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**REPORT TO COMMITTEE OF THE WHOLE  
MEETING OF WEDNESDAY, NOVEMBER 29, 2017**

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**SUBJECT**     **2018 Service Plans Review and Approval**

**ISSUE**

The 2018 Service Plans have been reviewed by standing committees and commissions. This report provides a high level overview of all the service plans before the Committee of the Whole review of the 2018 Financial Plan.

**BACKGROUND**

Guided by the Board's strategic priorities and core service delivery requirements, staff have developed multi-year service plans. Service plans outline core service information including key service drivers such as trends, service levels, workforce considerations, and performance measures. These plans also highlight divisional initiatives and implications to the overall work program and budget for their respective area. A fundamental part of the service planning process includes reviews of service delivery, areas to achieve operational efficiency and continued optimization of program delivery. This iterative process provides the organization with an effective planning tool to deliver their work efficiently and enable committees the opportunity to openly direct changes to existing programs and new initiatives.

In both the September and October Finance committees, staff brought forward high level organizational summaries of the service planning process. Both reports focused on the changes in trends and assumptions, while highlighting impacts to service levels and staffing. Both reports are attached.

All service plans were brought forward to their respective committees and commissions this fall. Through the delegated process, committees and commissions have the opportunity to review work programs and recommend service level adjustments in a detailed manner. All service plans have also been reviewed organizationally with a focus on identifying requirements versus requests in alignment to corporate and/or board priorities and the needs of commissions with delegated operating authority. One-time and ongoing funding requests have also been reviewed by committees and commissions as part of the detailed service plan review process. Budgets have been updated to reflect committee direction including removal and/or addition of approved budget items. A summary of committee review and recommendations is provided below and are also included in the attached appendices:

**Standing Committees**

**Finance Committee**

At its meeting of October 4, 2017, the Finance Committee reviewed the following service plans and recommended to the CRD Board that it be communicated to all committees and commissions that the Finance Committee has taken no position on the proposals contained within these plans:

- i.     Asset and Risk Management
- ii.    Financial Services
- iii.   Information Technology & GIS
- iv.    Executive Office, Legislative & Corporate Services, Board and Elections

- v. Corporate Communications
- vi. First Nations Relations Division
- vii. Human Resources and Organizational Development
- viii. Real Estate Services

Some key items in the service plans include:

- a. Addition of 2 FTE's in Human Resources offset by the reduction of 1 term employee to enable the implementation of corporate safety initiatives, training of staff, and to address safety requirements associated with major construction projects and expanding operations.
- b. 2 4-year term positions in Financial Services to support additional work as a result of the Core Area Wastewater Treatment Program.
- c. 1 FTE to support the implementation of process improvements including quarterly close and reporting, internal controls, and comprehensive updates to policies and procedures.
- d. Increase of 1 FTE in Asset & Risk Management (under Financial Services) to develop and maintain organizational Business Continuity Planning in accordance with the Auditor General of Local Government performance audit on emergency management.
- e. Increase of 2 FTE's in Information Technology to provide a more secure computing environment as recommended from a third party security assessment of organizational systems, and to support the increasing technological complexity related to incremental office locations, network devices and telecommunications equipment.

#### Planning & Protective Services Committee

At its meeting of October 11, 2017, the Planning & Protective Services Committee recommended approval of the following service plans with amendments:

- i. Health and Capital Planning Strategies (Community Health only)
- ii. Protective Services
- iii. Regional and Strategic Planning (not including Transportation)

The amendments were for service plans to be approved subject to the following:

- a. The Farming Infrastructure Research Project is to be reduced to \$25,000 and only proceed if a matching \$25,000 contribution is received from the Province.
- b. The Community Health Coordinator term position only be carried forward pending the approval of grant funding from VIHA.

#### Hospitals and Housing Committee

At the October 25, 2017, meeting, the Hospitals and Housing Committee recommended approval of the following service plans:

- i. Regional Housing
- ii. Health and Capital Planning Strategies (not including Community Health)

Some key initiatives from these service plans include:

- a. Regionals Housing's 2017 tenant engagement pilot project has resulted in 1 FTE to support ongoing tenant engagement activities. This position will be fully funded by the CRHC operating budget and has no impact on the CRD requisition.
- b. Regional Housing Affordability Strategy update planned in 2018

Transportation Committee

At the October 25, 2017, meeting, the Transportation Committee recommended approval of the Regional and Strategic Planning (Transportation only) service plan.

Regional Parks Committee

The Regional Parks Committee, at its October 18, 2017, meeting, recommended approval of the service plan for Regional Parks. Some of the key items included in the service plan include:

- a. Increase in auxiliary Park Officers for Sea to Sea Green Blue Belt
- b. Increase in Bylaw Enforcement Officer patrols in all parks
- c. Public engagement on the use of the Land Acquisition Fund

Arts Commission

At the October 4, 2017, meeting, the Arts Commission recommended approval of the Arts Development service plan and budget as presented.

A key highlight from the service plan is the increase requested for the Community Outreach Coordinator to support the continued implementation of the Arts Development Strategic Plan.

Core Area Liquid Waste Management Committee

On November 8, 2017, the Committee recommended approval of the service plan for the Core Area Liquid Waste Service. The Core Area Wastewater Treatment Project Board was delegated the authority to advance and implement all aspects of the Core Area Wastewater Treatment Project (Project). Key items in the service plan include:

- a. An increase of 1 FTE for a Supervisor of Operations for the McLoughlin Point Treatment Plant who will work with the Project Team during plant design, construction and commissioning before transitioning to plant operation
- b. 2 FTE's in Core Area Wastewater Engineering—a wastewater engineer and a GIS/drafting technician

Environmental Services Committee

At the October 25, 2017, meeting of the Environmental Services Committee, it was recommended that the following service plans be used as a basis to form the creation of the budget:

- i. Environmental Resource Management
- ii. Environmental Protection
- iii. Facilities Management and Engineering Services

Some of the key initiatives for 2018 include:

- a. Completion of the Solid Waste Management Plan
- b. Submission of Abandoned Boat Program applications to enhance education and awareness
- c. Addition of 2 4-year term positions in 2018–2021 to support the advancement of Integrated Resource Management procurement.
- d. Addition of a 0.5 FTE for regional invasive species management and coordination
- e. Addition of a 0.6 FTE to manage contaminated sites under the Public Sector Accounting Board standards
- f. Addition of a 0.5 FTE for managing an increase in construction and demolition waste at the landfill and to meet safety regulatory requirements
- g. Addition of a 1.0 FTE for sampling, analysis and reporting of water quality to meet regulatory requirements on behalf of the municipal water purveyors
- h. Addition of a 0.3 FTE for regional support for Climate Action

### Electoral Area Services Committee

On October 18, 2017, the Committee reviewed and recommended approval for all electoral area related service plans:

- i. Building Inspection
- ii. Juan de Fuca Planning
- iii. Protective Services
- iv. Salt Spring Island Administration
- v. Southern Gulf Islands Initiatives
- vi. Juan de Fuca Parks and Recreation

The Committee's review and recommendation included relevant portions of service plans for Integrated Water Services; i.e., Customer and Technical Services, Infrastructure Engineering and Infrastructure Operations.

On November 1, 2017 the Committee recommended approval of the electoral area-only budgets as amended. These budgets included the local service commission budgets which were recommended for approval by the respective commissions. Some key items from these budgets include:

- a. Increase of 4.6 FTE to staff the pool operations previously contracted to external party
- b. Increase in the Southern Gulf Islands Administration budget to provide teleconferencing equipment as well as a consultant to manage communication and operations with commissions and committees on the islands.
- c. New tsunami warning system in Port Renfrew area;
- d. Relocation of 0.2 FTE to Juan De Fuca Planning as clerical support for Juan De Fuca services (previously Juan De Fuca Community Parks);
- e. Capital spending for improvements and upgrades to Southern Gulf Island docks;
- f. Increase of 0.5 FTE for Magic Lake Estates (Pender Island) Water and Sewer services.

### **Sub Regional Committees**

#### Regional Water Supply Commission

On October 18, 2017, the Regional Water Supply Commission recommended approval of the following service plans and 2018 operating and capital budgets:

- i. Customer and Technical Services
- ii. Infrastructure Engineering
- iii. Infrastructure Operations
- iv. Watershed Protection

The budget included 1.0 FTE for a Watershed Technologist/Information Officer to support Resource Planning and Public Engagement and Tours in the Watershed Protection Division.

The Regional Water Service Commission reviewed and recommended the 2018 Regional Water Supply operating and capital budget and the proposed 2018 Regional Water Supply wholesale water rate.

Peninsula Recreation Commission

On October 19, 2017, the Peninsula Recreation Commission recommended approval of Panorama Recreation Centre's service and financial plans as presented. Some key initiatives include:

- a. Exploring the feasibility of establishing food services at Panorama Recreation Centre.
- b. Enhancing art opportunities for seniors and linking seniors with youth.

Sooke and Electoral Area Parks and Recreation Commission (SEAPARC)

At its October 19, 2017 meeting, SEAPARC recommended approval of the SEAPARC service plan and 2018 operating and capital plans as amended. Some major items include:

- a. Facility expansion of a gym and multipurpose room (subject to grant approval) and pool roof replacement
- b. Continue to operate the DeMamiel Creek Golf Course on a seasonal basis.

Saanich Peninsula Water and Wastewater Commissions

On October 19, 2017 both the Saanich Peninsula Water Commission and the Saanich Peninsula Wastewater Commission recommended approval of the service plans and 2018 operating and capital budgets as presented, with the addition of a capital project to support post-disaster water supply preparedness. The Water Commission recommended the proposed 2018 Saanich Peninsula bulk water rate.

Juan de Fuca (JDF) Water Distribution Commission

On October 3, 2017 the JDF Water Distribution Commission recommended approval of the JDF Water Distribution 2018 operating and capital budget, which included 1.0 FTE for an Administrative Clerk for JDF Water Engineering and Planning as well as funding for an Engineering Manager for the Water Distribution Engineering Section. The Water Commission recommended the proposed 2018 JDF Water Distribution water rate.

**ALTERNATIVES**

Alternative 1

That the Committee of the Whole endorse the recommendation of the Standing Committees and commissions and recommend to the Capital Regional District Board:

That the Service Plans be approved.

Alternative 2

That the Committee of the Whole endorse the recommendation of the Standing Committees and commissions and recommend to the Capital Regional District Board:

That the Service Plans be approved with specific direction on amendments.

**FINANCIAL IMPLICATIONS**

Service plans drive the financial planning process and provide necessary information to evaluate overall organizational requirements, new initiatives, proposed service levels and implications for the budget and financial plan. The 2018 Financial Plan has been developed based on the resources required for delivery of core services, the cost of new initiatives, proposed capital programs, debt servicing and any new direction from the committees and commissions from the service planning review process. Detailed financial implications are included in the 2018 Preliminary Financial Plan report included as a separate report on the agenda.

**CONCLUSION**

The service and financial planning process are integral to providing ongoing service delivery. Departments prepared service plans for presentation to the appropriate standing committee and commissions to provide a more detailed assessment and knowledge of service delivery and programs. The 2018 Service Plans have been reviewed and approved by the appropriate Standing Committees and commissions. This report provides a consolidated view of all the service plans.

**RECOMMENDATION**

That the Committee of the Whole endorse the recommendation of the Standing Committees and commissions and recommend to the Capital Regional District Board:  
That the Service Plans be approved.

Submitted by:	Rianna Lachance, CPA, CA, Senior Manager, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

**Attachments**

- Attachment 1: 2018 Service Plan Summary Discussion (September 6, 2017)
- Attachment 2: 2018 Service Plan Summary Update (October 4, 2017)

- Appendix A: Finance Committee
- Appendix B: Planning and Protective Services Committee, Transportation Committee, Hospitals and Housing Committee,
- Appendix C: Regional Parks Committee
- Appendix D: Arts Commission
- Appendix E: Core Area Liquid Waste Management Committee
- Appendix F: Environmental Services Committee
- Appendix G: Electoral Area Services Committee
- Appendix H: Regional Water Supply Commission, Saanich Peninsula Water and Wastewater Commissions, Juan de Fuca Water Distribution Commission, Electoral Area Services Committee
- Appendix I: Peninsula Recreation Commission
- Appendix J: Sooke and Electoral Area Parks and Recreation Commission (SEAPARC)



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**REPORT TO THE FINANCE COMMITTEE  
MEETING OF WEDNESDAY, SEPTEMBER 6, 2017**

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**SUBJECT 2018 Service Plan Summary Discussion**

**ISSUE**

A summary of organizational service planning information and themes that will be prevalent in the 2018 budget process is provided to allow for Finance Committee and Board discussion and to inform other Committees and Commissions.

**BACKGROUND**

The Capital Regional District (CRD) provides a broad range of services to businesses, institutions, organizations, visitors and over 378,000 residents of the region. Regional services are provided to the entire region; sub-regional services are provided to groups of participating municipalities, First Nations and three Electoral Areas; and local services are provided to individual municipalities, Electoral Areas or to defined areas within the region.

The planning process, which is outlined in Appendix A, begins with the development of the service plans covering a four year span, with the current service plans covering 2015-2019 and are updated each year to allow for changes, both internal and external to the organization. A service plan update summary is then developed to illustrate any deviations that have occurred from the previous year. The service plan summary outlines changes in assumptions, trends, and issues, highlights anticipated performance to budget, updates division initiatives, and outlines required service adjustments and staffing levels. The updated service plans and service plan summaries will be presented to committees and commissions throughout October and November

CRD services generally fall into one of three categories:

1. Regional services which have either been mandated due to regulatory requirements or established with clear advantages with respect to operating efficiency, planning and the ability to leverage and make effective use of capital investments;
2. Sub-regional services with oversight by commissions which recommend operating budgets (including transfers to reserve funds) and capital expenditure plans annually; and
3. Services that are provided to a defined area within the region, also with oversight by a Commission of volunteers.

The Priorities Dashboard tracks the implementation of Board and Corporate priorities. These priorities have resulted in investments for initiatives that accomplish Board objectives, respond to community needs, and improve efficiency while considering the overall fiscal capacity and maximizing the potential to leverage grants.

**2018 Service Plan**

The Corporate Service Plan Update Summary (Appendix B) provides an organizational overview of the service plan update summaries that will be reviewed by Committees and Commissions in October and November. Changes in Assumptions, Trends, and Other Issues categorizes the primary themes from all service plans into three groupings:

- a) Alignment to regulatory or legislative compliance,
- b) Impacts due to external situational factors, and
- c) Internal organizational impacts

***Alignment to regulatory or legislative compliance***

As the organization realizes continued growth, there is a need to realign the organization to reflect the scope and scale of similar local governments in administrative oversight, controls, regulatory and legislative frameworks.

The CRD is entering into increasingly complex partnering, operating, and third party agreements in support of strategic and corporate priorities. With Board endorsed policies on Climate Action, Risk & Asset Management as examples, the downstream impact of incorporating these emphases into all agreements is formidable. Furthermore, with many long term agreements expiring, there is a need to align renewed agreements with modern terms and conditions, and aforementioned Board supported policies and decisions. Through recent experiences this can result in challenging negotiations with existing providers.

There has also been an increase in recent years on the number of available grant opportunities in addition to the application, due diligence, and associated agreement requirements. Most funding programs require the recipient to adhere to stringent application, expenditure tracking and reporting guidelines, along with strict and often short deadlines.

***Impacts due to external situational factors***

External factors impacting the organization can have both positive and negative effects for the CRD and subsequently the municipalities and the region.

A strong and vibrant regional economy has resulted in a surge of development activity and population growth. The resulting direct and indirect impacts on current systems have led to a need for additional short and long term capital investment, various infrastructure improvements, and upgrades to maintain service levels within the region. Incremental ongoing operational maintenance, repairs and routine replacements will be required to support these systems as various services are impacted; for example, water connections and flow volume increases against current capacity. Subsequently, there is also an impact on internal staff capacity to maintain the pace of growth and expected service levels. Positively, development activity has resulted in additional revenue through increased volumes, in particular at Hartland landfill and wholesale water distribution.

Furthermore, a maturing organizational workforce combined with the capital region having one of the lowest unemployment rates in the country, will cause the CRD to continue to face challenges in staffing positions, especially those that require unique or specialized skills. This confluence will have both direct and indirect impacts on employee retention and turnover, vacancy duration, knowledge transfer, and transition periods of new personnel.

***Internal organizational impacts***

As the CRD has grown into a \$500M organization, it is well positioned to drive a renewed internal focus on organizational resilience in alignment with corporate and strategic priorities for effective and efficient service delivery.

In order to achieve this, an Organizational Development Plan was developed as a key deliverable and engagement tool to enhance organizational resilience and promote revitalization. The plan's

multi-year organization wide implementation is designed to ensure a high performing organization by building a culture that is engaged, responsive, adaptive and aligned with our service mandate. It supports the implementation of the 2015–2018 Corporate Plan and focuses on strengthening the foundational core of the organization through employee development, communication, and engagement.

In the third quarter of 2017, the Chief Administrative Officer was informed by the Auditor General for Local Government the CRD had been selected for a performance audit of the organization's business continuity and emergency plans and processes. The CRD plays a critical role in providing necessary services to the community and should be equipped to ensure a comprehensive, coordinated and organized approach to emergency management. The audit will assess the effectiveness of emergency management plans and programs and will focus on emergency management, business continuity management, and key elements including related policies and procedures. A key focus for the CRD will be on developing and refining business continuity and emergency planning systems, and will do so by following industry best practices that are relevant to the size and complexity of the organization.

Furthermore, there continues to be increases in the complexity of relationships with First Nations requiring further capacity building for CRD in deepening relationships. With current staffing levels, relationship building has been successful, but deeper engagement may be required for implementation of the Truth and Reconciliation Commission's (TRC) calls to action. There is also an operational need to involve First Nations in shared decision making moving forward.

## **IMPLICATIONS**

Because of the size and complexity of the organization and distributed location of operations throughout the region, there are many agreements and contracts that are negotiated and held in different locations. There is currently no central repository for completed contracts, agreements, or records management. This creates a significant risk to the organization that agreements are or will expire without a renewed contract or that wording and language is outdated or in need of standardization. An appropriate system along with policies and procedures will safeguard the CRD and will improve the process of knowledge transfer and continuity.

Investing in the development of organizational systems and setting up relevant processes and procedures are necessary to manage business, financial and legislative risks. Creating standardized processes will also assist staff in supporting services in both efficiency and effectiveness. Optimal and even automated reporting procedures will contribute to reducing manual processes, reconciliations, and in turn decrease the risk of significant errors.

With the regional growth rate exceeding and expected to continue to exceed the national average over the next 25 years, the CRD must implement systems, infrastructure, and appropriate resources to meet the steady demand on mandated, directed, delegated, and contractual and emergency services. In response to these challenges, one avenue the CRD should consider is additional shared service opportunities among the municipalities, electoral areas, and partner agencies. There is ongoing engagement and discussion among the region's CAOs and staff to proactively identify such opportunities.

**CONCLUSION**

The service planning process is an integral component of implementing the Board's strategic priorities and providing ongoing service delivery. Service plans define the work that will be performed over a four year period and provide the foundation for building operating and capital budgets. This report has been developed to provide an overview of the themes that will be prevalent when reviewing the service plans and service plan summaries for 2018.

**RECOMMENDATION**

That the Finance Committee recommend to the Capital Regional District Board:

That the 2018 Service Plan Summary Discussion report be received for information and referred to Committees and Commissions for information as part of the 2018 service and financial planning process.

Submitted by:	Amber Donaldson, MA, CPA, CMA, Acting Senior Manager, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Larisa Hutcheson, P.Eng., Acting Chief Administrative Officer

Appendix A: CRD Planning Process

Appendix B: Corporate Service Plan Update Summary



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**REPORT TO THE FINANCE COMMITTEE  
MEETING OF WEDNESDAY, OCTOBER 4, 2017**

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**SUBJECT 2018 Service Plan Summary Update**

**ISSUE**

As a follow up to the 2018 Service Plan Summary Discussion report presented to Finance Committee on September 6, 2017, this report provides additional information with respect to service delivery levels and associated resourcing.

**BACKGROUND**

The 2018 Service Plan Summary Discussion report, attached as Appendix A, summarized three main themes that were prevalent through preliminary planning;

1. Alignment to regulatory or legislative compliance – as the organization realizes continued growth, there is a need to realign the organization to reflect the scope and scale of similar local governments in administrative oversight, controls, regulatory and legislative frameworks;
2. Impacts due to external situational factors – the organization can experience both positive and negative impacts through external factors such as a strong and vibrant local economy increasing both revenue and expenses at Hartland landfill and wholesale water distribution; and
3. Internal organizational impacts – as the CRD has grown into a \$500M organization, it is well positioned to drive a renewed internal focus on organizational resilience in alignment with corporate and strategic priorities for effective and efficient service delivery.

Through themes outlined above, additional staffing resources are proposed throughout the organization. These resources will be added in different departments and divisions and have unique funding structures, based on the requesting service.

**IMPLICATIONS**

**Division: Executive Services**

**1. *Salt Spring Island***

- Description: Salt Spring Island's Rainbow Road Indoor Pool (RRIP) operating contract is up for renewal March 31, 2018.
- Impact: The CRD Board approved assuming the management and operation of the facility in order to provide additional programming and increase operating hours. 4.6 FTE's will be required to assume responsibilities from the off-island private contractor.
- Funding: This will be recovered through a combination of savings from the contracted service and fees and charges revenue for programs at the Rainbow Road Indoor Pool on Salt Spring Island.

**2. *Human Resources***

- Description: Centralized oversight of regulatory and legal responsibilities related to the CRD's safety obligation is a necessary focus for the Human Resources department.
- Impact: Along with an internal realignment of staff, there is a requirement of two FTE's, offset by the reduction of one term FTE. A safety advisor has been realigned from

Integrated Water Services to Human Resources, funded through allocations from IWS. The Manager of Corporate Occupational Health and Safety will be converted from a term position to a permanent position, along with the addition of a Human Resources Advisor to provide confidential statutory support and service to the corporate occupational health and safety function.

- Funding: The manager position will be funded through requisition and the advisor will be funded by allocation.

## **Division: Finance and Technology**

### **1. Financial Services (Project Support)**

- Description: There will be added volume and complexity created by the Core Area Wastewater Treatment Project (CAWTP), including invoice and payment volumes, added internal controls, and grant funding complexity.
- Impact: Two 4-year term positions are required to manage the distributed workload across the finance department in various areas including financial analysis, accounts payable, payroll, and required grant reporting.
- Funding: These term positions will be funded by an allocation from CAWTP and will have no impact on other services or requisition.

### **2. Financial Services**

- Description: As the organization continues to grow in size and scope, internal financial controls and reporting become a higher priority to ensure fiscal responsibility and transparency.
- Impact: One additional FTE will be required to carry out duties related to closing procedures, reconciliations, exception reporting, and the standardization and automation of manual processes.
- Funding: The position will be recovered through internal allocations.

### **3. Asset & Risk Management**

- Description: Planning for essential services during an emergency or disaster is a legislated requirement for Local Governments.
- Impact: One additional FTE will be required to support the development of a corporate Business Continuity Management Program. The responsibilities will include developing and implementing a framework, policy, strategy, and plans for organizational resilience.
- Funding: The position will be recovered through internal allocations.

### **4. Information Technology (Security)**

- Description: An external third party was engaged to conduct an Information Technology (IT) security vulnerability assessment, testing the enterprise system for weaknesses through ethical hacking techniques.
- Impact: One additional resource is required to address recommendations for a more secure computing environment across the organization.
- Funding: The position will be recovered through internal allocations.

### **5. Information Technology (Complexity)**

- Description: As technology continues to be integrated throughout daily operations, there is a growing need for IT support, both in the number of devices supported and the complexity of the technology.

- Impact: One FTE is required to support the growing IT organizational requirements (seven new work locations, additional phones, and a growing number of networked devices).
- Funding: The position will be recovered through internal allocations.

## **Division: Integrated Water Services**

### **1. Infrastructure Operations (CAWTP)**

- Description: The design and construction of the infrastructure related to CAWTP began in 2017 and will continue through 2020. Beginning in 2019, the new infrastructure will be commissioned and integrate into ongoing system operations.
- Impact: One FTE is required; a Supervisor of Operations for the wastewater treatment plant to proactively engage in the transition from the project to ongoing operations.
- Funding: This FTE will be funded from committed funds from the CAWTP for 2018 with funding transitioning to a new CAWTP operating budget being developed for 2019.

### **2. Infrastructure Operations (Magic Lake Estates Water and Sewer Service)**

- Description: With the completion of the new water treatment plant at Magic Lake Estates on Pender Island, additional operating effort is required to operate and maintain more advanced treatment infrastructure and processes..
- Impact: 0.5 FTE is required to complete ongoing operations and maintenance tasks.
- Funding: This will be funded through parcel taxes and user fees related to Magic Lake Estates.

### **3. Infrastructure Engineering (Core Area Wastewater Service)**

- Description: The expansion of the Core Area Wastewater system infrastructure, including the McLoughlin Point treatment plant, major pumping stations at Clover Point and Macaulay, extensive conveyancing systems, along with related ancillary works, require significant ongoing engineering support.
- Impact: Two FTEs are required; a technical support engineer and a GIS/drafting technician to support core sewer engineering for ongoing core area wastewater projects.
- Funding: These positions will be funded through requisition.

### **4. Infrastructure Engineering (JDF Water Distribution Service)**

- Description: In order to maintain service levels for the rapidly growing JDF water distribution system, additional administrative support is required to coordinate development servicing requests and the development cost charge (DCC) program, as well as other CRD underground utility referrals from external agencies.
- Impact: One FTE is required to support ongoing operational activities of Tempest, the enterprise database system, and manage the new DCC process.
- Funding: This position is budgeted to be funded through water sales revenue.

### **5. Watershed Protection (Regional Water Supply Service)**

- Description: Increasing service levels related to public engagement on regional watershed tours and incremental resource planning initiatives related to the future use of the Leech Water Supply Area.
- Impact: One FTE is required; a Watershed Technologist/Information Officer to provide additional capacity for resource planning projects, hydrology field monitoring, and public tour expansion.

- Funding: This position will be funded through the water rate.

**Division: Parks & Environmental Services**

**1. Environmental Protection (Landfill)**

- Description: A growing and vibrant regional economy has resulted in dramatic increases in construction activities leading to amplified waste loads at the landfill.
- Impact: 0.5 FTE is required for a demolition waste permit technician.
- Funding: This will be funded through tipping fee revenue.

**2. Environmental Protection (Climate Action)**

- Description: To support the implementation of the board approved Regional Community Climate Action Strategy.
- Impact: 0.3 FTE is requested; a Climate Action Program Assistant that will provide additional support to address strategic priorities related to climate change.
- Funding: This position will be funded through requisition.

**3. Environmental Protection (Invasive Species)**

- Description: To support regional coordination of invasive species management
- Impact: 0.5 FTE is requested; an Ecosystem Biologist for regional management of invasive species.
- Funding: This position will be funded through requisition.

**4. Environmental Protection (Contaminated Sites)**

- Description: Public Sector Accounting Board Standards (PSAB) require the organization to carry a liability for contaminated sites for which the CRD is responsible.
- Impact: 0.6 FTE is required to address the increased regulatory requirements related to tracking and monitoring the liability of contaminated sites.
- Funding: This will be funded by the various capital projects requiring additional support for remediation.

**5. Environmental Protection (Water Sampling)**

- Description: Expanded municipal water sampling and analysis is required to achieve compliance with existing legislation.
- Impact: One FTE is required; a Drinking Water Sampling Technician to meet legislative requirements.
- Funding: This position will be funded through the water rate.

**6. Integrated Resource Management (IRM)**

- Description: The procurement process related to IRM is expected to significantly increase over the next several years, both in volume and complexity.
- Impact: Two 4-year term positions are required as project leads to support IRM procurement and ensure consistent application of policies and procedures.
- Funding: These positions will be funded through the IRM capital project from 2018 through 2021.

**Division: Planning & Protective Services**

**1. Bylaw Enforcement & Animal Care**

- Description: Dog management in Regional Parks continues to be a public concern resulting in a service level adjustment with greater focus and emphasis on the enforcement of existing regulations and bylaws.
- Impact: 0.5 FTE will be required to support Regional Parks in monitoring and enforcement.
- Funding: This position will be funded internally through allocation from Regional Parks.

**2. Capital Region Housing Corporation (CRHC)**

- Description: The CRHC Board of Directors directed staff to undertake a Tenant Engagement Pilot Project.
- Impact: One FTE will be required as an outcome of this initiative.
- Funding: This position will be funded internally through building property management fees collected and administered by the CRHC.

**CONCLUSION**

The service planning process is an integral component of implementing the Board's strategic priorities and providing ongoing service delivery. Service plans define the work that will be performed over a four year period and provide the foundation for building operating and capital budgets. This report has been developed to provide a summary of the additional staffing resources that will be required for 2018.

**RECOMMENDATION**

That the Finance Committee recommend to the Capital Regional District Board:  
That the 2018 Service Plan Summary Update report be received for information and referred to Committees and Commissions for information as part of the 2018 service and financial planning process.

Submitted by:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

Appendix A: 2018 Service Plan Summary Discussion report (September 6, 2017)

**2018 Service Plans Review and Approval**  
**For Committee of the Whole, November 29, 2017**

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**APPENDIX A**

**Service Plans Reviewed by the Finance Committee**

**TABLE OF CONTENTS**

**Service Plan Summaries**

1. Asset and Risk Management
2. Financial Services
3. Information Technology & GIS
4. Executive Office, Legislative & Corporate Services, Board and Elections
5. Corporate Communications
6. First Nations Relations Division
7. Human Resources and Organizational Development
8. Real Estate Services

**Service Plans**

1. Asset and Risk Management
2. Financial Services
3. Information Technology & GIS
4. Executive Office, Legislative & Corporate Services, Board and Elections
5. Corporate Communications
6. First Nations Relations Division
7. Human Resources and Organizational Development
8. Real Estate Services

**SERVICE NAME:** Asset & Risk Management

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- Implementation of an asset management framework, policy, strategy and plans to build on existing asset management practices within the organization and focus on aligning our practices to industry best practices on asset management to enable sustainability of service delivery.
- Due to the continual increase in demand for funding capital projects, the grant program activity has increased, thereby requiring greater demand on reporting, forecasting, coordination, and research. Additionally, refining strategies on applying for external grant programs as well as the distribution of our internal grant programs.
- Developing a corporate Business Continuity Management Program (BCMP) and implementing a framework, policy, strategy and plans for building organizational resilience.
- The CRD Board has endorsed the Corporate Climate Action Strategy (CCAS), a policy framework to guide organizational efforts to accelerate corporate mitigation and adaptation activities, achieve a 33% reduction in operational GHG emissions by 2020 from a 2007 base year, and integrate a climate lens into CRD decision-making.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- No material variance from budget for 2017

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Risk Management: Development of a policy and framework for a Business Continuity Management Program (BCMP).
- Asset Management: Development of a framework, policy, strategy, asset management plan, asset management program manual, enterprise asset management system, tools and reports.
- Grant Portfolio Management: Development of a framework, policy, strategy, procedure manual and reports.
- Corporate Climate Action: Implement the policy, goals, actions and activities identified in the Board-endorsed corporate climate action strategy (CCAS).

***Service Adjustments and Staffing Levels:*** (linked to section 2 of the detailed service plan)

- Risk Management: Increase of 1.0 FTE to support the development of a corporate Business Continuity Management Program – J15 step 3 – estimated cost \$93,000
- Asset Management: No adjustments planned for 2018.
- Corporate Climate Action: Increase of 1 auxiliary position for a 1-year term at 0.9 FTE to support the implementation of the Corporate Climate Action Strategy – J15 step 1

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service goal: Develop a Corporate Climate Action Strategy (CCAS) to guide the organization's operational response to climate change.</b></p>	Develop and obtain board endorsement for CCAS	Develop and obtain board endorsement for CCAS	Implement activities outlined within CCAS
<p><b>Service Goal: Support the organization to use a climate lens for Board decision-making that demonstrates how decisions align with CRD's GHG reduction target, climate action objectives and strategic priorities</b></p> <ul style="list-style-type: none"> <li>Climate lens is integrated into 5-year capital planning template</li> <li>Climate lens training is offered annually</li> <li>Climate lens template is developed</li> </ul>	<p>Climate lens is integrated into 5-year capital planning template</p> <p>Climate lens training is offered</p> <p>Climate lens template is developed</p>	<p>Climate lens is integrated into 5-year capital planning template</p> <p>Climate lens training is offered</p> <p>Climate lens template is developed</p>	<p>Implement climate lens on capital projects</p> <p>Climate lens training is offered</p>
<p><b>Service Goal: Support the organization to monitor, report and communicate metrics to enhance continuous improvement toward climate change goals</b></p> <ul style="list-style-type: none"> <li>Annual Climate Action Revenue Incentive Program (CARIP_ reporting requirements are met, on time.</li> <li>A corporate energy management process is developed</li> <li>A fleet management system is developed</li> <li>A communications plan is developed.</li> </ul>	<p>Annual Climate Action Revenue Incentive Program (CARIP_ reporting requirements are met, on time.</p> <p>A corporate energy management process is developed</p>	<p>Annual Climate Action Revenue Incentive Program (CARIP_ reporting requirements are met, on time.</p> <p>A corporate energy management process is developed</p>	<p>Annual Climate Action Revenue Incentive Program (CARIP_ reporting requirements are met, on time.</p> <p>A corporate energy management process is implemented</p> <p>A fleet management system is developed</p> <p>A communications plan is developed.</p>

<p><b>Service Goal: Establishment of asset management plans for each organization service that contains assets that are either engineered or natural.</b></p> <p>A ratio of complete asset management plans over total asset management plan required*</p>	0%	5%	15%
<p><b>Service Goal: Systematic approach to decision-making</b></p> <p>Implementation of a prioritization methodology that documents the quantitative and qualitative analysis analyzing a vast variety of factors.</p>	0%	25%	100% complete
<p><b>Service Goal: Ensure service delivery is supported through the development of best practices</b></p> <p>Development of corporate Business Continuity Management Program framework and policy</p>	0%	0%	100% complete

## Contact

Name: Nancy Moore  
 Title: Manager, Risk & Insurance  
 Contact Information: 250.360.3015

Name: Carlo Vijandre  
 Title: Manger, Asset Management  
 Contact Information: 250.360.3175

**SERVICE NAME:** Financial Services

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- Employee turnover and long-term leaves in key positions have resulted in a longer than expected period of stabilization. Recruitment across the organization has also taken longer than expected as the regional unemployment rate is the lowest in the country.
- A change in leadership within the department has identified various process improvements to be implemented in internal controls, policies and procedures, and both internal and external organizational support. In addition a strategic review with a focus on department culture and dynamics was undertaken with multi-year key actions and deliverables arising in the areas of communications, policy, and training.
- Organizational policies changes and corporate initiatives such as the delegation of authority bylaw and organizational development plan have resulted in increased scope and workload. Quarterly reporting on the status of capital projects, including actual to budget variances, will be implemented in Q3 of 2017.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- There is a one-time net favourable variance of \$76,000 (2%) due mainly to staff vacancies and low spending on supplies, offset by higher than expected spending on Contract for Services for outside SAP support while implementing New GL. This variance will be combined with other Legislative Services.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Improved financial reporting will be a focus in 2018 through quarterly reporting, variance and exception reporting, and additional analysis and commentary with the Financial Statements.
- Allocations, charge out rates and cost recoveries will be reviewed to ensure consistency and appropriateness throughout the CRD
- Finance will commence a periodic review of financial policies along with reviewing reserve balances to ensure appropriate levels are met and maintained.
- Improvements to financial systems will take place in 2018 to reduce the number of manual processes being undertaken, to allow efficiencies in budgeting, both within finance as well as operating departments, and to meet customer demands by implementing Pre-Authorized Debits and electronic billing for utility customers.
- Several priorities were delayed from 2017 as a result of employee turnover and staffing shortages, these items will be prioritized in 2018.

***Service Adjustments and Staffing Levels:*** (linked to section 2 of the detailed service plan)

- A permanent increase of 1.0 FTE's is proposed to focus on internal controls, policies and procedures, and additional support to operations. The additional cost is estimated to be \$95,000.
- 2.0 FTE's are proposed to be added to support financial functions and the increased volume of transactions related to Core Area Wastewater Treatment Program (CAWTP). They will be 4-year term positions and will be funded through allocations from CAWTP; the finance budget does not incur additional costs.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Comply with legislation and statutory requirements</b></p> <ul style="list-style-type: none"> <li>• Overall Accuracy of Budgeted Surplus / Deficit to Actuals</li> <li>• Accuracy of Estimated Surplus / Deficit to Year End</li> </ul>	94%	92.5%	93%
<p><b>Service Goal: Provide specialized support and information for decision making</b></p> <ul style="list-style-type: none"> <li>• Frequency of on time delivery of R&amp;E reports to all the stakeholders</li> <li>• Number of Days to Perform Periodic Close</li> </ul>	100%	100%	100%
<p><b>Service Goal: Continuous improvement of financial planning, tools and processes</b></p> <ul style="list-style-type: none"> <li>• Fully funded reserves by service</li> <li>• Financial policies reviewed annually</li> </ul>		33%	TBD
<p><b>Service Goal: Guide efficient and secure use of financial resources</b></p> <ul style="list-style-type: none"> <li>• Average Age (in days) of Outstanding Accounts Receivable</li> <li>• Average Return on Investment</li> <li>• Average Inventory Turns per Year</li> </ul>	0	1.45%	0
	1.40%	2.0	1.52%
	2.0	2.0	2.25

• On Time Vendor Payments		71%	85%
• Number of Payroll Process Errors	10	10	7

## Contact

Name: Rianna Lachance  
Title: Senior Manager, Financial Services  
Contact Information: 250.360.3138

**SERVICE NAME:** Information Technology & GIS

**Changes in Assumptions, Trends, and Other Issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- **Market Conditions:** Difficulty attracting highly technical and/or specialized IT resources; feedback from 3<sup>rd</sup> party recruiters and consultants revealed a high disparity between public and private sector salaries.
- **Business Complexity:** Growth in IT services and support (surveillance systems, networks, number of user devices, phones, business locations, applications, cell towers, ongoing support for incremental software, number of employees; projects and FTEs) driving increased demand for IT resources to meet business needs
- **Security:** KPMG Security Audit highlights evolution and additional need to resource network and security to manage and mitigate risk to enterprise systems

**Overall 2017 Budget Performance:** (linked to budget forecast to year end)

- There is a one-time net favorable variance of \$66,000 (1.6%) as a result of underspent salaries budget. This favourable variance was created by delays in recruiting specialized and technical staff. Salary variances were used to hire an auxiliary network analyst to assist with additional work, and to pay additional staff overtime.

**Update to Division Initiatives:** (linked to section 3 of the detailed service plan)

**Core Services:**

- Unplanned work added an additional 2070 hours to the IT 2017 work plan
  - Additional effort to support the Core Area Wastewater Treatment Project; including; implementation of new applications (Prolog, Primavera), interface Prolog system to SAP financial system, setup and support three new locations; Victoria, Vancouver and McLoughlin Point.
  - Additional effort to start up a new Corporate Commons meeting room, a new HR training room, a new office for SSI Recreation and a new office for Integrated Water Services.
  - Increased effort on networking and security in support of these seven new work locations and a growing network of mobile devices.
  - Developed new eBusiness audit application for Regional Source Control and a new Contract Management Register, changes to SSI Voters List application, redesign of our Corporate Intranet and developed Fuel Card System Integration.
  - Considerable additional effort required to complete Perfectmind Recreation System implementations.
  - Started providing GIS Services to the City of Colwood.
- In addition to hiring contractors and applying overtime to meet these additional service requests we also deferred routine maintenance tasks, patching and upgrades to accommodate all this unplanned work.
- The following additional work has been requested as part of the 2018 Service Plan:
  - Security                      Creation of a Access Protection and Remediation Network
  - Security                      Management of Privileged Accounts System
  - Security                      SCADA Network Architecture Redesign and Support
  - Business Complexity      Hartland North New Automated Weigh Scale
  - Business Complexity      SharePoint 2016 Upgrade
  - Business Complexity      Corporate Electronic Records Management
  - Business Complexity      Integrated HR Onboarding

o Business Complexity	Enhance Board Information Portal
o Business Complexity	Business Intelligence/Data Warehouse and Analytics
o Business Complexity	Implement Digital Asset Management (photos, movies, etc.)
o Business Complexity	Arts Grants Submission Web application
<b>Board Priorities: no changes</b>	

<b>Service Adjustments and Staffing Levels: (linked to section 2 of the detailed service plan)</b>
<ul style="list-style-type: none"> <li>• Security: Increased effort on corporate security to ensure a secure and safe computing environment for all systems, locations and users. Additional effort and focus required to support seven new office work locations. Increase corporate security resources with the addition of 1 FTE</li> <li>• Business Complexity: Increased effort in IT networking, required to support seven new work locations, additional phones and a growing number of networked devices. Increase IT resources with the addition of 1 FTE.</li> <li>• Since 2012 the number of devices supported by has increased by 37% and the number of sites has increased by 30%</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Financial</b></p> <ul style="list-style-type: none"> <li>• Cost of IT as a % of Operating Budget (industry average is 4.1%)</li> <li>• Security cost as a % of IT Budget (industry average is 4% - 6.9%)</li> </ul>	2.2 % 4.5 %	2.1 % 2.7%	2.2 % 4.5 %
<p><b>Service Goal: Systems Availability</b> <b>Corporate Website Availability</b></p> <ul style="list-style-type: none"> <li>• Is the probability that a system is not failed or undergoing a repair when it needs to be used.</li> </ul>	99 % 99 %	99.1 % 98.5 %	99 % 99 %
<p><b>Service Goal: Systems Reliability</b></p> <ul style="list-style-type: none"> <li>• Failure rate of network hardware</li> <li>• Failure rate of user devices</li> <li>• Backup/restore success rate</li> </ul> <p>The probability that a device will perform its intended function during a defined period of time under stated conditions.</p>	< 2.0 % < 1.5 % 99 %	2.7 % 2.5 % 95 %	< 2.0 % < 1.5 % 99 %
<p><b>Service Goal: Systems Security</b></p> <ul style="list-style-type: none"> <li>• SPAM to valid email ratio</li> <li>• Time to apply critical system patches</li> <li>• Email Gateway Virus Detection</li> <li>• # of security related incidents</li> <li>• % of downtime due to security incidents</li> </ul> <p>The process of implementing measures and designing systems to securely protect and safeguard information, both business and personal data, thereby preserving the value, confidentiality, integrity, intended use and its ability to perform their permitted business functions.</p>	9:1 < 24 hours < 1.0 % < 10 < .05 %	9:1 18 hours .002% 2 0%	9:1 < 24 hours < 1.0 % < 10 <.05 %
<p><b>Service Goal: Customer Satisfaction</b></p> <ul style="list-style-type: none"> <li>• Survey results are compiled from a random sampling of staff requests for IT services.</li> </ul>	90 %	91.5 %	90 %

## Contact

Name: David Hennigan

Title: Senior Manager, Information Technology & GIS Services

Contact Information: 250.360.3141

**SERVICE NAME:** Legislative & Corporate Services

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- CRD projects and capital programs shifting from development phase to implementation
- Increased delegated authority to CRD officers and staff
- Increased provision of legislative and technical support throughout the organization
- Implementation of the CRD Organizational Development Plan

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- There is a one-time favourable variance of \$68,000 (7%) on the Board budget due to lower than expected legal, meeting, and contract for service expenses. The surplus will be included in total for the Legislative & General division
- There is a one-time favourable variance of \$41,000 (3%) on the Legislative & Corporate Services/CAO budget due to staffing transitions and lower than expected auxiliary expenses. The surplus will be included in total for the Legislative & General division

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Review Delegation Processes: Review and amend oversight policies to support delegated authorities and monitor effectiveness (Corporate Development)
- Corporate Policy Review: Review corporate policies, update the corporate policy on policy development, and provide tools and support to enable the creation of effective policy
- Legal Services Review: Review external legal services and resources used by the CRD

***Service Adjustments and Staffing Levels:*** (linked to section 2 of the detailed service plan)

- No adjustments planned for 2018.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Maintain effective relationships with other levels of governments</b>	<p>One in-person meeting with the 8 First Nations</p> <p>75% participation of elected officials in Forums of Councils and workshops</p> <p>CAO attends 5 CAO meetings annually</p>	<p>Target achieved</p> <p>Approximately 50% participation rate</p> <p>Target achieved</p>	<p>One in-person meeting with the 8 First Nations</p> <p>75% participation of elected officials in Forums of Councils and workshops</p> <p>CAO attends 5 CAO meetings annually</p>
<b>Service Goal: Provide high quality administrative support</b>	<p>Post agendas by Friday at noon 95% of the time</p> <p>Over 90% of Board and Committee meetings available via webstreaming</p> <p>Response time to FOI requests is within 30 days 90% of the time</p>	<p>Achieved approximately 50% of the time</p> <p>Target achieved</p> <p>Target achieved</p>	
<b>Service Goal: Provide specialized support for Board and legislative matters</b>	<p>Director orientation completed within 3 months of election</p> <p>Deliver FOI training sessions for 95% of staff within 9 months of employment start</p>	<p>Target achieved</p> <p>Target achieved</p>	<p>Director orientation completed within 3 months of election</p> <p>Deliver FOI training sessions for 95% of staff within 9 months of employment start</p>

			<p>Circulate Board correspondence to the portal 2 times per week, 95% of the time</p> <p>Review time for contracts: 1 week, 90% of the time</p>
<p><b>Service Goal: Communicate Board direction and corporate standards and initiatives to the organization</b></p>	<p>Two meetings held annually with CRD managers with 90% participation rate</p>	<p>Target achieved</p>	<p>Two meetings held annually with CRD managers with 90% participation rate</p> <p>Quarterly CAO reporting to the Board</p>

## Contact

Name: Brent Reems  
 Title: Senior Manager, Legislative and Corporate Services  
 Contact Information: 250.360.3128

**SERVICE NAME:** Corporate Communications

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- Increased need and demand for communications strategies as part of outreach initiatives may require adjustments in service delivery model and/or resources.
- Increased demand to be flexible and adapt to changing priorities, such as the need for an Internal Communications Framework.
- The general public increasingly consumes news and information online via social networks, with the use of video trending upward across social media platforms.
- While Facebook usage is high, its algorithm limits the number of posts that followers see. As a result, brands are increasingly using paid advertising to reach audiences.
- Online and digital advertising are increasingly viable channels for reaching broad audiences - in addition to traditional print and radio.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- Operating costs are expected to be approximately \$27,000 (3%) below budget due to temporary periods where staff positions have been vacant. This has been offset by higher than budgeted costs for an updated version of Adobe software and increased operating expenses.
- Internal recoveries are expected to be below budget by the same amount (6%) due to staff turnover. No surplus or deficit at the end of 2017 is anticipated.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Image Library and Multimedia Review initiatives rolled into Develop Digital Asset Management System project with IT and Legislative Services
- Implement Internal Communications Framework
- Refreshed intranet and guidelines as part of Organizational Development Plan
- Resident satisfaction survey – moved from 2017 to 2018 to align with strategic planning process; reframed to focus on service satisfaction.

***Service Adjustments and Staffing Levels:*** (linked to section 2 of the detailed service plan)

- No adjustment planned

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Provide specialized support to Board and CRD departments in their communication of decisions and information</b></p> <ul style="list-style-type: none"> <li>Respond to 95% of media inquiries within two hours of receipt</li> <li>% of news releases that result in earned media annually</li> <li>Website reach: <ul style="list-style-type: none"> <li>5% annual increase number of sessions and page views</li> <li>50% new sessions (50% repeat)</li> </ul> </li> <li>Website engagement: <ul style="list-style-type: none"> <li>Average time on page <math>\geq</math> 1:30</li> <li>Average pages/session 2.5</li> </ul> </li> </ul>	<p>95%</p> <p>65%</p> <p>1.6M sessions 2.83M page views Establish baseline</p> <p><math>\geq</math> 1:30 2.5</p>	<p>95%</p> <p>67%</p> <p>1.6M sessions 2.88M page views 47% new sessions</p> <p>1:38 2.3</p>	<p>95%</p> <p>67%</p> <p>1.7M sessions 2.97M page views 50% new sessions</p> <p><math>\geq</math> 1:30 2.5</p>
<p><b>Service Goal: Ensure consistency of messaging and visual brand across all communications channels and mediums</b></p> <ul style="list-style-type: none"> <li>95% of all major activities that require production support are registered in Corporate Communications calendar (2016 baseline)</li> </ul>	<p>95% baseline year</p>	<p>90%</p>	<p>95%</p>
<p><b>Service Goal: Increase opportunities for two-way engagement</b></p> <ul style="list-style-type: none"> <li>Participation rates of residents in two-way dialogue and engagement opportunities*</li> <li>Global social media engagement statistics, including likes/shares/comments/reactions* (2017 baseline, 10% annual increase)</li> <li>Increase the number of followers and likes on CRD social media channels by 10% annually (2015 baseline)</li> <li>KPI addition: 95% of planned major capital projects and strategic initiatives for 2018 featured on the website</li> <li>Number of new Checkbox surveys published</li> <li>Number of engagement sessions held in the Centre for Engagement* (2017 baseline)</li> </ul>	<p>4325 Twitter followers</p> <p>1730 Facebook Fans</p> <p>50 projects &amp; initiatives 10-12 surveys</p> <p>12 baseline year</p>	<p>2000 Twitter engagements</p> <p>7000 Facebook engagements</p> <p>Twitter 4325+</p> <p>Facebook 1750+</p> <p>50 projects &amp; initiatives 12 surveys</p> <p>12 sessions</p>	<p>2200 Twitter engagements</p> <p>7700 Facebook engagements</p> <p>4800 Twitter followers</p> <p>2000 Facebook Fans</p> <p>TBD based on service planning 10 -12 surveys</p> <p>16 sessions</p>

<p><b>Service Goal: Develop and implement internal communications framework</b></p> <ul style="list-style-type: none"> <li>• Increase usage of CRD Central as a means to share information effectively (#visits and visitors - 2017 baseline)</li> <li>• Use of templates and tools for communicating organizational messages to employees</li> </ul>	<p>2017 baseline measure</p> <p>Framework developed</p>	<p>2017 baseline measure (# visits, # visitors)</p> <p>Framework developed</p>	<p>2018 YoY increase</p> <p>100% templates and tools implemented</p>

## Contact

Name: Andy Orr  
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 Contact Information: 250.360.3229.

**SERVICE NAME:** First Nations Relations

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- Increased scope and specific tasks as directed by the Special Task Force on First Nations Relations and approved by the Board, relating to the Truth and Reconciliation Commission (TRC) Calls to Action.
- Engagement with First Nations is increasingly “deeper” as a result of both greater familiarity and stronger relationships, which requires more resources for both the Region and the engaged First Nation.
- Emerging discourse regarding Douglas Treaty rights and the application to regional parklands.
- Increase in number of First Nations leaders expressing interest in Board participation.
- Staff support to the Wastewater Treatment Project’s First Nations Liaison’s positions and consultation obligations.
- Fostering greater participation by First Nations in emergency planning and affordable housing sectors.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- There is a one-time favourable variance of \$6,000 (12%) due primarily to underspending in legal expenses. This variance will be rolled up and combined with Legislative Services.
- Board approved a temporary (1 year) increase in staff resources to achieve tasks identified by Task Force. Funds for the auxiliary position are drawn from the division’s reserve fund and has no impact on surplus/deficit.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Development of effective communications and education documents for internal / external use
- Updates and renewals to various service agreements
- Completion of special projects: E&N Rail Trail through Songhees and Esquimalt Nations; Cultural Access Agreement with T’Sou-ke Nation; shellfish harvesting
- Publication of quarterly engagement newsletter
- Support for First Nations Liaison positions relating to Core Area Wastewater Treatment project
- Fostering greater First Nations participation in regional initiatives, such as emergency planning and affordable housing
- Expanded Scope and Tasks regarding the TRC Calls to Action:
  - Corporate-wide cultural training and education materials
  - Reconciliation statement
- Additional Tasks as Identified by Task Force:
  - Facilitate discussions with Douglas Treaty Nations on local government responsibilities
  - UBCM / Provincial government advocacy for governance changes
  - Committees / Commissions review in consideration of First Nations participation
  - Dedicate a Committee of the Whole meeting with First Nations Chiefs to a joint agenda
  - Support municipalities in First Nations relationship building initiatives
  - Quarterly report to the Board on FNRD (First Nations Relations Division) / Task Force activities

***Service Adjustments & Staffing Levels:*** (linked to section 2 of the detailed service plan)

- Increase of staffing by one year auxiliary

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Facilitate relationship between CRD leadership and First Nations</b></p> <ul style="list-style-type: none"> <li>Board attendance to cultural training sessions</li> <li>Forum of Government event</li> </ul>	<p>50% participation</p> <p>1</p>	<p>50%</p> <p>Delayed to 2018</p>	<p>75%</p>
<p><b>Service Goal: Address emergent issues &amp; opportunities as directed by the Board through the Special Task Force</b></p> <ul style="list-style-type: none"> <li>Quarterly reports to the Board summarizing response to emergent issues and opportunities</li> </ul>	<p>4</p>	<p>4</p>	<p>4</p>

## Contact

Name: Sue Hallatt

Title: Manager, First Nations Relations Division

Contact information: 250.360.3156

**SERVICE NAME:** Human Resources and Organizational Development (HR&OD)

**Changes in Assumptions, Trends, and Other Issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- Accelerated change in the workforce requires realignment of work activities and staffing to support more comprehensive onboarding and training.
- Evolution of human resource and organizational development services to ensure a better understanding of organizational systems and processes, and to facilitate greater staff engagement and accountability.
- Implementation of more integrated safety standards and guidelines with increased capital project activity, and to continue to improve WorkSafeBC employer rated assessment (premium costs).

**Overall 2017 Budget Performance:** (linked to budget forecast to year end)

- There is a one-time net favorable variance of \$157,000 (10.0%) as a result of budgeting for implementation of safety programs, employee changes, delay in collective bargaining, and low spending on contract for services. This will be offset by a shortfall of \$53k (4.3%) in internal recoveries. The positive variance will be used to fund one-time costs for the safety initiatives and offset general legislative requisition in 2018.
- Based on 2017 budget performance, in the area of occupational health and safety, the recovery model has been re-evaluated to be better aligned with where services are provided and where the benefits of experience rating costs and recoveries are realized.

**Update to Division Initiatives:** (linked to section 3 of the detailed service plan)

**Core Services:**

- Additional focus to support key complex corporate programs and projects, including key capital projects, such as the Core Area Wastewater Treatment Project.
- Additional resourcing and focus required for occupational health and safety management. Focus to include significant occupational health and safety governance and oversight, and an increased presence notably in the areas of capital development.
- Additional focus in advancing the Organizational Development Plan, including proactive and advanced recruitment, onboarding, training and employee engagement initiatives.
- Additional focus on ensuring all legislative and regulatory obligations are maintained including improved disability management programs aimed at proactive return to work programs.
- Bargain new collective agreement with CUPE Local 1978 and USW Local 1-1937.

**Board Priorities: no changes**

**Service Adjustments and Staffing Levels:** (linked to section 2 of the detailed service plan)

- Corporate Occupational Health and Safety has been centralized to best ensure consistent approach and legislative requirements are maintained.
- New resources and services required to enable centralized oversight of legal responsibilities pertaining to owner's safety obligations. Internal realignment of staff resources with the addition of 1 FTE as follows:
  - Safety Advisor realigned from Integrated Water Services to HR&OD in 2017; no net change in FTE; \$138k funded by allocations from IWS division
  - Manager of Corporate Occupational Health and Safety confirmed a regular FTE from term FTE; no net increase in FTE; \$153k funded by requisition
  - Addition of Human Resources Advisor to provide confidential statutory support and service to corporate occupational health and safety function; addition of 1 FTE; \$94k funded by allocations across the organization

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Support and lead proactive disability management and return to work programs</b>  CRD Absenteeism <i>(industry avg: 5-8%)</i>	3-5%	4%	3-5%
<b>Service Goal: Support and lead cost effective organizational development, workforce planning, and recruitment/retention programs</b>  CRD Staff Turnover / Retirement Rate <i>(industry avg: 9.6% turnover / 2.3% retirements)</i>	7% / 3%	5.7% / 2.3%	7% / 3%
<b>Service Goal: Support and lead cost effective organizational development, workforce planning, and recruitment/retention programs</b>  # of Employment Competitions	180	250 <i>(projected)</i>	220
<b>Service Goal: Provide cost effective full-spectrum HR services</b>  HR FTE to CRD FTE Ratio <i>(industry avg: 1:72, or 1 HR FTE to 72 FTEs)</i>	Greater than 1:72	1:90 1 HR FTE to 90 staff FTEs)	Greater than 1:72
<b>Service Goal: Provide cost effective full-spectrum HR services</b>  Grievance resolution rate <i>(prior to arbitration)</i>	Greater than 90%	96%	Greater than 90%
<b>Service Goal: Support and lead organizational compliance for Occupational Health &amp; Safety</b>  WorkSafeBC (Safety) Employer Rated Assessment <i>(industry average = 2.03%)</i>	10% below industry average	13% below industry average (1.79%)	Minimum 10-15% below industry average

## Contact

Name: Christopher Neilson, MBA, BComm, CPHR

Title: Senior Manager, Human Resources & Organizational Development

Contact information: 250.360.3282

**SERVICE NAME:** Real Estate Services

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- The majority of the work for the Core Area WWTP in relation to Real Estate is completed, however the Real Estate Division continues to provide daily support.
- Increased activity in the local real estate market has increased demand for agreements in 2017, and staff are accommodating the increase.
- Land acquisition by several departments is continuing at a steady rate and there is an increase in CRD space being leased to third parties.
- Referrals from 3<sup>rd</sup> party agencies have doubled in 2017 and staff are accommodating the increase.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- There is a favourable variance of \$30,000 (7%) due mainly to underspending in auxiliary wages and contract for services. This variance will be rolled up to the overall Legislative Services surplus/deficit.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Referrals from 3<sup>rd</sup> Parties continue to be managed by Real Estate with no allocation for costs. The referrals have increased from 47, in 2013 to a forecasted 205 in 2017.
- Core Area WWTP – the key land tenures agreements were executed in 2017, and some minor ones remain outstanding.

***Service Adjustments and Staffing Levels:*** (linked to section 2 of the detailed service plan)

- No adjustments or changes intended

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Number of CRD Services supported by Real Estate Division</b>	59	59	59
<b>Service Goal: Number of SRW's and Covenants transactions completed in 2017</b>	30	45	35
<b>Service Goal: Number of Property Negotiations completed or in progress</b>	50	70	60
<b>Service Goal: Referrals</b>	100	190	150

## Contact

Name: Stephen Henderson  
 Title: Manager of Real Estate Services  
 Contact Information: 250.360.3136

# Service Plan for Asset & Risk Management

2016 – 2019

Capital Regional District

**Date submitted:** ~~September 30, 2015~~ September 30, 2015

**Date updated:** September 29, 2017 ~~September 29, 2016~~



Making a difference...together

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# 1 Overview

## 1.1 Division & Service Summary

The ~~Risk and Asset and Risk~~ Management Division serves the entire organization in each service area and utilizes its resources in an optimal and efficient manner. Our core services are risk and insurance, climate, grant and asset management and we provide leadership and direction within the Capital Regional District. The service areas vary in size and complexity by which this division scales their services to meet the service areas requirements. ~~coordinates the Risk management and Insurance functions for the organization, departments upon request~~

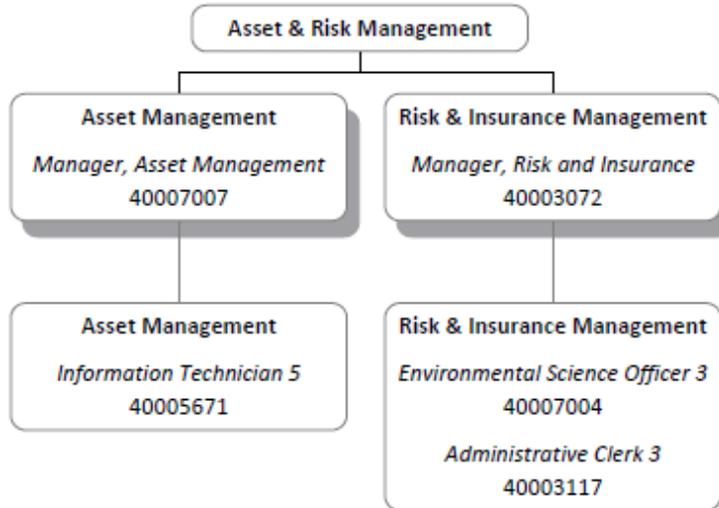
Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Risk Management (RM)</b></p> <ul style="list-style-type: none"> <li>• Loss Control (Property and Liability)</li> <li>• Claims Management (Property, Liability, and 3<sup>rd</sup> party claims)</li> <li>• <del>Enterprise Risk Management (Risk Register)</del></li> <li>• <del>Development of a Business Continuity Management program (BCMP) to ensure that critical services are delivered during a disruption</del></li> <li>• <del>Work with internal stakeholders to document critical business processes; assess risks; and create business continuity plans</del></li> <li>• <del>Consulting Services</del></li> </ul>	All Departments	Requisition, Insurance Reserves, allocations, internal recoveries, Insurers	Finance Committee
<p><b>Insurance Management (IM)</b></p> <ul style="list-style-type: none"> <li>• Insurance Procurement</li> <li>• Coordinate acquisition of Construction Insurance (coc &amp; wrap up)</li> <li>• Contract Review (insurance and indemnity wordings)</li> <li>• Fleet Insurance</li> </ul>	All Departments	Internal Allocations and Recoveries, Requisition	Finance Committee

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<ul style="list-style-type: none"> <li>Property Valuations (replacement costs)</li> <li>Certificate of Insurance Management</li> </ul>			
<p><b>Corporate Climate Action</b></p> <ul style="list-style-type: none"> <li><a href="#">Implement Corporate Climate Action Strategy</a></li> <li><a href="#">Coordinate and manage provincial CARIP reporting requirements</a></li> <li><a href="#">Accelerate corporate mitigation and adaptation activities</a></li> <li><a href="#">Implement climate lens for CRD decision-making</a></li> <li><a href="#">Oversee CRD's commitment to 33% reduction in operational GHG emissions by 2020.</a></li> </ul>	<a href="#">All Departments</a>	CARIP and Internal Allocations	Finance Committee
<p><b>Asset Management (AM)</b></p> <p><a href="#">Establishment of a Corporate Asset Management</a></p> <ul style="list-style-type: none"> <li><a href="#">Framework</a></li> <li><a href="#">Policy</a></li> <li><a href="#">Strategy</a></li> <li><a href="#">Corporate Plan</a></li> </ul> <p><a href="#">Establishment of a Corporate Enterprise Asset Management System</a></p> <p><a href="#">Establishment of a Capital Asset Program Manual for Capital Planning and Implementation.</a></p> <p><a href="#">Development of networks and relationships with relevant organizations and association as it relates to Asset Management.</a></p>	All Departments	Internal Allocation	Finance Committee

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><a href="#">Strategic adviser to the Executive Leadership Team relating to Asset Management.</a></p> <p><a href="#">Development of Asset Management tools as they relate to the Asset's lifecycle.</a></p> <p><a href="#">Asset Management adviser to the organization's service areas</a></p>			
<p><b><a href="#">Grant Portfolio Management (GPM)</a></b></p> <p><a href="#">Coordinate CRD participation in External Grant Programs (EGP – which refers to grant funding accessible from and dispersed by external agencies)</a></p> <p><a href="#">Administer processes related to Internal Grant Programs (IGP – which refers to grant funding the CRD disperses to CRD Services and/or Third Parties. These programs include Grants-In-Aid and Federal Gas Tax Community Works Fund)</a></p> <p><a href="#">Strategic adviser on grant application to organization service areas and the Executive Leadership Team</a></p> <p><a href="#">Monitor and research local, provincial and national grant programs</a></p> <p><a href="#">Develop reports, dashboards, and analytics on grant activities within the organization</a></p> <p><a href="#">Collaborate with Project Leads of grant-funded initiatives to ensure compliance with grant program requirements at all stages of the grant life-cycle</a></p>	<p><a href="#">All Departments</a></p>	<p><a href="#">Internal Allocation</a></p>	<p><a href="#">Finance Committee</a></p>

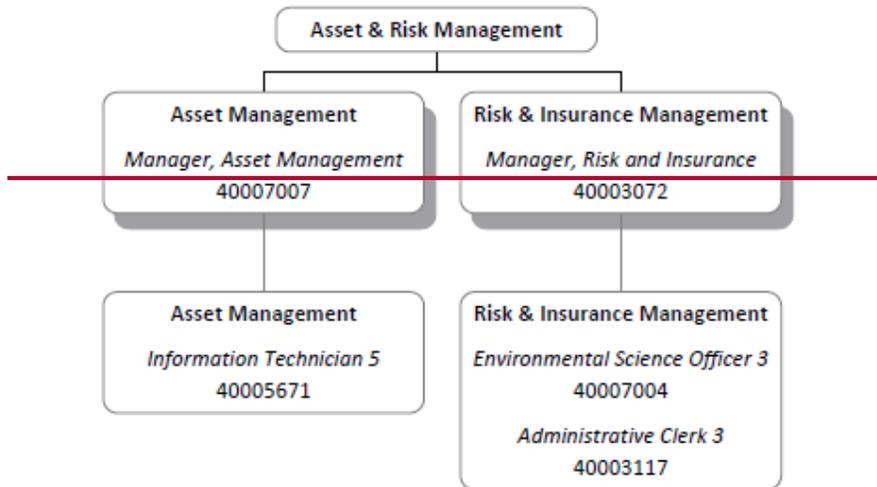
## 1.2 Organization Chart

# Asset & Risk Management



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# Asset & Risk Management



## 1.3 Key Trends, Issues & Risks – Service Specific

Increased corporate focus on climate change mitigation and adaptation activities and corporate climate policy development: CRD has set a target to reduce corporate GHG emissions 33% below 2007 levels by 2020 and in 2016 committed to accelerate corporate mitigation and adaptation activities. [In November](#)

2016, the CRD Board endorsed the Corporate Climate Action Strategy which identified policy, goals and actions to meet Board-endorsed targets, and identified additional resources required for implementation.

CRD has also committed to developing and implementing organizational policies and incorporating climate change in new risk registers to elevate consideration of climate change as part of decision-making. Coordination, project management, project implementation and corporate support towards meeting these objectives will be delivered by the division.

Corporate focus on developing a Business Continuity Management Program (BCMP) and implementing a framework, policy, strategy and plans for building organizational resilience.

Trending to an increased focus on asset management long term planning.

Build on our risk management processes as it relates to the activities within the asset's lifecycle.

Improve the ability to report on the condition, replacement value and risks with our assets.

Standardizing asset management processes to align with industry best practices (i.e. Asset Management BC, NAMS) requiring CRD to adapt to these standards.

Increased demand for information from the public on the impact of the investment historically and current as it relates to capital assets and internal grant distribution.

Build on the current processes on CRD's natural asset management and increase transparency through enhanced reporting in the public forum.

Development and implementation of industry best practices on asset management practices and tools to establish a robust decision-making methodology that includes a quantitative and qualitative process.

Due to the increase demand for funding capital projects, the grant program activity has increased therefore requiring greater demand on reporting, forecasting, coordination, and research.

Gather data (staff time, observations, feedback from grant agencies) to help develop principles and guidelines for participation in grant programs such that the return on investment in the grant application phase of the grant life-cycle is maximized.

## 1.4 Link to Priorities

The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:

### CLIMATE CHANGE

- realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations
- develop and implement a climate strategy and framework to guide decision-making, establish a working group to identify climate change priorities and maximize partnerships

### CORPORATE DEVELOPMENT

- evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery

- ensure CRD service delivery is effectively supported through the development of best practices
- [enhance and ensure effective financial and audit reporting practices](#)
- [Support continued investments in workforce education, training and development](#)

#### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- [develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered](#)

#### HOUSING

- [Establish an overarching Housing body, complete the Long Term Financial and Asset Management Plan and the Regional Housing Affordability Strategy Update.](#)

#### DRINKING WATER

- [Invest in the renewal and replacement of aging infrastructure to deliver an adequate supply of safe, reliable drinking water](#)

#### EDUCATION, OUTREACH & INFORMATION

- [Demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information.](#)

## 2 Services

### 2.1 Service Levels

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Risk Management (RM)	<p>Complete 10 of the FM loss control Global recommendations</p> <p><u>Property</u> Inspection(s) 1 day / month</p> <p>Respond to third party notices</p> <p>Investigate incidents and claims</p> <p>Coordinate CRD responses and actions</p> <p>Liaise with CRD staff and legal counsel and</p>	<p>Implement ERM</p> <p>Maintain Risk Register</p>	<p><del>Review and Assess</del> Enhance processes to include evaluation of projects and initiatives through an Enterprise Risk Management framework</p>	<p><del>Adjust to meet service delivery needs, as required</del> Adjust to meet service delivery needs, as required.</p>	<p>Adjust to meet service delivery needs, as required.</p>

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<p>participate in legal process</p> <p><del>es</del></p> <p>Provide <del>monthly</del> <u>quarterly legal status updates reports to ELT</u></p> <p>Provide quarterly reports to Insurers</p> <p>Develop ERM <u>policy and</u> framework</p> <p>Develop Risk Register <u>templates</u></p> <p><del>Develop reporting process</del></p> <p>Initial response to staff queries within 1 working day (consulting services)</p>				
<b><u>RM: Business Continuity Management System</u></b>				<p><u>Develop a corporate Business Continuity Management (BCM) Program</u></p> <p><u>Develop BCM framework and policy</u></p> <p><u>Develop BC plans, test and implement. Monitor and review</u></p>	<p><u>Develop BCM plans, test and implement. Monitor and review</u></p>
<b>Insurance Management</b>	<p>For the 8 insurance programs, prepare applications; negotiate terms, and complete renewals</p> <p>Update policy terms for new activities as required</p>	Develop CRD COI form for third parties to complete.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Coordinate full Replacement Value appraisal (every 5 years)

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<p><del>Review Dam insurance</del>  Obtain Property &amp; <del>and</del> or Liability (COC &amp; / or Wrap-up) policies for construction projects within 2 weeks of request</p> <p>Respond to approx. 50 staff requests per year (contract review/waivers/<del>indemnity clauses</del>)</p> <p>Obtain auto insurance for approx. <del>357</del> 9 vehicles / year</p> <p>Obtain property valuations (replacement cost) for new facilities acquired</p> <p>Obtain update of replacement costs for approximately <del>286-294</del> locations</p> <p>Purchase policy for Third Party Users and collect premiums for 102 events held at CRD facilities</p> <p>Obtain <del>issue</del> approx. 50 Certificates of Insurance (COI's) for 3rd parties</p> <p>Manage approx. 100 COI's required by CRD</p>				

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<p><b><u>Corporate Climate Action:</u></b></p>	<p>Corporate climate action was not part of the division for the base year.</p>	<p>Identify, develop and achieve Board endorsement of Corporate Climate Action Strategy.</p> <p>Implement climate lens for CRD decision-making</p> <p>Accelerate corporate mitigation and adaptation activities.</p> <p>Identify approach to meet 33% GHG reduction target in corporate operations.</p>	<p>Implement Corporate Climate Action Strategy, following the timeline and resources identified within the Strategy document.</p>	<p>Implement Corporate Climate Action Strategy, following the timeline and resources identified within the Strategy document.</p>	<p>Implement Corporate Climate Action Strategy, following the timeline and resources identified within the Strategy document.</p>
<p><b><u>Grants Portfolio Management (GPM):</u></b></p> <p><u>Research and communicate grant opportunities</u></p> <p><u>Co-ordinate CRD participation in EGP</u></p> <p><u>Administer processes related to IGP</u></p> <p><b><u>Administration of grants, preparation of grant applications</u></b></p> <p><b><u>Coordinate accountability/ audit of delivered grant programs</u></b></p> <p><b><u>Prepare bylaws for</u></b></p>	<ul style="list-style-type: none"> <li>• <u>Scan for new grant opportunities that could be available for CRD services and inform and assist staff with application.</u></li> <li>• <u>Collaborate with Project Leads to support development of approximately 20 EGP applications per year</u></li> <li>• <u>Process approx. 90 IGP applications per year</u></li> <li>• <u>Co-ordinate approx. 40-50 EGP-funded projects through all stages of the grant life-cycle (i.e.: agreement /</u></li> </ul>	<p><u>Asset Management linkage</u></p>	<p><u>Adjust to meet service delivery needs, as required.</u></p>	<p><u>Adjust to meet service delivery needs, as required.</u></p>	<p><u>Adjust to meet service delivery needs, as required.</u></p>

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b><u>certain financial activities that require board approval</u></b>	<ul style="list-style-type: none"> <li>• amendment execution, claims processing, progress reporting, final reporting, document and data management)</li> <li>• Regular grant dashboard updates.</li> <li>• Process approx. 30 Third Party Agreements for IGP-funded projects</li> <li>• Continually maintain and optimize the SharePoint-based CRD Grants Library, inclusive of document and data management.</li> </ul>				
<b><u>Asset Management (AM)</u></b>	<ul style="list-style-type: none"> <li>• Develop and implement asset management planning framework</li> <li>• Build tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered</li> </ul>	<u>Draft development and consultation</u>	<u>Draft development and consultation</u>	<ul style="list-style-type: none"> <li>Establishment of a Corporate Asset Management <ul style="list-style-type: none"> <li>• <u>Framework</u></li> <li>• <u>Policy</u></li> <li>• <u>Strategy</u></li> <li>• <u>Corporate Plan</u></li> </ul> </li> <li>Establishment of a Corporate Enterprise Asset Management System</li> <li>Establishment of a Capital Asset Program Manual for Capital Planning and Implementation.</li> </ul>	<u>Adjust to meet service delivery needs, as required.</u>

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
				<u>Development of networks and relationships with relevant organizations and association as it relates to Asset Management.</u>  <u>Strategic adviser to the Executive Leadership Team relating to Asset Management.</u>  <u>Development of Asset Management tools as they relate to the Asset's lifecycle.</u>  <u>Asset Management adviser to the organization's service areas</u>	

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Risk Management	2.5	3.5	3	4	4
Asset Management			2	<u>2</u>	<u>2</u>
<b>Total</b>	<b>2.5</b>	<b>3.5</b>	<b><u>5</u></b>	<b><u>6</u></b>	<b><u>6</u></b>

\* Increase from realignment of resources from Finance; see corresponding reduction in Financial Services Service Plan

\* 2018 increase of 1 FTE in Risk Management for Business Continuity Management position

# 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016 – 2019</b>			
<b>Realign resources and reorganize Risk, Insurance &amp; Facility Management Division</b>  <del>To be e</del> Completed in 2016	As identified in 2016 priorities, the division was realigned to include a Manager of Environmental Engineering and a Climate Action Analyst	Climate Change	Realignment of costs and funding sources from other departments
<b>RM – Enterprise Risk Management (ERM) Development</b>  <del>Anticipated ERM will be e</del> Ongoing	<del>Working with ELT d</del> Develop policy, <del>framework and -and</del> process to embed ERM across the organization  Develop and maintain Strategic Risk Register in conjunction with ELT	<del>Climate Change</del> Corporate Development  <u>Climate Action</u>	Core Budget and Department Budgets  Impact on existing resources is unknown and will depend on service level expectations
<b>RM – Enterprise Risk Management (ERM) Implementation and Management</b>  Ongoing	Educate Departments <del>on Operational Risk Contacts on</del> the ERM Program and assist in developing operational risk registers  Coordinate reporting of operational risks to ELT to facilitate mitigation decision making.	<del>Climate Action</del> <u>Corporate Development</u>	Core Budget and Department Budgets  <del>Impact on existing resources is unknown and will depend on ELT service level expectations</del>
<b><u>RM – Enterprise Business Continuity Management Program (BCMP)</u></b>	<del>In 2018 develop policy, framework for establishing a corporate Business Continuity Management Program</del>	<u>Corporate Development</u>	<u>Core Budget and Department budgets</u>  <u>1 FTE required</u>
<b>Corporate Climate Change Policy Development &amp; Planning</b>	Policies and climate lens review template will be implemented in 2017	Climate Action	<u>Core Budget</u>
<b>Corporate Lens Review of Capital Projects</b>  2018 Onward	In 2018, initiate, manage, monitor and report on all new and ongoing capital projects, additional resource expected.	Climate Action	<u>Core Budget</u>
<b>Corporate Climate Adaptation Plan</b>	In 2018, develop plan to prepare CRD owned assets, infrastructure and facilities for future climate change impacts.	Climate Action	<del>\$65,000, -plu plus e</del> grant monies.

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Corporate Mitigation &amp; Adaptation Projects</b>  Ongoing	Manage projects and provide support to staff to develop projects designed to accelerate mitigation and adaptation activities	Climate Action	<u>\$-36,000, plus grant monies.</u>
<u>AM - Corporate asset management framework</u>  <u>2018</u>	<u>Develop, consult and establish a corporate asset management framework in 2018</u>	<u>Regional Infrastructure</u>  <u>Corporate Development</u>	<u>Realignment of existing staff resources. Some grant monies available.</u>
<u>AM - Long term asset management plans</u>  <u>2018 Onward</u>	<u>Develop a template that enable organization service areas to develop long term asset management plans in a systematic approach across the organization.</u>	<u>Regional Infrastructure</u>  <u>Corporate Development</u>  <u>Drinking Water</u>  <u>Housing</u>	<u>Realignment of existing staff resources. Some grant monies available.</u>
<u>AM - Corporate asset management strategy</u>  <u>2018</u>	<u>Develop, consult and establish a corporate asset management strategy in 2018</u>	<u>Regional Infrastructure</u>  <u>Corporate Development</u>	<u>Core Budget. Some grant monies available.</u>
<u>AM – Corporate capital planning and project management program manual.</u>  <u>2018</u>	<u>Develop, consult and establish a corporate capital planning and project management program manual that contains but not limited to;</u>  <ul style="list-style-type: none"> <li>• <u>Process maps</u></li> <li>• <u>Work plans</u></li> <li>• <u>Procedures</u></li> <li>• <u>Business case report templates</u></li> <li>• <u>Project thresholds indicator for work level effort.</u></li> </ul>	<u>Corporate Development</u>	<u>Core Budget. Some grant monies available.</u>
<u>AM – Enterprise asset management system</u>  <u>2018</u>	<u>Develop and establish an enterprise asset management system within the organization that is fully synchronized and automated with associated platforms across the organization.</u>	<u>Regional Infrastructure</u>  <u>Corporate Development</u>	<u>Core Budget and Department Budgets</u>
<u>AM – A systematic risk management approach throughout each phase of the asset’s lifecycle.</u>  <u>2018</u>	<u>Build an intuitive risk assessment tools that enable organization service areas to assess their asset risk in a systematic method across the organization.</u>	<u>Regional Infrastructure</u>  <u>Corporate Development</u>	<u>Core Budget. Some grant monies available.</u>

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<u><a href="#">AM &amp; RM – Decision making tools</a></u>  <u><a href="#">2018</a></u>	<u><a href="#">Assemble decision making tools that incorporates both quantitative and qualitative analysis with the flexibility for the organization service area to adjust the tool to fit their purpose.</a></u>	<u><a href="#">Regional Infrastructure</a></u>  <u><a href="#">Corporate Development</a></u>	<u><a href="#">Core Budget</a></u>
<u><a href="#">AM – Asset Management Workshops</a></u>  <u><a href="#">2018 Onward</a></u>	<u><a href="#">Execute asset management workshops to build on the organization’s capacity in planning, decision-making, risk assessments and project management.</a></u>	<u><a href="#">Regional Infrastructure</a></u>  <u><a href="#">Corporate Development</a></u>  <u><a href="#">Education, Outreach &amp; information</a></u>	<u><a href="#">Core Budget</a></u>
<u><a href="#">AM – SharePoint intranet website.</a></u>	<u><a href="#">Build of an intranet website to increase communication and awareness on asset management across the organization.</a></u>	<u><a href="#">Regional Infrastructure</a></u>  <u><a href="#">Corporate Development</a></u>  <u><a href="#">Education, Outreach &amp; information</a></u>	<u><a href="#">Core Budget</a></u>
<u><a href="#">AM – Asset Management CRD Web presence</a></u>	<u><a href="#">Produce a CRD asset management website to increase transparency in the CRD’s infrastructure profile.</a></u>	<u><a href="#">Regional Infrastructure</a></u>  <u><a href="#">Corporate Development</a></u>  <u><a href="#">Education, Outreach &amp; information</a></u>	<u><a href="#">Core Budget</a></u>
<u><a href="#">GPM –Internal Grant Programs – Web-based application process</a></u>  <u><a href="#">2018</a></u>	<u><a href="#">Develop a web-based application process for each IGP; this process will integrate with the CRD’s financial accounting and reporting systems.</a></u>	<u><a href="#">Corporate Development</a></u>	<u><a href="#">Core Budget.</a></u>
<u><a href="#">GPM – Optimize Data Management.</a></u>  <u><a href="#">2018 onward</a></u>	<u><a href="#">Data integration and analysis of historical and present data to enable insights, analytics on historical funding distribution.</a></u>	<u><a href="#">Corporate Development</a></u>	<u><a href="#">Core Budget</a></u>
<u><a href="#">GPM – SharePoint intranet website.</a></u>  <u><a href="#">2018</a></u>	<u><a href="#">Continuation of the development of an intranet website to increase communication on the grant portfolio program such as roles/responsibility, tools, and grant opportunities.</a></u>	<u><a href="#">Corporate Development</a></u>	<u><a href="#">Core Budget</a></u>

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<a href="#">GPM – Grant portfolio management CRD Web presence.</a> 2018	Elevate the grant portfolio information in the public facing website to include historical grant information as it relates to distribution, amounts, recipients and programs.	Corporate Development	Core Budget
<a href="#">GPM –Grant Portfolio Management Manual</a> 2018	Document the corporate GPM knowledge base on the processes, programs, procedures, standards and tools in a form of a manual.	Corporate Development	Core Budget
<a href="#">GPM – Grant Portfolio Management Framework, Policy, and Strategy.</a> 2018	Build on the CRD's success in securing grant funding over the years (\$67 million since 2003) by continuously refining strategies and systems for participation in all phases of the grants life-cycle.  Refine, update, and / or streamline IGP grant processes to ensure optimum utilization of finite human resources in meeting growing workload demands.	Corporate Development	Core Budget

## 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Contribute to corporate climate action goals	<ul style="list-style-type: none"> <li>● <del>Realign resources and reorganize division</del></li> <li>● <del>Number and impact of projects and partnerships that demonstrate support for reductions in greenhouse gas (GHG) emissions and for increased climate resiliency*</del></li> <li>● <del>Annual GHG emissions of corporate buildings*</del></li> </ul>
	<u>Develop a Corporate Climate Action Strategy to guide the organization's operational response to climate change.</u>	<ul style="list-style-type: none"> <li>● <u>Completion of a draft corporate climate action strategy.</u></li> <li>● <u>Board endorsement of corporate climate action strategy</u></li> <li>● <u>Implementation of corporate climate action strategy</u></li> </ul>
	<u>Support the organization to use a climate lens for Board decision-making that demonstrates how decisions align with CRD's GHG reduction target, climate action objectives and strategic priorities</u>	<ul style="list-style-type: none"> <li>● <u>Climate lens is integrated into 5-year capital planning template</u></li> <li>● <u>Climate lens training is offered annually</u></li> <li>● <u>Climate lens template is developed</u></li> </ul>

	<p><u>Support the organization to integrate climate change considerations into CRD management and operational decision-making</u></p>	<ul style="list-style-type: none"> <li>• <u>Annual summary of climate actions across divisions is presented to senior management prior to service plan reviews</u></li> <li>• <u>Climate change considerations are incorporated into budget planning cycle</u></li> <li>• <u>Project management process is updated to incorporate climate action policy into project requirements documents and project-level decision making</u></li> <li>• <u>A 'seed funding' (revolving green fund) mechanism is established to fund studies and components of capital projects that meet climate change objectives</u></li> <li>• <u>Staff climate action engagement/recognition program is developed and implemented</u></li> <li>• <u>Staff climate action working group is developed</u></li> <li>• <u>Procurement policy is updated to align with CCAS, and supporting decision matrix and criteria are developed</u></li> </ul>
	<p><u>Support the organization to monitor, report and communicate metrics to enhance continuous improvement toward climate change goals</u></p>	<ul style="list-style-type: none"> <li>• <u>Annual Climate Action Revenue Incentive Program (CARIP) reporting requirements are met, on time.</u></li> <li>• <u>A corporate energy management process is developed</u></li> <li>• <u>A fleet management system is developed</u></li> <li>• <u>A communications plan is developed.</u></li> </ul>
	<p><u>Support the organization to accelerate corporate climate adaptation activities to enhance resilience and prepare for future climate change impacts</u></p>	<ul style="list-style-type: none"> <li>• <u>Downscaled climate change projections report is completed.</u></li> <li>• <u>Potential impacts of sea level rise on CRD assets are identified</u></li> <li>• <u>A corporate climate adaptation plan is developed.</u></li> <li>• <u>Climate impacts are identified within risk registers in the enterprise risk management system.</u></li> <li>• <u>Climate adaptation is considered in all new capital projects through the climate lens review.</u></li> </ul>
	<p><u>Support the organization to achieve continuous, significant reductions in GHG emissions from the fleet and strive towards zero emissions for new fleet vehicles</u></p>	<ul style="list-style-type: none"> <li>• <u>An in-depth analysis of the CRD fleet is completed to identify ways to optimize fleet utilization and efficiency to reduce emissions and cut costs.</u></li> <li>• <u>Fleet management best practices are implemented.</u></li> <li>• <u>The 2007 draft fleet policy is reviewed and recommendations are made to incorporate life cycle costs and GHG emissions impacts as priorities during fleet purchasing process.</u></li> </ul>
	<p><u>Support the organization to accelerate a reduction in energy use and GHG emissions in existing buildings, facilities and infrastructure</u></p>	<ul style="list-style-type: none"> <li>• <u>A business case and feasibility analysis is completed to produce RNG.</u></li> <li>• <u>SEAPARC and Panorama are supported to complete the recommendations from energy assessments</u></li> <li>• <u>A staff conservation demand management program is developed.</u></li> <li>• <u>A review of the 15 largest energy consuming buildings and facilities is conducted.</u></li> </ul>
	<p><u>Support the organization to achieve high-performance standards and strive towards net-zero energy for all new construction.</u></p>	<ul style="list-style-type: none"> <li>• <u>Technical standards for new construction to ensure high-energy performance and low-carbon criteria are developed.</u></li> <li>• <u>Life cycle costing to calculate the business case for all capital projects is incorporated.</u></li> <li>• <u>The project management process is updated to ensure all new construction goes through a commissioning process.</u></li> <li>• <u>Climate action considerations are included in the capital project initiation process.</u></li> </ul>
	<p><b>Provide specialized information to support decision making</b></p>	<p><b>Implementation of Enterprise Risk Management system</b>  <b>Respond to general staff inquiries within 5 working days 95% of the time</b></p>

	<u>Ensure service delivery is supported through the development of best practices</u>	<ul style="list-style-type: none"> <li>• <u>Development of Business Continuity Program for identification and prioritization of critical operations, dependencies and associated resource requirements and business continuity strategies</u></li> <li>• <u>Implement an Enterprise Risk Management process to manage organizational risks and to reduce the potential for harm to employees and public.</u></li> </ul>
	Monitor liability and property exposures	<ul style="list-style-type: none"> <li>• <u>Perform a minimum of 40 internal loss control visits per year</u></li> <li>• <u>Respond to general staff inquiries within 5 working days 95% of the time</u></li> <li>• <u>Obtain property and/or liability policies for construction projects within 2 weeks of request 95% of the time.</u></li> </ul>
	<u>Long term sustainability plans on asset service levels</u>	<ul style="list-style-type: none"> <li>• <u>Implementation of a long-range capital plan spanning a minimum of 10 years with a financial strategy balancing the need, capital cost and funding.</u></li> <li>• <u>A ratio of complete 10+ years long-range capital plans over total 10+ years long-range capital plans required*</u></li> </ul>
	<u>Systematic approach to decision-making</u>	<ul style="list-style-type: none"> <li>• <u>Implement an Enterprise Risk Management process for managing risks and to provide clarity and transparency in decision making to support the achievement of the organizations objectives</u></li> <li>• <u>Implementation of a prioritization methodology that documents the quantitative and qualitative analysis analyzing a vast variety of factors.</u></li> <li>• <u>A ratio of documented decisions made on asset investments that include multiple core factors scalable to the asset's complexity over total amount.*</u></li> </ul>
	<u>Establishment of asset management plans for each organization service that contains assets that are either engineered or natural.</u>	<ul style="list-style-type: none"> <li>• <u>Implementation of a Corporate Asset Management Framework, Policy, Strategy, and Plans</u></li> <li>• <u>A ratio of complete asset management plans over total asset management plan required*</u></li> </ul>
	<u>Enable a systematic approach to risk management throughout each phase of the asset's lifecycle</u>	<ul style="list-style-type: none"> <li>• <u>Implementation of a risk management process and tools tailored and scalable to each phase of the asset's lifecycle.</u></li> <li>• <u>Documentation of risk assessments scalable to the asset's complexity throughout its lifecycle</u></li> </ul>
	<u>Optimal asset lifecycle data management</u>	<ul style="list-style-type: none"> <li>• <u>Implementation of an enterprise asset management system.</u></li> <li>• <u>Synchronization of asset data activity throughout its lifecycle to enable working with up-to-date data when making decisions in planning, implementation, operations and disposals.</u></li> </ul>
	<u>Strategic approach on grant applications with submitting projects that are in greatest need of investment within the organization</u>	<ul style="list-style-type: none"> <li>• <u>Assemble a corporate project list that is prioritized using both quantitative and qualitative analysis.</u></li> <li>• <u>High-prioritized projects are used to apply for eligible grant programs*</u></li> </ul>
	<u>Increase the organization's transparency on asset management and the grant</u>	<ul style="list-style-type: none"> <li>• <u>Assemble a presence in the CRD public facing website specifically related to assets and grants.</u></li> </ul>

[portfolio to the public to elevate the impact of our investment.](#)

- [A ratio of page visits amount over baseline amount\\*](#)

\* = Corporate indicator – multiple divisions may contribute to this measure.

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# Service Plan for Financial Services

2016-2019

(2018)



Capital Regional District

*Date Updated: Fall 2017*



Making a difference...together

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# 1 Overview

## 1.1 Division & Service Summary

The Financial Services division guides the organization in utilizing its financial resources in a secure and efficient manner. Financial Services provides financial leadership and direction to all departments and divisions within the Capital Regional District.

Specific functions administered by Financial Services include: budgeting, five year financial plan, ~~banking, treasury,~~ investing and safeguarding financial assets, ~~administration of short and long-term borrowing, revenue services, procurement, accounts receivable, accounts payable,~~ payroll, financial reporting and financial statements, direction of external audit/accountability engagements, ~~integrity of financial systems policies, procedures & guidelines, contracts, financial information systems, grants management and development of financial bylaws, billing and mail services.~~

Activities performed by Financial Services include: administration of short and long-term borrowing, banking, treasury, revenue services, procurement, accounts receivable, accounts payable, integrity of financial systems policies, procedures & guidelines, financial information systems, development of financial bylaws, billing, and mail services.

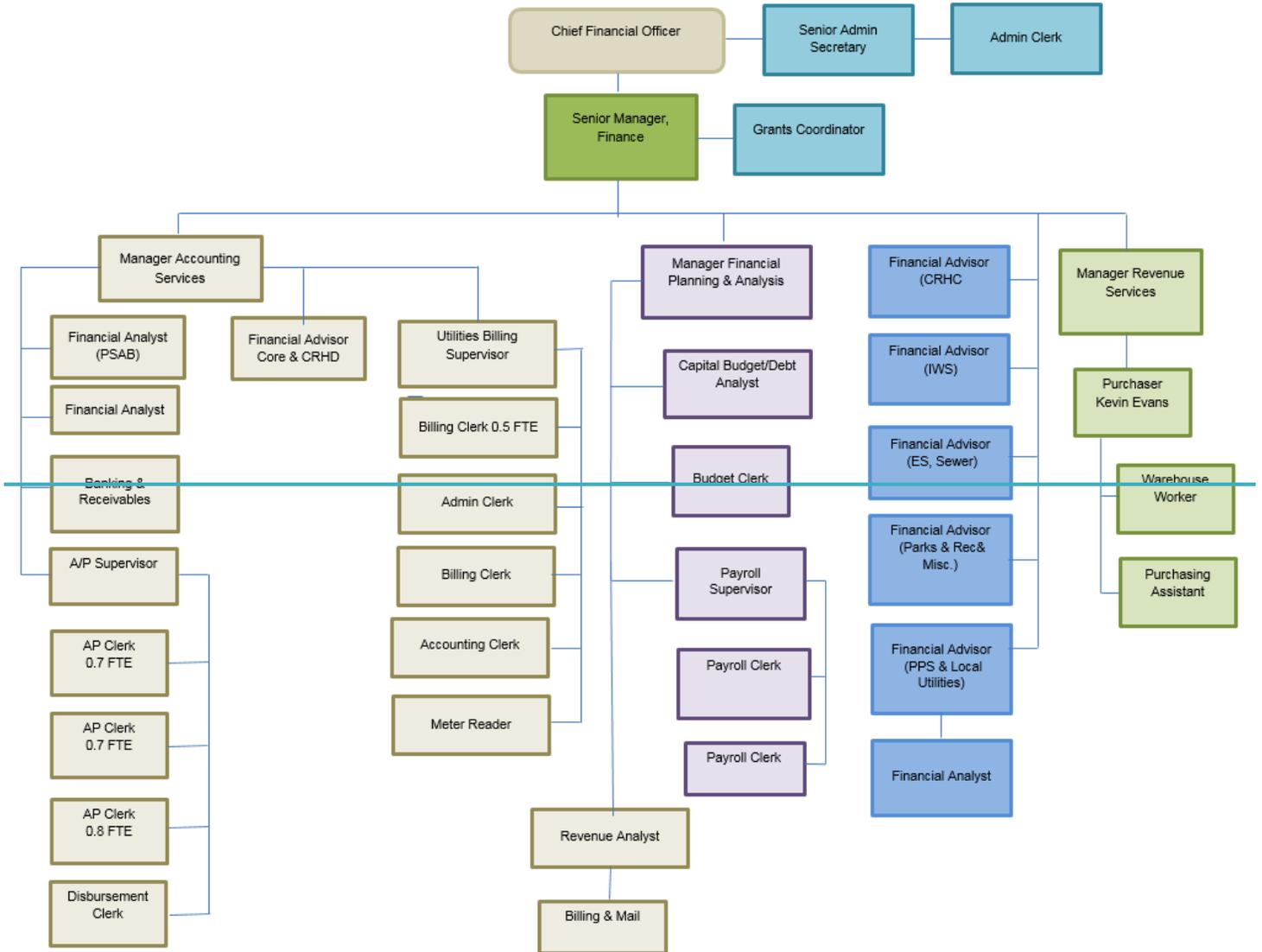
Financial Services is also responsible for co-ordination of various local services such as library services and volunteer commissions.

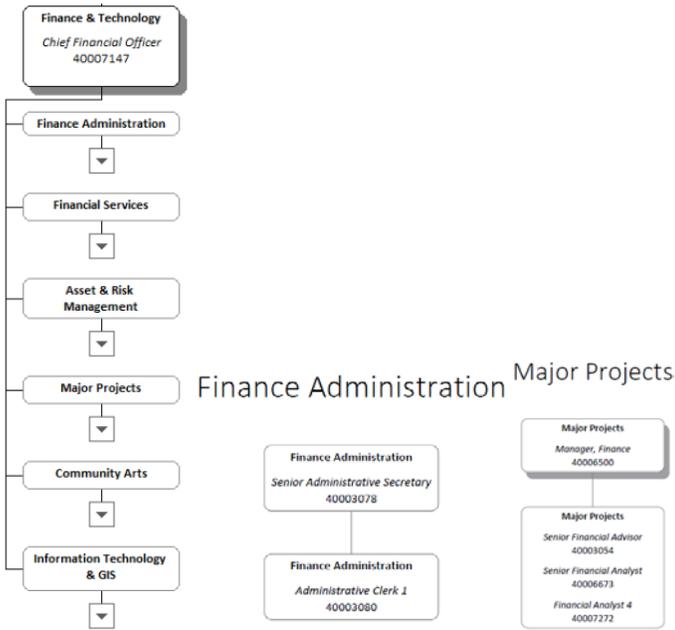
The Financial Services division serves the entire organization in each service category. The ~~organization~~ service areas vary in size and activity impacting the scope of work required by Financial Services. ~~However, Aa~~ base financial infrastructure must exists for all services to meet legislative and regulatory standards and assist the Board in discharging meeting their fiduciary responsibilities for the stewardship of the organization's assets.

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
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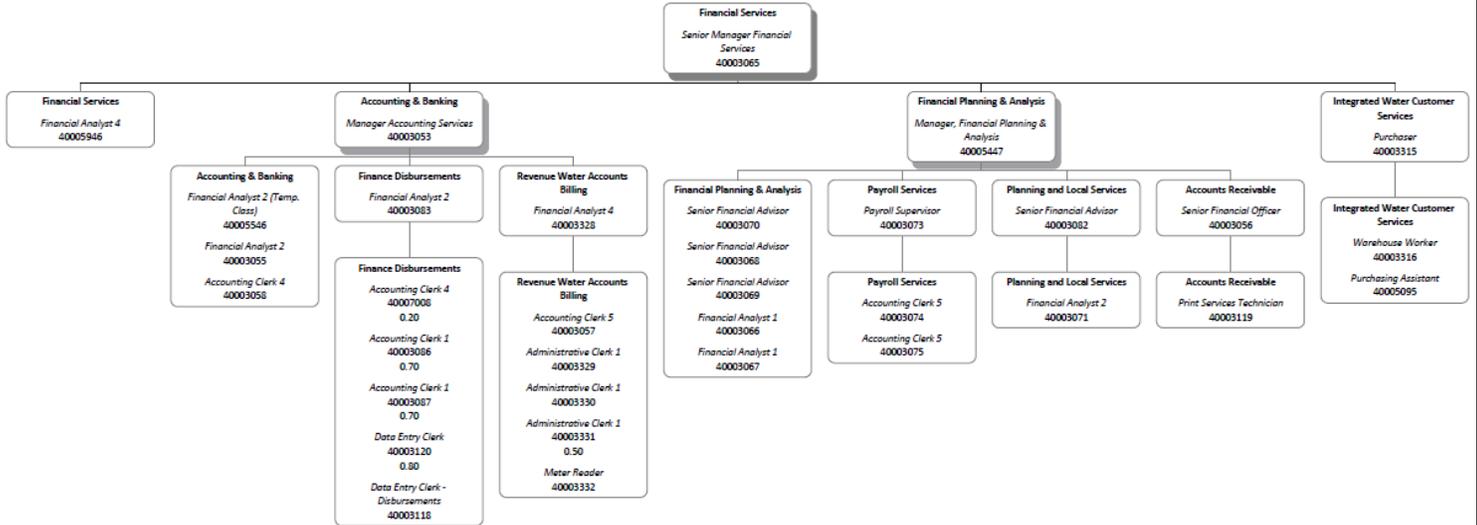
<p><b>Comprehensive Financial Services including:</b></p> <p><u>Administration of short and long-term borrowing, banking, treasury, revenue services, procurement, accounts receivable, accounts payable, integrity of financial systems policies, procedures &amp; guidelines, financial information systems, development of financial bylaws, billing, and mail services</u></p> <p><del>Financial Accounting &amp; Reporting, Financial Planning &amp;</del></p>	<p>All municipalities, Electoral Areas, First Nations.</p>	<p>Requisition, Allocations and Grants.</p>	<ul style="list-style-type: none"> <li>• Finance Committee</li> <li>• Electoral Areas Services Committee</li> <li>• Local Services Commissions (Utilities, Recreation, etc.)</li> <li>• Parcel Tax Review Panel</li> </ul>
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# 1.2 Organization Chart

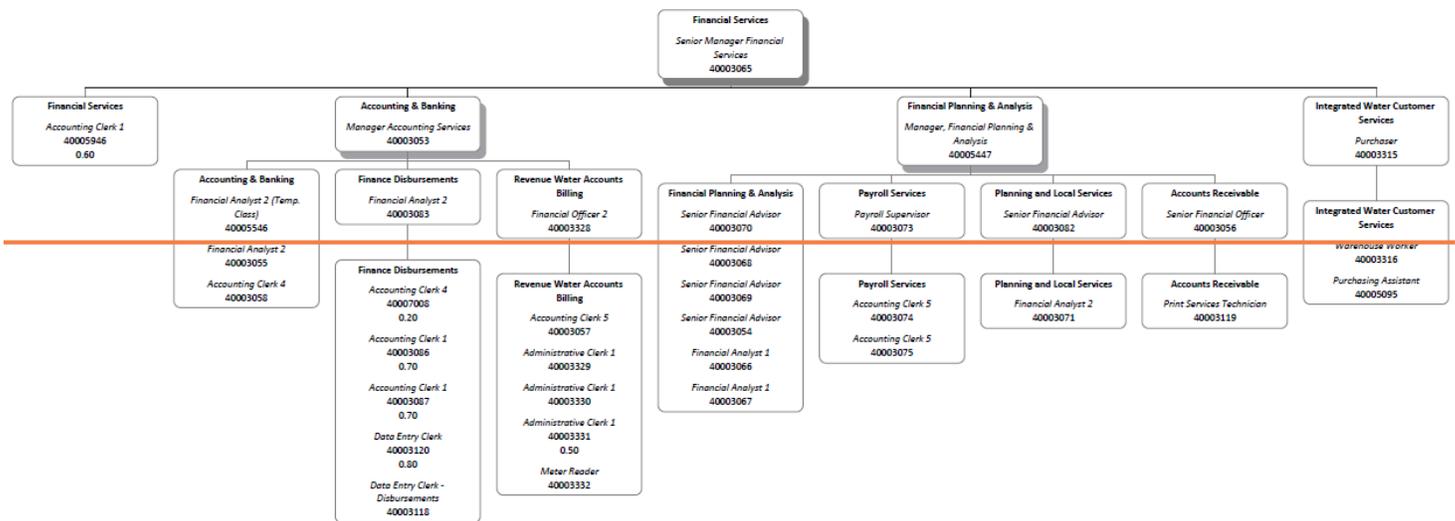




Financial Services



## Financial Services



### 1.3 Key Trends, Issues & Risks – Service Specific

- Continued development of the CRDs Long Range Sustainable Funding Plan 5 year plan, including designing and implementing an asset management framework, plans and policies, and as well as developing the long range service delivery assumptions and financial models.
- Increased demand for financial monitoring and reporting for new and growing service areas along with quarterly capital reporting.
- Increasing emphasis on value for money analysis and increasing demand for budget details resulting in a shift to more performance rated metrics requiring redesign of current reporting infrastructure.
- Improve the ability to report on and forecast reserve balances to meet the need of long range funding, in alignment with corporate asset management framework.
- Increased demand for finance to assist departments with financial analysis and advice.
- Increased demand for financial policy development, implementation, guidance and interpretation.
- Dynamic fiscal stewardship responding to changing economic factors. Continue to improve, in partnership with human resources, payroll processing, data management and reporting; enhancing human resource and payroll services provided to the organizations' employees.
- Continued changes in accounting standards and reporting (i.e. Public Sector Accounting Boards; Auditor General Local Government, etc.) requiring financial services system and process changes to adhere with standards.
- Increased scope and quantity of complex infrastructure projects along with a greater focus on asset management has increased the demand to evolve decision making processes, support future investment and build creative financing strategies. As a result, demand for enhanced controls and reporting on key performance indicators has become a greater priority.
- Knowledge loss has occurred because of employee turnover; there is a transition period as new employees learn about the organization and their job duties.
- Staff turnover and resource shortages have impacted internal controls, appearing as deficiencies in project close outs and other significant areas, along with higher than normal overtime through budgeting and year-end cycles.
- An Asset Manager was hired in 2017; all asset management and grants priorities will now be reported in the Asset & Risk Management Service Plan.
- Due to increased grant program activity, there is greater emphasis and transparency on grant forecasting, application status, and end results / contributions awarded.

- ~~Development and implementation of best-in-class municipal asset management processes and a decision-making matrix identified as new priorities.~~

## 1.4 Link to Board Strategic Priorities

The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:

### CORPORATE DEVELOPMENT

- evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery
- ensure CRD service delivery is effectively supported through the development of best practices
- enhance and ensure effective financial and audit reporting practices
- support continued investments in workforce education, training and development

## 2 Services

### 2.1 Service Levels

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)

<p><b>Financial Accounting &amp; Reporting</b></p> <p>Provision of accurate and timely financial reporting through periodic and annual financial statements according to the established schedule and policies &amp; procedures</p> <p>Compliance with external legislative requirements (i.e. CRA <del>G</del>HST, PSAB) and audit standards</p> <p>Annual yearend audit program</p> <p>Corporate financial standards and internal control compliance</p>	<p>Annual financial statements prepared and approved by June 30.</p> <p>Daily transaction processing with standard financial reports distributed by the 65<sup>th</sup> working day of the month for all services.</p> <p>Improve financial reporting to include financial indicators.</p> <p>Public Sector Accounting Standards (PSAB) require the <del>implementation-</del> adoption of PS 3260, Contaminated Sites for the 2015 fiscal year end.</p>	<p>Ongoing staff training and work load to meet PSAB requirements</p> <p>Additional research for continual improvement in financial reporting</p> <p>Updated SAP chart of accounts hierarchy</p> <p><u>PSAB 3260 Contaminated Sites implementation</u></p>	<p>Review and Assess</p> <p><u>Adoption of PS 3450 Financial Instruments and PS 2600 Foreign Currency Translation</u></p> <p><u>RFP for audit services.</u></p> <p><u>Quarterly capital reporting Q3</u></p>	<p>Adjust to meet service levels, as needed</p> <p><del>Public Sector Accounting Standards require implementation of PS-3420, Inter-entity Transactions, PS-2200, Related Party Disclosures, and PS-3380 Contractual Rights Management's Discussion and Analysis</del></p>	<p>Review and Assess</p> <p><u>Adoption of PS 3420, Inter-entity Transactions, PS 2200, Related Party Disclosures, and PS 3380 Contractual Rights</u></p>
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<p><b>Financial Planning &amp; Budgets</b></p> <p>Preparation of operating/capital budgets for the provision of 200+ services</p> <p>Financial advice and support to operating departments</p> <p>Preparation of financial bylaws</p> <p>Debt Management</p>	<ul style="list-style-type: none"> <li>• Annual budget preparation for over 200 CRD services.</li> <li>• Financial monitoring.</li> <li>• Preparation of new 5 year financial plan.</li> <li>• Development of financial plan and financial bylaws.</li> <li>• Ongoing financial advice on operating and capital budgets.</li> <li>• Expand and enhance budget review documentation.</li> <li>• Continue to streamline financial planning and budgeting processes leveraging system tools to reduce time and enhance documentation and reporting Process.</li> <li>• Tax requisitions and invoices.</li> </ul> <p><u>Development of</u></p>	<p><u>Ongoing-implementation-of-asset-management-initiatives</u></p> <p>Management research and analysis</p> <p>Design standardized budget documentation and extend available schedules and background information</p>	<p>Review and Assess</p> <p><u>5 year Capital Plan improvements to align with corporate strategies - included risk, climate action, cashflow details</u></p> <p><u>Cross departmental collaboration on process optimization with legislative services</u></p>	<p>Adjust to meet service delivery needs, as required.</p> <p><u>Implement SAP Business Planning &amp; Consolidation (BPC) module to improve and streamline budgeting processes, increase customer satisfaction, and allow for improved reporting &amp; dashboards</u></p> <p><u>Internal borrowing to reduce external debt servicing costs.</u></p>	<p>Review and Assess</p>
<p><b>Division Financial Advisory Services</b></p>	<p>Provide financial services management, business process management and training/support services to 200+ services.</p>	<p>Review and Assess</p>	<p>Adjust to meet service delivery needs, as required.</p>	<p>Review and Assess</p>	<p>Adjust to meet service delivery needs, as required.</p>
<p><b>Capital Assets:</b></p> <p>Maintain asset reporting systems and assist in asset sustainability for CRD services</p> <p>Year-end depreciation analysis of capital assets</p>	<ul style="list-style-type: none"> <li>• Managing the addition/deletion of tangible capital assets in CRD depts.</li> <li>• Annual depreciation calculations.</li> <li>• Asset management inventory support and asset funding. analysis</li> </ul>	<p>Review and Assess</p>	<p>Adjust to meet service delivery needs, as required.</p>	<p>Review and Assess</p>	<p>Adjust to meet service delivery needs, as required.</p>
<p><b>Payroll</b></p>	<ul style="list-style-type: none"> <li>• <u>Biweekly processing, reporting for 1000 employees totaling \$45M in 4 employee groups</u></li> </ul>	<p>Review and Assess</p>	<p>Adjust to meet service delivery needs, as required.</p>	<p>Review and Assess</p>	<p>Adjust to meet service delivery needs, as <u>required.</u></p>

	<p><u>\$45M in 4 employee groups</u></p> <ul style="list-style-type: none"> <li>• Process on average 6 periodic updates to payroll system for legislative and financial system upgrades.</li> <li>• Expand payroll analysis to meet demand by including personnel cost planning support and variance analysis</li> </ul>		<u>Implementation of electronic pay stubs</u>		<u>required.</u>
<p><b>Financial Systems</b></p> <p>Assist in the development of business processes for the financial system</p> <p>Provision of financial expertise and analytical support to business units</p> <p>Ensure all financial records are captured accurately in SAP</p>	<ul style="list-style-type: none"> <li>• Integration of approx. 100,000 annual transactions reporting into corporate financials.</li> </ul>	Review and Assess	<p>Adjust to meet service delivery needs, as required.</p> <p><u>New GL implementation.</u></p>	<p>Review and Assess</p> <p><u>Automate Statement of Financial Information (SOFI)</u></p>	Adjust to meet service delivery needs, as required.
<p><b>Grants:</b></p> <p><u>Research and communicate grant opportunities</u></p> <p><u>Administration of grants, preparation of grant applications</u></p> <p><u>Coordinate accountability/audit of delivered grant programs</u></p> <p><u>Prepare bylaws for certain financial activities that require board approval</u></p>	<ul style="list-style-type: none"> <li>• <u>Scan for new grant opportunities that could be available for CRD services and inform and assist staff with application.</u></li> <li>• <u>Develop an average of 15 grant applications per year.</u></li> <li>• <u>Process approx. 90 claims per year.</u></li> <li>• <u>Process approx. 50 progress and final reports to grant agencies.</u></li> <li>• <u>Regular grant dashboard updates.</u></li> </ul>	<u>Asset Management linkage</u>	<u>Adjust to meet service delivery needs, as required.</u>	<u>Adjust to meet service delivery needs, as required.</u>	<u>Adjust to meet service delivery needs, as required.</u>
<p><b>Revenue</b></p> <p>Billing, collection, forecasting and reconciliation of CRD revenue</p>	<ul style="list-style-type: none"> <li>• Monthly and quarterly billing and collections for 24,000 customers.</li> <li>• Annual Requisitions, parcel taxes and payments in lieu.</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required.	<p>Review and Assess</p> <p><u>Implement electronic billing to improve customer satisfaction</u></p>	Adjust to meet service delivery needs, as required.

<u>Revenue, continued</u>				<u>Implement Pre-authorized Debits as a billing payment option to address customer demands</u>	
<p><b>Procurement</b></p> <p>Oversee supply chain management for Integrated Water Services (IWS)</p> <p>Provide procurement advice to all departments</p>	<ul style="list-style-type: none"> <li>• Approx. 100 IWS RFPs, RFQs, tenders &amp; contracts annually.</li> </ul>	Review and Assess.	Adjust to meet service delivery needs, as required.	<p>Review and Assess</p> <p><u>Inter departmental evaluation of the Evaluate validity of centralized procurement</u></p>	Adjust to meet service delivery needs, as required.
<p><b>Treasury</b></p> <p>Manage short and long term investments and cash on hand</p> <p>Manage long term debt financing</p> <p>Provide competitive return on investments while maintaining the security of investment principal</p>	<ul style="list-style-type: none"> <li>• Ongoing investment and cash management.</li> <li>• Investment updates to Board.</li> </ul>	Adjust to meet service delivery needs, as required.	<p>Adjust to meet service delivery needs, as required.</p> <p><u>Updated Investment Policy to include Socially Responsible Investing.</u></p> <p><u>Fixed 25 year borrowing through MFA for Summit Project.</u></p>	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.
<p><b>Accounts Payable</b></p> <p>Payment to suppliers of operating and capital expenditures</p> <p>Internal controls and systems over the organizations expenditures and coding of those expenditures</p>	<ul style="list-style-type: none"> <li>• Weekly cheque and EFT run produces 13,000 vendor payments a year.</li> <li>• Compliance with external payment legislations (i.e. contract holdbacks).</li> <li>• Increasing vendors and payments to support increased service activity.</li> </ul>	<p>Increased capital projects</p> <p>Core Area Liquid Waste Management Plan</p>	Review and Assess.	<p>Adjust to meet service delivery needs, as required.</p> <p><u>Manage cash flow through payment terms.</u></p>	Review and Assess.

<p><b>Banking</b></p> <p>Coordinate all CRD banking activities</p> <p>Processing payments and electronic banking transactions of CRD expenditures</p> <p>Banking reconciliations</p>	<ul style="list-style-type: none"> <li>• Develop banking services for CRD (transactions flow through 29 bank accounts a year.</li> <li>• Monthly reconciliation of all bank accounts for over 6,000 banking transactions.</li> </ul>	<p>Review and Assess.</p>	<p>Adjust to meet service delivery needs, as required.</p>	<p>Review and Assess.</p> <p><a href="#"><u>Request for Proposal for all banking services.</u></a></p>	<p>Adjust to meet service delivery needs, as required.</p>
<p><b>Billing, Mailing &amp; Printshop</b></p> <p>Provision of utility billing, bulk printing and in-house reprographics services and CRD mail and courier services</p>	<ul style="list-style-type: none"> <li>• Ongoing reprographics service delivery and mail/courier services.</li> </ul>	<p>Review and Assess.</p>	<p>Adjust to meet service delivery needs, as required.</p>	<p>Review and Assess.</p>	<p>Adjust to meet service delivery needs, as required.</p>

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	2016	2017	2018	2019
<b>Financial Services</b>	37	38.5*	<del>38</del> 6.5	<del>37</del> <del>38.5</del> <u>40.5</u> **	<del>38.5</del> <u>40</u> <del>37.5</del>
<b>Term Positions</b>			<u>2</u>	<u>5</u>	<u>5</u>

\* Reallocation of existing FTEs to support Core Area Wastewater Treatment Project and Asset Management Initiatives.

\*\* 13.0 FTE added to support Core Area Wastewater Treatment Project (4 year term) and 1.0 FTE to be added to support Senior Financial Advisors to provide operations with additional financial advice and support, and reduce overtime for the department, and improve noted deficiencies.

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016 – 2019</b>			
<b>Asset Management</b>	Development of corporate-asset management framework and implementation of long-term asset management plans.	Regional Infrastructure  Corporate Development	Realignment of existing staff resources.  Some grant monies available.
<b>Core Area Liquid Waste Management Plan</b>  ongoing	<u>The WTP requires appropriate support to ensure financial controls and financial reporting is accurate and timely.</u>	Integrated waste management	Realignment of existing staff resources.

<p><u>Core Area Liquid Waste Management Plan, con't</u></p>	<p>The support roles will implement appropriate financial controls, produce monthly financial reports, administer an increased volume of transactions. The finance support will also process, report on and manage grant funding claims for various funders. They will administer the bylaw authorizations, financing requirements, and manage the cash flow requirements. The roles will perform ongoing analysis of WTP performance.</p>		
<p><u>Improved Financial Reporting</u> <del>ongoing</del>ongoing</p>	<p>Timely and accurate financial reporting assists in improved decision making throughout the organization. Quarterly variance reporting to the board will allow for more transparency and is foundational for performance management-. It also allows for better controls and will align with board delegated authority, along with improved year-end efficienciesand give more comfort to the organization's financial position on a regular basis.--</p> <p>Management's Discussion and Analysis (MD&amp;A) will accompanybe provided with year-end financial statements and will provide an overview of the year's performance and outline highlights of operations. This will improve usefulness and provide</p>	<p>Public engagement and communications</p>	<p>Core budget</p>

<p><u>Review GRD- Allocations (Overhead costs), Charge Out Rates, and Breakdown of Allocation versus Requisition Methodology review</u></p>	<p>Ongoing work to review, document and update the allocations cost methodology. Review methodology used for internal overhead allocations to ensure consistency and appropriateness of charges.</p> <p>Evaluate the method for determining the breakdown of revenue between allocation and requisition to ensure logical and consistent application throughout the organization.</p> <p>Review calculation of charge out rates to assess the validity of standardizing the to create consistency and reduce the volume of different methodologies.</p>		<p>Core Budget</p>
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Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Finance Policies Review and Update</b>	<p><u>Periodic review of finance policies (every three years) to verify validity and completeness and assess the need for additional policies to provide financial guidance to CRD employees and volunteers.</u>  Initiate the process of updating financial policies to support the development of long range financial planning, including the reserve and reserve fund policies and.</p>		Core Budget
<b><u>Ongoing work on management and reporting of reserves</u> <u>Capital and Operating Reserves for Appropriate Levels</u></b>	<p>Establish and develop operating reserves bylaws, review and update existing bylaws for efficient administration. In partnership with Asset Management, review best practices and industry benchmarks to assess appropriate reserve balances, which have been established to fund capital and mitigate future risk.</p> <p>Develop policies to ensure</p>		Core Budget
<b><u>Renovate/replace Grant Management Application</u></b>	<p>Current application is 8 years old and is in need of a renovation and/or replacement. With more and focus on grant reporting it is important to review the system. The current system no longer meets the financial reporting requirements.</p>		Core Budget

<p><b>Automation of Finance Processes and Systems</b> <b>General-Ledger Review</b></p>	<p>In partnership with IT, Finance will document and review current manual processes and explore ways to improve and create efficiencies and reduce the probability of errors.</p> <ul style="list-style-type: none"> <li>Automation of Statement of Financial Information (SOFI) – currently manual process.</li> <li>Implement SAP BPC.</li> <li>Standardized fuel cards to enhance internal controls and allow for improved GHG reporting.</li> <li>Explore data requirements for on-line business analytics software to provide more transparency to the public for reporting budgets and actual results.</li> </ul> <p><del>The existing General Ledger was designed and</del></p>		Core Budget
<p><b>Upgrade Budgeting Application</b></p>	<p>Current budgeting application is <u>over 16 years old and requires update</u>. <del>Review and update needed to ensure</del> <u>our budgeting application</u> meets modern standards and <del>requirements</del> <u>provides tools to simply the budget planning process.</u></p> <p><u>In partnership with IT, implement BPC to provide an</u></p>		Core Budget
<p><b>Pre-<del>A</del>uthorized <del>e</del>Debit and Electronic Billing for <del>U</del>tility <del>C</del>ustomers</b></p>	<p><u>For several years utility customers have been requesting Pre-Authorized Debits and e-billing options.</u> <u>With IT, Finance will review current technology and standards to provide customers with alternative options for payment and billing.</u> <u>This will allow CRD to meet customer demands and update to current technology.</u></p> <p><del>Review providing an additional payment option to</del></p>		Core Budget

# 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Comply with legislation and statutory requirements	<ul style="list-style-type: none"> <li>Design and manage financial planning process to ensure the Budget is prepared for final Committee and Board review by March <u>31</u> of each year.</li> <li><u>Financial Statements, Statement of Financial Information, and Audit Findings Report approved and submitted</u> by June 30<sup>th</sup> of each year</li> </ul>
	Provide specialized support and information for decision making	<ul style="list-style-type: none"> <li><del>% of successful of grant applications annually</del></li> <li><del>Daily transaction processing with s</del>Standard financial reports distributed by the 6<sup>th</sup> working day of each month for 95% of services</li> <li><u>Quarterly reporting (Q2-Q4) to Board</u></li> </ul>
	<u>Continuous improvement of financial planning, tools and processes</u>	<ul style="list-style-type: none"> <li><u>Fully funded reserve balances and 5 year capital plan</u></li> <li>Sustainable asset funding plans in place*</li> <li>Number of awards or nominations received annually*</li> <li># of financial policies reviewed and updated annually</li> </ul>
	Guide efficient and secure use of financial resources	<ul style="list-style-type: none"> <li><del>Target 65% of accounts payable payments made by purchasing card by 2019</del><u>Minimize days of accounts receivable outstanding</u></li> <li><del>Maximize return on investment</del><u>Dollars leveraged annually through grant programs (2015 baseline)</u></li> <li><u>Minimize length of time inventory is on hand</u></li> <li><u>Maximize cash flow by optimizing vendor payment terms</u></li> </ul>

\* = Corporate indicator – multiple divisions may contribute to this measure

Additional Indicators for Financial Services:

Indicators	2014 (actual)	2015 (actual)	2016 (actual)	2017 (projected)	2018 (projected)	2019 (projected)
<del>% of Accounts Payable payments by Electronic Funds Transfer</del>	44%	21%	57%	59%	60%	62%
<del>% of Accounts Payable payments by CRD-Purchasing Card</del>	54%	59%	60%	61%	62%	63%
<u>Overall Accuracy of Budgeted Surplus / Deficit to Actuals</u>			<u>92.1%</u>	<u>92.5%</u>	<u>93%</u>	<u>93%</u>
<u>Accuracy of Estimated Surplus / Deficit to Year End</u>			<u>98%</u>	<u>98%</u>	<u>98.5%</u>	<u>98.5%</u>

Frequency of on time delivery of R&E reports to all the stakeholders	98%	98%	100%	100%	100%	100%
<u>Number of Days to Perform Periodic Close</u>				<u>12</u>	<u>10</u>	<u>10</u>
<u>On time delivery of MFA financing to municipalities</u>	<del>100%</del>	<del>100%</del>	<del>100%</del>	<del>100%</del>	<del>100%</del>	<del>100%</del>
<u>Fully funded reserves by service</u>					<u>TBD</u>	<u>100%</u>
<u>Financial policies reviewed annually</u>				<u>33%</u>	<u>33%</u>	<u>33%</u>
<u>Average Age (in days) of Outstanding Accounts Receivable</u>				<u>0</u>	<u>0</u>	<u>0</u>
<u>Accuracy of budgeted surplus/deficit</u>						
Average Return on Investment	1.55%	1.46%	1.42%	1.45%	1.52%	1.52%
<u>Average Inventory Turns per Year</u>	<u>1.8</u>	<u>1.7</u>	<u>2.0</u>	<u>2.0</u>	<u>2.25</u>	<u>2.25</u>
<u>On Time Vendor Payments</u>				<u>71%</u>	<u>85%</u>	<u>88%</u>
<u>Number of Payroll Defects Annually</u>				<u>10</u>	<u>7</u>	<u>7</u>

\*KPIs removed as they are no longer relevant or valid

## Contact

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# Service Plan for Information Technology

2016-2019

Capital Regional District

*Date submitted:* ~~—~~ September 30, 2016

*Updated:* July 2017



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# 1 Overview

## 1.1 Division & Service Summary

### a) General Overview of the Division.

Information Technology and GIS Services (ITGIS) is responsible for the management of the CRD information systems and associated infrastructure across 24 different locations. The division strives to guide and support the organization in the use of information technology applications and resources in a secure and efficient manner.

The mission of the Information Technology & GIS division is:

- To serve the information technology needs of CRD departments as well as the public.
- To provide and support information systems which assist the organization in achieving defined business objectives.

### b) Service Overview and Description

The Information Technology division serves the entire organization. The organization service areas vary in size and activity, impacting the scope of work and skills required by IT.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<b>Corporate Information System (SAP) Development and Support</b> Manage the data integrity of the integrated Corporate Information System (SAP) ensuring all financial records are captured accurately allowing for the production of accurate and timely financial information and reporting that complies with legislative and audit requirements. Provide systems support and expertise for specific use and further development of SAP for application in multiple CRD departments	All CRD Departments, CRHC, RMTS	Internal Recovery	Finance Committee
<b>Website Development &amp; Support</b> Ensure the Enterprise Content Management System is implemented in such a way as to provide a reliable and secure corporate website.	All CRD Departments, CRHC, RMTS	Internal Recovery	Finance Committee

<p><b>Security, Data, Communications, Networking and Electronic Messaging</b></p> <p>Ensure the security and availability of all information systems for the organization including secure email services, voice and data radio systems and document storage.</p>	All CRD Departments, CRHC, RMTS	Internal Recovery	Finance Committee
<p><b>Departmental Support: Systems Analysis and Business Requirement Definition</b> Provide other CRD departments and divisions with systems and analytical expertise in the analysis, design, selection and development of information systems solutions (i.e. Landfill Scales System, Recreation Management, Housing Property and Tenant Management).</p>	All CRD Departments, CRHC, RMTS	Internal Recovery	Finance Committee
<p><b>Helpdesk – Customer Support</b> Provide all users with computer technical assistance related to desktop, <a href="#">laptop</a>, <a href="#">tablet</a> and <a href="#">mobile</a> hardware and software. <a href="#">Technical support to Boardroom meetings when streaming to the public.</a></p>	All CRD Departments, CRHC, RMTS	Internal Recovery	Finance Committee
<p><b>Custom Application Development</b> Provide business units with custom developed applications and ensure all website based applications are reliable, secure and available.</p>	All CRD Departments, CRHC, RMTS	Internal Recovery	Finance Committee
<p><b>Geographical Information Systems</b> Provide geospatial services to the residents of the capital region and a standardized cadastre fabric. Manage corporate geographic data, ensuring the data integrity of systems.</p>	All CRD Departments, CRHC, RMTS, CRD member municipalities and electoral areas	Internal Recovery and Requisition	Finance Committee
<p><a href="#">Data Analytics Systems (New)</a> Provide other CRD departments and divisions with expertise to design and build analytics models to support the business needs.</p>	<a href="#">All CRD Departments, CRHC, RMTS</a>	<a href="#">Internal Recovery</a>	<a href="#">Finance Committee</a>

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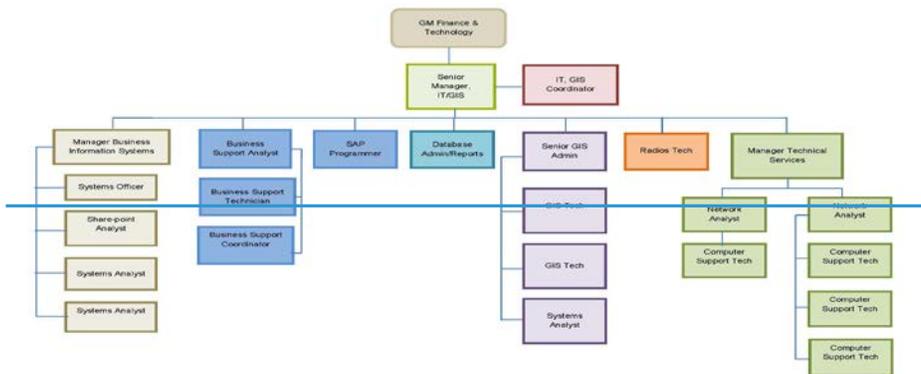
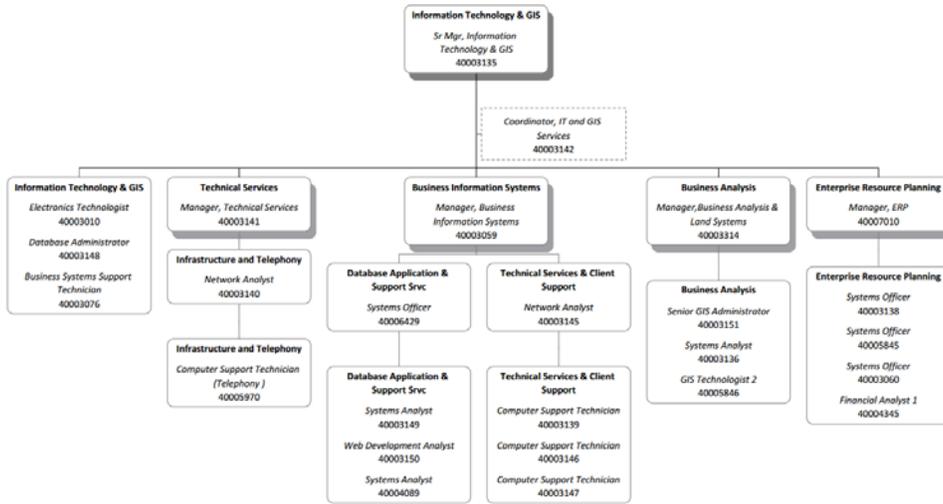
# 1.2 Organization Chart

## 1.2

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### Information Technology & GIS



## 1.3 Key Trends, Issues & Risks – Service Specific

### **Trends & Issues:**

**Security:** Continued increased focus on security as threats become more sophisticated and combined with increased mobility access it will be increasingly more important for applications to assume a higher profile role in securing data. Security aware applications will need new ways to offer protection as firewalls by themselves will no longer offer enough security. This will continue to increase the acquisition and operating costs of applications and software tools.

**Data Mobility And Analytics:** As mobile devices continue to proliferate there is an increased emphasis on serving the needs of the mobile user. This will continue to raise significant systems challenges for IT as more user endpoint devices are deployed and an increased need for data access from the field. Analytics may also become more common place as the volume of data generated by systems increases and vast pools of structured and unstructured data inside and outside the enterprise require analyzing. Not only will this trend change our need for access to data but will also influence our hiring practices as the organization will require staff skilled in data analysis.

**Increased use of and rapid changes in technology:** As a part of providing effective and responsive services, the division is increasingly spending time analyzing existing business processes and reviewing new technologies. With the increased use of technology across all facets of CRD service delivery, there are increased resource demands on the division: [e.g. Surveillance Systems-](#)

[Difficulty in hiring: With the increasing housing cost of living and high occupancy rates, it is becoming very challenging to attract new talent, especially when the salary grid is misaligned with technical skills in the marketplace making CRD less and less competitive with other companies.](#)

### **Risks:**

The **Corporate Information System (SAP)** requires significant work in order to effectively meet evolving Corporate and Departmental needs. Many of the modules no longer meet the daily operating needs and, in some cases, no longer align with business processes. Program maintenance consumes the majority of available resources and results in delays or inability to deliver on new SAP initiatives or custom report development needs.

As indicated above, the continued increase in demand for IT-related services from across the organization also presents a risk. While a number of critical IT-related projects are proposed over the next few years which directly support Department Service Delivery (ex: Recreation Management System for 3 centres and Regional Parks) these projects can also limit the division's ability to participate in or respond to emerging IT Systems work.

[Cyber Security: Even though we continue to implement new security mechanisms, cyber criminals continue to evolve on a very rapid pace while organizations struggle to keep up. CRD needs to expand our efforts in this area by having dedicated and focused resources to ensure security, integrity and availability of our systems.](#)

[Cloud based solutions and privacy risk: IT vendors continue to prioritize their Cloud Based vs On Premises solutions and some new technologies will only be available on the cloud. While these solutions may can bring productivity gains, they significantly increase networking work as well as increase the privacy and security risks. This demands more effort on our IT department to work closely with vendors understanding in detail these cloud solutions prior to recommending them to the organization.](#)

## 1.4 Link to Priorities

The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:

### Climate Change

- Evaluate and implement solutions that can help the CRD reduce its carbon footprint.

### Corporate Development

- Evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery.

### Education, Outreach & Information

- Demonstrate transparency and increase visibility through the provision of accessible, relevant, time and usable data and information

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## 1.5 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	2016	2017	2018	2019
<b>Corporate Information System (SAP)</b>	Current resource levels are inadequate to maintain integrity of the system. New initiatives have been delayed or postponed.	Increased resourcing to facilitate implementation of Enterprise Asset Management, as well as enhancements and support for Maintenance Management, Corporate/HR Organizational Structure, Workflow, Payroll, Budgeting, General Ledger, Grants Management, Real Estate and SAP Mobility into the organization.	Review & Assess	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.
<b>Website Development &amp; Support</b>	Ensure the enterprise content management system is implemented and website based applications are reliable, secure and available.	No change	Review & Assess	Adjust to meet service delivery needs, as required.	Review & Assess

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Service Level Adjustments in Role/Scope					
Service	Base year 2015	2016	2017	2018	2019
<b>Security, Data Communication, Networking and Electronic Messaging</b>	<p>Ensure the security of existing computing environment.</p> <p>Manage data communications and delivery of electronic mail to all locations.</p> <p>Provide networking services to all 24 CRD locations as well as 450 landline and cellular phone services.</p>	No change	Review and assess	<p><u>Additional staff required to meet operational requirements for both networking and security. Driven by ongoing increased security needs and need to manage an increasing larger and more complex network, including; SCADA - networks &amp; security, Telecommuting access and security. Adjust to meet service delivery needs, as required.</u></p>	Review & Assess
<b>Departmental Support: Systems Analysis and Business Requirement Definition</b>	Provide business analysis services to CRD Departments as they look to modernize, renovate and/or replace old aging systems.	No change	Review and assess	Adjust to meet service delivery needs, as required.	Review & Assess
<b>Helpdesk Customer Support</b>	Provide customer support to 650 computers, 150 servers, and 135 print devices	No change	Review and assess	Adjust to meet service delivery needs, as required.	Review & Assess
<b>Application Development, Application Support and Database Management</b>	<p>Support <u>Line of Business 200</u> applications and provide custom application development services and support as required.</p> <p>Manage corporate and departmental databases ensuring data integrity,</p>	No change	Review and assess	Adjust to meet service delivery needs, as required.	Review & Assess

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Service Level Adjustments in Role/Scope					
Service	Base year 2015	2016	2017	2018	2019
	availability and security.				
<b>Spatial Data Management and Addressing (GIS)</b>	Provide geographic and property information to all CRD services and applications.	No change	Review and assess	Adjust to meet service delivery needs, as required.	Review & Assess
<b>Document &amp; Records Management Systems</b>	Manage corporate documents and records, ensuring the security and integrity of all files.	No change	Review and assess	Adjust to meet service delivery needs, as required.	Review & Assess
<b>Radio &amp; Geospatial Services</b>	Provide 3 radio repeater sites and services and analysis to all CRD departments.  Provide geospatial services to enable surveying across the CRD.	No change	Review and assess	Adjust to meet service delivery needs, as required.	Review & Assess
<b><u><a href="#">Business Warehouse / Data Analytics Services</a></u></b>	<u><a href="#">Provide business analysis, design, build, and implement and maintain data models for creating -and reports, dashboards and performance indicators using multiple systems. Install, manage and support Business Warehouse systems including monitoring performance and data extracts &amp; loads.</a></u>	<u><a href="#">Not Present</a></u>	<u><a href="#">Not Present</a></u>	<u><a href="#">New service which requires additional staff to meet the growing data needs of the organization in the areas of data analytics, reporting, dashboarding and performance metrics. Creating, building and maintaining a Business/Data Warehouse requires business analysis and data architecture skills.</a></u>	<u><a href="#">new</a></u>

## 1.6 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	2016	2017	2018	2019
Corporate Information System (SAP)	4	5	5	5	5
System Architect Report Development	0.5	0.5	0.5	0.5	0.5
Project Management	0.3	0.3	0.3	0.3	0.3
Website Development	1.1	1.2	1.2	1.2	1.2
Security/networking/phones/email	2.9	2.9	2.9	<del>2.94.9</del>	<del>2.94.9</del>
Systems and Business Analysis	1.6	1.6	1.6	1.6	1.6
Application Development	2.3	2.3	2.3	2.3	2.3
Helpdesk User Support	4.2	4.2	4.2	4.2	4.2
Line of Business Application Support	3	3	3	3	3
Spatial Data and Addressing	3	3	3	3	3
Document and Records Management	1.1	1	1	1	1
Radio and Geospatial Systems	1	1	1	1	1
<u>Business Warehouse/Data Analytics</u>					<u>1</u>
<b>Total</b>	<b>25</b>	<b>26 *</b>	<b>26</b>	<b><u>28**</u></b>	<b><u>29***</u></b>

\* 1.0 FTE to be added to support the management and upgrading of the Corporate Information System (SAP).

\*\* 1.0 FTE to be added to focus on security, 1.0 FTE to be added to support Networks team.

\*\*\* 1.0 FTE to be added for Business Warehouse, Business intelligence, reporting and Analytics support

## 3 Divisional Initiatives & Budget Implications

This section highlights important divisional initiatives over the next four years, including those initiatives related to delivery of 2015 – 2018 Board Strategic Priorities.

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016 - 2019</b>			
<b>Renovate CRHC Social Housing Property Management System</b>	<p>Improve and streamline Housing business processes associated with property management and the maintenance of all buildings and units.</p> <p>Streamline procurement process, integrating vendor and contract management.</p> <p>Improve communications related to property management and purchasing between caretakers, property managers and administrative staff.</p>	Housing	All purchase and development costs are reflected in the Housing Department budget.

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Replacement of Recreation Management System for all 3 Recreation Centres</b>	<p>The existing version of our Recreation Management System (CLASS) reaches End-of-Life December 2017, after which either an upgrade to the most recent release of the incumbent vendor's software or a replacement system will be required.</p> <p>Class functionality includes; in person and online program registrations, facility/room bookings, membership sales and drop-in cash handling. It also allows staff to plan, implement and deliver programs and communicates relevant information to staff in various departments.</p> <p>Both staff and customers expect the program to be simple and intuitive as well as offer mobile access to program registration and services.</p>	Changing Demographics, Recreation Parks & Culture	All purchase and development costs are reflected in each Recreation Centre's departmental budget.
<b>Regional Parks - Implement an on-line reservation and booking system using a module of the Recreation Management System.</b>	<p>All processes associated with booking Park's facilities are manual. Parks staff are seeking efficiencies through automating these processes and at the same implement appropriate financial controls. Required functionality includes; in person and online program registrations, facility reservations and cash handling.</p> <p>Recreation software provides the needed functionality to meet Park's needs.</p>	Changing Demographics, Recreation Parks & Culture	All purchase and development costs are reflected in the Regional Parks departmental budget.
<b>Enterprise Asset Management</b>	Assist in the development of a technology framework to support corporate asset management including implementation of asset management plans.	Regional Infrastructure	Grants, core budget
<b>Renovate/replace Grant Management Application</b>	Current application is 8 years old and needs renovating and/or replacement. The existing Commercial Off The Shelf system has reached End-of-Life and no	Corporate Development	All purchase and development costs are reflected in the Financial Services budget.

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
	<p>longer meets the financial reporting requirements.</p> <p>This directly impacts the resourcing required to support our Corporate Information System (SAP)</p>		
<p><b>Upgrade and enhance SAP Financial General Ledger (GL)</b></p>	<p>The current General Ledger was designed and implemented 16 years ago and no longer meets the business needs of the user departments and the Financial Services Department. The increased volume of staff turnover has highlighted the need to address this issue which will provide opportunities to modernize financial reporting and more closely align with departmental expectations and needs.</p> <p>This directly impacts on the resourcing required to support our Corporate Information System (SAP)</p>	<p>Corporate Development</p>	<p>a#All purchase and development costs are reflected in the Financial Services budget.</p>
<p><b>Development of a corporate Encumbrance repository system</b></p>	<p>Development of a system to inventory all encumbered properties and make that inventory available to all areas of the organization, for improved decision making. The application will have a geographical component to ensure departments can easily visualize the properties the encumbrances actually impact.</p>	<p>Corporate Development</p>	<p>a#All purchase and development costs are reflected in the Real Estate Services budget.</p>
<p><b>Upgrade and enhance SAP Budgeting Module</b></p>	<p>Current budgeting application is 16 years old and no longer meets the budgeting, modeling and reporting needs of the organization. Also changes to the existing budget module are required to allow for improved integration with the new proposed Enterprise Asset Management project/application.</p> <p>This directly impacts resourcing required to support the Corporate Information System (SAP).</p>	<p>Corporate Development</p>	<p>a#All purchase and development costs are reflected in the Financial Services budget.</p>
<p><b>Improvements to Existing Financial Reporting to meet the needs of departments</b></p>	<p>Core financial reporting has remained unchanged for 16 years; the user community is requesting improvements to better meet their operational needs.</p>	<p>Corporate Development</p>	<p>a#All purchase and development costs are reflected in the Financial Services budget.</p>

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
	This directly impacts resourcing required to support the Corporate Information System (SAP).		
<b>Expansion of Integrated Water Services Surveillance System to the McDonald Gate</b>	Expansion of the IWS Security Monitoring system to include the McDonald Gate in an effort to reduce illegal entry and vandalism as well as provide a mechanism to identify and proceed with prosecuting these individuals.	Corporate Development	<del>all</del> purchase and development costs are reflected in the Integrated Water Services budget.
<b>Environmental Services (ES) Information System</b>	Develop a new Information System for ES to track and analyze all laboratory and monitoring data. Ensure data quality and integrity through quality control and data validation as well as analytical analysis and reporting.	Corporate Development	<del>all</del> development costs are reflected in the Environmental Services budget.
<b>Environmental Services (ES) eAudit Application</b>	Design and develop an electronic data capture and auditing system for the ES Cross Connection Program. Improving program data integrity and staff efficiencies.	Corporate Development	<del>all</del> development costs are reflected in the Environmental Services budget.
<b>Implementation of a new Enterprise Emergency Notification System</b>	Provide the public with the ability to subscribe to a hosted service which would notify them of an emergency event. Notification could be via phone, text, email, etc.	Corporate Development	<del>all</del> development costs are reflected in the Protective Services budget.
<b>Modernize the geographical interface from our Emergency Management software – eTeam</b>	Improve the interface to include data updates from our own water and sewer modeling systems. As well as consume Provincial Emergency program response data.	Corporate Development	<del>all</del> development costs are reflected in the Protective Services budget.
<b>Upgrade the Integrated Water Services Voice Radio System</b>	In 2018, the IWS voice radio system will be 13 years old - it was last upgraded in early 2005.	Corporate Development	<del>all</del> purchase and development costs are reflected in the Integrated Water Services budget.
<b>Create a CRD Board Information Portal</b>	Legislative Services has <del>requested</del> requested the creation of a CRD Board Information Portal where board related material can be stored and related to upcoming agenda items	Corporate Development	<del>all</del> purchase and development costs are reflected in the Legislative Services budget.
<b>Provide a new System to help</b>	Using our Tempest <del>Pro</del> Property Management	Corporate Development	<del>all</del> purchase and development costs are

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Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Integrated Water manage Water &amp; Sewer applications and associated DCC Tracking</b>	system develop a process to assist with tracking water & sewer + DCC application, relating these requests directly to the property		reflected in the Integrated Water Services budget.
<b>Redesign SAP Utility Billing module to provide consumption comparisons, usage graphs and electronic billing</b>	<del>Inegrated</del> <u>Integrated</u> Water Services in response to customer requests has requested changes to the SAP Utility <del>Billing</del> <u>Billing</u> module to provide the ability to calculate consumption data, add graphs to all utility bills and electronic billing functionality.	Corporate Development	<del>all</del> <u>All</u> purchase and development costs are reflected in the Integrated Water Services budget.
<b>Upgrade corporate Property Management System – Tempest</b>	The existing release of the Tempest software reaches End of Life in December of 2017. To ensure continued operational and technical support the software must be upgraded to the most current release.	Corporate Development	<del>all</del> <u>All</u> purchase and development costs are reflected in the Planning and <del>Protective</del> <u>Protective</u> Services budget.
<b><u>CAWTP – Setup &amp; Configure Vancouver and Victoria offices</u></b>	<u>CAWTP requested to setup both offices to restart the project</u>	<u>Corporate Development / Climate Change</u>	<del>all</del> <u>All</u> purchase and installation costs are reflected in the CAWTP budget.
<b><u>Creation of Corporate-Commons meeting and HR training room</u></b>	<del>Corporate Communications and HR have requested to implement IT infrastructure and audio/video equipment on</del> <u>in Fisgard office retail space</u>	<u>Education, Outreach &amp; Information</u>	<u>all purchase and installation costs are reflected in the Corporate Communications and HR budget</u>
<b><u>CAWTP – SAP to Prolog System Integration</u></b>	<u>CAWTP has requested to integrate PROLOP with SAP Corporate systems</u>	<u>Corporate Development</u>	<del>all</del> <u>All</u> purchase and development costs are reflected in the CAWTP budget.
<b><u>CAWTP – Implement Primavera Project Management System</u></b>	<u>CAWTP has requested to implement the project management tool Primavera</u>	<u>Corporate Development</u>	<del>all</del> <u>All</u> purchase and implementation costs are reflected in the CAWTP budget.
<b><u>System re-development for Regional Source Control (CRIMS RSCP)</u></b>	<u>Regional Source Control has requested to re-develop old application originally built in 2006 and include new more modern capabilities to meeting current business processes</u>	<u>Corporate Development</u>	<u>all purchase and development costs are reflected in the Regional Source Control budget</u>
<b><u>Saltspring Island Office move</u></b>	<u>SSI office has requested for implement IT infrastructure, acquire new and move existing IT equipment to the new office while keeping the old office still functional</u>	<u>Corporate Development</u>	<u>all purchase and installations costs are reflected in the SSI Admin budget</u>

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<a href="#">Implement Business Warehouse/Data Analytics Solution</a>	Finance Department has requested the implementation of a solution to better extract and analyze information from Corporate SAP systems	Corporate Development	500K Purchase and installation costs are reflected in Capital Plan
<a href="#">Electronic Records Management</a>	Legislative Services has requested the implementation of an electronic records management solution to improve the management and searchability of CRD records.	Corporate Development / Climate Change	250K
<a href="#">Upgrade to SharePoint to new 2016</a>	SharePoint 2016 was released mid-2016 and CRD systems were last upgraded in 2015.	Corporate Development	all purchase and development costs are reflected in the IT&GIS budget
<a href="#">Integrated Human Resources Onboarding Process</a>	HR has requested to integrate SAP HR / Payroll with the IT systems to assist in identifying corporate assets assigned to staff and to streamline and integrate the onboarding of new employees.	Corporate Development	all purchase and development costs are reflected in the HR budget
<a href="#">Provide GIS Services to Member Municipalities</a>	The City of Colwood has requested that the CRD provide GIS services to them. This includes data editing and webmapping.	Corporate Development	Costs will be billed directly to municipality
<a href="#">Develop enhancements to the CRD Board Information Portal (Portal 2.0)</a>	Continued modification and enhancements to the Board Portal created in 2016-2017	Corporate Development	all purchase and development costs are reflected in the Legislative Services budget.
<a href="#">Implement enhancements to Intranet (CRD Central)</a>	Executive Services and Corporate Communications requested the redevelopment of the Corporate Intranet (CRD Central) to meet Internal Communication needs based on feedback collected from CRD staff to improve communications.	Education, Outreach & Information	all purchase and development costs are reflected in the Executive Services budget
<a href="#">Implement solutions for management of privileged/privileged credentials (CyberArk)</a>	CyberArk reduces the risk of cyber attacks by providing secure management of privileged/privileged accounts as well as enabling master audit and supporting IT Security compliance	Corporate Development	all purchase and development costs are reflected in the IT&GIS budget
<a href="#">Create a Contract Management Register</a>	Legislative services requested a repository with workflow capabilities to collaborate, track	Corporate Development	all purchase and development costs are reflected in the

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Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
	and store CRD cooperate contracts.		<u>Legislative Services budget</u>
<u>Review Telecommuting Requirements</u>	With a renewed corporate interest to provide employees with more flexibility, IT will review and propose a telecommuting strategy which can solve that technological need	<u>Corporate Development / Climate Change</u>	5K for requirements and recommendations. Actual implementation costs will depend on selected solution.
<u>Review Video Conferencing Requirements</u>	Video conferencing from both designated meeting rooms and corporate desktops permits cost and environmental savings to the organization.  Expanded use of video conferencing will allow better use of meeting resources and time.	<u>Corporate Development</u>	all purchase and development costs are reflected in the Executive Services
<u>Implement Digital Asset Management Solution</u>	Executive Services and Corporate Communications requested a solution to manage and control the use and distribution of media files across the organization.	<u>Corporate Development / Education, Outreach &amp; Information</u>	100K Implementation / 50K Yearly cost
<u>Grants Submission Application</u>	Currently the Arts and Finance divisions are responsible for receiving, evaluation and awarding different types of grants. They have approached the IT department to implement a web solution to automate this paper-based process	<u>Corporate Development</u>	70K Development / 9K Yearly cost for maintenance.
<u>SCADA Network Design and Integration to Corporate Corporate Network</u>	The current SCADA system operates on an independent network and security platform. This project will combine the networking and security services of the SCADA network into a single seamless corporate system. Providing for the automated automated patching of server operating systems, the automated delivery of anti-virus and anti-spam updates, more secure and managed remote access system and offering the security protection of the corporate firewall	<u>Integrated Water Services</u>	allAll purchases, development and maintenance costs are reflected in the Integrated Water Services budgets.

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# 4 Goals & Performance Indicators

Indicator Name	2017 Planned	2017 Projected	2018 Planned
<b>Financial</b>			
Cost of IT as a % of Operating Budget (industry average is 4.1%)	2.2 %	2.1 %	2.2 %
Security cost as a % of IT Budget (industry average is 4% - 6.9%)	4.5 %	2.7%	4.5 %
<b>Systems Availability</b>			
Corporate Website Availability	99 %	99.2 %	99 %
Is the probability that a system is not failed or undergoing a repair when it needs to be used.	99 %	98.5 %	99 %
<b>Systems Reliability</b>			
Failure rate of networking hardware	< 2.0 %	2.5 %	< 2.0 %
Failure rate of user devices	< 1.5 %	2.5 %	< 1.5 %
Backup/restore success rate	99 %	95 %	99 %
The probability that a device will perform its intended function during a defined period of time under stated conditions.			
<b>Systems Security</b>			
SPAM to valid email ratio	9:1	9:1	9:1
Time to apply critical operating system patches	< 24 hours	18 hours	< 24 hours
Email Gateway Virus Detection	< 1 %	.002%	< 1.0 %
# of security related incidents	< 10	2	< 10
% of downtime due to security incidents	< .05 %	0%	< .05 %
The process of implementing measures and designing systems to securely protect and safeguard information, both business and personal data, thereby preserving the value, confidentiality, integrity, intended use and its ability to perform their permitted business functions.			
<b>Customer Satisfaction</b>			
Survey results are compiled from a random sampling of staff requests for IT services.	90 %	91.5 %	90 %

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## Contact

Name: David Hennigan  
 Title: Senior Manager, Information Technology

Contact information: 250-360-3141

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## 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Maintain overall systems availability to support CRD services and operations	<ul style="list-style-type: none"><li>Percentage of systems availability for information technology including general overall, phone service, public website, and financial systems. Target 99% availability</li></ul>
	Provide specialized support to departments related to information technology and GIS	<ul style="list-style-type: none"><li>Maintain a 90% or higher customer satisfaction rate annually</li><li>% of projects completed on time, on budget</li><li>Respond to help-desk inquiries within 2 business hours 75% of the time</li><li>Percentage of Board and committee meetings available by web streaming</li></ul>

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### Contact

Name: David Hennigan

Title: Senior Manager, Information Technology

Contact information: 250-360-3141

# Service Plan for Executive Office, Legislative & ~~Information~~ Corporate Services, Board and Elections

2016-2019

Capital Regional District

*Date revised: November 30, 2016*



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# 1 Overview

## 1.1 Division & Service Summary

The Executive Office and Legislative & Information Corporate Services divisions provide professional senior-level leadership, advice, support and service to the Board, the organization and staff.

### Executive Office (EO)

The Chief Administrative Officer (CAO) oversees all administrative operations and staff and ensures CRD Board policies are implemented, oversees the operations and functions of the CRD, and aligns the organization to achieve strategic priorities set by the Board.

The Executive Office provides guidance and advice to the Board on regional issues and services, and fosters relationships with representatives of the region's municipalities, First Nations, and provincial and federal governments. The Executive Office also provides leadership and support to the Executive Leadership Team and staff and clarifies/communicates Board direction for the organization. The Executive Office also guides corporate-wide initiatives and corporate standards.

### Legislative & Information Corporate Services (LCIS)

The Legislative and Information Services division is the office responsible for corporate administration and manages and provides specialized support in the following three-four key areas:

1. *Board Administration*: specialized administrative support to the Board, standing and select committees including the provision of procedural advice, scheduling of meetings and preparation of agendas and minutes; maintains and provides access to official corporate records including minutes, reports and bylaws; administers elections and assent voting opportunities (referendum and alternative approval process).
2. *Information Services (Records Management and Freedom of Information (FIPPA))*: primary point of contact for the public in accessing the required services and resources; manage the records management function for the organization; provide access to records through the *Freedom of Information and Protection of Privacy Act*; develop and implement corporate policies and standards and manage information flow into and out of the organization.
3. *Bylaw and Contract Administration*: develops, reviews and provides advice and guidance on a variety of bylaws, contracts and agreements for the organization.

3-4. Corporate Administration: provides support and direction on corporate policies, systems, projects and initiatives and promotes integration of service delivery to align with and achieve Board and corporate priorities. Provides specialized advice to staff on matters of legislative compliance.

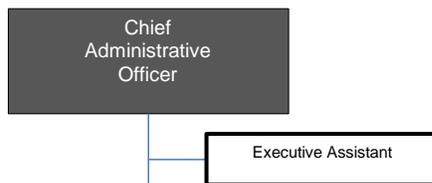
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Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
Liaison and Relationship Building (EO)	All municipalities, electoral areas, First Nations, provincial and federal government	Requisition	
Core Area Wastewater Treatment Program-Project (EO) – Senior Government Agreements and	Core area municipalities, First Nations, provincial and federal government	Requisition	Core Area Liquid Wastewater Treatment Project Board Management

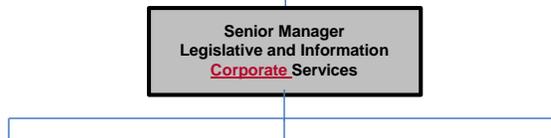
Municipal and First Nations Engagement			<b>Committee and Seaterra Commission</b>
Executive Leadership, Direction and Support (EO)	All CRD staff	Requisition	Executive Leadership Team (ELT), all Board standing committees and commissions
Governance (EO & LCIS)	All municipalities, electoral areas & First Nations	Requisition	CRD Board, Governance Committee
Board Administration (EO & LCIS)	All municipalities, electoral areas & First Nations	Requisition	CRD Board, all standing committees and commissions
Elections/Assent Voting (LCIS)	All municipalities and electoral areas	Requisition	CRD Board, Electoral Area Services Committee and commissions
Information Services (LCIS)	All CRD staff, member municipalities, electoral areas, First Nations, provincial and federal governments and the public	Requisition	CRD Board and Governance Committee
Bylaw and Contract Administration (LCIS)	All CRD staff, member municipalities, electoral areas, First Nations, provincial and federal governments and the public	Requisition	CRD Board, Governance and Finance Committees
<u>Corporate Administration</u>	<u>All CRD staff</u>	<u>Requisition</u>	<u>CRD Board, ELT</u>

## 1.2 Organization Chart

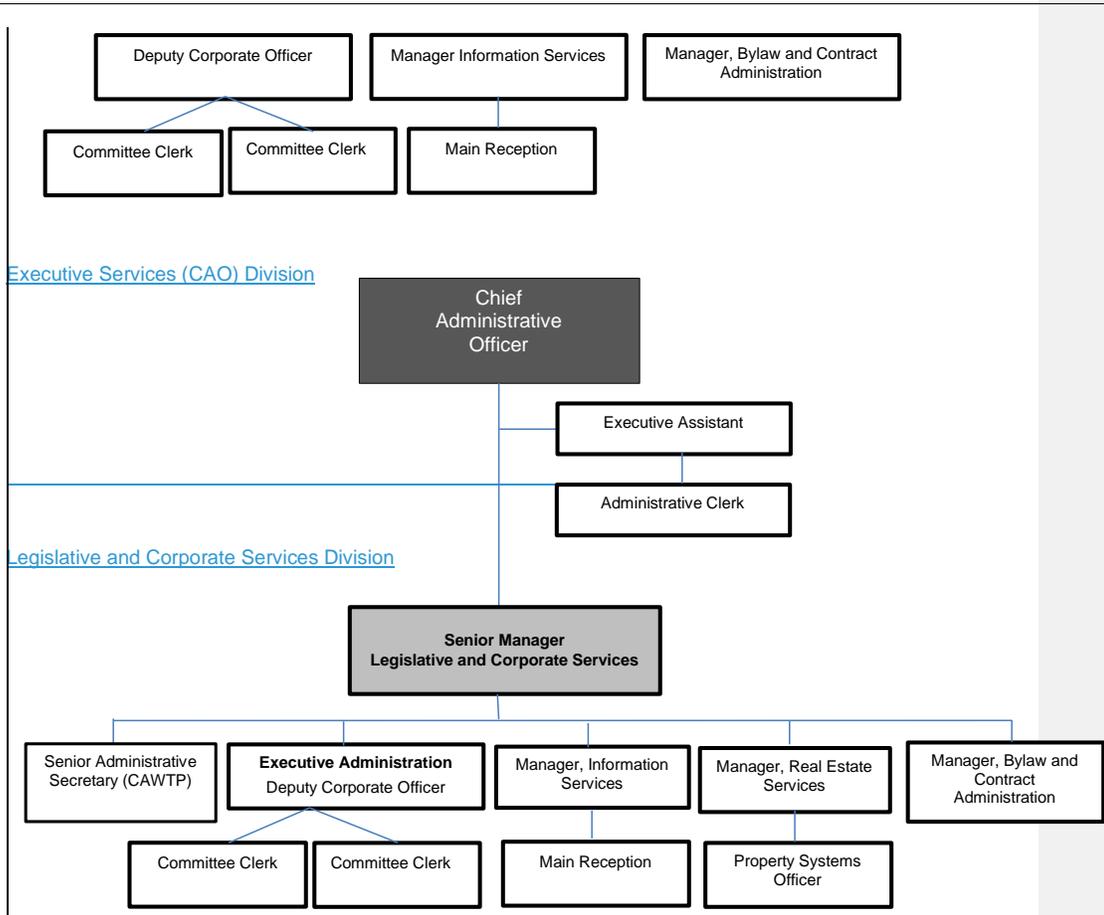
Executive Office (CAO) Division



Legislative and Information Services Division



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### 1.3 Key Trends, Issues & Risks – Service Specific

- changes in provincial and federal governments and First Nations Councils; pending treaty settlements;
- anticipated changes in provincial policy and Local Government Audits informing ongoing organizational policy review
- changes to the CAWT Project: administration and implementation of the Project has been delegated to the newly created CAWT Project Board (a Board Commission).
- -workplace retirements and changes
- inclusion of First Nations in governance structure
- changes in Board membership, Chair and committee structure
- legislative & regulatory changes; 2018 election to be held in October
- potential Salt Spring Island Incorporation
- increased expectation to receive more information, faster
- regulatory changes and requirements could have potential impact on service provision
- increased public scrutiny
- supporting the Board in defining the CRD role in governance conversations

- continued evolution of legislative and information services to enable effective engagement
- CRD projects and capital programs shifting from development phase to implementation
- increased delegated authority to CRD officers and staff
- increased provision of legislative and technical support throughout the organization
- implementation of the CRD Organizational Development Plan

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## 1.4 Link to Priorities

The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:

### GOVERNANCE

- work with the Governance Committee to review the existing committee structure, design a Board self-evaluation process and complete the work of the Special Task Force on First Nations Engagement
- deliver annual Board orientations and participate in government and partner programs
- enable regular, proactive dialogue on regional and sub-regional issues

### FIRST NATIONS

- collaborate with the First Nations task force to design and deliver Board training and education
- prepare agreements to enable traditional uses of CRD lands and identify First Nations partnership opportunities for economic development activities

### CORPORATE DEVELOPMENT

- evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery
- ensure CRD service delivery is effectively supported through the development of best practices
- enhance and ensure effective financial and audit reporting practices
- support continued investments in workforce education, training and development

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Liaison &amp; Relationship Building</b>	<ul style="list-style-type: none"> <li>• Attend 6 CAO meetings annually</li> <li>• Tour of councils, special workshops and orientations</li> <li>• maintain contact with provincial and federal officials at the deputy level</li> </ul>	<ul style="list-style-type: none"> <li>• Schedule 1-2 Forum of Councils annually</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

	<ul style="list-style-type: none"> <li>• meet with First Nations leaders and senior staff</li> </ul>				
<b>Core Area Wastewater Treatment Program</b>	<ul style="list-style-type: none"> <li>• CALWM procurement paused</li> <li>• Extra demands on CAO, GMs, and Exec. Services to assume direct leadership over planning of Core Area Wastewater Treatment Program</li> <li>• Senior Government Agreements</li> <li>• Liaison with Municipalities and First Nations</li> </ul>	<ul style="list-style-type: none"> <li>• When Program resumes, CAO and CALWMC Chair to liaise with Wastewater Commission on a monthly basis or as required</li> <li>• Re-establishment of Wastewater Commission</li> </ul>	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Executive Leadership, Direction &amp; Support</b>	<ul style="list-style-type: none"> <li>• Bi-weekly meetings with ELT and semi-annual meetings with CRD managers</li> <li>• Monthly 1 on 1 meetings with direct reports</li> </ul>	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Governance</b>	<ul style="list-style-type: none"> <li>• Regular review of governance structure, eg. committee structure, to ensure efficiency in decision-making</li> <li>• Provide regular Board education, eg. orientation sessions and bus tours</li> <li>• Coordinate governance discussions with member municipalities and electoral areas</li> </ul>	Additional working groups to deal with advocacy issues identified by the Board	Review and Assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Board Administration</b>	<ul style="list-style-type: none"> <li>• Regular on-going support to Board, standing and select committees – agendas prep and distribution, minutes and follow-up</li> <li>• Regular on-going procedural support and guidance to regional, sub-regional and local service area commissions</li> <li>• Addition of Eastside and Westside Wastewater Treatment and Resource Recovery Select Committees</li> </ul>	Additional meetings re Core Area Wastewater Treatment Program – i.e. bi-weekly meetings, select committees	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

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	<ul style="list-style-type: none"> <li>Regular review of processes to ensure efficiencies including electronic agendas and webstreaming</li> </ul>				
<b>Elections/ Assent Voting</b>	<ul style="list-style-type: none"> <li>Administer assent voting (referendum, alternative approval process) as required and including mail ballots</li> </ul>	No change	No change	Administer General Local Elections in October	No change
<b>Information Services</b>	<ul style="list-style-type: none"> <li>Regular ongoing assistance to departments regarding records classification program (RCS)</li> <li>Training sessions scheduled as required regarding records management</li> <li>Mandatory training for all CRD staff re FIPPA</li> <li>Manage flow of information in and out of the organization</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Bylaw &amp; Contract Administration</b>	<ul style="list-style-type: none"> <li>Assist and provide guidance with drafting and review of bylaws, contracts and agreements</li> <li>Engage legal counsel as required</li> <li>Ensure appropriate approvals are required for bylaws and contracts</li> <li>Train, develop policies, templates as required</li> <li>Retention and management of existing contracts and agreements for organization</li> </ul>	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b><u>Corporate Administration</u></b>				<ul style="list-style-type: none"> <li><u>Provide ongoing assistance, support and direction to departments on corporate policies, systems, projects and initiatives.</u></li> <li><u>Provide ongoing</u></li> </ul>	<ul style="list-style-type: none"> <li><u>Adjust to meet service delivery needs as required</u></li> </ul>

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support and technical direction to departments regarding legislative requirements, compliance and service authority

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Executive Office	2	2	2	<del>3</del> <sup>2</sup> *	<del>3</del> <sup>2</sup>
Legislative & Information-Corporate Services	7	8*	8	8	8
<b>Total</b>	9	10	10	<del>11</del> <sup>10</sup>	<del>11</del> <sup>10</sup>

\*Transfer of Senior Administrative Secretary position, FTE and funding, from Core Area Wastewater Treatment Program to support the Core Area Liquid Waste Management Project Board, from Environmental Services to Executive Office

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b><del>2016</del>2017</b>			
Records Management	<u>Inventory of Assess</u> storage capacity for corporate semi-active and inactive records (archives)	Corporate Development	<u>Reserves</u> Within core budget  Consultant required to conduct inventory and identify solutions
Records Management Ongoing and to be completed in 2017	<u>Work cross-departmentally to achieve solutions to storage issues identified in review</u> Implement recommendations from inventory	Corporate Development	Within core budget  Additional capital required for shelving, refit of storage areas etc.
Contract Administration	Develop contracts database	Corporate Development	Within core budget – additional auxiliary assistance required for data entry (see 2.2(2))

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Contract Administration</b>	Re-establish Contracts Committee to consider common contractual issues	Corporate Development	Within core budget
<b>Contract Administration</b>	Develop vendor performance database to track contractor performance and assist with future evaluation	Corporate Development	Within core budget – additional auxiliary assistance required for data entry (see 2.2(2))
<b>Bylaw Management System Upgrade</b> <u>Ongoing</u>	Upgrade existing bylaw management system and make it accessible to all CRD staff. Includes a service page component	Corporate Development	<del>Reserves \$22,000 to be funded 50/50 with Finance – already in budget</del> <u>Upgrade completed, ongoing implementation and review within core budget</u>
<b>Salt Spring Island Incorporation</b>	Incorporation Referendum – <del>Spring or</del> Fall 2017 <sup>6</sup> (tbc)	Corporate Development	Provincial Grant
	Mayor and Council Election – following referendum ( <del>fall 2018</del> <sup>be</sup> )	Corporate Development	Provincial Grant
<b>Governance</b>	Ongoing support will be provided to the Governance Committee and the CRD Board to address service review discussions and the provincial study on service integration in the region.	Governance	Within core budget
<b>Regional and Sub-Regional Dialogues</b>  <u>Ongoing</u>	Enable regular, proactive dialogue sessions between the general public, municipalities, electoral areas, First Nations and the CRD	Governance  Public Engagement & Communications	Within core budget
<b>Self governance and equality of electoral areas</b>	Review mandate and structure of existing CRD committees and commissions to merge and streamline where possible and clarify role.	Governance	<del>Reserves Additional contractor \$ required to complete review</del> <u>Within core budget</u>
<b>Decision-making and regular Board education</b>	Work with Governance Committee to review existing committee structure and terms of reference to make recommendations to the Board Chair	Governance	Within core budget
	Deliver annual Board Standing and Select Committee orientation	Governance	Within core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
	sessions bringing forward priorities that span election cycles and provide key information and current status of major decisions and/or initiatives		
	Develop and implement electronic Reference Library for Board members	Governance	IT costs - tbd
	Quarterly meetings of Board standing committee chairs to discuss Board performance and staff support	Governance	Within core budget
	Schedule regular theme-based bus tours throughout the year	Governance	Reserves Bus tours - \$5000 (\$2500 x 2)
<b>Two way engagement</b>	<ul style="list-style-type: none"> <li>Investigate implementation of e-comment module in Electronic Agenda system</li> <li>Investigate and implement citizen engagement module</li> <li>Investigate and implement portal for elected officials and public</li> </ul>	Governance  Public Engagement & Communications	Reserves Software costs – approximately \$50,000
<b>Changing Demographics</b>	Work with Governance Committee to determine referral function to facilitate conversation with municipal recreation centres for common definition of "seniors"	Governance	Committee Clerk transfer to FTE & reallocation of resources (Item 2.2(1))
<b>First Nations</b>  Ongoing	Implement compensation of First Nations Chiefs and Councillors in the same manner and amount as local government Mayors and Councillors when attending CRD Forums of Councils.	First Nations	Within core budget
<b>First Nations Hunting Protocol</b>  Ongoing	Assist in preparation of an MOU between First Nations and the CRD to enable a hunting protocol in CRD lands in recognition of the Douglas Treaty	First Nations	Within core budget
<b>First Nations Partnering Agreements</b>  Ongoing	Assist in development of partnering agreements with First Nations regarding economic development activities	First Nations	Within core budget
<b>2017/18</b>			

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Electronic Document Management</b>	Implement electronic document management system to better manage corporate records	Corporate Development	IT allocation and software costs - tbd
<b>Open Government/Web Development</b>	Develop and implement an Open Government Portal to increase transparency and accountability	Governance  Public Engagement & Communications	IT allocation and software costs - tbd
<u><b>Legal Services Review</b></u>	<u>Review external legal services and resources used by the CRD</u>	<u>Corporate Development</u>	<u>Within core budget</u>
<u><b>Review Delegation Processes</b></u>	<u>Review and amend oversight policies to support delegated authorities and monitor effectiveness</u>	<u>Corporate Development</u>	<u>Within core budget</u>
<u><b>Corporate Policy Review</b></u>	<ul style="list-style-type: none"> <li>•<u>Review corporate policies to streamline, ensure relevancy and consolidate where necessary</u></li> <li>•<u>Update the corporate policy on policy development</u></li> <li>•<u>Provide tools and support to enable the creation of effective policy</u></li> </ul>	<u>Corporate Development</u>	<u>Within core budget</u>
<b>2018</b>			
<b>Board Orientation</b>	Develop Board orientation sessions for new and returning Board members (post-election) and include a bus tour(s)	Governance	Within core budget  Bus tours - \$2500 each
<b>2019</b>			
<b>Continued implementation of above initiatives</b>			

## 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Maintain effective relationships with other levels of governments	<ul style="list-style-type: none"> <li>• Target a minimum of one in-person meeting with each of the 8 First Nations and at least one Provincial Ministry annually</li> <li>• 75% of elected officials from municipalities and electoral areas participate in each Forum of Councils or specialty workshops</li> <li>• CAO attends at least 5 of the scheduled Regional and/or Provincial CAO meetings annually</li> </ul>
	Provide high quality administrative support	<ul style="list-style-type: none"> <li>• Implement electronic records management system by 2019</li> <li>• Post Committee and Board meeting agendas by Friday at noon 95% of the time.</li> <li>• Percentage of Board and committee meetings available by web streaming*</li> <li>• Response time to Freedom of Information requests* (target within 30 days 90% of the time)</li> </ul>
	Provide specialized support for Board and legislative matters	<ul style="list-style-type: none"> <li>• Director orientation program completed within 3 months of election.</li> <li>• Annual review of Board committee structure completed* (target completion by October/November)</li> <li>• <u>Deliver FOI training sessions for 95% of staff within 9 months of employment start</u></li> <li>• <u>Review time for contracts (target within 1 week 90% of the time)</u></li> <li>• <u>Circulate Board correspondence via Portal 2 times per week, 95% of the time</u></li> </ul>
	Communicate Board direction and corporate standards and initiatives <u>within to</u> the organization	<ul style="list-style-type: none"> <li>• <u>Two meetings held annually with CRD managers with 90% participation rate or higher</u></li> <li>• <u>Quarterly CAO report to the Board, 100% of the time</u></li> </ul>

\* = Corporate Indicator – multiple divisions contribute to this measure

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# Service Plan for Corporate Communications, Executive Services

2016 – 2019  
(2018)

Capital Regional District

*Date prepared: Summer 2017*

*Date submitted: September 30, 2017*

*Date Revised:*



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# 1 Overview

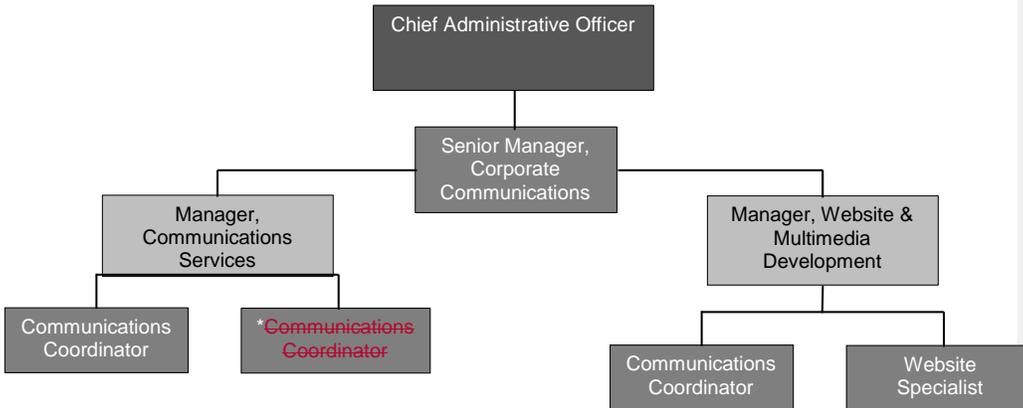
## 1.1 Division & Service Summary

Corporate Communications assists the Board and the organization in communicating the CRD's priorities, major decisions and program information. Corporate Communications ensures the organization adopts and uses industry best practices in its communication activities. This is accomplished through the development and application of communication guidelines and tools, and providing strategy and advice on communications activities with a goal of consistent alignment of the CRD's [mandate and service objectives](#) [Board, corporate and core service priorities](#). Corporate Communications develops tools and techniques that foster engagement, ensuring that the public has access to accurate, timely and consistent information.

Service Purpose , Role or Overview	Participants (for example: all municipalities, electoral areas, First Nations)	Funding Sources (for example: requisition, internal recoveries, grants)	CRD Board Committee and/or Commission Reporting Structure
<b>Protocols and Toolkit Development:</b> Prepare and provide appropriate strategies and tools (along with support and/or training) to ensure organizational alignment and improved education, participation and awareness	The Board, <a href="#">CRD Staff</a> , Municipal partners and other organizations	Requisition and internal recovery	Board or Delegated Commission, such as <a href="#">the</a> Core Area Commission or Panorama Rec through the CAO
<b>Information Delivery and Governance:</b> Facilitate the collection of and provide strategies for delivery of information through CRD communications tools and processes in a meaningful, <a href="#">rapidly timely, and accessible and consumable</a> manner	The Board, Municipal partners, and other organizations	Requisition and internal recovery	Board or Delegated Commission through CAO
<b>Communications Materials and Assets:</b> Prepare, develop, maintain and manage communications assets and processes that enhance the visibility of the CRD	The Board, CAO and ELT, <a href="#">and CRD Staff</a>	Requisition and internal recovery	Board or Delegated Commission through the CAO
<b>Internal Communications:</b> Develop and deliver internal communications through the intranet <a href="#">and</a> Inside CRD (staff newsletter), <a href="#">and developing an internal communications framework</a> <a href="#">employee hotline</a> <a href="#">Internal Communications Framework</a>	The CAO and ELT, <a href="#">and CRD Staff</a>	Requisition and internal recovery	CAO and ELT

<b>Core Communications Services:</b> Maintain effective media relations, emergency communications management, business continuity, <a href="#">website and social media content</a> , <a href="#">online surveys</a> , and media buys and placements	The Board, CAO and ELT, <a href="#">and CRD Staff</a>	Requisition and internal recovery	Board or Delegated Commission through the CAO
<b>Corporate Initiatives:</b> Facilitate and prepare corporate strategic initiatives and projects.	The Board, <a href="#">and CAO</a> and ELT	Requisition and internal recovery	CAO and ELT
<b>Strategic Communications:</b> Facilitate the development and ongoing evolution of strategies that inform and enhance engagement with public	The Board, <a href="#">and CAO</a> and ELT	Requisition and internal recovery	Board or Delegated Commission through the CAO

## 1.2 Organization Chart\*



*\*One ~~The~~ Communications Coordinator position for wastewater planning is currently housed in Corporate Communications, costs are covered by the planning budget for wastewater, and the position will likely ~~has been re-integrated~~ into implementation of the wastewater planning ~~the wastewater project~~ over future years ~~as of March 2017~~.*

## 1.3 Key Trends, Issues & Risks – Service Specific

- Increased public demand for transparency in how decisions are made, how services operate, and how citizens can impact decision-making is a trend that we need to recognize and respond to by constantly re-evaluating our strategies and approach.

- Increasing demand for accessible, timely and consumable-meaningful information (such as infographics, proactive social media, and video) may change delivery mechanisms and/or require shifts in the organization's communications styles in order to meet the diverse needs of our varied audiences.
- Increased need and demand for communications strategies as part of education initiatives may require adjustments in service delivery model and/or resources.
- Increased demand to be flexible and adapt to changing priorities, such as the need for an Internal Communications Framework.
- The Ggeneral public increasingly consumes news and information online via social networks, with the use of video trending upward across social media platforms.
- While Facebook usage is high, its algorithm has limits the number of posts that followers see. As a result, brands are increasingly using paid advertising to reach audiences.
- Online and digital advertising are increasingly viable channels for reaching broad audiences - in addition to traditional print and radio.

## 1.4 Link to Priorities

The Division Corporate Communications will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division Corporate Communications has a direct link to the following priorities:

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement
- share stories of collaboration and accomplishments

### CORPORATE DEVELOPMENT

- evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery
- ensure CRD service delivery is effectively supported through the development of best practices
- enhance and ensure effective financial and audit reporting practices

### EDUCATION, INFORMATION & OUTREACH

- expand on successful education partnerships and program delivery to include innovative in-person outreach and educational programs
- demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information

### GOVERNANCE

- enable regular, proactive dialogue on regional and sub-regional issues

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Protocols and Toolkit Development</b>	Ensure accountability for and consistency of communications activities across the organization.	Establish strategies, processes and tools to enhance education, participation and awareness.	Review, assess and refine strategies, tools and processes, including training and support.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.
<b>Information Delivery and Governance</b>	Provide <a href="#">policy policies</a> and guidelines for information delivery.	Update and develop policy and guidelines for enhanced information delivery. <a href="#">In 2016 including emergency guidelines, social media strategy and online registration</a>	Review, assess, refine and develop <a href="#">policy policies</a> and guidelines.	Adjust to meet service delivery needs, as required.  <a href="#">Investigate use of Instagram and LinkedIn uses for strategic communication and recruitment</a>  <a href="#">Create production standards for video and photography specific to social media</a>	Adjust to meet service delivery needs, as required.
<b>Communications Materials and Assets</b>	Establish clear lines of accountability for managing corporately developed communications materials and assets.	Establish tools and processes for developing, collecting, managing and disseminating items such as photos, graphics, education and	Maintain variety of communications materials and assets.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.

		display materials, and promotional items. <u>This year included, including</u> more graphics, icons and dashboards.			
<b>Internal Communications</b>	Continue to produce an internal newsletter ( <u>min 4x per year</u> ), maintain an emergency staff line to advise of closures and maintain the intranet home page.	Review and refine strategies for internal communications.	<u>Adjust to meet service delivery needs, as required. Develop an Internal Communications Framework and implement phase one tactics as actioned in the Organizational Development Plan</u>	<u>Adjust to meet service delivery needs, as required. Implement phase two of the Continue to implement and support the Internal Communications Framework.</u>  <u>Work with Human Resources &amp; Organizational Development include updated social media materials in staff orientation</u>	Adjust to meet service delivery needs, as required.
<b>Core Communications Services</b>	Maintain effective media relations, website (updates, maintenance, training and testing), social media (global reporting, strategy and metrics), advertising, business continuity, and emergency communications.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.  <u>Tabletop exercise and training refresh for emergency response</u>  <u>Ongoing website content reviews - key areas of focus:</u> <u>Waste &amp; recycling</u> <u>Parks &amp; trails</u> <u>Drinking water</u> <u>Careers</u> <u>About Us</u>	Adjust to meet service delivery needs, as required.
<b>Corporate Initiatives</b>	Facilitate the development and preparation of corporate projects, including the annual report and the corporate plan, and provide direct	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.

	support to the CAO and ELT members for similar corporate projects.				
<b>Strategic Communications</b>	Update, develop and implement strategies that inform and enhance communications and engagement with the public.	Review, assess and refine strategies.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Corporate Communications</b>	67.0*	67.0*	67.0*	67.0*	67.0*
<b>Total</b>	67.0*	67.0*	67.0*	67.0*	67.0*

*\*One The Communications Coordinator position for wastewater planning is currently housed in Corporate Communications, costs are covered by the planning budget for wastewater, and the position will likely have been re-integrated into implementation of the wastewater planning the wastewater project over future years as of March 2017.*

## 3 Divisional Initiatives & Budget Implications

This section highlights important divisional initiatives over the next four years, including those initiatives related to the delivery of the 2015 – 2018 Board Strategic Priorities.

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>2016</b>			
<b>Communications Toolkit</b>	Develop and establish consistent, processes and tools for communications services.	Public Engagement and Communications  Corporate Development  Education, Outreach & Information	Core Budget
<b>Social Media Enhancement</b>	Conduct review of the organizations social media strategy and reevaluate existing and recommended platforms.	Public Engagement & Communications  Education, Outreach & Information	Core Budget
<b>Enhanced Online Communications</b>	Develop strategies and tools that improve the accessibility and <del>consumability</del> effectiveness	Public Engagement & Communications	Core Budget

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
	of information, including evolving the use of web and social media and leveraging modern visual based communications practices, such as infographics.	Corporate Development Education, Outreach & Information Governance	
<b>Review of Communications Protocols</b>	Collect, review, refine, update and/or develop communications protocols, <del>policy</del> as required.	Public Engagement and Communications Corporate Development	Core Budget
<b>Organizational Support</b>	Support for <a href="#">the</a> 50 <sup>th</sup> anniversary of CRD, wastewater planning and implementation, Integrated Solid Waste Management Plan, <a href="#">and</a> Sea to Sea Regional Park.	Public Engagement and Communications Outreach, Education & Information Governance	Core Budget
<b>Communications Calendar</b>	Develop a rolling calendar of major activities that require production.	Public Engagement and Communications Corporate Development	Core Budget
<b>Advance Media Relations support</b> <del>Support</del>	Implement tools and resources for media and web monitoring services.	Public Engagement and Communications	Core Budget
<del>Internal Communications – Review of Newsletter</del>	<del>Review and refine InsideCRD purpose, approach and efficacy.</del>	<del>Corporate Development</del>	<del>Core Budget</del>
<b>2017</b>			
<b>Internal Communications Framework</b>	<del>Design, develop and implement an <a href="#">internal communications framework</a>-Internal Communications Framework and implement tactics, including <a href="#">intranet changes</a>, <a href="#">establishing protocols for staff email communications</a>, and <a href="#">reviewing and restructuring the internal newsletter</a></del>	<del>Corporate Development</del>	<del>Core Budget</del>
<b>Development of a Corporate Style Guide</b> <del>Identity Manual</del> Workshop process	<del>Develop a Unified-unified approach to CRD materials, language use and approaches.</del>	Public Engagement and Communications	Core Budget
<b>Centre for Engagement</b>	<del>Develop and launch <a href="#">the Centre for Engagement venue, located at CRD Headquarters, for public consultation and engagement</a></del>	<del>Public Engagement and Communications</del>	<del>Core Budget</del>

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>Website Principles and Guidelines Update on Refresh Strategy and Planning for Future Upgrades-</b>	Review of overarching approach, working guidelines and plan for how long to archive content. <u>-Key with key areas of focus on:</u> <u>Agendas &amp; minutes section</u> <u>Mobile template and design</u> <u>"What We Do" service profiles</u> <u>Capital projects</u> <u>News &amp; events</u>	Public Engagement and Communications	Core Budget
<b><u>Uniforms, Nametags &amp; ID Tags</u></b>	<u>Design templates and implement systems for procurement</u>	<u>Corporate Development</u>	<u>Core Budget</u>
<b><u>Paid Advertising System Development</u></b>	<u>Streamline and enhance the requesting, booking and records management system for paid advertising and piloting of ad placement in new digital and social channels</u>	<u>Public Engagement and Communications</u>	<u>Core Budget</u>
<b>Social Media Strategy Update</b>	Review of principles, current outcome and new emerging trends	Public Engagement and Communications	Core Budget
<b>Website Infographics</b>	Create and pilot "CRD Fast Facts" infographic that is optimized for web and social media (accessible, mobile <u>and</u> interactive)	Public Engagement and Communications	Core Budget
<b><u>Image Library Development</u></b>	<u>Based on 2016 review, implement library resources. Develop plan for categorizing, filing and searching</u>	<u>Public Engagement and Communications</u>  <u>Corporate Development</u>	<u>Core Budget</u>
<b><u>Resident satisfaction survey</u></b>	<u>Develop and conduct survey to identify baseline level of satisfaction among residents with CRD services.</u>	<u>Corporate Development</u>	<u>Single supplemental TBD</u>
<b>2018</b>			
<b><u>Multimedia Resource Review Digital Asset Management System Development (DAM)</u></b>	<u>Evaluation of organizational multimedia resources and requirements. Develop a corporate DAM system that will include image library, video and other multi-media tool filing and sharing systems, in conjunction with IT around appropriate tools data security and storage, and Leg Services in terms of records management and privacy</u>	Public Engagement and Communications  Education, Outreach & Information	Core budget
<b><u>Resident Satisfaction Survey – moved from 2017 to 2018 to align with strategic planning process, Reframed to service</u></b>	<u>Develop and conduct survey to identify baseline level of satisfaction among residents with CRD services. Conduct online and print survey surveys</u>	<u>Corporate Development</u>	<u>Core Budget</u>

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Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<a href="#">satisfaction survey process Service Satisfaction Survey Process</a>	<a href="#">and promote participation through service touchpoints, outreach events and website/social media to capture satisfaction with current CRD services</a>		
<a href="#">Intranet Refresh</a>	Improve use of CRD Central as a <a href="#">key component of the Internal Communications Framework and Organizational Development Plan</a>	Corporate Development	<a href="#">Core Budget</a>

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
<b>Provide specialized support to Board and CRD departments in their communication of decisions and information</b>	<ul style="list-style-type: none"> <li>Respond to 95% of media inquiries within two hours of receipt.</li> <li>Percentage of news releases that result in earned media annually.</li> <li>Increase web page views by 5% annually (2016 baseline) with average time on page ≤ 90 seconds and bounce rates for key initiatives ≤ 50% KPI change: Year over year increase in number of sessions (visits), new users (visitors) and unique page views (5% annual target).</li> <li>KPI change: Average time on page ≥ 90 seconds</li> <li>KPI addition: Average pages/session 2.5</li> <li><del>Percentage of residents stating satisfaction with CRD services (baseline 2017)</del></li> </ul>
<b>Ensure consistency of messaging and visual brand across all communications channels and mediums</b>	<ul style="list-style-type: none"> <li><del>Completion of brand identity manual by 2017</del></li> <li><del>Usage rates of CRD brand templates (PPT, memo, etc.)</del></li> <li><del>Development of Briefing Notes available for media inquiries (2017 baseline)</del></li> <li>95% of all major activities that require production support are registered in Corporate Communications calendar (2016 baseline)</li> </ul>
<b>Increase opportunities for two-way engagement</b>	<ul style="list-style-type: none"> <li>Participation rates of residents in two-way dialogue and engagement opportunities*</li> <li>Global <del>and divisional</del> social media engagement statistics, including likes, shares, comments, <del>and sentiment reactions</del>*</li> <li>Increase the number of followers and likes on CRD social media channels by 10% annually (2015 baseline)</li> <li>KPI change: 95% of planned major capital projects and strategic initiatives featured on the website</li> <li>Number of projects and initiatives listed</li> <li>Number of Checkbox surveys published</li> <li>Number of <del>engagement sessions held in the Centre for Engagement*</del> (2017 baseline)</li> </ul>
<b>Develop and implement Internal Communications Framework</b>	<ul style="list-style-type: none"> <li>Establish baseline measures for continually improving internal communications</li> </ul>

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Corporate indicator – multiple divisions contribute to this measure

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**Service Plan for ~~Aboriginal Initiatives~~**  
**~~Division (AID)~~ First Nations Relations Division**  
**(FNRD)**

2016-2019

Capital Regional District

*Original Submission: Sept. 30 2015*

*Updated September 29, 2016*

*Updated September 29, 2017*

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# 1 Overview

## 1.1 Division & Service Summary

[Aboriginal Initiatives First Nations Relations](#) Division ([AIDFNRD](#)) is mandated to streamline the Capital Regional District's (CRD) cross-departmental approach to First Nations engagement in support of the Board's strategic priorities which are founded on principles of *regional collaboration* and focus on *building relationships with First Nations governments*.

The division, through its three-pronged service role identified below, provides opportunities to:

- increase the CRD's profile as a relevant government to First Nations (FNs) needs and aspirations;
- acts as a 'hub' for FN government enquiries and shepherds responses and actions that First Nations have identified as helpful to their day to day operations;
- engage in practical activities that foster greater understanding of the CRD's range of services, the agency's mandate and the regulatory framework in which the services are delivered;
- facilitate greater familiarity and more regular interactions which in turn:
  - builds relationships and normalizes interchanges,
  - establishes protocols and MoUs
  - allows effective, respectful approaches to both formally and organically evolve
  - supports improved service delivery.

The Board's 2015-2018 Strategic Priorities identified more specific direction with respect to First Nations relations, which has informed the [Aboriginal Initiative's First Nations Relations](#) Service Plan activities.

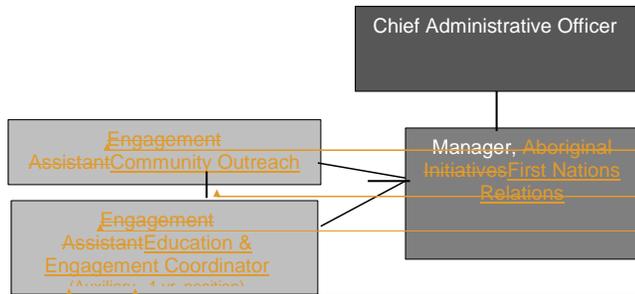
### a) Service Overview and descriptions

AID's operating framework is made up of three areas: Leadership Vision, CRD Internal Dept. Support and Emergent Issues and Opportunities.

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
The Board's vision is supported by <b>Leadership Vision</b> by facilitating opportunities to build political relationships among the Board Chair, Directors and Chiefs and Councils;	All local First Nations Electoral Areas	Internal recovery Allocation from Legislative Services	Committee of the Whole
Division workplans are augmented by <b>CRD Internal Departmental Support</b> through consistent outreach	All municipalities by way of Inter-municipal working groups All local First Nations Electoral Areas	Internal recovery Allocations from each Division	Respective Committees of each Division / Department

approaches and protocols across divisions;			
Developing areas of common interest are supported through <b>Emergent Issues &amp; Opportunities</b> with the Board's direction while working closely with the Nations and affected CRD Divisions.	All local First Nations All municipalities and electoral areas Affected CRD Departments	Internal recovery	Committee of the Whole Governance Committee via Special Task Force on First Nations Engagement

## 1.2 Organization Chart



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## 1.3 Key Trends, Issues & Risks – Service Specific

**Engagement and Participation:** Greater interest on the part of First Nations governments to engage with local government and to participate in regional decision-making matters of common interest. Continued responsibility and duty to undertake meaningful "early and ongoing" engagement. Limitations ~~enshrined in the~~ Local Government Act (LGA) pose barriers to full participation of FN governments in regional governance model; limited capacities and resources on the part of FNs, to engage / participate. increase in references to required capacity funding for referral processes and engagement requests. Increased involvement of FNs in the core area wastewater treatment project (WTP), including monitoring of activities in archeology sites, employment opportunities related to the project, communications and support to the First Nations liaison positions established by the project. Additional tasks established, under direction from the Special Task Force on First Nations Engagement, and approved by the Board, focus on the CRD's response to the Truth and Reconciliation Commission's Calls to Action, sewage treatment facility process.

**Interests and Precedents:** Legal precedents from court decisions trending in favour of ~~aboriginal~~ Aboriginal Rights and Title rights and title, which in turn has heightened advocacy by First Nations for acknowledgement of Douglas Treaty rights. Unique interests and differing priorities of each Nation including matters relating to governance, and land-use, service agreements, water rates, affordable housing development and exploration of co-management frameworks for CRD park lands. The creation of the Aboriginal Initiatives/First Nations Relations Division (AIDFNRD) has increased awareness of the CRD amongst First Nations governments and provides an accessible portal through which interactions with local government is streamlined. As First Nations related issues, interests and opportunities arise, the Board is able to provide direction to other CRD Divisions through the AIDFNRD office.

**Resource Requirements and Work Planning:** Division activities, work plans and approaches must be able to accommodate increased demands for engagement processes. In time, resource demands will decrease as efficiencies and streamlining of processes are realized with the signing of protocols and MoUs. In the meantime, the core activities of the work plan for this strategic plan timeframe will continue to focus on shoring up the “relationship-based” foundation and building a comprehensive body of protocol agreements that will serve to sustain the region in its interactions with neighbouring First Nations governments over the long-term. As participation in regional matters increases, First Nations will likely request funding contributions to ensure their existing resources are not diverted from other internal governance responsibilities. The work of relationship-building, establishing trust and negotiating acceptable protocols for engagement and communications requires significant investment in time and staff resources and political participation, from all parties.

**Project Delivery and First Nations Engagement:** Potential for increased costs and delays to CRD projects that require meaningful engagement with First Nations, in order to meet emerging standards of engagement / consultation expectations. FN's limited resources impacts their capacity to fully engage in a timely and comprehensive manner. Increased time and resources required to support First Nations and CRD Board and Committees to ensure effective, meaningful participation;

## 1.4 Link to Priorities

The Division provides support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such will have a supporting role in achieving numerous priorities. Specifically the division has a direct link to the following priorities:

### FIRST NATIONS

- collaborate with the First Nations task force to design and deliver Board training and education
- prepare agreements to enable traditional uses of CRD lands and identify First Nations partnership opportunities for economic development activities

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement
- share stories of collaboration and accomplishments

## 2 Services

### 2.1 Service Levels

Consider each service within the division over the four year period. After identifying the current base level of service, explain any planned changes in the role or scope of service. If changes are directly related to fulfilling Board Strategic Priorities, please clearly identify these. Staffing implications should be provided in section 2.3 and specific projects and budget implications will be provided in Section 3. Increase in activities in 2018 as a result of expanded scope of the Special Task Force and in support of Board motion to undertake initiatives relating to CRD's response to the Truth and Reconciliation Commission (TRC) Calls to Action. Expanded scope to be limited to the end of this Board's term in 2018.

Note: 2017 column amended to align with Task Force and Board approved directives,

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Leadership Vision</b>	Task Force supported by Division	No additional staff resources required	No additional staff resources required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>CRD Internal Departmental Support</b>	Support for departmental / division activities accommodated within existing service level	no additional resources required	New initiative: CRD Response to TRC – org-wide cultural training,, divisional Calls to Action. Additional staff resources via internal auxillary position; financed through Reserve fund	<u>TRC-based activities supported by auxillary position / Reserve fund. Divisional support for WTP Assuming CALWMP completed: FN engagement resources reallocated to other Nations</u>	Adjust to meet service delivery needs, as required
<b>Emergent Issues and Opportunities</b>	Emergent issues from the last term will be concluded in the base year	Upcoming focus areas: local gov't treaty chapter topics, Board priorities (Economic Development) can be adequately supported within existing service levels, with	Increase in tasks for divisional workplan, as identified by Task Force. Adjust to meet service delivery needs, as required	<u>Additional tasks for Task Force to be completed by Nov. 2018</u> Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

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		support from additional contract / consulting funds for specific expertise			
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## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Leadership Vision	.25	.5	Same	Same	Same
Division Activities	.5	.75	1.5	<u>1.5</u> Same	.75
Emergent Issues and Opportunities	.75	.25	.50	<u>.5</u> Same	.5
<b>Total</b>	1.5	1.5	2.5	<u>4.5</u> <u>2.5</u>	1.5

Note: 2017 column amended to align with Task Force and Board approved directives,

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### 3 Divisional Initiatives & Budget Implications

This section highlights important divisional initiatives over the next four years, including those initiatives related to delivery of 2016– 2019 Board Strategic Priorities.

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Open Sea to Sea Park</b>	Assist Regional Parks staff with developing an agreeable access / cultural use protocol with T'Sou-ke First Nation	First Nations Ecological Health & Biodiversity	Core budget
<b>Indigenous Cultural Access Protocols for CRD lands.</b>  <b>Draft protocol to be completed in 2016 with referrals / broad engagement extending to 2017, 2018</b>	Building on the Sea to Sea terms of agreement, negotiate an MOU and set of protocols with interested First Nations	First Nations	Core budget
<b>Board Cultural Training</b>  <b>To be completed in 2016</b>	Cultural education	Governance First Nations	Core budget
<b>Special Task Force on First Nations Engagement</b>  <b>To be completed in 2016 Possible extension into 2017</b>	Extensive engagement with each local First Nation to explore governance interests	First Nations Governance Public Engagement & Communications	Core budget
<b>Manage Service Agreements / Contracts</b>  <b>Ongoing to 2019</b>	Update existing agreements with current legislative and regulatory requirements. Renew expired agreements. Negotiate new agreements as requested	First Nations Finance Governance	Core budget
<b>Economic Development opportunities</b>  <b>Ongoing to 2019</b>	Exploration of potential partnerships relating to existing CRD business activities that could be ec. dev. opportunities for FNs.	First Nations Economic Development	Core budget
<b>Food and Agricultural / Indigenous Food Systems</b>	Inclusion of Indigenous perspective on food systems within the RSS - Food and Agriculture Sub-strategy	First Nations Food and Agriculture	Core budget

<b>Title &amp; Estimated Completion Date</b>	<b>Description</b>	<b>Priority Reference (if applicable)</b>	<b>Budget Implications</b>
<b>To be completed 2016</b>			
<b>Aboriginal Relations Communications &amp; Outreach</b>  <b>Ongoing to 2019</b>	Publication of quarterly newsletter reporting on common interests, accomplishments, collaborations with First Nations	First Nations  Communication	Core budget
<b>Determine role of CRD in wildlife management</b>  <b>To be completed in 2016</b>	Facilitate discussions with First Nations for partnership / cooperative agreement.  Possible link to economic development	First Nations Ecological Health & Biodiversity	Core budget
<b>Treaty Negotiations –</b>  <b>Ongoing to 2019</b>	Local Government Chapter issues: Board membership, RGS participation, suite of bylaws and services, environmental management areas Participation on TTAC	Governance  First Nations	Core budget and potentially Reserves for legal / consultant
<b>2017</b>			
<b>First Nations representation on or participation in CRD Board / Committees and/or Commissions</b>  <b>Advocate to UBCM for amendments to LGA</b>  <b>To be completed in 2018</b>	Implementation on direction from Board as a result of Task Force Recommendations	First Nations  Governance	Increased allocation via Legislative Services, as required.
<b>Forum of Governments Summit</b>	Regional gathering, in the similar style of Forum of Councils, which includes municipalities, interested local first nations, provincial and federal counterparts	First Nations  Governance	Allocation via Legislative Services
<b>Sewage Treatment</b>	Support for First Nations participation in committee(s) as well as protocols for archeology and cultural component	First Nations	core budget
<b>Invasive species partnership development</b>	Facilitate potential First Nations + Provincial partnership	First Nations	Core budget

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Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>To be completed in 2019</b>	in invasive species management and re-introduction of traditional and native species	Ecological Health & Biodiversity	
<b>Archeological Protocols</b> <b>To be completed in 2019</b>	Participate in Provincially led initiative, with First Nations and local governments to establish referral protocols re: cultural laws.	First Nations	Core budget
<b>2018</b>			
<b>First Nations representation on or participation in CRD Board / Committee/Commissions</b> <b>To be completed in 2018</b>	Staff support for established committee	First Nations Governance	Core budget for staff resourcing. Allocation through Legislative Services as required
<b>Regional Housing Trust Fund/Affordable Housing Opportunities</b> <b>Ongoing through to 2019</b>	First Nations participation, collaboration and possible contribution in-towards Regional Housing Trust Fund/regional approach to affordable housing initiatives	First Nations Housing	Core budget
<b>Regional Food &amp; Agriculture Task Force Committee</b> <b>To be completed in 2019</b>	Outcome of the RFAS Sub-strategy. Participation on the committee to support eventual Indigenous participation in the committee	First Nations Food and Ag	Core budget
<b>Review of CRD Committees and Commissions</b> <b>To be completed in 2018</b>	Review and recommend a comprehensive approach to potential participation of FNs	First Nations Governance	Core budget
<b>Douglas Treaties</b> <b>To be completed in 2018</b>	Information sharing and education on implications of Douglas Treaties for local governments and the region	First Nations Governance	Core budget
<b>Core Sewage Treatment Project</b>	Ongoing Consultation-related support to project team; support to FN Liaison positions		Internal allocation from CALWMP
<b>Statement of Reconciliation Commitment</b>	Commitment statement to guide Board in decision-making with First Nations relative to TRC and UNDRIP	First Nations Governance	Core budget
<b>Emergency Planning FN – EPAC and REMP participation</b>	Assist LG-EPAC to support FNS to establish coordinating cttee for a fully regional	First Nations	Core budget

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Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
	<a href="#">emergency management approach.</a>		
<b>Corporate wide cultural training</b>	<a href="#">Cultural safety and acumen training to all staff, delivered by division</a>	<a href="#">First Nations</a>	<a href="#">Core budget</a>
<b>Board cultural training</b>	<a href="#">Presentation by legal experts on emerging trends and court decisions</a>	<a href="#">First Nations Governance</a>	<a href="#">Core budget</a>
<b>2019</b>			
<b>Economic Development opportunities</b>	Continued management of business partnerships	First Nations Economic Development	Core budget
<b>Treaty Negotiations</b>	Continued participation in tripartite government process TTAC participation	First Nations	Core budget
<b>First Nations Board / Committee participation</b>	Continued support and implementation of Task Force recommendations.	First Nations Governance	Core budget Allocation via Legislative Services as required
<b>Service Agreements / Contract management</b>	Continued updating / renewal of service agreements	First Nations Finance Governance	Core budget
<b>Communications / Outreach</b>	Continued publication of collaborations and common interests	First Nations Public Engagement & Communications	Core budget

## 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Facilitate relationship between CRD leadership and First Nations	<ul style="list-style-type: none"> <li>Established framework for First Nations participation in regional matters*</li> <li>Participation rates of residents in two-way dialogue and engagement opportunities *</li> <li>50% Board participation rate in training sessions</li> <li>Plan and implement a Forum of Governments by 2017 and achieve a minimum participation rate of one representative from each of the 13 municipalities, 3 electoral areas and 8 First Nations.</li> </ul>
	Provide specialized support for First Nations engagement and service delivery	<ul style="list-style-type: none"> <li># of successful partnerships established with First Nations annually</li> <li>Participation rates in available CRD services by First Nations*</li> </ul>
	Address emergent issues & opportunities as directed by the Board <a href="#">through the Special Task Force</a>	<ul style="list-style-type: none"> <li>Quarterly reports to <del>Governance Committee</del><a href="#">the Board</a> summarizing the response to emergent issues and opportunities <a href="#">and specific tasks, as directed by the Board, through the Special Task Force.</a></li> </ul>

\* = Corporate indicator – multiple divisions contribute to this measure.

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# Service Plan for Human Resources and Organizational Development

2016-2019

Capital Regional District

**Date submitted: September 30, 2015**

**Revised: November 30, 2016**

**Revised: ~~XXXXXXXX~~ September 29, 2017**



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# 1 Overview

## 1.1 Division & Service Summary

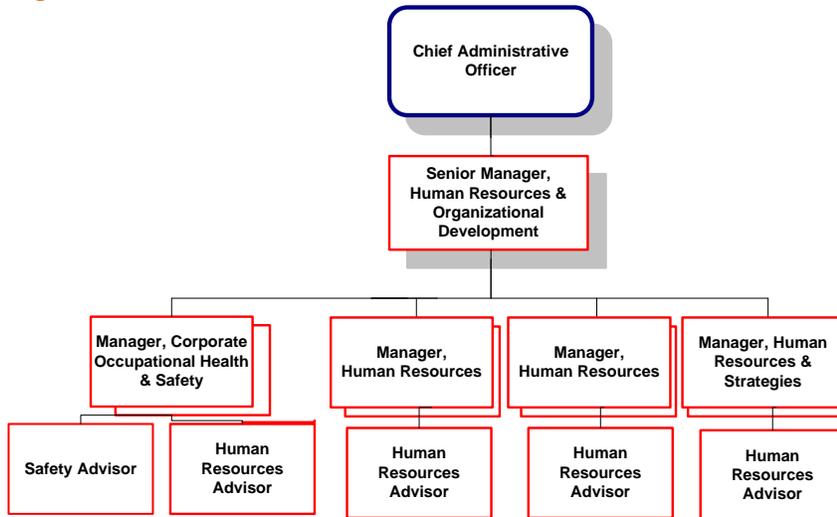
The Capital Regional District's success is in a large part dependent on talented and committed employees who have the knowledge, skills and resources to make a difference every day. With approximately 1,000 employees, two (2) unions and one (1) management association, ensuring the right people are in the right jobs with the right skills requires responsive and strategic Human Resources systems and support.

With a mission to "lead and support the organization in creating and sustaining a vibrant, healthy, safe, and high performance workforce that provides excellent services and programs to the citizens of the Capital Region", Human Resources [and Organizational Development](#) provides professional in-house services to all departments and divisions of the CRD. The professionals in the department function as HR generalists to support strong relationships between employees and managers, to provide a one-stop HR shop with the information, tools, advice and support needed to align individual and organizational success, and to be proactive and responsive to the ongoing and changing needs of our vibrant organization.

Running approximately 150-180 job competitions per year means the CRD provides career growth opportunities for employees and brings in new talent as needed. Training and development is a key component of the Strategic Human Resources Plan so we ensure employees have the skills and competencies to support CRD success now and in the future. We want employees to value their employment at the CRD and willingly contribute their time, energy, creativity and hard work. The outcome is a safe, challenging, healthy and progressive workplace with rewarding work, strong leaders and a reputation for results.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Comprehensive Human Resources including:</b></p> <p><b>Employment Services, Occupational Health &amp; Safety, Human Resource Information Systems and Records, Labour Relations, Compensation, Benefits Services, Training and Organizational Development, general HR inquiries</b></p>	<p>All municipalities and Electoral Areas; Songhees and Tsawout Bands</p>	<p>Direct requisition (<del>45</del><u>18</u>%) and internal allocations (<del>85</del><u>82</u>%)</p>	<p>Finance Committee; Governance Committee; Greater Victoria Labour Relations Association Board</p>

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

Changing workplace and society demographics have significant impact on the nature of Human Resource programs and focus. With significant workplace retirements in the near future, more employee transitional and family needs, the acceleration of workplace and technological change, shifting economic conditions, doing more-with-less, and an increased reliance on employee goodwill, recruitment, retention, workforce and succession planning, recognition, and learning and development initiatives are paramount to ensure the continued success of the organization.

While staff turnover is at a healthy rate, there are currently pressures associated with staff retirements, and the average worker age at the CRD suggests significant numbers of retirements in the near future. With higher levels of retirements come significant staffing pressures, most notably at the senior staff levels where accountabilities to continue to deliver high levels of service remains regardless of resource turnover. In addition, periods of transition, change and doing more-with-less increases pressure to labour dynamics in the workplace. With these goes the challenge of workplaces embracing ongoing change versus holding on to what they have.

The CRD, like many successful organizations, is continuously evaluating and refocusing how it does its business, including rationalizing resources, reorganizing work activities, and investing in employees to ensure viability and vibrancy for the future. With this comes the need to be more transparent and inclusive for the workplace not only to understand changes in direction, but to embrace and shape it for the future.

## 1.4 Link to Priorities

The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:

### GOVERNANCE

- Work with the Governance Committee to review the existing committee structure, design a Board self-evaluation process and complete the work of the Special Task Force on First Nations Engagement

### CORPORATE DEVELOPMENT

- Evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery
- Ensure CRD service delivery is effectively supported through the development of best practices
- Support continued investments in workforce education, training and development

# 2 Services

## 2.1 Service Levels

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Employment Services</b>	Postings completed within 2 business days and closed within 1 business day: ≥ 98% of time  Review of Criminal Record Checks completed within 1 business day: ≥ 98% of time	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Occupational Health and Safety</b>	Claims administered: ≤ 2 business days	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required  <a href="#">Oversight of all OHS matters, including disability management.</a>	Adjust to meet service delivery needs, as required  <a href="#">Oversight of all OHS matters, including disability management.</a>
<b>Human Resource Information System/ Records</b>	Changes processed: ≤ 5 business days	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

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<b>Corporate Training</b>	98.2% of corporate training programs run as scheduled	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Labour Relations</b>	Participation on grievance and labour relations administration (including collective bargaining): 100%  Grievances appropriately resolved before arbitration: ≥ 95%	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Compensation Services</b>	Completion of employer review of compensation review requests: ≤ 30 days	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>HR Inquiry Response</b>	Inquiries responded to (as available): ≤ 4 hours	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Human Resources (all)	7.0 FTE	7.0 FTE	7.0 FTE	7.0 FTE	7.0 FTE
OH&S (fixed duration)*			1.0 FTE	1.0 FTE	1.0 FTE

\*addition of a fixed duration FTE (Manager, Occupational Health and Safety) for 2017, moving to regular position FTE commencing 2018, and implementation of a Human Resources Advisor to: lead and administer corporate occupational health and safety; ensure continued compliance with Acts, Regulation and relevant legislation; lead and support a comprehensive disability management program; and ensure processes in place for the requirements of the Core Area Wastewater Treatment Program and other CRD capital initiatives and operating programs

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>2015</b>			
<b>Board Self-Evaluation Process</b>	Provide leadership and tools for the CRD Board to review roles, responsibilities and remuneration approach for Directors.	Governance	Core budget

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>2016</b>			
<b>Collective Bargaining</b>	To bargain new collective agreement with USW Local 1-1937. Bargaining stalled and expected to continue through 2016/17.		Core budget
<b>Organizational Development Plan</b>	Develop and implement a corporate organizational development consistent with the direction of the Corporate Plan and Strategic Plan. Continued implementation through 2018.		Core budget
<b>Succession Plan Program</b>	Review and amend corporate succession plan approach and strategies, recognizing the upcoming turnover and retirement of staffing resources.		Core budget
<b>Competency Alignment Program</b>	Implement a core competency alignment program for CRD employees. Align human resource processes and systems accordingly.		Core budget
<b>Corporate Alignment Initiatives</b>	Undertake and implement corporate organizational alignment reviews as required to complete Strategic and Corporate Plans direction		Core budget
<b>HRIS Organization Management (SAP)</b>	Implement SAP Organizational Management module. Overall outcome will result in improved org. reporting within SAP, resulting in cost savings in time management, org. systems process, and financial processes.		Core budget
<b>Learning and Development</b>	Review and align corporate learning and development initiatives to Board Strategic Plan and Corporate Plan priorities. Continued alignment with the Organizational Development Plan in 2017.		Core budget
<b>2017</b>			
<b>Collective Bargaining</b>	To bargain new collective agreements with CUPE Local 1978 and USW Local 1-1937.		Core budget

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>Employee Onboarding Program</b>	Development and implementation of a revised corporate employee onboarding program, aimed at engaging, informing and educating employees around the corporation, its mandate, responsibilities, and strategic and corporate plan.		Core budget
<b>2018</b>			
<a href="#"><u>Organizational Development Plan Implementation</u></a>	<a href="#"><u>Continued implementation of the corporate Organizational Development Plan, with significant focus in the following areas: proactive and advanced recruitment process; workforce planning; policy development; alignment and administration; employee training and engagement.</u></a>		<a href="#"><u>Core budget</u></a>
<b><a href="#"><u>Attendance-Disability Management and Healthy Workplace Program</u></a></b>	Development and implementation of corporate <a href="#"><u>attendance-disability</u></a> management program aimed at expediting return to work and lowering costs associated with workplace absences. Program includes: return to work programs; disability management program; work-life initiatives.		Core budget
<b>Management and Supervisory Community of Practice</b>	Develop a management and supervisory community of practice to create the internal awareness and understanding as well as sharing of information and experiences creating a shared and cohesive understanding and corporate consistency.		Core budget
<b>Employee Survey and Action Plan</b>	Development and implementation of the CRD Employee Survey and corresponding Action Plan. Components of the Action Plan to be implemented over the course of the 2017-2019 calendar years.		Core budget
<b>Climate Action Engagement and Recognition Program</b>	In concert with Climate Action, establish a staff climate action engagement program that includes a climate action recognition program that acknowledges		Core budget

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
	climate leadership among employees		
<a href="#">Occupational Health and Safety Management</a>	<a href="#">Oversight and leadership of all corporate occupational health and safety initiatives. Focus to include significant occupational health and safety governance and oversight, and an increased presence notably in the areas of capital development.</a>		<a href="#">Ongoing supplementary and internal reallocation of OHS resources.</a>
<b>2019</b>			
<b>Employee Survey Action Plan Implementation</b>	See "Employee Survey and Action Plan" above (2018).		Core budget
<b>Corporate Alignment Initiatives</b>	Undertake and implement corporate organizational alignment reviews as required to complete Strategic and Corporate Plans direction		Core budget
<b>Learning and Development</b>	Review and align corporate learning and development initiatives to Board Strategic Plan and Corporate Plan priorities.		Core budget
<b>Employee Survey Action Plan Implementation</b>	See "Employee Survey and Action Plan" above (2017).		Core budget

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Provide cost effective full-spectrum HR services	<ul style="list-style-type: none"> <li>Maintain a better than industry average for staffing and cost ratio annually (current industry average is 1 HR staff for every 69 employees at a cost of \$576 per FTE)</li> <li>More than 95% of new regular employees are oriented within their first <a href="#">month-two weeks</a> of hire</li> <li>Employment posting completed within 2 business days and closed within 1 business day 98% of the time</li> <li>Changes processed for 95% of all information/system records within 5 business days</li> <li>Participate in 100% of grievance and labour relations administration meetings (including collective bargaining)</li> <li>Target 95% of all grievances resolved appropriately before arbitration</li> <li>Completion of employer review of compensation review requests in less than 30 days</li> <li>HR inquiries, as available, are responded to in less than 4 hours</li> </ul>

	Deliver effective corporate training to support strategic needs of the organization	<ul style="list-style-type: none"> <li>98% of all corporate training programs run as scheduled</li> <li>Increased employee satisfaction rate with corporate training (85% satisfaction rate baseline in 2015)</li> <li>Percentage of employees maintaining professional designations*</li> </ul>
	Support exemplary organizational practices and leadership	<ul style="list-style-type: none"> <li>Number of awards or nominations received annually*</li> </ul>
	Support <u>and lead</u> organizational compliance for Occupational Health & Safety <u>Timelines</u>	<ul style="list-style-type: none"> <li><u>100%</u> of WorkSafe BC claims processed within 2 working days of receipt</li> <li><u>Minimum 10-15% cost savings in WorkSafeBC Employer Rating Assessment premiums with implementation of proactive OHS standards and disability management programs.</u></li> </ul>

\* = Corporate Indicator – multiple divisions contribute to this measure

Corporate CRD Human Capital Performance Metric	CRD Current	Industry Average (as recorded through HR Metric Services™)
Unionized Workforce ( <u>all staff</u> )	<u>84.390.4%</u>	<u>79.685.4%</u>
Management Span of Control ( <u>all staff</u> )	1:16 (1 manager to 16 staff)	1: <u>10.6</u> (1 manager to <u>10.6</u> staff)
Turnover Rate / Retirement Rate ( <u>regular staff</u> )	<u>5.72.6%</u> turnover / <u>1.81.3%</u> retirement	<u>7.22.6%</u> turnover / <u>2.80.8%</u> retirement
Churnover (Internal Staff Movement) Rate / <u>Promotion Rate</u> / Position Vacancy Rate ( <u>regular staff</u> )	<u>10.43.2%</u> churnover / <u>1.7%</u> promotion rate / <u>1.40.9%</u> position vacancy	<u>8.82.8%</u> churnover / <u>1.2%</u> promotion rate / <u>3.03.1%</u> position vacancy
Absenteeism Rate ( <u>regular staff</u> )	<u>43.7%</u> absenteeism	<u>5.12.8%</u> absenteeism
WorkSafeBC (Safety) Employer Rating Assessment ( <u>all staff</u> )	1.79% (13% merit situation with WorkSafeBC)	2.03% ( <i>provided by WorkSafeBC</i> )
Average Length of Service ( <u>regular staff</u> )	<u>11.0-11.4</u> years	<u>10.89.4</u> years
Average Worker Age ( <u>Regular-regular staff</u> )	<u>47.147.3</u> years	<u>44.044.6</u> years
<u>Grievances to Headcount</u> ( <u>all staff</u> )	<u>0.2%</u>	<u>0.4%</u>

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<a href="#">HR FTE to CRD FTE Ratio</a>	<a href="#">1:90 (one HR FTE for every 90 FTEs)</a>	<a href="#">1:62 (one HR FTE for every 62 FTEs)</a>
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## Contact

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Title: Senior Manager, Human Resources  
Contact information: 250-360-3282

# Service Plan for Real Estate Services

201~~8~~<sup>7</sup>-2019

Capital Regional District

*Date submitted: September 30, 201~~7~~<sup>6</sup>*



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# 1 Overview

## 1.1 Division & Service Summary

### General overview of the Real Estate Division

There are two primary services within the division: Property and Real Estate Services.

#### Property Services

1. Maintains property information (hard copy and electronic) for:
  - i. CRD land interest, (fee simple, leases, licenses, right of ways, easements, covenant's, etc.).
  - ii. 3rd party interests on CRD properties.
2. Coordinates referrals from outside agencies to ensure that the CRD is well informed of processes that are happening within their jurisdiction, or that may affect their land interests.
3. Performs property research on behalf of CRD staff.

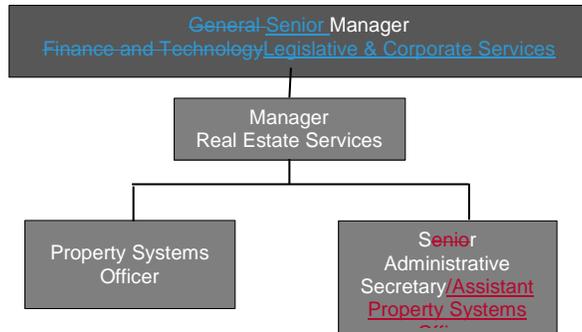
#### Real Estate Services

Real Estate Services coordinates appraisal, acquisition and disposal of real property interests, including subdivisions, proformas, valuations, conveyancing, registering Notices on Titles and Covenants, land title research and similar support on behalf of the District's departments, the Board, Committees and Commissions (the "clients").

### Service overview and descriptions

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<b>Property Administration Services</b>  Provides administration systems and services for all CRD land interests. Coordinate all referrals.	All Municipalities, Electoral Areas and First Nations on a demand basis	Cost Recovery and Requisition	Communicates with Commissions  Reports to Committees and Board
<b>Real Estate</b>  Negotiate on behalf of CRD for matters involving land. Provide conveyancing services and guidance to CRD staff regarding land interests and opportunities	All Municipalities, Electoral Areas and First Nations on a demand basis	Cost Recovery and Requisition	Communicates with Commissions  Reports to Committees and Board

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

The majority of the work for the Core Area WWTP in relation to Real Estate is completed, however the Real Estate Department/Division continues to provide daily support.

There is increased activity in the local real estate market has increased demand for real estate agreements in 2017, and staff are accommodating the increase

Land acquisition by several CRD departments is continuing at a steady rate and there is an increase in CRD space being leased to third parties.

Referrals from 3<sup>rd</sup> party agencies have doubled in 2017 and staff are accommodating the increase.

The Core Area Wastewater Treatment project will increase the workload in the Real Estate Division in 2016, as such; additional support may be required on a temporary basis. This increased cost would be funded through cost recovery.

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## 1.4 Link to Board Strategic Priorities

The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:

Integrated Waste Management:

- Investigate region-wide solutions to liquid and solid waste.

Biodiversity and Ecosystem Health:

- Strategically acquire protected areas which contribute to climate mitigation and adaptation goals.

Active and Multi-Modal Transportation:

- Design and manage regional trails as transportation corridors for users now and in the future.

Agricultural Land and Food Security:

- Develop a regional land banking solution

First Nations:

- Investigate ways to best support first nations economic development in co-operation with local governments.

Housing:

- Leverage equity in all CRD assets to develop creative solutions to providing new housing.

## 1.5 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015		Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Property Administration</b>	<ul style="list-style-type: none"> <li>• Maintain property information (hard copy and electronic) for CRD land interests and encumbrances owned and on CRD Properties</li> <li>• Coordinate response to referrals and encumbrance requests received from 3rd parties (<del>approx. 50/yr</del>)</li> <li>• <del>10</del> Registrations of Notices on Title</li> <li>• <del>10</del> Cancellation of Notices on Titles</li> <li>• <del>10</del> Registrations of Development Permits on Title</li> <li>• <del>10</del> SRWs negotiated and executed</li> <li>• <del>20</del> Covenants negotiated and executed</li> <li>• <del>80</del> <del>A</del> agreements witnessed as Commissioner of Oaths</li> <li>• <del>10</del> <del>a</del> Appraisals tendered and received per year</li> </ul>		Forecast increased demand associated with Core Area WWTP land tenures	Adjust to meet service delivery needs, as required.	Review and Assess
<b>Real Estate</b>	Negotiate on behalf of CRD for matters involving land <ul style="list-style-type: none"> <li>• Facilitate conveyancing services</li> <li>• Provide guidance to CRD staff re: land interests and opportunities</li> <li>• Negotiating <del>25</del> agreements</li> <li>• Evaluating and reporting -on <del>400</del> Real Estate files for CRD Depts.</li> </ul>		Forecast increased demand associated with Core Area WWTP land tenure agreements	Adjust to meet service delivery needs, as required.	Review and Assess

<ul style="list-style-type: none"> <li>• Write <del>15</del> Staff Reports</li> <li>• Apply for or renegotiate <del>5</del> Provincial Tenures</li> <li>• Assist in Regional Parks Land Acquisitions</li> <li>• Assist in CAWTP Land Acquisitions and Tenure Agreements</li> <li>• Manage Lease and Licenses for 126,000ft2 warehouse</li> <li>• <del>Acquire Request</del> Legal Advice on <u>Real Estate</u> <del>30 files per year</del></li> </ul>					
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## 1.6 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Manager	1	1	1	1	1
Property Officer	1	1	1	1	1
Sr. Administrative Secretary	1	1	1	1	1
<b>Total</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016 - 2019</b>			
<b>Continue Move to Digital File Storage</b>  <del>To be e</del> Completed <del>by in</del> 2017	Transfer of existing and archived hard-files into SharePoint	Corporate Development	Core budget
<b>Encumbrance Project Phase 2</b>  <del>To be e</del> Completed <del>in by</del> 2017	Include all encumbrances on CRD land in Intramap with a link to the digital document. Intramap will then identify: <ul style="list-style-type: none"> <li>• Encumbrances granted on CRD Land, and</li> <li>• Encumbrances held on others land by the CRD</li> </ul>	Corporate Development	Core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Departmental support for achieving Board Strategic Priorities</b>  To be completed by 2019	Provide guidance to CRD staff regarding real estate's relation to the priority, land interests and opportunities	Integrated Waste Management  Biodiversity and Ecosystem Health  Active and Multi-Modal Transportation  Agricultural Land and Food Security  First Nations  Housing	Core budget
<u>Referrals</u>	<u>Coordinating the Corporate response to referrals received from External Agencies</u>	<u>Corporate Development</u>	<u>Not funded / Core budget</u>
<u>Weekly Task</u>			

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## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Improve efficiency of Property Administration Services and increase accessibility to data	<ul style="list-style-type: none"> <li>Transition of all legacy agreements files into new system by end of 2017</li> <li>Reduced average length of time for completing referrals, notices on title, covenants, lease and license negotiations, property acquisition and disposals compared to previous year (2016 baseline)</li> </ul>
Provide specialized support for corporate real estate interests	<ul style="list-style-type: none"> <li>Successful real estate transactions annually</li> <li></li> <li></li> </ul>

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Number of CRD Services supported by Real <a href="#">Department-Estate Division</a>	59	59	59
Number of SRW's and Covenants transactoins completed in 2017	30	45	35
Number of Property Negotiations completed or in progress	50	70	60

Referrals	100	190	150
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## Contact

Name: Stephen Henderson  
Title: Manager of Real Estate Services  
Contact information: 250-360-3136



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## 2018 Service Plans Review and Approval

For Committee of the Whole, November 29, 2017

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### APPENDIX B

#### Service Plans Reviewed by the Planning & Protective Services Committee, Transportation Committee, and Hospitals and Housing Committee

##### TABLE OF CONTENTS

##### Service Plan Summaries

1. Protective Services\*
2. Regional and Strategic Planning\*\*
3. Health and Capital Planning Strategies+
4. Regional Housing++

##### Service Plans

1. Protective Services\*
2. Regional and Strategic Planning\*\*
3. Health and Capital Planning Strategies+
4. Regional Housing++

\*Reviewed by Planning & Protective Services Committee only

\*\*Planning & Protective Services Committee—review did not include Transportation

\*\*Transportation Committee—reviewed Transportation only

+Planning & Protective Services Committee—reviewed Community Health only

+Hospitals and Housing Committee—review did not include Community Health

++Reviewed by Hospitals and Housing Committee only

**SERVICE NAME:** Protective Services

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- Construction on South Island Communications Centre to start Fall of 2017 complete Jan 2019. This facility will consolidate the 911 PSAP and Police Dispatch services in the CRD into a single operational site with E-Comm as the contracted operator.
- Increased collaboration with FN's on emergency management in the CRD. This is aligned with EMBC's recent agreement with INAC to provide emergency program support to FN's.
- The BCSPCA no longer providing vet services to strays. This decrease in service from that sector is now impacting CRD budgets as we are now having to absorb additional vet service costs.
- OFC fire training guidelines per the Playbook severely challenging some rural fire services to meet these standards. This creates inequity in some areas that are challenged with recruitment and retention of volunteers.
- IWS is undertaking post-disaster planning for the CRD water system. This will be aligned with the overall CRD emergency plans and will inform other local authorities in the region with respect to their post disaster plans related to water supply.
- The Regional Emergency Management Partnership (REMP) between the CRD and the province is beginning implementation of its strategic plan to improve collaborative response to regional emergencies. This will assist with the overall regional coordination of resources and response amongst local authorities in the region in the event of a multi-jurisdictional emergency.
- The AGLG is undertaking an audit of the CRD's Emergency Management program in October 2017. This audit will review all aspects of the CRD's emergency program and will provide a report back on results.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- **Regionally Funded Services (Corporate Emergency, Hazmat, Regional Support)** – There is a \$20,000 favourable (12.2%) variance due to the cessation of the use of E Team. This variance will be used to fund improvements required for the Regional Emergency Operations Centre in 2017.
- **Fire Protection** – No significant variances from budget expected.
- **Animal Care** – Continued pressure on vet services and legal expenses will result in overspending of \$32k. This will be offset by a budgeted Contingency of \$29k and recoveries from Bylaw.
- **Emergency Communication/Dispatch – (911 Call Answer, 912 PSAP)** – Call Answer Levies (CAL) are anticipated to be \$150,000 (10%) below budget. RCMP contract for services estimated to be \$80,000 (68%) below budget, offset by shortfall in CAL revenue in 912 PSAP service of \$50,000 (11%). Remaining surplus to be carried forward to 2018. Payback to Victoria, Saanich PSAP members will be \$103,000 (11%) below budget.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Construction on the Port Renfrew/Pacheedaht Earthquake Early Warning/Tsunami siren system begins in fall of 2017. The project will see the establishment of three sirens in this high risk area to warn residents of potential tsunamis.
- Construct South Island Communications Centre to meet January 2019 operational target.
- Upgrade Emergency Communications Infrastructure to ensure effective communications within the region and to external agencies in the event of telecommunications system failure.
- Acquire reserve fire apparatus for EA Fire services to provide timely spare when frontline engines are down for repair and maintenance to ensure service continuity. The spare would be held at Hartland Landfill and would also act as on site fire suppression support to Hartland as required. This is a collaborative purchase with Hartland.

- Enhance on call Duty Emergency Manager capability to better serve the organization and to relieve excessive after hours pressure on the two current emergency managers that take call.
- Improve EOC/building supplies for emergencies to ensure that emergency operations can be sustained during disaster events consistent with legislative requirements.

***Service Adjustments and Staffing Levels: (linked to section 2 of the detailed service plan)***

- Increase of on-call Duty Emergency Manager capability to better serve the organization and to relieve excessive after hours pressure on the two current emergency managers that take call. \$25K funded through requisition.
- Increase parks patrols in Regional Parks by Bylaw Officers, \$100K recovery from Parks to fund a .5 FTE and additional auxiliary hours to provide four hours of Parks patrol daily x 365

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p>In section 4 of your Service Plan, select 2017 and 2018 indicators or measures and summarise at a high level. If you have any new or updated KPIs or unchanged KPIs related to 2017 and 2018 you'll add them here. This table is a snapshot of your service plan section 4 related to 2017/2018 indicators.</p>			
<b>Maintain and enhance public safety through emergency management and response</b>	<b>2017 planned metric</b>	<b>2017 projected metric</b>	<b>2018 planned metric</b>
Corporate Emergency Operations Centre	2 exercises per year	2 exercises per year	2 exercises per year
Hazardous Material Response Readiness	Ensure a minimum of 70 hazmat technicians	Ensure a minimum of 60 hazmat technicians	Ensure a minimum of 60 hazmat technicians
911 Call Answering	95% of 911 calls are handled within 15 seconds	95% of 911 calls are handled within 15 seconds	95% of 911 calls are handled within 15 seconds
Trained SAR volunteers	30 trained volunteers on roster	30 trained volunteers on roster	40 trained volunteers on roster
<b>Ensure Quality Animal Care Services for Region</b>			
Ensure Quality Animal Care Services for Region	Rehome more than 90% of dogs and cats from CRD animal care facilities annually	Rehome more than 90% of dogs and cats from CRD animal care facilities annually	Rehome more than 90% of dogs and cats from CRD animal care facilities annually

## Contact

Name: Shawn Carby  
 Title: Senior Manager, Protective Services  
 Contact Information: 250.360.3186

**SERVICE NAME:** Regional & Strategic Planning

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- Implementation of the Transportation Data Review completed in 2017 will require funding. Completion of projects will respond to stakeholder demand for improved transportation data.
- Adoption of the Regional Growth Strategy has been delayed because not all municipalities accepted the document, thus triggering a legislatively mandated dispute resolution process, which will continue through 2017 and into 2018.
- Following Board approval of the Regional Food and Agriculture Strategy in late 2016, there is increased interest from some municipalities and external stakeholders in having the region play a greater role in supporting agriculture.
- Establishment of a Transportation Service has been delayed pending release of provincial report.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- There is a \$22,000 (5.3%) favourable variance in Regional Growth Management due to UBCM gas tax grant coverage of most RGS expenses. This variance will be transferred to the RGS Reserve to fund future Regional Growth Service projects so as to reduce/avoid future requisition impacts. Currently, the Reserve is at \$695,000.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- The following new initiatives (all related to the Active and Multi-Modal Transportation Priority) are proposed to be funded with reserves in 2018:
  - Transportation Indicators: Develop transportation indicators and sub-indicators
  - Transportation Protocols: Establish protocols to coordinate and share local, regional and provincial transportation data
  - Travel Time Surveys: Develop a travel time survey program
  - Transportation Key Facts: Provide policy-relevant factual information to decision makers/public
  - Goods Movement Data: Identify data needs and recommend process for collecting
- The following new initiative (related to the Agricultural Land & Food Security Priority) is proposed to be funded in 2018 as a supplemental:
  - Regional Food and Farmland Trust Options Feasibility Study/Business Case
- The following initiative originally planned for 2017 is proposed to be delayed:
  - Transportation Model Recalibration: Full recalibration is not required until 2021 (Active and Multi Modal Transportation Priority)
- The following initiative is proposed to be completed in 2018:
  - CRD Transportation Service: Advance a service establishment bylaw to create a transportation service

<p><b>Service Adjustments and Staffing Levels:</b> <i>(linked to section 2 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>No staffing adjustments planned for 2018. Increased service pertaining to implementation of transportation data review recommendations.</li> <li>Farming Infrastructure Research Project in 2018 - \$25k</li> <li>Regional Food &amp; Farmland Trust Study in 2018 - \$30k</li> </ul>
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<b>Key Performance Indicators:</b> <i>(linked to section 4 of the detailed service plan)</i>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Prepare, update and monitor RGS</b>			
Adoption of Regional Growth Strategy (RGS)	Adoption	Delayed Due to Dispute Resolution	Adoption
Establishment of RGS Monitoring Plan	Completion	Delayed Due to Dispute Resolution	Completion
Provision of observations on RGS Implementation	Available within 1 year of adoption	Available within 1 year of adoption	Available within 1 year of adoption
<b>Service Goal: Develop policy, plans, studies and reports under direction of Board</b>			
Establishment of Transportation Service	Establishment	Delayed pending release of provincial report	Board consideration
# Local Governments/Agencies Supported Towards Advancement of Active Transportation Infrastructure and Programming	20 schools 10 municipalities 1 EA	30 schools 10,821 students 10 municipalities 1 EA; 1575 residents	6 schools 1 municipality (user-pay funded)
<b>Service Goal: Provide regional, subregional and municipal statistics</b>			
# Information Requests Responded To	150	222 (1)	200
% of Standard Data Requests Provided within 4 Business Days	90%	98% (1)	98%

(1) Projected to year-end based on year-to-date information available on June 22, 2017.

## Contact

Name: Signe Bagh, MCIP  
 Title: Senior Manager, Regional and Strategic Planning  
 Contact Information: 250.360.3244

**SERVICE NAME:** Health & Capital Planning Strategies

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- The Board has identified the need to explore a designated health facilities in Sooke, on the Saanich Peninsula, and in the Westshore.
- Support the CRDs Regional Housing First Program, including exploring potential mixed-use designated health facilities.
- Grant funding from Island Health for the healthy communities planner to advance the CHWB plan will expire at the end of December 2017.
- Research and policy development is increasingly relied upon to support healthcare infrastructure investments and community wellbeing initiatives. The CRD is well positioned to lead and facilitate the measurement and tracking of progress towards desired health and wellbeing outcomes through initiatives such as the Regional Outcomes Monitoring (ROM) Collaborative.
- Island Health is seeking a partnership with CRD to support a Southern Gulf Island community health coordinator.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- Health and Capital Planning Strategies (HCPS) Administration - There is an estimated \$49,000 favourable variance due primarily to underspending in salaries and various administrative expenses. This variance will be carried forward to 2018 to the Feasibility and Administrative Reserve.
- Capital Regional Hospital District (CRHD) - no significant variation to budget.
- Community Health - There is a \$25,900 (3.8%) favourable variance due primarily to underspending for the Clean Air bylaw update as well as CHWB project costs and legal fees. This variance will be carried forward to 2018.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Property Development Partnerships (Housing, Regional Infrastructure, Health and Wellbeing, Changing Demographics):
  - Work with Island Health to support capital projects and explore health care facilities in Board identified priority areas of Sooke, Saanich Peninsula, and the Westshore.
  - Conduct a feasibility study to determine best location for a future designated health facility.
- Property Acquisition (Housing, Health and Wellbeing, Changing Demographics):
  - Develop business cases to acquire strategic properties for future residential and dementia care.
- Asset Management (Housing, regional Infrastructure, Health and Wellbeing)
  - Facilitate discussion around the development of 950 Kings Rd. (Quadra Village) and Oak Bay Lodge.
- Community Health (Health and Wellbeing)
  - Build regional capacity to improve health and wellbeing through data collection and analytics (ROM Collaborative and Community Map), coordination of SGI Community Health Network, student engagement, regional forums, workshops, tools and resources.

**Service Adjustments and Staffing Levels:** *(linked to section 2 of the detailed service plan)*

- Community Health
  - Renewal of existing annual term position for 2018. 2018 term planner position to be funded by grants and offset of decreasing Island Health service contract. Previous 2011-2016 Island Health grants funded the term position Healthy Communities Planner. A term position is required to continue to support the implementation of the Community Health and Wellbeing Plan and support a Southern Gulf Island Community Health network coordinator.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Expand, improve and maintain healthcare facilities.</b>	Construction projects on time and on budget	Construction projects on time and on budget	Construction projects on time and on budget
<b>Service Goal: Monitor expenditures and administration of payments to VIHA and other partners, including oversight of expenditure patterns of multiple capital and equipment projects to ensure CRD funds are spent according to approved project scope, schedule and budget.</b>	Ensure CRD funds for minor capital and equipment are utilized within project scope, on time, and on budget.	Ensure CRD funds for minor capital and equipment are utilized within project scope, on time, and on budget.	Ensure CRD funds for minor capital and equipment are utilized within project scope, on time, and on budget.
<b>Service Goal: Improved public health through public health bylaws development, implementation and enforcement.</b>	<p>Respond to all bylaw enquiries and make referrals to Island Health for enforcement within 7 days.</p> <p>Engage Island Health twice annually to ensure existing bylaws continue to address public health risks.</p>	<p>Respond to all bylaw enquiries and make referrals to Island Health for enforcement within 7 days.</p> <p>Engage Island Health twice annually to ensure existing bylaws continue to address public health risks.</p>	<p>Respond to all bylaw enquiries and make referrals to Island Health for enforcement within 7 days.</p> <p>Engage Island Health twice annually to ensure existing bylaws continue to address public health risks.</p>
<b>Service Goal: Greater regional coordination of wellbeing initiatives; provision of valid, reliable, local data, and; capacity-building through forums, workshops and planning tools.</b>	<p>Indicators and data collected through the ROM Collaborative are shared with community partners, including municipalities.</p> <p>Community Map is accessed regularly (unique page views) and updates are made annually to</p>	<p>Indicators and data collected through the ROM Collaborative are shared with community partners, including municipalities.</p> <p>Community Map is accessed regularly (unique page views) and</p>	<p>Indicators and data collected through the ROM Collaborative are shared with community partners, including municipalities.</p> <p>Community Map is accessed regularly (unique page views) and</p>



	ensure information is accurate and relevant.	updates are made annually to ensure information is accurate and relevant.	updates are made annually to ensure information is accurate and relevant.
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## Contact

Name: Michael Barnes

Title: Manager, Health and Capital Planning

Contact Information: 250.360.3114

**SERVICE NAME:** Regional Housing

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

**Housing Planning and Programs**

**Community Development:** Increased number and scope of community development projects

- Increase in requests for Housing Agreement Administration from municipalities may impact service levels
- Expectations for municipal engagement/communications/outreach are increasing and evolving

**Homelessness Partnership Strategy (HPS)** is focused on the delivery of Housing First programs.

- Increased funding envelope for 2017/18 and 2018/19;
- Diversified knowledge requirements and increased complexity in administrative processes;
- Announcement in 2017 for continued funding of HPS for 2019-2028;
- Government of Canada is currently undertaking an evaluation of this program; and
- The CRD will need to apply to the Government of Canada to continue in its role as administrator of the program.

**Regional Housing First Program (RHFP) and Regional Housing Trust Fund (RHTF)**

- In 2016, the CRD Board directed staff to phase out the Regional Housing Trust Fund (RHTF) and replace it with the Regional Housing First Program (RHFP) from 2016-2021 for the development of supportive and affordable housing.
- The RHFP will administer \$30M of CRD/CRHD equity funding by way of MFA debt borrowings.
- Due to the standard two year capital development cycle RHTF will be suspended in 2019 and the related \$1M requisition capacity transferred to RHFP.

**Social purpose real estate investment trust**

- Advance an examination of options to support the establishment of a program or structure capable of investing in affordable housing, preserving projects at moderately affordable rates while also providing a modest return to investors, including an examination of establishing a social purpose real estate investment trust

**Regional Housing Affordability Strategy (RHAS) Update:**

- Completion of RHAS update in 2018 may impact service priorities in 2019.

**Greater Victoria Coalition to End Homelessness**

- Act as liaison on behalf of CRD. Increased involvement in project administration and oversight associated with Coalition.

**Capital Region Housing Corporation (CRHC)**

**CRHC Board Strategic Plan 2016-2019 approved in December 2015**

- Umbrella Operating Agreement (2015-2019) will need to be renegotiated in 2019.
- 14 Expiring Operating Agreements from 2018-2021, develop strategy to address operational changes required.
- Increased operational (utilities, property taxes, staff contracts) and capital costs (aging infrastructure) may impact capacity to maintain current rent geared to income levels into the future.

- Aging infrastructure is requiring increased asset management resources. Limited Provincial or Federal commitment of grants for remediation of aging infrastructure.
- Tenant Engagement Strategy: The CRHC Board of Directors directed staff to undertake a Tenant Engagement Pilot Project from April 2017 to March 2018. Outcomes may impact service requirements.
- Increased demand in Housing First programs may require CRHC to consider expanding mandate and/or developing new partnerships.

**Development**

- Development of “Westview”, a 73 unit development for families, seniors, persons with disabilities and workforce housing, on Carey Rd. in Saanich. Currently in design/development phase.
- Development of 161 Drake Rd, an 80 unit development on Salt Spring Island, currently in predevelopment stage.
- Redevelopment of Michigan Square, currently in predevelopment phase.

**Overall 2017 Budget Performance:** *(linked to budget forecast to year end)*

- **Housing Planning and Programs (HPP)**
  - No significant variance from planned budget.
- **Capital Region Housing Corporation (CRHC)**
  - No significant variance from planned budget.
- **Regional Housing Trust Fund (RHTF)**
  - There is a \$1,361,220 (62.2%) favourable variance due to the multiple year payout of committed RHTF capital grants. This surplus carry forward is anticipated to be spent by 2019.

**Update to Division Initiatives:** *(linked to section 3 of the detailed service plan)*

- Regional Housing First Program: Ensure prioritization be given to youth and Indigenous programming solutions.

**Service Adjustments and Staffing Levels:** *(linked to section 2 of the detailed service plan)*

- Homelessness Partnering Strategy: Extension of Social Innovation Funding (SIF) for 2018/19 will maintain current staffing levels through 2018.
- Capital Region Housing Corporation: 2017 Tenant Engagement Pilot Project results could impact 2018 staffing levels by 1 FTE increase. To be funded by CRHC internal building property management fees. Will not impact CRD budget.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Increase access to affordable housing</b></p> <ul style="list-style-type: none"> <li>RHFP – Increase housing for chronic homeless, at least 300 units from 2017-2021</li> <li>CRHC – increase CRHC housing to absorb additional 30 RGI units (this will result in approximately 150-200 affordable units) from 2017-2021</li> </ul>	<p>RHFP: Increase housing for chronic homeless by 90 units.</p> <p>RHTF: increase affordable housing by at least 67 units through RHTF investment of \$15,000 per door.</p> <p>CRHC: – increase CRHC housing to absorb additional 30 RGI units (this will result in approximately 150-200 affordable units) from 2017-2021</p>	<p>RHFP – 50 units of housing for chronic homeless</p> <p>RHTF – 84 units of affordable housing</p> <p>CRHC – 43 units of affordable housing – 30 RGI units approved.</p> <p>Total: 207 units</p>	<p>RHFP – Increase housing for chronic homeless, at least 300 units from 2017-2021</p> <p>Met target in 2017, will revise target with CRHC Board for 2018</p>
<p><b>Service Goal: Ensure responsible asset management</b></p> <ul style="list-style-type: none"> <li>Maximum number of days that a unit is vacant in CRHC is no more than 30 days per month</li> </ul>	<p>Ongoing deliverable of average turnover at under 30 days</p>	<p>Yes</p>	<p>Ongoing deliverable of average turnover at under 30 days</p>
<p><b>Service Goal: Ensure responsible asset management</b></p> <ul style="list-style-type: none"> <li>Routine capital replacement projects completed on time and on budget (within 10% +/-)</li> </ul>	<p>Yes</p>	<p>Yes</p>	<p>Yes</p>

<p><b>Service Goal: Increase opportunities for tenant and community engagement</b></p> <ul style="list-style-type: none"> <li>• Minimum number of working groups or committees hosted or attended is at least 40 annually</li> </ul>	<p>40 annually</p>	<p>40 annually*</p>	<p>40 annually</p>
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\*New engagement opportunities in 2017: Southern Gulf Islands Housing Needs Assessment, Regional Housing Affordability Strategy Update Event, Regional Housing First Program presentations to eight sector groups (e.g. Aboriginal Coalition to End Homelessness, UDI, Women’s Organizations, Housing ED’s), Tenant Engagement Pilot Project in 7 CRHC communities

Salt Spring Island Housing Council and Housing First and Homelessness on Salt Spring Committee

## Contact

Name: Christine Culham  
 Title: Senior Manager, Regional Housing  
 Contact information: 250.360.3371

# Service Plan for Protective Services

2016-2019



Capital Regional District

**Date submitted:** October 7, 2015  
**Date updated:** ~~October 2016~~ July 2017



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# 1 Overview

## 1.1 Division & Service Summary

The Protective Services Division is focused on planning, administration and operation for public safety, emergency management and response, and bylaw and animal care services. The division manages services of both a regional and local electoral area nature. Included in this division are:

**Regional services** including Hazmat Response, 911 Call Answer and Regional Emergency Support

**Sub-regional services** including Fire Dispatch, Animal Care and Bylaw

**Electoral Area services** including Fire Protection, Emergency Management and Search and Rescue

The purpose of Protective Services is to maintain a comprehensive Emergency Management and Response Organization to ensure appropriate and timely response to emergency incidents in our areas of responsibility (regional, sub-regional and electoral areas).

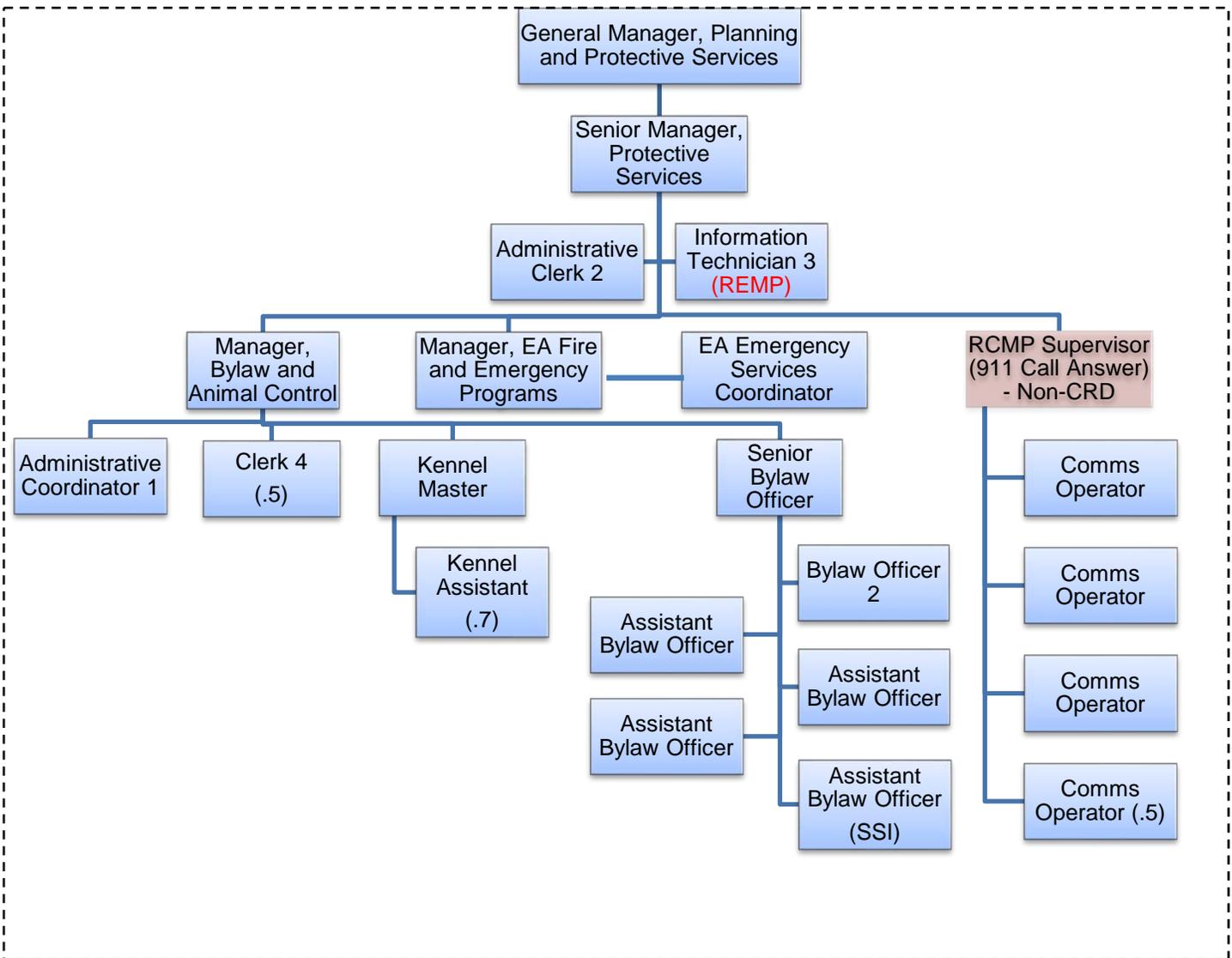
Bylaw and Animal care respond to complaints, seek voluntary compliance and use regulatory and legal enforcement options to enforce bylaws in the three Electoral Areas for noise, nuisance and unsightly premises, as well as soil deposit and removal in the Juan de Fuca (JdF) Electoral Area (EA).

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>911 Call Answer (Regional)</b></p> <p>Administration and oversight of 911 Call Answer services within the Capital Regional District, with operational responsibility for the areas served by the RCMP.</p>	Police, Fire and Ambulance Dispatch	Call Answer Levy	Planning, <del>Transportation</del> and Protective Services Committee (P+PSC)
<p><b>Hazmat Response (Regional)</b></p> <p>Operation and administration of the regional Emergency Hazardous Material Response team in partnership with the region's fire departments.</p>	Regional service includes members from fire departments across the region. Japan Gulch Water Treatment Plant staff cross trains with the Hazmat team for preplanning responses	Regional Requisition	P+PSC Greater Victoria Fire Chiefs Association (GVFCA) Policy Group Operational Working Group (Team members, GVFCA reps and CRD)
<p><b>CRD Emergency Management</b></p> <p>Responsible for local emergency management programs in each of the electoral areas supported centrally by the CRD Emergency Operations Centre (EOC). <u>Provision of 24/7 On Call Duty Emergency Manager, Operation of Regional/EA Emergency Communications centres.</u> The CRD EOC will be provide support to <u>internal departments and external agencies during emergencies.</u> Support provided to <u>departmental emergencies</u> such as those affecting water systems or other CRD assets, <u>through Advance Planning, response and After Action reviews.</u></p>	EA Emergency Programs, all departments	General legislative funding for corporate initiatives, local EA requisitions for each local EA program	<u>Emergency Management Committee (EMC)</u> <u>Emergency Coordination Committee (ECC)</u> Electoral Area Services Committee (EASC) Southern Gulf Islands (SGI) Advisory Commission JdF & Salt Spring Island (SSI) Community Coordinators Group

<p><b>Regional Emergency Management Coordination (Regional)</b></p> <p>Developed to provide a coordinating role for resource and information sharing among local municipal and electoral area programs, supported by the CRD Local Government Emergency Program Advisory Commission (LGEPAC) and Regional Emergency Planning Advisory Commission (REPAC).</p> <p><a href="#">Regional Emergency Management Partnership (REMP) supported through human Resources and strategic direction</a></p>	Municipal and EA Emergency Programs	Regional Requisition	<p>P+PSC LGEPAC REPAC <a href="#">REMP</a></p>
<p><b>Fire Dispatch (Sub-Regional)</b></p> <p>Operational management of fire dispatch for the three electoral areas (JdF, SGI and SSI) along with participating municipalities (Sooke, Metchosin, Langford and Highlands).</p>	Fire Departments in Sooke, Metchosin, Highlands, Langford, EA Fire departments and EA Emergency Programs	Requisition of participating jurisdictions	<p>P+PSC Working group of fire department representatives</p>
<p><b>Bylaw Services (Sub-Regional)</b></p>	All EAs, District of Highlands, and District of Metchosin, internal Customers	Requisition and internal recoveries for the EA. Fee for service to District of Highlands and District of Metchosin and internal customers	EASC
<p><b>Animal Care Services (Sub-regional)</b></p>	All EA, the Highlands, Metchosin, Sooke, Colwood, Langford, View Royal, Central Saanich, North Saanich, Saanich and Sidney	Requisition for the EA, Highlands, Sooke and Metchosin. By contract for Colwood, Langford, View Royal, Central Saanich, North Saanich, Saanich, and Sidney	EASC
<p><b>EA Emergency Coordination</b></p> <p>Oversight and administration of the Electoral Area Emergency Programs.</p>	Support to all three EA	Funding for two FTE is provided through a requisition to the three EAs	EASC
<p><b>SGI Emergency Program</b></p> <p>Operation of a community based emergency management program, utilizing input from a local Advisory Commission to develop a program that is supported by the CRD EOC and meets the needs of the local residents and area.</p>	SGI	Funded by requisition to the SGI EA	EASC
<p><b>SSI Emergency Program</b></p> <p>Operation of a community based emergency management program that is supported by the CRD EOC and meets the needs of the local residents and area.</p>	SSI	Funded by requisition to the SSI EA	EASC
<p><b>JdF Emergency Program</b></p> <p>Operation of a community based emergency management program that is supported by the CRD EOC and meets the needs of the local residents and area.</p>	JdF	Funded by requisition to the JdF EA	EASC

<b>JdF Search and Rescue (JdF SAR)</b> Program oversight and administration for the JdF SAR service.	JdF	Funded by requisition to the JdF Response costs covered by EMBC	EASC
<b>SSI Search and Rescue (SSI SAR)</b> Financial support to the SSI SAR Society to cover overhead (non-operational) costs.	SSI	Funded by requisition to the SSI EA	EASC
<b>EA Fire Services</b> <u>Operation Oversight and support of and to Fire and Rescue Commissions and services.</u>	All residents and visitors within jurisdiction set out in establishing bylaw	Funded by requisition to the residents of the service area	EASC

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

Changes in technology from the consumer side (cell phones, texting, social media, and GPS locations) have driven the need to enhance technology at the service side and look at the integration of information and technology throughout the emergency management and response areas.

Increasingly the public expects instantaneous advice and direction when events do occur (earthquake/tsunami warnings). From the service side this is driving the need for mass notification systems and the ability to integrate situational awareness information into the EOC.

Over the past several years focus has been on the creation of efficiencies within existing budgets in order to meet higher community expectations. These efficiencies have now been realized, ~~indicating~~ Further service level increases will require budgetary expansions.

~~The CRD has been chosen by the AGLG to undergo an audit of our emergency management program including all service area emergency plans. The audit expected to be completed in October of 2017.~~

~~A process for First Nations engagement has been commenced, It is expected this will become an additional enhance FN engagement in regional emergency preparedness and will align with EMBC and function to RREMP initiatives.~~

Collaborations on service improvement has resulted in the establishment of the Regional Emergency Management Partnership (REMP) with Emergency Management BC (EMBC) which is designed to improve regional emergency planning for cross jurisdictional disasters in alignment with provincial level planning.

~~Work has begun with key stakeholders around the unification of 911 and Police Dispatch services and building of the South Island Communications Centre to support police responders within the region is underway.~~

Recently, the Office of Fire Commissioner (OFC) has established a new *Fire Services Act* that may have impact on CRD service requirements related to fire investigations and inspections. The associated regulations are in development ~~and expected as early as Fall 2016~~ and will dictate service expectations on regional jurisdictions. Regional districts are lobbying to have input on these new regulations.

### Regional Services

- 911 Call Answer Support:
  - Public is increasingly engaged with events resulting in increases in number of calls per incident.
  - Increased call volumes put pressure on staffing levels.
  - Expectations of the public to be able to connect with 911 across a wide array of technologies.
  - ~~Reductions in landline Call Answer Levy (CAL).~~
  - Provincial take-over of responsibility for Public-Safety Answering Point (PSAP) services and call answer levies ~~is a possibility along with attendant reduction in revenues.~~
  - ~~Construction of the South Island Communications Centre that will house the Unification of unified 911 call answer and police dispatch services for the region will be underway in the fall of 2017 with an anticipated completion of January 1, 2019 is being built, progressing.~~
  - ~~Ability of BCEHS to accept medical calls in a timely fashion causing delays and transfer of calls from 911 centre~~
- Hazmat Response:
  - Increasingly the public is less tolerant of the occurrence of hazardous materials incidents and when they do occur the expectation is for a rapid and effective response.
  - The provision of the service requires ongoing training to ensure safety and efficiency.
  - Structure and staffing of the service requires ongoing participation of the partner fire departments many of which are unionized. As training by necessity must occur outside of regular duty hours for these individuals, significant overtime costs are incurred.
  - ~~Reliance on cooperation of all fire departments to support integration of career, paid on call and volunteer fire-fighters (FFs).~~
  - ~~Potential for Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) attack due to proximity of Parliament building is being highlighted by the Legislature~~
- Regional Emergency Support:
  - Increased frequency and complexity of emergency events.
  - Heightened public awareness and concern regarding lack of readiness/response capability:

- Increasing educational requirement expectations of volunteers (time commitment).
- Inability Challenges to provide timely information out to residents and integrate situational awareness into EOC operations may compound the severity of any local or regional disaster.
- CRD Regional ~~communications~~communications centre's approachability to facilitate timely communications during major events
- Challenges with training and maintaining Emergency Communications Centre volunteer operators.
- Challenges in establishing, training and maintaining skill sets for EOC staff
- Signing of the REMP MOU with the province will improve regional coordination during large scale emergencies.
- Changing demographics in rural areas leading to aging volunteers or part time residents leads to reduction in available volunteers for critical programs.

### Sub Regional Services

- Fire Dispatch:
  - Continually increasing call volumes.
  - Imminent change to 700 ~~MHz~~MHz National trend to frequency spectrum for all first responder agencies. may have significant impact on equipment budgets. ~~change to 700 MHz.~~
  - Interoperability capacity between response services.
  - Continued changes to technology need to be strategically addressed in conjunction with 911 Call Answer or we will lose the high level of service currently achieved.
  - Interdependency between dispatch centres including technical and wired connectivity.
- Bylaw and Animal Care Services:
  - Loss of current contracts could further decrease service capability and economy of scale.
  - BCSPCA no longer providing veterinarian services to strays, this now falls on regional animal care service to cover. This is not covered under existing contracts.
  - Legal costs for animal control is increasing and not provided for under existing contracts.

### Electoral Area Services

- Electoral Area Emergency Coordination and Fire Services:
  - Public expectations of government's ability to provide leadership and restoration of service following major incidents continue to increase.
  - Focus of the program has to continue to reflect each community's specific and unique needs to ensure that the emergency program is able to respond appropriately in an all-hazards manner to any incident.
  - Changing demographics in rural areas leading to aging volunteers or part time residents points to reduction in available volunteers for critical programs.
  - SSI Emergency Program requires new post seismic event facilities
  - ~~Provincial Fire Commissioners Office has created new requirements tying service levels to specific training/staffing/equipment levels.~~
  - Support levels for emergency programs can vary.
  - Climate change continues to impact frequency and severity of weather events (wildfire risks, drought, severe winter storms etc.).
  - Decreasing availability of volunteers can limit program and response capability and effectiveness.
  - Provincial Fire Commissioners Office has created new requirements tying service levels to specific training/staffing/equipment levels resulting in some significant challenges potentially impacting long term viability of smaller volunteer based fire services.
  - Increasing challenges in meeting administrative burdens of many EA fire departments
  - Ongoing and increasing pressures on volunteer recruitment and retention as well as issues related to training for all volunteer based EA services (Fire departments and Emergency Programs)
  - ~~Severe~~Significant challenge in aAbility to meet and maintain compliance with new government fire service guidelines in all service areas.
  - The new Fire Services Act that may have impact on CRD service requirements related to fire investigations and inspections.

## 1.4 Link to Priorities

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement
- share stories of collaboration and accomplishments

### PROTECTIVE SERVICES

- collaborate with partners to prepare for, respond to and recover from emergencies

### EDUCATION, OUTREACH & INFORMATION

- demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information

## 2 Services

### 2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>911 Call Answer</b>	Working with PSAPs on unification model	Implementation of unified approach	Continued implementation of new technologies	<a href="#">Review &amp; Assess build and commissioning of new SICC</a>	Adjust to meet service levels, as needed
<b>Hazmat Response</b>	Focus training maintaining response capacity and multi-agency response	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>CRD Emergency Management</b>	Local electoral area emergency planning and response support	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>Regional Emergency Management Coordination</b>	Partnering with Province for enhanced Regional Cooperation	Review & Assess	Adjust to meet service levels, as needed. <a href="#">REMP introduced</a>	Review & Assess	Adjust to meet service levels, as needed
<b>Fire Dispatch</b>	Implementation of full service fire dispatch	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>Bylaw and Animal Care Services</b>	Bylaw officers working 7 days/week from 8 am to 6 pm. A bylaw officer on call for issues from 6 pm to 8 am and all day long on Statutory holidays	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>EA Coordination</b>	Partnering with Province for enhanced Regional Cooperation	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed

					levels, as needed
<b>SIG Emergency Program</b>	Focus training maintaining response capacity  Focus on integrated emergency exercises with CRD EOC and multiple EAs	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>SSI Emergency Program</b>	Focus training maintaining response capacity  Focus on integrated emergency exercises with CRD EOC and multiple EAs	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>JdF Emergency Program</b>	Focus training maintaining response capacity  Focus on integrated emergency exercises with CRD EOC and multiple EAs	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>JdF SAR</b>	Focus training maintaining response capacity	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>EA Fire Services</b>	Complete Fire Service review	Implement strategies to meet OFC guidelines	Review & Assess	Adjust to meet service levels, as needed	Review & Assess

## 2.2 Workforce Considerations

### Regional

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
911 Call Answer	3.5	3.5	3.5	3.5	0 E-Comm assumes 911 contract
Hazmat Response	73 (Non CRD)	80 (Non CRD)	80 (Non CRD)	<del>6080</del> (Non CRD)	<del>8060</del> (Non CRD)
CRD Emergency Management	5	5	5	5	5
<b>Total</b>	8.5	8.5	8.5	8.5	5

### Sub-regional

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Bylaw and Animal Care	10.2	10.2	10.2	10.7	10.7
<b>Total</b>	10.2	10.2	10.2	10.7	10.7

*Both services were combined as of February 1, 2015 and will be blended into one budget in future years.*

**Electoral Area**

	<b>Workforce (FTEs)</b>				
<b>Service</b>	<b>Base year 2015</b>	<b>Year 1 (2016)</b>	<b>Year 2 (2017)</b>	<b>Year 3 (2018)</b>	<b>Year 4 (2019)</b>
<b>Emergency Management</b>	*	*	*	*	*
<b>Emergency Programs</b>	1.5	1.5	1.5	1.5	1.5
<b>JdF SAR</b>	0.5	0.5	0.5	0.5	0.5
<b>Total</b>	2.0	2.0	2.0	2.0	2.0

\* 5 FTE split between Regional and Electoral Area Emergency Management.

### 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Situational Awareness Integration System</b>	Undertake review of existing situational awareness software and assess integration compatibility with Mass Notification System.	Protective Services	Core Budget
<b>Regional Emergency Management Partnership</b>	To establish a local/regional/provincial partnership, designed to enhance emergency management across the CRD through the provision of greater regional cooperation, coordination, collaboration and communications.	Public Engagement and Communications Protective Services	Core Budget
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Public Engagement and Communications Protective Services	Core Budget
<b>Regional Emergency Management Coordination</b>	Undertake review of requirements to accommodate EOC staff families during major event.	Protective Services	Core Budget
<b>Increase communications infrastructure resilience</b>	Ensure uninterrupted communications linkages are in place.	Protective Services	Core Budget
<b>911 Amalgamation</b>	Review and pursue opportunities to amalgamate 911 PSAP services in the CRD.	Protective Services	Core Budget
<b>Fire Services</b>	Fire services in the EAs will be required to comply with the new Fire Services Guidelines released by the Office of the Fire Commissioner (OFC) by June 2016. Presently there are a number of deficiencies with fire services that need to be addressed in order to comply.	Protective Services	Single Supplemental \$53,000
<b>Increase the number of First Nations contracts for Animal Control</b>	Enter into discussions to provide animal control services to First Nations not currently under contract.	First Nations Protective Services	Core Budget.
<b>Animal Care in Disasters</b>	Establish a regional animal care plan for emergency and disaster events.	Protective Services	Core Budget

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>2017</b>			
<b>Hazmat Response</b>	Conduct full Service Review as the team has responded 19 times from 2011 to June 2015.	Protective Services	Core Budget
<b>Hazmat Response</b>	Conduct Cost Recovery (service fees) review – initiate bylaw change to accommodate.	Protective Services	Core Budget
<b>CRD Recovery Plan</b>	This was a divisional initiative for 2014; the completion of this <u>was envisioned to may</u> become a part of the Regional Emergency Management Partnership identified for 2016, <u>failing that it will become</u> <u>it is now</u> a stand-alone project.	Protective Services	Core Budget
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Protective Services	Core Budget
<b>911 Amalgamation</b>	Implement approved 911 amalgamation initiatives.	Protective Services	Reserves
<b>2018</b>			
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Protective Services	Core Budget
	<u>Continued support of REMP</u>		<u>Core Budget</u>
	<u>Reserve Fire Apparatus</u>	<u>Applies to JDF &amp; SGI EA's and depts. within.</u>	<u>10,000/A adjusted for inflation</u>
	<u>Upgrade Emergency Communications Infrastructure</u>		<u>\$45,000 one-time supplemental and \$12,000/A adjusted for inflation</u>
	<u>CRD Staff Incident Management Team</u>		<u>Within core budgets of participating departments/divisions</u>
	<u>Increase of on call Duty Emergency Manager capability to better serve the organization and to relieve excessive after hours pressure on the two current emergency managers that take call. Enhance "On call capability"</u>		<u>\$12,500/A from Corporate Services starting in 2019. 2018 increase funded by surplus</u>
	<u>EOC/Bldg Emergency Supplies</u>		<u>5,000 one time supplement</u>
<b>911 Amalgamation</b>	<u>Implement approved 911 amalgamation initiatives. Construct South Island Communications Centre</u>	Protective Services	<u>Reserves Borrowing Bylaw</u>

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>Fire Services</b>	Port Renfrew/Pacheedaht Earthquake Early Warning/Tsunami siren system	Port Renfrew Fire Department	\$10,000/A maintenance & operating costs
	Acquire reserve fire apparatus for EA Fire services to provide timely spare when frontline engines are down for repair and maintenance to ensure service continuity. The spare would be held at Hartland Landfill and would also act as on site fire suppression support to Hartland as required. This is a collaborative purchase with Hartland.	Applies to JDF & SGI EA's and depts. within.	\$13,460/A adjusted for inflation
<b>2019</b>			
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Protective Services	Core Budget
	<u>Upgrade Emergency Communications Infrastructure</u>		\$45,000 one-time supplemental and \$12,000/A adjusted for inflation
<b>911 Amalgamation</b>	Complete 911 amalgamation.	Protective Services	
<b>2016-2019</b>			
<b>Regional Emergency Management Coordination</b>	Undertake to EOC Level 3 activation staff training. EOC Essentials & ICS as well as full-scale functional exercises.	Protective Services	Continuous supplemental \$10,600
<b>Mass Notification System</b>	Strategic planning sessions were held in each EA, these indicated a mass notification system to be a strategic priority. The intent is to provide where possible advance notice of events and as required direction to residents. A Pilot Project was completed in 2015.	Protective Services	Continuous supplemental \$6,000
<b>Situational Awareness Integration System</b>	Undertake review of existing situational awareness software and assess integration compatibility with Mass Notification System.	Protective Services	Core Budget
<b>JdF Search &amp; Rescue</b>	Review Operations ensuring compliance with all relevant regulations.	Protective Services	Core Budget
<b>Fire Dispatch</b>	2017-2018 will be the 2 <sup>nd</sup> -3 <sup>rd</sup> of 5 years in which the payment to Langford for Fire Dispatch	Protective Services	Continuous supplemental \$49,500

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
	increases approved for budget in 2016.		
<b>EA Fire Services</b>	<ul style="list-style-type: none"> <li>• <del>Continued work on coordinated response protocols (SOGs).</del></li> <li>• Ensuring record keeping requirements of new Fire Commissioner Playbook are met.</li> <li>• Integration of long range capital planning into budgets.</li> </ul>	Protective Services	Core Budget

## 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Maintain and enhance public safety through emergency management and response	<ul style="list-style-type: none"> <li>• # of Emergency Operations Centre staff training exercises annually* (target <del>4</del><u>2</u> per year)</li> <li>• 95% of 911 calls handled within 15 seconds</li> <li>• Number of volunteers registered in electoral area emergency programs* (baseline 900 volunteers in 2015)</li> <li>• Ensure a minimum of <del>70</del><u>60</u> hazmat technicians and 40 Juan De Fuca Search &amp; Rescue members are trained over 3 years</li> <li>• # of CRD educational workshops delivered or partnered on annually* (target minimum of 33)</li> </ul>
	Ensure Quality Animal Care Services for Region	<ul style="list-style-type: none"> <li>• Rehome more than 90% of dogs and cats from CRD animal care facilities annually</li> </ul>

### Contact

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# Service Plan for Regional & Strategic Planning

2016-2019



Capital Regional District

***Date submitted:*** ~~Revised as per Board resolution~~  
~~November 18, 2015~~

***Date updated:*** ~~October 6~~October 12~~September 15, 2017~~6



Making a difference...together

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# 1 Overview

## 1.1 Division & Service Summary

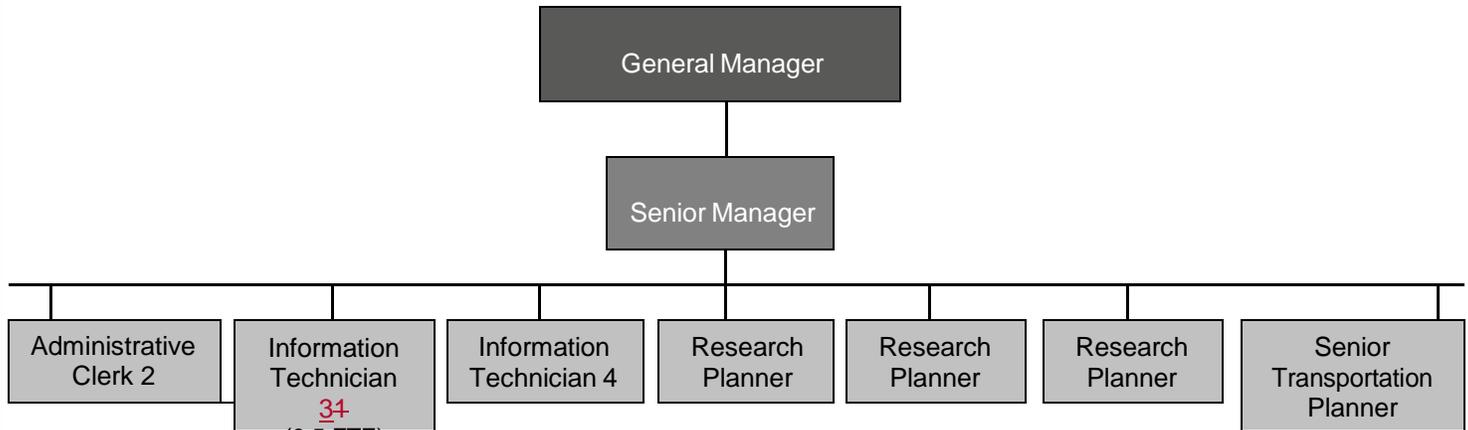
Regional and Strategic Planning provides information and planning services for municipalities, electoral areas and community agencies, including regional planning and regional growth services.

~~This Service Plan has been prepared in anticipation of a Transportation Service being approved in 2016.~~ Transportation initiatives (Section 3) have ~~\_, for 2016,~~ been planned so as to fall within the mandates of *existing* functions within Regional Information Systems (within Regional and Strategic Planning), as detailed in Section 2.1.

Future introduction of a Transportation Service would require amendment of this Service Plan to transfer transportation functions to the new Service. The components of this Service Plan that would be transferred are indicated in blue text throughout this Service Plan.

<p><b>Regional Planning</b></p> <ul style="list-style-type: none"> <li>provides regional, sub-regional and municipal statistics and prepares trend analyses</li> <li>develops policy, plans, studies and reports under direction from the CRD Board</li> <li>supports preparation and monitoring of Board's Strategic Plans</li> <li><u>oversees development of the regional transportation model and applies model to respond to municipal and electoral area (EA) information requests</u></li> <li><u>analyzes the impacts of actual and projected changes to the transportation system</u></li> <li>provides advice and information to the CRD Board, other departments and other jurisdictions on policies and issues related to land use planning, <u>transportation</u>, and population related data</li> </ul>	<p>All municipalities All EAs Tsawout and Songhees</p>	<p>Requisition, Grants</p>	<p>CRD Board Planning, Transportation and Protective Services Committee (PTPSC) Transportation Select Committee</p>
<p><b>Regional Growth</b></p> <ul style="list-style-type: none"> <li>prepares and updates the Regional Growth Strategy (RGS)</li> <li>monitors RGS indicators and progress towards targets</li> <li>evaluates development applications for consistency with RGS provisions</li> </ul>	<p>All municipalities Juan de Fuca EA (not Salt Spring Island or Southern Gulf Islands EAs) Tsawout and Songhees</p>	<p>Requisition, Grants</p>	<p>CRD Board PTPSC</p>

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

The below-noted trends, issues and risks pertain to both the Regional Planning and Regional Growth services within the Regional and Strategic Planning Division.

- Number and scope and complexity of special projects being given to Regional Planning is increasing, as is demand for regional planning information/knowledge/expertise. Regional disagreement on issues such as regional growth policy is prolonging timelines for project completion. There is increased interest from some municipalities and stakeholders in having the region play a greater role in supporting agriculture. Credibility could be impacted if resources are spread too thin and projects are tackled without necessary resources.
- Focus on implementation is eclipsing focus on planning/policy development (e.g., deer management pilot project, active transportation, agricultural initiatives). Ebbs and flows of divisional projects challenge stakeholder relationship-building efforts – relationships require consistency and ability for the organization to predictably add value. If programs are not delivered in the context of long term stability supported by secure funding, then CRD credibility will be compromised.
- Expectations for engagement/communications/outreach are increasing and evolving. The ability of the CRD to engage stakeholders will be compromised in the absence of stable services.
- The manner in which information is absorbed is changing -- there is greater desire for information to be conveyed visually – so the Division will need to effectively communicate increasingly complex issues using a broader set of platforms, in visually appealing, succinctly conveyed, relevant ways.
- Demand for specialized data/information/modelling is increasing, with expectations for very short turn-around times.
- Availability of grants supporting the projects mandated in delivery is decreasing/becoming more complex. For example, grant sources that once helped implement plans, such as the Regional Transportation Plan, have been broadened to include other focus areas, thus making less available for implementation of Regional Planning initiatives.
- Division is dependent on outside sources (Statistics Canada, etc.) for both quantity and quality of data that is analyzed and distributed. Relevance of work will be compromised if adjustments are not made to approaches to data collection/modelling programs to respond to technological changes and to evolving customer needs for localized data delivered on short timelines. Implementation of 2017 data review recommendations requires funding.

## 1.4 Link to Priorities

### CLIMATE CHANGE

- develop a climate framework to guide decision-making, establish a working group to identify climate change priorities and maximize partnerships

### LAND USE PLANNING

- present the amended Regional Growth Strategy to the Board for adoption

### ACTIVE & MULTI-MODAL TRANSPORTATION

- manage trails as transportation corridors, establish a Transportation Service, deliver active transportation programming and complete feasibility studies
- establish a working group to identify transportation priorities and participate in government programs

### AGRICULTURAL LAND & FOOD SECURITY

- review opportunities for regional agricultural incentives and initiate food security educational programming
- develop new policies to encourage farming and agri-tourism and propose land-banking solutions through the completion of the Food & Agricultural Strategy
- establish a working group to identify agricultural priorities and a task force to identify infrastructure priorities

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement

### EDUCATION, OUTREACH & INFORMATION

- expand on successful education partnerships and program delivery to include innovative in-person outreach and educational programs
- demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information

## 2 Services

### 2.1 Service Levels

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Regional Planning</b>	Conduct annual bicycle and vehicle counts and provide public access to data	May be slight reduction in # of traffic counts (given increasing costs and constant budget); Elimination of January bike count (still leaving 3 counts in 2016) to free up resources to allow for a review of the count program	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

Apply regional transportation data model to regional and sub-regional projects, on demand	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Contribute data and expertise to support inter-jurisdictional transportation projects and initiatives	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Implement and monitor the Regional Transportation Plan including the Pedestrian and Cycling Master Plan	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Disseminate Statistics Canada data	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Prepare monthly and quarterly construction and development activity reports for building permits and subdivisions	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Fulfill custom information, data and mapping requests, on demand	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Provide monthly, quarterly and annual sub-regional profiles and fact sheets	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Monitor and report on completion of Board Strategic Priorities	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Conduct special studies as directed	Adjust to meet service delivery needs, as required	Broaden scope to provide programming, advocacy, business plan and policy support to agricultural land and food security matters (one year)	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
Provide specialized support, expertise and information to CRD divisions and departments	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

<b>Regional Growth</b>	Advise on Regional Growth Strategy (RGS) consistency of development applications	Review and assess	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
	Conduct special studies	<del>Complete RGS</del> Adjust to meet service delivery needs, as required	Adjust to meet	Adjust to meet Complete RGS	Adjust to
	Implement the Deer Management Pilot Project	Program, as funded by one time supplementary funding completed in 2015 -- not ongoing	N/A	N/A	N/A

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Regional Planning*	5.5	5.5*	5.5	5.5	5.5
Regional Growth	2	2	2	2	2
<b>Total</b>	7.5	7.5	7.5	7.5	7.5

### \*NOTE – Transportation Service

On August 12, 2015, the Board directed staff to pursue establishment of a Transportation Service. ~~It is anticipated that a bylaw enabling such will be brought forward in 2016.~~ If a Transportation Service bylaw is approved, it is anticipated that some FTEs from the Regional Planning function would be dedicated to the Transportation Service under a scenario where the scope of services to be offered is the same as it was in 2015. Expansion of services would require additional resources.

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if	Budget Implications
<b>2016</b>			
<b>CRD Transportation Service</b>  To be completed in 2016	Prepare a service establishment bylaw to create a transportation service. The Board will identify functions for inclusion in the service.	Active & Multi-Modal Transportation	To be determined upon bylaw development
<b>CRD and VRTC Reporting and Communications Framework</b>  To be completed in 2016	Implement a series of processes and protocols to increase the CRD role in transit and strengthen the working relationship between the Victoria Regional Transit Commission (VRTC) and the Board.	Active & Multi-Modal Transportation	Core Budget
<b>Local Food Educational Programming</b>  Completed in 2016	Deploy programming to promote local food and its benefits by using existing templates from other projects and partnerships with external agencies.	Agricultural Land & Food Security	Core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Senior government agricultural programs and policies</b>	Support the Board Working Group and other agencies with advocacy efforts by providing input and advice generated from the Food & Agriculture Strategy and the update of the Regional Growth Strategy.	Agricultural Land & Food Security	Core budget
<b>Farming Incentives and Policy Development</b>  To be completed in 2016	Complete the Food and Agriculture Strategy which will contain detailed ideas, incentives and policies for the region to move food and agriculture policy ahead and enhance the regional food system.	Agricultural Land & Food Security	Core budget
<b>Regional Transportation Data Collection and Dissemination Review</b>  To be completed in 2017	Identify ways that technological, process and methodological approaches can be refined to improve cost efficiencies and data quality while better meeting customer needs. Explore the potential for web-based customer applications.	Active & Multi-Modal Transportation  Education, Outreach & Information	Core budget
<b>Active &amp; Safe Routes to School Travel Planning</b>  To be completed in 2018	Support school travel planning activities across the capital region in partnership with local governments and school districts. Design and implement a program to support interested participants in identifying and mapping active and safe routes to schools and identifying infrastructure gaps on school grounds and in surrounding neighbourhoods. Support school-led educational programs and funding applications for improvements to the physical environment for increasing use of active transportation.	Active & Multi-Modal Transportation  Public Engagement & Communications	Two single supplemental requests of \$125,000 for 2016 and 2017
<b>Active Transportation &amp; Healthy Communities Program</b>  To be completed in 2018	Coordinate a two-year, capacity-building program which includes education, training, skills development, material development and research initiatives in partnership with other divisions, public sector agencies and not-for-profit organizations. The program will collect new information and data on motivators and deterrents for active transportation in both rural and urban areas and is designed to motivate and support the increased use of walking, cycling and other forms of active transportation among target populations.	Active & Multi-Modal Transportation  Education, Outreach & Information	Program execution supported by \$100,000 grant from Victoria Foundation and \$50,000 grant from the Real Estate Foundation. CRD Traffic Safety Commission has provided contribution of \$50,000 over two years.  Above-noted Safe Routes to School Planning work would complement the Active Transportation and Healthy Communities Program.

2017			
<b>Origin/Destination Survey</b>	Complete this survey, completed every five years, which gathers up-to-date, statistically representative data on mode choices across the region to update the regional transportation model.	Active & Multi-Modal Transportation  Education, Outreach & Information	Reserves \$400,000
<b>Growth Projections Updates</b>	Update the 2038 population, dwellings and employment projections with new base year information from 2016 census and National Housing Survey data.	Education, Outreach & Information	Reserves \$80,000
2018			
<b>Farming Infrastructure Research Project</b>	Undertake research with assistance of consultants with agricultural business experience to determine viable, sustainable options and solutions for farming infrastructure needs.	Agricultural Land & Food Security	Single supplemental request of <u>\$25,000 \$50,000 (project initiation to be contingent on matching Provincial funding)</u>
<b>Regional Food and Farmland Trust Options Feasibility Study/Business Case</b>	Undertake a feasibility study/business case that assesses potential models for a regional food and farmland trust	<u>Agricultural Land &amp; Food Security</u>	Single supplemental request of \$30,000
<b><u>Transportation Indicators</u></b>	<u>Develop transportation indicators and sub-indicators in consultation with local, regional and provincial partners</u>	<u>Active &amp; Multi-Modal Transportation</u>  <u>Education, Outreach &amp; Information</u>	<u>Reserves \$5000</u>
<b><u>Transportation Protocols</u></b>	<u>Establish protocols to coordinate and share local, regional and provincial transportation data</u>	<u>Active &amp; Multi-Modal Transportation</u>  <u>Education, Outreach &amp; Information</u>	<u>Reserves \$3000</u>
<b><u>Travel Time Surveys</u></b>	<u>Develop a travel time survey program</u>	<u>Education, Outreach &amp; Information</u>	<u>Reserves \$25,000</u>
<b><u>Transportation Key Facts</u></b>	<u>Provide policy-relevant factual information to decision makers/public</u>	<u>Education, Outreach &amp; Information</u>	<u>Reserves \$5000</u>
<b><u>Goods Movement Data</u></b>	<u>Identify goods movement data needs and recommend process for collecting needed information</u>	<u>Education, Outreach &amp; Information</u>	<u>Reserves \$10,000</u>
<b><u>CRD Transportation Service</u></b>	<u>Advance a service establishment bylaw to create a transportation service as per Board direction.</u>	<u>Active &amp; Multi-Modal Transportation</u>	<u>To be determined upon bylaw development</u>

<p><b>Support of new Board Strategic Priorities 2019 – 2022</b></p> <p>To be completed by 2019</p>	<p>At the outset of each new Board mandate, the Board-prioritizes strategic priorities for the following four years.</p>		<p>Core Budget – funded through Executive Services budget</p>
<p><b>2019</b></p>			
<p><b>Pedestrian &amp; Cycling Master Plan (PCMP) Update</b></p> <p>To be completed by 2019</p>	<p>Work with municipal partners and community stakeholders to update the PCMP (and/or specific components of the plan).</p>	<p>Active &amp; Multi-Modal Transportation  Public Engagement &amp; Communications</p>	<p>Single supplemental request of \$30,000</p>

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
<p><del>Fulfil regulatory mandate under Local Government Act related to Regional Growth Strategy</del> Prepare, update and monitor RGS</p>	<ul style="list-style-type: none"> <li>• Adoption of Regional Growth Strategy*</li> <li>• Establishment of Regional Growth Strategy Monitoring Plan*</li> <li>• Qualitative observations on Regional Growth Strategy Implementation*</li> </ul>
<p><del>Improve coordination of regional transportation services and support expansion of infrastructure</del> Develop policy, plans, studies and reports under direction of Board</p>	<ul style="list-style-type: none"> <li>• Establishment of CRD Transportation Service*</li> <li>• # local governments and agencies supported towards advancement of active transportation infrastructure and programming</li> </ul>
<p>Advance policy, research-programming to support local food and agriculture</p>	<ul style="list-style-type: none"> <li>• # of policies promoting and encouraging farming and agri-tourism in the region*</li> <li>• Observations and reporting on infrastructure enhancements and/or deficiencies*</li> <li>• # of partnerships focused on local food education*</li> </ul>
<p>Maintain high quality customer-service for information and data-provision Provide regional, sub-regional and municipal statistics</p>	<ul style="list-style-type: none"> <li>• # of requests fulfilled per year for building inspection, transportation, demographic and/or development data*</li> <li>• % of standard data requests provided within 4 business days</li> <li>• 90% of standard data requests provided within 4 business days</li> </ul>

\*Corporate indicator – Multiple divisions may contribute to this measure

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# Service Plan for Health and Capital Planning Strategies Division

2016-2019

Capital Regional District

**Date submitted:** ~~September 08, 2017~~ January 2016  
**Date updated:** ~~October 2016~~ September 08, 2017



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# 1 Overview

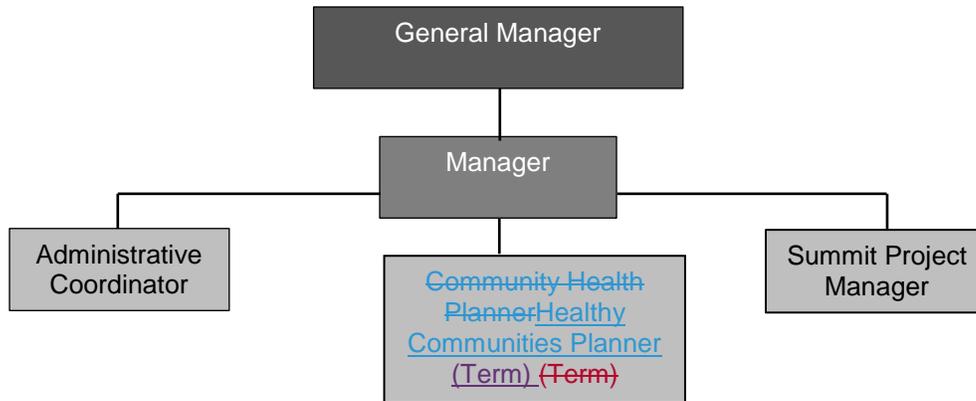
## 1.1 Division & Service Summary

The Division works with the Vancouver Island Health Authority (Island Health) and other community partners to expand, improve and maintain healthcare facilities in the capital region. ~~Facilities are categorized as: a) traditional acute care; and, b) non-traditional health care such as residential care, primary care and supportive/affordable housing, and expenditures are categorized into five key areas: major capital projects (greater than \$2 million), minor capital projects (\$100,000 to \$2 million), healthcare equipment, non-traditional projects, and land holdings.~~

The Division has two primary areas of responsibility: the Capital Regional Hospital District (CRHD) and Community Health.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Capital Regional Hospital District (CRHD)</b></p> <p>The Division is the operational division of the CRHD, which provides the local taxpayer’s share of capital funding to expand, improve and maintain <del>acute</del> health care facilities in the Capital Region. The CRHD is enabled by the <i>Hospital District Act</i> and is incorporated under <i>Letters Patent</i> issued in 1967. VIHA is responsible for the delivery of health care in the Region.</p>	<p>All municipalities, electoral areas, First Nations, non-profit housing providers, private housing providers, community, BC Housing, <del>Island health</del>VIHA, school districts, and other community planning and funding partners <del>such as the United Way and and</del> numerous community foundations.</p>	<p>CRHD requisitions.</p> <p>Capital project budgets.</p>	<p>The CRHD functions on behalf of the CRHD Board of Directors. The Division reports to the CRHD Board of Directors through the <del>Planning, Transportation and Protective Services</del><u>Hospital and Housing</u> Committee which makes recommendations to the CRHD Board.</p>
<p><b>Community Health</b></p> <p>Includes responsibility for public health bylaws, addressing homelessness by <del>funding the Greater Victoria Coalition to End Homelessness</del><u>Division’s mandate under the Homelessness Secretariat</u>, and healthy communities planning.</p>	<p>All municipalities, electoral areas, First Nations, non-profit housing providers, private housing providers, community, BC Housing, <del>Island Health</del>VIHA, school districts, and other community planning and funding partners such as the United Way and numerous community foundations.</p>	<p>CRHD requisitions.</p>	<p><del>The Division reports to the CRD Board of Directors through the Planning &amp; Protective Services Committee, which makes recommendations to the CRD Board.</del><u>The Division reports to the CRHD Board of Directors through the Planning, Transportation and Protective Services Committee which makes recommendations to the CRHD Board.</u></p>

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

~~Changing community health and well-being needs require diverse service delivery models. Understanding the broader community health trends and changing care needs can help staff identify potential impacts on health facility requirements in the Region.~~

There are continued investments needed for health facility upgrades, replacement and/or expansion projects, as well as medical equipment. ~~Island Health saw the number of older adults waiting for placement in residential care increase by 22% between the Winter (Jan) of 2016 and the subsequent Fall (Sept). Technical analysis and cost/benefit exercises are required to determine best investment strategies. Continued partnership with Island health is needed to identify gaps and solutions.~~

The Division needs to be able to respond to emerging opportunities such as strategic land acquisition for future health-related facilities ~~in order to meet future demands across the region. The board has identified the need to explore designated health facilities in Sooke, on the Saanich Peninsula, and in the Westshore.~~

~~Support the CRDs Regional Housing First Program including exploring potential mixed use designated health facilities, requiring additional planning resources.~~

~~Market pressures such as increased construction activity has resulted in competition for trades that could impact the cost and schedule of construction projects. This has resulted in advancing the early construction works for the Summit at Quadra Village project.~~

~~Grant funding from Island health for the healthy communities planner to advance the CHWB plan will expire at the end of December 2017.~~

~~Research and policy development is increasingly relied upon to support healthcare infrastructure investments and community wellbeing initiatives. The CRD is well positioned to lead and facilitate the measurement and tracking of progress towards desired health and wellbeing outcomes through initiatives such as the Regional Outcomes Monitoring (ROM) Collaborative.~~

~~Island Health is seeking a partnership with CRD to support a Southern Gulf Island community health coordinator.~~

## 1.4 Link to Priorities

### HOUSING

- ~~encourage~~**Encourage** participation in the Regional Housing Trust Fund and determine options for ~~leveraging equity in collaboration and multi-use sites in partnership with CRHC. CRD assets to develop new housing~~

## HEALTH & WELLBEING

- Engage in community consultation to determine support for the Community Health & Wellbeing Plan prior to completion and adoption.

## REGIONAL INFRASTRUCTURE

- Ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements.
- ~~D~~evelop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, ~~both natural and engineered~~

CHANGING DEMOGRAPHICS

- ~~establish a task force to explore and identify age-friendly priorities and participate in government and partner programs~~ Develop tools, acquire land for development and support designated health care facilities for older adults.

PUBLIC ENGAGEMENT & COMMUNICATIONS

- ~~Develop~~ develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement.

## 2 Services

### 2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
CRHD	<ul style="list-style-type: none"> <li>• Acute care facilities planning</li> <li>• Deliver capital projects</li> <li>• Strategic property acquisition and planning of property development</li> <li>• Research, analyze and coordinate with VIHA in preparation of the CRHD's Ten Year Capital Plan and individual project capital funding requests</li> <li>• Monitor expenditures and administration of payments to VIHA and other partners, including oversight of expenditure patterns of multiple capital and equipment projects to ensure CRD funds are spent according to approved project scope, schedule and budget</li> <li>• Analyze the implications of provincial and VIHA policy on the district, inform the Board and Committee of the likely implications of provincial and Health Authority policy and provide direction and advocate for the Region's interests</li> </ul>	<p><del>Ongoing</del> <u>Adjust to meet service delivery needs, as required</u></p>	<p><del>Planning and implementation of capital projects are ongoing.</del> <u>The ten year capital plan is updated annually. Capital and equipment is processed as it is received and new policies and process have been implemented to improve efficiencies. Review and assess</u></p>	<p>Adjust to meet service delivery needs, as required</p>	<p>Review and assess</p>

	<ul style="list-style-type: none"> <li>Participate in and provide oversight of health capital project implementation</li> <li>Develop CRHD short- and long-term capital policies and strategies</li> <li>Monitor the broader health system and commission health care facility research</li> </ul>				
<b>Community Health</b>	<p><b>Public Health:</b></p> <ul style="list-style-type: none"> <li>Enact and enforce public health bylaws.</li> <li>Contract with the Medical Health office of Island Health to conduct research, education and enforcement in support of existing or planned health-related bylaws, e.g., Clean Air (non-smoking), Tanning, Tattoo, and Vehicle Idling Control.</li> <li>Provide oversight of public health bylaws enforcement.</li> </ul> <p><b>Community Health:</b></p> <ul style="list-style-type: none"> <li>Healthy communities planning</li> </ul>	<p><b>Public Health:</b> <u>Ongoing</u></p> <p><b>Community Health:</b> <u>Potential implementation of Community Health &amp; Well-Being Plan (subject to approval of the Plan by the Board)</u> <u>Data and analytics, including coordination of ROM Collaborative and initial development of Community Map (Connecting Older Adults Map).</u></p> <p><u>Capacity-building and public engagement through consulting, coordination, liaison, hosting of workshops, and provision of tools and resources as needed.</u></p>	<p><b>Public Health:</b> <u>Service agreement with Island health renewed for another year. Bylaws were monitored and updated as needed in consultation with Island Health. VIHA grant funding to advance work on the draft CHW plan</u></p> <p><b>Community Health:</b> <u>Data and analytics, including coordination of ROM Collaborative and regular maintenance of and updates to Community Map.</u></p> <p><u>Capacity-building and public engagement through consulting, coordination of Southern Gulf Islands (SGI) Community Health Network, liaison, forums and workshops, and provision of tools and resources as needed.</u></p>	<p><b>Public Health:</b> <u>Ongoing</u></p> <p><b>Community Health:</b> <u>Data and analytics, including coordination of ROM Collaborative and regular maintenance of and updates to Community Map.</u></p> <p><u>Capacity-building and public engagement through consulting, coordination of Southern Gulf Islands (SGI) Community Health Network, liaison, forums and workshops, and provision of tools and resources as needed.</u></p>	Review and assess

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
CRHD	3 *	3 *	<u>3 *</u>	3 *	3 *
Community Health	0	0	<u>1 ***01</u>	<u>001 ***</u>	<u>00 ***</u>
<b>Total</b>	3	<u>34</u>	<u>34 4 ***</u>	<u>334</u>	<u>33</u>

\* New term FTE from Environmental Engineering for Summit Project Manager.

\* Additional term FTE will be required to support the Division's mandate for Project Management of capital projects emerging from innovative capital project development and business solutions. The FTE will be funded by the capital project. An amendment to the budget will be brought forward once the Board approves the capital project.

\*\* ~~The~~A term (Planner) position ~~is provided for the work on advancing the draft CHW Plan. This is being funded~~ previously funded through grants from Island Health ~~grant funding from 2016, will expire at the end of December 2017.~~ A term position is required to continue to support the implementation of the Community Health and Wellbeing Plan and support a Southern Gulf Island Community Health network coordinator.

~~\*\*\* Budgetary changes in 2017 reflect a change in the role of the Senior Manager of Health and Capital Planning Strategies to a Manager position.~~

### 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>20176</b>			
<b>Summit at Quadra Village</b>  To be completed <del>fall</del> 2019	Complete the <del>design and</del> <u>begin tender of major construction packages and oversee the schedule and budget construction</u> of <del>construction of this</del> residential and dementia care facility.	Health & Wellbeing  Regional Infrastructure  <u>Changing Demographics</u>	Core budget
<b>Property Development Partnerships</b>	Seek partnership opportunities to <u>acquire and</u> develop vacant <del>Mt. View parcels and other</del> CRHD-controlled assets. <u>Conduct a feasibility study to determine the best location for a future designated health facility.</u>	Housing  Health & Wellbeing	Core budget
<b>Asset Management</b>	Sell 3810 Carey Rd. for market value. Facilitate discussion around the development of 950 Kings <del>rd</del> Rd. and Oak Bay lodge.	Housing  Regional Infrastructure  Health & Wellbeing	Core budget
<b>Asset Management Policy Development</b>	Develop policies related to use of CRHD assets.	Housing  Regional Infrastructure	Core budget
<b>Community Health</b>	<del>Consult with</del> <u>Implement specific actions in community around</u> the CHW Plan <u>and build regional capacity to improve wellbeing through data and analytics (ROM Collaborative)</u> , coordination of SGI Community Health Network, student engagement, regional forums, workshops, tools and resources. Regularly engage with Island Health to ensure public health bylaws remain relevant and responsive to regional public health risks.	Health & Wellbeing  <del>Changing Demographics</del>	Core budget
<b>Seniors Isolation Strategy</b>	<del>Develop strategy on how to best improve housing and social conditions for seniors to reduce social isolation and support aging in place.</del>	<del>Changing Demographics</del>  Housing  <del>Health &amp; Well-Being</del>	<del>Core budget</del>
<b>20187</b>			
<b>Property Acquisition</b>	<del>Develop business cases to acquire strategic properties for future residential and dementia care.</del> <del>Acquire strategic properties for future residential and dementia care.</del>	Housing  Health & Wellbeing  <u>Changing Demographics</u>	Core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<del>Mt. View Village Parcel Development Asset Management</del>	Initiate <del>capital project development partnerships to achieve strategic priority outcomes while reducing costs to taxpayers.</del> <u>Manage existing land holdings.</u> <u>Determine best strategic use of 950 Kings rd. and Oak Bay lodge.</u> <u>Facilitate discussion and partnership around the development of Quadra village.</u>	Housing Health & Wellbeing	Core budget
Property Development Partnerships	Work with <del>community agencies</del> <u>Island Health</u> to support <del>non-traditional capital projects</del> <u>projects.</u>	Housing Regional Infrastructure Health & Wellbeing Changing Demographics	Core budget
Strategic Asset (Property) Management Planning	Leverage equity in all CRHD assets.	Housing Regional Infrastructure Health & Wellbeing	Core budget
<del>Capital Regional Hospital District Executive Hospital and Housing Committee</del>	Provide support to the <del>newly created Hospital and Housing Committee</del> <u>CRHD Executive Committee.</u>	<u>Housing</u> Regional Infrastructure	Core budget
<del>Community Health Community Health</del>	Build regional capacity to improve wellbeing through data and analytics (ROM Collaborative), coordination of SGI Community Health Network, student engagement, regional forums, workshops, tools and resources. Regularly engage with Island Health to ensure public health bylaws remain relevant and responsive to regional public health risks.	<u>Health &amp; Wellbeing</u> <del>Health &amp; Wellbeing</del>	<u>Core budget</u> <del>Core budget</del>
<b>2019-2019</b>			
Property Development	Initiate partnerships to achieve strategic priority outcomes while reducing costs to taxpayers.	Housing Health & Wellbeing	Core budget
<del>Community Health Community Health</del>	Build regional capacity to improve wellbeing through data and analytics (ROM Collaborative), coordination of SGI Community Health Network, student engagement, regional forums, workshops, tools and resources. Regularly engage with Island Health to ensure public health bylaws remain relevant and responsive to regional public health risks.	<u>Health &amp; Wellbeing</u> <del>Health &amp; Wellbeing</del>	<u>Core budget</u> <del>Core budget</del>

# 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Expand, improve and maintain healthcare facilities.	<ul style="list-style-type: none"> <li>• <del>Capital projects completed on time and on budget</del> <u>Manage capital projects on time and on budget and land holdings to meet anticipated health infrastructure needs for the region.</u></li> </ul>
<del>Research, analyze and coordinate with Island Health in preparation for the CRHD's Ten Year Capital Plan and individual project capital funding requests.</del> <del>Island Health for.</del> Improve regional coordination on community health issues	<ul style="list-style-type: none"> <li>• <u>Update the ten year capital plan annually.</u></li> </ul>
<u>Monitor expenditures and administration of payments to VIHA and other partners, including oversight of expenditure patterns of multiple capital and equipment projects to ensure CRD funds are spent according to approved project scope, schedule and budget.</u>	<ul style="list-style-type: none"> <li>• <u>Ensure CRD funds for minor capital and equipment are utilized within project scope, on time, and on budget.</u></li> </ul>
<u>Improved public health through public health bylaws development, implementation and enforcement.</u>	<ul style="list-style-type: none"> <li>• <u>Respond to all bylaw enquiries and make referrals to Island Health for enforcement within 7 days.</u></li> <li>• <u>Engage Island Health twice annually to ensure existing bylaws continue to address public health risks.</u></li> <li>• <del>Ensure Island Health has a regular point of contact within the division in case need for a new public health bylaw arises. Sufficient property acquisitions and/or developments to meet anticipated community investment needs</del></li> <li>• <del>Prepare a new financing model for capital and operating cost strategies by 2017</del></li> <li>• <u>Participation rates of residents in two-way dialogue and engagement opportunities*</u></li> </ul>
<u>Greater regional coordination of wellbeing initiatives; provision of valid, reliable, local data, and; capacity-building through forums, workshops and planning tools.</u>	<ul style="list-style-type: none"> <li>• <del>Community Health &amp; Wellbeing Plan is completed and community is engaged prior to finalizing.</del></li> <li>• <u>Indicators and data collected through the ROM Collaborative are shared with community partners, including municipalities.</u></li> <li>• <u>Community Map is accessed regularly (unique page views) and updates are made annually to ensure information is accurate and relevant.</u></li> </ul>

## Contact

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# Service Plan for Regional Housing

2016-2019

Capital Regional District

**Date submitted:** October 2015

**Date updated:** ~~October 2016~~ August 2017



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# 1 Overview

## 1.1 Division & Service Summary

Regional Housing includes two service streams: *Housing Policy and Programs (HPP)* and the *Capital Region Housing Corporation (CRHC)*.

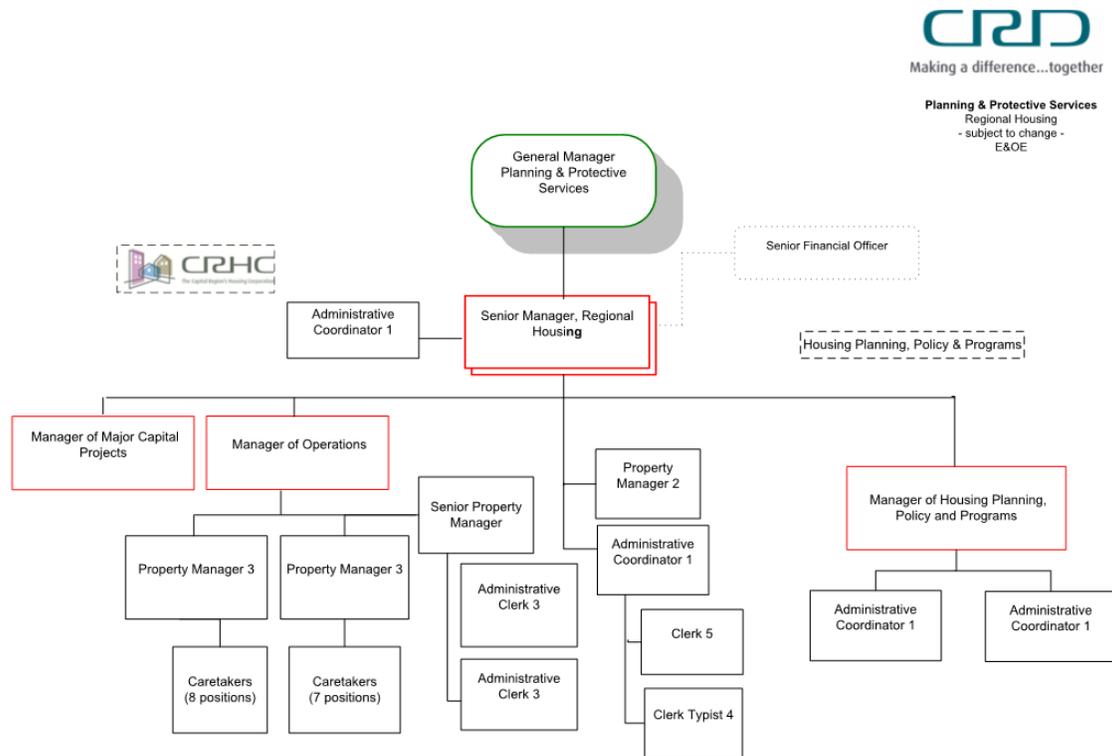
- Housing Policy and Programs (HPP) (previously Housing Secretariat) facilitates the development of affordable housing through collaboration with other levels of government, community and housing agencies, private development industry, and other funders in accordance with the Regional Housing Affordability Strategy (RHAS).
- The Capital Region Housing Corporation develops, manages and promotes affordable housing for low and moderate income families, seniors and persons living with disabilities.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Housing Policy and Programs</b></p> <ul style="list-style-type: none"> <li>• Is responsible for the RHAS as identified by the Regional Growth Strategy;</li> <li>• Administers the Regional Housing First Program (RHFP). The CRD in partnership with BCHMC and Island Health will invest \$60 million to create new affordable housing aimed with an emphasis on meeting the needs of those experiencing chronic homelessness.</li> <li>• Administers the Regional Housing Trust Fund (RHTF), which has 11 municipalities and two electoral areas participating in raising funds to assist in the development of new affordable housing units;</li> <li>• Administers the Homelessness Partnering Strategy funding program on behalf of the Federal Services Canada; and</li> <li>• Provides <u>community development expertise activities</u> on affordable housing policy, planning and development to municipalities, electoral areas and with the community and housing agencies, private development industry and other funders.</li> <li>• Provides oversight for the Greater Victoria Coalition to End Homelessness.</li> </ul>	<p>All municipalities, electoral areas, First Nations, non-profit housing providers, private housing providers, community, BC Housing and Management Commission (BCHMC) and Canada Mortgage and Housing Corporation (CMHC), Employment and Social Development Canada</p>	<p>Requisitions, Employment and Social Development Canada grant, BCHMC, CMHC</p>	<p>CRD Board PTPSC Housing Trust Fund Commission School District #64, Salt Spring Island Housing Council and BCHMC</p>

<p><b>Capital Region Housing Corporation:</b></p> <ul style="list-style-type: none"> <li>• Manages 45 townhouse and apartment communities/1286 units of affordable housing (including service delivery and redevelopment planning);</li> <li>• Responsible for the asset management of the 45 properties;</li> <li>• Responsible for financial management of the portfolio;</li> <li>• Provides property management support for 127 units on behalf of non-profit organizations; and</li> <li>• <u>Works with other non-profits and sector organizations to promote social and affordable housing in the capital region.</u></li> <li>• <u>Develops Housing</u></li> </ul>	<p>All municipalities, electoral areas, First Nations, non-profit housing and service providers, community, BCHMC and CMHC</p>	<p>Subsidies through Operating Agreements – Senior levels of government (BCHMC, CMHC) Tenant Rent Revenue Grants</p>	<p>CRD Board PTPSC Capital Region Housing Corporation Board of Directors</p>
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## 1.2 Organization Chart

\* 15 caretaker positions equal 13.77 FTE.



Planning & Protective Services  
Regional Housing  
- subject to change -  
E&OE

Updated by Human Resources  
October 2016

## 1.3 Key Trends, Issues & Risks – Service Specific

### Housing Policy-Planning and Programs

- **Community Development:** Increased number and scope of “projects” community development projects of Regional Housing is increasing, as is demand for information/knowledge/expertise (City of Victoria Housing Task Force, Peninsula Needs Study, Western Communities Needs Study, Housing Agreements Administration – Travino, Dockside etc.) Southern Gulf Island Needs Assessment
  - Increase in requests for Housing Agreement Administration from municipalities may impact service levels
  - Expectations for municipal engagement/communications/outreach are increasing and evolving
- **Homelessness Partnership Strategy (HPS)** is ~~focus~~ focused on the delivery of ~~on~~ Housing First programs.
  - ~~has~~ increased funding envelope for 2017/18 and 2018/19;
  - ~~D~~ and diversified administrative and knowledge requirements and increased complexity in administrative processes;
  - Announcement in 2017 for continued funding of HPS for 2019-2028; ~~and~~
  - Government of Canada is currently undertaking an evaluation of this program; ~~and~~
  - The CRD will need to apply to the Government of Canada to continue in its role as administrator of the program.
- Increase in requests for Housing Agreement Administration
- Expectations for engagement/communications/outreach are increasing and evolving
- Disparity of funding opportunities from senior levels of government for affordable housing is impacting ability to leverage other resources and requiring diversity in partnerships and is increasing pressure on regional and municipal governments to respond
- **Homelessness Partnering Strategy (HPS)**  
The CRD is eligible to receive an additional amount of \$793,652, from 2016-2018, bringing the total amount to \$3,918,767 over a five-year agreement ending March 31, 2019.
- **Regional Housing First Program (RHFP) and Regional Housing Trust Fund (RHTF)**
  - In 2016, the CRD Board directed staff to phase out the Regional Housing Trust Fund (RHTF) and replace it with the Regional Housing First Program (RHFP) from 2016-2021 for the development of supportive and affordable housing.
  - The RHFP will administer \$30M of CRD/CRHD equity funding by way of MFA debt borrowings.
  - Due to the standard two year capital development cycle RHTF will be suspended in 2019 and the related \$1M requisition capacity transferred to RHFP. ~~Starting in 2016, RHFP will be receiving the CRHC Willowdene land lease revenue in the annual amount of \$63,000~~
- **Social purpose real estate investment trust**  
Advance an examination of options to support the establishment of a program or structure capable of investing in affordable housing, preserving projects at moderately affordable rates while also providing a modest return to investors, including an examination of establishing a social purpose real estate investment trust
- **Regional Housing Affordability Strategy (RHAS) Update:**  
Completion of RHAS update in 2018 may impact ~~service levels~~ service priorities in 2019.
- **Greater Victoria Coalition to End Homelessness**
  - Increased involvement in project administration and oversight associated with Coalition regarding Coordinated Assessment and Access for Housing and Supports and Homelessness Management Information System.
- **Syrian Refugees**  
Capital region named as new destination community for the Resettlement Assistance Program (RAP). Between 290 and 400 Government Assisted Refugees (GARS) to arrive in 2016. Numbers for 2017 have not been released. Province is allowing GARS to access Social Housing. CRD Regional Housing requested to provide leadership on housing needs.
- **Oversight of the Greater Victoria Coalition to End Homelessness**

~~Was provided by the CRD – Health and Capital Planning Division, is now being provided through Housing Planning and Programs.~~

- ~~• Disparity of funding opportunities from senior levels of government for affordable housing is impacting ability to leverage other resources and requiring diversity in partnerships and is increasing pressure on regional and municipal governments to respond for those in greatest core housing need.~~

### **Capital Region Housing Corporation (CRHC)**

- CRHC Board Strategic Plan 2016-2019 approved in December 2015**

Priority #1: Management: Maintaining existing rent geared to income levels, tenant engagement, well-maintained portfolio and renewal of current housing stock.

- Umbrella Operating Agreement 2015-2019 has flat subsidy for 5 years, need to balance increased operating costs through increased revenue or program efficiencies Umbrella Operating Agreement (2015-2019) will need to be renegotiated in 2019.
- 14 Expiring Operating Agreements from 2018-2021, develop strategy to address operational changes required.
- Increased operational (utilities, property taxes, staff contracts) and capital costs (aging infrastructure) may impact capacity to maintain current rent geared to income levels into the future.
- Aging infrastructure is requiring increased asset management resources. Limited Provincial or Federal commitment of grants for remediation of aging infrastructure.
- Tenant Engagement Strategy: The CRHC Board of Directors directed staff to undertake a Tenant Engagement Pilot Project from April 2017 to March 2018. Outcomes may impact service requirements.
- Increased demand in Housing First programs may require CRHC to consider expanding mandate and/or developing new partnerships.

Priority #2: Development: Redevelopment of existing housing and increased development with a continued focus on those in core housing need.

- ~~• Expectations for increased tenant engagement has increased resource implications as well as engagement/communications/outreach are increasing and evolving~~
- ~~• Increased operational (utilities, property taxes, staff contracts) and capital costs (aging infrastructure) may impact capacity to maintain current rent geared to income levels into the future; Aging infrastructure is requiring increased asset management resources~~
- ~~• Increased demand in Housing First programs may require CRHC to consider expanding mandate and/or developing new partnerships~~
- ~~• Lack of funding opportunities from senior levels of government for affordable housing is impacting ability to increase housing stock for current target population (within Housing Income Limits)Development of “Westview”, a 73 unit development for families, seniors, persons with disabilities and workforce housing, on Carey Rd. in Saanich. Currently in design/development phase.~~
- ~~• Development of 161 Drake Rd, an 80 unit development on Salt Spring Island, currently in predevelopment stage.~~
- ~~• Redevelopment of Michigan Square, currently in predevelopment phase.~~

○

- ~~• Lack of Provincial or Federal commitment of grants for remediation of aging infrastructure~~
- ~~• **CRHC Board Strategic Plan 2016-2019 approved in December 2015**~~
  - ~~➤ Management: Maintaining existing rent geared to income levels, tenant engagement, well-maintained portfolio and renewal of current housing stock.~~
  - ~~➤ Development: Redevelopment of existing housing and increased development with a continued focus on those in core housing need.~~

### Property Tax Exemption

The land for 22 CRHC properties was acquired by CRD from Provincial Rental Housing Corporation (PRHC) in 2015 and are now tax exempt. Savings from the property taxes will fund future RHFP debt servicing in annual amount of up to \$400,000.

### Tenant Engagement Strategy

Originally earmarked for 2017, CRHC Board of Directors accelerated priority from 2017 to 2016.

### CRHC Field Services Review

The objectives of the Field Services Review are to improve operational efficiencies and to improve services to CRHC tenants. To be completed in first quarter of 2017.

## 1.4 Link to Priorities

### HOUSING

- establish an overarching Housing body, complete the Long Term Financial & Asset Management Plan and the Regional Housing Affordability Strategy Update
- encourage participation in the Regional Housing Trust Fund and determine options for leveraging equity in CRD assets to develop new housing

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement
- share stories of collaboration and accomplishments

### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Housing Policy and Programs	Regional Housing Affordability Strategy	<del>Work plan/scope based on 2015 update</del> <u>Review and Assess</u>	<del>Review &amp; Assess</del> <u>RHAS update</u>	Adjust to meet service delivery needs, as required	Review & Assess
	Maintain Regional Housing Databook	Review & Assess	<del>Review &amp; Assess</del> <u>Update as part of RHAS update</u>	<del>Review &amp; Assess</del> <u>Review and Assess</u>	<del>Review &amp; Assess</del> <u>Update</u>
	<u>Regional Housing First Strategy</u>	<u>Developed Program</u> <u>Administer program</u>	<u>Administer program</u>	<u>Administer Program</u>	<u>Administer Program</u>
	Regional Housing Trust Fund (RHTF)	<u>Increase participation</u> <u>Administer RHTF</u>	<del>Review &amp; Assess</del> <u>Adjust to meet funding priorities</u>	<u>Increase participation</u> <u>Adjust to meet funding priorities</u>	<del>Review &amp; Assess</del> <u>Phase out of RHTF</u>

	<a href="#">Greater Victoria Coalition to End Homelessness</a>	<a href="#">Act as liaison on behalf of CRD</a>	<a href="#">Act as liaison on behalf of CRD</a>	<a href="#">Act as liaison on behalf of CRD</a>	<a href="#">Act as liaison on behalf of CRD</a>
	Homelessness Partnering Strategy Funding Program	No change	<del>No change</del> <a href="#">Adjust to meet increased funding</a>	<del>No change</del> <a href="#">Adjust to meet increased funding. Renegotiate program funding</a>	Contract ends March 31, 2019
	Administration of Housing Agreements	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess	Adjust to meet service delivery needs, as required
<b>Capital Region Housing Corporation</b>	Operational management of 1286 units of social housing / 45 properties	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
	Asset management of 1286 units of social housing / 45 properties	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	<del>Adjust to meet service delivery needs, as required</del> <a href="#">Additional 73 units for total of 1359</a>
	Property Management Services for 127 units on behalf of non-profits	Review & Assess	Adjust to meet service delivery needs, as required	Review Assess	Adjust to meet service delivery needs, as required
	<del>Consolidated Umbrella</del> Operating Agreement with BC Housing Management Commission (BCHMC)	No change	No change	No change	Renegotiation

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Senior Manager, Regional Housing	1.0	1.0	1.0	1.0	1.0
Housing Policy and Programs	2.0	<del>3.0</del> *	3.0	3.0	2.0
Capital Region Housing Corporation	24.77	<del>25.77</del> **	25.77	<del>265.77</del> ***	<del>275.77</del> ****
<b>Total</b>	<b>27.77</b>	<b>29.77</b>	<b>29.77</b>	<b><del>2930.77</del>***</b>	<b><del>28304.77</del>****</b>

\*Board approved for increased administrative needs for RHFP and HPS (2016-2019).

\*\* Board approved for increased needs of development priority.

\*\*\*CRHC Tenant engagement Pilot Project results could ~~may~~ impact workforce. New FTE funded by CRHC internal building property management fees. Will not impact CRD budget.

\*\*\*CRHC commissioning of Westview, a 73 unit development will have impact on workforce. New FTE funded by CRHC internal building property management fees. Will not impact CRD budget.

### 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Regional Housing Affordability Strategy</b> Development of strategy to be completed in 2018	Develop and implement RHAS based on 2015 update	Housing	Core budget Grants
<b>Regional Housing Trust Fund (RHTF)</b> On hold as of 2020	Review and revise existing policies and procedures focusing on criteria for private and non-profit applicants, evaluation and ongoing monitoring Increase participation and contribution to RHTF through outreach to municipalities, electoral areas and First Nations	Housing	Core budget
<b>Regional Housing First Program</b> To be completed in 2021	Increase housing opportunities for individuals experiencing homelessness <u>Ensure prioritization be given to youth and Indigenous programming solutions. Applied to Affordable Rental Housing Innovation Fund for additional \$30 million from Federal Government.</u>	Housing	Redirection of RHTF funding to LBH
<b>Saanich Peninsula Needs Assessment</b> To be completed in 2016	Provide project coordination for the Affordable Housing Needs Assessment for the Saanich Peninsula	Housing	Core budget Grants
<b>Develop sustainability strategy for expiring operating agreements</b> To be completed in 2019	The majority (36/43) Federal and Provincial operating agreements will be expiring between 2019-2031	Housing	Core budget Operating agreements coincide with the amortization period of the mortgage.
<b>Development Strategy</b> To be completed in 2022	Development of <del>463-161</del> Drake Road, Salt Spring Island Development of 3816 Carey Rd. Redevelopment of Michigan Square Redevelopment of Campus View	Housing Regional Infrastructure	Core budget Reserve Grants Will require financing

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>IT Business Needs Assessment Phase 2 – Implementation</b> To be completed in 2017 <u>Phase 2 to begin in 2019</u>	In 2015, CRHC and CRD IT executed an IT Business Needs Assessment	Housing	Supplemental request
<b>Field Services Review</b> To be completed in 2017	Review of CRHC field property management services to determine areas for improvement	Housing	Core budget
<b>Implement CRHC Smoke-free policy</b> To be completed in 2017	Implement smoke-free policy in 21 new communities; execute review of remaining 17 communities	Public Engagement & Communications	Core budget
<b>Explore Social Financing</b> To be completed in 2016	Explore the possibilities of Social Finance as an adjunct to future growth strategies of the CRHC including but not limited to Social Finance, Values Based Investing	Housing	Funding from Administration Stabilization review if not available through core budget
<b>2017</b>			
<b>Greater Victoria Coalition to End Homelessness</b> <u>To be completed in 2018</u>	<del>Evaluate CRD role and service outcomes in advance of 2018 expiring mandate</del> <u>Review and Assess</u>	Housing	Core budget
<b>Tenant Engagement Strategy Pilot Project</b> <u>To be completed in 2018</u>	Develop a Tenant Engagement Strategy	Public Engagement & Communications  Housing	<u>Supplemental Budget</u> <del>Core budget</del>
<b>Southern Gulf Islands Needs Assessment</b> <u>To be completed in 2018</u>	Provide project coordination for the Affordable Housing Needs Assessment	Housing	Gas Tax Funding
<b>2018</b>			
<b>Homelessness Partnering Strategy</b> To be completed in 2019 <u>Application to be submitted for renewal of contract in 2018</u>	Administers the Homelessness Partnering Strategy funding program on behalf of the Federal Services Canada, which expires on March 31, 2019. <del># funding</del> <u>Funding commitment was announced in 2017 for 10 year extension of program beyond 2019 is extended for another five years.</u> CRD Regional Housing will need to submit an application to maintain Community Entity Status	Housing	Grant
<b>Property Development</b>	Leverage equity in all CRD assets (CRD, CRHC, CRHD) to develop creative solutions to providing new housing	Housing	Increase
<b>Consolidated Operating Agreement</b>	Renegotiation with BCHMC of Consolidated operating Agreement that expires in 2019	Housing	Core budget

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>Development of five year capital plan 2020-2024</b>	Develop detailed five year capital plan	Regional Infrastructure	Replacement Reserves Alternative Financing
<b><u>Examination of options of establishing a social purpose or REIT</u></b>  <b><u>Complete in 2018</u></b>	<u>Advance an examination of options to support the establishment of a program or structure capable of investing in affordable housing, preserving projects at moderately affordable rates while also providing a modest return to investors, including an examination of establishing a social purpose real estate investment trust</u>		<u>Increase</u>

## 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Increase access to affordable housing	<ul style="list-style-type: none"> <li>• % increase in size and/or participation in the Regional Housing Trust Fund*</li> <li>• Number and type of affordable housing units in region* (compared to previous years)</li> <li>• Maximum number of days that a unit is vacant is no more than 30 days per month</li> </ul>
	Ensure responsible asset management	<ul style="list-style-type: none"> <li>• Capital Projects completed on time and on budget*</li> <li>• Sustainable asset funding plans in place*</li> </ul>
	Increase opportunities for tenant and community engagement	<ul style="list-style-type: none"> <li>• <u>Participation rates of residents in two-way dialogue and engagement opportunities*</u></li> <li>• <u>Minimum number of working groups or committees hosted or attended is at least 40 annual</u></li> </ul>
	<del>Improve coordination of affordable housing services and share best practices</del>	<ul style="list-style-type: none"> <li>• <del>Minimum number of working groups or committees hosted or attended is at least 40 annually</del></li> </ul>

\* = Corporate Indicator – multiple divisions may contribute to this measure.

## Contact

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Making a difference...together

**2018 Service Plans Review and Approval**

**For Committee of the Whole, November 29, 2017**

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**APPENDIX C**

**Service Plan Reviewed by the Regional Parks Committee**

**TABLE OF CONTENTS**

Service Plan Summary

Service Plan for Regional Parks

**SERVICE NAME:** Regional Parks

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- In November 2016, the CRD Board approved borrowing up to \$6.1 million to complete Phases 3 and 4 of the E&N Rail Trail. The two sections represent 2.3 km of additional trail and create a 13.8 km-continuous route from Jacklin Road to Victoria. In 2018, construction of Phase 3 between Atkins Avenue/E&N Railway Crossing and Savory School in Langford (approximately 1 km in length) will begin. Construction of Phase 4 (1.3 km) from Esquimalt Road to the Blue Bridge in Victoria is targeted to occur in 2019.
- The number and complexity of issues associated with First Nations is increasing as a result of heightened awareness of the responsibilities local governments have for reconciliation, consultation, engagement, traditional use and access to regional park lands and cooperative management of park lands and resources. All Regional Park lands have associated First Nation interests and are within First Nations' traditional territories.
- The Regional Parks Land Acquisition Fund, which since its inception in 2000 has resulted in the acquisition of more than 4,500 hectares of land with a value of over \$52 million, will expire in 2019. The CRD Board has directed that public consultation occur in 2018 respecting the renewal of the Fund and the appropriate uses of those funds.
- Questions about dog management in Regional Parks have come up through public complaints and through management planning processes. The Regional Parks Committee has asked for information regarding the number of dogs one owner can effectively control while in a park. There may be a need to adjust dog regulations in the Regional Park Regulation Bylaw and an increased focus on the enforcement of existing regulations pertaining to dogs.
- Implementation of priorities identified in the Regional Trails Management Plan will require a shift in work priorities for staff. Completion of management plan priorities early on in the implementation phase will help to build public confidence in the CRD's commitment to meeting park management plan objectives.
- In 2017, a condition assessment was completed for Durrance Dam in Mount Work Regional Park. The assessment recommended remedial actions to improve spillway function and seismic stability. Upgrades will be initiated in 2018, and continued in 2019.
- In 2018, Regional Parks, in cooperation with Environmental Protection, will be working to investigate technologies to address blue-green algae and other water quality issues in Elk/Beaver Lake.
- In August 2017, an inspection of the timber supports for the Todd Creek Trestle on the Galloping Goose Regional Trail resulted in closure of the trestle until repairs could be done. In 2017, the trestle will be assessed and a project to repair the current trestle, modify it, or construct a new structure to span Todd Creek will be implemented in 2018.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- There is an overall favorable variance of \$47,000 (0.4%) from total operating expenditures mainly related to lower salaries and wages due to the timing in filling vacancies, but offset by higher costs from external sources like parks maintenance and repairs, vehicle and equipment, operating supplies and other operating costs to maintain the service level. This variance will be transferred to the capital reserve to fund future capital projects. The current balance of the capital reserve fund is \$648,800.
- There is a favourable variance of \$100,000 (0.8%) related to \$6.1 million MFA debt (E&N phase 3&4) borrowing schedule adjustment. This variance will be transferred to operating

reserve to fund 2018 and 2019 MFA debt servicing cost. The current balance of the operating reserve is \$86,000 before this additional transfer of \$100,000.

**Update to Division Initiatives:** *(linked to section 3 of the detailed service plan)*

- Land Acquisition: Undertake public engagement process to determine public support for the use of Land Acquisition Fund money to support capital development and operational budgets for new parks. (Public Engagement priority)
- Galloping Goose User Separation Feasibility Study: The Regional Trails Management Plan identifies the completion of a feasibility study to separate users or widen the trail from Selkirk Trestle to McKenzie Avenue on the Galloping Goose Regional Trail and from Switch Bridge to McKenzie Avenue on the Lochside Regional Trail.
- In 2017, the CRD Board approved a project to install aeration equipment in Beaver Lake to improve water quality, and to develop a business case for a larger water quality improvement process for Elk Lake. Regional Parks will be working with Environmental Protection to implement this direction

**Service Adjustments and Staffing Levels:** *(linked to section 2 of the detailed service plan)*

**Ongoing Items:**

- Auxiliary Park Officers for Sea to Sea Green Belt \$63,800
- Increase in Bylaw Patrols \$100,000
- MFA Debt servicing cost for Phases 3&4 of E&N Trail \$83,690 (funded by Operating Reserve Fund in 2018)

**One-Time Item:**

- Public Engagement on use of Land Acquisition Fund \$35,000

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>2017 Service Goal: Maintain exemplary park planning, resource management and development practices</b>  <b>2018 Service Goal: no change</b></p> <ul style="list-style-type: none"> <li>• 2017 KPI: Implementation of Land Acquisition Strategy*</li> <li>• 2018 KPI change: Add additional lands to the regional park and trails system</li> </ul> <ul style="list-style-type: none"> <li>• 2017 KPI: Prepare a minimum of one environmental inventory and conservation plan for a park (or part of one park) annually</li> <li>• 2018 KPI change: Undertake environmental conservation planning and projects (e.g. habitat restoration, invasive species control)</li> </ul> <ul style="list-style-type: none"> <li>• 2017 KPI: Prepare or update a minimum of one park/trail management plan annually</li> <li>• 2018 KPI: no change</li> </ul> <ul style="list-style-type: none"> <li>• 2017 KPI: Number of initiatives implemented from park management plans</li> <li>• 2018 KPI change: Implementation of priority actions in management plans</li> </ul> <ul style="list-style-type: none"> <li>• 2017 KPI: Participation rates of residents in two-way dialogue and engagement opportunities *</li> <li>• 2018 KPI change: number of public engagement opportunities on park/trail management.</li> </ul> <ul style="list-style-type: none"> <li>• 2017 KPI: Completion of an updated list of Species at Risk annually*</li> <li>• 2018 KPI: no change</li> </ul>	<p>2 updates to CRD Board annually</p> <p>1 environmental inventory and 1 conservation plan completed</p> <p>Complete 1 plan</p> <p>Implement short-term priority actions identified in 5 management plans</p> <p>12 engagement opportunities on park/trail management</p> <p>Complete update of Species at Risk List</p>	<p>2 updates completed</p> <p>1 environmental inventory and 1 conservation plan completed</p> <p>Completed 1 plan</p> <p>Short-term priority actions identified from 5 management plans implemented</p> <p>14 engagement opportunities on park/trail management</p> <p>Completed update of Species at Risk List</p>	<p>Complete 1 land acquisition</p> <p>Complete 3 conservation plans and initiate 1 conservation project</p> <p>Complete 1 plan</p> <p>Implement priority actions identified in 5 management plans</p> <p>6 engagement opportunities</p> <p>Complete update of Species at Risk List</p>

<ul style="list-style-type: none"> <li>• 2017 KPI: Amount of invasive species removed from Regional Parks *</li> <li>• 2018 KPI change: number of locations where invasive species removal has occurred</li> </ul>	<p>Treat 17 sites</p>	<p>Treat 25 sites</p>	<p>Treat 20 sites</p>
<p><b>2017 Service Goal: Increase use of Regional Parks and Trails</b>  <b>2018 Service Goal change: Maintain visitor satisfaction with regional park and trails</b></p> <ul style="list-style-type: none"> <li>• 2017 KPI: Increase in overall annual visits to regional parks*</li> <li>• 2018 KPI change: Visitor satisfaction with regional park and trails</li> <li>• 2017 KPI: Number of trips on regional trails annually (target a minimum of 2% increase over previous year)*</li> <li>• 2018 KPI: no change</li> <li>• 2017 KPI: Increase in kilometres of active transportation infrastructure*</li> <li>• 2018 KPI: no change</li> </ul>	<p>140,000 additional visits expected</p> <p>3.15 M trips on the Galloping Goose, Lochside and E&amp;N Regional Trails</p> <p>+ 1 km on the E&amp;N Rail Trail</p>	<p>7,134,000 visits (over 180,000 additional visits)</p> <p>3.15M trips on the Galloping Goose, Lochside and E&amp;N Regional Trails</p> <p>1 km on the E&amp;N Rail Trail</p>	<p>75% of survey respondents report being satisfied or very satisfied</p> <p>3.25M trips on the Galloping Goose, Lochside and E&amp;N Regional Trails</p> <p>1 km on the E&amp;N Rail Trail</p>
<p><b>2017 Service Goal: Maintain responsible management of regional infrastructure and assets</b>  <b>2018 Service Goal: No change</b></p> <ul style="list-style-type: none"> <li>• 2017 KPI: % of capital projects delivered on time and on budget</li> <li>• 2018 KPI: no change</li> <li>• 2017 KPI: Increase revenues at each campground by at least 2% annually (2015 baseline)</li> <li>• 2018 KPI change: Weekend occupancy rate at Sooke Potholes and Island View Beach campgrounds between May long weekend and September long weekend</li> </ul>	<p>21 capital infrastructure construction projects identified in capital plan</p> <p>\$150,000 in revenue generated</p>	<p>17 capital infrastructure construction projects completed (81%)</p> <p>\$150,000 in revenue generated</p>	<p>10 capital infrastructure projects identified in capital plan</p> <p>65% occupancy</p>

<ul style="list-style-type: none"> <li>• 2017 KPI: Number of sign packages completed annually</li> <li>• 2018 KPI: no change</li> </ul>	Complete 5 sign packages	Completed 5 sign packages	Complete 7 sign packages
<p><b>Service Goal: Increase opportunities to engage residents and community partners</b></p> <ul style="list-style-type: none"> <li>• 2017 KPI: Number of community outreach events the CRD participates in and/or supports annually*</li> <li>• 2018 KIP: no change</li> <li>• 2017 KPI: Number of CRD educational workshops delivered or partnered on annually*</li> <li>• 2018 KPI change: Number of guided hikes and special events delivered or partnered on annually</li> <li>• 2017 KPI: Number of stakeholders engaged through educational programming on biodiversity and ecological health issues*</li> <li>• 2018 KPI change: Number of formal education programs delivered in parks to students.</li> <li>• 2017 PI: Number of volunteer hours leveraged in restoration or stewardship activities*</li> <li>• 2018 KPI: no change</li> <li>• 2017 KPI: Target a minimum of 90% satisfaction rates from feedback forms collected through environmental interpretation programs</li> <li>• 2018 KPI: no change</li> <li>• 2017 KPI: Secure a minimum of 2 new donations in the Legacy Program annually</li> <li>• 2018 KPI change: delete KPI</li> </ul>	15 outreach events	15 outreach events	15 outreach events
	135	135	135
	Not measured	Not measured	130 programs
	2,000 hrs	2,000 hrs	2,000 hrs
	90%	90%	90%
	2 new donations	3 donations for construction of Sooke Hills Wilderness Trail	Delete KPI
<p><b>Service Goal: User Fee Revenue as % of Total Cost</b></p>	2.89%	2.86%	2.84%

\* Corporate Indicator – multiple divisions may contribute to this measure

## Contact

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Making a difference...together

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# Service Plan for Regional Parks

2016-2019  
(2018)



Capital Regional District

Date submitted: ~~November 2016~~ August 2017



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# 1 Overview

## 1.1 Division & Service Summary

Capital Regional District (CRD) Regional Parks protects and manages approximately 13,000 hectares of natural area in 319 regional parks. In 2016, regional parks recorded approximately 3.8627-million visits. The management of regional parks is guided by the Board-approved 2012-2021 Regional Parks Strategic Plan.

The purpose of regional parks is twofold: Firstly, to establish and protect a system of regional parks that represent and help maintain the diverse range of natural environments in the capital region and, secondly, to provide opportunities for outdoor experiences and activities that foster appreciation and enjoyment of, and respect for, the region's natural environments.

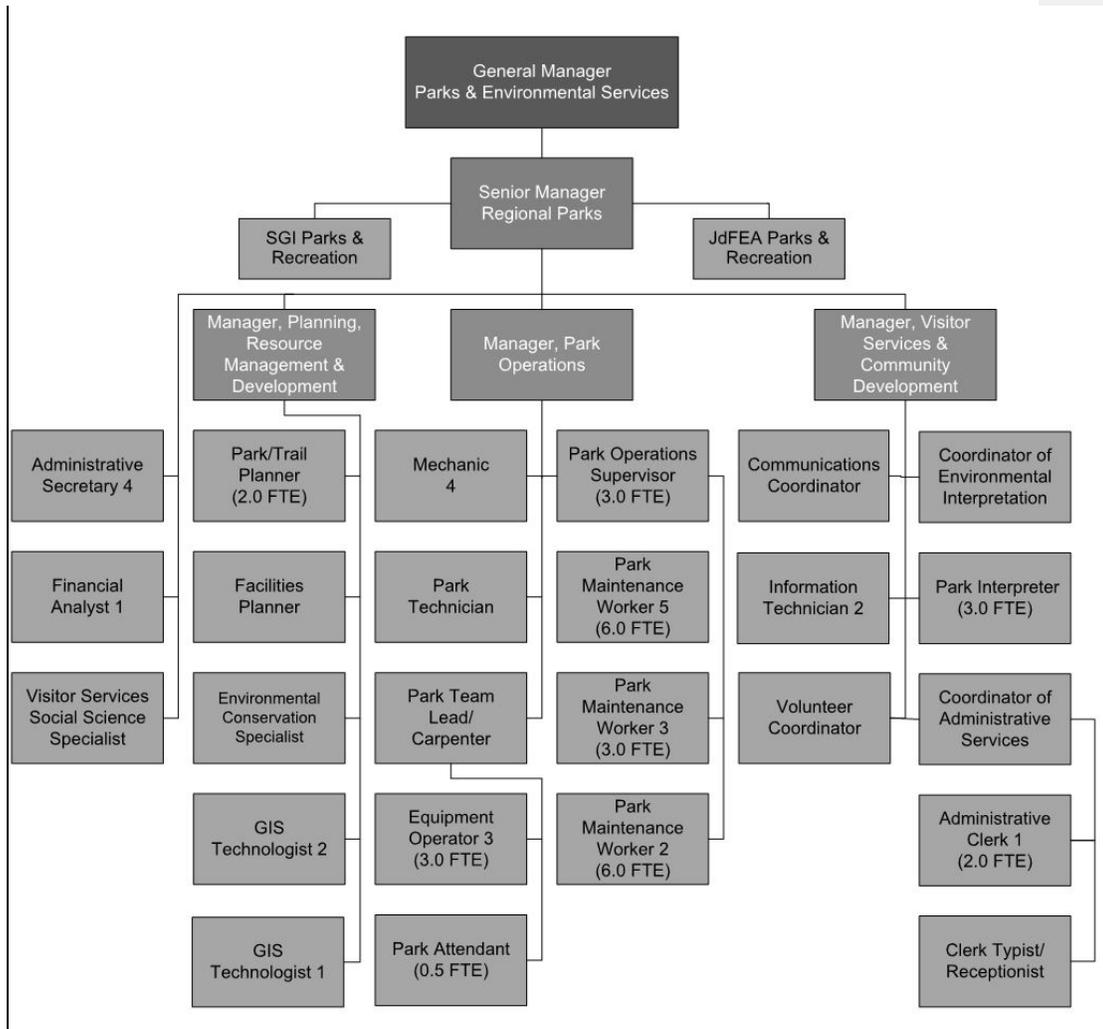
The mandate of Regional Parks is realized through four services:

1. Planning, Resource Management & Development (PRMD)
2. Park Operations (OPS)
3. Visitor Services & Community Development (VSCD)
4. Regional Trails (RT)

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Planning, Resource Management &amp; Development</b></p> <p>Contributes to effective and efficient decision making through plan and policy development, natural and cultural resource management, capital development planning, project management and geographic mapping; development of the division's Strategic Plan and park management plans; provide oversight of the land acquisition program; and guide implementation of scientific and technical work related to environmental management</p>	<p>All municipalities and electoral areas</p>	<p>Requisition, grants, and donations</p>	<p>Regional Parks Committee and CRD Board</p>
<p><b>Park Operations</b></p> <p>Responsible for the daily operations and maintenance of regional parks, attending to nature centres, campgrounds, washrooms, trails, beaches, picnic areas, parking lots, bridges, kiosks and signs, including restoration projects and overseeing park safety and security, including bylaw enforcement and fire management; annual operating</p>	<p>All municipalities and electoral areas</p>	<p>Requisition, grants, donations, non-tax revenue</p>	<p>Regional Parks Committee and CRD Board</p>

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
plans guide the maintenance of all regional parks			
<p><b>Visitor Services &amp; Community Development</b></p> <p>Connects people with the natural environment, conduct social science research and planning, provide park volunteer opportunities for residents, cultivate community partnerships and provide administrative services; park visitors of all ages learn more about their natural and cultural heritage through guided hikes, school programs and special events throughout the year; provide web-based park information and publications to the public, issue park use permits for group picnic shelters and special events and provide administrative and financial support to the division</p>	All municipalities and electoral areas	Requisition, grants, donations, non-tax revenue	Regional Parks Committee and CRD Board
<p><b>Regional Trails</b></p> <p>Managed through Regional Parks to protect and operate three regional trails which provide a transportation and recreation function; the Regional Trail system provides non-motorized trails for active transportation and recreation that connect municipalities, electoral areas and the region with adjacent jurisdictions</p>	All municipalities and electoral areas	Requisition, grants, donations, non-tax revenue	Regional Parks Committee and CRD Board

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

### Planning, Resource Management & Development

Regional Parks contains many important ecosystems and species. Their long-term protection is a core responsibility, as defined in the Board-approved Regional Parks Strategic Plan. With high visitor use, the protection of ecosystems and species is a major park planning challenge.

Guided by the 2015-2017 Land Acquisition Strategy, the Regional Parks system will continue to grow. This will require a high level of focus for identifying and selecting priority areas.

The opening of Sooke Hills Wilderness Regional Park and Sea to Sea Green Blue Belt requires a detailed implementation plan to ensure facilities and visitor experiences correspond to the direction provided in the park management plans for these parks.

Some major facilities in existing parks need to be replaced or upgraded. Demand for capital funding is much greater than available funding. Detailed planning and engineering work also needs to be done for these projects. An asset management plan needs to be completed for all facilities and be used to guide capital development.

Urban and suburban development will continue at a faster pace in the Western Communities than elsewhere in the region. The consequences of this will be increased use, which could result in diminished park visitor experiences and negative impacts on the natural environment. The regional parks most impacted will be Thetis Lake, Mt. Wells, Devonian, Witty's Lagoon, Sooke Hills Wilderness, Sea to Sea Green Blue Belt and Sooke Potholes.

Regional residents are looking for transparent and meaningful processes to provide input into various aspects of park operations, including land use, management, conservation and programming.

In some cases, Regional Parks does not have accurate and current information about the natural environment. This information is crucial for decision making that ensures the protection of habitat and species.

Regional Parks utilizes best management practices and industry standards for park planning and management. If best management practices are not followed, Regional Parks could be criticized by the public and elected representatives for poor performance and failing to meet public expectations and industry standards. This could result in loss of support for the organization, loss of habitat and species, increased long-term costs and missed opportunities to address public needs for outdoor recreation.

~~2018 Update: A CRD Corporate Priority related to regional infrastructure includes developing and implementing an asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure. Regional Parks is engaging the Manager of Asset Management has been reviewing its asset inventory and developing an assessment framework to support and participate in this corporate initiative. During the review, it has become even more apparent that critical facilities including dams, bridges and trestles, are aging and are now reaching the point at which they are in need of increased monitoring and maintenance to meet provincial regulatory requirements, ensure user safety, and manage risks.~~

~~2017 Update: A new management plan for Island View Beach Regional Park is expected to be approved in November, 2016. The expected plan will result in the need for new capital developments in the park, which may include improvements to facilities such as washrooms, fences, new trails and accessibility improvements on existing trails.~~

~~2018 Update: In 2017, a condition assessment was completed for Durrance Dam in Mount Work Regional Park. The assessment recommended remedial actions to improve spillway function and seismic stability. Upgrades will be initiated in 2018, and continued in 2019. Dam Safety Reviews were completed on 6 dams in the regional park system. There may be upgrades required in order for these dams to become compliant with provincial regulations.~~

~~In 2018, Regional Parks, in cooperation with Environmental Protection, will be working to investigate technologies to address blue-green algae and other water quality issues in Elk/Beaver Lake.~~

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In November 2016, the CRD Board approved borrowing up to \$6.1 million to complete phases 3 and 4 of the E&N Rail Trail. The two sections will complete an additional 2.3 km of trail and create a 13.8 km continuous route from Jacklin Road to Victoria. In 2018, construction of phase 3 between Atkins Avenue/E&N Railway Crossing and Savory School in Langford (approximately 1 km in length) will begin. Construction of Phase 4 (1.3 km) from Esquimalt Road to the Blue Bridge in Victoria is targeted to occur in 2019.

In August 2017, an inspection of the timber supports for the Todd Creek Trestle on the Galloping Goose Regional Trail resulted in closure of the trestle until repairs could be done. In 2017, the trestle will be assessed and a project to repair the current trestle, modify it, or construct a new structure to span Todd Creek will be implemented in 2018.

The Regional Parks Land Acquisition Fund, which since its inception in 2000 has resulted in the acquisition of more than 4,500 hectares of land with a value of over \$52 million, will expire in 2019. The CRD Board has directed that public consultation occur in 2018 respecting the renewal of the Fund and the appropriate uses of those funds.

The number and complexity of issues associated with First Nations is increasing as a result of heightened awareness of the responsibilities local governments have for reconciliation, consultation, engagement, traditional use and access to regional park lands and cooperative management of park lands and resources. All Regional Park lands have associated First Nation interests and are within First Nations' traditional territories.

## **Park Operations**

Visitor use of regional parks continues to increase. In 2016, regional parks recorded a total of 3.86 million visits<sup>27</sup> million visits; an overall increase from 3.24 million in 2013. This represents a 1% increase in visits to regional parks.

Aging infrastructure continues to be a concern, as some facilities are reaching the end of their serviceable lives and therefore require increased effort and money to maintain for public safety and aesthetics.

Increased visitor use and service expectations require customized equipment designed to maximize efficiency and meet public expectations. The purchase of a lake weed harvester to meet recreational needs at Elk/Beaver Lake and a trackless boom flail to manage vegetation on fire access roads and multi-use trails are examples of expensive, yet necessary, pieces of equipment required to meet operational service levels.

The expansion of camping as a Regional Park service from one campground in 2010, to three in 2015, has required a shift in staff resources to meet the level of services necessary to deliver safe and enjoyable camping experiences. The cost of resources to deliver camping services exceeds the revenues generated from camping permits.

~~2017 Update: The acquisition of property to establish a new regional park on the Sooke River will require resources to develop and maintain the site. The property requires interim management direction and site improvements prior to being opened in 2017.~~

~~2017 Update: Visitor demands for weed removal from Elk/Beaver Lake strain existing staff levels. Aggressive weed harvesting has not occurred for 4 years. Now that a weed harvester has been purchased, it will require increased staff time and operator training to meet expectations amongst high profile users and agreement on standards for weed harvesting in channels and key areas of the lake. Staff workplans have been shifted so that the increased work over the next 2-3 years can be accommodated within the core budget.~~

~~2018 Update: Questions about dog management in Regional Parks have come up through public complaints and through management planning processes. The Regional Parks Committee has asked for information respecting the number of dogs one owner can effectively control while in a park. There may be a need to adjust dog regulations in the Regional Park Regulation Bylaw and an increased focus on the enforcement of existing regulations pertaining to dogs.~~

~~Opening of the Sea to Sea and Sooke Hills Wilderness Regional Park has increased the access to areas adjacent to the Drinking Water Protection Zone of Sooke Hills Wilderness Regional Park. There will be a need for heightened~~

~~security and enforcement to keep people out of those areas and ensure that an effective buffer is provided between recreational users and the Greater Victoria Watershed.~~

~~2018 Update: Implementation of management plan priorities at Island View Beach will require a shifting of work priorities for staff. Completion of management plan priorities early on in the implementation phase will help to build public confidence in the CRD's commitment to meeting overall park management plan objectives.~~

### Visitor Services & Community Development

Visitor interest and understanding of issues related to the local natural environment is anticipated to continue to increase and develop. This will require Regional Parks to evolve programming to better meet new and emerging interests.

~~Volunteers are interested in less traditional opportunities and more short-term or one-time only opportunities, such as corporate employee, one-day-only shoreline clean-ups. This presents opportunities for Regional Parks to work with community partners and corporations in innovative ways to deliver on its mandate.~~

~~Community-based partnerships continue to support strategic priorities. It is expected that there will be an increase in opportunities to engage corporations, agencies, and other levels of government in park-based projects that support mutual goals of encouraging healthy, active lifestyles.~~

Use of new technology and social media is increasing rapidly for trip planning and communicating visitor experiences. Technology can provide directions in the parks, and can be used for sharing photos and comments on visitor experiences. Keeping pace through development of apps, on-line registration systems and downloadable maps is crucial.

~~The BC Ministry of Education curriculum is undergoing a review in 2015. Changes in outcomes and curriculum topics, especially in the Kindergarten to Grade 8 levels, will require increased staff time from Regional Parks to update and, in some cases, develop new formal education programs.~~

### Regional Trails

Visitor use of regional parks and trails continues to increase. In 2016, regional trails recorded a total of 3.096 million visits, an overall increase from 2.93 million in 2013. The popularity of the trails for recreation and transportation purposes is only expected to increase over time. Increased use and congestion on the trails will likely need to be addressed through facility upgrades and projects focused on increasing the user capacity of the trail system and providing ways to maintain public safety among users.

The promotion of regional trails as transportation corridors may create an expectation that trails will be maintained to a level of service where high-speed travel can be safely accomplished. More resources would be required to meet these expectations than have previously been allocated for regional trail maintenance.

~~The Regional Trails Management Plan was approved by the Board in 2016. Implementation of priorities identified in the Plan will require a shifting of work priorities for staff. Completion of management plan priorities early on in the implementation phase will help to build public confidence in the CRD's commitment to meeting park management plan objectives.~~

~~The development of the E&N Rail Trail presents a significant financial challenge. The development is proposed in five phases and the total estimated development cost is \$36 million. Opening of the trail will increase operational and maintenance costs.~~

~~2018 Update: Subject to approval of a loan authorization bylaw in 2017, construction will begin on phases 3 and 4 of the E&N Rail Trail. In 2017, design and engineering work for both phases will be undertaken. In 2018, construction of phase 3 between Atkins Avenue/E&N Railway Crossing and Savory School in Langford (approximately 1 km in length) will begin in 2018. Construction of Phase 4 (1.3 km) from Esquimalt Road to the Blue Bridge in Victoria is targeted to occur in 2019.~~

Some facilities in existing trails need to be replaced or upgraded. Demand for capital funding is much greater than available funding. An asset management plan needs to be completed for all facilities, to guide capital development.

## 1.4 Link to Board Strategic Priorities

### ENVIRONMENTAL PROTECTION

- Undertake monitoring, education, and remediation programs to support decision-making and management of natural resources

### BIODIVERSITY & ECOSYSTEM HEALTH

- Respond to issues that threaten ecological health such as wildlife and invasive species and profile best practices
- Integrate a climate lens in our land acquisition strategies
- [Work with First Nations to reach an agreement on the usage of the Sea-To-Sea parklands](#)

### REGIONAL INFRASTRUCTURE

- Develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

### ACTIVE & MULTI-MODAL TRANSPORTATION

- Manage trails as transportation corridors

### EDUCATION, OUTREACH & INFORMATION

- Expand on successful education partnerships and program delivery to include innovative in-person outreach and educational programs

### REGIONAL PARKS

- Increase access to recreational trails within park boundaries and consider opening new park reserve lands
- Prepare and update park management plans

### [FIRST NATIONS](#)

- [Work with First Nations to reach an agreement on the use of the Sea-To-Sea parklands](#)

## 2 Services

### 2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Planning, Resource Management and Development</b>					
<b>Land Acquisition</b> Manage the land acquisition strategy, identify priority areas, and assess feasibility of acquiring properties to expand Regional Parks' System	Provide 1 update to the Board annually	Review & Assess	<a href="#">Provide 2 updates to the Board annually</a> <a href="#">Adjust to meet service delivery needs, as required</a>	<a href="#">Complete 1 land acquisition</a> <a href="#">Review &amp; Assess</a>	<a href="#">Complete 1 land acquisition</a> <a href="#">Adjust to meet service delivery needs, as required</a>
<b>Parks Management Planning and Public Engagement</b> Provide strategic direction and guide environmental conservation, development of visitor facilities and provision of visitor services	Preparation or update of 2 management plans per year  2 public engagement processes per year	Review & Assess  Review & Assess	Adjust to meet service delivery needs, as required	<a href="#">Review &amp; Assess</a> <a href="#">Complete 1 park/trail management plan and undertake 2 management plan projects including public engagement</a>  <a href="#">Review &amp; Assess</a>	Adjust to meet service delivery needs, as required  <a href="#">Adjust to meet service delivery needs, as required</a>
<b>Capital and Facilities Planning and Project Management</b> Undertake improvements and new construction of buildings, facilities, dams and related infrastructure that align with capital plan	3 capital facility plan projects	Review & Assess	<a href="#">3-8 new capital facility projects identified in Capital Plan</a> <a href="#">Adjust to meet service delivery needs, as required</a>	<a href="#">Review &amp; Assess</a> <a href="#">7 new capital projects</a>	Adjust to meet service delivery needs, as required
<b>Resource Conservation</b> Undertake stewardship work, including habitat restoration, invasive species control, and working with partners	20 research permits per year  2 conservation planning/partnerships per year	Review & Assess  Review & Assess	<a href="#">20 research permits per year</a>  <a href="#">2 conservation planning/partnerships per year</a> <a href="#">Adjust to</a>	Review & Assess  <a href="#">Review &amp; Assess</a> <a href="#">Complete 3 conservation</a>	Adjust to meet service delivery needs, as required  Adjust to meet service delivery needs, as required

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
on stewardship projects.			<a href="#">meet service delivery needs, as required</a>  Adjust to meet service delivery needs, as required	<a href="#">plans and initiate 1 conservation project</a>	
<b>Geographic Mapping</b>	150 cartographic products/year	Review & Assess	<a href="#">200 cartographic products/year</a>	Review & Assess	Adjust to meet service delivery needs, as required
	GIS analysis for 8 planning initiatives	Review & Assess	<a href="#">GIS analysis for 10 planning initiatives</a>	Review & Assess	Adjust to meet service delivery needs, as required
	Update and maintenance of 4 Spatial Data Models/year	Review & Assess	<a href="#">Update and maintenance of 6 Spatial Data Models/year</a> Adjust to meet service delivery needs, as required  Adjust to meet service delivery needs, as required  Adjust to meet service delivery needs, as required	Review & Assess	Adjust to meet service delivery needs, as required
<b>Park Operations</b>					
<b>Infrastructure replacement and repair</b>	8 infrastructure and facilities projects per year  Annual infrastructure plan is prepared	Review & Assess	<a href="#">8 infrastructure and facilities projects per year</a>  <a href="#">Implement Annual infrastructure plan</a> Adjust to meet service delivery needs, as required	<a href="#">Review &amp; Assess 5 Infrastructure and facilities projects</a>  <a href="#">Annual infrastructure plan is prepared</a>	Adjust to meet service delivery needs, as required  <a href="#">Adjust to meet service delivery needs, as required</a>
<b>Park &amp; Facility Maintenance</b>	Regular cleaning of park facilities,	Review & Assess	<a href="#">Regular cleaning of park facilities.</a>	Review & Assess	Adjust to meet service delivery

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<p>minor repairs &amp; clearing trails</p> <p>30 operating plans prepared per year</p> <p>Manage and maintain 300 km of park trails</p> <p>Service and inspect 51 washroom facilities/week</p> <p>Service and inspect 132 garbage containers/week</p>	<p>No change</p> <p>Review &amp; Assess</p> <p>Review &amp; Assess</p>	<p><a href="#">minor repairs &amp; clearing trails</a></p> <p><a href="#">30 operating plans prepared per year</a></p> <p><a href="#">Manage and maintain 330 km of park trails</a></p> <p><a href="#">Service and inspect 55 washroom facilities/week</a></p> <p><a href="#">Service and inspect 132 garbage containers/week</a></p> <p>Adjust to meet service delivery needs, as required</p>	<p>Review &amp; Assess</p> <p>Manage and maintain 400 km of park trails</p> <p>Review &amp; Assess</p>	<p>needs, as required</p> <p>Adjust to meet service delivery needs, as required</p> <p>Adjust to meet service delivery needs, as required</p> <p>Adjust to meet service delivery needs, as required</p>
<b>Vegetation Management</b>	Contract weed harvesting at Elk/Beaver Lake	<p>Purchase weed harvester and operate it with parks staff</p> <p>Conduct 600 hours of lake weed harvesting</p>	<p><a href="#">Operate weed harvester</a></p> <p><a href="#">Conduct 400 hours of lake weed harvesting</a></p> <p><a href="#">Review &amp; Assess</a></p>	Adjust to meet service delivery needs, as required	Review & Assess
<b>Campground Operations</b>	3 campgrounds managed	No change	No change	4 campgrounds managed	Review & Assess

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	Set baseline for annual revenue from campgrounds	Increase revenue by 5%	Increase revenue by 4%	<a href="#">Achieve a 65% weekend occupancy rate at Sooke Potholes and Island View Beach campgrounds May long weekend-September long weekend. Increase revenue by 3%</a>	<a href="#">Achieve a 65% weekend occupancy rate at Sooke Potholes and Island View Beach campgrounds May long weekend-September long weekend. Increase revenue by 2%</a>
<b>Park &amp; Trail Signage</b>	4 park re-signing projects	3 new park re-signing projects	5 new park re-signing projects	7 new park re-signing projects	Repair and replace park signs as necessary
<b>Bylaw Enforcement</b>	650 patrol hours per year with CRD Bylaw Enforcement	Review & Assess	<a href="#">745 patrol hours per year with CRD Bylaw Enforcement</a> Adjust to meet service delivery needs, as required	Review & Assess	Adjust to meet service delivery needs, as required
<b>Fire Management</b>	20 seasonal and regular staff trained to BC Forest Service standards for basic firefighters	Review & Assess	<a href="#">20 seasonal and regular staff trained to BC Forest Service standards for basic firefighters</a> Adjust to meet service delivery needs, as required	Review & Assess	Adjust to meet service delivery needs, as required
<b>Visitor Services &amp; Community Development</b>					
<b>Volunteers in Parks Programs</b>  <i>Volunteer Naturalists</i> act as Nature Centre Hosts in the Nature Centres operated by Regional Parks on weekends throughout the year. They engage with park visitors and help to build awareness,	30 volunteers and 900 hours	Review & Assess	<a href="#">30 volunteers and 900 hours</a> Adjust to meet service delivery needs, as required	Review & Assess	Adjust to meet service delivery needs, as required

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
understanding and appreciation of the natural and cultural environments in regional parks					
<b>Volunteer Park Stewards</b> visit parks weekly, checking and reporting on condition of parks, trails, and facilities. They also foster positive relationships with visitors through information, education and professional role modelling	50 volunteers and 1,500 hours	Review & Assess	<a href="#">50 volunteers and 1,500 hours</a> <del>Adjust to meet service delivery needs, as required</del>	Review & Assess	Adjust to meet service delivery needs, as required
<b>Restoration Volunteers</b> participate in the removal of invasive species (i.e., Scotch broom removal at Mill Hill Regional Park) and the restoration of natural habitats (i.e., Western Painted Turtle habitat restoration project at Elk/Beaver Lake Regional Park)	120 volunteers and 900 hours	Review & Assess	<a href="#">120 volunteers and 900 hours</a> <del>Adjust to meet service delivery needs, as required</del>	<del>Review &amp; Assess</del> <a href="#">120 volunteers and 900 hours</a>	Adjust to meet service delivery needs, as required
<b>Corporation and Community Group Volunteers</b> participate in one-time events that usually last 1-3 hours. They assist with environmental stewardship projects (i.e., Great Canadian Shoreline Clean-up events) and they also assist with restoration projects (i.e., Scotch broom removal at Witty's Lagoon – Tower Point)	400 volunteers and 1,100 hours  2 corporations or community groups involved in projects	Review & Assess  <del>3 new corporations or community groups</del> <a href="#">Review &amp; Assess</a>	<a href="#">400 volunteers and 1,100 hours</a> <del>Adjust to meet service delivery needs, as required</del>  3 new corporations or community groups	<del>Review &amp; Assess</del> <a href="#">400 volunteers and 1,100 hours</a>  3 new corporations or community groups <a href="#">Review &amp; Assess</a>	Adjust to meet service delivery needs, as required  3 new corporations or community groups <del>Adjust to meet service delivery needs, as required</del>
<b>Environmental Interpretation</b>	Educational Programs offered 3 days per week;	Review & Assess	<del>Adjust to meet service delivery</del>	Review & Assess	Adjust to meet service delivery

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
BC curriculum-based programs are offered to elementary school students in the spring and fall	150 programs per year		<a href="#">needs, as required</a> <a href="#">Educational Programs offered 3 days per week; 130 programs per year</a>	<a href="#">130 formal education programs</a>	needs, as required
<b>Nature outings and events</b>  Offer nature outings and events, including guided nature walks, adult hikes, roving programs, workshops, and drop-in special events	135 outings and events per year	Review & Assess	<a href="#">135 outings and events per year</a> <a href="#">Adjust to meet service delivery needs, as required</a>	<a href="#">Review &amp; Assess</a> <a href="#">135 guided hikes and special events delivered or partnered on</a>	Adjust to meet service delivery needs, as required
<b>Outreach and education activities</b>  Outreach and education includes participation in community events and festivals (i.e., Saanich Fair, Strawberry Festival, Oceans Day, Seedy Saturday)	15 outreach events per year	Review & Assess	<a href="#">15 outreach events per year</a> <a href="#">Adjust to meet service delivery needs, as required</a>	<a href="#">Review &amp; Assess</a> <a href="#">15 outreach events</a>	Adjust to meet service delivery needs, as required
<b>Community Partnership Development</b>  Community partnerships are built with individuals, the private sector, and other levels of government to engage in environmental stewardship projects and improve facilities (i.e., working with community partners to design user-friendly trails in parks)	3 new partnerships	Review & Assess	<a href="#">Adjust to meet service delivery needs, as required</a> <a href="#">1 new partnership</a>	Review & Assess	Adjust to meet service delivery needs, as required
<b>Regional Parks Legacy Program</b>  This Program encourages gifts,	1 donation in 2015	2 new donations	<a href="#">2 new donations</a> <a href="#">3 donations for construction of Sooke Hills Wilderness Trail</a>	<a href="#">2 new donations</a> <a href="#">Review &amp; Assess</a>	<a href="#">2 new donations</a> <a href="#">Adjust to meet service delivery needs, as required</a>

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
donations, and planned giving to support land acquisition, and ongoing programs, services and facilities					
<b>Communications and Creative Services</b>  Communication, design and production services in support of park programs.	Establish base level of social media projects  2,000 signs and display pieces	Increase social media projects  Review & Assess	Increase social media projects  <a href="#">2,000 signs and display pieces</a> <a href="#">Adjust to meet service delivery needs, as required</a>	Increase social media projects  Review & Assess	Increase social media projects  Adjust to meet service delivery needs, as required
<b>Social Science Research &amp; Planning</b>  Social Science research and planning, visitor surveys, data analysis	New position beginning in September 2015	<a href="#">Review &amp; Assess</a> <a href="#">Conduct 1 Household Survey</a>	<a href="#">Adjust to meet service delivery needs, as required</a>  <a href="#">Review and Assess</a>	<a href="#">Review &amp; Assess</a> <a href="#">Adjust to meet service delivery needs, as required</a>	<a href="#">Adjust to meet service delivery needs, as required</a> <a href="#">Review &amp; Assess</a>
<b>Administration</b>  Administration staff provide services to the public, including responding to general inquiries, administering the permit system for use of picnic shelters and administrative support to Regional Parks staff	240 permits processed	New recreation management software system to be implemented for on-line registrations	<a href="#">250 permits processed</a> <a href="#">Review &amp; Assess</a>	<a href="#">Adjust to meet service delivery needs, as required</a> <a href="#">Review &amp; Assess</a>	<a href="#">Review &amp; Assess</a> <a href="#">Adjust to meet service delivery needs, as required</a>
<b>Regional Trails</b>					
<b>Regional Trails Operation &amp; Maintenance</b>  Operate and maintain multi-use regional trails	Operate and maintain 93 km of multi-use regional trails	No change	Add 1 km E&N Rail Trail Total 94km	Add 1 km E&N Rail Trail (Phase 3) Total 95 km	Add 1.3 km E&N Rail Trail (Phase 4) Total 96.3 km
Operate and maintain multi-use regional trails as transportation and recreation corridors	Conduct 250 km of boom flail vegetation removal in spring and fall cuts	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess	Adjust to meet service delivery needs, as required
<b>Trail Management Planning and Public Engagement</b>	Prepare 1 plan (Regional Trails Management Plan)	Prepare 2 Plans SGI and SSI;	Review & Assess	<a href="#">Adjust to meet service delivery needs, as required</a>	Review & Assess

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Prepare or update Trail Plans to provide strategic direction and guide transportation and recreation facility development		Complete 1 plan RTMP		<del>required</del> complete 1 plan: <a href="#">Gulf Islands Regional Trails Plan</a>	

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
PRMD	4.96	4.96	<del>4.96</del> 4.96	<del>4.96</del> 4.96	<del>4.96</del> 4.96
OPS	20.69	20.69	<del>20.69</del> 20.69	<del>20.69</del> 20.69	<del>20.69</del> 20.69
VSCD	15.62	15.62	<del>15.62</del> 15.62	<del>15.62</del> 15.62	<del>15.62</del> 15.62
*Regional Trails	7.23	7.23	7.23	7.23	7.23
<b>Total</b>	<b>48.5</b>	<b>48.5</b>	<b>48.5</b>	<b>48.5</b>	<b>48.5</b>
<b>Increase FTEs</b>	0	0	0	0	0
<b>Combined Total</b>	<b>48.5</b>	<b>48.5</b>	<b>48.5</b>	<b>48.5</b>	<b>48.5</b>

### \*NOTE – REGIONAL TRAILS

~~On July 22, 2015, the CRD Transportation Select Committee approved the recommendation to go forward for Board approval for the establishment of a new transportation service. An estimate of 10% (\$800,000) for operating and maintaining the trails was provided. It is proposed that the current budget allocation for Regional Trails be isolated from the Regional Parks budget and added to the new Transportation Service Cost Centre.~~

FTE's for Regional Trails were calculated by adding the percentage of time spent on Regional Trail management and operations from all Regional Parks staff. A rough estimate of the level of effort by Regional Parks staff that went into the management of Regional Trails was prepared. This estimate was based on percentage of time spent by a variety of staff (e.g., trail maintenance, planning, volunteer management, mechanic services, promotions and communications). There are no discrete FTEs that are dedicated solely to Regional Trails.

### 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>2016</b>			
<b>Completion of Island View Beach Regional Park Management Plan</b> To be completed in <del>2016</del> 2017	Update of 1989 management plan to address natural resource protection and management, increased regional park area and increased visitor use	Biodiversity and Ecosystem Health	Core budget
<b>Identify priority land acquisition areas in the Coastal Western Hemlock ecosystem zone</b> To be completed 2017	Prepare inventory of ecosystems to identify priority areas for regional park potential to support update of Land Acquisition Strategy in 2017	Climate Change Biodiversity and Ecosystem Health	\$50,000 for consulting service – Reserves
<b>Land Acquisition Strategy (LAS) 2015 to 2017</b> Ongoing	LAS guides the acquisition of land Update LAS in 2017 for 2018-2019; in 2018, report to the Board regarding the future of the land acquisition fund beyond 2019	Climate Change Biodiversity and Ecosystem Health	Possible budget implications for acquiring land; these will be identified to the Board during the acquisition of specific parcels
<b>Environmental Services' Elk/Beaver Lake Watershed Initiative</b>	Integrated natural resource management to improve water quality and reduce algae blooms in Elk and Beaver Lakes  Coordinate the development and implementation of an Elk and Beaver Lake Water Quality Action Plan  Purchase and operate an aquatic weed harvester to support water quality initiatives and improve recreation	Biodiversity and Ecosystem Health Board Priority  Economic Development	Ongoing 4-year term increase request for coordinator to work with Environmental Protection Services \$122,000  Replace aquatic weed harvester that was decommissioned in 2013; \$200,000 from equipment reserves
<b>Construct the Trans Canada Trail (The Great Trail)</b> To be completed in 2017	Complete the connection of the Trans Canada Trail to connect with the Cowichan Valley Regional District	Biodiversity and Ecosystem Health  Economic Development	The class D estimated cost is \$2.3 million. The proposed source of funding is: \$630,000 from TCT Relocation Fund, estimate \$650,000 from TCT Foundation and \$800,000 Reserves
<b>Continue with the opening Sea to Sea Green Blue Belt (Mt. Manuel Quimper area)</b>	Development of trails and toilet facilities, installation of signs and staff patrols	Biodiversity and Ecosystem Health Board Priority	\$75,000 in capital budget

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
To be completed 2016			
<b>On-line registration system</b> To be completed <del>2016</del> <u>2018</u>	Purchase of online registration system license and software to streamline operational processes and customer experience management for camping reservations, event permits, facility rentals, school programs and nature programs	Public Engagement and Communications	One-time increase of \$35,000 for initial installation
<b>Implement New Uniform Standard</b> To be completed in <u>2017</u>	Develop standard uniform pieces and colours. Issue pants, shorts, shirts, jackets and hats to employees whose day-to-day activities involve high public visibility.	Public Engagement	One-time increase of \$50,000 for initial purchase
<b>Develop Asset Management Plan</b> To be completed <del>2018</del> <u>2016</u>	Develop an asset management program <u>in conjunction with the Corporate Asset Manager</u> that includes the implementation of Plant Maintenance (SAP)	Regional Infrastructure	\$200,000 is identified in capital budget for 2016 <u>\$190,000 carried forward to 2017</u>
<b>First Nations</b> Ongoing	Support access to regional park land for traditional use purposes and explore ways to support First Nations economic development through that access	First Nations	Subject to agreements
<b>Planning and Development of Southern Gulf Islands and Salt Spring Island Regional Trail</b> To be completed <del>2019</del> ; <u>Ongoing</u>	<p>The trail management plan will be completed in <del>2016</del> <u>2017</u> and detailed development planning and construction would occur <del>2016 to in</del> <u>2019 and beyond</u></p> <p>Develop 2 km regional trail on Mayne Island. \$50,000 was allocated from the Regional Park capital reserve and \$60,000 from SGI Community Works Fund <u>to support design of the trail. Construction will be contingent on the identification of external funding.</u></p>	Active and Multi-modal Transportation	\$200,000 as a continuous supplemental for development of regional trails
<b>Completion of Regional Trail Management Plan</b> To be completed in Fall 2016  Implementation 2017 and beyond and subject to Board approval	The regional trail management plan will identify the design and management approach for regional trails as transportation corridors for users now and in the future to retain and expand use	Active and Multi-Modal Transportation	Funded from 2013 one-time increase of \$30,000  Implementation budget subject to Board approval of management plan and capital budget

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
To be reflected in the update to the Service Plan in 2017			
<b>2017</b>			
<b>Open <a href="#">Trans-Canada Trail (The Great Trail)</a> through Sooke Hills Wilderness Regional Park</b>  To be completed 2017	Trail development, facilities and sign installation	Biodiversity and Ecosystem Health	Complete <a href="#">TGC</a> facility development \$220,000 from capital reserve.
<b>Continue opening Sea to Sea Green Blue Belt. Develop trails to the main lakes</b>  To be completed 2019	Trail development and sign installations  Two seasonal auxiliary park officers to conduct enforcement patrols on <a href="#">the The Great Trail/Trans-Canada Trail</a> , in the watershed protection zone of Sooke Hills Wilderness Regional Park, and in the Mount Manuel Quimper area of the Sea to Sea Green Blue Belt and to maintain trails and facilities in those areas May-September (21 weeks each).	Biodiversity and Ecosystem Health	\$50,000 in capital budget  2017 update: re-profiled to move \$50,000 from this project in 2019 to 2017. Total is \$100,000 in capital for 2017.  Purchase ATV to service backcountry trails and campground at Sheilds Lake. \$15,000 in capital for 2017.  \$62,500 ongoing increase for seasonal auxiliary park officer wages.
<b><a href="#">Southern Gulf Islands Regional Trail planning and development</a></b>  To be completed 2019	Continue development of 2 km regional trail on Mayne Island	Active and Multi-modal Transportation	\$200,000 ongoing increase added in 2016
<b>Implementation of Regional Trails Management Plan - <a href="#">Plan Subject to Board Approval</a></b>  Ongoing To be completed 2016	The regional trails management plan identifies improvements needed to retain and expand usage	Active and Multi-modal Transportation	Core Budget
<b>NEW Develop and Open Sooke River Regional Park</b>	Site improvements, including new septic system, parking lot, toilet, gate, kiosk, picnic tables, trail improvements, fencing	Biodiversity and Ecosystem Health – Strategically acquire protected areas	\$100,000 One-time increase Funding source - Capital \$30,000 per year ongoing, offset by rental revenue of \$20,000. Total ongoing increase request is \$10,000 Funding source - Reserves

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>NEW</b> Implement Island View Beach Regional Park Management Plan	New Capital developments including washroom, fences, new trails and accessibility improvements	Regional Parks – Increase access to recreational trails within park boundaries and consider opening new park reserve lands.	\$50,000 One-time increase Funding source – Capital
<b>NEW</b> Assess Major Structures - Trestles, Bridges, Dams	Assessments of priority structures for purposes of informing capital plan priorities for next 5-10 years	Regional Infrastructure –meeting regulatory and service requirements	\$200,000 Funding source – Capital
<b>NEW</b> Participate in Regional Canada Goose Management Strategy	Participate on regional working group to support initiative and keep up to date on management of overpopulation of non-migratory Canada geese in the region, as per Parks Committee direction	Biodiversity and Ecosystem Health	Funding source – Core Budget
<b>NEW</b> Subject to loan authorization bylaw approval, Complete design of phases 3 and 4 of the E&N Rail Trail	Construction of the E&N Rail Trail is taking place in phases. Phase 3 is a 1 km section in the City of Langford. Phase 4 is a 1.3 km section between Esquimalt Road and the Johnson Street Bridge. This will create a continuous 11 km off-street route between Langford and Victoria	Active and Multi-modal Transportation	<del>\$695,560</del> ,000 (design only, subject to loan authorization bylaw approval)  Funding source – borrowing
<b>2018</b>			
<b>Land Acquisition</b>  Fund beyond 2019	Submit report to the Board regarding options for the land acquisition fund beyond 2019  <b>NEW:</b> <u>Land Acquisition: Undertake public engagement process to determine public support for the use of Land Acquisition Fund money to support capital development and operational budgets for new parks.</u>	Biodiversity and Ecosystem Health  <u>Public Engagement</u>	Potential <u>continuation of increase to Land Acquisition funding; one-time increase of \$35,000 to support public engagement</u>
<b>Open Sea to Sea Green Blue Belt for backcountry camping and continue trail development</b>  To be completed in 2018	Provide backcountry camping facilities at Shields Lake and open for use  Two seasonal auxiliary park officers to conduct enforcement patrols of the lakes area (Sheilds, Crabapple, Grass, and Peden) of the Sea to Sea Green Blue Belt and to maintain trails on Mount Manuel Quimper and in the lakes area; May-September (21 weeks each)	Biodiversity and Ecosystem Health  Regional Parks	\$250,000 allocated in capital budget  \$63,800 ongoing increase for seasonal auxiliary park officer wages
<b>NEW</b> Construct Phase 3 of E&N Rail Trail	Phase 3 is a 1 km section in the City of Langford	Active and Multi-modal Transportation	<del>\$2,688,000</del> <u>\$3,200,000</u>

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
			Funding source – borrowing, subject to loan authorization by law approval in 2017
<a href="#">NEW Todd Creek Trestle Repair</a>	<a href="#">This project is to assess and implement a spanning of Todd Creek on The Galloping Goose Regional Trail (GGRT). It includes an assessment of the current Todd Creek Trestle and either a repair of the trestle, a modification of the trestle, or the construction of a new structure to span Todd Creek. The goal of the project is to connect the GGRT from the south side of Todd Creek to the north side of Todd Creek. During the project, a bypass route will be upgraded to provide continuity of the GGRT.</a>	<a href="#">Active and Multi-modal Transportation</a>	<a href="#">Funding source - \$1.2 million allocated in capital budget</a>
<a href="#">NEW Galloping Goose User Separation Feasibility Study</a>	<a href="#">The Regional Trails Management Plan identifies the completion of a feasibility study to separate users or widen the trail from Selkirk Trestle to McKenzie Avenue on the Galloping Goose and from Switch Bridge to McKenzie Avenue on the Lochside Trail.</a>	<a href="#">Active and Multi-modal Transportation</a>	<a href="#">Funding Source-\$75,000 from core budget.</a>
<a href="#">NEW Beaver Lake Aeration System</a>	<a href="#">In 2017, the CRD Board approved the installation of aeration equipment in Beaver Lake to improve water quality, and to develop a business case for a larger water quality improvement process for Elk Lake. Regional Parks will be working with Environmental Protection to implement this direction</a>	<a href="#">Biodiversity and Ecosystem Health</a>	<a href="#">Funding source: \$40,000 from core budget</a>
<b>2019</b>			
<b>Complete the opening of the Sea to Sea Green Blue Belt.</b>  To be completed in 2019	One seasonal auxiliary park officer to provide customer service, maintain facilities, and ensure safe camping experiences at Shields Lake camping area, to assist with enforcement patrols on the Trans Canada Trail, in the watershed protection zone of Sooke Hills Wilderness Regional Park, and the lakes area and Mount Manuel Quimper area of the Sea to Sea Green Blue Belt May-September (21 weeks)	Biodiversity and Ecosystem Health  Regional Parks	\$32,500 ongoing increase for seasonal auxiliary park officer wages
<b>MOVED FROM 2018 - Open Sooke Hills</b>	Development of trails, parking area and installation of signs	Biodiversity and Ecosystem Health	\$200,000 allocated in capital budget

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>Wilderness Regional Park in the vicinity of the Veitch Creek</b>  Trails and facilities to be completed in 2019			
<del>NEW</del> Construct Phase 4 of the E&N Rail Trail	Phase 4 is a 1.3 km section of trail between Esquimalt Road and the Johnson Street Bridge.	Active and multi-modal transportation	\$2, <del>250</del> 97,000  Funding source - borrowing, subject to loan authorization bylaw approval in 2017

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
<p>Maintain exemplary park planning, resource management and development practices</p>	<ul style="list-style-type: none"> <li>• <del>Implementation of Land Acquisition Strategy* 2018 KPI change: Add additional lands to the regional parks and trails system</del></li> <li>• <del>Prepare a minimum of one environmental inventory and conservation plan for a park (or part of one park) annually 2018 KPI change: Undertake environmental conservation planning and projects (e.g. habitat restoration, invasive species control)</del></li> <li>• Prepare or update a minimum of one park management plan annually</li> <li>• <del>Number of initiatives implemented from park management plans* 2018 KPI change: Implementation of priority actions in management plans</del></li> <li>• <del>Participation rates of residents in two-way dialogue and engagement opportunities* 2018 KPI change: Number of public engagement opportunities on park/trail management.</del></li> <li>• Completion of an updated list of Species at Risk annually*</li> <li>• <del>Amount of invasive species removed from Regional Parks* 2018 KPI change: Number of locations where invasive species removal has occurred</del></li> </ul>
<p><del>Increase use of Regional Parks and Trails 2018 update: Maintain visitor satisfaction with regional park and trails</del></p>	<ul style="list-style-type: none"> <li>• <del>Increase in overall annual visits to regional parks* 2018 KPI change: Visitor satisfaction with regional park and trails</del></li> <li>• Number of trips on regional trails annually* (target a minimum of 2% increase over previous year)</li> <li>• Increase in kilometres of active transportation infrastructure*</li> </ul>
<p>Maintain responsible management of regional infrastructure and assets</p>	<ul style="list-style-type: none"> <li>• % of capital projects delivered on time and on budget</li> <li>• <del>Increase revenues at each campground by at least 2% annually (2015 baseline) 2018 KPI update: Weekend occupancy rate at Sooke Potholes and Island View Beach campgrounds between May long weekend and September long weekend</del></li> <li>• Number of sign packages completed annually</li> </ul>
<p>Increase opportunities to engage residents and community partners</p>	<ul style="list-style-type: none"> <li>• Number of community outreach events the CRD participates in and/or supports annually*</li> <li>• <del>Number of CRD educational workshops delivered or partnered on annually* 2018 KPI change: Number of guided hikes and special events delivered or partnered on annually</del></li> <li>• <del>Number of stakeholders engaged through educational programming on biodiversity and ecological health issues* 2018 KPI change: Number of formal education programs delivered in parks to students.</del></li> <li>• Number of volunteer hours leveraged in restoration or stewardship activities*</li> <li>• Target a minimum of 90% satisfaction rates from feedback forms collected through environmental interpretation programs</li> <li>• <del>Secure a minimum of 2 new donations in the Legacy Program annually</del></li> </ul>

\* Corporate Indicator – multiple divisions may contribute to this measure

# Contact

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Making a difference...together

**2018 Service Plans Review and Approval**

**For Committee of the Whole, November 29, 2017**

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**APPENDIX D**

**Service Plan Reviewed by the Arts Commission**

**TABLE OF CONTENTS**

Service Plan Summary

Service Plan for Arts Development

<p><b>SERVICE NAME:</b> Arts Development</p>
<p><b>Changes in Assumptions, Trends, and Other Issues since 2017:</b> <i>(linked to section 1.3 and 1.4 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• The community engagement process leading to the Arts Strategic Plan's Implementation Plan (Board priority 11b) identified a number of service delivery gaps.</li> <li>• The Implementation Plan specified new work to be done in funding, community education, stakeholder engagement, information sharing, and reporting and identified proposed programming to be put on hold pending redevelopment.</li> <li>• The Implementation Plan recommended an additional FTE which was approved by the CRD Board of Directors on June 14, 2017. Staffing for this position is scheduled to begin September 2017.</li> </ul>
<p><b>Overall 2017 Budget Performance:</b> <i>(linked to budget forecast to year end)</i></p> <ul style="list-style-type: none"> <li>• There is a one-time favourable variance of \$6,800 (0.25% of budget) due to savings in auxiliary (\$5,000) and Contracts for Services (\$2,000). This variance will be transferred to the Operating Reserve which has a current balance of \$162,079.</li> <li>• The new FTE will result in overspending in salaries in 2017 but is fully offset by proposed programming that has been put on hold.</li> </ul>
<p><b>Update to Division Initiatives:</b> <i>(linked to section 3 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• The adoption of the Arts Strategic Plan's Implementation Plan fulfills Board Priority 11b and specifies new work in order for the Arts Service to fulfill its mission. This work includes:             <ul style="list-style-type: none"> <li>○ two new funding programs to encourage and support arts activities and development in underserved communities;</li> <li>○ new strategic education, outreach and community engagement activities, including annual and incremental benefits reporting;</li> <li>○ development and dissemination of infographics and other tools for the use and information of funded organizations and municipal stakeholders;</li> <li>○ development of a value proposition for participation in the Arts Service;</li> <li>○ promotion of organizational capacity and skill building through workshops;</li> <li>○ convening activities and information sharing for funded organizations to facilitate partnerships and collaborations;</li> <li>○ strategic development of the Arts Service social media presence.</li> </ul> </li> <li>• Planning, development and initial implementation starts in the 4th quarter of 2017 with full implementation beginning in 2018.</li> </ul>
<p><b>Service Adjustments and Staffing Levels:</b> <i>(linked to section 2 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• New initiatives are supported by the addition of a new 1.0 FTE beginning September 2017 (approved by the CRD Board March 29, 2017).</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Gaps in current programs identified by consultant led community engagement process.</b></p> <ul style="list-style-type: none"> <li>Assess the recommended actions in Building Our #ArtsFuture's Together Implementation Plan</li> <li>Funding programs evaluated and changes implemented</li> <li>New programs initiated</li> </ul>	<p>Implementation Plan actions assessed, prioritized and adopted</p> <p>Begin planning and program development for two new programs, based on adopted Implementation Plan actions</p> <p>Develop community outreach framework</p> <p>Establish baseline metrics for social media audience</p> <p>Initiate incremental reporting and establish baseline audience metrics</p> <p>Develop data framework for Annual Arts Impact Report</p>	<p>Implementation Plan actions prioritized and adopted</p> <p>Planning and preparation for two programs commenced.</p> <p>Outreach framework developed.</p> <p>Baselines established.</p> <p>Incremental reporting established and baselines established.</p> <p>Framework developed</p>	<p>Implementation of 9 adopted actions</p> <p>Two new programs implemented</p> <p>Outreach framework implemented</p> <p>Increase audience by 10% over baseline</p> <p>Increase audience by 5% with each report</p> <p>First Annual Arts Impact Report produced. Establish baseline metric for audience.</p>

## Contact

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# Service Plan for Arts Development

2016-2019

Capital Regional District

*Date submitted: November 30, 2016*



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# 1 Overview

## 1.1 Division & Service Summary

a) The Arts Development Service manages a range of funding programs that support the operational and programming activities of organizations in the not-for-profit arts sector that meet established eligibility criteria and goals for public investment in the sector. It also manages a searchable database of public art on behalf of its member municipalities and oversees the Golden Jubilee Youth Arts Fund vested with the Victoria Foundation that benefits youth arts. The Arts Development Service is a resource for the arts in the capital region, serving the general public and arts funders in other jurisdictions and levels of government.

b) **Service overview and descriptions.**

Service Purpose , Role or Overview	Participants (for example: all municipalities, electoral areas, First Nations)	Funding Sources (for example: requisition, internal recoveries, grants)	CRD Board Committee and/or Commission Reporting Structure
Grant and organizational capacity-building programs for the not-for-profit arts sector	Victoria, Saanich, Oak Bay, Esquimalt, View Royal, Metchosin, Highlands, Sidney	requisition	Arts <del>Committee</del> <u>Commission</u>

## 1.2 Organization Chart

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## 1.3 Key Trends, Issues & Risks – Service Specific

Municipal investment in the arts recognizes the contribution that arts organizations make to the quality of life, the provincial and national visibility such organizations provide to the region, their role in providing a wide range of event and activities for citizens and visitors, and for the economic benefits that accrue to the region as a result. Sustaining and increasing investment in the arts is strongly tied to local and global economic trends that affect municipalities' ability and desire to support such investment.

Shortfalls in fulfillment of the Arts Service mission were identified through a 2016 community engagement process resulting in adoption of ~~through newnew~~ initiatives designed to fulfill the Arts Service mission and Board approval of an additional 1.0 FTE to resource those initiatives, staffing.

## 1.4 Link to Board Strategic Priorities

Arts Development Service programs provide strategic investment through granting to maximize the social and economic contribution arts organizations make to the quality of life in the Capital Regional District (CRD Strategic Priority 11b), the provincial and national visibility these organizations provide to the region, and their role in providing employment and a wide range of arts activities for citizens and visitors.

## 2 Services

### 2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Operating grant program (1 intake per year)</b>	Provide support to Arts Advisory Council and sub-committees to enable fulfillment of their adjudicative mandate per Bylaw 2973:				
	• screen organizations for eligibility (45-50)	No change	No change	No change	No change
	• provide assessment and reporting on eligible organizations (32)	<del>313 (est.)</del>	<del>33 (est.)</del> <u>31 (est.)</u>	<del>3432 (est.)</del>	No change
	• monitor funded organizations for fulfillment of grant obligations	No change	<del>No change</del>	No change	No change
<b>Project grant program, 2 intakes per year</b>	Advise and support prospective applicants on project development, grant eligibility, application processes, and issues related to capacity development.	No change	No change	No change	No change
	• screen organizations for eligibility (40-50)	No change	No change	No change	No change
	• provide assessment and reporting on eligible organizations (32)	<del>373</del>	<del>4033</del>	<del>33-3540-45 (est.)</del>	<del>33-3535-40 (est.)</del>
	monitor funded groups for fulfillment of grant objectives	No change	No change	No change	No change
	maintain data on funding outcomes events produced: 181; attendance: 42,716; employment: 392; volunteer engagement: 1210 (all numbers 2010).	No change	No change	No change	No change
	Provide support to Arts Committee by maintaining accountable processes for disbursement of program allocations.	No change	No change	No change	No change

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<p><b>IDEA grant program, 2 intakes per year (program review in 2017)</b></p>	<p>Advise and support prospective applicants on project development, grant eligibility, application processes, and issues related to capacity development.</p> <ul style="list-style-type: none"> <li>• screen organizations for eligibility (20-25)</li> <li>• provide assessment and reporting on eligible organizations (22)</li> </ul> <p>monitor funded organizations for fulfillment of grant obligations</p> <p>Provide support to Arts Committee by maintaining accountable processes for disbursement of program allocations.</p>	<p>No change</p> <p>22</p> <p>179</p> <p>No change</p> <p>No change</p>	<p>Program assessment year</p> <p>Program target levels tbc</p> <p><u>Revision of program resulting from Building Our #ArtsFuture Together. Adopted for development and piloting (see 2018)</u></p>	<p><u>NEW: Diversity Fund 2-year pilot program to encourage participation by Indigenous, multi-cultural and disabled communities. Maximum investment of \$25,000</u></p> <p>Program tbc</p> <p><u>NEW: Incubator Fund 2-year pilot program to develop skills and organizational capacity, provide access to expertise, administrative mentoring, and to support arts initiatives that are not fundable under other programs.</u></p>	<p><u>Program tbc</u></p> <p><u>Second year of pilot programs</u></p>
<p><u>Education, Outreach and Engagement</u></p> <p><u>(New 1.0 FTE and initiatives resulting from adoption of Building Our #ArtsFuture Together</u></p>			<p><u>NEW: September Development of early implementation of Arts Dev. Communications and outreach strategy</u></p>	<p><u>Implement:</u></p> <ul style="list-style-type: none"> <li>• <u>scheduled reporting on program impacts</u></li> <li>• <u>implement a comprehensive social media presence</u></li> <li>• <u>annual report on State of the Arts</u></li> <li>• <u>host 1<sup>st</sup> Arts Summit</u></li> </ul>	
<p><b>Maintain indicators</b></p>	<p>Baseline data as of 2013</p> <ul style="list-style-type: none"> <li>• events produced: 2285</li> <li>• event attendance: 603,847</li> <li>• admin and tech employment: FT 152; PT 599</li> <li>• artists employed: 2653</li> </ul>	<p><u>2015 Data pending:</u></p> <ul style="list-style-type: none"> <li>• <u>events: 2715</u></li> <li>• <u>attendance: 672,191</u></li> <li>• <u>admin and tech employment:</u></li> </ul>	<p><u>Data pending</u></p>	<p><u>Current and new indicators integrated into communications strategy</u></p>	

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		<a href="#">FT 152: PT 530</a> • <a href="#">artists employed: 3036</a>			
	Sector-generated economic activity: \$177.3 million GDP (2012)			Commission updated economic impact report	
	Provide support to individuals and organizations on not-for-profit structure, governance, and capacity development in general and as it relates to Arts Service programs.  Respond to inquiries on funding (CRD and other sources).  Liaise with arts funders at other levels of government.  Collect data for internal use and by outside agencies.	No change	No change	No change	No change
<b>Committee support</b>	Provide support to Arts Committee by maintaining accountable processes for allocation of program budgets.	No change	No change	No change	No change
<b>Information resource and data collection</b>	Provide support to individuals and organizations on not-for-profit structure, governance, and capacity development in general and as it relates to Arts Service programs.  Respond to inquiries on funding (CRD and other sources).  Liaise with arts funders at other levels of government.  Collect data for internal use and by outside agencies.  Manage web-database of regional public art for the region.	No change	No change	No change	No change

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## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Total</b>	1.8	1.8	1.8 (2.8 <u>as of September</u> )	<del>1.8</del> 2.8	<del>1.8</del> 2.8

## 3 Divisional Initiatives & Budget Implications

This section highlights important divisional initiatives over the next four years, including those initiatives related to delivery of 2015 – 2018 Board Strategic Priorities.

Title & Estimated Completion Date	Description	Board Strategic Priority Reference (if applicable)	Budget Implications (core budget; single supplemental or; continuous supplemental request)
<b>2016</b>			
<b>Regional Arts and Culture Strategic Plan</b>  <b>Completion: Dec. 2016</b>	Development of a Regional Arts Strategy that includes communication and community engagement activities to accomplish the following goals: <ul style="list-style-type: none"> <li>• increase community and stakeholder knowledge and support of the arts;</li> <li>• encourage municipalities to fully participate in funding the CRD Arts Service;</li> <li>• identify and reduce barriers to participation in the arts;</li> <li>• enable sustainable growth of the arts and arts organizations in the region;</li> <li>• ensure Arts Service grant programs are responsive to community needs and use effective and accountable processes.</li> </ul>	11b	Single supplemental (see continuous supplemental as a result of planning process to follow in subsequent year)
<b>Arts Service Strategic Goals</b>  <b>Completion: 2019</b>	The Arts Committee have adopted 5 strategic goals for the current mandate, as described above.		core budget

Title & Estimated Completion Date	Description	Board Strategic Priority Reference (if applicable)	Budget Implications (core budget; single supplemental or; continuous supplemental request)
<b>2017</b>			
<b>New program initiatives driven by outcomes of Regional Arts and Culture Strategic Plan</b> Completion: 2019	Program(s) and/or initiatives resulting from gap analysis from the Regional Arts Plan TBD <u>(see descriptions in Section 2.1)</u>  <u>Planning 4<sup>th</sup> quarter</u>	11b	<u>Continuous supplemental</u>
	Hire Community Outreach Coordinator to begin education and engagement activities related to fulfillment of Arts Service mission to promote and celebrate the arts. <u>1.0 FTE approved by CRD Board June 14, 2017</u>	<u>Outcome of priority 11b.</u>	<u>Core budget in 2017. Continuous supplementary in 2018.</u>
<b>2018</b>			
<b>New program initiatives continued</b> Completion: 2019	Program(s) and/or initiatives resulting from gap analysis from the Regional Arts Plan	11b	Core budget
	<u>Community Outreach Coordinator to develop and implement Outreach and Communications Strategy</u>	<u>Outcome of priority 11b.</u>	Continuous supplemental
	<u>Incubator Fund (see description Section 2.1)</u>  <u>Diversity Fund (see description Section 2.1)</u>	<u>Outcome of priority 11b.</u>  <u>Outcome of priority 11b.</u>	<u>Core budget &amp; reserve</u>
<b>2019</b>			
<b>Economic Activity Study of Arts and Culture in the Capital Region</b> Completion: 2019	Update (previous studies commissioned in 2010 and 2012) to gauge impact of arts and culture in the Capital Region.	11b	Reserve

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## 4 Goals & Performance Indicators

Please identify service goals and performance indicators for the next four years. Consider goals related to: customer service, business processes, financial performance, community outreach & engagement, or operational processes. Goals may be quantitative or qualitative. Performance indicators should evaluate the success in achieving the goals.

	Service Goals	Performance Indicators
2016	Development of a regional arts strategic plan	Community engagement, data gathering and plan complete and adopted by Dec. 2016.
2017	Gaps in current programs identified by <a href="#">consultant led community engagement process</a>	Recommendations for revised or additional programs developed.
	Funding programs evaluated and changes implemented  ;-New programs initiated.	Increased confidence by Arts Advisory Council, Arts Committee and grant recipients in accountability of granting decisions and appropriate distribution of funds.  <a href="#">Incubator and Diversity Funding programs researched and developed</a>  <a href="#">Establish baseline metrics for social media presence</a>
2018	Enhanced community and political knowledge of the social and economic impacts of the arts <a href="#">through strategic communications and initial release of Annual State of the Arts Report-</a>	Increased funding support from new and current municipal partners  <a href="#">Increase social media presence by 10% over baseline</a>  <a href="#">Production of inaugural annual Arts Impact Report -Establish baseline audience numbers (requests/downloads/unique views)</a>
2019	Economic activity of the arts re-assessed.  <a href="#">Enhanced community and political knowledge of the social and economic impacts of the arts through strategic communications and release of Annual State of the Arts Report.</a>	GDP impact of the arts sector in comparison to past studies (2010 & 2012)  <a href="#">Increase social media audience by 5% over previous year</a>  <a href="#">Requests/downloads/unique views of Arts Impact Report increased by 10%</a>

### Contact

Name: James Lam  
Title: Manager, Arts Development Service - Contact information: 250-360-3205



Making a difference...together

**2018 Service Plans Review and Approval**

**For Committee of the Whole, November 29, 2017**

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**APPENDIX E**

**Service Plan Reviewed by the Core Area Liquid Waste Management Committee**

**TABLE OF CONTENTS**

Service Plan Summary

Service Plan for Core Area Liquid Waste

**SERVICE NAME:** Core Area Liquid Waste Service

**Changes in assumptions, trends, and other issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- The Core Area Wastewater Treatment Project (CAWTP) Board and its project implementation team have commenced construction of the Wastewater Treatment Project and resources have been redirected to support any Liquid Waste management obligations associated with the Integrated Resource Management planning process.

Various regulatory compliance, reporting and monitoring work will expand as new facilities are being constructed and are commissioned. The Liquid Waste Management Plan (LWMP) will need to be consolidated to reflect the final resolution of any conditional obligations stipulated with past amendments to the Plan.

**Overall 2017 budget performance:** (linked to budget forecast to year end)

- There is a \$473,000 (53%) favourable variance due largely to LWMP changes in 2017. This variance will be transferred to the operating reserve to fund 2018-2022 projects. The current balance of the operating reserve is \$811,000.
- Source Control - There is a \$43,000 (2.8%) favourable variance due largely to lower than expected labour expenses. This variance will be transferred to the operating reserve to fund 2018-2022 capital projects. The current balance of the operating reserve is \$357,000.
- LWMP Core - There is a \$473,000 (53%) favourable variance due largely to LWMP changes in 2017. This variance will be transferred to the operating reserve to fund 2018-2022 projects. The current balance of the operating reserve is \$811,000.
- LWMP Onsite - There is a \$16,500 (7.2%) favourable variance due largely to unanticipated staff vacancies. This variance will be transferred to the operating reserve to fund 2018-2022 projects. The current balance of the operating reserve is \$73,000
- Core Area Wastewater Operations: There are 1-5% unfavourable variances projected across the four core trunk budgets at year end, primarily as a result of funding the relocation of the operations function to the interim facility on Tennyson Avenue. The shortfalls will be funded through a reduction in the planned transfer to reserve funds.

**Update to Division Initiatives:** (linked to section 3 of the detailed service plan)

- Every 3-5 years, the CALWMP is consolidated to include amendments to that date; consolidation was last done in 2011. Over the next 1-2 years, amendments up to and including Amendment No. 12 need to be reviewed to ensure regulatory compliance.
- There are no significant changes planned for the Inflow & Infiltration, Wastewater & Marine Environment, Regional Source Control, Stormwater Quality Management, Harbours Environmental Action, Onsite Septic System and Trucked Liquid Waste Management programs relative to 2017. Additional details about the activities of these programs can be found in the Service Plans for the Environmental Protection and Facilities Management & Engineering Services divisions.
- Some of the Core Area 'minor' capital projects will be deferred to align with the treatment project conveyance upgrades and future capital funding approach.

**Service Adjustments & Staffing Levels:** *(linked to section 2 of the detailed service plan)*

- There are no adjustments to the LWMP Core & Westshore, Inflow & Infiltration, Wastewater & Marine Environment, Regional Source Control, Stormwater Quality Management, Harbours Environmental Action, Onsite Septic System and Trucked Liquid Waste Management programs.
- Related liquid waste service and staffing adjustments are as follows:
  - a) Core Area Wastewater Treatment Project - 3 FTEs are requested:
    - 1) a Supervisor of Operations for the McLoughlin Point Treatment Plant to proactively engage in the transition from the project to ongoing operations. This FTE will be funded by CAWTP in 2018, but will transition to the 2019 McLoughlin operating budget being developed;
    - 2) two 4-year term positions are required by the Finance Department to manage the increased complexity and volume of CAWTP-related work, including financial analysis, accounts payable, payroll and required grant reporting. These positions will be funded by an allocation from the CAWTP and will have no impact on other services or requisitions.
  - b) Core Area Wastewater Engineering – 2 FTEs are requested:
    - 1) a wastewater engineer – technical support for ongoing engineering related to Core Area conveyance and treatment system processes
    - 2) a GIS/drafting technician – technical support for ongoing wastewater design and system information management

These FTEs will support ongoing (Integrated Water Services) core sewer engineering associated with the expansion of the system at McLoughlin Point, upgrades of the conveyance system, and related ancillary works. These positions will be funded through requisition.

**Key Performance Indicators:** *(linked to section 4 of the detailed service plan)*

Additional LWMP related key performance indicators can be found in the divisional service plans for Infrastructure Operations, Facilities Management & Engineering Services, and Environmental Protection.

Indicator Name	2017 Planned	2017 Projected	2018 Planned
<p><b>Service Goal: Provide specialized information and technical support.</b></p> <ul style="list-style-type: none"> <li>• Percentage of sewer odour monitoring assessment stations monitored and reported on annually</li> </ul>	Monitor and report on 90% of sewer odour monitoring assessment stations annually	Monitor and report on 90% of sewer odour monitoring assessment stations annually	Monitor and report on 90% of sewer odour monitoring assessment stations annually

<p><b>Service Goal: Maintain regulatory compliance monitoring activities for government agencies, member municipalities or other stakeholders</b></p> <ul style="list-style-type: none"> <li>Percentage of operational and compliance samples (outfall, stormwater, etc.) collected, analyzed and reported on annually</li> <li>Percentage of businesses in compliance with Sewer Use Bylaw Requirements*</li> </ul>	<p>Collect, analyze and report on 100% of samples collected annually</p> <p>90% of inspected businesses compliant with bylaw</p>	<p>Collect, analyze and report on 100% of samples collected annually</p> <p>&gt;90% of inspected businesses compliant with bylaw</p>	<p>Collect, analyze and report on 100% of samples collected annually</p> <p>90% of inspected businesses compliant with bylaw</p>
<p><b>Service Goal: Maintain assessment requirements for government agencies, member municipalities or other stakeholders</b></p> <ul style="list-style-type: none"> <li>Percentage of all high-rated stormwater discharges investigated annually</li> <li>Decrease or maintain priority contaminant loadings to the core area marine environment on results of 3-5 year trend assessment cycles</li> </ul>	<p>Investigate 80% of all high-rated stormwater discharges annually</p> <p>Decrease or maintain priority contaminant loadings to the core area marine environment</p>	<p>Investigate 80% of all high-rated stormwater discharges annually</p> <p>Decrease in most priority contaminant loadings over the 2012-2015 time period</p>	<p>Investigate 80% of all high-rated stormwater discharges annually</p> <p>Decrease or maintain priority contaminant loadings to the core area marine environment</p>
<p><b>Service Goal: Increase community and municipal engagement opportunities</b></p> <ul style="list-style-type: none"> <li>Number of community outreach events the CRD participates in and/or supports annually*</li> <li>Number of volunteer hours leveraged in restoration or stewardship activities</li> </ul>	<p>Participate in or support 25 community outreach events*</p> <p>Leverage 300 volunteer hours in restoration or stewardship annually</p>	<p>Participate in or support 17 community outreach events*</p> <p>Leverage 300 volunteer hours in restoration or stewardship annually</p>	<p>Participate in or support 25 community outreach events*</p> <p>Leverage 300 volunteer hours in restoration or stewardship annually</p>

<ul style="list-style-type: none"> <li>Increased participation in Onsite Wastewater Management workshops over 2015 levels</li> </ul>	Increase participation by 50% at Onsite workshops	Increase participation by 100% at Onsite workshops	Increase participation by 50% at Onsite workshops
<p><b>Service Goal: Ensure preparation, management and implementation of liquid waste management plan</b></p> <ul style="list-style-type: none"> <li>I&amp;I Management Plan</li> <li>LWMP Management</li> </ul>	<p>Prepare and submit Core Area I&amp;I Management Plan Five Year Update to CALWM Committee</p> <p>Support Core Area Wastewater Treatment Project LWMP requirements</p>	<p>Five-year update to be submitted to the CALWM Committee. Develop educational materials for I&amp;I reduction.</p> <p>Support Core Area Wastewater Treatment Project LWMP requirements</p>	<p>Distribute/promote educational materials and introduce a GIS pilot project to identify historical semi-combined inflow sources.</p> <p>Develop a plan to consolidate, review and audit the Core Area LWMP</p>
<p><b>Service Goal: Maintain high quality wastewater infrastructure.</b></p> <p>Maintenance: Planned Maintenance Completed</p>	94%	92%	96%

\*Corporate indicator – multiple divisions/programs may contribute to this measure.

## Contact

Name: Glenn Harris  
 Title: Senior Manager, Environmental Protection  
 Contact information: 250.360.3090

# Service Plan for Core Area Liquid Waste Management Plan Service

2016-2019

(2018)

~~October 2015~~



Capital Regional District

~~Date submitted:~~ November 8, 2017~~August 28, 2017~~

Capital Regional District  
Core Area Liquid Waste Service  
470 Island Highway, Victoria, BC  
T: 250.474.9600 [www.crd.bc.ca](http://www.crd.bc.ca)



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# 1 Overview

## 1.1 Scope

The Capital Regional District (CRD) provides wastewater management to residential, commercial, industrial and institutional customers, equivalent to a population of approximately 330,000 persons distributed throughout the Core Area communities. These communities include the cities of ~~Victoria, Langford and Colwood, the districts of Oak Bay and Saanich, the Township of Esquimalt, the Town of View Royal and the Songhees and Esquimalt First Nations communities~~ Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria and View Royal, and the Songhees and Esquimalt First Nations. In 2006, the CRD commenced the planning for the expansion and upgrading of the wastewater management system with the principal goal of moving from the existing preliminary level of treatment to secondary-tertiary treatment.

The municipalities of Esquimalt, Oak Bay and Victoria are fully served by sewers. The majority of properties in View Royal have sewers but a few still remain outside of the service area. A large, predominantly rural area of Saanich is outside of the sewerage service area. Increasing areas of Colwood and Langford are served by sewers, with plans for further expansion. In the long term, both these municipalities are expected to be fully served by sewers.

Properties not served by sewers utilize onsite septic systems or small treatments plants to provide wastewater treatment. These onsite systems primarily rely on tile fields or other distribution methods for ground disposal of treated effluent.

The Core Area Liquid Waste Management Plan Service, as a whole, is delivered and supported by a number of CRD services and programs delivered by various CRD departments and divisions. The main service and program areas are described below in Section 2.

## 1.2 Primary Contacts

### Core Area Wastewater Planning, Regulatory, Scientific and Technical Programs

**Name:** Larisa Hutcheson

**Title:** General Manager, Parks ~~and~~ Environmental Services

**Contact Information:** 250.360.3085, [lhutcheson@crd.bc.ca](mailto:lhutcheson@crd.bc.ca)

### Core Area Wastewater Conveyance System Operations and Engineering

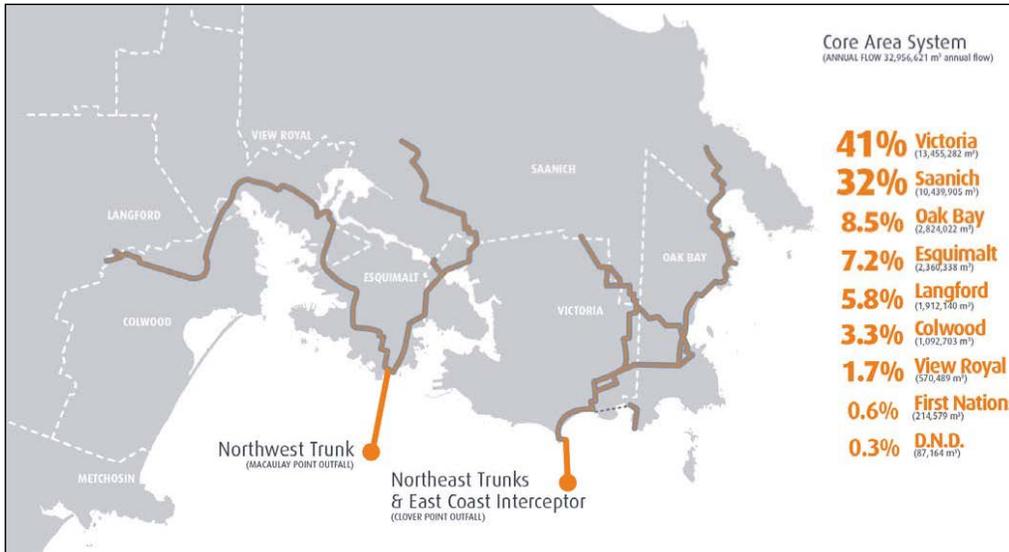
**Name:** Ted Robbins

**Title:** General Manager, Integrated Water Services

**Contact Information:** 250.360.3061, [trobbs@crd.bc.ca](mailto:trobbs@crd.bc.ca)

## 2 Services & Programs

### 2.1 Regional Trunk System Overview\*



\*2014 Actual Flows

### 2.2 Conveyance System Operations & Engineering

The services provided under this function include the operation, maintenance, engineering and capital project delivery for the Core Area Wastewater System, including wastewater collection, conveyance, screening and disposal through the ocean outfalls. The conveyance system is primarily composed of the four trunks:

**North West Trunk** - ThisThe North West Trunk sewer system includes the Macaulay Point pump station and outfall, as well as the Marigold, Craigflower and Lang Cove pump stations, and interconnecting trunk sewer main infrastructure.

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Operating costs are recovered by requisition to all participating members based on member percentage of total sewage input. Costs for the North West Trunk are shared by Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria and View Royal, and the Songhees and Esquimalt First NationsSaanich, Victoria, Esquimalt, View Royal, Colwood, Langford, Songhees First Nation and Esquimalt First Nation under a separate agreements.

**North East Trunk – Clover** - The North East Trunk Clover This sewer system includes the Clover Point pump station and outfall, as well as the Harling Point pump station and interconnecting trunk sewer main infrastructure.

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Operating costs are recovered by requisition to all participating municipalities based on each participant's percentage of total sewage input. Costs for the North East Trunk Clover are shared by Victoria, Saanich and Oak Bay, Saanich and Victoria.

~~Northe East Trunk – Bowker~~ - ~~The North East Trunk Bowker~~ This sewer system includes the Trent pump station and interconnecting trunk sewer main infrastructure.

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Operating costs are recovered by requisition to all participating municipalities based on each participant's percentage of total sewage input. Costs for the ~~Northe East Trunk Bowker~~ are shared by ~~Victoria, Saanich and~~ Oak Bay, ~~Saanich and~~ Victoria.

~~East Coast Interceptor~~ - ~~The East Coast Interceptor Trunk~~ This sewer system includes seven pump stations, the largest being the Currie Road pump station in Oak Bay and the Penrhyn pump station in Saanich East, as well as the interconnecting trunk sewer main infrastructure. The ~~East Coast Interceptor~~ conveys sewer flows to the ~~Northe East Trunk~~ Clover for eventual discharge at Clover Point.

Operating costs are recovered by requisition to all participating municipalities based on each participant's percentage of total sewage input. Costs for the ~~East Coast Interceptor~~ are shared by ~~Victoria, Saanich and~~ Oak Bay, ~~Saanich and~~ Victoria.

~~These services are delivered by the Infrastructure Operations Division and the Infrastructure Engineering Division, both under the Integrated Water Services Department. The Core Area Liquid Waste Management Plan provides the context and content for delivering wastewater services in the core area. There are several chapters in the plan which relate to specific services delivered by the CRD.~~

Core Area Liquid Waste Management Plan (CALWMP) - The CRD completed a Liquid Waste Management Plan in July 2000 to serve the municipalities of Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria, View Royal, and the Songhees and Esquimalt Nations. The plan provides a strategy for managing liquid wastes for the next 25 years, and was approved by the Minister of Environment in March 2003. Since that time, the Plan has had ~~eleven~~ 12 amendments, though the twelfth amendment has not yet been approved by the BC Ministry of Environment. Every 3-5, the CALWMP is consolidated to include amendments to that date; consolidation was last done in 2011. Over the next 1-2 years, staff plan to consolidate the CALWMP, up to and including Amendment No. 12, review and audit the objectives and commitments, and revise the CALWMP with provincial, municipal and stakeholder input. Staff are also working to ensure that all conditions imposed by the BC Ministry of Environment, when CALWMP amendments were conditionally approved, have been met. This program component will also support the development of the regional Integrated Resource Management plan, through cost-sharing with the Environmental Resource Management division.

## 2.3 Planning, Regulatory, Scientific & Technical Support Programs

The services provided under this function include the planning for and administration of the Core Area Liquid Waste Management Plan (CALWMP) and Treatment Program, and the programs that fulfill the commitments made under the CALWMP, including the ~~following programs: Infiltration and Inflow & Infiltration Management Program, the Wastewater and & Marine Environment Program, the Regional Source Control Program, the Stormwater Quality Management Program, Integrated Watershed Management, the Harbours Environmental Action Program, the On-site Septic System Program, and Management of Trucked Liquid Waste Management and Corrosion & Odour Control.~~ These services and programs are delivered by technical and scientific staff in the ~~Environmental Planning Facilities Management & Engineering Services~~ Division, ~~the Environmental Partnerships Division~~, and the Environmental Protection Division.

~~Core Area Liquid Waste Management Plan (CALWMP)~~ - The CRD completed a Liquid Waste Management Plan in July 2000 to serve the municipalities of Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria, View Royal, and the

[Service Plan for Core Area Liquid Waste Management Plan Service](#)

3 | Page

~~Songhees and Esquimalt Nations. The plan provides a strategy for managing liquid wastes for the next 25 years, and was approved by the Minister of Environment in March 2003. Since that time, the Plan has had eleven amendments.~~

~~**Infiltration and Inflow & Infiltration Management Program (I&I)** - Infiltration and inflow (I&I) and infiltration refers to rainwater and groundwater that enters the sanitary sewer. A certain amount of I&I inflow and infiltration is unavoidable and is accounted for in routine sewer design. However, when I&I exceeds design allowances, sewer capacity is consumed and may result in overflows, risks to health, damage to the environment and increased conveyance costs. The purpose of the program is to reduce the amount of rainwater and groundwater entering the sanitary sewer system when it is cost-effective to do so. Reduction of I&I inflow and infiltration in the system lowers the risk of sanitary sewer overflows and can decrease the costs of conveying and treating wastewater. This program works closely with municipalities to identify and prioritize problem areas in the conveyance system.~~

~~**Wastewater and Marine Environment Program (WMEP)** - The Wastewater and Marine Program This program provides regulatory compliance monitoring and scientific assessment services on behalf of Integrated Water Services to assess to identify the potential effects of the outfalls on the marine environment and human health and the marine environment. The program includes assessment of wastewater flows, surface water and water column quality, the seafloor and organisms living near the outfalls.~~

~~The program includes assessment of wastewater flows, surface water and water column quality and assessment of the seafloor and organisms living near the outfall. The results are shared internally to guide the efforts of the Regional Source Control Program and to inform Infrastructure Operations staff on outfall functionality. The Wastewater and Marine Program staff works closely with regulatory agencies to ensure compliance and provides scientific assessment and annual reporting for the general public. The monitoring and analysis follows a rigorous quality assurance and quality control regime, in the field and in the laboratory, that ensures the quality of the data collected data.~~

~~**Regional Source Control Program** - The Regional Source Control This program is a pollution prevention initiative aimed at reducing reduces the amount of contaminants that industry, businesses, institutions and households discharge into the district's sanitary sewer systems. This pollution prevention The program has been active region-wide since the adoption of the CRD's Sewer Use Bylaw in August 1994. Source Control is recognized as a cost-effective way of reducing the impacts of wastewater on the environment.~~

~~**Stormwater Quality Management Integrated Watershed Management Program Program (IWMP)** - The Stormwater, Harbours and Watersheds Program (SHWP) This program monitors and investigates stormwater quality at all discharges in the core area. Information and data are provided to plans, promotes and coordinates the management of stormwater quality in the LWMP area, in consultation with the municipalities, the Department of National Defence and First Nations municipal staff to inform their municipal infrastructure plans. The program also promotes best practices for stormwater management.~~

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~~**Harbours Environmental Action Program (HEAP)** - This program The Harbours Environmental Action Program (HEAP) coordinates environmental protection and improvement efforts in Victoria and Esquimalt harbours, Portage Inlet, the Gorge Waterway and Esquimalt Lagoon. HEAP works with community groups, municipal partners and other agencies to achieve the following goals: decrease contaminant inputs, protect and enhance habitat quality, set environmental quality objectives, achieve environmentally protective land uses, and monitor environmental quality.~~

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~~**On-Site Septic System Program (Onsite)** - Septic systems, also known as on-site sewage systems, are an effective treatment option when designed, installed and maintained properly. This program provides administration and oversight of maintenance requirements for onsite septic systems in Colwood, Langford, Saanich and View Royal. Educational programs are also provided for system owners. Lack of maintenance, such as regular pump-outs, is the number one cause of system failure in the CRD. The program provides administration and implementation of CRD Bylaw 3479 which outlines maintenance requirements for on-site septic systems. The bylaw requires owners with Type 1 systems (septic tanks) to have pumped out their system every five years.~~

~~Owners of Type 2 or Type 3 systems (often package treatment plants) are required to maintain their system according to the maintenance plan for the system, and ensure it is maintained by an Authorized Person at least once per calendar year.~~

**Management of Trucked Liquid Waste Management Program (TLW)** - Many industrial, commercial and institutional operations produce liquid waste that is not suitable for discharge to the sanitary sewer or storm water system. These wastes are generated at operations such as: restaurants (grease interceptors), car washes (vehicle wash interceptors), automotive repair shops (oil water separators), parking lots (catch basins / stormwater rehabilitation units), dry cleaners (PERC from dry cleaning machines), photo processors (fixer), and laboratories (various chemicals). These by-products are considered ~~to be~~ high-strength liquid wastes or obstructive wastes and it is ~~therefore~~ illegal to discharge these wastes to the sanitary sewer system or the storm drain system. Proper disposal of these wastes requires a licensed hauler to pick up the waste, and transport it to a proper disposal facility.

**Corrosion & Odour Control Program** – This program identifies locations where sewer corrosion is a concern and where odours may cause a public nuisance. Staff also respond to odour nuisance complaints submitted by the public.

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## 3 Core Area Wastewater Treatment Program

### 3.1 Project Overview

The municipalities of ~~Colwood, Esquimalt, Langford, Oak Bay, Saanich, Victoria and View Royal~~ ~~Victoria, Saanich, Oak Bay, Esquimalt, View Royal, Colwood and Langford~~ collectively are participants of the Core Area Liquid Waste Management ~~Plan~~ ~~Service~~ which is managed and operated by the ~~Capital Regional District (CRD) in accordance with the Core Area Liquid Waste Management Plan (CALWMP)~~.

~~CALWMP is a 25-year plan under the Environmental Management Act which outlines CRD's wastewater management strategies, including wastewater treatment.~~

The CALWMP is the main planning document for the core area's wastewater treatment program. The current ~~plan~~ ~~plan (CALWMP Amendment No. 11)~~ was developed by the ~~CAWT~~ ~~Core Area Wastewater Treatment~~ Project Board and approved by the BC Minister of Environment on September 30, 2016. ~~The District of Oak Bay has also developed a plan to eliminate the 2 combined sewer overflow points in the core area conveyance system (CALWMP Amendment No. 12), but this plan has not yet been approved by the BC Ministry of Environment.~~

The ~~currently~~ approved plan ~~(CALWMP Amendment No. 11)~~ consists of a centralized wastewater treatment plant ~~at McLoughlin Point, a residual treatment facility at Hartland Landfill and a~~, ~~a resource recovery centre to process residual solids and a~~ conveyance system of pump stations and pipes throughout the core area to convey wastewater to the ~~respective~~ treatment facilities. ~~This plan is being implemented by the Core Area Wastewater Treatment Project Team.~~

~~In addition, the CRD is investigating Integrated Resource Management opportunities. This investigation will determine how liquid waste residuals and solid waste can be best managed to generate beneficial reuse opportunities.~~

## 4 Governance & Financial Information

The CRD has the authority to collect, convey, treat and dispose of sewage as detailed under the service establishment bylaw (CRD Bylaw 2312).

**Core Area Liquid Waste Management Committee** – The CRD Core Area Liquid Waste Management Committee is a standing committee established by the CRD Board to oversee and make recommendations to the Board regarding the

[Service Plan for Core Area Liquid Waste Management Plan Service](#)

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~~administration and regulatory reporting for the CALWMP, Core Area Liquid Waste Management Plan. The mandate of the committee is to oversee and make recommendations to the Board regarding the administration and regulatory reporting for the Core Area LWMP, core area trunk sewers and sewage disposal systems, and opportunities for resource recovery. The CAWT Core Area Wastewater Treatment Project Board was established by the CRD Board in May of 2016 and has been delegated authority to administer all aspects of the management of the Core Area Wastewater Treatment Project, including implementation of the project by the project team.~~

## 4.1 ~~4.1~~ Financial Overview

Trunk Sewers and Sewage disposal was the second service established for the CRD. The service was established by Letters Patent in 1967. The service was established with flexibility to incorporate service expansion and fairness in costing for both capital and operating costs. During the 1990s, as provincial legislation changed, the Core Area and West Shore municipalities and portions of the Juan de Fuca Electoral Area (Songhees and Esquimalt Nation lands) were established as a Liquid Waste Management Planning Area for those participants (municipality or nation).

### Cost Sharing/Apportionment

#### Operating Costs

Annual Operating Costs – Annual cost sharing for the operation of the four trunk systems (Northwest Trunk, Northeast Trunk (Bowker), Northeast Trunk (Clover), East Coast Interceptor) is based on annual flows from the prior year for each system. There are various flow meters throughout the systems that allow the CRD to determine annual flow volumes received from each participant. The operating costs for each system are then divided amongst the participants based on those flows and then requisitioned/invoiced on an annual basis.

Operating Maintenance Reserves – The trunk systems carry maintenance reserve funds for operating expenses anticipated on a cyclical basis and for minor equipment replacement. Contributions to this reserve fund are made annually through the trunk operating budgets based on the flow volumes from each participant. The funds are drawn down as required for works in each trunk system.

Apportioning annual operating costs to each participant based on annual flow on a 'trunk-by-trunk' basis has been the historical method and is not proposed to change with the implementation of the new treatment project works and facilities, except with the addition of the new works and facilities. It is proposed to begin establishing the operating budget for the new treatment project works and facilities in 2019.

#### Capital Costs

Annual Capital Projects – Annual capital projects, or 'minor' capital, across the four trunk systems has historically been funded through a combination of debt, grants, capital reserve funds and annual requisition. The project costs have been apportioned on the basis of design capacity benefit that each participant derives from each component of the system. Where the benefit is not an increase in capacity, the design capacity benefit is based on the existing maximum allocated capacity for each participant and for each facility.

Capital Reserves – Since capital funds are apportioned by participant, the capital reserves are segregated by participant and drawn down by participant based on the design capacity benefit of specific projects. In light of various new capital investment through the Core Area Wastewater Treatment Project, including the plant, piping infrastructure, outfalls, pumping stations, etc., we will reassess the impact and benefits of normalizing all capital costs through a design capacity benefit model, including minor capital, reserve funds, etc.

Core Area Wastewater Treatment Project – In 2013, the CRD commenced an annual requisition ramp-up to reach an annual funding level that would cover the new treatment program annual operating and capital costs.

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The annual funding has been providing working capital, funding new debt servicing costs for the project, and funding some project related capital costs directly which will reduce the longer term and ongoing debt servicing costs for the project.

Trunk sSewers and sSewage dDisposal was the second service established for the CRD. This service was established by Letters Patent in 1967. The Service was established with flexibility to incorporate service expansion and fairness in costing for both eCapital and oOperating cCosts. During the 1990s, as provincial legislation changed, the Core Area and Wests Shore municipalities and portions of the Juan de Fuca Electoral Area (Songhees and Esquimalt First Nations lands) were established as a Liquid Waste Management Planning area for those participants.

Annual Operating cost sharing is calculated on prior year flows, whereas Capital Project cost sharing is calculated on future Design Capacity Benefit.

Annual Cost Sgharing for the operation of various wWastewater sSystems (Northw West and Western Communities Trunk, Bowker System, East Coast Interceptor, etc.) is based on the prior year annual flows from the prior year for each wWastewater sSystem. There are various meters throughout the system that allow engineering staff to calculate the annual volumes of flow received from each participant (municipality/first nation), by system and sub system. The costs for each system are then divided amongst the participants based on those flows and then requisitioned/invoiced on an annual basis.

Capital project cost sharing is based on future DDesign cCapacity bBenefit. Expected capacity for each participant is calculated and costs are shared on that basis. Funding for these projects comes from a combination of dDebt, gGrants, eCapital rReserve and aAnnual rRequisition.

Maintenance Reserve — There is a maintenance reserve for operations, funded by system/sub system, and drawn from by system/sub system — thus preserving the operating cost sharing. Any operating surplus is transferred to the Capital Reserve. Since the cost sharing for eCapital projects is different from oOperating, when funds go into the Capital Reserve, they are segregated by participant contribution, not by system.

Capital project cost sharing is based on future Design Capacity Benefit. Expected capacity for each participant is calculated and costs are shared on that basis. Funding for these projects comes from a combination of Debt, Grants, Capital Reserve and Annual Requisition.

Design Capacity Benefit — Capital costs and net annual debt costs for the four 4 trunks and facilities are apportioned on the basis of the design capacity benefit that each participating area derives from each component of the system. Where the benefit is not an increase in capacity, the design capacity benefit is based on the existing maximum allocated capacity for each participant and for each facility.

Capital Reserve — Since funds are segregated by participant, capital project funding is drawn from individual participant envelopes, based on design capacity benefit from the infrastructure project. Up until 2013, there were no budgeted annual contributions to the Capital Reserve to fund eventual sSecondary (or higher) waste water treatment infrastructure. In 2013, an annual contribution program was commenced started to provide funding towards the capital cost of NEW new infrastructure.

Some Funds from these segregated reserves have also been were used for consulting services to support planning and public engagement processes for the Eastside and Westside Select Committees, according to municipally agreed upon cost sharing.

**Core Area Wastewater Treatment Program** – In 2013, the committee commenced an annual ramp up of participant costs, to smooth spread the increase in eventual annual costs over a number of years. The annual funding (\$20 million in 2017 and \$25 million in 2018) 2016 amount \$15 million) is providing working capital, funding any new annual debt servicing costs for the project, and down payment on total capital costs, which will reduce the longer term on going debt servicing costs for the project.

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**Liquid Waste Management Plan** – This budget is funded on the current design capacity benefit flows for the new Core Area Wastewater Treatment Program.

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Appendix B – Additional FTE's

**Financial Services Project Support:**

- Description: There will be added volume and complexity created by the Core Area Wastewater Treatment Project including invoice and payment volumes, added internal controls, and grant funding complexity.
- Impact: Two 4-year term positions are required to manage the distributed workload across the finance department in various areas including financial analysis, accounts payable, payroll, and required grant reporting.
- Funding: These term positions will be funded by an allocation from CAWTP and will have no impact on other services or requisition.

**Infrastructure Engineering and Operations (Integrated Water Services)CAWTP:**

- Description: The design and construction of the infrastructure related to CAWTP began in 2017 and will continue through 2020. Beginning in 2019, the new infrastructure will be commissioned and integrate into ongoing system engineering and operations functions.
- Impact: Operations – One FTE is required, a Supervisor of Operations for the wastewater treatment plant to proactively engage in the transition from the project to ongoing operations.
- Funding: This FTE will be funded from committed funds from the CAWTP for 2018 with funding transitioning to a new CAWTP operating budget being developed for 2019.
- Impact: Engineering –
  - Core Area Wastewater Engineering – 2 FTEs are requested; these FTEs will support ongoing (Integrated Water Services) core sewer engineering associated with the expansion of the system at McLoughlin Point, upgrades of the conveyance system, and related ancillary works
    - a wastewater engineer – technical support for on-going engineering related to Core Area conveyance and treatment system processes
    - a GIS/drafting technician – technical support for on-going wastewater design and system information management
- Funding: These positions will be funded through requisition beginning in 2018.

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Making a difference...together

## 2018 Service Plans Review and Approval

For Committee of the Whole, November 29, 2017

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### APPENDIX F

#### Service Plans Reviewed by the Environmental Services Committee

##### TABLE OF CONTENTS

##### Service Plan Summaries

1. Environmental Resource Management
2. Environmental Protection
3. Facilities Management and Engineering Services

##### Service Plans

1. Environmental Resource Management
2. Environmental Protection
3. Facilities Management and Engineering Services

<p><b>SERVICE NAME:</b> Environmental Resource Management</p>
<p><b>Changes in Assumptions, Trends, and Other Issues since 2017:</b> <i>(linked to section 1.3 and 1.4 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• Kitchen scraps tonnages being received at the Hartland transfer station are expected to decrease from 7,500 to 6,500 tonnes/year in 2018. This is due to the increase in the kitchen scraps tipping fee that was put in place in 2017 to fully recover costs, which resulted in some haulers taking their kitchen scraps to other lower-cost facilities.</li> <li>• Projected general refuse tonnages being received at Hartland landfill in 2018 have been increased from 110,000 to 135,000 tonnes/year. The increased tonnage is due to strong construction activity within the region and the Highwest landfill only taking waste from a few selective customers hauling in waste from outside the region.</li> </ul>
<p><b>Overall 2017 Budget Performance:</b> <i>(linked to budget forecast to year end)</i></p> <ul style="list-style-type: none"> <li>• There is a favourable capital variance of \$10,000,000, resulting from a delay in undertaking the gas utilization capital project. The project business case validation and Board direction is anticipated by the end of 2017.</li> <li>• There is a \$3,000,000 favorable revenue variance in Landfilling Services due to higher than anticipated Hartland waste volumes from strong local construction activity and the limited private waste disposal availability at Highwest landfill in the District of Highlands. Delays to Solid Waste planning and programming activities resulted in a favourable expenditure variance of \$200,000 in Diversion Services.</li> <li>• Any annual positive Environmental Resource Management (ERM) budget variance is transferred into the environmental sustainability reserve fund. The current balance of the Environmental Sustainability reserve fund is \$17.4M.</li> </ul>
<p><b>Update to Division Initiatives:</b> <i>(linked to section 3 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• The revision of the Solid Waste Management Plan (SWMP) began in 2012 but was put on hold in 2015 at the Board’s direction, in order to allow Integrated Resource Management (IRM) opportunities to be fully investigated. The completion of the SWMP revision has been deferred to 2018 while this process continues.</li> <li>• ERM continues to support the Integrated Resource Management Project and implementation of the Core Area Wastewater Residuals Treatment Facility Project at the Hartland North site.</li> <li>• Environmental Protection to submit federal Abandoned Boat Program (ABP) applications for a total of \$1,050,000: \$50,000 in abandoned Boat Education and Awareness funding (with CRD contribution of \$16,667) and \$1,000,000 in Abandoned Boat Assessment and Removals funding (with CRD contribution of \$333,333) in support of a local multi-year ABP initiative starting in 2018; and CRD contributions to be funded by the ERM Sustainability Reserve</li> </ul>
<p><b>Service Adjustments and Staffing Levels:</b> <i>(linked to section 2 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• The likely advancement of Integrated Resource Management (IRM) over the next several years will require the addition of two (2) four-year term positions, a Project Director and Deputy Project Director, to manage the development and procurement of this regionally-significant project. The positions will be funded through the IRM capital project budget from 2018 through 2021.</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Manage solid waste in an environmentally, socially and economically responsible manner</b> <ul style="list-style-type: none"> <li>• SWMP adoption</li> <li>• Annual Waste disposal per capita (&lt;369kg)</li> </ul>	<p>Complete</p> <p>338</p>	<p>Delayed</p> <p>350</p>	<p>In Progress</p> <p>350</p>
<b>Service Goal: Continue to optimize landfill operations</b> <ul style="list-style-type: none"> <li>• Landfill garbage to cover ratio (5:1 max)</li> <li>• Compaction rate (&gt;850kg/m3)</li> </ul>	<p>&gt;5:1</p> <p>&gt;850</p>	<p>&gt;5:1</p> <p>&gt;850</p>	<p>&gt;5:1</p> <p>&gt;850</p>
<b>Service Goal: Optimize Landfill gas recovery at Hartland</b> <ul style="list-style-type: none"> <li>• Landfill gas capture (&gt;75%)</li> </ul>	<p>75%</p>	<p>70%</p>	<p>75%</p>
<b>Service Goal: Fee Revenue as % of Total Costs</b>	<p>100%</p>	<p>114%</p>	<p>100%</p>

## Contact

Name: Russ Smith

Title: Senior Manager, Environmental Resource Management

Contact Information: 250.360.3080

**SERVICE NAME:** Environmental Protection

**Changes in Assumptions, Trends, and Other Issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- Environmental Partnership and Environmental Protection programs and staff are consolidated into one division for 2018.
- With an environmental management support role across the organization, the Division's focus will be on enhanced integration of (i) environmental regulatory oversight (sanitary sewers, stormwater sewers, onsite systems), (ii) drinking water quality protection programs (water quality monitoring, demand management, cross-connection control), (iii) consolidation of all environmental monitoring and reporting, as well as (iv) integration of communication initiatives (planning, education, outreach, community engagement and program delivery) across the Parks & Environmental Services department.
- The Division continues to provide environmental oversight for the Hartland landfill, as well as several smaller contaminant reduction programs (e.g., contaminated sites, trucked liquid waste, controlled waste, septage and odour)
- Strategic planning initiatives (e.g., Regional Drinking Water Strategic Plan update, Regional Climate Action Strategy, Integrated Resource Management, Emergency Planning and major capital projects (e.g., core area wastewater treatment plant, drinking watershed dam upgrades, drinking water treatment plant) will influence modifications to ongoing work plans.
- New federal funding will allow technical staff to support abandoned boat grant applications.
- There are significant regulatory changes across several key service areas (e.g., Contaminated Sites Regulation, Drinking Water Protection Regulation, federal/provincial wastewater regulation harmonization, Municipal Solid Waste Landfill Criteria) that will impact the monitoring and reporting programs.
- New financial reporting requirements and expanded omnibus changes to the core legislation will lead to increased oversight with contaminated sites liability associated with asset management.
- Increased expectations and associated resources for climate action are a significant priority across all levels of government, which continue to see more focus on emission reduction and adaptation planning at the local government level. Funding for new programs (e.g., BC Energy Step Code, sea level rise planning) are being unveiled for local government involvement on an ongoing basis.

**Overall 2017 Budget Performance:** (linked to budget forecast to year end)

- ES Admin - Estimated net favourable variance of \$236,000 (3.5%) due to one-time cost savings from labour usage (\$125,000) and better than expected labour recovery (\$111,000) year-to-date. This variance will be returned to program budgets or carried forward to reduce labour charge-out rate in 2016.
- Source Control - There is a \$43,000 (2.8%) favourable variance due largely to lower than expected labour expenses. This variance will be transferred to the operating reserve to fund 2018-2022 capital projects. The current balance of the operating reserve is \$357,000.
- LWMP Core & Saan Pen - There is a \$473,000 (53%) favourable variance due largely to LWMP changes in 2017. This variance will be transferred to the operating reserve to fund 2018-2022 projects. The current balance of the operating reserve is \$811,000.
- LWMP Onsite - There is a \$16,500 (7.2%) favourable variance due largely to unanticipated staff vacancies. This variance will be transferred to the operating reserve to fund 2018-2022 projects. The current balance of the operating reserve is \$73,000.

**Update to Division Initiatives:** *(linked to section 3 of the detailed service plan)*

- JdeF Distribution System – Metal (lead) Investigation of potential lead concentrations in JdeF drinking water distribution system. \$15K
- Goldstream Reservoir Water Quality Study – investigate annual water quality conditions for secondary drinking water source potential. \$5K
- Capital Projects Water Quality Study – develop pre- and post-monitoring study for significant capital projects in the drinking watershed. \$5K
- Supply Management Modelling Study - model development to investigate climate projections on near-term drinking water supply. \$75K
- Paperless Data Management – pilot study to integrate direct lab data entry to drinking water quality database. \$15K
- Abandoned Boat Program (ABP) grant applications for up to a total of \$1,050,000 (amount pending grant approval): \$50,000 in abandoned Boat Education and Awareness funding (with CRD contribution of \$16,667) and \$1,000,000 in Abandoned Boat Assessment and Removals funding (with CRD contribution of \$333,333) in support of a local multi-year ABP initiative starting in 2018; and CRD contributions to be funded by the ERM Sustainability Reserve

**Service Adjustments & Staffing Levels:** *(linked to section 2 of the detailed service plan)*

- Demolition Waste Permit Technician. 0.5 FTE (ongoing) to address increased waste loads at landfill due to construction boom (to be funded by ERM operating budget).
- Contaminated Sites ESO. 0.6 FTE (ongoing) to address increased regulatory requirements for contaminated sites liability.
- Climate Action Program Assistant. 0.3 FTE (ongoing) to existing 0.7 FTE position to address implementation of Regional Community Climate Action Strategy.
- Ecosystem Biologist. 0.5 FTE (ongoing) to support regional coordination of invasive species management.
- Drinking Water Sampling Technician. 1.0 FTE (ongoing) to provide expanded municipal water sampling and analysis to achieve compliance with existing legislation.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Contribute to community and corporate climate action goals.</b></p> <ul style="list-style-type: none"> <li>Number and impact of projects and partnerships that demonstrate support for reduction in greenhouse gas (GHG) emissions and for increased climate resiliency*</li> </ul>	Support 25 external partnerships on regional climate action	Support 25 external partnerships on regional climate action	Support 25 external partnerships on regional climate action
<p><b>Service Goal: Provide specialized information and technical support.</b></p> <ul style="list-style-type: none"> <li>Number of environmental water quality sampling plans reviewed and updated*</li> <li>Achieve lab accreditation to ISO 17025</li> <li>Number of streams with continuous flows and/or water flows monitored annually (target 9 streams by 2019)</li> <li>Percentage of sewer odour monitoring assessment stations monitored and reported on annually</li> </ul>	<p>Review and update 8 WQ sampling plans</p> <p>Achieve lab accreditation to ISO 17025</p> <p>Provide continuous flow monitoring on 3 streams</p> <p>Monitor and report on 90% of sewer odour monitoring assessment stations annually</p>	<p>Review and update 8 WQ sampling plans</p> <p>Achieve lab accreditation to ISO 17025</p> <p>Provide continuous flow monitoring on 3 streams</p> <p>Monitor and report on 90% of sewer odour monitoring assessment stations annually</p>	<p>Implement 8 updated WQ sampling plans</p> <p>Expand scope of ISO 17025 lab accreditation</p> <p>Provide continuous flow monitoring on 6 streams</p> <p>Monitor and report on 90% of sewer odour monitoring assessment stations annually</p>
<p><b>Service Goal: Maintain regulatory compliance monitoring activities for government agencies, member municipalities or other stakeholders</b></p> <ul style="list-style-type: none"> <li>Percentage of sampling, analysis and reporting of in-house drinking water samples with turnaround within 5 business days.</li> <li>Percentage of operational and compliance samples (outfall,</li> </ul>	<p>Turnaround 95% of in-house drinking water samples with within 5 business days</p> <p>Collect, analyze and report on</p>	<p>Turnaround 95% of in-house drinking water samples with within 5 business days</p> <p>Collect, analyze and report on</p>	<p>Turnaround 95% of in-house drinking water samples with within 5 business days</p> <p>Collect, analyze and report on</p>

<p>stormwater, landfill) collected, analyzed and reported on annually</p> <ul style="list-style-type: none"> <li>• Number of landfill gas ambient, foundation and perimeter well monitoring activities annually</li> <li>• Percentage of businesses in compliance with Sewer Use Bylaw Requirements*</li> <li>• Percentage of compliance rate with bylaw for Type 1, 2 and 3 onsite systems</li> <li>• Drinking water compliance samples collected, analyzed and reported for municipalities.</li> </ul>	<p>100% of samples collected annually</p> <p>Conduct a minimum of 4 landfill gas monitoring activities annually</p> <p>90% of inspected businesses compliant with bylaw</p> <p>Achieve 80% or better onsite system compliance rate</p> <p>Maximum achievable within current capacity</p>	<p>100% of samples collected annually</p> <p>Conduct a minimum of 4 landfill gas monitoring activities annually</p> <p>&gt;90% of inspected businesses compliant with bylaw</p> <p>Achieve 80% or better onsite system compliance rate</p> <p>Maximum achievable within current capacity (not fully compliant with Drinking Water Protection Regulation - DWPR)</p>	<p>100% of samples collected annually</p> <p>Conduct a minimum of 4 landfill gas monitoring activities annually</p> <p>90% of inspected businesses compliant with bylaw</p> <p>Achieve 80% or better onsite system compliance rate</p> <p>Full compliance with DWPR</p>
<p><b>Service Goal: Maintain assessment requirements for government agencies, member municipalities or other stakeholders</b></p> <ul style="list-style-type: none"> <li>• Percentage of sludge assessment samples collected and reported</li> <li>• Percentage of all stormwater discharges sampled annually</li> <li>• Percentage of all high-rated stormwater discharges investigated annually</li> </ul>	<p>Collect and report on 90% of sludge assessment samples</p> <p>Sample 20% of all stormwater discharges annually</p> <p>Investigate 80% of all high-rated stormwater</p>	<p>Collect and report on 90% of sludge assessment samples</p> <p>Sample 20% of all stormwater discharges annually</p> <p>Investigate 80% of all high-rated stormwater</p>	<p>Collect and report on 90% of sludge assessment samples</p> <p>Sample 20% of all stormwater discharges annually</p> <p>Investigate 80% of all high-rated stormwater</p>

<ul style="list-style-type: none"> <li>• Number of days reduction of blue-green algae blooms compared to previous years at Elk/Beaver Lake</li> <li>• Percentage of businesses inspected annually as a part of Stormwater Source Control on Saanich Peninsula</li> <li>• Number of controlled waste audits conducted annually</li> <li>• Percentage of businesses (affected by Once-Through-Cooling prohibition) receiving informational letters</li> <li>• Percentage of all food service facilities inspected annually for compliance with Regional Source Control Bylaw</li> <li>• Decrease or maintain priority contaminant loadings to the core area marine environment on results of 3-5 year trend assessment cycles</li> <li>• Number of annual backflow incidents reported in Regional Water Supply</li> <li>• Number of cross-control audits conducted annually</li> </ul>	<p>discharges annually</p> <p>Plan to reduce the number of blue-green algae bloom days beginning 2018</p> <p>Inspect 15% of Saanich Peninsula businesses annually</p> <p>Conduct 12 or more controlled waste audits annually</p> <p>50% of affected businesses bylaw receiving information letter</p> <p>Inspect 33% of all food service facilities annually</p> <p>Decrease or maintain priority contaminant loadings to the core area marine environment</p> <p>Achieve 0 or no annual backflow incidents reported</p> <p>Conduct 900 or more cross-control audits annually</p>	<p>discharges annually</p> <p>Plan to reduce the number of blue-green algae bloom days beginning 2018</p> <p>Inspect 15% of Saanich Peninsula businesses annually</p> <p>Conduct 12 or more controlled waste audits annually</p> <p>50% of affected businesses receiving bylaw information letter</p> <p>Inspect 33% of all food service facilities annually</p> <p>Decrease in most priority contaminant loadings over the 2012-2015 time period</p> <p>Achieve 0 or no annual backflow incidents reported</p> <p>Conduct 900 or more cross-control audits annually</p>	<p>discharges annually</p> <p>Reduce the number of blue-green algae bloom days by 20% relative to previous year</p> <p>Inspect 15% of Saanich Peninsula businesses annually</p> <p>Conduct 12 or more controlled waste audits annually</p> <p>Remaining 50% of affected businesses receiving bylaw information letter</p> <p>Inspect 33% of all food service facilities annually</p> <p>Decrease or maintain priority contaminant loadings to the core area marine environment</p> <p>Achieve 0 or no annual backflow incidents reported</p> <p>Conduct 900 or more cross-control audits annually</p>
<p><b>Service Goal: Increase community and municipal engagement opportunities</b></p>			

<ul style="list-style-type: none"> <li>• Number of community outreach events the CRD participates in and/or supports annually*</li> <li>• Number of CRD educational workshops delivered or partnered on annually *</li> <li>• Number of stakeholders engaged through educational programming on biodiversity and ecological health issues *</li> <li>• Number of volunteer hours leveraged in restoration or stewardship activities</li> <li>• Increased participation in Onsite Wastewater Management workshops over 2015 levels</li> </ul>	<p>Participate in or support 25 community outreach events &amp; 15 water cart events annually*</p> <p>Deliver 24 water conservation, 6 Integrated Watershed Management Program (IWMP), and 5 other initiative workshops annually *</p> <p>Engage 9 stakeholders annually on biodiversity and ecological health issues *</p> <p>Leverage 300 volunteer hours in restoration or stewardship annually</p> <p>Increase participation by 50% at Onsite workshops</p>	<p>Participate in or support 17 community outreach events &amp; 10 water cart events annually*</p> <p>Deliver 24 water conservation, 6 IWMP, and 5 other initiative workshops annually *</p> <p>Engage 9 stakeholders annually on biodiversity and ecological health issues *</p> <p>Leverage 300 volunteer hours in restoration or stewardship annually</p> <p>Increase participation by 100% at Onsite workshops</p>	<p>Participate in or support 25 community outreach events &amp; 15 water cart events annually*</p> <p>Deliver 24 water conservation, 6 IWMP, and 5 other initiative workshops annually *</p> <p>Engage 9 stakeholders annually on biodiversity and ecological health issues *</p> <p>Leverage 300 volunteer hours in restoration or stewardship annually</p> <p>Increase participation by 50% at Onsite workshops</p>
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\*Corporate indicator – multiple divisions/programs may contribute to this measure.

## Contact

Name: Glenn Harris

Title: Senior Manager, Division

Contact information: 250.360.3090

**SERVICE NAME:** Facilities Management & Engineering Services

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- In 2017, the Facilities Management division was combined with the Engineering Services division resulting in both groups reporting to a single senior manager.
- The Engineering Services workload continues to increase with more capital upgrades being planned for Regional Parks and the Environmental Resource Management divisions. Over the last year, the Engineering Services group has been involved with 63 contracts/RFPs with a total value exceeding \$11 million.
- The enhanced focus on integrated resource management (IRM) offers an opportunity to provide technical support to the Integrated Resource Management (IRM) Advisory Committee and Board.
- Proposed capital project evaluations are being enhanced to consider risk factors, as well as climate change impacts and/or opportunities.
- Enhanced efforts are required with the older municipalities to help them achieve their goals of Inflow & Infiltration (I&I) reduction to meet the commitments in the liquid waste management plan.
- The division continues to support the Core Area Wastewater Treatment Project, in particular the Core Area Liquid Waste Management Plan Residuals Treatment Facility at Hartland.
- The lease agreement with Island Health for the Peninsula Health Unit is due to expire in August 2018.
- Overall Facilities costs are under pressure due to increasing utility and insurance costs, as well as higher maintenance costs due to aging buildings and the consideration of climate change throughout the decision-making process.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- 1.576 Engineering Services: There is an overall favourable variance of \$13,000 (0.6%) due mainly to decreased operating costs of \$59,000 (2.89%) and decreased revenue from internal recovery of \$47,000 (2.3%). This estimated variance will be returned back to CRD services.
- 1.105 Facility Management: There is an overall favourable variance of \$220,000 (12.4%) mainly due to the vacant position of the building coordinator and the retirement of the general manager. A surplus of \$125,000 will be carried forward to 2018 to fund the FM manager's position to reduce requisition. The estimated surplus of \$95,000 will be transferred to the equipment replacement fund to fund future equipment and vehicle pool replacement. The current ERF balance is \$223,000.
- 1.106 CRD Headquarters Facilities: There is an overall favourable variance of \$36,000 (2.8%), mainly related to lower electricity consumption due to the LED lighting upgrades expected to be completed this year. This variance will be transferred to capital reserve, with the current balance being \$6,000,000.
- 1.107 Corporate Satellite Facilities: There is an overall favourable variance of \$7,500 (3.8%) due to minor savings on various operating costs. This estimated variance will be returned back to Planning & Protective Services.
- 1.123 Family Court Building: There is an overall favourable variance of \$6,000 (2.8%), mainly due to the savings in utilities from mild weather. This variance will be transferred to capital reserve with the current balance of \$60,000.
- 1.226 Island Health Facilities: There is an overall favourable variance of \$29,600 (1.7%) mainly from the savings in natural gas and electricity due to mild weather and the lighting upgrades done this year for the Vancouver Health Unit and Esquimalt Health Unit. This estimated variance will be returned back to Island Health.

**Update to Division Initiatives:** *(linked to section 3 of the detailed service plan)***Core Services:**

- Additional focus to develop a plan to prepare CRD assets for future climate change impacts
- Additional focus to work with other divisions on greenhouse gas reporting following CARIP requirements
- Additional focus to support capital projects at Hartland in relation to IRM
- Evaluation of potential capital projects through the climate change lens
- Establish a system for tracking and reporting energy use at all CRD facilities
- Provide project management support to Regional Parks with dam and trestle evaluations

**Board Priorities: No changes****Service Adjustments and Staffing Levels:** *(linked to section 2 of the detailed service plan)*

- The Engineering Services group is leading dam safety evaluations for Regional Parks.
- The service model for the Facilities Management group is under review. Resources and service levels to be aligned with the model as determined.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Ensure preparation, management and implementation of liquid waste management plans</b>	Prepare and submit Core Area I&I Management Plan Five Year Update to CALWM Committee	Five-year update to be submitted to the CALWM Committee. Develop educational materials for I&I reduction.	Distribute/promote educational materials and introduce a GIS pilot project to identify historical semi-combined inflow sources.
<b>Service Goal: Provide specialized engineering and project management support to multiple divisions</b>	As required	New subject areas continue to emerge through projects originating in other departments	Continued support to other departments in evaluating and applying special technologies
<b>Service Goal: Contribute to corporate climate action goals</b>	Plan and carry out capital projects that result in GHG reductions	Majority of facility lighting projects complete	Determine remaining lighting projects and support ERM on Renewable Natural Gas project
<b>Service Goal: Monitor liability and property exposures</b>	Ongoing	Ongoing	Establish an inventory of property liabilities and exposures, and develop strategies to address accordingly
<b>Service Goal: Maintain buildings and facilities and ensure compliance with relevant regulations</b>	Ongoing	Carry out projects at Island Health facilities to maintain high level of environmental standards	Continued efforts to ensure facilities are professionally maintained and up to date with applicable codes

## Contact

Name: Steve May

Title: Senior Manager, Facilities Management & Engineering Services

Contact Information: 250.360.3064

# Service Plan for Environmental Resource Management

2016-2019  
(2018)

Capital Regional District

**Date submitted:**      **August 2017**



Making a difference...together

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# 1 Overview

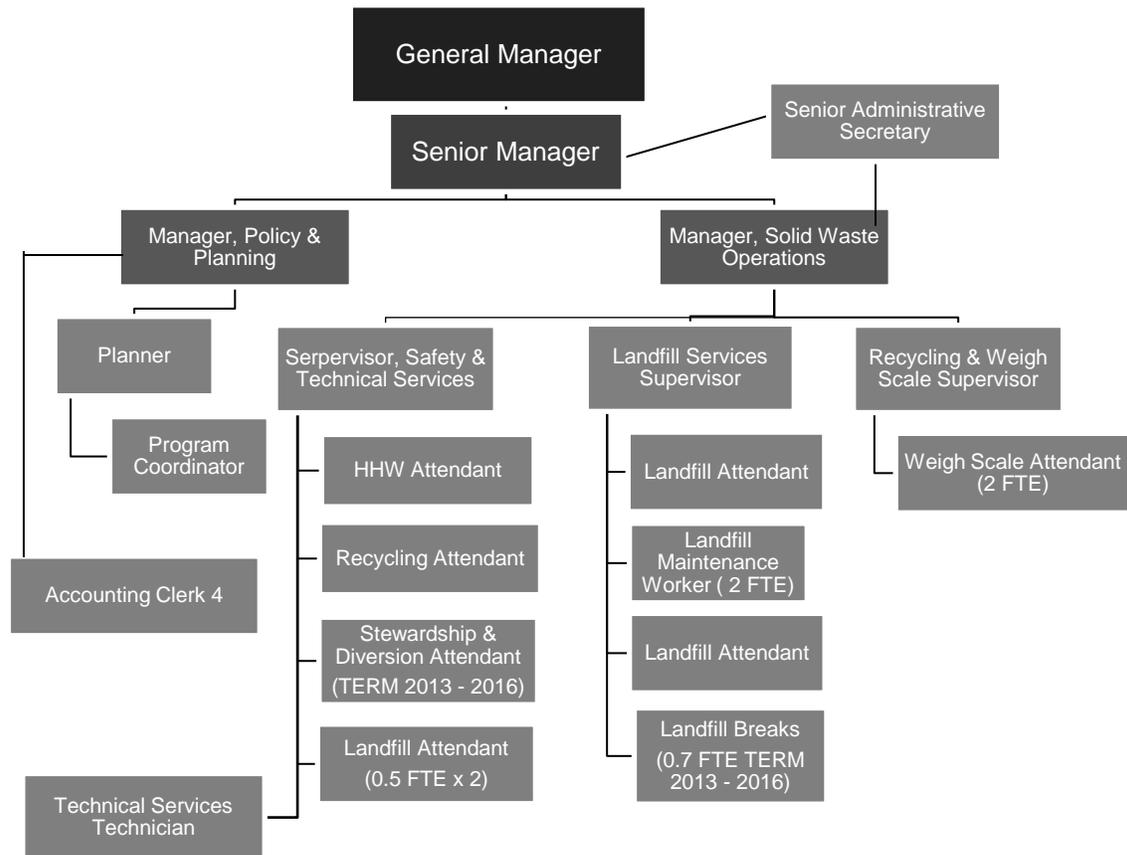
## 1.1 Division & Service Summary

Environmental Resource Management's (ERM) mission is to efficiently and effectively manage the region's solid waste resources in an environmentally, socially and economically responsible manner. The ERM division is responsible for municipal solid waste management in the Capital Region, including waste reduction, recycling programs and operation of Hartland landfill.

The CRD sees waste as a commodity and seeks the highest and best use for these resources by applying the 5R hierarchy of Reduce, Reuse, Recycle, Resource Recovery and Residual Management. Services range from planning and policy development, bylaw and contract administration to landfill operations. The division is responsible for a new solid waste management plan, facility licensing, recycling and household hazardous waste collection programs, the regional kitchen scraps strategy, community education and support programs, landfill bans, as well as leachate and landfill gas management.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<b>Diversion Services</b> Planning, Policy Recycling Programs	All jurisdictions in region	Landfill tipping fees Funding from product stewardship programs	Environmental Services Committee (ESC)
<b>Landfilling Services</b> Disposal Services and Environmental Compliance	All jurisdictions in region	Landfill tipping fees	ESC
<b>Recovery Services</b> Landfill gas recovery and electricity generation	All jurisdictions in region	Landfill tipping fees Sale of electricity	ESC

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

Landfill tipping fee revenues are no longer sufficient to fully cover the costs of both landfill operations and diversion programs. A new long-term financial model is required.

### Diversion Services

- The CRD's current per capita disposal rate aligns with the Ministry's new waste disposal service target of 350kg/capita by 2020. The remaining waste materials in the landfill will be more difficult and costly to divert.
- Lifecycle management of consumer products is shifting from local governments to producers through Extended Producer Responsibility (EPR) programs, but not always at full cost recovery. There are opportunities to divert more stewardship materials from the landfill.
- Planning and development of in-region kitchen scraps processing capacity is ongoing (annual kitchen scraps diversion appears to have plateaued at 7,500 tonnes).
- A new Solid Waste Management Plan (SWMP) will provide direction for the future.

- Decrease kitchen scraps tonnage projected to be received at the Hartland transfer station in 2018 from 7,500 down to 6,500 tonnes/year. Increase of kitchen scraps tipping fee, to fully recover costs, has resulted in kitchen scraps volumes being taken to lower-cost alternatives

### Landfilling Services

- The potential movement of garbage out of region for disposal remains a concern due to possible loss of revenue and reduced environmental oversight.
- Residual material is becoming more costly and difficult to manage as WorkSafe BC identifies an increasing variety of materials that need to be managed with heightened worker safety standards.
- ~~Increasing waste volumes and tipping fee revenue due to healthy local economy and real estate market. Tipping fees budgeted for inflationary increases, \$2/tonne, starting 2018.~~
- ~~2017 landfill tipping fee was \$110/tonne. 2018 tipping fee reduced to \$105/tonne to help draw down excess balance in ERM Sustainability Reserve and to proactively manage waste export risk~~
- Increase general refuse tonnage to be received at Hartland landfill in 2018 from 110,000 to 125,000 tonnes/year. Increased tonnage due to sustained strong construction activity and Highwest landfill taking only selective customers hauling mid-island (non CRD) waste.

### Recovery Services

- Staff are continually investigating new integration and recovery opportunities to optimize landfill gas recovery and maximize resource recovery revenue.
- Proceed with an integrated resource management (IRM) procurement process based on Board direction.
- Board approval of Core Area Liquid Waste Management Business Case, including conveyance of residuals to Hartland for recovery of resources at an anaerobic digestion facility
- Evaluate Renewable Natural Gas business case as an opportunity to better optimize landfill gas utilization at Hartland landfill~~potentially integrate with biogas recovery from Hartland North liquid waste digestion facility~~

## 1.4 Link to Board Strategic Priorities

The Division has a link to the following strategic priorities:

### INTEGRATED WASTE MANAGEMENT

- Realign resources to effectively deliver on Board directives relating to integrated waste management and develop an overarching integrated plan
- Implement an assessment framework on integration opportunities, consider innovative approaches and report on the effectiveness of programs.
- Recruit two four-year term staff to undertake an integrated resource management procurement process.

### CLIMATE CHANGE

- Realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations

### AGRICULTURAL LAND AND FOOD SECURITY

- Review opportunities for regional agricultural incentives and initiate food security educational programming

### PUBLIC ENGAGEMENT AND COMMUNICATIONS

- Develop public participation strategies, including implications and performance metrics, as a part of all major initiatives and implement more options for two-way dialogue.

## 2 Services

### 2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Diversion Services</b>					
<b>Planning and Policy Development</b>	SWMP development (currently at Stage 2)	Stage 3 delayed pending Board IRM direction	<u>Stage 3 delayed pending Board IRM direction</u> Complete Stage 3 of SWMP	<u>Re-start SWMP development</u> New SWMP determines service levels	<u>New SWMP determines service levels</u> Adjust to meet service delivery needs, as required
	Administer 49 agreements and contracts	The number of agreements will increase as the Ministry of Environment adds new Extended Producer Responsibility (EPR) programs (e.g., mattresses, construction & demolition waste)	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
	Administer 5 licensed transfer stations on Salt Spring under the Transfer Station Bylaw	The number of licensed transfer stations will increase if other areas (e.g., North Pender Island) request similar bylaws during the SWMP process	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Administer Compost Facilities Bylaw (no licensed facilities as of June 2014)	Compost bylaw administration varies with number/types of unlicensed and licensed facilities	Review and Assess	Review and Assess	Review and Assess
<b>Recycling Programs Delivery</b>	Curbside collection of packaging &	Glass to be collected as a separate third	Review and Assess	Review and Assess	Review of MMBC agreement may result in further

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	printed paper (PPP)	stream, as per Multi Material BC (MMBC) requirements			service level changes
	Curbside collection from 123,000 households (HH)	Add new HH (approx. 1,000 HH/year) to collection	No change	Review and Assess	Adjust to meet service delivery needs, as required
	PPP collection from 6 Electoral Area depots	No change	MMBC incentive review may increase depot funding	Review and Assess	Review of MMBC agreements may result in further service level changes
	Hartland recycling facility collects over 80 items from 28 product categories	Increase number of items if Ministry mandates more collection under EPR legislation	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Education to support all recycling programs	Reduce & revise Hotline service to reflect MMBC funding (reduce to 0.5 FTE)	No change	Review and Assess	Adjust to meet service delivery needs, as required
	Kitchen scraps strategy in place (15,000 tonnes diverted in 2014)	Increase tonnage diverted beyond 15,000 tonnes	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Household Hazardous Waste (HHW) program (Hartland, mobile events on Salt Spring and Gulf Islands, as well as off-site pickup of orphan HHW materials)	Discontinue HHW collection from Salt Spring and Gulf Islands locations, as well as off-site pickup of orphan HHW materials	No change	No change	No change

**Landfilling Services**

<b>Disposal services</b>	Administer five contracts and agreements	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
	Residential service at bin area (Mon – Fri 9 am to 5 pm, Sat 9	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	am to 2 pm) 45,000 vehicles				
	Commercial service at active face (Mon – Fri 7 am to 5 pm, Sat 9 am to 2 pm) 120,000 tonnes @\$110/tonne	Potential new EPR and SWMP diversion programs will decrease tonnages. Maintain tipping fee rate to prevent leakage of garbage	Review and Assess	Review and Assess	Tervita landfill (Highlands) is reaching capacity. Construction & demolition tonnage at Hartland may increase.
	Controlled waste 7,500 tonnes @\$157/tonne	Amend tipping fee rate for asbestos to reflect increased handling costs	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
<b>Environmental Compliance</b>	Leachate management (meet or exceed Regional Source Control Program)	No change	No change	No change	No change
	Environmental monitoring (meet or exceed Ministry requirements)	No change	No change	No change	No change
<b>Recovery Services</b>					
<b>Provide Recovery Services</b>	Landfill gas capture (current capture rate 55%)	Increase capture rate to 75% to meet Ministry guideline	Review and assess	Adjust to meet service delivery needs, as required	Review and Assess
	Electricity generation equivalent to powering 1,100 homes	Facility upgrade to maintain or exceed generation	Review and assess	Adjust to meet service delivery needs, as required	Review and assess
				<u>Initiate IRM procurement process based on Board direction</u>	<u>Develop IRM services based on outcome of 2018 procurement process</u>

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Diversion</b>	12.25	12.25	12.25	12.25	12.25
<b>Landfilling</b>	8.26	8.26	8.26	8.26	8.26
<b>Recovery</b>	1.19	1.19	1.19	<del>1.19</del>	<del>1.19</del>
<b>Total</b>	<b>21.7</b>	<b>21.7</b>	<b>21.7</b>	<b>21.7</b>	<b>21.7</b>
<b>Supplementary</b>	1.7	1.7	1.7	<del>1.7</del>	<del>1.7</del>
<b>Total</b>	<b>21.7</b>	<b>21.7</b>	<b>21.7</b>	<del><b>21.7</b></del>	<del><b>21.7</b></del>

In the 2013 budget, there were two 3-year term positions created. One was a 0.7 FTE Landfill Breaks position to provide daily break relief for up to six landfill employees. The second was a 1.0 FTE Stewardship and Diversion Attendant to address an increasing number of stewardship commodities collected at the Hartland Depot, as well as conduct on-site maintenance.

For 2016, the 0.7 FTE Landfill Breaks position has been added as a permanent position. There is a demonstrated ongoing need to provide break relief to maintain service levels during regular operating hours.

For 2016, the 1.0 FTE Stewardship and Diversion Attendant has been continued for a further 4-year term, renewed annually, and will now provide labour in relation to stewardship commodities, as well as the operation of the new Kitchen Scraps Transfer Station at Hartland. The work associated with this position will continue at a full-time capacity, and be extended annually until 2019, until a long-term decision is made regarding a regional kitchen scraps processing.

[For 2018, add a Project Director and Deputy Project Director for two \(2\) four-year term FTEs to undertake the Integrated Resource Management procurement \(RFQ & RFP\) process. Funding for these positions would be drawn from the IRM capital budget.](#)

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>2016</b>			
<b>Financial Review</b> ERM expenditure adjustments to transition from a growth business model to a program maintenance model	2016 budget was adjusted to maintain existing programs  Primary Budget Drivers:  Service Reductions • Reduction to Blue Box administration and hotline	n/a	\$1.44 M reduction overall  (\$250,000) continuous

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
Ongoing	service levels as a result of new MMBC funded collection contract <ul style="list-style-type: none"> <li>Consolidation of CRD Household Hazardous Waste program at Hartland and elimination of offsite collection programs</li> </ul> Program Adjustments/Efficiencies <ul style="list-style-type: none"> <li>Adjustment of kitchen scraps diversion and processing volumes based on current trends</li> <li>Reduction of wood waste diversion and processing costs by using optimizing onsite re-use at Hartland</li> </ul>		(\$140,000) continuous  (\$550,000) continuous  (\$100,000) continuous
<b>Blue Box Glass Collection</b>  To be completed in 2016	Address potential issues arising from separate collection of glass at the curb	Environmental Protection	Supplementary as required
<b>Kitchen Scraps Processing</b>  Ongoing	Develop regional kitchen scraps processing capacity	Integrated Waste Management  Regional Infrastructure	Supplementary as required
<b>Waste Stream Analysis</b>  To be completed in 2016	Conduct waste stream analysis as per Ministry guidelines	Integrated Waste Management	\$125,000 Single supplementary Waste stream analysis
<b>Hartland Landfill &amp; Recycling Facility Operations</b>  To be reviewed annually	Maintain service levels by providing break relief. Complete work associated with stewardship materials and kitchen scraps management.	Education, Outreach and Information	\$121,700 Continuous supplementary  0.7 FTE Landfill Breaks position 1.0 Term (up to 4 years) Stewardship and Kitchen Scraps Attendant position
<b>Hartland Landfill Security</b>  Ongoing	Review security arrangements	Corporate Development	\$100,000 Continuous supplementary Increased security
<b>Controlled Waste</b>  Complete in 2016	Amend controlled waste fees to cover costs of more difficult to manage materials	Environmental Protection	Core budget (cost recovery)
<b>2017 - 2019</b>			
<b>Solid Waste Management Plan Stage-3</b>	Conduct public consultation and complete plan for approval by Board and Ministry	Integrated Waste Management	Core budget

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<p>Moved <a href="#">to 201876</a></p> <p><b>Hartland North Improvements</b></p> <p><b><u>Integrated Resource Management</u></b></p>	<p>Make necessary capital improvements and operational adjustments at Hartland Landfill to facilitate siting of the sewage project's waste digestion facility at Hartland North</p> <p><u>Recruit two four-year term staff to undertake an integrated resource management procurement process to Ffacilitate Board direction regarding investigation and procurement of Integrated Resource Management infrastructure.</u></p>	<p>Integrated Waste Management</p> <p><u>Integrated Waste Management</u></p>	<p>To be determined</p> <p><u>To be fully determined. Estimated cost of two fully--burdened FTEs, subject to Humun Resources review, would be an estimated \$400,000 annually for four years.</u></p>

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
<p><b>Diversion Services</b></p> <p>Manage solid waste in an environmentally, socially and economically responsible manner</p>	<ul style="list-style-type: none"> <li>• Adoption of Solid Waste Management Plan by Board and approval of plan by provincial ministry in 2016</li> <li>• Revenue to cost ratio <math>\geq 1</math> by 2020 (current ratio is <math>&lt;1</math>)</li> <li>• Decrease waste disposal per capital (target <math>&lt;369</math> kg)</li> </ul>
<p><b>Landfilling Services</b></p> <p>Continue to optimize landfill operations</p>	<ul style="list-style-type: none"> <li>• Optimize use of landfill cover material at Hartland (target 5:1 garbage to cover ratio)</li> <li>• Increase compaction rate at Hartland (target minimum 850kg/m<sup>3</sup>)</li> </ul>
<p><b>Recovery Services</b></p> <p>Optimize landfill gas resource recovery at Hartland</p>	<ul style="list-style-type: none"> <li>• Percentage of methane gas captured at Hartland Landfill* (75% target)</li> </ul>

\*Corporate indicator – multiple divisions may contribute to this measure.

### Contact

Name: Russ Smith  
 Title: Senior Manager  
 Contact information: 250-360-3080

# Service Plan for Environmental Protection

2016-2019  
(2018)



Capital Regional District

*Date submitted:*      *August 28, 2017*



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# 1 Overview

## 1.1 Division & Service Summary

The programs and staff from the Environmental Partnerships and Environmental Protection Divisions are consolidated for 2018.

With an environmental management support role across the organization, the Division's focus will be on enhanced integration of (i) environmental regulatory oversight (sanitary sewers, storm water sewers, onsite systems), (ii) drinking water quality protection programs (water quality monitoring, demand management, cross-connection control), (iii) consolidation of all environmental monitoring and reporting, as well as (iv) integration of communication initiatives (planning, education, outreach, community engagement and program delivery) across the Parks & Environmental Services department.

The Division provides environmental management support and expertise to the organization, municipalities and electoral areas, with a key focus on climate action; drinking water quality and quantity; integrated watershed management; and contaminant reduction, monitoring and assessment associated with both liquid and solid waste treatment. Staff provide scientific, technical and regulatory expertise, and work with all internal departments and divisions, municipalities and electoral areas, external regulators and stakeholders, as well as community stewardship groups. The division assists the CRD's various services to meet human health and environmental protection requirements, support an environmental management context to multiple service delivery, and provide environmental data and research for local government commitments. The division is responsible for the preparation and management of the CRD liquid waste management plans. The division also has a strong communication focus that promotes resilient and sustainable communities within healthy natural environments.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Regional Source Control</b></p> <p>Provides contaminant reduction oversight, monitoring, assessment and reporting related to the regional sanitary sewer service to meet regulatory requirements prescribed under provincial legislated frameworks</p>	<p>10 municipalities 3 electoral areas</p> <p>4 First Nations</p> <p>2 federal facilities</p>	<p>Requisition</p>	<p>Environmental Services Committee (ESC)</p> <p>Core Area Liquid Waste Management Committee (CALWMC)</p> <p>Saanich Peninsula Wastewater Commission (SPWWC)</p> <p>Ganges Sewer Local Service Commission (LSC)</p> <p>Highland Water and Sewer LSC</p> <p>Magic Lake Estates Water and Sewer LSC</p>

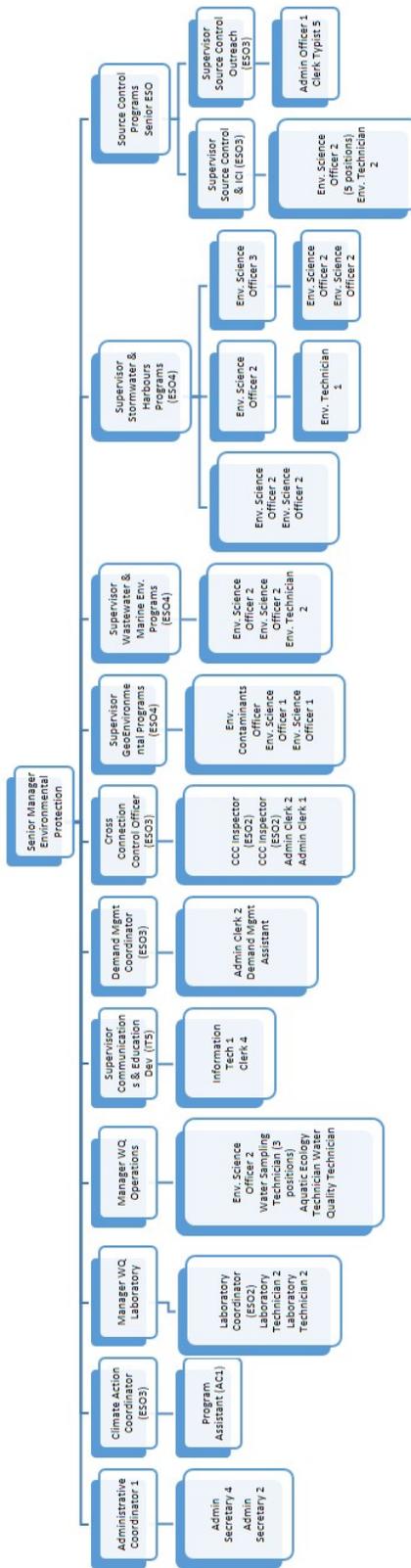
Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Water Quality</b></p> <p>Provides monitoring, assessment, reporting and technical advice across the region, including the several local service areas, to meet regulatory requirements for safe and potable water quality</p>	<p>Municipalities of Regional Water Supply (RWS) area, JDF and various local service areas</p> <p>Municipalities of RWS area, JDF and various local service areas</p> <p>Municipalities RWS area, JDF and various local service areas</p> <p>Sidney, North Saanich, Central Saanich and Peninsula FN</p>	<p>Allocation from Integrated Water Services (IWS) and Local Service Areas (LSA)</p> <p>Allocation from IWS and LSA</p> <p>Allocation from IWS and LSA</p> <p>Allocation from IWS and LSA</p>	<p>Regional Water Supply Commission (RWSC) , Regional Water Advisory Committee (RWAC) and various LSA Commissions</p> <p>RWSC, RWAC and various LSA Commissions</p> <p>RWSC, RWAC and various LSA Commissions</p> <p>SPWWC</p>
<p><b>Wastewater &amp; Marine Environmental Programs</b></p> <p>Provides oversight for wastewater planning, monitoring, assessment and reporting to meet regulatory requirements prescribed under both provincial and federal legislated frameworks</p>	<p>Core municipalities</p> <p>Sidney, North Saanich, Central Saanich</p> <p>Salt Spring Island</p> <p>Salt Spring Island</p> <p>Pender Island</p> <p>Port Renfrew</p> <p>Sidney, North Saanich, Central Saanich,</p> <p>Salt Spring Island</p> <p>Salt Spring Island, Pender Island, Mayne Island and Galiano Island</p>	<p>Allocation from IWS</p>	<p>CALWMC</p> <p>SPWWC</p> <p>Ganges Sewer LSC</p> <p>Highland Water and Sewer LSC</p> <p>Magic Lake Estates Water and Sewer LSC</p> <p>Port Renfrew Utility Services Committee</p> <p>SPWWC</p> <p>Ganges Sewer LSC</p> <p>Salt Spring Island Liquid Waste Disposal LSC</p>

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Integrated Watershed Management Programs</b></p> <p>Provides environmental planning, monitoring and reporting for stormwater discharges associated with sub-regional liquid waste management plans; integrated watershed management, including rainwater management and contaminant reduction outreach and education; and facilitates community stewardship initiatives around key urban watersheds</p>	<p>Core municipalities (not Oak Bay)</p> <p>Oak Bay, Saanich, Victoria</p> <p>Core municipalities, Esquimalt FN and Songhees FN</p> <p>Sidney, North Saanich, Central Saanich and Peninsula FN</p> <p>Sidney, North Saanich, Central Saanich</p> <p>Salt Spring Island (SSI)</p> <p>Southern Gulf Islands Electoral Area (SGI)</p> <p>Juan de Fuca Electoral Area (JDF)</p> <p>Sooke</p>	<p>Requisition and Grants</p> <p>Direct invoice</p> <p>Requisition</p> <p>Requisition</p> <p>Requisition</p> <p>Requisition</p> <p>Requisition</p> <p>Requisition</p>	<p>ESC or CALWMC</p> <p>ESC or CALWMC</p> <p>ESC or CALWMC</p> <p>SPWWC</p> <p>SPWWC</p> <p>Salt Spring Island Director, Electoral Areas Services Committee (EASC)</p> <p>Southern Gulf Islands Director, EASC</p> <p>Juan de Fuca Director, EASC</p> <p>Sooke Council</p>
<p><b>GeoEnvironmental Programs</b></p> <p>Provides regulatory, scientific and technical oversight, monitoring, assessment and reporting for the solid waste service, various miscellaneous contaminant programs, contaminated sites and associated liability</p>	<p>All municipalities and electoral areas</p> <p>All municipalities and electoral areas</p> <p>Core municipalities, Ministry of Forests, Lands and Natural Resources Operations (cost-share)</p>	<p>Allocation from IWS and ES</p> <p>Allocation from ERM</p> <p>Capital project Requisition</p>	<p>ESC</p> <p>ESC</p> <p>ESC</p>
<p><b>Demand Management</b></p> <p>Provides public education, plans and promotes the efficient use of the regional drinking water supply</p>	<p>13 municipalities 3 electoral areas</p>	<p>Requisition through water rate</p>	<p>RWSC, RWAC</p>

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Cross Connection Control</b></p> <p>Provides oversight, monitoring and reporting of potential sources of contamination that may flow in a reverse direction into the Regional Water Supply</p>	<p>13 municipalities 3 electoral areas</p>	<p>Requisition through water rate</p>	<p>RWSC, RWAC</p>
<p><b>Climate Action (mitigation and adaptation)</b></p> <p>Supports local governments in climate goals/commitments and supports CRD in corporate climate goals/commitments, liaises and advocates to senior levels of government</p> <p>Provides climate data and indicators, public education and outreach</p>	<p>All municipalities, electoral areas (EA) and First Nations (FN)</p>	<p>Requisitions and Grants</p>	<p>ESC</p>
<p><b>Onsite Program</b></p> <p>Provides regulatory oversight for onsite wastewater management (monitoring and compliance) for several local governments</p> <p>Provides education and outreach services for onsite treatment systems across the region</p>	<p>4 municipalities  13 municipalities 1 electoral area</p>	<p>Requisition  Internal recoveries</p>	<p>CALWMC, ESC</p>
<p><b>Communications and Environmental Education</b></p> <p>Provides public education and engagement in the region to promote sustainable behavior through departmental campaigns, initiatives and services</p>	<p>13 municipalities 3 electoral areas</p>	<p>Internal recoveries</p>	<p>ESC</p>

# 1.2 Organization Chart

Interim Org Chart – to be revised for 2018



## 1.3 Key Trends, Issues & Risks – Service Specific

**Climate Action Demand:** In 2008, the region and corporation set greenhouse gas emission (GHG) reduction (mitigation) targets for 2020 and beyond; however, community and corporate GHG trends remain stagnant. The region should also anticipate climate change effects (adaptation), such as shifting weather patterns and sea level rise in the coming decades. *Demand for climate action support will continue to increase* as energy prices increase, deadlines for emission reduction targets approach, impacts on local services and assets are identified, and regulatory direction from higher levels of government are implemented. Impacts to service delivery across the organization need to be considered in upcoming service plans.

**Meeting Regulatory Requirements:** Open transparent data and regulatory reporting amidst changing regulatory frameworks continue to focus our program delivery. The updated Contaminated Sites Regulation has implications for contaminated sites and property management, but also all contaminant management programs. Proposed regulatory changes (i.e., new landfill criteria) or landfill upgrades (expansion or expanded services) have the potential to significantly impact the level of monitoring required for both operational and compliance requirements. Further, additional requirements may result from planning and implementation of integrated waste management decisions as they relate to the liquid waste management project for the core area municipalities. Finally, federal wastewater monitoring requirements are dependent upon flow volumes. Currently, the Macaulay and Clover systems require weekly monitoring, but the flow volumes of these two facilities are approaching the threshold that would require monitoring three times per week. *If this flow threshold is exceeded in the 2016-2019 time period, additional funds would be required for the extra wastewater monitoring.* Federal-provincial harmonization of the wastewater regulatory framework is underway and may also have implications for monitoring and reporting requirements in advance of the new core area treatment plant.

**Changing Service Needs:** The dynamic regulatory framework will require additional resources for some programs. For example, corporate liability and reporting requirements, along with remediation of contaminated sites within our service scope require additional resources for the division. A review of the drinking water protection regulation indicates additional monitoring requirements for local governments that have asked the CRD to provide this service on their behalf. Increased demolition waste, as a result of a booming local construction industry, requires increased resources to ensure worker health and safety at the landfill. [New federal funding will allow technical staff to support abandoned boat grant applications.](#) And finally, there is interest in regional coordination of invasive species management and an [amended ~~new~~ service](#) is being presented for Board consideration. Strategic planning initiatives (e.g., Regional Drinking Water Strategic Plan update, Regional Climate Action Strategy, Integrated Resource Management, Emergency Planning) and major capital projects (e.g., core area wastewater treatment plant, drinking watershed dam upgrades, drinking water treatment plant, ~~Hartland north development~~) will influence modifications to ongoing work plans.

**Lab Accreditation:** The analytical labs will seek accreditation to *ISO 17025: General Requirements for the Competence of Testing and Calibration Laboratories* to meet current industry standards and maintain regulatory and public confidence in our drinking water quality. To provide more efficient and effective support to CRD-owned systems on Salt Spring Island and the Southern Gulf Islands, the laboratory services will also bring most analyses in-house. This will lead to an increase in overall workload by 30%, making *expansion and updating of the CRD Water Quality Labs a key issue for 2016-2019.*

**Communication:** Various strategies and initiatives related to public and targeted outreach, education and incentives to improve environmental stewardship associated with key service delivery will be required in the areas of climate action, water quality and quantity protection, contaminant reductions, marine conservation and watershed stewardship. Partnerships with multiple agencies and community groups is a key focus for the Division's mandate.

# Link to Board Strategic Priorities

The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery and, as such, may have a role in supporting numerous priorities. Specifically, the division has a direct link to the following priorities:

## ENVIRONMENTAL PROTECTION

- undertake research, monitoring, reporting and communication to support decision-making and management of natural resources related to regional services

## CLIMATE CHANGE

- focus climate change projections on key service delivery and lead the implementation of the Regional Climate Action Strategy

## DRINKING WATER

- protect and maintain an adequate supply of safe, reliable drinking water
- assist with risk management of vulnerable infrastructure

## BIODIVERSITY & ECOSYSTEM HEALTH

- provide research, information, and data to support regional responsibilities to protect biodiversity and support advocacy to senior levels of government

## PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop education, outreach and various campaigns to promote sustainable, resilient communities within healthy natural environments

## INTEGRATED WASTE MANAGEMENT

- provide direct and indirect planning, research, monitoring and assessment of liquid and solid waste management

## 1.4 Service Levels

		Service Level Adjustments in Role/Scope				
Service		Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Regional Source Control	<b>Sanitary Sewer – Source Contaminant Reduction</b>  Planning, compliance monitoring and assessment, reporting, education and outreach	Conduct inspections, monitoring and enforcement for 2,000 businesses and institutions connected to sanitary sewer	No change	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
		Deliver 55 outreach campaigns, events and educational initiatives for residents, businesses and schools	No change	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
Water Quality	<b>Drinking Water Quality Monitoring</b>  Source water and distribution system monitoring, assessment and reporting	Provide monitoring, assessment, reporting and operation support services to the Greater Victoria Regional Water System, the JDF, SSI and SGI local service areas	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
	<b>Drinking Water Quality (Main) Laboratory Services</b>  Physical and chemical analytical services, assessment and reporting	Provide laboratory analytical and reporting services to the Greater Victoria Regional Water System, the JDF, SSI and SGI local service areas, and Regional Parks campgrounds and regional trail fountains	Laboratory accreditation  30% increase in workflow through in-house LSA monitoring	Consolidation with SPWWTP Lab	Review and Assess	Adjust to meet service delivery needs, as required.

		Service Level Adjustments in Role/Scope				
Service		Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<b>Drinking Water Quality Aquatic Ecology (AE) Laboratory Services</b>  Biological analytical services, assessment and reporting	Provide laboratory analytical and reporting services to the Greater Victoria Regional Water System, the JDF, SSI and SGI local service areas, Regional Parks campgrounds and regional trail fountains	Laboratory accreditation  30% increase in workflow through in-house LSA monitoring	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess
	<b>SPWWTP Laboratory Analytical Services</b>  Physical and chemical analytical services, assessment and reporting	Provide laboratory analytical and reporting services for SPWWTP, and CRD-operated wastewater treatment facilities and outfalls on SSI and SGI	Review and Assess	Consolidation with main WQ Lab	Review and Assess	Adjust to meet service delivery needs, as required.
Wastewater & Marine Environmental Programs	<b>Core Area – Sanitary Sewer Outfalls(2)</b>  Compliance monitoring, assessment and reporting  5-year dynamic monitoring cycle	Provide wastewater compliance monitoring and reporting and marine outfall monitoring, assessment and reporting services	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
	<b>Saanich Peninsula - Sanitary Sewer Outfall (1)</b>  Compliance monitoring, assessment and reporting  4-year dynamic monitoring cycle	Provide wastewater compliance monitoring and reporting and marine outfall monitoring, assessment and reporting services	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.

		Service Level Adjustments in Role/Scope				
Service		Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<b>Electoral Areas (JDF, SGI, SSI) Sanitary Sewer Outfalls (5)</b>  Compliance monitoring, assessment and reporting  4-year dynamic monitoring cycle	Provide wastewater compliance monitoring and reporting and marine outfall monitoring, assessment and reporting services (wastewater assessment monitoring – Ganges Harbour only)	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
	<b>Biosolids Monitoring (Saanich Peninsula, Electoral Areas facilities)</b>  Compliance monitoring, assessment and reporting  Annual monitoring program	Sludge assessment monitoring	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
Integrated Watershed Management	<b>Stormwater Discharges (Core Area)</b>  Compliance monitoring, assessment, reporting, education and outreach	Monitor 650 discharges	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
		Hold 6 IWM inter-municipal meetings	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
		Monitor all high public-use beaches in winter for enterococci	Review and Assess	Complete sampling project	n/a	n/a
	<b>Stormwater Discharges (Saanich Peninsula)</b>	Monitor 290 discharges	Review and Assess	Increased efforts to locate sources of contaminants and additional non-regulatory contaminant	Increased efforts to locate sources of contaminants and additional non-regulatory contaminant	Increased efforts to locate sources of contaminants and additional non-regulatory contaminant

		Service Level Adjustments in Role/Scope				
Service		Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Integrated Watershed Management	Compliance monitoring, assessment, reporting, education and outreach			source control work	source control work	source control work
		Monitor all high public-use beaches in winter for enterococci	Review and Assess	Complete sampling project	n/a	n/a
	<b>Stormwater Discharges Source Control (Saanich Peninsula)</b>  Compliance monitoring, assessment, reporting, education and outreach	Monitor and oversee all industrial and commercial connections to the Saanich Peninsula stormwater sewer system	Review and Assess	Increased inspection and communication efforts. Increased chemical contaminant monitoring.	Increased inspection and communication efforts. Increased chemical contaminant monitoring.	Increased inspection and communication efforts. Increased chemical contaminant monitoring.
	<b>Stormwater Discharges (Salt Spring Island)</b>  Compliance monitoring, assessment and reporting	Support watershed protection initiatives as required through the Salt Spring Watershed Protection Authority	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
	<b>Stormwater Discharges - Southern Gulf Islands</b>  Compliance monitoring, assessment and reporting	Monitor 80 discharges	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
	<b>Stormwater Discharges (Juan de Fuca)</b>  Compliance monitoring, assessment and reporting	Monitor 97 discharges	Review and Assess	<b>Service suspended per Director's request</b>	<b>Service suspended per Director's request</b>	<b>Service suspended per Director's request</b>

		Service Level Adjustments in Role/Scope				
Service		Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<b>Stormwater Discharges (Sooke)</b>  Compliance monitoring, assessment and reporting	Provide monitoring services Modify program to meet Ministry of Environment (MOE) requirements for Sooke	Year 1 – 5 year cycle	Year 2 – 5 year cycle	Year 3 – 5 year cycle	Year 4 – 5 year cycle
	<b>Harbours &amp; Watersheds (Core Area)</b>  Facilitation of multi-stakeholder engagement, education and outreach for Bowker Creek Initiative, Gorge Waterway Initiative, Esquimalt Lagoon Initiative, Victoria and Esquimalt harbours	Provide monitoring, assessment, reporting and coordination services for 5 harbour systems and various multi-use watersheds	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
	<b>Elk &amp; Beaver Lake Watershed Coordination</b>  Facilitation of multi-stakeholder engagement for Elk/Beaver Lake watershed	n/a	Develop and implement a watershed management plan	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess
<b>Geo-Environmental Programs</b>	<b>Environmental Contaminants Reduction</b>  Compliance monitoring, assessment, reporting and education for Trucked Liquid Waste, Controlled Waste, Septage and Odour	Manage 1 septage disposal contract servicing approximately 30 truck liquid waste service providers	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.

		Service Level Adjustments in Role/Scope				
Service		Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	(Regional Trunk System)					
	<b>Hartland Landfill Environmental</b>  Compliance monitoring, assessment and reporting  Operational support	Regulatory compliance monitoring at 178 locations	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
	<b>Millstream Meadows Contaminated Site (Remediation)</b>  Monitoring, site management and reporting	Implement remediation and investigation to achieve Certificate of Compliance  Rezoning	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required.
<b>Demand Management</b>	<b>Drinking Source Water Conservation</b>  Monitoring, assessment, reporting, education and outreach	Deliver 24 water conservation educational workshops	No change	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
		Conduct 5-10 water audits for local businesses	10 water audits/yr	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
<b>Cross Connection Control</b>	<b>Drinking Water Contamination Prevention</b>  Monitoring, assessment and reporting	Conduct 350 facility audits for backflow prevention devices	500/yr	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
		Monitor and track 20,000 back flow prevention devices	23,000/yr	25,000/yr	28,000/yr	30,000/yr

		Service Level Adjustments in Role/Scope				
Service		Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Climate Action	<b>Mitigation and Adaptation</b>  Research, planning, monitoring, reporting, stakeholder engagement, education and outreach	Advance local and regional climate mitigation and adaptation goals  Facilitate regional coordination	Accelerate corporate climate action efforts (planning, implementation, reporting).  Engage in 2 climate mitigation or adaptation projects	Review and Assess	Review and Assess	Adjust to meet service delivery needs, as required.
Onsite Wastewater Management	<b>Onsite Septic Systems</b>  Compliance monitoring, assessment and reporting (4 municipalities under bylaw) and regional education and outreach	80% compliance with bylaw	No change	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
		Deliver outreach to 27,000 households with onsite sewage systems	No change	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
		Deliver pilot maintenance assessment program (25 system assessments)	No change	No change	Review & Assess	Adjust to meet service delivery needs, as required
Communications and Environmental Education	<b>Communications</b>  Planning, implementation, assessment and reporting	Deliver outreach and education through participation in 52 facility tours and 74 school presentations	40 tours & 59 presentations	Review & Assess	Adjust to meet service delivery needs, as required	Review & Assess
		Deliver Hotline service – currently 7 hours per day	Deliver Hotline service 3.5 hours/day	Review & Assess	Review & Assess	Review & Assess

## 2 Services

### 2.1 Service Levels

Service	Work force (FTE) including all supplementary and term				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Senior Manager	2	2	2*	1 <sup>a</sup>	1
Administration	3	3	3	3	3
Regional Source Control	8	8	8	8	8
Water Quality Operations and Laboratories	10	11	11	12 <sup>b</sup>	12
Wastewater & Marine Environmental Program	3.6	3.6	3.6	3.6	3.6
Integrated Watershed Management Program	6	6	6.5	7 <sup>c</sup>	7
GeoEnvironmental Programs	4	4	4	5.1 <sup>d</sup>	5.1
Demand Management	2.6	2.6	2.6	2.6	2.6
Cross Connection Control	3.6	3.6	4.6	4.6	4.6
Climate Action Program	2.5	1.7	1.7	2 <sup>e</sup>	2
Onsite Wastewater Management	3	3	3	3	3
Communications and Environmental Education	3	2.32	2.32	2.32	2.32
<b>TOTAL FTE</b>	<b>51.3</b>	<b>51.5</b>	<b>53</b>	<b>54.9</b>	<b>54.9</b>
<b>2018 FTE Variance</b>				<b>1.9<sup>3</sup></b>	

**2018 FTE Variance:**

- a. \*divisions combined under one Senior Manager July 2017, decrease 1 FTE
- b. Water Quality Operations will increase by 1 FTE
- c. IWMP will increase by 0.5 FTE
- d. Geo-E will increase by 1.1 FTE (0.6 – contaminated sites officer; 0.5 – clean waste tech)
- e. Climate Action Program will increase by 0.3 FTE, lifting existing Program Asst. to 1.0

# 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>2016</b>			
<b>Support Board Strategic Priorities for Climate Action</b>  Ongoing	Provide additional support to address Board Strategic Priorities on topic of climate action	Climate Change	\$26,000 continuous supplemental for 0.2 FTE
<b>Millstream Meadows Remediation Land Management Planning &amp; Implementation</b>  To be completed in 2020	Plan and implement property improvements (temporary property use and long-term rezoning) to balance remediation costs and prepare the property for sale; implement remediation plan and investigations to achieve Certificate of Compliance	Environmental Protection	Capital budget
<b>Harbours Inventory</b>  Ongoing	Updating of 1999-2000 habitat survey of Core harbours sub-surface and intertidal zones	Biodiversity & Ecosystem Health	\$20,000 continuous supplemental – 4 years (2016-2019)
<b>Elk/Beaver Lake Watershed Coordination</b>  To be completed in 2019	Establishment of a part-time coordinator to develop and implement a management plan for multi-use watershed integrated natural resource management to improve water quality and reduce algae blooms in Elk and Beaver Lakes	Biodiversity & Ecosystem Health  Economic Development	\$122,000 continuous supplemental for 0.5 FTE - 4 years (2016-2019)
<b>Stormwater Quality on the Saanich Peninsula</b>  ongoing	Increase efforts to identify contaminant sources and work with municipalities to resolve issues	Environmental Protection	\$10,000 continuous supplemental at direction of Saanich Peninsula Wastewater Commission
<b>Water Quality Analytics</b>  Ongoing	Increase capacity of operational and analytical service levels	Drinking Water	\$70,250 continuous supplemental for 1 FTE
<b>Laboratory Equipment Upgrade</b>  To be completed in 2016	Replacement and upgrading of essential analytical equipment	Drinking Water  Environmental Protection	\$60,000 single supplemental  Capital budget

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>Laboratory Accreditation</b>  To be achieved in 2017 with maintenance ongoing	Accreditation to the internationally recognized standard, <i>ISO 17025 General Requirements for the Competence for Testing and Calibration Laboratories</i>	Environmental Protection  Corporate Development	\$30,000 single supplemental (\$20,000 continuous supplemental 2017) Capital budget
<b>EQIS Database Enhancements</b>  To be completed in 2017 with maintenance ongoing	Develop functional improvements to the existing water quality database	Corporate Development	\$31,000 single supplemental (\$15,000 continuous supplemental 2017) Capital budget
<b>Chlorine Residual Online Monitoring</b>  To be completed in 2017	Install two additional chlorine online monitors per year for assessing adequate water quality in the Juan de Fuca Electoral Area and Regional Water Supply area	Drinking Water	\$30,000 single supplemental each year - 2 years  Capital budget
<b>Water Quality Sampling and Operational Support</b>  Ongoing	Increase role in reviewing and recommending on IWS activities	Drinking Water  Environmental Protection	\$10,000 continuous supplemental
<b>Drinking Water Safety Plan (DWSP)</b>  To be completed in 2016-2017  Moved forward from 2017-2018	Develop and implement a DWSP for JDF and RWS as “best management practice” for efficiently addressing risks in a water system; Phase 1	Drinking Water	2017: \$40,000 single supplemental  2018: \$30,000 single supplemental  Capital budget
<b>Cross Connection Control Audits</b>  To be completed in 2020	Complete the first round of Cross Connection Control facility audits and undertake the re-audits of severe hazard facilities	Drinking Water	\$174,000 continuous supplemental - 4 years (2017-2020)
<b>2017</b>			
<b>Stormwater Saanich Peninsula</b>  <b>Stormwater Source Control Saanich Peninsula</b>  Ongoing	Increased efforts to locate sources of contaminants and additional non-regulatory contaminant source control work  Increased inspection and communication efforts. Increased chemical contaminant monitoring.	Environmental Protection	\$30,000 continuous supplemental to be reassessed in 2020  \$15,000 continuous supplemental to be reassessed in 2020.

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>2018</b>			
<b>New Permitting Requirements for Residential Construction and Demolition Waste</b>  Ongoing	Position: Clean Demo Permit Technician (J11)  Support new ERM policy requiring permitting of residential clean demolition waste loads to manage Hartland employees health and safety risks	Integrated Waste Management	\$64,000 continuous supplemental for 0.5 FTE  Position requested and fully funded by ERM
<b>Contaminated Sites Support to Regional Infrastructure</b>  To be completed in 2020	Position: Contaminated Sites Environmental Science Officer 1 (J15)  Provide additional support to manage CRD contaminated sites liability identified through asset management activities.	Regional Infrastructure	\$90,000 continuous supplemental for 0.6 FTE - 4 years  (2018-2020)  Position funded by already committed capital projects
<b>Support Regional Climate Action Strategy (RCAS) reporting and implementation</b>  Ongoing	Provide additional support to address Board Strategic Priorities on topic of climate action  (increase hours for Climate Action Program Assistant from 0.7 to 1.0 FTE)	Climate Change	\$38,000 continuous supplemental for 0.3 FTE
<b>Regional Coordination of Ecosystem Protection</b>  Ongoing	Position: Ecosystem biologist/planner (J16)  Provide additional support through Regional Coordination for invasive species management  As requested by municipalities and stakeholders, and directed by CRD Board (August 2017)	Biodiversity & Ecosystem Health  Regional Climate Action Strategy  IWMP Implementation Strategy	\$95,000 from existing core budgets plus provincial grants (no budget increase for 2018)  Position funding to be reviewed in 2019
<b>Expansion of Municipal Sampling Program</b>  Ongoing	Position: Water Quality Sampler (J12)  Provide additional support and water sampling/testing services to the bulk water customer municipalities to achieve compliance with legislation.	Drinking Water	\$105,000 continuous supplemental for 1 FTE and  \$25,000 for additional laboratory costs (funded from reserve)
<b>Abandoned Boat Program Coordination</b>	Coordinate funding application and assessment/removal of abandoned boats in regional waters	Environmental Protection	<u>Up to a total of \$1,050,000 (amount pending grant approval): \$50,000 in Abandoned Boat Education and Awareness funding (with CRD contribution of \$16,667)</u>

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
			and \$1,000,000 in Abandoned Boat Assessment and Removals funding (with CRD contribution of \$333,333) Up to \$50,000 from ERM Sustainability Fund
<b>JDF Distribution System Lead/Metal Investigation</b> To be completed in 2018	Provide additional sampling and testing to identify potential lead/metals hot spots in the JDF Distribution System for evaluation of health risk to the public.	Drinking Water	\$2,000 single supplemental
<b>Goldstream Reservoir Water Quality Study</b>	Evaluation of annual water quality conditions for secondary drinking water source potential	Drinking Water	\$15,000
<b>Capital Projects Monitoring Study</b>	Develop pre- and post-monitoring programs for significant capital projects in the drinking watershed	Drinking Water	\$5,000
<b>Supply Management Modelling Study</b>	Model development to investigate climate projections on near-term drinking water supply	Regional Infrastructure	\$75,000
<b>Laboratory Renovations</b> To be completed in 2018	In preparation for combining the water and wastewater laboratories, the laboratory space at 479 Island Hwy will be redesigned to accommodate both labs and SPWWTP equipment will be moved as necessary	Environmental Protection Regional Infrastructure	\$75,000 single supplemental Capital budget
<b>Paperless Data Management</b>	Pilot study to integrate direct lab data entry to drinking water quality database	Drinking Water	\$15,000
<b>2019</b>			
<b>Nutrient Analyzer</b> To be completed in 2019	Expand and improve capital for internal analysis	Environmental Protection Regional Infrastructure	\$60,000 single supplemental Capital budget
<b>pH and Corrosion Study</b> To be completed in 2019 Moved from 2016	Undertake a pH and corrosion study of distribution system to evaluate risks to infrastructure and compliance with Drinking Water Guidelines	Regional Infrastructure Environmental Protection	\$30,000 single supplemental Capital budget
<b>2020</b>			
<b>2021</b>			

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>Development of a Water Quality System Model</b>  To be completed in 2022	Develop a hydraulic model for the Regional Supply System, the JDF System and the Saanich Peninsula System to enable CRD to simulate water quality emergencies, model chlorine residual distribution and other relevant water quality parameters.	Drinking Water	\$105,000 single supplemental

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Contribute to community and corporate climate action goals	<ul style="list-style-type: none"> <li>Number and impact of projects and partnerships that demonstrate support for reductions in greenhouse gas (GHG) emissions and for increased climate resiliency*</li> </ul>
Provide specialized information and technical support	<ul style="list-style-type: none"> <li>Percentage of environmental water quality sampling plans reviewed and updated*</li> <li>Achieve lab accreditation to ISO 17025</li> <li>Provide monitoring for streams with continuous flows and/or water flows annually (target 9 streams by 2019)</li> <li>90% of sewer odor monitoring assessment stations monitored and reported on annually</li> </ul>
Maintain regulatory compliance monitoring activities for government agencies, member municipalities or other stakeholders	<ul style="list-style-type: none"> <li>Provide sampling, analysis and reporting of in-house drinking water samples within 5 business days 95% of the time.</li> <li>100% of operational and compliance samples (outfall, stormwater, landfill) collected, analyzed and reported on annually</li> <li>Conduct a minimum of 4 landfill gas ambient, foundation and perimeter well monitoring activities annually</li> <li>Percentage of businesses in compliance with Sewer Use Bylaw Requirements*</li> <li>80% or better compliance rate with bylaw for Type 1, 2 and 3 onsite systems</li> </ul>
Maintain assessment requirements for government agencies, member municipalities or other stakeholders	<ul style="list-style-type: none"> <li>90% of sludge assessment samples collected and reported</li> <li>20% of all stormwater discharges sampled annually</li> <li>80% of all high-rated stormwater discharges investigated annually</li> <li>Reduction in days of blue-green algae blooms compared to previous years at Elk/Beaver Lake</li> <li>15% of businesses inspected annually as a part of Stormwater Source Control on Saanich Peninsula</li> <li>Conduct a minimum of 12 controlled waste audits annually</li> <li>Annual % reduction in water consumption by ICI sector</li> <li>Inspect 33% of all food service facilities annually for compliance with source control bylaw</li> <li>Decrease or maintain priority contaminant loadings to the core area marine environment on results of 3-5 year trend assessment cycles</li> <li>Target of 0 or no annual backflow incidents reported in Regional Water Supply</li> </ul>

	<ul style="list-style-type: none"> <li>• Target of 900 cross-control audits conducted annually</li> </ul>
Increase community and municipal engagement opportunities	<ul style="list-style-type: none"> <li>• Number of community outreach events the CRD participates in and/or supports annually*</li> <li>• Number of CRD educational workshops delivered or partnered on annually *</li> <li>• Number of stakeholders engaged through educational programming on biodiversity and ecological health issues *</li> <li>• Number of volunteer hours leveraged in restoration or stewardship activities (target 300 hours annually)</li> <li>• Increased participation in Onsite Wastewater Management workshops over 2015 levels</li> </ul>

\* Corporate indicator – more than one division may contribute to this measure.

## Contact

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# Service Plan for Facilities Management & Environmental Planning & Engineering Services

2016-2019  
(~~2017~~8)

Capital Regional District

**Date submitted:** ~~August 2016~~ August 2017

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# 1 Overview

## 1.1 Division & Service Summary

The ~~Facilities Management & Environmental Planning and Engineering Services~~ Division is a recent combination of two previously separate divisions. ~~Facilities Management provides building management services at 15 locations, provides facility management services to other departments upon request, and coordinates various corporate programs. The Engineering Services side of the division~~ is responsible for providing professional engineering and construction management services to a number of CRD divisions and departments and ensuring CRD engineering and project stewardship standards are maintained throughout the organization. ~~Engineering Services~~ ~~The division~~ is also responsible for the preparation and management of the CRD liquid waste management plans, integrated waste management and resource recovery plans, and ensuring the implementation of the commitments made under the plans providing procurement support to the Environmental Resource Management division for the Integrated Resource Management Plan.

Administrative and contract management staff provide administrative, financial and clerical support to all divisional functions. ~~Facilities Management provides building management services at 15 locations, provides facility management services to other departments upon request and coordinates some corporate programs.~~

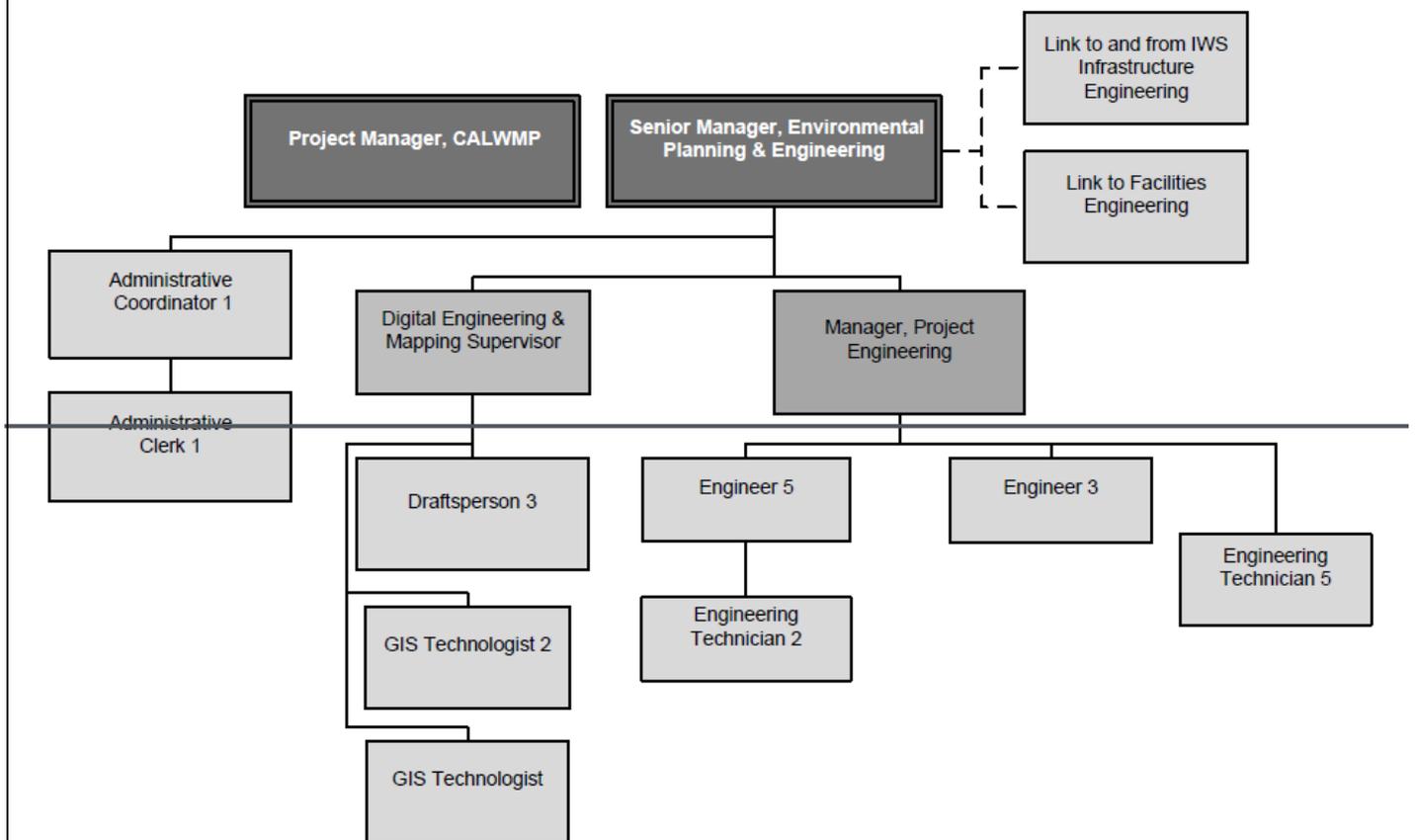
Service Purpose, Role or Overview		Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<b>Facility Management (FM)</b>	<ul style="list-style-type: none"> <li>• Building Management (maintenance, operation, capital projects)</li> <li>• Building Access and Security</li> <li>• Building Support Services (JDF Planning, Bylaw, Pound, Hartland Landfill, Macaulay Point, IWS, Pender BI, SSI BI and Library, Galiano Library)</li> <li>• Capital Projects</li> </ul>	<u>Various Locations and Tenants, All Departments</u>	<u>Reserves, Grants, Internal Allocation and Recovery, Allocations and Expense Recovery, Allocations to services and IHA</u>	<u>Finance Committee</u>
<b>Engineering &amp; Project Management Services</b>  Provide engineering feasibility	<b>Integrated Water Services Department</b>  (Regional Odour Control Program, Capital Projects)	Core Area municipalities	Requisition from participating municipalities	Core Area Liquid Waste Management Committee (CALWMC) and CRD Board

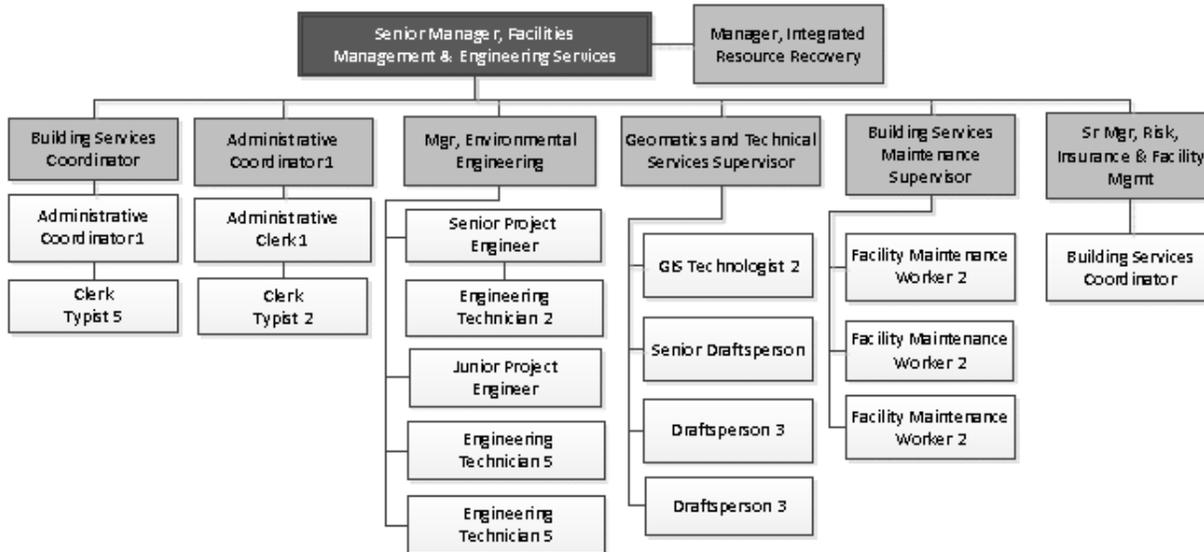
studies, detailed design, tendering, construction management and commissioning services	<b>Environmental Resources Management Division</b> (Capital Projects at Hartland Landfill) (Development and implementation of solid Waste Management Plans)	All 13 municipalities and 3 electoral areas	Requisition and landfill tipping fees	Environmental Services Committee-(ESC), Solid Waste Advisory Committee and CRD Board
	<b>Regional Parks Division</b> (Capital projects) (Asset management program)	All 13 municipalities and 3 electoral areas	Requisition, capital funds and grants	Regional Parks Committee and CRD Board
	<b>Planning and Protective Services</b> (Capital projects)	All 13 municipalities and 3 electoral areas	Requisition, capital funds and grants	Electoral Area Services Committee and CRD Board
	<b>Environmental Protection/Partnerships Division</b> (Develop and implement strategies for regional odour management originating from sewer trunk system and treatment plants) (Remediation Projects-Millstream Meadows)	All 13 municipalities and 3 Electoral areas	Service requisitions	Service area dependent
	<b>Core Area Liquid Waste</b> (Provide engineering support on as-needed basis to the Core Area Wastewater treatment Program)	Core Area municipalities	Requisition, Capital Funds and Grants	CALWMC, CRD Board

<b>Develop &amp; Implement Liquid Waste Management Plans</b>	<b>Inflow &amp; Infiltration Program</b> Develop and implement strategies to reduce I&I into sewers to minimize conveyance, treatment and disposal costs to provide reliable sewer service for the community in compliance with regulations related to sewer overflows	Core Area municipalities	Requisition from participating municipalities	CALWMC and CRD Board
	<b>Core Area Liquid Waste Management Plan</b> Ensure implementation of the commitments set out in the Core Area Liquid Waste Management Plan	Core Area municipalities	Requisition from participating municipalities	CALWMC and CRD Board
	<b>Saanich Peninsula Liquid Waste Management Plan</b> Ensure implementation of the commitments as set out in the Saanich Peninsula Liquid Waste Management Plan	Saanich Peninsula municipalities	Requisition from participating municipalities	Saanich Peninsula Wastewater Commission and CRD Board
<b>Corporate Project Stewardship</b>	<b>CRD Project Stewardship Initiative</b> Develop and implement CRD-wide project stewardship framework to standardize project leadership and management across all CRD departments	All CRD Divisions	Internal recoveries	Executive Leadership Team
<b>Facility Management (FM)</b>	<ul style="list-style-type: none"> <li>● <u>Building Management (maintenance, operation, capital projects)</u></li> <li>● <u>Building Access and Security</u></li> <li>● <u>Building Support Services (JDF Planning, Bylaw, Pound, Hartland Landfill, Macaulay</u></li> </ul>	<u>Various Locations and Tenants, All Departments</u>	<u>Reserves, Grants, Internal Allocation and Recovery, Allocations and Expense Recovery, Allocations to services and IHA</u>	<u>Finance Committee</u>

Point, IWS, Pender  
BI, SSI BI and  
Library, Galiano  
Library)  
● Capital Projects

## 1.2 Organization Chart





## 1.3 Key Trends, Issues & Risks – Service Specific

**Lease and Service Agreements Changes:** VIHA lease renewal could impact service levels. Facility Management services at the Peninsula Health Unit (PHU) are scheduled to end in August 2018 (impact on workforce / allocations).

**Increased Labour and/or Cost Implications or Demands:** Utility costs are increasing consistently above the rate of inflation. Aging buildings, Facility Condition Index (FCI) increasing, expect increase in building operating costs. Insurers are pursuing subrogation opportunities with more conviction and are interpreting insurance policies with more care in an effort to better their bottom line – expect increase in the liability insurance rate. Impact of the Health Care Cost Recovery Act has increased the cost of claims and it is expected that this will have a negative impact on the cost of future Liability Insurance rates. New “Green” or “Energy Efficiency” initiatives impact labour and budget requirements.

Other factors impacting the service delivery include Work Safe BC updates and requirements, as well as global insurance coverage, availability and rates.

Increased corporate focus on climate change mitigation and adaptation activities and corporate climate policy development: CRD has set a target to reduce corporate greenhouse gas (GHG) emissions 33% below 2007 levels by 2020 and in 2016 committed to accelerate corporate mitigation and adaptation activities.

The CRD has also committed to developing and implementing organizational policies and incorporating climate change in new risk registers to elevate consideration of climate change as part of decision-making. Coordination, project management, project implementation and corporate support towards meeting these objectives will be delivered by the division.

Many of the capital projects that the division works on are funded through grants from senior levels of government. Increasingly, grant applications require comprehensive project information, including detailed design. This requires the division to plan projects well in advance and have shovel-ready projects in hand.

The enhanced focus on resource recovery and the integration of liquid and solid wastes offers an opportunity for the division to provide specialized technical support (e.g., gasification, district energy and heat recovery system design and operation) to the [Integrated Resource Management RM-Advisory Select](#) Committee and Board.

The divisional work-load continues to increase, with more capital upgrades being planned for Regional Parks and the Environmental Resource Management divisions. Over the last five years, the division has issued 175 Contracts/RFPs valued at close to \$40 million.

Project information requests related to GISPS and construction surveys for quality assurance and cost control are growing. The GIS group of the division has been able to respond by performing more in-house construction surveys and adapting to newer technology resulting in significant costs savings on multiple projects, i.e., E&N Rail Trail Phase 2, Aggregate Production, TransCanada trail, etc.

~~Lease and Service Agreements Changes:~~ VIHA lease renewal could impact service levels. Facility Management services at the Peninsula Health Unit (PHU) are scheduled to end in Sept 2018 (impact on workforce / allocations).

~~Increased Labour and/or Cost Implications or Demands:~~ Utility costs are increasing consistently above the rate of inflation. Aging buildings, Facility Condition Index (FCI) increasing, expect increase in building operating costs. Insurers are pursuing subrogation opportunities with more conviction and are interpreting insurance policies with more care in an effort to better their bottom line — expect increase of the liability insurance rate. Impact of the Health Care Cost Recovery Act has increased the cost of claims and it is expected that this will have a negative impact on the cost of future Liability Insurance rates. New “Green” or “Energy Efficiency” initiatives impact labour and budget requirements.

~~Other factors impacting the service delivery include Work Safe BC updates and requirements as well as global insurance coverage, availability and rates.~~

## 1.4 Link to Strategic Priorities

Facilities Management provides support to all departments across a variety of services on corporate projects and in support of core service delivery —and, as such, may have a role in supporting numerous priorities.

~~The Environmental Engineering Services Division~~ provides project management services in completing a wide range of capital projects for Parks & Environmental Services and other CRD departments that contribute to achieving Board Strategic Priorities.

Specific linkages to the Board Strategic Priorities are listed below.

### INTEGRATED RESOURCE MANAGEMENT

- ~~● Realign resources to effectively deliver on Board directives related to integrated waste management and develop an overarching integrated plan~~
- ~~● Implement an assessment framework on integration opportunities, consider innovative approaches and report on effectiveness of programs~~

### CLIMATE CHANGE

- Realign resources to effectively deliver on Board directives related to climate change and implement policy and practices to demonstrate leadership in operations
- ~~● realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations~~
- Develop a climate framework to guide decision-making: —establish a working group to identify climate change priorities and maximize partnerships
- ~~● Realign resources to effectively deliver on Board directives related to climate change and implement policy and practices to demonstrate leadership in operations~~

### ACTIVE & MULTI-MODAL TRANSPORTATION

- Build and manage trails as transportation corridors

### REGIONAL INFRASTRUCTURE

- ~~Ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements~~
- ~~ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements~~
- ~~dDevelop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered~~
- ~~Ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements~~

## CORPORATE DEVELOPMENT

- ~~Evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery~~
- ~~Ensure CRD service delivery is effectively supported through the development of best practices~~
- ~~evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery~~
- ~~ensure CRD service delivery is effectively supported through the development of best practices~~
- ~~eEnhance and ensure effective financial and audit reporting practices~~
- ~~Ssupport continued investments in workforce education, training and development~~
- ~~Evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery~~
- ~~Ensure CRD service delivery is effectively supported through the development of best practices~~

## PUBLIC ENGAGEMENT & COMMUNICATIONS

- Develop public participation strategies, including implications and performance metrics, as a part of all major initiatives and implement more options for two-way dialogue.

~~The Division will provide support to all departments across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:~~

### ~~CLIMATE CHANGE~~

- ~~realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations~~
- ~~develop a climate framework to guide decision making, establish a working group to identify climate change priorities and maximize partnerships~~

### ~~CORPORATE DEVELOPMENT~~

- ~~evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery~~
- ~~ensure CRD service delivery is effectively supported through the development of best practices~~
- ~~enhance and ensure effective financial and audit reporting practices~~
- ~~support continued investments in workforce education, training and development~~

### ~~REGIONAL INFRASTRUCTURE~~

- ~~ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements~~
- ~~develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered~~

## 2 Services

### 2.1 Service Levels

Service Areas	Service Levels				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Facilities Management</b>	<ul style="list-style-type: none"> <li>• Provide building management services</li> <li>• 7 Capital Projects (\$187,112)</li> <li>• Procure corrective and preventative maintenance services (150 contracts)</li> <li>• Procure multiyear facility/building management services (75 contracts)</li> <li>• Administer Human Element programs, fire safety, organize building systems inspections (9 locations)</li> <li>• Estimate 2,800 work orders in current year</li> <li>• New locations to be added to service portfolio in 2015 TBD Provide support services for 1200 card holders</li> </ul>	<ul style="list-style-type: none"> <li>• 46 Capital Projects (\$2,283,960)</li> <li>• Estimate 3100 work orders</li> <li>• Possible expansion to other sites</li> <li>• Possible increase in the number of internal clients / locations</li> <li>• Complete Hazardous materials assessments for locations budgeted in 2016 (92 locations)</li> <li>• Monitor and review data to identify irregularities and reduction opportunities . Information to be provided to other CRD Divisions.</li> </ul>	<ul style="list-style-type: none"> <li>• 9 Capital Projects (\$615,076)</li> <li>• Estimate 3400 work orders</li> <li>• Possible expansion to other sites</li> <li>• Possible increase in the number of internal clients / locations</li> <li>• Complete Hazardous materials assessments for remaining locations. (240 locations)</li> <li>• Monitor and review data to identify irregularities and reduction opportunities. Information to be provided to other CRD Divisions.</li> </ul>	<ul style="list-style-type: none"> <li>• 13 Capital Projects (\$357,519)</li> <li>• FM's role ends in Sept 2018 at PHU</li> <li>• Estimate 3800 work orders</li> <li>• Possible expansion to other sites</li> <li>• Possible increase in the number of internal clients / locations</li> <li>• Monitor and review data to identify irregularities and reduction opportunities. Information to be provided to other CRD Divisions.</li> </ul>	<ul style="list-style-type: none"> <li>• 3 Capital Projects (\$444,827)</li> <li>• Estimate 4200 work orders</li> <li>• Possible expansion to other sites</li> <li>• Possible increase in the number of internal clients / locations</li> <li>• Monitor and review data to identify irregularities and reduction opportunities. Information to be provided to other CRD Divisions. <u>For discussion A quick analysis of the FM capital situation shows potential of \$1.15M in capital spending being carried forward from 2017. It's unclear at this point if this is to be referenced here in columns for years 3 &amp; 4.</u></li> </ul>

	<ul style="list-style-type: none"> <li>● <u>Expect 900 transactions/yr (new, lost, cancel, etc.)</u></li> <li>● <u>Provide Building maintenance, operations, capital project services upon request from staff (50 w/o's)</u></li> <li>● <u>Initiate coordination of the "noninvasive" Hazardous Materials Survey process</u></li> <li>● <u>Complete Hazardous materials assessments for locations budgeted in 2015 (62 locations)</u></li> <li>● <u>Implement Energy Monitoring software for 400 CRD utility accounts to obtain baseline usage data</u></li> </ul>				
<b>Integrated Water Services</b>	Core Area Liquid Waste Management Plan	No Change	Provide additional Planning and Project Management on the CALWMP	Provide additional Planning and Project Management on the CALWMP	Provide additional Planning and Project Management on the CALWMP
	Regional Odour Management Program	No Change	No Change	No Change	No Change
	Capital Projects	No Change	Number of Capital Projects to upgrade odour control systems will increase	Number of Capital Projects to upgrade odour control systems will increase	Number of Capital Projects to upgrade odour control systems will increase
	Operations Support	No Change	No Change	No Change	No Change
<b>Environmental Resource Management</b>	Capital Projects	No Change	No Change	No Change	No Change
	Operations Support	No Change	No Change	No Change	No Change

<b>Regional Parks</b>	Capital Projects: E&N Rail Trail and TransCanada Trail	Construction of TCT and next Phase of E&N to start	Construction of next Phase of E&N to continue along with other capital projects.	Construction of next Phase of E&N to continue along with other capital projects.	Construction of new capital projects.
	Operations Support	Increase in condition assessments on critical infrastructure	Increase in condition assessments on critical infrastructure	Increase in condition assessments on critical infrastructure	Increase in condition assessments on critical infrastructure
<b>Planning &amp; Protective Services</b>	Capital Projects	No Change	No Change	No Change	No Change
	Operations Support	No Change	No Change	No Change	No Change
<b><u>Environmental Partnerships/ Protection</u></b>	<u>Capital Projects: Provide Eng. support on the Millstream Remediation Project</u>	<u>No Change</u>	<u>No Change</u>	<u>No Change</u>	<u>No Change</u>
	<u>Operations Support</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>
<b>Service Areas</b>	<b>Service Levels</b>				
	<b>Base year 2015</b>	<b>Year 1 (2016)</b>	<b>Year 2 (2017)</b>	<b>Year 3 (2018)</b>	<b>Year 4 (2019)</b>
	<u>Operations Support</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>	<u>TBD</u>

## 2.2 Workforce Considerations

	<b>Workforce (FTE's)</b>				
<b>Service</b>	<b>Base year 2015</b>	<b>Year 1 (2016)</b>	<b>Year 2 (2017)</b>	<b>Year 3 (2018)</b>	<b>Year 4 (2019)</b>
<b>FTEs Engineering Services</b>	14	13	<del>12</del>	13**	13**
<b>Facility Management 7.5</b>	7.5	9.0*	9.0*	89.0*	89.0*
<b>Combined Total</b>	<b>1421.5</b>	<b>1322</b>	<b>1321</b>	<b>1321</b>	<b>1321</b>

\* Increase due to ~~from~~ realignment of resources with Engineering Services. ~~from~~

\*\* Realignment of one FTE from Facilities Management back into Engineering Services, other departments; see corresponding reduction in Environmental Engineering & Planning Division Service Plan

~~The three-year term position has been removed from the 2016—2019 service plan and no new positions are being added to the division.~~

Engineering Services ~~EP&E~~ is realigning and reprioritizing projects in response to the recent Corporate Plan roll out that has resulted in two less staff. Based on the current and future work-load, we forecast a resource deficit.

The Project Manager (Core Area Wastewater Treatment Project) position will revert back to the Senior Manager Position (currently in acting role) in 2017.

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Board Strategic Priority Reference	Budget Implications
<b>2016 – 2019</b>			
<del>I&amp;I Private Property Sewer Lateral Initiative</del> December 2016	<del>Develop a model Private Property Bylaw for municipalities to adopt and concurrently set up a rebate program for sewer lateral smoke testing.</del>	<del>Integrated Waste Management Regional Infrastructure</del>	<del>Core Budget</del>
<del>East Sooke Fire Hall</del> December 2016	<del>Complete, commission and turn over facility to East Sooke Fire Commission</del>	<del>Protective Services Regional Infrastructure</del>	<del>EAS Capital Reserves and Grants</del>
<del>E&amp;N Rail Trail and Trans-Canada Trail Development Projects</del> December 2016	<del>Complete design, construction and commissioning of these two important capital projects</del>	<del>Active &amp; Multi-Modal Transportation</del>	<del>Capital Reserves (Parke) and Grants</del>
<del>Core Area Wastewater Treatment Program</del> TBD	<del>Realign resources to deliver on Core Area Wastewater Treatment Project and acquire additional expertise on technologies and solutions</del>  <del>Environmental Engineering will be an active participant in the design, construction and commissioning of this project.</del>	<del>Integrated Waste Management</del>	<del>TBD</del>
<del>Integrated Waste Management Plan</del> TBD	<del>Investigate an overarching Liquid and Solid Waste Management Plan</del>	<del>Integrated Waste Management</del>	<del>TBD</del>
<b>2016</b>			
<del>FM – Energy Conservation &amp; Efficiency Review - Building</del>	<del>Estimated that luminaires and lamp upgrades at 5 locations would have a</del>	<del>Climate Change</del>	<del>350,000 – to be recovered from</del>

Title & Estimated Completion Date	Description	Board Strategic Priority Reference	Budget Implications
<u>Lighting Replacement Program</u> To be completed in 2016	<u>payback period of less than 5 years with hydro incentives and energy savings Approximately 25% of Building Lighting Replacement Program upgrades to be completed in 2016, balance in 2017</u>		<u>departments over payback period or current budgets</u>
<u>FM – Asset Management Plan (AMP) development</u> To be completed in 2016	<u>Working with Finance, dDevelop AMP that aligns with BC Framework for sustainable asset management and CRD asset management strategy and policy</u>	<u>Regional Infrastructure</u>  <u>Corporate Development</u>	<u>Grant proceeds, core budget (Finance, FM)</u>
<u>FM – Review Division Guidelines for developing leasehold and capital improvement projects</u> To be completed in 2016	<u>Incorporate changing demographic and climate change information into planning process. (ex. bathrooms renovations that accommodate scooter access)</u>	<u>Climate Change</u>	<u>Potential budget on future projects</u>
<u>FM – Hazardous Materials Identification Program (asbestos, lead paint, etc)</u> Ongoing	<u>Assess resource sourcing for Hazard Assessments (see section 2.1) and subsequent year follow ups. Waiting on ELT decisions on level of service in AMP</u>	<u>Regional Infrastructure</u>	<u>Project costs expected to exceed \$400,000 if full project is contracted out. Possible cost savings by developing in-house resources</u>
<u>FM – Procurement</u> To be completed in 2016	<u>Working with Executive Sservices, develop wording for a “purchase order” contract to streamline process for CRD and Contractors</u>	<u>Corporate Development</u>	<u>Core Budget</u>
<u>2017</u>			
<u>FM – Energy Conservation &amp; Efficiency Review</u> Ongoing	<u>Collaborate with other CRD divisions (e.g.ex,- Climate Action) to identify new opportunities to conserve / improve efficiency of energy use</u>	<u>Climate Action</u>	<u>Variety of Core, Department, Capital budget implications. In each case, business case to be developed that supports decision to proceed.</u>
<u>FM - Corporate Climate Change Policy Development &amp; Planning</u>	<u>Policies and climate lens review template will be implemented in 2017</u>	<u>Climate Action</u>	
<u>FM - Corporate Lens Review of Capital Projects</u>	<u>In 2018, initiate, manage, monitor and report on all new and ongoing capital projects, additional resource expected.</u>	<u>Climate Action</u>	

Title & Estimated Completion Date	Description	Board Strategic Priority Reference	Budget Implications
<u>2018 Onward</u>			
<u>2018 Onward</u>			
<u>FM - Corporate Climate Adaptation Plan</u>	In 2018, develop plan to prepare CRD-owned assets, infrastructure and facilities for future climate change impacts.	<u>Climate Action</u>	
<u>FM - Corporate Mitigation &amp; Adaptation Projects</u>  <u>Ongoing</u>	Manage pProjects and provide support to staff to develop projects designed to accelerate mitigation and adaptation activities	<u>Climate Action</u>	
<u>Title &amp; Estimated Completion Date</u>	<u>Description</u>	<u>Board Strategic Priority Reference</u>	<u>Budget Implications</u>
<u>2016-2019</u>			
<u>ES - I&amp;I Private Property Sewer Lateral Initiative</u>  <u>December 2016</u>	<u>Develop a model Private Property Bylaw for municipalities to adopt and concurrently set up a rebate program for sewer lateral smoke testing.</u>	<u>Integrated Waste Management</u>  <u>Regional Instructure</u>	<u>Core Budget</u>
<u>ES - East Sooke Fire Hall</u>  <u>December 2016</u>	<u>Complete, commission and turn over facility to East Sooke Fire Commission</u>	<u>Protective Services</u>  <u>Regional Infrastructure</u>	<u>EAS Capital Reserves and Grants</u>
<u>ES - E&amp;N Rail Trail and Trans-Canada Trail Development Projects</u>  <u>December 2018</u>	<u>Complete design, construction and commissioning of these two important capital projects</u>	<u>Active &amp; Multi-Modal Transportation</u>	<u>Capital Reserves (Parks) and Grants</u>
<u>ES - Core Area Wastewater Treatment Program</u>  <u>TBD</u>	<u>Realign resources to deliver on Core Area Wastewater Treatment Project and acquire additional expertise on technologies and solutions</u>  <u>Environmental Engineering will be an active participant in the design, construction and commissioning of this project.</u>	<u>Integrated Waste Management</u>	<u>TBD</u>
<u>ES - Integrated WasteResource Management Plan</u>  <u>TBD</u>	<u>Provide procurement support to ERM for the IRM plan. Investigate an overarching Liquid and Solid Waste Management Plan</u>	<u>Integrated WasteResource Management</u>	<u>TBD</u>

# 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Ensure preparation, management, and implementation of liquid waste management plans	<ul style="list-style-type: none"> <li>• <del>Qualitative observations on demonstrated progress toward integration of liquid and solid wastes</del> progress on the Core Area LWMP*</li> <li>• <u>Submit amendment no. 10 of Core Area Liquid Waste Management Plan to Ministry of Environment by Spring 2016.</u></li> <li>• <u>Note: <del>Is this line still relevant?</del></u></li> </ul>
Provide specialized engineering and project management support to multiple divisions	<ul style="list-style-type: none"> <li>• Percentage of capital projects completed on time and on budget* (i.e., phase 2 &amp; phase 3 of E&amp;N Rail Trail; East Sooke Fire Hall; projects at Hartland)</li> <li>• Number of infrastructure replacement projects*</li> <li>• Sustainable asset funding plans in place*</li> </ul>
<u>Contribute to corporate climate action goals</u>	<ul style="list-style-type: none"> <li>• <u>Realign resources and reorganize the FM division</u></li> <li>• <u>Number and impact of projects and partnerships that demonstrate support for reductions in greenhouse gas (GHG) emissions and for increased climate resiliency*</u></li> <li>• <u>Annual GHG emissions of corporate buildings*</u></li> </ul>
<u>Provide specialized information to support decision making</u>	<ul style="list-style-type: none"> <li>• <u>Note: <del>Is this line still relevant?</del> Respond to general staff inquiries within 5 working days 95% of the time</u></li> </ul>
<u>Monitor liability and property exposures</u>	<ul style="list-style-type: none"> <li>• <u>Perform a minimum of 40 internal loss control visits per year</u></li> <li>• <u>Obtain property and/or liability policies for construction projects within 2 weeks of request 95% of the time.</u></li> </ul>
<u>Maintain buildings and facilities and ensure compliance with relevant regulations</u>	<ul style="list-style-type: none"> <li>• <u>% of projects completed on time and on budget</u></li> <li>• <u>Number of infrastructure replacement projects*</u></li> <li>• <u>Sustainable asset funding plans in place*</u></li> <li>• <u>75% of work orders completed as scheduled</u></li> </ul>

\*Corporate indicator – multiple divisions may contribute to this measure

## Contact

Name: ~~Joshua Frederick~~ Stephen May, P.Eng.  
 Title: ~~Acting Senior Manager, Facilities Management & Environmental Engineering Services~~  
 Contact information: 250-360-3097 3064





Making a difference...together

## 2018 Service Plans Review and Approval

For Committee of the Whole, November 29, 2017

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### APPENDIX G

#### Service Plans Reviewed by the Electoral Area Services Committee

##### TABLE OF CONTENTS

##### Service Plan Summaries

1. Building Inspection
2. Juan de Fuca Planning
3. Protective Services
4. Salt Spring Island Administration
5. Southern Gulf Islands Initiatives
6. Juan de Fuca Parks and Recreation

##### Service Plans

1. Building Inspection
2. Juan de Fuca Planning
3. Protective Services
4. Salt Spring Island Administration
5. Southern Gulf Islands Initiatives
6. Juan de Fuca Parks and Recreation

The Electoral Area Services Committee also reviewed service plans related to Integrated Water Services (see Appendix H)

<p><b>SERVICE NAME:</b> Building Inspection</p>
<p><b>Changes in Assumptions, Trends, and Other Issues since 2017:</b> <i>(linked to section 1.3 and 1.4 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• Regulations with respect to new provincial Act and the British Columbia Building Code are anticipated to come into effect by the end of 2017.</li> <li>• The New BC Energy Step Code and BC Housing Licensing and Consumer Services (formerly HPO-Homeowner’s Protection Office) came into effect March 2017. The BC Housing (HPO) Licensing program requires that all construction be carried out by Licensed Contractors and the Owner-Builders get certified by BC Housing to build their private residence.</li> </ul>
<p><b>Overall 2017 Budget Performance:</b> <i>(linked to budget forecast to year end)</i></p> <ul style="list-style-type: none"> <li>• There is an overall favourable variance of \$242,000 (20%) due mainly to a significant favourable variance (\$255,000) in permit fee and contract fee revenue. This will be offset by an unfavourable variance (\$36,000) in salaries and wages and favourable internal recoveries of \$23,000. The resulting surplus will be:             <ol style="list-style-type: none"> <li>1. Used to fund increased auxiliary wages in 2018 of approximately \$41,000,</li> <li>2. Transferred to Permit Fee Reserve in 2017 as projections show that the Permit Fee Reserve will be underfunded by 2019.</li> </ol> </li> </ul>
<p><b>Update to Division Initiatives:</b> <i>(linked to section 3 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• Dormant File Policy: Maintain the CRD Dormant File policy to include for the expiry of all building permits for 2002 or earlier.</li> <li>• Preparation work for digitization of old building permit files from micro-fiche.</li> </ul>
<p><b>Service Adjustments and Staffing Levels:</b> <i>(linked to section 2 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• No change to the FTE count.</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Ensure application of building regulations, codes and practices.</b></p> <ul style="list-style-type: none"> <li>• % of building inspections in compliance with current BC Building Code (100%)</li> <li>• Conduct an average of 7 building inspections per day</li> <li>• Permit Fee Revenue</li> </ul>	<p>100%</p> <p>7</p> <p>\$708,210</p>	<p>100%</p> <p>7</p> <p>\$948,580</p> <p>(34% difference)</p>	<p>100%</p> <p>7</p> <p>\$800,000</p> <p>(13% increase from 2017 to 2018)</p>
<p><b>Service Goal: Provide acceptable response time to customer service requests.</b></p> <ul style="list-style-type: none"> <li>• Permit processing time is less than 21 days 80% of the time</li> <li>• Permit Fee Revenue as a % of Total Costs</li> </ul>	<p>&lt;21 days/80%</p> <p>57%</p>	<p>&lt;21 days/80%</p> <p>90%</p>	<p>&lt;21 days/80%</p> <p>70%</p>
<p><b>Service Goal: Provide information on building permit process, BC Building Code requirements and approved construction practices.</b></p> <ul style="list-style-type: none"> <li>• # of requests fulfilled per year for building inspection, transportation, demographic and/or development data* (18,675) <sup>1</sup></li> </ul>	<p>18,675 <sup>(1)</sup></p>	<p>22,440<sup>(2)</sup></p>	<p>22,440<sup>(2)</sup></p>

Note: <sup>(1)</sup> This is based on an average of 25 requests per day per office.

<sup>(2)</sup> This is based on an average of 30 requests per day per office.

## Contact

Name: Robert Gutierrez, RBO

Title: Manager, CRD Building Inspection

Contact information: 250.360.3230

**SERVICE NAME:** Juan de Fuca Electoral Area Planning

**Changes in Assumptions, Trends, and Other Issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- An increase in the number of development applications for 2017 (YTD) has resulted in staff resources being focused on meeting customer service targets. The filling of a vacant 0.5 FTE will allow staff to deliver other core services, such as consolidating land use and subdivision servicing bylaws for the Electoral Area while continuing to meet customer service goals.

**Overall 2017 Budget Performance:** (linked to budget forecast to year end)

- There is an estimated overall favourable variance of \$73,980 (12.6%). The surplus will be carried forward to 2018 to offset operating costs. This variance is due to lower than anticipated operating costs (\$31,000), mainly legal expenses and spending for LIDAR photography, an increase in revenue (\$22,500) due to an increase in development applications, and a favourable variance in internal recovery (\$20,000) from Regional Parks arising from a staff secondment from JdF Planning to Regional Parks.

**Update to Division Initiatives:** (linked to section 3 of the detailed service plan)

- Shirley/Jordan River and East Sooke Official Community Plan Updates: Proceed with adoption of proposed OCPs upon adoption of the new Regional Growth Strategy.
- Juan de Fuca Land Use and Subdivision Servicing Bylaw Updates: Filling the vacant 0.5 FTE will allow current staff to begin work reviewing and aligning subdivision standards within the JdF EA. Staff to undertake stakeholder engagement to update land use and subdivision regulations.

**Service Adjustments and Staffing Levels:** (linked to section 2 of the detailed service plan)

- Funding the vacant 0.5 FTE to address increased office work load and allow work to continue on Service Plan initiatives (estimated \$35k + expenses).
- 0.2 FTE has been transferred from Juan de Fuca Community Parks and Recreation to Juan de Fuca Electoral Area Planning to accommodate administrative assistance provided by Planning staff. Funding is estimated at \$11k + expenses.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Maintain quality community planning and engagement processes</b></p> <ul style="list-style-type: none"> <li>• Target a minimum of 1 Official Community Plan update each year</li> <li>• # of CRD educational workshops delivered or partnered annually*</li> <li>• Initiate bi-annual survey to gauge applicant satisfaction with Development Services (target 50% applicant completion rate)</li> <li>• # of Advisory Planning Commissions active annually</li> </ul>	<p>1</p> <p>5</p> <p>Yes</p> <p>5</p>	<p>0</p> <p>0</p> <p>No</p> <p>5</p>	<p>2</p> <p>5</p> <p>No</p> <p>5</p>
<p><b>Service Goal: Provide high levels of customer service</b></p> <ul style="list-style-type: none"> <li>• Process 100% of zoning amendment applications within 8 months of completed application.</li> <li>• Process 100% of development permit and development variance permits within 2 months of a completed application</li> <li>• # of requests fulfilled per year for building inspections, transportation, demographic and/or development data/information**</li> </ul>	<p>100</p> <p>100</p> <p>4980 <sup>(1)</sup></p>	<p>100</p> <p>100</p> <p>7380 <sup>(2)</sup></p>	<p>100</p> <p>100</p> <p>6150 <sup>(3)</sup></p>

Note: <sup>(1)</sup> This is based on an average of 20 requests per day.  
<sup>(2)</sup> This is based on an average of 30 requests per day.  
<sup>(3)</sup> This is based on an average of 25 requests per day.

\* *Educational materials, including brochures, to be developed in place of workshops*  
 \*\* *Corporate indicator – Multiple divisions may contribute to this measure*

## Contact

Name: Iain Lawrence

Title: Manager, Juan de Fuca Local Area Planning

Contact Information: 250.642.8104

**SERVICE NAME:** Protective Services

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

- Construction on South Island Communications Centre to start Fall of 2017 complete Jan 2019. This facility will consolidate the 911 PSAP and Police Dispatch services in the CRD into a single operational site with E-Comm as the contracted operator.
- Increased collaboration with FN's on emergency management in the CRD. This is aligned with EMBC's recent agreement with INAC to provide emergency program support to FN's.
- The BCSPCA no longer providing vet services to strays. This decrease in service from that sector is now impacting CRD budgets as we are now having to absorb additional vet service costs.
- OFC fire training guidelines per the Playbook severely challenging some rural fire services to meet these standards. This creates inequity in some areas that are challenged with recruitment and retention of volunteers.
- IWS is undertaking post-disaster planning for the CRD water system. This will be aligned with the overall CRD emergency plans and will inform other local authorities in the region with respect to their post disaster plans related to water supply.
- The Regional Emergency Management Partnership (REMP) between the CRD and the province is beginning implementation of its strategic plan to improve collaborative response to regional emergencies. This will assist with the overall regional coordination of resources and response amongst local authorities in the region in the event of a multi-jurisdictional emergency.
- The AGLG is undertaking an audit of the CRD's Emergency Management program in October 2017. This audit will review all aspects of the CRD's emergency program and will provide a report back on results.

***Overall 2017 Budget Performance:*** (linked to budget forecast to year end)

- **Regionally Funded Services (Corporate Emergency, Hazmat, Regional Support)** – There is a \$20,000 favourable (12.2%) variance due to the cessation of the use of E Team. This variance will be used to fund improvements required for the Regional Emergency Operations Centre in 2017.
- **Fire Protection** – No significant variances from budget expected.
- **Animal Care** – Continued pressure on vet services and legal expenses will result in overspending of \$32k. This will be offset by a budgeted Contingency of \$29k and recoveries from Bylaw.
- **Emergency Communication/Dispatch – (911 Call Answer, 912 PSAP)** – Call Answer Levies (CAL) are anticipated to be \$150,000 (10%) below budget. RCMP contract for services estimated to be \$80,000 (68%) below budget, offset by shortfall in CAL revenue in 912 PSAP service of \$50,000 (11%). Remaining surplus to be carried forward to 2018. Payback to Victoria, Saanich PSAP members will be \$103,000 (11%) below budget.

***Update to Division Initiatives:*** (linked to section 3 of the detailed service plan)

- Construction on the Port Renfrew/Pacheedaht Earthquake Early Warning/Tsunami siren system begins in fall of 2017. The project will see the establishment of three sirens in this high risk area to warn residents of potential tsunamis.
- Construct South Island Communications Centre to meet January 2019 operational target.
- Upgrade Emergency Communications Infrastructure to ensure effective communications within the region and to external agencies in the event of telecommunications system failure.
- Acquire reserve fire apparatus for EA Fire services to provide timely spare when frontline engines are down for repair and maintenance to ensure service continuity. The spare would be held at Hartland Landfill and would also act as on site fire suppression support to Hartland as required. This is a collaborative purchase with Hartland.

- Enhance on call Duty Emergency Manager capability to better serve the organization and to relieve excessive after hours pressure on the two current emergency managers that take call.
- Improve EOC/building supplies for emergencies to ensure that emergency operations can be sustained during disaster events consistent with legislative requirements.

***Service Adjustments and Staffing Levels: (linked to section 2 of the detailed service plan)***

- Increase of on-call Duty Emergency Manager capability to better serve the organization and to relieve excessive after hours pressure on the two current emergency managers that take call. \$25K funded through requisition.
- Increase parks patrols in Regional Parks by Bylaw Officers, \$100K recovery from Parks to fund a .5 FTE and additional auxiliary hours to provide four hours of Parks patrol daily x 365

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p>In section 4 of your Service Plan, select 2017 and 2018 indicators or measures and summarise at a high level. If you have any new or updated KPIs or unchanged KPIs related to 2017 and 2018 you'll add them here. This table is a snapshot of your service plan section 4 related to 2017/2018 indicators.</p>			
<b>Maintain and enhance public safety through emergency management and response</b>	<b>2017 planned metric</b>	<b>2017 projected metric</b>	<b>2018 planned metric</b>
Corporate Emergency Operations Centre	2 exercises per year	2 exercises per year	2 exercises per year
Hazardous Material Response Readiness	Ensure a minimum of 70 hazmat technicians	Ensure a minimum of 60 hazmat technicians	Ensure a minimum of 60 hazmat technicians
911 Call Answering	95% of 911 calls are handled within 15 seconds	95% of 911 calls are handled within 15 seconds	95% of 911 calls are handled within 15 seconds
Trained SAR volunteers	30 trained volunteers on roster	30 trained volunteers on roster	40 trained volunteers on roster
<b>Ensure Quality Animal Care Services for Region</b>			
Ensure Quality Animal Care Services for Region	Rehome more than 90% of dogs and cats from CRD animal care facilities annually	Rehome more than 90% of dogs and cats from CRD animal care facilities annually	Rehome more than 90% of dogs and cats from CRD animal care facilities annually

## Contact

Name: Shawn Carby  
 Title: Senior Manager, Protective Services  
 Contact Information: 250.360.3186

<p><b>SERVICE NAME:</b> Salt Spring Island Administration</p>
<p><b>Changes in Assumptions, Trends, and Other Issues since 2017:</b> <i>(linked to section 1.3 and 1.4 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>Referendum for incorporation scheduled for September 9, 2017, and will impact division operations regardless of outcome (potential to transfer operation and management of utilities and conversion of water improvement district).</li> </ul>
<p><b>Overall 2017 Budget Performance:</b> <i>(linked to budget forecast to year end)</i></p> <ul style="list-style-type: none"> <li>Savings in salaries due to vacancy in Engineer position will be partially offset by lower labour recoveries; transfer to capital will be increased to fund higher than planned leasehold improvements</li> <li>Transportation: There is a \$15,000 (16.6%) unfavourable variance in operating cost to repair damaged pathway infrastructure. Offset with a reduction in transfer to capital reserves. The current balance of the capital reserve is \$907,832.</li> <li>Transit: There is a \$16,000 (4.2%) favourable variance in operating costs due to BC Transit's utilizing internal reserves to offset their base level operating costs thereby reducing CRD proportional share.</li> <li>Economic Development: There is a \$13,000 (32.6%) favourable variance due to unexpected funds in strategic plan initiatives. Surplus to be carried forward into 2018 to offset future strategic plan initiatives.</li> <li>Community Recreation: There is \$4,000 (6.81%) favorable variance of fees revenue driven by successful program offerings. Surplus to be carried forward into 2018 to offset additional administrative support.</li> </ul>
<p><b>Update to Division Initiatives:</b> <i>(linked to section 3 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>Administration Office: New office Ganges Village completed as July 2017. Will require ongoing funding for annual lease and short term loan repayment (2017-2021) for renovations.</li> <li>Athletic Fields Acquisition: Application for non-farm status of ALR lands to develop playing fields was denied by the ALC; search for non-ALR lands underway. \$100,000 of available park land acquisition funds were used to purchase three lots to provide a connector trail between the Trincomali Trail Network and Dunbabin Park.</li> <li>Economic Development: Developed website (<a href="http://www.opportunitysaltspring.com">www.opportunitysaltspring.com</a>). Implementing grant for Rural Accelerator program to grow local economy by building business capacity, mentoring entrepreneurs, and creating employment opportunities. Working with Chamber of Commerce and accommodation sector on Salt Spring and Southern Gulf Islands to develop business plan to pursue MRDT tax.</li> <li>Ganges Harbour Walk: Preliminary infrastructure assessment in progress.</li> <li>Fernwood Dock: 90% of infrastructure improvements to be completed by December 2017</li> <li>Transportation: Designs for multi-use pathway and cycling in progress. Construction projected to commence in the 2<sup>nd</sup> Quarter of 2018. Completed Rainbow Road pathway to high school. Atkins Road to be completed by September 30.</li> <li>Transit: Implemented and expanded Saturday summer service on #2 Fulford Harbour route. Approved additional 500 evening service hours in 2018/2019 Monday to Thursday. New bus shelter to be installed in Q4 on Lower Ganges Road and Crofton.</li> <li>Beddis: Potassium permanganate injection and equipment project complete. Creekside pressure control station rebuild complete. Failed variable frequency drive repair completed. Backwash supply tank installed.</li> </ul>

- Cedars of Tuam: Sand removal and pressure transducer installation completed. New well site secured. Scope of work underway for preliminary designs and costs to put new well into production.
- Fulford Water: Morningside main replacement underway. 2901 Fulford Road water service replacement completed.
- Maliview Sewer: Inflow and infiltration inspection completed and repair work to commence upon completion of outfall repair (land section) which is scheduled to be completed 2017.
- Ganges Sewer: Capital improvement program in progress. Generator set electrical designs and install underway.
- Burgoyne Liquid Waste: Septage receiving station and storage tank installation and construction in progress. Access road improvements completed.

***Service Adjustments and Staffing Levels: (linked to section 2 of the detailed service plan)***

- Additional staffing levels: Aquatic facility will benefit from a 4.1 FTE with CRD assuming full operation and management effective Apr. 1, 2018; and a 0.5 FTE increase for recreation programmer in 2018 to be recovered from programming revenue.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: User fees and admission revenues as a % of total costs</b>	Pool 26.6% Parks 20.4% Recreation 57.0%	Pool 25.9% Parks 20.9% Recreation 62.2%	Pool 28.5% Parks 20.3% Recreation 63.6%
<b>Service Goal: Increase access to parks and recreational opportunities</b>	3 active parks 58 passive parks	3 active parks 58 passive parks	3 active parks 59 passive parks
<b>Service Goal: Increase access to parks and recreational opportunities</b>  <ul style="list-style-type: none"> <li>Active Parks (Athelctic Fields Land Acquisition, / Portlock Park Multisport Court Renovation)</li> </ul>	Conceptual design for playing fields. Upgrade multisport court at Portlock	Update the 2009 Parks and Recreation Strategic Plan	Develop a master plan for Portlock Park, establish location for multisport court.
<b>Service Goal: Increase access to parks and recreational opportunities</b>  <ul style="list-style-type: none"> <li>Passive Parks (Centennial Park Master Plan Implementation)</li> </ul>	Replace Centennial Park washroom facility	Develop a storm water and drainage plan for Centennial Park	Replace Centennial Park washroom facility
<b>Service Goal: Increase access to parks and recreational opportunities</b>  <ul style="list-style-type: none"> <li>Rainbow Road Aquatic Centre System Enhancement</li> </ul>	Implement new revenue and cash handling procedures at the pool and install registration program	Registration software installed (Perfect Mind) Pool operations contact reviewed and business case presented to CRD Board	CRD to take over operations/staffing April 1, 2018
<b>Service Goal: Support multi-modal transportatoin planning and investment</b>  <ul style="list-style-type: none"> <li>Pathway and dock construction and improvements</li> </ul>	Fernwood Dock captial repair and inspection	Inspection completed; 90% repair work complete	Complete final repairs. Monitor identified issues in condition report for further work
	Construct Rainbow Road pathway;	Section one completed; detailed designs for remainder underway	Construction to be completed.
	Pedestrian improvements	Complete Ganges pathway network	Identify new pathway infrastructre projects



	2015/2016	2016/2017	Variance
<b>Local Investment Measures</b>			
Revenue Service Hours	7,000	7,000	0%
Total Cost	\$565,000	\$560,000	-1%
Service Hours per capita	1.35	1.33	-1%
Fleet size	4	4	0%
<b>Return on Investment</b>			
Passenger trips	107	101	-5%
Total revenue	\$196,000	\$202,000	3%
Passenger Trips per capita	20.4	19.1	-6%
Revenue per trip	\$1.83	\$1.99	9%
<b>Performance</b>			
Operating Cost per service hour	\$68.88	\$65.13	-5%
Operating costs per passenger trip	\$4.58	\$4.54	-1%
Passenger trip per service hour	15.0	14.3	-5%
Operating cost recovery	40.1%	43.8%	9%

## Contact

Name: Karla Campbell

Title: Senior Manager, Division

Contact Information: 250.538.4300

<p><b>SERVICE NAME:</b> Southern Gulf Island Initiatives</p>
<p><b><i>Changes in Assumptions, Trends, and Other Issues since 2017:</i></b> (linked to section 1.3 and 1.4 of the detailed service plan)</p> <ul style="list-style-type: none"> <li>• All trends identified in 2016 continue to apply</li> <li>• Administrative structure under review which may impact staffing and budget</li> <li>• Addition of teleconferencing equipment acquisition and installation project</li> </ul>
<p><b><i>Overall 2017 Budget Performance:</i></b> (linked to budget forecast to year end)</p> <ul style="list-style-type: none"> <li>• No significant variance to budget with the exception of additional revenue from a CWF grant for CESC Strategic Plan SGI2020 (\$50,000) and matching expenses</li> <li>• Administrative structure under review may impact budget requisition</li> <li>• Allocation of \$50,000 to support teleconferencing initiative</li> </ul>
<p><b><i>Update to Division Initiatives:</i></b> (linked to section 3 of the detailed service plan)</p> <ul style="list-style-type: none"> <li>• Progress made on CESC initiatives, including Social Finance and Organizational Structure, with preparation of CESC Strategic Plan SGI2020, which is out for public consultation; draft SSI and SGI Regional Trails Plan out for public review; ETGI Concept Plan and SGI Food &amp; Agriculture Strategy approved by Board; Community bus and Inter-island ferry information reports completed</li> <li>• Several initiatives have been delayed including Salish Sea Registry, Mayne Island Demonstration Trail, Broadband Improvement, Inter-island ferry pilot project, ETGI Implementation Plan, and Food and Agriculture Strategic Initiatives</li> <li>• Acquisition and installation of teleconferencing equipment and facilities on all islands to facilitate inter-island communication</li> </ul>
<p><b><i>Service Adjustments and Staffing Levels:</i></b> (linked to section 2 of the detailed service plan)</p> <ul style="list-style-type: none"> <li>• Administrative structure under review and may affect FTE</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Service Plan update</b>	approved	approved	refined
<b>Service Goal: New SGI Administrative Structure</b>	Identified	identified	Implemented
<b>Service Goal: CESC Strategic Plan SGI2020</b>	Community support	Implemented	Refined

## Contact

Name: June Klassen

Title: Manager, Service Delivery SGI

Contact Information: 250.360.3275

**SERVICE NAME:** JDFEA Parks & Recreation

**Changes in Assumptions, Trends, and Other Issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- No changes

**Overall 2017 Budget Performance:** (linked to budget forecast to year end)

- A favourable variance of \$20,000 (11%) is expected due to the vacancy in the Parks Manager position and low spending on Contract for Services. The surplus will be transferred to a Capital Fund for future capital improvements.

**Update to Division Initiatives:** (linked to section 3 of the detailed service plan)

- 2017 divisional initiatives updated to reflect continuation of the Kemp Lake Foreshore Access Project and the new Rural Dividend BC – Port Renfrew Tourism Trail.

**Service Adjustments and Staffing Levels:** (linked to section 2 of the detailed service plan)

- Reduce core operating budget to reallocate wages to capital projects identified in the service plan.
- 0.2 FTE is being transferred from Juan de Fuca Community Parks and Recreation to Juan de Fuca Electoral Area Planning to accommodate administrative assistance provided by Planning staff.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: Ensure responsible stewardship of parks and trails – trail network development – Port Renfrew</b>	1.5 km Port Renfrew Tourism Trail	1.5 km Port Renfrew Tourism Trail	1.5 km Port Renfrew Tourism Trail
<b>Service Goal: Increase access to community parks, trails and recreational programming</b>	Develop improved road and parking access to Kemp Lake boat launch and install for boat launching, fishing and swimming	Develop improved road and parking access to Kemp Lake boat launch and install for boat launching, fishing and swimming	Develop improved road and parking access to Kemp Lake boat launch and install for boat launching, fishing and swimming
<b>Service Goal: Increase access to community parks, trails and recreational programming</b>	Working in partnership with the Friends of Coppermine Park Society to construct a picnic shelter at Coppermine Park	Working in partnership with the Friends of Coppermine Park Society to construct a picnic shelter at Coppermine Park	Working in partnership with the Friends of Coppermine Park Society to construct a picnic shelter at Coppermine Park

## Contact

Name: Mike MacIntyre  
 Title: A/Manager Juan de Fuca Parks and Recreation  
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# Service Plan for Building Inspection

2016-2019  
(2018)



Capital Regional District

*Date submitted: July 18~~7~~, 2017*  
*Date updated: July 18~~7~~, 2017*



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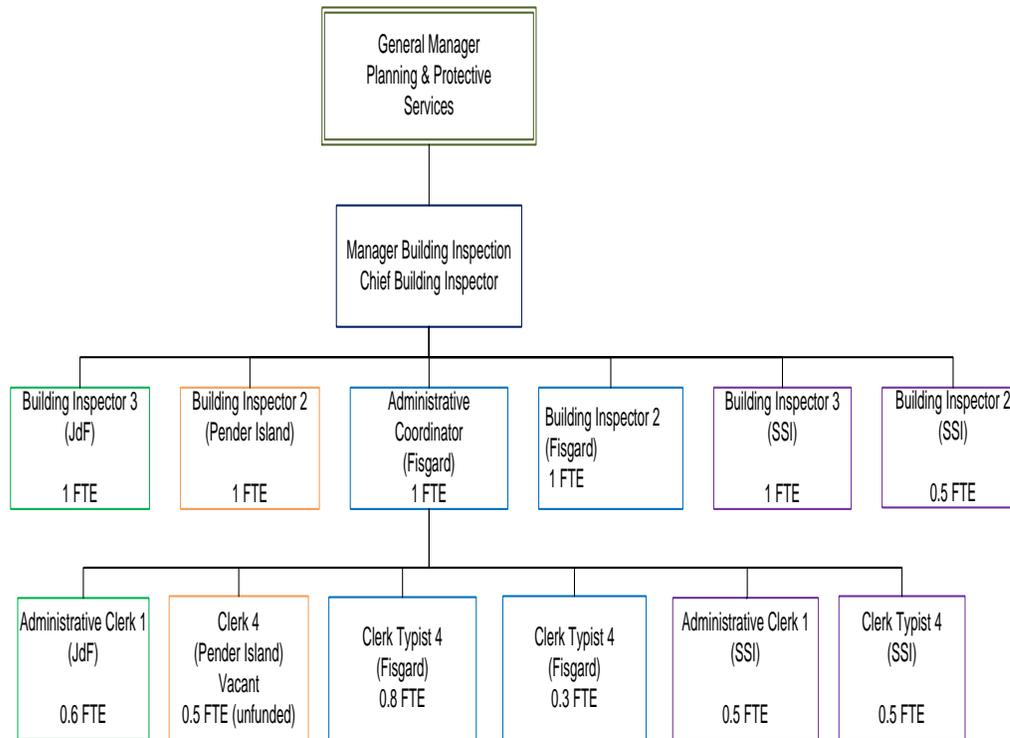
# 1 Overview

## 1.1 Division & Service Summary

The Building Inspection Division works to provide protection to the residents of the Capital Region for the health, safety, structural integrity, and the fire protection of buildings through the BC Building Code, CRD Building Bylaws, and the *Local Government Act/Community Charter*.

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<ul style="list-style-type: none"> <li>Provide information on the building permit process, BC Building Code requirements and approved construction practices</li> </ul>	CRD Electoral Areas <del>Pacquachin, Tsartlip, Tsawout and Songhees First Nations</del>	Partial requisition, <del>and building permit fees and invoicing for fees for service</del>	Electoral Area Services Committee CRD Board
<ul style="list-style-type: none"> <li>Process building permit applications ensuring compliance with all applicable regulations</li> </ul>	CRD Electoral Areas <del>Pacquachin, Tsartlip, Tsawout and Songhees First Nations</del>	Partial requisition, <del>and building permit fees and invoicing for fees for service</del>	Electoral Area Services Committee CRD Board
<ul style="list-style-type: none"> <li>Provide building inspection services</li> </ul>	CRD Electoral Areas <del>Pacquachin, Tsartlip, Tsawout and Songhees First Nations</del>	Partial requisition <del>and building permit fees and invoicing for fees for service</del>	Electoral Area Services Committee CRD Board

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

Recent trends or issues that affect building inspection services include:

- Changes to provincial building acts, legislation and regulations with respect to new provincial changes to the *Community Charter*, *The Local Government Act*, and the *British Columbia Building Code*.
- Changes to Provincial Regulations due to Climate Change Initiatives. (New Energy Code requirements).
- Home Owner Protection Office (BC Housing) requirements to have all owner builders be certified in order to receive building permits to construct a single family dwelling.
- Staff time spent providing services to ~~to Electoral Area Directors or~~ CRD departments can result in less time spent carrying out building inspections activities.
- Having adequate staff and resources to process new- the high volume of building permit applications and complete existing active files.
- Increase in residential and commercial construction and the number of building permits being issued.
- Senior staff retirement replacement 2017/18.

## 1.4 Link to Priorities

### PROTECTIVE SERVICES

- Oversee compliance with applicable building regulations

### CORPORATE DEVELOPMENT

- Ensure CRD service delivery is effectively supported through the development of best practices.

### EDUCATION, OUTREACH & INFORMATION

- Demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Ensure Regulatory Compliance</b>	<ul style="list-style-type: none"> <li>• Manage violation files, register notices on title and follow up on issues</li> <li>• Manage remedial action files</li> <li>• Carry out contract work for removal of derelict structures</li> </ul>	<u>Review &amp; assess</u>	Amend the current Building Inspections Bylaw to comply with Bill-3 <i>Building Act</i> 2015.	<u>Review &amp; assess</u> <u>Review and assess current Building Inspections bylaws with new amendments to the Building Regulation</u>	Adjust to meet service delivery needs, as required
<b>Process Building Permits</b>	<ul style="list-style-type: none"> <li>• Process building permit applications for Malahat, Willis Point, Juan de Fuca area, Salt Spring Island, Southern Gulf and small islands <u>and First Nations</u></li> <li>• Maintain building permit files</li> <li>• Maintain building permit records in Tempest</li> </ul>	<u>Review &amp; assess</u>	<ul style="list-style-type: none"> <li>• <u>Process building permit applications for Malahat, Willis Point, Juan de Fuca area, Salt Spring Island, Southern Gulf and small islands</u></li> <li>• <u>Maintain building permit files</u></li> </ul> Adjust to meet service delivery needs, as required	<ul style="list-style-type: none"> <li>• <u>Process building permit applications for Malahat, Willis Point, Juan de Fuca area, Salt Spring Island, Southern Gulf and small islands</u></li> <li>• <u>Maintain building permit files</u></li> </ul> Maintain building permit records in Tempest <u>Review &amp; assess</u>	<ul style="list-style-type: none"> <li>• <u>Process building permit applications for Malahat, Willis Point, Juan de Fuca area, Salt Spring Island, Southern Gulf and small islands</u></li> <li>• <u>Maintain building permit files</u></li> </ul> Adjust to meet service delivery needs, as required

<p><b>Conduct Inspections</b></p> <p><b>Maintain Competency/Qualification Requirements that are now required by <i>Building Act</i></b></p>	<ul style="list-style-type: none"> <li>• Provide building inspector coverage in all offices</li> <li>• Provide inspection services in all areas</li> <li>• <u>Provide building inspectors with information and access to training and development</u></li> </ul>	<p><del>Review &amp; assess</del></p>	<ul style="list-style-type: none"> <li>• <u>Provide building inspector coverage in all offices</u></li> <li>• <u>Provide inspection services in all areas</u></li> <li>• <u>Provide building inspectors with information and access to training and development</u></li> </ul> <p><del>Provide all inspectors with information and access to training and development</del></p>	<ul style="list-style-type: none"> <li>• <u>Provide building inspector coverage in all offices</u></li> <li>• <u>Provide inspection services in all areas</u></li> <li>• <u>Provide building inspectors with information and access to training and development</u></li> </ul> <p><del>Review &amp; assess</del></p>	<p>Adjust to meet service delivery needs, as required</p>
<p><b>Provide Information and Administrative Support</b></p>	<ul style="list-style-type: none"> <li>• Update building bylaw, policies and procedures</li> <li>• Provide consultant services regarding planning and land use, sewer and water, fire suppression etc.</li> <li>• Provide cash handling, point of sale and reception point for CRD <del>Building Inspection on Salt Spring Island and in the Juan de Fuca area</del></li> <li>• Issue and maintain house addressing for Juan de Fuca, Salt Spring Island and The Southern Gulf Islands</li> </ul>	<p><del>Review &amp; assess</del></p>	<ul style="list-style-type: none"> <li>• <u>Update building bylaw, policies and procedures</u></li> <li>• <u>Provide consultant services regarding planning and land use, sewer and water, fire suppression etc.</u></li> <li>• <u>Provide cash handling, point of sale and reception point for CRD Building Inspection</u></li> </ul> <p><del>Issue and maintain house addressing for Juan de Fuca, Salt Spring Island and The Southern Gulf</del></p>	<ul style="list-style-type: none"> <li>• <u>Update building bylaw, policies and procedures</u></li> <li>• <u>Provide consultant services regarding planning and land use, sewer and water, fire suppression etc.</u></li> <li>• <u>Provide cash handling, point of sale and reception point for CRD Building Inspection</u></li> </ul>	<p>Adjust to meet service delivery needs, as required</p>

			Islands Adjust to meet service delivery needs, as required	Issue and maintain house addressing for Juan de Fuca, Salt Spring Island and The Southern Gulf Islands Review & assess	
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## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Total Building Inspection staff (4 workplace locations)</b>	9.7	9.7	9.7	9.7	9.7

No services or staffing level increase for 2017-2018. ~~One FTE position has been intentionally left vacant in 2016 but can be filled at a later date if there is an increase in building permit activity and correlating building inspection requests.~~

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016-2019</b>			
<b>Building Bylaw Update</b> To be <del>c</del> Completed by the end of 2017	Amend current Building Bylaw to incorporate changes from the 2012 BC Building Code and the new Bill-3 <i>Building Act</i> 2015	Climate Change Protective Services	Core budget
<b>Dormant File Policy</b>	<del>Amend the</del> Maintain and implement CRD Dormant File policy to include for the expiry of all building permits from 2000 or earlier		Core budget
<b>Risk and Liability Claims Monitoring</b>	Monitor legal claims to ensure appropriate inspection procedures and update policy manual accordingly		Core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Salt Spring Island Governance Changes</b>	Prepare building inspection records for potential governance changes	Governance	Core budget
<b>First Nations Contracts</b>	Complete new contracts for building inspection services	Corporate Development	Core budget

# 4 Goals & Performance Indicators

Indicator Name	2017 Planned	2017 Projected	2018 Planned
<p><b>Service Goal: Ensure application of building regulations, codes and practices.</b></p> <ul style="list-style-type: none"> <li>% of building inspections in compliance with current BC Building Code (100%)</li> <li>Conduct an average of 7 building inspections per day</li> <li>Permit Fee Revenue</li> </ul>	<p>100%</p> <p>7</p> <p>\$708,210</p>	<p>100%</p> <p>7</p> <p>\$948,580</p> <p>(34% difference)</p>	<p>100%</p> <p>7</p> <p>\$800,000</p> <p>(13% increase from 2017 to 2018)</p>
<p><b>Service Goal: Provide acceptable response time to customer service requests.</b></p> <ul style="list-style-type: none"> <li>Permit processing time is less than 21 days 80% of the time</li> <li>Permit Fee Revenue as a % of Total Costs</li> </ul>	<p>&lt;21 days/80%</p> <p>57%</p>	<p>&lt;21 days/80%</p> <p>90%</p>	<p>&lt;21 days/80%</p> <p>70%</p>
<p><b>Service Goal: Provide information on building permit process, BC Building Code requirements and approved construction practices.</b></p> <ul style="list-style-type: none"> <li># of requests fulfilled per year for building inspection, transportation, demographic and/or development data* (18,675) <sup>1</sup></li> </ul>	<p>18,675 <sup>(1)</sup></p>	<p>22,440<sup>(2)</sup></p>	<p>22,440<sup>(2)</sup></p>

Note: <sup>(1)</sup> This is based on an average of 25 requests per day per office.  
<sup>(2)</sup> This is based on an average of 30 requests per day per office.

## Contact

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 Contact Information: 250-360-3230

# Service Plan for Community Planning Juan de Fuca Electoral Area

2016-2019

Capital Regional District

*Date submitted: October 2015*  
*Date updated: October 2016*



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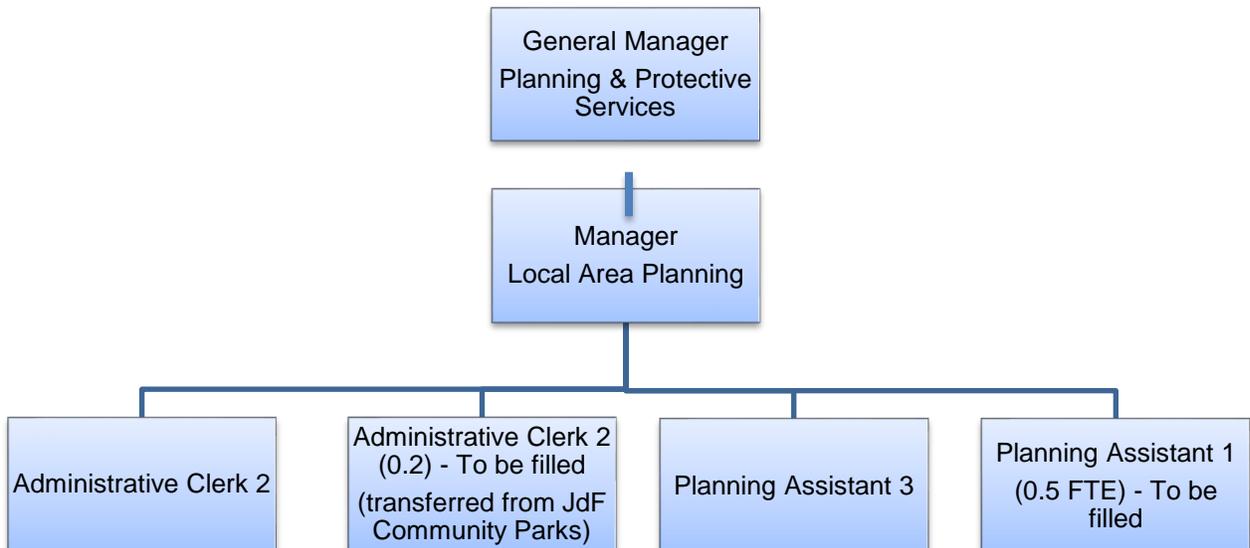
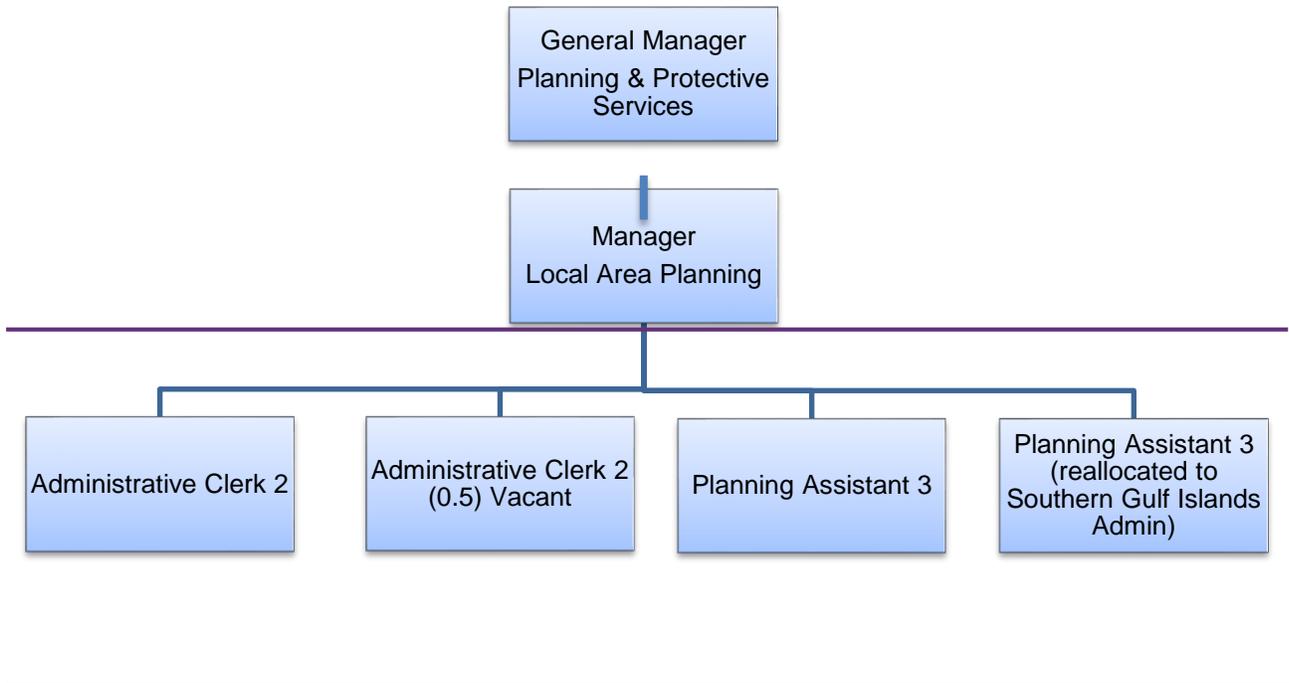
# 1 Overview

## 1.1 Division & Service Summary

The Juan de Fuca (JdF) Electoral Area (EA) Community Planning Service develops community plans and implements and administers land use regulations by providing professional advice and recommendations on planning processes and development services, providing for orderly growth, protection of the environment, sustainable communities and resource management.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Community Planning</b> – Prepare, review and amend five Official Community Plans (OCPs) and two Comprehensive Community Plans; participate in park plan review &amp; services, water &amp; sewer servicing reviews; implementing OCP objectives; related policy research and data collection</p> <p><b>Development Services</b> – Prepare and administer five Land Use Bylaws (LUBs); Process OCP and zoning bylaw amendments, development permits, development variance permits, soil deposit/removal permits, temporary use permits and review land referrals, subdivision referrals, building permits, park dedications and Agricultural Land Reserve (ALR) applications</p> <p><b>Customer Service</b> – Respond to development inquiries; Provide general community and specific land use information; Liaise with external agencies and internal departments</p> <p><b>Administrative Services</b> – Prepare agendas and minutes, and provide administrative support for the Juan de Fuca Land Use Committee, seven advisory commissions, and two Boards of Variance; Maintain a records management system, implement new technology and update GIS mapping</p>	<p>JdF EA, including the six communities of East Sooke, Malahat, Otter Point, Port Renfrew, Shirley/Jordan River and Willis Point, and the Rural Resource Lands</p>	<p>Development fees, Requisition and Gas Tax funding</p>	<p>JdF Land Use Committee East Sooke, Otter Point, Shirley/Jordan River, Port Renfrew and Willis Point Advisory Planning Commissions (APCs) JdF Agricultural Advisory Planning Commission (AAPC) JdF Economic Development Commission (EDC) JdF Electoral Area Parks and Recreation Advisory Commission JdF Board of Variance Malahat, Willis Point Board of Variance Electoral Areas Services Committee Planning, Transportation &amp; Protective Services Committee CRD Board – Voting Blocks “A” and “B” Full CRD Board</p>

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

Within the JdF EA, recent trends or issues that may affect the division include:

- Changes to provincial Acts and the overall regulatory environment (for example: sea level rise; community governance reviews; Treaty negotiations) requires on going education for staff and engagement with residents and internal stakeholders.
- Increased Board oversight of local planning applications, as well as multiple advisory commissions, impacts the division's processes for applications and bylaw amendments.
- ~~There is a declining trend in the number of development applications, but on-going work in areas of bylaw enforcement and community consultation processes.~~ Changes in the number of development applications have an impact on revenue, as well as the availability of staff resources to work on projects itemized within the Service Plan.
- There is ~~increased~~ continued need for collaboration with other CRD departments – Building Inspection, Regional and Strategic Planning, Regional Parks, Integrated Water Services, Real Estate, GIS, Legislative Services -- which impacts plan development and application processing.
- There is an ongoing need for legal opinions on complex planning issues, which impacts the division's budget and application process.
- Changes in technology to manage records – SharePoint, Tempest, Infolinx, GIS and Legistar requires extensive administrative support.

There is an outstanding requirement to update at least one OCP per year and to update/consolidate the LUBs in JdF.

## 1.4 Link to Priorities

The nature of the division and expertise of staff provides a number of links to both Board and Corporate Priorities.

### LAND USE PLANNING

- present the amended Regional Growth Strategy to the Board for Adoption

### AGRICULTURAL LAND & FOOD SECURITY

- develop new policies to encourage farming and agri-tourism and propose land banking solutions through the completion of the Food & Agricultural Strategy.

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement

### GOVERNANCE

- enable regular, proactive dialogues on regional and sub-regional issues

### EDUCATION, OUTREACH & INFORMATION

- demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information

The division also ensures that each OCP in the JdF EA reflects the goals and policies of the Regional Growth Strategy as well as considers Board Strategic Priorities like Climate Change, Environmental Protection, Active & Multi-Modal Transportation, Agricultural Land and Food Security, Economic Development, and Recreation, Arts and Culture.

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Community Planning</b>	Update East Sooke & Shirley/Jordan River OCPs	Ongoing update of East Sooke & Shirley/Jordan River OCPs	<u>Adoption of East Sooke &amp; Shirley/Jordan River OCPs pending adoption of RGS; Update Port Renfrew OCP following adoption of RGS</u>	<u>Adoption of East Sooke &amp; Shirley/Jordan River OCPs pending adoption of RGS; Update Port Renfrew OCP following adoption of RGS Update Malahat &amp; Willis Point OCPs</u>	<u>Update Malahat &amp; Willis Point OCPs Update Rural Resource Lands OCP</u>
			<u>Consolidate and update JdF-LUBs, zoning, subdivision servicing and</u>	<u>Consolidate and update JdF, zoning, subdivision servicing and flood plain</u>	<u>Adjust to meet service delivery needs, as required Review and assess</u>

			<a href="#">flood plain management bylaws</a>	<a href="#">management bylaws</a> <del>Review and assess</del>	
	Undertake special purpose studies - update Soil Bylaw		<del>Port Renfrew Sensitive Ecosystem Inventory &amp; riparian mapping</del>	<a href="#">Port Renfrew Sensitive Ecosystem Inventory &amp; riparian mapping</a> <del>Rural Resource Lands Sensitive Ecosystem Inventory</del>	<a href="#">Rural Resource Lands Sensitive Ecosystem Inventory</a> Assist in update of JdF Community Parks Plan
	Participate in updating digital mapping – reorganize planning data sets		<del>Confirm stream alignments in Otter Point, East Sooke, and Shirley/Jordan River</del>	<a href="#">Confirm stream alignments in Otter Point, East Sooke, and Shirley/Jordan River</a> <del>Confirm stream alignments in Malahat and Willis Point</del>	<a href="#">Confirm stream alignments in Malahat and Willis Point</a> Adjust to meet service delivery needs, as required
	<del>Participate in Interim Update of RGS</del>	<a href="#">Participate in update of RGS</a> <del>Review and assess</del>	<a href="#">Participate in update of RGS</a> <del>Adjust to meet service delivery needs, as required</del>	Review and assess	Adjust to meet service delivery needs, as required
<b>Development Services</b>	Process about 30 OCP amendments, rezoning, and development permit/development variance permit applications; review about 40 land referrals; review about 110 building permit referrals	Review and assess	Adjust to meet service delivery needs, as required	Review and assess	Adjust to meet service delivery needs, as required
	Prepare approximately 45 LUC, BOV and CRD Board staff reports	Review and assess	Adjust to meet service delivery needs, as required	Review and assess	Adjust to meet service delivery needs, as required
<b>Customer Service</b>	Respond to approximately 20 counter, email and telephone planning queries per day	Review and assess	Adjust to meet service delivery needs, as required	Review and assess	Adjust to meet service delivery needs, as required

<b>Administrative Services</b>	Update procedural or administrative bylaws (JdF Development Procedures Bylaw, APC Bylaw, Land Use Committee Bylaw)	Review and assess	Adjust to meet service delivery needs, as required	Review and assess	Adjust to meet service delivery needs, as required
	Manage JdF Meeting room rentals	Review and assess	Adjust to meet service delivery needs, as required	Review and assess	Adjust to meet service delivery needs, as required
	Attend and prepare minutes for approximately 40 LUC, APC, BOV, and public information meetings and Public Hearings	Review and assess	Adjust to meet service delivery needs, as required	Review and assess	Adjust to meet service delivery needs, as required
	Manage records using Infolinx and Tempest	Review and assess	Adjust to meet service delivery needs, as required	Review and assess	Adjust to meet service delivery needs, as required

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>All JdF Community Planning Services</b>	4.5	4.5	3.5	3.75*	3.75*

- Ongoing reallocation of 1 FTE to Southern Gulf Islands Administration for 2017 due to the declining trend in development applications
- Reallocation of 1 FTE to Southern Gulf Islands Administration in 2017 due to declining development application trend in 2015 and 2016.
- 0.5 FTE vacant as administrative clerk— vacant and unfunded for 2017, 0.5 FTE to be filled as Development Technician to address should-increased application permit activity-increase.
- \* 0.2 FTE has been transferred for in 2018 and 2019 from Juan de Fuca Community Parks and Recreation to Juan de Fuca Electoral Area Planning to accommodate ongoing administrative assistance provided by Planning staff.

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Update East Sooke OCP BL 4000 &amp; Shirley/Jordan River OCP BL 4001</b> To be adopted in 2018 <del>7</del>	With extensive community involvement, review existing OCP and revise to incorporate changing community values, provincial legislation, the Regional Growth Strategy and new emerging issues	Land Use Planning Public Engagement & Communications	Core budget  supplemented with Gas Tax Funding requests

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Consolidate &amp; Update JdF LUBs &amp; Subdivision Servicing Bylaws</b>  To be completed in 2018 <sup>7</sup>	With extensive community involvement, consolidate the five LUBs for the Electoral Area and undertake cadastral correction to the web mapping to provide consistency in all communities, to improve comprehension and to facilitate development compliance	Public Engagement & Communications	Core budget  supplemented with Gas Tax Funding
<b>Amend Soil Bylaw, BL 3996</b>  To be completed in 2016	With community involvement, amend soil bylaw for the Electoral Area to ensure fees are reasonable but oversight remains	Public Engagement & Communications	Core budget
<b>Amend JdF Development Procedures Bylaw, BL 3885</b>  To be completed in 2017 <sup>6</sup>	With community involvement, clarify the development process, application requirements and fees in JdF	Public Engagement & Communications	Core budget
<b>Amend MTI Bylaw, BL 1857</b>  To be completed in 2017	<a href="#">Partner with Bylaw Enforcement to amend bylaw to reflect changes in JdF Land Use Bylaws and improve ease of enforcement action.</a>	<a href="#">Land Use Planning</a>	<a href="#">Core budget</a>
<b>Amend APC Bylaw</b>  To be completed in 2018 <sup>6</sup>	Reconcile APC purpose and function with development procedures and to appoint members	Public Engagement & Communications	Core budget
<b>Amend JdF Land Use Committee Bylaw</b>  To be completed in 2018 <sup>6</sup>	Reconcile land use committee purpose and function with development procedures	Public Engagement & Communications	Core budget
<b>Update Port Renfrew OCP including a Sensitive Ecosystem Inventory</b>  To be <del>initiated</del> <sup>completed</sup> in 2018	With extensive community involvement, review existing OCP and revise to incorporate changing community values, provincial legislation, the Regional Growth Strategy and new emerging issues	Land Use Planning Public Engagement & Communications Environmental Protection Biodiversity and Ecosystem Health	Core budget  supplemented with Gas Tax Funding request
<b>Sea Level Rise Guidelines</b>  To be completed in 2016 <sup>6</sup> following the publication of new guidelines by the Province	Determine the process response to the new provincial Flood Management Guidelines	Land Use Planning	Core budget
<b>Forestry Working Group</b>  <a href="#">To be initiated in 2017.</a>	Work with Ministry of Forests staff and operators, as well as JdF residents, to establish a working group to provide an opportunity for the province and industry to share annual harvesting and planting programs and to solicit community input	Public Engagement & Communications Biodiversity & Ecosystem Health	Core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Groundwater/Surface Water Working Group</b>  <u>To be initiated in 2018.</u>	Work with provincial FLNRO and Ministry of Environment staff, JdF residents and other CRD divisions to establish a working group to provide an opportunity to inventory and map groundwater and surface water sources and to consider local groundwater protection regulations	Environmental Protection	Core budget
<b>Planning Processes and Bylaws Presentation/Brochure Materials</b>  To be completed in 2017	Develop <u>a presentation or brochure materials</u> to provide <u>an</u> orientation for residents, developers, surveyors, realtors and internal departments on the communities and planning processes in JdF	Education, Outreach and Information	Core budget
<b>2017</b>			
<b>Update Malahat and Willis Point OCP</b>  To be completed in 2019	With extensive community involvement, review existing OCP and revise to incorporate changing community values, provincial legislation, the Regional Growth Strategy and new emerging issues	Land Use Planning Public Engagement & Communications	Core budget  supplemented with Gas Tax Funding request
<b>2018</b>			
<b>Update Rural Resource Lands OCP</b>  To be completed in 2020	<del>With extensive community involvement, review existing OCP and revise to incorporate changing community values, provincial legislation, the Regional Growth Strategy and new emerging issues</del>	<del>Land Use Planning Public Engagement &amp; Communications</del>	<del>Core budget             supplemented with Gas Tax Funding request</del>
<b>Orientation for new LUC, APC, AAPC and Board of Variance members</b>  To be completed in 2018 <u>following election of new members</u>	In conjunction with Legislative Services, provide information on JdF services, bylaws and land use processes	Governance	Core budget
<b>2019</b>			
<b>Update Rural Resource Lands OCP</b>  <u>To be completed in 2020</u>	<del>With extensive community involvement, review existing OCP and revise to incorporate changing community values, provincial legislation, the Regional Growth Strategy and new emerging issues</del>	<del>Land Use Planning Public Engagement &amp; Communications</del>	<del>Core budget             supplemented with Gas Tax Funding request</del>
<b>Otter Point OCP Update</b>  To be completed in 2020	With extensive community involvement, review existing OCP and revise to incorporate changing community values, provincial legislation, the <u>updated</u> Regional Growth Strategy and new emerging issues	Land Use Planning Public Engagement & Communications	Core budget  supplemented with Gas Tax Funding request

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>JdF Community Parks Strategic Plan Review</b> To be completed in 2019	Work with Community Parks Manager and JdF EA Parks and Recreation Advisory Commission to update parks plan	Recreation, Arts and Culture	Core budget
<del>Land Use Bylaw (LUB) Review</del> To be completed in 2019	<del>Given all community OCPs have been updated, review LUB to see if amendments are required</del>	<del>Land Use Planning</del>	<del>Core budget</del>

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Maintain quality community planning and engagement processes	<ul style="list-style-type: none"> <li>Target a minimum of 1 Official Community Plan update each year</li> <li># of CRD educational <del>workshops</del> brochures delivered or partnered on annually* (target 5)</li> <li># of advisory commissions active annually <u>(target 5)</u></li> </ul>
Provide high levels of customer service	<ul style="list-style-type: none"> <li><del>Initiate bi-annual survey to gauge applicant satisfaction with Development Services (target 50% applicant completion rate)</del></li> <li>Process <del>400</del>80% of zoning amendments within 8 months of completed of application</li> <li>Process 100% of development permit and development variance permits within 2 months of completed application</li> <li># of requests fulfilled per year for building inspections, transportations, demographic and/or development data*</li> </ul>

\*Corporate indicator – Multiple divisions may contribute to this measure

## Contact

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# Service Plan for Protective Services

2016-2019



Capital Regional District

**Date submitted:** October 7, 2015  
**Date updated:** ~~October 2016~~ July 2017



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# 1 Overview

## 1.1 Division & Service Summary

The Protective Services Division is focused on planning, administration and operation for public safety, emergency management and response, and bylaw and animal care services. The division manages services of both a regional and local electoral area nature. Included in this division are:

**Regional services** including Hazmat Response, 911 Call Answer and Regional Emergency Support

**Sub-regional services** including Fire Dispatch, Animal Care and Bylaw

**Electoral Area services** including Fire Protection, Emergency Management and Search and Rescue

The purpose of Protective Services is to maintain a comprehensive Emergency Management and Response Organization to ensure appropriate and timely response to emergency incidents in our areas of responsibility (regional, sub-regional and electoral areas).

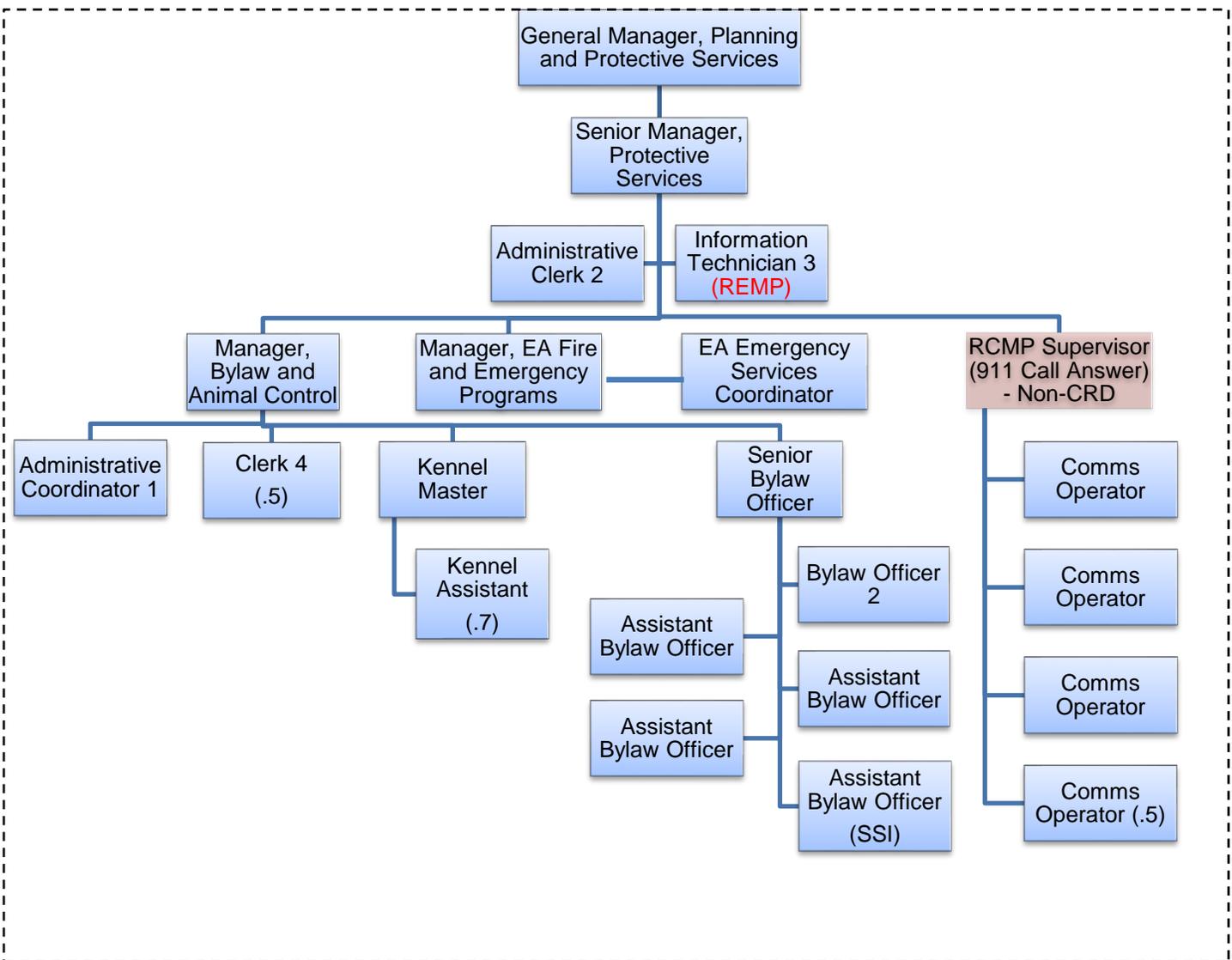
Bylaw and Animal care respond to complaints, seek voluntary compliance and use regulatory and legal enforcement options to enforce bylaws in the three Electoral Areas for noise, nuisance and unsightly premises, as well as soil deposit and removal in the Juan de Fuca (JdF) Electoral Area (EA).

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>911 Call Answer (Regional)</b></p> <p>Administration and oversight of 911 Call Answer services within the Capital Regional District, with operational responsibility for the areas served by the RCMP.</p>	Police, Fire and Ambulance Dispatch	Call Answer Levy	Planning, <del>Transportation</del> and Protective Services Committee (P+PSC)
<p><b>Hazmat Response (Regional)</b></p> <p>Operation and administration of the regional Emergency Hazardous Material Response team in partnership with the region's fire departments.</p>	Regional service includes members from fire departments across the region. Japan Gulch Water Treatment Plant staff cross trains with the Hazmat team for preplanning responses	Regional Requisition	P+PSC Greater Victoria Fire Chiefs Association (GVFCA) Policy Group Operational Working Group (Team members, GVFCA reps and CRD)
<p><b>CRD Emergency Management</b></p> <p>Responsible for local emergency management programs in each of the electoral areas supported centrally by the CRD Emergency Operations Centre (EOC). <u>Provision of 24/7 On Call Duty Emergency Manager, Operation of Regional/EA Emergency Communications centres.</u> The CRD EOC will be provide support to <u>internal departments and external agencies during emergencies.</u> Support provided to departmental emergencies such as those affecting water systems or other CRD assets, <u>through Advance Planning, response and After Action reviews.</u></p>	EA Emergency Programs, all departments	General legislative funding for corporate initiatives, local EA requisitions for each local EA program	<u>Emergency Management Committee (EMC)</u> <u>Emergency Coordination Committee (ECC)</u> Electoral Area Services Committee (EASC) Southern Gulf Islands (SGI) Advisory Commission JdF & Salt Spring Island (SSI) Community Coordinators Group

<p><b>Regional Emergency Management Coordination (Regional)</b></p> <p>Developed to provide a coordinating role for resource and information sharing among local municipal and electoral area programs, supported by the CRD Local Government Emergency Program Advisory Commission (LGEPAC) and Regional Emergency Planning Advisory Commission (REPAC).</p> <p><a href="#">Regional Emergency Management Partnership (REMP) supported through human Resources and strategic direction</a></p>	Municipal and EA Emergency Programs	Regional Requisition	<p>P+PSC LGEPAC REPAC <a href="#">REMP</a></p>
<p><b>Fire Dispatch (Sub-Regional)</b></p> <p>Operational management of fire dispatch for the three electoral areas (JdF, SGI and SSI) along with participating municipalities (Sooke, Metchosin, Langford and Highlands).</p>	Fire Departments in Sooke, Metchosin, Highlands, Langford, EA Fire departments and EA Emergency Programs	Requisition of participating jurisdictions	<p>P+PSC Working group of fire department representatives</p>
<p><b>Bylaw Services (Sub-Regional)</b></p>	All EAs, District of Highlands, and District of Metchosin, internal Customers	Requisition and internal recoveries for the EA. Fee for service to District of Highlands and District of Metchosin and internal customers	EASC
<p><b>Animal Care Services (Sub-regional)</b></p>	All EA, the Highlands, Metchosin, Sooke, Colwood, Langford, View Royal, Central Saanich, North Saanich, Saanich and Sidney	Requisition for the EA, Highlands, Sooke and Metchosin. By contract for Colwood, Langford, View Royal, Central Saanich, North Saanich, Saanich, and Sidney	EASC
<p><b>EA Emergency Coordination</b></p> <p>Oversight and administration of the Electoral Area Emergency Programs.</p>	Support to all three EA	Funding for two FTE is provided through a requisition to the three EAs	EASC
<p><b>SGI Emergency Program</b></p> <p>Operation of a community based emergency management program, utilizing input from a local Advisory Commission to develop a program that is supported by the CRD EOC and meets the needs of the local residents and area.</p>	SGI	Funded by requisition to the SGI EA	EASC
<p><b>SSI Emergency Program</b></p> <p>Operation of a community based emergency management program that is supported by the CRD EOC and meets the needs of the local residents and area.</p>	SSI	Funded by requisition to the SSI EA	EASC
<p><b>JdF Emergency Program</b></p> <p>Operation of a community based emergency management program that is supported by the CRD EOC and meets the needs of the local residents and area.</p>	JdF	Funded by requisition to the JdF EA	EASC

<b>JdF Search and Rescue (JdF SAR)</b> Program oversight and administration for the JdF SAR service.	JdF	Funded by requisition to the JdF Response costs covered by EMBC	EASC
<b>SSI Search and Rescue (SSI SAR)</b> Financial support to the SSI SAR Society to cover overhead (non-operational) costs.	SSI	Funded by requisition to the SSI EA	EASC
<b>EA Fire Services</b> <u>Operation Oversight and support of and to Fire and Rescue Commissions and services.</u>	All residents and visitors within jurisdiction set out in establishing bylaw	Funded by requisition to the residents of the service area	EASC

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

Changes in technology from the consumer side (cell phones, texting, social media, and GPS locations) have driven the need to enhance technology at the service side and look at the integration of information and technology throughout the emergency management and response areas.

Increasingly the public expects instantaneous advice and direction when events do occur (earthquake/tsunami warnings). From the service side this is driving the need for mass notification systems and the ability to integrate situational awareness information into the EOC.

Over the past several years focus has been on the creation of efficiencies within existing budgets in order to meet higher community expectations. These efficiencies have now been realized, ~~indicating~~ Further service level increases will require budgetary expansions.

~~The CRD has been chosen by the AGLG to undergo an audit of our emergency management program including all service area emergency plans. The audit expected to be completed in October of 2017.~~

~~A process for First Nations engagement has been commenced, It. It is expected this will become an additional enhance FN engagement in regional emergency preparedness and will align with EMBC and function to RREMP initiatives.~~

Collaborations on service improvement has resulted in the establishment of the Regional Emergency Management Partnership (REMP) with Emergency Management BC (EMBC) which is designed to improve regional emergency planning for cross jurisdictional disasters in alignment with provincial level planning.

~~Work has begun with key stakeholders around T~~ the unification of 911 and Police Dispatch services and building of the South Island Communications Centre to support police responders within the region is underway.

Recently, the Office of Fire Commissioner (OFC) has established a new *Fire Services Act* that may have impact on CRD service requirements related to fire investigations and inspections. The associated regulations are in development ~~and expected as early as Fall 2016~~ and will dictate service expectations on regional jurisdictions. Regional districts are lobbying to have input on these new regulations.

### Regional Services

- 911 Call Answer Support:
  - Public is increasingly engaged with events resulting in increases in number of calls per incident.
  - Increased call volumes put pressure on staffing levels.
  - Expectations of the public to be able to connect with 911 across a wide array of technologies.
  - ~~Reductions in landline Call Answer Levy (CAL).~~
  - Provincial take-over of responsibility for Public-Safety Answering Point (PSAP) services and call answer levies is a possibility along with attendant reduction in revenues.
  - Construction of the South Island Communications Centre that will house the Unification of unified 911 call answer and police dispatch services for the region will be underway in the fall of 2017 with an anticipated completion of January 1, 2019 is being built. progressing.
  - Ability of BCEHS to accept medical calls in a timely fashion causing delays and transfer of calls from 911 centre
- Hazmat Response:
  - Increasingly the public is less tolerant of the occurrence of hazardous materials incidents and when they do occur the expectation is for a rapid and effective response.
  - The provision of the service requires ongoing training to ensure safety and efficiency.
  - Structure and staffing of the service requires ongoing participation of the partner fire departments many of which are unionized. As training by necessity must occur outside of regular duty hours for these individuals, significant overtime costs are incurred.
  - Reliance on cooperation of all fire departments to support integration of career, paid on call and volunteer fire-fighters (FFs).
  - Potential for Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) attack due to proximity of Parliament building is being highlighted by the Legislature
- Regional Emergency Support:
  - Increased frequency and complexity of emergency events.
  - Heightened public awareness and concern regarding lack of readiness/response capability:

- Increasing educational requirement expectations of volunteers (time commitment).
- Inability Challenges to provide timely information out to residents and integrate situational awareness into EOC operations may compound the severity of any local or regional disaster.
- CRD Regional ~~communications~~communications centre's approachability to facilitate timely communications during major events
- Challenges with training and maintaining Emergency Communications Centre volunteer operators.
- Challenges in establishing, training and maintaining skill sets for EOC staff
- Signing of the REMP MOU with the province will improve regional coordination during large scale emergencies.
- Changing demographics in rural areas leading to aging volunteers or part time residents leads to reduction in available volunteers for critical programs.

### Sub Regional Services

- Fire Dispatch:
  - Continually increasing call volumes.
  - Imminent change to 700 ~~mbz~~MHz National trend to frequency spectrum for all first responder agencies. may have significant impact on equipment budgets. change to 700-mhz.
  - Interoperability capacity between response services.
  - Continued changes to technology need to be strategically addressed in conjunction with 911 Call Answer or we will lose the high level of service currently achieved.
  - Interdependency between dispatch centres including technical and wired connectivity.
- Bylaw and Animal Care Services:
  - Loss of current contracts could further decrease service capability and economy of scale.
  - BCSPCA no longer providing veterinarian services to strays, this now falls on regional animal care service to cover. This is not covered under existing contracts.
  - Legal costs for animal control is increasing and not provided for under existing contracts.

### Electoral Area Services

- Electoral Area Emergency Coordination and Fire Services:
  - Public expectations of government's ability to provide leadership and restoration of service following major incidents continue to increase.
  - Focus of the program has to continue to reflect each community's specific and unique needs to ensure that the emergency program is able to respond appropriately in an all-hazards manner to any incident.
  - Changing demographics in rural areas leading to aging volunteers or part time residents points to reduction in available volunteers for critical programs.
  - SSI Emergency Program requires new post seismic event facilities
  - ~~Provincial Fire Commissioners Office has created new requirements tying service levels to specific training/staffing/equipment levels.~~
  - Support levels for emergency programs can vary.
  - Climate change continues to impact frequency and severity of weather events (wildfire risks, drought, severe winter storms etc.).
  - Decreasing availability of volunteers can limit program and response capability and effectiveness.
  - Provincial Fire Commissioners Office has created new requirements tying service levels to specific training/staffing/equipment levels resulting in some significant challenges potentially impacting long term viability of smaller volunteer based fire services.
  - Increasing challenges in meeting administrative burdens of many EA fire departments
  - Ongoing and increasing pressures on volunteer recruitment and retention as well as issues related to training for all volunteer based EA services (Fire departments and Emergency Programs)
  - ~~Severe~~Significant challenge in aAbility to meet and maintain compliance with new government fire service guidelines in all service areas.
  - The new Fire Services Act that may have impact on CRD service requirements related to fire investigations and inspections.

## 1.4 Link to Priorities

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement
- share stories of collaboration and accomplishments

### PROTECTIVE SERVICES

- collaborate with partners to prepare for, respond to and recover from emergencies

### EDUCATION, OUTREACH & INFORMATION

- demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information

## 2 Services

### 2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>911 Call Answer</b>	Working with PSAPs on unification model	Implementation of unified approach	Continued implementation of new technologies	<a href="#">Review &amp; Assess build and commissioning of new SICC</a>	Adjust to meet service levels, as needed
<b>Hazmat Response</b>	Focus training maintaining response capacity and multi-agency response	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>CRD Emergency Management</b>	Local electoral area emergency planning and response support	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>Regional Emergency Management Coordination</b>	Partnering with Province for enhanced Regional Cooperation	Review & Assess	Adjust to meet service levels, as needed. <a href="#">REMP introduced</a>	Review & Assess	Adjust to meet service levels, as needed
<b>Fire Dispatch</b>	Implementation of full service fire dispatch	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>Bylaw and Animal Care Services</b>	Bylaw officers working 7 days/week from 8 am to 6 pm. A bylaw officer on call for issues from 6 pm to 8 am and all day long on Statutory holidays	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>EA Coordination</b>	Partnering with Province for enhanced Regional Cooperation	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed

					levels, as needed
<b>SIG Emergency Program</b>	Focus training maintaining response capacity  Focus on integrated emergency exercises with CRD EOC and multiple EAs	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>SSI Emergency Program</b>	Focus training maintaining response capacity  Focus on integrated emergency exercises with CRD EOC and multiple EAs	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>JdF Emergency Program</b>	Focus training maintaining response capacity  Focus on integrated emergency exercises with CRD EOC and multiple EAs	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>JdF SAR</b>	Focus training maintaining response capacity	Review & Assess	Adjust to meet service levels, as needed	Review & Assess	Adjust to meet service levels, as needed
<b>EA Fire Services</b>	Complete Fire Service review	Implement strategies to meet OFC guidelines	Review & Assess	Adjust to meet service levels, as needed	Review & Assess

## 2.2 Workforce Considerations

### Regional

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
911 Call Answer	3.5	3.5	3.5	3.5	0 E-Comm assumes 911 contract
Hazmat Response	73 (Non CRD)	80 (Non CRD)	80 (Non CRD)	<del>6080</del> (Non CRD)	<del>8060</del> (Non CRD)
CRD Emergency Management	5	5	5	5	5
<b>Total</b>	8.5	8.5	8.5	8.5	5

### Sub-regional

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Bylaw and Animal Care	10.2	10.2	10.2	10.7	10.7
<b>Total</b>	10.2	10.2	10.2	10.7	10.7

*Both services were combined as of February 1, 2015 and will be blended into one budget in future years.*

**Electoral Area**

	<b>Workforce (FTEs)</b>				
<b>Service</b>	<b>Base year 2015</b>	<b>Year 1 (2016)</b>	<b>Year 2 (2017)</b>	<b>Year 3 (2018)</b>	<b>Year 4 (2019)</b>
<b>Emergency Management</b>	*	*	*	*	*
<b>Emergency Programs</b>	1.5	1.5	1.5	1.5	1.5
<b>JdF SAR</b>	0.5	0.5	0.5	0.5	0.5
<b>Total</b>	2.0	2.0	2.0	2.0	2.0

\* 5 FTE split between Regional and Electoral Area Emergency Management.

### 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Situational Awareness Integration System</b>	Undertake review of existing situational awareness software and assess integration compatibility with Mass Notification System.	Protective Services	Core Budget
<b>Regional Emergency Management Partnership</b>	To establish a local/regional/provincial partnership, designed to enhance emergency management across the CRD through the provision of greater regional cooperation, coordination, collaboration and communications.	Public Engagement and Communications Protective Services	Core Budget
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Public Engagement and Communications Protective Services	Core Budget
<b>Regional Emergency Management Coordination</b>	Undertake review of requirements to accommodate EOC staff families during major event.	Protective Services	Core Budget
<b>Increase communications infrastructure resilience</b>	Ensure uninterrupted communications linkages are in place.	Protective Services	Core Budget
<b>911 Amalgamation</b>	Review and pursue opportunities to amalgamate 911 PSAP services in the CRD.	Protective Services	Core Budget
<b>Fire Services</b>	Fire services in the EAs will be required to comply with the new Fire Services Guidelines released by the Office of the Fire Commissioner (OFC) by June 2016. Presently there are a number of deficiencies with fire services that need to be addressed in order to comply.	Protective Services	Single Supplemental \$53,000
<b>Increase the number of First Nations contracts for Animal Control</b>	Enter into discussions to provide animal control services to First Nations not currently under contract.	First Nations Protective Services	Core Budget.
<b>Animal Care in Disasters</b>	Establish a regional animal care plan for emergency and disaster events.	Protective Services	Core Budget

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>2017</b>			
<b>Hazmat Response</b>	Conduct full Service Review as the team has responded 19 times from 2011 to June 2015.	Protective Services	Core Budget
<b>Hazmat Response</b>	Conduct Cost Recovery (service fees) review – initiate bylaw change to accommodate.	Protective Services	Core Budget
<b>CRD Recovery Plan</b>	This was a divisional initiative for 2014; the completion of this <u>was envisioned to may</u> become a part of the Regional Emergency Management Partnership identified for 2016, <u>failing that it will become</u> <u>it is now</u> a stand-alone project.	Protective Services	Core Budget
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Protective Services	Core Budget
<b>911 Amalgamation</b>	Implement approved 911 amalgamation initiatives.	Protective Services	Reserves
<b>2018</b>			
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Protective Services	Core Budget
	<u>Continued support of REMP</u>		<u>Core Budget</u>
	<u>Reserve Fire Apparatus</u>	<u>Applies to JDF &amp; SGI EA's and depts. within.</u>	<u>10,000/A adjusted for inflation</u>
	<u>Upgrade Emergency Communications Infrastructure</u>		<u>\$45,000 one-time supplemental and \$12,000/A adjusted for inflation</u>
	<u>CRD Staff Incident Management Team</u>		<u>Within core budgets of participating departments/divisions</u>
	<u>Increase of on call Duty Emergency Manager capability to better serve the organization and to relieve excessive after hours pressure on the two current emergency managers that take call. Enhance "On call capability"</u>		<u>\$12,500/A from Corporate Services starting in 2019. 2018 increase funded by surplus</u>
	<u>EOC/Bldg Emergency Supplies</u>		<u>5,000 one time supplement</u>
<b>911 Amalgamation</b>	<u>Implement approved 911 amalgamation initiatives. Construct South Island Communications Centre</u>	Protective Services	<u>Reserves Borrowing Bylaw</u>

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
<b>Fire Services</b>	Port Renfrew/Pacheedaht Earthquake Early Warning/Tsunami siren system	Port Renfrew Fire Department	\$10,000/A maintenance & operating costs
	Acquire reserve fire apparatus for EA Fire services to provide timely spare when frontline engines are down for repair and maintenance to ensure service continuity. The spare would be held at Hartland Landfill and would also act as on site fire suppression support to Hartland as required. This is a collaborative purchase with Hartland.	Applies to JDF & SGI EA's and depts. within.	\$13,460/A adjusted for inflation
<b>2019</b>			
<b>Regional Emergency Management Coordination</b>	Continued work on coordinated response protocols, (i.e., tsunamis), along with continued efforts in coordinated public education such as the workbook.	Protective Services	Core Budget
	<u>Upgrade Emergency Communications Infrastructure</u>		\$45,000 one-time supplemental and \$12,000/A adjusted for inflation
<b>911 Amalgamation</b>	Complete 911 amalgamation.	Protective Services	
<b>2016-2019</b>			
<b>Regional Emergency Management Coordination</b>	Undertake to EOC Level 3 activation staff training. EOC Essentials & ICS as well as full-scale functional exercises.	Protective Services	Continuous supplemental \$10,600
<b>Mass Notification System</b>	Strategic planning sessions were held in each EA, these indicated a mass notification system to be a strategic priority. The intent is to provide where possible advance notice of events and as required direction to residents. A Pilot Project was completed in 2015.	Protective Services	Continuous supplemental \$6,000
<b>Situational Awareness Integration System</b>	Undertake review of existing situational awareness software and assess integration compatibility with Mass Notification System.	Protective Services	Core Budget
<b>JdF Search &amp; Rescue</b>	Review Operations ensuring compliance with all relevant regulations.	Protective Services	Core Budget
<b>Fire Dispatch</b>	2017-2018 will be the 2 <sup>nd</sup> -3 <sup>rd</sup> of 5 years in which the payment to Langford for Fire Dispatch	Protective Services	Continuous supplemental \$49,500

Title & Estimated Completion Date	Description	Strategic Priority Reference (if applicable)	Budget Implications
	increases approved for budget in 2016.		
<b>EA Fire Services</b>	<ul style="list-style-type: none"> <li>• <del>Continued work on coordinated response protocols (SOGs).</del></li> <li>• Ensuring record keeping requirements of new Fire Commissioner Playbook are met.</li> <li>• Integration of long range capital planning into budgets.</li> </ul>	Protective Services	Core Budget

## 4 Goals & Performance Indicators

	Service Goals	Indicators or Measures
	Maintain and enhance public safety through emergency management and response	<ul style="list-style-type: none"> <li>• # of Emergency Operations Centre staff training exercises annually* (target <del>4</del><u>2</u> per year)</li> <li>• 95% of 911 calls handled within 15 seconds</li> <li>• Number of volunteers registered in electoral area emergency programs* (baseline 900 volunteers in 2015)</li> <li>• Ensure a minimum of <del>70</del><u>60</u> hazmat technicians and 40 Juan De Fuca Search &amp; Rescue members are trained over 3 years</li> <li>• # of CRD educational workshops delivered or partnered on annually* (target minimum of 33)</li> </ul>
	Ensure Quality Animal Care Services for Region	<ul style="list-style-type: none"> <li>• Rehome more than 90% of dogs and cats from CRD animal care facilities annually</li> </ul>

### Contact

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# Service Plan for Salt Spring Island

2016-2019



Capital Regional District

***Date submitted:*** November 30, 2016



Making a difference...together

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# 1 Overview

## 1.1 Division & Service Summary

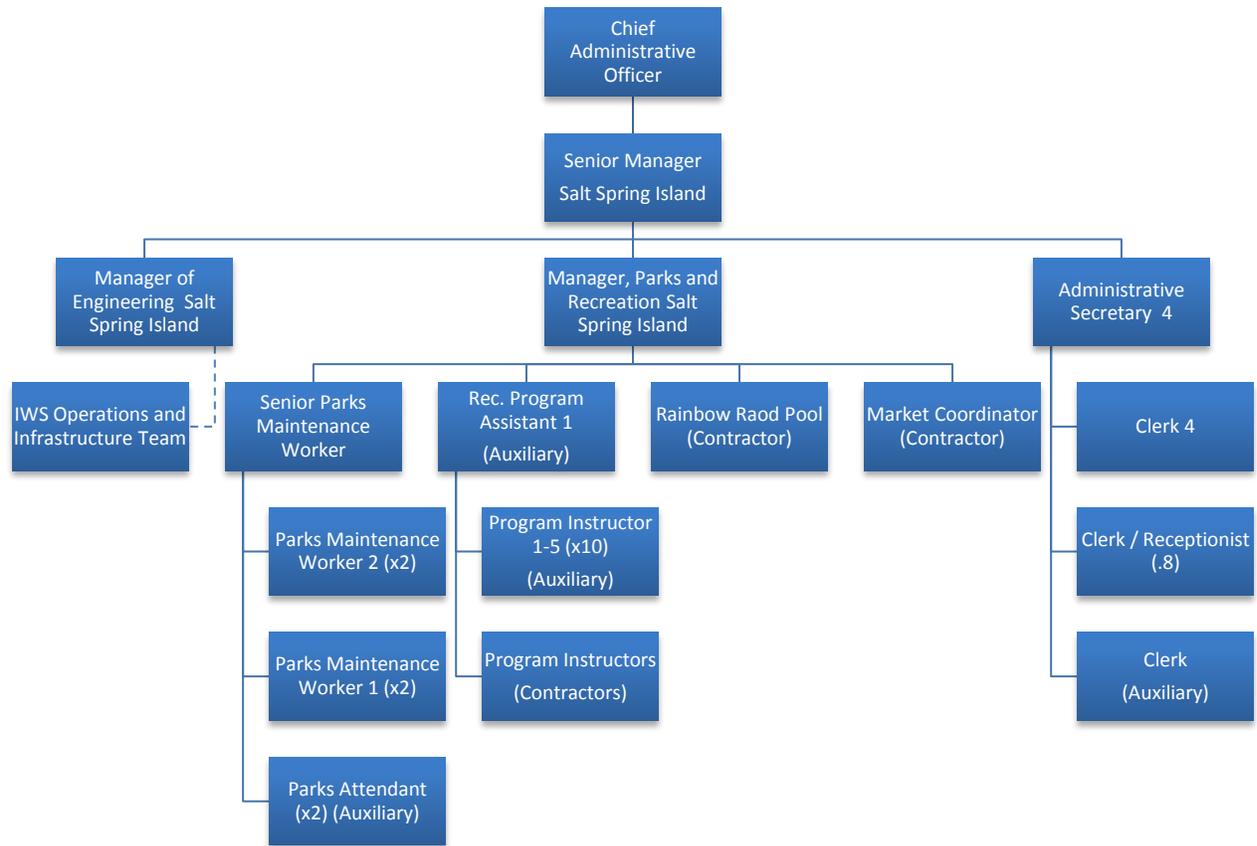
The Salt Spring Island Electoral Area Administration is responsible for the administration and management of the Salt Spring Island Parks and Recreation Commission, Transportation and Transit Commission, Community Economic Development Commission, Fernwood dock; and in collaboration with other CRD divisions, eight local water and sewer service areas, and Liquid Waste Management Commission. The SSI division is also responsible for planning, organizing, and delivering services for SSI and support to the Electoral Area Director through these various service Commissions and Committees.

**Note:** The services operating on Salt Spring not included in this plan are building inspection, bylaw enforcement, and emergency services. These are found in the following Divisional service plans: Building Inspection, Protective Services.

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Electoral Area Administration:</b> Responsible for administration and delivering services for Salt Spring Island; providing support to the Electoral Area Director and across the various service Commissions and Committees; representing the individual SSI CRD services. Manage various SSI projects and collaborate with other CRD divisions in managing and delivering services to local utility operations and engineering, transportation, economic development, and parks and recreation.</p>	<p>Salt Spring Island Electoral Area</p>	<p>Requisition and internal recoveries</p>	<p>Electoral Area Services Committee</p>
<p><b>Local Water, Sewer, and Liquid Waste Local Services:</b> Assists and coordinates with internal CRD contracted services for delivery of service outcomes and capital infrastructure planning, design, procurement and project management for water, sewer, and liquid waste.</p>	<p>Salt Spring Island Electoral Area</p>	<p>Requisition, fees and charges, grants, gas tax</p>	<p>Beddis Water Cedar Lane Water Cedars of Tuam Water Fulford Water Ganges Sewer Highland/Fernwood Maliview Sewer Liquid Waste</p>

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Transportation Services:</b> Responsible for developing and implementing transportation initiatives and services such as studies, construction, maintenance, and regulation of parking, pedestrian and cycling arrangements, implementation of transportation infrastructure projects through internal contract arrangements with other CRD service areas and outside agencies such as the Ministry of Transportation, Island's Trust, BC Ferries, BC Transit.</p>	Salt Spring Island Electoral Area	Requisition, gas tax, grants, donations, volunteers	Transportation Commission
<p><b>Transit Services:</b> Provide public transit system on the island to an optimal level of service; construct and maintain bus stops and shelters; set fare structure. Provided through an annual operating agreement between the CRD, BC Transit and local contractor.</p>	Salt Spring Island Electoral Area	Requisition, BC Transit	Transportation Commission
<p><b>Economic Development:</b> Implement the economic strategic development plan in areas of tourism, agriculture and food, diversifying the economy, business support, enhance and beautify Ganges and Fulford villages, and build economic support through communication and advocacy.</p>	Salt Spring Island Electoral Area	Requisition	Community Economic Development Commission
<p><b>Fernwood Dock:</b> Manage and operate dock facility</p>	Salt Spring Island Electoral Area	Requisition	Fernwood Dock Commission
<p><b>Parks and Recreation Programs and Services:</b> Responsible for developing and maintaining community trails &amp; beach accesses, active and passive parks, community recreation, the Rainbow Road Indoor Pool and the Salt Spring Island Saturday Market.</p>	Salt Spring Island Electoral Area	Requisition, internal recoveries, rental fees and grants	Salt Spring Island Parks and Recreation Commission

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

~~Salt Spring Island Incorporation-Governance review resulted in a referendum where the voters of Salt Spring Island chose to remain with the Capital Regional District. Study was extended to November 30, 2016 to conduct a road condition assessment and could have significant implications for operations of this Division.~~

Governance: The current governance structure with multiple commissions and jurisdictional entities creates challenges in coordinating and delivering services. One opportunity is to explore an integrated framework for local infrastructure services to move from single entity focus to an island wide stewardship of infrastructure and services under on commission structure.

Spring Island Electoral Area Administration may become responsible for the management of the operations, maintenance, and capital projects for eight (8) water, sewer, and liquid waste utilities on Salt Spring Island in the coming years-2015. The full service impact will need to be reviewed.is currently under review.

Currently Electoral Area administration operates out of the ~~offices located on McPhillips Avenue, Portlock Park building facility.~~ In 2012, the CRD set up the electoral area administration structure to manage and operate: parks and recreation, transportation, economic development, water and sewer utilities, and capital infrastructure on island. With these added functions these facilities pose significant space constraints and challenges. With these added functions an administrative office has been leased in the Ganges Village core as of July 1, 2016, ~~and will require significant renovations with completion anticipated in the Fall of 2016.~~

Gaps in existing trail networks and the ability to secure statutory rights of way (SRW) through private property continue to be a challenge. The trail network continues to expand each year while operating resources to maintain this network remain the same.

Re-zoning Agricultural Land Reserves (ALR) land to non-farm status for active park use (athletic fields), water and budget constraints are major risks in achieving this land acquisition objective.

A shortage of community recreation space poses a challenge for ~~the replacement of recreation software, construction or renovation of program space, and piloting~~ and expanding of new recreation programs. Space limitations impede ability to train staff and public with new software and availability of program space resulting in a loss in revenue.

Building repairs for the Rainbow Road Aquatic Centre and equipment replacement continue to be a risk at this facility due to excessively harsh environmental conditions which have accelerated the deterioration of the parts chosen for the mechanical components. The aquatic centre operating business model ~~will need to be explored as operating costs continue to rise with no major increase in revenue predicted.~~ has been evaluated and the CRD will be taking over the operations and management of the centre on April 1, 2018.

Future success of Transit services could be impacted by: ensuring operating costs closely aligned with cost recovery, maintaining adequate funding to provide level of service and challenges with ability for service changes to meet community user needs, and the challenges associated with coordinating island based services with BC Ferries.

~~An~~ There is no engineering review and condition assessment ~~that determine the remaining useful service life of the Fernwood Dock.~~ has been completed and repairs are scheduled to in be completed in coordination with repairs to other Southern Gulf Island docks. Upgrades are expected to be completed on the Fernwood Dock by the first quarter of 2018.

Additional inputs of money through grants (or volunteer driven programs) significantly impact service delivery due to limited staff resources. Whenever initiatives that are not within the normal planning and approval process are added, rearranging of priorities and deliverables is needed in order to accommodate the requests. An example of this would be if funds are made available to construct a seawalk or major improvements to Peck's Cove Park.

## 1.4 Link to Priorities

### ECONOMIC DEVELOPMENT

- establish a working group to identify economic development priorities and participate in government and partner programs
- review existing arts and culture strategies and identify new priorities and actions
- evaluate options for establishing funding mechanisms to support regional economic development

### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements

- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

#### RECREATION, ARTS & CULTURE

- support increased access to community arts and recreation through programming and strategic investments

ACTIVE & MULTI-MODAL TRANSPORTATION

- manage trails as transportation corridors, establish a Transportation Service, deliver active transportation programming and complete feasibility studies

PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement
- share stories of collaboration and accomplishments

## 2 Services

### 2.1 Service Levels

Consider each service within the division over the four year period. After identifying the current base level of service, explain any planned changes in the role or scope of service. If changes are directly related to fulfilling Board Strategic Priorities, please clearly identify these. Staffing implications should be provided in section 2.3 and specific projects and budget implications will be provided in Section 3.

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Electoral Area Administration</b>	Electoral Area administration services and support to the Electoral Area Director	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Local Water, Sewer, and Liquid Waste Local Services:</b>  <b>Water</b>	Commission support and liaise and collaborate with other service areas (IWS, ES, PP) for service outcomes and delivery of capital projects	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.
<b>Local Water, Sewer, and Liquid Waste Local Services:</b>  <b>Sewer</b>	Commission support and liaise and collaborate with other service areas (IWS, ES, PP) for service outcomes and delivery of capital projects	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.
<b>Local Water, Sewer, and Liquid Waste</b>	Commission support and	Adjust to meet service delivery needs, as			

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Local Services:</b>  <b>Liquid Waste</b>	liaise and collaborate with other service areas (IWS, ES, PP) for service outcomes and delivery of capital projects	required. Continue implementation of capital program.	required. Continue implementation of capital program.	required. Continue implementation of capital program.	required resources. Continue implementation of capital program.
<b>Transportation Services</b>	Transportation studies, construction, installation, maintenance and regulation of sidewalks and bicycle paths, parking spaces, areas, and facilities, implementing and providing transportation demand management programs; and construction and maintenance of pedestrian safety and traffic calming facilities.	May expand service to include Fernwood Dock; annual maintenance increase corresponding to additional new pedestrian and cycling pathway infrastructure initiatives. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.	Adjust to meet service delivery needs, as required. Continue implementation of capital program.
<b>Transit Services</b>	Public passenger transportation system service	Ridership; increase service hours by April 2017 – 105 October 2017 - 850	Ridership increase service hours by June 2018 - 500	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Economic Development</b>	Broaden tourism, agriculture, food, economic diversity, business efficiency, improve Fulford and Ganges Villages, build economic support through communication and advocacy	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Fernwood Dock</b>	Manage and operate dock facility	Recruit for commission membership unless merged with another service (i.e. transportation)	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
<b>Rainbow Road Aquatic Centre</b>	Operates 64 hours per week, 49 weeks per year	Adjust to meet service delivery needs, as required	<u>Open Multipurpose room, 40 hours per week of program instruction and rentals</u> <u>Develop a business case to evaluate the current operating model</u>	<u>Change will depend on aquatic centre business plan and/or requisition limitations</u> <u>CRD to take over operations and management as of April 1, 2018</u>	<u>Open Multipurpose room, 40 hours per week of program instruction and rentals</u> <u>Adjust to meet service delivery needs, as required</u>
<b>Community Trails</b>	38 km of developed trails Distribution of 2500 trail guides	2-5 km of trail development; major upgrades to existing trails Distribution of 2500 trail guides	1-3 km of trail development; major upgrades to existing trails Distribution of 2500 trail guides	1-3 km of trail development; major upgrades to existing trails Distribution of 2500 trail guides	1-3 km of trail development; major upgrades to existing trails Distribution of 2500 trail guides
<b>Active and Passive Parks</b>	3 Active Parks	Asses and Review	4 Active Parks	No change	No change
	40 User Groups	2% increase	5% increase	1% increase	1% increase
	58 Passive Parks	Assess and Review	59 <del>(1 new beach access)</del>	Assess and Review <u>(1 new beach access)</u>	60 <del>(1 new beach access)</del> <u>Assess and Review</u>
<b>Community Recreation</b>	Distribution of Leisure Guides: 5000/2 x/year	5000/3 times per year	<u>54000/3 times per year</u> Implementation of online registration	<del>3500</del> <u>5000</u> /3 times per year	<del>3000</del> <u>5000</u> /3 times per year
	No. recreation programs: 12	5% increase	2% increase	2% increase	2% increase
	No. camp participants: 250	2% increase	1% increase	1% increase	1% increase
	No. LEAP users: 80	5% increase	2% increase	2% increase	1% increase
<b>Market in the Park</b>	Saturday Vendors: 165	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required	Adjust to meet service delivery needs, as required
	Sunday Vendors: 45	<u>Cancelled due to low</u>	<u>Vendors: 55</u>	<u>Vendors: 60</u>	<u>Adjust to meet service delivery</u>

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	(long weekends only)	<del>registration Vendors: 50</del>			<del>needs, as required</del>

## 2.2 Workforce Considerations

	Workforce (FTEs)				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Division Managers	1	1	1	1	1
Engineering	1	1	1	1	1
Administrative Support*	2.2	3*	2.8	2.8	2.8
<u>Parks &amp; Recreation</u>	3	3	5.35*	<del>5.35</del> <u>9.95</u> **	<del>5.35</del> <u>9.95</u>
<b>Total FTE</b>	7.2	8	<del>10.105</del>	<del>14.75</del> <u>14.05</u>	<del>14.75</del> <u>14.75</u>

\* 3 Parks Maintenance Workers (8mo, 8mo & 12mo) to reflect 3 converted employees.

\*\* ~~To be determined based on a review of the current aquatic centre operating business model. This service is contracted out expiring April 2018. The aquatic centre will benefit from a 4.1 FTE with the CRD assuming full operation and management effective April 1, 2018; and a 0.5 FTE increase of recreation programmer in 2018 to be recovered from program revenue~~

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>2016-2019</b>			
<b>Active and Passive Parks (Athletic Fields Land Acquisition)</b>	Acquire land through acquisition for athletic fields; develop <a href="#">phase 1 as identified in the a-Master Plan for 2017 Centennial Park Master Plan</a> . Review park maintenance policies and standards. <del>Create a conceptual design for playing fields; renovate and or R</del> replace washrooms at Centennial. <del>Develop athletic fields and grounds; purchase utility vehicles.</del>	Regional Infrastructure	Land Acquisition Reserves
<b>Transit Service Options Review</b>	<u>Review three potential Service Options:</u> <ul style="list-style-type: none"> <li>• Additional winter morning service (820 hrs.)</li> <li>• Increased summer Saturday frequency on #2</li> </ul>	Active & Multimodal Transportation	Core budget, reserves, BC Transit

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
	Fulford Harbour (120 hrs. and requires additional bus) • Extend evening service Monday – Thursday (420 hrs.)		
<b>Transit Fare &amp; Information Review</b>	Review fare related programs vendor distribution, marketing, and passenger information and develop action plan with BC Transit.	Active & Multimodal Transportation	Core budget, BC Transit
<b>Economic Development</b>	Implement strategic plan initiatives	Economic Development	Core budget
<b>Beddis Water Service</b>	Creekside RCS rebuild; Lautman reservoir dismantling; strategic asset management plan; install additional backwash fresh water tank  Booster pump at Sky Valley lower reservoir; Sky Valley reservoir decommissioning	Regional Infrastructure	Reserves and capital funds on hand
<b>Ganges Sewer Service</b>	Capital improvement program	Regional Infrastructure	Debt Financing
<b>Maliview Sewer Service</b>	public engagement and funding approval; wastewater treatment building upgrades; repair/replace main/service on Maliview Road; replace land portion of outfall; inflow/infiltration inspection (Phase 2)  Collection system repairs – Phase 1 and Phase 2; additional primary treatment	Regional Infrastructure	Reserves, Debt Financing, or Grant
<b>2016</b>			
<b>Ganges Seawalk</b>	Ganges Seawalk from Pecks Cove park to 151 Lower Ganges Road: project planning, identify the cost of completing construction of the boardwalk, and the requisite sources of funding.	Active & Multimodal Transportation	Single Supplemental, Grant. Upon completion will require continuous supplemental
<b>Administration Office</b>	<a href="#">Need to explore leasing alternative location space, or renovate existing</a>	Regional Infrastructure	Continuous Supplemental

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
	<p><del>Portlock Park administration buildings as an option in reorganizing and where feasible co-locate some or all key CRD functions on island for better coordination, delivery of services, and potential cost savings.</del></p> <p><del>Shared Space feasibility study.</del> <u>New office in Ganges Village completed as of July 2017. Will require ongoing funding for annual lease and short term loan repayment for renovations.</u></p>		
<b>SSI Incorporation Study</b>	Support proposed incorporation study needs and possible implementation.		Core Budget
<b>Potential Utilities Transfer</b>	Potential transfer of management and operations of the local utilities	Regional Infrastructure	Core Budgets
<b>Trail Development</b>	Ongoing trail maintenance. Review trail maintenance policies and standards	Active & Multimodal Transportation	Core Budget, reserves
<b>Recreation Enhancements</b>	<p><del>Replace recreation software; renovate Portlock buildings and program space; pilot new recreation programs.</del> <u>Develop program space and increase recreation program offerings</u></p>	Arts, Culture & Recreation	Core Budget, Reserves
<b>Multi-Use Pathway, Rainbow Rd East</b>	Rainbow Road (east) multi-use pathway from Rainbow Road Aquatic Centre to LGR: three phased designs and tender award	Active & Multimodal Transportation	Reserves
<b>Temporary Pathway, Lower Ganges Rd</b>	Lower Ganges Road site preparation and temporary pathway	Active & Multimodal Transportation	Reserves
<b>Pathway, Atkins Rd</b>	Pathway project: Atkins Road designs and tender award	Active & Multimodal Transportation	Core Budget, Reserves; Third Party Contribution Or Donation
<b>Transportation Capital Infrastructure Plan Support</b>	The Transportation Commission has a \$1.985 million capital infrastructure plan. Coordinating local	Regional Infrastructure	Reserves

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
	volunteers to prepare the designs, cost estimates, and project manage the construction program. Ensure project is managed within time, cost and scope constraints, meet stakeholder expectations, and maintain project momentum to completion.		
<b>Bus Shelter, Lower Ganges Rd</b>	Transit/Bus shelter north side of Lower Ganges Road north of Crofton Road.	Active & Multimodal Transportation	Core Budget/Transfer From Operating Budget To Capital Reserves
<b>Vesuvius Bay Transit Infrastructure Review</b>	Review Vesuvius Bay ferry terminal ferry for potential infrastructure improvements and costs	Active & Multimodal Transportation	BC Transit and Ministry of Transportation and Infrastructure
<b>Cedar Lane Water Service</b>	Strategic asset management plan	Regional Infrastructure	Reserves, Grants
<b>Cedars of Tuam Water Service</b>	Register SRW on School District property for well; negotiate access road SRW; strategic asset management plan	Regional Infrastructure	Reserves, Grants
<b>Fulford Water Service</b>	Design and approvals to replace water main on Morningside Road at Weston Creek; 2901 Fulford Road water service replacement	Regional Infrastructure	Core Budget, Reserves
<b>Highland/Fernwood Water Service</b>	Undertake intake assessment and design	Regional Infrastructure	Reserves
<b>Liquid Waste</b>	Septage facility upgrade; options analysis	Regional Infrastructure	Reserves
<b>Fernwood Dock Engineering Review</b>	<del>Undertake an engineering review and condition assessment; develop a multi-year inspection and capital repair and replacement priority work program, and financial plan; identify structural deficiencies, required component repair and replacement, upon which to</del> Develop a multi-year inspection and capital repair and replacement priority work program and financial plan.	Regional Infrastructure	Reserves

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
2017			
<b>SSI Incorporation Study Governance</b>	<del>Support proposed</del> <u>Proposed commission consolidation incorporation needs and possible implementation</u>		Core Budget
<b>Community Trails &amp; Beach Accesses</b>	Ongoing trail maintenance. Review trail maintenance policies and standards	Active & Multimodal Transportation	Core Budget, reserves
<b>Active Parks (Athletic Fields Land Acquisition / Portlock Park Multisport Renovation)</b>	<del>Create a conceptual design for playing fields. Upgrade multisport court at Portlock Park</del>	Regional Infrastructure	Core Budget, reserves
<b>Passive Parks (Centennial Park Master Plan implementation)</b>	Create a conceptual design for washroom renovation or replacement	Regional Infrastructure	Core Budget, Reserves; Third Party Contribution Or Donation
<b>Rainbow Road Aquatic Centre Systems Enhancement</b>	Implement new revenue and cash handling procedures at pool and install registration program. <u>Business case development.</u>	Recreation, Arts & Culture	Core Budget
<b>Recreation Programs</b>	Renovate Portlock buildings and program space; develop new recreation programs.	Arts, Culture & Recreation	Core Budget, Reserves
<b>Multi-Use Pathway, Rainbow Rd East</b>	Pathway blend gravel pathway from Kanaka Road to access to School District 64 administration building.	Active & Multimodal Transportation	Reserves
<b>Lower Ganges Rd</b>	Paved pathway on high side of Lower Ganges Road from south of intersection with Upper Ganges Road to Rainbow Road. Modified design from original JE Anderson Plan	Active & Multimodal Transportation	Reserves
<b>Rainbow Road</b>	Paved pathway on north side of Rainbow Road from Lower Ganges Road to access to School District 64 administration building. Modified design from original JE Anderson Plan	Active & Multimodal Transportation	Reserves
<b>Pathway, Atkins Rd</b>	Pathway project: Atkins Road designs and tender award	Active & Multimodal Transportation	Core Budget, Reserves; Third Party Contribution Or Donation

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>Bus Shelters: Lower Ganges Rd, Fulford-Ganges Rd &amp; Mobrae</b>	<u>Bus Shelter Location Considerations:</u> Lower Ganges Road <del>at Crofton, at Vesuvius; Fulford-Ganges Rd, at Cusheen Lake Road; Mobrae neighbourhood</del>	Active & Multi-modal Transportation	Core Budget, Reserves
<b>Transit Infrastructure Review</b>	Review and plan with BC Transit priority infrastructure actions	Active & Multi-modal Transportation	Core Budget, BC Transit
<b>Beddis Water Service</b>	Strategic Asset Management Plan, Creekside PCS rebuild; Lautman reservoir dismantling	Regional Infrastructure	Reserves and capital funds on hand
<b>Cedar Lane Water Service</b>	Strategic Asset Management Plan <del>at Grants for additional rain water catchment</del>	Regional Infrastructure	Reserves, Grants
<b>Cedars of Tuam Water Service</b>	Register SRW on School District property for well; negotiate access road SRW; Strategic Asset Management Plan	Regional Infrastructure	Reserves, Grants
<b>Fulford Water Service</b>	Construction of replacement water main on Morningside Road at Weston Creek	Regional Infrastructure	Core Budget
<b>Highland/Fernwood Water Service</b>	<u>Highland/Fernwood:</u> Complete intake assessment and design	Regional Infrastructure	Debt Financing
	<u>Highland:</u> Completion of Middle reservoir repairs, standpipe replacements, dismantle old intake building, replace services.	Regional Infrastructure	Reserves, Grant
<b>Liquid Waste</b>	Public engagement and referendum	Regional Infrastructure	Reserves
<b>Ganges Sewer Service</b>	Capital improvement program	Regional Infrastructure	Debt Financing
<b>Maliview Sewer Service</b>	wastewater treatment building upgrades; repair/replace main/service on Maliview Road; replace land portion of outfall	Regional Infrastructure	Reserves, Debt Financing, or Grant
<b>Fernwood Dock</b>	Capital improvement program	Regional Infrastructure	Reserves

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>2018</b>			
<b>Community Trails &amp; Beach Accesses</b>	<del>Scope and plan Mouat West, Harbour House / Crofton Brook trail; scope and plan beach access developments</del> <u>Realign Hedgers Trail; community consultation on Stark Road connector strips.</u>	Active & Multi-modal Transportation	Core Budget, Reserves
<b>Active Parks (Athletic Fields Land Acquisition)</b>	Develop athletic fields and grounds;	Regional Infrastructure	Core Budget, reserves
<b>Passive Parks (Centennial Park Master Plan implementation)</b>	Develop washroom and phase one of Master Plan Operational and infrastructure improvements to Saturday Market,	Regional Infrastructure	Core Budget, Reserves; Third Party Contribution Or Donation
<b>Rainbow Road Aquatic Centre (Multipurpose Room)</b>	Create a conceptual design for multipurpose room.	Arts, Culture & Recreation	Third Party Contribution, Grant Funding
<b>SSI Incorporation Study</b>	<del>Support proposed incorporation needs and possible implementation</del>		<del>Core Budget</del>
<b>Sidewalks &amp; Bike Path, Lower &amp; Upper Ganges Rd</b>	Sidewalks and bike path at Lower Ganges Road and Upper Ganges Road intersection	Active & Multi-modal Transportation	Reserves
<b>Connector, Lower Ganges Rd</b>	Lower Ganges Road upland connector	Active & Multi-modal Transportation	Reserves
<b>Bus Shelters: Lower Ganges Rd, Fulford-Ganges Rd &amp; Mobrae</b>	<u>Bus Shelter Location Considerations:</u> Lower Ganges Road at Vesuvius; Fulford-Ganges Rd. at Cusheon Lake Road; Mobrae neighbourhood	Active & Multi-modal Transportation	Core Budget, Reserves
<b>Transit Infrastructure Review</b>	Review and plan with BC Transit priority infrastructure actions	Active & Multi-modal Transportation	Core Budget, BC Transit
<b>Cedar Lane Water Service</b>	Abandon unused wells.	Regional Infrastructure	Reserves, Grants
<b>Cedars of Tuam Water Service</b>	Abandon unused wells.	Regional Infrastructure	Reserves, Grants
<b>Fulford Water Service</b>	Strategic asset management plan	Regional Infrastructure	Reserves, Grant
<b>Ganges Sewer Service</b>	Capital improvement program	Regional Infrastructure	Debt Financing
<b>Maliview Sewer Service</b>	Collection system repairs – Phase 1	Regional Infrastructure	Debt Financing, or Grant

Title & Estimated Completion Date	Description	Priority (if applicable)	Budget Implications
<b>Liquid Waste</b>	Design and construction of treatment and disposal	Regional Infrastructure	Reserves
<b>2019</b>			
<b>Community Trails &amp; Beach Accesses</b>	Develop Harbour House / Crofton Brook trail	Active & Multi-modal Transportation	Core Budget, Reserves
<b>Active Parks (Athletic Fields Land Acquisition)</b>	Develop athletic fields and grounds; purchase utility vehicles.	Recreation, Arts & Culture	Core Budget, Reserves
<b>Passive Parks (Centennial Park)</b>	Operational and infrastructure improvements to Saturday Market, i.e. online booking system	Regional Infrastructure	Core Budget, Reserves; Third Party Contribution Or Donation
<b>Rainbow Road Aquatic Centre (Multipurpose Room)</b>	Develop a multipurpose room at Rainbow Road Aquatic Centre.	Recreation, Arts & Culture	Core Budget, Reserves
<b>Transportation Infrastructure Improvements</b>	Intersection improvements at Hereford/Purvis on Lower Ganges Road	Active & Multi-modal Transportation	Reserves
	Rainbow Road south side sidewalk	Active & Multi-modal Transportation	Reserves
<b>Bus Shelters: Lower Ganges Rd, Fulford-Ganges Rd &amp; Mobrae</b>	<u>Bus Shelter Location Considerations:</u> Lower Ganges Road at Vesuvius; Fulford-Ganges Rd. at Cusheon Lake Road; Mobrae neighbourhood	Active & Multi-modal Transportation	Core Budget, Reserves
<b>Transit Infrastructure Review</b>	Review and plan with BC Transit priority infrastructure actions	Active & Multi-modal Transportation	Core Budget/BC Transit
<b>Ganges Sewer Service</b>	Capital improvement program, Strategic Asset Management Plan	Regional Infrastructure	Debt Financing
<b>Highland/Fernwood Water Service</b>	Construct new intake	Regional Infrastructure	Reserves
<b>Maliview Sewer Service</b>	Collection system repairs – Phase 2	Regional Infrastructure	Debt Financing, or Grant
<b>Liquid Waste</b>	Continued ground water monitoring	Regional Infrastructure	Reserves, Debt

## 4. Goals & Performance Indicators

Service Goals	Indicators or Measures
---------------	------------------------

	Increase access to parks and recreational opportunities	<ul style="list-style-type: none"> <li>• Annual increase in trail development (2015 baseline)</li> <li>• Increased participation in recreation programs*</li> <li>• Number of recreation programs offered to the public*</li> <li>• <u>Increase active sports field for development, passive parks and beach accesses</u></li> <li>• <u>Increase aquatic program offerings</u></li> </ul>
	Advance strategic economic development activities	<ul style="list-style-type: none"> <li>• Implement at least one initiative from the economic strategic plan annually between 2016 and 2019</li> <li>• </li> <li>• Qualitative observations on the increased coordination of economic development activities in Southern Gulf Islands and Salt Spring Island*</li> </ul>
	Support multi-modal transportation planning and investment	<ul style="list-style-type: none"> <li>• Complete multi-year inspection and capital repair and replacement priority work program and financial plan of Fernwood Dock by end of 2016</li> <li>• Complete construction of paved pathway on the upper side of Lower Ganges Road and on the north side of Rainbow and in 2017 (detailed location in plan)</li> <li>• Complete construction of gravel pathway on Rainbow Road in 2017(detailed location in plan)</li> <li>• Review and prioritize balance of pedestrian improvements identified in 2015 referendum by in 2017Implement a fare related action by 2019</li> <li>• Implement a marketing and passenger information service improvement recommendation by 2019</li> <li>• % increase in transit services or related infrastructure*</li> <li>• Increase in kilometers of active transportation infrastructure*</li> </ul>
	Maintain and operate quality water and sewer infrastructure	<ul style="list-style-type: none"> <li>• % of capital projects completed on time and on budget*</li> <li>• Sustainable asset funding plans in place*</li> <li>• # of infrastructure replacement projects*</li> </ul>
	Maintain high quality Electoral Area Administration and provide opportunities for community engagement	<ul style="list-style-type: none"> <li>• Participation rates of residents in two way dialogue and engagement opportunities*</li> <li>• # of Electoral Area Director Meetings</li> </ul>

\* = Corporate Indicator – multiple divisions may contribute to this measure.

## Contact

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# Service Plan for Southern Gulf Islands Electoral Area Administration 2016-2019

Capital Regional District

*Date submitted: October 2015*

*Date updated: ~~September 2016~~ July 2017*



Making a difference...together

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# 1 Overview

## 1.1 Service Summary

The Southern Gulf Islands (SGI) Electoral Area Administration Service facilitates emerging issues identified by the EA Director. Position also facilitates the advancement the SGI Economic Sustainability Commission's goals of resilient and sustainable local economies and triple bottom line initiatives. The Service also coordinates with other CRD divisions to initiate and complete specific projects or initiatives occurring on the Southern Gulf Islands.

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<b>Administration</b> Provide administration for the SGI EA Director and coordinate actions with CRD Divisions	SGI Electoral Area	Requisition, <del>grants</del>	Electoral Area Services Committee Finance Committee
<u>SGI Community Parks and Recreation Commission Support</u> Provide assistance with goods and service procurement and facilitate responses to operational and policy queries	<u>SGI Electoral Area</u>	<u>Requisition</u>	<u>Local Parks and Recreation Commission</u> <u>Electoral Area Services Committee</u>
<u>SGI Finance related Support</u> Assist Finance staff to process Community Works Fund (CWF) applications for CRD services and by third party applicants	<u>SGI Electoral Area</u>	<u>Requisition</u>	<u>Electoral Area Services Committee</u> <u>Finance Committee</u> <u>CRD Board</u>
<b>Community Economic Sustainability Commission Support</b> Facilitate the advancement of Community Economic Sustainability Commission's projects and initiatives	SGI Electoral Area	Requisition, grants and donations	Electoral Area Services Committee Finance Committee

## 1.2 Organization Chart

The CRD has allocated time in the form of a 1.0 FTE Manager position for 2017. A future organization structure is to be determined. This position reports directly to the Executive Leadership Team.

## 1.3 Key Trends, Issues & Risks – Service Specific

### Administration

Electoral Area Director working with CRD CAO and ELT to define new administrative structure to support SGI initiatives

### **Legislation**

Changes to provincial Acts and the overall regulatory environment (for example: sea level rise, community governance reviews, Treaty negotiations, water management and climate change) require ongoing education for staff and engagement with residents and internal stakeholders.

Salt Spring Island governance review may impact or change SGI Community Economic Sustainability Commission (CESC) initiatives and priorities.

### **Community**

The Service has an ongoing need for collaboration with Islands Trust, which is the local land use planning authority, as well as multiple CRD divisions who work or provide services within the SGI.

There is also a need for extensive community consultations associated with designing and implementing projects to address emerging issues and CESC initiatives.

### **Resources**

Managing expectations around emerging issues and for CESC initiatives by the residents may exceed the mandate, ability and resources available under the Service.

## **1.4 Link to Priorities**

While the service is still in its infancy, the current emerging issues and the CESC initiatives relate to the following Corporate and Board priorities:

- Active & Multi-Modal Transportation
- Changing Demographics
- Agricultural Land and Food Security
- Recreation, Arts & Culture
- Public Engagement & Communications
- First Nations

# 2 Services

## 2.1 Service Levels

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Administration</b>	Review current bylaws and potential structures  Respond to uncertainty regarding variable emerging issues	Revised 2016 Service Plan to new Administration Service	<u>Electoral Area Director working with CRD CAO and ELT to define new administrative structure to support SGI initiatives</u> <u>Adjust to address emerging issues</u>	Adjust to address emerging issues	Adjust to address emerging issues
<b><u>SGI Community Parks and Recreation Commission Support</u></b>		<u>Facilitate Purchase Orders and prepare contracts for local service providers</u> <u>Facilitate responses to operational and policy queries</u>	<u>Facilitate Purchase Orders and prepare contracts for local service providers</u> <u>Facilitate responses to operational and policy queries</u>	<u>Facilitate Purchase Orders and prepare contracts for local service providers</u> <u>Facilitate responses to operational and policy queries</u>	<u>Facilitate Purchase Orders and prepare contracts for local service providers</u> <u>Facilitate responses to operational and policy queries</u>
<b><u>SGI Finance Related Support</u></b>	<u>Assist Finance staff to process Community Works Fund (CWF) applications for CRD Services and Third Party Groups</u>	<u>Assist Finance staff to process Community Works Fund (CWF) applications for CRD Services and Third Party Groups</u>	<u>Assist Finance staff to process Community Works Fund (CWF) applications for CRD Services and Third Party Groups</u>	<u>Assist Finance staff to process Community Works Fund (CWF) applications for CRD Services and Third Party Groups</u>	<u>Assist Finance staff to process Community Works Fund (CWF) applications for CRD Services and Third Party Groups</u>
<b><u>Community Economic Sustainability Commission Support</u></b>	Identify CESC priorities, objectives, budgets and timelines to determine baseline level of service	Identified CESC priorities <del>Prepare draft Action Plan</del> <del>Prepare 2014 Census sheets for Islands</del>	<u>Facilitated funding for consultant to prepare draft Strategic Plan SGI2020</u> <u>Refine CESC priorities, objectives, budgets, timelines and organization structure in accordance with CESC Economic Framework</u>	Refine CESC priorities, objectives, budgets and timelines in accordance with and organization structure in accordance with SGI2020 <u>Prepare 2011 Census sheets for Islands</u>	Refine CESC priorities, objectives, budgets and timelines in accordance with <u>SGI2020 Plan</u>

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Administration, <del>and SGI Parks and Recreation Commission support, SGI Finance related support</del> and Community Economic Sustainability Commission Support	1.0 FTE (September to December)	1 FTE	1 FTE	TBD	TBD

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>2016</b>			
<b>Social Finance Feasibility Project</b> (Joint project with CESC organizational Structure)  To be completed in 2017	<del>Through a consultant W</del> work with the CRD, financial agencies and private sponsors to identify opportunities that can mobilize resources and private capital to create funding sources for achieving social and environmental goals. <del>Economic development framework and action plan to be completed this fall</del> Facilitated preparation of Draft Strategic Plan SGI2020. Consultants developing and undertaking public consultation in fall.	Governance Public Engagement & Communications	Core Budget and Gas Tax funding
<b>CESC Organization Structure</b> (Joint project with Social Finance)  To be completed in 2018 <del>7</del>	<del>Through consultant I</del> identify organization options e.g., CRD service, not for profit. Community Cooperative to facilitate implementation of initiatives Organizational options to be considered as part of the <del>economic development action plan to be completed this fall</del> . Strategic Plan SGI2020	Economic Development	Core Budget and Gas Tax funding
<b>SGI Community Bus Service Exploration</b> (Joint project with Inter-island Passenger Ferry service)  <del>To be c</del> ompleted in 2017	<del>Through consultant P</del> provide continued exploration of the feasibility, scope and costs of a more formal transit system or public transportation network on Galiano, Mayne, South and North Pender and Saturna Islands and identify a mechanism for implementation. Community bus report which outlines requirements, explores existing services and consider recommendations for pilot projects for Galiano and Pender <del>to be completed this fall</del> . Related to ETGI through provision of transportation infrastructure.	Economic Development Active & Multi-modal Transportation Public Engagement & Communications	UBCM Strategic Priorities Grant \$50K

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<b>Inter-island Passenger Ferry Services</b> (Joint project with Community Bus)  To be completed in <u>2017-2018</u>	<u>Through a consultant</u> investigate the operational and financial feasibility of introducing a water-based passenger service for the Southern Gulf Islands, Salt Spring Island and Town of Sidney, with an aim of introducing a summer trial service in <u>2017-2018</u> if deemed viable. Workshop <u>in-fall</u> held to outline requirements, explore existing services and consider feasibility of a pilot project. <u>Consultant preparing work plan for pilot project.</u> Related to ETGI through provision of transportation infrastructure.	Economic Development  Active & Multi-modal Transportation  Public Engagement & Communications	UBCM Strategic Priorities Grant \$50K
<b>Broadband Infrastructure Improvement</b>  To be completed in 2017	<del>Complete research and analysis on the feasibility scope and costs to improve internet service.</del>	<del>Governance  Public Engagement &amp; Communications</del>	<del>Core Budget</del>
<b>Experience the Gulf Islands (ETGI) – Proposal Document</b>  Completed 2016	Finalize the ETGI publication and update website.	Public Engagement & Communications  Education, Outreach & Information	Core Budget
<b>Experience the Gulf Islands – Concept Plan</b>  <del>To be completed in 2016</del> Completed 2017	<del>Prepare the ETGI Concept Plan approved by CRD Board July 2017.</del>	Economic Development	Gas tax funding (\$25K SSI & \$35K SGI)
<b>Regional Trail for SGI and SSI –Mayne Island Demonstration Trail</b>  To be completed in <u>2016-2017</u>	<del>Complete Regional Parks to complete</del> detailed planning and design phase for the Mayne Island Demonstration Trail.  Related to ETGI through provision of transportation infrastructure.	Economic Development  Active & Multi-modal Transportation  Public Engagement & Communications	Shared cost - Regional Parks (\$50K) SGI Gas Tax (\$60K)
<b>Regional Trail for SGI and SSI</b>  To be completed in <u>2017-2018</u>	<del>Identify-Draft plan prepared by Regional Parks which identifies</del> the potential routes for regional spine trails for SSI and SGI. <u>Public consultation underway.</u>  Related to ETGI through provision of transportation infrastructure.	Economic Development  Active & Multi-modal Transportation  Public Engagement & Communications	Regional Parks Core budget and gas tax funding
<b>Education Assessment</b> (Joint project with Resource Inventory) <del>Replaced with Education Opportunity Application</del> <del>Web application to be completed in 2016</del>	<del>Research existing and emerging educational programs delivered in the SGIs and develop a list of strategies to promote the islands as an education destination through creation of a web registry.</del>	<del>Education, Outreach &amp; Information</del>	<del>Core Budget and CESC (\$15.5K)</del>
<b>Island Resource Inventory</b> (Joint project with Educational Assessment) <del>Replaced with Education Opportunity Application</del>	<del>Prepare an inventory of significant resources (people, groups, agencies) on the islands through creation of a web registry.</del>	<del>Public Engagement &amp; Communications</del>	<del>Core Budget and CESC (\$15.5K)</del>

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<del>Web application to be completed in 2016 on hold</del>			
<b>Food and Agriculture Strategy</b> <del>To be completed 2017</del>	<del>Complete the Southern Gulf Islands Food and Agriculture Strategy approved by CRD Board April 2017.</del>	Agricultural Land & Food Security	Gas Tax and grant funding
<b>Magic Lake Estates Emergency Access</b>  <b>To be completed in 2017-2018</b>	Work with the community, <u>and Parks and Fire commissions</u> to identify and establish an alternate emergency routes for Magic Lake. <u>Project Charter prepared and approved with consultation starting in September.</u>	Public Engagement & Communications	Gas Tax funding (\$50K)
<b>Saturna Health Group Service Establishment</b>  <b>To be completed in 2018</b>	<del>Coordinating</del> <u>Providing</u> assistance to <u>Finance staff</u> to consider establishment of a Health Care Centre service. <u>Any referendum likely to coincide with 2018 elections</u>	Public Engagement & Communications	Core budget
<b>SIG Housing Needs Assessment</b>  <b>To be completed in 2018</b>	<del>Requesting</del> <u>Obtained</u> CWF grant for an SGI Housing Needs Assessment <del>to be</del> <u>being</u> managed by CRD Housing in collaboration with Islands Trust and housing groups on the islands.	Public Engagement & Communications	Gas Tax Funding (\$40,000)
<b>SIG Community Works Fund Applications</b>	<u>Assisted Finance staff to process CWF requests for Pender Island Library Solar Roof (\$15,000) and SSI and SIG Regional Trail support (\$20,000)</u>	<u>Economic Development</u>	<u>Gas Tax Funding</u>
<b>2017</b>			
<b>Experience the Gulf Islands – Implementation Plan</b>  <del>To be completed in 2017</del>	<del>Prepare Implementation plan to identify key actions, partnerships and funding sources.</del>	<del>Economic Development</del>	<del>Gas Tax and grant funding</del>
<b>Regional Trail for SIG and SSI – Mayne Island Demonstration Trail</b>  <del>To be completed in 2018</del>	<del>Construct Phase 1 of trail.  Related to ETGI through provision of transportation infrastructure.</del>	<del>Economic Development  Active &amp; Multi-modal Transportation  Public Engagement &amp; Communications</del>	<del>Regional Parks Core Funding and Gas Tax and grant funding</del>
<b>Food and Agriculture Strategic Initiatives</b>  <del>To be completed in 2017</del>	<del>Address data collection, branding, marketing, and transportation issues identified in Strategy.</del>	<del>Agricultural Land &amp; Food Security</del>	<del>Gas Tax and grant funding</del>
<b>CESC Organizational Structure for Implementation</b>  <del>To be completed in 2017</del>	<del>Prepare documents e.g. bylaw or not-for-profit society and agreements to implement new structure that facilitates implementation.</del>	<del>Economic Development</del>	<del>Gas Tax and grant funding</del>
<b>Community Bus Pilot projects – Galiano, North Pender</b>  <del>To be completed in 2018</del>	<u>Community Bus Societies to</u> <del>Commence</del> two-year pilot community bus service on islands.  Related to ETGI through provision of transportation infrastructure.	Active & Multi-modal Transportation	Gas Tax and grant funding
<b>Inter-island Passenger Ferry Pilot Projects</b>	<u>Commence three month pilot project linking SIG, SSI and Town of Sidney.</u>	<u>Economic Development</u>	<u>Gas Tax and grant funding</u>

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
<del>To be completed in 2017</del>	<del>Related to ETGI through provision of transportation infrastructure.</del>	<del>Active &amp; Multi-modal Transportation</del>	
<b><u>Educational Opportunity Application (formerly Education Assessment and Resource Inventory)</u></b>  <del>To be fully operational for program, provider and facility registration and user bookings in 2017 web application on hold</del>	<u>Consultant developed a</u> Application which identifies specific educational programs, providers and facilities available and enables booking of providers and facilities for educational events. <u>Salish Sea Registry developed and tested. Formal launch delayed pending finding a web sponsor</u>	Economic Development	<del>Gas Tax and grant funding</del> <u>\$15.5K CESC</u>
<b><u>SGI Community Works Fund Applications</u></b>	<u>Assisted Finance staff to process CWF requests for Galiano Museum Society heat pump (\$20,000); Mayne Island reading Room Renovation (\$4,000); Pender Library heat pump (\$22,733); Galiano Childcare Centre (\$34,500); Pender Community hall solar panels (\$15,000); SGI Chamber of Commerce Tourist Centre/Sign/Kiosk (\$24,600); Mayne Island Parks and Recreation Commission Dinner Bay (\$27,000); SGI Community Resource Centre - visitor centre (\$36,000); and Galiano Club Community Hall Energy Upgrade (\$13,947.40).</u>	<u>Economic Development</u>	<u>Gas Tax</u>
<b><u>Pender Island Parks and Recreation Commission</u></b>	<u>Facilitated preparation of contracts for Trail maintenance, bathroom maintenance, lawn mowing. Facilitated POs for South Island Woodworks, SKYTECH Enterprises Inc and Big Digem Excavating Ltd</u>	<u>Economic Development</u>	<u>Core budgets</u>
<b>2018-2019</b>			
<b><u>Experience the Gulf Islands – Implementation Plan</u></b>  <del>To be determined</del>	<u>ETGI Project Manager and teams to prepare Implementation plan to identify key actions, partnerships and funding sources.</u>	<u>Economic Development</u>	<u>Gas Tax and grant funding</u>
<b><u>Regional Trail for SGI and SSI – Mayne Island Demonstration Trail</u></b>  <del>To be determined</del>	<u>Regional Parks to construct Phase 1 of trail.</u>  <u>Related to ETGI through provision of transportation infrastructure.</u>	<u>Economic Development</u>  <u>Active &amp; Multi-modal Transportation</u>  <u>Public Engagement &amp; Communications</u>	<u>Regional Parks Core Funding and Gas Tax and grant funding</u>
<b><u>Food and Agriculture Strategic Initiatives</u></b>  <del>To be determined</del>	<u>SGI Steering Committee to address data collection, branding, marketing, and transportation issues identified in Strategy.</u>	<u>Agricultural Land &amp; Food Security</u>	<u>Gas Tax and grant funding</u>
<b><u>CESC Organizational Structure for Implementation</u></b>	<u>Facilitate preparation of documents e.g. bylaw or not –for-profit society and</u>	<u>Economic Development</u>	<u>Gas Tax and grant funding</u>

Title & Estimated Completion Date	Description	Priority Reference	Budget Implications
To be completed in 2018	<u>agreements to implement new structure that facilitates implementation.</u>		
<b><u>Inter-island Passenger Ferry Pilot Projects</u></b> To be completed in 2018	<u>Facilitate private contractor to commence three month pilot project linking SGI, SSI and Town of Sidney.</u>  <u>Related to ETGI through provision of transportation infrastructure.</u>	<u>Economic Development</u> <u>Active &amp; Multi-modal Transportation</u>	<u>Gas Tax and grant funding</u>
<b><u>Broadband Infrastructure Improvement</u></b> To be determined	<u>SGI team to complete research and analysis on the feasibility scope and costs to improve internet service. No action taken or proposed</u>	<u>Governance</u> <u>Public Engagement &amp; Communications</u>	<u>Core Budget</u>
<b>Establish SGI Community Bus Society</b> To be completed in 2018 <u>determined</u>	<u>SGI CESC to consider aAmalgamation of several community bus societies into one SGI society. pending results of Galiano and North Pender pilot projects.</u>  <u>Related to ETGI through provision of transportation infrastructure.</u>	Active & Multi-modal Transportation	Gas Tax and grant funding
<b>Regional Trail for SGI and SSI</b> To be completed in 2018 <u>determined</u>	<u>Regional Parks to cComplete detailed design for regional trail routes.</u>  <u>Related to ETGI through provision of transportation infrastructure.</u>	Economic Development Active & Multi-modal Transportation Public Engagement & Communications	Regional Parks Core budget and gas tax funding
<b>Inter-island Passenger Ferry Service</b> <u>To be determined</u>	<u>SGI CESC to consider Eestablishing a public/private entity to provide passenger ferry service, # feasiblepending pilot project results.</u>  <u>Related to ETGI through provision of transportation infrastructure.</u>	Economic Development Active & Multi-modal Transportation	Private Partnership funding/Gas Tax and grant funding
<b><u>SGI Community Works Fund Applications</u></b>	<u>Assist Finance staff with submitted applications</u>	<u>Economic Development</u>	<u>Gas Tax</u>
<b><u>SGI Parks and Recreation Commissions</u></b>	<u>Facilitate contracts and POs as requested</u>	<u>Economic Development</u>	<u>Core Budgets</u>
<b><u>SGI Teleconferencing Equipment and Facilities</u></b> To be completed in 2018	<u>To provide teleconferencing services on all of the islands to facilitate inter-island communication especially for SGI CESC meetings</u>	<u>Governance</u> <u>Public Engagement &amp; Communications</u>	<u>Core Budget</u>

## 4 Goals & Performance Indicators

Service Goals	Performance Indicators
A Service plan is established and agreed to for service delivery beyond 2016	<ul style="list-style-type: none"> <li><u>The EA Director supports the service plan and required requisition for service delivery beyond 2016</u></li> <li><u>New organization structure for administrative support established</u></li> </ul>

<p><del>An action</del> Strategic plan SGI2020 is approved by CESC and reorganization of CESC is established</p>	<ul style="list-style-type: none"> <li>• <del>An implementation framework</del> Strategic Plan SGI2020 is established approved and agreed to for initiatives beyond 2016 to 2020</li> <li>• <del>CESC bylaw amended or new organization established to implement SGI2020</del></li> <li>• <del>Develop and distribute a CESC and Advisory Committee Satisfaction Survey covering role, mandate and timelines of initiatives (80% survey participation rate)</del></li> </ul>
<p><del>Number of educational workshops delivered or partnered annually</del></p>	<ul style="list-style-type: none"> <li>• <del># of educational workshops delivered on or partnered on annually*</del></li> </ul>

\* = Corporate indicator – multiple divisions may contribute to this measure

## Contact

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# Service Plan for Juan de Fuca Parks & Recreation

2016-2019  
~~(2017)~~ (2018)

Capital Regional District

**Date submitted:** ~~August 2016~~ August 2017



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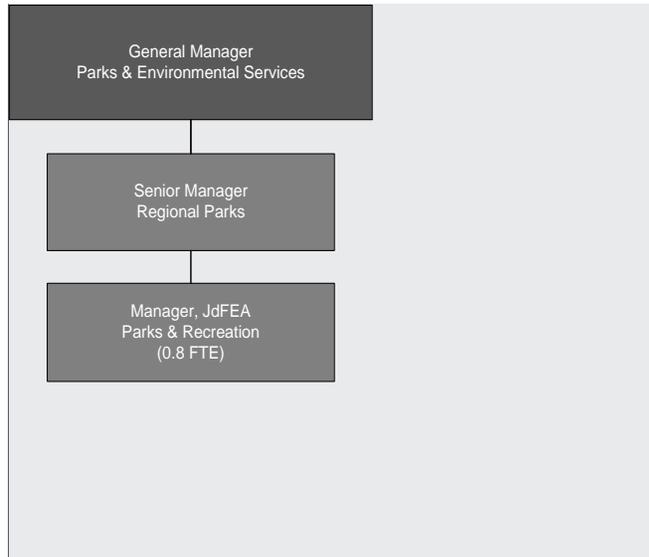
# 1 Overview

## 1.1 Division & Service Summary

The Juan de Fuca Electoral Area (JdFEA) Parks & Recreation serves the unincorporated communities of Port Renfrew, Shirley/Jordan River, Otter Point, Willis Point, Malahat and East Sooke. With advice from the nine-member Parks and Recreation Advisory Commission, the division is responsible for the acquisition, development and maintenance of community parks as well as the provision of community recreational programming in the electoral area. The division is also responsible for overseeing the operations and maintenance needs of the Port Renfrew Community Centre, working with a local operating committee.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Planning, management and maintenance of Community Parks System (24 community parks and 8.1 kilometers of trails)</b></p> <p>A small seasonal staff carries out maintenance and development of trails and park facilities and project implementation goals. Staff also collaborate with various partners and volunteer organizations in the maintenance of parks and trails.</p>	<p>Juan de Fuca Electoral Area communities</p> <p>Volunteers through Stewardship Agreements</p>	<p>Requisition, revenue, grants, donations</p>	<p>Juan de Fuca Electoral Area Parks and Recreation Advisory Commission</p>
<p><b>Delivery of recreational programming and community events</b></p> <p>Health and fitness classes are provided to residents by contracted professionals. The program also supports one-time community recreational events, as well as volunteer organizations providing guided hikes and other recreational initiatives.</p>	<p>Juan de Fuca Electoral Area communities, except Willis Point</p> <p>Volunteers through Stewardship Agreements and third party organizations</p>	<p>Requisition, volunteers</p>	<p>Juan de Fuca Electoral Area Parks and Recreation Advisory Commission</p>
<p><b>Management and maintenance of Port Renfrew Community Centre</b></p> <p>The Community Centre supports leased office space, as well as a space for local recreational, cultural and meeting events.</p>	<p>Port Renfrew community</p>	<p>Revenue</p>	<p>Community Centre Operating Committee under Juan de Fuca Parks and Recreation Advisory Commission</p>

## 1.2 Organization Chart



ommented [AS1]: jjfManager position is currently 0.6 FTE

## 1.3 Key Trends, Issues & Risks – Service Specific

### Community Parks

Through 7 Stewardship Agreements and 7482-volunteers, Juan de Fuca Parks achieves a significant level of community support in the maintenance of specific parks and playgrounds. Some volunteers coordinate community events in parks, guided hiking programs, as well as educational and ecosystem health (removal of invasive species) initiatives.

Another key trend for JdFEA Parks & Recreation is the collaboration between Regional Parks and Community Parks. Over the past 2 years, Regional Parks and Juan de Fuca Community Park managers have continued to develop an integrated operational and management organization and Division Plans. Although both programs remain funded through separate tax bases, real cost and operational efficiencies continue to be realized through the coordinated management team approach, and Regional Parks ability to provide equipment and professional staff support to community park initiatives as they become available.

Parks Program Requisition Levy: The maximum levy was increased in March 2016 to \$203,027. This allows for the program to now keep pace with annual operational and cost of living increases. The long-term objective should be the amalgamation of the parks and recreation program budgets.

## 1.4 Link to Priorities

### BIODIVERSITY & ECOLOGICAL HEALTH

- assess service needs, respond to issues that threaten ecological health such as wildlife and invasive species, and profile best practices
- integrate a climate lens in our land acquisition strategies

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement

### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

### RECREATION, ARTS & CULTURE

- support increased access to community arts and recreation through programming and strategic investments

### ACTIVE & MULTI-MODAL TRANSPORTATION

- manage trails as transportation corridors, establish a Transportation Service, deliver active transportation programming

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Community Parks</b>	Inspect/Maintain 8.1 km of trails per year	Potential new trail (1.7 km) if Statutory Right of Way obtained	Review and Assess	Adjust to meet service delivery needs, as required. Potential new trail (1.5 km) if Rural Dividend-Port Renfrew	Review and Assess

				<u>funding obtained</u>	
	Maintain/repair 21 park facilities per season	22 facilities	23 facilities	Review and Assess	Adjust to meet service delivery needs, as required.
	Maintain two sports fields (baseball) and two tennis courts	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required
	Maintain two playgrounds and 16 pieces of playground equipment	17 pieces	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Add 25 signs	Add/replace 5 signs/year	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	Remove invasive species at 3-5 locations per year	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
	7 stewardship agreements and 82 volunteers	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess
<b>Recreation Programs</b>	Support 5 recreation program contracts and 2-3 events or initiatives	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required
<b>Port Renfrew Community Centre</b>	Manage 100% of centre operating costs through revenue	Review and Assess	Adjust to meet service delivery needs, as required.	Review and Assess	Adjust to meet service delivery needs, as required

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Program Management</b>	0.86 Perm. PT	0.86 Perm. PT	0.86 Perm. PT	0.86 Perm. PT	0.86 Perm. PT
<b>Two auxiliary staff 4 months/year</b>	2 AUX, four mos/yr	2 AUX, <del>four</del> five mos/yr			

Supplementary FTEs	0	0	0	0	0
<b>Total</b>	<b>0.86</b>	<b>0.86</b>	<b>0.86</b>	<b>0.86</b>	<b>0.86</b>

### 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Establish new parkland</b>	Establish parkland or 5% cash-in-lieu for land acquisition through development permits or rezoning applications received by local area planning (mandated requirement under Local Government Act, Sec. 510)	Biodiversity & Ecosystem Health  Regional Infrastructure	Core Budget
<b>Trail Maintenance</b>	Maintain existing 8.1 km of trails on a monthly basis and remove hazards	Recreation, Arts & Culture	Core Budget
<b>Community Recreation Programming</b>	Continue to deliver a range of recreation programs to residents in the electoral area. Advertise for new contract in 2016	Recreation, Arts & Culture	\$15,000 Core Budget
<b>Guided Hiking Program</b>	Assist the Juan de Fuca Community Trails Society (via Stewardship Agreement) to maintain guided hiking program, information brochure, and support equipment for volunteer guides	Recreation, Arts & Culture	\$800 Core Budget
<b>William Simmons, Park seasonal toilets</b>	Provide seasonal toilet services for new development area (completed in 2015) until funding allows for permanent facility	Regional Infrastructure	\$1,500 per season Core Budget
<b>Invasive species removal</b>	Remove selected invasive species from park lands and community trails, with assistance from volunteers	Biodiversity & Ecosystem Health	Core Budget
<b>Stewardship agreements</b>	Provide support and assistance to Society volunteers assisting to maintain parks and trails	Biodiversity & Ecosystem Health	Core Budget
<b>2017</b>			
<b>Kemp Lake Foreshore Access</b>	<a href="#">Develop improved road and parking access to Kemp Lake boat launch and install dock structure that accommodates boat launching, fishing and swimming. (Potential partnership with Freshwater Fisheries Society of B.C.)</a>  <a href="#">Through a public consultation process, investigate the feasibility of improving the existing lake access at Milligan and Manatu Roads, as well as installing angling and lake</a>	Regional Infrastructure	\$45,000 Freshwater Fisheries Society of B.C., Gas Tax Grant and <del>\$10,000</del> Capital Funds Core Budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
	<a href="#">recreation infrastructure at Kemp Lake in an effort to enhance recreation experiences for local area residents.</a>		
<b>Rural Dividend BC – Port Renfrew Tourism Trail</b>	<p>An application was submitted to Rural Dividend BC for funding for a 1.5 km trail in the core area of Port Renfrew for a total value of \$111,000</p> <p>An application for a Community Works Fund Grant for \$12,500 was submitted to assist with completing the project</p> <p>Funding dependent</p>	Active & Multi-modal Transportation	\$10,020 <a href="#">Capital Funds</a> <a href="#">Core Budget</a>
<b>2018</b>			
<b>Becher Bay Viewpoint Access Trail</b>  <a href="#">Previously 2017</a>	Develop a 123-metre trail on existing Ministry of Transportation & Infrastructure foreshore access; construct small 2-3 car parking area, foot bridge and viewpoint bench. (Potential 2 year project if funding available.)	Biodiversity & Ecosystem Health	\$20,000 Core Budget
<b>Wieland Trail Alternate Transportation Funding</b>  <a href="#">Previously 2016</a>	Seek Gas Tax funding to develop 1.7 km of trail from William Simmons Park to Kemp Lake Road as part of an Otter Point alternate transportation route (dependent on whether final Statutory Right of Way be secured)	Biodiversity & Ecosystem Health  Active & Multi-modal Transportation	\$5,000 Core Budget and \$80,000 Gas Tax Grant
<b>Seagirt Ponds Park Stewardship Strategy</b>  <a href="#">Previously 2016</a>	<p>Assist Seagirt Ponds Preservation Society with development of interpretive information kiosk, <del>and potential pond viewing platform and</del> consideration of a bench placement</p> <p>Funding dependent</p>	Biodiversity & Ecosystem Health	<del>\$3,000</del> 1,200 Core Budget and Society Funding
<b>Kemp Lake Foreshore Access</b>  <a href="#">Previously 2017</a>	<p>Develop improved road and parking access to Kemp Lake boat launch and install dock structure that accommodates boat launching, fishing and swimming. (Potential partnership with Freshwater Fisheries Society of B.C.)</p> <p><a href="#">Project contingent on approval from Island Health regarding drinking quality and final approval from the Ministry of Transportation and Infrastructure</a></p> <p><a href="#">Through a public consultation process, investigate the feasibility of improving the existing lake access at Milligan and Manatu Roads, as well as installing angling and lake recreation infrastructure at Kemp Lake in an</a></p>	Regional Infrastructure	\$45,000 Freshwater Fisheries Society of B.C., Gas Tax Grant and <a href="#">\$10,000 Capital Funds</a> Core Budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
	<a href="#">effort to enhance recreation experiences for local area residents.</a>		
<b>Coppermine Park Picnic Shelter</b>	Working in partnership with the Friends of Coppermine Park Society to construct a picnic shelter at the east end of the ball field  <u>Vounteer assistance dependent</u>	Regional Infrastructure	In kind donation of timber from the East Sooke Fire Comission  \$1,800 Core Budget and Society Funding (\$5,000)
<u>Proposed Amendment to Bylaw No. 3763, "Juan de Fuca and Salt Spring Island Parks and Recreation Advisory Commissions Bylaw No. 1, 2011" and Bylaw No. 3795, "Community Parks Regulations (Juan de Fuca and Salt Spring Island Electoral Areas) Bylaw No.1, 2012"</u>	<u>Bylaw amendments may be required should Salt Spring Island referendum be successful</u>		
<u>Proposed Bylaw No. 4101, "A Bylaw to Establish A Land Acquisition Fund for Juan de Fuca Electoral Area Community Parks"</u>	<u>Bylaw desired by the Commisison to permit use of the land acquisition reserve fund for purposes of acquiring other lands for dedication as park. The term "acquiring" in the bylaw includes "any interest in land, including any right, title or estate in it of any tenure, with all building and houses". This will include the ability to purchase statutory rights-of-way.</u>		
<b>2019</b>			
<b>Juan de Fuca EA Community Parks Strategic Plan</b>	Initiate review of and hold consultations on the current 10-year plan (2010) with an approval date by the end of the year	Public Engagement & Communications  Biodiversity & Ecosystem Health	\$10,000 Core Budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<a href="#">Becher Bay Viewpoint Access Trail</a> Previously 2017	Develop a 123-metre trail on existing Ministry of Transportation & Infrastructure foreshore access; construct small 2-3 car parking area, foot bridge and viewpoint bench. (Potential 2 year project if funding available.)	Biodiversity & Ecosystem Health	\$20,000 Capital Funds
<a href="#">Wieland Trail Alternate Transportation Funding</a> Previously 2016	Seek Gas Tax funding to develop 1.7 km of trail from William Simmons Park to Kemp Lake Road as part of an Otter Point alternate transportation route (dependent on whether final Statutory Right of Way be secured)	Biodiversity & Ecosystem Health  Active & Multi-modal Transportation	\$5,000 Capital Funds and \$80,000 Gas Tax Grant
<a href="#">Shores Community Park Access Trail</a> Previously 2018	Construct a 165 meter trail from Petrel Drive cul-de-sac to the Juan de Fuca shoreline. (Potential 2 year project if funding available.)	Biodiversity & Ecosystem Health	\$24,000 Capital Funds Core Budget

### 3 Goals & Performance Indicators

Service Goals	Indicators or Measures
Maintain sustainable operations	<ul style="list-style-type: none"> <li>New funding bylaw adopted and amalgamation of Parks and Recreation program budgets by 2016</li> <li>% of operating costs achieved through revenue sources at Port Renfrew Community Centre (target 100%)</li> </ul>
Increase access to community parks, trails and recreational programming	<ul style="list-style-type: none"> <li>Increased participation in recreation programs*</li> <li>5 recreation programs overall offered to the public*</li> <li>4 events or initiatives supported annually (2015 baseline)</li> </ul>
Ensure responsible stewardship of parks and trails	<ul style="list-style-type: none"> <li>Amount of invasive species removed from regional parks*</li> <li>Target a minimum of one community park land development or trail network improvement projects annually</li> <li>Maintain a minimum of 7 stewardship agreements annually</li> <li>82 volunteers engaged annually through stewardship agreements (2016 baseline)</li> </ul>
Engage the community in future strategic directions	<ul style="list-style-type: none"> <li>Participation rates of residents in two-way dialogue and engagement opportunities*</li> <li>Approval of the 2020-2030 Juan de Fuca EA Community Parks Strategic Plan</li> </ul>

\*Corporate indicator – multiple divisions may contribute to this measure.

## Contact

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Making a difference...together

## 2018 Service Plans Review and Approval

For Committee of the Whole, November 29, 2017

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### APPENDIX H

#### Service Plans for Integrated Water Services

**Reviewed by Juan de Fuca Water Distribution Commission, Regional Water Supply Commission, Saanich Peninsula Water and Wastewater Commissions, and Electoral Area Services Committee\***

#### TABLE OF CONTENTS

##### Service Plan Summaries

1. Customer and Technical Services
2. Infrastructure Engineering
3. Infrastructure Operations
4. Watershed Protection

##### Service Plans

1. Customer and Technical Services
2. Infrastructure Engineering
3. Infrastructure Operations
4. Watershed Protection

\* The Electoral Area Services Committee reviewed service plans 1, 2 and 3 above.

<p><b>SERVICE NAME:</b> Customer &amp; Technical Services</p>
<p><b><i>Changes in Assumptions, Trends, and Other Issues since 2017:</i></b> (linked to section 1.3 and 1.4 of the detailed service plan)</p>
<p>The following are assumptions that have changed since 2017:</p> <ul style="list-style-type: none"> <li>• The Safety Advisor position is being transferred to Human Resources as of 2018. The responsibility for the departmental safety program however will still reside within the CTS division and not with the Safety Advisor.</li> <li>• With the increased need for maintenance inspections of water and wastewater facility buildings, the assumption is that Facilities Management will provide support to Infrastructure Operations, and not Customer and Technical services.</li> </ul>
<p><b><i>Overall 2017 Budget Performance:</i></b> (linked to budget forecast to year end)</p>
<ul style="list-style-type: none"> <li>• Customer &amp; Technical Services (CTS) and General Manager - There is a one-time favourable variance of \$199,000 (5%) due to underspending in consulting costs, contract for services, advertising, and wages and salaries due to one vacant position. This variance will be used to offset the unfavourable variance in the Central Fleet Program.</li> <li>• Central Fleet – There is a one-time unfavourable variance of \$140,000 (12.4%) due primarily to the timing of a 2016 expenditure (paid in 2017) related to the Maintenance Study funded as a one-time budget increase in 2016 and higher than normal costs for the Fleet Shop maintenance, safety, and vehicle transport. This variance will be offset by the positive variance in the CTS and General Manager budget above.</li> </ul>
<p><b><i>Update to Division Initiatives:</i></b> (linked to section 3 of the detailed service plan)</p>
<ul style="list-style-type: none"> <li>• Fleet Maintenance Study was completed in 2017</li> <li>• Fleet Management Software is ongoing. Proposal received to review present systems functional capacity.</li> <li>• Fuel card implementation in progress.</li> <li>• Outstanding maintenance plans completed.</li> <li>• NWWBI 2015 data and reporting completed and 2016 draft data submitted.</li> </ul>
<p><b><i>Service Adjustments and Staffing Levels:</i></b> (linked to section 2 of the detailed service plan)</p>
<ul style="list-style-type: none"> <li>• 2018 – 1 FTE transferred to Human Resources. The safety advisor function will now report to the Safety Manager in Human Resources.</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Increase knowledge and compliance with corporate fleet policies</b></p> <ul style="list-style-type: none"> <li>Update 2007 Corporate Fleet Driver and Management policies and procedures</li> </ul>	Complete implementation plan	Appoint consultant	Complete policy review and update
<p><b>Service Goal: Contribute to corporate climate action objectives</b></p> <ul style="list-style-type: none"> <li>GHG emissions data</li> </ul>	Implement a new data system using a Corporate-wide fuel card	Appoint service provider	Review system
<p><b>Service Goal: Maintain responsible management and maintenance of Corporate Fleet</b></p> <ul style="list-style-type: none"> <li>Fleet Maintenance Study</li> </ul>	Issue a RFP for study and appoint consultant	Complete study	Implement relevant recommendations and standards

## Contact

Name: Jan van Niekerk

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**SERVICE NAME:** Infrastructure Engineering

***Changes in Assumptions, Trends, and Other Issues since 2017:*** (linked to section 1.3 and 1.4 of the detailed service plan)

The following are 3 major changes that are currently impacting service delivery:

**Juan de Fuca Water Engineering and Planning**

- This service is currently rolled up into Water Engineering and Planning and is serviced by a part-time manager (shared by Regional Water and local services). Prior to 2012, this group had a staff of 4 people, including a full time manager, a support engineer and two technical support staff. The service delivery was also restricted to the Juan de Fuca water (JDF) system only. It is recommended that the service be staffed by a full-time manager (also functions as review engineer), three technical support staff, and an administrative support person. Reasons for the change are:
  - The group now provides referral support services (both sewer and water) to all local services on the Southern Gulf Islands, as well as Port Renfrew.
  - The JDF system has grown dramatically over the past few years as growth in the West Shore communities has increased and is expected to continue to increase. This has resulted in increased referrals and development application reviews.
  - Additions to the JDF system have also become more complex due to the terrain now being developed with an increase in both reservoirs and pump stations. This results in more time being required to review technical submissions.
  - The software system that supports the service property and development data is no longer supported and the service is being changed over to new software (Tempest) that will require vast amounts of data entry to convert and ongoing data upkeep. There is also currently no front desk administrative support resulting in technical staff conducting filing and other administrative duties.
- To staff this service as suggested will require the addition of a management FTE (repurposed from elsewhere in IWS) as well as a FTE for the administrative support position.

**Dam Safety (for all dams associated with CRD drinking water services)**

- The dam safety function is currently provided in Water Engineering and Planning and provides service to all dams that are for the use of water provision, both regionally and for local services. Increased oversight by provincial regulators is resulting in more studies, designs, construction being carried out and resultant actions required to meet regulatory obligations. This results in increased funding for both operational and capital budgets. There is not a requirement for additional staff at this time since part of the current manager's time, which is allocated to the JDF system, will be available.

**Wastewater Engineering and Planning**

- This service currently serves the Core Area, Saanich Peninsula and local services as well as major project and technical support to Salt Spring Island. Staffing dedicated to this service consists of a manager, a senior engineer, a junior engineer (which is currently vacant) and a technical support person. Additional pressure on the service is the technical interaction with the delivery team for the Core Area Wastewater project. Besides not having enough staff to currently support the service, the service is being expanded with the addition of the McLoughlin treatment plant, major pumping stations at Clover Point and Macaulay, extensive conveyancing systems and ancillary works related to the project, which all began in 2017. Additional staff in the form of 2 FTE's are being requested in 2018. One is a draftsman/GIS technician that will lead the organization of the existing drawing system as well as incorporate the thousands of infrastructure design drawings expected from the project into the appropriate

system. The second is a junior engineer to support the operational and capital activities in all the wastewater systems that the service supports.

**Overall 2017 Budget Performance:** *(linked to budget forecast to year end)*

- There is a \$21,000 (5.2%) unfavourable variance due to additional efforts required to address regulatory demands that were not anticipated in the 2017 budget process. The unfavourable variance was partially offset by savings on salary costs, due to timing of filling a vacant position. This net overage is anticipated to be offset by higher than budgeted revenue from water sales within the RWS service.

**Update to Division Initiatives:** *(linked to section 3 of the detailed service plan)*

- There are no additional divisional initiatives to be added at this time.

**Service Adjustments and Staffing Levels:** *(linked to section 2 of the detailed service plan)*

- Proposed Staffing Changes (further justification provided in top box):
- 1 FTE Engineer 3 for Core Sewer Engineering Support to provide technical support for the ongoing Core Area wastewater projects including McLoughlin treatment plant, major pumping stations at Clover Point and Macaulay, extensive conveyancing systems and ancillary works related to the preceding. This FTE will be fully recovered from work on the Core Sewer operating and capital programs.
  - 1 FTE Draftsperson/GIS Technician for Core Sewer Engineering Support to develop and maintain drawing and GIS systems for current assets as well as the additional drawings and assets that will flow into the system from the Core Area wastewater project including McLoughlin treatment plant, major pumping station at Clover Point and Macaulay, extensive conveyancing systems and ancillary works related to the preceding which have started in 2017. This FTE will be fully recovered from work on the Core Sewer operating and capital programs.
  - 1 FTE Manager for Juan de Fuca Water Engineering and Planning to manage and lead the service as described in the top box in this document. This position is being repurposed from another division in IWS. This FTE will be fully recovered from work on the JDF Water Distribution operating budget.
  - 1 FTE Administrative Clerk for Juan de Fuca Water Engineering and Planning to provide administrative support and public interaction with the customers of the rapidly growing JDF water system. Also, to lead the implementation of Tempest as the new database system and monitor the new DCC collection process. This FTE will be fully recovered from work on the JDF Water Distribution operating budget.

**Key Performance Indicators:** *(linked to section 4 of the detailed service plan)*

Indicator Name	2017 Planned	2017 Projected	2018 Planned
	(Annual Target from Service Plan)	(Projected to year end)	(Revised/New Annual Target)
<b>Service Goal: Reduce processing and response time</b>	45 days	45 days	40 days

<p><b>Service Goal: Maintain strategic infrastructure investments</b></p>	<p>2015 – 3 plans 2016 – 4 plans 2017 – 5 plans 2018 – 4 plans</p>	<p>Previous 23 SAMP plans have been reduced to 16 plans with the elimination of Saltspring and the addition of SGI Harbours. Actual progress is: 2015 – 3 plans 2016 – 4 plans 2017 – 0 plans 2018 – 2 plans 2019 – 4 plans 2020 – 3 plans All 16 plans have been started and range in completion from 25% to 100%.</p>	<p>2015 – 100% 2016 – 100% 2017 – 0% 2018 – 100% 2019 – 100% 2020 – 100%</p>
<p><b>Service Goal: Ensure responsible delivery and completion of capital projects</b></p>	<p>80% of planned projects will have project plans and 90% will be delivered on budget and on schedule in accordance with the project plans</p>	<p>85% of planned projects will have project plans and 90% will be delivered on budget and on schedule in accordance with the project plans</p>	<p>85% of planned projects will have project plans and 90% will be delivered on budget and on schedule in accordance with the project plans</p>

## Contact

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**SERVICE NAME:** Infrastructure Operations**Changes in Assumptions, Trends, and Other Issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- Wastewater: Infrastructure Operations is anticipating increased staffing requirements related to the large amount of wastewater infrastructure planned or under construction in the Core Area. This staffing requirement will begin to roll out in 2018 and continue through to full commissioning of the facilities, which is scheduled for the end of 2020. This will involve a combination of full-time permanent position development, as well as auxiliary positions in order to build the internal skill set in anticipation of hiring for permanent wastewater positions in 2019/20.
- Water: Stress on the operation and maintenance programs within the Greater Victoria Water Systems is being experienced. The Juan de Fuca Water Distribution system is experiencing a high rate of water infrastructure expansion to accommodate the high rate of development and population growth. The Regional Water Supply system infrastructure is aging which is resulting in an increased amount of maintenance attention.
- The Japan Gulch Water Treatment Plant upgrade will be completed in early 2018. The upgraded plant in addition to the recently commissioned emergency generator, will result in extra operating costs to the RWS.

**Overall 2017 Budget Performance:** (linked to budget forecast to year end)

- Regional Water Supply: There is an unfavourable variance of \$340,000 (9.7%) due largely to historically under-budgeted labour charges for Water Operations work performed in the service. This overage is anticipated to be offset by higher than budgeted revenue from water sales within RWS.
- Juan de Fuca Water Distribution: There is an unfavourable variance of \$292,000 (7.4%) as a result of the growing cost of inventory and supplies, and labour support from contractors for this service. This overage is anticipated to be offset by higher than budgeted revenue from water sales within JDFWD.
- Saanich Peninsula Water Supply: There is a \$36,000 (2.7%) favourable variance due mainly to projected underspends on overhead costs. Recommendation from the Commission is that year-end surpluses are to be transferred to the Capital Reserve Fund, which has a current balance of \$4,700,000.
- Saanich Peninsula Wastewater: There is a \$109,000 (3.3%) favourable variance due mainly to projected underspend on overhead costs, chemical, and waste sludge disposal. Recommendation from the Commission is that year-end surpluses are transferred to the Capital Reserve Fund, which has a current balance of \$3,695,000, except carry forward surplus to fund one time budget items in the following year.
- Core Area Wastewater: Anticipated year end budgets for Core Area are on track with an anticipated deficit of less than 1%.
- Local Service Areas (including SGI Harbours):
  - SGI Harbours – No significant variance to budget is anticipated.
  - SGI Water & Wastewater Utilities – There is a \$ 7,250 (5.4%) unfavorable variance in Lyall Harbour Boot Cove Water operating cost as a result of emergency maintenance. This will be offset with a reduction in transfer to capital reserves. The current balance of capital reserve is \$98,660. No other significant variances are expected in SGI services.
  - SSI Water & Wastewater Utilities – There is a \$15,000 (10.2%) unfavorable variance in Beddis Water operating cost and \$34,000 (13.1%) unfavorable variance in Highland / Fernwood Water as a result of emergency maintenance. This will be offset with an increase in transfer from maintenance reserve. No other significant variances are expected in SSI services.

- Juan de Fuca Electoral Area Utilities - No significant variance to budget is anticipated.

Revenue performance for the 3 Water Utilities:

- Regional Water Supply – Favourable revenue variance of \$405,000 (1.4%) due to higher water sales than budgeted. This additional revenue will be used largely to offset higher than anticipated total operating expenses in the service. Anticipated net surplus remaining of \$18,000 (0.06%) will be transferred to the services' Water Capital Fund per Commission direction.
- Juan de Fuca Water Distribution – Favourable revenue variance of \$750,000 (4.8%) due to higher water sales than budgeted. The additional revenue will be used to offset total operating and bulk water purchase overages. Anticipated net surplus of \$280,000 (1.8%) will be transferred to the services' Water Capital Fund.
- Saanich Peninsula Water Supply – Favourable revenue variance of \$27,345 (0.5%) due to higher water sales than budgeted. This additional revenue will be used to offset bulk water purchase overages. After operating cost savings, the anticipated net surplus of \$44,230 (0.7%) will be transferred to reserves per Commission direction.

**Update to Division Initiatives:** (linked to section 3 of the detailed service plan)

- Water Operations Review: Complete review of Operations and Maintenance programs for the water supply and distribution systems to determine the labour and cost balance between preventative maintenance programs for an increased quantity of assets and completing capital upgrades. (Regional Infrastructure Priority)

**Service Adjustments and Staffing Levels:** (linked to section 2 of the detailed service plan)

- 1.0 FTE (not additional): The service level and size of the Infrastructure Operations division is set to grow in the next 1-3 years with the addition of a large amount of wastewater infrastructure associated with the Core Area Wastewater Project. As a result, the Division will be divided in 2018 to have a service level focus – a) Water and b) Wastewater. This will result in an additional Senior Manager being hired such that there will be a Senior Manager, Water Infrastructure Operations and Senior Manager, Wastewater Infrastructure Operations. This exempt position will not impact the existing staff establishment chart as it is proposed that the previously approved Plant Manager position will be repurposed.
- Additional 1.0 FTE (no budget impact): McLoughlin WWTP Operations Supervisor – with the design, commissioning and operation of the new infrastructure beginning in 2017 and continuing into 2020, there is a need to hire a Supervisor of Operations for the WWTP. This FTE will be funded from committed funds from the CAWTP for the duration of the project. Noted in the bullet above is that the approved Plant Manager FTE will be repurposed, so the Plant Supervisor (CUPE position) is a new request.
- Additional 0.5 FTE: The Magic Lake Estates Water and Sewer Service requires an additional 0.5 FTE for an operator to complete the required operation and maintenance tasks for the new Water Treatment Plant and the aging wastewater infrastructure.
- Auxiliary and Student Seasonal Staff: The seasonal workload in the Core Water and Wastewater services require additional support staff in the form of students and auxiliary to complete operations and maintenance. In addition, the support staff will build internal knowledge base to potentially fill positions for the new core area wastewater treatment service.
- 2018-2020 Staffing and Service Increase: The staffing levels and new operations functions associated with the CAWTP infrastructure will begin to take effect in 2018 and into 2020. Though staffing levels are still to be finalized, this will result in approximately: 12 new operators for the WWTP; 2 new operators for the wastewater collection system; 2 new Electrical instrumentation and controls staff to support all new infrastructure; 2 new mechanical staff to support all new infrastructure.

- There is a noted need for a Facilities Maintenance Coordinator to develop and maintain operations and maintenance programs for the multitude of facilities within water and wastewater infrastructure operations.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>																																																			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>																																																
<p><b>Service Goal: Maintain high quality water and wastewater infrastructure.</b></p> <p>Maintenance: Planned Maintenance Completed</p>	94%	92%	96%																																																
<p><b>Service Goal: Ensure compliance with all regulatory requirements</b></p> <p>Regulatory Compliance: # Regulatory Contraventions for drinking water quality</p> <p>Regulatory Compliance: # Regulatory Contraventions for wastewater effluent quality exceedance</p>	<table border="1"> <tr><td>GVWS</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table> <table border="1"> <tr><td>SPWWTP</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table>	GVWS	0	JDF EA	0	SSI EA	0	SGI EA	0	SPWWTP	0	JDF EA	0	SSI EA	0	SGI EA	0	<table border="1"> <tr><td>GVWS</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table> <table border="1"> <tr><td>SPWWTP</td><td>0</td></tr> <tr><td>JDF EA</td><td>1</td></tr> <tr><td>SSI EA</td><td>5</td></tr> <tr><td>SGI EA</td><td>9</td></tr> </table>	GVWS	0	JDF EA	0	SSI EA	0	SGI EA	0	SPWWTP	0	JDF EA	1	SSI EA	5	SGI EA	9	<table border="1"> <tr><td>GVWS</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table> <table border="1"> <tr><td>SPWWTP</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table>	GVWS	0	JDF EA	0	SSI EA	0	SGI EA	0	SPWWTP	0	JDF EA	0	SSI EA	0	SGI EA	0
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<p><b>Service Goal: Ensure employees and contractors complete work safely</b></p> <p>Lost Time Incidents # days lost Avg days lost per claim</p>	<p>≤ 8 ≤ 100 ≤ 12</p>	<p>6 70 12</p>	<p>≤ 7 ≤ 80 ≤ 10</p>																																																
<p><b>Financial Indicator: *</b> Cost Recovery (Total Revenue/Total Cost) By Water Utility</p>	<table border="1"> <tr><td>RWS</td><td>1.000</td></tr> <tr><td>JDFWD</td><td>1.000</td></tr> <tr><td>SPWS</td><td>1.000</td></tr> </table>	RWS	1.000	JDFWD	1.000	SPWS	1.000	<table border="1"> <tr><td>RWS</td><td>1.001</td></tr> <tr><td>JDFWD</td><td>1.018</td></tr> <tr><td>SPWS</td><td>1.008</td></tr> </table>	RWS	1.001	JDFWD	1.018	SPWS	1.008	<table border="1"> <tr><td>RWS</td><td>1.000</td></tr> <tr><td>JDFWD</td><td>1.000</td></tr> <tr><td>SPWS</td><td>1.000</td></tr> </table>	RWS	1.000	JDFWD	1.000	SPWS	1.000																														
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*\*data provided by Finance department*

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<p><b>SERVICE NAME:</b> Watershed Protection</p>
<p><b><i>Changes in Assumptions, Trends, and Other Issues since 2017:</i></b> (linked to section 1.3 and 1.4 of the detailed service plan)</p> <ul style="list-style-type: none"> <li>Preparation of the 2017 Regional Water Supply Strategic Plan has highlighted the need for detailed knowledge of the hydrological and biological parameters that affect future drinking water quantity and quality in the Leech Water Supply Area for the Regional Water Supply</li> </ul>
<p><b><i>Overall 2017 Budget Performance:</i></b> (linked to budget forecast to year end)</p> <ul style="list-style-type: none"> <li>There is a one-time unfavourable variance of \$27,000 (1%) due to a contract wage increase related to USW Local-1937 (2013-2016). This variance may be offset by greater than expected revenue from staff on standby to the BC Wildfire Service.</li> </ul>
<p><b><i>Update to Division Initiatives:</i></b> (linked to section 3 of the detailed service plan)</p> <ul style="list-style-type: none"> <li>Several projects in Resource Planning have been delayed, including the completion of the Watershed Assessment update, biological security strategy, and expansion of public and school tours of the GVWSA. Assistance in Resource Planning through the requested additional FTE would help ensure planned projects can be completed.</li> <li>The application for funding of a NSERC Network for Forested Drinking Water Source Protection Technologies was funded for 5 years with CRD as Strategic Network Partner.</li> </ul>
<p><b><i>Service Adjustments and Staffing Levels:</i></b> (linked to section 2 of the detailed service plan)</p> <ul style="list-style-type: none"> <li>1 FTE increase proposed for 2018 in Resource Planning for a Watershed Technologist/Information Officer to provide capacity for resource planning projects, hydrology field monitoring and public tour expansion.</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Increase strategies and actions to protect the drinking water supply and improve access to catchment lands.</b></p> <ul style="list-style-type: none"> <li>• Annual work on watershed roads:               <ul style="list-style-type: none"> <li>○ Maintenance</li> <li>○ Upgrades</li> <li>○ Reclamation</li> </ul> </li>   <li>• Capital projects               <ul style="list-style-type: none"> <li>○ % on time</li> <li>○ % on budget</li> </ul> </li> </ul>	<p>367 km 5 km 5 km</p> <p>100% on time 100% on budget</p>	<p>300 km 5 km 5 km</p> <p>73 % on time 73 % on budget</p>	<p>367 km 5 km 5 km</p> <p>100% on time 100% on budget</p>
<p><b>Service Goal: Increase public engagement and education efforts.</b></p> <ul style="list-style-type: none"> <li>• Annual tours and participation 2015 = 682</li> </ul>	<p>23 tours 700 participants</p>	<p>29 tours 880 participants</p>	<p>36 tours 1080 participants</p>

## Contact:

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# Service Plan for Customer and Technical Services

2016-2019

Capital Regional District

*Date submitted: October 7, 2015*

*Revised: ~~August~~ November 23, 2017~~6~~*



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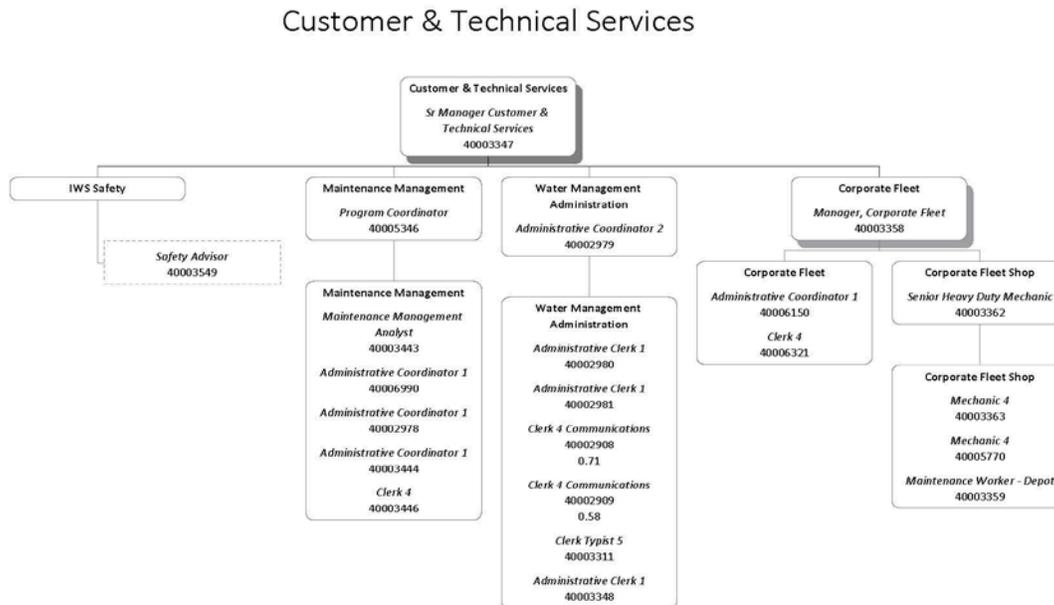
# 1 Overview

## 1.1 Division & Service Summary

Customer and Technical Services Division provide a range of services to support Integrated Water Services and other departments of the Capital Regional District, including Fleet Management Services, Maintenance Management Services, Integrated Water Services Administrative Support Services and Safety ~~Advisor Services~~ Program Support.

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Administrative Support Services:</b> ensures administrative standards and staff needs are achieved, including administration of records system, document processing, scheduling and recording meetings, and the scheduling and tracking of compliance and professional development training courses and hours.</p>	<p>All IWS Divisions, Local Service Committees/Commissions, and other CRD staff at 479 Island Hwy.</p>	<p>Internal recoveries through allocations</p>	<p>Through various standing service Commissions and Committees as required.</p>
<p><b>Fleet Management Services:</b> management of 300 vehicles and equipment to achieve a well maintained, compliant, economical and reliable fleet. This service includes managing vehicle and equipment procurement and disposal; preventive maintenance and repair programs for vehicles and equipment; monitoring driver abstracts, review collisions, vehicle and driver files, perform commercial vehicle inspections and arrange training to provide a Fleet Safety program; data entry, review and reporting; development of policy, procedures and standards for fleet usage and upkeep.</p>	<p>CRD Departments</p>	<p>Internal recovery through allocations to IWS divisions and labour rates</p>	<p>Through various standing service Commissions and Committees as required.</p>
<p><b>Maintenance Management Services:</b> maintenance management and purchase order processing to maintain assets, inform decision-making, and to assign work and costs appropriately. This is service includes: managing data for infrastructure and equipment; work order creation and completion; Preventative Maintenance (PM) planning; processing purchase orders; data entry, analysis and reporting; monitor user activities and data integrity; and user support and training.</p>	<p>IWS Operations and Centralized Fleet section</p>	<p>Internal recoveries through allocations</p>	<p>Through various standing service Commissions and Committees as required.</p>
<p><b>Safety <del>Advisor Services</del> Program Support:</b> Providing Occupational Health and Safety support to ensure required documentation is in place and informed decisions are made. This service includes: developing policy and procedures; assisting in incident investigations and hazard assessments; participating in JOH&amp;S meetings; researching OH&amp;S regulations, Workers Compensation Act and industry; completing required documentation for variances and other permits.</p>	<p>CRD Departments</p>	<p>Internal recoveries through allocations</p>	<p>Through various standing service Commissions and Committees as required.</p>

## 1.2 Organization Chart



E & O. E. Regular Positions Only

## 1.3 Key Trends, Issues & Risks – Service Specific

There is an increasing demand by CVSE Inspectors for accurate and well maintained records and safety programs that meet the requirements of the BC Motor Vehicle Act division 37 and National Safety Code. At present there are not enough resources in Fleet to meet this demand.

The growth and renewal of assets, the changing needs of managers, supervisors and users and the requirement to update and maintain the asset data and preventative maintenance programs results in an increased demand on staffing resources. The opportunity exists (with appropriate resourcing) to expand the service provided through the section to include other corporate assets.

~~Ongoing changes to the requirements of the Workers Compensation Act and Occupational Health and Safety Regulations impact workload and place a financial burden on operating running a risk that compliance could be sacrificed in favour of providing a minimum service to meet budget constraints.~~

[Assumption that the department safety program will still reside within the CTS division](#)

[Assumption that Facilities Management will provide support to Infrastructure Operations with the increased need for maintenance inspections of water and wastewater facility buildings.](#)



## 1.4 Link to Board Strategic Priorities

The Division will provide support to all divisions within the IWS Department across a variety of services on corporate projects and in support of core service delivery, and as such may have a role in supporting numerous priorities. Specifically the division has a direct link to the following priorities:

### CLIMATE CHANGE

- realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations
- develop a climate framework to guide decision-making, establish a working group to identify climate change priorities and maximize partnerships

### CLIMATE ACTION

- continue to [use a climate lens when making decisions on vehicle replacements and policies that demonstrate how decisions align with CRD's ~~consider~~ GHG reduction target, climate action objectives and strategic priorities.](#)
- [Establish a fleet management approach that includes: GHG footprint calculations and reports when possible and install monitoring system to gather data on vehicle operation and utilization](#)
- [Use a climate lens for reduction of GHG emissions in existing buildings, facilities and infrastructure. ~~when replacing vehicles and working on the vehicle policies related to GHG reductions~~](#)

### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

### CORPORATE DEVELOPMENT

- evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery
- ensure CRD service delivery is effectively supported through the development of best practices
- enhance and ensure effective financial and audit reporting practices
- support continued investments in workforce education, training and development

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Administrative Support</b>	<ul style="list-style-type: none"> <li>• Maintains over 5200 files in the record system;</li> <li>• Processing of correspondence documents for over 35 employees and approx. 70 staff reports per year.</li> </ul>	Review & Assess	Adjust to meet service delivery needs, as required.	Review & Assess	Adjust to meet service delivery needs, as required.

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<ul style="list-style-type: none"> <li>Scheduling and record minutes for more than 30 IWS teams and committees. (139 internal and 41 external meetings per year).</li> <li>Provide training coordination and tracking for more than 120 employees</li> </ul>				
<b>Fleet Management</b>	<ul style="list-style-type: none"> <li>Manage 95% of CRD fleet procurement &amp; disposal.</li> <li>Manage 85% of CRD fleet preventive maintenance and perform repairs.</li> <li>Provide a limited fleet safety program of establishing driver records, provide driver training and collision review (2015: 270 files for CRD drivers created of which 6% are complete)</li> </ul>	<p>Manage 100% of CRD fleet procurement and disposal</p> <p>Review &amp; Assess</p> <p>Complete driver record setup and driver abstract review.</p>	<p>Review &amp; Assess</p> <p>Manage 100% Perform 50%</p> <p>Maintain driver records and implement a fleet safety policy and program.</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Manage 100% Perform 75%</p> <p>Administer a comprehensive fleet safety program</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Manage 100% Perform 75%</p> <p>Maintain compliance</p>
<b>Maintenance Management</b>	<ul style="list-style-type: none"> <li>Maintain 36,000 asset records by collecting, reviewing and entering information.</li> <li>Maintain 19,000 work orders per year.</li> <li>Maintain 3,500 preventative maintenance plans.</li> <li>Data entry, analysis, monitoring and reporting</li> <li>Process 6,000 purchasing transactions per year.</li> <li>User support and training</li> </ul>	Eliminate existing back log of 720 hrs of data collection and review	Eliminate existing back log of 740 hrs of data input and maintenance plan creation	Maintain asset records and maintenance plans	Review & Assess
<b>Safety Advisor Support</b>	<ul style="list-style-type: none"> <li><u>Provide Safety Program support to the department</u> Guidance and advice, research, site visits and procedure development</li> </ul>	Review & Assess	Adjust to meet service delivery needs, as required.	Review & Assess	Adjust to meet service delivery needs, as required.

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Administrative Support	7.29	7.29	8.29	8.29	8.29
Fleet Services	7	7	7	7	7
Maintenance Management	5	6	6	6	6
Safety Advisor	1	1	1	1.04	1
<b>Total</b>	20.29	21.29	22.29	22.29	22.29

### 2016

#### **Fleet Clerk ( No new FTE pending use of IWS Custodian position)**

The administration required to maintain records for regulatory compliance, policy and maintenance planning requires an additional FTE. Areas of current noncompliance include driver records and hours of work for drivers, areas of backlog include vehicle records, maintenance data and asset data.

#### **Maintenance Management Clerk**

A Maintenance Management Clerk is required to maintain asset information and a related maintenance plan, provide transactional reports, monitoring and improve user support and documentation. This position will be essential to ensure the backlog of a maintenance plan setup is eliminated with all assets requiring operation and maintenance being included in the management system, then working closely with operations staff to administer the maintenance planning and maintenance work flow moving forward.

### 2017

1 FTE transferred from Watershed Protection to Customer & Technical Services (the total FTE count for IWS remains the same).

### 2018

1 FTE transferred from Customer & Technical Services to Human Resources.

# 3.3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Fleet Maintenance Study</b> <del>On schedule</del> <a href="#">complete</a>	Under take a study of industry practices to optimize best practices for CRD fleet maintenance.	Climate Change Regional Infrastructure Corporate Development	\$60,000 single supplementary
<b>Fleet Management Software</b>  to be completed in 2018	To facilitate all aspects of fleet management in one platform. Review Fleet requirements and ability of existing ERP system to meet the needs and implement.	Climate Change Regional Infrastructure Corporate Development	\$150,000 capital project
<b>Fleet Card (fuel/maintenance)</b>  on schedule <a href="#">for completion in 2017</a>	Implement a single source fuel/maintenance procurement card system to improve fuel use tracking and reporting and management of external service provider agreements	Climate Change Regional Infrastructure Corporate Development	\$25,000 set up costs single supplementary and \$3.25 per month per vehicle continuous supplementary.
<b>Maintenance Plans</b>  <b>Completion - ongoing</b>	<p>The maintenance management clerks are responsible to ensure that each of the five service area's that use SAP PM receives the support needed to maintain assets and make informed decisions regarding maintenance programs.</p> <p>Create maintenance management plans for all assets in backlog.</p> <p>Improve access, reliability and effectiveness of SAP PM documentation, estimates on work orders</p> <p>Assist in SAP PM development projects such as effective use of Syclo, electronic document management and ongoing development and testing.</p>	Climate Change Regional Infrastructure Corporate Development	\$80,000 continuous supplementary (1 x FTE for new Maintenance Management Clerk)
<b>National Water and Wastewater Benchmarking Initiative (NWWBI)</b>	Benchmark the Regional Water System and Juan De Fuca Distribution system to 45 utilities across Canada.	Regional Infrastructure	Core Budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Ongoing initiative</b> <a href="#">to be started</a>	The benchmarks represent business outcomes that are feasible, practical and useful to attain such goals as protection of the environment, reliable service and assets and meet service levels and economic efficient standards.		
<b>2017</b>			
<b>Asset Data and Maintenance Plans</b> <a href="#">completed</a>	Capture and enter all data associated with critical IWS equipment, and associating preventative Maintenance scheduling (1,500hrs of combined backlog)	Climate Change Regional Infrastructure Corporate Development	Core budget (\$15,000 Labour allocation from IWS Ops to collect data and auxiliary resource to enter data)
<b>2018</b>			
<b>Fleet Safety Program</b>	Design, implement and administer a comprehensive Fleet Safety Program to ensure vehicle and driver records and training meet regulatory compliance. <a href="#">Review with the input from the Corporate Safety Manager.</a>	Corporate Development	Funding requirements TBD <a href="#">in 2018, following 2016 Fleet Safety Program Review</a>
<b>2019</b>			
<b>Continuation of projects as above</b>			

# 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Contribute to corporate climate action objectives	<ul style="list-style-type: none"> <li>Number and impact of projects and partnerships that demonstrate support for reductions in greenhouse gas (GHG) emissions and for increased climate resiliency*</li> <li>Annual GHG emissions of corporate fleet* (baseline year 2016)</li> </ul>
Increase knowledge and compliance with corporate fleet policies	<ul style="list-style-type: none"> <li>Complete CRD Central Fleet Policies and Strategic Plan by end of 2018</li> </ul>
Maintain high quality support to IWS and other CRD divisions	<ul style="list-style-type: none"> <li>Increase administrative and business process documentation for divisional support to the IWS department annually (baseline 60% in 2015)</li> <li>Measure internal customer satisfaction rates with Administration, Centralized Fleet, Maintenance Management and Safety <u>in 2018</u> (target minimum of 75% satisfaction rate annually)</li> </ul>

\*Corporate indicator – multiple divisions may contribute to this measure

Please see revised table below

## KEY PERFORMANCE INDICATORS

Indicator Name	2016 Planned	2016 Projected	2017 Planned
Vehicle and equipment Policies and Procedures	Complete update of policies	Complete 10 Fleet policies related to GHG and a Green Fleet.	<u>Appoint consultant to complete</u> <del>Complete</del> Fleet management policies
GHG emissions	Fuel card implementation to measure fuel use	Complete business case for implementation	Complete fuel card implementation
<u>Fleet</u> Maintenance Study	Complete study		Develop <u>corporate initiatives standards</u> from study results <u>in 2018</u>

## Contact

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# Service Plan for Infrastructure Engineering

2016-2019

Capital Regional District

*Date submitted: ~~October 7, 2015~~*

*Revised: ~~November 23, 2016~~ August 14, 2017*



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# 1 Overview

## 1.1 Division & Service Summary

The Infrastructure Engineering Division provides water and wastewater utility planning, engineering services and capital project delivery for the Integrated Water Services Department. Technical services provided by the Division include:

- Strategic asset management planning
- Capital project delivery and project management
- Engineering design and drafting
- Survey and mapping
- Response to development servicing requests and underground utility referrals
- Engineering support to IWS Operations
- Dam safety inspections and administration
- Watershed hydrology and water supply planning

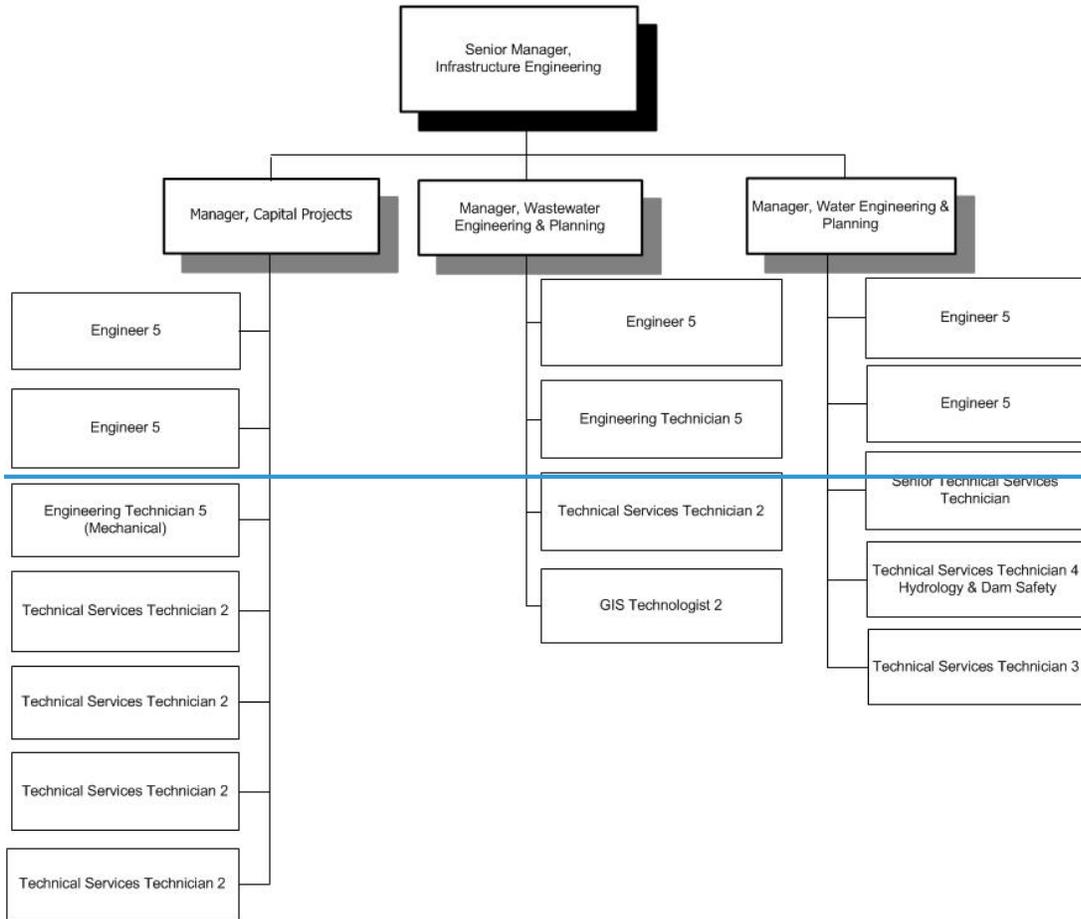
The above noted technical services are provided to the following CRD Services in the table below:

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<b>Regional Water Supply</b> Wholesale water supply to the 350,000 consumers in Greater Victoria supported through three key service areas: infrastructure planning, capital project delivery and engineering services.	<ul style="list-style-type: none"> <li>• 4 Core Municipalities (Saanich, Victoria/Esquimalt, Oak Bay)</li> <li>• Saanich Peninsula</li> <li>• JDF Distribution</li> </ul>	Funded through bulk water sales revenue	Regional Water Supply Commission (Standing)
<b>Juan de Fuca Water Distribution</b> Retail water supply to <b>58,000 residents in</b> the six municipalities in the Western Communities, Sooke, and 4 First Nations supported through three key service areas: infrastructure planning, capital project delivery and engineering services.	<ul style="list-style-type: none"> <li>• 6 Municipalities (Langford, Colwood, View Royal, Metchosin, Sooke, portion of Highlands)</li> <li>• 4 First Nations</li> <li>• JDF Electoral Area</li> </ul>	Funded through retail water sales revenue	Juan de Fuca Water Distribution Commission (Standing)
<b>Saanich Peninsula Water</b> Wholesale water supply to residents in the three municipalities on the Saanich Peninsula supported through three key service areas: infrastructure planning, capital project delivery and engineering services.	<ul style="list-style-type: none"> <li>• 3 Municipalities (Central Saanich, North Saanich, Sidney)</li> </ul>	Funded through wholesale water sales revenue	Saanich Peninsula Water Commission (Standing)

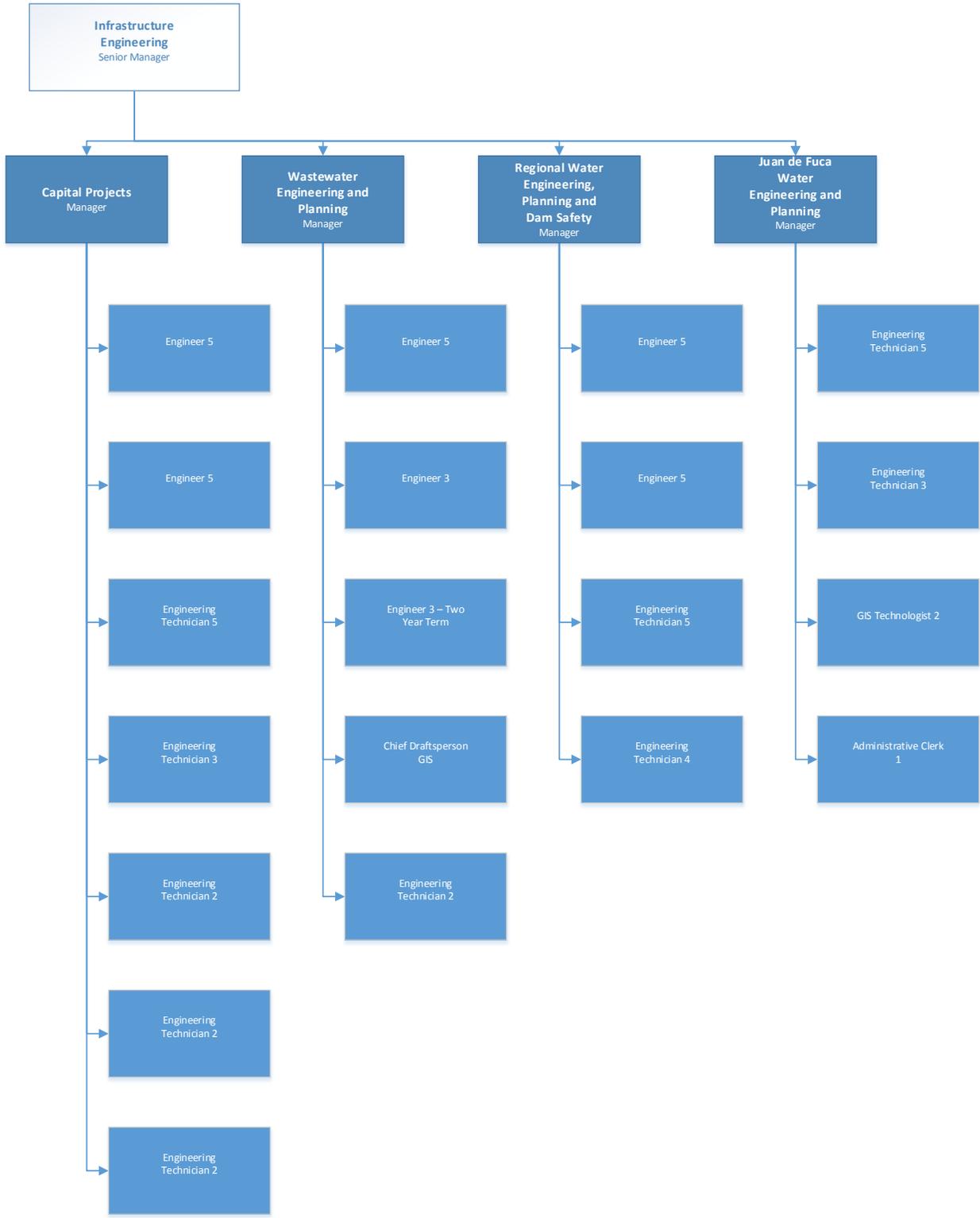
Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Core Area Wastewater</b> Sub-regional wastewater conveyance, treatment, and disposal services in the Core Area supported through three key service areas: infrastructure planning, capital project delivery and engineering services.</p>	<ul style="list-style-type: none"> <li>• 7 Municipalities (Colwood, Langford, Esquimalt, Oak Bay, Saanich, Victoria, View Royal)</li> <li>• Songhees Nation</li> <li>• Esquimalt Nation</li> </ul>	<p>Funded through tax requisition based on each participant's flow or design capacity</p>	<p>Core Area Liquid Waste Management Committee (Standing)</p>
<p><b>Saanich Peninsula Wastewater</b> Sub-regional wastewater conveyance, treatment, and disposal services for the Saanich Peninsula municipalities, and other participants supported through three key service areas: infrastructure planning, capital project delivery and engineering services.</p>	<ul style="list-style-type: none"> <li>• 3 Municipalities (Central Saanich, North Saanich, Sidney)</li> <li>• Peninsula First Nations</li> <li>• IOS and Victoria Airport</li> </ul>	<p>Funded through tax requisition based on each participant's flow or design capacity</p>	<p>Saanich Peninsula Wastewater Commission (Standing)</p>
<p><b>Local Services</b> Local services in the JDF, SGI, and SSI Electoral Areas including 12 water systems, 4 sewer systems, 1 septage facility, <del>11 harbour facilities</del><del>1-dock facility</del> supported through three key service areas: infrastructure planning, capital project delivery and engineering services.</p>	<ul style="list-style-type: none"> <li>• Small service area customers within JDF, SGI, and SSI Electoral Areas</li> </ul>	<p>Funded through parcel tax and user charges (fixed and variable)</p>	<p>Various <a href="#">Harbour, Water and Wastewater Local Service Commissions</a> (Advisory Commissions)</p>

# 1.2 Organization Chart

~~1.2 Replace organization chart with new one below.~~



# IWS Infrastructure Engineering



## 1.3 Key Trends, Issues & Risks – Service Specific

- **Infrastructure Renewal:** In general, sewer and water Infrastructure in North America has not been replaced at a sustainable rate. There is now an increased awareness of the “infrastructure deficit” and the need to replace system components, although funding is not in place for most services yet.
- **Climate Change:** As climate change occurs the summers are becoming hotter and drier and the winters are seeing more intense rain storms. This can lead towards water shortages in the summer and flooding and increased power outages in the winter. Therefore, water resources must be conserved and efficiently used throughout the region and infrastructure in flood prone areas needs to be designed with possible flooding in mind in addition to increased requirements for backup power.
- **Infrastructure Vulnerability and Emergency Preparedness:** As the region grows and the infrastructure networks age, key components of the system could become vulnerable to providing reliable service especially during an emergency situation. Plans need to be updated to mitigate risks, enhance reliability, and to be prepared.
- **Regulatory Changes:** Increased stringency of environmental, safety and electrical regulations are causing cost increases for capital projects and operating budgets. Of particular note are the Provincial requirements for dam safety and their impact on the variety of dams the service maintains and is required to improve.
- **Project Delivery:** To better meet the objectives and priorities of client’s needs and deliver more projects on time and on budget, the IE Division is exploring a number of procurement strategy options for capital projects. The design-build of the Japan Gulch Treatment Upgrade is an example of an alternative procurement option.
- **Infrastructure Growth:** To maintain client service at current levels, additional financial and personnel resources are required to meet rapid growth in a number of areas. Major growth areas that are now impacting the service are the rapid expansion of the Juan de Fuca water system and the addition of the Core Area Sewage facilities that are being delivered from now through 2020.

## 1.4 Link to Priorities

### INTEGRATED WASTE MANAGEMENT

- realign resources to effectively deliver on Board directives relating to integrated waste management and develop an overarching integrated plan
- implement an assessment framework on integration opportunities, consider innovative approaches and report on the effectiveness of programs

### CLIMATE CHANGE

- realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations

### DRINKING WATER

- protect and maintain an adequate supply of safe, reliable drinking water
- invest in the renewal and replacement of aging infrastructure to deliver an adequate supply of safe, reliable drinking water

### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

### CORPORATE DEVELOPMENT

- evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery
- ensure CRD service delivery is effectively supported through the development of best practices
- enhance and ensure effective financial and audit reporting practices
- support continued investments in workforce education, training and development

## 2 Services

### 2.1 Service Levels

Service	Service Level Adjustments in Role/Scope				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Infrastructure planning</b>	<ul style="list-style-type: none"> <li>Complete long term Strategic Asset Management Plans (SAMP) for all service/systems. Plans to include modeling, capacity analysis, vulnerability assessment, emergency preparedness, infrastructure renewal plans, and financial plan for infrastructure replacement financing for 23 water and wastewater services.</li> </ul>	Complete 9 service SAMP	Complete 8 service SAMP	Review and Assess	Adjust to meet service delivery needs, as required
<b>Capital project delivery and project management</b>	<ul style="list-style-type: none"> <li>Complete project design, procurement, and delivery of capital projects planned each year, on time and budget. 2015 capital program value for 23 services – approximately \$20 million</li> </ul>	Complete \$15M - \$20M program	Complete \$20M - \$25M program <u>Total capital program = \$34.2 M</u>	Complete <del>\$20M-25M</del> - <del>\$25M-30M</del> program <u>Total capital program = \$38.2 M</u>	Complete <del>\$10M-25M</del> <del>\$20M-30M</del> program <u>Program</u>
<b>Engineering Design and Drafting</b>	<ul style="list-style-type: none"> <li>Ongoing services for development referrals; survey and mapping; engineering support to utility operations; Dam safety inspections and administration; Watershed hydrology and water supply planning</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Regional Water Engineering &amp; Planning &amp; Dam Safety</b>	6.33	7.33	7.33	<del>6.33</del> 5.25	<del>6.33</del> 5.25
<b>Juan de Fuca Water Engineering &amp; Planning</b>				5.25	5.25
<b>Wastewater Engineering &amp; Planning</b>	5.33	5.33	5.33	<del>5.33</del> 6.25	<del>6.25</del> 5.33
<b>Capital Project Engineering</b>	8.33	8.33	8.33	<del>8.33</del> 8.25	<del>8.25</del> 8.33
<b>Total</b>	20	21	21	<del>20</del> 25	<del>20</del> 25

Supplemental Budget includes an allowance for retaining 1 staff on 2-year term engineer position to address upcoming workload demands over the next two years and including planning and execution the following initiatives/projects: Supply System Vulnerability Assessment, Strategic Asset Management Plans for all service areas, Japan Gulch Treatment Upgrade, and Ganges Wastewater Treatment Upgrade to support the growth in wastewater due to the Core Area Wastewater program. ~~—~~ The new 2-year term FTE is funded ~~entirely~~ from planned capital projects in various utility service areas operational and capital budgets related to wastewater. At the end of ~~2017~~2015, the current 5 year term engineer position (established for 5-year JDF fire flow upgrade program 2012-2016) ~~is proposed to be converted~~ into a permanent position.

## 3 Divisional Initiatives & Budget Implications

This section highlights important divisional initiatives over the next four years, including those initiatives related to delivery of 2015 – 2018 Board Strategic Priorities.

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Wastewater Asset Management Plans</b>	Complete Strategic Asset Management Plans for Core Area system and generate prioritized asset replacement in consideration of treatment program	Integrated Waste Management Regional Infrastructure Corporate Development	Capital Budgets
<b>Small System Asset Management Plans</b>	Complete Strategic Asset Management Plans for 9 Small Water and Wastewater Systems, generate prioritized asset replacement list; identify funding model for long-term asset replacement plans	Integrated Waste Management Drinking Water Regional Infrastructure Corporate Development	Capital Budgets
<b>Saanich Peninsula Water System Asset Management Plan</b>	Complete plan to establish long term strategy for infrastructure upgrades and financial plan	Integrated Waste Management Regional Infrastructure Corporate Development	Capital Budgets

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>JDF Water Distribution System Asset Management Plan</b>	Plan to establish long term strategy for annual main and service replacement program, fire flow related upgrades, pump station and reservoir upgrades	Drinking Water Regional Infrastructure Corporate Development	Capital Budgets
<b>JDF Water Distribution Water Audit</b>	Complete system water audit that will review metering program and strategy, non-revenue water sources and quantification, demand analysis and water balance	Drinking Water	Capital Budgets
<b>Regional Water Supply System - Strategic Plan</b>	Complete studies to prepare for treatment and transmission sections of 2018-2019 strategic plan for water supply, including supply main condition assessment and replacement plan, hydraulic modeling and supply forecasting, water quality and filtration study, post disaster water supply requirements, supply system vulnerability update and dam safety improvements.	Drinking Water Corporate Development Regional Infrastructure	Capital Budgets
<b>RWSC Upgrade Disinfection Process at Japan Gulch</b>	Implement new methods of adding chlorine and ammonia to water for disinfection	Regional Infrastructure	Capital Budgets
<b>2017</b>			
<b>Municipal Water and Wastewater Service Agreements</b>	Establish master water and wastewater service agreements with municipalities across region.	Drinking Water Integrated Waste Management Corporate Development	Capital Budgets
<b>Small System Asset Management Plans</b>	Complete Strategic Asset Management Plans for 8 Small Water and Wastewater Systems, generate prioritized asset replacement list; identify funding model for long-term asset replacement plans	Integrated Waste Management Drinking Water Regional Infrastructure Corporate Development	Capital Budgets
<b>2018</b>			
<b>Regional Water Supply Strategic Plan</b>	Work with other IWS divisions in completion and release of plan	Drinking Water Regional Infrastructure Corporate Development	Capital Budgets
<b>2019</b>			
<b>Utility Infrastructure Replacements</b>	Update service capital and financial plans with 2016-2018 asset management plan recommendations	Regional Infrastructure	Capital Budgets

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Reduce processing and response time	<ul style="list-style-type: none"> <li>Annual processing and response time for development servicing applications and utility referrals (baseline in 2015: response provided within 65 days of receipt). Target response within 60 days in 2016; <del>50</del><u>45</u> days in 2017; 40 days in 2018; and 30 days in 2019.</li> </ul>
Maintain strategic infrastructure investments	<ul style="list-style-type: none"> <li>Number of infrastructure replacement projects*</li> <li>Total value of infrastructure investment annually*</li> <li>Strategic asset management plans in place* (baseline in 2015: 6 plans). Target completion of 9 plans in 2016 and 8 plans in 2017.</li> </ul>
Ensure responsible delivery and completion of capital projects	<ul style="list-style-type: none"> <li>Percentage of capital projects completed on time and on budget* (target minimum 85% annually)</li> </ul>

\*Corporate indicator – multiple divisions may contribute to this measure

Please see revised table below.

### KEY PERFORMANCE INDICATORS

Indicator Name	<del>2016</del> <u>2017</u> Planned	<del>2016</del> <u>2017</u> Projected	<del>2017</del> <u>2018</u> Planned
	(Annual Target from Service Plan)	(Projected to year end)	(Revised/New Annual Target)
Reduce processing and response time	<del>60</del> <u>45</u> days	<del>50</del> <u>45</u> days	<del>45</del> <u>40</u> days
Maintain strategic infrastructure investments	2015 – <del>6</del> <u>3</u> plans 2016 - <del>9</del> <u>4</u> plans 2017 – <del>8</del> <u>5</u> plans <u>2018 – 4 plans</u>	Previous 23 SAMP plans has been reduced to 16 plans with the elimination of Saltspring and the addition of SGI Harbours. Actual progress is: 2015 – 3 plans 2016 – 4 plans 2017 – <del>5</del> <u>0</u> plans 2018 – <del>4</del> <u>2</u> plans <u>2019 – 4 plans</u> <u>2020 – 3 plans</u> All 16 plans have been started and range in completion from 25% to 100%	2015 – 100% 2016 – 100% 2017 - <del>100</del> <u>0</u> % 2018 – 100% <u>2019 – 100%</u> <u>2020 – 100%</u>
Ensure responsible delivery and completion of capital projects	<del>85% of capital projects completed on time and on budget</del> <u>80% of planned projects will have project plans and 90% will be delivered on budget</u>	<del>80</del> <u>85</u> % of planned projects will have project plans and 90% will be delivered on budget and on schedule in accordance with the project plans	<i>85% of planned projects will have project plans and 90% will be delivered on budget and on schedule in accordance with the project plans</i>

	<i>and on schedule in accordance with the project plans budget</i>		
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## Contact

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# Service Plan for Infrastructure Operations

2016-2019

Capital Regional District

*Date submitted: October 7, 2015*

*Revised: ~~November 23, 2016~~ August 2017*



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# 1 Overview

## 1.1 Division & Service Summary

The Infrastructure Operations Division operates a number of drinking water and wastewater systems across the Capital Region, with a focus on providing clean and safe potable water, and wastewater collection and disposal services, while ensuring compliance with public health and environmental regulations.

The Division operates and proactively manages our infrastructure assets that exist in the following service areas: Regional Water Supply System, Juan de Fuca Water Distribution System Saanich Peninsula Water Supply System, Regional Trunk Wastewater, Saanich Peninsula Wastewater System, as well as 18 Local Service Area Small Water and Wastewater Systems in the electoral areas.

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Regional Water Supply</b> Wholesale water supply to the 350,000 consumers in Greater Victoria supported through four key service areas: Water and Wastewater System Operations, Water and Wastewater System Maintenance, Emergency Response/System Failure, and Capital Works.</p>	<ul style="list-style-type: none"> <li>• 4 Core Municipalities (Saanich, Victoria/Esquimalt, Oak Bay)</li> <li>• Saanich Peninsula</li> <li>• JDF Distribution</li> </ul>	<p>Funded through bulk water sales revenue</p>	<p>Regional Water Supply Commission (Standing)</p>
<p><b>Juan de Fuca Water Distribution</b> Retail water supply to <del>the 58,000</del> <b>residents in</b> the six municipalities in the Western Communities, Sooke, and 4 First Nations supported through four key service areas: Water and Wastewater System Operations, Water and Wastewater System Maintenance, Emergency Response/System Failure, and Capital Works.</p>	<ul style="list-style-type: none"> <li>• 6 Municipalities (Langford, Colwood, View Royal, Metchosin, Sooke, portion of Highlands)</li> <li>• 4 First Nations</li> <li>• JDF Electoral Area</li> </ul>	<p>Funded through retail water sales revenue</p>	<p>Juan de Fuca Water Distribution Commission (Standing)</p>
<p><b>Saanich Peninsula Water</b> Wholesale water supply to residents in the three municipalities on the Saanich Peninsula supported through four key service areas: Water and Wastewater System Operations, Water and Wastewater System Maintenance, Emergency Response/System Failure, and Capital Works.</p>	<ul style="list-style-type: none"> <li>• 3 Municipalities (Central Saanich, North Saanich, Sidney)</li> </ul>	<p>Funded through wholesale water sales revenue</p>	<p>Saanich Peninsula Water Commission (Standing)</p>

Service Purpose, Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
<p><b>Core Area Wastewater</b> Sub-regional wastewater conveyance, treatment, and disposal services in the Core Area supported through four key service areas: Water and Wastewater System Operations, Water and Wastewater System Maintenance, Emergency Response/System Failure, and Capital Works.</p>	<ul style="list-style-type: none"> <li>• 7 Municipalities (Colwood, Langford, Esquimalt, Oak Bay, Saanich, Victoria, View Royal)</li> <li>• Songhees Nation</li> <li>• Esquimalt Nation</li> </ul>	<p>Funded through tax requisition based on each participant's flow or design capacity</p>	<p>Core Area Liquid Waste Management Committee (Standing)</p>
<p><b>Saanich Peninsula Wastewater</b> Sub-regional wastewater conveyance, treatment, and disposal services for the Saanich Peninsula municipalities, and other participants supported through four key service areas: Water and Wastewater System Operations, Water and Wastewater System Maintenance, Emergency Response/System Failure, and Capital Works.</p>	<ul style="list-style-type: none"> <li>• 3 Municipalities (Central Saanich, North Saanich, Sidney)</li> <li>• Peninsula First Nations</li> <li>• IOS and Victoria Airport</li> </ul>	<p>Funded through tax requisition based on each participant's flow or design capacity</p>	<p>Saanich Peninsula Wastewater Commission (Standing)</p>
<p><b>Local Services</b> Local services in the JDF, SGI, and SSI Electoral Areas including 12 water systems, 4 sewer systems, 1 septage facility, <a href="#">and 4 dock facility</a>, <a href="#">11 harbour facilities</a> supported through four key service areas: Water and Wastewater System Operations, Water and Wastewater System Maintenance, Emergency Response/System Failure, and Capital Works.</p>	<ul style="list-style-type: none"> <li>• Small service area customers within JDF, SGI, and SSI Electoral Areas</li> </ul>	<p>Funded through parcel tax and user charges (fixed and variable)</p>	<p>Various <a href="#">Harbour, Water and Wastewater Local Service Commissions</a> (Advisory Commissions)</p>



## 1.3 Key Trends, Issues & Risks – Service Specific

**Core Area Wastewater Treatment Project** – it is anticipated that Infrastructure Operations staff will be involved in the project, providing design input from an operational perspective in the early phases, to eventual commissioning and operation of the new facilities in the completion phases. Staffing requirements will increase as new facilities are completed.

Infrastructure Operations is anticipating increased staffing requirements related to the large amount of wastewater infrastructure planned or under construction in the Core Area. This staffing requirement will begin to roll out in 2018 and continue through to full commissioning of the facilities which is scheduled for the end of 2020. This will involve a combination of full time permanent position development as well as auxiliary positions in order to build the internal skill set in anticipation of hiring for permanent wastewater positions in 2019/20.

**Local Service Area Operations and Capital Improvements** – It is anticipated that Infrastructure Operations staff will be directly involved in the planning and completion of the many infrastructure improvement projects that are required across the Local Service Area water and wastewater systems, to address failing/aging infrastructure. The expected level of involvement will have an impact on available staff resources.

**Worker Safety Regulatory Changes** – Increasing worker safety regulatory changes result in increased training and certification requirements (ie. crane safety training and certification, fleet service vehicle driver training) and operating procedural changes (ie. confined space work procedures and safe excavation requirements) that have an impact on field productivity, but are critical to the work environment.

**Workforce Planning** – A focus on divisional workforce planning will be important to identify knowledge transfer opportunities and staffing levels necessary to operate new facilities requiring higher levels of EOCP certification and to backfill retirements in operating areas.

**Water Operations:** Additional financial resources are required to maintain the current level of service of operation and maintenance programs within the Greater Victoria Water Systems. The Juan de Fuca Water Distribution system is experiencing a high rate of water infrastructure expansion to accommodate the high rate of development and population growth. The Regional Water Supply system infrastructure is aging which is resulting in an increased amount of maintenance attention.

**Water Treatment Operations:** The Japan Gulch Water Treatment Plant upgrade will be completed in early 2018. The upgraded plant in addition to the recently commissioned emergency generator, will result in extra operating costs to the RWS.

## 1.4 Link to Priorities

### CLIMATE CHANGE

- realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations
- develop a climate framework to guide decision-making, establish a working group to identify climate change priorities and maximize partnerships

### INTEGRATED WASTE MANAGEMENT

- realign resources to effectively deliver on Board directives relating to integrated waste management and develop an overarching integrated plan
- implement an assessment framework on integration opportunities, consider innovative approaches and report on the effectiveness of programs

### DRINKING WATER

- protect and maintain an adequate supply of safe, reliable drinking water
- invest in the renewal and replacement of aging infrastructure to deliver an adequate supply of safe, reliable drinking water

### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

### CORPORATE DEVELOPMENT

- evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery
- ensure CRD service delivery is effectively supported through the development of best practices
- enhance and ensure effective financial and audit reporting practices
- support continued investments in workforce education, training and development

## 2 Services

### 2.1 Service Levels

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Water and Wastewater System Operations</b>	<ul style="list-style-type: none"> <li>• Water and wastewater treatment;</li> <li>• supply and distribution system operation;</li> <li>• collection and transmission system operation;</li> <li>• system monitoring;</li> <li>• customer service</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required

Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Water and Wastewater System Maintenance</b>	<ul style="list-style-type: none"> <li>System and facility maintenance</li> <li>Consumables management</li> <li>Component preventative maintenance</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required
<b>Emergency Response / System Failure</b>	<ul style="list-style-type: none"> <li>Water main breaks;</li> <li>wastewater overflows;</li> <li>unplanned service interruptions</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required
<b>Capital Works</b>	<ul style="list-style-type: none"> <li>Main installations;</li> <li>equipment replacement;</li> <li>capital projects support</li> </ul>	Review and Assess	Adjust to meet service delivery needs, as required	Review and Assess	Adjust to meet service delivery needs, as required

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Water Operations</b>	36.5	36.5	36.5	<del>36.5</del> 37	<del>36.5</del> 37
<b>Core Area Wastewater Operations</b>	23.5	23.5	23.5	<del>23.5</del> 25	<del>23.5</del> 25
<b>Saanich Peninsula &amp; Gulf Islands Operations</b>	16.8	16.8	16.8	<del>16.8</del> 17.3	<del>16.8</del> 17.3
<b>Water Treatment Operations</b>	10	10	10	10	10
<b>Total</b>	86.8	86.8	86.8	<del>86.8</del> 89.3	<del>86.8</del> 89.3

Note: Senior Manager FTE split 0.5 (Water Operations) and 0.5 (Core/Saanich Peninsula Operations)

## 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016 - 2019</b>			
<b>Water and Wastewater Asset Management Plans</b>  <b>To be completed by end of 2017-2020</b>	As part of the comprehensive asset management planning work, develop long term operations and maintenance plans and corresponding financial plans for each utility – JDF Water, Saanich Peninsula Water, Core Area Wastewater, 18 local services.	Integrated Waste Management  Drinking Water  Regional Infrastructure	Core Budget

<b>Disaster Response Plan for water supply and distribution</b>  To be completed by end of 2017	Establish and implement disaster response plan and emergency water supply and distribution plan in collaboration with Infrastructure Engineering	Drinking Water  Regional Infrastructure  Protective Services	Capital Budget
<u>Title &amp; Estimated Completion Date</u>	<u>Description</u>	<u>Priority Reference (if applicable)</u>	<u>Budget Implications</u>
<u>2016 - 2019</u>			
<b>Cross Sectional Training and Development Project</b>  To be completed annually though 2019	Work with employees that are interested in opportunities to enhance their skills and abilities in other Infrastructure Operations work sections.	Corporate Development	Core Budget
<b>Standard Master Operating Procedure Manuals</b>  To be completed by end of 2019	Develop master operating procedure manuals for the major and small utility systems –  Regional Water Supply System, Juan de Fuca Water, Saanich Peninsula Water, Core Area Waste Water, Saanich Peninsula Waste Water, Local Service Areas	Drinking Water  Regional Infrastructure	Core Budget
<u>Water Operations Review</u>	<u>Review of Operations and Maintenance programs to determine balance between preventative maintenance and capital projects in terms of labour and costs.</u>	<u>Drinking Water</u>  <u>Regional Infrastructure</u>	<u>Core Budget</u>

## 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Maintain high quality water and wastewater infrastructure	<ul style="list-style-type: none"> <li>• Sustainable asset funding plans in place*</li> <li>• Complete 94% planned maintenance projects annually</li> <li>• Reduce the number of unplanned non-weather related wastewater overflows/bypasses annually (target no more than 1 overflow/bypasses annually by 2019)</li> <li>• Reduction in number of unplanned interruptions to water services each year* (baseline 2015)</li> </ul>
Ensure compliance with all regulatory requirements	<ul style="list-style-type: none"> <li>• Annual volume of drinking water supplied in compliance with water quality guidelines and regulations*</li> <li>• 100% Compliance with Island Health, Provincial and Federal drinking water health guidelines in all water service areas</li> </ul>

	<ul style="list-style-type: none"><li>• 100% Compliance rate with operating permit conditions for all wastewater system operating permits</li></ul>
Contribute to integrated resource management objectives	<ul style="list-style-type: none"><li>• Qualitative observations on demonstrated progress toward integration of liquid and solid wastes*</li></ul>

\*Corporate indicator – multiple divisions may contribute to this measure

Please see updated table of Performance Indicators below.

### KEY PERFORMANCE INDICATORS

Indicator Name	2016-2017 Planned	2016-2017 Projected	2017-2018 Planned																								
Maintenance: Planned Maintenance Completed	94%	90% <del>2%</del>	96 %																								
Regulatory Compliance: <sup>1</sup> # Regulatory Contraventions for drinking water quality	<table border="1"> <tr><td>GVWS</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table>	GVWS	0	JDF EA	0	SSI EA	0	SGI EA	0	<table border="1"> <tr><td>GVWS</td><td>0</td></tr> <tr><td>JDF EA</td><td>1</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>1</td></tr> </table>	GVWS	0	JDF EA	1	SSI EA	0	SGI EA	1	<table border="1"> <tr><td>GVWS</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table>	GVWS	0	JDF EA	0	SSI EA	0	SGI EA	0
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Regulatory Compliance: <sup>1</sup> # Regulatory Contraventions for wastewater effluent quality exceedance	<table border="1"> <tr><td>SPWWTP</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table>	SPWWTP	0	JDF EA	0	SSI EA	0	SGI EA	0	<table border="1"> <tr><td>SPWWTP</td><td>0</td></tr> <tr><td>JDF EA</td><td><del>0</del>1</td></tr> <tr><td>SSI EA</td><td>45</td></tr> <tr><td>SGI EA</td><td><del>0</del>9</td></tr> </table>	SPWWTP	0	JDF EA	<del>0</del> 1	SSI EA	45	SGI EA	<del>0</del> 9	<table border="1"> <tr><td>SPWWTP</td><td>0</td></tr> <tr><td>JDF EA</td><td>0</td></tr> <tr><td>SSI EA</td><td>0</td></tr> <tr><td>SGI EA</td><td>0</td></tr> </table>	SPWWTP	0	JDF EA	0	SSI EA	0	SGI EA	0
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SGI EA	0																										
Safety: <sup>2</sup> Lost time incidents <sup>2</sup> # days lost <sup>2</sup> Avg days lost per claim	$\leq 408$ $\leq 420$ <del>100</del> $\leq 45$ <del>12</del>	<del>86</del> <del>400</del> 70 <del>43</del> 12	$\leq 87$ $\leq 400$ <del>80</del> $\leq 42$ <del>10</del>																								
<u>Financial:</u> <sup>3</sup> Cost Recovery (Total Revenue/Total Costs)	<table border="1"> <tr><td>RWS</td><td>1.0</td></tr> <tr><td>JDFWD</td><td>1.0</td></tr> <tr><td>SPWS</td><td>1.0</td></tr> </table>	RWS	1.0	JDFWD	1.0	SPWS	1.0	<table border="1"> <tr><td>RWS</td><td>1.0</td></tr> <tr><td>JDFWD</td><td>1.0</td></tr> <tr><td>SPWS</td><td>1.0</td></tr> </table>	RWS	1.0	JDFWD	1.0	SPWS	1.0	<table border="1"> <tr><td>RWS</td><td>1.0</td></tr> <tr><td>JDFWD</td><td>1.0</td></tr> <tr><td>SPWS</td><td>1.0</td></tr> </table>	RWS	1.0	JDFWD	1.0	SPWS	1.0						
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<sup>1</sup> Note that these KPI's have been updated from % compliance to number of Regulatory Contraventions.

<sup>2</sup> Note that these KPI's have been updated from only Lost Time Injuries to additional metrics to reflect the severity of the incident.

<sup>3</sup> Note that this financial indicator is presented for each of the three Water Utility services, and is not limited solely to Infrastructure Operations. It relates to the expected financial performance of the relevant service as a whole.

## Contact

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# Service Plan for Watershed Protection

2016-2019

Capital Regional District

***Date submitted: October 15, 2015***

***Revised: September 8, 2016***

***Revised: November 23, 2016***

***Revised: July 25, 2017***



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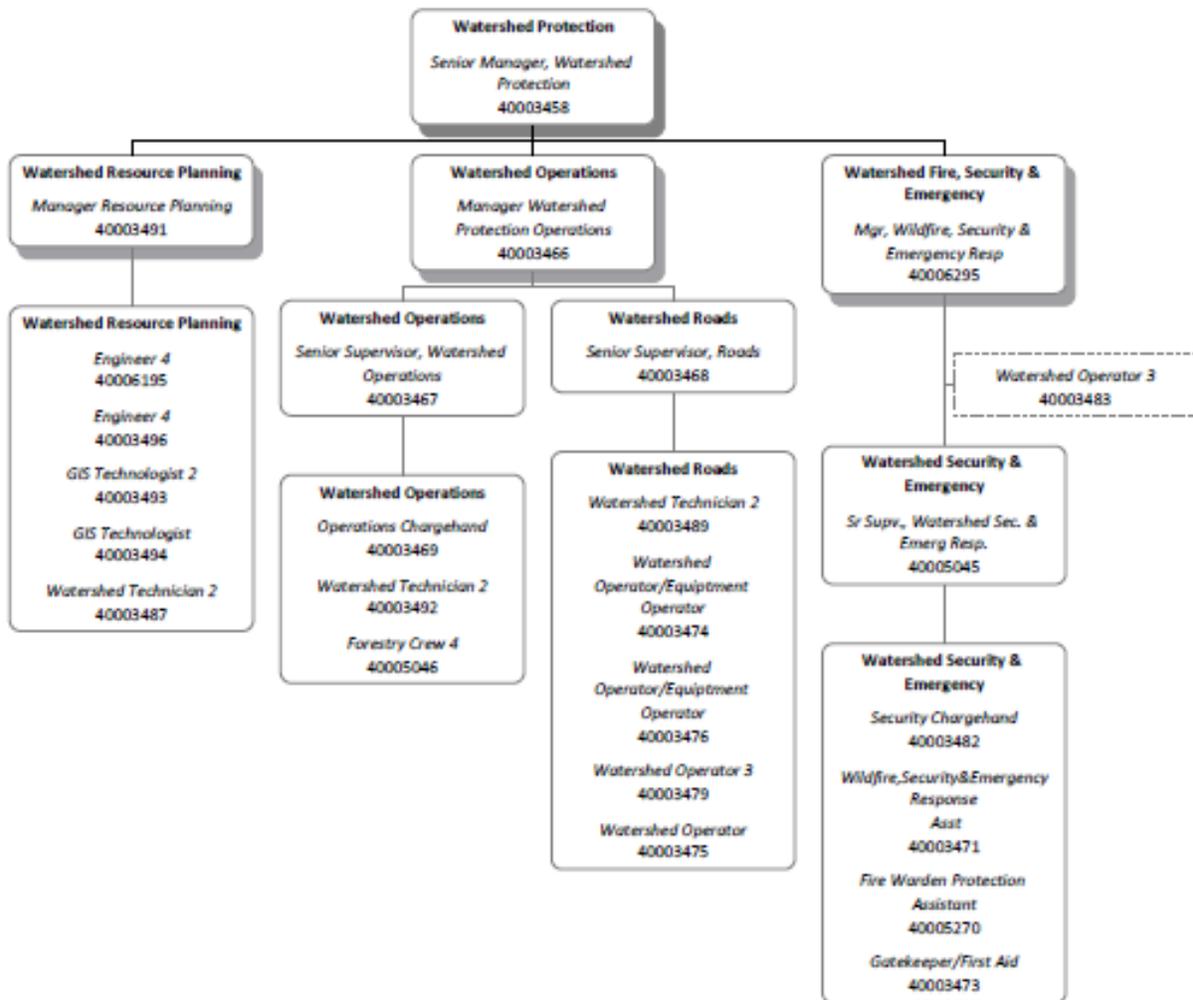
# 1 Overview

## 1.1 Division & Service Summary

The Watershed Protection Division provides forest land management of the 20,550 hectares of the Greater Victoria Water Supply Area to ensure high quality source drinking water for the Regional Water Supply System. The Division provides management in the following areas:

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
Wildfire, Security & Emergency Response: <ul style="list-style-type: none"> <li>• Watershed security</li> <li>• Wildfire and spill preparedness, prevention and response</li> </ul>	Regional Water Supply Service All municipalities	Bulk water rate	Regional Water Supply Commission; Water Advisory Committee
Watershed Operations <ul style="list-style-type: none"> <li>• Silviculture, forest health and forest fuel management</li> <li>• Invasive plant management</li> <li>• Vegetation management (previously referred to as Facilities maintenance)</li> <li>• Road maintenance, upgrades and rehabilitation</li> </ul>	Regional Water Supply Service All municipalities	Bulk water rate	Regional Water Supply Commission; Water Advisory Committee
Resource Planning <ul style="list-style-type: none"> <li>• <u>Wildlife management</u></li> <li>• <u>Watershed hydrology</u></li> <li>• Ecological inventories and analyses</li> <li>• Risk assessment and management</li> <li>• GIS and data management</li> <li>• Research and monitoring</li> </ul>	Regional Water Supply Service All municipalities	Bulk water rate	Regional Water Supply Commission; Water Advisory Committee

## 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

- **Closure of the Leech Water Supply Area (WSA)** to unrestricted access through amendment of the Greater Victoria Water Supply Area Protection Bylaw no. 2804 is expected to be the predominant issue for 2016 – 2019. Decisions made by the RWSC whether to fully close, allow recreational access by permit and other decisions will require implementation and may require new ways of doing business for Watershed Security.
- Preparation of the 2017 Regional Water Supply Strategic Plan has highlighted the need for detailed knowledge of the hydrological and biological parameters that affect future drinking water quantity and quality in the Leech Water Supply Area for the Regional Water Supply System.
- **First Nations** are increasingly interested in access into the GVWSA. There is uncertainty regarding the applicability of Douglas Treaty rights and the degree to which interests can be accommodated. Accommodation will require resources to implement. Negotiations between Regional Parks and First Nations may influence expectations for access to the GVWSA.
- The **opening of the Trans Canada Trail and Sea to Sea Regional Park** will increase trespass pressure and require greater security monitoring and infrastructure. Increased risk of trespass, wildfire, invasive species and other issues from changes in ownership, development and activities on adjacent lands (catchment and non-catchment) from sale of private forest lands and First Nations treaty settlements.
- **Climate Change** is expected to provide a longer period of high/extreme fire danger conditions and greater fuel availability within the GVWSA. Firefighting equipment upgrades will continue and there will be more emphasis in staff readiness (training, fitness and experience) for initial attack, and leadership development by gaining firefighting experience with the provincial Wildfire Management Branch. A warming climate also increases the risk of a large wildfire affecting the quality of source water. The large proportion of young stands in the Leech, and younger stands in the Goldstream and Sooke Water Supply Areas will continue to accumulate forest fuels in the short and medium term. Forest fuel management is laborious and therefore costly. There will be continued effort in the next 4 years to create fuel breaks in strategic locations to protect Sooke Lake Reservoir. Climate change has the potential to increase threats to water quality and forest health in the GVWSA and the potential for undesirable species to invade or expand their populations. Climate change will be considered in the watershed assessment and integrated into the risk assessment framework developed to protect water quality and ecosystem integrity in the GVWSA.
- There is a lack of comprehensive training and practical experience in responding to **hazardous materials spills** into water. Although the likelihood of a large spill into a source reservoir or main tributary is low, the potential consequences dictate a renewed emphasis on training and preparedness in the next four years.
- The effort and cost of **management of invasive plant and animal species** that may have a detrimental effect on water quality continues to rise. Public awareness and expectation regarding invasive species management is also growing in the Region. Greater emphasis will be placed on prevention of new species from entering and existing species from being spread within the GVWSA

## 1.4 Link to Priorities

### FIRST NATIONS

- prepare agreements to enable traditional uses of CRD lands and identify First Nations partnership opportunities for economic development activities

### CLIMATE CHANGE

- realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations
- develop a climate framework to guide decision-making, establish a working group to identify climate change priorities and maximize partnerships

## DRINKING WATER

- protect and maintain an adequate supply of safe, reliable drinking water
- invest in the renewal and replacement of aging infrastructure to deliver an adequate supply of safe, reliable drinking water

## REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

## BIODIVERSITY & ECOLOGICAL HEALTH

- assess service needs, respond to issues that threaten ecological health such as wildlife and invasive species, and profile best practices
- integrate a climate lens in our land acquisition strategies

## PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement
- share stories of collaboration and accomplishments

## EDUCATION, OUTREACH & INFORMATION

- expand on successful education partnerships and program delivery to include innovative in-person outreach and educational programs
- demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information

# 3.2 Services

## 3.12.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Wildfire, Security &amp; Emergency Response</b>	<ul style="list-style-type: none"> <li>• Goldstream gate security and first aid: weekdays 7:30 – 4:30</li> <li>• Watershed emergency duty officer (WEDO) standby: 24h/day 365/year</li> <li>• Security patrols: weekends and holidays year round</li> <li>• Maintenance of 11 km of security fencing and &gt; 50 gates</li> <li>• Wildfire detection/suppression patrols during ≥ moderate fire hazard: daily</li> <li>• Wildfire suppression standby ≥ moderate fire hazard: daily</li> <li>• Wildfire detection air patrol: 1 – 2 times daily during high and extreme fire hazard</li> <li>• Monitoring and distribution of fire weather data and preparedness: daily May to Oct.</li> <li>• Delivery of capital projects</li> </ul>	<ul style="list-style-type: none"> <li>• Transition Emergency Preparedness Asst to Security Asst</li> </ul>	<ul style="list-style-type: none"> <li>• Addition of First Nations Environment and Culture Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust to meet service delivery needs, as required</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust to meet service delivery needs, as required</li> </ul>
<b>Watershed Operations</b>	<ul style="list-style-type: none"> <li>• Winter road maintenance: 94km</li> <li>• Summer road maintenance: 367 km</li> <li>• New road construction: 1–2 km</li> <li>• Roads brushed: 125 km</li> <li>• Roads assessed and managed for danger trees: 210 km</li> <li>• Roads upgraded: 5 km</li> <li>• Roads reclaimed: 5 km</li> <li>• New bridges installed: 2</li> <li>• Culverts installed/replaced: 25</li> </ul>	<ul style="list-style-type: none"> <li>• Review &amp; Assess</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust to meet service delivery needs, as required</li> </ul>	Additional road maintenance for Leech WSA: <ul style="list-style-type: none"> <li>• 95 kms of road</li> <li>• 19 major drainage structures</li> <li>• 525 culverts</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust to meet service delivery needs, as required</li> </ul>

Service Level Adjustments in Role/Scope					
	<ul style="list-style-type: none"> <li>• Crossings maintenance: 20 bridges, 479 stream culverts and 1,122 drainage culverts</li> <li>• Invasive plants: 15-20 sites treated twice annually</li> <li>• Silviculture surveys: 50 ha per year</li> <li>• Silviculture brushing: 10 ha/year</li> <li>• Brushing: 18 ha dams and infrastructure <u>once or twice per year as required</u>;</li> <li>• Brushing/fire smarting facilities: 5 ha</li> <li>• Dams and reservoirs – inspection and removal of woody debris accumulations: monthly on 38 booms, dams, spillways</li> <li>• Delivery of capital projects</li> </ul>				
<b>Resource Planning</b>	<ul style="list-style-type: none"> <li>• Ecosystem information updates e.g. wetland mapping, TEM, forest cover.</li> <li>• Orthophotography update: every 2 years</li> <li>• Forest health survey: annual</li> <li>• Risk assessment and management planning</li> <li>• Partnering in climate change and other research in the GVWSA.</li> <li>• Monitoring of weather station fire weather data: daily May to October</li> <li>• Monthly monitoring and management of beaver</li> <li>• Monitoring and management of American bullfrogs: 3 times weekly for 6 months</li> <li>• Monitoring and management of Canada geese: daily for 6 months</li> <li>• <del>Plan and oversee implementation of actions from Greater Victoria Water Supply System Strategic Plan</del></li> <li>• Public Tours – 18 tours over 6 days</li> </ul>	<ul style="list-style-type: none"> <li>• Update of the Watershed Assessment</li> <li>• GVWSA Climate change adaptation strategy</li> <li>• <del>Biosecurity strategy</del></li> <li>• <del>Expanded public tours – 36 tours within a 3 to 4 month period</del></li> <li>• Adjust to meet service delivery needs, as required</li> </ul>	<ul style="list-style-type: none"> <li>• Update of the Watershed Assessment</li> <li>• GVWSA Management Plan</li> <li>• <u>Assist with Regional Water Supply Strategic Plan</u></li> <li>• Plan forest hydrology program</li> <li>• Fish stream assessments</li> <li>• Adjust to meet service delivery needs, as required</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Update of the Watershed Assessment</u></li> <li>• State of the GVWSA Report</li> <li>• <u>Regional Water Supply Strategic Plan</u></li> <li>• <u>Biosecurity strategy</u></li> <li>• <u>Expanded public, First Nations and school tours program</u></li> <li>• <u>Implement forest hydrology program</u></li> <li>• <u>Fish stream assessments</u></li> </ul>	<ul style="list-style-type: none"> <li>• Report out on State of the GVWSA</li> <li>• <del>Regional Water Supply Strategic Plan</del></li> <li>• <u>Expanded public, First Nations and school tours program</u></li> <li>• <u>Fish stream assessments</u></li> <li>• <u>forWater Network project implementation</u></li> <li>• Adjust to meet service delivery needs, as required</li> </ul>

Service Level Adjustments in Role/Scope					
				<ul style="list-style-type: none"> <li>• <del>for</del>Water Network project planning</li> <li>• Adjust to meet service delivery needs, as required</li> </ul>	

### 3.22.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Wildfire, Security &amp; Emergency Response</b>	8.33	8.33	<b>7.33</b>	<b>7.33</b>	<b>7.33</b>
<b>Watershed Operations</b>	11.33	11.33	11.33	11.33	11.33
<b>Resource Planning</b>	6.33	6.33	6.33	<b>7.33</b>	<b>7.33</b>
<b>Total</b>	26 FTE	26 FTE	<b>25 FTE</b>	<b>26 FTE</b>	<b>26 FTE</b>

- 1.0 FTE decrease in 2017 in Wildfire, Security & Emergency Response with Resident Caretaker position moved to ~~Customer and Technical Services~~ the Infrastructure Engineering division.
- 1.0 FTE increase in 2018 in Resource Planning for a Watershed Technologist ~~and Information Officer~~ position to provide capacity for resource planning projects, hydrology field monitoring and public tour expansion.

# 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Amendment of the Greater Victoria Water Supply Area Protection Bylaw no. 2804</b>  <b>April 2016</b>	The Leech Water Supply Area is not included in Bylaw 2804. An amendment would incorporate the Leech WSA, make provision for authorized activities in the Leech and clarify existing Bylaw language.	Drinking Water	Core budget
<b>Traditional Use Access Agreement</b>  <b>April 2016</b>	A traditional use access agreement is being developed with a local First Nation for the Leech WSA while not in use for drinking water supply.	First Nations	Core budget
<del><b>Security upgrade— Goldstream Entrance to the GVWSA</b></del>  <del><b>November 2016</b></del>	<del>The Goldstream entrance to the GVWSA was re-designed in 2015 and will be constructed in 2016 to address security and biosecurity needs.</del>	<del>Regional Infrastructure</del>  <del>Biodiversity &amp; Ecological Health</del>  <del>Drinking Water</del>	<del>Capital</del>
<del><b>Climate Change Adaptation Strategy for the GVWSA</b></del>  <del><b>December 2016</b></del>	<del>Using a common framework, an adaptation strategy for climate change will be developed for the GVWSA. The strategy will become part of the larger climate change strategy for the Regional Water Supply System.</del>	<del>Climate Change</del>  <del>Drinking Water</del>	<del>Core budget and external funding (assistance from 3 month intern position which is grant funded through Pacific Institute for Climate Solutions)</del>
<del><b>Biosecurity Strategy for the GVWSA</b></del>  <del><b>December 2016</b></del>	<del>Increasing new and existing invasive species may affect drinking water quality. This strategy will provide new tools and standards for preventing the establishment of undesirable species in the GVWSA.</del>	<del>Biodiversity &amp; Ecological Health</del>  <del>Drinking Water</del>	<del>Core budget</del>

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<del>Public tours expansion</del>  <b>June 2018</b>	<del>The current model of offering tours to the public during only one week relying on senior staff to lead the tours has remained unchanged for 26 years. A revised model of tour offerings over several months a year will provide more tour opportunities at better times for the public and schools for lower overall cost.</del>	<del>Public Engagement &amp; Communications  Education, Outreach &amp; Information</del>	<del>Continuous supplementary budget request for 1.0 FTE in Resource Planning.</del>
<b>Leech Watershed Restoration</b>  <b>Dec 2016</b>	Upgrade of Weeks Main north <ul style="list-style-type: none"> <li>• Deactivation of Survey Main (year 1)</li> <li>• Construction of Horton Connector and Worley Lake access</li> </ul>	Regional Infrastructure	Capital
<b>Forest Fuel Management Projects</b>  <b>2016 - 2019</b>	Establishment and maintenance of forest fuel breaks to help protect Sooke Lake Reservoir from the effects of large scale wildfire.	Climate Change	Core budget
<b>2017</b>			
<u><b>Security upgrade – Goldstream Entrance to the GVWSA</b></u>  <u><b>November 2016</b></u>	<u>The Goldstream entrance to the GVWSA was re-designed in 2015 and will be constructed in 2016 to address security and biosecurity needs.</u>	<u>Regional Infrastructure</u>  <u>Biodiversity &amp; Ecological Health</u>  <u>Drinking Water</u>	<u>Capital</u>
<u><b>Climate Change Adaptation Strategy for the GVWSA</b></u>  <u><b>December 2016</b></u>	<u>Using a common framework, an adaptation strategy for climate change will be developed for the GVWSA. The strategy will become part of the larger climate change strategy for the Regional Water Supply System.</u>	<u>Climate Change</u>  <u>Drinking Water</u>	<u>Core budget and external funding (assistance from 3 month intern position which was grant funded through Pacific Institute for Climate Solutions)</u>
<b>Update Watershed Assessment</b>  <b>Dec 2017</b>	Update the 1999 Watershed Assessment	Drinking Water  Biodiversity & Ecological Health	Core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Watershed Management Plan</b>  <b>Nov 2017</b>	The management of the GVWSA will be documented and results of the watershed assessment and <del>biosecurity</del> and climate change strategies will be incorporated.	Drinking Water  Regional Infrastructure  Climate Change  Biodiversity & Ecological Health	Core Budget
<b>Assessment of Streams in the GVWSA</b>  <b>2017-2019</b>	A three year program to assess the fish habitat potential, channel stability, and proper functioning condition of streams in the GVWSA.	Biodiversity & Ecological Health	Capital
<b>Leech Watershed Restoration</b>  <b>Dec 2017</b>	<del>Upgrade of Weeks Main running surface and minor culverts</del>  <ul style="list-style-type: none"> <li>• <u>Deactivation of Survey Main year 2</u></li> <li>• <u>Cragg Creek Bridge upgrade</u></li> <li>• <u>Upgrade of Cragg Main and Horton Main running surface and minor culverts</u></li> </ul>	Regional Infrastructure	Capital
<del><b>Waugh Creek Bank Stabilization</b></del>  <del><b>Oct 2017</b></del>	<del>Waugh Creek is under cutting the fill slope of Kapeer Main which is the primary access to Sooko Lake Dam and the Water Supply Area. A stabilization project (rip rap placement and slope reinforcement) is required to prevent further damage.</del>	<del>Regional Infrastructure</del>  <del>Drinking Water</del>	<del>Capital</del>
<b>2018</b>			
<b>Regional Water Supply Strategic Plan</b>  <b>2018 – 2019</b>	The Resource Planning section will provide significant support to the department in developing a new strategic plan.	Drinking Water	Core budget with supporting studies funded by Capital

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<u><b>Biosecurity Strategy for the GVWSA</b></u>  <u><b>December 20168</b></u>	<u>Increasing new and existing invasive species may affect drinking water quality. This strategy will provide new tools and standards for preventing the establishment of undesirable species in the GVWSA.</u>	<u>Biodiversity &amp; Ecological Health</u>  <u>Drinking Water</u>	<u>Core budget</u>
<u><b>Public tours expansion</b></u>  <u><b>June 2018</b></u>	<u>The current model of offering tours to the public during only one week relying on senior staff to lead the tours has remained unchanged for 26 years. A revised model of tour offerings over several months a year will provide more tour opportunities at better times for the public, First Nations and schools for lower overall cost.</u>	<u>Public Engagement &amp; Communications</u>  <u>Education, Outreach &amp; Information</u>	<u>Continuous supplementary budget request for 1.0 FTE in Resource Planning.</u>
<u><b>Security upgrade – Goldstream Entrance to the GVWSA</b></u>  <u><b>November 2018</b></u>	<u>The Goldstream entrance to the GVWSA was re-designed in 2015 and will be constructed in 20168 to address security and biosecurity needs.</u>	<u>Regional Infrastructure</u>  <u>Biodiversity &amp; Ecological Health</u>  <u>Drinking Water</u>	<u>Capital</u>
<u><b>Update Watershed Assessment</b></u>  <u><b>Dec 2018</b></u>	<u>Update the 1999 Watershed Assessment</u>	<u>Drinking Water</u>  <u>Biodiversity &amp; Ecological Health</u>	<u>Core budget support from supplementary budget request for 1.0 FTE in Resource Planning</u>
<u><b>State of the GVWSA Report</b></u>  <u><b>Dec 2018</b></u>	<u>Development of a set of sustainability indicators for the health and management of the GVWSA.</u>	<u>Drinking Water</u>  <u>Climate Change</u>	<u>Core budget</u>
<u><b>Leech forest hydrology monitoring network</b></u> <u><b>Nov 2018</b></u>	<u>Implementation of a network of hydrology monitoring stations in the Leech WSA</u>	<u>Regional Infrastructure</u>	<u>Capital and Core budget, support from supplementary budget request for 1.0 FTE in Resource Planning</u>
<u><b>Leech Watershed Restoration</b></u>  <u><b>Dec 2018</b></u>	<u>Development Assessment and planning of Lazar Mainroad infrastructure in north Leech</u>  <u>Leech road maintenance</u>	<u>Regional Infrastructure</u>	<u>Capital and continuous supplementary request for \$7550,000 for Leech road maintenance.</u>

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<del>Leech River/Weeks Main Bridge replacement</del>  <u>Oct 2018</u>	<del>The Leech River crosses Weeks Main through a large culvert. The culvert is undersized and needs to be replaced with a concrete bridge to restore proper water flow and safe road passage.</del>	<u>Regional Infrastructure</u>	<u>Capital</u>
<u>Replacement of Goldstream Main bridge</u>  <u>Oct 20198</u>	<u>The existing bridge is undersized and poses a risk to water quality and fish habitat and should be replaced with a longer concrete structure with greater clearance.</u>	<u>Regional Infrastructure</u>	<u>Capital</u>
<u>Waugh Creek Bank Stabilization</u>  <u>Oct 20178</u>	<u>Waugh Creek is under cutting the fill slope of Kapoor Main which is the primary access to Sooke Lake Dam and the Water Supply Area. A stabilization project (rip-rap placement and slope reinforcement) is required to prevent further damage.</u>	<u>Regional Infrastructure</u>  <u>Drinking Water</u>	<u>Capital</u>
<b>2019</b>			
<b>Leech Watershed Restoration</b>  <b>Dec 2019</b>	Leech road maintenance  West Leech road upgrades/deactivation	<u>Regional Infrastructure</u>	Core budget (continuous supplemental request of \$5075,000 in 2018)  <u>Capital</u>
<del>Replacement of Goldstream Main bridge</del>  <del>Oct 2019</del>	<del>The existing bridge is undersized and poses a risk to water quality and fish habitat and should be replaced with a longer concrete structure with greater clearance.</del>	<u>Regional Infrastructure</u>	<u>Capital</u>
<u>Leech River/Weeks Main Bridge replacement and Weeks North Bridge construction</u>  <u>Oct 20189</u>	<u>The Leech River crosses Weeks Main through a large culvert. The culvert is undersized and needs to be replaced with a concrete bridge to restore proper water flow and safe road passage.</u>  <u>Upgrade of Weeks Main north access</u>	<u>Regional Infrastructure</u>	<u>Capital</u>



# 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Increase strategies and activities to protect the drinking water supply and improve access to catchment lands	<ul style="list-style-type: none"> <li>• Bylaw 2804 Amended - Leech entrances secured and new enforcement procedures in place.</li> <li>• Increase the number of staff with fire suppression fitness and training as well as qualified and experienced initial attack crew leaders by 2018 (baseline 2015 levels)</li> <li>• # of kilometres of roads maintained, upgraded or reclaimed associated with drinking watershed operations annually*</li> <li>• Number of watershed forest fuel management projects completed annually*</li> <li>• % of capital projects completed on time and on budget*</li> <li>• Completion of Biosecurity Strategy by end of 2018<u>6</u>.</li> </ul>
Enhance information and data collection activities to support resource planning	<ul style="list-style-type: none"> <li>• Completion of Watershed Assessment by end of 2017<u>8</u>.</li> </ul>
Contribute to corporate and regional climate action objectives	<ul style="list-style-type: none"> <li>• Completion of GVWSA climate change adaptation strategy by end of 2016<u>7</u>.</li> </ul>
Increase public engagement and educational efforts	<ul style="list-style-type: none"> <li>• <u>Total P</u>articipation rates in CRD-watershed public tours annually*</li> </ul>

\*Corporate indicator – multiple divisions may contribute to this measure.

**Please see revised table below**

### KEY PERFORMANCE INDICATORS

Indicator Name	201 <u>7</u> 6 Planned	201 <u>7</u> 6 Projected	201 <u>7</u> 8 Planned
Watershed roads:			
Maintained	367 km	34 <u>0</u> 0 km	367 km
Upgraded	5 km	5 km	5 km
Reclaimed	5 km	6 <u>5</u> km	5 km
Capital projects			
% on time	100% on time	73 % on time	100% on time
% on budget	100% on budget	73 % on budget	100% on budget
Participation rates in CRD public tours annually			
2015 = 682	<u>234</u> 8 tours 700 participants	<u>222</u> 9 tours 69 <u>6</u> 8 <u>8</u> 0 participants	<u>233</u> 6 tours 70 <u>0</u> <u>1</u> 0 <u>8</u> 0 participants

## Contact

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**2018 Service Plans Review and Approval**

**For Committee of the Whole, November 29, 2017**

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**APPENDIX I**

**Service Plan Reviewed by the Peninsula Recreation Commission**

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Service Plan Summary

Service Plan for Peninsula Recreation

<p><b>SERVICE NAME:</b> Peninsula Recreation</p>
<p><b>Changes in Assumptions, Trends, and Other Issues since 2017:</b> <i>(linked to section 1.3 and 1.4 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• Aging infrastructure remains a priority in the capital plan.</li> </ul>
<p><b>Overall 2017 Budget Performance:</b> <i>(linked to budget forecast to year end)</i></p> <ul style="list-style-type: none"> <li>• There is a favourable variance of \$229,000 (2.7%) due to increased revenue of \$155,000 (\$109,000 programs and \$46,000 rentals) and decreased expenses of \$74,000 in part due to an FTE vacancy (\$10,400 salaries), \$50,000 unused contingency and \$27,000 decrease in finance/banking charges. This variance will be transferred to the capital reserve to fund 2018 capital projects. The current balance of the capital reserve is \$417,000.</li> </ul>
<p><b>Update to Division Initiatives:</b> <i>(linked to section 3 of the detailed service plan)</i></p> <p><b>Core Services:</b></p> <ul style="list-style-type: none"> <li>• Food Services – Implementation of financially viable food services operation based on community input. Start 2017, to be completed in 2019.</li> <li>• Art Programs Delivery – Collaborate with local art organizations to enhance art opportunities on the Peninsula. Gather input from the community regarding art programs and services. To be completed in 2019.</li> <li>• Identify strategies to increase programs and services in Central Saanich. Conduct a community engagement session to gather information and develop an online survey. To be completed in 2019.</li> </ul>
<p><b>Service Adjustments and Staffing Levels:</b> <i>(linked to section 2 of the detailed service plan)</i></p> <ul style="list-style-type: none"> <li>• Reallocate 1 FTE Facility Maintenance Worker position to Operations Lead Hand midnight shift.</li> <li>• Reallocate 1 FTE Recreation Coordinator 1 to 1 FTE Recreation Coordinator 3 to meet efficient program delivery.</li> </ul>

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<p><b>Service Goal: Initiate strategic recreational infrastructure investments</b></p> <ul style="list-style-type: none"> <li>% of capital projects completed on time and on budget</li> </ul>	<p>2 capital infrastructure projects identified in capital plan</p>	<p>Arena B Floor replacement at 65% with completion expected on Sept. 15, 2017</p> <p>Arena A&amp;B Dehumidification project to commence Nov 2017- design stage at 60%</p> <p>Fire Alarm project to commence Nov 2017- design stage at 80%</p>	<p>3 capital infrastructure projects identified in Capital Plan</p> <p>Arena Dehumidification</p> <p>Building control automation (DDC) upgrades.</p> <p>Fire alarm replacement</p>
<p><b>Service Goal: Increase access to recreation, arts and culture opportunities</b></p> <ul style="list-style-type: none"> <li># of recreation programs offered overall to the public</li> <li>Annual # of programs and/or services designed from First Nations communities, seniors, youth and children offered</li> </ul>	<p>650 registered programs, 39 different drop-in services, 100 drop-in fitness classes, 20 hours of drop-in sports</p> <p>1 program offered, 4 health fairs attended, blanket ceremony</p>	<p>633 registered programs, 39 different drop-in services, 104 drop-in fitness classes, 35 hours of drop-in sports</p> <p>1 program offered, 4 health fairs attended, blanket ceremony, celebrated National Aboriginal Day with \$2 admission</p>	<p>650 registered programs, 40 different drop-in services, 104 drop-in fitness classes, 35 hours of drop-in sports</p> <p>2 programs offered, 4 health fairs attended, Welcome figure carving project, recognize National Aboriginal Day</p>

<p># of art programs offered annually</p>	<p>Winter/Spring: 20 Summer: 12 Fall: 15</p>	<p>Winter/Spring: 26 Summer: 12 Fall: 24</p>	<p>Winter/Spring: 28 Summer: 12 Fall: 26</p>
<p><b>Service Goal: Provide recreational programming that responds to community need</b></p> <ul style="list-style-type: none"> <li>• Participation rates of residents in two-way dialogue and engagement opportunities</li> <li>• Completion of a needs assessment for programs, services and facilities with community members and stakeholders</li> </ul>		<p>734 responses to food services survey 3,500 followers on facebook 11,500 post engagements per month on facebook 1,400 followers on twitter 500 followers on instagram</p>	<p>3,600 followers on facebook 12,000 post engagements per month on facebook 1,425 followers on twitter 525 followers on instagram</p> <p>Targeted for 2018</p>
<p><b>Service Goal: Increase opportunities for user generated feedback on recreational programming and web-based registrations</b></p> <ul style="list-style-type: none"> <li>• Implement new Recreation Management software</li> <li>• Initiate post-course completion survey for recreation user and program participants once recreation software replacement is in place</li> <li>• Target 5% program participants and recreation users complete post-course survey</li> </ul>	<p>Implementation complete in April 2017</p> <p>Implementation in 2017</p> <p>5% response rate for Fall 2017</p>	<p>Implementation completed April 2017</p> <p>Implementation in Fall 2017</p> <p>5% response rate for Fall 2017</p>	<p>7% response rate</p>
<p><b>Service Goal: User Fee Revenue as % of Total Costs</b></p>	<p>43.99%</p>	<p>44.63%</p>	<p>45.07%</p>

## Contact

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# Service Plan for Peninsula Recreation

2016-2019  
(~~2017~~2018)

Capital Regional District

*Date submitted:*      *August 20176*



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# 1 Overview

## 1.1 Division & Service Summary

The mandate of Peninsula Recreation is to foster individual and community well-being in the communities of the Saanich Peninsula, including the residents of the District of Central Saanich, the District of North Saanich and the Town of Sidney. Peninsula Recreation administers service delivery through the Panorama Recreation Centre, which has two arenas, an indoor swimming pool and indoor leisure pool (both using a salt purification system) with the tallest waterslide in the region (which is wheelchair accessible), four indoor tennis courts, two outdoor tennis courts, weight room and fitness studio, squash and racquetball courts, and three small multi-purpose rooms.

Peninsula Recreation also operates a satellite location, Greenglade Community Centre, which was formerly a local elementary school. The amenities include a gymnasium, a number of activity rooms for program use, pottery studio, weight and fitness room, mind and body studio, dance studio, teen lounge, and sports fields. The Centre has become a valuable asset for the delivery of recreation programs and services.

Peninsula Recreation delivers a variety of programs through several joint-use agreements and partnerships with local organizations, including School District No. 63, North Saanich Middle School and Central Saanich Cultural Centre.

Furthermore, regional and corporate initiatives and partnerships provide a number of programs and services that allow sharing of resources and provide opportunities for additional programs and services.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
To operate two ice arenas and an aquatics complex and provide recreation and community use services for the three municipalities on the Saanich Peninsula	Sidney, Central Saanich and North Saanich	Requisition, grants, sponsorships, donations, non-tax revenue	Peninsula Recreation Commission

# 1.2 Organization Chart

General Manager  
Parks & Environmental  
Services

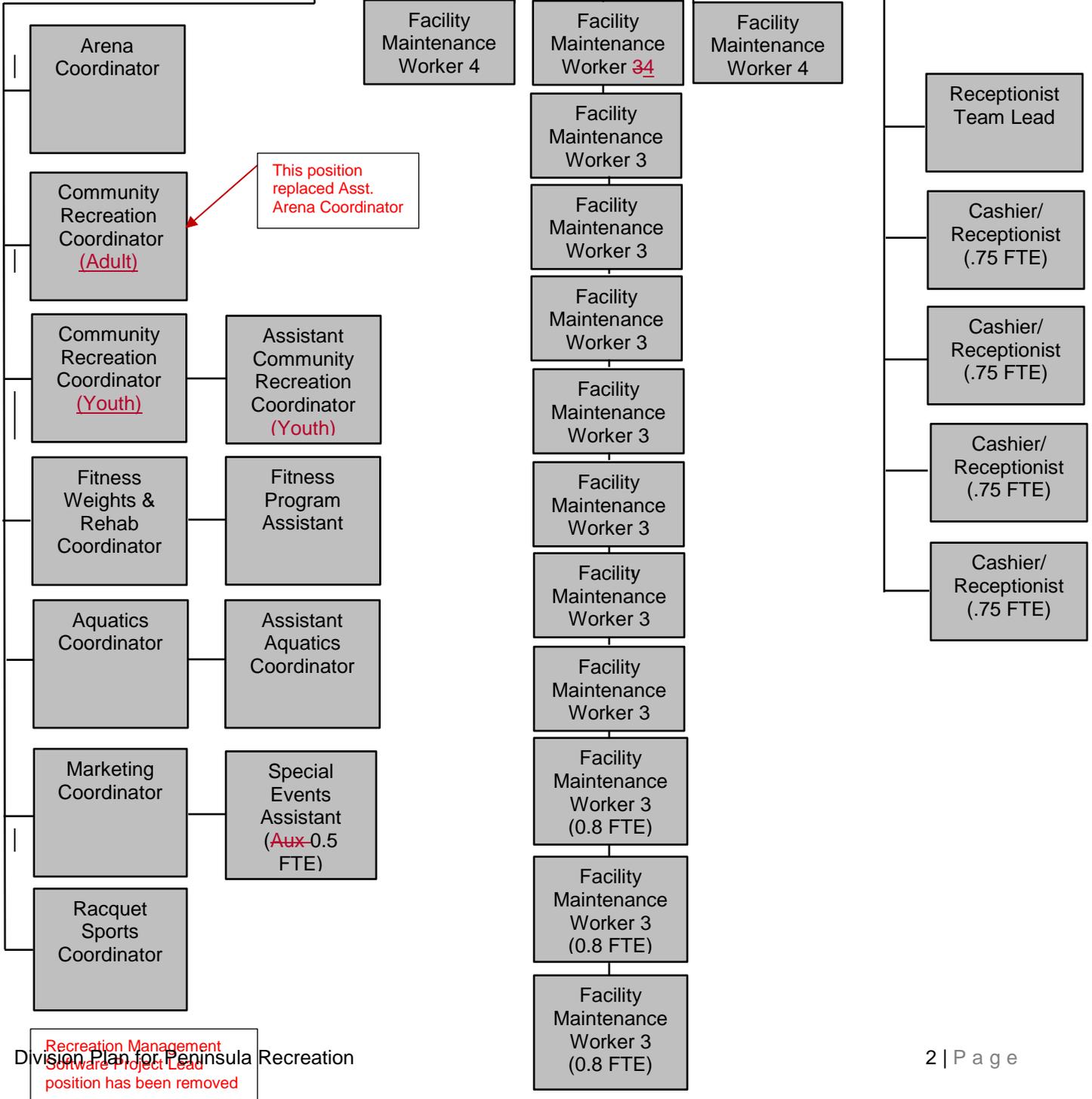
Senior Manager  
Panorama Recreation

Administrative  
Secretary

Manager  
Program Services

Manager  
Facilities &  
Operations

Manager  
Administrative  
Services



Recreation Management Software Project Lead position has been removed

## 1.3 Key Trends, Issues & Risks – Service Specific

The Peninsula has an aging population and serves four First Nations. This creates some unique needs for programs, services and facilities, including accessibility.

An increase in sedentary lifestyles and risk factors for disease, such as obesity, has become prevalent in children and youth due to increased screen time during their free time instead of active recreation and unstructured play. Physical literacy in recreation programs and services can address sedentary behaviours.

Aging infrastructure requires increased maintenance for existing facilities. ~~The need to rehabilitate the main arena's floor and dasher board system, which has exceeded its life expectancy, will have a significant capital impact.~~

There is an increasing demand for programs and services that support a connection with nature and green spaces, particularly for children and youth.

Facilities are at capacity with existing delivery of programs. In order to expand programs and services, partnerships will need to be developed and explored.

There is an increasing demand for skill-based art programs and services to promote [holistic health](#) in individuals and communities.

## 1.4 Link to Priorities

### RECREATION, ARTS & CULTURE

- support increased access to community arts and recreation through programming and strategic investments

### CHANGING DEMOGRAPHICS

- complete the Community Health & Well-Being Plan and facilitate conversation with recreation centres to develop a common definition of “seniors”

### REGIONAL INFRASTRUCTURE

- ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements
- develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered

### CLIMATE CHANGE

- realign resources to effectively deliver on Board directives relating to climate change and implement policy and practices to demonstrate leadership in operations

### PUBLIC ENGAGEMENT & COMMUNICATIONS

- develop public participation strategies, including implications and performance metrics, as part of all major initiatives and implement more options for two-way dialogue and engagement

## 2 Services

### 2.1 Service Levels

	Service Level Adjustments in Role/Scope				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Aquatics</b>	<p>Provide lane swimming a minimum of 114.5 hours per week for a total of 5,894 hours per year</p> <p>Provide public swimming 114.5 hours per week for a total of 5,894 hours per year</p> <p>Offer five new programs per year</p> <p>60% of registered programs are successful</p> <p>Deliver 20 weekly drop-in aquatic fitness classes each year</p> <p>Average attendance of 21 drop-in fitness classes</p> <p>141,627 visits to the pool each year</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 3% to 63%</p> <p>Increase average attendance by 1% to 22</p> <p>Increase by 0.5% to 142,335</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 2% to 65%</p> <p>Increase by 0.5% to 143,047</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 2% to 67%</p> <p>Increase average attendance by 1% to 23</p> <p>Increase by 0.5% to 143,762</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 1% to 68%</p> <p>Increase by 0.5% to 144,481</p>
<b>Arena</b>	<p>Operational hours of ice per day: 18.5 hours per rink for a total of 8,917 hours per year (August through April)</p> <p>Operational hours of dry floor per day: 12 hours per day for a total of 2,976 hours per year (May through July)</p> <p>Offer one new program per year</p> <p>76% of registered programs are successful</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 1% to 77%</p>	<p>Decrease of 1,480 hours in Arena B*</p> <p>Decrease of 1,480 hours in Arena B*</p> <p>Increase by 1% to 78%</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 1% to 79%</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 1% to 80%</p>

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<p>Offer 20 hours of public skating per week for a total of 760 hours per year</p> <p>7,670 visits to the arena each year</p>	<p>Increase by 5% to 8,053</p>	<p>Offer 18 hours of public skating per week for a total of 684 hours per year as well as decrease of 100 hours due to arena project*</p> <p>Decrease by 22% to 6,281*</p> <p>*Arena B – seven month closure March 1 to September 30 to replace flooring and boards. Estimated net revenue loss of \$117,232.</p>	<p>Offer 18 hours of public skating per week for a total of 684 hours per year</p> <p>Increase by 2% over 2016 levels to 8,214</p>	<p>Increase by 2% to 8,380</p>
<b>Fitness, Weights &amp; Rehabilitation</b>	<p>Operational hours of Panorama weight room: 114.5 hours per week for a total of 5,894 hours per year</p> <p>Operational hours of Greenglade weight room: 61.5 hours per week September – June, 46 hours per week July – August for a total of 3,105 hours per year</p> <p>77% of registered programs are successful</p> <p>Offer two new programs each year</p> <p>Deliver 61 drop-in fitness classes each week at Panorama</p> <p>Deliver seven drop-in fitness classes each week at Greenglade</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 1% to 78%</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Add 80 hours to be open weekends 9 am – 1 pm (Summer)</p> <p>Increase by 1% to 79%</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 1% to 80%</p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Add 416 hours per year: weight room open 8 hours per day all year long</p>

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<p>Average attendance of drop-in fitness classes: 14</p> <p>131,900 visits to the weight room each year</p>	<p>Increase by 0.5% to 132,560</p>	<p>Increase average attendance by 1 to 15</p> <p>Increase by 0.5% to 133,223</p>	<p>Increase by 0.5% to 133,889</p>	<p>Increase average attendance by 1 to 16</p> <p>Increase by 0.5% to 134,558</p>
<b>Community Recreation</b>	<p>Offer a minimum of 14 hours of childminding per week (September – June)</p> <p>Offer <del>20</del>8 new adult programs each year</p> <p>Offer seven new youth programs each year</p> <p>53% of registered adult programs are successful</p> <p>66% of registered youth programs are successful</p> <p>Deliver <del>48</del>530 hours of drop-in sports programs per week (September – June)</p> <p>Average attendance of 20 for drop-in sports sessions</p> <p>Offer a minimum of 44 hours of public access to the pottery studio</p> <p>Offer a minimum of 360 hours of free teen programs at two locations (Sept-June)</p>	<p>Adjust to meet service delivery needs, as required.</p> <p><u>Offer 8 new adult programs each year</u></p> <p>Increase by 3% to 56%</p> <p>Increase by 1% to 67%</p> <p><u>Deliver 30 hrs of drop-in sports programs per week (Sept-Jun)</u></p>	<p>Adjust to meet service delivery needs, as required.</p> <p><u>Offer 8 new adult programs each year</u></p> <p>Increase by 2% to 58%</p> <p>Increase by 1% to 68%</p> <p><u>Deliver 30 hrs of drop-in sports programs per week (Sept-Jun)</u></p> <p>Increase average attendance by 1 to 21</p>	<p>Adjust to meet service delivery needs, as required.</p> <p><u>Offer 8 new adult programs each year</u></p> <p>Increase by 2% to 60%</p> <p>Increase by 1% to 69%</p> <p><u>Deliver 30 hrs of drop-in sports programs per week (Sept-Jun)</u></p>	<p>Adjust to meet service delivery needs, as required.</p> <p>Increase by 2% to 62%</p> <p>Increase by 1% to 70%</p> <p>Increase average attendance by 1 to 22</p>
<b>Racquet Sports</b>	<p>Tennis courts open 14.5 hours per day, 346 days a year</p> <p>Offer five new programs each year</p> <p>92% of registered programs are successful</p>	<p>Decrease of 72 operational days**</p>	<p>Adjust to meet service delivery needs, as required.</p>	<p>Adjust to meet service delivery needs, as required.</p>	<p>Adjust to meet service delivery needs, as required.</p>

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	<p>Offer 11 local tournaments each year</p> <p>Offer three provincial/national/international tournaments each year</p>	**Tennis courts – two-month closure June 20 to August 31 to upgrade flooring			
<b>Marketing</b>	<p>Participate in and/or support 36 local community events</p> <p>Plan and deliver five major special events (three Hockeyville events, one New Year's Eve event and one Winter Wonderland event)</p>	<p>Increase participation by 1 to 37</p> <p>Two major special events (New Year's Eve, Winter Wonderland)</p>	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.
<b>Greenglade</b>	<p>Operational hours of Greenglade 62 hours per week September-June, 46 hours per week July-August for a total of 3,105 hours per year.</p> <p>Investigate the need for additional operating hours based on community use and recreation software capacity. Potential additional 80 hours to be open weekends in the summer and/or 8 hours per day, 7 days per week.</p>	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.
<b>Administration</b>	<p>Offer registration services at reception a minimum of 3,822 hours per year</p> <p>Maintain number of transactions per reception staff at minimum of 34 per hour</p>	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
	Maintain and improve internet registration options. Current year registrations online equal 28.4%	Increase to 30%	Increase to 32%	Increase to 34%	Increase to 35%
<b>Maintenance</b>	<p>Provide a clean and safe facility that is maintained by staff 24 hours a day, 7 days a week each year</p> <p>Clean the facility a minimum of once per day</p> <p>Maintain the facility grounds a minimum of 2.5 days per week</p> <p>Provide operational support for major special events</p>	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.	Adjust to meet service delivery needs, as required.

## 2.2 Workforce Considerations

	Workforce (FTEs)				
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Administration</b>	6.75	6.75	6.75	6.75	6.75
<b>Programming</b>	12.00	12.00	12.00	12.00	12.00
<b>Maintenance</b>	12.60	12.60	12.60	12.60	12.60
<b>Total</b>	<b>31.35</b>	<b>31.35</b>	<b>31.35</b>	<b>31.35</b>	<b>31.35</b>
<b>Supplementary FTEs</b>	0	0	0	0	0
<b>Total</b>	<b>31.35</b>	<b>31.35</b>	<b>31.35</b>	<b>31.35</b>	<b>31.35</b>

# 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>2016</b>			
<b>Recreation Software Upgrades</b> <del>To be completed in 2017</del>	Replace outdated recreation management system software.	Corporate Development	\$200,000 reserves
<b>Identify Strategies to Increase Programs and Services in Central Saanich</b> To be completed in <del>2017</del> 2018	Complete an inventory of existing facilities and potential partnerships. <del>Conduct a community engagement session to gather information and develop an online survey</del>	Public Engagement & Communications	Core budget
<b>Develop and Implement Programs and Services for First Nations</b> To be completed by 2019	Build relationships with the four bands on the Peninsula and work with them in developing recreation programs and services; continue to explore opportunities to train First Nation youth in delivering programs	Recreation, Arts & Culture	Core budget
<b>Panorama Community Engagement Plan</b> To be completed in 2017	<del>Develop a community engagement plan and an evaluation framework to assess gaps in program delivery and explore potential partnerships</del> <u>Enhance community engagement opportunities for input and guidance on programs and services.</u>	Public Engagement & Communications	Core budget
<b>Physical Literacy Awareness Plan</b> <del>To be completed in 2016</del>	Develop a plan to increase the awareness of physical literacy and the benefits of recreation, fitness and health by working in partnership with key stakeholders in the community	Public Engagement & Communications  Changing Demographics	Core budget
<b>Nature Preschool Program</b> <del>To be completed by in 2016</del>	Develop and deliver a new program for preschool-aged children to engage them in nature and green space to enhance connection with the environment.	Recreation, Arts & Culture	Core budget

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Play in the Park Program Enhancement</b>  To be completed by 2017	Integrate cycling, walking and rolling into annual Play in the Park programming. Include awareness campaign, incentives, educational programs and expanded opportunities.	Recreation, Arts & Culture	Core budget and grant funding
<b>Indoor Tennis Court Upgrades</b>  To be completed in 2016	Upgrade indoor tennis asphalt floor.	Regional Infrastructure	\$100,000 reserves
<b>Upgrade the Arena with Kraft Hockeyville Funds</b>  To be completed by 2017	Determine priority items for upgrades and commence project work.  <u>Multi-media screen for arena, storage space expansion and sea can containers have been identified for the funding.</u>	Regional Infrastructure Public Engagement & Communications	\$100,000 sponsorship funding
<b>2017</b>			
<b>Community Engagement Plan Implementation</b>  To be completed by 2019	<del>Implement</del> <u>Continue</u> community engagement activities to increase the number of successful registered programs. Include continued outreach with School District 63, <del>and local</del> Parent Advisory Committees <u>and other local organizations.</u>	Public Engagement and Communications	Core budget
<b>Physical Literacy Awareness Plan</b>  To be completed in 2019	Implement activities identified in the plan to decrease the number of sedentary lifestyles, particularly among youth.  Continue to develop and execute a plan to increase the awareness of physical literacy and the benefits of recreation, fitness and health by working in partnership with key stakeholders in the community. Work with regional stakeholders and experts to incorporate components of physical literacy in existing youth program offerings.	Public Engagement & Communications  Changing Demographics	Core budget
<b>Arena Floor and Dasher Board System Rehabilitation Project</b>  To be completed in 2017	Demolish and replace existing floor and refrigerant piping (which is at risk of failure) and replace of the main arena's dasher boards and glass.	Climate Change	\$ <del>1.582</del> <u>.2</u> million total - 0,000 grant and \$ <del>1.087</del> million debt financing

Title & Estimated Completion Date	Description	Priority Reference (if applicable)	Budget Implications
<b>Art Programs Delivery</b>  To be completed in 2019	Implement new art and craft programs. Received \$25,000 in grant funding to enhance art opportunities for seniors and linking seniors with youth through March 2017. <u>Collaborate with local art organizations to enhance art opportunities on the Peninsula. Gather input from the community regarding art programs and services.</u>	Recreation, Arts & Culture	Core budget and \$25,000 grant funding
<b>Food Services Assessment</b>  To be completed in <del>2018</del> 2017	Create a project team to explore the feasibility of establishing food services at Panorama Recreation. Review best practices. Develop a community engagement plan to determine need.	Public Engagement & Communications	Core budget
<b>2018</b>			
<b>Food Services Implementation</b>  To be completed in 2019	<del>Further financial analysis and implementation of community engagement plan. Analysis and recommendations for next steps.</del> <u>Implementation of financially viable food services operation based on community input.</u>	Public Engagement & Communications	Core budget
<u><b>Identify Strategies to Increase Programs and Services in Central Saanich</b></u>  <u>To be completed in 2019</u>	<u>Conduct a community engagement session to gather information and develop an online survey.</u>	<u>Public Engagement &amp; Communications</u>	<u>Core budget</u>

# 4 Goals & Performance Indicators

Service Goals	Indicators or Measures
Initiate strategic recreational infrastructure investments	<ul style="list-style-type: none"> <li>• % of capital projects completed on time and on budget*</li> <li>• <del>% increase in efficiency in performance and/or annual cost savings resulting from arena improvements and tennis court investments</del></li> </ul>
Increase access to recreation, arts and culture opportunities	<ul style="list-style-type: none"> <li>• # of recreation programs overall offered to the public* (2016 as baseline)</li> <li>• Annual # of programs and/or services designed for First Nations communities, seniors, youth and children offered* (2016 as baseline)</li> <li>• # of new partners or collaborators established to support program design and delivery</li> <li>• # of self-identified First Nations participants engaged in program design and delivery</li> <li>• # art programs offered annually (baseline 2015)</li> </ul>
Provide recreational programming that responds to community need	<ul style="list-style-type: none"> <li>• Participation rates of residents in two-way dialogue and engagement opportunities*</li> <li>• Completion of a needs assessment for programs, services and facilities with community members and stakeholders.</li> </ul>
Increase opportunities for user-generated feedback on recreational programming and web-based registrations	<ul style="list-style-type: none"> <li>• Implement new Recreation Management Software</li> <li>• Initiate post-course completion survey process for recreation user and program participants once recreation software replacement is in place</li> <li>• Target 5% of program participants and recreation users complete post-course survey</li> <li>• % of participants registered via website compared to in-person registration</li> </ul>

\* = Corporate indicator – Multiple divisions may contribute to this measure

## Contact

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 Title: Senior Manager  
 Contact information: 250-655-2170



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**2018 Service Plans Review and Approval**

**For Committee of the Whole, November 29, 2017**

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**APPENDIX J**

**Service Plan Reviewed by the Sooke and Electoral Area Parks and Recreation  
Commission (SEAPARC)**

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Service Plan Summary

Service Plan for SEAPARC

**SERVICE NAME:** Sooke & EA Parks & Recreation

**Changes in Assumptions, Trends, and Other Issues since 2017:** (linked to section 1.3 and 1.4 of the detailed service plan)

- SEAPARC is now operating the DeMamiel Creek 9 Hole Golf Course, providing seasonal access to the community (May-October)
- 2016 Census data confirms the District of Sooke's population grew 13.7% over a five-year period (2011-2016), making it the second-fastest growing community on Vancouver Island and one of the fastest-growing cities in the province.
- Current capacity is available in existing services, including new golf course service, to keep pace with increases in population, growth and demand.
- New fitness service expansion and provision continues to be a high priority, with capital funding in place and grant applications underway.
- Future initiatives that may impact SEAPARC include field management, minor sports development, seniors and youth community centre.

**Overall 2017 Budget Performance:** (linked to budget forecast to year end)

- There is an overall estimated favorable variance of \$125,000 (3.4%); \$100,000 will be transferred to capital reserve which has a current balance of \$545,000, \$10,000 will be transferred to ERF which has a current balance of \$34,000 and \$15,000 will be transferred to operating reserve which has a balance of \$410. These reserves will fund future fitness expansion, infrastructure and equipment renewal and strategic and program planning. The favorable variance is due to:
  - Decreased revenue of \$30,000 (0.8%) mainly from lower usage for Ice rentals from minor hockey and program and membership fees. The adjustments have been made for 2018 budget to reflect expected performance.
  - Decreased Expenses of \$155,000 (4.1%) mainly from unused contingency of \$20,000 (0.5%), savings of heating oil utility cost of \$44,000 (1.2%), decreased contract for services \$22,000 (0.6%) by switching to staffed grounds maintenance of golf course, salaries and wages \$33,000 (0.9%) and other minor various operating costs. The adjustments have been made for 2018 budget to reflect the expected performance.

**Update to Division Initiatives:** (linked to section 3 of the detailed service plan)

- Fitness expansion continues to be SEAPARC's main divisional priority.
- Seasonal golf course service is now offered by SEAPARC in Sooke. Service is operated on a cost recovery model.

**Service Adjustments and Staffing Levels:** (linked to section 2 of the detailed service plan)

- No adjustments planned for 2018.

<b>Key Performance Indicators: (linked to section 4 of the detailed service plan)</b>			
<b>Indicator Name</b>	<b>2017 Planned</b>	<b>2017 Projected</b>	<b>2018 Planned</b>
<b>Service Goal: User Fee Revenue as % of Total Cost</b>	29.51%	28.94%	29.38%
<b>Service Goal: Begin construction of new fitness service at SEAPARC</b>	September	December	Complete
<b>Service Goal: Operate golf course</b>	150 Days	160 Days	150 Days

## Contact

Name: Steve Knoke

Title: Manager, SEAPARC

Contact Information: 250.642.8009

# Service Plan for SEAPARC

2016 – 2019  
(2018)

Capital Regional District

*Date submitted: August 2017*



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# 1 Overview

## 1.1 Division & Service Summary

Sooke & Electoral Area Parks and Recreation Commission (SEAPARC) is a regional recreation service established by Bylaw No. 4029 (amending Bylaw No. 152). Participating areas include the District of Sooke and portions of the Juan de Fuca Electoral Area (JdFEA). The JdFEA communities participating in the SEAPARC service include East Sooke, Otter Point, Shirley/Jordan River and Port Renfrew.

Sooke and Electoral Area Parks and Recreation (SEAPARC) provides recreational opportunities for the public through the planning, development and operation of recreation facilities, programs and activities with a focus on the citizens of the District of Sooke and the Juan de Fuca Electoral Area (Mission Statement, October 16, 1991).

Bylaw No. 152 delegated administrative authority to SEAPARC for the purpose of providing recreational and related community programs, equipment and facilities.

The commission is comprised of seven elected and appointed members from the District of Sooke and Juan de Fuca Electoral Area. Two elected members (the Mayor and one Councillor) represent the District of Sooke, as well as two appointed volunteer commissioners. The Electoral Area Director sits on the Commission and recommends appointment of one member from the Electoral Area. There is also one youth member who is registered in the secondary school program of Sooke School District 62 and is a resident of Juan de Fuca Electoral Area or the District of Sooke.

The service administers:

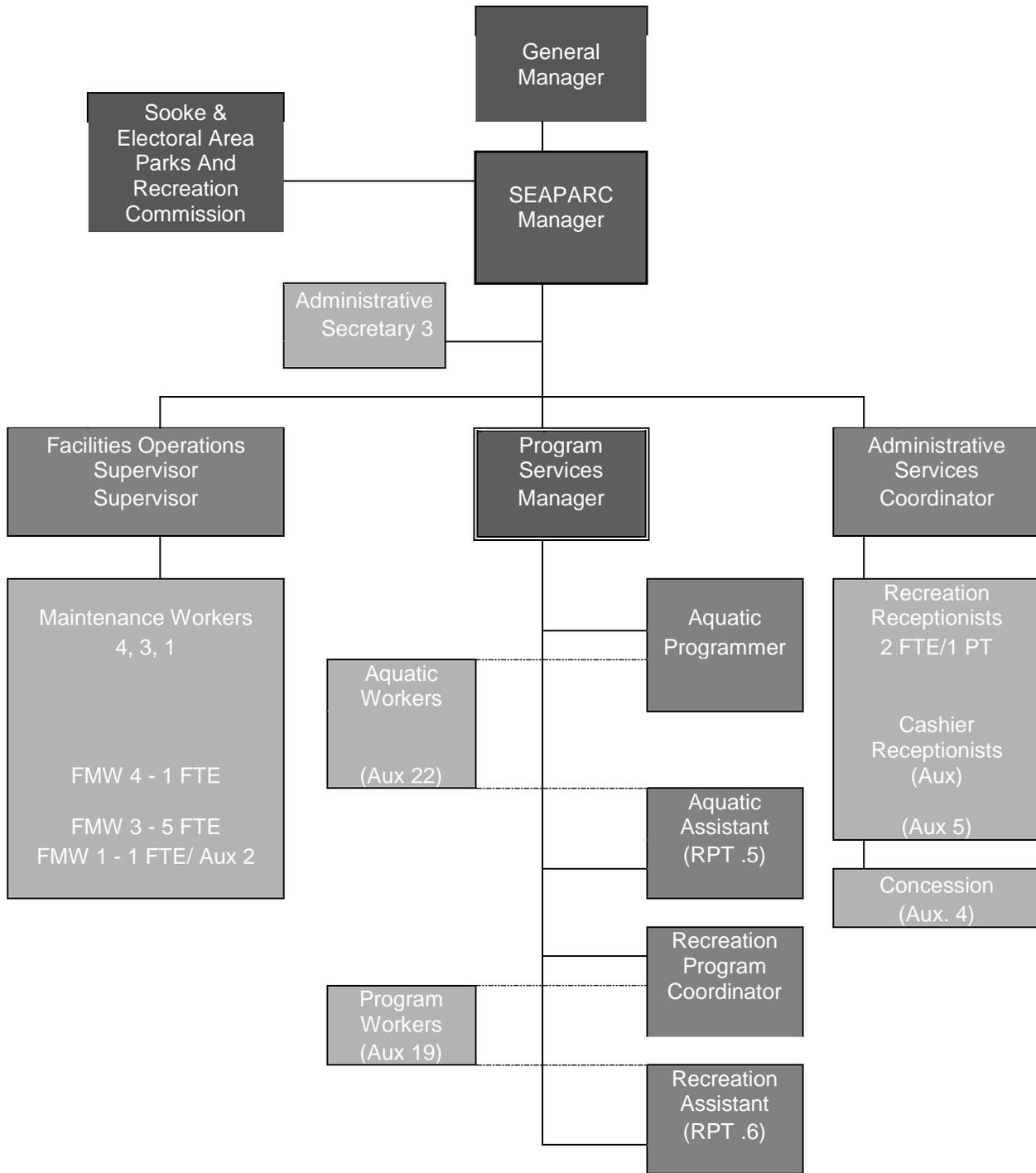
- Ice arena/ Dry Floor
- Aquatic Centre
- Community Recreation Programs
- Facility and grounds maintenance
- Program/ Multipurpose/ Boardroom spaces
- Slo-pitch field/ baseball diamond
- Bike park
- Skateboard park
- Joint Use Agreement with School District 62
- Community Events
- Multi-use trail
- DeMamiel Creek 9 Hole Golf Course

A broad range of recreational services are provided by the Commission, including provision of well-maintained facilities for public use, community recreational programs, community partnerships and facilitation services.

Annual cost for the SEAPARC service, net of grants and other revenues, is currently apportioned based on population. The District of Sooke pays approximately 75% of the cost of providing the service; JdFEA pays approximately 25%.

Service Purpose , Role or Overview	Participants	Funding Sources	CRD Board Committee and/or Commission Reporting Structure
Sooke and Electoral Area Parks and Recreation (SEAPARC) provides recreational opportunities for the public through the planning, development, and operation of recreation facilities, programs and activities with a focus on the citizens of the District of Sooke and the Juan de Fuca Electoral Area (Mission Statement October 16, 1991)	Sooke and Juan de Fuca Electoral area	Sooke 75% JdF 25%  Requisition, grants, sponsorships, donations, non-tax revenue	Delegated administrative authority to SEAPARC

# 1.2 Organization Chart



## 1.3 Key Trends, Issues & Risks – Service Specific

SEAPARC provides recreational opportunities for the public through the planning, development, and operation of recreation facilities, programs and activities with a focus on the citizens of the District of Sooke and the Juan de Fuca Electoral Area.

Sooke's population continues to grow and young families continue to move to the region. According to Statistics Canada's 2016 Census data, the District of Sooke's population grew 13.7% over a five-year period (2011-2016), making it the second-fastest growing community on Vancouver Island and one of the fastest-growing cities in the province. This places increased demands on current programs and facilities. SEAPARC's population catchment has increased by nearly 60% in the past 25 years and is projected to increase in the next 25 years by almost 70%. This is higher than the CRD, provincial and national averages. However, the nature and composition of that growth will change as the proportion of older adults will increase more rapidly. Over the next 25 years, the plus-50 age cohorts will more than double, while the 19-under age groups will only increase by 20-30%. The information above is illustrated in the graph below.

SEAPARC will pursue grant opportunities to leverage development and growth.

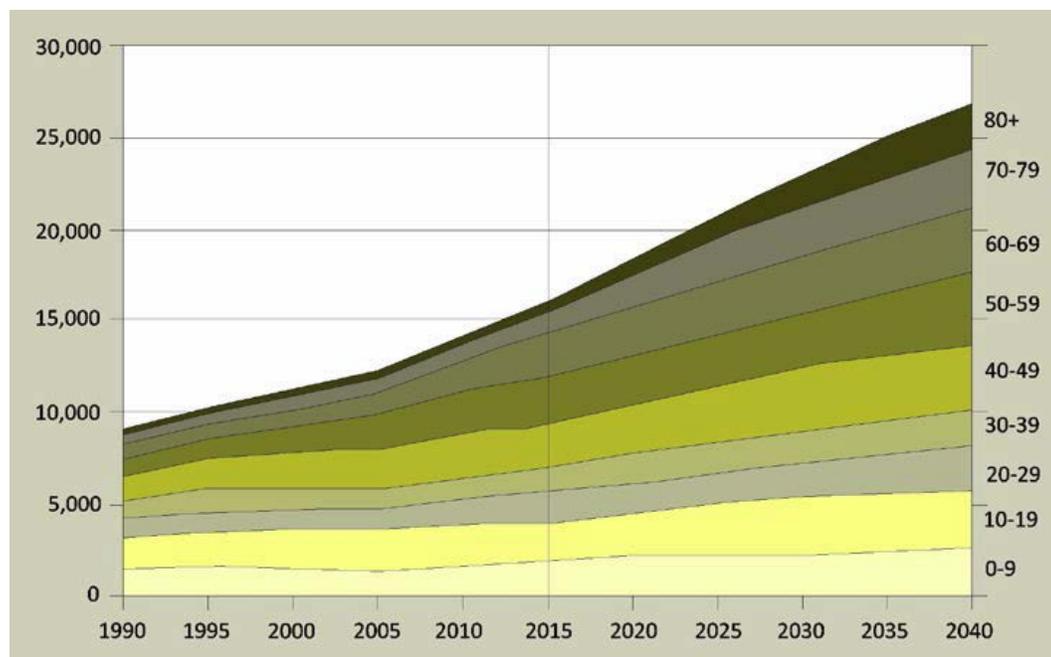
Opportunities exist for SEAPARC to work and partner with various community recreation stakeholders including the Sooke School District 62, Sooke Community Association, District of Sooke, T'Sou-ke Nation and local sports associations. Development of greenways, bikeways and pathway systems is a key priority for community open space systems. These systems contribute to personal and environmental health.

Large facility assets are aging and will require investment in the next 15-20 years. This will have a significant financial impact. Efficient equipment upgrades that contribute to a reduction in energy consumption and contribute to reduction in CO<sub>2</sub> emissions are a priority.

A fitness facility addition has been identified as a priority for SEAPARC. Child and youth inactivity is considered a major health problem. Provision of programs and activities that foster active living through physical recreation are a priority. Investigating ways to increase inclusion and access to recreation for populations that face constraints to participation is another trend, along with finding new ways to help people connect to nature through recreation. SEAPARC will ensure the provision of supportive physical and social environments that encourage participation in recreation and build strong caring communities.

SEAPARC will continue to work toward the continued growth and sustainability of recreation in the Sooke region-

\*Each strata represents a decade age cohort, with the total being the sum of all cohorts.



## 1.3 Link to Board Strategic Priorities

SEAPARC provides recreation services that improve the health and quality of life for those in the Sooke Region and Juan de Fuca electoral area. The service supports the following Board Strategic Priorities:

SEAPARC supports the priority of Changing Demographics, developing and implementing recreational programs and services that respond to and anticipate changes in seniors demographics.

SEAPARC supports the Climate Change priority by providing active transportation opportunities for programs and special events. SEAPARC will implement climate change adaptation when upgrading facilities and will ensure efficient equipment upgrades that contribute to a reduction in energy consumption and contribute to reduction in CO<sub>2</sub> emissions.

SEAPARC supports the priority of Public Engagement & Communications by providing engagement opportunities for residents to gather information on program development and provide evaluation of the delivery of programs and services.

## 2 Services

### 2.1 Service Levels

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Community Recreation</b>					
<b>Administration</b>	Provide and review financial data monthly: occurs monthly	No Change	No Change	No Change	No Change
	Provide customer service in person and via phone and respond to customer concerns and issues: 4,848 hrs	No Change	No Change	No Change	No Change
	Provide software updates, data base management, online registration, and direct payment options: occurs continuously	No Change	No Change	No Change	No Change
<b>Arena</b>	Operational hours per day (Ice): 16	No Change	No Change	No Change	No Change
	Operational hours per day (Dry Floor): 16	No Change	No Change	No Change	No Change
	# of skate lesson registrants: 254	3%	3%	3%	3%
	Hrs. of Rented Ice/ Dry Floor (Year): 2,000 ice, 950 dry	No Change	No Change	No Change	No Change
	Hrs. of Public Skating (Year): 308	No Change	No Change	No Change	No Change
	# of drop in arena admissions (year): 6089	3%	3%	3%	3%
	Sooke Fine Art Show hrs booked: 840	No Change	No Change	No Change	No Change
<b>Aquatic Centre</b>	Public Swim: 4,848 hrs. (year)	No Change	No Change	No Change	No Change
	100% compliance with pool legislated requirements	No Change	No Change	No Change	No Change
	# of drop in admissions (year): 29,554	3%	3%	3%	3%
	# of memberships sold (year): 1,630	3%	3%	3%	3%
	# of lesson registrants: 2,320	3%	3%	3%	3%
<b>Fitness</b>	# of program registrants (year): 881	3%	3%	3%	3%
	Fitness weight room open to public daily	n/a	n/a	<del>16hrs</del> n/a	No Change <u>16hrs</u>
	# of fitness drop in admissions (year): 1,620	3%	3%	3%	3%

Service Level Adjustments in Role/Scope					
Service	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
<b>Community Recreation Programs</b>	Monitor, evaluate and balance joint use agreement with SD 62: 11K	No Change	No Change	12k	No Change
	Marketing and promotion of SEAPARC events services and programs: Occurs monthly	No Change	No Change	No Change	No Change
	Offer and operate number CR programs annually running: <ul style="list-style-type: none"> <li>CR Preschool</li> <li>CR School Age</li> <li>CR Teen</li> <li>CR Adult</li> </ul>	40 68 3 62	45 70 5 65	50 75 10 70	55 80 15 75
	Offer community events: SEAPARC is involved in a number of community events each year: 7	No Change	8	No Change	9
<b>Maintenance</b>	Provide safe and clean facility that is maintained by staff 24/7 364 days per year	No Change	No Change	No Change	No Change
	Clean facility a min of once per day	No Change	No Change	No Change	No Change
	Maintain Exterior/Grounds	No Change	No Change	No Change	No Change
	SAP program maintenance	Launch Software	No Change	No Change	No Change
<b>Multi-use Trail</b>	Trail open 365 days a year	No Change	No Change	No Change	No Change
	Number of users accessing trail reported and recorded: 5,000 approx.	No Change	No Change	No Change	No Change
<b>Golf Course Operation</b>	Golf course operates seasonally	90days	150days	No Change	No Change
	<del>Tee times</del> Fees for service booked in advance paid at SEAPARC front desk or golf course kiosk	Occurs	No Change	No Change	No Change
	Programs and lessons offered	n/a	Occurs	No Change	No Change

## 2.2 Workforce Considerations

Service	Workforce (FTEs)				
	Base year 2015	Year 1 (2016)	Year 2 (2017)	Year 3 (2018)	Year 4 (2019)
Community Recreation	17	17	17	17	17
Supplementary FTEs	0	0	0	0	0
<b>Total</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>17</b>

# 3 Divisional Initiatives & Budget Implications

Title & Estimated Completion Date	Description	Board Strategic Priority Reference	Budget Implications
<b>2016</b>			
<b>Artificial Turf Field Development/ Partnership</b>	Pursue installation of artificial turf field installation in Sooke subject to grant funding	n/a	1.6 million grant funded
<b>Class Software Replacement</b>	Replacement of current registration and accounting software	n/a	25k Capital Reserve
<b>Asset Management</b>	Complete 25-year capital plan	n/a	Core
<b>LED Light Replacement</b>	LED replacement of high-energy-use lighting in facility	Climate Change	170k Capital Reserve
<b>Natural Gas Boiler Replacement</b>	Natural Gas replacement of Oil Burning Boilers	Climate Change	155k Capital Reserve
<b>Play in the Parks</b>	Provide increased opportunities for children to become active in local parks. Include a focus on active transportation.	Active - multi modal Transportation	Core
<b>Bike Park Learn to Ride Programs (2016-2019)</b>	Programs targeted to children and youth to encourage safe biking and bike park use	Active - multi modal Transportation	Core
<b>Stan Jones Ball field grass improvements</b>	Soil exchange to remove clay base soil and install sand base soil	n/a	15k Capital Reserve
<b>Golf Course Operation</b>	Operate seasonal golf course	n/a	Core
<b>2017</b>			
<b>Fitness Expansion</b>	<del>4200</del> <u>5,200</u> sqf building expansion	n/a	<del>4.25</del> <u>750k</u> Capital Reserve
<b>Golf Course Operation</b>	Operate seasonal golf course	n/a	Core
<b>2018</b>			
<b>Fitness Expansion</b>	<del>4200</del> <u>5,200</u> sqf building expansion includes various fitness equipment	n/a	750k Capital Reserve <u>1.25 million grant funding</u>
<b>Fitness Service Provision</b>	Staff and program new fitness amenity-	n/a	Core

Title & Estimated Completion Date	Description	Board Strategic Priority Reference	Budget Implications
<b>2019</b>			
<b>Multi Use Sport Box</b>	Lacrosse, soccer, basketball, ball hockey sport court	n/a	150k Capital Reserve 50%grant funded

## 4 Goals & Performance Indicators

Service Goals	Performance Indicators
User funding without debt	>28%
Administration/Customer Service to implement new recreation management software	Implement online registration and new payment methods; EFT and Credit Card auto payment. Improve customer service, evaluate programs and services; increase internet registrations
Customers rate SEAPARC for speed/courtesy/service at/or above 90%	Customers rate SEAPARC for speed/courtesy/service at/or above 90% (ongoing)
Increase number of recreation programs offered to public	Program attendance increases 3% each year (2016-2019) Increase the number of programs offered 3% (2016-2019)
Maintenance/Facilities provides a safe/clean facility	Customers Rate SEAPARC Cleanliness at or above 90% (ongoing)
Customers Rate SEAPARC for cleanliness at or above 90%	
Deliver "Play in the Park" program with active transportation engagement	Collaborate with other CRD departments to encourage and support active transportation to the "Play in the Park" program. (2016-2019)
Program Evaluation	Distribute program survey to 100% Program participants. Create Email Program Evaluation form. Staff track and review feedback. (ongoing)
Increase "drop in" attendance	Increase "drop in" attendance by 3-5%
Participate in completing the Community Health & Well Being Plan and determine appropriate roles for implementation	Adoption by the Board; implementation
Participate with internal and external partners to establish a universally-accepted definition "seniors" for purposes of recreational programming alignments	Adoption by the Board; implementation
Operate Golf Course	90 days
User Funding without debt	>29%

Operate Golf Course	150 days (2017-2020)
Begin construction of new fitness service at SEAPARC	Start building 54,200sqf fitness facility
User Funding without debt	>30%
Complete construction of new fitness service at SEAPARC	Complete building 54,200sqf fitness facility
Operate new fitness facility	Run new fitness facility for 16 hrs a day on a program cost recovery basis.
User Funding without debt	>30%
Construction of Multi Use Sport Box	Sport Box is constructed and operates

## Contact

Name: Steve Knoke  
Title: Manager  
Contact information: 250.642.8009



**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE  
MEETING OF WEDNESDAY, OCTOBER 25, 2017**

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**SUBJECT**     **Regional Invasive Species Coordinator – Alternative Service Options**

**ISSUE**

The Environmental Services Committee (ESC) asked staff to consider alternate service delivery options for regional coordination of invasive species, including housing the function within Capital Regional District (CRD) Parks.

**BACKGROUND**

At its September 13, 2017 meeting, the ESC received a staff report (Appendix A) responding to requests for the CRD to investigate the implications, feasibility and recommendations to house the duties of a Regional Invasive Species Coordinator. Capital Regional Invasive Species Partnership (CRISP) had undertaken this role in recent years; however, the CRISP model is no longer sustainable and it had proven difficult to retain a permanent coordinator.

Invasive species affect, or have the potential to affect, lands and waters associated with CRD services (e.g., Regional Parks, drinking water Supply Areas and Housing properties), as well as other public and private lands. Risks from invasive species continue to impact public and private infrastructure and natural assets.

The September report presented a model whereby the CRD would create a regional service for the function and hire a half-time coordinator to perform the work. The ESC directed staff to come back with information on alternative approaches to providing the service within an existing service authority, such as Regional Parks.

**ALTERNATIVES**

That the Environmental Services Committee recommend to the CRD Board:

*Alternative 1*

1. That the CRD support regional coordination of invasive species management (communication, education and cooperation) through the Climate Action Service; and
2. That the new program be supported by a half-time (0.5 FTE) coordinator funded through existing Regional Parks, Environmental Protection and Integrated Water Services budgets, and provincial funding for 2018. Staff will propose service level changes, if necessary, for 2019 and beyond.

*Alternative 2*

1. That staff be directed to bring forward an up-to-date establishing bylaw for the Regional Parks service, which includes the coordinating of Invasive Species management and education in the Capital Region; and

2. That the new work be supported by a half-time (0.5 FTE) coordinator and provincial funding for 2018. Staff will propose service level changes, if necessary, for 2019 and beyond.

*Alternative 3*

That the Capital Regional District not pursue Regional Invasive Species management, coordination and education.

**INTERGOVERNMENTAL AND LEGAL IMPLICATIONS**

Climate Action Program (Alternative 1)

The Climate Action Program (CAP) has “adaptation” within its service description. Climate change is having a significant effect on invasive species, which are becoming established and spreading with climate changes. This option does not require an amendment to the CAP service establishing bylaw but will need to be reflected in 2018 Service Plans.

CRD Regional Parks (Alternative 2)

The CRD Regional Parks’ extended service is established under Letters Patent and CRD Bylaw No. 1749. This establishment is limited to acquisition, development, operation and maintenance of Regional Parks. Coordination of invasive species outside Regional Parks does not fit within this definition and, therefore, an amendment to the establishing bylaw would be required to fully assume responsibility for the delivery of this service.

Recent interactions with the Inspector of Municipalities have indicated that when bylaw amendments are submitted, there is an expectation to (where needed) bring the rest of the bylaw up to current standards, such as updating outdated language and references to legislation. It is anticipated that the Regional Parks extended service establishing bylaw, adopted in 1989, would require significant updating, with approval from two-thirds of participants.

**FINANCIAL IMPLICATIONS**

As presented in the previous staff report, the cost of delivering an invasive species function in 2018 is approximately \$95,000: \$75,000 for labour and \$20,000 for operating expenses. Regardless of how the function is established, the labour and supporting costs are the same.

Under Alternative 1, the budget for invasive species coordination (~\$95,000) will be funded in 2018 by contributions from Regional Parks (~\$30,000), Integrated Water Services (\$30,000) and Environmental Protection (~\$35,000) core budgets, less any provincial funding and other grants.

It is estimated that Alternative 2 would involve a large amount of staff time to fully review and update the CRD Regional Parks establishing bylaw to current standards.

**CONCLUSION**

Staff have revisited the options for including a regional invasive species coordinator within the CRD. The function can fit within the existing Climate Action Service mandate and aligns with the

CRD's environmental protection, watershed protection, drinking water protection, climate change and biodiversity roles for the region. Funding for 2018 can be secured from existing internal services that currently have a role in invasive species management within CRD boundaries.

**RECOMMENDATIONS**

That the Environmental Services Committee recommend to the Capital Regional District Board:

1. That the CRD support regional coordination of invasive species management (communication, education, and cooperation) through the Climate Action Service; and
2. That the new program be supported by a half-time (0.5 FTE) coordinator funded through existing Regional Parks, Environmental Protection and Integrated Water Services budgets, and provincial funding for 2018. Staff will propose service level changes, if necessary, for 2019 and beyond.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

DG:cam/ss

Attachment: Appendix A – Staff Report to Environmental Services Committee, September 13, 2017 – Regional Invasive Species Coordinator

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE  
MEETING OF WEDNESDAY, SEPTEMBER 13, 2017**

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**SUBJECT**     **Regional Invasive Species Coordinator**

**ISSUE**

To present the implications and feasibility of housing the duties of a Regional Invasive Species Coordinator within the Capital Regional District (CRD).

**BACKGROUND**

Invasive species are plants, animals and microbes that are not native to a region and that tend to dominate ecosystems, often forming dense populations and out-competing native species for available resources. Invasive species include terrestrial plants (knotweed, broom), aquatic plants (milfoil weed) and animal species (geese, bullfrogs and carp).

Under the CRD Board strategic priority of Biodiversity & Ecosystem Health, the CRD is committed to following best practices for managing invasive species on CRD lands and to advocate to the provincial and federal governments to maintain and fulfill their roles to protect biodiversity. The CRD Corporate Plan 2015-2018 states we will assess service needs, respond to issues that threaten ecological health, such as invasive species, and profile best practices.

Invasive species represent a significant environmental and economic risk to local ecosystems. They have the potential to overwhelm healthy watersheds and ecosystems, displace native species, disrupt infrastructure and impact service delivery. Climate change will also likely accelerate these risks over the coming decades.

Capital Region Invasive Species Partnership (CRISP) is a collaboration of local stakeholders that has coordinated invasive species control and outreach in the region since 2010 within a limited mandate and budget. CRISP operated through the leadership and coordination of a few municipal staff who have been carrying this workload for the region. CRISP's funding and organizational model make it difficult to attract and retain a suitable coordinator.

CRISP is no longer viable and the CRD has received a request from CRISP and motions from four municipalities (Highlands, Metchosin, North Saanich and Victoria) asking the CRD to investigate the implications, feasibility and/or recommendations to house the duties of a Regional Invasive Species Coordinator within the CRD.

**ALTERNATIVES**

That the Environmental Services Committee recommend to the CRD Board:

*Alternative 1*

1. That staff be directed to bring forward an establishing bylaw for a new Regional Invasive Species service for the purposes of coordinating Invasive Species management and education in the Capital Region; and

2. That the new service be supported by a half-time coordinator and provincial funding for 2018, and that staff propose service level changes, if necessary, for 2019 and beyond.

*Alternative 2*

That the Capital Regional District not create a Regional Invasive Species service.

**INTERGOVERNMENTAL IMPLICATIONS**

Invasive species management lacks consistent leadership across the Capital Region, making it difficult to deal with this region-wide issue. Additionally, there is a disconnect between the local governments and the community in species prioritization, response and management. While CRISP provided this role in the past, local government participation was inconsistent. The issues of invasive species affect, or will affect, all areas of the Capital Region. Invasive species can spread quickly across local government borders or arrive anywhere in the region through soil transport, retail sales or personal importation.

The CRD currently has no service for regional control, coordination and education of invasive species management. The initial steps to create a new service would be for staff to bring back an establishing bylaw that includes an associated cost-sharing formula. The new service would be established on an opt-in basis for municipal, First Nations and electoral area participants.

**ENVIRONMENTAL IMPLICATIONS**

Many invasive plants (i.e., Scotch broom, English ivy, Himalayan blackberry) are firmly established throughout the region, impacting native ecosystems. Invasive species have the ability to establish quickly and spread rapidly, often displacing native plants and becoming the predominant species in an area because their new environment has few natural competitors to keep them in check. Invasive species are increasingly difficult and expensive to control. It is generally accepted that they will become more problematic with anticipated climate change.

The initial work plan of the proposed service would mirror the tasks previously undertaken by CRISP, including coordination of the following:

- planning
- early detection and removal strategies
- species prioritization
- monitoring
- management of contractors treating high-priority species
- mapping and reporting
- training
- public engagement
- education and guidance for disposal
- liaising with internal CRD invasive control programs (Regional Parks and Integrated Water Services)

The initial invasive species of concern would likely be the same as CRISP's program: priority terrestrial plants (e.g., knotweed) and European fire ants. With a regular half-time coordinator, the CRD would be well positioned to coordinate invasive removal/treatment at the most effective times of the year, as well as focusing on consistent education so that residents are aware of best practices for invasive removal and early control, which is one key piece of invasive species management.

### **FINANCIAL IMPLICATIONS**

Staff have had preliminary conversations with provincial staff responsible for funding invasive species initiatives through grants. These grants are only for incentive-level funding to support local governments in developing invasive plant/noxious weed programs and bylaws. The grant amount is determined by the Province after receiving an application detailing the scope of work for the upcoming year. Staffing costs are not factored in. The CRD grant amount would likely be similar to CRISP at \$16,000 per year. The highest amount provided to a local government (excluding those with intensive agricultural areas) to date is \$29,300.

CRISP's annual budget for 2016-2017 was approximately \$62,750, consisting of: \$41,750 cash (\$9,750 local government contributions, \$16,000 Ministry of Forests, Lands and Natural Resource Operations grant and a \$16,000 Ministry of Transportation and Infrastructure contract) plus an estimated \$21,000 of in-kind labour from City of Colwood and District of Saanich staff to manage the program.

The cost of a new CRD-delivered service in 2018 is approximately \$95,000: \$75,000 for labour and \$20,000 operating expenses.

Provincial grant funding would be applied each year to reduce the requisition. Appendix A shows an example breakdown of the requisition cost-sharing, assuming full regional participation and apportioned based on converted assessments, with the provincial grant included.

### **CONCLUSIONS**

Invasive species is one of many stressors that dynamically impact our natural environment because of their ability to establish quickly and spread rapidly, often displacing native plants and animals to become the dominant species in an area. In the past, CRISP coordinated invasive species control and outreach in the region within a limited mandate and budget; however, they are no longer able to provide this function.

Housing the duties of a Regional Invasive Species Coordinator within the CRD is feasible and aligns with the environmental protection, watershed protection, climate change and biodiversity roles for the region. However, this requires establishment of a new service, 2018 Service Plan amendments and a budget for the service that is cost-shared among participants. Staff would emulate the CRISP work plan for 2018 then adjust, if necessary, for 2019 and beyond.

**RECOMMENDATIONS**

That the Environmental Services Committee recommend to the Capital Regional District Board:

1. That staff be directed to bring forward an establishing bylaw for a new Regional Invasive Species service for the purposes of coordinating Invasive Species management and education in the Capital Region; and
2. That the new service be supported by a half-time coordinator and provincial funding for 2018, and that staff propose service level changes, if necessary, for 2019 and beyond.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

DG:cam

Attachments: Appendix A – Example of Requisition Cost-Sharing Breakdown



Making a difference...together

**REPORT TO THE ELECTORAL AREA SERVICES COMMITTEE  
MEETING OF WEDNESDAY, November 15, 2017**

**SUBJECT    Community Works Fund Applications**

**ISSUE**

To approve the attached Community Works Fund (CWF) grant applications.

**BACKGROUND**

The Community Works Fund (CWF) is delivered to all local governments in British Columbia through a direct annual allocation to support local priorities.

The 2014-2024 Community Works Fund Agreement between the CRD and the Union of BC Municipalities (CWF Agreement) specifies the CRD’s roles and responsibilities with regard to the expenditure and reporting of CWF.

CWF grant proposals are subject to Electoral Area Director approval prior to being submitted for Capital Regional District Board approval.

**IMPLICATIONS**

The proposed projects meet the terms and conditions as outlined in the 2014-2024 Community Works Fund Agreement between the CRD and the Union of British Columbia Municipalities (UBCM). Additionally, CRD administrative and operational implications have been taken into consideration.

**RECOMMENDATION**

That the Electoral Area Services Committee recommend to the Capital Regional District Board:  
That the following Community Works Fund applications be approved:

	<b>RECIPIENT</b>	<b>PROJECT</b>	<b>AMOUNT</b>
1	Southern Gulf Islands (SGI) Administration	SGI Corporate Asset Management Plan	\$ 60,000
2	Saturna Island Lions Club	Saturna Lions Community Shuttle Program – Bus Purchase	\$ 25,000

Submitted by:	Carlo Vijandre, PMP, ASCT, FMP, Manager, Asset Management
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

- Appendix A – Board-Approved CWF Investments as of October 31, 2017
- Appendix B – SGI Corporate Asset Management Plan CWF Application
- Appendix C – Saturna Island Lions Club CWF Application

APPENDIX A: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
JDF	Shirley	Sheringham Water Works system repairs	Drinking Water	2014-04-09	\$ 20,000.00	\$ -	\$ -	
JDF	Kemp Lake	Kemp Lake Infrastructure Improvement	Recreation	2017-03-08	\$ 18,000.00	\$ 18,000.00		
JDF	Port Renfrew	Water Service Chlorine Injection Pump	Drinking Water	2016-06-08	\$ 10,000.00	\$ 1,614.17		
JDF	Shirley	JDF Community Recreation	Recreation	2016-03-09	\$ 23,000.00	\$ 1,497.91		
JDF	Willis Point	Willis Point Well Upgrade	Drinking Water	2015-10-14	\$ 15,000.00	\$ -		
JDF	Port Renfrew	JDF Community Recreation - Tennis Court	Recreation	2015-07-08	\$ 8,000.00	\$ 1,850.00		
JDF	Willis Point	Willis Point Water Tower	Drinking Water	2015-06-10	\$ 20,000.00	\$ 10,869.18		
JDF	Otter Point	Butler Trail Extension	Active Transportation	2015-04-08	\$ 12,000.00	\$ -	\$ 500.00	
JDF	Otter Point	William Simmons Community Park	Recreation	2015-04-08	\$ 45,000.00	\$ -	\$ 626.54	
JDF	Shirley/Jordan River	Fire Hydrant for Shirley fire service	Disaster Mitigation	2014-11-12	\$ 15,000.00	\$ -		
JDF	East Sooke	East Sooke Fire Hall	Drinking Water	2014-05-14	\$ 25,000.00	\$ -		
JDF	East Sooke	Mt Matheson/Roche Lake Connector Trail	Active Transportation	2013-12-11	\$ 20,000.00	\$ 952.38		
JDF	Juan de Fuca	JDF Admin Building	Energy Systems	2013-10-09	\$ 50,000.00	\$ 17,196.00		
JDF	Juan de Fuca	JDF Admin Building	Drinking Water	2013-08-14	\$ 100,000.00	\$ -		
JDF	Juan de Fuca	JDF Admin Building	Energy Systems	2013-08-14	\$ 100,000.00	\$ 5,057.00		
JDF	Shirley/Jordan River	Shirley/Jordan River OCP	Community Planning	2013-08-14	\$ 150,000.00	\$ -		
JDF	Willis Point	Willis Point Water Tower	Drinking Water	2013-06-12	\$ 40,000.00	\$ 0.04		
JDF	Kemp Lake	Kemp Lake Water Quality	Long-term Infrastructure Plan	2013-02-13	\$ 11,500.00	\$ -		
JDF	East Sooke	East Sooke Fire Hall	Drinking Water	2012-12-12	\$ 125,000.00	\$ -		
JDF	East Sooke	Wilderness Mountain Water System	Drinking Water	2012-06-13	\$ 30,000.00	\$ 11,432.00		
JDF	Juan de Fuca	JDF Fire Suppression	Asset Management	2011-12-14	\$ 20,000.00	\$ -	\$ 1,920.83	
JDF	Otter Point	Otter Point. Env. Inventory	Asset Management	2010-04-14	\$ 100,000.00	\$ 433.61		
JDF	Shirley	Sheringham Point Lighthouse Access Rd.	Local Roads	2016-04-13	\$ 10,000.00	\$ -		
JDF	Juan de Fuca	Sooke artificial turf playing field	Recreation	2014-10-08	\$ 300,000.00	\$ 300,000.00		
JDF	Otter Point	Kemp Lake Water Main Extension Project	Drinking Water	2017-06-14	\$ 30,000.00	\$ 30,000.00		
JDF	Shirley	Sheringham Point Lighthouse - Chip Sealing of Access Road	Local Roads	2017-07-12	\$ 10,000.00	\$ 10,000.00		
JDF	Port Renfrew	Port Renfrew Tourism Trail	Active Transportation	2017-10-11	\$ 12,500.00	\$ 12,500.00		
JDF					\$ 1,320,000.00	\$ 409,536.68	\$ 14,912.98	\$ 628,212.49

APPENDIX B: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
SGI	Pender Islands	Gardom Pond lower dam	Disaster Mitigation	2014-10-08	\$ 50,000.00	\$ 16,043.51	\$ -	
SGI	Saturna island	Lyall Harbour/Boot Cove	Drinking Water	2012-08-08	\$ 120,000.00	\$ -	\$ -	
SGI	Saturna island	Lyall Harbour/Boot Cove	Drinking Water	2013-03-13	\$ 20,000.00	\$ -	\$ -	
SGI	Saturna island	Lyall Harbour/Boot Cove	Disaster Mitigation	2014-11-12	\$ 112,000.00	\$ 56,433.35		
SGI	SGI	Community Quality of Life and Needs Assessment	Community Planning	2013-07-10	\$ 15,000.00	\$ 0.06	\$ 14,755.00	
SGI	SGI	Experience the Gulf Islands (ETGI) Concept Plan	Long-term Infrastructure Plan	2016-03-09	\$ 35,000.00	\$ 211.55	\$ 210.34	
SGI	Pender Islands	Magic Lake Estates	Drinking Water	2014-05-14	\$ 60,000.00	\$ -	\$ -	
SGI	Galiano Island	North Galiano Fire Hall Well	Drinking Water	2013-12-11	\$ 18,000.00	\$ -	\$ -	
SGI	Pender Islands	Pender Islands Fire Hall No. 1	Drinking Water	2014-04-09	\$ 75,000.00	\$ -	\$ -	
SGI	Pender Islands	Pender School Solar Roof Project	Energy Systems	2016-02-10	\$ 20,000.00	\$ -	\$ -	
SGI	Galiano Island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00	\$ -	\$ 17,884.00	
SGI	Saturna island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00	\$ -	\$ 19,926.00	
SGI	Mayne Island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00	\$ 20,000.00	\$ -	
SGI	SGI	Standpipe Inventory - Water Supply Systems and Sources	Asset Management	2011-08-10	\$ 45,000.00		\$ 26,772.01	
SGI	Saturna island	Greening Saturna Community Hall	Energy Systems	2016-02-10	\$ 30,000.00	\$ -	\$ -	
SGI	Pender Islands	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 25,000.00	\$ -	\$ -	
SGI	Pender Islands	PI Community Hall	Energy Systems	2011-08-10	\$ 11,000.00	\$ -	\$ -	
SGI	Saturna island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00		\$ 19,740.00	
SGI	Galiano Island	Water Meters	Drinking Water	2008-05-14	\$ 15,326.00	\$ -	\$ -	
SGI	Pender Islands	PI Community Hall	Energy Systems	2012-03-14	\$ 132,000.00	\$ 0.22	\$ -	
SGI	SGI	Cycling/Pedestrian Trail Plan	Long-term Infrastructure Plan	2012-12-12	\$ 60,000.00		\$ 14,327.45	
SGI	SGI	SGI Food System and Agriculture Strategy	Community Planning	2013-08-14	\$ 66,000.00	\$ -	\$ -	
SGI	Galiano Island	Water Meters	Drinking Water	2008-05-14	\$ 29,874.00	\$ -	\$ -	
SGI	Mayne Island	Water Meters	Drinking Water	2008-05-14	\$ 12,620.00	\$ -	\$ -	
SGI	Pender Islands	Water Meters	Drinking Water	2008-05-14	\$ 180,500.00	\$ -	\$ -	
SGI	SGI	Social Finance Model for SGI Economic Development (Suspended)	Community Planning	2014-07-09	\$ -	\$ -	\$ -	
SGI	Saturna island	Water Meters	Drinking Water	2008-05-14	\$ 27,380.00	\$ -	\$ -	
SGI	Pender Islands	Magic Lake Estates	Wastewater	2014-10-08	\$ 60,000.00	\$ -	\$ -	

APPENDIX B: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
SGI	Mayne Island	Mayne Island Demo Trail	Active Transportation	2014-11-12	\$ 60,000.00	\$ 40,238.72	\$ -	
SGI	Pender Islands	Magic Lake Estates Sewerage Treatment Options	Wastewater	2015-08-01	\$ 15,000.00		\$ 2,481.00	
SGI	Mayne Island	Mayne Island Bus Society - Community busses (2) purchase	Public Transit	2016-05-11	\$ 50,000.00	\$ -		
SGI	Galiano Island	Galiano Museum Building - heat pump	Energy Systems	2016-12-14	\$ 20,000.00	\$ 20,000.00		
SGI	Galiano Island	Galiano Childcare Centre	Recreation	2017-03-08	\$ 34,500.00	\$ 34,500.00		
SGI	Mayne Island	Mayne Island Bus Society - Community bus purchase (Deferred)	Public Transit	2016-09-14	\$ -	\$ -	\$ -	
SGI	SGI	SGI Community Economic Sustainability Economic Development Framework	Community Planning	2016-09-14	\$ 50,000.00	\$ 20,203.00	\$ -	
SGI	Pender Islands	Magic Lake Estates Emergency Access/Egress Route	Active Transportation	2016-10-12	\$ 50,000.00	\$ 47,977.32		
SGI	SGI	Housing Needs Assessment for the SGI	Long-term Infrastructure Plan	2016-10-12	\$ 40,000.00	\$ 40,000.00		
SGI	Pender Islands	Pender Islands Community Hall solar roof	Energy Systems	2017-04-12	\$ 15,000.00	\$ -		
SGI	Mayne Island	Miners Bay Dock Infrastructure Improvements	Short-sea Shipping	2016-12-14	\$ 15,000.00	\$ 15,000.00		
SGI	Pender Islands	Pender Library (SGI Library Service)	Energy Systems	2016-12-14	\$ 15,000.00	\$ -		
SGI	SGI	SSI and SGI Regional Trails Plan	Long-term Infrastructure Plan	2016-12-14	\$ 10,000.00	\$ 10,000.00		
SGI	Mayne Island	Mayne Reading Centre Renovation Project	Culture	2017-02-08	\$ 4,000.00	\$ 4,000.00		
SGI	Pender Islands	Pender Library (SGI Library Service)	Energy Systems	2017-03-08	\$ 5,000.00	\$ 5,000.00		
SGI	Pender Islands	SGI Community Resource Centre - SGI Visitor Centre	Tourism	2017-07-12	\$ 36,000.00	\$ 36,000.00		
SGI	Mayne Island	Dinner Bay Park Surface Replacement - Gravel, Grass, and Light Machinery	Recreation	2017-07-12	\$ 27,000.00	\$ 27,000.00		
SGI	Galiano Island	Community Hall Energy Upgrades	Energy Systems	2017-07-12	\$ 13,947.40	\$ 13,947.40		
SGI	SGI	Tourism Visiter Centre and Kiosks	Tourism	2017-07-12	\$ 24,600.00	\$ 24,600.00		
SGI	Galiano Island	Galiano Community playground development	Recreation	2017-08-02	\$ 50,673.00	\$ 50,673.00		
SGI	SGI	SGI Sustainability - Phase 2 Cooperative Planning	Community Planning	2017-08-02	\$ 34,000.00	\$ 34,000.00		
SGI	Pender Islands	Thieves Bay Park Lawn Enhancement (Approved initially at 2017-08-02)	Recreation	2017-09-13 (Update)	\$ 46,100.00	\$ 46,100.00		
SGI	Mayne Island	Vehicle Acquisition for a Community Bus Service	Public Transit	2017-10-11	\$ 25,000.00	\$ 25,000.00		
SGI	Pender Islands	Epicentre Family Playground	Recreation	2017-10-11	\$ 12,000.00	\$ 12,000.00		
<b>SGI</b>					<b>\$ 1,952,520.40</b>	<b>\$ 598,927.57</b>	<b>\$ 116,095.80</b>	<b>\$ 266,991.46</b>

APPENDIX B: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
SSI	Ganges	Drake Road - Hydrology Study Ph 2	Drinking Water	2017-07-12	\$ 15,000.00	\$ 15,000.00		
SSI	Ganges	Drake Road - Hydrology Study	Drinking Water	2017-02-22	\$ 30,000.00	\$ 30,000.00		
SSI	SSI	Experience the Gulf Islands (ETGI) Concept Plan	Long-term Infrastructure Plan	2016-12-14	\$ 10,000.00	\$ 10,000.00		
SSI	Maliview	Maliview Sewer System	Wastewater	2016-11-09	\$ 195,000.00	\$ 181,685.00		
SSI	Ganges	Ganges Boardwalk and Pecks Cove Park	Long-term Infrastructure Plan	2016-10-12	\$ 150,000.00	\$ 150,000.00		
SSI	SSI	Experience the Gulf Islands (ETGI) Concept Plan	Long-term Infrastructure Plan	2016-03-09	\$ 25,000.00	\$ 151.11		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2016-02-10	\$ 685,280.00	\$ 685,280.00		
SSI	Maliview	Maliview Sewer System	Wastewater	2015-05-13	\$ 35,000.00	\$ 2,452.08		
SSI	SSI	Cycling/Pedestrian Trail Map (Experience the Gulf Islands)	Community Planning	2014-05-14	\$ 25,000.00		\$ 25,000.00	
SSI	St. Mary Lake	St. Mary's Lake Water Quality Assessment	Asset Management	2014-05-14	\$ 35,000.00	\$ -		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2013-07-10	\$ 100,000.00	\$ 64,776.00		
SSI	Highland Fernwood	Highland/Fernwood	Drinking Water	2012-12-10	\$ 150,000.00	\$ -		
SSI	Highland Fernwood	Highland/Fernwood	Drinking Water	2012-12-10	\$ 50,000.00	\$ -		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2012-04-11	\$ 340,540.00	\$ 2,406.00		
SSI	Highland Fernwood	Highland/Fernwood	Asset Management	2011-10-12	\$ 87,937.00	\$ -		
SSI	Highland Fernwood	Highland/Fernwood	Asset Management	2011-10-12	\$ 72,063.00	\$ -		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2010-11-10	\$ 338,134.00	\$ -		
SSI	Beddis	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 24,550.00	\$ 24,550.00		
SSI	Beddis	Beddis Water Treatment Plant	Drinking Water	2009-11-18	\$ 142,000.00	\$ 28,400.00		
SSI	Cedars of Tuam	Cedars of Tuam Water Treatment Plant	Drinking Water	2009-11-18	\$ 30,400.00	\$ 1,832.65		
SSI	Fernwood	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 24,550.00	\$ 24,550.00		
SSI	Fulford	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 13,569.00	\$ 5,535.00		
SSI	Fulford	Fulford Water Treatment Plant	Drinking Water	2009-11-18	\$ 75,000.00	\$ 10,000.00		
SSI	Highland	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 24,550.00	\$ 19,290.00		
SSI	Maliview	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 2,781.00	\$ -		
SSI	Burgoyne Bay	Composting Pilot	Wastewater	2008-07-11	\$ 30,000.00	\$ -		
SSI	Ganges	Pathways	Active Transportation	2008-07-11	\$ 425,000.00	\$ -		
SSI	Ganges	Pathways	Active Transportation	2008-03-12	\$ 50,000.00	\$ -		
SSI	St. Mary Lake	St. Mary's Lake Compressor	Drinking Water	2007-07-05	\$ 25,000.00	\$ -		
SSI	Ganges	Ganges Transportation Management/ Conceptual Design	Active Transportation	2006-10-11	\$ 30,000.00	\$ 5,012.00		
<b>SSI</b>					<b>\$ 3,241,354.00</b>	<b>\$ 1,207,507.84</b>	<b>\$ 58,412.00</b>	<b>\$ 1,081,167.95</b>

# Community Works Fund (CWF) Grant Application – CRD Service

SECTION 1: Ultimate Recipient Information			
DEPARTMENT ACRONYM SGI Admin	SERVICE Southern Gulf Islands Administration	SERVICE NO. 1.1100	
SECTION 2: Project Information			
PROJECT TITLE Southern Gulf Islands (SGI) - Corporate Asset Management Plan (CAMP)		ELIGIBLE PROJECT CATEGORY Asset Management	
DESCRIBE THE PROJECT PUPOSE (MAX. 400 CHARACTERS). We are building on the long-term practice of asset management (i.e. Water, Sewer, Buildings, Parks, etc) in the SGI. In order to sustain the level of service (LOS) our infrastructure provides, a CAMP needs to be developed to gain a complete view of all the assets to help in prioritizing our capital investments to have the greatest impact on social, environment and financial elements in our community.			
USING THE ELIGIBLE PROJECT EXAMPLES TABLE ON PAGES 9-10, IDENTIFY AN EXAMPLE PROJECT THAT RELATES MOST CLOSELY TO THE PROPOSED PROJECT (MAX. 200 CHARACTERS) Asset Management Plan			
DESCRIBE HOW THE PROPOSED PROJECT IN ITS COMMUNITY CONTEXT RELATES TO THE ELIGIBLE PROJECT EXAMPLE IDENTIFIED ABOVE (MAX. 500 CHARACTERS) Our assets are a core element in delivering services to the community. Each asset has an expected service life that is greatly affected by demand and maintenance planning; without having a long-term forecast on the risks, costs and asset condition, the service delivery will be compromised. Establishing an asset management plan for the SGI will ensure service delivery is maintained for future generations.			
DESCRIBE HOW THE PROJECT RELATES TO THE GAS TAX FUNDING OBJECTIVES OF SUPPORTING PRODUCTIVITY AND ECONOMIC GROWTH, A CLEAN ENVIRONMENT, AND STRONG CITIES AND COMMUNITIES. (MAX. 800 CHARACTERS) Developing a corporate asset management plan will ensure sustainability in service delivery with our assets which will build strong communities and cities now and for future generations. Additionally, as it relates to clean environment, it will analyze the GHG emissions of our assets as a part of our commitment to reducing climate change.			
SECTION 3: Project Administration and Sustainability Considerations			
PROJECT MANAGER TITLE Carlo	NAME (LAST, FIRST) Vijandre	EMAIL ADDRESS cvijandre@crd.bc.ca	TEL. NO. (250) 360-3175
DESCRIBE HOW THE PROJECT ALIGNS WITH A CRD SERVICE PLAN AND/OR CAPITAL PLAN (MAX. 300 CHARACTERS). The project aligns with the Corporate Priorities under Regional Infrastructure in developing long-term asset management plans.			
IF THE PROJECT INVOLVES A TANGIBLE CAPITAL ASSET, HOW WILL THE COST OF SUSTAINING IT OVER ITS LIFECYCLE BE FUNDED? (MAX. 400 CHARACTERS) n/a			
ESTIMATED PROJECT START DATE: 1-Dec-2017		ESTIMATED PROJECT ENDDATE: 30-Mar-2018	

SECTION 4: Project Budget			
PROJECT COSTS AND SOURCES OF FUNDING:			
Total Project Cost			\$ 60,000.00
CFW Request			\$ 60,000.00
Borrowing			\$ 0.00
Internal Contributions			\$ 0.00
Other 3 <sup>rd</sup> Party funds			\$ 0.00
Is the CWF requested replacing other available funding sources for the project?			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
CFW-ELIGIBLE EXPENDITURES: <i>See Eligible Expenditures definition on p. 6</i>			
Consultant			\$ 60,000.00
		Sub-Total: Eligible Expenditures:	\$ 60,000.00
CFW-INELIGIBLE EXPENDITURES: <i>See Ineligible Expenditures definition on p. 6</i>			
n/a			\$ 0.00
		Sub-Total: Eligible Costs:	\$ 0.00
		TOTAL COSTS	\$ 60,000.00
SPECIFY HOW THE PROJECT'S CWF-INELIGIBLE EXPENDITURES WILL BE COVERED? (MAX. 100 CHARACTERS)			
n/a			
SECTION 5: Project Authorization			
<b>PROJECT MANAGER:</b>			
I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in keeping with the CWF guidelines explained in CWF Grant Application Toolkit – CWF Reference Materials.			
TITLE	NAME	SIGNATURE	DATE: DD/MM/YR
Manager, Asset Management	Carlo Vijandre		20-Oct-17
<b>CRD FINANCIAL SERVICES:</b>			
This is certify that:			
1. The proposed project complies with the terms and conditions of the CWF Agreement;			
2. The project's Electoral Area has sufficient funds in its CWF Account to award the grant requested;			
3. The Service involved in the project has the resources to cover the project's CWF-ineligible expenditures.			
AUTHORIZED SIGNATORY TITLE	NAME	SIGNATURE	DATE: DD/MMM/YYYY
Chief Financial Officer	Nelson Chan, MBA, CPA, CMA		20-Oct-2017
<b>ELECTORAL AREA DIRECTOR APPROVAL:</b>			
ELECTORAL AREA	DIRECTOR NAME	SIGNATURE	DATE: DD/MMM/YYYY
<input type="checkbox"/> JDF <input checked="" type="checkbox"/> SGI <input type="checkbox"/> SSI	Director Howe		20-Oct-2017
SUBMIT APPLICATION TO THE CRD FINANCE AND TECHNOLOGY DEPT, ATTN: <u>MANAGER, ASSET MANAGEMENT</u>			

# Community Works Fund (CWF) Grant Application – Third Party

<b>SECTION 1: Ultimate Recipient Information</b>			
ORGANIZATION Saturna Island Lions Club		ORGANIZATION TYPE (SEE DEFINITIONS ON PAGE 4) FP    NGO <b>NFP</b> BC-T	
<b>SECTION 2: Project Information</b>			
PROJECT TITLE Saturna Lions Community Shuttle Program		ELIGIBLE PROJECT CATEGORY Public transport (para-transit vehicles)	
DESCRIBE THE PROJECT PURPOSE (MAX. 800 CHARACTERS).  The project's purpose is to extend the life of Saturna Island's no charge shuttle/bus service. The Saturna Lions club launched a scheduled service with a 21-passenger wheelchair equipped bus in 2014. Since then the Lion's shuttle/bus program has been refined to a para-transit service to better reflect actual demand and further augmented with a donated passenger van adapted to higher frequency and lower passenger loads. The 20 year old bus requires major repairs that likely exceed its market value and the minivan is being retired in November. Without a significant capital infusion to replace the minivan and the 21 passenger bus, the program will cease operation			
USING THE ELIGIBLE PROJECT EXAMPLES TABLE ON PAGES 9-10, IDENTIFY AN EXAMPLE PROJECT THAT RELATES MOST CLOSELY TO THE PROPOSED PROJECT (MAX. 200 CHARACTERS) "Infrastructure which supports a shared passenger transport system which is available for public use" fits the description of Saturna's Community shuttles. They provide no cost transportation to users, support other regional community bus services and integrate with inter-island water transport.			
DESCRIBE HOW THE PROPOSED PROJECT IN ITS COMMUNITY CONTEXT RELATES TO THE ELIGIBLE PROJECT EXAMPLE IDENTIFIED ABOVE (MAX. 1000 CHARACTERS)  The acquisition of a newer bus and minivan will allow for continuation of Saturna Island's para-transit service for years five through eight (2018 through 2020) and substantially improve service reliability. With newer vehicles, maintenance costs will likely decline, offset by increased insurance costs. Moreover, current restrictions on operations will likely not apply to a newer bus, allowing travel outside the SGI's, enhancing the service.  While the existing 21-passenger bus and our minivan have proven good value (extending a one year pilot to over four years of operation), both require repair and rehabilitation in the next quarter, where those costs exceed their market value. Furthermore, costs of that rehabilitation and repair would fully deplete the existing operations account.			
DESCRIBE HOW THE PROJECT RELATES TO THE GAS TAX FUNDING OBJECTIVES OF SUPPORTING PRODUCTIVITY AND ECONOMIC GROWTH, A CLEAN ENVIRONMENT, AND STRONG CITIES AND COMMUNITIES. (MAX. 800 CHARACTERS)  The service enhances community resilience and sustainability through no charge transport to community organizations, residents, visitors, external organizations (supporting Parks Canada, universities, secondary schools, NGO's, etc). The program has reduced vehicular traffic and successfully promoted a lower cost and carbon footprint option for visiting and moving around Saturna and the other Southern Gulf Islands (SGI's). The service supports other SGI community bus societies through shuttle and driver loans, strengthening regional ties and paving the way to future SGI transportation integration (booking & administration). The program provides a viable transportation safety net for seniors and those with mobility challenges and has the support of the RCMP in keeping our roads safe.			
<b>SECTION 3: Project Administration and Sustainability Considerations</b>			
PROJECT LEAD TITLE Lions Shuttle Chair	NAME (LAST, FIRST) Brent, Paul	EMAIL ADDRESS pbrent@mac.com	TEL. NO. (250) 539-5454
IF THE PROJECT INVOLVES A TANGIBLE CAPITAL ASSET, HOW WILL THE COST OF SUSTAINING IT OVER ITS LIFECYCLE BE FUNDED? (MAX. 800 CHARACTERS)  The Saturna Lions Club is a not-for-profit society that has provided sustained community services for over forty-five years through fund-raising efforts and the receipt of donations. The Saturna Lions Club has funded and operated the existing community bus service since late 2013, including the original acquisition of a 1998 E350 21 passenger bus with wheelchair lift. Since the establishment of the community shuttle service, donations from individuals and business to the Lions have increased by \$6,000 to \$7,000 annually, attributable to significant community support for the no-fee island transportation service. These donations have sustained the existing service for over four years. However, a looming capital overhang for vehicle replacement (bus and minivan) will more than fully deplete operating reserves. With replacement vehicles and a newly-invigorated donation drive in support of newer vehicle operations, costs will be covered through the project end date.			
ESTIMATED PROJECT START DATE: 30-Apr-2018		ESTIMATED PROJECT ENDDATE: 31-Mar-2021	

SECTION 4: Project Budget			
PROJECT COSTS AND SOURCES OF FUNDING:			
Total Project Cost			\$ 50,000.00
CWF Request			\$ 25,000.00
Borrowing			
Internal Contributions			\$ 25,000.00
Other 3 <sup>rd</sup> Party funds			
Is the CWF requested replacing other available funding sources for the project?			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
CWF-ELIGIBLE EXPENDITURES: <i>See Eligible Expenditures definition on p. 6</i>			
15 to 21-passenger bus (likely ex BC Transit or Cost Mountain Bus)			\$ 15,000.00
7 to 8 passenger van			\$ 10,000.00
Sub-Total: Eligible Costs:			\$ 25,000.00
CWF-INELIGIBLE EXPENDITURES (See Ineligible Expenditures definition on p. 6) AND OTHER:			
Operating costs (Insurance, fuel, communications)			\$ 17,000.00
Repairs & Maintenance			\$ 8,000.00
Sub-Total: Ineligible and other Costs:			\$ 25,000.00
TOTAL COSTS:			\$ 50,000.00
SPECIFY HOW THE PROJECT'S CWF-INELIGIBLE AND OTHER EXPENDITURES WILL BE COVERED? (MAX. 100 CHARACTERS)			
The Saturna Lion's Club will fund operations from current reserves and future fundraising & donations			
SECTION 5: Project Authorization			
<b>THIRD PARTY PROJECT LEAD:</b>			
I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in keeping with the CWF guidelines explained in CWF Grant Application Toolkit – CWF Reference Materials.			
TITLE	NAME	SIGNATURE	DATE: DD/MM/YY
Lions Club Director & Past President	Paul Brent		30-Oct-17
<b>CRD FINANCIAL SERVICES:</b>			
This is certify that:			
1. The proposed project complies with the terms and conditions of the CWF Agreement;			
2. The project's Electoral Area has sufficient funds in its CWF Account to award the grant requested;			
3. The Service involved in the project has the resources to cover the project's CWF-ineligible costs.			
AUTHORIZED SIGNATORY TITLE	NAME	SIGNATURE	DATE: DD/MM/YY
Chief Financial Officer	Nelson Chan, MBA, CPA, CMA		1-Nov-17
<b>ELECTORAL AREA DIRECTOR APPROVAL:</b>			
ELECTORAL AREA	DIRECTOR NAME	SIGNATURE	DATE: DD/MM/YY
<input type="checkbox"/> JDF <input checked="" type="checkbox"/> SGI <input type="checkbox"/> SSI	David Howe		30/10/17
SUBMIT APPLICATION TO THE CRD FINANCE AND TECHNOLOGY DEPT, ATTN: SENIOR MGR, FINANCIAL SERVICES			



Making a difference...together

**REPORT TO THE ELECTORAL AREA SERVICES COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 15, 2017**

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**SUBJECT**     **Community Works Fund – Financial Summary and Process Update**

**ISSUE**

This report summarizes updates to the Community Works Fund (CWF) grant process.

**BACKGROUND**

**CWF Grant Application**

A new process for administration of CWF applications was presented at the Electoral Area Services Committee meeting of April 19, 2017, and at the subsequent Capital Regional District (CRD) Board meeting of May 10, 2017. The first iteration of the process has now been successfully implemented. Already, it has enabled enhanced efficiency, transparency, and due diligence in processing CWF requests. The work of optimizing administrative processes for CWF Agreement-compliant investments in local community priorities is ongoing. The updates presented in this submission feature:

- Enhanced application process guidance (see Toolkit pages 10-11);
- Expanded project substantiation requirements for heightened due diligence and risk management; which in turn ensures CWF records will be thorough for audit purposes. The new questions added are highlighted in yellow on the application forms in the Toolkit (see pages 12-22);
- Heightened accountability at the Project Attestation stage. Anyone who accesses CWF Funding is compelled to be familiar with the terms and conditions of the CWF Contribution Agreement, the UBCM-CRD CWF Agreement, as well as the overarching Administrative Agreement on Gas Tax Funding for BC;
- Enhanced functionality of the online fillable application forms inclusive of: drop-down menus, pop-up instructions, auto-alerts of missing information.

**CWF Grant Approval**

It has been the CRD's practice to have all CWF grants approved by the CRD Board. Based on CRD Legislative Services' review of the UBCM-CRD Community Works Fund Agreement, CRD Board approval is not required for these grants, regardless of whether they are assigned to a CRD Service or to a Third Party recipient.

On that basis, the CWF administrative process will be further streamlined by having CWF grants approved and Third Party CWF Contribution Agreements executed in accordance with CRD Delegation Bylaw 4186:

- “7. (a) Subject to subsection (b), the Board hereby delegates to the District's officers and employees listed below all of the Board's powers, duties and functions under section 263(1)(a) and 263(1)(b) to make grant applications and enter into agreements respecting the receipt and use of grants:  
The Chief Administrative Officer, the Chief Financial Officer, and all General Managers, to a maximum of \$500,000 where this is consistent with the approved financial plan of the Capital Regional District.*

*(b) The authority under subsection (a) does not include authority delegated under section 5(a) of this Bylaw. “*

Adherence to Bylaw 4186 Section 7 will result in more efficient CWF grant administration. Given the process rigor now in place, due diligence and risk management of CWF investments is assured. The CRD Board will be kept apprised of CWF project investments in the Electoral Areas through quarterly reporting.

In 2016 there were 20 approved CWF applications for the 3 Electoral Areas. Through the first 3 quarters of 2017 there have been 21 approved applications. In addition to the approved applications there are a number of projects and applications the CRD reviews and evaluates for eligibility of CWF requirements.

### **ALTERNATIVES**

#### **Alternative 1**

That the Electoral Area Services recommend to the Capital Regional District Board:  
That this report be received for information.

#### **Alternative 2**

That the report be referred back to staff for further review.

### **IMPLICATIONS**

#### **Growth Management Implications**

The volume of work in grants administration overall is growing at an accelerating pace; opportunities for improving processes are continuously scanned. The process enhancements described in this report will further improve the high quality of CWF grants administration work.

### **CONCLUSION**

The first iteration of the CWF process improvements has now been successfully implemented enabling enhanced efficiency, transparency, and due diligence. Implementing the enhancements described in this report will build on the progress achieved since May, 2017.

### **RECOMMENDATION**

That the Electoral Area Services recommend to the Capital Regional District Board:  
That this report be received for information.

Submitted by:	Carlo Vijandre, PMP, ASCT, FMP, Manager, Asset Management
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

RF:ngm

ATTACHMENTS

- Appendix A – Community Works Fund Account Summary by Electoral Area
- Appendix B – Community Works Fund Project Investments by Electoral Area
- Appendix C – Community Works Fund Grant Application Toolkit
- Appendix D – Community Works Fund Contribution Agreement Boiler Plate

## COMMUNITY WORKS FUND SUMMARY BY ELECTORAL AREA

ELECTORAL AREA	JUAN DE FUCA	SALT SPRING ISLAND	SOUTHERN GULF ISLANDS
	GL 215091	GL 215092	GL 215093
<b>FUNDING SUMMARY</b>			
CWF Funding Received (2006 - 2016)	\$ 1,799,378.95	\$ 3,973,204.73	\$ 1,973,022.62
LESS: Funding Assigned to Projects as of 2017-Oct-11	\$ (1,320,000.00)	\$ (3,241,354.00)	\$ (1,952,520.40)
PLUS: Project surplusses returned to EA accounts	\$ 14,912.98	\$ 58,412.00	\$ 116,095.80
PLUS: CWF 2017 Installment 1 Received August, 1, 2017	\$ 133,920.56	\$ 290,905.22	\$ 130,393.44
Subtotal: CWF Balance as of 2017-Oct-11 Board	\$ 628,212.49	\$ 1,081,167.95	\$ 266,991.46
LESS: CWF Requests Pending Approval at 2017-Nov-8 Board	\$ -	\$ (33,000.00)	\$ (141,750.00)
Subtotal: CWF Balance Projected as of 2017-Nov-8 Board	\$ 628,212.49	\$ 1,048,167.95	\$ 125,241.46
LESS: CWF Requests Pending Approval at 2017-Dec-13 Board	\$ -	\$ -	\$ -
PLUS: CWF 2017 Installment 2 Receivable by December 31, 2017	\$ 133,920.56	\$ 290,905.22	\$ 130,393.44
Subtotal: CWF Balance Projected as of 2017-Dec-31	\$ 762,133.05	\$ 1,339,073.17	\$ 255,634.90
PLUS: Projected CWF Installments Receivable by December 31, 2018	\$ 276,916.60	\$ 601,524.39	\$ 269,623.32
CWF Balance Projected Inclusive of 2018 CWF Installments	\$ 1,039,049.65	\$ 1,940,597.56	\$ 525,258.22

APPENDIX B: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
JDF	Shirley	Sheringham Water Works system repairs	Drinking Water	2014-04-09	\$ 20,000.00	\$ -	\$ -	
JDF	Kemp Lake	Kemp Lake Infrastructure Improvement	Recreation	2017-03-08	\$ 18,000.00	\$ 18,000.00		
JDF	Port Renfrew	Water Service Chlorine Injection Pump	Drinking Water	2016-06-08	\$ 10,000.00	\$ 1,614.17		
JDF	Shirley	JDF Community Recreation	Recreation	2016-03-09	\$ 23,000.00	\$ 1,497.91		
JDF	Willis Point	Willis Point Well Upgrade	Drinking Water	2015-10-14	\$ 15,000.00	\$ -		
JDF	Port Renfrew	JDF Community Recreation - Tennis Court	Recreation	2015-07-08	\$ 8,000.00	\$ 1,850.00		
JDF	Willis Point	Willis Point Water Tower	Drinking Water	2015-06-10	\$ 20,000.00	\$ 10,869.18		
JDF	Otter Point	Butler Trail Extension	Active Transportation	2015-04-08	\$ 12,000.00	\$ -	\$ 500.00	
JDF	Otter Point	William Simmons Community Park	Recreation	2015-04-08	\$ 45,000.00	\$ -	\$ 626.54	
JDF	Shirley/Jordan River	Fire Hydrant for Shirley fire service	Disaster Mitigation	2014-11-12	\$ 15,000.00	\$ -		
JDF	East Sooke	East Sooke Fire Hall	Drinking Water	2014-05-14	\$ 25,000.00	\$ -		
JDF	East Sooke	Mt Matheson/Roche Lake Connector Trail	Active Transportation	2013-12-11	\$ 20,000.00	\$ 952.38		
JDF	Juan de Fuca	JDF Admin Building	Energy Systems	2013-10-09	\$ 50,000.00	\$ 17,196.00		
JDF	Juan de Fuca	JDF Admin Building	Drinking Water	2013-08-14	\$ 100,000.00	\$ -		
JDF	Juan de Fuca	JDF Admin Building	Energy Systems	2013-08-14	\$ 100,000.00	\$ 5,057.00		
JDF	Shirley/Jordan River	Shirley/Jordan River OCP	Community Planning	2013-08-14	\$ 150,000.00	\$ -		
JDF	Willis Point	Willis Point Water Tower	Drinking Water	2013-06-12	\$ 40,000.00	\$ 0.04		
JDF	Kemp Lake	Kemp Lake Water Quality	Long-term Infrastructure Plan	2013-02-13	\$ 11,500.00	\$ -		
JDF	East Sooke	East Sooke Fire Hall	Drinking Water	2012-12-12	\$ 125,000.00	\$ -		
JDF	East Sooke	Wilderness Mountain Water System	Drinking Water	2012-06-13	\$ 30,000.00	\$ 11,432.00		
JDF	Juan de Fuca	JDF Fire Suppression	Asset Management	2011-12-14	\$ 20,000.00	\$ -	\$ 1,920.83	
JDF	Otter Point	Otter Point. Env. Inventory	Asset Management	2010-04-14	\$ 100,000.00	\$ 433.61		
JDF	Shirley	Sheringham Point Lighthouse Access Rd.	Local Roads	2016-04-13	\$ 10,000.00	\$ -		
JDF	Juan de Fuca	Sooke artificial turf playing field	Recreation	2014-10-08	\$ 300,000.00	\$ 300,000.00		
JDF	Otter Point	Kemp Lake Water Main Extension Project	Drinking Water	2017-06-14	\$ 30,000.00	\$ 30,000.00		
JDF	Shirley	Sheringham Point Lighthouse - Chip Sealing of Access Road	Local Roads	2017-07-12	\$ 10,000.00	\$ 10,000.00		
JDF	Port Renfrew	Port Renfrew Tourism Trail	Active Transportation	2017-10-11	\$ 12,500.00	\$ 12,500.00		
JDF					\$ 1,320,000.00	\$ 409,536.68	\$ 14,912.98	\$ 628,212.49

APPENDIX B: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
SGI	Pender Islands	Gardom Pond lower dam	Disaster Mitigation	2014-10-08	\$ 50,000.00	\$ 16,043.51	\$ -	
SGI	Saturna island	Lyall Harbour/Boot Cove	Drinking Water	2012-08-08	\$ 120,000.00	\$ -	\$ -	
SGI	Saturna island	Lyall Harbour/Boot Cove	Drinking Water	2013-03-13	\$ 20,000.00	\$ -	\$ -	
SGI	Saturna island	Lyall Harbour/Boot Cove	Disaster Mitigation	2014-11-12	\$ 112,000.00	\$ 56,433.35		
SGI	SGI	Community Quality of Life and Needs Assessment	Community Planning	2013-07-10	\$ 15,000.00	\$ 0.06	\$ 14,755.00	
SGI	SGI	Experience the Gulf Islands (ETGI) Concept Plan	Long-term Infrastructure Plan	2016-03-09	\$ 35,000.00	\$ 211.55	\$ 210.34	
SGI	Pender Islands	Magic Lake Estates	Drinking Water	2014-05-14	\$ 60,000.00	\$ -	\$ -	
SGI	Galiano Island	North Galiano Fire Hall Well	Drinking Water	2013-12-11	\$ 18,000.00	\$ -	\$ -	
SGI	Pender Islands	Pender Islands Fire Hall No. 1	Drinking Water	2014-04-09	\$ 75,000.00	\$ -	\$ -	
SGI	Pender Islands	Pender School Solar Roof Project	Energy Systems	2016-02-10	\$ 20,000.00	\$ -	\$ -	
SGI	Galiano Island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00	\$ -	\$ 17,884.00	
SGI	Saturna island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00	\$ -	\$ 19,926.00	
SGI	Mayne Island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00	\$ 20,000.00	\$ -	
SGI	SGI	Standpipe Inventory - Water Supply Systems and Sources	Asset Management	2011-08-10	\$ 45,000.00		\$ 26,772.01	
SGI	Saturna island	Greening Saturna Community Hall	Energy Systems	2016-02-10	\$ 30,000.00	\$ -	\$ -	
SGI	Pender Islands	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 25,000.00	\$ -	\$ -	
SGI	Pender Islands	PI Community Hall	Energy Systems	2011-08-10	\$ 11,000.00	\$ -	\$ -	
SGI	Saturna island	Water and Sewer SAMP	Asset Management	2011-08-10	\$ 20,000.00		\$ 19,740.00	
SGI	Galiano Island	Water Meters	Drinking Water	2008-05-14	\$ 15,326.00	\$ -	\$ -	
SGI	Pender Islands	PI Community Hall	Energy Systems	2012-03-14	\$ 132,000.00	\$ 0.22	\$ -	
SGI	SGI	Cycling/Pedestrian Trail Plan	Long-term Infrastructure Plan	2012-12-12	\$ 60,000.00		\$ 14,327.45	
SGI	SGI	SGI Food System and Agriculture Strategy	Community Planning	2013-08-14	\$ 66,000.00	\$ -	\$ -	
SGI	Galiano Island	Water Meters	Drinking Water	2008-05-14	\$ 29,874.00	\$ -	\$ -	
SGI	Mayne Island	Water Meters	Drinking Water	2008-05-14	\$ 12,620.00	\$ -	\$ -	
SGI	Pender Islands	Water Meters	Drinking Water	2008-05-14	\$ 180,500.00	\$ -	\$ -	
SGI	SGI	Social Finance Model for SGI Economic Development (Suspended)	Community Planning	2014-07-09	\$ -	\$ -	\$ -	
SGI	Saturna island	Water Meters	Drinking Water	2008-05-14	\$ 27,380.00	\$ -	\$ -	
SGI	Pender Islands	Magic Lake Estates	Wastewater	2014-10-08	\$ 60,000.00	\$ -	\$ -	

APPENDIX B: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
SGI	Mayne Island	Mayne Island Demo Trail	Active Transportation	2014-11-12	\$ 60,000.00	\$ 40,238.72	\$ -	
SGI	Pender Islands	Magic Lake Estates Sewerage Treatment Options	Wastewater	2015-08-01	\$ 15,000.00		\$ 2,481.00	
SGI	Mayne Island	Mayne Island Bus Society - Community busses (2) purchase	Public Transit	2016-05-11	\$ 50,000.00	\$ -		
SGI	Galiano Island	Galiano Museum Building - heat pump	Energy Systems	2016-12-14	\$ 20,000.00	\$ 20,000.00		
SGI	Galiano Island	Galiano Childcare Centre	Recreation	2017-03-08	\$ 34,500.00	\$ 34,500.00		
SGI	Mayne Island	Mayne Island Bus Society - Community bus purchase (Deferred)	Public Transit	2016-09-14	\$ -	\$ -	\$ -	
SGI	SGI	SGI Community Economic Sustainability Economic Development Framework	Community Planning	2016-09-14	\$ 50,000.00	\$ 20,203.00	\$ -	
SGI	Pender Islands	Magic Lake Estates Emergency Access/Egress Route	Active Transportation	2016-10-12	\$ 50,000.00	\$ 47,977.32		
SGI	SGI	Housing Needs Assessment for the SGI	Long-term Infrastructure Plan	2016-10-12	\$ 40,000.00	\$ 40,000.00		
SGI	Pender Islands	Pender Islands Community Hall solar roof	Energy Systems	2017-04-12	\$ 15,000.00	\$ -		
SGI	Mayne Island	Miners Bay Dock Infrastructure Improvements	Short-sea Shipping	2016-12-14	\$ 15,000.00	\$ 15,000.00		
SGI	Pender Islands	Pender Library (SGI Library Service)	Energy Systems	2016-12-14	\$ 15,000.00	\$ -		
SGI	SGI	SSI and SGI Regional Trails Plan	Long-term Infrastructure Plan	2016-12-14	\$ 10,000.00	\$ 10,000.00		
SGI	Mayne Island	Mayne Reading Centre Renovation Project	Culture	2017-02-08	\$ 4,000.00	\$ 4,000.00		
SGI	Pender Islands	Pender Library (SGI Library Service)	Energy Systems	2017-03-08	\$ 5,000.00	\$ 5,000.00		
SGI	Pender Islands	SGI Community Resource Centre - SGI Visitor Centre	Tourism	2017-07-12	\$ 36,000.00	\$ 36,000.00		
SGI	Mayne Island	Dinner Bay Park Surface Replacement - Gravel, Grass, and Light Machinery	Recreation	2017-07-12	\$ 27,000.00	\$ 27,000.00		
SGI	Galiano Island	Community Hall Energy Upgrades	Energy Systems	2017-07-12	\$ 13,947.40	\$ 13,947.40		
SGI	SGI	Tourism Visiter Centre and Kiosks	Tourism	2017-07-12	\$ 24,600.00	\$ 24,600.00		
SGI	Galiano Island	Galiano Community playground development	Recreation	2017-08-02	\$ 50,673.00	\$ 50,673.00		
SGI	SGI	SGI Sustainability - Phase 2 Cooperative Planning	Community Planning	2017-08-02	\$ 34,000.00	\$ 34,000.00		
SGI	Pender Islands	Thieves Bay Park Lawn Enhancement (Approved initially at 2017-08-02)	Recreation	2017-09-13 (Update)	\$ 46,100.00	\$ 46,100.00		
SGI	Mayne Island	Vehicle Acquisition for a Community Bus Service	Public Transit	2017-10-11	\$ 25,000.00	\$ 25,000.00		
SGI	Pender Islands	Epicentre Family Playground	Recreation	2017-10-11	\$ 12,000.00	\$ 12,000.00		
<b>SGI</b>					<b>\$ 1,952,520.40</b>	<b>\$ 598,927.57</b>	<b>\$ 116,095.80</b>	<b>\$ 266,991.46</b>

APPENDIX B: BOARD-APPROVED CWF INVESTMENTS AS OF 2017-10-31

AREA	COMMUNITY	TITLE	PROJECT CATEGORY	BOARD RESOLUTION IN HOTSHEET	GRANT AWARD AMOUNT	GRANTED CWF UNSPENT TO YEAREND 2016	PROJECT SURPLUS (RETURNED TO EA ACCOUNT)	CWF RECEIVED NOT YET ASSIGNED TO PROJECTS
SSI	Ganges	Drake Road - Hydrology Study Ph 2	Drinking Water	2017-07-12	\$ 15,000.00	\$ 15,000.00		
SSI	Ganges	Drake Road - Hydrology Study	Drinking Water	2017-02-22	\$ 30,000.00	\$ 30,000.00		
SSI	SSI	Experience the Gulf Islands (ETGI) Concept Plan	Long-term Infrastructure Plan	2016-12-14	\$ 10,000.00	\$ 10,000.00		
SSI	Maliview	Maliview Sewer System	Wastewater	2016-11-09	\$ 195,000.00	\$ 181,685.00		
SSI	Ganges	Ganges Boardwalk and Pecks Cove Park	Long-term Infrastructure Plan	2016-10-12	\$ 150,000.00	\$ 150,000.00		
SSI	SSI	Experience the Gulf Islands (ETGI) Concept Plan	Long-term Infrastructure Plan	2016-03-09	\$ 25,000.00	\$ 151.11		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2016-02-10	\$ 685,280.00	\$ 685,280.00		
SSI	Maliview	Maliview Sewer System	Wastewater	2015-05-13	\$ 35,000.00	\$ 2,452.08		
SSI	SSI	Cycling/Pedestrian Trail Map (Experience the Gulf Islands)	Community Planning	2014-05-14	\$ 25,000.00		\$ 25,000.00	
SSI	St. Mary Lake	St. Mary's Lake Water Quality Assessment	Asset Management	2014-05-14	\$ 35,000.00	\$ -		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2013-07-10	\$ 100,000.00	\$ 64,776.00		
SSI	Highland Fernwood	Highland/Fernwood	Drinking Water	2012-12-10	\$ 150,000.00	\$ -		
SSI	Highland Fernwood	Highland/Fernwood	Drinking Water	2012-12-10	\$ 50,000.00	\$ -		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2012-04-11	\$ 340,540.00	\$ 2,406.00		
SSI	Highland Fernwood	Highland/Fernwood	Asset Management	2011-10-12	\$ 87,937.00	\$ -		
SSI	Highland Fernwood	Highland/Fernwood	Asset Management	2011-10-12	\$ 72,063.00	\$ -		
SSI	Ganges	Nth Ganges Transportation Plan	Active Transportation	2010-11-10	\$ 338,134.00	\$ -		
SSI	Beddis	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 24,550.00	\$ 24,550.00		
SSI	Beddis	Beddis Water Treatment Plant	Drinking Water	2009-11-18	\$ 142,000.00	\$ 28,400.00		
SSI	Cedars of Tuam	Cedars of Tuam Water Treatment Plant	Drinking Water	2009-11-18	\$ 30,400.00	\$ 1,832.65		
SSI	Fernwood	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 24,550.00	\$ 24,550.00		
SSI	Fulford	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 13,569.00	\$ 5,535.00		
SSI	Fulford	Fulford Water Treatment Plant	Drinking Water	2009-11-18	\$ 75,000.00	\$ 10,000.00		
SSI	Highland	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 24,550.00	\$ 19,290.00		
SSI	Maliview	Strategic Plan for Sewer and Water	Asset Management	2009-11-18	\$ 2,781.00	\$ -		
SSI	Burgoyne Bay	Composting Pilot	Wastewater	2008-07-11	\$ 30,000.00	\$ -		
SSI	Ganges	Pathways	Active Transportation	2008-07-11	\$ 425,000.00	\$ -		
SSI	Ganges	Pathways	Active Transportation	2008-03-12	\$ 50,000.00	\$ -		
SSI	St. Mary Lake	St. Mary's Lake Compressor	Drinking Water	2007-07-05	\$ 25,000.00	\$ -		
SSI	Ganges	Ganges Transportation Management/ Conceptual Design	Active Transportation	2006-10-11	\$ 30,000.00	\$ 5,012.00		
SSI					\$ 3,241,354.00	\$ 1,207,507.84	\$ 58,412.00	\$ 1,081,167.95

# Community Works Fund

## Grant Application Toolkit

Capital Regional District | November 2017 (Version 1.1)



Developed by:

CRD Finance and Technology – Grants Coordinator  
November 2017 (Version 1.1)

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# INTRODUCTION

The Community Works Fund (CWF) is delivered to all local governments in British Columbia through a direct annual allocation to support local priorities.

2014-2024 Community Works Fund Agreement between the CRD and the Union of BC Municipalities (CWF Agreement) specifies the CRD's roles and responsibilities with regard to the expenditure and reporting of CWF.

This toolkit is designed to help ensure the CRD's compliance with the CWF Agreement. It provides the resource material needed to determine project eligibility for CWF and to assist in applying for funding. It is comprised of the following sections:

1. CWF Reference Materials
2. CWF Proposal Screening and Application Process Guide  
This form is included for demonstration purposes only; it is provided as a standalone fillable form for use in requesting feedback from the Finance and Technology Department on project eligibility.
3. CWF Application Forms:  
The following forms are included in the CWF Toolkit for demonstration purposes.
  - For applications aimed at supporting projects in CRD services;
  - For applications aimed at supporting Third Party projects.

The fillable PDF versions of these forms are provided as a separate attachment to the Toolkit.

## CWF REFERENCE MATERIALS

Unless otherwise specified, the following materials are extracted from the Administrative Agreement on the [Federal Gas Tax Fund in British Columbia](#) (the GTA).

### Key Definitions

As defined in Annex A of the GTA, the following definitions are provided for ease of reference:

ASSET MANAGEMENT	Includes planning processes, approaches or plans that support integrated, lifecycle approaches to effective stewardship of infrastructure assets in order to maximize benefits and manage risk. It can include: <ul style="list-style-type: none"> <li>o asset inventory</li> <li>o conditions of assets review</li> <li>o level of service framework</li> <li>o risk assessment</li> <li>o cost analysis</li> <li>o community priority setting</li> <li>o long-term financial planning</li> </ul>
INFRASTRUCTURE	Means municipal or regional, publicly or privately owned tangible capital assets in British Columbia primarily for public use or benefit.
ULTIMATE RECIPIENT	<ul style="list-style-type: none"> <li>a) A Local Government or its agent (including its wholly owned corporation;</li> <li>b) A non-municipal entity including, subject to a CRD Board resolution in support of the project: <ul style="list-style-type: none"> <li>o FP – For Profit</li> <li>o NGO – Non-governmental organization</li> <li>o NFP – Not-for-profit (includes BC Improvement Districts)</li> <li>o BC-T – BC Transit</li> </ul> </li> </ul>

### Eligible Project Categories

Schedule B of the GTA describes the eligible Project Categories as follows:

*Infrastructure construction, renewal or material betterment (See betterment vs. maintenance on p. 7)*

1. Local roads, bridges – roads, bridges and active transportation infrastructure (e.g.: cycling lanes and paths, sidewalks, hiking and walking trails);
2. Highways – highway infrastructure;
3. Short-sea shipping – infrastructure related to the movement of cargo and passengers around the coast and on inland waterways, without directly crossing an ocean;
4. Regional and local airports – airport-related infrastructure, excluding the National Airport System;
5. Broadband connectivity – infrastructure that provides internet access to residents, business, and/or institutions in Canadian communities;
6. Public transit – infrastructure that supports a shared passenger transport system which is available for public use;
7. Drinking Water – infrastructure that supports drinking water conservation, collection, treatment and distribution systems;
8. Wastewater – infrastructure that supports wastewater and storm water collection, treatment and management systems;

9. Solid waste – infrastructure that supports solid waste management systems including the collection, diversion and disposal or recyclables, compostable materials and garbage;
10. Community energy systems – infrastructure that generates or increases the efficient usage of energy;
11. Brownfield redevelopment – remediation or decontamination and redevelopment of a brownfield site within CRD boundaries, where the redevelopment includes:
  - a. the construction of public infrastructure as identified in the context of any other eligible project category under the GTF, and/or
  - b. the construction of a CRD park and publicly-owned social housing;
12. Sport infrastructure – amateur sport infrastructure;
13. Recreational infrastructure – recreational facilities or networks;
14. Cultural infrastructure – infrastructure that supports arts, humanities, and heritage;
15. Tourism infrastructure – infrastructure that attracts travelers for recreation, leisure, business or other purpose;
16. Disaster mitigation – infrastructure that reduces or eliminates long-term impacts and risks associated with natural disasters.

*Capacity building to strengthen the ability of Local Government to develop long-term planning practices.*

Capacity building includes investments related to strengthening the ability of the CRD to develop long-term planning practices. Project expenditures can include:

1. Capital investment plans
2. Integrated community sustainability plans
3. Life-cycle cost assessments
4. Asset Management Plan
5. Studies, strategies, or systems related to asset management (e.g.: software acquisition and implementation)
6. Training directly related to asset management planning
7. Long-term infrastructure plans

### Ineligible Project Categories

Schedule B of the GTA describes the in-eligible Project Categories as follows:

1. Response and emergency services related infrastructure: fire halls, fire trucks, fire services equipment, emergency service vehicles, buildings and equipment;
2. Investments in health infrastructure (hospitals, convalescent and seniors centres);
3. Investments in the National Airport System;
4. Investments in facilities, including arenas, which would be used as the home of professional sports teams or major junior hockey teams (e.g. Western Hockey League);
5. The purchase of vessels, infrastructure that supports passenger-only ferry services;
6. Rehabilitation and maintenance of existing facilities such as wharves and docks, and dredging;
7. Feasibility studies under the capacity building stream (see [Reference Guide](#) p.5)

## Eligible and Ineligible Expenditures

Schedule C of the GTA describes eligible and ineligible expenditures.

### *Eligible Expenditures*

1. Expenditures associated with acquiring, planning, designing, constructing or renovating a tangible capital asset, as defined by Generally Accepted Accounting Principles (GAAP), and any related debt financing charges specifically identified with that asset;
2. Expenditures directly related to the joint communication activities and with federal project signage for GTF funded projects;
3. Expenditures related to strengthening the ability of Local Governments to improve local and regional planning including capital investment plans, integrated community sustainability plans, life cycle costs assessments, and Asset Management Plans. These expenditures could include:
  - a. Studies, strategies, or systems related to asset management, which may include software acquisition and implementation;
  - b. Training directly related to asset management planning
  - c. Long-term infrastructure plans
4. Employee and equipment costs: The incremental costs of the Ultimate Recipient's employees or leasing of equipment may be included as Eligible Expenditures under the following conditions:
  - a. The Ultimate Recipient demonstrates that it is not economically feasible to tender a contract;
  - b. The employee or equipment is engaged directly in respect of the work that would have been the subject of the contract; and
  - c. The arrangement is approved in advance and in writing by UBCM.

### *Ineligible Expenditures*

1. Leasing costs;
2. Overhead costs, including salaries and other employment benefits of any employees of the Ultimate Recipient;
3. Direct or indirect operating or administrative costs;
4. Costs related to planning, engineering, architecture, supervision, management and other activities normally carried out by its staff, except in accordance with Eligible Expenditures describe above;
5. Taxes for which the Ultimate Recipient is eligible for a tax rebate and all other costs eligible for rebates;
6. Purchase of land or any interest therein, and related costs;
7. Legal fees; and
8. Routine repair and maintenance costs.

### *Betterment vs. Routine Repair and Maintenance*

A betterment is a material cost incurred to enhance the service potential (useful life or capacity) of a tangible capital asset. A betterment will:

1. Increase the previously assessed physical output or service capacity;
2. Significantly lower associated operating costs (efficiency);
3. Extend the life of the property; or
4. Improve the quality of the output.

## Eligible Project Examples

CATEGORY	DESCRIPTION	EXAMPLES
Public Transit	Infrastructure which supports a shared passenger transport system which is available for public use	<ul style="list-style-type: none"> <li>○ Transit infrastructure such as rail and bus rapid transit systems, and related facilities</li> <li>○ Buses, rail cars, ferries, para-transit vehicles, and other rolling stock and associated infrastructure</li> <li>○ Intelligent Transport Systems such as fare collection, fleet management, transit priority signaling, and real time traveler information system at stations and stops</li> <li>○ Related capital infrastructure including bus lanes, streetcar and trolley infrastructure, storage and maintenance facilities, security enhancement, and transit passenger terminals</li> </ul>
Local Roads, Bridges, and Active Transportation	Roads, bridges and active transportation (active transportation refers to investments that support active methods of travel)	<ul style="list-style-type: none"> <li>○ New and rehabilitation of roads</li> <li>○ New and rehabilitation of bridges</li> <li>○ Cycling lanes, paths, sidewalks and hiking trails</li> <li>○ Intelligent Transportation systems</li> <li>○ Additional capacity for high occupancy/ transit lanes, grade separations, interchange structures, tunnels, intersections and roundabouts</li> </ul>
Regional and Local Airports	Airport related infrastructure (excludes National Airport System)	<ul style="list-style-type: none"> <li>○ Construction projects that enhance airports and are accessible all year- round, through the development, enhancement or rehabilitation of aeronautical and/or non-aeronautical infrastructure (includes runways, taxiways, aprons, hangars, terminal buildings etc.)</li> <li>○ Non-aeronautical infrastructure such as groundside access, inland ports, parking facilities, and commercial and industrial activities</li> </ul>
Short-line Rail	Railway related infrastructure for carriage of passengers or freight	<ul style="list-style-type: none"> <li>○ Construction of lines to allow a railway to serve an industrial park, an intermodal yard, a port or a marine terminal</li> <li>○ Construction, rehabilitation, or upgrading of tracks and structures, excluding regular maintenance, to ensure safe travel</li> <li>○ Construction, development or improvement of facilities to improve interchange of goods between modes</li> <li>○ Procurement of technology and equipment used to improve the interchange of goods between modes</li> <li>○ Short-line operators must offer year- round service</li> </ul>
Short-sea Shipping	Infrastructure related to the movement of	<ul style="list-style-type: none"> <li>○ Specialized marine terminal intermodal facilities or transshipment (marine to marine) facilities</li> <li>○ Capitalized equipment for loading/unloading required</li> </ul>

CATEGORY	DESCRIPTION	EXAMPLES
	cargo and passengers around the coast and on inland waterways, without directly crossing an ocean	<p>for expansion of short-sea shipping</p> <ul style="list-style-type: none"> <li>○ Technology and equipment used to improve the interface between the marine mode and the rail/highways modes or to improve integration within the marine mode including Intelligent Transportation Systems (ITS)</li> </ul> <p><i>Note: The purchase of vessels, infrastructure that supports passenger- only ferry services, rehabilitation and maintenance of existing facilities such as wharves and docks, and dredging are not eligible for funding</i></p>
Community Energy Systems	Infrastructure that generates or increases efficient use of energy	<ul style="list-style-type: none"> <li>○ Renewable electricity generators</li> <li>○ Electric vehicle infrastructure/fleet vehicle conversion</li> <li>○ Hydrogen infrastructure (generation, distribution, storage)</li> <li>○ Wind/solar/thermal/geothermal energy systems</li> <li>○ Alternative energy systems that serve local government infrastructure</li> <li>○ Retrofit local government buildings and infrastructure</li> </ul>
Drinking Water	Infrastructure for drinking water conservation, collection, treatment and distribution	<ul style="list-style-type: none"> <li>○ Drinking water treatment infrastructure</li> <li>○ Drinking water distribution system (including metering)</li> </ul>
Wastewater	Infrastructure that supports wastewater and storm water collection, treatment and management systems	<ul style="list-style-type: none"> <li>○ Wastewater collection systems and or wastewater treatment facilities or systems</li> <li>○ Separation of combined sewers and or combined sewer overflow control, including real-time control and system optimization</li> <li>○ Separate storm water collection systems</li> </ul>
Sport Infrastructure	Amateur sport infrastructure	<ul style="list-style-type: none"> <li>○ Sport infrastructure for community public use</li> <li>○ Sport infrastructure in support of major amateur athletic events</li> </ul> <p><i>NOTE: Excludes facilities, including arenas, which would be used as a home of professional sports teams or major junior hockey teams</i></p>
Recreation Infrastructure	Recreational facilities or networks	<ul style="list-style-type: none"> <li>○ Large facilities or complexes which support physical activity such as arenas, gymnasiums, swimming pools, sports fields, tennis, basketball, volleyball or other sport-specific courts, or other facilities that have sport and/or physical activity as a primary rationale</li> <li>○ Community centers that offer programming to the community at large, including all segments of the</li> </ul>

CATEGORY	DESCRIPTION	EXAMPLES
		<ul style="list-style-type: none"> <li>population</li> <li>○ Networks of parks, fitness trails and bike paths</li> </ul>
Cultural Infrastructure	Infrastructure that supports arts, humanities, and heritage	<ul style="list-style-type: none"> <li>○ Museums</li> <li>○ The preservation of designated heritage sites</li> <li>○ Local government owned libraries and archives</li> <li>○ Facilities for the creation, production, and presentation of the arts</li> <li>○ Infrastructure in support of the creation of a cultural precinct within an urban core</li> </ul>
Tourism Infrastructure	Infrastructure that attract travelers for recreation, leisure, business or other purposes	<ul style="list-style-type: none"> <li>○ Convention centers</li> <li>○ Exhibition hall-type facilities</li> <li>○ Visitor centres</li> </ul>
Disaster Mitigation	Infrastructure that reduces or eliminates long-term impacts and risks associated with natural disasters.	<ul style="list-style-type: none"> <li>○ Construction, modification or reinforcement of structures that protect from, prevent or mitigate potential physical damage resulting from extreme natural events, and impacts or events related to climate change</li> <li>○ Modification, reinforcement or relocation of existing public infrastructure to mitigate the effects of and/or improve resiliency to extreme national events and impacts or events related to climate change</li> </ul> <p><i>NOTE: this category is related to disaster prevention (such as dykes, berms, seismic upgrades etc.) and not response (such as fire trucks, fire halls etc.)</i></p>
Broadband Connectivity	Infrastructure that provides internet access to residents, businesses, and/or institutions in BC.	<ul style="list-style-type: none"> <li>○ High-speed backbone</li> <li>○ Point of presence</li> <li>○ Local distribution within communities</li> <li>○ Satellite capacity</li> </ul>
Brownfield Redevelopment	Remediation or decontamination and re-development of a brownfield site within municipal boundaries.	<ul style="list-style-type: none"> <li>○ New construction of public infrastructure as per the categories listed under the Federal Gas Tax Agreement</li> <li>○ New construction of municipal use public parks and affordable housing.</li> </ul> <p><i>NOTE: For this category, redevelopment includes: the construction of public infrastructure as identified in the context of any other category under the GTF, and/or the construction of municipal use public parks and publicly-owned social housing.</i></p>

CATEGORY	DESCRIPTION	EXAMPLES
Asset Management	Increase local government capacity to undertake asset management planning practices.	<ul style="list-style-type: none"> <li>○ Asset Management Practices Assessment</li> <li>○ Current State of Assets Assessment</li> <li>○ Asset Management Policy</li> <li>○ Asset Management Strategy</li> <li>○ Asset Management Plan</li> <li>○ Long-Term Financial Plan</li> <li>○ Asset Management Practices Implementation Plan</li> <li>○ Asset Management Plan Annual Report</li> </ul>
Integrated Community Sustainability Plans	Increase local government capacity to undertake integrated community sustainability plans.	<ul style="list-style-type: none"> <li>○ Integrated community sustainability plans</li> <li>○ Regional growth strategies</li> <li>○ Community development plans</li> <li>○ Community plans</li> </ul>
Long-term Infrastructure Plans		<ul style="list-style-type: none"> <li>○ Transportation plans</li> <li>○ Infrastructure development plans</li> <li>○ Liquid waste management plans</li> <li>○ Solid waste management plans</li> <li>○ Long-term cross-modal transportation plans</li> <li>○ Water conservation/demand management plans</li> <li>○ Drought management contingency plans</li> <li>○ Air quality plans</li> <li>○ GHG reduction plans</li> <li>○ Energy conservation plans</li> </ul>

# CWF PROPOSAL SCREENING AND APPLICATION PROCESS GUIDE

## STEP 1: Review the CWF Reference Materials.

The CWF Reference Materials are provided to help you assess the eligibility of your proposed project using questions A-F. The table below identifies the relevant reference(s) for each question.

QUESTION	REFERENCE MATERIAL	QUESTION	REFERENCE MATERIAL
A	Key Definitions (See Ultimate Recipient)	C, D	Eligible and Ineligible Expenditures
B	Eligible Project Categories	F	Eligible Project Examples

(THIS SCREENING FORM IS AVAILABLE AS A FILLABLE PDF)

## STEP 2: Complete and send the Screening Form to an Electoral Area Administrator; see contacts below.

A. Does your organization comply with the 'Ultimate Recipient' definition?  YES  NO

*If you answered 'NO', proceed to item H; otherwise, proceed to item B.*

B. What category of tangible outcome will be created?  1  2  NEITHER

1. Infrastructure construction, renewal or material betterment primarily for public use and benefit.
2. Capacity building to strengthen the CRD's ability to develop long-term planning practices.

*If you answered 'NEITHER', go to item H; if you answered '1' go to item D; if you answered '2' go to item C.*

C. Could the project outcome be a recommendation that no further action be taken (E.g.: an analysis that recommends a no-go decision)?  YES  NO

*If you answered 'YES' go to item H; otherwise, proceed to item D.*

D. a) Does your proposed use of CWF comply with the Eligible Expenditures  YES  NO  
 b) Do you have the funding to cover the project's non-eligible expenditures?  YES  NO

*If you answered 'NO' to a) and/or b), go to item H; otherwise, proceed to item E.*

E. a) Can you describe, in your community's context, how your project aligns with at least one of the CWF eligible project examples listed in Eligible Project Examples?  YES  NO

b) Can you identify a similar project in the [UBCM List of Funded Projects \(2015\)](#)?  YES  NO

If yes, please specify the project: \_\_\_\_\_

*If you answered 'NO' to both a) and b), go to item H; otherwise, proceed to item F.*

F. Does the project area's Electoral Area Director support the project?  YES  NO

*If you answered 'NO', go to item H; otherwise, proceed to item G.*

G. If you made it to this point, your project may be eligible for application. Submit this completed screening form to your Electoral Area Administrator for confirmation of eligibility.

Once eligibility is confirmed, use the appropriate fillable PDF form from the 2 options below. Samples of both forms are provided on pages 12-22. Upon completing the form, go to Step 3.

1. For a CWF grant to support a CRD Service, fill out: [CWF Application – CRD Service](#)
2. For a CWF grant to support an eligible Third Party, fill out: [CWF Application – Third Party](#)

H. It is highly unlikely that the proposed project will qualify for a CWF grant. If you wish to discuss this conclusion with someone at the CRD, please contact the Administrator for your Electoral Area (see contact information below).

### ELECTORAL AREA ADMINISTRATORS - CONTACT INFORMATION:

*Juan de Fuca: [Iain Lawrence](#) ■ Salt Spring Island: [Karla Campbell](#) ■ Southern Gulf Islands: [June Klassen](#)*

**STEP 3: Use this checklist to verify that an application is complete.**

- Use the online fillable form applicable to your organization type:
  - a) CRD Service Application Form

**OR**

  - b) Third Party Application Form.
- Verify that all the fields are completed and that you have followed the instructions provided in the form.
- Ensure the supporting documentation, in accordance with the specifications for the type of project proposed, is attached in PDF format:
  - TYPE 1 – Infrastructure Construction, Renewal, or Material Betterment**
    - Drawings and Specifications
    - Product Specifications
    - Permits (e.g. Construction)
  - TYPE 2 – Capacity Building**
    - Terms of Reference
    - Workplan
    - Statement of Qualifications (For sole sourcing)
- If the project involves a Direct Award Contract, be sure to fill out the Direct Award Rationale Form (Section 9 for CRD Service Application; Section 10 for Third Party Application)
- Submit the application and supporting documents in PDF format to your Electoral Area Administrator:

***ELECTORAL AREA ADMINISTRATORS - CONTACT INFORMATION:***

*Juan de Fuca: [Iain Lawrence](#) ■ Salt Spring Island: [Karla Campbell](#) ■ Southern Gulf Islands: [June Klassen](#)*

# Community Works Fund (CWF) Grant Application – CRD Service

<b>SECTION 1: Ultimate Recipient Information</b>		
CRD DEPT.	SERVICE NAME:	SERVICE NO.:
SELECT THE ELECTORAL AREA WHERE THE PROJECT LOCATED:	LIST THE COMMUNITY/IES THE PROJECT WILL BENEFIT:	
ESTIMATED # OF PEOPLE WHO WILL BENEFIT FROM THE PROJECT:		
<b>SECTION 2: Project Summary</b>		
PROJECT TITLE:	ELIGIBLE PROJECT CATEGORY:	
SPECIFY THE PROJECT OUTCOME IN TERMS OF INFRASTRUCTURE AND/OR PLANS THAT THE CWF FUNDING WILL HELP ACHIEVE: 		
SELECT THE PROJECT TYPE (TYPE 1 OR 2) AND ATTACH IN APPENDIX A THE ADDITIONAL PROJECT INFORMATION IN PDF FORMAT TO YOUR APPLICATION AS SPECIFIED FOR THAT PROJECT TYPE:		
<input type="checkbox"/> <b>TYPE 1: Infrastructure construction, renewal, or material betterment</b> <ul style="list-style-type: none"> <li>▪ Drawings and Specifications</li> <li>▪ Product Specifications</li> <li>▪ Permits (e.g. Construction)</li> </ul>	<input type="checkbox"/> <b>TYPE 2: Capacity Building</b> <ul style="list-style-type: none"> <li>▪ Terms of Reference</li> <li>▪ Workplan</li> <li>▪ Statement of Qualifications (For sole sourcing)</li> </ul>	
WILL THE PROJECT OBTAIN PROPER INSURANCE?	<input type="checkbox"/> IF YES, SPECIFY TYPE:	IF NO, DESCRIBE WHY:
WILL THE PROJECT OBTAIN ALL APPROVALS, CERTIFICATE(S), AND PERMITS REQUIRED BY ANY GOVERNMENT AUTHORITY?	<input type="checkbox"/> IF NO, DESCRIBE WHY:	
IS THIS PROJECT PART OF A MULTI-PHASE PROJECT?	<input type="checkbox"/> IF YES, WHAT IS THE PHASE #?	HOW WILL THE WORK BE TENDERED?
IF DIRECT-AWARD, PLEASE COMPLETE SECTION 9 TO PROVIDE THE RATIONALE.		
FOR CAPACITY BUILDING PROJECTS, SKIP TO SECTION 4.		
<b>SECTION 3: Infrastructure Project Details</b>		
AT WHAT PHASE IS THIS PROJECT?	WHAT IS THE PROPERTY OWNERSHIP TYPE?	
WHAT IS THE SERVICE TYPE?	DO YOU HAVE AN ASSET MANAGEMENT PLAN FOR THE RESULTING INFRASTRUCTURE?	
HOW WILL THE LIFE-CYCLE COST OF THE RESULTING INFRASTRUCTURE BE FUNDED?		
<b>SECTION 4: Project Strategic Alignment</b>		
DESCRIBE HOW THE PROPOSED PROJECT ALIGNS WITH THE ELECTORAL AREA STRATEGIC DIRECTION:		
USING THE ELIGIBLE PROJECT EXAMPLES TABLE, IDENTIFY AN EXAMPLE PROJECT THAT RELATES MOST CLOSELY TO THE PROPOSED PROJECT: 		
DESCRIBE HOW THE PROPOSED PROJECT IN ITS COMMUNITY CONTEXT RELATES TO THE ELIGIBLE PROJECT EXAMPLE IDENTIFIED ABOVE:		
WHICH OF THE GAS TAX OBJECTIVE(S) DOES YOUR PROJECT SUPPORT?		
<input type="checkbox"/> PRODUCTIVITY AND ECONOMIC GROWTH	<input type="checkbox"/> A CLEAN ENVIRONMENT	<input type="checkbox"/> STRONG CITIES AND COMMUNITIES

# Community Works Fund (CWF) Grant Application – CRD Service

SECTION 5: Project Budget and Schedule				
PROJECT BUDGET SUMMARY AND SCHEDULE				AMOUNT
Planning Cost (Including consultant, design, and tendering):				
Implementation Cost (including construction, materials purchase, labour):				
Other Costs (E.g.: Contingency, permits, etc...):				
Total Cost :				
Estimate Class:				
CWF Grant Request:				
Is the CWF grant requested replacing other available funding sources for the project?				
SCHEDULE: Estimated Start Date:	<input type="text"/>	Estimated End Date:	<input type="text"/>	Project duration (months): <input type="text"/>
COST DETAILS (See Toolkit Page 6 for Expenditure Guidelines)				AMOUNT
CWF Request Expenditure Breakdown:				
Eligible Costs:				
Other Funding Expenditure Breakdown:				
FUNDING SOURCE	EXPENDITURE			
Ineligible Costs:				
SECTION 6: Project Attestations				
<b>CAPITAL REGIONAL DISTRICT PROJECT MANAGER:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit;				
<input type="radio"/> I have reviewed and understand the Capital Regional District's (CRD) Procurement Policy (Section 8).				
NAME	TITLE	EMAIL	Tel. No.	DD/MM/YYYY
<b>CAPITAL REGIONAL DISTRICT ELECTORAL AREA ADMINISTRATOR:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit.				
NAME	TITLE	EMAIL	Tel. No.	DD/MM/YYYY
<b>CAPITAL REGIONAL DISTRICT ELECTORAL AREA DIRECTOR:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit.				
NAME	ELECTORAL AREA	SIGNATURE	DD/MM/YYYY	
<b>CAPITAL REGIONAL DISTRICT FINANCIAL SERVICES:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit.				
NAME	SIGNATURE		DD/MM/YYYY	
Nelson Chan, Chief Financial Officer				
VERIFY THAT YOUR APPLICATION IS COMPLETE AND SUBMIT IT TO THE ELECTORAL AREA ADMINISTRATOR: Juan de Fuca: <a href="#">Iain Lawrence</a> ■ Salt Spring Island: <a href="#">Karla Campbell</a> ■ Southern Gulf Islands: <a href="#">June Klassen</a>				

# Community Works Fund (CWF) Grant Application – CRD Service

SECTION 7: Project Supporting Documentation	
In this section, please insert supporting documentation in PDF format relevant to the type of project proposed.	
<input type="checkbox"/> TYPE 1: Infrastructure construction, renewal, or material betterment <ul style="list-style-type: none"><li>▪ Drawings and Specifications</li><li>▪ Product Specifications</li><li>▪ Permits (e.g. Construction)</li></ul>	<input type="checkbox"/> TYPE 2: Capacity Building <ul style="list-style-type: none"><li>▪ Terms of Reference</li><li>▪ Workplan</li><li>▪ Statement of Qualifications (For sole sourcing)</li></ul>

Community Works Fund (CWF) Grant Application – CRD Service

SECTION 8: Capital Regional District Procurement Policy

To be added to online fillable PDF form.

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# Community Works Fund (CWF) Grant Application – CRD Service

## SECTION 9: Direct Award Rationale Form

To be added to online fillable PDF form.

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# Community Works Fund (CWF) Grant Application – Third Party

(SCHEDULE D of the Capital Regional District-CWF Contribution Agreement)

<b>SECTION 1: Ultimate Recipient Information</b>	
ORGANIZATION LEGAL NAME:	ORGANIZATION TYPE:
ORGANIZATION MAILING ADDRESS:	
SELECT THE ELECTORAL AREA WHERE THE PROJECT LOCATED:	LIST THE COMMUNITY/IES THE PROJECT WILL BENEFIT:
ESTIMATED # OF PEOPLE WHO WILL BENEFIT FROM THE PROJECT:	
<b>SECTION 2: Project Summary</b>	
PROJECT TITLE:	ELIGIBLE PROJECT CATEGORY:
SPECIFY THE PROJECT OUTCOME IN TERMS OF INFRASTRUCTURE AND/OR PLANS THAT THE CWF FUNDING WILL HELP ACHIEVE: <span style="float: right;">?</span>	
SELECT THE PROJECT TYPE (TYPE 1 OR 2) AND ATTACH IN APPENDIX A THE ADDITIONAL PROJECT INFORMATION IN PDF FORMAT TO YOUR APPLICATION AS SPECIFIED FOR THAT PROJECT TYPE:	
<input type="checkbox"/> <b>TYPE 1: Infrastructure construction, renewal, or material betterment</b> <ul style="list-style-type: none"> <li>▪ Drawings and Specifications</li> <li>▪ Product Specifications</li> <li>▪ Permits (e.g. Construction)</li> </ul>	<input type="checkbox"/> <b>TYPE 2: Capacity Building</b> <ul style="list-style-type: none"> <li>▪ Terms of Reference</li> <li>▪ Workplan</li> <li>▪ Statement of Qualifications (For sole sourcing)</li> </ul>
WILL THE PROJECT OBTAIN PROPER INSURANCE? <input type="checkbox"/> IF YES, SPECIFY TYPE: _____ IF NO, DESCRIBE WHY: _____	
WILL THE PROJECT OBTAIN ALL APPROVALS, CERTIFICATE(S), AND PERMITS REQUIRED BY ANY GOVERNMENT AUTHORITY? <input type="checkbox"/> IF NO, DESCRIBE WHY: _____	
IS THIS PROJECT PART OF A MULTI-PHASE PROJECT? <input type="checkbox"/> IF YES, WHAT IS THE PHASE #: _____ HOW WILL THE WORK BE TENDERED? _____	
IF DIRECT-AWARD, PLEASE COMPLETE SECTION 10 TO PROVIDE THE RATIONALE. FOR CAPACITY BUILDING PROJECTS, SKIP TO SECTION 4.	
<b>SECTION 3: Infrastructure Project Details</b>	
AT WHAT PHASE IS THIS PROJECT?	WHAT IS THE PROPERTY OWNERSHIP TYPE?
WHAT IS THE SERVICE TYPE?	DO YOU HAVE AN ASSET MANAGEMENT PLAN FOR THE RESULTING INFRASTRUCTURE?
HOW WILL THE LIFE-CYCLE COST OF THE RESULTING INFRASTRUCTURE BE FUNDED?	
IF THE PROPERTY OWNERSHIP IS PRIVATE FOR A PRIVATE SERVICE, HOW WILL THE PROJECT'S REQUIREMENT OF BEING PRIMARILY FOR PUBLIC USE AND BENEFIT BE MET?	
<b>SECTION 4: Project Strategic Alignment</b>	
DESCRIBE HOW THE PROPOSED PROJECT ALIGNS WITH THE ELECTORAL AREA STRATEGIC DIRECTION:	
USING THE ELIGIBLE PROJECT EXAMPLES TABLE, IDENTIFY AN EXAMPLE PROJECT THAT RELATES MOST CLOSELY TO THE PROPOSED PROJECT: <span style="float: right;">?</span>	
DESCRIBE HOW THE PROPOSED PROJECT IN ITS COMMUNITY CONTEXT RELATES TO THE ELIGIBLE PROJECT EXAMPLE IDENTIFIED ABOVE:	
WHICH OF THE GAS TAX OBJECTIVE(S) DOES YOUR PROJECT SUPPORT? <input type="checkbox"/> PRODUCTIVITY AND ECONOMIC GROWTH <input type="checkbox"/> A CLEAN ENVIRONMENT <input type="checkbox"/> STRONG CITIES AND COMMUNITIES	

# Community Works Fund (CWF) Grant Application – Third Party

(SCHEDULE D of the Capital Regional District-CWF Contribution Agreement)

SECTION 5: Project Budget and Schedule				
PROJECT BUDGET SUMMARY AND SCHEDULE				AMOUNT
<b>Planning Cost (including consultant, design, and tendering):</b>				
<b>Implementation Cost (including construction, materials purchase, labour):</b>				
<b>Other Costs (E.g.: Contingency, permits, etc...):</b>				
Total Cost :				
<b>Estimate Class:</b>				
CWF Grant Request:				
Is the CWF grant requested replacing other available funding sources for the project?				
SCHEDULE: Estimated Start Date: <input style="width: 100px;" type="text"/> Estimated End Date: <input style="width: 100px;" type="text"/> <b>Project duration (months):</b> <input style="width: 50px;" type="text"/>				
COST DETAILS <span style="float: right;"></span>				AMOUNT
CWF Request Expenditure Breakdown:				
Eligible Costs:				
Other Funding Expenditure Breakdown:				
<b>FUNDING SOURCE</b>	<b>EXPENDITURE</b>			
Ineligible Costs:				
SECTION 6: Project Attestations				
<b>THIRD PARTY PROJECT LEAD:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit; <input type="radio"/> I have reviewed and understand the terms in the CWF 3 <sup>rd</sup> Party Contribution Agreement Boiler Plate (Section 8); <input type="radio"/> I have reviewed and understand the Capital Regional District's (CRD) Procurement Policy (Section 9).				
NAME	TITLE	EMAIL	Tel. No.	DD/MM/YYYY
<b>CAPITAL REGIONAL DISTRICT ELECTORAL AREA ADMINISTRATOR:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit.				
NAME	TITLE	EMAIL	Tel. No.	DD/MM/YYYY
<b>CAPITAL REGIONAL DISTRICT ELECTORAL AREA DIRECTOR:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit.				
NAME	ELECTORAL AREA	SIGNATURE	DD/MM/YYYY	
<b>CAPITAL REGIONAL DISTRICT FINANCIAL SERVICES:</b>				
<input type="radio"/> I hereby certify that this completed application provides a truthful and accurate representation of the proposed project in compliance with the CWF guidelines explained in the CWF Grant Application Toolkit.				
NAME	SIGNATURE		DD/MM/YYYY	
Nelson Chan, Chief Financial Officer				
<b>VERIFY THAT YOUR APPLICATION IS COMPLETE AND SUBMIT IT TO THE ELECTORAL AREA ADMINISTRATOR:</b> Juan de Fuca: <a href="#">Iain Lawrence</a> ■ Salt Spring Island: <a href="#">Karla Campbell</a> ■ Southern Gulf Islands: <a href="#">June Klassen</a> <span style="float: right;"></span>				

# Community Works Fund (CWF) Grant Application – Third Party

(SCHEDULE D of the Capital Regional District-CWF Contribution Agreement)

SECTION 7: Project Supporting Documentation	
In this section, please insert supporting documentation in PDF format relevant to the type of project proposed.	
<input type="checkbox"/> TYPE 1: Infrastructure construction, renewal, or material betterment <ul style="list-style-type: none"><li>▪ Drawings and Specifications</li><li>▪ Product Specifications</li><li>▪ Permits (e.g. Construction)</li></ul>	<input type="checkbox"/> TYPE 2: Capacity Building <ul style="list-style-type: none"><li>▪ Terms of Reference</li><li>▪ Workplan</li><li>▪ Statement of Qualifications (For sole sourcing)</li></ul>

Community Works Fund (CWF) Grant Application – Third Party  
(SCHEDULE D of the Capital Regional District-CWF Contribution Agreement)

SECTION 8: CWF Contribution Agreement Boiler Plate

To be added to the online fillable PDF form.

Community Works Fund (CWF) Grant Application – Third Party  
(SCHEDULE D of the Capital Regional District-CWF Contribution Agreement)

SECTION 9: Capital Regional District Procurement Policy

To be added to the online fillable PDF form.

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Community Works Fund (CWF) Grant Application – Third Party  
(SCHEDULE D of the Capital Regional District-CWF Contribution Agreement)

SECTION 10: Direct Award Rationale Form

To be added to the online fillable PDF form.

## Contribution Agreement Regarding Use of Community Works Funds

This Agreement dated effective \_\_\_\_\_.  
DD/MM/YYYY

BETWEEN:

CAPITAL REGIONAL DISTRICT

625 Fisgard Street  
Victoria, B.C. V8W 1R7

(herein called the "**CRD**")

OF THE FIRST PART

AND:

(herein called "the **Recipient**")

OF THE SECOND PART

WHEREAS:

- A. The Regional Board of the CRD has entered into a Community Works Fund ("**CWF**") Agreement (the "**CWF Agreement**") with the Union of British Columbia Municipalities ("**UBCM**") to enable the CRD to build and revitalize public infrastructure that supports productivity, economic growth, a clean environment and strong cities and communities, and to benefit from the CWF in accordance with the terms and conditions of the Administrative Agreement on the Federal Gas Tax Fund in British Columbia dated April 1, 2014 between Canada, British Columbia, and the UBCM (the "**Administrative Agreement**");
- B. The CWF Agreement contemplates that Local Governments will enter into Contracts with other Ultimate Recipients for the implementation of Eligible Projects;
- C. The CRD has been advised by UBCM that an entity such as the Recipient may be considered an Ultimate Recipient pursuant to the CWF Agreement, and the CRD may enter into Agreements with Ultimate Recipients to receive funds for Eligible Projects, provided that all requirements of the CWF Agreement are met;
- D. The Recipient operates on a non-commercial basis and therefore is not considered to be an "industrial, commercial or business undertaking" as contemplated by the *Local Government Act*, R.S.B.C. 2015, c. 1 making it permissible for the CRD to provide assistance;

- E. If CWF funding is used for an Eligible Project, the CRD remains the Ultimate Recipient of the CWF funding and must fulfill its commitments to the UBCM under the CWF Agreement in relation to the Eligible Project;
- F. The funding provided by this agreement is for the purpose described in Schedule D, and herein referred to as “the Project”
- G. The Recipient and the CRD agree that the Project is needed for the reason(s) described in Schedule D;
- H. The CRD has indicated support for the Project as an Eligible Project through a formal resolution of its Board of Directors, and wishes to enter into an agreement (the “**Contribution Agreement**”) between the CRD and the Recipient stipulating the contribution amount and defining the work and content of the Project;
- I. The CRD and the Recipient must comply at all times with the terms and conditions of the CWF Agreement in respect of the use of the CWF for the Eligible Project.

**NOW THEREFORE THIS AGREEMENT WITNESSES** that the parties hereto in consideration of the monies to be paid by the CRD to the Recipient as hereinafter set forth and of the premises and the mutual covenants hereinafter contained the parties hereto agree as follows:

- 1. The following Schedules, originating in whole or part from the Administrative Agreement, and appended to the CWF Agreement, are attached to and form part of this Contribution Agreement:

- Schedule A – Definitions
- Schedule B – Eligible Project Categories
- Schedule C – Eligible and Ineligible Expenditures

Capitalized terms not otherwise defined in this Contribution Agreement have the meanings as defined in the above Schedule A.

- 2. Schedule D describes the purpose of this agreement and is part of this Contribution Agreement.
- 3. (a) Subject to the terms and conditions of this Contribution Agreement, the CRD shall provide funding as specified in Schedule D from the funds received through the CWF Agreement (the “**Contribution**”) to the Recipient for the purpose of the Project described in Schedule D.
- (b) The CRD shall pay the Contribution, to the Recipient within 30 days of the date of this Agreement;
- (c) The Recipient shall ensure that the entirety of the Contribution amount provided pursuant to section 3(b) is paid or disbursed in respect of the Eligible Expenditures by the project end date specified in Schedule D;
- (d) In the event that the Recipient does not spend the Contribution or any portion thereof on an Eligible Expenditure for the Project, as required under section 3(c), the Recipient shall immediately return the Unspent Funds to the CRD. The Recipient shall provide receipts for all funds allocated to the Eligible Expenditures for the project at the project end date specified in Schedule D;

- (e) The CRD shall be not obliged to make any payment under this Contribution Agreement more than one year after Project Completion, after which date the payment obligations of the CRD in respect of the Contribution shall be terminated.
- 4. The term of this Contribution Agreement shall be from the date of execution until the day that is 5 years after Project Completion (the "Term").
- 5. Subject to this Contribution Agreement, the Recipient may spend the Contribution for the purposes of the Project only on those expenditures that constitute Eligible Expenditures, as described at Schedule C.
- 6. The Recipient shall:
  - (a) ensure that the Project is conducted in a safe and efficient manner to a standard that is equal to or higher than if the Project were to be conducted by CRD directly;
  - (b) implement the project with sufficient capacity to meet the anticipated needs of the target communities individually and collectively;
  - (c) obtain and maintain in force all approvals, certificates and permits required by any government authority in connection with the construction and/or implementation of the Project;
  - (d) where applicable, comply with all relevant policies and procedures of the CRD with respect to use of the Contribution for the award of Contracts and any other agreements for the purposes of the Project;
  - (e) ensure that all components of the Project are operated in accordance with any and all instructions provided by the Project designer, installer, manufacturer or other qualified professional, and maintained in good working condition;
  - (f) assume all responsibility related to the proper operation and routine maintenance of all aspects of the Project upon completion of the Project.
- 7. The Recipient will, without limiting its obligations or liabilities herein, provide and maintain insurances with insurers licensed in Canada with coverage of a type, and in amounts, that any similar business, acting reasonably, would procure for a project of the scope, size and exposure of this Project, during the term of this Agreement and for any subsequent ongoing operations and maintenance of the resulting infrastructure.
- 8. The Recipient shall require and ensure that each Third Party maintains insurances comparable to those required in Section 7.
- 9. The Recipient shall indemnify, release and save harmless the CRD, its elected and appointed officers, employees and agents and the Government of Canada, British Columbia and UBCM and any of their officers, servants, employees or agents, from and against any and all claims, suits, demands, actions, causes of action, damages, costs, fees, fines, and penalties whatsoever, including legal fees and liability, that the Recipient has or may have or that a Third Party or any person has or may have, caused by or arising from the Contribution or the implementation of the Project by the Recipient, including liability arising out of any claim, allegation or determination that the CRD has breached the CWF Agreement by transferring the Contribution to the Recipient pursuant to this Contribution Agreement, including without limitation any obligation to repay funds to

UBCM or Canada pursuant to the CWF Agreement or the Administrative Agreement, except to the extent to which such claims or losses relate to the negligence or willful misconduct of an officer, servant, employee, or agent of the CRD, Canada, British Columbia or the UBCM in the performance of his or her duties.

10. Nothing in this Contribution Agreement shall be interpreted as creating an agency, joint venture, principal-agent, or partnership relationship between any of the CRD, UBCM or Canada and the Recipient, nor an employment relationship between any of CRD, UBCM or Canada and the Recipient and its employees or volunteers.
11. The Recipient warrants and represents to the CRD that it has sufficient legal authority to carry out the Project as contemplated by this Contribution Agreement, with the intention that the CRD will rely upon such warranty and representation.
12. The Recipient acknowledges and agrees that it has been provided with copies of the Administrative Agreement and the CWF Agreement and that the Recipient has reviewed those agreements and is aware of the terms and conditions contained therein.
13. The CRD represents and warrants that UBCM considers the Recipient to be an Ultimate Recipient pursuant to the CWF Agreement, and the parties acknowledge and agree that this Contribution Agreement constitutes a Contract between the Recipient and the CRD pursuant to the CWF Agreement.
14. The Recipient acknowledges that the CRD retains responsibility for the use of the Contribution under the CWF Agreement and reporting on the use of funds received under the CWF Agreement. The Recipient, as the owner of the funded assets acquired with the Contribution, shall during the Term of this Contribution Agreement and at its cost:
  - (a) maintain all administrative, corporate and accounting records related to the receipt and expenditure of all the Contribution (the “**Records**”) in accordance with generally accepted accounting principles, and retain these records for at least six (6) years following completion of the Project;
  - (b) provide access to all Records to CRD, UBCM or Canada auditors upon request by the CRD;
  - (c) spend the Contribution only on Eligible Expenditures of Eligible Projects as defined in the CWF Agreement;
  - (d) ensure that any Contract or agreement with a Third Party in relation to the Project shall:
    - (i) ensure that the Recipient remains in compliance with all requirements of this Contribution Agreement;
    - (ii) contain terms that oblige such Third Party to comply with the terms and conditions of this Contribution Agreement; and
    - (iii) not cause the CRD to be out of compliance with the CWF Agreement;
  - (e) where the CRD has contributed funds for the Project in the previous calendar year, report to the CRD and provide to the CRD on or before March 31 of each year all other information necessary or useful to permit the CRD to fulfill its reporting

requirements to UBCM required under section 6 of the CWF Agreement and section 9 of Schedule A of the Administrative Agreement; and

- (f) provide further information, documentation and reports upon request by CRD, acting reasonably.
15. The Recipient acknowledges that the CRD will rely upon information provided to CRD under section 14 of this Contribution Agreement to fulfill its commitments to UBCM pursuant to the CWF Agreement, including to complete reporting in relation to the Project and Eligible Expenditures.
  16. The Recipient will not alter the agreed use of the Contribution for the Project without the written agreement of the CRD, which may be withheld in the sole and complete discretion of the CRD.
  17. The Recipient shall retain ownership of and title to the Project, including all materials, components, devices and equipment acquired with the use of the Contribution, as long as Recipient retains ownership of the improvements benefitting from the Project.
  18. If the Recipient disposes of the Project or any interest in the Project through the sale, lease, encumbrance or other disposal of an asset resulting from the Project (the "**Disposition**") within five (5) years of the date of completion and the Disposition is made to, or granted in favour of, a person or entity other than the CRD or a person or entity approved in writing by the CRD, acting reasonably, the Recipient shall pay any revenue generated or arising from such Disposition to the CRD to be invested by the CRD into other Eligible Projects in accordance with section 6.1(H) of the CWF Agreement.
  19. Default

If either Party is in default of any of its obligations under this Contribution Agreement and, upon receiving written notice of the default from the other Party, fails to correct the default or to take steps to correct the default within ten (10) business days of having received the notice, or such other time as the Parties may agree in writing, the other Party may provide ninety (90) days written notice to the defaulting Party to terminate the Contribution Agreement.
  20. If this Contribution Agreement is terminated within the first five (5) years of the Term due to an uncorrected default of the Recipient, then the Recipient will reimburse the CRD for the full amount of the Contribution, to be invested by the CRD into other Eligible Projects in the complete discretion of the CRD.
  21. Notices
    - (a) Each notice sent pursuant to this Contribution Agreement ("**Notice**") shall be in writing and shall be sent to the relevant Party at the relevant address, facsimile number or e-mail address set out below. Each such Notice may be sent by registered mail, by commercial courier, by facsimile transmission, or by electronic mail;
    - (b) The Contact Information for the parties is in Schedule D.
    - (c) Each Notice sent by electronic mail ("**E-Mail Notice**") must show the e-mail address of the sender, the name or e-mail address of the recipient, and the date and time of transmission, must be fully accessible by the recipient, and unless

receipt is acknowledged, must be followed within twenty-four (24) hours by a true copy of such Notice, including all addressing and transmission details, delivered (including by commercial courier) or sent by facsimile transmission;

- (d) Subject to sections 21(a) through 21(c), each Notice shall be deemed to have been given or made at the following times:
    - (i) if delivered to the address (including by commercial courier), on the day the Notice is delivered;
    - (ii) if sent by registered mail, seven (7) days following the date of such mailing by sender;
    - (iii) if sent by facsimile transmission, on the date the Notice is sent by facsimile transmission; or
    - (i) if sent by electronic mail, on the date the E-Mail Notice is sent electronically by e-mail by the sender;
  - (e) If a Notice is delivered, sent by facsimile transmission or sent by electronic mail after 4:00 p.m., or if the date of deemed receipt of a Notice falls upon a day that is not a Business Day, then the Notice shall be deemed to have been given or made on the next Business Day following;
  - (f) Notice given by facsimile transmission in accordance with the terms of this section 21 will only be deemed to be received by the recipient if the sender's facsimile machine generates written confirmation indicating that the facsimile transmission was sent;
  - (g) If normal mail service, facsimile or electronic mail is interrupted by strike, slow down, force majeure or other cause beyond the control of the parties, then a Notice sent by the impaired means of communication will not be deemed to be received until actually received, and the party sending the Notice shall utilize any other such services which have not been so interrupted or shall personally deliver such Notice in order to ensure prompt receipt thereof;
  - (h) Each Party shall provide Notice to the other Party of any change of address, facsimile number, or e-mail address of such Party within a reasonable time of such change.
22. The Recipient shall take all reasonable steps to ensure that no act or omission of the Recipient causes the CRD not to be in compliance with all terms and conditions of the CWF Agreement, and, without limiting the foregoing, the Recipient shall:
- (a) take no action that would place the CRD in breach of any provision of the CWF Agreement;
  - (b) comply, where applicable, with all requirements of the Local Government contained at section 6.1 of the CWF Agreement; and
  - (c) upon receiving written notice from the CRD of an amendment to the CWF Agreement made under section 10 of the CWF Agreement, take all required actions and execute all documents as may be applicable and reasonably required to comply with the Recipient's obligations under this section.

23. This Agreement has been executed on behalf of the Recipient and the CRD by those officers indicated below and each person signing the agreement represents and warrants that they are duly authorized and have the legal capacity to execute the Agreement.

24. Compliance with Laws

The Recipient shall comply with all statutes, regulations and bylaws applicable to the Project, any requirements of the Recipient's insurers and underwriters and all other applicable orders, codes and requirements related to or arising from the Project.

25. Taxes and Charges

The Recipient shall pay all taxes, charges, levies, duties, licenses, permits and assessments of every nature due and payable with respect to or arising as a result of this Agreement and the Project.

26. Oral Agreements

No oral instruction, objection, claim, or notice by any party to the other shall affect or modify any of the terms or obligations contained in this Agreement, and none of the provisions of this Agreement shall be held to be waived or modified by reason of any act whatsoever, other than by a waiver or modification in writing and agreed to by the parties to the Agreement.

27. Non-Waiver

Any failure by the CRD at any time, or from time to time, to enforce or require the strict keeping and performance of any of the terms or conditions of the Agreement will not constitute a waiver of such terms or conditions and will not affect or impair such terms or conditions in any way or the right of the CRD at any time to avail itself of such remedies as it may have for any breach of such terms or conditions. No provision in this Agreement, which imposes or may be deemed to impose extra or specific responsibilities or liabilities on the Recipient shall restrict the general or other responsibilities or liabilities of the Recipient in any way.

28. No Derogation from Statutory Powers

Nothing contained or implied herein shall prejudice or affect the rights and powers of the CRD in the exercise of its functions under any public or private statute, bylaw, order or regulation, all of which may be fully and effectively exercised in relation to this Agreement as if this Agreement had not been executed and this Agreement shall be subject to and consistent with the statutory restrictions imposed on the CRD under the *Local Government Act*, R.S.B.C. 2015, c. 1 and the *Community Charter*, S.B.C. 2003, c. 26.

29. Liability

The Recipient shall not, at any time, hold the CRD responsible for any claims or losses of any kind that the Recipient or its successors may suffer in relation to any matter related to the CRD's supply of oral or written information to the Recipient or the carrying out of the CRD's responsibilities under this Agreement and the Recipient waives for itself and its successors the right to sue the CRD in tort for any loss, including economic loss, damage, cost or expense arising from or connected with any error, omission or misrepresentation occurring in the supply of oral or written information to the Recipient or the carrying out of

the CRD's responsibilities under this Contribution Agreement, except to the extent to which such claims or losses relate to the negligence or willful misconduct of an officer, employee, or agent of the CRD in the performance of his or her duties.

30. Further Assurances

The parties hereto shall execute such further and other documents and do such further and other things as might be necessary to carry out and give effect to this Agreement.

31. Survival

Except as otherwise provided under this Contribution Agreement, all of the Recipient's obligations under this Agreement that are for the benefit of the CRD, Canada or UBCM shall survive early termination of this Agreement.

32. Severance

If any portion of this Agreement is held invalid by a court of competent jurisdiction, the invalid portion shall be severed and the decision that it is invalid shall not affect the validity of the remainder of this Agreement.

33. Entire Agreement

This Agreement constitutes the entire agreement between the parties with respect to the subject matter of the Agreement and contains all of the representations, warranties, covenants and agreements of the respective parties and may not be amended or modified except by an instrument in writing executed by all parties. This Agreement supersedes all prior agreements, memoranda and negotiations between the parties.

34. Binding Effect

The Agreement shall enure to the benefit of and be binding upon the parties and their successors, executors, administrators, and permitted assigns.

35. Extended Meanings

Words importing the singular number include the plural and vice versa, and words importing the masculine gender shall include the feminine and neuter genders.

36. Headings

Headings have been inserted for ease of reference and shall not be used in interpreting this Agreement.

37. No Assignment

- (a) Neither party may assign any right or entitlement granted under this Contribution Agreement to any person.
- (b) For greater clarity, any access rights granted to the general public in respect of the Sport Court as contemplated by this Contribution Agreement will not be considered or deemed an assignment hereunder.

38. Time

Time is of the essence in this Agreement.

39. Counterparts

This Agreement may be executed in counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument. To evidence its execution of an original counterpart of this Agreement, a party may send a copy of its original signature on the execution page hereof to the other party by fax transmission and such transmission shall constitute delivery of an executed copy of this Agreement to the receiving party.

**IN WITNESS WHEREOF** this Agreement has been executed by the parties hereto:

\_\_\_\_\_, by its

RECIPIENT'S LEGAL NAME

Authorized signatory:

\_\_\_\_\_  
NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE (DD/MM/YYYY)

**CAPITAL REGIONAL DISTRICT**, by its

Authorized signatory:

Nelson Chan, MBA, CPA, CMA

\_\_\_\_\_  
NAME

Chief Financial Officer

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE (DD/MM/YYYY)

**FOR ADMINISTRATIVE PURPOSES ONLY: AGREEMENT AUTHORIZATION**

CONTENT		INITIAL	DATE (DD/MM/YYYY)
	Procurement		
	Financial Plan		
	Content		
GM Approval			
Form			
Authority			

## SCHEDULE A – DEFINITIONS

"**Administrative Agreement**" means the Administrative Agreement on the Federal Gas Tax Fund in British Columbia.

"**Annual Report**" means the duly completed annual report to be prepared and delivered by UBCM to Canada and British Columbia, as described in Schedule D (Reporting and Audits).

"**Asset Management (AM)**" includes planning processes, approaches or plans that support integrated, lifecycle approaches to effective stewardship of infrastructure assets in order to maximize benefits and manage risk. AM is further described in Schedule F (Asset Management) of the 2014-2024 of the Community Works Fund Agreement, and can include:

- an inventory of assets;
- the condition of assets;
- level of service;
- risk assessment;
- a cost analysis;
- community priority setting;
- long-term financial planning.

"**Base Amount**" means an amount established over a time-period, reflecting non-federal investments in Infrastructure and against which GTF investments will be measured to ensure that GTF investments are incremental.

"**Chief Financial Officer**" means in the case of a municipality, the officer assigned financial administration responsibility under s. 149 of the *Community Charter*, and in the case of a Regional District, the officer assigned financial administration responsibility under s. 237 of the *Local Government Act*, R.S.B.C. 2015, c. 1.

"**Communications Protocol**" means the protocol by which all communications activities related to GTF funding will be delivered as described in Schedule E (Communications Protocol) of the 2014-2024 Community Works Fund Agreement.

"**Community Works Fund**" means the fund provided from the Federal gas tax revenues to be dispersed to local governments based on a percentage of the per capita allocation for local spending priorities in accordance with the terms and conditions set out in the Agreement.

"**Community Works Fund Agreement**" means this Agreement made between UBCM and Local Government.

"**Contract**" means an agreement between an Ultimate Recipient and a Third Party whereby the latter agrees to supply a product or service to an Eligible Project in return for financial consideration.

"**Eligible Expenditures**" means those expenditures described as eligible in Schedule C (Eligible and Ineligible Expenditures).

**"Eligible Projects"** means projects as described in Schedule B (Eligible Project Categories).

**"First Agreement"** means the agreement for the transfer of federal gas tax revenues entered into on September 19, 2005 by the Government of Canada, British Columbia and UBCM, with an expiry date of March 31, 2019, as amended.

**"First Community Works Fund Agreement"** means the agreement entered between UBCM and Local Government in order to administer the Community Works Fund under the First Agreement.

**"Funding Agreement"** means an agreement between UBCM and an Ultimate Recipient setting out the terms and conditions of the GTF funding to be provided to the Ultimate Recipient as entered under the First Agreement or the Agreement.

**"GTF"** means the Gas Tax Fund, a program established by the Government of Canada setting out the terms and conditions for the administration of funding that may be provided by Canada to recipients under section 161 of the *Keeping Canada's Economy and Jobs Growing Act*, S.C. 2011, c. 24 as amended by section 233 of the *Economic Action Plan 2013 Act*, No. 1, S.C. 2013, c. 33, or any other source of funding as determined by Canada.

**"Ineligible Expenditures"** means those expenditures described as ineligible in Schedule C (Eligible and Ineligible Expenditures).

**"Infrastructure"** means municipal or regional, publicly or privately owned tangible capital assets in British Columbia primarily for public use or benefit.

**"Local Government"** means a municipality as defined in the *Community Charter* [S.B.C. 2003] Chapter 26, a regional district as defined in the *Local Government Act*, R.S.B.C. 2015, c. 1, and the City of Vancouver as continued under the *Vancouver Charter* [S.B.C. 1953] Chapter 55.

**"Outcomes Report"** means the report to be delivered by March 31, 2018 and again by March 31, 2023 by UBCM to Canada and British Columbia which reports on how GTF investments are supporting progress towards achieving the program benefits, more specifically described in Schedule D (Reporting and Audits) in the 2014-2024 Community Works Fund Agreement.

**"Partnership Committee"** means the Committee required to be established by the Agreement to govern the implementation of the Agreement and further described in Annex C of the Agreement.

**"Party"** means Canada, British Columbia or UBCM when referred to individually and collectively referred to as "Parties".

**"Project Completion"** means the date on which the parties confirm in writing that the work described in section 3(a) has been completed to the reasonable satisfaction of both parties.

**"Third Party"** means any person or legal entity, other than Canada, British Columbia, UBCM or an Ultimate Recipient, who participates in the implementation of an Eligible Project by means of a Contract.

**"Ultimate Recipient"** means a Local Government.

**"Unspent Funds"** means Funds (as defined by the First Agreement) that have not been spent towards an Eligible Project (as defined under the First Agreement) prior to the effective date of the Agreement.

## SCHEDULE B – ELIGIBLE PROJECT CATEGORIES

Eligible Projects include investments in Infrastructure for its construction, renewal or material enhancement in each of the following categories:

- A. Local roads, bridges- roads, bridges and active transportation infrastructure (active transportation refers to investments that support active methods of travel. This can include: cycling lanes and paths, sidewalks, hiking and walking trails).
- B. Highways – highway infrastructure.
- C. Short-sea shipping – infrastructure related to the movement of cargo and passengers around the coast and on inland waterways, without directly crossing an ocean.
- D. Short-line rail – railway related infrastructure for carriage of passengers or freight.
- E. Regional and local airports – airport-related infrastructure (excludes the National Airport System).
- F. Broadband connectivity – infrastructure that provides internet access to residents, businesses, and/or institutions in Canadian communities.
- G. Public transit – infrastructure that supports a shared passenger transport system which is available for public use.
- H. Drinking water – infrastructure that supports drinking water conservation, collection, treatment and distribution systems.
- I. Wastewater – infrastructure that supports wastewater and storm water collection, treatment and management systems.
- J. Solid waste – infrastructure that supports solid waste management systems including the collection, diversion and disposal of recyclables, compostable materials and garbage.
- K. Community energy systems – infrastructure that generates or increases the efficient usage of energy.
- L. Brownfield Redevelopment – remediation or decontamination and redevelopment of a brownfield site within Local Governments boundaries, where the redevelopment includes:
  - the construction of public infrastructure as identified in the context of any other eligible project category under the GTF, and/or;
  - the construction of Local Government public parks and publicly-owned social housing.
- M. Sport Infrastructure – amateur sport infrastructure (excludes facilities, including arenas, which would be used as the home of professional sports teams or major junior hockey teams (e.g. Western Hockey League).

- N. Recreational infrastructure – recreational facilities or networks.
- O. Cultural infrastructure – infrastructure that supports arts, humanities, and heritage.
- P. Tourism infrastructure – infrastructure that attract travelers for recreation, leisure, business or other purposes.
- Q. Disaster mitigation – infrastructure that reduces or eliminates long-term impacts and risks associated with natural disasters.

Eligible Projects also include:

- R. Capacity building – includes investments related to strengthening the ability of Local Governments to develop long-term planning practices.

Note: Investments in health infrastructure (hospitals, convalescent and senior centres) are not eligible.

## **SCHEDULE C – ELIGIBLE AND INELIGIBLE EXPENDITURES**

### **1. ELIGIBLE EXPENDITURES**

1.1 Eligible Expenditures of Ultimate Recipients will be limited to the following:

- A. the expenditures associated with acquiring, planning, designing, constructing or renovating a tangible capital asset, as defined by Generally Accepted Accounting Principles (GAAP), and any related debt financing charges specifically identified with that asset;
- B. for capacity building category only, the expenditures related to strengthening the ability of Local Governments to improve local and regional planning including capital investment plans, integrated community sustainability plans, life-cycle cost assessments, and Asset Management Plans. The expenditures could include developing and implementing:
  - studies, strategies, or systems related to asset management, which may include software acquisition and implementation;
  - training directly related to asset management planning; and
  - long-term infrastructure plans;
- C. the expenditures directly associated with joint communication activities and with federal project signage for GTF-funded projects.

1.2 Employee and Equipment Costs: The incremental costs of the Ultimate Recipient's employees or leasing of equipment may be included as Eligible Expenditures under the following conditions:

- the Ultimate Recipient is able to demonstrate that it is not economically feasible to tender a contract;
- the employee or equipment is engaged directly in respect of the work that would have been the subject of the contract; and
- the arrangement is approved in advance and in writing by UBCM.

1.3 Administration expenses of UBCM related to program delivery and implementation of this Agreement, in accordance with Section 9 (Use and Recording of Funds by UBCM) of Annex B (Terms and Conditions).

### **2. INELIGIBLE EXPENDITURES**

The following are deemed Ineligible Expenditures:

- A. project expenditures incurred before April 1, 2005;
- B. project expenditures incurred before April 1, 2014 for the following investment categories:
  - highways;
  - regional and local airports;
  - short-line rail;
  - short-sea shipping;

- disaster mitigation;
  - broadband connectivity;
  - brownfield redevelopment;
  - cultural infrastructure;
  - tourism infrastructure;
  - sport infrastructure; and
  - recreational infrastructure;
- C. the cost of leasing of equipment by the Ultimate Recipient, any overhead costs, including salaries and other employment benefits of any employees of the Ultimate Recipient, its direct or indirect operating or administrative costs of Ultimate Recipients, and more specifically its costs related to planning, engineering, architecture, supervision, management and other activities normally carried out by its staff, except in accordance with Eligible Expenditures above;
- D. taxes for which the Ultimate Recipient is eligible for a tax rebate and all other costs eligible for rebates;
- E. purchase of land or any interest therein, and related costs;
- F. legal fees; and
- G. routine repair and maintenance costs.

**REPORT TO THE ELECTORAL AREA SERVICES COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 15, 2017**

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**SUBJECT**     **Bylaw 4214: Capital Reserve Fund for the Salt Spring Island Community Transit Service**

**ISSUE**

The need to establish a capital reserve fund for the Salt Spring Island (SSI) Community Transit Service.

**BACKGROUND**

Capital Regional District (CRD) services use capital reserve funds, established by bylaw, to help accumulate resources for future capital expenditures. Periodically, services transfer either budgeted or operating surplus funds to their respective capital reserve fund. The practice of building capital reserves for funding ongoing infrastructure renewal is essential to ensuring long-term sustainability of infrastructure-dependent CRD services.

The SSI Electoral Area Director concurs with the establishment of this proposed capital reserve fund.

**ALTERNATIVES**

Alternative 1

That the Electoral Area Services Committee recommend to the CRD Board:

That Bylaw No. 4214, "Salt Spring Island Community Transit Capital Reserve Fund Bylaw No. 1, 2017" be introduced and read a first and second time, read a third time, and adopted.

Alternative 2

That the Electoral Area Services Committee recommend to the CRD Board:

That the surplus funds be carried forward as surpluses in each service budget and be offset as contingencies, and that the proposed capital reserve fund bylaws not be adopted.

**FINANCIAL IMPLICATIONS**

Capital reserve funds provide a readily available source of funding for capital expenditures. Fund balances earn interest. By transferring unused funds at year end to a reserve fund, services are more likely to accumulate the required resources for future capital expenditures.

**CONCLUSION**

The practice of building capital reserves for funding ongoing infrastructure renewal is essential to ensuring the long-term sustainability of infrastructure-dependent CRD services. As with all capital reserve funds, the resources to build the proposed capital reserve funds can either be part of the respective service budget or result from an operating surplus. The terms of the proposed bylaws specify the kinds of expenditures that are allowed with the reserve funds.

The SSI Electoral Area Director concurs with the establishment of the proposed capital reserve fund.

**RECOMMENDATION**

That the Electoral Area Services Committee recommend to the CRD Board:  
That Bylaw No. 4214, “Salt Spring Island Community Transit Service Capital Reserve Fund Bylaw No. 1, 2017” be introduced and read a first and second time, read a third time, and adopted.

Submitted by:	Rianna Lachance, BCom, CPA, CA, Senior Manager, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

Appendix 1: Bylaw No. 4214

**CAPITAL REGIONAL DISTRICT**

**BYLAW NO. 4214**

\*\*\*\*\*

**A BYLAW TO ESTABLISH A CAPITAL RESERVE FUND  
FOR THE SALT SPRING ISLAND COMMUNITY TRANSIT SERVICE**

\*\*\*\*\*

**WHEREAS:**

- A. Under Bylaw No. 3438, "Salt Spring Island Community Transit and Transportation Service Establishment Bylaw No. 1, 2007", the Capital Regional District established a service for the purpose of providing a public passenger transportation system as defined in the *British Columbia Transit Act* as a community transit service on Salt Spring Island together with a service to address transportation needs within the Electoral Area;
- B. Pursuant to Section 377 of the *Local Government Act*, the Board of the Regional District is empowered by Section 188 of the *Community Charter* to establish a reserve fund for a specified purpose and direct that money be placed to the credit of the reserve fund;
- C. It is deemed desirable to establish a reserve fund for the Salt Spring Island Community Transit Service to provide for capital expenditures for or in respect of capital projects and land, machinery or equipment necessary for them and extension or renewal of existing capital works and related debt servicing payments.

**NOW THEREFORE** the Board of the Capital Regional District enacts as follows:

- 1. There shall be and is hereby established a capital reserve fund pursuant to the provisions of Section 188 of the *Community Charter* to be known as the "Salt Spring Island Community Transit Service Capital Reserve Fund".
- 2. Surplus monies from the operation of the service may be paid from time to time into the reserve fund.
- 3. Monies in the reserve fund will be used to provide for new capital works and extension or renewal of existing capital works, including the planning, study, design, construction of facilities, land acquisition, as well as machinery or equipment necessary for capital works and related debt servicing payments.
- 4. This Bylaw may be cited as the "Salt Spring Island Community Transit Capital Reserve Fund Bylaw No. 1, 2017".

READ A FIRST TIME THIS	13 <sup>th</sup>	DAY OF	December	2017
READ A SECOND TIME THIS	13 <sup>th</sup>	DAY OF	December	2017
READ A THIRD TIME THIS	13 <sup>th</sup>	DAY OF	December	2017
ADOPTED THIS	13 <sup>th</sup>	DAY OF	December	2017

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CHAIR

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CORPORATE OFFICER



Making a difference...together

**REPORT TO ELECTORAL AREA SERVICES COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 15, 2017**

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**SUBJECT**     **Age-friendly Communities Program Grant Application**

**ISSUE**

Capital Regional District Board authorization is required to enable submission of a Stream 2 grant application to the UBCM Age-friendly Communities Grant Program for the Moving Around Pender Society to provide community bus service for North Pender Island seniors.

**BACKGROUND**

The Age-friendly Communities Program is intended to assist local governments in BC to best support aging populations, develop and implement policies and plans, or develop projects that enable seniors to age in place and facilitate the creation and sustainability of age-friendly communities. Under the 2018 program, funding is available for two streams: (1) Age-friendly assessments, action plans and planning (up to \$25,000) and (2) Age-friendly projects (up to \$15,000).

The program specifies that eligible applicants are local governments (municipalities and regional districts) in British Columbia. Therefore, the Capital Regional District (CRD) may apply for the program. Only one application is permitted from each local government, and staff are not aware of other applications from CRD Services. A Board resolution is required to indicate support for the proposed activities and willingness to provide overall grant management.

The Moving Around Pender Society is requesting the CRD apply for a Stream 2 grant of \$15,000 to implement a community bus service geared to meet the critical transportation needs of the senior population of North Pender Island. In order to be eligible for Stream 2, applicants are required to have a completed age-friendly assessment or action plan, or demonstrate that their Official Community Plan, Integrated Sustainability Community Plan, or equivalent, is inclusive of age-friendly planning principles. The *Age Friendly North Pender Island Action Plan*, completed in 2015 under the guidance of the North Pender Island Local Trust Committee (Appendix A), would be included in the grant application to demonstrate eligibility.

The application deadline for the current grant call is November 10, 2017.

**ALTERNATIVES**

**Alternative 1**

That the Electoral Area Services Committee recommend to the Capital Regional District Board:  
That the Capital Regional District Board authorize the submission of a grant application to the UBCM Age-friendly Communities Program for the North Pender Community Bus project and that the Board support this project throughout its duration.

Alternative 2

That the Electoral Area Services Committee recommend to the Capital Regional District Board:  
That the report be referred back to staff for further review.

**IMPLICATIONS**

**SOCIAL IMPLICATIONS**

The Pender Island Community Bus would provide increased bus service to reduce anxiety and social isolation of seniors. It may reduce the number of seniors contemplating moving off the island due to the lack of transportation alternatives.

**ENVIRONMENTAL IMPLICATIONS**

Increased community bus service will reduce the greenhouse gas emissions associated with multiple private vehicles delivering seniors to local events and programs.

**CONCLUSION**

Grant applications are now being accepted for the 2018 Age-friendly Communities Program. The CRD is eligible to submit an application. Moving Around Pender has proposed an application to support community bus service on Pender Island geared to meet the critical needs of Pender's seniors. A Board resolution is required to indicate support for the proposed activities and willingness to provide overall grant management.

**RECOMMENDATION(S)**

That the Electoral Area Services Committee recommend to the Capital Regional District Board:  
That the Capital Regional District Board authorize the submission of a grant application to the UBCM Age-friendly Communities Program for the North Pender Community Bus project and that the Board support this project throughout its duration.

Submitted by:	June Klassen, MCIP, RPP, Manager, Service Delivery SGI
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

JK:ngm

Attachments: Appendix A Age Friendly North Pender Island Action Plan

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# Age Friendly North Pender Island Action Plan



North Pender Island Local Trust Committee • Hope Bay • November 4, 2015

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# What is an Age Friendly Community?



## WORLD HEALTH ORGANIZATION'S EIGHT AGE FRIENDLY AREAS

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An age-friendly community is one in which the policies, services and structures related to the physical and social environment are designed to support and enable older people to “age actively.”<sup>1</sup> In an age friendly community citizens can grow older and continue to live in security, enjoy good health and participate fully in society. The World Health Organization (WHO) identifies eight areas that contribute to an age friendly community. These are described below for the North Pender Island context and colour coded to match the respective sections in this plan.

- ❖ **Outdoor spaces and public buildings** are pleasant, clean, secure and physically accessible;
- ❖ There are opportunities for older adults to **participate** in leisure, social, cultural and spiritual activities with people of all ages and cultures;
- ❖ There are safe places to walk, cycle and use **mobility** devices for all ages and abilities and **community based public transportation** is accessible and affordable;
- ❖ **Housing** is affordable, appropriately located, well built, well designed and secure;
- ❖ Older people are treated with **respect** and are included in **civic life**;
- ❖ There are opportunities for **employment** and **volunteerism** that cater to older persons’ interests and abilities;
- ❖ Age-friendly **communication** and **information** is available; and
- ❖ **Community support** and **health services** are tailored to older persons’ needs.

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<sup>1</sup> World Health Organization definition, referenced at [http://www.who.int/ageing/projects/age\\_friendly\\_cities/en/](http://www.who.int/ageing/projects/age_friendly_cities/en/), accessed August 31, 2015

## ISLANDS TRUST MANDATE

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The Islands Trust Act (The Act) clearly states that the object of the Trust is to preserve and protect the Trust Area and its unique amenities and environment for the benefit of the residents of the Trust Area and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia. The implication is clear: partnerships with other governments, agencies and persons is essential to achieving the object of the Trust and in turn the objectives of Local Trust Committees.

Through its Official Community Plan and Land Use Bylaw (zoning and subdivision of land) the North Pender Island Local Trust Committee (LTC) has direct authority and influence on matters of land use —including transitional and special needs housing and phasing of roads and infrastructure—and environmental protection.

Many areas of relevance to age friendly planning place the LTC in an indirect role through cooperation and agreements with other agencies including Provincial and regional government as well as voluntary non profit agencies. The plan recognizes direct and indirect partnership oriented actions.



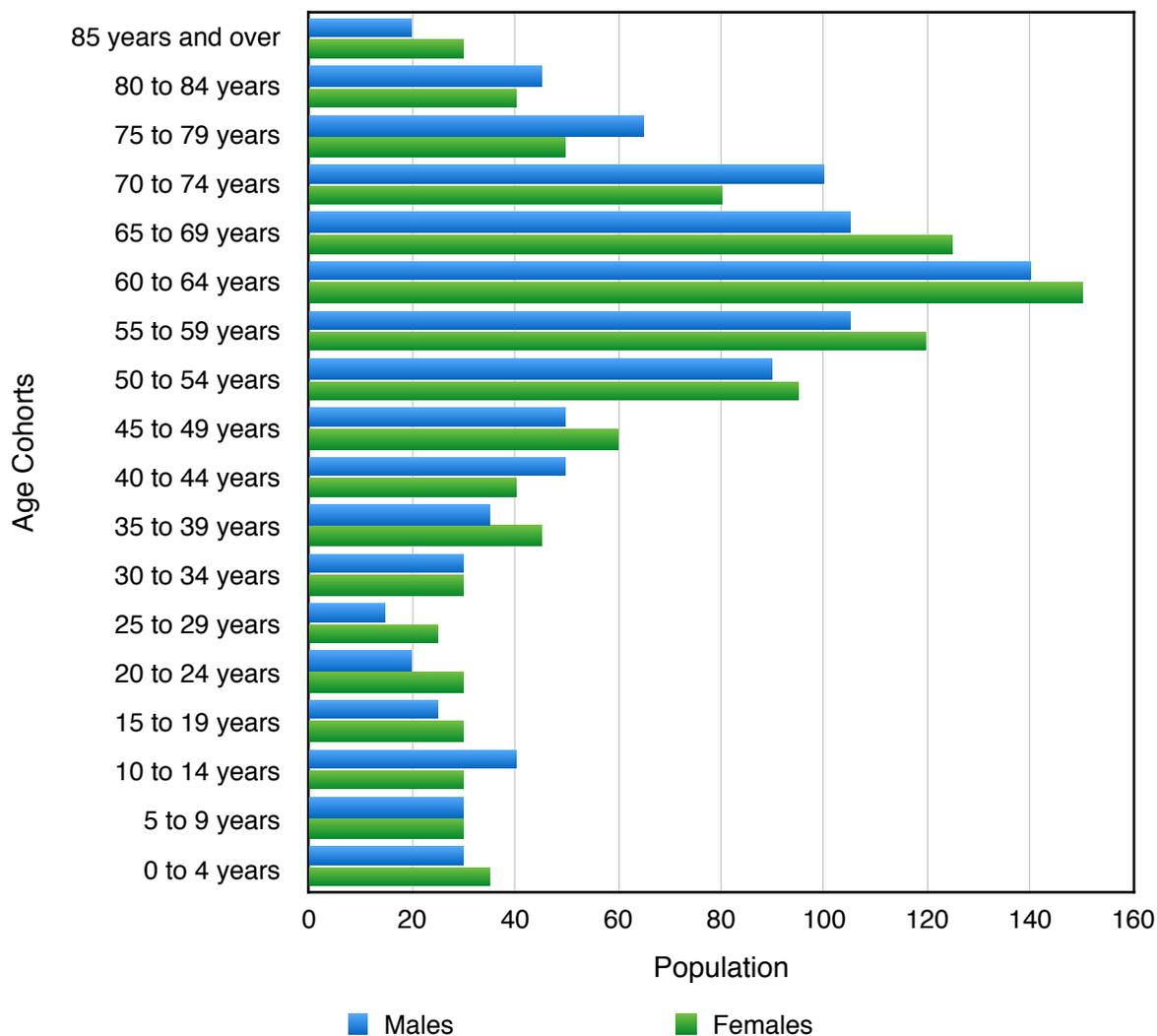
*Stock photo*

# Baseline Analysis Highlights

## DEMOGRAPHICS

The island's permanent resident population is 2,035 based on the 2011 Census. This is a 2% increase over the 2006 population of 1,935. Males number 990, or 48.6%; females 1,045, or 51.4%. A majority of the population, 2,020 people, live in private households. The census counts 1,039 occupied private dwellings.

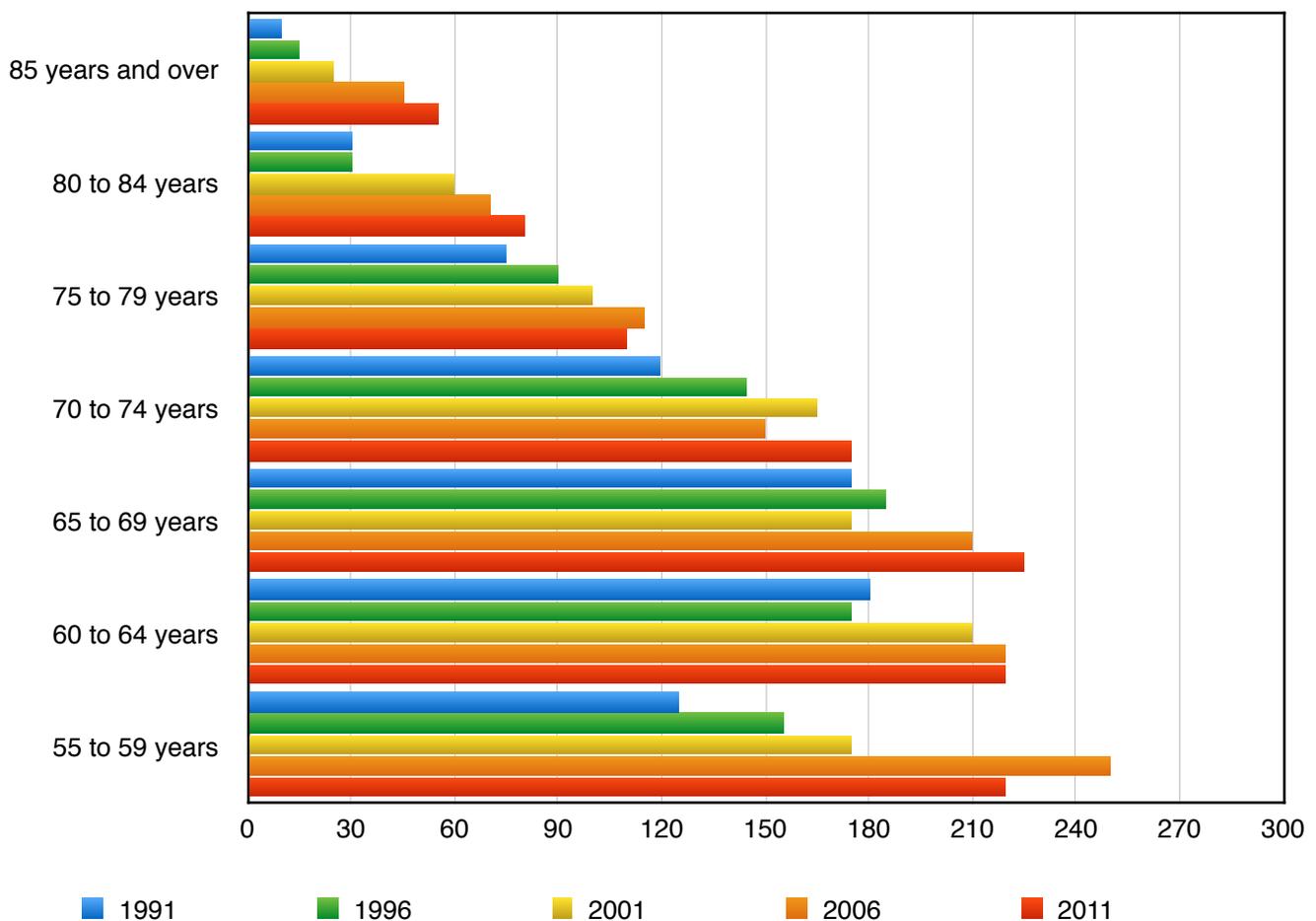
**Chart 1 North Pender Island Male & Female Pop. by Cohorts (Census 2011)**



## Older Adult Population change

Population change for North Pender Island is illustrated in 5 year cohorts between 1991 and 2011, particularly with a focus on the cohorts over age 55.<sup>2</sup> All cohorts have increased in number; the cohorts over 80 and the youngest, 55 to 59, the most. The 80 to 84 year cohort has more than doubled since 1991, rising from 30 to 80. The population of the Gulf Islands is older than both that of BC and Island Health's jurisdiction.<sup>3</sup>

**Chart 2 N. Pender Island Population Change 1991-2011 Age 55 to 85+**



Source: Statistics Canada, 2011 Census

<sup>2</sup> Source: Adapted from Statistics Canada, Custom Tabulations, 1991-2006 Census. Adapted from Statistics Canada, Semi-custom Profile, 2011 Census. This does not constitute an endorsement by Statistics Canada of this product.

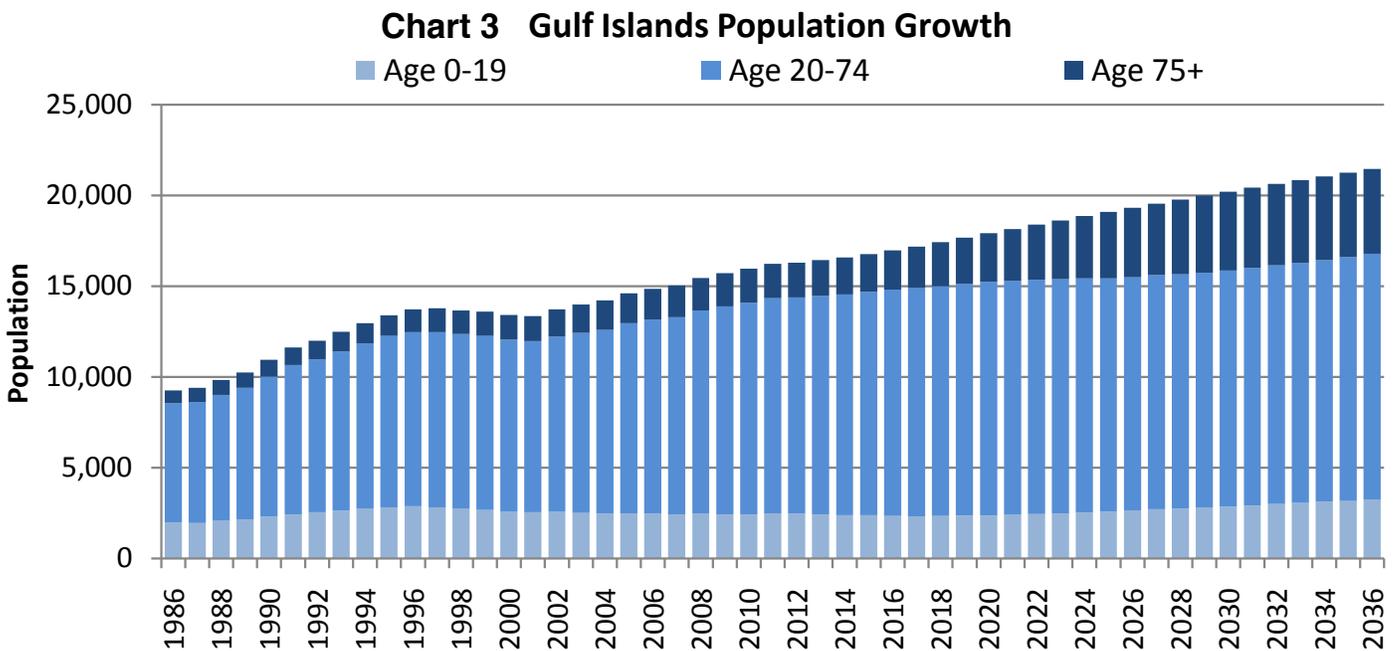
<sup>3</sup> Ibid.

## Population change estimates and forecast

Population change estimates and forecast by 5 year cohorts between 2011 and 2041, a 30 year period, is described and illustrated.<sup>4</sup> The forecast is shown in Chart 3 for 10 year intervals. The data is produced by BC Stats' P.E.O.P.L.E. program and published by Island Health for the Gulf Islands Local Health area and includes the islands of North Pender, South Pender, Saturna, Mayne, Galiano, Salt Spring, and Prevost Islands.

The population of the Gulf Islands is expected to grow 27% by 2034 (see Chart 3), while the population over the age of 75 is expected to grow 127% in the same period. This group alone will account for most of the overall population growth.

Ecological, social and economic constraints of the island are limiting factors for future population growth.



Source: BC Statistics, PEOPLE 2013

<sup>4</sup> Source: BC Statistics, PEOPLE 2013.

## LAND USE

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The predominant land use on North Pender is single-family residential. Over two-thirds of the land area is designated and zoned for residential use (Rural Residential and Rural). All residential land on the island is zoned to permit single family dwellings (and accessory cottages under certain circumstances). A GIS mapping exercise reveals that under current Land Use Bylaw rules a total of 279 accessory cottages could be built within the Rural, Rural Residential and Agricultural Zone districts on parcels of 1.2 hectares or larger. The exercise did not analyze the number of existing cottages on these parcels and did not consider geometric, topographic, or environmental constraints.

There are no multiple unit buildings and no multiple unit residential zoning. The bulk of the remaining land is designated for agriculture (13%) or has protected status (15%). There are limited areas designated for various institutional and service uses (less than 1% of the island's land area), commercially designated land (also less than 1% of the island) and only around 6 hectares (15 acres) of land designated for industrial uses.

Land use patterns are relevant because this influences where services are relative to where people live, work and play. A more dispersed pattern, for example, places heavier demands on transportation networks and services.



*Hope Bay*

*Photo: Kevin Oke Photography*

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# Listening to the Voices

## APPROACH AND HIGHLIGHTS

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*Photos by James van Hemert*

The voices of older adults, stakeholders, and service providers speaking to the needs and aspirations of an aging population were listened to using a variety of methods: direct face-to-face, community questionnaire, and telephone interviews.

### Community Workshop #1

The first community workshop<sup>5</sup> was designed to provide a forum for learning about the challenges faced by an aging population on North Pender Island. The appetite for conversation was set with presentations on age friendly planning, housing for older adults, alternative transportation, community support and health services. Participants engaged in round table conversations on the question of “What is the most important thing or things that need to happen, so that I can live out my days happily and healthfully on Pender Island?” Priority areas identified were expanding housing diversity, more community supports for aging in place, the need for a community bus service, and the desire for safer places to walk and bicycle.

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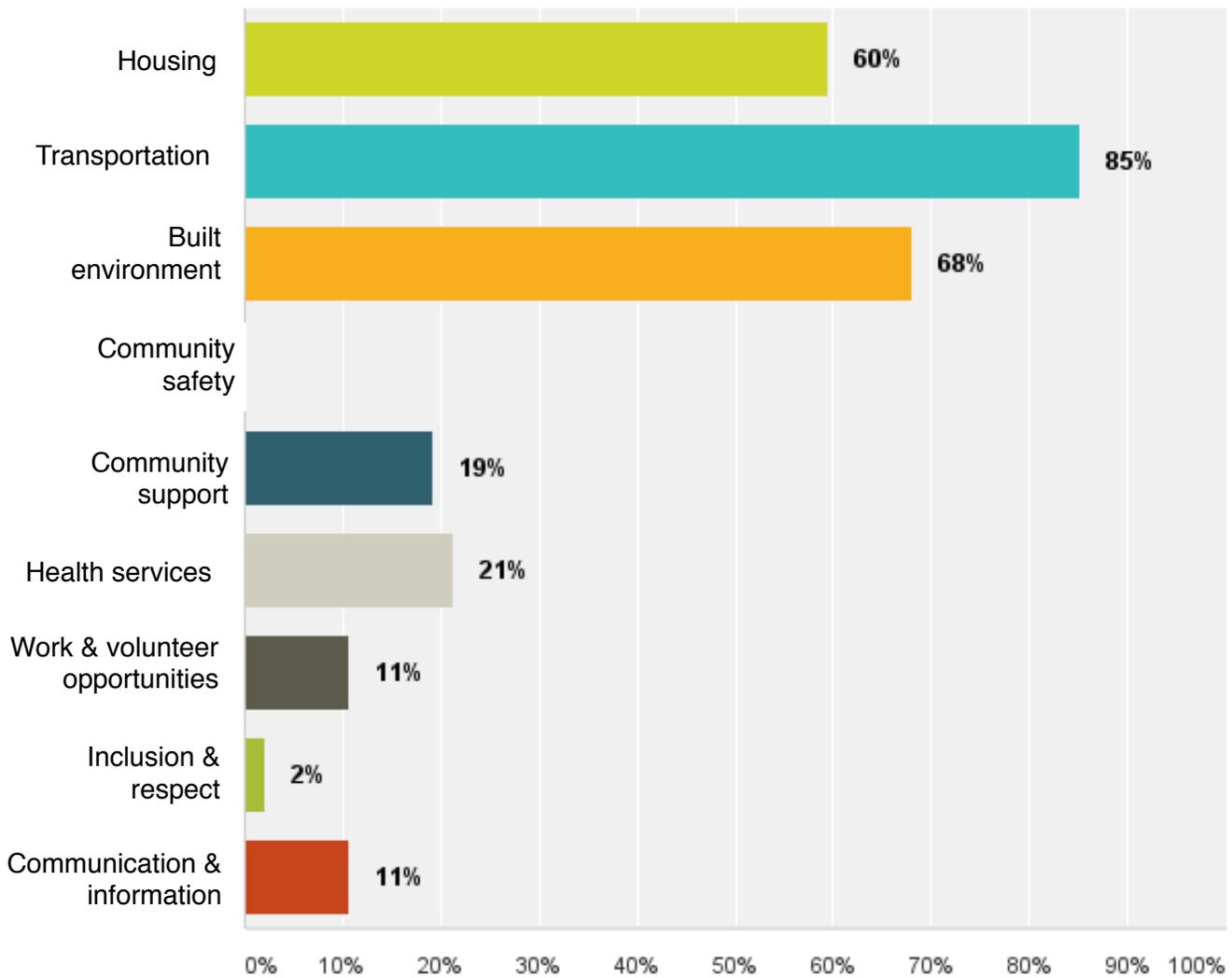
<sup>5</sup> Held on May 19, 2015 at the Pender Islands Community Hall

## Community Questionnaire

A community questionnaire was conducted to cast a wider net for community feedback on the extent to which individuals perceived the age friendliness of living on the Pender islands. There were 70 questionnaires completed between May 14 and June 12. The majority were completed directly online at Survey-Monkey, the remainder completed on paper and the data placed online by Islands Trust staff. Topics explored included housing, transportation, the built

### Q15 What are the least age friendly aspects of Pender Island? Choose 3

Answered: 47 Skipped: 23

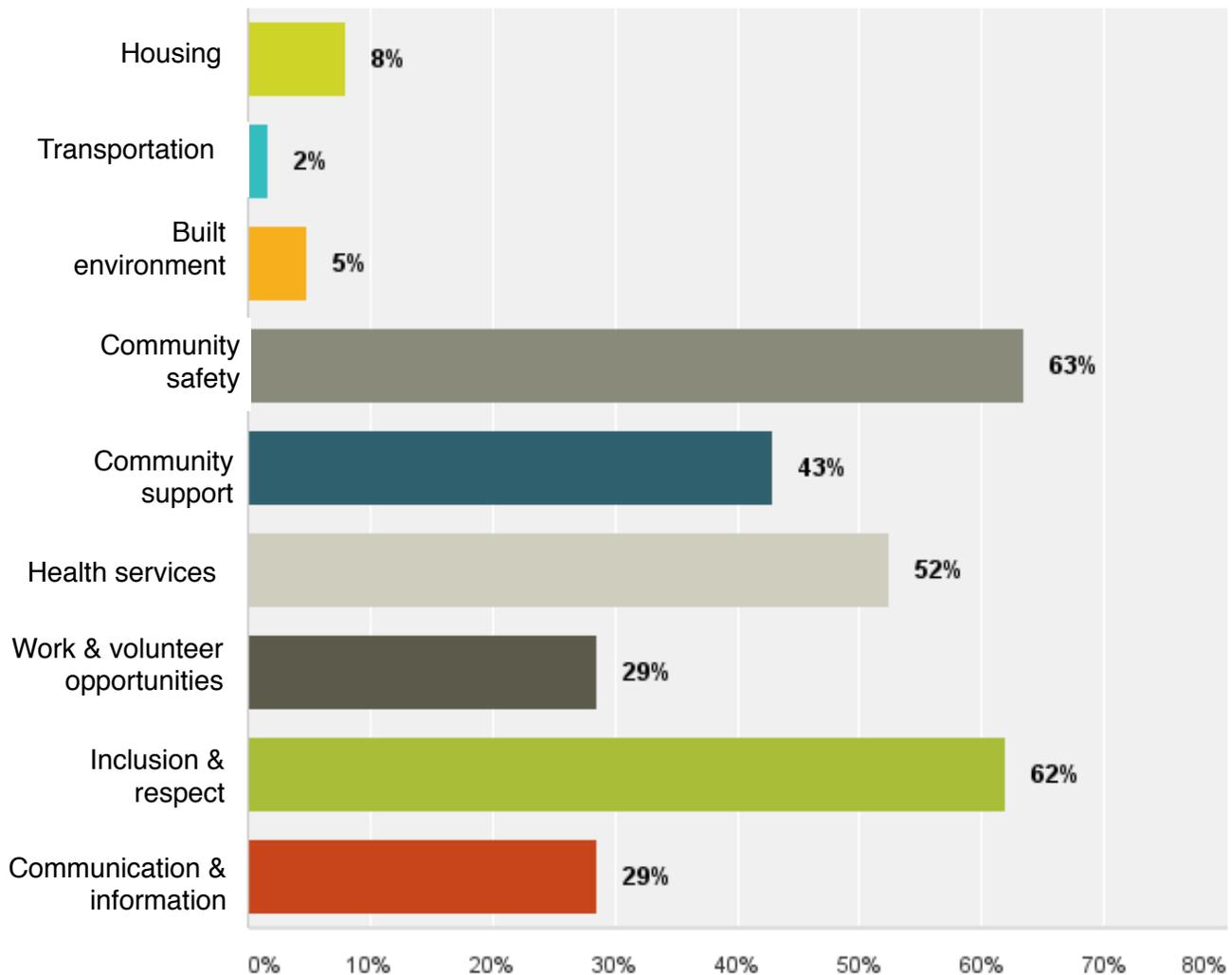


environment, community safety, community support, health services, work & volunteer opportunities, inclusion & respect, and communication & information. The least age friendly aspects reported were transportation, housing, and the built environment. The most age friendly aspects were community safety, inclusion & respect, and health services.

The questionnaire was designed as a voluntary “opt in” or “self selection” survey which anyone could complete. It is not therefore a representative “scientific” sample of a given population.

### Q14 What are the most age friendly aspects of North Pender Island? Choose 3

Answered: 63 Skipped: 7



The information gathered is valuable nonetheless because it represents one of several streams of information and data collected in the process of creating the age friendly plan.

Paper copies of the questionnaires were distributed at the workshop of May 19 and completed surveys were dropped off at the Capital Regional District building inspection office in the Driftwood Centre. The URL address for taking the survey online was provided at the workshop and sent out by email through various community channels. Full survey results are available on the Islands Trust website.

### **Stakeholder Service Provider Interviews**

Interviews were conducted by telephone with service providers to learn more about the role their agencies play in advancing age friendly principles, challenges faced, opportunities seen, outcomes desired for the age friendly plan, and the extent to which they would be willing to participate as a partner in the plan.

Those interviewed included Wendy MacDonald, Executive Director of the Pender Islands Senior Housing Society (operates Plum Tree Court), Carolyne Cartwright-Ower, Community Care Coordinator for Island Health, (dual role of case manager for home care and respite care and community nursing), Michael Symons, chair of the Pender Island Parks & Recreation Commission (PIPRC), Andrea Mills, Community Support worker with the Pender Health Care Society, David Howe, Southern Gulf Islands Director for the Capital Regional District, and Christine Culham, Senior Manager for Regional Housing for the Capital Regional District. Many action oriented opportunities identified by these people have been incorporated into the plan.



*Photo by Justine Starke*

## Community Workshop #2

The second community workshop held at the Pender Islands Community Hall offered participants an opportunity to identify action-oriented priorities based on an overview of what was learned through the community questionnaire, stakeholder & service provider interviews, and the baseline analysis. Priorities identified for the built environment included improved accessibility for public facilities such as the ferry terminal and Nu2Yu thrift store; priorities for housing include Land Use Bylaw changes to permit secondary suites and generally expand housing diversity; priority highlights for mobility include a locally controlled agency responsible for community transit and expropriation of rights of way for safety and expanding pedestrian and cycling opportunities.



*Pender Islands Community Hall*

*Photo by Joseph Lopez*

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# Outdoor Spaces and Buildings

Outdoor spaces and public buildings are pleasant, clean, secure and physically accessible.

## CHALLENGES

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North Pender Island's topography and historical development patterns create a charming but challenging landscape in which to navigate. Finding flat and safe trails and paths to walk and cycle on is difficult, often because of narrow roads and fast driving.

The majority of government and business facilities are not fully accessible to older adults. Shortcomings include inadequate directional signage and stairs with no accompanying ramps.

### Best Practice Example

Healthy Saanich Committee's Senior Friendly Business Decal program assesses and recognizes local businesses that apply age-friendly principles and practices.

## NORTH PENDER ISLAND GOOD PRACTICES

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Community safety, one element of the built environment, achieved the highest ranking (63%) of questionnaire respondents selecting their top three age friendly aspects of North Pender Island.

Pender Islands Parks & Recreation Commission is adopting a Senior Friendly Community philosophy into their projects and attempts to make them suitable for all ability levels.



Bench with a view, Hope Bay.  
Photo by Justine Starke

## MOVING FORWARD ACTIONS

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1. Amend Commercial & Industrial Development Permit Area guidelines of the Official Community Plan to address accessibility.
2. Identify funding and take short term action to modify all government and non-profit buildings to be fully accessible for older adults and those with mobility challenges. Specifically the following can be improved with better accessibility, and signs indicating accessible routes:
  - ◆ Ferry terminal, Otter Bay;
  - ◆ Islands Trust office in Hope Bay;
  - ◆ Post office in Hope Bay; and
  - ◆ Nu2Yu thrift store.
3. In partnership with the Southern Gulf Islands Economic Development Commission and Pender Island Chamber of Commerce educate local businesses on the need to make their facilities fully accessible to older adults and those with mobility challenges. Where appropriate, secure financial support for upgrades to private buildings to make them accessible. Specific businesses identified include:
  - ◆ Port Browning Pub; and
  - ◆ Retail spaces at Hope Bay.
4. Encourage the Pender Islands Parks & Recreation Commission to formally adopt accessibility standards and to identify and prioritize projects that are fully accessible.

5. Explore the feasibility of developing an indoor and outdoor facility for exercise and recreation.



*Nu -To-Yu. Photo by Joseph Lopez.*

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# Mobility

The island has safe places to walk, cycle and use mobility devices for all ages, and community based public transportation is accessible and affordable.

## CHALLENGES

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Mobility options are limited almost entirely to the automobile. This in turn gives rise to the fear of losing one's driver's license and being rendered immobile and dependent on others for rides, or worse, leaving home and the Island.

Night driving road safety is an issue with narrow winding roads and faintly painted lines or a lack of lines.

Reliable transportation is particularly important for attending medical or other appointments. Alternatives to the automobile that are lacking or deficient include:

- Community transit service is not available: 68% of respondents of the community questionnaire stated that they would use public transit for most or some of their travel on the island; and
- Older adults want to walk and cycle more, stay active, but find this difficult here: 83% of questionnaire respondents indicated that there are no safe and comfortable sidewalks or trails to the places they need to go, either most of the time or never.

The cost of living is high: goods and services are available at a premium on the island, or available at the cost of travel off island. When too many choose to go off island for goods and services, the competitive viability of local businesses suffer.

## NORTH PENDER ISLAND GOOD PRACTICES

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The island's 26 car stops provide a unique means of requesting and sharing rides in a manner that is non-threatening and safe.

The "Moving Around Pender Society" (MAPS) actively studies and facilitates improvements to active forms of transportation, particularly walking and cycling. They produced a thorough and clever Transportation Management Plan in 2012.



*Photo by James van Hemert*

The Islands Trust has entered into a formal partnership agreement with the Ministry of Transportation and Infrastructure (MOTI) that requires public consultation as part of future road construction or improvements.

### **Best Practice Example**

The Mayne Island Bus Society is a low cost community funded bus service operates a by donation fare bus service that currently uses volunteer bus drivers. Routes focus on getting passengers to and from the BC ferry terminal.

## MOVING FORWARD ACTIONS

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1. Formally adopt a road and infrastructure phasing plan using the MAPS Transportation Management Plan as a starting point.
2. Support and facilitate a community supported on-island transit service operated by a locally controlled transit organization.
3. Support the Southern Gulf Islands Economic Development Commission's (SGIEDC) inter-island water taxi concept.
4. Support and facilitate the development of alternative transportation routes (ATR) which are designed for use as walking pathways as well as for bicycles, strollers, wheel chairs and other non-motorized vehicles and possibly horses. Specific priority routes and improvements<sup>6</sup> identified by MAPS are:
  - Pedestrian/cycling route from Magic Lake Estates via Shingle Bay through the National Park to Irene Bay and South Otter Bay Road;
  - An extension of Magic Lake –South Otter Bay Road route to the Library and Nu 2 Yu;
  - Bypasses for Einer's Hill and Scarff Road Hill to enhance safety; and
  - Safety improvement of Pender Islands' main thoroughfare, the road from the Ferry Terminal in Otter Bay to the Community Hall and the Driftwood Centre and beyond to Magic Lake Estates.
5. Encourage MOTI to review the road line painting program to ensure regular maintenance and addition of new lines where needed for safety reasons.
6. Expropriate lands for rights of way in critical locations identified in the MAPS Transportation Management Plan to support alternative transportation routes.

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<sup>6</sup> Pender Islands Transportation Survey, May-July 2012, Moving Around Pender Society, Capital Regional District, and Pender Island Community Service Society (Nu-To-Yu).

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# Housing

Housing is diverse, affordable, appropriately located, well built, age-adaptable designed and secure.

## CHALLENGES

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Safe and affordable housing with home support services is identified as one of the most important decision factors for staying and aging in place on North Pender Island.



*Plum Tree Court, operated by the Pender Island Seniors Housing Association*

*Photo by Islands Trust staff*

The island has a very limited range of housing types; almost 100% of homes are single family. This situation is reinforced by the Land Use Bylaw which limits its options as follows:

- No secondary suites are permitted;
- Limited opportunity for accessory dwellings (vacation cottages permitted in Rural, Rural Residential, and Agricultural zones on lots larger than 1.2 hectares; and

- No multi-unit housing types such as apartments or townhouses are permitted.

There is an absence of assisted living and complex care facilities.

Support services that are lacking or insufficient include:

- Transportation
- Light yard work
- Minor home repairs
- Light housekeeping

Affordable housing opportunities are very limited. The only purpose built facility is Plum Tree Court with 6 units.

### **Best Practice Example**

The District of Saanich (BC) permits secondary suites within a defined area subject to specific requirements: single family zoning, floor area within the maximum floor space ratio, suite is wholly contained within the single family dwelling, the registered owner of the property must occupy either the single family dwelling or the secondary suite as their principal residence, an Occupancy Permit must be issued, and one additional onsite-parking space for the occupant of the secondary suite is required.

## **NORTH PENDER ISLAND GOOD PRACTICES**

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Plum Tree Court is a well managed locally initiated affordable housing project that serves six households with land zoning for future expansion.

The use of existing housing stock represents a valuable asset and is the most affordable way to adapt housing for an aging population.

## MOVING FORWARD ACTIONS

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1. In consultation with the community, explore potential changes to the Land Use Bylaw in the following manner:
  - permit secondary suites in all single family zones: Rural Residential (RR), Rural ( R ), Rural Comprehensive One (RC1), Rural Comprehensive Two (RC2) Agricultural (AR);
  - expand the number of zones that permit accessory units to include the Rural Residential (RR) zone;
  - reduce the minimum lot size for permitted accessory dwelling units.
  - create a multi-family dwelling zone district; and
  - create or modify a zone district to permit medium density cluster small unit housing designed for older adults.



*Example of a small unit cluster housing plan*

Source: [arboracres.org](http://arboracres.org)

2. Attract more support care workers to North Pender Island (enables people to stay in their own homes longer).
3. Support and encourage the Pender Islands Senior Housing Society to expand facilities at Plum Tree Court.
4. Invite the Capital Regional Housing Corporation (CRHC) to host a workshop which will introduce citizens and service providers with their wide

range of potential supports for affordable housing such as best practices, educational support for housing policy, and partnerships to build facilities.

5. Expand housing options by promoting co-housing, leasing bedrooms to young adults.
6. Upon completion of the required zoning bylaw amendment, promote market based small unit clusters (sometimes referred to as patio homes) purpose built for older adults.

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# Social Participation

Opportunities for older adults are available to participate in leisure, social, cultural and spiritual activities with people of all ages and cultures.

## CHALLENGES

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Despite the wide ranging social opportunities--which seem “outsized” relative to the island’s population--many questionnaire respondents felt the opportunities were insufficient (21%) or didn’t know (21%).

Workshop participants emphasized the importance of older adults being able to get out and do things together like walking, swimming, and cooking. This is to connect socially, stay active, physically and mentally.

It is acknowledged that it is important for these activities to connect older adults with other age groups, particular youth.



*Stock photo*

## NORTH PENDER ISLAND GOOD PRACTICES

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The Pender Islands Community Hall, fully supported financially and programmatically by island citizens, provides a venue for a wide range of community

cultural, social and leisure activities. The facility is handicap accessible and centrally located.

### **Best Practice Example**

A community older adults' centre was built at Cordova Bay Elementary School (Saanich, BC). Cordova Bay Community Place is the home of the Cordova Bay 55 Plus Association offering recreation and social opportunities for older persons in that community. This unique centre places older persons and children as the focal point of community activities.

## **MOVING FORWARD ACTIONS**

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1. Encourage older adults, particularly those who are socially isolated, to participate in mentoring young people in life skills such as cooking, canning, sewing, gardening, and basic carpentry. A mentoring program may be possible in partnership with the Pender Elementary School and the Royal Canadian Legion.
2. Encourage the Pender Island Recreation Commission to develop an age based recreation plan that addresses the particular needs of older adults.

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# Respect and Civic Participation

Older people are treated with respect and are included in civic life.

## CHALLENGES

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We learned in the first workshop that older adults receive a high degree of respect in the community and are socially included in local government, community societies and nonprofit boards. A substantial majority (94%) indicated in the questionnaire that they are always or usually treated with respect in the community. A majority (62%) identified respect & social inclusion as the most age friendly aspects.



*Stock photo*

## NORTH PENDER ISLAND GOOD PRACTICES

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The Royal Canadian Legion hosts a variety of inter-generational events. Because older adults are almost a majority on North Pender Island, they receive respect.

## Best Practice Example

The Gulf Islands School District's Connecting Generations program offers students the opportunity to teach computer skills to older adults.

## MOVING FORWARD ACTIONS

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1. Explore a Pender Island expansion of Connecting Generations, a program of the Gulf Islands School District operating at the Salt Spring High School, with United Way's Better at Home program.
2. The Local Trust Committee, Health Centre and senior's organizations promote awareness of the services of the BC Senior's Advocate office, which include addressing elder abuse.

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# Employment & Volunteer Opportunities

There are opportunities for employment and volunteerism that cater to older persons' interests and abilities.

## CHALLENGES

---

The community questionnaire revealed that slightly less than half (48%) of respondents believed there were adequate employment opportunities for older adults.



*Older adult mentoring a child.  
Stock photo.*

## NORTH PENDER ISLAND GOOD PRACTICES

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“What we have out here is a volunteer economy. It’s second nature here.”

-- Dave Howe, CRD Area Director, quoted by Jack Knox in the Victoria Times Colonist<sup>7</sup>

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<sup>7</sup>Pender Island an urbanite's dream, Victoria Times Colonist, February 16, 2015  
more at: <http://www.timescolonist.com/news/local/jack-knox-pender-island-an-urbanite-s-dream-1.1764893#sthash.EThzBczu.dpuf>

The majority (93%) of community questionnaire respondents are aware of volunteer opportunities.

### **Best Practice Example**

Volunteer Cowichan (Duncan, BC) recruits, interviews, and place volunteers with agencies through a volunteer referral system. They promote volunteerism by organizing and sponsoring events such as the National Volunteer Week, Volunteer Spirit Awards and Volunteer Fairs. They offer training and consultation for volunteer organizations and also assist local employment centres. They have an extensive library.

## **MOVING FORWARD ACTIONS**

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1. In partnership with the Southern Gulf Islands Economic Development Commission (SGIEDC), identify ways in which a senior population can participate in a steady state economy.<sup>8</sup>

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<sup>8</sup> A steady state economy has zero economic growth, a stable population, and stable consumption.

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# Communication & Information

Age friendly communication and information is available.

## CHALLENGES

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Interviews and community workshop reveal that a central website and complementary traditional media (print, phone calls) for service information would be a helpful improvement.

Not all older adults are computer literate and use email, and still need to be reached by using traditional communication devices.



*Stock photo*

## NORTH PENDER ISLAND GOOD PRACTICES

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The Islands Trust's North Pender Island LTC is an excellent web site that provides easy access to bylaws, studies, meeting agendas and minutes, general interest information, and provides an opportunity for receiving notices via email on Islands Trust meetings.

The Pender Island Health Centre offers a wide range of health and social support services. A dedicated staff position serves the social support services with program coordination and communicating information via a website, word of mouth and an email service for social and educational events.

### **Best Practice Example**

Age Friendly Edmonton and “211” introduced a Seniors Information Phone Line in 2014. Seniors can call a single source for information about programs and services. The “211” operators answer straightforward requests for information and ask a few questions to identify the most effective referral to make. If callers require support, and not just information, the call is transferred to one of several senior service agencies that have outreach staff who can help.

### **MOVING FORWARD ACTIONS**

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1. Create a central age friendly website focused on the full suite of service information for older adults.
2. Set up a non-internet based person to person communication system to communicate and disseminate information. For example, a one stop information centre at the health clinic.

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# Community Support & Health Services

Community support and health services are tailored to older persons' needs.

## CHALLENGES

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### *Community support*

There are not enough qualified people to provide home support services. This is reflected in responses from the community questionnaire: 37% of respondents said that home support services (e.g. meals, delivery, home care) were always or usually adequate; 27% said they were sometimes available; 34% didn't know.



*Pender Islands Health Centre.*

*Photo by Justine Starke*

## Best Practice Examples

### *Community Support*

A government sponsored program in Victoria, BC, the **Piercy Respite Hotel**, is an example of a facility that offers a safe, secure and supportive environment to guests, enabling their caregivers to have a period of rest and renewal. The dining room, enclosed garden, and fireside lounge provide a comfortable setting for social interaction. The hotel operates 24 hours a day, seven days a week. It is located on the main floor of the Hillside Seniors Health Centre.

### *Health Services*

The **Integrated Health Care Team** at the Kaatza Health Clinic in Lake Cowichan is primary health care team consisting of a dietitian, primary health care nurse, social worker/counsellor and a clinical office assistant. The innovative approach was developed by Island Health in consultation with community groups.

### *Health Services*

Health services was identified by half of questionnaire respondents selecting their top age friendly community aspects. Slightly less than half of those surveyed indicated that services were always or usually adequate.

## NORTH PENDER ISLAND GOOD PRACTICES

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The Pender Islands Health Centre serves as a hub for a wide range of health and community support services.

The Community Care Coordinator is a dual role position which provides case management as well as community nursing. The majority of work is in people's homes. This program is working well, according to Carolyn Cartwright-Owers, who holds the position at Island Health. She notes that it enables people to stay in their homes longer.

## MOVING FORWARD ACTIONS

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### *Community Support*

1. Secure reliable long term funding for a full time community support “career position.”
2. Attract more qualified and certified home support workers to live and work on the island.

### *Health Services*

3. Secure respite and palliative care beds.
4. Attract a general practitioner doctor to live and work on the island.
5. Set up an integrated health care team such as the one set up by Island Health for the Town of Lake Cowichan, which provides both public health and primary health care services.

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# Keeping the Plan Alive and Relevant

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1. Establish an inter-agency partnership task force to monitor progress and partnership relationships.
2. Formalize partnerships for active transportation initiatives with the Ministry of Transportation and Infrastructure (MOTI) and Moving Around Pender Society (MAPS).
3. Partner with Southern Gulf Islands Economic Development Commission (SGIEDC) and the Chamber of Commerce in pursuing steady-state economic health.
4. Explore with the community potential OCP and Land Use Bylaw amendments to provide an age friendly lens to planning policy and provide specific direction on relevant topics.



*Photo by Elim Home*

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# Acknowledgements

Well over 100 citizens contributed to the making of this plan. Those acknowledged here by name made unique or sustained contributions.

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## Elected Officials

- Derek Masselink, Trustee, North Pender Island Local Trust Committee
- Dianne Barber, Trustee, North Pender Island Local Trust Committee
- David Howe, Southern Gulf Islands Area Director, Capital Regional District

## Islands Trust Staff

- Justine Starke, Island Planner

## Key participants

- Andrea Mills, Community Support Worker, Pender Islands Health Centre
- Wendy MacDonald, Executive Director, Pender Islands Senior Housing Society
- Carolyne Cartwright-Owers, Community Care Coordinator, Island health
- Michael Symons, Chair, Pender Islands Recreation Commission
- Niall Parker, Board member, Moving Around Pender Society (MAPS)

## Funding agency

- Senior's Housing and Support Initiative of the Union of British Columbia Municipalities (UBCM) and the BC Ministry of Health

## Consultants

- James van Hemert, van Hemert & Co.
- Dr. Trevor Hancock

# Actions Summary

The actions summary is organized by topic area, priority and recommended partners. Priority levels are immediate (within three months), high (within a year), Medium (one to three years) and ongoing.

Action	Priority	Partners
<b>Outdoor spaces and buildings</b>		
1. Amend Commercial & Industrial Development Permit Area guidelines of the Official Community Plan to address accessibility.	High Within one year	
2. Identify funding and take short term action to modify all government and non-profit buildings to be fully accessible for older adults and those with mobility challenges.	Immediate Within three months	
3. In partnership Southern Gulf Islands Economic Development Commission (SGIEDC) and Pender Island chamber of commerce, educate local businesses on the need to make their facilities fully accessible to older adults and those with mobility challenges.	Ongoing	SGIEDC and Pender Island Chamber of Commerce
4. Encourage the Pender Islands Parks & Recreation Commission (PIPRC) to formally adopt accessibility standards and to identify and prioritize projects that are fully accessible.	High Within one year	PIPRC
5. Explore the feasibility of developing an indoor and outdoor facility for exercise and recreation.	High Within one year	PIPRC
<b>Mobility</b>		
1. Formally adopt a road and infrastructure phasing plan using the MAPS Transportation Management Plan as a starting point.	High Within one year	MAPS

Action	Priority	Partners
2. Support and facilitate a community supported on-island transit service operated by a locally controlled transit organization.	High Within one year	SGIEDC
3. Support the Southern Gulf Islands Economic Development Commission's (SGIEDC) inter-island water taxi concept.	Ongoing	SGIEDC
4. Support and facilitate the development of alternative transportation routes (ATR) which are designed for use as walking pathways as well as for bicycles, strollers, wheel chairs and other non-motorized vehicles and possibly horses.	Ongoing	MAPS
5. Encourage Ministry of Transportation and infrastructure (MOTI) to review the road line painting program to ensure regular maintenance and addition of new lines where needed for safety reasons.	Ongoing	MOTI
6. Expropriate lands for rights of way in critical locations identified in the Moving Around Pender Society (MAPS) Transportation Management Plan to support alternative transportation routes.	Ongoing	MAPS, MOTI
<b>Housing</b>		
1. In consultation with the community explore the potential revisions to the Land Use Bylaw to permit secondary suites in all single family zones, expand the number of zones that permit accessory units, reduce the minimum lot size for permitted accessory dwelling units, create a multi-family dwelling zone district, create or modify a zone district to permit medium density cluster small unit housing designed for older adults.	High Within one year	
2. Attract more support care workers to North Pender Island (enables people to remain in their homes longer).	Ongoing	Island Health, Pender Islands Health Centre
3. Support and encourage the Pender Islands Senior Housing Society to expand facilities at Plum Tree Court.	Ongoing	Pender Islands Senior Housing Society

Action	Priority	Partners
4. Invite the Capital Regional Housing Corporation (CRHC) to host a workshop which will introduce citizens and service providers with their wide range of potential supports for affordable housing such as best practices, educational support for housing policy, and partnerships to build facilities.	Immediate Within three months	CRD Regional Housing Corporation
5. Expand housing options by promoting co-housing, leasing bedrooms to young adults.	Ongoing	
6. Upon completion of the required zoning bylaw amendment, promote market based small unit clusters (sometimes referred to as patio homes) purpose built for older adults.	Ongoing	
<b>Social participation</b>		
1. Encourage older adults, particularly those who are socially isolated, to participate in mentoring young people in life skills such as cooking, canning, sewing, gardening, and basic carpentry. A mentoring program may be possible in partnership with the Pender Elementary School and the Royal Canadian Legion.	Ongoing	Pender Elementary School Royal Canadian Legion
2. Encourage the Pender Island Recreation Commission to develop an age based recreation plan that addresses the particular needs of older adults.	Medium One to three years	PIRC
<b>Respect &amp; Civic Participation</b>		
1. Explore a Pender Island expansion of Connecting Generations, a program of the Gulf Islands School District operating at the Salt Spring High School, with United Way's Better at Home program.	Medium One to three years	Gulf Islands School District
2. The Local Trust Committee, Health Centre and senior's organizations promote awareness of the services of the BC Senior's Advocate office, which include addressing elder abuse.	Ongoing	Health Centre
<b>Employment &amp; Volunteer Opportunities</b>		

Action	Priority	Partners
1. In partnership with the Southern Gulf Islands Economic Development Commission (SGIEDC) identify ways in which a senior population can participate in a steady state economy.	Ongoing	SGIEDC
<b>Communication &amp; Information</b>		
1. Create a central age friendly website focused on the full suite of service information for older adults.	Medium One to three years	Health Centre
2. Set up a non-internet based, person to person communication system to communicate and disseminate information. For example, a one stop information centre at the health clinic.	Medium One to three years	Health Centre
<b>Community Support &amp; Health Services</b>		
<i>Community Support</i>		
1. Secure reliable long term funding for a full time community support “career position.”	Ongoing	Health Centre
2. Attract more qualified and certified home support workers to live and work on the island.	Ongoing	Island Health
<i>Health Services</i>		
3. Secure respite and palliative care beds.	Medium One to three years	Island Health
4. Attract a general practitioner doctor to live and work on the island.	Ongoing	Island Health
5. Set up an integrated health care team such as the one set up by Island Health for the Town of Lake Cowichan which provides both public health and primary health care services.	Medium One to three years	Island Health Health Centre
<b>Keeping the Plan Alive and Relevant</b>		
1. Establish an inter-agency partnership task force to monitor progress and partnership relationships.	Immediate Within three months, ongoing	

Action	Priority	Partners
2. Formalize partnerships for active transportation initiatives with Ministry of Transportation and Infrastructure (MOTI) and Moving Around Pender Society (MAPS).	Immediate Within three months	MOTI, MAPS
3. Partner with Southern Gulf Islands Economic Development Commission (SGIEDC) and the Chamber of Commerce in pursuing steady-state economic health.	Ongoing	SGIEDC, MAPS
4. Explore with the community potential OCP and Land Use Bylaw amendments to provide an age friendly lens to planning policy and provide specific direction on relevant topics.	Medium Within one year	

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# Potential Bylaw Amendments

## OFFICIAL COMMUNITY PLAN

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### Goals

1. Specifically reference age-friendly and inclusive as part of a “complete” community.
2. Reference “connected” and “accessible” in Goal 11.

### Objectives

1. Residential objective 2: expand and clarify the full spectrum of housing options and that serving the needs of all residents include an older, aging population.
2. Add additional objectives:
  - a. Add policy on “aging in place” and recognize the importance of retrofitting existing homes.
  - b. To ensure inclusive neighbourhoods that meet the needs of the all residents, including older adults and those with special needs, within close proximity to shopping, personal and medical services, financial services and public transit.
  - c. To provide for a broad range of household types and income groups including older adults, and those with special needs.
  - d. Senior’s housing development is encouraged and may include, for example, independent living, assisted living, independent/supportive and residential care type facilities.
  - e. Special needs housing is encouraged in close proximity to, community services, shopping and community transit.
  - f. Recognize the need for affordable housing, particularly for special needs population such as the disabled and the elderly.

## Policy recommendations

### *Housing*

1. Specifically state “senior’s housing” in the affordable housing type list (Section 6.3.1 12).
2. Add “accessory dwelling units” in the list of housing types list (Section 6.3.1 2).
3. Policies should specifically state:
  - a. Permitting secondary suites and/or detached accessory dwellings in some zones
  - b. Zoning for increased densities on small lots or multi-family developments in ‘town’ centres or village nodes
  - c. Promoting mixed use developments (residential use in commercial zones)
  - d. Although not increasing density on the island overall was one of the frequent concerns raised in the responses to the Senior Housing Task Force Report, the only option is to increase density in some locations, and down-zone in other areas to ensure the overall density is maintained. This limitation may be a significant barrier to providing a broader range of housing types.
  - e. Affordable housing can be provided by the private, non-profit, cooperative, and public sectors separately or through partnership models.
  - f. Affordable housing includes a variety of tenure models including ownership, rental, co-housing, and cooperative.

### *Outdoor Spaces*

1. Identify specific age friendly design elements desired for all public gathering places and parks.
2. Identify parks with specific desired age-friendly features that align with senior’s interests.

## ***Buildings***

1. A new subsection in the plan regarding buildings should express that all public buildings, including government owned facilities, should be retrofitted to universal accessibility standards. A target time line for completion is advisable. This effort will require partnerships with other governments, authorities, and agencies.
2. Building policy should also provide incentives for retrofitting existing commercial structures to universal accessibility standards.

## ***Transportation***

1. To maintain and develop a transportation network that provides safe and efficient movement for pedestrians, cyclists, transit users, automobiles, and freight.
2. Adopt “complete street” standards to ensure safe access for all transportation modes and for people of all capabilities. Complete streets are designed to ensure safe passage for cyclists, pedestrians and transit, in addition to automobiles.
3. Build a comprehensive network of safe pedestrian and bicycle facilities using government funds, grant funds and developer required improvements in accordance with applicable Bylaws.
4. Ensure safe access for all is provided in the design and modification of all streets, sidewalks and pathways.
5. In partnership with the Ministry of Transportation & Infrastructure, adopt a complete street standard within the Subdivision Bylaw and through selected references and preferences for such within the Master Municipal Construction Documents (MMCD).

## ***Complete Communities***

- ◆ Consider a policy section on aging in the same community that reflects a comprehensive and holistic set of policies and actions. An appropriate and inclusive term for this concept is “complete community.” This is defined as a community that “meet people’s needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs,

local services, a full range of housing and community infrastructure including affordable housing, schools, recreation and open space for their residents.”

## LAND USE BYLAW (LUB)

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1. Permit secondary suites in the following zone districts:
  - ◆ Rural Residential (RR) Zone;
  - ◆ Rural (2 ) Zone;
  - ◆ Rural Comprehensive One RC1 ) Zone;
  - ◆ Rural Comprehensive Two (RC2 ) Zone; and
  - ◆ Agricultural (AG) zone.
2. Permit accessory dwellings in the Rural Residential (RR) Zone. The form of dwelling could be a garden suite (also referred to as a “granny flat”), similar to the currently defined “cottage,” a dwelling with a maximum of 56 m<sup>2</sup>. which is already permitted in the Rural R , RC1, RC2 and AG zones.
  - a. Proposed definition of the accessory dwelling and standards:

*“Garden Suite” refers to a single-unit independent suite in a free-standing, single-story accessory building located behind the primary single family residential dwelling.*
  - b. Maximum size: limit to 40% of gross floor area of the single family dwelling or 60 square feet, whichever is less;
  - c. Minimum size: 30 square metres;
  - d. Maximum number of bedrooms: two; and
  - e. Access to exterior entrance with outdoor lighting
3. Update the bylaw to reflect uses permitted under the under the Community Care and Assisted Living Act.
4. Proposed new zone districts

### **Cluster Residential**

Purpose:

To provide appropriately sized dwellings in a clustered pattern.

Commentary:

- ◆ More flexibility than current Special Needs Housing zone district and no restrictions on ability or need.
- ◆ Any age restrictions addressed separately via OCP policy and implementing instruments such as covenants or private society bylaws. Permit detached and semi-detached dwellings (2, 3, or 4 attached) in clustered arrangements.

Standards:

- ◆ Maximum density of 0.1 ha per dwelling unit (with community sewer and water).
- ◆ Min. lot size of 0.1 ha.
- ◆ No secondary suites or accessory dwellings permitted.

### **Multi-family Residential**

Purpose:

To provide multi-family residential housing options.

Standards:

- ◆ Permit semi-detached, duplex, triplex, townhouse, apartment style dwellings.
- ◆ Max. density of 20 units per hectare.
- ◆ Min. parcel/development size of 2 ha.
- ◆ Min. lot size of 0.1 ha.
- ◆ No secondary suites or accessory dwellings permitted.



**REPORT TO INTEGRATED RESOURCE MANAGEMENT ADVISORY COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 8, 2017**

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**SUBJECT**     **Integrated Resource Management – Consolidated Technical Summary**

**ISSUE**

To present the Consolidated Technical Summary document prepared by HDR Consulting to inform the procurement of an Integrated Resource Management (IRM) Facility within the Capital Regional District (CRD).

**BACKGROUND**

At its September 6, 2017 meeting, the CRD Board directed staff to:

*consolidate the technical reports and work of the IRM Committee and Task Force and work with the consultant to report back on development of the criteria to move the IRM project forward.*

As directed by the Board, the CRD's contracted IRM specialist HDR Consulting has consolidated the technical reports and the work of the CRD's IRM Advisory Committee and IRM Task Force, further informed by HDR's IRM research and experience, to produce the attached Consolidated Technical Summary report. This report presents a comprehensive summary of the findings to date, including twenty case studies of IRM facilities and initiatives worldwide. The consultants will present highlights from the report at the meeting on November 8.

The Consolidated Technical Summary also identifies a number of key procurement assumptions that were determined by HDR to be important factors in the successful procurement and development of an IRM facility:

- waste supply
- facility siting
- ownership and financing
- technology and risk tolerance
- recovered resources and resource markets
- procurement approach and contract structure

This consolidated report, along with the December 2017 IRM procurement workshop to be facilitated by HDR, will help to determine the CRD Board's key project criteria and provide a clear framework to inform the IRM procurement process. The focus of the December workshop will be to seek input and direction from the Board on key issues that will affect the approach applied in the IRM procurement process and evaluation criteria.

HDR will prepare supporting materials for the December workshop, primarily in the form of a presentation and summary sheets, to facilitate a discussion to inform the discussion on the CRD's key procurement assumptions for the development of an IRM Facility.

**NEXT STEPS**

Following the December IRM procurement criteria workshop, the anticipated timing of the IRM procurement steps are as follows:

- January 2018 – IRM Project Plan adopted (including procurement assumptions and consultation plan)
- February/March 2018 – Consultation period on CRD IRM Project Plan
- March 2018 – Finalize IRM Project Plan
- Q2 2018 – Issue and Evaluate Request for Qualifications (RFQ)
- Q3/4 2018 – Issue Request for Proposals (RFP) upon decision by the Board to proceed

**RECOMMENDATION**

That the Integrated Resource Management recommend to the Environmental Services Committee:

That the Integrated Resource Management Consolidated Technical Summary be forwarded to the Capital Regional District Board for information.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

RS:ac

Attachment: Appendix A – Integrated Resource Management Consolidation and Project Criteria Development – HDR



Integrated Resource Management

**IRM Information Consolidation and  
Project Criteria Development**

Capital Regional District

November 3, 2017



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Appendix H	City of Sydney Advanced Waste Treatment Master Plan, Gasification Technologies Review, August 2014 (TWE)
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Appendix M	CRD Integrated Resource Management – Facilities Tour Plan, September 2017
Appendix N	CRD Integrated Resource Management – IRM Project Plan Outline, September 2017
Appendix O	CRD Integrated Resource Management RFQ – Draft Outline, September 2017
Appendix P	CRD Integrated Resource Management Technology Gap Analysis – Preliminary, September 2017
Appendix Q	CRD Beneficial Reuse of Biosolids – Jurisdictional Review, September 2017

- Appendix R Report ERM 17-36 Waste Flow Management Policy Backgrounder, September 2017
- Appendix S Report to the Environmental Sustainability Committee, Results of Feasibility Studies on Waste-to-Energy, June 2011

Note: Due to the substantial file size associated with the documents listed in the Appendices, and as these documents have previously been provided as supporting information as part of reports to previous CRD Board and Committee meetings, these documents are not included as part of this report file. A separate consolidated document file of these Appendices can be provided upon request.



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## Glossary of Key Terms

The following glossary is not intended to be a comprehensive overview of all descriptive terms used in this report. However, in order to provide clarity for this report, key terms essential for understanding of the overall Integrated Resource Management (IRM) project are defined as follows.

**Beneficial Use / Beneficial Reuse:** Beneficial use and beneficial reuse are used interchangeably and for the purpose of this report and the Integrated Resource Management Project, are assumed to have the same meaning. Beneficial use is applied in the context of this project as a concept for the management of residual solid and liquid waste as a means to save landfill disposal capacity by avoiding disposal of materials and directing them to alternative uses. To be considered a beneficial use, the materials/products recovered from the solid or liquid waste stream must not be stored in anticipation of speculative future markets, the recovered materials must be an effective substitute for an analogous material or a necessary input to generate a new product, the use of the material should not adversely impact human health or the environment, and the material should be used in accordance with applicable standards, requirements, guidelines and best management practices. In accordance with CCME guidelines, Beneficial Use is the use of municipal biosolids, municipal sludge and treated septage according to the *Canada-wide Approach for Management of Wastewater Biosolids*.

**Biosolids:** For the purpose of this report the term biosolids is either used interchangeably with the term Class A biosolids when making reference specifically to this material in the context of the CRD or it is used as a generic term that in the most part refers to sewage sludge that has been treated. However, in some cases it has been used consistent with the terminology used in the source material and reflects the terminology applicable in that jurisdiction which in some cases includes jurisdictions where the terms biosolids and sewage sludge are used interchangeably.

**Class A Biosolids:** In all parts of the document that refer to Class A Biosolids as produced in BC including the CRD, Class A Biosolids are as defined under the BC Organic Matter Recycling Regulation, that meet the requirements of section 6 of the regulation (Schedule 1, Pathogen Reduction Processes; Schedule 2, Vector Attraction Reduction; Schedule 3, Pathogen Reduction Limits; Section 3 of Schedule 4, Quality Criteria; Schedule 5, Sampling and Analysis; Schedule 6, Record Keeping). There are portions of the document where reference to class A biosolids may be made in keeping with how this is defined in the host jurisdiction.

**Compost:** Means a solid mature product resulting from composting but does not include compost to which the Fertilizer Act (Canada) applies. This would include materials defined as “compost” under the BC Organic Matter Recycling Regulation.

**Disposal:** Is used in this report to refer to the disposition of solids, in a manner that does not result in the recovery of the resources (materials or energy) from those solids, including incineration (without energy recovery) and landfill disposal.

**Fertilizer:** Means any substance of mixture of substances, containing nitrogen, phosphorus, potassium or other plant food, manufactured, sold or represented for use as a plant nutrient that meets the

requirements of the Fertilizer Act (Canada) and includes materials such as Compost where this material is sold as a fertilizer and thus must meet the requirements of the Fertilizer Act. This would include materials defined as “fertilizer” under the BC Organic Matter Recycling Regulation.

**Integrated Resource Management (IRM):** IRM is defined by the Capital Regional District as the integration of solid and liquid wastes, using currently landfilled or diverted materials along with biosolids, to maximize resource recovery through combined processing or some, or all, of these materials. Combined processing could be accomplished through the application of a single technology or a combination of technologies, from one or more technology providers, which recover resources in the form of materials and/or energy for beneficial use.

**Municipal Solid Waste (MSW):** Municipal Solid Waste includes solid waste material streams generated by the residential sector, institutional, commercial and light industrial sources as well as waste from construction, demolition and renovation activities. It does not include hazardous, biomedical or agricultural waste, motor vehicles or components, heavy industry waste or contaminated soil.

**Pathogen:** Means an organism including some bacteria, viruses, fungi and parasites that are capable of producing an infection or disease in a susceptible human, animal or plant host.

**Resource Recovery:** Resource recovery is identified as the 4<sup>th</sup> R in the waste hierarchy, and involves the reclaiming of recyclable components and/or energy from the solid waste stream by various methods. To be considered a resource recovery facility, waste to energy facilities will achieve an energy efficiency criteria of obtaining at least 60% of the potential energy from the MSW used as fuel. The energy efficiency criteria is modelled after Annex II of the European Commission Waste Framework Directive model.

**Sewage Sludge:** Means the semi-liquid material that is removed from a wastewater treatment system as an end product of the treatment process. Generally sewage sludge has been used to refer to this material prior to treatment using elevated temperature and biological processes. However, in some cases it has been used consistent with the terminology used in the source material and reflects the terminology applicable in that jurisdiction which in some cases includes jurisdictions where the terms biosolids and sewage sludge are used interchangeably.

**Scientific Evidence:** Is evidence which serves to support or counter a scientific theory or hypothesis. Such evidence is expected to be empirical evidence and interpreted in accordance with the scientific method.

## Table of Key Acronyms and Abbreviations

AD	Anaerobic Digestion
C&D	Construction and Demolition waste
CHP	Combined Heat & Power
CNG	Compressed Natural Gas
CRD	Capital Regional District
DB	Design, Build
DBFO	Design, Build, Finance, Operate
DBFOM	Design, Build, Finance, Operate, Maintain
DBO	Design, Build, Operate
DBOM	Design, Build, Operate, Maintain
DBOO	Design, Build, Own, Operate
DBOOM	Design, Build, Own, Operate, Maintain
DBOOT	Design, Build, Own, Operate, Transfer
EPC	Engineering, Procurement and Construction
FICFB	Fast Internally Circulating Fluidized Bed
FOG	Fats, Oils and Grease
GHG	Greenhouse Gas
Ha	Hectares
ICI	Industrial, Commercial and Institutional
IRM	Integrated Resource Management
kWh	kilowatt hours
LYW	Leaf and Yard Waste
m	Meters
MBT	Mechanical Biological Treatment
MSW	Municipal Solid Waste
MW	MegaWatt
Nm <sup>3</sup>	Normal Cubic Meter
P3	Public Private Partnership
RDF	Refuse Derived Fuel
RFEOI	Request for Expression of Interest
SRF	Solid Recovered Fuel
SSO	Source Separated Organics
tpd	Tonnes per day
tpy	Tonnes per year
VOC	Volatile Organic Compound
WWTP	Waste Water Treatment Plant

# 1 Introduction

The Capital Regional District (CRD) has undertaken significant work over the past few years to further its investigations of advanced Integrated Resource Management (IRM) options to address solid and liquid waste streams generated in the district. Activities undertaken included the investigations by the CRD IRM Task Force in late 2015/early 2016, continued investigations by CRD solid waste staff on IRM activities as part of current programs and a decision in early 2017 to proceed with the issuance of a Request for Expressions of Interest (RFEOI) for advanced IRM solutions. As of late 2016, HDR was retained as the IRM advisor to the CRD to assist with the RFEOI, and has undertaken a number of subsequent activities as part of this work.

On June 28, 2017 a report was made to the Integrated Resource Management Advisory Committee (IRMAC) regarding the Advanced Integrated Resource Management, Request for Expressions of Interest, Detailed Analysis. The IRMAC recommended to the CRD Environmental Services Committee that five key deliverables be prepared and delivered for the September 6<sup>th</sup>, 2017 IRMAC meeting, based on the staff report regarding Advanced Integrated Resource Management, Next Steps and the presentation that was provided regarding the IRM Road Map. These recommendations were approved by the Environmental Services Committee on June 28<sup>th</sup>, 2017 and subsequently by the CRD Board.

The reports presented to the IRMAC meeting on September 6, 2017 included:

1. Report ERM 17-35 Advanced Integrated Resource Management – Facilities Tour Plan;
2. Report ERM 17-37 Advanced Integrated Resource Management – Procurement and Project Plan Update, including the IRM Project Plan Outline (Appendix A) and IRM RFQ – Draft Outline (Appendix B);
3. Report ERM 17-34 Integrated Resource Management Technology Gap Analysis – Biosolids Jurisdictional Review, including the IRM Technology Gap Analysis (Appendix A) and Beneficial Reuse of Biosolids – Jurisdictional Review (Appendix B);
4. Report ERM 17-36 Waste Flow Management Policy Backgrounder.

Subsequent to the IRMAC meeting, a motion was passed by the Environmental Services Committee and approved by the CRD Board that:

1. That staff be directed to work with the consultant to consolidate the reports and information presented to date and to bring forward criteria that would be used for advancing the procurement process; and
2. That the work, moving forward, not include any travel, at this time.

This report is intended to address this motion, to consolidate the reports and information presented to-date and to provide context for the development of criteria that would be used for advancing the IRM procurement process.

In addition to the reports and information presented to-date to the CRD, this document also presents some information sourced through additional research, to expand upon some key areas required to provide context to the procurement criteria. A series of case studies are presented, based on documents and information presented to-date and this research, identifying key issues that will need to be addressed in the IRM procurement process.

Based on the information reviewed, key findings regarding the following topics are discussed, to prepare CRD officials for a subsequent workshop to discuss and determine the direction in which the CRD chooses to proceed for the IRM procurement. This workshop session will provide direction for the development of the criteria which would be used to advance the IRM procurement process. The findings address (but are not limited to) the following key issues that will need to be confirmed to advance the procurement process.

**Table 1 Key IRM Procurement Issues**

Project Element	Impact
Site	Critical Asset Critical Factor for Project Success
Waste Supply	Key to Financeable Project
Ownership	Asset Control Risk Exposure
Financing	Ability to Secure Financing Cost of Financing
Technology	Degree of Complexity affects Risk Posture
Deal Structure	Depends on level of technology risk and risk allocation
Markets	Market Access and Value affecting financing and long-term viability
Residuals Management	Long term secure access to economically and environmentally sound residuals management capacity

These issues will be addressed in the development of risk management matrices that will be presented and discussed at the upcoming workshop session.

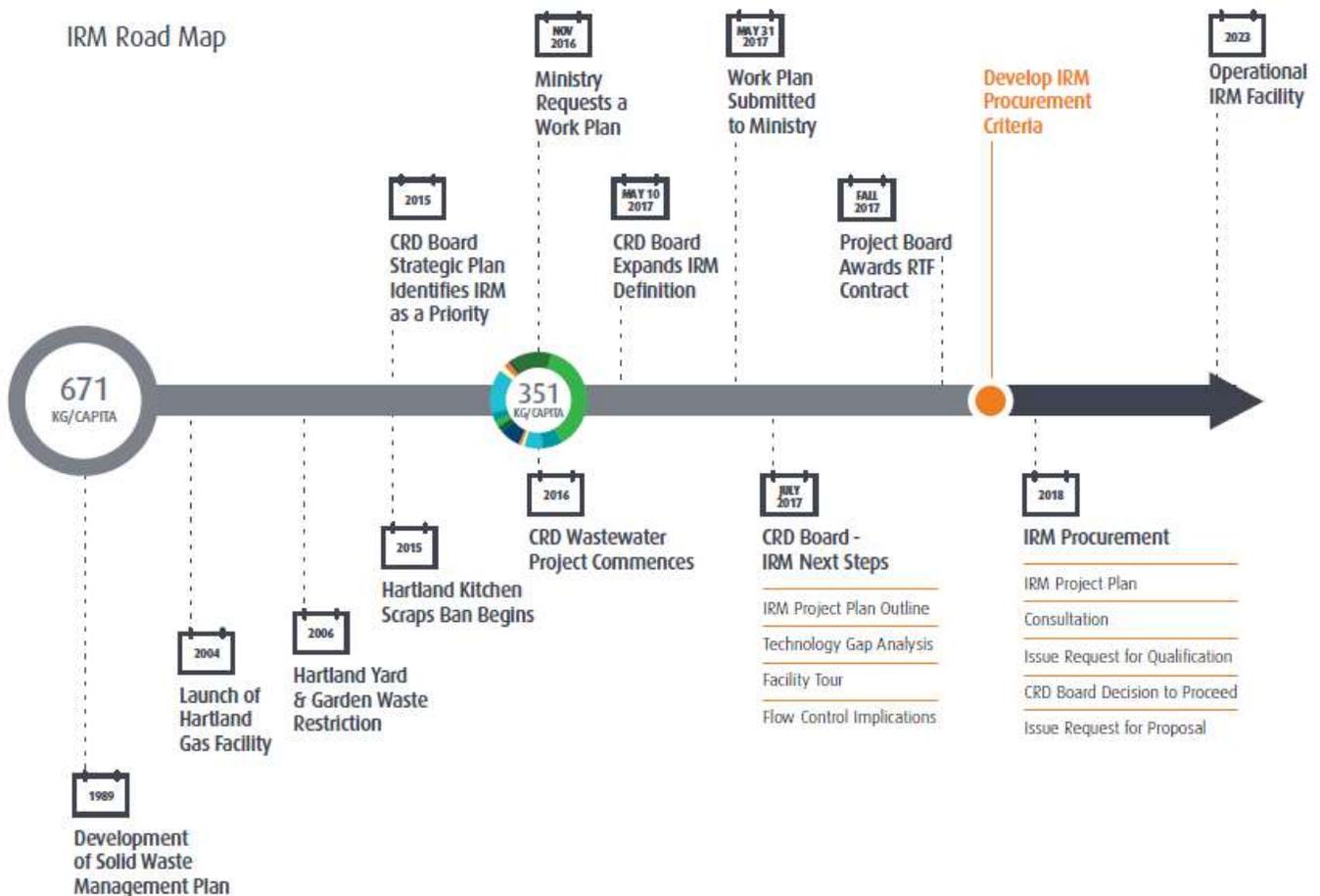
## 2 Summary of IRM Reports and Information

The reports and information developed to-date which support the IRM process, include materials that have been gathered for and presented to the CRD IRMAC, information arising from the Core

Area Liquid Waste Management Plan (CALWMP) process, and documentation gathered by the BC MOE in support of biosolids management in the province. The following provides an overview of reports and information that are related to the CRD IRM process and in particular the findings resulting from these reports/documents that are relevant to setting the context for IRM procurement.

Figure 1 presents a graphic timeline of the IRM roadmap indicating the progress made towards an IRM solution and proposed steps moving forward based on the IRM Workplan Outline. This progress includes progress related to the CRD Solid Waste Management Plan and the CALWMP and IRM Workplan.

Figure 1



## 2.1 CRD Board and Core Area Liquid Waste Management Plan – Key Information

The CRD is developing a wastewater treatment facility that will come online in 2020. The Project Board's Terms of Reference include the following key goals that are applicable to IRM:

- a) optimizing opportunities to recover resources from waste as part of an integrated waste management approach; and,
- b) minimizing GHG emissions.

The CRD Corporate Plan for 2015 to 2018 includes Climate Change and Integrated Waste Management as Board priority areas, and Environmental Protection and Regional Infrastructure as key corporate priority areas. In regards to Integrated Waste Management, the Board's strategic priorities include:

- a) Acquiring additional expertise on technologies and solutions (including centralized/decentralized approaches and gasification) to liquid and solid waste management;
- b) Investigate region-wide solutions to liquid and solid waste;
- c) Establish a systematic process of evaluation for all liquid and solid waste decisions;
- d) Investigate combined liquid and solid waste management plans;
- e) Ensure responsible management of wastewater for the entire capital region.

Solid and liquid waste management within the CRD are currently driven by different legislative authorities/requirements and under the administration of different regional committees and Boards.

The Core Area Liquid Waste Management Plan includes the construction and commissioning of the wastewater treatment plant (WTP), development of a conveyance line for sewage sludge to the Hartland site, construction and commissioning of a residuals treatment facility (RTF) to produce Class A biosolids. The outcome of the CALWMP process, provides the key input to the advanced IRM process, being the Class A biosolids feedstock stream.

The CRD issued a Request for Qualifications (RFQ) for the RTF on December 5, 2016, and issued the subsequent RFP to qualified respondents in 2017. A decision on award of the RTF is anticipated in late 2017. Design and construction of the Residuals Treatment Facility is expected to begin in early 2018, with service commencement in the summer of 2020.

The outcome of the RFP process for the Resource Treatment Facility (RTF) will determine the quantity and composition of the biosolids stream that would be made available for an IRM solution.

Various supporting documents to the CALWMP process serve as supporting information for the IRM project. This includes for example, the various studies completed as part of the CALWMP Wastewater Treatment System Feasibility and Costing Analysis, such as Technical

Memorandum #3 – Costing and Financial Analysis which provided analysis of biosolids management costs (Appendix A). This analysis examined the energy content of the MSW stream and biosolids, and the energy balance and potential costs for AD and gasification options.

Currently there is a prohibition of land application of biosolids from CRD facilities either with or without treatment. As a result, the CRD requires that a beneficial use solution be found for management of the majority of the biosolids stream. Appendix B includes a copy of the decisions that encompass the CRD policy regarding land application of biosolids. This includes:

1. the minutes of the CRD Board meeting held on Wednesday July 13, 2011 which includes the following resolution:

*“Be it so moved that the CRD will harmonize current and long-term practices at all CRD-owned regional facilities and parts with the approved policies of the regional treatment strategy, including ending the production, storage and distribution of biosolids for land application at all CRD facilities and parks; and*

*Be it further moved that the CRD does not support the application of biosolids on farmland in the CRD under any circumstances, and let this policy be reflected in the upcoming Regional Sustainability Strategy.”*

2. the minutes of the CRD Board meeting held on Wednesday October 30, 2013 which includes the following resolution:

*“That the current policy, adopted July 13, 2011, regarding the banning of the land application of biosolids be confirmed.”*

3. the minutes of the CRD Board meeting held on Wednesday, November 30, 2016, which includes the following resolution:

*“That the Capital Regional District Board direct staff to include in the Integrated Resource Management project Request for Expressions of Interest the following:*

*1. A statement outlining the Board's current policy on land application and the concerns which drove its establishment; and*

*2. A request for proponents to outline technologies that will deal with the Board's concerns; how the technology will mitigate the Board's concerns; applicability to the core area, Peninsula and other community sludge/biosolids management problem as a central and/or sub regional solution; costs, history and effectiveness.*

It is the intent of the CRD to ensure that it has an integrated waste management solution that at minimum would allow for management of the Class A biosolids stream. Any system selected by the CRD, whether it consists of a single technology or a group of approaches must include a long-term solution for the management of these biosolids. The CRD is looking for a solution that can be integrated with the outcome of the current procurement process for the RTF, and is interested in identifying those options that present region-wide and/or sub-regional solutions.

## 2.2 BC MOE – Key Direction Documents

On November 18, 2016 the BC Minister of the Environment issued a letter regarding its revised conditional approval of Amendment No. 11 to the Core Area Liquid Waste Management Plan (CALWMP), attached as Appendix C. Amendment No. 11 includes the conveyance of sewage sludge from the McLaughlin Point WWTP to the Hartland landfill for processing into Class A Biosolids as defined under the BC Organic Matter Recycling Regulation, for beneficial use and optimization for potential opportunities for integrated resource management (IRM).

As a condition of approval, the Minister requires that the CRD develop a definitive plan for the beneficial reuse of biosolids that does not incorporate multi-year storage of biosolids within a biocell. On May 31, 2017 the CRD submitted a plan that outlines procedural steps and the schedule it will implement to achieve the definitive plan, attached as Appendix D. The definitive plan must be submitted as of June 30, 2019.

The definitive plan for beneficial reuse of biosolids:

- a) is to be supported by an assessment of the full spectrum of beneficial uses and integrated resource management (IRM) options available for the Class A biosolids produced at the Hartland landfill;
- b) incorporates a jurisdictional review of how similar-sized and larger municipalities within BC, North America and abroad successfully and beneficially reuse biosolids;
- c) must select a beneficial reuse option for treated biosolids that meets the requirements for beneficial use specified in the Canadian Council of Ministers of the Environment *Canada-wide Approach for the Management of Wastewater Biosolids* (October 11, 2012) and be based on scientific evidence.

Upon receipt of the IRM Work Plan, the MOE issued correspondence on July 7, 2017 which noted that:

- a) the IRM Work Plan submitted to the MOE exceeds the Minister's requirement as identified in the Minister's letter of November 18, 2016;
- b) The Ministry distinguishes the implementation of the CALWMP and the advanced IRM facility initiative as two distinct projects. The first project is the CALWMP including the construction and commissioning of the wastewater treatment plant, conveyance line and residuals treatment facility and the beneficial use of Class A biosolids. The advanced IRM facility initiative is a longer term project where operation and commissioning is not dependent on the required timelines for implementation of the CALWMP. The Ministry concurs with the CRD that since the advanced IRM facility contemplate beneficial use of solid waste residuals, this initiative is better aligned with the CRD Solid Waste Management Plan process.

The full text of the letter is included in Appendix E. The IRM procurement process will reflect this approach.

The BC MoE has continued its own investigations and studies in support of beneficial use of biosolids in the province. Some of that work has been undertaken in support of the equivalency agreement that is being developed by the Ministry of Environment (MoE) and Environment Canada. This agreement will see amendments to the Municipal Wastewater Regulation making it equivalent in effect to the federal Wastewater Systems Effluent Regulation (WSER). The updated regulation will require all municipal wastewater facilities with flow rates greater than 100 m<sup>3</sup>/day discharging to water to have secondary treatment by 2040.

## 2.3 IRMAC – IRM Supporting Information

The documents discussed below, were presented and discussed as supporting information with the IRMAC, but were not prepared as specific documents within the IRM Project Plan.

### 2.3.1 CRD IRM Task Force Report

A CRD Integrated Resource Management (IRM) Task Force was created to examine the question of whether an IRM approach to managing waste streams might provide substantial financial benefit and substantially improved environmental outcomes to the region and its residents. In its terms of reference, the task force was asked to define the scope and parameters of Integrated Resource Management objectives, to recommend options to the CRD Board for endorsement and to recommend to the board a process for broadly seeking submissions from the private sector for implementing the recommended initiative.

Its report provided as of February 24, 2016 (Appendix F) the task force reported on the outcome of four presentations from potential technology providers.

In summary, information provided in this document that provides context to the IRM procurement process includes:

1. Partnerships with infrastructure and/or construction companies and technology providers will be required to develop the more complex IRM technologies. These entities would need to be able to guarantee and fund the development of the project. In the IRM procurement process, the RFQ stage would be required to qualify all key team members including the technology providers and the major partners required to execute a project.
2. Some technology providers offered a complete solution to manage CRD solid and liquid waste streams, while others focused on only specific material streams. This indicates potential for a single or multi-facility solution for IRM. The CRD has to determine if the procurement process would accommodate both.
3. Various potential contractual (and procurement) models were identified, with varying degree of risk transfer from the CRD. The evaluation of risk and identification of preferred contractual/procurement models will be a central part of the IRM procurement criteria development.
4. Various financial and environmental benefits were posited by the technology providers. The procurement process should include criterion related to financing and development of markets for beneficial use products which was a central theme, as well as criterion related to environmental benefits.

### 2.3.2 Gasification Technologies – Characterization of Waste Resources in the Capital (TWE)

Given the interest of the CRD in options for energy recovery from IRM materials, the CRD retained Talent with Energy (TWE) to undertake an assessment of waste resources available in the Capital Region to gain a better understanding of the potential for energy recovery associated with these resources. Their report on the Characterization of Waste Resources in the Capital issued in September 2016, is included as Appendix G. The analysis framework developed specifically for the CRD builds on a combination of elemental analysis data for the range of materials typically found in the domestic and commercial and industrial waste streams, and data from a composition study for solid waste streams collected within the Capital Region, developed for the CRD by Sperling Hansen Associates.

The provision of information derived from this report as supporting information in the IRM procurement process would be valuable to potential respondents considering the potential for use of CRD solid waste streams for renewable energy recovery. However, this information does not provide a similar analysis of the potential CRD biosolids stream.

### 2.3.3 Gasification Technologies Information – City of Sydney Australia

Based on the interest of the CRD in advanced IRM technologies, the IRMAC sourced information from the City of Sydney Australia that had undertaken an extensive gasification technologies review, as documented in the City of Sydney Advanced Waste Treatment Master Plan, Gasification Technologies Review, August 2014 by Talent with Energy (TWE) on behalf of the City (Appendix H).

Further, the CRD engaged the former Manager of the Waste Strategy with the City of Sydney (Mark McKenzie) to present via video link at the IRMAC meeting of February 8, 2017 to provide an update and information regarding the City of Sydney gasification project. The presentation is included in Appendix I.

The Sydney report indicated that in the opinion of the author, all of the key technology components (conversion, gas upgrading and delivery) were available to generate a substitute natural gas product from the gasification of waste, the network level integration of these technologies would be a unique development.

A key driver in the Sydney decision making process was the potential to increase the City's resource recovery rate and maximize energy recovery. The potential for use of biosolids directed to biomass energy recovery was considered in this study. The approach selected for advanced waste treatment is documented in the City of Sydney, Advanced Waste Treatment Master Plan (Appendix J).

Key elements within the information provided in these documents that provides context to the IRM procurement process includes:

1. Risks noted for the implementation of this energy conversion project included the nature and variability of the waste resource, the multitude of stakeholders involved, the higher degree of technology and operational risk associated with the waste

conversion processes, issues arising from public perception of WTE schemes and lack of a clear and comprehensive regulatory framework. Similar risks are associated with the CRD project and would be addressed through a detailed risk matrix to support development of the IRM procurement criteria.

2. To manage these risks, various activities were proposed including: profiling of alternative sites, waste characterization, undertaking a pre-feasibility study and preparing a business case and an assessment of the techno/economic feasibility of the facility, undertaking a multi-step procurement process that encourages the partnership between gasification technology providers and industrial gas providers.
3. Context for renewable biogas recovery is critical. With significant emissions from coal fired electricity plants, there is a significant incentive for GHG emissions reduction through complementary energy contributions.
4. Regional partnering was identified as a critical element to reach viable levels of waste for a facility (120,000 tonnes per year). Current challenges to the project and achieving a regional partnership include changes in critical staff, the political cycle, competing priorities, challenging regulatory context and the choice of technology.
5. The outcome of the gasification technology assessment undertaken by the City, was the selection of high-temperature gasification plus ash melting. One of the examples considered was the Plasco technology and facility in Ottawa, which ultimately was decommissioned (see case studies below).

#### 2.4 IRM RFEOI

At its February 8, 2017 meeting, the CRD Board approved the advanced IRM Project – Request for Expressions of Interest documentation and directed staff to proceed with issuing the RFEOI. The purpose of the RFEOI was to gather information on potentially viable alternatives for processing of the existing solid and future liquid waste residuals that are/will be managed by the CRD. The outcome of the RFEOI process was not intended to qualify technologies or respondents, nor was it intended to validate partners.

The RFEOI was issued on February 16, 2017 and closed on March 20, 2017. Ten (10) responses were received. An initial report was presented as an appendix of Staff Report ERM 17-15 to the IRMAC on April 12, 2017 and is attached as Appendix K. Key findings from the initial review and assessment of these submissions that provide context to the development of IRM procurement criteria include:

1. The majority of respondents prefer that the CRD provide the site for the IRM facility. Many prefer that the CRD owns the IRM facility.
2. The type of business offerings in the submissions were quite varied. Many respondents are open to a variety of development models (DB, DBOM, DBOOT, etc.).
3. The majority of respondents reported their technology as being proven (operating at a commercial level) and do not recommend that the CRD undertake a pilot project. Those

respondents that did not put forward a proven technology, were more interested in, or recommended that the CRD undertake a pilot.

Following the initial review, there were a number of items that required clarification for each submission. Letters were developed and issued to all respondents, seeking additional clarification of the submissions. Discussions were held with some respondents based on their interest in participating in a teleconference with the CRD.

A detailed analysis of the RFEOI submissions was presented to the IRMAC on June 28, 2017 (Appendix L).

Key findings in the detailed analysis of the RFEOI submissions that provide context to the development of IRM procurement criteria include the following:

1. Generally the outcome of the RFEOI identified a broad spectrum of technologies and approaches that combined could offer the CRD an IRM solution, and in particular offer a range of options to beneficially use some or all of the CRD biosolids stream. However, this did not necessarily cover the full range of vendors that are capable of offering these solutions, nor did the responses to the RFEOI address all options applicable to manage the other CRD material streams. The IRM procurement approach needs to consider approaches that would broaden the market response to ensure that a sufficient number of companies representing viable technologies are qualified as a result of the process.
2. The option to integrate additional market sounding processes within any future procurement process for an IRM facility, and to integrate a proponent review process for draft procurement and/or contract documents, offer the option to fully inform the IRM procurement process and to address uncertainty and concerns regarding risk management approaches.
3. A number of RFEOI respondents, noted the difficulty in identifying IRM solutions for feedstock that is not wholly controlled by the CRD, and where there is significant potential for the materials to vary in quantity and quality over time (e.g. the CRD MSW stream). The assessment of longer-term solid waste management system impacts and determination of potential shifts in material types and tonnages is an essential component of the IRM Project Plan as is the consideration of waste flow management policy.
4. Further understanding of the need for supplemental feedstock materials is required. Additional research will be undertaken as part of developing the IRM Project Plan, to identify the potential availability of materials such as woody biomass and commercial material streams, which may be required as supplemental materials for some processes (e.g. composting, gasification). This will assist in determining the viability of some approaches.
5. The assessment of economic implications (or preliminary business case) for the IRM project, should assess the cost of continuing under the status quo for the management of the range of CRD solid waste streams, compared to the range of potential IRM system costs. Full economic implications, including the effect on existing infrastructure (e.g. the

availability of landfill disposal infrastructure) as well as the potential range of revenues associated with recovery of beneficial use products and GHG emission credits should be addressed.

6. Development of the IRM project plan will include the identification of project risks. Some of the risks identified in the evaluation of the RFEOI submissions, include the adequacy of the location identified at the Hartland landfill site for the development of a full IRM solution. Facility siting is an exercise that has presented obstacles and delays in other similar projects. In addition, there are some IRM solutions that require access to infrastructure (e.g. suitable access to the electrical grid or gas grid) for them to provide a viable option to the CRD. The project risk assessment exercise undertaken as part of the IRM Project Plan development should address these items.
7. Overall, the RFEOI submissions indicate that a number of products could be recovered and marketed and/or directed to beneficial use, from the CRD liquid and solid waste streams as indicated in the RFEOI. The market value of these materials has yet to be determined, and is an important consideration in determining the overall cost of an IRM solution. Initial feedback through the RFEOI process indicates that additional research regarding markets and market risks would be appropriate as part of the development of the IRM Project Plan. The viability of technologies that recover energy such as AD or gasification, may be contingent upon identifying a higher value market for that energy such as vehicle fuel. In regards to other products, in some cases more limited markets were identified (e.g. cement kilns as an RDF market) while in others the respondents had identified potential for a broader market (Class A compost).
8. In general, about half of the RFEOI respondents indicated a longer term agreement would be preferred (e.g. 20+ years), particularly as some form of Design Build Operate (DBO) deal structure was proposed or preferred. Some respondents did not provide any preferred term, or indicated that it would vary based on the type of deal structure/agreement. Longer term agreements tend to be favoured when the contractor is being held to rigorous performance guarantees for the facility and/or where there is more operational risk given the complexity of the facility. Assessment of the appropriate deal structure will include development of recommendations related to the appropriate term of agreement.
9. There was wide variation in the type of preferred deal structure identified by the RFEOI respondents. Respondents to the RFEOI indicated a wide variation in approach to allocation of responsibility, which reflects allocation of risk. Some indicated preferences that were balanced between the parties, and others indicated preferences that would place more responsibility on the CRD or vice-versa on the respondent. In most cases, respondents clearly stated that their preferences related to allocation of responsibility either reflects their preferred type of deal structure or would vary based on the type of deal structure appropriate for the project. As part of the procurement process, an exercise needs to be completed to identify the range of potential project risks, and will

discuss the implications of risk allocation in making a decision on ownership, the preferred procurement approach (ies) and business/deal structure.

10. The RFEOI specifically sought to understand the potential interest in or perceived necessity to undertake a pilot program in order to demonstrate the applicability of a technology or technologies to process the CRD liquid and/or solid waste materials. Respondents were requested to identify the feedstock of interest to them, the technology solution proposed, whether that technology was demonstrated at a commercial scale and whether they would recommend a pilot be undertaken. The majority of respondents indicated that a pilot would not be required, but did identify the need for the CRD to provide greater understanding of the quantity and composition of the CRD solid and liquid waste streams. Prior to undertaking any future procurement process for an IRM facility, additional waste stream characterization is recommended (e.g. compositional analysis of the SSO stream).

## 2.5 IRM Reports – September 2017

The following reports were prepared and presented at the September 6, 2017 Integrated Resource Management Advisory Committee meeting:

- A draft Integrated Resource Management Project Plan Outline
- A Gap Analysis to complete the evaluation of the broader array of technologies and feedstock combinations (as required in the provincial approval of the Core Area Liquid Waste Management Plan, Amendment No. 11)
- A proposed IRM Facilities Tour Plan, to address identified information gaps; and
- An IRM RFQ Outline
- And a summary of potential policy/project implications resulting from the CRD's lack of flow control over much of the waste feedstock.

An overview of these reports, and key findings which provide context for the development of IRM procurement criteria is presented below.

### 2.5.1 Integrated Resource Management – Facilities Tour Plan

Within the IRM RFEOI report, it was identified that consideration should be given to undertaking facility tours of a representative sample of technologies and vendors. Facility tours have the potential to flesh out understanding of a technology, over a shorter timeline and for a lower overall cost compared to undertaking a pilot study. It was recommended that facility tours not be undertaken on an ad-hoc basis, but in a strategic fashion with specific information targets in mind and that facility tours could provide first-hand information on the performance of technologies, further understanding of the approaches used to select IRM technologies, expand CRD understanding of successful procurement and ownership models and of the markets for recovered energy and products. The IRM Facility Tour Plan (Appendix M) was developed to address these recommendations.

As indicated in the Introduction, a decision was made by the CRD Board not to proceed with travel at this time. In-lieu of undertaking any facility tour, HDR has gathered from the various CRD reports and information, and from HDR information and on-line sources, various case studies (Section 5) that address much of the same information as would have been gathered in a tour.

Key findings of the facility tour report that provide context relative to the development of IRM procurement criteria include:

1. The facility tour plan developed a comprehensive list of potential facilities of interest from various sources including the reference facilities identified in the RFEOI responses. Over 70 facilities in North America and overseas were identified. Of these facilities:
  - a. A small minority processed the range of similar solid and liquid waste materials identified by the CRD;
  - b. A small minority current process sewage sludge and/or biosolids, and only a few of these co-process biosolids with other waste streams.

This indicates that care will be required when developing the criteria for reference facilities required in the RFQ submissions, to allow for reasonable technical equivalencies for materials processed.

2. There were few advanced thermal or chemical technologies that met the criteria for selection for the tour including having been in operation for 2 or more years, processing at least one feedstock similar to the CRD materials and that were owned by a Municipality or municipal corporation. The majority of the facilities that met the criteria used more conventional MBT, composting, AD or thermal technologies. This speaks to the potential degree of technology risk that should be addressed in the IRM procurement criteria.

### 2.5.2 Integrated Resource Management – IRM Project Plan Outline

The IRM Project Plan outline (Appendix N) builds upon the IRM Work Plan which was submitted to the Province in May 2017 as requested by the Minister of Environment in her conditional approval of Amendment No. 11 of the Core Area Liquid Waste Management Plan (CALWMP). The intent was that the IRM Project Plan outline, provide more details regarding the road map for the IRM process.

Key findings of the IRM Project Plan Outline that provide context relative to the development of IRM procurement criteria include:

1. The IRM Plan Outline indicates the key decisions that would be required, in the form of recommendations from the IRMAC and subsequent decisions by Environmental Services Committee and the CRD Board throughout the IRM planning process. This Plan Outline identifies the timing of key decisions related to policy, in particular waste flow management policy implications as reflected in a separate CRD Staff report presented to the IRMAC in September, as well as the implications related to the existing CRD policy regarding Land Application and implications associated with the beneficial reuse of products that could include biosolids. Decisions related to the regulation of the flow of solid waste and organic materials will determine whether the CRD will be in the position to guarantee feedstock for

an IRM solution. In the absence of feedstock guarantees, the viability of an IRM solution will depend on its ability to compete cost effectively with options to ship materials off-island for management elsewhere. Decisions related to the CRD policy regarding Land Application and how that policy would apply to the use of products generated by an IRM solution that could contain biosolids, will significantly scope the potential for product markets and thus effect both facility design as well as the business case for implementing an IRM solution.

2. The IRM Plan Outline addresses the need for development of a Preliminary and Final Business Case for an IRM solution. Generally for similar projects a municipality would be advised to develop a Preliminary Business Case in order to determine if a project of this nature was viable, and in the event that it was viable the outcome of the business case would be used to scope the subsequent procurement process in regards to defining the preferred service delivery model to undertake the project; the preferred technology and the feedstock that would be managed.

The timeframes currently assumed for the IRM Project Plan do not allow for a separate business case to be developed in advance of procurement. Instead, during the development of the IRM RFQ document an assessment of service delivery models will be undertaken. The IRM RFQ document, could be structured so as to allow for pre-qualification of service providers that have capability to manage IRM solid and liquid waste streams, with the identification of any preferred technologies and the feedstock to be addressed in an IRM solution to be informed by the outcome of the RFQ process. The outcome of the RFQ, including a Preliminary Business Case assessment, will provide the basis for the CRD to decide whether to proceed with the next IRM steps and the RFP scope definition for an IRM solution. The Final Business Case would reflect the outcome of the IRM RFP.

3. The IRM Plan Outline reflects alignment with the CRD solid waste management planning process, as it contemplates beneficial reuse of solid waste residuals. IRM in the Capital Region is predominantly driven by the solid waste streams, as biosolids comprise a relatively small proportion of the combined liquid and solid waste streams. The IRM project would be a fundamental shift in the way solid waste residuals and potentially other materials like organics would be managed in the Capital Region and requires a major review of the solid waste management plan. As appropriate, key steps in the development of the CRD Solid Waste Management Plan (SWMP) which can affect the IRM planning process (and vice versa) were indicated in the IRM Plan Outline.
4. The IRM Plan Outline refers to the planning and development of an advanced IRM solution, rather than making specific reference to an advanced IRM facility (in the singular) to allow for flexibility in the outcome of the process. This reflects the real potential that the outcome of the initial steps of the IRM Project Plan, including the RFQ and Preliminary Business Case, may indicate that either a phased solution or a multi-facility approach may be identified as more feasible approaches to implement an advanced IRM solution for the CRD. For example, it may be made clear that initially the focus of an IRM facility should be the management of biosolids and a smaller subset of other CRD materials, with the option that

over time either a facility expansion or an additional facility could be developed to manage other CRD materials. A phased approach could be developed by the same or a different entity. Alternatively, it may become apparent that the most feasible IRM solution may include more than one facility at the outset, developed by different entities, managing separate CRD material streams.

In the event that an IRM opportunity managing biosolids and other CRD waste streams is not proven to be the most beneficial path forward, the CRD would pursue an individual resource recovery plan or plans for the Region's solid waste streams, and present the Province with a definitive plan for the beneficial reuse of biosolids as a stand-alone opportunity.

### 2.5.3 Integrated Resource Management RFQ – Draft Outline

The RFQ draft outline (Appendix O) describes the proposed approach to undertake the IRM RFQ along with a proposed table of contents. The IRM RFQ Outline reflects the staff reports and documents developed to-date in support the IRM process including the outcome of the RFEOI process, the outcome of discussions with CRD staff and work completed on other components of the IRM Project Plan.

Key findings of the IRM RFQ Draft Outline that provide context relative to the development of IRM procurement criteria include:

1. The CRD will not be in a position as of late 2017 to 'guarantee' all of the feedstock types or quantities that could be made available for an IRM solution. The outcome of the RFP process for the Residual Treatment Facility will be understood in late 2017 and will allow for greater definition of the biosolids material stream in the IRM RFQ document. However, work on the Solid Waste Management Plan (SWMP) process and decisions related to flow control that would be required to guarantee other solid waste feedstock materials, will not be completed as of the time the RFQ needs to be finalized and released in order to support the overall IRM Project Plan.

As a result, this RFQ would not seek to pre-qualify service providers capable of managing specific feedstock as required by the CRD, other than management of biosolids. Rather the RFQ would seek to pre-qualify service providers that demonstrate that they have the capability to manage biosolids along with one or more other solid waste streams. The outcome of the RFQ could result in identifying service providers that demonstrate capability to manage the full range of the potential CRD liquid and solid waste feedstock within a single integrated IRM facility as well as service providers that can manage some of these materials with their proposed technology, potentially requiring a multi-facility approach to address the full spectrum of potential IRM feedstock.

2. In most RFQ processes, a preferred type of technology or subset of technologies is identified prior to development and release of the document, which focuses the exercise to qualifying vendors with specific technologies that meet key technical criteria. This is not possible for the IRM RFQ process for two key reasons:

- i. Firstly, it is difficult (to impossible) to scope the technologies that are the subject of an RFQ, without first being able to scope or guarantee the feedstock that must be managed by the facility. The current spectrum of feedstock is capable of being managed through a range of mechanical, biological and thermal technologies.
- ii. Secondly, to support the alignment of the IRM Project Plan with the SWMP process, decisions cannot be made to scope or focus technologies this early in the concurrent processes, without constraining the SWMP planning process in a way that is not consistent with provincial solid waste management planning policy.

As a result, the RFQ would be designed to qualify service providers that demonstrate capability to manage some or all of the potential IRM feedstock, and the technologies proposed by those service providers that meet the qualification criteria will be used to inform the SWMP process and subsequent steps of the IRM Project Plan.

3. The outcome of the RFEOI process, as documented in the report on the detailed analysis of the RFEOI responses, did not identify any consensus or focus by the technology providers on any specific service delivery models. Interest was expressed by the majority of respondents on a longer term of agreement (20+ years) for some form of Design, Build, Operate (DBO) service delivery model. There was wide variation in the type of the preferred deal structure identified by respondents. As noted below, it is recommended that concurrent with the development of the IRM RFQ that an assessment of risk management approaches, service delivery models and contract structures be undertaken to focus the RFQ approach.
4. The RFQ would seek to qualify respondents on the basis of: the qualifications of the proponent team; the technical capability of their proposed IRM solution; and the financial capability of the respondent, pending selection of the service delivery models and contract structure selected by the CRD.

#### 2.5.4 Integrated Resource Management Technology Gap Analysis - Preliminary

The Gap Analysis was undertaken to complete the evaluation of the broader array of technologies and feedstock combinations, as required in the provincial approval of the Core Area Liquid Waste Management Plan, Amendment No. 11.

The preliminary Gap Analysis (Appendix P) identifies the full spectrum of possible technologies that could be considered by the CRD and considers the application of these technologies to the potential feedstock combinations considered by the CRD. This preliminary Gap Analysis reflects the outcome of the IRM RFEOI as reported in the detailed analysis of the RFEOI results provided to the IRMAC on June 28, 2017 as well as the outcome of the Jurisdictional Review both of which are key components supporting the assessment of the full spectrum of approaches to beneficially reuse biosolids. As the responses to the RFEOI did not reflect the full spectrum of possible IRM technologies that are available, additional resources were used to supplement this information.

This Gap Analysis should be considered as a preliminary document/analysis, as further work will be undertaken over the course of the next few months as set out in the recommended CRD IRM Project Plan Outline (discussed in the separate report to the IRMAC) regarding the approach for technology selection and development of feedstock assumptions for the RFQ. The assessment of the full spectrum of beneficial uses and integrated resource management options in the IRM Project Plan, would be comprised of this preliminary Technology and Feedstock Gap Analysis along with the additional work undertaken regarding the approach for technology selection and development of feedstock assumptions, and the outcome of the IRM RFQ process.

Key findings of the IRM Technology GAP Analysis that provide context relative to the development of IRM procurement criteria include:

1. It is clear based on the review of the technologies presented in the RFEOI submissions, the analysis of additional technologies not captured in the RFEOI process and the technologies identified in the jurisdictional review, that there is not one single technology applied at an operating facility that has managed the full range of IRM solid and liquid feedstock. It is anticipated that further steps in the IRM Project Plan, including the proposed RFQ process, will identify a viable sub-set of technologies that would be applicable to both the solid and liquid CRD waste streams that could be developed for the CRD by qualified companies. A successful IRM solution is most likely to consist of a combination of technologies at a single facility, or a combination of facilities, integrated into the CRD's overall system for solid and liquid waste management.
2. For a CRD IRM solution to be successful, it will require consideration of the appropriate combination of technologies and the appropriate combination of feedstock materials, considering:
  - a) The properties of the feedstock materials (chemical composition, heating value, moisture content etc.), which will be supported by the CRD Solid Waste Management Plan (SWMP).
  - b) The quantities of the feedstock materials considering the quantities required to achieve economies of scale as well as the availability of these materials considering flows of materials that are controlled by and that are not controlled by the CRD. Economies of scale could be achieved either through some form of regulatory control (flow control), or through functional competition of an IRM solution in comparison to other waste management facilities through market forces. Flow control would be addressed through the assessment of policy/project implications in the SWMP.
  - c) Requirements for amendments and other supplemental materials (e.g. woody amendment materials). The IRM RFQ process would determine, based on the responses and technologies identified, if there would be a need for the CRD or the respondents to source supplemental materials in order to implement an IRM solution. The preliminary Business Case would need to analyse the current market value of any supplemental materials and the issues that could arise in sourcing/securing these material streams.

- d) The range of beneficial materials that can be recovered, and the markets for these materials. The outcome of the IRM RFQ process will assist in this determination, along with the preliminary Business Case which will need to examine local market conditions.
  - e) The economic implications associated with applying specific technologies to this feedstock. . This would be addressed by the development of a preliminary Business Case based on the outcome of the RFQ and a final Business Case based on the outcome of the RFP
3. Decisions regarding the technology or combination of technologies that would comprise an IRM solution, and the feedstock that would be directed to an IRM solution, must be integrated with the other concurrent IRM planning processes, and consider the effect on the CRDs overall liquid and solid waste management systems.

#### 2.5.5 Beneficial Reuse of Biosolids – Jurisdictional Review

As the regulator for the CRD regional wastewater treatment project, the Province of British Columbia requested that the CRD conduct a jurisdictional review “of how similar-sized and larger municipalities within British Columbia, North America, and further abroad, successfully and beneficially reuse biosolids.” The jurisdictional review was undertaken to support a more informed biosolids option assessment for CRD wastewater treatment and Integrated Resource Management projects, and to meet the Province of BC request. As specified in the letter from the Province dated November 18, 2016, the beneficial reuse option selected by the CRD for their treated biosolids must meet the requirements for beneficial use specified in the Canadian Council of Ministers of the Environment ‘Canada-Wide Approach for the Management of Wastewater Biosolids’. EDI Environmental Dynamics Inc. (EDI) was contracted by the CRD to complete this review. The jurisdictional review was provided to the IRMAC as Appendix B to report ERM 17-34 and is referenced here in this report as Appendix Q.

Key findings of this report that provide context relative to the development of IRM procurement criteria include:

1. Only a few examples were noted in the jurisdictional review of IRM approaches for co-management of liquid and solid waste streams. In the majority of cases where IRM was applied (e.g. the Mont De Marsan facility in France) the solid waste that has been co-processed has been limited to green waste (yard waste) or residential organic waste (Edmonton) and in some countries regulatory and other pressures have resulted in biosolids being incinerated with MSW or RDF (Germany, Netherlands). As a result, it will be difficult for many technology providers responding to an IRM RFQ to identify as reference facilities, facilities that current co-manage biosolids using the same process within the same facility. Most respondents will have to show equivalencies for their IRM approach, based on grouping of multiple technologies or facility types.
2. The majority of technologies noted in the Jurisdictional review, generate some form of beneficial use product that is used in some way to build soil productivity, support agriculture/silviculture/landscaping/gardening or is used for land reclamation. This includes the range of emerging technologies that were examined, the majority of which produce some form of Class A or B biosolids or ash/biochar which is proposed or used as soil amendment.

The expectations set out in the IRM procurement process needs to recognize the range of current products and markets for materials derived from biosolids.

### 2.5.6 Waste Flow Management Policy Backgrounder

This staff report (Appendix R) presents policy and financial considerations regarding flow control of waste feedstocks. One of the main challenges identified in the Core Area Wastewater Treatment Program Business Case was the lack of flow control over solid waste streams in the region. Flow control refers to the ability of a regional district to regulate the flow of solid waste and recyclable materials as provided for in the Environmental Management Act (EMA). Waste flow management provides a means to guarantee feedstock for the establishment of new facilities, such as the proposed IRM facility. Regional districts in the province have identified waste flow management as a critical issue and are trying different approaches to secure feedstock availability and funding for solid waste programs. The more successful approach, in the wake of the Province's rejection of Metro Vancouver's proposed flow management bylaw in October 2014, has been the application of financial mechanisms through reduction in tipping fees for large commercial loads. The proposed solid waste generation levy and licensing of commercial haulers by Metro Vancouver is also anticipated to affect waste flow.

As part of the IRM Work Plan and during the development of the IRM procurement documents, the CRD needs to address the CRD's lack of control over the flow of solid waste streams in the Region, so that respondents are fully aware of the potential risks. Securing material flows under current conditions, will require very competitive pricing for tipping fees at an IRM solution. Current conditions in the CRD are discussed in Section 3 below and the issue of waste flow control is discussed both in the Case Studies in Section 5 and in the Findings in Section 6, as it is one of the most significant issues to be addressed as part of the IRM Project Plan.

There may be other options for securing material flows that could also be considered such as inter-municipal agreements. Some of these options/concepts are discussed in the Case Studies presented in Section 5. Certainly, the CRD has previously examined the option of pursuing development of waste management infrastructure through joint initiatives that would allow for control over larger waste streams and thus economies of scale, through the Feasibility Study for a Tri-regional Waste-to-Energy Facility as discussed in the staff report to the Environmental Sustainability Committee in June 2011 attached as Appendix S. This study determined that a tri-regional option would secure more feedstock, allowing for greater viability of a range of technology options including conventional WTE, gasification and plasma arc, and greater economies of scale and lower costs for each unit of waste processed.

## 3 Current CRD IRM System

The Environmental Resource Management Division of the CRD is responsible for solid waste disposal of municipally controlled waste in the Capital Region. Programs offered by the CRD are funded through fees collected at the Hartland landfill, funding received from producers for

managing stewardship items and the sale of resources and recyclable materials. No funding is drawn from the municipal tax system.

The programs offered by the CRD include:

1. The CRD residential blue box program provided to over 121,000 households in the Region.
2. Support for waste reduction, reuse and recycling through public outreach and initiatives such as the myrecyclopedia app.
3. Operation of a drop-off facility at Hartland, accepting recyclables, product stewardship items, household hazardous waste and residual garbage.
4. A Kitchen scraps landfill ban, resulting in residential collection programs provided through a combination of municipal programs and private services.
5. A yard and garden material landfill restriction, resulting in a number of municipal yard waste depots accepting the drop off of these materials including Hartland. This is also supported by collection services in 6 municipalities.
6. Operation of the Hartland landfill (discussed further below).
7. Management of construction and demolition materials at the Hartland landfill that meet the CRD landfill disposal requirements for removal of hazardous items and recyclables.

Municipal solid waste generated in the CRD that is destined for disposal, is managed at two specific sites within the region. The CRD owns and operates a landfill at the Hartland site in Saanich, approximately 14 km north of the City of Victoria. At the current rate of fill, the Hartland landfill has well over 30 years of life remaining. As indicated in Figure 1 above, since the original development of the CRD Solid Waste Management Plan, waste generation rates in the CRD have declined from 671 kg/capita/year as of 1989 to 351 kg/capita/year as of 2016 through the combined effort of the CRD and member municipalities to divert yard and kitchen scraps and through other waste reduction, reuse and recycling efforts.

Of the waste entering the Hartland landfill, approximately 50% of the approximately 150,000 tonnes per year that is landfilled, is generated by residential sources and the rest is generated by private sources and is hauled to the site by private contractors. Current tipping fees at the Hartland landfill are identified in the *Hartland Tipping Fee and Regulation Bylaw*. As of 2017 the charge for general refuse was \$110/tonne. This is generally equivalent to the average tipping fees set by other Vancouver Island regional districts. The landfill gas system at the Hartland landfill currently captures 1,200 SCFM of landfill gas, of which approximately 50% is directed to a 1.6 MW co-generation plant, and approximately 50% is currently flared. The LFG that is currently flared, would be available as a supplementary energy source to an Advanced Integrated Resource Management Facility.

The CRD has embarked on a Landfill Gas Utilization Feasibility Study intended to determine if greater value can be derived from all the landfill gas generated at the site. The outcome of this exercise may provide an opportunity for co-management of landfill gas and biogas from the RTF, including the gas conditioning infrastructure to upgrade landfill gas and biogas to pipeline grade renewable gas to the grid or other options (e.g. CNG applications).

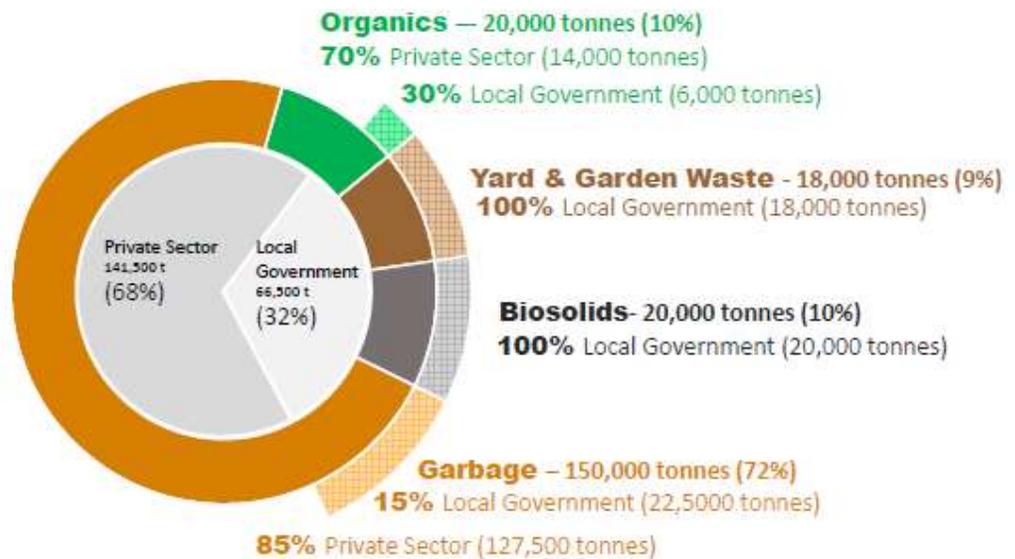
A second landfill owned and operated by Tervita known as the Highwest Waste Management Facility accepts construction and demolition (C & D) and non-hazardous institutional, commercial and light industrial (ICI) waste. This facility is the only private disposal facility located in the CRD and can dispose of a maximum of 25,500 tpy of selected non-putrescible wastes. Capacity at this site is expected to be reached around year 2019/2020.

The CRD has no control over the flow of C & D material to the Highwest facility nor does it have control of the flow of the privately managed MSW stream to the Hartland landfill beyond the current tipping fees and bans/restrictions on the disposal of yard & garden waste and kitchen scraps that are applied at the site. There may be some residual waste that flows outside the region via private haulers but that is considered negligible at this time. However, there is some concern that ICI material streams could be directed to other landfills in BC and Washington State should the tipping fee at Hartland increase such that the haul and export of waste outside of the CRD becomes financially viable.

The CRD has restricted kitchen scraps from disposal at the Hartland Landfill as of 2015. Household organics are collected through municipal services or private service providers across the CRD. Acceptable materials include food scraps, household plants and soiled paper towels and tissues. The CRD expects diverted organic tonnes to increase to 20,000 tpy over the next few years following implementation of this restriction. The CRD manages a portion (approximately 30%) of the processing of kitchen scraps collected across the Region for some of its municipal partners. This material is hauled to a transfer station at Hartland Landfill. Currently the CRD contracts for the haul and processing of these materials at a facility located outside the Region in Richmond BC.

Figure 2 below, provides an overview of the material streams generated within the CRD, and how these material streams are currently managed. This overview includes the potential generation of biosolids through the RTF.

**Figure 2** Current Waste Generation and Management in the CRD



### Waste Stream Control

(Local Government, CRD and Municipalities)

In 2012, the Capital Regional District (CRD) began development of a major revision of its 1995 Solid Waste Management Plan, referred to as the Integrated Solid Waste and Resource Management Plan (ISWRMP). The ISWRMP was put on hold in 2015 to investigate Integrated Resource Management (IRM) opportunities.

As indicated in the letter received from the MOE letter of July 2017, the Ministry's CRD Project Liaison, advised that the Ministry views the implementation of the CALWMP and the Advanced IRM facility as two distinct projects. The Advanced IRM facility initiative is seen as a longer term project which requires further details and would be better aligned with the CRD solid waste management plan process as it contemplates beneficial reuse of solid waste residuals. Updates to the SWMP would proceed under the new *Guide to Solid Waste Management Planning* released by the Province in September 2016. The Guide sets a new municipal waste disposal target of 350 kg per capita by 2020, requires consideration of eight new provincial guiding principles, and shifts the focus from a prescriptive to a results-based model for solid waste planning.

The IRM Project Plan outline presented in Appendix N was aligned with the CRD solid waste management planning (SWMP) process as it contemplates the beneficial reuse of some or all of the solid waste residuals currently managed by the CRD. The IRM project could result in a fundamental shift in the way that solid waste residuals and organics could be managed in the region. IRM has the potential to impact every aspect of the overall waste management system during the three main stages: system inputs (pre-processing), processing and system outputs.

Key steps in the re-initiation and updating of the SWMP which can affect the IRM planning process (and vice versa) have been indicated in the IRM Project Plan.

As noted in Section 2.5.6 above, as part of the IRM Work Plan and during the development of the IRM procurement documents, there is a need to address the CRD's lack of control over the flow of solid waste streams in the Region.

#### 4 Overview of IRM and National/Regional Context in Various Jurisdictions

The national/Provincial and regional context in which IRM is implemented is a very significant factor in the success of any IRM initiative. This context includes the regulatory environment for solid waste and biosolids, greenhouse gas emission related regulations and emission reduction targets, availability of disposal capacity, the market for renewable energy and recovered materials amongst others.

In British Columbia and the CRD in comparison to other jurisdictions:

1. Management of residentially generated solid waste is largely a municipal responsibility, while management of commercial waste falls largely to the private sector. Authorities responsible for solid waste management are responsible for compliance with B.C. regulations and for the development of Solid Waste Management Plans under the new *Guide to Solid Waste Management Planning* released by the Province in September 2016, which provides a framework for how the waste streams they are responsible for are managed over time. The CRD Solid Waste Management Plan, which provides the current framework for the management of solid waste in the region, was developed in 1989.
2. There are no applicable Provincial or National bans or taxation initiatives that direct major material streams away from landfill disposal to possible IRM infrastructure. The CRD restricts the disposal of a number of materials including yard and garden waste and Kitchen scraps at the Hartland landfill, as a means of incentivizing diversion of these material streams.
3. There are no specific waste flow management requirements as discussed in Section 2.5.6 above. Generally, jurisdiction for waste management jurisdiction in the CRD is split, with the lower tier member municipalities being responsible for decisions regarding the provision of residential collection services and directing those materials to waste processing/disposal facilities for management, and the CRD being responsible for Hartland, and the services provided at this facility. As a result only 32% of the materials managed at Hartland are municipally 'controlled', with the remainder being solid waste hauled to this facility by the private sector. This is similar to the experience in other BC jurisdictions, and as a result pricing signals including the tipping fees at regional facilities are the primary influencers on waste flow. This is similar to the majority of the rest of North America. However, overseas there are many jurisdictions where waste flow is directed through regulations to regional authorities.

4. Pricing signals for disposal, often reflect the availability of landfill disposal capacity. While the CRD has significant remaining capacity at Hartland, it is recognized that the landfill is an asset that could not easily (or ever) be replaced. In jurisdictions like Ontario or the New England states, the lack of availability of landfill disposal space has resulted in higher landfill disposal tipping fees which has driven both investment in waste diversion programs and the application of IRM solutions including thermal technologies (e.g. Durham York Energy Centre discussed below). This is a significant factor in countries with limited available land or landfill disposal capacity.
5. In British Columbia the regulatory system supports the beneficial re-use of biosolids. Depending on the type and extent of treatment, biosolids can be produced as either Class A or Class B. British Columbia's Organic Matter Recycling Regulations (OMRR) outline the biosolids class requirements through quality criteria for pathogens, specifically faecal coliforms, and trace elements. Class A biosolids undergo more extensive treatment (e.g. anaerobic digestion, alkaline stabilization) and stabilization, targeted at pathogen removal, compared to Class B biosolids. Class A biosolids products are also lower in trace metal content due to the addition of additives during the treatment process such as lime, sand, or wood waste (Stantec 2011). As Class A biosolids are subject to more stringent quality criteria, they have less restrictive land application requirements than Class B biosolids due to their lower risk (BCWWA 2016, MoE 2017).
6. The availability of incentives for renewable energy production from solid or liquid waste streams varies from province to province, state to state and at a federal level. Some jurisdictions have no direct incentives at all. Some incentives are more substantial than others and provide a more significant financial premium for generation of renewable transportation fuels and/or for the generation of electricity from this type of renewable source. In BC incentives available under the Provincial Climate Leadership Plan and the Greenhouse Gas Reduction Regulation (GGRR) as well as under the Clean Energy Act are enabling utilities to increase incentives for the supply and use of renewable natural gas (RNG). RNG is considered carbon neutral. Increased use of RNG could result in up to 450,000 tonnes of GHG reductions per year in B.C., and will also help build the market for biogas, providing economic opportunities for local governments and farming and forestry operations. Amendments to the GGRR will allow utilities to double the incentives available to convert vehicles and marine vessels to natural gas when the new incentives go towards vehicles using 100% RNG, and enable utilities to recover the costs of acquiring and distributing RNG in rates.

The following sections provide some background on the national/Provincial and regional context which has affected the implementation of IRM initiatives elsewhere, and that are of relevance when reviewing the IRM case studies as presented in Section 5.

#### 4.1 North America

Management of solid waste in North America is usually addressed within the development and implementation of solid waste management plans as required based on state or provincial acts,

regulations and/or guidelines. Requirements vary significantly from those jurisdictions that are required to achieve specific diversion targets and those where only general guidance is provided.

There are several states, counties and local jurisdictions in the US that encourage similar types of programs for some of the suite of materials CRD desires managed. However, most such similar programs are integrated to address the management of solid waste and recyclable materials and few if any include biosolids in the suite of materials requiring an integrated approach.

The United States Environmental Protection Agency (EPA ) is a US federal agency which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress. The EPA enforces the Resource Conservation and Recovery Act (RCRA) which was developed to protect communities and implement resource conservation. The EPA develops regulations, guidance and policies that ensure the safe management and cleanup of solid and hazardous waste, and programs that encourage source reduction and beneficial reuse. However, in practical terms the EPA and RCRA are primarily focused on protecting the environment and not focused on resource recovery in the way CRD defines the term. The EPA also oversees the management of biosolids<sup>1</sup>. The EPA enforces regulations that establish a protective regulatory framework to manage the use and disposal of sewage sludge. The EPA also governs the use of biosolids when used as fertilizer. However the EPA does not require the preparation or implementation of IRM approaches, nor does it stipulate a requirement for the beneficial use of biosolids.

As an example of a local governmental entity developing IRM type programs, the Ohio Environmental Protection Agency oversees Ohio's solid waste management planning program. The program is a multi-faceted, statutorily-based program developed to ensure the state's solid waste is properly managed. The overriding objectives are to ensure that Ohio has adequate disposal capacity and to reduce Ohio's reliance on landfills for disposing of solid waste. To achieve those objectives, Ohio EPA, working with the Materials Management Advisory Council, adopts a state solid waste management plan (state plan) that establishes goals for reduction and recycling.

The state reports approximately 40 years of available disposal capacity which allows the state to focus its attention on diverting waste to alternative management options. This is achieved by ensuring that communities and businesses have opportunities to reduce, reuse, and recycle their solid waste. Making those opportunities available is a collaborative effort among many stakeholders but is driven primarily at the local level through solid waste management districts (SWMDs). SWMDs, in turn, fulfil their planning obligations by preparing and implementing solid waste management plans. Through those plans, SWMDs demonstrate how they will fulfil their statutory requirements and achieve the goals in the state plan.

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<sup>1</sup> <https://www.epa.gov/biosolids>

As another example, the state of North Carolina requires its counties to develop and submit a ten-year solid waste management plan (SWMP). Mecklenburg County developed its SWMP<sup>2</sup> with a goal of continuously evaluating the waste stream, developing waste reduction goals, and guiding future planning decisions to “Create recycling infrastructure for no wasted resources in our County”. The SWMP does not address biosolids. The County incorporates eight local governmental entities in the development of the SWMP. The latest 2012 Mecklenburg County Ten-Year Solid Waste Management Plan (Plan) represents the fifth update to the Plan, and encompasses eight local governments.

The state of California has a department (CalRecycle) devoted to managing its resources titled the California Department of Resources Recycling and Recovery<sup>3</sup>. The state has enacted numerous laws and regulations that mandate the recovery of resources that has resulted in significant improvement in the beneficial use of the state’s solid wastes and recyclables. Businesses in California are required to implement recycling their organic materials depending on the amount of waste they generate each week. Local jurisdictions must have an organic waste recycling program in place for those businesses. The state also set the goal of 75 percent recycling, composting or source reduction of solid waste by 2020 calling for the state and the Department of Resources Recycling and Recovery (CalRecycle) to take a statewide approach to decreasing California’s reliance on landfills. The approach is based on implementing programs to achieve the highest and best use of all materials in the state.<sup>4</sup> CalRecycle does not manage biosolids.

In regards to the Canadian approach to IRM and solid waste planning, there are general similarities in the regulatory and/or policy guidance regarding solid waste management programming for municipal jurisdictions. There are variations in extended producer responsibility programs, whether or not planning documents require approval as an overall framework for municipal systems (e.g. BC) or whether they are regarded as good practice and are expected to reflect Provincial policy (e.g. Ontario).

Within BC, as a comparison to the CRD system and SWMP as described in Section 3, the Greater Metro Vancouver Regional District adopted a Solid Waste and Integrated Resources Management Plan (ISWRMP)<sup>5</sup> which has been incorporated into the Metro Vancouver Regional

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<https://www.mecknc.gov/LUESA/SolidWaste/ManagementPlan/Documents/MeckCoSolidWasteMgmtPlanJune2012.pdf>

<sup>3</sup> <http://www.calrecycle.ca.gov/stateagency/IWMPlans/>

<sup>4</sup> <http://www.calrecycle.ca.gov/75Percent/>

<sup>5</sup> <http://www.metrovancouver.org/services/solid-waste/SolidWastePublications/ISWRMP.pdf>

Growth Strategy (Bylaw 1136, 2010)<sup>6</sup>. The overriding principle of the Integrated Solid Waste and Resource Management Plan was based on the avoidance of waste through an aggressive waste reduction campaign and through the recovery of materials and energy from the waste that remains. In line with this principle, the Integrated Solid Waste and Resource Management Plan (ISWRMP) has four goals:

1. Minimize waste generation
2. Maximize reuse, recycling and material recovery
3. Recover energy from the waste stream after material recycling
4. Dispose of all remaining waste in landfill, after material recycling and energy recovery

Among a variety of strategies to manage resources, Strategy 2.6 of the ISWRMP targets organics for recycling and energy recovery and specifically seeks to identify beneficial and marketable products from various materials including biosolids and other utility residuals.

This plan and strategy is relatively unique in North America as it addresses the management of a range of materials outside of traditional solid waste, including biosolids.

In regards to management of biosolids in Canada, there is support for beneficial re-use of biosolids by federal and provincial agencies across Canada (CCME 2012). In Canada, the CCME has developed a 'Canada-Wide Approach for the Management of Wastewater Biosolids' (CCME 2012a) and a supporting 'Guidance Document for the Beneficial Use of Municipal Biosolids, Municipal Sludge and Treated Septage' (CCME 2012b). Federal and provincial acts and regulations are intended to ensure biosolids are managed and used in a safe and environmentally sound manner. Biosolids sold or imported as fertilizer or supplements are regulated under the Federal Fertilizer Act. End use of biosolids, including land application and disposal are governed by provincial or territorial acts and regulations, which specify standards and generally require licencing/permitting approvals for biosolids use.

Generally in North America, the driving factors that encourage any form of integrated waste management system for solid or liquid waste materials are indicated in Table 2.

**Table 2 Factors That Affect IRM Project Development in North America**

**Political/Regulatory**

<b>Indicator</b>	<b>Definition/Description</b>
<b>Regulations banning disposal of residential and/or commercial organic wastes to landfills</b>	Legislation that restricts or places limits on the disposal of organic/decomposable materials in landfills. Each jurisdiction has its own generator/trigger value.

<sup>6</sup><http://www.metrovancouver.org/services/regionalplanning/PlanningPublications/RGSAdoptedbyGVRDBoard.pdf>

<b>Carbon credit/trading programs or subsidy programs</b>	State/Provincial level programs that provide financial incentives for facility/project owners to implement IRM solutions.
<b>Regulatory limits on GHG emissions</b>	Regulatory guidelines or legislation that places a cap on GHG emissions generated by waste and/or industrial facilities.
<b>Legislation that creates renewable energy portfolio mandates/goals (e.g. 20% of state's energy will come from renewable sources)</b>	State/Provincial level government enacted regulations and/or programs that set forth goals for energy generated by renewable sources.
<b>State/Provincial diversion mandates requiring achievement of certain diversion goals</b>	State/Province sets a broad goal for reuse or recovery of materials without stipulating how those goals should be achieved. States that target diversion rates higher than 50% draw market interest.
<b>Limits/requirements regarding nutrients and land application</b>	Specific regulatory limits/requirements that stipulates the quantity and/or type of nutrients that can be applied to land.
<b>State's political climate on energy matters</b>	The political makeup of the state (red/blue) and the influence of traditional energy sources on policy making.

#### Economic

<b>Indicator</b>	<b>Definition/Description</b>
<b>Market price for electricity (KW/h)</b>	The market price of electricity per kilowatt-hour (KW/h) in a given geography, particularly for energy from renewable sources.
<b>Landfill tipping fees</b>	The average tipping fee for landfill disposal of waste
<b>Market price for recovered material (e.g. compost, fertilizer)</b>	Average bulk retail price for recovered material

#### Social

<b>Indicator</b>	<b>Definition/Description</b>
<b>Green ranking of a state/province or city</b>	State/city green score.
<b>Recycling rates or landfill diversion rates</b>	Current waste diversion rate
<b>Public awareness of past failures (e.g. odor, environmental, etc.) where facilities have been a public nuisance.</b>	News articles that cite complaints regarding large-scale waste facilities.

#### Technology

<b>Indicator</b>	<b>Definition/Description</b>
<b>Proximity/accessibility to distribution infrastructure (e.g. gas pipeline, grid)</b>	Estimated natural gas pipeline mileage as reported by U.S. Department of Energy
<b>Waste collection and pre-processing infrastructure</b>	Status of waste collection and pre-processing infrastructure and the degree of material flow control held by the jurisdictions considering IRM

## 4.2 European Union

The management of waste material in the European Union (EU) reflects the diversity of the various countries that make up the EU. There are overarching regulations and guidelines in place that have for some time favoured the processing of waste, rather than direct disposal in landfills. Additional regulations and guidelines address extended producer responsibility and recently there is additional emphasis on moving towards a circular economy.

In general, members of the EU have regulations in place that require that no untreated organic waste be deposited directly in landfills, that landfills are reserved for the disposal of residual materials that remain following some form of processing and treatment. A number of jurisdictions also impose significant fees on any waste going to landfills, which in turn serves to increase the number and types of processing facilities because the higher cost of processing waste materials is competitive with these increased landfill disposal fees.

Regulations and guidelines promulgated by the EU include minimum requirements for managing certain types of waste. These include the Landfill Directive targeting biodegradable municipal solid waste, the Packaging and Packaging Waste Directive focused on recycling, the Waste Framework Directive emphasizing the hierarchy and various directives related to the treatment and disposal of waste water sludge and biosolids. The Waste Directive focuses on waste prevention and puts in place new targets which will help the EU move towards its goal of becoming a re cycling society. It includes targets for EU Member States to recycle 50% of their municipal waste and 70% of construction waste by 2020.

The Directive introduces a five-step waste hierarchy where prevention is the best option, followed by re-use, recycling and other forms of recovery, with disposal such as landfill as the last resort. EU waste legislation aims to move waste management up the waste hierarchy.

The Waste Framework Directive, revised in 2008, streamlines waste legislation, incorporating rules on a number of issues such as the management of hazardous waste and waste oils. Other pieces of EU waste legislation include

1. The Regulation on waste shipments which aims to ensure the safe shipment of all types of waste, including hazardous waste;
2. The Packaging and Packaging Waste Directive which sets standards for the design of packaging and lays down specific targets for the recycling and recovery of waste packaging;
3. The Landfill Directive and the Waste Incineration Directive which set standards and limits for the release of pollution into the air or into groundwater;
4. The End-of-Life Vehicles Directive which sets increasing re-use, recycling and recovery targets and restricts the use of hazardous substances in both new vehicles and replacement vehicle parts;
5. The Waste Electrical and Electronic Equipment (WEEE) legislation which addresses collection, recycling and recovery targets for electrical goods;

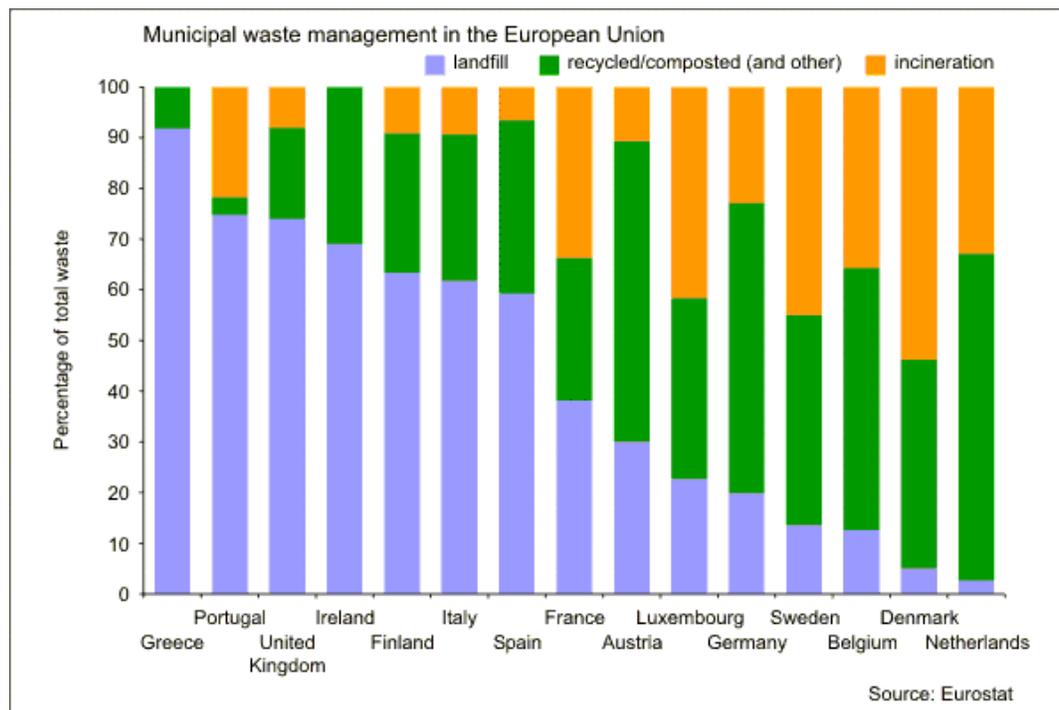
6. The Directive on the Restriction of Hazardous Substances in electrical and electronic equipment which restricts the use of hazardous substances in electronics;
7. The Batteries Directive which sets collection, recycling and recovery targets, and
8. The Council Directive concerning urban waste water treatment which states that sludge arising from waste water treatment shall be re-used whenever appropriate and that disposal routes shall minimize the adverse effects on the environment.

The Waste Framework Directive has also introduced life-cycle analysis into waste policies, which provides a broader view of economic and environmental aspects.

The measures used within each country to affect changes in practices varies. These include landfill bans, landfill and incineration taxes, mandatory source separation of organic waste, pay as you throw and extended producer responsibility. More recently, the emphasis on sustainability and the circular economy has increased within the EU.

These factors, coupled with the existing competing pressures on land use, have resulted in greater diversion of materials from disposal to various forms of processing/treatment. As shown in Figure x, there is significantly less landfilling of materials in many of the EU member countries than is found in North America.

In regards to biosolids management, the Jurisdictional Review (Appendix Q) provides an overview of treatment and disposal and beneficial use programs across the EU. The processing and use of biosolids varies considerably across the EU, with the dominant processing/utilization methods including application to agricultural land; composting and other land applications; landfilling; and incineration (Evan 2012, Fonts et al. 2012). Countries within the EU are required to enact Regulations and Directives into their own national legislations. While Regulations must be transposed verbatim, Directives are minimum requirements. Relevant directives include the Sludge (use in agriculture) Directive (CEC, 1986), the Landfill Directive (CEC, 1999), and the Waste Incineration Directive (CEC, 2000). EU member states have chosen a range of measures and limits in the implementation of the EU Sludge (use in agriculture) Directive (Evan 2012). Within the EU, biogas and phosphate recovery appear to be areas of future interest (Evan 2012).

**Figure 3 Waste Management in the European Union**

Regarding biosolids, the ultimate end use depends on the specific circumstances of each country. Countries with large populations and limited agricultural land utilize disposal/processing options other than land application. Land application is common in England, France and Spain, while in Austria and Germany, the trend is towards incineration.

#### 4.3 Japan

Japan has a unique set of circumstances as well. Land is at a premium, so significant emphasis is placed on minimizing use of valuable land for waste disposal. Energy is also a prime driver in Japan. Japan is dependent on the overseas markets for most of its energy and resources and is therefore very focused on maximizing the efficient consumption of these resources. It has a goal of 100% energy independence, including at its wastewater treatment facilities and therefore has focused efforts on recovering energy from biosolids. Utilization of sewage sludge in Japan includes use in i) direct application to agricultural lands, ii) as a component of compost, iii) as a raw materials in cement and iv) incineration and anaerobic digestion to recover the energy content. Approximately 70% of the sludge is incinerated.

The Japanese, through a combination of public policy, private market conditions, and geographic necessity, practice integrated MSW management. The Japanese rely heavily on incineration/waste-to-energy driven by the country's severe shortage of landfill space, the desire to sanitize and sterilize the waste to minimize environmental impacts of the residuals and the drive to energy and materials sustainability.

In 2000, Japan enacted the Fundamental Law for Establishing a Sound Material-Cycle Society (Law No. 110/2000) which focused Japan's efforts toward a Sound Material-Cycle Society where resources are conserved and the environmental load is reduced to the greatest extent possible. There are a number of regulatory and legislative initiatives that directly relate to this effort. These include:

1. Law for the Promotion of Sorted Collection and Recycling Containers and Packaging which addresses collection of containers and packaging by municipalities recycling of containers and packaging by producers and users
2. Law for the Recycling of Specified Kinds of Home Appliances which addresses retailers receiving used appliances from consumers, recycling by manufacturers, etc. and consumers shouldering cost for recycling
3. Construction Material Recycling Law which requires construction contractors are responsible for the sorting and dismantling and are responsible for the recycling of construction waste
4. Law for promotion of Recycling and Related Activities for treatment of Cyclical Food Resources which requires recycling of food waste by food manufacturer, processors and sellers
5. Law for the Recycling of End-of-Life Vehicles which requires the recycling of end-of-life vehicles and payment of recycling fee at the time of purchase of new vehicle
6. The Basic Law for Environmental Pollution Control which provides basic policies for environmental conservation
7. The Fundamental Plan for Establishing a Sound Material-Cycle Society Amended in 2013, which seeks to ensure societal control of consumption of natural resources and to reduce environmental load The Basic Act for Establishing a Sound Material-Cycle Society

As Japan's landmass is limited and finding landfill disposal sites is difficult, they have developed an integrated system to collect and transport waste, process it through intermediary treatment by incineration and other methods, and then dispose of the treated residuals in sanitary landfills. As a result, Japan is host to over 1,200 incineration facilities which use several methods including stoker furnaces, fluidized bed furnaces, and gasification.

## 5 IRM Facility Case Studies

Based on review of the various IRM documents and information as discussed in Section 3, as well as additional investigations undertaken by HDR, a number of IRM facility case studies have been documented below to inform the development of IRM procurement criteria. The context for development of these facilities from a regulatory and market place standpoint as discussed in Section 4 above, is important to consider when reviewing these case studies and findings in regards to the implications for the CRD IRM project. The definition of biosolids, Class A biosolids

and sewage sludge in these jurisdictions varies, and may be different from how these terms are applied in BC and in the CRD.

### 5.1 ZAB Nuthe-Spree (Redwave reference facility)

The Zweckverband Waste Treatment Nuthe-Spree or ZAB association was formed by two regional waste authorities in Germany, the SBAZV and the LOS in 2002. Both authorities are responsible for the management of residual waste disposal within their respective jurisdictions. The ZAB planned the facility and awarded a contract to construct an MBT facility to manage waste generated in their area. Construction began in 2004. The original general contractor became insolvent, and new contracts were signed in 2005 with Herhof GmbH for technology provision and Waste Tec GmbH for development of the facility. The facility began operations in the summer of 2007. The ZAB association runs the MBT facility and manages its affairs. Committees of the association that govern the facility including annual funding requests (facility tariffs) include an Association Assembly and a Board of Directors, with representatives from both regional waste authorities.

The primary technology applied at the ZAB Nuthe-Spree facility is a Mechanical Biological Treatment (MBT) process for the MSW and bulky waste stream. MBT is a broad term that refers to multiple sub-processes including pre-treatment, biodrying, recyclables recovery, recovery of solid recovered fuel (SRF). The equipment for each sub-process is based on a series of conventional equipment installations similar to those used in operating MBT plants elsewhere in the world. The specific technology applied at the ZAB facility is the Herhof Stabilat technology. First the waste is dried through a biological process and then the dry waste is mechanically processed. The combustible components are separated from metals and inert components (stones, sand, glass, and ceramics) in several stages. The secondary fuel produced in this way (SBS or RDF) is utilized energetically in brown coal power plants and by the cement industry.

The facility was constructed over a two and a half year period from June 2004 to November 2006 and was commissioned over a four month period. Redwave reported capital costs of 45 million euros as of 2004/2006.

The rationale for application of IRM in this jurisdiction is similar to that in other jurisdictions in the European Union (EU) being lack of available landfill disposal capacity and the EU and German directives and regulations that favour the processing of waste rather than direct disposal in landfills, and the regulatory environment and energy market that favours use of SRF and other renewable or partly renewable fuels.

#### Key facility information:

##### a. Feedstock and Flow Control

This facility is owned and operated by the ZAB. The two regional waste authorities that formed ZAB are responsible for management of MSW and bulky waste primarily from residential sources, and are able to direct these solid waste streams to the facility. The plant has capacity for 135,000 tonnes per year of MSW and 15,000 tonnes per year of bulky waste.

- b. Management of Biosolids  
This facility does not manage biosolids.
- c. Site Size and Characteristics  
The facility occupies a site of approximately 3 hectares, and is located in an industrial area at the outskirts of a local community. The site was identified and secured by the ZAB.
- d. Technology Risk  
The MBT technology applied at the ZAB Nuthe-Spree facility is relatively conventional, and has been applied in many facilities across the EU. There was minimal technology risk associated with the facility, supporting the application of a DB contract as noted below. Key risks associated with the functionality of the facility were addressed through the commissioning phase of the project.
- e. Products and Markets  
Products recovered from the facility include recyclable materials and RDF. RDF is marketed as an alternative substitute fuel to be used in solid fuel electricity generating facilities and by cement kilns. It is important to note that the use of alternative fuels by the cement sector in Germany and many EU nations is a well-established practice with a defined market.
- f. Cost and Financing  
As noted above, the reported capital cost for the facility was of 45 million euros as of 2004/2006. The constructor was responsible for temporary financing during the construction phase of the facility, but ultimately the overall costs were addressed and financed by the ZAB authority. Information regarding the exact nature of the financing relationships is not available.
- g. Procurement/Contract Structure  
Herhof and WasteTec were retained to Design, Build and Commission the facility. They were responsible for project development, the permit application, tendering and awarding of trades in coordination with their municipal client, project management and supervision during construction and commissioning of the facility. This is typical for facility development based on conventional technologies with minimal technology risk.
- h. Residuals Management  
It is unclear exactly how inert non-recyclable (or mineral fraction) residue generated by the ZAB facility is managed. Generally this material can be directed for use in aggregate applications, or alternatively it would meet EU and German requirements for landfill disposal.

Applicability to the CRD / Context for IRM Procurement Criteria:

- 1) The Regional waste authorities responsible for the ZAB and the MBT facility have the responsibility to manage the residual waste in their jurisdiction and thus have flow control and certainty regarding the waste streams that are directed to the facility.
- 2) The application of EU waste directives and German legislation to comply with these directives, facilitated the development of the facility and of the markets for the RDF recovered through the MBT process. The existence of a robust market for this type of recovered fuel is essential for diversion of this material from landfill disposal.
- 3) The technology applied at this facility is a proven technology, applied at many facilities across the EU. As a result it was possible and reasonable for the ZAB to apply a straightforward Design/Build procurement and contract structure for the development of the facility.

## 5.2 ZAK Kaiserslautern Facility (Anaergia Reference Facility)

The ZAK is a 'joint communal institution' of the City of Kaiserslautern and the Kaiserslautern regional waste authority in Germany. ZAK is responsible for managing mixed solid waste generated by area residents and contracts for the management of waste from a nearby U.S. military base (60,000 servicemen). The ZAK is one component of an overall system managed by ASK a certified municipal waste management entity.

The MBT facility at ZAK uses the Organic Extrusion (OREX) Press to extract organics from mixed municipal solid waste. The installation at Kaiserslautern is operating on mixed solid waste which has a high level of contamination. The combined OREX and Organic Polishing (OPS) technologies provide a pre-treatment system is robust and flexible to handle virtually any level of contamination. The MBT facility was commissioned in 2006.

Municipal waste is unloaded in the reception area and directly fed into the hopper of the OREX. The OREX separates the input waste into two fractions: a dry and a wet fraction. The dry fraction, which has 75-80% solids concentration and a calorific value of 11,000-13,000 kJ/kg is sent directly to energy from waste plants. The wet fraction with 35-40% solids concentration is conveyed to a dry anaerobic digestion plant. The first step for the AD process is an organic polishing system where incoming material is blended with AD digestate into a slurry, which is passed through a cyclone to remove light (floating) contaminants and heavy (sinking) contaminants. The 'clean' slurry enters the digester.

The digested matter is extracted from the digester (DRANCO digester), is pressed to remove excess water, and then sent to an aerobic stabilization process. During aerobic stabilization, the matter is left to rest in static biocells with air infiltration for 3-4 weeks and then matured under a canopy for 60 days. The stabilized matter obtained is used as covering soil in landfill sites.

The facility is part of a larger existing integrated waste processing site, which includes a recycling facility, a composting facility for source separated organics, a hazardous waste management centre, and a new landfill disposal facility for inert residues developed on an old landfill site.

The rationale for application of IRM in this jurisdiction is similar to that in other jurisdictions in the European Union (EU) being lack of available landfill disposal capacity and the EU and German directives and regulations that favour the processing of waste rather than direct

disposal in landfills, and the regulatory environment and energy market that favours production of biogas as a renewable fuel.

Key facility information:

a. Feedstock and Flow Control

The ASK is responsible for the control and management of municipal waste generated within its regional area including residential and commercial materials. The ASK contracts for additional waste streams, including the waste generated by the US military base. The services provided by ASK are recovered through a municipal refuse disposal fee collected on an annual basis and depending on the size of the non-recyclable refuse container used for collection. The overall capacity for the OREX system has been designed for 100,000 tonnes per year.

b. Management of Biosolids

The ZAK is not responsible for the management of Biosolids.

c. Site Size and Characteristics

The full ZAK facility encompasses 88 hectares hosting a number of IRM related activities. The facility is in a valley surrounded by forest plantations and is both visually and physically separated from residential areas.

d. Technology Risk

Generally, the technologies employed at the ZAK facility have been proven through application in a number of locations. The OREX technology itself is a newer technology, and was chosen by ZAK to replace the previous pre-processing facility which had been used to extract the organic fraction from MSW to direct that stream to the existing AD digester. The contract with Anaergia for the OREX facility requires that it meets a guaranteed feed rate of 35 tonnes per hour.

e. Products and Markets

The products recovered from the OREX pre-processing system and the anaerobic digester include: RDF with energy content of between 11,000 to 13,000 kJ/kg; Biogas between 70 and 80 cfm/tonne used to generate electricity; Stabilized digestate material used for landfill cover; and ferrous and non-ferrous metals.

f. Cost and Financing

The facility was financed by the ZAK. The estimated cost of installation of the new front end processing system for the MBT as of 2006 was 3.6 million euros for installation of OREX press (\$5.4 million CAD). 6 million euros (9 million CAD) for separate front end recycling processing system. 20 million euro (\$30 million CAD) for overall system overhaul.

g. Procurement/Contract Structure

Anaergia was contracted for the Design, Build and Maintenance of the new front end processing system. Currently a full service maintenance contract is in effect. The guaranteed feed rate for the OREX press is 35 tonnes per hour.

#### h. Residuals Management

The ZAK is responsible for the disposal of inert residues, and recently entered into a contract with a private sector partner REMEX to develop an inert landfill disposal facility for 'slightly polluted' mineral waste.

#### Applicability to the CRD / Context for IRM Procurement Criteria

- 1) The Regional waste authorities (ASK) responsible for the ZAK and the MBT facility have the responsibility to manage the waste streams in their jurisdiction including commercial waste and thus have flow control and certainty regarding the waste streams that are directed to the facility.
- 2) The application of EU waste directives and German legislation to comply with these directives, facilitated the development of the facility and of the markets for the RDF recovered through the MBT process. The existence of a robust market for this type of recovered fuel from landfill disposal.
- 3) The majority of the technologies applied at this facility are proven technologies, applied at many facilities across the EU. As a result, the majority of the technologies were procured through DB contracts. For the relatively newer OREX technology, the ZAK addressed potential risk through the longer term maintenance contract and the guaranteed OREX feed rate.

### 5.3 AVR Rozenburg Facility, Rotterdam

The AVR Rotterdam facility is a private sector-owned integrated waste management facility which includes a number of waste to energy components as well as an ash processing and metals recovery facility. The processing capacity offered by AVR is approximately 870,000 tonnes per year of household waste and 350,000 tonnes per year of commercial waste, 20% of the overall processing capacity for residual waste in the Netherlands.

AVR operates four transfer stations in the Netherlands, accepting domestic and commercial waste streams that it transfers to its Rotterdam facility. The AVR Rotterdam facility accepts and processes residual waste, paper pulp, wood residue and industrial waste water.

The AVR facility accepts and processes 1.5 million tonnes of residual domestic waste, originating from households in the Netherlands and England. The facility also accepts and processes a range of commercial waste materials. These materials are processed through conventional grate furnace incinerators, recovering both electricity and heat for district heating.

The AVR facility accepts and processes 150,000 tpy of non-reusable waste wood (B-wood) including treated wood from demolition cannot be directed to wood-processing industries. This material is directed to a biomass power plant, generating renewable power. AVR will be commissioning a system for direct delivery of district heating and process steam from this facility in early 2018.

The industrial waste water that it accepts for processing is unsuitable for conventional wastewater treatment, and is directed to four Vortex furnaces that are relatively unique in the EU. Collectively the Vortex furnaces are capable of processing 325,000 tonnes of industrial

waste water per year. Materials are recovered from the solid residues from the furnaces (such as molybdenum) and heat is recovered for district heating for residential and commercial development in the area.

Products and services offered by AVR include:

1. District heating for the equivalent of 160,000 homes and commercial operations. They are currently working with local utilities to provide district heating for the greenhouse farming sector.
2. Use of the bottom ash from the WTE facility to create construction products such as paving stones, clinker bricks, kerbstones and products for road construction. This material is processed through an agreement with a secondary processor that has secured product markets including Dutch Public Works and Water Management.
3. Pulp residue from paper recycling facilities is first sent to separate combustion and then the remaining minerals are processed into a product called Topcrete which is a calciferous binding agent that can be used in building materials.
4. A pilot project is under development to use CO<sub>2</sub> from the flue gases from the facility as a carbon source for greenhouse facilities.
5. Processing of waste wood and industrial waste water as discussed above.
6. A composting facility that processes 90,000 tonnes per year of organic material.

AVR is part of a partnership with three other companies and the Port of Rotterdam for the development of an Enerkem facility to process synthesis gas from residual waste to produce methanol. This partnership was announced in the fall of 2016, the current status of development of a facility is unclear.

The rationale for application of IRM by AVR is similar to that in other jurisdictions in the European Union (EU) being lack of available landfill disposal capacity and the EU and Dutch directives and regulations that favour the processing of waste rather than direct disposal in landfills, and the regulatory and energy markets that favours energy recovery (heat, power) from non-fossil fuel sources.

Key facility information:

- a. Feedstock and Flow Control  
AVR competes in the open market for waste materials. Currently the facility accepts waste materials from a variety of sources including solid waste from the United Kingdom and the Netherlands.
- b. Management of Biosolids  
Conventional biosolids are not managed at the AVR facility. However, various industrial waste water streams are managed.
- c. Site Size and Characteristics

The AVR facility is located within an industrial area of the City of Rotterdam. Information could not be found indicating the size of the overall site.

d. Technology Risk

The thermal technologies used at the AVR site are more conventional Waste to Energy technologies, with advanced emissions control and energy recovery systems. Some of the ancillary technologies and approaches to derive products and energy are more advanced than others in the EU and North America. The risk associated with technology adaption has been borne by the company, which has sought expertise and outside partners/advisors as necessary to support innovation.

e. Products and Markets

The facility produces a range of solid material products from processing residues as discussed above. Energy products include electricity generation equal to the requirements of around 200,000 homes as well as heat recovery for district heating. No public information on the energy market for AVR power could be found.

f. Cost and Financing

No public information on the capital investment for the AVR facility could be sourced. As a private entity, this information would be expected to remain confidential. AVR appears to have been largely if not solely responsible for financing all development, no information was found to indicate any investment from government entities. AVR generates its income from three sources: gate fees for receipt of waste materials, sale of energy and the sale of recovered materials.

g. Procurement/Contract Structure

AVR sourced all technologies/equipment and services for construction. This is a fully DBFOM facility. The majority of gate fees have been secured through long term contracts from municipalities and commercial customers. Sale of electricity and heat are also sold under long term contracts with utilities, local municipal district heating networks and industrial steam users. AVR Rotterdam has been able to import waste from other countries and states in the EU as it is a qualified energy efficient waste treatment plan holding R1 status.

h. Residuals Management

AVR is responsible for the management of all residues. The prohibitive price for landfill disposal in the Netherlands including landfill disposal taxes, incentivizes the market for alternative products derived from solid residues remaining after thermal processing.

Applicability to the CRD / Context for IRM Procurement Criteria

- 1) AVR has secured long term contracts for waste supply, which facilitates their ability to invest in and grow their facilities including advanced schemes such as CO2 recovery.
- 2) Market conditions such as the availability of local district heating schemes for energy products in the EU support the sale of recovered heat increasing the viability of thermal technologies.

- 3) AVR has mitigated technology risk by using conventional thermal technologies to form the central component of their facility, and then choosing to work with partners/advisors for the development of new products and markets.

#### 5.4 Altriom MBT Facility (3Wayste technology)

The Altriom MBT facility in Polignac France uses the 3Wayste technology developed by the Vacher group, and was developed by a private corporation under the terms of a long term (15-year) contract with four communities in the Polignac region. These communities participated in a 7 year planning process to determine a solution to reduce waste to disposal. The resulting procurement process resulted in four bids, with a new company - Altriom winning the process. Driving factors behind the municipal decision to contract for an MBT facility were: current economics for disposal, markets for energy recovery, soil quality in area and potential market/need for soil amendment.

This MBT facility was developed to process 'grey waste' being residual mixed garbage to recover recyclables, compost and RDF. The area has a yellow bag program for recycling, which is processed at a separate facility within the same site and the Altriom MBT facility. The facility was designed to process 120,000 tpy of MSW, however in the first few years of operation the facility received and processed only 40,000 tpy. The contract was designed to ramp-up waste quantities sent to the facility as contracts expire with the local host jurisdictions. Construction of the facility took 14 months. It has been in operation since June 2014.

The MBT process used by the facility includes: material pre-sort to remove large items; opening of bags through a proprietary bag breaker, separation of the materials into a large and small fraction. The large fraction is sent through a series of optical sorters to recover recyclables. The small fraction sent to composting is largely organic (80%). Optical sorting is used to removal small metal items from the small fraction sent to compost. In-vessel composting is used to generate a compost that meets EU standards.

The rationale for application of IRM in this jurisdiction is similar to that in other jurisdictions in the European Union (EU) being lack of available landfill disposal capacity and the EU and French directives and regulations that favour the processing of waste rather than direct disposal in landfills.

Key facility information:

- a. Feedstock and Flow Control  
The facility was designed to process mixed solid waste. This material is provided under long term (15 year) agreement with the communities responsible for the collection of the domestic waste stream in this region.
- b. Management of Biosolids  
The 3WAYSTE facility does not manage biosolids.
- c. Site Size and Characteristics

Under the DBOOM procurement process, the participating municipalities made a site available within the same site as is currently used for processing recyclables. The site is in the order of 3 to 4 hectares in size. This site is on the outskirts of the local community.

d. Technology Risk

The majority of the component technologies used at the facility are conventional MBT technologies, however the overall design and some key pieces of equipment such as the initial bag-breaker are unique to this facility. Altriom has borne the technology risk and is responsible for meeting performance guarantees under the terms of its agreements.

e. Products and Markets

The facility recovers HDPE, PET, PP, ferrous and non-ferrous metals, some paper products, compost and RDF. The recyclables generally have a downgraded value compared to the source separated recyclables. Compost recovered from processing of the organic fraction is sold for \$15 CAD per tonne. Value for recyclables: 120 euro (\$179 CAD)/tonne ferrous; 1,400 euro (\$2,090 CAD) /tonne non-ferrous; 314 euro (\$468 CAD)/tonne foil; 50 to 70 euro (\$75 to \$105 CAD) /tonne paper; 20 euro (\$30 CAD)/tonne for RDF.

f. Cost and Financing

The estimated capital cost for the facility was 25 million Euro (\$37 million CAD). Altriom was responsible for financing of the facility. Financing was secured on the basis of the waste supply contract as noted below.

g. Procurement/Contract Structure

The participating municipalities undertook procurement under a DBOOM contract structure, under which the facility was fully financed and completed by Altriom. The municipalities entered into a 15 year waste supply agreement. Altriom guaranteed under the terms of the contract, 80% recovery of recyclable materials from the mixed solid waste stream (including recovery of RDF).

h. Residuals Management

Altriom is responsible for residue disposal. Approximately 10 to 20% of the incoming waste stream cannot be recovered and is sent to disposal.

Applicability to the CRD / Context for IRM Procurement Criteria

- 1) Altriom was able to finance the development of the facility on the basis of the long term contract for waste supply and as the facility was designed using largely conventional technologies resulting in less technology risk. Reasonable local markets were also available for the sale of recovered recyclables and RDF.
- 2) The local/district municipalities transferred risk to Altriom through the DBOOM contract structure including the recovery rate guarantees.

## 5.5 SYDEC Mont de Marsan Biosolids Co-composting Facility

The Mont de Marsan biosolids composting facility is owned and operated by the SYDEC municipal waste water utility. SYDEC is a public body that includes 331 municipalities of Landes and the County Council and Regional Council of Aquitaine in France.

In April 2001, Syndicat Mixte Departemental d'Equipement des Communes des Landes (SYDEC), the regional utilities authority responsible for providing services to manage wastewater treatment plant biosolids and department green waste, conducted a study to determine the best alternative for managing biosolids and utilizing the end product. The study showed that composting biosolids with green waste and wood waste would create a product to greatly enhance the soil quality. In June 2003, SYDEC selected Veolia Water Systems/OTV-SUD Ouest, a division of Veolia Environnement, to design a composting plant that would use the USFilter IPS Composting System. Five months later, the project received environmental approval and administrative authorization to proceed. The technology provider was BPD industries.

The Mont de Marsan biosolids composting facility is comprised of ten 45-meter (148-foot) long bays, the facility is designed to handle 44 tonnes/ day (48.5 tons) of dewatered biosolids at 15 percent solids concentration and 50 tonnes/day (55 tons) of green waste. Once a day, the automated composting machine travels through each bay to mix and move the material about 4 meters (13 feet). At this rate, the compost is retained in the bays for 16 to 18 days before being transferred to the curing area where it matures for another 28 days. Although French regulations focus on specific standards for the end product and not on the actual process, the Mont de Marsan plant is required to achieve a minimum of 60°C for seven days to ensure that pathogen requirements for the final product are met. The bays are also equipped with an automated aeration system and a moisture addition system, to aid the composting process.

Odour control is imperative to the successful operation of the Mont de Marsan plant. Two chemical scrubbers and two large biofilters treat the facility's process air. Pine trees surrounding the plant's boundary provide an additional buffer between the site and its neighbours.

Mont de Marsan is centrally located to receive biosolids from the surrounding communities' wastewater treatment facilities. Initially, approximately 30 wastewater treatment facilities will participate in the composting project. Trucks will transport dewatered biosolids from as far away as 100 km (62 mi). In an effort to accommodate wastewater facilities great and small, a mobile dewatering truck will serve five small plants that wish to participate in the project.

The rationale for application of IRM in this jurisdiction through the co-composting of biosolids and yard trimmings is based on the EU and French directives and regulations that favour beneficial use of biosolids.

Key facility information:

### a. Feedstock and Flow Control

The facility processes in the order of 18,000 wet tonnes per year of biosolids, anaerobically digested to 15 to 20% DS, along with 20,000 wet tonnes per year of yard trimmings. Both material streams are municipally controlled.

- b. Management of Biosolids  
The primary purpose of this facility is to derive a beneficial use compost product from the processing of municipal biosolids.
- c. Site Size and Characteristics  
The facility site is 8 acres, and is located in an agricultural area, within a mile of the closest town.
- d. Technology Risk  
This facility was developed using largely conventional in-vessel composting technology. Technology risk was addressed through retaining a reputable designer, experienced in the EU market.
- e. Products and Markets  
Compost from the facility is marketed for agricultural applications. Initially, market assistance was provided through the French government and SYDEC paid for hauling costs for the first year.
- f. Cost and Financing  
Financing for the 8.05 million facility came from several sources. Agencies included Landes Conseil General (18%), European Union (20%), Agence de l'Eau Adour Garonne (20%), Agence de l'Environnement et de la Maitrise d'Energie or ADEME (12%) and SYDEC (30%).
- g. Procurement/Contract Structure  
This facility was procured and developed under a Design/Build contract structure, and is owned and operated by SYDEC.
- h. Residuals Management  
SYDEC is responsible for the management of any residuals from the facility. However minimal residuals are generated under normal operations.

#### Applicability to the CRD / Context for IRM Procurement Criteria

- 1) SYDEC through the municipalities that are part of this utility, has control of the biosolids and yard trimmings that form its feedstock.
- 2) Technology risk was mitigated through technology selection and the selection of a qualified contractor with a lengthy track record of successful biosolids management.
- 3) Marketing risk for the recovered compost product was mitigated in the initial years through incentives such as free hauling and assistance provided by the French government.

#### 5.6 UTE TEM, Mataro (Veolia)

The UTE TEM facility in Mataro Spain, is an integrated waste management facility which includes a 190,000 tpy MBT plant, a 35,000 tpy AD facility, a 41,000 tpy composting facility and a 160,000 tpy waste to energy plant.

The facility is owned by the Consorci de Residus del Maresme. The facility treats household waste from the 28 member municipal consortium as well as industrial waste. The facility serves the needs of 470,000 people within the Maresme region of Spain. The new incineration process at the Mataro facility was designed and built by a consortium including Veolia and Spanish partners. The entire treatment site including the WTE plant, composting and AD facility is operated by Veolia.

Construction of the facility began in 2009. The facility was commissioned in 2011. Veolia's operating contract runs into 2022.

Mixed solid waste received at the facility is directed to the MBT plant. Following mechanical sorting, recyclables are recovered and the organic fraction of the waste stream is directed to AD or composting. RDF from the MBT is directed to the WTE plant along with other industrial waste. The facility also separately receives and processes bulky waste and source separated recyclables.

The rationale for application of IRM in this jurisdiction is similar to that in other jurisdictions in the European Union (EU) being lack of available landfill disposal capacity and the EU and Spanish directives and regulations that favour the processing of waste rather than direct disposal in landfills, and the regulatory environment and energy market that favours use of RDF and other renewable or partly renewable fuels.

Key facility information:

a. Feedstock and Flow Control

The municipal consortium that owns the facility, has flow control over the household residential waste stream that supplies the majority of the feedstock for the facility. The supplementary feedstock used for blending with the biosolids is primarily hog fuel, purchased from a local sawmill at \$1.75/cubic yard as of 2010.

b. Management of Biosolids

Biosolids are not managed at this facility.

c. Site Size and Characteristics

The facility occupies a relatively small site in an industrial area, with an unusual configuration. The total site size is approximately 3 hectares.

d. Technology Risk

The technologies used at the facility are relatively conventional. The Compost process employs a wide-bed in-vessel aerobic composting process, while the AD uses the BTA technology which is used at many facilities across the EU and here in North America in the City of Toronto. The WTE facility is a conventional combustion facility with two processing lines using Martin grates and a steam boiler.

e. Products and Markets

The MBT facility recovers recyclable materials and compost as well as electricity from the AD facility and 12 MW of power from the WTE plant. Overall, 24% of the received material is

recovered for market. Information on the market value of these products has not been publicly available.

f. Cost and Financing

The municipal consortium was responsible for the capital financing for the facility. Information could not be sourced regarding the total capital cost.

g. Procurement/Contract Structure

The facility was procured through a DBOM procurement and contract structure. Following installation, the operating contract has been held with Veolia, while various maintenance contracts with specific technology providers are also in effect.

h. Residuals Management

Overall the facility generates 37,000 tpy of residue that requires landfill disposal. Disposal is the responsibility of the municipal consortium.

Applicability to the CRD / Context for IRM Procurement Criteria

- 1) The municipal consortium which owns the UTE TEM facility have the responsibility to manage the waste streams in their jurisdiction and thus have flow control and certainty regarding the waste streams that are directed to the facility.
- 2) The majority of the technologies applied at this facility are proven technologies, applied at many facilities across the EU. However, the complexity of the overall installation resulted in the selection of a DBOM procurement model and long term operating and maintenance contracts to facilitate and minimize operational risk.

## 5.7 Lahti Energia, Kymijarvi II Power Plant, Finland

Lahti Energia is an energy and energy services company owned by the City of Lahti in Finland. Lahti Energia has used gasified biofuel and SRF as a complementary fuel in their coal-fired generating facility since 1998.

The Lahti Energia Kymijarvi II Power Plant uses solid recovered fuel (SRF) in a gasification process with capacity to process 250,000 tonnes of SRF to produce 160 MW of power. The facility uses 'energy waste' collected by the municipal waste authorities in the Pajjat-Hame region as its primary feedstock. Energy waste consists of unclean plastic, paper, cardboard and wood. Current waste fuel suppliers collect MSW from domestic and commercial sources. Energy waste from domestic sources is collected separately and shredded, and then is hauled to the facility and comprises 20% of the fuel feed. Commercial waste is processed to recover solid recovered fuel that meets the facilities fuel specifications. Lahti energy purchases this material from these local fuel suppliers.

Construction of the project began in November 2009, with commissioning in 2012. The facility was handed to Lahti Energy as of June 2012.

The Kymijarvi II facility is a demonstration plant. Fuel is received and stored in silos. Fuel is feed from the silos to two separate gasifiers. The gasifiers use an atmospheric pressure circulating fluidized bed (CFB) gasification technology. The gas is cooled and then cleaned, prior to being

directed to a steam boiler where it is combusted to generate steam which is then directed to a steam turbine. The facility produces 50 MW of electricity and 90MW of district heat which is conducted to a district heating network to customers in the Lahti and Hollola region. The facility achieved its first 25,000 hours of operation as of October 2017.

Waste incineration plants that only utilize waste, are exempt from the carbon emissions trading system which encouraged Lahti Energy to focus on developing gasification technology.

The rationale for application of IRM in this jurisdiction is similar to that in other jurisdictions in the European Union (EU) being lack of available landfill disposal capacity and the EU and Finnish directives and regulations that favour the processing of waste rather than direct disposal in landfills, and the regulatory environment and energy market that favours use of renewable fuels.

Key facility information:

a. Feedstock and Flow Control

Lahti Energia purchases energy waste and solid recovered fuel. No information was found regarding the market value of this material.

b. Management of Biosolids

The Kymijarvi II facility does not process biosolids.

c. Site Size and Characteristics

The Kymijarvi II facility is set in a forested area, near the City of Lahti. While exact information regarding the site size was not available, the site appears to be in the order of a few hectares. The facility was sited and the site is owned by Lahti Energia which is the municipally owned energy utility.

d. Technology Risk

The Kymijarvi II facility is the largest, successfully operating gasification facility in the EU. While the technology is advanced, Lahti Energia had developed operating experience over the prior use of gasification and SRF to supplement fuels at its coal fired generating facility, thus minimizing some of the technology risk borne by the company.

e. Products and Markets

The primary products from the facility are electricity which is sold to the national grid, and heat which is sold through Lahti Energia's local district heating systems.

f. Cost and Financing

The original budget for the facility as 157 million Euros, rising to 160.5 million during the project. Lahti Energia primarily financed this facility, with some funding support of 15 million Euros from the Finnish state and 7 million Euros from the EU.

g. Procurement/Contract Structure

Lahti Energia procured the facility from Valmet through a DB contract. Valmet has agreed on a long-term agreement for further marketing and commercialization of the gasification

technology. Lahti Energia had the operating experience from its existing facilities to operate the facility following commissioning and turn-over of the facility.

#### h. Residuals Management

Lahti Energia is responsible for the management of solid residues from the gasification process.

#### Applicability to the CRD / Context for IRM Procurement Criteria

- 1) Lahti Energia is owned by the City of Lahti, which also has control over the domestic waste stream in the Region and thus has some control over the sourcing of fuel for the facility.
- 2) As Lahti Energia is also a local electricity and district heating supplier, they had an existing marketing approach for recovered energy.
- 3) While the application of gasification to SRF is an advanced technology and not widely applied in the EU, Lahti Energia was able to mitigate technology risk through their contractual arrangement with Valmet and through their years of experience in applying similar approaches to provide some fuel for their existing coal-fired power plant.

### 5.8 Kelowna/Vernon Compost Facility

The Cities of Kelowna and Vernon co-own an aerobic composting facility processing municipal biosolids. The regional composting facility is located on the outskirts of Vernon and opened in 2006. It converts 100% of the received biosolids to a Class A product under the BC OMRR and meets the requirements of the federal Fertilizers Act. Major contributors of biosolids to the facility include Kelowna, Vernon and Westbank.

The technology used at the facility is an advanced aerated static pile composting process which converts biosolids to Class A compost in approximately 80 days. The composting technology was supplied by Engineering Compost Systems. Biosolids are mixed with wood waste comprised of wood chips or hog fuel and wood ash. Once composted and cured, the compost is screened to remove large woody residues and is tested in compliance with provincial and federal guidelines. Large woody residues are returned to the composting system as inoculant. The facility has a capacity to process 36,400 tonnes annually, and typically produces approximately 28,500 tonnes of compost per year. Stormwater and leachate from the facility is treated in a wetland and detention area before being discharged to the Vernon effluent force main.

The facility has recently undergone an upgrade and expansion, including additional odour control measures.

Key facility information:

#### a. Feedstock and Flow Control

The Cities of Vernon and Kelowna control the municipal biosolids stream. Supplemental feedstock (wood waste, ash) is purchased for the operation.

#### b. Management of Biosolids

The primary focus of this facility is the generation of a Class A product from the processing of biosolids.

c. Site Size and Characteristics

The current facility has a 9 hectare footprint, to accommodate expansion over the first 10 years of operation. A total 33 hectare area is available to accommodate further expansion. The site is located in an agricultural area. The site was provided by the City of Vernon. The site selection and acquisition process was lengthy, involving in-depth review, consultation, stakeholder engagement and negotiations.

d. Technology Risk

The advanced aerated static pile process used at this facility is relatively conventional presenting minimal technology risk.

e. Products and Markets

The compost product generated at the facility is marketed as 'Ogogrow' for various applications including commercial landscaping, residential gardening, nurseries and orchards and as final cover for landfill closure. The cities decided to work with compost distributors and landscape supply centres rather than entering into a competitive market position. The sale of compost has covered approximately 23% of the facility operating costs.

f. Cost and Financing

The facility was developed based on the terms of a MOU between the Cities of Kelowna and Vernon, signed in the early stages of the project. Both municipalities contributed to the capital cost of the facility based on their projected use, 2/3 Kelowna and 1/3 Vernon. The total capital cost in 2006 was 7.4 million. It is estimated that the economies of scale of the project resulted in significant savings for each partner. To cover annual operating costs, a tip fee is collected per tonne of biosolids processed from each customer group using the facility. A portion of the operating costs is covered from product revenues.

g. Procurement/Contract Structure

The facility is owned by the municipal partnership in proportion with the financing arrangement. Consultants were retained to advise through the facility design, tendering and construction period. A DB procurement and contract structure was used. The facility is operated by the municipalities under the terms of their agreement.

h. Residuals Management

The Cities of Vernon and Kelowna are responsible for the management of any non-compostable residue generated at the facility.

Applicability to the CRD / Context for IRM Procurement Criteria

- 1) The municipal consortium that owns the facility have the responsibility to manage the biosolids in their respective jurisdictions and thus have flow control and certainty regarding the primary waste stream directed to the facility. Supplementary materials are purchased on the open market.
- 2) The technologies applied at this facility are proven technologies, facilitating the DB procurement and contractual arrangement chosen by the Cities.

- 3) Siting of the facility was a complex and time consuming process. By selecting a site with room for expansion, the Cities mitigated risk associated with future biosolids management requirements.

## 5.9 Durham York Energy Centre

The Durham York Energy Centre is a 140,000 tonne per year mass-burn energy from waste facility procured by the Regions of Durham and York under a Design Build Operate procurement. The Regions deliver the residential municipal solid waste remaining after source reduction, recycling and composting programs in place throughout the Regions.

Planning for this project, the first new energy from waste facility in Canada in twenty years, began in the 90's. The Regional Council determined that they did not want to rely on out-of-Region disposal options and established a Long Term Strategy Plan: 2000 to 2020 with the main goals of diverting at least 50% of the residential waste from disposal, to implement an integrated residential waste management system for collection, processing and disposal of blue box recyclables, food and yard waste compostables, special wastes, and to consider energy from waste for residential garbage residential.

Over the past two decades, Durham Region has implemented several key infrastructure assets including a materials recovery facility opened in December, 2007, an organics processing facility opened in the fall of 2006 and the remediation of old landfill sites. Most recently, the Region is investigating implementation of an AD facility to recover energy and expand the capacity of local organics management options.

The factors contributing to the implementation of IRM in Durham Region include provincial regulations and policy that favour the recovery of materials, lack of landfill disposal capacity and an environment in southern Ontario that does not favour new landfill capacity development, and the cost of disposal outside the Region.

Key Facts regarding the Durham York Energy Center include:

- a. **Feedstock and Flow Control**  
Residential MSW from the Regions of Durham and York delivered via transfer trailers from municipally controlled transfer stations. The Durham Region is responsible for 110,000 tonnes per year and the York Region 30,000, which represents the total annual capacity of the Facility. These material streams are wholly controlled by the two municipalities
- b. **Management of Biosolids**  
Biosolids are managed under a completely separate program. Biosolids from the Region's anaerobic digesters is either directed to land application or to a regionally owned and operated biosolids incinerator. Ash from the biosolids incinerator is directed to a local cement operation where it is blended with the raw feed to supplement cement production.
- c. **Site Size and Characteristics**  
The Durham York Energy Center is sited on approximately 28 hectare site located in Clarington. The greenfield site was selected following a multi-year site selection process. The site selection process began in 2006 and included a series of over fifteen separate public

information centres held in the Durham and York Region over a two year- span to narrow the siting options down to the preferred site, approved by the Durham and York Regional Councils in January of 2008. The site selection and approvals process included an extensive Environmental Assessment process, which examined the full suite of residual waste processing technologies, a long-list of potential sites, an REOI, RFQ & RFP and included a procurement process, and detailed site specific studies, including a Human Health and Ecological Risk Assessment, an Air Quality Assessment; Surface Water and Groundwater Assessment; Facility Energy and Life Cycle Assessment; Geotechnical Investigation; Acoustic Assessment; Visual Assessment, Natural Environment Assessment, Social/Cultural Assessment; a Stage 2 Archaeological Assessment and Built Heritage Assessment; a Traffic Assessment; an Economic Assessment; and, a Site-Specific Human Health and Ecological Risk Assessment. More than 20 different companies, and over 100 team members were involved in completing and reviewing these reports. The Notice of Completion of the Review of the EA was issued in February, 2010, almost four years after the approval of the terms of reference on March 31, 2006. The site is owned by the Region and is located in an industrial/commercial area directly off the 401 in a rural setting along the shore of Lake Ontario.

- d. **Technology Risk**  
The Facility is a mass burn combustion unit, coupled with state of the art combustion and emission controls and generates electricity via a steam turbine generator utilizing high temperature/pressure steam generated by the combustion of the MSW in a waterwall boiler. The mass burn technology is the predominant approach used throughout the world for combustion of MSW and has a long operating history.
- e. **Products and Markets**  
The Facility generates electricity for sale to the local power utility. Ash is also processed to recover ferrous and non-ferrous metals, which are sold in the regional scrap metals market.
- f. **Cost and Financing**  
The capital costs totaled approximately \$284 million. This included approximately \$255 million for construction of the facility and \$29 million for permitting, site servicing, consulting fees and economic development activities in the host community. The annual cost of operations is approximately \$16 M and revenues from electricity metal sales are on the order of \$8 to \$9 M.
- g. **Procurement/Contract Structure**  
The Facility is owned by the Regions and operated under a 20 year operating agreement by Covanta. It was procured under a DBOM approach, with the Regions financing the capital costs which were paid to Covanta during the construction period based on milestones achieved.
- h. **Residuals Management**  
The responsibility for managing the residuals from this Facility is the operators (Covanta). The residuals are transported in closed transfer trailers to a landfill for disposal as a non-hazardous waste.

### Applicability to CRD / Context for Procurement Criteria

The lessons learned in the DYEC implementation include:

- 1) A new Facility needs to be part of an integrated system that aligns with the preferred hierarchy. Adding new waste management infrastructure can be a controversial undertaking. It is critical that any new asset be right sized taking into account aggressive source reduction, composting, and reuse/recycling programs. The facility wouldn't have been approved by the Province of Ontario without the 3R's taking priority and 'recovery' being the identified method of addressing the remaining waste stream.
- 2) Every project needs a champion. Durham and York have strong leadership in support of this initiative from individuals who has spent considerable time learning about the technology before deciding what to do
- 3) Determining and understanding what "sufficient consultation" is. Even with over 100 public meetings, some residents still believe that they were not consulted enough.
- 4) Recognize that it is likely that there are some individuals who will never support what you are doing. These individuals should of course be allowed to be heard, but attention shouldn't come at the expense of other voices and opinions.
- 5) Plan for the long haul. Implementing a regional project with multiple levels of approvals and participation by various political levels is a time and energy consuming process. Be sure that there are adequate resources available and that the timeline takes into account the fact that there will be delays and surprises.
- 6) Having a site. The siting process was long and at times controversial. It is key to a successful project.

#### 5.10 Palm Beach, Renewable Energy Facility 2

The Palm Beach Renewable Energy Facility 2 is the first greenfield facility built in the US in twenty years. The Palm Beach Renewable Energy Facility 2 (PBREF 2) entered commercial operation on July 18, 2015. It is a 95-MW plant, owned by the Solid Waste Authority (SWA) of Palm Beach County, was designed and constructed by a consortium of Babcock and Wilcox and KBR, Inc., and is operated under a DBO agreement by a subsidiary of Babcock and Wilcox Power Services Group. It utilizes mass burn technology, consists of three boilers and is sized to combust up to 3,000 t/d of post-recycled MSW. It generates electricity by passing the steam generated in the water wall boilers through a single turbine generator with the power (net of in-house use) supplied to Florida Power and Light Co. under a long-term power purchase agreement.

WTE facilities are subject to very stringent emissions standards. The Facility controls emissions through advanced combustion controls, use of powdered activated carbon to control dioxin, furan, and mercury emissions, a spray dryer absorber to remove acid gases, a pulse jet fabric filter (baghouse) to remove particulate matter and a selective catalytic reduction (SCR) system installed for NOx control. The bottom and fly ash generated are conveyed to an ash management building. There, a rotary magnet removes ferrous metals and an eddy current separator removes nonferrous metals from the ash stream for sale.

Planning for the Facility began in 2004 to build on other elements of the County's integrated solid waste system, which included a 1,800 tpd Refuse Derived Fuel (RDF) WTE facility, several regional transfer stations, a Subtitle D sanitary landfill, a MRF, a composting facility, a metals processing facility and household hazardous waste collection program. Remaining life at the landfill was less than 20 years. Continued population growth and a series of hurricanes in 2003, 2004 and 2005 strained the capacity of the system.

A number of alternatives were developed based on six principles

- a) Waste generated in the County should be processed and disposed of in the County;
- b) Should utilize proven state of the art processes;
- c) Should be protective of human health and the sensitive environment;
- d) Solutions should conserve resources;
- e) New processing facilities should be publicly owned but be developed and operated in partnership with experienced private firms; and
- f) Solutions should be cost effective and long term in nature.

After a lengthy options evaluation phase, the Board voted in 2007 to explore procuring a new WTE and in 2008 authorized the issuance of a Request for Qualifications (RFQ) for a full service design/build/operator to provide a mass burn facility. The Authority has a history of owning its facilities. While it has operated its transfer stations and landfills, it has historically used the design/build/operate model for the processing facilities.

The Facility is funded through a series of bond issues. The total project cost is estimated at \$762 million. Repayment will be through revenues realized by the Authority. Revenues of the Authority include revenues from the sale of electricity, recovered materials, commercial tipping fees and non-ad valorem assessments.

Treatment of biosolids is a completely separate activity. The Authority has a biosolids pelletizing facility which opened In August 2009. The biosolids processing facility uses landfill gas as its primary fuel source to fuel the dryers.

Key facility information:

a. Feedstock and Flow Control

The Authority's System consists of a 1,600 TPD RDF waste-to-energy WTE plant and a 3,000 TPD mass burn facility, Class I and Class III landfills, a state-of-the-art Recovered Materials Processing Facility (RMPF), a household hazardous waste (HHW) processing facility, a vegetation waste processing facility, several transfer stations, and various maintenance and other ancillary support facilities. Approximately 70 percent of all solid waste and recyclables collected in Palm Beach County pass through one of the Authority's transfer stations. PBREF2 processes mixed MSW. Most of the MSW processed at the Facility is delivered in transfer trailers.

b. Management of Biosolids

The Authority also separately operates a biosolids pelletizing facility, fuelled by landfill gas, to serve wastewater treatment plants in Palm Beach County.

c. Site Size and Characteristics

The Facility is sited on 24 acres within a larger County owned Energy Park (~ 1,300 acres). This site was chosen because of several advantageous factors. First, it was already owned by the Authority. Second, it is near the existing Energy from waste facility and the site was thus already certified as a power site. Third, it would not require any significant change in collection/transfer routing, as the waste was already coming to the site. Fourth, there was significant supporting infrastructure already in place. Fifth, residue landfilling and recovered metals processing capacity already existed close by. The Energy Park includes an 1,800 tpd RDF WTE facility, Subtitle D sanitary landfill, recovered materials processing facility for both commercial and residential recyclables, yard waste and wastewater sludge composting facility, wastewater sludge pelletizer facility, metals processing facility, and household hazardous waste drop-off facility, and administrative offices.

d. Technology Risk

The technology risk is minimal. Proven technologies were designed, constructed and operated by experienced companies.

e. Products and Markets

Markets for the energy and metals generated at the Facility are well defined and in the case of electricity sold under a long term defined contract with a secure off-take agreement.

f. Cost and Financing

The project is funded through the Authority's revenues, which include a non -ad valorem assessment, tip fees, energy and recovered ad valorem assessment. The capital cost of the winning bid was \$667,981,128. The annual operating fee for the first year was \$20,490,000.

g. Procurement/Contract Structure

The Facility was procured under a design build long term operate structure.

h. Residuals Management

The Facility operator is responsible for managing the residuals.

Applicability to the CRD / Context for IRM Procurement Criteria:

The lessons learned in the Palm Beach implementation include:

- 1) New Facility needs to be part of an integrated system that aligns with the preferred hierarchy. Adding new waste management infrastructure can be a controversial undertaking. It is critical that any new asset be right sized taking into account aggressive source reduction, composting, and reuse/recycling programs.
- 2) Control of the Waste stream simplifies the process of developing a Facility. The Authority had in place existing control of the feedstock to the Facility.

- 3) Having a secure source of funding is critical to obtaining project funding. The Authority had in place a funding system that was secure and thus were able to issue significant debt to fund the capital costs associated with the Facility.

#### 5.11 Pivotal – Güssing Reference Facility

Güssing Austria was the first community in the European Union to produce its whole energy demand (electricity, heating/cooling, fuels) from renewable resources located within the Region. This arose out of a policy adopted in the early 1990's out of which a number of initiatives were developed including an initial pilot facility to gasify locally sourced wood chips and recover electricity and heat for district heating.

The Güssing Austria facility is reported to process 50 tonnes per day of biomass (wood chips from wood thinned from the forest and waste wood from a wooden flooring company) producing 2MW of electricity and 4.6 MW thermal energy. The Güssing facility was constructed in 2001-02 and produces energy for the town of Güssing. The Güssing facility does not process biosolids. The development of the facility was supported with federal funding from the Austrian government and the EU, which covered 6 million euros of the initial 16 million euro capital investment for the plant as of 2001.

The biomass gasifier plant installed at Güssing was a joint effort of a consortium called "Renet Austria" which included: AE Energietechnik as the construction company, (ii) Institute for chemical engineering (Technical University of Vienna), (iii) EVN the regional energy utility, (iv) District heating company Güssing, (v) GE Jenbacher company, and (vi) Repotec Umwelttechnik GmbH. In 2009 Renet Austria merged with the Austrian Bioenergy Centre and formed Bioenergy 2020+, a centre of excellence funding by the Austrian COMET programme. This organization is not currently involved in day-to-day operation of the facility.

The heat energy is directed to the municipally run district heating system, supplying heat to mainly private homes and local institutions as well as green industry that has been attracted to the City. The electricity is sold to the grid under an original feed-in-rate of 12.3 cents/kWh, however the current rate is not known.

Biomass supply is secured by long term contracts for purchase of wood chips from a local wood farmers association. The price was initially fixed for a duration of ten years at 1.6 cents/kWh. The water content of the wood chips is approx. 25%. It was intended that over time that in the order of 40% of the fuel would be replaced by cheaper (0.7 cents/kWh) dry fuel from local wood working industries.

The technology deployed at Güssing plant is Fast Internally Circulating Fluidized Bed (FICFB) gasification system, this process is also called dual fluidized bed gasification, developed jointly by the Institute of Chemical Engineering (Technical University of Vienna) and by AE Energietechnik in Austria. In this system, the gasification reactor is physically separated from the combustion reactor in order to gain a largely nitrogen-free product gas.

The rationale for development of this facility in Güssing are the EU and Austrian directives and regulations that favour use of renewable fuels and the local economic and policy environment.

## Key Facility Information:

- a. Feedstock and Flow Control  
Feedstock for the facility is biomass (wood chips and biomass). The materials are secured in a long term supply contract from a local farmers association. The price was initially fixed for a duration of ten years at 1.6 cents/kWh. The water content of the wood chips is approx. 25%.
- b. Management of Biosolids  
Not applicable for this facility
- c. Site Size and Characteristics  
The facility processes 50 tpd of biomass. Site characteristics of the Güssing facility are not known.
- d. Technology Risk  
The Güssing facility was developed using a demonstration facility in the late 1990's prior to its development in 2002.
- e. Products and Markets  
The facility produces 2 MW electricity and 4.5 MW of thermal energy, both of which are used by the community. There are no liquid emissions from the CHP plant at Güssing, as the condensate from the scrubber is evaporated and fed into the combustion zone, where the organic matter is combusted.
- f. Cost and Financing  
The facility reportedly cost 16 million euros in 2001. The development of the facility was supported with federal funding from the Austrian government and the EU, which covered 6 million euros of the initial 16 million euro capital investment.
- g. Procurement/Contract Structure  
The procurement and contract structure are not known. However, the original ownership structure consisted of a joint effort of a consortium called "Renet Austria" which included: AE Energietechnik as the construction company, (ii) Institute for chemical engineering (Technical University of Vienna), (iii) EVN the regional energy utility, (iv) District heating company Güssing, (v) GE Jenbacher company, and (vi) Repotec Umwelttechnik GmbH. The ownership structure changed in 2009 when Renet Austria merged with the Austrian Bioenergy Centre and formed Bioenergy 2020+, a centre of excellence funding by the Austrian COMET programme.
- h. Residuals Management  
The FICFB technology literature reports the only solid residue is the fly ash from the combustion zone. The carbon content in this fly ash is reported as being very low (<0.5%) and can be handled similar to an ash from biomass combustion.

### Applicability to the CRD / Context for IRM Procurement Criteria:

1. The feedstock for this facility is wood chips and biomass, which is typical of this type of gasification facility. Biomass supply is secured by long term contracts for purchase of wood chips from a local wood farmers association.
2. Since the beginning of the plant operation in the year 2002, continuous improvement in the plant operation and optimisation has been done. Publicly available information indicates that the Güssing plant had consistent hours of operation and continuously improved the availability of the plant. After the initial optimization period (2002 to 2006), the system running hours both for gasifier and engine were quite consistent; about 7000 hours and more than 6000 hours per year respectively.

#### 5.12 Walker Industries – Thorold Facility (Net Zero Waste Reference)

Walker Industries (Walker Environmental) owns and operates an Integrated Waste Management facility in Thorold, Ontario. The site has been the location of a commercial landfill development for many years, and over time the facility has grown to include: an N-Viro biosolids treatment facility managing biosolids generated by the Region of Niagara, an aerobic composting facility processing 35,000 tonnes of municipal source separated organics and 40,000 tonnes per year of yard waste annually, and a public drop-off and recycling centre.

The Region of Niagara selected a joint venture between Walker Industries and N-Viro Systems Canada to construct a centralized biosolids treatment facility following years of study and a competitive procurement process to find an alternative beneficial use solution to manage a portion (1/2) of the Region's biosolids. The Region entered into a long term contract to supply biosolids to Walker who developed and currently operates the N-Viro facility. The process yields a Class A biosolids product marketed under the name Niagara N-Rich. It is approved for use as a fertilizer or soil amendment by the CFIA.

Niagara N-Rich is sold to large farm fertilizer distributors who sell the Class A biosolid product and the direct application service to farmers in Ontario. Most of the product is sold to neighbouring regions where the province's large cash-crop farms are located. Niagara N-Rich is well received by consumers for agricultural use and has required little marketing to date (Gunn 2015). The facility is also working with a contractor, a mining company, and university researchers to look for more uses for the product, such as mine reclamation and reforestation (Gunn 2015).

The facility processes 26,000 tonnes of treated Class B biosolids annually, most of which are from the region, and produces approximately 35,000 tonnes of the Class A Niagara N-Rich soil amendment per year (Walker Industries 2014a). The product is sold for approximately \$10 per tonne (Gunn 2015). In 2014, Walker Environmental acquired N-Viro and became the sole owner of the facility, operating under a contract with the regional government. The Niagara Region pays Walker Environmental to process the Class A biosolids; however they split the net revenue from sales of the N-Rich product.

Walker Industries has also won successive contracts with the Region of Niagara for receipt and processing of the curbside collected source separated organic stream, which includes a combination of food residuals and yard waste. The facility is a GORE cover system composting

facility, with forced aeration for the initial phase of composting, followed by curing in outdoor windrows. Initially the composting facility depended on passive aeration, however, following an increase in material receipt and potential odour incidents Walker invested in the GORE technology. The overall capacity of the compost facility is 90,000 tonnes. Walker markets the compost product, largely for agricultural use.

Key information on the Walker Thorold facility:

a. Feedstock and Flow Control

Walker industries is a private company that competes in the open market for long term material supply contracts with municipal and commercial waste generators. Walker has contracts with the Region of Niagara for the management of source separated organics and yard waste, and for the supply of 26,000 tonnes of Class B biosolids. Walker buys its alkaline agent for the process from a regional cement plant.

b. Management of Biosolids

Walker's Thorold facility includes the NViro treatment facility for management of a portion of the Region of Niagara's Biosolids. The NViro process is a flash-lime stabilization process that creates a fertilizer product that meets federal standards.

c. Site Size and Characteristics

The Compost facility at the Thorold site is approximately 13.5 acres. This facility is surrounded by 100's of acres of land owned and controlled by Walker Industries, which has actively secured land surrounding its operations.

d. Technology Risk

The technologies chosen by Walker are proven technologies in the Canadian market. Walker mitigates its technology risk through its own internal technology selection process.

e. Products and Markets

Compost and fertilizer product generated by Walker Industries are sold to larger distributors of fertilizer products. As noted above, the Niagara N-Rich product is currently sold for \$10 per tonne.

f. Cost and Financing

The reported capital cost for the compost facility was \$10 million CAD as of 2009. Walker self-financed the capital for the facility. Walker also self-financed the NViro facility and all other site infrastructure.

g. Procurement/Contract Structure

Walker has entered into long-term material supply agreements with the Region of Niagara and other entities based on competitive market conditions. Walker has been directly responsible for the design, engineering, construction and operations of the facilities in Thorold.

#### h. Residuals Management

Walker is responsible for managing all residues from their operations, and dispose of these at their adjacent landfill facility.

#### Applicability to the CRD / Context for IRM Procurement Criteria

- 1) Walker has secured long term contracts for waste supply, which facilitates their ability to invest in and grow their facilities.
- 2) Walker has mitigated technology risk by using proven technologies for the primary components of their facility, and where appropriate choosing to work with partners/advisors for the development of new products and markets. For the N-Viro facility, it was originally developed through a joint venture and then Walker acquired N-Viro and became the sole owner of the facility following years of successful operation.

#### 5.13 ARK Power Dynamics (APD) – Stamps Arkansas

The Ark Power Dynamics facility in Stamps Arkansas was developed as a private facility to demonstrate the Ark Reformer technology on chicken litter wastes. The facility was developed in order to derive additional value from the management of this organic material stream versus conventional approaches (e.g. land application) used to manage manures. The facility began operations in 2012. It is unclear if the facility is currently in operation.

The ARK Reformer operates at a relatively low temperature of 65 degrees C. The Ark Reformer technology reportedly can accept materials containing up to 75% moisture content (similar to biosolids) as opposed to gasification technology (which according to APD, is limited to 15% moisture)<sup>7</sup>.

#### Key Facility Information:

##### a. Feedstock and Flow Control

The facility processes chicken litter which has a moisture content up to 75% moisture. The facility processes as much as 3 tons of feedstock per day. Feedstock with a water content of 50 to 60 percent is reportedly preferred. The chicken litter processing revealed the facility may process any carbon-based wet waste, such as animal waste which is similar to other carbon based wet materials such as biosolids. In regards to control of the material processed by the facility, this is through agreement with local suppliers. There are no indications that this technology may be suitable for other solid material streams generated in the CRD.

##### b. Management of Biosolids

Biosolids were not processed at this facility however APD points out that the high moisture content feedstock of chicken litter is similar to that of biosolids.

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<sup>7</sup> <http://www.google.com/patents/US9005536>

c. Site Size and Characteristics

The facility processes 1 to 3 tons per day. The actual site size has not been noted, but generally the size required to process this quantity of material would be relatively small.

d. Technology Risk

It is unclear exactly how the risk associated with the development of the technology was addressed, however it can reasonably be assumed based on the current ownership of this plant that it was largely (or completely) assumed by the technology provider.

e. Products and Markets

The exact products derived at this facility and the market value of these products are not known, however APD reports output could include: a synthetic oil, syngas and a remnant ash that is also referred to as a sterile soil.

Applicability to the CRD / Context for IRM Procurement Criteria:

1. The facility processes feedstock (chicken litter) which has a moisture content of up to 75% moisture which is similar to dewatered biosolids. Although there are no indications the technology is suitable for other solid wastes, the technology could be suitable for the CRD's biosolids, particularly if they are blended with wood chips at an appropriate mixture to yield a feedstock moisture content in the 50 to 60% range.

5.14 Ostara – Gold Bar, Edmonton

The Ostara nutrient recovery facility was constructed at the Clover Bar sewage-settling lagoons at Edmonton's 310- million-litre-per-day Gold Bar wastewater treatment plant in 2015. The Ostara Gold Bar facility was the largest largest-ever nutrient-recovery facility in Canada as of 2015. The facility removes phosphorus from the liquor following biosolids dewatering and is reported to produce 10,000 kilograms per day of plant fertilizer. The facility was a scale up by 20 times of an initial demonstration plant installed in 2007.

The Ostara nutrient recovery process recovers phosphorus from post-digestion liquor resulting from dewatering biosolids, through a controlled precipitation of struvite from the biosolids. Phosphorous recovery from post-digestion liquor is a chemical precipitation process that recovers nutrients (phosphorus and nitrogen) from dewatering liquor stream before they accumulate as struvite in pipes and on equipment. Struvite is a crystalline formation of minerals that occurs in alkaline conditions which is common in post digestion liquor (biosolids that have been digested). Phosphorous recovery is a controlled chemical precipitation process that facilitates the generation and growth of struvite "seeds" (crystalline pellets). This process occurs in an up-flow container that keeps the struvite seeds in suspension until they accumulate mineral crystals to a desired size for commercial fertilizer markets. The crystals are allowed to settle, extracted and dried for commercial horticulture and agriculture markets.

**Key Facility Information:**

- a. **Feedstock and Flow Control**

The Gold Bar Ostara facility receives the liquor from post-digestion biosolids dewatering of the 310- million-litre-per-day Gold Bar wastewater treatment plant.
- b. **Management of Biosolids**

This facility processes the liquor from dewatered biosolids to recover phosphorus in the form of a crystal pellet called Crystal Green™.
- c. **Site Size and Characteristics**

The 600-sq-meter, 12-m-high facility was constructed at the Clover Bar sewage-settling lagoons at Edmonton's Waste Management Centre. The facility is designed to produce 10,000 kilograms per day of slow release plant fertilizer.
- d. **Technology Risk**

Ostara's proprietary technology incorporates a fluidized-bed reactor and crystallization process to precipitate phosphorus and nitrogen out of dewatering recycle streams at the Gold Bar treatment plant. An added benefit of the process is the reduction in the build-up of struvite that typically occurs in the process equipment. The technology is considered proven and commercially operating in dozens of facilities in the US, Canada and Europe.
- e. **Products and Markets**

The Crystal Green product Ostara produces is reportedly a multi-nutrient source (5-28-0 with 10%Mg). Phosphorus from Crystal Green® reportedly optimizes crop performance by providing plants with a more effective and efficient source of nutrients than conventional phosphate fertilizers. The product is marketed for a variety of agricultural fertilizer purposes. Ostara would assume responsibility for the certification, management, storage and distribution of the produced fertilizer product, providing a revenue share to the CRD under a fertilizer offtake agreement (fixed price or index price).
- f. **Cost and Financing**

Not known for this facility. As a private company Ostara is not required to disclose financial information. The equipment reportedly ranges between \$5 million to \$10 million for a typical facility.
- g. **Procurement/Contract Structure**

The contract structure consists of a partnership between EPCOR Water Services Inc. (the WWTP owner/operator) and Ostara Nutrient Recovery Technologies. The WWTP (EPCOR) owns and operates the facility which was designed by Ostara. Ostara supports EPCOR in periodic operations as needed and retains a long-term offtake agreement for the Crystal Green™ fertilizer by-product.
- h. **Residuals Management**

Solid residuals of the process are the Crystal Green™ product that Ostara commits to purchase at agreed upon price. Ostara takes responsibility for the certification,

management, storage, and distribution of the produced fertilizer product while still also providing a revenue share to the public sector consistent with the respective responsibilities of each party. Ostara has used this method to accept the financial risks for the product thereby insulating the City from the significant volatility of the agro-chemical, commodity fertilizer market. Ostara then resells Crystal Green primarily to retailers in the agriculture market and distributors in the turf and ornamental markets. These retailers and distributors combine Crystal Green with other fertilizer components to produce finished products that provide the desired nutrient balance for specific end user applications. These finished products are then sold to end-users (e.g. farmers, golf courses, lawn care professionals). Ostara has built relationships with an extensive network of customers across the United States, Canada, and Europe.

Applicability to the CRD / Context for IRM Procurement Criteria:

- 1) The Ostara process focuses on processing the liquor from post-digestion biosolids. As such it could form part of an overall IRM solution, but would not on its own constitute an IRM approach suitable for management of some or all of the CRD solid and liquid waste streams. A process like Ostara could be considered and implemented outside of the IRM procurement process or as a step in IRM implementation.
- 2) Ostara enters into a long term Crystal Green™ product repurchase agreement whereby Ostara agrees to purchase the fertilizer by-product at agreed upon pricing. This off-take agreement has been used to remove the financial risks of the potentially volatile agro-chemical commodity market from the public entity where it can be managed by the private sector.

#### 5.15 WTT – Surrey Biosolids Facility

The Surrey Organics to Biofuel Facility employs a dry anaerobic digestion system and is designed to recover energy from a co-collected yard and food waste feedstock. The City of Surrey Organics to Biofuel project was the result of the City of Surrey seeking to identify beneficial use of its organic wastes pursuant to a regional directive by Metro Vancouver who adopted a comprehensive, long term waste strategy to divert 70% of all wastes from the landfill by 2015. A key tenant of the strategy is to divert yard and kitchen wastes from being landfilled. Accordingly, the City expanded its residential yard waste collection program in October, 2012 to accept kitchen wastes and food solid paper. The City implemented a waste sampling and composition protocol throughout the first year collection of the combined material streams and provided that information to the prospective proposers as the information became available.

The City applied and secured P3 Canada funding in support of the facility development for provincial funds up to 25% of the capital or not to exceed \$16.9M.

The City solicited for developers to provide design, construction, financing and operations of an Organics to Biofuel facility for a 25 year operating period. The terms included the obligation to provide equipment to process the biogas for use as a pipeline grade natural gas or to produce electricity for sale to BC Hydro. The City also expressed a preference for the production of pipeline gas including compressed natural gas suitable for CNH fuelled vehicle use. The solicitation requested the facility include pre-processing of the mixed feedstock materials, anaerobic digestion, biogas production and recovery, and by-product management.

The City offered the use of a city-owned site. The site is a 6.6 acre parcel of land located adjacent to the Surrey Waste Transfer Station within the Port Kells Industrial Park. The City also offered an additional 3.3-acre parcel of land located adjacent to the 6.6 acre parcel but separated by the only entrance/exit to the Waste Transfer Station. The offering of the 3.3 acre parcel obligated the developers to be responsible for environmental remediation of the site. The 3.3 acre site had been used as a storage area for biomass from a former facility and would necessitate the removal of the biomass prior to its use in the development.

The City required that the project finance structure meet its affordability ceiling. The affordability ceiling was set as the maximum cost of organic waste disposal based on the 2013 Metro Vancouver disposal rates for municipal wastes. The City intended to pay the developer annual service payments, net of any revenues the developer would secure, over the 25 year term of the agreement.

The agreement included a hand-back provision which includes the developer turning over the ownership and operations to the City at the end of the 25 year operating agreement.

The procurement process included an RFQ phase wherein capable companies were requested to submit evidence of their qualifications. After review and shortlisting, the process included an RFP process to request facility design, build, finance, own, operate cost proposals. The RFP process included collaborative meetings to explore technical and commercial matters through workshop and key topic meetings.

The City selected Orgaworld as the preferred proponent. The project includes a dry fermentation anaerobic digestion technology with biogas clean-up and compression into the pipeline grid in addition to CNG offtake for vehicle use. Solids from the project are composted and will be sold to the agri-business by the project company. The project development, design and construction has been on-going since 2014. Project completion has been reported and commencement of operations is expected in late 2017 or early 2018.

#### Key Facility Information:

a. Feedstock and Flow Control

The City of Surrey was obligated to deliver all of the waste collected from the city's residential co-collected yard and food waste program to the facility. The contract includes a provision for increased quantities, beginning with approximately 80,000 tonnes per year of material and increasing over the contract duration to eventually 115,000 tonnes per year. The City has flow control to guarantee the material which was used as the basis for the private sector development partner when securing private financing for the project. In addition to the city's residential organics, the development partner was obligated to secure industrial, commercial and institutional (ICI) wastes to make the economies of scale attractive for the project. As the city's residential wastes increase over time, the private operator will need to reduce the quantities of ICI wastes to allow the City's waste as first priority for processing.

b. Management of Biosolids

The Surrey facility does not receive or process biosolids.

c. Site Size and Characteristics

The city provided a site consisting of approximately six acres for the proponent to use under a long-term no-cost lease for the duration of the contract. The City also offered an additional three acre site that the developer could use if desired however, it is separated from the primary six acre parcel by an access road that serves as the primary access to the City's waste Transfer Station. The developer choose to not use the additional three acre site. The site is located in an industrial area of the City. The site was equipped with utilities and street access. The developer has used the entirety of the six acre parcel for the facility.

d. Technology Risk

The project developer proposed and guaranteed the technology, assuming all risks for the adequacy and efficacy of the technology and Facility design, construction and operation. The technology risk of the facility was relatively minimal as anaerobic digestion was the selected technology. The somewhat problematic risk of feedstock quality and related pre-processing risk was minimized by the city implementing a co-collected yard and food waste collection system a year in advance of the project. The City performed an analysis of the feedstock on a monthly basis providing the information to the prospective bidders. The bidders were also allowed access to the feedstock during this time.

e. Products and Markets

The primary product of the facility is the biogas which is to be upgraded to pipeline quality renewable natural gas (RNG). The City initiated interaction with utility companies, entering into a long term off-take agreement with Fortis BC for the RNG produced by the facility.

f. Cost and Financing

The capital cost for the facility was \$68M Canadian. The project was partially funded by P3 Canada, receiving \$16.9M in funding towards capital costs. According to the P3 funding process, private equity funding was included in the financing.

g. Procurement/Contract Structure

The procurement process consisted of a Request for Expressions of Interest, followed by a Request for Qualifications, followed by a short-listing of firms. The top three qualified firms were invited to participate in a Request for Proposals. The two firms that competed but were ultimately not selected were compensated for their efforts by payment in the amount of \$125,000 to each of the firms. The procurement process followed the procedures of P3 Canada and included a Fairness Advisor, collaborative/in-confidence (sounding) meetings and strict adherence to the confidential management of information under P3 Canada's guidelines. The contract obligates the developer to secure private industrial, commercial and institutional (ICI) wastes from the region to meet the facility capacity levels in the early stages of the contract when the City's wastes have not grown to the ultimate capacity, as anticipated in the later years of the contract. The contract requires private financing of the project beyond the P3 contribution of \$16.9M. The contract includes a 25-year design, build, own, operate agreement that includes a hand-back provision that returns facility ownership to the City at the end of the 25-year operating agreement (DBOOT).

#### h. Residuals Management

Solid residuals from the anaerobic digestion process are converted to a soil amendment using an aerobic composting process.

#### Applicability to the CRD / Context for IRM Procurement Criteria:

- 1) The Surrey Organics to Biofuel facility's dry fermentation anaerobic digestion system represents the biological portion of the mechanical-biological system offered by WTT.
- 2) The dry fermentation technology demonstrates the ability to process food waste, yard waste (SSO) for beneficial uses including energy, and compost.

#### 5.16 Edmonton Waste Management Centre

The Edmonton Waste Management Centre is a 200+ hectare integrated waste management system incorporating an integrated processing and transfer facility, a composting facility, a materials recovery facility, a construction and demolition waste recycling facility, a transfer station, an electronic waste recycling facility, a closed landfill with landfill gas recovery, a waste to biofuels production facility, a biosolids management facility, a research facility and administrative offices.

##### *The Integrated Processing and Transfer Facility (IPTF)*

Waste arrives at the IPTF and is divided into three separate waste streams: composting, biofuels production and landfill. Waste that can't be recycled or composted becomes feedstock for Enerkem's waste to biofuels facility.

The IPTF includes two loading bays, two rotating screens with bag breaking "spikes" to separate materials into different streams, manual pick stations, magnets and other equipment to remove unprocessable materials such as propane bottles, a mechanical system to produce feedstock for Enerkem's waste-to-biofuels facility from processed waste, a conveyor to transfer organic waste materials to the composting and non-recyclable, non-compostable waste to the adjacent Waste-to-Biofuels Facility, bays to load materials for transport to other landfills for disposal.

##### *Biosolids Management Facility*

Biosolids generated from the Edmonton region's two wastewater treatment plants are stored in the Clover Bar lagoons. Biosolids are currently managed through a combination of land application (the NutriGold program which utilizes liquid biosolids from the Clover Bar lagoons) and via co-composting

##### *Composting Facility*

Edmonton's organics processing program uses the organic portion of the waste collected in combination with biosolids (treated sewage sludge) to create compost. Processing organic waste currently take place at the composting facility. The composting facility is the largest of its kind in North America by volume and size. It was built in 2000 and processes compost from 160,000 tonnes of organic waste and biosolids per year for use in agriculture and horticulture.

##### *The Enerkem Waste to Biofuels Facility*

The waste to biofuels facility is owned and operated by Enerkem. It receives 100,000 tonnes per year of pre-processed MSW for conversion into liquid methanol/ethanol. The company has been producing and selling methanol since 2016. Enerkem is responsible for financing, construction and operation of the ~ \$100 M Facility. It is the first industrial scale waste to biofuels facility of its kind.

#### *The C & D Processing Facility*

The C&D facility located at the Waste Management Centre processes mixed C&D recycling or segregated C&D recycling. The C&D Facility recycles wood, drywall, asphalt shingles, concrete, metals and brush and trees. .Mixed loads of material are diverted from landfill and either sold to recycling processors or used in the City's operations.

#### *Global Electric and Electronic Processing, Inc. Facility*

The electronics processing facility processes more than 30,000 tonnes per year of old computers, televisions, and other electrical and electronic waste materials for recycling. It was built and is operated by GEEP Alberta, Inc.

#### *The Proposed Anaerobic Digestion Facility (ADF)*

This facility will also be located at the Edmonton Waste Management Centre and will supplement the composting facility by processing up to 48,000 tonnes of organic waste per year to generate renewable energy and a high quality compost for use in agriculture and horticulture. It is a partnership between the City of Edmonton, BIOFerm and the University of Alberta. The ADF is scheduled to be in operation by the first half of 2018

#### *The Materials Recovery Facility (MRF)*

The MRF is almost 6,000 square metre (64,000 square feet) sized to handle processing 50,000 tonnes per year, the MRF processes all types of recyclables accepted in the City's blue bag, blue bin and recycling depot programs.

The Facility is owned by the City and has been operated since April 2014 by SUEZ Canada Waste Services Incorporated.

Key information regarding the Edmonton Waste Management Centre:

a. Feedstock and Flow Control

There are several waste streams being delivered directly to the Waste Management Centre by various public and private entities. The City is responsible for the management of all residential waste streams, including the collection of residential waste from single and multi-family residents. The City also offers services to the commercial sector, competing with a number of private companies who also operate in Edmonton. There are multiple competing landfills and transfer stations located in or near Edmonton.

b. Management of Biosolids

Biosolids are currently managed through a combination of composting and land application.

c. Site Size and Characteristics

The site is over 570 acres and serves as the home of several waste processing/management facilities.

d. Technology Risk

The majority of the facilities at the Waste Management Centre utilize proven technology with long operating histories on the specific feedstocks. The one exception to this is the waste to fuels facility which represents a significant step in the commercialization of this technology to convert waste to methanol and ethanol.

e. Products and Markets

The process outputs vary depending on the Facility and thus the markets as well. The various products include recovered materials sold into the recyclables and compost markets and biofuel sold in the fuel market.

f. Cost and Financing

The expenses of the Management Centre are funded primarily through a Waste Management Fee line item in the utility bill, which is \$44.90 per month in 2017 for a typical residential customer. Additional revenues includes fees and grants. The capital cost of the Enerkem facility owned and operated by Enerkem is ~ \$100 M. The IPTF owned by the City and operated under subcontract cost ~ \$40 M. Alberta Innovates contributed \$29 M to funding the biofuels initiative.

g. Procurement/Contract Structure

Edmonton utilizes public private partnerships extensively. The waste to biofuels facility, the IPTF Facility, the Electronics Processing Facility, the C & D Facility and the MRF are all operated and/or maintained by private companies.

h. Residuals Management

The City provides residuals management at the Waste Management Centre.

Applicability to the CRD / Context for IRM Procurement Criteria:

- 1) The Edmonton Waste Management Centre is a good example of an integrated resource management system. There are a number of separate facilities co-located on a single site operated by different entities which have been developed sequentially over several years.
- 2) The City controls all of the residential waste materials and the biosolids and has control over the various processing operation. The system is funded through an enterprise fund tied to the utility bill. Thus, they are able to provide assurance of long term supply of feedstock and ultimately a secure source of revenues.

5.17 PGH Energy – Lebanon Tennessee

The PHG Energy (now the Aries Clean Energy Project) is a 64 TPD gasification plant co-located at the city's wastewater treatment plant. It will convert up to 64 tons of blended waste wood, sewer sludge and scrap tires into power, generating up to 300 kilowatts that will be used for the power

needs of both the plant and the wastewater treatment facility. PHG completed a similar, but smaller-sized project in Covington, Tennessee, in 2013.

Funding for the project included a \$250,000 matching-funds grant awarded by the Tennessee Department of Environment and Conservation's (DEC) Clean Tennessee Energy Grant Program and \$5.5 million of the Qualified Energy Conservation Bonds initiative, a low-cost financing tool offered by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy.

A key project participant is Lebanon-based Rockwood Recycling who has assumed all responsibility for collecting, transporting and preparing the feedstock for the plant. It also receives discarded tires from Wilson County officials. Rockwood has a yard located close to the Facility where they store wood and tires for the plant's fuel.

Lebanon is the 13th commercial gasification plant installed by PHG Energy. The plant is expected to divert more than 8,000 tons of waste from the landfill annually. It currently processes 32 tons per day—3 tons of sludge, 3 tons of tires and 26 tons of wood waste. At full capacity, it will use 64 tons of feedstock per day. The plant will convert up to 64 tons per day of waste into fuel gas and five percent of the waste which turns into biochar, which will be sold for fertilizer or kiln fuel.

Wood and tires are first shredded to a particle size of 1 to 3 inches (25 to 76 mm) and blended with sludge before gasification with a target moisture content of 30%. The materials are then fed into a down draft thermal gasifier. The syngas produced by the gasification process is combusted and the thermal energy is used to heat water, which in turn drives three Clean Energy Technologies' Organic Rankine Cycle generators with a total output of 420Kw.

Key facility information:

a. Feedstock and Flow Control

Two of the three feedstock elements (wood waste and tires) are furnished by a private company, Rockwood Recycling, while the third material, sludge, is provided by the City.

b. Management of Biosolids

The biosolids from the City's WWTP are processed in this Facility.

c. Site Size and Characteristics

The footprint of the Facility is approximately one acre and is located on City property adjacent to the WWTP.

d. Technology Risk

Wood waste, shredded tires and sludge are blended prior to introduction into the gasifier. There are fewer risks with this mix of fuels when compared to gasification of more non-homogenous feedstocks.

e. Products and Markets

The syngas is used to reduce the energy demands of the adjacent wastewater treatment plant and the biochar can be used in fertilizer or other applications.

f. Cost and Financing

The City utilized funds available under the Qualified Energy Conservation Bonds initiative, a low-cost financing tool offered by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy.

g. Procurement/Contract Structure

The facility was procured under a DB type arrangement, with the City owning and operating the Facility and Aries providing the technology, general contracting services and operational support.

h. Residuals Management

The City operates the Facility and is responsible for managing the gasification process residuals.

Applicability to the CRD / Context for IRM Procurement Criteria:

- 1) The mix of feedstocks used by this facility are limited to wood waste, tires and sludge.
- 2) Development of the facility permitted the City to change its then current management of sludge which involved the use of an ATAD (Autoheated Thermophilic Aerobic Digester) to produce Class A biosolids for land application to the recovery of energy from the sludge, thus reducing the cost of operation and energy demand at its existing WWTP.

#### 5.18 Plasco – Ottawa

In the mid 2000's, the City of Ottawa entered in an agreement with Plasco to deliver a portion of their waste stream to a pilot plasma arc facility. The proposed technology utilized plasma arc to refine gases produced during gasification, which were then fed into Jenbacher internal combustion engines to generate electricity. The Facility began operation in 2008.

In December 2012, Plasco concluded a contract with the city of Ottawa for the construction of a three train commercial plant. The plant as designed was intended to process up to 405 tonnes/day, producing electricity and aggregate.

This contract offered an option for the City to reduce the waste landfilled at the Trail Road landfill facility, extending the life of the landfill and would have contributed to the City's efforts to increase diversion of materials from disposal.

In 2015, the City terminated its relationship after several extensions intended to provide Plasco with time to make modifications in the process and bring the Facility up to full scale operations. Plasco was not able to meet project milestones for financing of the facility and to bring the Facility up to full scale operations. Plasco sought protection from creditors and the Facility was auctioned off in 2015.

Key facility information:

a. Feedstock and Flow Control

The City was obligated to deliver waste to the Facility which it controlled and was then currently sending to the Trail Road landfill

b. Management of Biosolids

This was not part of this project.

c. Site Size and Characteristics

Plasco leased land from the City across from the Trail Road landfill. The Facility occupied three acres.

d. Technology Risk

Clearly there was technology risk, as the Facility was not able to reach full scale production after several years.

e. Products and Markets

The Facility was intended to utilize the syngas generated to power internal combustion engine generator sets.

f. Cost and Financing

When initially proposed, Plasco was to fund the costs to build the pilot Facility, then estimated at approximately \$30 million. In 2008, Plasco proposed to build an expanded 400 TPD \$125 million facility. Plasco reportedly raised over \$300 million over the span of several years from various private and public investors, but was not able to implement the needed modifications to bring the Facility up to full scale operations.

g. Procurement/Contract Structure

Plasco was responsible for the design, construction, operation, ownership and financing of the Facility. The City's obligation was to deliver 109,500 tonnes of city waste annually and pay \$83.25 for every tonne of garbage it processed.

h. Residuals Management

Plasco was responsible for the management of process residuals

Applicability to the CRD / Context for IRM Procurement Criteria:

- 1) It is critically important that the technology selected, works at the proposed scale on the waste streams being considered. The criteria applied during the RFQ stage to qualify proponents and the performance guarantees and specifications at the RFP stage are intended to screen out those technologies that would not work or meet the CRD requirements.
- 2) The private partner in a public private partnership needs to have the financial capacity to weather potential upsets. The application of procurement criteria related to the qualifications and capability of the private partner and their financing is critical to the success of this type of project.

## 5.19 Tees Valley

Commissioning on the first phase of the Tees Valley 1 Facility was started in late 2014. The advanced gasification facility being developed by Air Products utilizes the AlterNRG Westinghouse plasma arc. Air Products developed the Tees Valley Renewable Energy Facility in Northeast England intending to process 950 tonnes per day of household waste and convert it into 50 MW of electricity.

Problems first arose shortly after Tees Valley 1 reached completion. The facility had been due to enter operations in summer 2014 – but 18 months later was still undergoing commissioning due to technical issues. Construction work on the second of the two facilities was suspended in November 2015 because of the operational challenges in making the facility function correctly. On April 4, 2016, Air Products announced it was leaving the waste-to-energy business, and was taking a write-down of \$0.9-\$1.0B. The company said that the decision was due to technical difficulties in making the technology work as expected. As a result, the company treated the energy from waste business segment as a discontinued operation.

The rationale for application of IRM in this jurisdiction was similar to that in other jurisdictions in the European Union (EU) being lack of available landfill disposal capacity and the EU and English directives and regulations that favour the processing of waste rather than direct disposal in landfills, and the regulatory environment and energy market that favours energy generation from renewable fuels.

Key facility information:

- a. Feedstock and Flow Control  
The waste is supplied by the site's owners, Impetus Waste Management.
- b. Management of Biosolids  
Not part of this project
- c. Site Size and Characteristics  
The total acreage for both facilities is approximately 37 acres. They are located on industrial land owned by Impetus Waste Management adjacent to a major chemical complex.
- d. Technology Risk  
The degree of technology risk was reflected in the need for a major corporation to take an almost \$1 billion write off upon abandoning the project due to the inability to bring the facility up to full operations.
- e. Products and Markets  
The Facilities used the syngas generated to generate ~ 50 MW of electricity per facility.
- f. Cost and Financing  
The combined facilities capital cost totalled over \$800 million.
- g. Procurement/Contract Structure  
Air Products developed this project under a DBFOM model.
- h. Residuals Management  
Residual management was the responsibility of Air Products.

Applicability to the CRD / Context for IRM Procurement Criteria:

- 1) It is critically important that the technology selected, works at the proposed scale on the waste streams being considered. The criteria applied during the RFQ stage to qualify proponents and the performance guarantees and specifications at the RFP stage are intended to screen out those technologies that would not work or meet the CRD requirements.
- 2) The private partner in a public private partnership needs to have the financial capacity to weather potential upsets. The application of procurement criteria related to the qualifications and capability of the private partner and their financing is critical to the success of this type of project.

## 5.20 Silicon Valley Clean Water

The Silicon Valley Clean Water (SVCW) Authority is a joint powers authority located in Redwood City California and serves the communities of Redwood City, City of San Carlos, and the City of Belmont as well as the West Bay Sanitary District. Since the 1980s, the SVCW has disposed of its biosolids through contracts with private companies that haul the biosolids to dedicated agricultural land application and compost sites or, when necessary, to an approved landfill for either burial or preferably as an alternative daily cover.

The disposal of biosolids is a major expense for any wastewater treatment facility and the options for disposal continue to shrink, while costs increase. The cost per ton of biosolids disposed has increased approximately 10 percent per year, every year for the past decade with the expectation of continued increases in the future.

SVCW began working towards alternative disposal options as an active participant in the Bay Area Biosolids to Energy Coalition (BAB2E), a consortium of Bay Area wastewater treatment facilities. The BAB2E operates under a “Joint Exercise of Powers” agreement. This group is focused on finding alternative processes that will eliminate the need to dispose of biosolids and turn it into an asset that produces more energy than the cost of treatment and to address the increasingly restrictive environment for land application of biosolids in the state. That process has proven very difficult and the coalition continues to work with vendors and educational facilities in the evaluation and testing of processes to meet the goal. The BAB2E coalition has worked in support of its members to advocate for state legislation to support the conversion of biosolids to clean energy and in federal bills to support biosolids to energy technologies. The intent of the coalition is to address the challenges with technology development, recognizing that commercial-scale demonstration of biosolids to energy technologies requires large capital investment that is difficult to obtain without a revenue stream, yet agencies cannot commit a revenue stream without commercial-scale demonstration.

SVCW has employed a practice of having more than one disposal option available at all time for biosolids. This practice is due to the fact that the options for disposal have changed many times over the years and continue to change today. SVCW currently has only one biosolids disposal contract in place. Synagro Inc. is a major biosolids disposal company in the United States and the SVCW contract with them allows for disposal via agricultural land application, at a landfill or for composting. While this contract provides three methods for disposal, it is with one company that has little control over their cost of disposal due to the fact that they are using other people's or agencies' property for the majority of their operation. This fact makes the Synagro disposal options susceptible to closures or increases in cost.

The current average cost per ton of biosolids disposed by Synagro for SVCW is approximately \$49 per ton and is expected to exceed \$60 per ton within two years. The goal of the BAB2E has been to find a disposal option that will allow the production of some level of energy to be created from the disposal of biosolids and at a cost of less than \$100 per ton.

Based on a three-year study, the SVCW elected to proceed with an agreement with BioForceTech, Inc. for a full service biosolids disposal contract. BioForceTech is an Italian firm with a new process that uses very little energy to dry the biosolids. BioForceTech approached the SVCW offering a partnering relationship in the United States to test their process, with an ultimate goal of installing a facility utilizing their equipment. SVCW agreed to work with them in the testing process and to evaluate the potential for a full-scale installation at the Authority's site.

SVCW and BioForceTech have developed a system through the combined testing that will allow for disposal of the biosolids and production of a small amount of electricity for use in the treatment facility for a cost of \$59 per ton of biosolids during the first year of operations. This cost is lower than BioForceTech's expected retail cost to other future facilities due to the fact that the SVCW installation is the first in the country and is, at least in theory, at their "cost" of providing the service. It should be recognized that the cost should be considered speculative at this time and that the true cost will not be known for several years, or until the facility has been developed and is fully operational.

While even this cost is more than the current cost of biosolids disposal, it is expected to be very competitive in the near future, and is much less expensive than the options the BAB2E coalition has found to date.

SVCW has worked very closely with BioForceTech in the development of a facility at the SVCW site. BioForceTech intends to develop a full scale operating facility to demonstrate to others that the technology works and is cost effective. Initially, BioForceTech proposed that SVCW purchase a full scale facility to treat 100% of the SVCW biosolids for a reasonable price, but SVCW staff felt it was not prudent for the agency to risk our capital to prove their process and staff also believed it was in the Authority's best interest to develop multiple alternatives for long-term biosolids disposal.

For these reasons, SVCW entered into a 10-year service contract with BioForceTech. The contract calls for BioForceTech to build, operate and maintain a facility that is capable of drying and disposing of approximately one-half (50%) of the biosolids produced by the SVCW. SVCW provides a site and utilities for the facility, at the proposed land lease cost to BioForceTech of one dollar (\$1.00) per year.

BioForceTech will make all connections to the utilities at their cost. BioForceTech is responsible for all permits needed for construction and continued operation of the facility for the term of the agreement.

From an operational standpoint, the financial impact over the long term is expected to save SVCW money. Short term, for the first year or two, the added cost to dispose of approximately one-half of SVCW's annual biosolids production through the BioForceTech process could result

in an additional cost of \$70,000 per year, if there is no inflation or other costs added to the current Synagro costs.

It is believed the actual impact will be much less than this as Synagro costs have gone up each year of the contract term to date, due to inflation and transportation cost increases. The estimate of \$70,000 is a worse-case scenario. This also does not take into account the value of electricity that will be produced by the BioForceTech system and used in the treatment facility. The quantity and reliability of power generated will be determined as the facilities come on line.

An added benefit of the BioForceTech process is the elimination of many truck trips from the SVCW facility to the out of county disposal locations. It is estimated that over 500 truck trips per year will be eliminated due to the drying and power production onsite versus disposal at the current offsite locations. The BioForceTech facility employs an oxygen-rich compost process to dry the biosolids. The process occurs in a set of large cylinders aimed at accelerating a process similar to compost, in which oxygen-fueled bacteria break down the solid matter into smaller pieces. The process reportedly dries the biosolids without using any gas from about 80 percent water to 20 percent water in 48 hours.

Once dried, the shrunken biosolids will be fed into a pyrolysis process that heats them up in the absence of oxygen to about 1,100 degrees Fahrenheit, causing more of the mass to evaporate and creating the energy used to fuel the two machines. The process produces thousands of small, black particles with large pores and a volume that is 8 percent of the volume of the waste fed into it. BioForceTech have named the particles 'Nutrieno' and intend to explore their ability to absorb/adhere toxins and other chemicals. The presence of trace chemicals, drugs and other toxins in processed biosolids have caused some jurisdictions to ban or restrict their agricultural use.

#### Key Facility Information:

- a. Feedstock and Flow Control
 

The SVCW is providing a feedstock (biosolids) and flow control (half the SVCW biosolids) for a ten year period in the form of a service agreement, whereby BioForceTech will design, build, own and operate the facility.
- b. Management of Biosolids
 

The facility will process biosolids from the SVCW WWTP.
- c. Site Size and Characteristics
 

The SVCW provided the site and utilities. The size of the site and its characteristics are not known at this time.
- d. Technology Risk
 

The technology risk is borne by the developer BioForceTech as a part of a ten year service agreement to produce a system that beneficially uses biosolids at a cost equal to (or near) the current land application rate.
- e. Products and Markets
 

The process produces dried biosolids which are then gasified in a pyrolysis process. The process produces excess heat which is available for accelerated biosolids drying.

f. Cost and Financing

The cost and financing are not clear at this time, however the preliminary findings indicate the process will be able to manage biosolids for \$59/ton (US ton) which is slightly higher than the current \$49/ton for transportation and land application cost provided by an independent contract.

g. Procurement/Contract Structure

BioForceTech is reported to have approached the SVCW seeking an agreement to test, and then to design, build, operate a biosolids processing technology. The 10-year service contract appears to be a service agreement for half of the SVCW biosolids.

h. Residuals Management

The BioForceTech process produces a small quantity (approximately 8% by volume) of the dried biosolids fed into the pyrolysis process. At this time, further research is on-going as to the use of the residuals.

Applicability to the CRD / Context for IRM Procurement Criteria

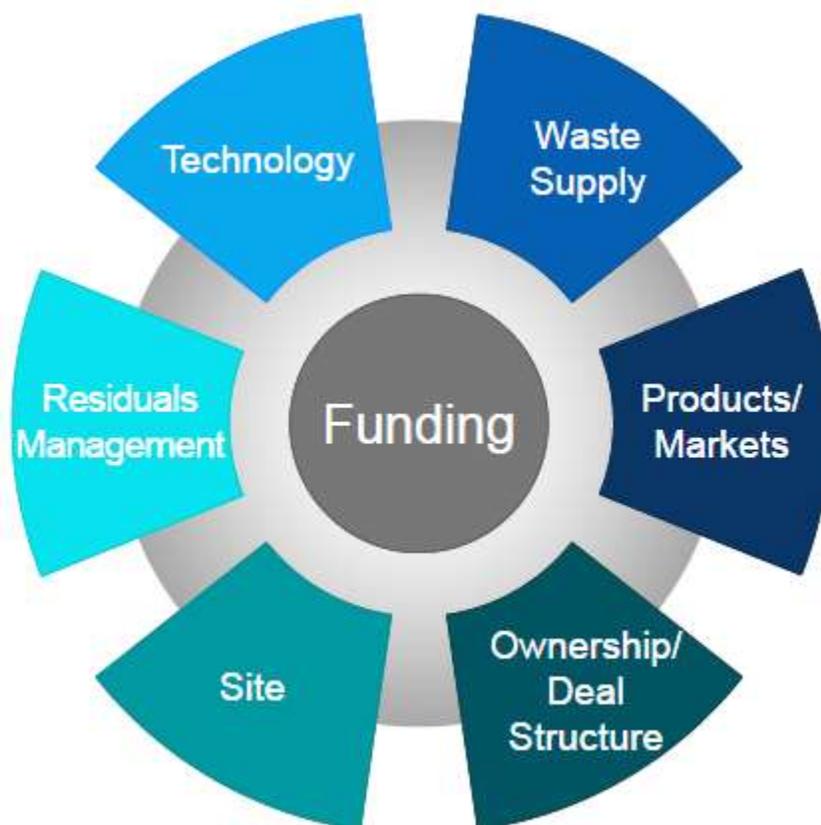
- 1) The combined drying and pyrolysis process being developed by BioForceTech is potentially applicable to the CRD biosolids feedstock. The BioForceTech process does not address the other feedstock materials the CRD wishes to be managed.
- 2) The BioForceTech process is in a developmental phase at this time. Further proof of technology is anticipated in the coming years.
- 3) The form of agreement between the SVCW and BioForceTech apportions the majority of the risk associated with the biosolids to energy technology to BioForceTech.
- 4) SVCW began working towards alternative disposal options as an active participant in the Bay Area Biosolids to Energy Coalition (BAB2E), a consortium of Bay Area wastewater treatment facilities. Project participants in the BAB2E share their respective progress towards biosolid to energy programs through the coalition which includes various technology assessments and progress on a number of partnerships with various companies to implement solutions (e.g. SVCW with BioForceTech, FSSD with Lystek international). The work of the coalition has advocated for state legislation to support the conversion of biosolids to clean energy and in federal bills to support biosolids to energy technologies to address the funding/financing/revenue gap to develop successful technologies.

## 6 Summary of Findings

The review of the IRM related documentation prepared to-date in support of this project, and of IRM related case studies arising out of these documents, provides context for the key procurement issues that will need to be addressed as part of the development of the IRM procurement criteria which would be applied through the IRM RFQ and RFP process. The key findings arising from this review and the implications for the development of IRM procurement criteria are discussed below. These findings are organized around key themes that are critical to the success of the IRM procurement process.

The key elements of a successful project are indicated in Figure 4.

**Figure 4** Elements of a Successful IRM Project



This summary of findings, as presented below, is intended to:

1. Form the basis for the development of a risk assessment matrix and supporting documentation for an IRM procurement workshop to be held with elected officials later this year. This will serve to clarify the CRD's preferred risk posture related to key project elements which will define the appropriate structure of the business arrangement and clearly define the respective roles of the CRD and the Respondent.

2. Provide the context for key decisions that need to be made to support development of the IRM procurement criteria. Some 'Criteria' reflect fundamental decisions or elements of the project that should be decided upon prior to the procurement process proceeding. They form the framework for the procurement such as identifying the waste supply that is available, the CRD role in providing a site, and the deal structure that the CRD is interested in considering. Certain criteria will reflect mandatory requirements regarding minimum technical, team and financial qualifications, experience and capability, while other criteria will be rated or scored reflecting evaluation of their specific proposal as it relates to financing, design/engineering, construction, operations and maintenance and marketing and deriving value from recovered materials and energy.

Each of the key elements of a successful project in the context of the IRM project, are discussed below.

## 6.1 Site

Facility siting was noted as a significant risk element in many supporting information reports (e.g. Sidney Master Plan) and in the IRM case studies (e.g. Durham York Energy Centre). Arising from the IRM RFEOI process, the majority of respondents preferred that the CRD provide the site for the IRM facility. In the majority of case studies that were examined, for facilities managing municipally controlled waste, the municipal authority was responsible for facility siting. The facility siting process itself can be complex and controversial. The CRD has attempted to mitigate this by identifying as set out in the IRM RFEOI, that it has space available at Hartland for development of an IRM solution. However, comparison of this space to the site size requirements for many of the IRM options (which vary by technology) indicates that this space may not be sufficient. Certainly, the Hartland site offers conveniences to an IRM solution including proximity to the RTF, potential for shared infrastructure such as access roads, scales etc. and potential access to the electrical and/or gas grid (and potentially opportunities to share some gas infrastructure).

While the CRD has expressed interest in examining the concept of sub-regional IRM solutions, the approach to facility siting for sub-regional facilities has not been identified.

Prior to proceeding with the IRM procurement process, the CRD should determine:

1. If the CRD will retain specific responsibility for identifying and providing a site for an IRM facility, and exactly what its role would be in siting for options that include any sub-regional or multi-facility approaches;
2. If the CRD can provide more area at Hartland for consideration as a location for an IRM facility;
3. If a siting process would be required, would the CRD lead this process and how would it be addressed within the IRM Project Plan and/or the CRD Solid Waste Management Plan process.

## 6.2 Waste Supply

As indicated in the majority of the case studies discussed in Section 5 of this report, secure waste supply is the key for a financeable and sustainable project. Waste supply is usually secured through two means. For municipal entities that have implemented facilities, waste supply focuses on the materials over which those entities have waste flow control. Some municipalities do compete on the open market, however, generally facility sizing decisions and financing decisions are focused on the material streams for which they have certainty of supply. For the private sector entities that have implemented facilities, the majority of waste supply is secured through long term contracts.

Where there is more than one municipal body (upper and lower tier jurisdictions) or in those areas where multiple jurisdictions have partnered to develop facilities, waste supply has been addressed through long term agreements. This could be an option for the CRD to consider, particularly if the CRD is interested in pursuing any relationships with other jurisdictions to seek an IRM solution.

Currently, as discussed in Section 3 (see Figure 2), the CRD only controls a fraction of the solid waste stream generated in the region. The CRD currently only has assurance that it can make available the RTF Biosolids stream, and a portion of the organics stream (primarily yard waste) that it currently manages. In regards to the MSW stream, while the Hartland landfill currently manages significant IC&I waste streams, and the disposal of residential waste as directed by the area municipalities, this stream is not a guaranteed feedstock for an IRM solution as its availability is governed through competitive pricing and the availability of competitive disposal/processing options.

A number of RFEOI respondents, noted the difficulty in identifying IRM solutions for feedstock that is not wholly controlled by the CRD, and where there is significant potential for the materials to vary in quantity and quality over time (e.g. the CRD MSW stream). The assessment of longer-term solid waste management system impacts and determination of potential shifts in material types and tonnages is an essential component of the IRM Project Plan as is the consideration of waste flow management policy.

Prior to proceeding with the IRM procurement process, the CRD should determine:

1. What specific material streams will the CRD identify and guarantee that it would make available for processing for an IRM solution;
2. Are there any contractual or other relationships that the CRD would want to pursue itself, in order to secure additional material streams?
3. Although not preferred, how much risk for waste supply would be passed onto the respondents to the IRM procurement? Would this focus only on the supplemental materials required by their technology (e.g. wood waste) or would it extend more broadly to any other commercial material streams required to develop a viable IRM solution? What are the implications of this risk on pricing and the future availability of a facility?

Based on the decisions regarding waste supply, this could reduce the range of potential IRM solutions that are viable in the CRD, and allow for greater focus in the IRM procurement process.

### 6.3 Ownership

The question of facility ownership is central to the decisions made regarding deal structure, financing and allocation of project risk. In the majority of the case studies discussed in Section 5, the municipal authority held ownership of the IRM infrastructure that was developed particularly when the potential technology risk was lower through the application of proven/conventional technologies. There were some examples however, of municipal jurisdictions choosing to allow for private sector ownership of infrastructure (e.g. Walker Industries, Thorold Facility) where competitive pricing and long-term contractual guarantees provided a reasonable solution for the municipality and reduced the need for municipal capital investment.

No specific position on IRM facility ownership has been taken by the CRD Board. Many of the respondents to the IRM RFEOI indicated some preference towards CRD ownership of the facility, although most were flexible in the type of procurement and ownership model that could apply. Decisions regarding ownership are reflected in the form of procurement and contract structure as discussed below, and can affect access to federal or provincial grants that may require either immediate or transfer of ownership of the asset.

As shown in the case studies, there are facilities that are owned by the public sector and there are those that are owned by the private sector. The decision as to the which structure makes the most sense depends on the local circumstances and several key parameters. These include:

1. What do the parties bring to the transaction- i.e. technology, site, waste supply, market contracts, operating capability, and residuals management?
2. What is the historical preference of the public participant?
3. What is the tolerance for risk?

Prior to proceeding with the IRM procurement process, the CRD should determine:

1. What is the preferred ownership arrangement?
2. Are there any circumstances in which the CRD would not want to own the Facility?
3. What is the preferred risk posture?

### 6.4 Procurement and Contract Structure

The predominant procurement and contract structure utilized in those instances in which the Respondent is providing proprietary technology is some form of DBOM, either a straight DBOM, where the public sector provides the financing, a DBFOM where the Respondent provides the financing, a DBOOM, where the Respondent retains ownership or a DBOOT, where ownership of the Facility is ultimately transferred to the public sector.

Control of the asset beyond the initial contract term is one element of the decision process. In those situations in which the public sponsor provides the site and the procured facility is part of

a larger system, there is greater emphasis on retaining access to the asset. That in turn tends to drive in the direction of public ownership. As noted above, decisions regarding ownership are reflected in the form of procurement and contract structure, and can affect access to federal or provincial grants that may require either immediate or transfer of ownership of the asset.

Several of the RFEOI respondents were open to a wide range of business arrangements, ranging from providing the technology to DBFOM.

Prior to proceeding with the IRM procurement process, the CRD should confirm:

1. If preferred business model is some form of public/private partnership with the private sector providing design, construction, and operation and maintenance services for at least a portion of the operations period; and,
2. The recommended procurement approach is an RFQ/RFP structure to procure the selected business model (i.e.), with the RFQ and RFP including technical, financial, and team criteria.

## 6.5 Financing/Funding

Project financing is directly correlated to commitment of a waste supply over time (i.e.: flow control) enhanced by long term off-take agreements for the process byproducts. As discussed in Waste Supply above for the majority of the case studies discussed in Section 5 of this report, secure waste supply was the key for a financeable and sustainable project. In addition to waste supply the project financing can be enhanced with long term committed off-take agreements for the byproducts of the facility. Financing through local government authorities is usually obtained at a lower rate of interest than private financing, reducing the overall cost of IRM facility development.

Obtaining the required capital to fund the permitting, design and construction of the facilities needed to meet the IRM goals of the CRD is a critical element in the ability to successfully develop an IRM program. Financing approaches in the industry vary. As noted in the various case studies, some projects are financed by the private sector, others are financed by the public sponsor. The RFEOI respondents varied in their preference for which party would provide the financing. One of the factors in considering which approach to take is that private sector financing is generally more costly than public financing.

Financing is tied to ownership and structure of the procurement model/business deal, which in turn is linked to technological risk. As noted in several of the case studies, one of the ways technology risk was addressed was to require the Respondent to provide the financing for the project, with the public sector providing the waste under a long term fee for service.

Another mechanism for mitigating technological risk is to require that the Respondent provide construction financing, with the public sector providing payments either in the form of a large single payment upon successful completion of an acceptance test or via debt service payments over the operating term.

Another important consideration is the financial strength of the Respondent. One of the project elements that providers of capital will review is the financial strength of the Project participants and their ability to backstop their guarantees and performance obligations.

Prior to proceeding with the IRM procurement process, the CRD should determine:

1. Availability of Public Funding. What sources of funds could be used to fund the Project and the attendant security and interest rates anticipated.
2. Preferred Approach. Will the CRD require private financing of the Project, either during the construction period or overall?
3. What specific material streams will the CRD identify and guarantee with long term payment provisions that would make it possible for a private developer to secure project financing.
4. What off-take agreement terms will the CRD entertain.

## 6.6 Technology Risk

In summary, the IRM process undertaken to-date and discussed in Section 2 and the Case Studies discussed in Section 5 of this report, address a range of thermal, chemical, mechanical and biological processes. These technologies range from conventional processes (combustion, anaerobic digestion, composting, mechanical and biological treatment, RDF production, nutrient recovery) and more emerging technologies from the perspective of managing integrated solid and liquid waste streams (gasification, plasma arc gasification, pyrolysis, hydrolysis, catalytic and thermal depolymerization, waste to fuel).

Technology risks affect:

1. Performance of the facility with respect to the ability of the facility to receive and process the agreed upon quantity of material the large majority of the time. This is often expressed as the percent of operational time over the course of an operating year.
2. Performance of the facility with respect to achieving material and energy recovery rates.
3. Performance of the facility with respect to achieving environmental performance requirements related to emissions (air, water), greenhouse gas emission targets, noise/odour/dust effects on the community etc.

Decisions made on the procurement and contract structure that would be applied by the CRD, are usually coupled to the degree of risk associated with the technologies, although as discussed in the case studies, there are various means of sharing risk through performance guarantees and other contractual mechanisms.

In general, the following trends were clear from the review of the supporting documents and case studies:

1. Less technology risk is associated with conventional technologies, in many cases resulting in decisions by municipal entities to assume more risk related to the project and often less complex DB procurement and contractual structures.
2. More technology risk is associated with less conventional technologies, in many cases resulting in decisions to allocate more risk to the facility developer, including responsibility for long-term facility operations and in many cases for the majority of all areas of responsibility under the contract. Projects offering more technology risk are generally avoided by municipal entities to protect public funds from speculative enterprises.

Technology risks for the IRM would be addressed through the application of criteria in the RFQ process to select qualified respondents, through the various performance guarantees and specifications applied through the IRM RFP, and through the deal and contract structure decided upon by the CRD as discussed below.

Prior to proceeding with the IRM procurement process, the CRD should determine:

1. As discussed above, what specific waste streams will be provided, as this will impact technology options.
2. What degree of technology risk the CRD is willing to accept.
3. What minimum reference project/ team experience will the CRD require.

## 6.7 Markets

The financial viability of the majority of IRM solutions also reflects the range of potential products that can be recovered (materials, energy) and the market value of those materials. Market value is often driven by factors beyond municipal control, such as the regulatory environment, availability of raw materials and/or other energy sources. It is clear that market conditions in jurisdictions like the EU for example, reflect that a premium is often available for electrical or bio-energy (liquid or solid fuels) that support transition from fossil fuels, and that lack of competing raw material sources (e.g. aggregate) can support marketing of alternative products derived from waste materials.

The responses to the IRM RFEIOI indicate that a number of products could be recovered and marketed and/or directed to beneficial use, from the CRD liquid and solid waste streams. The market value of these materials has yet to be determined, and is an important consideration in determining the overall cost of an IRM solution. The viability of technologies that recover energy such as AD or gasification, may be contingent upon identifying a higher value market for that energy such as vehicle fuel. In regards to other products, in some cases more limited markets were identified (e.g. cement kilns as an RDF market) while in others the respondents had identified potential for a broader market (Class A compost).

Respondents to the RFEIOI provided varying feedback as to who should be allocated energy/commodity price risk and responsibility for energy offtake agreements.

Prior to proceeding with the IRM procurement process, the CRD should determine:

1. Does it have a preference for how responsibility would be allocated for energy offtake agreements.
2. Does it have a preference as to how responsibility would be allocated for energy/commodity price risk and marketing of recovered products/energy.

Additional research regarding markets and market risks would be appropriate as part of the development of the IRM Project Plan, and will be undertaken to support the risk and procurement workshop in December.

## 6.8 Residuals Management

Secure, long term availability of residual management capacity is critical to financing the Project. Most of the respondents to the RFEI indicated that they were looking to CRD to provide this. As noted in the case studies, responsibility for residuals management in most instances rests with the owner.

Prior to proceeding with the IRM procurement process, the CRD should confirm its willingness to provide residuals management capability throughout the proposed term of the agreement or identify the specific anticipated obligations of the private sector to address this critical aspect of the project.

## 6.9 Alternative Approaches / Concepts

In order to address many of the above elements of a successful IRM project, some jurisdictions have applied alternative approaches / concepts to resolve one or more of these issues. As indicated in Section 5:

1. In some cases a consortium or group was formed with private sector companies and/or municipal entities (e.g. Lahti Energia Kylmaijarvi II, Finland) to pursue a project and reduce the technical risk assumed by the partners in pursuing advanced technologies.
2. There were cases such as with the Kelowna/Vernon biosolids composting facility or the Durham York Energy Centre, where municipalities have partnered to develop a project to address the requirements for feedstock flow control, economies of scale and financial risks.
3. In some cases municipal coalitions / consortiums / agreements have been used to resolve broader IRM issues associated with biosolids and solid waste management such as the BAB2E Coalition in California. The CRD had previously explored the concept of tri-regional energy from waste solutions. It is possible that multi-regional concepts or inter-regional agreements could also play a role in IRM. The complexity of such arrangements can sometimes require significant effort to overcome, however there could be benefits of examining this type of relationship either on the island or with jurisdictions like Metro-Vancouver on the mainland.

At this stage in the process, the CRD should carefully examine the potential viability of difference partnership arrangements, particularly with other regional jurisdictions, to determine if they offer

an option to address IRM risks. This is particularly important to address prior to entering into IRM procurement at the RFP stage, as it could significantly alter the scope and contractual arrangements that would apply to IRM facility development.

## 7 Next Steps

In summary, the elements of a successful IRM project reflect a combination of critical factors, many interrelated, that need to be addressed as part of moving forward with the successful implementation of an IRM system. This summary of findings is intended to provide the context for key decisions that need to be made to support development of the IRM procurement process. It is proposed that these findings would form the basis for the development of risk management matrices that will be presented and discussed at an IRM procurement workshop to be held with elected officials later this year to help address the key decisions that must be made.

Following this workshop, the criteria that would be used for advancing the IRM procurement process will be developed.



Capital Regional District



IRM Information Consolidation  
and IRM Project Criteria  
Development  
Nov 8, 2017



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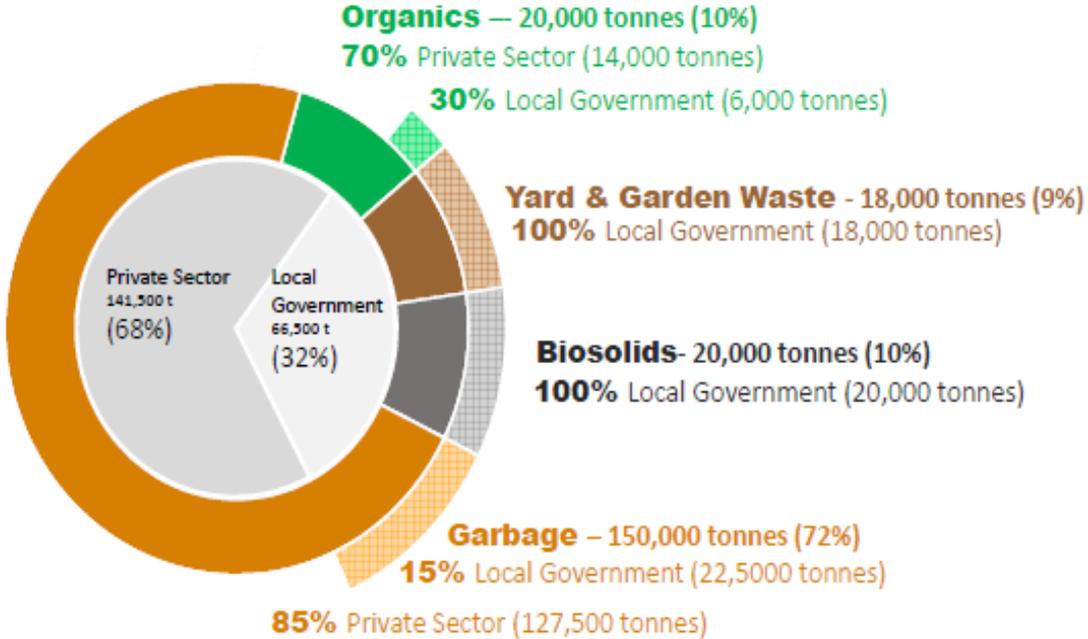
# Introduction

- Significant work completed over past few years investigating IRM
- Following September IRMAC meeting, motion passed
  - Consolidate the reports and information presented to-date
  - Bring forward criteria that would be used to advance the procurement process
- This Report
  - Consolidates the reports and information presented to-date
  - Provides case studies in-lieu of facility tour
  - Provides context for IRM procurement criteria, highlights key issues and decisions to be made
  - Foundation for IRM Procurement Workshop

# Introduction: Key IRM Procurement Issues

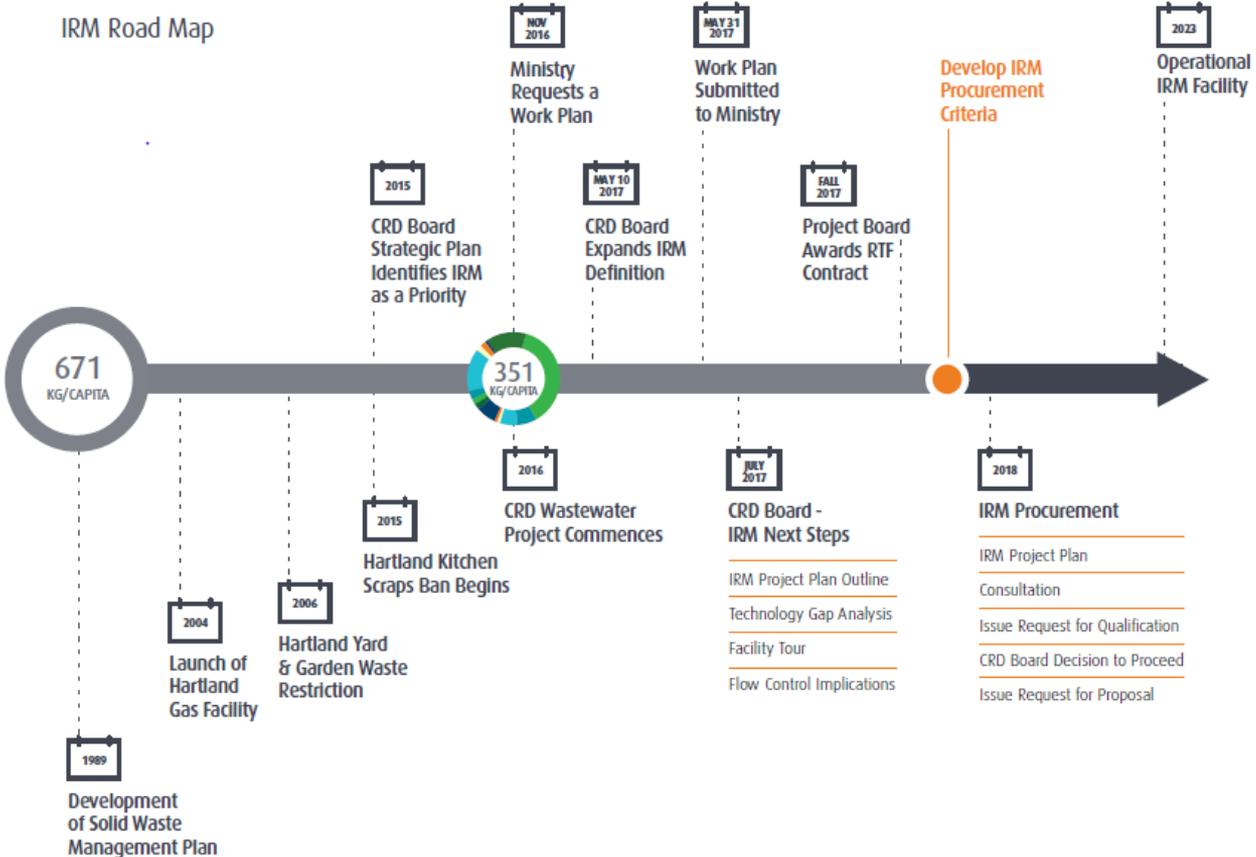
Project Element	Impact
Site	Critical Asset Critical Factor for Project Success
Waste Supply	Key to Financeable Project
Technology	Degree of Complexity affects Risk Posture
Ownership	Asset Control Risk Exposure
Deal Structure	Depends on level of technology risk and risk allocation
Financing/Funding	Ability to secure Financing Cost of Financing Additional sources of Funding (i.e. grants) if any
Markets	Market Access, security and value affecting financing and long-term viability
Residuals Management	Long term secure access to economically and environmentally sound residuals management capacity

# Overview of Current CRD IRM System



**Waste Stream Control**  
(Local Government, CRD and Municipalities)

# Overview of Information and Reports: IRM Roadmap



# Overview of Information and Reports

## Key CALWMP Information

- IRM supported by:
  - Project Board Goals
  - CRD Corporate Plan, integrated waste management strategic priorities
- Outcome of CALWMP provides Class A biosolids as key input to IRM
- RTF award late 2017 will define quantity and quality of biosolids
- Prohibition of land application of biosolids (with or without treatment) from CRD facilities affects markets/use of products derived from biosolids
- IRM solution, either single technology or group of approaches must include long-term solution to manage biosolids

# Overview of Information and Reports

## BC MOE Key Direction Documents

### Provincial Direction – MOE Letter of Nov 18, 2016

- Sludge processing into Class A biosolids for beneficial use and possible IRM
- Beneficial reuse of biosolids (no multi-year storage of biosolids within a biocell)
- IRM Work Plan outline submitted May 31, 2017
- Definitive Plan due June 30, 2019
- Definitive plan for beneficial reuse of biosolids must be supported by an assessment of the full spectrum of beneficial uses and IRM options

### Ministry Letter, July 7, 2017

- IRM Work Plan exceeds Minister's requirement
- MOE distinguishes CALWMP and IRM as two distinct projects
- IRM facility initiative is longer term project not dependent on CALWMP timelines

# Overview of Information and Reports

## IRMAC Supporting Information

- CRD IRM Task Force Report
- Gasification Technologies – Characterization of Waste Resources in the Capital
- Gasification Technologies Information – City of Sydney Australia

### Findings / Context for IRM Procurement:

- Interested technology providers
- Energy value in solid waste stream
- Risks (technology, nature of waste source, public perception)
- Manage Risks (pre-feasibility, business case, multi-step procurement process)
- Regional partnering to reach viable levels of waste

# Overview of Information and Reports

## IRM RFEOI and Reports

Findings/Context for IRM procurement:

- Broad spectrum of technologies
- Most processed biosolids and/or sewage sludge separately as blend with some other materials but not altogether by one technology/facility
- Not a lot of preference on contract terms or deal structure
- Most prefer CRD provides site
- Many prefer CRD owns IRM facility
- Many noted difficulty in identifying IRM solutions for feedstock not controlled by CRD
- Many types of products
- Many products including biosolids focused on use as nutrient for soil amendment

# Overview of Information and Reports

## IRM Reports September 2017

- Facilities Tour Plan
- IRM Project Plan Outline
- IRM RFQ Draft Outline
- IRM Technology Gap Analysis – Preliminary
- Beneficial Reuse of Biosolids – Jurisdictional Review
- Waste Flow Policy Backgrounder
  
- Findings / Context for IRM Procurement
  - Small minority of IRM facilities process range of CRD materials, few co-process biosolids
  - Ability to 'guarantee' IRM feedstock types and quantities will likely affect procurement (and responses)
  - Need to complete risk assessment in order to identify service delivery model
  - No one single technology found that manages full range of CRM IRM feedstock
  - Majority of technologies generate beneficial use product eventually applied to land

# Overview of Case Studies

- Evaluated wide variety of IRM Case Studies:
  - Reference facilities from RFEOI submissions plus others
  - Similar feedstock to CRD IRM
  - Integrated processing (single or multiple facilities)
  - Varying technology types: thermal, biological, mechanical
- Key facility information: feedstock & control, management of biosolids, site, technology, products & markets, cost & financing, procurement/contract structure, residuals
- Applicability to the CRD / Context for IRM Procurement Criteria

# Overview of Case Studies

## AVR Rozenburg Facility, Rotterdam, Netherlands

- Processes 1.2 M tpy including: residual domestic waste, pulp residue, industrial wastewater, waste wood, commercial waste
- Multiple technologies (WTE, Composting)

### Findings / Procurement Context:

- Long term contracts for waste supply
- Largely conventional technologies
- Exploring emerging technologies, partnering to spread risk
- Range of solid products
- Recovered heat and energy sales (district heating, energy)



# Overview of Case Studies

## UTE TEM, Mataro

- Integrated waste management facility including:
  - 190,000 tpy MBT plant
  - 35,000 tpy AD facility
  - 41,000 tpy composting facility
  - 160,000 tpy waste to energy plant

### Findings / Procurement Context

- Municipal consortium financed & owns facility
- Municipal flow control
- Conventional technologies
- DBOM procurement model & long term contract to minimize risk



# Overview of Case Studies

## Lahti Energia Kylmijarvi II, Finland

- Gasifies 250,000 tonnes of SRF ('energy waste') to produce 50 MW electricity & 90 MW of district heat

### Findings / Procurement Context:

- Contracts to purchase SRF
- 'Municipally' Owned (Lahti Energia is owned by the City of Lahti)
- Operator is also local electricity and district heating supplier
- Minimized technology risk (gasification) through operating experience of using similar fuels at other generating facility & contract with technology supplier



# Overview of Case Studies

## Durham York Energy Centre

- Municipal consortium owns/financed facility
- 140,000 tonne per year EfW

### Findings / Procurement Context

- Integrated with existing municipal systems
- Municipal waste flow control
- Strong leadership from elected officials
- Extensive consultation
- Provided site
- DBOM contact to minimize technology risk



# Overview of Case Studies

## Edmonton Waste Management Centre, Alberta

- Integrated facility, multiple components (IPTF, Biosolids Management, composting, waste to biofuels, C&D processing, WEE processing, MRF, proposed AD)

### Findings / Procurement Context

- City control of residential waste and biosolids
- Separate facilities co-located on a single site operated by different entities, developed sequentially over time
- Majority are conventional technologies
- Technology risks addressed through DBOM and DBOOM contracts
- System funded through waste management fee (\$44.90/month) in utility bill



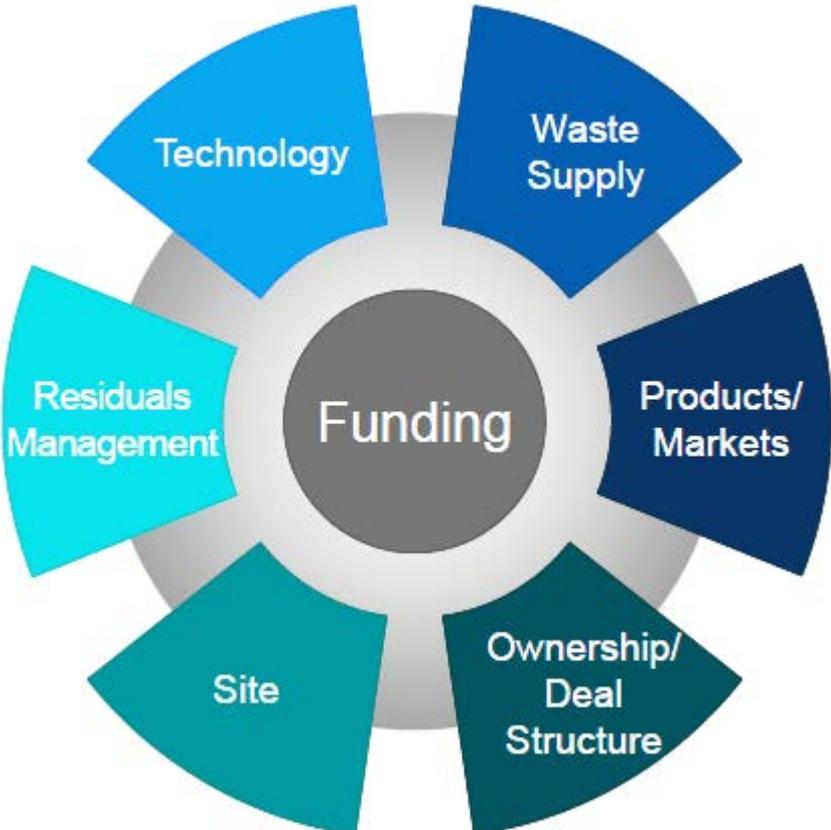
# Summary of Findings

- Basis for development of IRM risk matrix
- Foundation for IRM procurement workshop in December
- Provides the context for key decisions to support development of the IRM procurement criteria.



# Summary of Findings

## Key Elements of a Successful Project



# Summary of Findings

## Site

- Significant risk item
- Majority of IRM RFEOI respondents prefer CRD provides site
- Suitability of Hartland site, size and location

### Key Decisions:

- Will CRD provide site?
- Can CRD provide more area at Hartland?
- If siting process is required, who would be responsible?



# Summary of Findings

## Waste Supply

- Secure supply key to financial sustainability
- Options include long term supply agreements
- RFEOI respondents noted difficulty identifying IRM solutions for feedstock not controlled by CRD

### Key Decisions

- What specific material streams will the CRD guarantee?
- What options would CRD pursue to secure additional materials?
- How much risk for waste supply would be passed to respondents?



# Summary of Findings

## Ownership

- Central to deal structure, financing and allocation of risk
- Majority of case studies, municipal authority owned facility
- Ownership often linked to conventional technologies

### Key Decisions:

- Preferred ownership arrangement?
- Need for public ownership?
- Preferred risk posture?



# Summary of Findings

## Procurement and Contract Structure

- Decision linked to ownership, allocation of risk
- When respondent providing proprietary technology some form of public/private partnership usually used
- Procurement approach reflects contract structure

### Key Decisions:

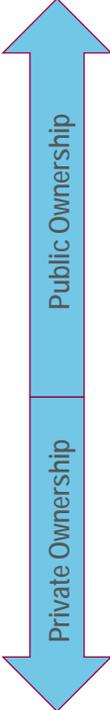
- Is preferred model some form of public/private partnership?
- What are the preferred approach(es) for the contract structure?



# SUMMARY OF FINDINGS

## PROCUREMENT AND CONTRACT STRUCTURE

Delivery Model	Type
Design-Bid-Build (DBB)	Traditional
Fixed Price Design-Build (DB) or ("DBF")	P3 Models
Design-Build-Operate/Maintain (DBO/M)	
Design-Build-Finance-Operate-Maintain (DBFOM)	
<hr style="border-top: 1px dashed #d9534f;"/>	
Dedicated Private Facility	Private Models
Long-term Service Contract	
Merchant Facility(ies)	



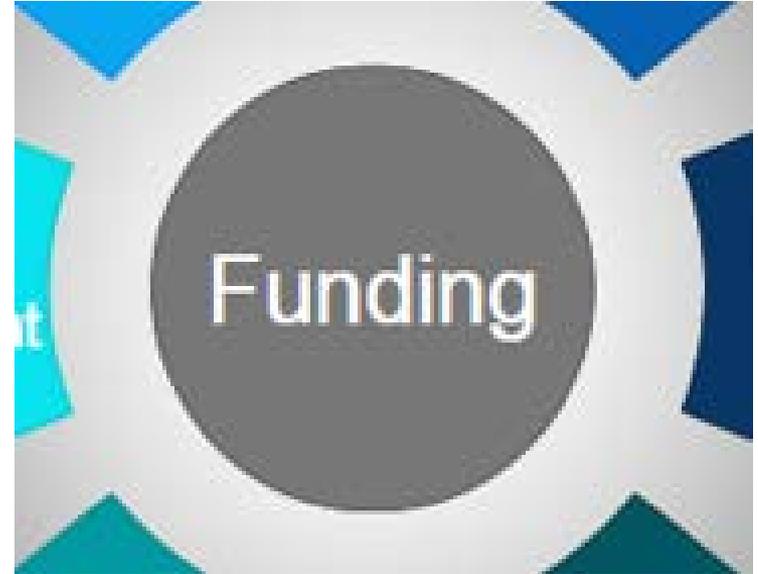
# Summary of Findings

## Financing / Funding

- Financing correlated with:
  - Commitment for waste supply
  - Ownership / deal structure

### Key Decisions:

- Availability of Public Funding?
- Preferred financing approach?
- Which material streams would be guaranteed to secure project financing?



# Summary of Findings

## Technology Risk

- Technology risks affect:
  - Facility process guarantee (quantity, quality)
  - Performance, material and/or energy recovery rates
  - Environmental Performance
- Conventional technologies = Less risky so easier for public to assume project funding role and less need for complex DB procurement and contractual structures.
- Emerging technologies = More risk so less inviting for public role and therefore more reliance on private contractual structures.



# Summary of Findings

## Technology Risk

### Key Decisions:

- What material streams will be provided/guaranteed?
- What degree of technology risk will the CRD accept?
- What minimum reference, project & team experience will the CRD require?



# Summary of Findings

## Markets

- Viability also reflects range of products and markets
- Respondents to RFEOI had varying feedback on who should bear energy/commodity price risk

## Key Decisions

- CRD preference for
  - Responsibility for material and/or energy offtake agreements?
  - Responsibility for marketing of recovered products/energy?



# Summary of Findings

## Markets

### Product/Market trends

- Economic drivers vary (energy markets, recycling markets, compost/digestate markets)
- Highest economic value to offset tip fees (e.g. from CHP to RNG or CNG low carbon intensity fuels)
- Consider 'Conventional' vs 'Emerging' technology product guarantees



# SUMMARY OF FINDINGS

## RESIDUALS MANAGEMENT

- Also critical to financing the Project.
- Most RFEOI respondents expect CRD to provide this.
- Case studies show responsibility for residuals management in most instances rests with the owner.

### Key Decisions:

- CRD Willingness to provide residuals management capability throughout term of the agreement?
- Or What would the respondents be required to do?



# **SUMMARY OF FINDINGS**

## **ALTERNATIVES APPROACHES/ CONCEPTS**

- Consortium (municipal and/or private) to reduce the technical risk assumed by the partners in pursuing advanced technologies
- Municipalities partnering to address the requirements for feedstock flow control, economies of scale and financial risks
- Municipal coalitions / consortiums / agreements to resolve broader IRM issues associated with biosolids and solid waste management including waste supply and economies of scale

# NEXT STEPS

## IRM Procurement Workshop – December 2017

- Exploration of IRM Project Risks and Issues through Risk Management Matrices
- Support Key Decisions required to frame the IRM Procurement (what the project is, roles and responsibilities) and to develop selection criteria
- Select criteria to advance the IRM procurement (experience, financial, technical)



# QUESTIONS / DISCUSSION





REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE  
MEETING OF TUESDAY, NOVEMBER 21, 2017

**SUBJECT**      **Addition of Agricultural Uses to the Forestry Zone**

**ISSUE**

To consider an amendment to the Juan de Fuca Land Use Bylaw, 1992, Bylaw 2040, to add Agriculture as a permitted use in the Forestry (AF) zone.

**BACKGROUND**

The Forestry (AF) zone (Appendix A) was established upon adoption of the Juan de Fuca Land Use Bylaw, Bylaw No. 2040, in 1992. Amendments to the AF zone have since been made by Bylaw Nos. 3705 and 3849 to expand the residential uses permitted, including the provision for suites and home based businesses.

Staff have recently received several inquiries into AF zoned properties from prospective buyers and current land owners that have expressed interest in starting small agricultural operations. The four hectare minimum parcel size and typically deforested landscapes are appealing to property owners interested in hobby farming and small-scale agriculture. The AF zone, however, does not currently permit a full range of agricultural uses. Staff have prepared proposed Bylaw No. 4179 to amend the AF zone to add *agriculture* as a permitted use on land that has been removed from Private Managed Forest Land (PMFL) (Appendix B). The proposed Bylaw as referred to agencies is included in Appendix C.

The Land Use Committee recommended referral of the proposed bylaw to appropriate CRD departments and to the following agencies at their meeting of June 20, 2017:

- |  |   |
|--|---|
| Agricultural Advisory Planning Commission                  | Ministry of Transportation and Infrastructure     |
| Cowichan Valley Regional District                          | Otter Point Advisory Planning Commission          |
| District of Sooke  | Pacheedaht First Nation                           |
| Managed Forest Council                                     | Scia'new First Nation                             |
| Ministry of Agriculture                                    | Shirley/Jordan River Advisory Planning Commission |
| Ministry of Forests, Lands and Natural Resource Operations | T'Sou-ke First Nation                             |

Comments were received from Cowichan Valley Regional District, District of Sooke, Ministry of Forests, Lands and Natural Resource Operations, Ministry of Transportation and Infrastructure, CRD Bylaw and Animal Care Services, and CRD Regional and Strategic Planning (Appendix D). The proposed bylaw was considered by the Otter Point Advisory Planning Commission on July 17, 2017 (Appendix E) and by the Shirley/Jordan River Advisory Planning Commission on August 2, 2017 (Appendix F). Quorum requirements for the Agricultural Advisory Planning Commission meeting, scheduled for August 1, 2017, were not met.

**ALTERNATIVES**

That the Land Use Committee recommends to the Capital Regional District Board:

1. a) That the referral of proposed Bylaw No. 4179 directed by the Juan de Fuca Land Use Committee to the Agricultural Advisory Planning Commission, Cowichan Valley Regional District, District of Sooke, Managed Forest Council, Ministry of Agriculture, Ministry of Forests, Lands and Natural Resource Operations, Ministry of Transportation & Infrastructure, Otter Point Advisory Planning Commission, Pacheedaht First Nation, Scia'new First Nation, Shirley/Jordan River Advisory Planning Commission, T'Sou-ke First Nation, and appropriate CRD departments be approved and the comments be received;
- b) That proposed Bylaw No. 4179, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017" be introduced and read a first time, read a second time; and
- c) That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4179.

2. That the CRD Board not proceed with proposed Bylaw No. 4179.
3. That more information be provided by staff.

### **LEGISLATIVE IMPLICATIONS**

Should the proposal proceed, a public hearing pursuant to Section 464 of the *Local Government Act (LGA)* will be required subsequent to the amendment passing second reading by the CRD Board. The hearing will be advertised in the local paper and on the CRD website. Since the bylaw applies to 10 or more parcels owned by 10 or more persons, notice is not required to be delivered to the owners and tenants subject to the bylaw alteration, pursuant to Section 466 of the *LGA*.

### **REFERRAL COMMENTS**

Referrals were sent to 12 agencies on June 21, 2017.

Cowichan Valley Regional District - responded to advise that their interests were unaffected by the proposed rezoning.

CRD Bylaw and Animal Care Services - expressed no issues with the amendment.

Ministry of Transportation & Infrastructure – indicated no objections for approval but, as a condition, the Ministry requires that should any commercial enterprises form as a result of the changes, that the proper commercial access permits to Ministry owned roads and dedications be applied for as needed.

CRD Regional and Strategic Planning – reviewed the amendment against the 2003 Regional Growth Strategy (RGS), Bylaw No. 2952. Regional Planning staff advised that lands under the AF zone are designated as a Renewable Resource Lands Policy Area. Action 1.2(2) of the RGS is to ensure the long-term protection of this policy area to support forestry and silviculture on Private Managed Forest Lands (PMFL). Staff were of the opinion that agricultural uses could result in a move away from forestry and silviculture and change the landscape character. The change would provide an alternative rural working landscape function, but presents a policy change from supporting forestry uses.

It was recognized, however, that the addition of agriculture as a permitted use would allow an additional working landscape function should the lands be removed from PMFL.

Ministry of Forests, Lands and Natural Resource Operations – indicated that the Ministry's interests are affected by the proposal. The comments reiterated concerns raised during the Otter Point Official Community Plan review process regarding loss of forest land to residential use and agriculture, and the resultant permanent loss of greenspace. Crown land in Tree Farm License 61 and the timber supply area managed by BC Timber Sales in Otter Point and Shirley/Jordan River will continue to be managed for forest resources, but are not intended to offset loss of greenspace through conversion of AF zoned lands to agricultural use.

District of Sooke – indicated the municipality's interests are affected by the proposed bylaw amendment. The submission outlined that Sooke residents' stated though a recent Official Community Plan public engagement process that their number one goal is to protect the local environment and natural surroundings. There is concern that introducing farming into the surrounding landscape will permanently alter the ecosystem, and compromise watersheds and viewscapes, thereby impacting Sooke's local economy. Long-term trends towards converting forest land to agricultural use would reduce the local carbon sink and hasten climate change. Further, while the community of Sooke supports food security measures, much of the existing agricultural land is underutilized.

Otter Point APC – considered the bylaw amendment at their meeting of July 17, 2017. Comments included that the OCP supports protection and enhancement of forest lands, that there is already land with agricultural potential and introducing agriculture could destroy forestry lands by changing physical landscape and affecting wildlife. It was acknowledged, however, that the 4 ha minimum lot size and setbacks required for silviculture would make forestry activity difficult on smaller lots and that agricultural uses, such as the keeping of horses and other livestock, represented a reasonable alternative use of the land. The Otter Point APC recommended deleting *intensive agriculture* as a permitted use from the AF zone and adding *agriculture* as an accessory use to a one-family dwelling.

Shirley/Jordan River APC – considered the bylaw amendment at their meeting of August 2, 2017. Support for clarifying the definitions of *agriculture* and *intensive agriculture* was expressed. Comments included

that small-scale agriculture is less intrusive to neighbours, concern regarding limited enforcement resources, impacts on water resources, sewerage and wildlife. Support was expressed for addressing wilderness-agriculture interface issues, for conducting farm impact assessments, and for a broader review of agricultural regulations. The APC recommends that intensive agriculture be prohibited on AF zoned properties, that agriculture use be limited by agricultural units and be aligned with the policies in the CRD Regional Food and Agriculture Strategy (RFAS), and that agricultural operations comply with the *Water Sustainability Act*.

### **REGIONAL IMPLICATIONS**

The RFAS, completed in 2016, was prepared in response to a high level of public interest and concern for food and agricultural production across the region. The purpose of the RFAS is to guide action and foster leadership in regional food and agriculture. One recommendation in the RFAS, especially applicable to the Juan de Fuca area, is to consider approaches to address existing and emerging regional wildlife and invasive species issues. The potential for wildlife conflict could increase with expanded agriculture uses in wilderness interface areas, such as AF zoned lands.

A local initiative is the formation of a group, called the “Coexisting with Carnivores Alliance”, of government and community members formed to provide strategic leadership, education and support to prevent human conflict with bears, cougars and wolves in the Capital Region. The group has recently obtained funding for development of a program to support coexistence between farmers and carnivores.

The Juan de Fuca Agricultural Inventory project, conducted in 2009 by the Ministry of Agriculture, surveyed existing agricultural land uses and land available for farming throughout the electoral area. The project was initiated partly in response to removal of land from Tree Farm Licenses and public interest in determining alternative uses for forestry land. The inventory report was completed in 2013 and was intended to inform an agricultural planning process for the Juan de Fuca. The recent Official Community Plan reviews for East Sooke and Shirley/Jordan River involved consideration of agricultural policies and, once adopted, would inform a comprehensive review of agricultural zoning for the Juan de Fuca. The proposed amendment to the AF zone is intended to facilitate agricultural activity based on recent public inquiries.

### **PLANNING ANALYSIS**

Agency referral comments regarding the proposed addition of *agriculture* and *intensive agriculture* to the AF zone generally highlighted concerns regarding the conversion of forest resource lands to agricultural uses. Silviculture has historically been the predominant activity defining the rural working landscape character of land in the Juan de Fuca Electoral Area. After the Minister of Forests and Range removed land from Tree Farm License (TFL) #25 in 2007, much of that land was classified as Private Managed Forest Land (PMFL). Land in PMFL is a taxation assessment classification and imposes less onerous responsibilities for forest management than TFLs. Local government land use zoning applies to land removed from PMFL status.

The AF zone now covers approximately 2,300 hectares of land within the Otter Point and Shirley/Jordan River areas. The 4 ha minimum parcel size specified in the AF zone has led to instances of harvesting under PMFL regulations followed by subdivision for rural residential purposes in accordance with the AF zone and removal of land from PMFL. Examples of this have occurred in the vicinity of Fishboat Bay, Kirby Creek, Invermuir Road and Clark Road. Staff have received several inquiries from current and prospective land owners regarding the allowance of agricultural operations on smaller AF zoned lots.

Although the addition of agricultural uses to the AF zone would not preclude silviculture from occurring again in the future, several issues with permitting agriculture in forestry areas were highlighted by the referral agencies and should be acknowledged. Such issues relate to the permanent removal of available land for renewable forest generation; the social, economic and environmental benefits of greenspace; conflicts between agricultural uses and wildlife; spread of invasive species; agricultural use of water resources; and, proximity of intensive agricultural operations to residences. In order to address that concern, staff recommend that agriculture be included as a permitted use on AF zoned property, only where land has been removed from PMFL.

Staff have considered referral comments and have deleted *intensive agriculture* from proposed Bylaw No. 4179 to address many of the concerns raised in the referral process. The proposed addition of agriculture use aligns with the range of uses permitted in the Resource Lands (RL) zone in Bylaw No. 3602 and aligns with the general support of local agricultural production across the region. The complexity of

land use issues related to agricultural activities warrants a comprehensive review of the regulations in the Juan de Fuca Land Use Bylaw to update definitions, reflect current best practices and support the current interest in hobby farming. This overarching review is more appropriately conducted for all land use zones and not solely the amendment to the AF zone. Therefore, staff recommend that the referral comments be received and that the proposed Bylaw No. 4179 be given first and second readings and proceed to a public hearing.

**CONCLUSION**

The purpose of this zoning amendment is to allow agricultural uses on land that has been removed from PMFL and is zoned Forestry (AF) by the Juan de Fuca Land Use Bylaw No. 2040. Referral comments have been received and the proposed bylaw has been amended to address issues raised. Staff recommend proceeding with proposed Bylaw No. 4179 for first and second reading and proceeding to a public hearing.

**RECOMMENDATIONS**

That the Juan de Fuca Land Use Committee recommends to the Capital Regional District Board:

- a) That the referral of proposed Bylaw No. 4179 directed by the Juan de Fuca Land Use Committee to the Agricultural Advisory Planning Commission, Cowichan Valley Regional District, District of Sooke, Managed Forest Council, Ministry of Agriculture, Ministry of Forests, Lands and Natural Resource Operations, Ministry of Transportation & Infrastructure, Otter Point Advisory Planning Commission, Pacheedaht First Nation, Scia'new First Nation, Shirley/Jordan River Advisory Planning Commission, T'Sou-ke First Nation, and appropriate CRD departments be approved and the comments be received;
- b) That proposed Bylaw No. 4179, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017" be introduced and read a first time, read a second time; and
- c) That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4179.

Submitted by:	Emma Taylor, MA, MCIP, RPP, Planner
Concurrence:	Iain Lawrence, MCIP, RPP, Manager, Local Area Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ET:wm

Appendices:

- A. Forestry (AF) zone
- B. Proposed Bylaw No. 4179 for 1<sup>st</sup> and 2<sup>nd</sup> reading
- C. Proposed Bylaw No. 4179, for referral
- D. Referral Comments
- E. Otter Point Advisory Planning Commission minutes
- F. Shirley/Jordan River Advisory Planning Commission minutes

Appendix A: Forestry (AF) zone

Schedule "A" of Capital Regional District Bylaw No. 2040  
Juan de Fuca Land Use Bylaw

3.0 **FORESTRY ZONE - AF**

3.01 **Permitted Uses**

In addition to the uses permitted by Section 4.15 of Part 1 of this Bylaw, the following uses and others shall be permitted in the Forestry AF Zone:

- (a) Silviculture except within 300m of a highway;
- (b) Offices, mechanical shops, fuel storage, and storage buildings accessory to mining or silviculture;
- (c) One-family dwelling;
- (d) Home Based Business Categories One, Two and Three; *Bylaw 3705*
- (e) Two Boarders or lodgers;
- (f) Secondary Suite pursuant to Part 1, Subsection 4.19; *Bylaw 3849*
- (g) Detached Accessory Suite pursuant to Part 1, Subsection 4.20. *Bylaw 3849*

3.02 **Minimum Parcel Size for Subdivision Purposes**

The minimum lot size is 4ha;

3.03 **Density**

One one-family dwelling per lot is permitted.

One secondary suite or one detached accessory suite per lot is permitted. *Bylaw 3849*

3.04 **Height**

Maximum height shall be 11m.

3.05 **Lot Coverage**

Maximum lot coverage shall be 10 percent.

3.06 **Maximum Size of for Residential Buildings**

Provided applicants having either met the *Sewerage System Regulation* (e.g., a filing) or acceptance by VIHA via referral. *Bylaw 3705*

- (i) On lots of less than 1ha in area, residential buildings and structures shall not exceed a Floor Area Ratio of 0.45 or a Total Floor Area of 418m<sup>2</sup>, whichever is less;
- (ii) On lots of 1ha or more in size, residential buildings and structures shall not exceed a Floor Area Ratio of 0.45.

3.07 **Yard Requirements**

For all structures, the front, side, rear and flanking yards shall be a minimum of 15m. *Bylaw 3849*







**Wendy Miller**

---

**From:** Wilf Marquis  
**Sent:** Thursday, July 06, 2017 1:54 PM  
**To:** Wendy Miller  
**Cc:** Iain Lawrence  
**Subject:** RE: Proposed Bylaw No. 4179

Wendy, no issues with the proposed amendment to allow for Agricultural Uses.

Wilf MARQUIS  
Senior Bylaw Officer

Bylaw and Animal Care Services  
212-2780 Veterans Memorial Parkway, Victoria, BC, Canada V9B 3S6  
Ph. 250.474.3351 ext. 22 \ Fax: 250.391.9727 \ TF: 800.665.7899  
email: wmarquis@crd.bc.ca

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**Wendy Miller**

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**From:** Berube, Nikki TRAN:EX <Nikki.Berube@gov.bc.ca>  
**Sent:** Wednesday, June 28, 2017 11:28 AM  
**To:** Wendy Miller  
**Subject:** RE: Proposed Bylaw No. 4179 - CRD Referral

Hi Wendy,

Thank you for providing the additional information.

Please accept this email as official response from the Ministry of Transportation and Infrastructure. The Ministry has no objections to the proposed amendment to the Juan de Fuca Land Use Bylaw, 1992; to include agriculture and intensive agricultural uses to the Forestry (AF) zone.

As a condition, the Ministry does require that should any commercial enterprises come to be as a result of the changes, that the proper Commercial Access permits for access to Ministry owned roads and dedications be applied for as needed.

There are no other conditions for completion. Feel free to forward any associated bylaw documentation to this office at your convenience.

Have a great day,

**Nikki Bérubé**

District Development Technician  
Ministry of Transportation and Infrastructure – Vancouver Island District  
Ph: 250-952-5562 Cell: 778-679-1973  
Fx: 250-952-4508



**Proud Member of the EAF**  
*For employees, by employees*

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**Wendy Miller**

---

**From:** Emily Sinclair  
**Sent:** Wednesday, August 16, 2017 3:59 PM  
**To:** Iain Lawrence  
**Cc:** Signe Bagh; Wendy Miller  
**Subject:** RSP Response - Proposed Bylaw No. 4179

Hi Iain,

Thank you for the opportunity to provide referral comments on the proposed amendments to the Forestry (AF) zone in the Juan de Fuca Land Use Bylaw. Comments from Regional and Strategic Planning are provided below. Comments relate to a review of the proposed amendment against the 2003 Regional Growth Strategy (RGS) Bylaw No. 2952. Staff note a policy matter to consider from an RGS perspective.

The 2003 Regional Growth Strategy (RGS) designates the planning area covered by the AF zone as Renewable Resource Lands Policy Area.

- 1) **RGS Action 1.2(2)** is to ensure the long-term protection of the Renewable Resource Lands Policy Area and to support farming within the Agricultural Land Reserve (ALR) and forestry and silviculture within the Forest Land Reserve (now called Privately Managed Forest Land [PMFL]). Almost all of the land within the AF zone is enrolled in the PMFL program.

Bylaw 4179 proposes to add agriculture uses to lands within the Renewable Resource Lands Policy Area that are within the PMFL. The proposed agriculture uses could result in a move away from forestry and silviculture, depending on the scale of agriculture use uptake across the JdF EA. A potential impact could be a change to landscape character. From an RGS perspective, the change would maintain the rural working landscape function but represents a change in policy from supporting forestry uses within the PMFL.

The above being said, allowing agriculture uses would provide an alternative working landscape function should land be removed from the PMFL program. Note that unlike the ALR, the PMFL does not protect land for forestry uses. Rather, the PMFL is a tax assessment class that provides incentives for ongoing forestry use and wise forestry management practices. When land is removed from the PMFL, underlying zoning applies.

- 2) **RGS Action 1.2(3)** is to generally limit rural subdivision and development to the designated Official Community Plan capacity levels as determined at the date of adoption of the RGS. No changes to residential density are proposed, in line with policy 1.2(3).

Please let me know should you have any questions.

Emily

**Emily Sinclair** MCIIP, RPP  
Planner  
Regional and Strategic Planning

Capital Regional District | 625 Fisgard Street, Victoria, BC V8W 2S6  
250.360.3163 | [esinclair@crd.bc.ca](mailto:esinclair@crd.bc.ca) | [www.crd.bc.ca](http://www.crd.bc.ca)

**RESPONSE SUMMARY – BYLAW NO. 4179**

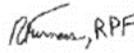
Interest Affected by Proposal for Reasons Outlined Below

Interest Unaffected by Proposal

Comments:

The loss of forested land classified as AF to other land uses such residential use and agriculture has been a concern to many residents of communities within regional districts. I commented on the Otter Point official community plan (OCP) a few years ago for the Ministry of Forest, Lands and Natural Resource Operations (FLNRO); South Island Natural Resource District (SINRD) and it was apparent that the community and regional district planners favoured treed greenspaces. The amount of development including increased housing density resulting in the permanent loss of greenspace was a significant concern to the extent that there were discussions about harvesting operations on Crown land within the Provincial Forest including the T'sou-ke First Nation Woodlot 1526. The conversion of forested land to agricultural is considered permanent deforestation resulting in the loss of greenspace. Crown land within w1526, TFL61 and the timber supply area managed by BC Timber Sales within the Otter Point and Shirley/Jordan River OCP areas will continue to be managed for forest resources including harvesting and reforestation (silviculture). The regional district and the communities must not set the expectation that the loss of treed greenspace due to agricultural use can be offset by placing restrictions against harvesting on Crown land through future changes to land use bylaws. FLNRO will continue to issue cutting authorities on Crown land within the Provincial Forest on the various tenures mentioned above as dictated by Provincial Legislation. Crown land within the OCP areas will continue to be managed for forest resources including, in part, timber production and wildlife and it is not intended to be used as permanent reserves to offset the loss of greenspaces through the conversion of AF classified lands to agriculture use.

Please contact Rob Furness, RPF at 250 731-3023 if you require further clarification.

 Robert Furness  
2017.07.20  
15:07:55 -07'00'

Authorizations Forester

Signed

Title

July 20, 2017

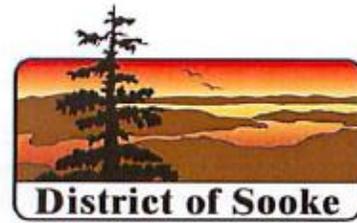
FLNRO

Date

Agency



## REFERRAL COMMENT



**TO:** CRD Planning staff  
**SUBJECT:** District of Sooke Response to referral request  
Addition of Agricultural Uses to the Forestry Zone  
Bylaw No 4179  
**DATE:** July 19<sup>th</sup>, 2017

The District of Sooke has concerns with the proposed Proposed Bylaw No. 4179 as residents have recently stated through the Official Community Plan public engagement process that their number one goal is to **protect the local environment and Sooke's natural surroundings**. The District has concerns that introducing livestock and farming practices into Sooke's surrounding native landscape will forever alter the ecosystem of the forest, compromise local watersheds and alter the landscape that is of great value to locals and our tourism industry. The impact that the change in use from Forestry to Agricultural has on the greater population should not be outweighed by the few who will benefit from farm practice when many local farmlands currently lie fallow.

Please note the Environmental goals of the current District of Sooke *Bylaw 400, Official Community Plan*:

- Sooke shall take responsibility for a sustainable, positive community future by ensuring the on-going health of the natural environment, **both within and surrounding Sooke**; and
- Sooke shall identify, **protect, enhance, and create environmental resources for the long term** of wildlife, natural ecosystems and the enjoyment of the present and future population and visitors to the District of Sooke.

Also, key future directions for the upcoming revised OCP include:

- **Preserve Ecosystems:** *monitor finite resources, preserve habitat and wildlife corridors*

The introduction of Agricultural use on surrounding Forestry zoned lands, will have negative and irreversible effects on local wildlife and their habitat, native ecosystems, watersheds and reduce the local carbon sink. Expediting deforestation will also hasten climate change. These effects will have a significant impact on Sooke residents and the beauty of Sooke's unique forestry-based landscape, tourism industry, local economy, and culture.

Recent OCP direction from the community regarding food security includes:

- **Secure our Food:** *support and celebrate our local farms and their employees, promote and market value added products, the harvest, local markets and artisans.*

While most residents in Sooke support the notion of food security, the District of Sooke contains only 3 percent of the region's ALR lands. However, over 9 percent of the District is made up of ALR land, most of which lie underutilized or fallow.

The District of Sooke *Agricultural Plan (2012)* notes that the reason for the decrease in number of farm operators can be attributed to the high cost of entering farming (land, equipment), the lack of interest by young people in becoming farmers and the low pay. Forestry lands are generally less expensive to purchase than agricultural lands. It appears that the proposed zoning changes may have come forward considering real estate costs of Forestry lands being less than those zoned for Agricultural uses.

A final direction provided through our recent public engagement process includes verbiage for the future:

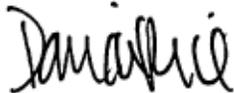
- **Plan for future generations:** *Protect and secure public views and access to the waterfront, develop partnerships to acquire key natural, cultural, or human assets when opportunities arise.*

Impacts to the local environment, climate change and surrounding natural landscape are not only contrary to the District of Sooke's OCP as outlined in paragraph 2, but also against three of the CRD's *Regional Growth Strategic Plan* goals.

1. *Keep urban settlement compact*
2. *Protect regional green and blue spaces*
3. *Manage natural resources and the environment sustainably*

Thank you for the opportunity to provide insight on this important bylaw. Please feel free to contact me for further discussion and for any questions.

Sincerely,



Danica Rice, MEdes, RPP, MCIP  
Planner II

District of Sooke  
2205 Otter Point Road  
Sooke, British Columbia, V9Z 1J2  
Phone 250.642.1634  
drice@sooke.ca

## IMPORTANT BACKGROUND INFORMATION

The following excerpts outline the value of second growth forest ecosystems and provide insight on some of the local environmental impacts that would result if agriculture were introduced into Sooke's surrounding CRD Forestry (F) zoning.

**Future older forests** – Within 20 years, many of the Second Growth Forests that were logged early this century will become Older Forests. The biodiversity values of second growth forest generally become higher with age. This means it will be able to sustain more and larger species of plants and animals.

**Landscap connectivity** – Second Growth Forest stands provide connections between other natural areas that promote the movement and dispersal of many forest dwelling species across the landscape. Species as varied as black-tailed deer, black bears, northwestern salamanders, and northern flying squirrels use second growth forest for a large portion of their lifecycle, but also require access to other habitat patches for feeding, breeding, or migration. Fragmentation is an important conservation concern.

**Buffers** – Second Growth Forests can minimize disturbance (such as residential use) to sensitive ecosystems that occur within or adjacent to the forest patch. Where they border or surround wetlands, patches of older forest or other sensitive ecosystems, the second growth area serves an important role in buffering the adjacent sensitive areas.

**Conservation concerns of Older Second Growth Forest Ecosystems**—Larger stands of second growth forest provide landscape level connectivity and support larger species with larger home ranges. The high biodiversity values of second growth forest come, in large part, from its function in landscape connectivity. For this reason, preventing fragmentation of this ecosystem is especially important. Logging is the most significant cause of second growth forest decline.

### **Forest Types: Develop with Care Standards, Ministry of Environment 2014**

Much of the region is in the Coastal Western Hemlock bio-geoclimatic zone. These 'temperate rainforests' are complex and highly productive ecosystems, with a variety of habitats for birds and mammals. Because these forest soils are generally nutrient poor, fungi and seedlings depend on fallen trees, while the forest canopy provides habitat for lichens, mosses, and insects. Where there are gaps in the canopy, understory vegetation flourishes, supplying forage for Roosevelt elk and other wildlife. The many streams are excellent habitat for fish and other aquatic species.

The Coastal Douglas-fir Zone is found only in the southwest corner of British Columbia, along the east coast of Vancouver Island, the Gulf Islands and parts of the Lower Mainland. The Coastal Douglas-fir zone contains a wide diversity of ecosystems including woodlands, rocky outcroppings, coastal bluffs and wetlands. In upland areas Douglas-fir are found in association with salal and Oregon grape. Garry Oak and Arbutus grow with the Douglas-fir in rocky outcrop areas, together with other drought-tolerant species such as Baldhip Rose, Snowberry and Oceanspray. Moister areas support Grand Fir, Western Redcedar, and Bigleaf Maple together with Sword Fern, Salmonberry and Trillium as the understory.

**The Coastal Douglas-fir Zone is one of the smallest and most endangered biogeo-climatic zones in British Columbia and has the highest number of species at risk per unit area of any zone in B.C. (Holt 2001)**

Appendix E: Otter Point Advisory Planning Commission Minutes

**6. Proposed Bylaw**

**a) Bylaw No. 4179, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017”**

Iain Lawrence spoke to the staff report and proposed Bylaw No. 4179, which would add agriculture and intensive agricultural uses to the Forestry (AF) zone. It was advised that the AF zone is one of the few zones in Bylaw No. 2040 that does not permit agriculture and intensive agricultural uses and that the bylaw amendment was generated by staff in response to prospective buyers that have expressed interest in agricultural activities on AF zoned properties.

Iain Lawrence reported that:

- the setbacks for agricultural buildings proposed by Bylaw No. 4179 are in keeping with the regulations in the Agricultural (AG) zone
  
- the AF zone generally applies to Crown lands, lands held under tree farm licence or lands classified private managed forest land (PMFL)
- the AF zone has become, in some instances, more of a rural residential zone as parcels removed from PMFL have been subdivided into smaller, residential parcels
- amendments to the AF zone have included adding a suite or a detached suite as a permitted use
- adoption of the amendment bylaw would add 800 hectares of agricultural land in Otter Point and 1,500 hectares in Shirley and Jordan River

APC comments included:

- the Otter Point Official Community Plan (OCP) supports the protection and enhancement of forest lands
- great agricultural potential already exists within the OCP area without adding agriculture and intensive agriculture uses to the AF zone
- adding agriculture and intensive agriculture uses to the AF zone provides a mechanism for destroying forest lands
- agriculture and intensive agriculture puts pressure on wildlife and changes topography and hydrology while reducing a natural resource
- tree felling impacts adjacent tree stands during high winds/wind storms
- tree harvesting is not the issue
- small scale farming is not the issue
- supporting reforestation is the issue
- the AF zone permits silviculture except within 300 m of a highway
- support for utilizing a setback to support forest regeneration
- property owners purchased lands knowing the uses permitted by the AF zone
- individuals purchasing new lots in the AF zone would have some expectation that they could keep animals such as horses and have a small farm
- AF property owners can apply for individual rezoning to permit agriculture and intensive agriculture uses
- is it reasonable to restrict home owners from utilizing the smaller properties for agriculture.

Iain Lawrence responded to questions from the APC advising that the:

- AF zone supports a 4 ha minimum lot size for subdivision
- Resource Lands (RL) zone in the Rural Resource Lands Land Use Bylaw permits Agriculture uses
- RL zone does not permit intensive agriculture uses
- CRD does not have the authority to enact a tree regulation bylaw

**MOVED** by Sid Joma, **SECONDED** by Anne Miller that the Otter Point APC supports proposed Bylaw No. 4179, as amended, to delete intensive agriculture as a permitted use from the Forestry (AF) zone and to add agriculture as an accessory use to a one-family dwelling to the AF zone. **CARRIED**

Appendix F: Shirley/Jordan River Advisory Planning Commission Minutes

7. Proposed Bylaw

a) Bylaw No. 4179, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017”

Emma Taylor spoke to the staff report and proposed Bylaw No. 4179, which would add agriculture and intensive agricultural uses to the Forestry (AF) zone. It was advised that staff have recently received several inquiries into AF zoned properties from prospective buyers that have expressed interest in agricultural activities. At present, staff cannot provide assurance to prospective buyers that complaints regarding agricultural activities on these properties will not initiate enforcement action.

Emma Taylor reported that:

- parcels removed from PMFL have been subdivided into smaller, residential parcels
- the AF zone permits a 4 ha minimum parcel size for subdivision purposes
- the AF zone presently permits an accessory suite or a detached accessory suite
- adoption of the amendment bylaw would add 800 hectares of agricultural land in Otter Point and 1,500 hectares in Shirley and Jordan River
- the CRD Food and Agriculture Strategy (RFAS), completed in 2016, guides action and fosters leadership in regional food and agriculture including approaches to address existing and emerging regional wildlife and invasive species issues
- a local initiative called “Coexisting with Carnivores Alliance” is a group of government and community members formed to provide strategic leadership, education and support to prevent human conflict with bears, cougars and wolves in the CRD
- the Juan de Fuca Agricultural Inventory project, completed in 2013, surveyed existing agricultural uses and land available for farming

Emma Taylor responded to questions from the APC advising that:

- the Shirley/Jordan River OCP identifies lands designated as being in a Protection of Farming Development Permit Area
- definition of Agriculture and Intensive Agriculture have not been amended since 1992
- salt and seafood harvesting are not considered agricultural activities
- salt and seafood harvesting would fall under Home Based Business and Home Industry in Bylaw No. 2040
- fish farming (finfish) is a separately defined use in Bylaw No. 2040
- the definition of Agriculture and Intensive Agriculture does not support abattoirs

APC comments included:

- support for clarifying the definitions of Agriculture and Intensive Agriculture including providing limits based on agriculture units
- small scale agriculture is less intrusive to neighbours
- support for greater oversight from the RFAS/implementing RFAS actions addressing interface issues prior to bylaw amendment
- agriculture impacts water, sewerage and wildlife
- subdivision equally impacts water, sewerage and wildlife
- support for implementing a development permit area/farm proposal assessment process
- 4 ha is too small for such activities as kennels and manure storage
- AF property owners can apply for individual rezoning
- opposed to large scale operations and issues related to animal confinement
- concern regarding limited enforcement resources
- support for more information on bylaw regulations for agriculture from other jurisdictions
- support for not limiting food production

Gerard LeBlanc, Shirley

- raising livestock in confined spaces is a hard use on the land
- livestock rearing impacts adjacent properties (e.g. odour)
- agriculture impacts ground water resources
- other local governments limit agricultural uses based on parcel size or through specifying agricultural units based on parcel size
- does not support intensive agriculture on parcels 4 ha or less

**MOVED** by Pascale Knoglinger, **SECONDED** by Fiona McDannold that the APC recommends to the Land Use Committee that intensive agriculture use be prohibited on AF zoned properties. **CARRIED**

**MOVED** by Fiona McDannold, **SECONDED** by Dominique Bernardet that the APC recommends to the Land Use Committee that agriculture use on AF zoned properties be limited by agriculture unit, be aligned with the policies of the CRD Food and Agriculture Strategy and be in accordance with the *Water Sustainability Act*. **CARRIED**

Parks, Fisheries & Oceans Canada, Island Health, Ministry of Environment, Ministry of Transportation and Infrastructure, Pacheedaht First Nation, Te'Mexw Treaty Association, T'Sou-ke First Nation, and the Shirley/Jordan River Advisory Planning Commission be approved and the comments be received;

- b) That proposed Bylaw No. 4188, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 132, 2017", be introduced and read a first time, read a second time; and
- c) That in accordance with the provisions of Section 469 of the Local Government Act, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4188.

**CARRIED**

## 7. Proposed Bylaw

### a) **Bylaw No. 4179, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017"**

Iain Lawrence spoke to the staff report and proposed Bylaw No. 4179, which would add Agriculture as a permitted use in the Forestry (AF) zone.

Iain Lawrence reported that at its June 20, 2017, meeting the LUC recommended that the proposal be referred to agencies and to the Otter Point Advisory Planning Commission (APC) and the Shirley/Jordan River APC. Iain Lawrence outlined the referral comments included in the staff report and highlighted the changes made to Bylaw No. 4179 in response to the comments received from referral agencies.

LUC comments included:

- the AF zone applies to private lands classified as private managed forest land (PMFL)
- local government zoning bylaws do not apply to PMFL
- private property owners can apply to have parcels removed from PMFL and then subdivide land into smaller, residential parcels

Iain Lawrence responded to questions from the LUC confirming that:

- all other zones in the Juan de Fuca that permit forestry use also permit agricultural use including lands zoned Rural Resource Land
- adding a use to AF zoned properties is considered beneficial to the property owner when land is removed from PMFL
- owners of AF zoned properties will be able to apply to have land classified as a farm should Bylaw No. 4179 proceed

**MOVED** by Art Wynans, **SECONDED** by Sandy Sinclair that the Land Use Committee recommends to the CRD Board:

- a) That the referral of proposed Bylaw No. 4179 directed by the Juan de Fuca Land Use Committee to the Agricultural Advisory Planning Commission, Cowichan Valley Regional District, District of Sooke, Managed Forest Council, Ministry of Agriculture, Ministry of Forests, Lands and Natural Resource Operations, Ministry of Transportation & Infrastructure, Otter Point Advisory Planning Commission, Pacheedaht First Nation, Scia'new First Nation, Shirley/Jordan River Advisory Planning Commission, T'Sou-ke First Nation, and appropriate CRD departments be approved and the comments be received;

- b) That proposed Bylaw No. 4179, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017” be introduced and read a first time, read a second time; and
- c) That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4179.

**CARRIED**

**8. Adjournment**

The meeting adjourned at 7:37 p.m.

\_\_\_\_\_  
Chair

DRAFT



**REPORT TO THE JUAN DE FUCA LAND USE COMMITTEE  
MEETING OF TUESDAY, NOVEMBER 21, 2017**

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**SUBJECT**      Zoning Amendment Application for Lot 2, Section 2, Renfrew District, Plan VIP4194 (PID: 000-141-917); Lot 6, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-229); Lot C, Section 2, Renfrew District, Plan VIP60061 (PID: 023-000-392); Lot 1, Section 2, Renfrew District, Plan VIP11741 (PID: 005-054-532); Lot 1, Section 2, Renfrew District, Plan VIP4194 (PID: 000-141-909); Lot A, Section 2, Renfrew District, Plan VIP60061 (PID: 023-000-376); Lot 8, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-270); Lot 9, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-318); Parcel Number 1 (DD130151I) of Parcel A (DD88175I), of Section 2, Renfrew District (PID: 009-573-127); Lot A, Section 2, Renfrew District, Plan VIP50879 (PID: 016-334-485); Lot 1, Section 9, Renfrew District, Plan EPP59131 (PID: 029-899-907); Lot 2, Section 9, Renfrew District, Plan EPP59131 (PID: 029-899-915); and Lot 3, Section 9, Renfrew District, Plan EPP59132 (PID: 029-900-221)

**ISSUE**

The applicant proposes to rezone four parcels from the Jordan River Hamlet (JR-1) zone to a new Restricted Development – Flood Hazard Area (RD-1) zone; to rezone five parcels from the Jordan River Hamlet Commercial (C-1B) zone to the RD-1 zone; to rezone one parcel from the Jordan River Destination Resort (CR-1A) zone to the RD-1 zone; and to rezone three parcels from the Rural A zone to the RD-1 zone, in order to restrict development within an area found to be at risk of catastrophic flooding due to dam failure associated with an extreme seismic event.

**BACKGROUND**

The thirteen subject properties are located in Jordan River, and are designated as Settlement Area in the Shirley/Jordan River Official Community Plan (OCP), Bylaw No. 3717. Under the current OCP, several of the parcels are partially designated as a Steep Slopes or as a Watercourses, Wetlands and Riparian Areas development permit area.

Four of the subject properties are zoned JR-1, five are zoned C-1B, one is zoned CR-1A, and three are zoned Rural (A) under the Juan de Fuca Land Use Bylaw, 1992, Bylaw No. 2040. These zones permit a variety of commercial, residential and agricultural uses, and allow for overnight accommodation.

In 2014, BC Hydro completed a seismic hazard study in an effort to better understand the intensity of ground movements during a major to extreme earthquake and the potential impact on their facilities. BC Hydro considers the Jordan River Dam to be safe under normal circumstances and to be one of the strongest dams in BC; however, there are no dams known to have been constructed to the level identified in the hazard study. The study identified that the seismic hazard at the Jordan River Dam was almost twice as high as was previously thought, and that it was particularly vulnerable given its proximity to the major fault line west of Vancouver Island.

In order to mitigate the risk associated with a catastrophic dam failure, BC Hydro purchased thirteen at-risk properties: ten from private individuals and three from the Capital Regional District. As the owner, BC Hydro has registered restrictive covenants and statutory rights-of-way to restrict overnight accommodation and residential habitation. The purpose of rezoning the properties is to formalize the permitted uses and activities in a manner that is consistent with the covenants.

Upon completion of the rezoning, BC Hydro intends on disposing of the lands so that the community is able to use the lands subject to the permitted and restricted uses. Staff have prepared Bylaw No. 4188 to rezone the subject from JR-1, C-1B, CR-1A and Rural A to RD-1 (Appendix A). The proposed Bylaw as referred to agencies is included in Appendix B.

The Land Use Committee recommended referral of the proposed bylaw to the following agencies at their meeting of July 18, 2017:

CRD Building Inspection	Island Health	Pacheedaht First Nation
CRD Protective Services	Ministry of Environment	Te'Mexw Treaty Association
CRD Regional Parks	Ministry of Transportation & Infrastructure	T'Sou-ke First Nation
Fisheries & Oceans Canada		

Comments were received from Fisheries and Oceans Canada, the Ministry of Environment, the Ministry of Transportation & Infrastructure, Island Health, Pacheedaht First Nation, CRD Bylaw and Animal Care Services, CRD Protective Services and CRD Regional Parks (Appendix C). The proposed bylaw was considered by the Shirley/Jordan River Advisory Planning Commission (APC) on August 2, 2017 (Appendix D).

### **ALTERNATIVES**

That the Land Use Committee recommends to the Capital Regional District (CRD) Board:

1. a) That the referral of proposed Bylaw No. 4188 directed by the Juan de Fuca Land Use Committee to CRD Building Inspection, CRD Protective Services, CRD Regional Parks, Fisheries & Oceans Canada, Island Health, Ministry of Environment, Ministry of Transportation and Infrastructure, Pacheedaht First Nation, Te'Mexw Treaty Association, T'Sou-ke First Nation, and the Shirley/Jordan River Advisory Planning Commission be approved and the comments be received;  
b) That proposed Bylaw No. 4188, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 132, 2017", be introduced and read a first time, read a second time; and  
c) That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4188.
2. That the CRD Board not proceed with proposed Bylaw No. 4188.
3. That the report be referred back to staff for more information.

### **LEGISLATIVE IMPLICATIONS**

Should the proposal proceed, a public hearing pursuant to Section 464 of the *Local Government Act (LGA)* will be required subsequent to the amendment passing second reading by the CRD Board. Property owners within 500 m of the subject property will be sent a notice of the proposed bylaw amendment, and it will be advertised in the local paper and on the CRD website.

### **REFERRAL COMMENTS**

Referrals were sent to eleven agencies on July 19, 2017. Responses were received from Fisheries and Oceans Canada, the Ministry of Environment, the Ministry of Transportation and Infrastructure, Island Health, Pacheedaht First Nation, CRD Bylaw and Animal Care Services, CRD Protective Services and CRD Regional Parks.

Fisheries and Oceans Canada advised that it does not have a regulatory role related to the rezoning application because it does not propose works, undertakings or activities that may result in serious harm to fish.

The Ministry of Forests, Lands and Natural Resource Operations, responding on behalf of the Ministry of Environment, advised that their interests were unaffected by the proposed rezoning. The Ministry of Transportation and Infrastructure also advised that it had no objection to the proposed bylaw amendment.

Island Health commented that it supports the proposal as it recognizes safety concerns related to potential dam failure in the event of an extreme seismic event.

Pacheedaht First Nation responded to request that the maximum lot coverage be increased from 25% for the parcels on the west side of Jordan River. They also viewed the proposed 12 m maximum height allowance as too restrictive for structures such as an envisioned cultural centre.

CRD Bylaw and Animal Care Services stated no issue with the rezoning application.

CRD Protective Services advised that it was supportive of the proposed rezoning.

CRD Regional Parks confirmed that its interests are unaffected by the proposed rezoning and that it supports the application.

The proposed bylaw was considered by the Shirley/Jordan River APC on August 2, 2017. At that meeting, the APC requested clarification regarding BC Hydro's current and future obligations for remediation of any contaminated sites and recommended that language be added to exclude gas bars, gas stations or bulk fuel sales, auto repair and car wash, or any use for which a permit is required under the *Environmental Management Act or Regulation* be added to the "retail stores" use. The APC recommended that the proposed permitted uses be aligned with the land use designations in the proposed OCP and that the subject properties be designated as a commercial or industrial development permit area. In response to what was considered to be a lack of information regarding the future plans for the lands, the APC requested that a public information meeting be held prior to first reading of the bylaw. The APC recommended that the rezoning proposal incorporate consideration of parkland, community market space, arts and culture space, and conservation areas.

### **PLANNING ANALYSIS**

The current Shirley/Jordan River OCP designates the subject property as Settlement Area. This designation supports commercial, tourism development, forestry, industrial and agricultural activities. It is the owner's intention that the lands be prevented from further subdivision to create additional parcels and that overnight accommodation be prohibited.

The JR-1 zone has a limited set of permitted uses that includes residential and home based business uses. The C-1B zone allows a wider range of uses, including residential, retail and convenience stores and restaurants. The CR-1A zone allows residential and tourist accommodation uses, and restaurants. The Rural A zone allows a broad range of uses including residential, agriculture and intensive agriculture, silviculture, animal hospitals and veterinary clinics, and land-based aquaculture.

While some of the permitted uses under the current zones do not involve overnight accommodation, all of the zones do allow either residential or tourist accommodation. For this reason, as well as to reinforce registered restrictive covenants and statutory rights-of-way, the applicant has requested that a new Restricted Development – Flood Hazard (RD-1) zone be applied to those parcels within the designated flood-hazard/inundation area.

The RD-1 zone would apply to thirteen lots in Jordan River and allows for a similar set of permitted uses as those allowed under the current zones, including arts and culture, light industrial, offices, outdoor recreation, restaurants, retail stores and silviculture, and expressly prohibits overnight accommodation.

In response to the Shirley/Jordan River APC's request for a public information meeting, the Electoral Area Director held a meeting at Jordan River to provide background on the situation regarding the flood hazard and to respond to questions from residents. A representative of Pacheedaht First Nation was also in attendance, and clarified that Pacheedaht intends to purchase the lands from BC Hydro. In response to questions from the public, Pacheedaht advised that there are currently no fixed plans for the lands, but that they do form a part of the Nation's long-term economic development plan. Currently envisioned uses include eco-tourism, a cultural centre and the potential storage of forestry related products.

Light industrial uses would only be permitted on parcels greater than 4.0 ha, which excludes those parcels on the west side of Jordan River. The industrial uses contemplated at the present time include warehouses and the storage of forestry related products. While the proposed OCP supports forestry activity on the three larger properties, it does not contemplate a wider range of industrial uses. The current OCP, under which this application must be evaluated, does, however, support such uses.

At the time this report was written, BC Hydro had removed the dwelling units from the properties on the west side of Jordan River. Underground oil tanks used for storing home heating oil were also removed at that time. Any contamination on the east side of the river is the responsibility of the original polluter and BC Hydro has expressed no intention of addressing such conditions.

In response to comments from the Shirley/Jordan River APC, retail uses have been restricted to prohibit gas stations or any other use that would require a permit under the *Environmental Management Act or Regulation*.

Subsequent to referral of the proposed zoning amendment, BC Hydro requested that the “outdoor recreation use”, which excluded overnight camping, be removed from the list of principal uses and added to the list of accessory uses. Such a change allows for eco-tourism uses that would be accessory to a principal retail or cultural use. Planning staff have no reason to object to this proposed change.

The proposed amendment will create three split zoned parcels; however, the Rural A/RD-1 split would not increase the potential number of dwelling units or lots that could be created by subdivision.

Staff recommends Alternative 1, approval of the referral, receipt of comments and proceeding for first and second readings of Bylaw No. 4188.

### **CONCLUSION**

The purpose of this zoning amendment is to restrict development within an area found to be at risk of catastrophic flooding due to dam failure associated with a major to extreme seismic event. The proposed bylaw has been revised to address comments received from Pacheedaht First Nation and the Shirley/Jordan River APC.

Staff recommend proceeding with proposed Bylaw No. 4188 for first and second readings and proceeding to a public hearing.

### **RECOMMENDATIONS**

That the Juan de Fuca Land Use Committee recommends to the Capital Regional District Board that:

- a) That the referral of proposed Bylaw No. 4188 directed by the Juan de Fuca Land Use Committee to CRD Building Inspection, CRD Protective Services, CRD Regional Parks, Fisheries & Oceans Canada, Island Health, Ministry of Environment, Ministry of Transportation and Infrastructure, Pacheedaht First Nation, Te'Mexw Treaty Association, T'Sou-ke First Nation, and the Shirley/Jordan River Advisory Planning Commission be approved and the comments be received;
- b) That proposed Bylaw No. 4188, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 132, 2017”, be introduced and read a first time, read a second time; and
- c) That in accordance with the provisions of Section 469 of the *Local Government Act*, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4188.

Submitted by:	Iain Lawrence, MCIP, RPP, Manager, Local Area Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager, Planning and Protective Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

IL:wm

- Attachments: Appendix A - Proposed Bylaw No. 4188, for 1<sup>st</sup> and 2<sup>nd</sup> reading  
Appendix B - Proposed Bylaw No. 4188, for referral  
Appendix C - Referral Comments  
Appendix D - Shirley/Jordan River Advisory Planning Commission Minutes

Appendix A: Proposed Bylaw No. 4188 for 1<sup>st</sup> and 2<sup>nd</sup> Reading

**CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4188**

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**A BYLAW TO AMEND BYLAW NO. 2040, THE “JUAN DE FUCA LAND USE BYLAW, 1992”**

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The Capital Regional District Board, in open meeting assembled, enacts as follows:

1. Bylaw No. 2040 being the “Juan de Fuca Land Use Bylaw, 1992” is hereby amended as follows:

**A. SCHEDULE A, PART 1, SECTION 2.0 DEFINITIONS**

(a) By adding a new definition for “ARTS AND CULTURE” before the word “ASSEMBLY USE” as follows:

ARTS AND CULTURE means the use which provides for the creation, presentation and display of artistic and cultural endeavours and includes workshops, studios, galleries and museums.

**B. SCHEDULE A, PART 1, SECTION 3.0 ADMINISTRATION AND ENFORCEMENT**

(a) By amending subsection 3.07 Zones by inserting the words, “RD-1 Restricted Development – Flood Hazard Area” after the words “CR-1A Jordan River Destination Resort”.

**C. SCHEDULE A, PART 2 – ZONING DISTRICTS**

(a) By inserting a new, “Restricted Development – Flood Hazard Area – RD-1” zone, to be inserted after Section 33.0, and to be read as follows:

**34.0 RESTRICTED DEVELOPMENT – FLOOD HAZARD AREA – RD-1**

**34.01 Permitted Uses**

With the exception of those uses permitted by Part 1, Section 4.15, only those uses stated in this section are permitted in the Restricted Development – Flood Hazard Area (RD-1) zone:

- a) arts and culture;
- b) civic uses;
- c) convenience store;
- d) light industrial, on lots 4.0 ha or greater;
- e) offices;
- f) personal services;
- g) restaurants;
- h) retail stores, excluding gas bars, gas stations, or bulk fuel sales, auto repair and car wash, or any use for which a permit is required under the *Environmental Management Act* or *Regulation*;
- i) Silviculture, on lots 4.0 ha or greater;

Accessory Uses:

- j) storage and warehousing of forestry related products, on lots 4.0 ha or greater;
- k) buildings and structures accessory to the above permitted uses, pursuant to Part 1, Section 4.01.
- l) outdoor recreation, but excludes overnight camping;

**34.02 Prohibited Uses**

In addition to the list of uses prohibited by Part 1, Section 4.09, the following uses are prohibited in the Restricted Development – Flood Hazard Area (RD-1) zone:

- a) any use or occupancy that provides for overnight accommodation.

**34.03 Minimum Lot Size for Subdivision Purposes**

Minimum lot size is 120 ha.

**34.04 Lot Coverage**

- (a) On parcels 2 ha or less, lot coverage shall not exceed 50 %.
- (b) On parcels greater than 2 ha, lot coverage shall not exceed 25 %.

**34.05 Height**

Maximum height shall be 12 m.

**34.06 Yard Requirements**

- (a) On parcels 2 ha or less:
  - (i) Front yards shall be a minimum of 4.5 m CTS;
  - (ii) Side yards shall be 3.0 m;
  - (iii) Flanking yards shall be a minimum of 4.5 m CTS;
  - (iv) Rear yards shall be a minimum of 3.0 m.
- (b) On parcels greater than 2 ha:
  - (i) Front yards shall be a minimum of 7.5 m CTS;
  - (ii) Side yards shall be 6.0 m;
  - (iii) Flanking yards shall be a minimum of 7.5 m CTS;
  - (iv) Rear yards shall be a minimum of 10.0 m.
- (c) All setback requirements for new construction are subject to compliance with the *BC Building Code*, and, if required, a setback permit from the Ministry of Transportation and Infrastructure.
- (d) All new construction must meet the minimum flood construction level as determined by a qualified professional.

**D. SCHEDULE B, MAP NO. 3 – SHIRLEY JORDAN RIVER ZONING MAP**

(a) By deleting

- (i) Lot 2, Section 2, Renfrew District, Plan VIP4194 (PID: 000-141-917);
- (ii) Lot 6, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-229);
- (iii) Lot C, Section 2, Renfrew District, Plan VIP60061 (PID: 023-000-392); and
- (iv) Lot 1, Section 2, Renfrew District, Plan VIP11741 (PID: 005-054-532)

from the Jordan River Hamlet (JR-1) zone, and adding the lots to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 1, attached to and forming part of this bylaw.

- (b) By deleting
- (i) Lot 1, Section 2, Renfrew District, Plan VIP4194 (PID: 000-141-909);
  - (ii) Lot A, Section 2, Renfrew District, Plan VIP60061 (PID: 023-000-376);
  - (iii) Lot 8, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-270);
  - (iv) Lot 9, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-318);
  - (v) Parcel Number 1 (DD130151I) of Parcel A (DD88175I), of Section 2, Renfrew District (PID: 009-573-127)

from the Jordan River Hamlet Commercial (C-1B) zone, and adding the lots to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 1, attached to and forming part of this bylaw.

- (c) By deleting
- (i) Lot A, Section 2, Renfrew District, Plan VIP50879 (PID: 016-334-485)

from the Jordan River Destination Resort (CR-1A) zone, and adding the lot to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 1, attached to and forming part of this bylaw.

- (d) By deleting
- (i) Lot 1, Section 9, Renfrew District, Plan EPP59131 (PID 029-899-907);
  - (ii) Lot 2, Section 9, Renfrew District, Plan EPP59131 (PID 029-899-915); and
  - (iii) Lot 3, Section 9, Renfrew District, Plan EPP59132 (PID 029-900-221)

from the Rural A zone, and adding the lots to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 2, attached to and forming part of this bylaw.

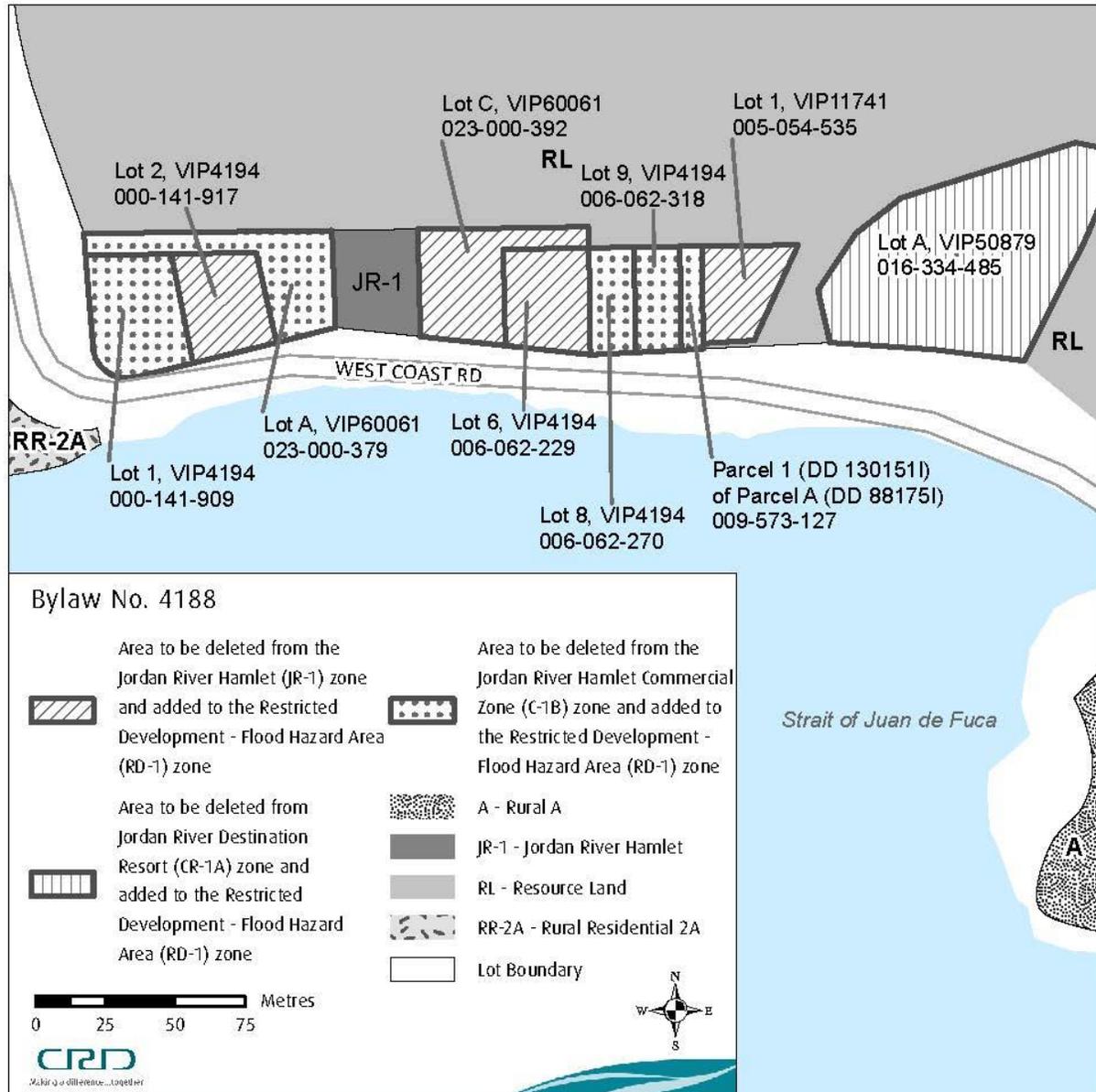
2. This bylaw may be cited as Bylaw No. 4188, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 132, 2017”.

READ A FIRST TIME THIS	day of	, 2017.
READ A SECOND TIME THIS	day of	, 2017.
READ A THIRD TIME THIS	day of	, 2017.
ADOPTED THIS	day of	, 2017.

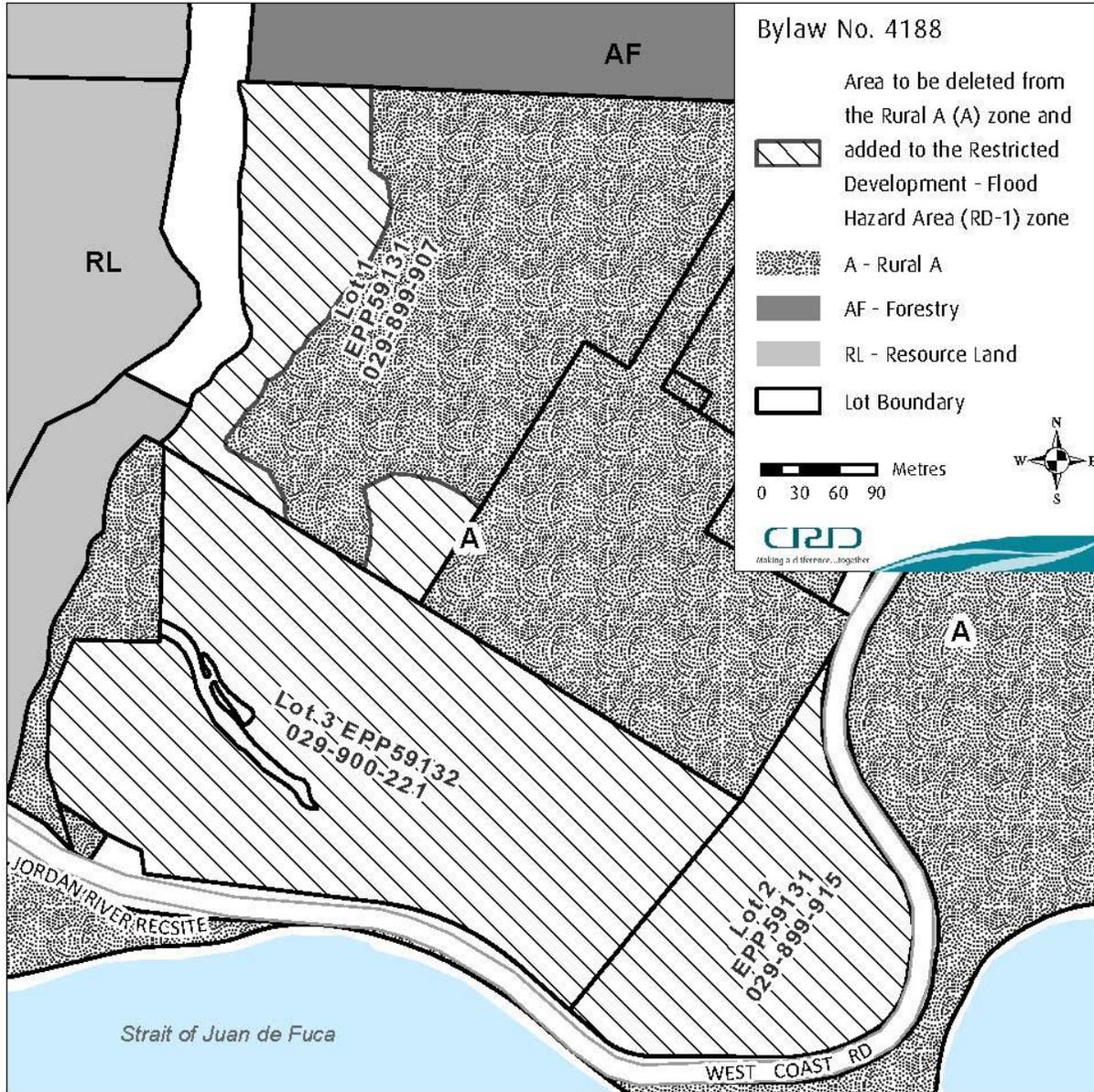
\_\_\_\_\_  
CHAIR

\_\_\_\_\_  
CORPORATE OFFICER

Plan No. 1 of Bylaw 4188, an amendment to Bylaw No. 2040



Plan No. 2 of Bylaw 4188, an amendment to Bylaw No. 2040



**CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4188**

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**A BYLAW TO AMEND BYLAW NO. 2040, THE “JUAN DE FUCA LAND USE BYLAW, 1992”**

\*\*\*\*\*

The Capital Regional District Board, in open meeting assembled, enacts as follows:

3. Bylaw No. 2040 being the “Juan de Fuca Land Use Bylaw, 1992” is hereby amended as follows:

**A. SCHEDULE A, PART 1, SECTION 2.0 DEFINITIONS**

(a) By adding a new definition for “ARTS AND CULTURE” before the word “ASSEMBLY USE” as follows:

ARTS AND CULTURE means the use which provides for the creation, presentation and display of artistic and cultural endeavours and includes workshops, studios, galleries and museums.

**B. SCHEDULE A, PART 1, SECTION 3.0 ADMINISTRATION AND ENFORCEMENT**

(a) By amending subsection 3.07 Zones by inserting the words, “RD-1 Restricted Development – Flood Hazard Area” after the words “CR-1A Jordan River Destination Resort”.

**C. SCHEDULE A, PART 2 – ZONING DISTRICTS**

(a) By inserting a new, “Restricted Development – Flood Hazard Area – RD-1” zone, to be inserted after Section 33.0, and to be read as follows:

**34.0            *RESTRICTED DEVELOPMENT – FLOOD HAZARD AREA – RD-1***

**34.01           Permitted Uses**

With the exception of those uses permitted by Part 1, Section 4.15, only those uses stated in this section are permitted in the Restricted Development – Flood Hazard Area (RD-1) zone:

- m) arts and culture;
- n) light industrial, on lots 4.0 ha or greater;
- o) offices;
- p) outdoor recreation, but excludes overnight camping;
- q) restaurants;
- r) retail stores;
- s) silviculture;

Accessory Uses:

- t) storage and warehousing of forestry related products, on lots 4.0 ha or greater;
- u) buildings and structures accessory to the above permitted uses, pursuant to Part 1, Section 4.01.

**34.02           Prohibited Uses**

In addition to the list of uses prohibited by Part 1, Section 4.09, the following uses are prohibited in the Restricted Development – Flood Hazard Area (RD-1) zone:

- b) any use or occupancy that provides for overnight accommodation.

<b>34.03</b>	<b><u>Minimum Lot Size for Subdivision Purposes</u></b>	Minimum lot size is 120 ha.
<b>34.04</b>	<b><u>Lot Coverage</u></b>	Lot coverage shall not exceed 25 percent.
<b>34.05</b>	<b><u>Height</u></b>	Maximum height shall be 12 m.
<b>34.06</b>	<b><u>Yard Requirements</u></b>	(a) Front yards shall be a minimum of 4.5 m CTS; (b) Side yards shall be 3.0 m; (c) Flanking yards shall be a minimum of 4.5 m CTS; (d) Rear yards shall be a minimum of 3.0 m.

**D. SCHEDULE B, MAP NO. 3 – SHIRLEY JORDAN RIVER ZONING MAP**

(a) By deleting

- (i) Lot 2, Section 2, Renfrew District, Plan VIP4194 (PID: 000-141-917);
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- (iii) Lot C, Section 2, Renfrew District, Plan VIP60061 (PID: 023-000-392); and
- (iv) Lot 1, Section 2, Renfrew District, Plan VIP11741 (PID: 005-054-532)

from the Jordan River Hamlet (JR-1) zone, and adding the lots to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 1, attached to and forming part of this bylaw.

(b) By deleting

- (i) Lot 1, Section 2, Renfrew District, Plan VIP4194 (PID: 000-141-909);
- (ii) Lot A, Section 2, Renfrew District, Plan VIP60061 (PID: 023-000-376);
- (iii) Lot 8, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-270);
- (iv) Lot 9, Section 2, Renfrew District, Plan VIP4194 (PID: 006-062-318);
- (v) Parcel Number 1 (DD130151I) of Parcel A (DD88175I), of Section 2, Renfrew District (PID: 009-573-127)

from the Jordan River Hamlet Commercial (C-1B) zone, and adding the lots to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 1, attached to and forming part of this bylaw.

(c) By deleting

- (i) Lot A, Section 2, Renfrew District, Plan VIP50879 (PID: 016-334-485)

from the Jordan River Destination Resort (CR-1A) zone, and adding the lot to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 1, attached to and forming part of this bylaw.

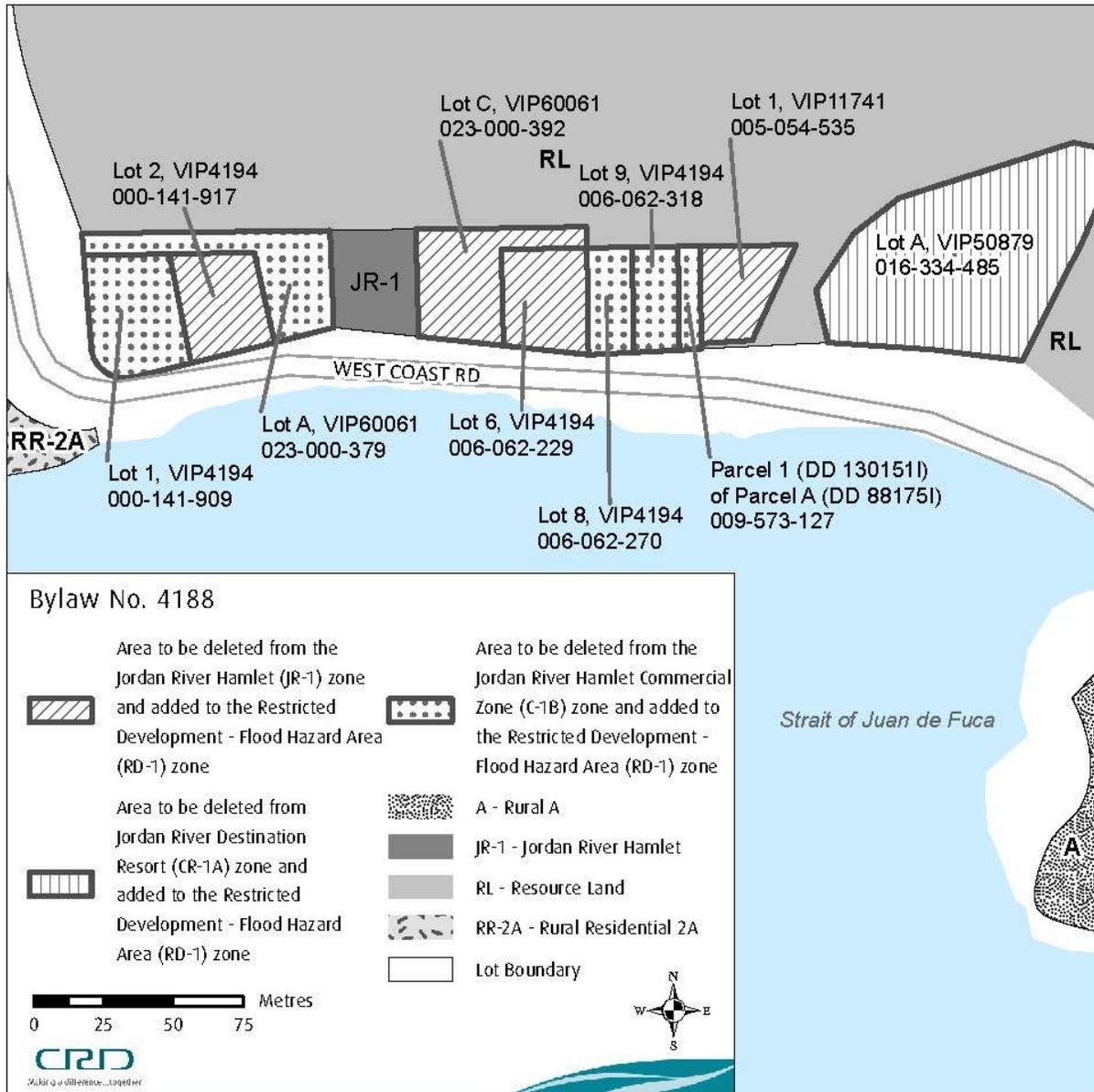
(d) By deleting

- (i) Lot 1, Section 9, Renfrew District, Plan EPP59131 (PID 029-899-907);
- (ii) Lot 2, Section 9, Renfrew District, Plan EPP59131 (PID 029-899-915); and
- (iii) Lot 3, Section 9, Renfrew District, Plan EPP59132 (PID 029-900-221)

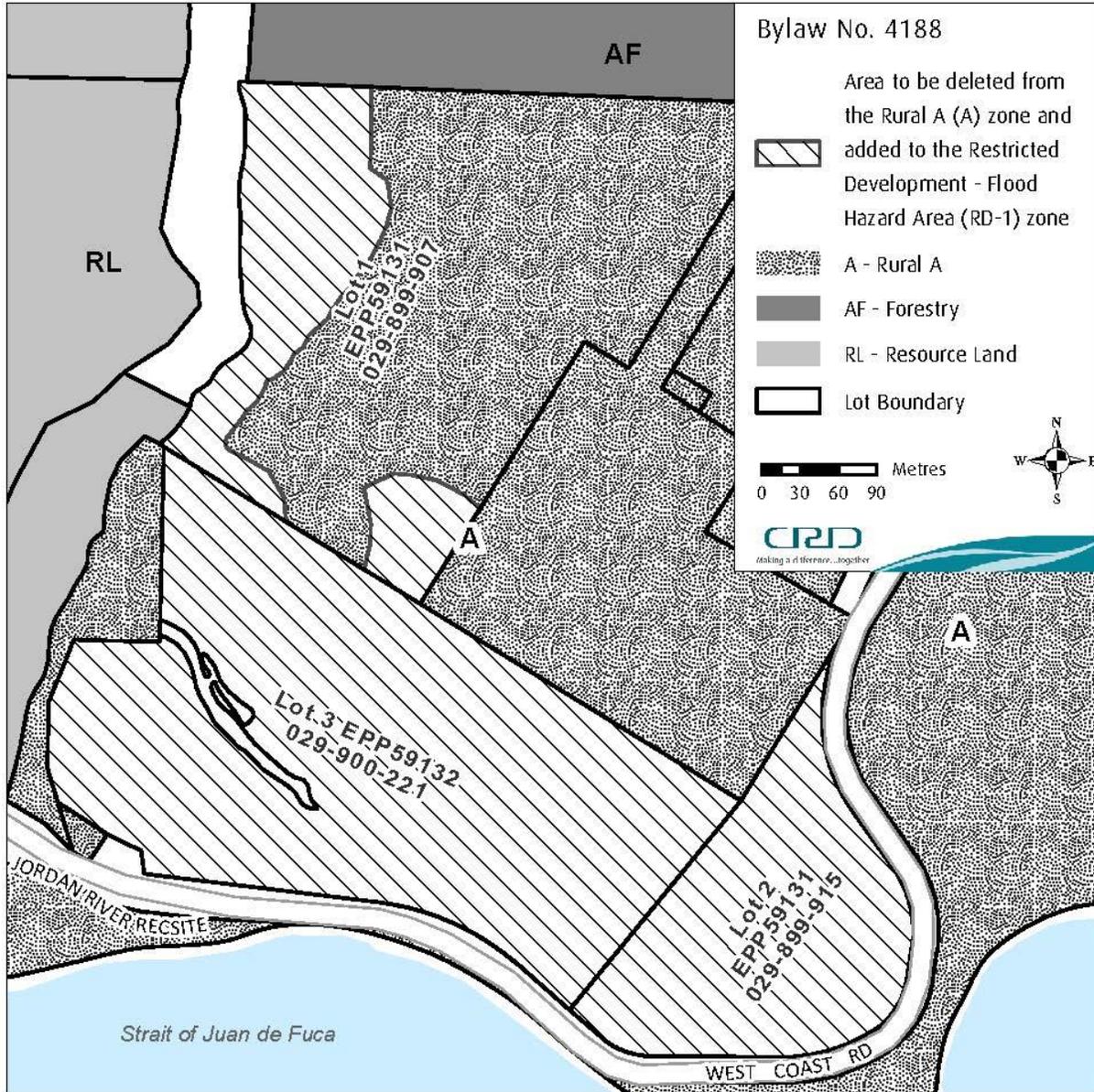
from the Rural A zone, and adding the lots to the Restricted Development – Flood Hazard Area (RD-1) zone, as shown on Plan No. 2, attached to and forming part of this bylaw.



Plan No. 1 of Bylaw 4188, an amendment to Bylaw No. 2040



Plan No. 2 of Bylaw 4188, an amendment to Bylaw No. 2040



Appendix C: Referral Comments

**Wendy Miller**

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**From:** FPP.PAC.Enquiries / Renseignements.PPP.PAC (DFO/MPO) <XPAC.EnquiriesPacific@dfo-mpo.gc.ca>  
**Sent:** Wednesday, August 02, 2017 11:25 AM  
**To:** Wendy Miller  
**Subject:** RE: Rezoning Application RZ000248 (Jordan River - BC Hydro Properties) - CRD Referral

Hello Wendy,

The role of the DFO's Fisheries Protection Program (FPP) is to protect and conserve fish and fish habitat in support of Canada's coastal and inland fisheries resources, and to make regulatory decisions under the fisheries protection provisions of the *Fisheries Act*. The FPP is specifically responsible for reviewing projects for which a s.35(2) *Fisheries Act* Authorization is required.

DFO does not have a regulatory role related to the rezoning application RZ000248 (Bylaw No. 4188) because it does not directly propose works, undertakings or activities that may result in serious harm to fish.

DFO's Projects Near Water website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) includes information for proponents on how to comply with the *Fisheries Act*, request a DFO review of a project, and request a *Fisheries Act* authorization.

If you have any further questions about DFO's regulatory process or need general information, contact DFO's Fisheries Protection Program toll free: 1-866-845-6776 or email: [EnquiriesPacific@dfo-mpo.gc.ca](mailto:EnquiriesPacific@dfo-mpo.gc.ca).

Thank you,

**Kristin Gravelle**

Fisheries Protection Biologist, Fisheries Protection Program  
Fisheries and Oceans Canada/Government of Canada  
[Kristin.Gravelle@dfo-mpo.gc.ca](mailto:Kristin.Gravelle@dfo-mpo.gc.ca)/Tel: 250-756-7263

Biologiste de la protection des pêches, La protection des pêches Programme  
Pêches et Océans Canada | Gouvernement du Canada  
[Kristin.Gravelle@dfo-mpo.gc.ca](mailto:Kristin.Gravelle@dfo-mpo.gc.ca)/Tél 250-756-7263

RESPONSE SUMMARY – REZONING APPLICATION RZ000248

Interest Affected by Proposal for Reasons Outlined Below

Interest Unaffected by Proposal

Comments:

We have few concerns with the proposed rezoning providing the following conditions are followed during subsequent development:

- We recommend that vegetation clearing be minimized and occur outside the nesting period from March 1 to August 31 to reduce impacts on all bird species. A search for the nests of birds (eagles, peregrine falcons, gyrfalcon, ospreys and herons) protected under Section 34(b) of the *Wildlife Act* should be conducted before the start of vegetation clearing. Should the nest of a bird requiring protection under Section 34(b) of the *Wildlife Act* be located, please refer to the recommended buffer distances in Table 4.1 (Section 4) of *Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia (MOE 2014)* available at <http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare/index.html>.
- Follow other relevant best management practices in *Develop with Care*.

Should you have any questions regarding our response, please do not hesitate to contact Dr. Grant Bracher ([grant.bracher@gov.bc.ca](mailto:grant.bracher@gov.bc.ca) Tel. 250-751-3221).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dr. Grant Bracher PAg RPh

DR. GRANT BRACHER

Signed

ECOSYSTEM BIOLOGIST

Title

AUGUST 29, 2017

Date

MINISTRY OF FORESTS, LANDS AND

Agency

NATURAL RESOURCE OPERATIONS

**Wendy Miller**

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**From:** Berube, Nikki TRAN:EX <Nikki.Berube@gov.bc.ca>  
**Sent:** Thursday, July 20, 2017 12:08 PM  
**To:** Wendy Miller  
**Subject:** RE: Rezoning Application RZ000248 (Jordan River - BC Hydro Properties) - CRD Referral

Hi Wendy,

Please accept this as official response from the Ministry of Transportation and Infrastructure.

The Ministry has no objections to the proposed rezoning and bylaw amendment. There are no other conditions to be met at this time.

Thank you,

**Nikki Bérubé**

District Development Technician  
Ministry of Transportation and Infrastructure – Vancouver Island District  
Ph: 250-952-5562 Cell: 778-679-1973  
Fx: 250-952-4508



**EMPLOYEE  
ADVISORY  
FORUM**

**Proud Member of the EAF**  
*For employees, by employees*

RESPONSE SUMMARY – REZONING APPLICATION RZ000248

Interest Affected by Proposal for Reasons Outlined Below

Interest Unaffected by Proposal

Comments:

See attached comments.



Signed

Environmental Health Officer

Title

Aug 16, 2017

Date

VIHA

Agency

**Highlight:**

- Studies conducted on the area have found it to be at risk of catastrophic flooding due to failure of the dam in the event of a major/extreme seismic event. In light of this risk the application proposes to prohibit overnight accommodations; residential as well as tourist. Island Health supports the proposal, as it recognizing safety concerns, and is taking steps to safeguard residents and visitors to the area by restricting overnight accommodation.

**Recommendations:**

- While some current uses of the property will continue as is, not all future use of the property are determined at this stage. The listed permitted uses include outdoor recreation. Ideally an outdoor recreation space will include benches or other seating areas and where restoration to the natural environment is to occur, it would ideally be carried out using vegetation native to the area. The addition of outdoor recreation site will allow visitors and residents in the area to engage and interact with the natural environment. Interaction with the natural environment is an important component to the health of our communities. Health evidence shows a strong link between exposure and engagement with nature and the reduction of stress, chronic diseases, depression and anxiety as well as improvements in cognitive functions.

**Regulatory:**

- The Health Protection and Environmental Services (HPES) department in Island Health have a regulatory role in food premises from construction to operation. Any changes to existing food premises and the possible construction of new food premises must be undertaken with the appropriate construction and operating permits.
- Under the *Drinking Water Protection Act* and *Regulation*, any construction, installation, alteration or extension of the water supply system must be issued a construction permit from our Public Health Engineer (for more information: <http://www.viha.ca/mho/water>).
- Sewage disposal development must be in compliance with the *Sewerage System Regulation* or the *Municipal Wastewater Regulation*.

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**Wendy Miller**

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**From:** Kristine Pearson <referrals@pacheedaht.ca>  
**Sent:** Thursday, August 17, 2017 3:30 PM  
**To:** Wendy Miller  
**Subject:** Re: Rezoning Application RZ000248 (Jordan River - BC Hydro Properties) - CRD Referral

Hi Wendy,

Please find the response to application RZ000248 from Pacheedaht First Nation below:

Interest affected:

1. Lot Coverage

The threshold of 25% coverage for the Jordan River parcels will be restrictive to the current Land Use Planning process initiated by PFN. Jordan River has been identified as a key area for economic development as presented to the CRD in May 2017. We request an increase in maximum lot coverage, especially for the western side of the Jordan River ( the residential properties), and for utilities such as light industrial use on JR 2/3.

2. Height

The maximum height restriction of 12 m is viewed by PFN as implicating development, especially in structures such as the envisioned cultural centre. This provision should be increased to accommodate, again for the ongoing Lang Use Plan currently being developed by the Nation.

We look forward to your review.

Thank you,

Kristine Pearson  
Pacheedaht Referrals Coordinator  
250-647-0020

**Wendy Miller**

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**From:** Wilf Marquis  
**Sent:** Thursday, July 20, 2017 3:13 PM  
**To:** Wendy Miller  
**Subject:** RE: Rezoning Application RZ000248 (Jordan River - BC Hydro Properties)

Thank you Wendy, no issues with the Rezoning Application RZ000248 to restrict development within an area found to be at risk of catastrophic flooding due to an extreme seismic event.

Wilf MARQUIS  
Senior Bylaw Officer

Bylaw and Animal Care Services  
212-2780 Veterans Memorial Parkway, Victoria, BC, Canada V9B 3S6  
Ph. 250.474.3351 ext. 22 \ Fax: 250.391.9727 \ TF: 800.665.7899  
email: wmarquis@crd.bc.ca

**Wendy Miller**

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**From:** Peter Ensor  
**Sent:** Wednesday, July 19, 2017 2:09 PM  
**To:** Wendy Miller  
**Subject:** RE: Rezoning Application RZ000248 (Jordan River - BC Hydro Properties)

Protective Services is supportive of this rezoning.

PE

**Wendy Miller**

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**From:** Wendy Miller  
**Sent:** Monday, August 14, 2017 8:41 AM  
**To:** Wendy Miller  
**Subject:** Rezoning Application RZ000248 (Jordan River - BC Hydro Properties)

**From:** Lynn Wilson  
**Sent:** Friday, August 11, 2017 4:50 PM  
**To:** Wendy Miller <wmiller@crd.bc.ca>  
**Cc:** Kathy Moore <kmoore@crd.bc.ca>  
**Subject:** RE: Rezoning Application RZ000248 (Jordan River - BC Hydro Properties)

"Thank you for referring JDF Rezoning Application RZ000248 to CRD Regional Park for comment. CRD Regional Parks doesn't believe the proposed rezoning will affect our interests at Jordan River Regional Park. For this reason, CRD Regional Parks supports the rezoning application."

Appendix D: Shirley/Jordan River Advisory Planning Commission meeting minutes

Shirley/Jordan River Advisory Planning Commission Meeting Minutes  
August 2, 2017

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binding dispute resolution process. Consideration of Bylaw No. 4000 and Bylaw No. 4001 cannot proceed until issues related to the RGS are resolved.

6. Rezoning Application

- a) RZ000248 - Lot 2, Section 2, Renfrew District, Plan VIP4194; Lot 6, Section 2, Renfrew District, Plan VIP4194; Lot C, Section 2, Renfrew District, Plan VIP60061; Lot 1, Section 2, Renfrew District, Plan VIP11741; Lot 1, Section 2, Renfrew District, Plan VIP4194; Lot A, Section 2, Renfrew District, Plan VIP60061; Lot 8, Section 2, Renfrew District, Plan VIP4194; Lot 9, Section 2, Renfrew District, Plan VIP4194; Parcel Number 1 (DD1301511) of Parcel A (DD881751), of Section 2, Renfrew District; Lot A, Section 2, Renfrew District, Plan VIP50879; Lot 1, Section 9, Renfrew District, Plan EPP59131; Lot 2, Section 9, Renfrew District, Plan EPP59131; and Lot 3, Section 9, Renfrew District, Plan EPP59132 (Jordan River)

Emma Taylor spoke to the staff report and the request to rezone four parcels from the Jordan River Hamlet (JR-1) zone to a new Restricted Development – Flood Hazard Area (RD-1) zone; to rezone five parcels from the Jordan River Hamlet Commercial (C-1B) zone to the RD-1 zone; to rezone one parcel from the Jordan River Destination Resort (CR-1A) zone to the RD-1 zone; and to rezone three parcels from the Rural A zone to the RD-1 zone (proposed Bylaw No. 4188) in order to restrict development within an area found to be at risk of catastrophic flooding due to dam failure associated with an extreme seismic event. Emma Taylor directed attention Appendix 3 and 4 in the staff report reflecting the current zoning for the subject properties.

Emma Taylor confirmed that:

- the properties are subject to the current OCP and current development permit area designations
- the proposed zone does not support an overnight component
- the proposed zone restricts subdivision (120 ha)
- the proposed amendment will create one split zoned parcel
- it is not known if the properties are subject to treaty negotiation

It was confirmed that representatives from BC Hydro, Mike Prettejohn, Contract Property Representative, and Ted Olynyk, Manager, Community Relations, were present.

The representatives responded to questions from the APC and the public advising that:

- it is proposed that Lot 1, EPP59131 be split zoned RD-1/Rural A as the full parcel is not considered at risk based on tsunami hazard line data and contour flood hazard line data
- they are unaware any other comparable zoning amendments prompted by BC Hydro
- the restrictive covenants and statutory rights-of-way (SRWs) registered on the title of the properties restrict overnight accommodation
- consolidation of the smaller properties would not support light industrial use as consolidation would not result in a 4.0 ha lot

Wayne Jackaman, Jordan River

- the properties currently zoned Jordan River Hamlet Commercial (C-1B) allow retail store as a permitted use but includes exclusionary language to restrict gas bars, gas stations or bulk fuel sales, auto repair and car wash, or any use for which a permit is required under the *Environmental Management Act or Regulation*

Shirley/Jordan River Advisory Planning Commission Meeting Minutes  
August 2, 2017

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- stated support for adding the exclusionary language from the C-1B zone to the proposed RD-1 zone to limit the type of retail store uses
- pending OCP notes that to assess the impact of a particular development proposal, more detailed information and studies may be necessary
- the community considers the Jordan River Powerhouse to have heritage value (PID 009-573-437)
- the policies and objectives of the pending OCP support heritage protection measures
- it is understood that there are known contamination issues on the properties located to the east

Emma Taylor confirmed that some of the subject properties are currently designated as being in a Commercial or Industrial Development Permit Area and that the pending OCP maintains these designations while providing further refinements to Development Permit Area guidelines.

The representatives responded to questions from the APC and the public advising that:

- BC Hydro's environment division is investigating claims of contamination as it is anticipated that purchasers will seek comfort from BC Hydro with respect to this issue
- status of this investigation and remediation is not known
- there is a known residential contamination issue related to a heating oil tank
- all buildings have either been demolished or moved off site

**MOVED** by Pascale Knoglinger, **SECONDED** by Dominique Bernardet that the APC recommend to the Land Use Committee that clarification be requested regarding BC Hydro's current and future obligations to remediate contamination issues related to the thirteen properties subject to the rezoning application. **CARRIED**

**MOVED** by Dominique Bernardet, **SECONDED** by Fiona McDannold that the APC recommends to the Land Use Committee that the words, " , excluding gas bars, gas stations or bulk fuel sales, auto repair and car wash, or any use for which a permit is required under the *Environmental Management Act or Regulation*;" be added to Bylaw No. 4188, Section 34.01 after the words "retail stores;". **CARRIED**

The representatives responded to questions from the APC and the public advising that:

- the restrictive covenants and SRWs apply to all lands identified as being within the proposed RD-1 zone
- time required to evacuate in the event of a major dam failure is not known
- in the event of an emergency, people should evacuate as soon as possible

Wayne Jackaman, Jordan River

- the community would be insulted if a property owner proposed reinstating residential use as a permitted use to the properties subject to the rezoning application
- the pending OCP supports appropriate small-scale neighbourhood commercial activities and small-scale tourism activities
- considers the maximum height of 12 m proposed by Bylaw No. 4188 to be potentially too great when it is not known what is going to be built

**Shirley/Jordan River Advisory Planning Commission Meeting Minutes  
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Emma Taylor responded to questions from the APC advising that the subject properties are designated Settlement Area (SA) in the current OCP and that some of the properties subject to the rezoning proposal are not designated as being as being in a Commercial or Industrial Development Permit Area.

**MOVED** by Pascale Knoglinger, **SECONDED** by Sonja De Wit that the APC recommends to the Land Use Committee that the permitted uses proposed for RD-1 zone be aligned with the Land Use Designations for the subject properties as proposed by the pending OCP. **CARRIED**

**MOVED** by Dominique Bernardet, **SECONDED** by Fiona McDannold that the APC recommends to the Land Use Committee that all thirteen properties subject to the rezoning proposal be designated as being in a Commercial or Industrial Development Permit Area. **CARRIED**

Public attendees questioned if future property owners will be able to get insurance or if the CRD will be able to issue building permits considering the subject properties are considered at risk properties.

A Jordan River resident stated that he considers the rezoning application to be an opportunity to communicate the community's interest in the lands. Community members stated support for securing land as conservation areas and for public uses such as park land and community market space.

The representatives stated that:

- a great deal of money was spent to purchase the at risk properties
- the purpose of the rezoning application is to ensure that it is known prior to selling that the properties are not suitable for residential use and that overnight accommodation is not permitted
- once the rezoning process is complete, the properties will be disposed
- BC Hydro will not be involved with development of the properties
- the community will work with the new property owners

Emma Taylor confirmed that building permit approval and development permit approval do not require public consultation.

APC comments included:

- there is local community interest in these lands
- communications from BC Hydro over the last two years has been limited
- the community of Jordan River is growing
- support for greater applicant engagement with the broader community in Jordan River
- support for input from the CRD as to how it is able to address community concerns and requests
- the rezoning application only addresses pressing uses but not how the community will be developed in future
- there has been no venue prior to this evening's meeting to receive community input
- written notice of the meeting was sent to owners within 500 m of the subject properties

Shirley/Jordan River Advisory Planning Commission Meeting Minutes  
August 2, 2017

5

Gerard LeBlanc, Shirley

- questioned if BC Hydro received a site contamination waiver from the original property owners or if BC Hydro assumed responsibility for site contamination
- it is understood that under the *Environmental Management Act* the original polluter is responsible for site remediation
- requested clarification on who is responsible for site reclamation
- it appears counterintuitive to prohibit overnight accommodation but still permit commercial use of the properties when dam failure can happen at all times of the day

**MOVED** by Pascale Knoglinger, **SECONDED** by Brenda Mark that the APC recommends to the Land Use Committee that a public information meeting be held prior to first reading of Bylaw No. 4188. **CARRIED**

A Jordan River resident stated that the rezoning application provides an opportunity to reclaim the land as a salt water marsh, supporting river restoration and the return of salmon runs and the overall remediation initiatives of the Jordan River Roundtable.

The representatives confirmed that BC Hydro is part of the Roundtable group.

**MOVED** by Pascale Knoglinger, **SECONDED** by Dominique Bernardet that the APC recommends to the Land Use Committee that the rezoning proposal incorporate consideration of parkland, community market space, arts and culture space, and conservation areas. **CARRIED**

The APC questioned BC Hydro's plans to provide emergency preparedness education to residents and tourists.

The representatives confirmed that additional warning signs will be placed.

Emma Taylor responded to a question from the APC confirming that lands owned by corporations are subject to local government bylaws; lands held under treaty are not.

**7. Proposed Bylaw**

**a) Bylaw No. 4179, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017"**

Emma Taylor spoke to the staff report and proposed Bylaw No. 4179, which would add agriculture and intensive agricultural uses to the Forestry (AF) zone. It was advised that staff have recently received several inquiries into AF zoned properties from prospective buyers that have expressed interest in agricultural activities. At present, staff cannot provide assurance to prospective buyers that complaints regarding agricultural activities on these properties will not initiate enforcement action.

Emma Taylor reported that:

- parcels removed from PMFL have been subdivided into smaller, residential parcels
- the AF zone permits a 4 ha minimum parcel size for subdivision purposes
- the AF zone presently permits an accessory suite or a detached accessory suite
- adoption of the amendment bylaw would add 800 hectares of agricultural land in Otter Point and 1,500 hectares in Shirley and Jordan River

## 6. Rezoning Application

- a) **RZ000248 - Lot 2, Section 2, Renfrew District, Plan VIP4194; Lot 6, Section 2, Renfrew District, Plan VIP4194; Lot C, Section 2, Renfrew District, Plan VIP60061; Lot 1, Section 2, Renfrew District, Plan VIP11741; Lot 1, Section 2, Renfrew District, Plan VIP4194; Lot A, Section 2, Renfrew District, Plan VIP60061; Lot 8, Section 2, Renfrew District, Plan VIP4194; Lot 9, Section 2, Renfrew District, Plan VIP4194; Parcel Number 1 (DD130151I) of Parcel A (DD88175I), of Section 2, Renfrew District; Lot A, Section 2, Renfrew District, Plan VIP50879; Lot 1, Section 9, Renfrew District, Plan EPP59131; Lot 2, Section 9, Renfrew District, Plan EPP59131; and Lot 3, Section 9, Renfrew District, Plan EPP59132 (Jordan River)**

Iain Lawrence spoke to the staff report and the request to rezone four parcels from the Jordan River Hamlet (JR-1) zone, five parcels from the Jordan River Hamlet Commercial (C-1B) zone, one parcel from the Jordan River Destination Resort (CR-1A) zone, and three parcels from the Rural A zone to a new Restricted Development – Flood Hazard Area (RD-1) zone (proposed Bylaw No. 4188), in order to restrict development within an area found to be at risk of catastrophic flooding due to dam failure associated with an extreme seismic event.

Iain Lawrence reported that at its July 18, 2017, meeting the LUC recommended that the proposal be referred to agencies and to the Shirley/Jordan River Advisory Planning Commission (APC). Iain Lawrence summarized the referral comments included in the staff report and highlighted the changes made to Bylaw No. 4188 in response to the comments received from referral agencies. It was confirmed that, as requested by the Shirley/Jordan River APC, a meeting was held by Director Hicks in Jordan River on September 22, 2017. At this meeting a representative of Pacheedaht First Nation (PFN) clarified that PFN intends to purchase the lands from BC Hydro.

Iain Lawrence responded to a question from the LUC advising that BC Hydro is responsible for contamination for the properties on the west side of Jordan River related to home heating oil tanks. Any contamination on the east side of the river is the responsibility of the original polluter.

The Chair clarified that should the lands be identified as treaty settlement lands through the treaty process, they would no longer be subject to local government zoning bylaws. In the interim, the proposed zone restricts overnight accommodation as requested by BC Hydro and addresses comments received from PFN.

The Chair confirmed that the spokespersons for the applicant were present.

A spokesperson for the applicant responded to questions from the LUC advising that:

- the Jordan River dam is considered one of the strongest dams in BC Hydro's system
- the dam is considered integral to the power system for southern Vancouver Island
- BC Hydro followed the disposition process for sale of Crown lands, which includes priority sale to First Nations

**MOVED** by Ron Ramsay, **SECONDED** by Sandy Sinclair that the Land Use Committee recommends to the CRD Board:

- a) That the referral of proposed Bylaw No. 4188 directed by the Juan de Fuca Land Use Committee to CRD Building Inspection, CRD Protective Services, CRD Regional

Parks, Fisheries & Oceans Canada, Island Health, Ministry of Environment, Ministry of Transportation and Infrastructure, Pacheedaht First Nation, Te'Mexw Treaty Association, T'Sou-ke First Nation, and the Shirley/Jordan River Advisory Planning Commission be approved and the comments be received;

- b) That proposed Bylaw No. 4188, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 132, 2017", be introduced and read a first time, read a second time; and
- c) That in accordance with the provisions of Section 469 of the Local Government Act, the Director for the Juan de Fuca Electoral Area, or Alternate Director, be delegated authority to hold a Public Hearing with respect to Bylaw No. 4188.

**CARRIED**

## 7. Proposed Bylaw

### a) **Bylaw No. 4179, "Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 130, 2017"**

Iain Lawrence spoke to the staff report and proposed Bylaw No. 4179, which would add Agriculture as a permitted use in the Forestry (AF) zone.

Iain Lawrence reported that at its June 20, 2017, meeting the LUC recommended that the proposal be referred to agencies and to the Otter Point Advisory Planning Commission (APC) and the Shirley/Jordan River APC. Iain Lawrence outlined the referral comments included in the staff report and highlighted the changes made to Bylaw No. 4179 in response to the comments received from referral agencies.

LUC comments included:

- the AF zone applies to private lands classified as private managed forest land (PMFL)
- local government zoning bylaws do not apply to PMFL
- private property owners can apply to have parcels removed from PMFL and then subdivide land into smaller, residential parcels

Iain Lawrence responded to questions from the LUC confirming that:

- all other zones in the Juan de Fuca that permit forestry use also permit agricultural use including lands zoned Rural Resource Land
- adding a use to AF zoned properties is considered beneficial to the property owner when land is removed from PMFL
- owners of AF zoned properties will be able to apply to have land classified as a farm should Bylaw No. 4179 proceed

**MOVED** by Art Wynans, **SECONDED** by Sandy Sinclair that the Land Use Committee recommends to the CRD Board:

- a) That the referral of proposed Bylaw No. 4179 directed by the Juan de Fuca Land Use Committee to the Agricultural Advisory Planning Commission, Cowichan Valley Regional District, District of Sooke, Managed Forest Council, Ministry of Agriculture, Ministry of Forests, Lands and Natural Resource Operations, Ministry of Transportation & Infrastructure, Otter Point Advisory Planning Commission, Pacheedaht First Nation, Scia'new First Nation, Shirley/Jordan River Advisory Planning Commission, T'Sou-ke First Nation, and appropriate CRD departments be approved and the comments be received;

**REPORT TO THE JUAN DE FUCA WATER DISTRIBUTION COMMISSION  
MEETING OF TUESDAY, OCTOBER 3, 2017**

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**SUBJECT      JUAN DE FUCA WATER DISTRIBUTION SERVICE - 2018 OPERATING AND  
CAPITAL BUDGET**

**ISSUE**

The purpose of the report is to provide an overview of the 2018 Juan de Fuca Water Distribution Service budget, highlighting the proposed significant changes and additions. The report generally follows the sequence of information provided in the attached draft budget document (Attachment 1).

**BACKGROUND**

This draft 2018 Juan de Fuca (JDF) Water Distribution Service budget has been prepared for the JDF Water Distribution Commission's (Commission) consideration. The Commission will make budget recommendations to the CRD Board through the Committee of the Whole in November. The draft 2018 JDF Water Distribution Service budget has been prepared considering the CRD Board's 2018 service planning and financial expectations, which include identifying opportunities to realign or reallocate resources and seek potential synergies or efficiencies between departments and services, reviewing of service levels and adjustments related to regulatory compliance, and undertaking infrastructure improvements to maintain service levels across the service area, including incremental ongoing operational and maintenance requirements in the expanding service area. The following sets out the key components of the budget.

**2017 Year End Financial Projections**

Year-end revenue and expenditure projections have been established and estimated variances are summarized as follows:

- Distribution System operating expenditures	\$249,733 (4.7%)
- Bulk water purchase	\$255,000 (5.0%)
- Capital fund transfer	\$278,177 (8.2%)
- Capital transfer to equipment (fleet) replacement fund	\$0 (0.0%)
- Capital transfer to debt reserve fund	-\$7,000 (-51.6%)
- Debt servicing – principal and interest expenditures	-\$24,650 (-1.5%)
- Revenue – water sales	\$765,160 (5.0%)
- Revenue – other	\$500 (0.3%)

**Rate Base**

The rate base for 2018 has increased by \$12,484,507 from 2017. This increase relates to physical plant additions and capitalization values, and a higher value of construction work in progress between 2017 and 2018. The construction work in progress primarily relates to the water main installation project underway on Bear Mountain Parkway (Pages 3 & 4 of the budget document).

### Revenue Requirement

The revenue requirement for 2018 has increased by \$1,354,688. This is resulting from an increase in operational expenses of \$458,002, increased depreciation expenses of \$197,986 net of expired depreciation on existing assets, and a net increase in the return on the rate base of \$685,300. The increase in the return on the rate base is primarily a result of an upward adjustment to the rate of return on assets funded by equity, to equal the long term Canada bond rate (Page 5 of the budget document).

### Operating Budget

The 2018 operating budget reflects an increase in non-discretionary expenses such as negotiated wage/salary increases, departmental support service allocation increases, maintenance expense increases due to new infrastructure additions, and other operating expense increases such as electricity costs.

As a result of a significant growth in new land development in the service area over the last three years, the distribution system has and continues to expand. Since 2015 (to 2017 to-date), the new assets added to the system include 16 km of water main, 9 km of service laterals, 1,573 new service connections and meters, 170 fire hydrants, 527 valves, and one large pump station, all of which require regular maintenance to ensure reliable performance. With at least four major developments underway in the service area including South Skirt Mountain, Bear Mountain, Royal Bay and Centre Mountain, it is expected that the water system asset base will continue to grow significantly in the near future as initial water servicing infrastructure is installed which will impact operating and maintenance costs. Given the size of the developments and anticipated phasing and build-out timelines, it is expected that there will be a 'revenue lag', possibly several years, before enough revenue is generated from retail water sales in these and other developments to offset the initial infrastructure operating and maintenance costs.

The net core 2018 operating budget increase is \$363,122, plus additional budget requests for one-time and ongoing expenditures in the amounts of \$50,000 and \$44,880 respectively. The core operating budget increase is primarily due to distribution system operations contract for services and labour budget adjustments necessary to support increasing operations and maintenance tasks and increasing safe work practice requirements. The one-time and ongoing expenditures include two separate requests which are detailed on pages 6-8 of the budget document. Operating budget forecasts for 2019 through 2022 have been presented for information.

### Capital Budget

There are a number of capital projects planned for 2018 with a total value of \$7,940,000, plus \$2,857,100 in Development Cost Charge (DCC) projects, and \$695,000 in projects cost shared with the Regional Water Supply Services (Pages 15-29 of the budget document). The major projects in 2018 include ongoing small diameter asbestos cement water main replacement, large diameter water main replacements on Jacklin Road and Sooke Road, as well as the McCallum Pump Station and Millstream Road water main extension DCC projects.

A five year capital plan has been presented for information. The total five year (2018-2022) capital plan budget is \$37.3 million, including \$3.8 million in carry forward projects (most of which are in-stream, multi-year projects).

### Capital and Debt Expenditures

The 2018 capital expenditures will be partially funded through a transfer to the water capital fund budgeted at \$4,444,346, with the balance funded through debt. 2018 debt expenditures for existing and new debt servicing are budgeted to be \$1,485,038. Debt servicing expenditures have decreased by \$206,811 from 2017, primarily due to the retirement of LA2913-078, originally borrowed in 2002 for \$4 million. The long term debt obligations are summarized on the attached graphs (Attachment 2). A new loan authorization was approved in 2015 to allow borrowing to partially fund the five year capital plan.

A \$246,192 transfer to the vehicle/equipment replacement fund is planned in 2018.

The DCC projects will be funded entirely from the DCC reserve fund, which is projected to have a balance of \$4,300,401 at the beginning of 2018.

### Bulk Water Purchase

Based on the proposed 2018 budgeted water demand and Regional Water Supply wholesale water rate, the bulk water purchase budget has been set at \$5,448,080.

### Water Demand

As reported last year, water demand in the service area (and per capita demand) has declined for many years recently primarily due to the ongoing residential replacement of low efficiency appliances and higher flow plumbing fixtures with high efficiency and low flow units, as well as decreasing outdoor summer demand due to changes in attitudes and behaviours with respect to water conservation. However, since 2015 actual demand has exceeded budgeted demand, primarily due to increased demand resulting from extended periods of warm and dry weather as well as growth related demand. Although 2017 demand is projected to be lower than 2016 demand, the total year end demand is projected to be 8,400,000 cubic metres which is higher than the 2017 budgeted water demand of 8,000,000 cubic meters. The net revenue resulting from this additional demand is proposed to be included in the water capital fund transfer at year end 2017. The recommended 2018 water rate has been calculated using a budget demand of 8,200,000 (Page 9 of the budget document).

### Proposed 2018 Wholesale Water Rate

The proposed 2018 wholesale water rate is \$0.6644 per cubic metre, subject to the Regional Water Supply Commission's approval.

### Proposed Agricultural Water Rate

The proposed 2018 agricultural water rate has been maintained at the 2017 rate of \$0.2105 per cubic metre, subject to the Regional Water Supply Commission's approval. The Regional Water Supply agricultural water rate budget funds the difference between the municipal retail water rate and the agricultural water rate.

### Proposed 2018 Juan de Fuca Water Distribution Service Retail Water Rate

The recommended retail water rate has taken into consideration the revenue required to meet operating and capital expenditures, including debt obligations, the bulk water purchase expense,

and the budget demand volume established for 2018. The proposed 2018 Juan de Fuca Water Distribution Service retail water rate is \$2.0739 per cubic metre (Page 10 of the budget document).

Retail and Wholesale Water Rate History and Projection

The retail and wholesale water rate history and projection is attached (Attachment 3). The rates may be adjusted in the future to reflect actual revenue and expenditure circumstances and water demand volumes.

**RECOMMENDATION**

That the Juan de Fuca Water Distribution Commission recommends that the Capital Regional District Board:

1. Approve the 2018 Capital Budget and the Five Year Capital Plan;
2. Approve the 2018 Operating Budget;
3. Approve the 2018 Juan de Fuca Water Distribution Service retail water rate of \$2.0739 per cubic metre, adjusted if necessary by any change in the Regional Water Supply wholesale water rate; and
4. Amend the Water Distribution Local Service Conditions, Fees and Charges Bylaw accordingly.

Submitted by:	Ted Robbins, BSc, CTech, General Manager, Integrated Water Service
Concurrence:	Ben Semmens, BCom, CPA, CMA, Senior Financial Advisor, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer, Financial Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

TR:mm

Attachments: 3

**CAPITAL REGIONAL DISTRICT**

**BYLAW NO. 4218**

\*\*\*\*\*  
**A BYLAW TO AMEND BYLAW 3889 TO UPDATE WATER DISTRIBUTION LOCAL SERVICE  
CONDITIONS, FEES AND CHARGES BYLAW NO. 1, 2013  
(JUAN DE FUCA WATER DISTRIBUTION)**  
\*\*\*\*\*

The Board of the Capital Regional District in open meeting assembled enacts as follows:

1. Bylaw No. 3889, "Water Distribution Local Service Conditions, Fees and Charges Bylaw No. 1, 2013" is amended as follows:
  - a) By replacing "Section 823(1) [now sections 805 and 806]" with "Sections 385 and 387", and "Section 825(1) [now sections 805.1(1)(a) and 806.1(1)(a)]" with "Sections 386(1)(a) and 388(1)(a)" in the preamble paragraph "B.(a)";
  - b) By replacing "Section 825(2) [now sections 805.1(1)(b) and 806.1(1)(b)]" with "Sections 386(1)(b) and 388(1)(b)" in the preamble paragraph "B.(b)";
  - c) By replacing "Section 363" with "Section 397" in the preamble paragraph "B.(c)";
  - d) By deleting Schedule "C" in its entirety and substituting the attached Schedule "C", effective January 1, 2018.
2. This Bylaw may be cited for all purposes as the "Water Distribution Local Service Conditions, Fees and Charges Bylaw No. 1, 2013, Amendment Bylaw No. 7, 2017".

READ A FIRST TIME THIS	day of	2017
READ A SECOND TIME THIS	day of	2017
READ A THIRD TIME THIS	day of	2017
ADOPTED THIS	day of	2017

\_\_\_\_\_  
CHAIR

\_\_\_\_\_  
CORPORATE OFFICER

### Schedule C - Water Rates

- 1. Effective:** The rates set out in sections 3 of this Schedule are the Water Charges for invoices received from the CRD for water consumption in the applicable areas described in section 2 of this Schedule after 1 January 2018.
- 2. Applicable:** The rates are applicable to water supplied within the Town of View Royal, the City of Langford, the City of Colwood, the District of Metchosin, the District of Highlands, the District of Sooke, the Juan de Fuca Electoral Area, the Esquimalt First Nation, the Tsouke First Nation, and the Beecher Bay First Nation.
- 3. Water Rates:** The applicable Water Charges are set out below:

  - (a) Subject to sections 3(b) and (c) of this Schedule, the Water Charge for all water supplied by the CRD shall be \$2.0739 per cubic metre or part thereof.
  - (b) The Water Charge for which water has been supplied by the CRD to a Community Allotment Garden shall be \$0.2105 per cubic metre or part thereof.
  - (c) The Water Charge for which water has been supplied by the CRD to a Wild Animal Rehabilitation Facility shall be \$0.6644 per cubic metre or part thereof.



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**REPORT TO REGIONAL PARKS COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 15, 2017**

---

**SUBJECT**     **Proposed 2018 Lake Use Event Schedule for Elk/Beaver Lake**

**ISSUE**

To consider endorsement of the 2018 Lake Use Event Schedule for Elk/Beaver Lake.

**BACKGROUND**

The Elk/Beaver Lake Regional Park Management Plan (Bylaw No. 2001 and amendment Bylaw No. 2303) states under section 3.3.8 (Power Driven Vessels on Elk/Beaver Lake) that:

*CRD Parks will coordinate a process to define temporary boating restrictions on Elk/Beaver Lake for regattas, boat races, fishing derbies and other community events.*

For 2018, Regional Parks received applications for 12 events taking place over 25 days; this includes 10 boating events scheduled over 18 days and 2 triathlons over 7 days.

The attached 2018 schedule was reviewed at the Elk/Beaver Lake Recreational Use Advisory Group meeting held on October 17, 2017. It was submitted to Capital Regional District (CRD) Regional Parks staff and recommended for approval.

**ALTERNATIVES**

*Alternative 1*

That the Regional Parks Committee recommend to the CRD Board:

That the proposed 2018 event schedule for Elk/Beaver Lake be endorsed and forwarded to Transport Canada for review and approval.

*Alternative 2*

That the proposed 2018 event schedule for Elk/Beaver Lake not be endorsed and returned to the Elk/Beaver Lake Recreational Use Advisory Group for further consideration.

**SOCIAL IMPLICATIONS**

A delay in approval will result in events being rescheduled and/or cancelled.

**CONCLUSION**

The proposed 2018 schedule of events requires endorsement by the Regional Parks Committee and by the CRD Board before it is forwarded to Transport Canada for review and approval.

**RECOMMENDATION**

That the Regional Parks Committee recommend to the Capital Regional District Board:

That the proposed 2018 event schedule for Elk/Beaver Lake be endorsed and forwarded to Transport Canada for review and approval.

Submitted by:	Mike Walton, PhD, Senior Manager, Regional Parks
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

KSC:jm

Attachment: Attachment 1 – Summary of Events on Elk/Beaver Lake – 2018

### Summary of Events on Elk/Beaver Lake – 2018

Organization	Name of Event	Description	Location	Date(s)	Part. / Spect.	Day(s) / Time(s)	Restriction	Install Course	Remove Course
University of Victoria	Elk Lake Spring Regatta	1850m Regatta using a 4 lane buoyed course	Elk Lake	Mar 3/4	700/500	Sat/Sun 8am-5pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Mar 1/2	Mar 5
Victoria City Rowing Club	Dueling Over a Grand Regatta	1000m two lane double elimination style Regatta between 2 boats at a time. Centreline buoys plus 4 outside markers.	Elk Lake	Apr 7/8	300/300	Sat/Sun 7am-5pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Apr 6	Apr 9
Island Outfitters	Fishing Derby	"Take a Kid" Fishing on Elk Lake	Elk Lake	Apr 14	300 (150 boats)	Sat 6am-4pm	N/A	N/A	N/A
Ironman Canada Inc.	Ironman Victoria 70.3	Hamsterly Beach to Eagle Beach, swimming portion of triathlon	Elk Lake	Jun 1-4	2000/800	Thu/Fri/Sat 8am-8pm Sun 6am-4pm	No vessels permitted on the east end of Elk Lake during a swimming event	Jun 1-3	Jun 4
Victoria City Rowing Club	Corporate Challenge	500m Regatta for beginners in the high school program using 4 outside course markers	Elk Lake	Jun 2	125/25	Sat 10am-2pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Jun 1	Jun 3
Victoria City Rowing Club	Corporate Challenge Final Regatta	500m Regatta using 4 outside course markers	Elk Lake	Jun 16	250/250	Sat 9am-4pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Jun 15	Jun 17
Victoria City Rowing Club	Challenge West	1850m Regatta using a 4 lane buoyed course	Elk Lake	Jul 13-15	600/600	Fri 10am-8pm Sat/Sun 6am-8pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Jul 10/11	Jul 16

**Attachment 1**  
**Summary of Events on Elk/Beaver Lake – 2018**

Organization	Name of Event	Description	Location	Date(s)	Part. / Spect.	Day(s) / Time(s)	Restriction	Install Course	Remove Course
Dynamic Race Events Ltd.	Victoria Triathlon	Hamsterly Beach to Eagle Beach – swimming portion of triathlon	Elk Lake	Aug 3-5	400/300	Sun 9am-5pm	No vessels permitted on the east half of Elk Lake during a swimming event	Aug 3	Aug 6
Greater Victoria Youth Rowing Society	Crabfest High School Regatta	500m Regatta for beginners in the high school program using 4 outside course markers	Elk Lake	Sep 30	300/400	Sun 8am-5pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Sep 30	Oct 1
Greater Victoria Youth Rowing Society	Crabfest High School Regatta	500m Regatta for beginners in the high school program using 4 outside course markers	Elk Lake	Sep 30	300/400	Sun 8am-5pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Sep 30	Oct 1
Greater Victoria Youth Rowing Society	2 <sup>nd</sup> High School Regatta	1000m Regatta using 8 outside course markers	Elk Lake	Oct 12-14	500/750	Fri 12pm-5pm Sat/Sun 8am-5pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Oct 11	Oct 15
Greater Victoria Youth Rowing Society	LVISSAA High School Final Regatta	1850m Regatta using a 4 lane buoyed course	Elk Lake	Nov 3-5	500/750	Fri 11am-4pm Sat/Sun 8am-5pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Nov 2	Nov 5
Greater Victoria Youth Rowing Society	Island Invitational High School	1850m Regatta using a 4 lane buoyed course	Elk Lake	Nov 10	50/200	Sun 8am-5pm	Under 10 hp on course or on warm-up and cool-down pattern outlined	Nov 9	Nov 11



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**REPORT TO REGIONAL PARKS COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 15, 2017**

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**SUBJECT**     Dog Waste in Regional Parks

**ISSUE**

Provision of dog-waste bags to manage uncollected dog waste in regional parks.

**BACKGROUND**

During consideration of the draft Island View Beach Regional Park Management Plan on June 21, 2017, the Regional Parks Committee directed “that the addition of doggie bag dispensers at the park be referred to staff to provide further information.”

Section 8 of Capital Regional District (CRD) Bylaw No. 3682 (*Park Regulations; Animals in Regional Parks*) subsection 6(a) requires that “a person with the care and control of a dog in a regional park must immediately remove any faeces deposited by that dog.” Noncompliance can result in a \$100 fine (Bylaw No. 3683, *Ticket Information Authorization*). Currently in regional parks, regulatory signs direct dog owners to pick up after their dog(s). Dog-waste bags are provided only at the Governor General Field at Elk/Beaver Lake Regional Park.

Staff reviewed current dog waste management practices of other park jurisdictions, including Saanich, Victoria, Metro Vancouver, Vancouver, West Vancouver, Delta, Surrey, New Westminster, Port Coquitlam, Toronto, Calgary, Montreal, Boulder, Seattle, and Portland. Research demonstrates there is a wide variety of approaches to managing dog waste in parks. Some jurisdictions provide dog-waste bags and/or dedicated dog-waste-only bins, whereas others have discontinued provision of dog-waste bags due to high costs and draw on staff resources. All jurisdictions indicate that an effective dog waste management strategy combines educational programs with enforcement.

**ALTERNATIVES**

That the Regional Parks Committee recommend to the CRD Board:

*Alternative 1*

1. That no dog-waste bags be supplied in regional parks or trails, with the exception of the existing dog-waste bag dispenser at the Governor General Field in Elk/Beaver Lake Regional Park
2. That compliance with the existing Regional Parks bylaw be encouraged through increased education of dog owners by providing information on social media, on the CRD website and on park signage, and additional bylaw enforcement efforts focused on dog owners as proposed in the Regional Parks 2018 budget; and
3. That staff be directed to report back to the Committee with amendments to update current dog regulations and to increase the fine for “dog faeces not removed.”

*Alternative 2*

1. That dog-waste bag dispensers be provided at the entries to regional parks known to have high dog use (e.g., Island View Beach, Elk/Beaver Lake, Mount Work, Sooke Potholes, Thetis Lake, Witty's Lagoon)
2. That compliance with the existing Regional Parks bylaw be encouraged through increased education of dog owners by providing information on social media, on the CRD website and on park signage, and additional bylaw enforcement efforts focused on dog owners as proposed in the Regional Parks 2018 budget; and
3. That staff be directed to report back to the Committee with amendments to update current dog regulations and to increase the fine for "dog faeces not removed."

*Alternative 3*

1. That every regional park and trail be supplied with at least one dog-waste bag station.
2. That compliance with the existing Regional Parks bylaw be encouraged through increased education of dog owners by providing information on social media, on the CRD website and on park signage, and additional bylaw enforcement efforts focused on dog owners as proposed in the Regional Parks 2018 budget; and
3. That staff be directed to report back to the Committee with amendments to update current dog regulations and to increase the fine for "dog faeces not removed."

**SOCIAL IMPLICATIONS**

Providing dog-waste bags in some parks, and not in others, may lead to increased problems with uncollected dog waste in those parks where bags are not provided. This is because visitors to parks where dog-waste bags are provided may expect that dog-waste bags are provided in every regional park, and they may therefore not come to the park with their own disposal bags.

Providing dog-waste bags only reduces non-compliance among those dog owners who do not remove dog waste because they forgot to bring their own bag. Education about appropriate behaviour and the adverse effects of uncollected dog waste, along with increased enforcement, are more likely to influence owners who do not comply for other reasons (e.g., incorrect belief that because dog waste is biodegradable, therefore it is harmless).

Increased public education and enforcement demonstrates an intention by CRD Regional Parks to increase compliance by dog owners, which can encourage peer-to-peer interactions about the importance of cleaning up after dogs. The combination of education, increased enforcement and not supplying dog-waste bags is consistent with the principle that dog owners should be responsible for cleaning up after their dog(s), rather than the general public or government.

**ENVIRONMENTAL IMPLICATIONS**

In addition to being unsightly and producing unpleasant odours for other park visitors, uncollected dog waste can be a source of gastrointestinal parasites (e.g., worm species, bacteria) that can cause disease in dogs, in wildlife and in people. Infected dogs pass eggs or cysts of these

pathogens in faeces, that, when exposed to suitable environmental conditions, develop into infective larvae and can contaminate soil, cement, grass, and water for up to 10 years.

Providing dog-waste bags in parks does not ensure that dog waste ends up in park garbage bins. Some owners collect the dog waste in a bag but then leave the dog waste-filled bag on the ground. Bagged dog waste has negative health consequences for people, for dogs and for the environment that are comparable to un-bagged dog waste. The bag acts to preserve the dog waste and thus perpetuate the negative impacts of uncollected waste.

### **ECONOMIC IMPLICATIONS**

The annual supply of 10,000 dog-waste bags for the one location at Elk/Beaver Lake Regional Park costs \$1,200. If a minimum of one dog-waste bag station is provided at each park (for consistency across all regional parks and trails), approximately \$40,000/year would be spent just on bags, although costs for lower-use parks may be less than at the Governor General Field of Elk/Beaver Lake Regional Park. However, additional costs would be incurred to purchase dispensers and signage for each station, and to pay staff to install the stations and to keep the stations filled. When inconsiderate users and vandals remove the entire supply of bags at dispensers, costs are further increased. To ensure a sufficient supply, multiple dispenser stations would be needed at large parks, at parks with high dog use and along regional trails.

### **INTERGOVERNMENTAL IMPLICATIONS**

All other jurisdictions surveyed require dog owners to pick up after their dogs in parks. Most areas require owners to deposit waste into park garbage bins. Some provide dog-waste-only bins and/or dog-waste bags. Others are phasing out dog-waste bags (Saanich, West Vancouver and New Westminster) due to high costs and logistical constraints. Saanich has changed to a “leave a bag, take a bag” model. Portland provides containers in parks for community members to fill with bags.

Penalties for non-compliance with regulations among other jurisdictions surveyed include a fine ranging from \$50-\$2,000 and/or up to 6 months imprisonment. The CRD is at the lower end of the range of fines found among other jurisdictions, but is consistent with those applied in Saanich (minimum of \$100) and Victoria (\$100). Focusing on increased education and enforcement in CRD parks, as well as increasing fines, would be consistent with practices in other jurisdictions.

### **CONCLUSION**

Uncollected dog waste in some regional parks is a source of public concern, and has the potential for adverse health impacts for people, for dogs, and for the environment. CRD Bylaw No. 3682 requires that “a person with the care and control of a dog in a regional park must immediately remove any faeces deposited by that dog.” A review of management strategies of other government jurisdictions reveals that the most cost effective and successful way to curtail noncompliance by dog owners is education and increased enforcement, rather than through increased provision of dog-waste bags.

**RECOMMENDATION**

That the Regional Parks Committee recommend to the Capital Regional District Board:

1. That no dog-waste bags be supplied in regional parks or trails, with the exception of the existing dog-waste bag dispenser at the Governor General Field in Elk/Beaver Lake Regional Park
2. That compliance with the existing Regional Parks' bylaw be encouraged through increased education of dog owners by providing information on social media, on the CRD website and on park signage, and additional bylaw enforcement efforts focused on dog owners as proposed in the Regional Parks 2018 budget; and
3. That staff be directed to report back to the Committee with amendments to update current dog regulations and to increase the fine for "dog faeces not removed."

Submitted by:	Mike Walton, PhD, Senior Manager, Regional Parks
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

KB:am



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**REPORT TO REGIONAL PARKS COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 15, 2017**

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**SUBJECT**     Dog Regulations and Permits

**ISSUE**

Enforcement issues related to dogs in regional parks and commercial dog-walking operations.

**BACKGROUND**

A report about dogs in regional parks was considered by the Regional Parks Committee on April 19, 2017. Subsequently, a motion was approved by the Capital Regional District (CRD) Board on May 10, 2017 that “staff be directed to investigate and report back on enforcement issues related to the number of dogs per person in parks and commercial dog walking operations.”

**ALTERNATIVES**

That the Regional Parks Committee recommend to the CRD Board:

*Alternative 1*

1. That the maximum number of dogs allowed per person is three, either on or off-leash, and amendments to that effect, with a proposed effective date of May 1, 2018, be included in updates to Regional Parks Bylaw No. 3682, Section 8, Animals in Regional Parks, and brought before the Committee in March 2018 for consideration;
2. That the maximum number of dogs allowed per commercial dog walker is eight, either on or off-leash, that commercial dog-walking operations be required to obtain a permit and pay the annual commercial service fee of \$320 and that staff work with commercial dog-walking operations to develop permit conditions such as areas to use, times of day and codes of conduct; and
3. That the Capital Regional District Regional Parks Services and Facilities Fees and Charges Bylaw No. 3675 be amended to add a new category for commercial dog-walking operations, with an effective date of May 1, 2018, and brought before the Committee in March 2018 for consideration.

*Alternative 2*

1. That no limit be put on the number of dogs per person, and that the focus for the next two years be on visitor education and on improving enforcement of current regulations and monitoring levels of compliance, changes in behaviour and volume of complaints; if, after that time period, improvements in compliance are negligible, that consideration be given to restricting the number of dogs per person;
2. That the maximum number of dogs allowed per commercial dog walker is eight, either on or off-leash, that commercial dog-walking operations be required to obtain a permit and pay the annual commercial service fee of \$320, and that staff work with commercial dog-walking operations to develop permit conditions such as areas to use, times of day and codes of conduct; and

3. That the Capital Regional District Regional Parks Services and Facilities Fees and Charges Bylaw No. 3675 be amended to add a new category for commercial dog operations, with an effective date of May 1, 2018, and brought before the Committee in March 2018 for consideration.

### **SOCIAL IMPLICATIONS**

Visitation to regional parks is increasing every year. Local media coverage in 2017 about dogs in parks has resulted in e-mails from individuals about their opinions and experiences. Many long-time visitors comment on how many more dogs are in the parks these days, and how some owners have many dogs off-leash at a time. Some people regard this as a problem. Others welcome dogs and state that there is no problem. What remains unknown is the number of people who do not visit parks because of the potential for negative dog encounters.

Section 8 of CRD Bylaw No. 3682 (as amended by Bylaw No. 3879) for Regional Parks includes direction to have the animal under control at all times, to not allow the animal to injure, disturb or molest any person, domestic animal or wildlife, to have a leash and collar for each dog at all times and to remove dog waste.

Enforcement issues are mainly related to dog owners who do not adhere to regulations. The three main categories of complaints received by the CRD about dog management are that dogs are not being effectively controlled, owners are not picking up after their dogs, and seasonal restrictions are being ignored.

CRD Bylaw Enforcement staff patrol the parks to enforce regulations. Statistics are not kept on the number of dog owners that are observed to be complying with dog regulations and other park regulations. Statistics are kept on the number of park violations that are handled by bylaw officers and those violations that are observed and recorded by staff and volunteer park stewards. In 2016, of the 3,844 violations that were recorded, 37% were dog-related, 24% were alcohol-related, 14% were smoking-related and the other 25% were all other violations such as noise and illegal camping.

Staff met with representatives of commercial dog-walking operations on September 13, 2017 to share information and discuss the prospect of permitting this business within the park system. It is estimated that there are 20 commercial dog walking companies in the region. Dog-walking companies come to regional parks because their service offer for their clients' pets is a 1 to 2 hour off-leash experience in a park setting. Regional parks are ideal locations for them because there are many trail options and dogs are allowed to be off-leash. These companies obtain business licenses and insurance coverage, have first-aid training, and set standards for handling dogs in a professional manner. The representatives were not averse to implementation of permit fees and conditions for commercial dog-walking within CRD parks and expressed a willingness to discuss permit conditions with staff. Regarding the number of dogs per person for commercial operations, Canadian insurance companies typically allow one person to be in care and control of eight to ten dogs, off or on-leash.

### **ENVIRONMENTAL IMPLICATIONS**

Some park agencies enforce a dogs-on-leash or no dogs rule, based on research showing that barking and potential pursuit by dogs are stressors to wildlife, that digging and trampling vegetation can be harmful to wildlife habitat, and that dog waste can be a source of pathogens that can adversely affect the health of dogs, wildlife and people. Other agencies focus on educating visitors about the environmental and health impacts that off-leash dogs can have by using signs, brochures and social media. In 2018, staff will expand the visitor education program and enhance data collection methods to document compliance with park regulations by dog owners and record the expected improvements in dog behaviour. A report on dog management and outstanding issues, including potential areas for on-leash restrictions, will be prepared in 2019.

### **ECONOMIC IMPLICATIONS**

A persistent presence of enforcement staff to educate, warn and fine dog owners can be an effective way to influence park visitors to train their dogs and practice more responsible dog ownership.

In 2016, the Regional Parks Bylaw Enforcement Budget was \$109,660. The 2018 update to the Regional Parks Service Plan includes a request for an ongoing budget increase of \$100,000/year. This amount, combined with that already dedicated to domestic animal enforcement, would allow one 4-hour patrol per day, circulating to parks year-round, for an annual total of 1,400 patrol hours. In addition to educating dog owners about appropriate behaviour and, if necessary, issuing warnings and fines, enforcement officers will spend extra time at Thetis Lake Regional Park during peak periods in the summer to educate visitors about swimming and cliff-jumping hazards.

CRD Bylaw No. 3675 outlines fees and charges for use of Regional Parks services and facilities. The commercial service or activity fee is \$320 per year, which is aligned with other park permit fees for commercial businesses operating in parks. Permit fees offset bylaw enforcement costs and court expenses for cases in which the fines are challenged. The annual fees charged by other park agencies for commercial dog walking range from \$116 to \$750, depending on the jurisdiction.

### **INTERGOVERNMENTAL IMPLICATIONS**

Dogs must be on-leash on CRD Regional Trails (Lochside, Galloping Goose, E&N Rail Trail-Humpback Connector) and in Sea to Sea and Sooke Hills Wilderness Regional Parks.

Dogs must be on-leash in national parks. In BC provincial parks, dogs must be on-leash at all times, except in some parks that have off-leash areas and designated swimming areas.

Municipalities and electoral areas in the capital region have a variety of regulations. In general, dogs must be under effective control. Some areas and beaches are off limits to dogs or require them to be on-leash. The number of dogs a person can walk at any one time is not specified.

Staff conducted a scan of ten municipalities in the Greater Vancouver Area, other parts of Canada and California. Regarding the number of dogs a person can walk at one time, four municipalities do not specify a number, four stated three, and two stated two. Depending on the park or area, the dogs can be off-leash or must be leashed.

The scan included regulations related to commercial dog-walking operations. There are various regulations in place, such as specific areas where dog-walking operations may go, restricted times of day they may be in an area, restricted numbers of permits issued per park or municipality and requirements for identification tags for the dogs and identification vests for the commercial dog walkers. The number of dogs per person for commercial dog walking off-leash is four, six or eight, depending on the municipality.

**CONCLUSION**

A targeted education program and enforcement presence in parks can be an effective way to raise awareness and influence dog owners to be more responsible about having care and control of their dogs. Some municipalities have established limits on numbers of dogs a person can walk at any one time. Many park agencies issue permits and charge fees for commercial dog-walking operations.

**RECOMMENDATION**

That the Regional Parks Committee recommend to the Capital Regional District Board:

1. That the maximum number of dogs allowed per person is three, either on or off-leash, and amendments to that effect, with a proposed effective date of May 1, 2018, be included in updates to Regional Parks Bylaw No. 3682, Section 8, Animals in Regional Parks, and brought before the Committee in March 2018 for consideration;
2. That the maximum number of dogs allowed per commercial dog walker is eight, either on or off-leash, that commercial dog-walking operations be required to obtain a permit and pay the annual commercial service fee of \$320 and that staff work with commercial dog-walking operations to develop permit conditions such as areas to use, times of day and codes of conduct; and
3. That the Capital Regional District Regional Parks Services and Facilities Fees and Charges Bylaw No. 3675 be amended to add a new category for commercial dog-walking operations, with an effective date of May 1, 2018, and brought before the Committee in March 2018 for consideration.

Submitted by:	Mike Walton, PhD, Senior Manager, Regional Parks
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

KStC:km



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**REPORT TO REGIONAL PARKS COMMITTEE  
MEETING OF WEDNESDAY, NOVEMBER 15, 2017**

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**SUBJECT**     **Consultation for Future Uses of the Land Acquisition Fund**

**ISSUE**

Staff are seeking endorsement of a plan for consultation with municipalities, electoral areas and the public regarding future uses of the Land Acquisition Fund.

**BACKGROUND**

The Regional Parks Land Acquisition Fund was established in 2000 for a 10-year period (2000 to 2009) at a rate of \$10 per average residential household assessment. In 2010, the Fund was extended for 10 years (2010 to 2019), starting at a rate of \$12 per average residential household assessment and increasing by \$2 per year to a maximum of \$20 in 2014 through to 2019. The Fund now generates approximately \$3.7 million per year. The Land Acquisition Fund is scheduled to be terminated at the end of 2019.

The acquisition of new parks also requires funds for management and development of facilities, such as trails, washrooms and parking lots, as well as ongoing maintenance. The money obtained through the Land Acquisition Fund is currently not used to support these costs. Management and development costs for each acquisition are identified in a report to the Capital Regional District (CRD) Board when it considers acquisition of a specific parcel. Budgets are confirmed through the CRD's service planning process.

In February 2017, the Regional Parks Committee directed staff to "report back to the Committee in 2017 with a consultation plan, to be incorporated into Regional Parks' service plan and budget for implementation in 2018, that explores and confirms the public's views on the Land Acquisition Fund and sources of funding for the development and renewal of park infrastructure and enhancement of parks and trails."

**ALTERNATIVES**

*Alternative 1*

That the Regional Parks Committee recommend to the CRD Board:

That the attached consultation plan and schedule for the land acquisition fund be approved.

*Alternative 2*

That the Regional Parks Committee refer the report back to staff with direction.

**ECONOMIC IMPLICATIONS**

The proposed 2018 budget for Regional Parks includes a one-time increase of \$35,000 to complete the consultation process.

**SOCIAL IMPLICATIONS**

In 2016, the CRD conducted a resident survey regarding regional parks and trails, which included a question asking respondents whether they supported the extension of the Land Acquisition Fund for another 10 years. Results of the survey demonstrate strong public support for renewing the Fund (see Attachment 1 for details). The proposed consultation therefore focuses on the uses of those funds to acquire land and/or to support capital investments in parks and trails. If the Land Acquisition Fund is renewed in 2019, future land acquisition will proceed under the guidance established in the Board-approved Regional Parks Strategic Plan 2012-2021.

**CONCLUSION**

In February 2017, the Regional Parks Committee directed staff to report back with a consultation plan to be implemented in 2018 to confirm the public’s views on the Land Acquisition Fund and sources of funding for the development and renewal of park infrastructure and enhancement of parks and trails. The proposed consultation plan will provide statistically representative information on the public’s views on this topic. The estimated cost of \$35,000 for this project is included in the Regional Parks 2018 budget request. Results of the consultation plan are anticipated to be reported out to the public and the Regional Parks Committee in early 2019.

**RECOMMENDATION**

That the Regional Parks Committee recommend to the Capital Regional District Board:

That the attached consultation plan and schedule for the land acquisition fund be approved.

Submitted by:	Mike Walton, PhD, Senior Manager, Regional Parks
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

BH:km

Attachments: Attachment 1 – Proposed Consultation Plan  
Attachment 2 – Proposed Project Schedule

**PROPOSED CONSULTATION PLAN  
LAND ACQUISITION FUND  
November 15, 2017**

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In 2016, the Capital Regional District (CRD) conducted a resident survey regarding regional parks and trails that asked respondents whether they supported the extension of the Land Acquisition Fund for another 10 years. Of the 1,256 respondents to the survey, 73% (n=923) supported the proposed action, with only 4% (n=43) of participants opposed to it and 23% (n=290) having no opinion. Based on established statistical approaches, 400 completed surveys are needed to be able to generalize the outcome of a survey to a broader population with an accuracy of 95%. Based on this rationale, the data obtained through the survey allow the survey results to be generalized to the CRD population.

Given this evidence of public support for the continuation of the Land Acquisition Fund for another 10 years, public consultation will focus on opinion about the future uses of the Land Acquisition Fund. This information will be collected primarily through an online survey. To ensure that a representative sample of the CRD's residents respond to the survey, postcards will be mailed to a random sample of residents inviting them to complete the online survey. This will be followed up with reminder postcards later in the process to encourage responses.

The survey sample will be selected randomly by using postal codes and mailing addresses. For the purposes of the survey, the region will be divided in four sub-regions. This approach respects CRD Regional Planning approaches that take into account the different geographic areas, land use patterns and municipal and resident interests. The four sub-regions are:

- 1) Gulf Islands (Salt Spring, Galiano, Mayne, Penders, Saturna)
- 2) Peninsula (North Saanich, Central Saanich, Sidney)
- 3) Core (Saanich, Oak Bay, Victoria, Esquimalt, View Royal)
- 4) Westshore (Colwood, Langford, Highlands, Metchosin, Sooke, Juan de Fuca)

The initial mail out will be sent in March 2018. Follow-up reminders will be mailed to residents in June and August 2018.

As the recent resident survey had a response rate of 27%, 5,900 postcards will be mailed out to allow the collection of at least 1,600 surveys (400 surveys \*4 subareas=1,600 surveys). If results demonstrate that not enough responses are being received to meet statistical requirements, funds will be held in reserve to conduct a targeted survey to obtain additional responses where necessary.

To assist survey respondents, the online survey instrument will include background information about the existing regional park system, park classifications, the history of the Land Acquisition Fund, investing in facilities for visitors and guidance found in the Regional Parks Strategic Plan 2012-2021.

### **Proposed Topics for Survey**

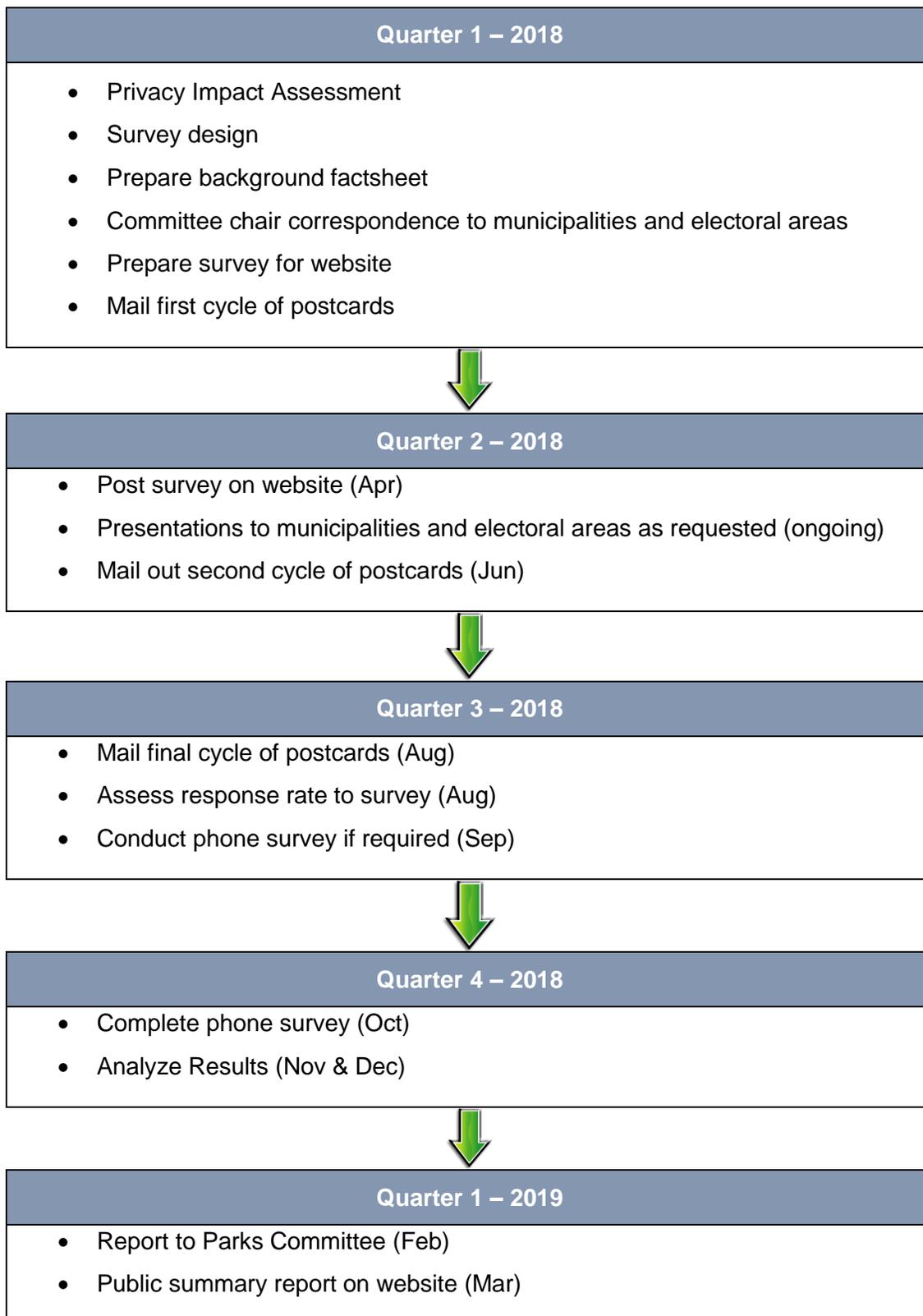
Respondents to the survey will be asked questions on the following issues regarding the use of the Land Acquisition Fund:

- Land purchases and associated costs, such as appraisals, surveys or environmental assessments only;
- New capital facilities (trails, parking lots, etc.) for opening newly-acquired lands to accommodate visitors only;
- Building new capital facilities anywhere in the parks and trails system; and
- Building new and maintaining existing capital facilities anywhere in the parks and trails system.

### **Municipalities and Electoral Areas**

The consultation process with municipal governments and electoral areas will be similar to that employed in 2009 for the most recent renewal of the Land Acquisition Fund. This will consist of a letter from the Chair of the Regional Parks Committee to the Mayor and Council of each municipality and electoral area directors accompanied by a brief questionnaire requesting their views on the topics above. Staff would be available to make presentations as requested.

## PROJECT SCHEDULE – CONSULTATION ON LAND ACQUISITION FUND





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# Regional Water Supply 2017 Strategic Plan

**CRD**  
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# Introduction

The Capital Regional District (CRD) supplies drinking water for more than 370,000 people, supporting residential, commercial, institutional, light industrial, agricultural and public safety uses across the Greater Victoria area of Vancouver Island in British Columbia. Greater Victoria is growing and factors affecting water supply continue to change. A safe and adequate supply of drinking water is critical to the livability and sustainability of Greater Victoria. Recognizing this, the CRD is committed to:



Provide high quality, safe drinking water

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Provide an adequate, long-term supply of drinking water

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Provide a reliable and efficient drinking water transmission system

This Strategic Plan for Regional Water Supply sets Commitments and identifies Strategic Priorities and Actions, with a planning horizon to the year 2050, that will guide the future direction for the Regional Water Supply Service. The Strategic Plan will also support CRD Board priorities, provide context for water servicing policy, and align with other CRD strategies and plans.



Sooke Lake Dam

## Context for the Strategic Plan

In 1997, the service authority for Regional Water Supply transferred from the Greater Victoria Water District to the CRD under the Capital Region Water Supply and Sooke Hills Protection Act and Regulation, provincial legislation enacted to establish a new model for the delivery of Regional Water Supply.

The Regulation required the CRD to establish a strategic plan for water supply. The first strategic plan was completed in 1999 and has been reviewed and updated in 2004 and 2012. The previous plans have resulted in the implementation of a number of initiatives in the areas of water conservation, management of the watershed lands, investment in treatment and transmission infrastructure, climate change adaptation, and addressing changing trends in water use.

Moving forward, there will be a periodic review of the Strategic Priorities, and an update of the Actions set out in this plan every five years.



The CRD treats and delivers an average of

**130 million**

litres of water every day.

# Service Governance & Stakeholders

The water supply system operates under a CRD regional service, known as the Regional Water Supply Service, which is administered by the Regional Water Supply Commission, a Commission of the CRD Board.

The Regional Water Supply Commission is a body of 22 elected officials who represent and provide political leadership and decision making on behalf of the local authorities that receive water supply service. The Water Advisory Committee is the public advisory committee that provides advice to the Commission on matters related to the service including water supply, water quality, water conservation and stewardship of the water supply area lands.

There are many stakeholders involved in the supply and delivery of safe drinking water, each with specific roles and responsibilities.

Some of the key stakeholders are:

## Canada

The Guidelines for Canadian Drinking Water Quality, published by Health Canada, set out the basic microbiological, chemical and radiological parameters and the physical characteristics, such as taste and odour, that water systems such as the Regional Water Supply System strive to achieve in order to provide the cleanest, safest and most reliable drinking water possible.

## Province of British Columbia

The provincial Public Health Act and Regulation sets out the role and powers of health



The Regional Water Supply service provides bulk water to the municipalities listed below and the CRD, who operate water distribution systems that deliver water directly to customers across Greater Victoria.

- District of Central Saanich
- District of North Saanich
- District of Oak Bay
- District of Saanich
- Town of Sidney
- City of Victoria/Township of Esquimalt
- CRD Juan de Fuca Water System (Serving Town of View Royal, City of Colwood, City of Langford, District of Metchosin, District of Highlands, District of Sooke, East Sooke in the Juan de Fuca Electoral Area, Beecher Bay First Nation, Esquimalt First Nation, Songhees First Nation, T'Souke First Nation)

officials and the requirements for planning, reporting and regulation of activities that may affect public health, including the provision of drinking water. The Public Health Act works in concert with the Drinking Water Protection Act and Regulation which pertains specifically to drinking water supply and protection requirements. The CRD also meets the requirements of the Water Sustainability Act which sets out requirements to ensure a sustainable supply of fresh, clean water that meets the needs of BC residents today and into the future.

### Island Health

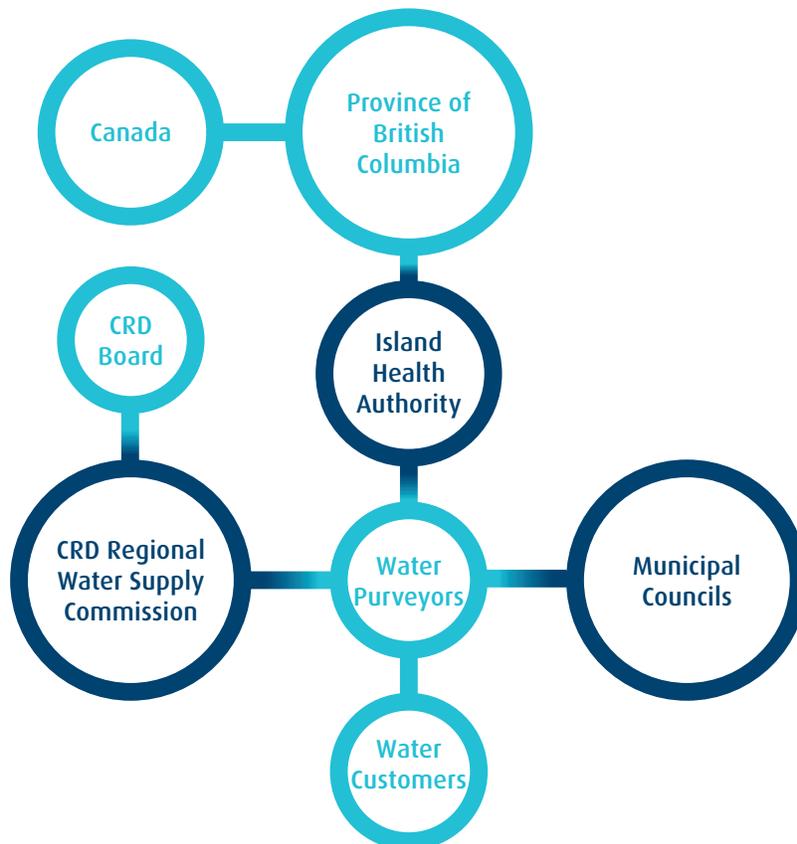
Island Health is the Vancouver Island Health Authority that administers and enforces the applicable provincial legislation through water system operating permits. The CRD holds operating permits with Island Health for the Regional Water Supply System and regularly reports drinking water quality information to Island Health.

### Water Purveyors

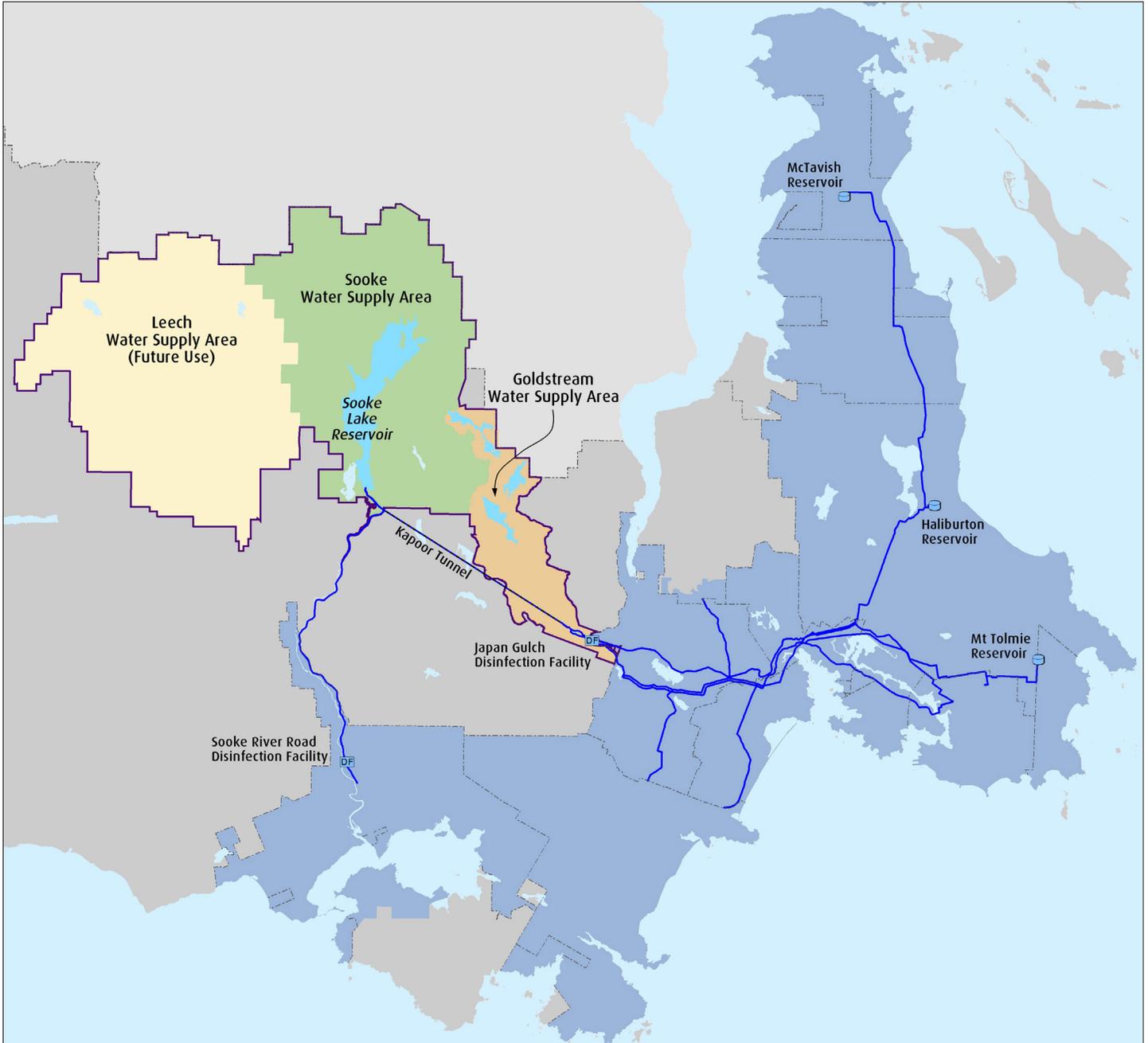
The CRD, municipalities and First Nations in the Region own and operate water systems that receive water from the Regional Water Supply Service, then distribute water directly to water customers. Water purveyors are responsible for the provision of safe drinking water as well as managing all other aspects of the distribution system.

### Water Customers

All water customers connected to a public water system are responsible for ensuring that the public system is not exposed to any contamination that could be introduced through private water plumbing systems by cross connection or backflow, and for using water responsibly, particularly when using water for discretionary purposes, to assist with management of the Region’s water supply.



# Regional Water Supply System



**Regional Water Supply System – Serving Greater Victoria**

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## Regional Water Supply Area:

# 20,549

 HECTARES OF PROTECTED DRINKING WATER CATCHMENT LANDS

- Primary Supply Source: Sooke Lake Watershed & Reservoir
- Secondary Supply Source: Goldstream Watershed & Reservoir System
- Future Water Supply Area: Leech Watershed

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### Water Treatment

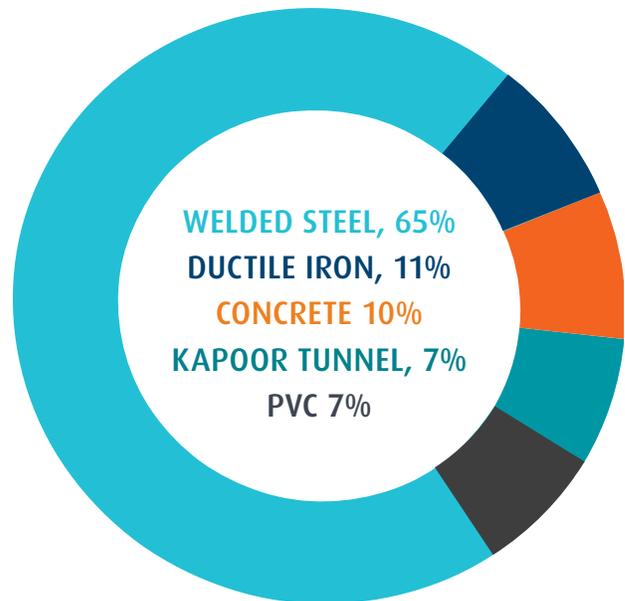
- Unfiltered Source Water
- Primary Disinfection:
  - Ultraviolet light – targets parasites
  - Free chlorine – targets bacteria and viruses
- Secondary Disinfection:
  - Ammonia to produce chloramine – long lasting disinfectant



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### Water Transmission Mains

- 130 km of pipe and tunnel, size range: 400mm – 2,134mm in diameter
- Pipe construction and materials:



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### Bulk Water Supply Points to water distribution systems

# 187

 POINTS

# The Regional Water Supply Strategic Plan Overview

This update of the Strategic Plan for Water Supply sets out the Commitments, Strategic Priorities and Actions for the Regional Water Supply Service.

## Commitments

There are three key water supply Commitments the CRD makes today and into the future. These long term Commitments are foundational to the plan and to achieving the service authority and mandate. The Commitments are expected to remain virtually unchanged for decades.

## Strategic Priorities & Actions

Each Commitment has supporting Strategic Priorities and Actions which will guide shorter term initiatives as well as service planning and delivery. It is expected that Strategic Priorities would be reviewed and updated every 5-10 years and Actions would be planned, budgeted and implemented over the five-year cycle.

## Planning Horizon

The planning horizon for the development of the plan is to the year 2050 based on the following considerations:

- 2050 is the projected earliest date that the Leech Water Supply Area may be required to supplement the Sooke Lake Reservoir to meet regional water supply demand based on higher population growth rate projections
- Water supply system components can have a useful life as short as 15 years and as long as 80 years or more
- Approximately 30 years from now strikes a balance with what can reasonably be planned considering the projected water supply needs of the Region and other factors such as climate change and advances in technology, while looking far enough ahead to allow informed decision making regarding key infrastructure and financial decisions

# Areas of Focus

There are six areas of focus that emerge from the Strategic Priorities and Actions that will influence operational, capital and financial aspects of the Regional Water Supply Service over the next five years and beyond. The six areas of focus are:



## **CRD BOARD PRIORITIES – SUSTAINABLE AND LIVABLE REGION**

The current CRD Board Strategic Priorities include 12 priority areas and 51 strategic priorities, which support a vision for a sustainable, livable, vibrant, collaborative and service oriented Region. In addition, the CRD has identified corporate and core service priorities - the Drinking Water and Regional Infrastructure priority areas directly relate to Regional Water Supply and the importance of the service in supporting a sustainable and livable region. The Regional Water Supply Commission supports these priority objectives.



## **CLIMATE CHANGE IMPACTS – MITIGATION AND ADAPTATION**

Preparing for and mitigating or adapting to climate change will be necessary in the Capital Region. In the years to come, it can be expected that there will be warmer winter temperatures, more extreme hot days and longer dry spells in the summer, more precipitation in fall, winter and spring and more intense, extreme weather events. All of these weather changes can have an impact on water supply, water quality and the health and resilience of forests in the watersheds. The CRD will respond to the climate change challenges by integrating climate change implications into risk register and infrastructure management decision making and plans.



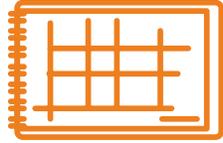
### **PREPARING FOR EMERGENCY AND POST-DISASTER WATER SUPPLY**

Planning and preparing for the potential impacts of a destructive earthquake and other natural disasters on regional and municipal infrastructure is a priority for the CRD and municipal partners. Water supply and distribution in a post-disaster situation is a key aspect of regional emergency planning. Furthering infrastructure resiliency, coordinating emergency planning with other local governments and senior governments, and preparing for emergency water supply and distribution are priorities.



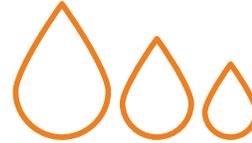
### **SUPPLY SYSTEM INFRASTRUCTURE INVESTMENT – RENEWING EXISTING AND PREPARING FOR NEW INFRASTRUCTURE**

Infrastructure renewal is an integral component of the management of the Regional Water Supply System. The goal is to ensure that water supply infrastructure is replaced or upgraded prior to the end of its projected service life to ensure the system performs reliably, while maximizing the service life of the assets. Planning for new infrastructure related to water treatment requirements, to meet water supply and demand capacity expectations, and to address redundancy and seismic resiliency will be a priority.



## **PLANNING FOR THE FUTURE USE OF THE LEECH WATER SUPPLY AREA**

The Leech Water Supply Area (LWSA) was acquired by the CRD in 2007 as the future water supply area for the Regional Water Supply System. The LWSA will serve as an additional water catchment area that will provide more water runoff into the Sooke Lake Reservoir when it is brought into service. Although the actual year the LWSA will be required will be subject to changing water demand and climate change impacts, as well as actual population growth rates, it is estimated that the LWSA will not be required to supplement the Sooke Lake Reservoir storage volumes until around 2070 with a moderate population growth projection or as early as around 2050 with a higher population growth rate projection. To prepare for the eventual use of the LWSA, further work is required to plan for the water quality impacts of the different raw water sources, rehabilitation of the water supply area forests and drainage structures, and infrastructure necessary to convey the LWSA flows into Sooke Lake Reservoir.



## **DEMAND MANAGEMENT - ADDRESSING CHANGING TRENDS IN WATER DEMAND**

It is expected that the trend of declining per capita water demand across the Capital Region will continue at a rate of approximately 1% per year over the next 10 years. The declining demand is largely related to declining indoor demand resulting from ongoing household conversions to low flow fixtures and high efficiency appliances, as well as declining outdoor demand as public attitudes and behavior towards discretionary outdoor water use change. However, it remains a priority to achieve a further reduction in per capita water use in order to defer the need to build water supply, treatment and transmission capacity in the supply system, until it is necessary to support population growth. Water conservation and understanding the value of water will continue to be key elements of demand management.



## COMMITMENT:

Provide high quality, safe drinking water

### 1 Manage and protect the Greater Victoria Water Supply Area (GVWSA).

- Continue to actively protect the GVWSA and water supply infrastructure from unauthorized activities and seek opportunities to acquire ownership and control of the remaining catchment lands and critical adjacent lands to act as a buffer.
- Reduce risk to water supply and ecosystems from contaminants and invasive plants, animals and pathogens by completing a biosecurity risk assessment and implementing biosecurity mitigation measures.
- Implement the recommendations of the GVWSA climate change adaptation initiatives to reduce the impact of the potential types, magnitude and rate of climate change on GVWSA ecosystems, water quality and infrastructure.
- Assess the need for more active forest management to protect and enhance forest health and resilience.
- Reduce risk of landscape level wildfire by designing and implementing forest fuel management treatments.



47.6M m<sup>3</sup>

of drinking water was delivered in 2016 through the regional water supply system



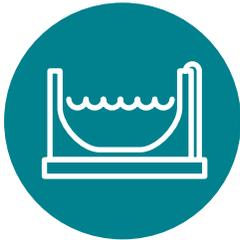
CRD Water Quality Laboratory

## 2 Maintain a multi-barrier approach to drinking water quality protection.

- Continually evaluate the effectiveness of the water treatment processes.
- Use the Regional Water Supply Service drinking water safety plan in operational and capital project decision making.
- Continue to develop and refine the Utility Operator Training Program and ensure adherence to Environmental Operator Certification Program requirements.
- Identify and implement progressive and innovative training and development opportunities with respect to utility operations and management for departmental staff.

## 3 Maintain a risk register for the Regional Water Supply System that identifies potential risks to water quality, water supply and water transmission and provide mitigation and adaptation measures.

- Regularly review Regional Water System hazards, risks and vulnerabilities and update the risk register.
- Continue the emphasis on wildfire prevention, early detection and suppression capability, preparedness, forest fuel management and post-fire rehabilitation planning to reduce and mitigate the risk of a large-scale wildfire affecting the water supply area and source water quality.
- Continue to monitor and evaluate the implications of the reliance on unfiltered source water and the absence of a filtration step in the water treatment process.
- Conduct specific seismic risk evaluations of critical assets.



## COMMITMENT:

# Provide an adequate, long-term supply of drinking water

### 1 Plan and prepare for future water supply needs to meet demand considering impacts of climate change, population growth, and per-capita demand rates.

- Evaluate climate change impacts and risks on water supply and incorporate mitigation and adaptation recommendations in operating and capital plans.
- Update service population and service population growth rate forecasts with current census data, considering municipal Official Community Plan land use and population directions, to estimate growth related water demand.
- Establish long-term per capita demand rate projections and Demand Management Program objectives to achieve rates and determine annual water demand by sector.
- Undertake regular monitoring and assessment of the physical, chemical, and biological parameters of the Leech Water Supply Area (WSA) source water and determine a plan to address potential water quality, ecological and ecosystem implications at Sooke Lake Reservoir resulting from diversion of Leech WSA source water (Leech River water) to Sooke Lake Reservoir (ie. combining source waters).
- Develop a plan to undertake more 'intensive' monitoring of Leech River water quality to inform treatability recommendations and long term treatment strategy.
- Determine conceptual 'hard' capital infrastructure plan to design and construct the necessary infrastructure to divert Leech WSA flows to Sooke Lake Reservoir.
- Conduct a feasibility study to explore the design and construction of supply and transmission infrastructure at Sooke Lake Reservoir to provide increased resiliency, including consideration of a deep northern intake and a secondary transmission pipe between the reservoir and the treatment facilities.
- Undertake biannual Supply System hydraulic modelling to confirm system capacity.



Jarvis Lake in the Leech Water Supply Area

## 2 Develop a higher level of public understanding of the drinking water supply system and value of water through education and engagement.

- Continue to improve Regional Water Supply service and system information available to the public through a variety of media streams, to raise awareness around specific topics including water supply and conservation, and supply infrastructure investment.
- Continue to promote the value of the drinking water resource through Water Supply Area public and school tours and other outreach.
- Continue to have two-way dialogue with the Water Advisory Committee regarding water supply matters.
- Explore opportunities for mutually beneficial collaborative partnerships to carry out research and monitoring initiatives in the water supply area and across the system.



9,628

Hectares of protected catchment lands within the Leech Water Supply Area acquired in 2007 for future drinking water supply area.



## COMMITMENT:

# Provide a reliable and efficient drinking water transmission system

### 1 Maintain a capital planning process and appropriate investment in Water Supply infrastructure to ensure reliable system performance

- Complete a short term (annual and 5-year), medium term (5-10 year), long term (10-20 year) and long range (20-50 year) asset management plan – informed by asset condition and remaining service life assessment, water operation and maintenance history, water audit, changing regulatory requirements, Hazard, Risk and Vulnerability Assessment (HRVA) recommendations, and system capacity requirements.
- Explore Regional Water Development Cost Charges to fund future growth related supply system infrastructure improvements.
- In collaboration with municipal and First Nations water purveyors, establish water supply service agreements.

### 2 Continually review cost effectiveness of service respecting operations and maintenance and capital investment decisions.

- Continue to review reactive, preventive and predictive operations and maintenance history and confirm operation and maintenance service levels for the Regional Water Supply Service that consider best practices and reliability centered maintenance approach.
- Consider life cycle costs with new infrastructure design and asset replacement.
- In asset replacement decisions, balance maximizing infrastructure service life with infrastructure reliability.
- Optimize capital investment taking into consideration priority, annual and long term budget and water rate impacts and resource availability to deliver the projects.



Japan Gulch Ultraviolet Disinfection Plant

### 3 Develop and manage emergency bulk drinking water supply systems for Greater Victoria.

- Establish emergency and post-disaster water supply protocols and obtain necessary supplies, materials and equipment to implement protocols. Establish water purveyor support roles and responsibilities in emergency water supply and distribution.
- Outline how an emergency/post disaster drinking water supply can be supported by regional emergency management plans and available senior government supports under certain conditions.

### 4 Continue to focus on retaining and recruiting experienced and professional employees responsible for the Regional Water Supply System engineering, system operation and maintenance, and management of the water supply area.

- Develop a succession plan to ensure key positions are backfilled by experienced and knowledgeable employees, and that system knowledge is preserved.
- In alignment with CRD organizational development initiatives, provide learning and development opportunities for employees.



Over \$130 million has been invested in supply system infrastructure renewal since 1995.

# Commitments



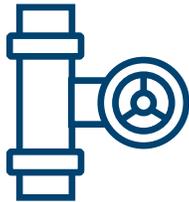
Provide high quality, safe drinking water

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Provide an adequate, long-term supply of drinking water

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Provide a reliable and efficient drinking water transmission system

# Advancing the Strategic Plan

A safe and adequate supply of drinking water is critical to the livability and sustainability of Greater Victoria and the Capital Region. The Greater Victoria area is fortunate to have a well established water supply system and a climate that has allowed for the replenishment of source water.

The Commitments outlined in the Plan will ensure that the CRD continues to provide clean, safe, reliable drinking water to the communities we serve. The Strategic Priorities and Actions will guide service planning and delivery over the coming years. The CRD will be responsive to factors affecting the uncertainty of water supply, such as climate change and future water demand, while ensuring the long term Commitments to our customers remain our priority.

Progress and outcomes will be tracked and reported annually to the Regional Water Supply Commission and the CRD Board to ensure the ongoing achievement of the Commitments, Strategic Priorities and Actions in the Strategic Plan.

The photos in this document were taken within the boundaries of the Capital Regional District, and we wish to acknowledge Helen Cyr whose work is featured here.



**REPORT TO REGIONAL WATER SUPPLY COMMISSION  
MEETING OF WEDNESDAY, OCTOBER 18, 2017**

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**SUBJECT      REGIONAL WATER SUPPLY SERVICE - 2018 OPERATING AND CAPITAL BUDGET**

**ISSUE**

The purpose of the report is to provide an overview of the draft 2018 Regional Water Supply Service budget, highlighting the proposed significant changes and additions. The report generally follows the sequence of information provided in the attached draft budget document (Attachment 1).

**BACKGROUND**

This draft 2018 Regional Water Supply Service budget has been prepared for the Regional Water Supply Commission’s (Commission) consideration. The Regional Water Supply Commission’s Budget Subcommittee met on September 20, 2017 to review the draft 2018 service budget in order to make budget recommendations to the Commission in October, who will in turn, make budget recommendations to the CRD Board through the Committee of the Whole in November. The draft 2018 Regional Water Supply Service budget has been prepared considering the CRD Board’s 2018 service planning and financial expectations, which include identifying opportunities to realign or reallocate resources and seek potential synergies or efficiencies between departments and services, reviewing service levels and adjustments related to regulatory compliance, and undertaking infrastructure improvements, and upgrades to maintain service levels across the region including incremental ongoing operational and maintenance requirements. The following sets out the key components of the budget.

**2017 Year End Financial Projections**

Year end revenue and expenditure projections have been established and estimated variances are summarized as follows:

- Supply System operating expenditures	\$392,276 (3.3%)
- Agricultural water rate funding	\$100,000 (8.3%)
- Capital fund transfer	\$17,766 (0.4%)
- Capital transfer to equipment (fleet) replacement fund	\$0 (0.0%)
- Capital transfer to debt reserve fund	-\$35,000 (-43%)
- Debt servicing – principal and interest expenditures	-\$69,792 (-0.6%)
- Revenue – bulk water sales	\$442,500 (1.5%)
- Revenue – other	-\$37,250 (6.3%)

**2018 Budget**

**Rate Base**

The rate base for 2018 has decreased by \$760,722 from 2017 (Page 3 of the budget document). This reduction relates to depreciation of existing physical plant, projected physical plant additions

and a higher value of construction work in progress between 2017 and 2018. The construction work in progress primarily relates to the Japan Gulch Disinfection Project. The changes in physical plant and work in progress are listed on page 4 of the budget document, and are used to project the 2017 year end total physical plant value, and determine the 2018 rate base.

### Revenue Requirement

The revenue requirement for 2018 has increased by \$1,210,519. This is resulting from an increase in operational expenses of \$1,431,570, increased depreciation expenses of \$126,609 net of expired depreciation on existing assets, and a net decrease in the return on the base of \$348,200. The decrease in return on rate base is a result of more assets being funded by equity rather than debt compared to 2017 (Page 5 of the budget document).

### Operating Budget

The 2018 operating budget reflects an increase in non-discretionary expenses such as negotiated wage/salary increases, departmental support service allocation increases, and other operating expense adjustments such as chemical and electricity costs. The net core 2018 operating budget increase is \$806,118, and additional budget requests for one-time and ongoing expenditures in the amounts of \$75,000 and \$525,452 respectively. The core operating budget increase is primarily due to supply system operations labour budget adjustments necessary to support increasing repair and maintenance tasks and increasing safe work practice requirements. The one-time and ongoing expenditures include nine separate requests which are detailed on pages 6-12 of the budget document. Operating budget forecasts for 2019 through 2022 have been presented for information.

### Agricultural Water Rate Funding

The total budget for the agricultural water rate funding has been increased by \$25,000 to \$1,225,000 to better align with the projected 2017 and anticipated 2018 claims, taking into consideration the higher than expected agricultural demand in 2015 and 2016 related to the unseasonal weather and the increasing spread between the agricultural water rate and the municipal water rates, which results in higher municipal refunds funded by this budget. The 2018 agricultural water rate has been maintained at the 2017 rate of \$0.2105 per cubic metre. Further analysis of the agricultural rate funding model and overall budget impact and an assessment of the benefit to the region that results from providing the agricultural water rate is recommended. Updating the region's agricultural land use inventory, crop production and agricultural water demand model would provide information that would help inform future budget decisions. It is proposed to further explore this initiative with the BC Ministry of Agriculture and CRD Regional Planning staff. A summary of the agricultural water volumes and agricultural water rate payments for 2011-2016 is attached (Attachment 2).

### Capital Budget

There are a number of capital projects planned for 2018 with a total value of \$13,199,063, plus \$695,000 in projects cost shared with the Juan de Fuca Water Distribution Service (pages 18-56 of the budget document). The major projects in 2018 include continued restoration of the Leech Water Supply Area including road and bridge improvements, upgrades to the Japan Gulch Chloramination System, Sooke Lake Intake Tower screen upgrades, several dam projects, post disaster water supply equipment purchases and a bulk supply billing meter replacements.

A five year capital plan has been presented for information. The total five year (2018-2022) capital plan budget is \$55.372 million, including \$3.222 million in carry forward projects, the largest of which are noted above.

### Capital and Debt Expenditures

The 2018 capital expenditures will be partially funded through a transfer to the water capital fund in the amount of \$5,301,214, with the balance funded through debt. 2018 debt expenditures for existing and projected new debt servicing are budgeted to be \$10,378,776. Debt servicing expenditures have decreased by \$1,800,825 from 2017, primarily due to the retirement of LA2862-078, originally borrowed in 2002 for \$27 million. The long term debt obligations are summarized on the attached graphs (Attachment 3). A loan authorization was completed in 2014 to allow borrowing to help fund the five year capital plan. It is expected that a new loan authorization process will be undertaken in the Fall of 2018 to allow borrowing in 2019.

### Water Demand

As reported last year, water demand in the service area has declined for many years recently primarily due to the ongoing residential replacement of low efficiency appliances and higher flow plumbing fixtures with high efficiency and low flow units, as well as decreasing outdoor summer demand due to changes in attitudes and behaviours with respect to water conservation. However, since 2015 actual demand has exceeded budgeted demand, primarily due to increased demand resulting from extended periods of warm and dry weather and growth related demand. Although 2017 demand is projected to be lower than 2016 demand, the year end demand total is projected to be 45,700,000 which is higher than the 2017 budgeted water demand of 45,000,000 cubic metres. The net revenue resulting from this additional demand is proposed to be included in the water capital fund transfer at year end 2017. The recommended 2018 water rate has been calculated using a budget demand of 45,000,000 cubic metres (Page 13 of the budget document).

### Proposed 2018 Wholesale Water Rate

The recommended wholesale water rate has taken into consideration the revenue required to meet operating and capital expenditures, including debt obligations, and the budget demand volume established for 2018. The proposed 2018 wholesale rate is \$0.6644 per cubic metre (Page 14 of the budget document).

### Wholesale Water Rate History and Projection

The wholesale water rate history and projection is attached (Attachment 4). The rates may be adjusted in the future to reflect actual revenue and expenditure circumstances and water demand volumes.

### Recommendations from the Regional Water Supply Commission Budget Subcommittee

1. Approve the 2018 Capital Budget and the Five Year Capital Plan;
2. Approve the 2018 Operating Budget;
3. Approve the 2018 wholesale water rate of \$0.6644 per cubic metre; and
4. Approve the 2018 agricultural water rate of \$0.2105 per cubic metre.

**RECOMMENDATIONS**

That the Regional Water Supply Commission recommends that the Capital Regional District Board:

1. Approve the 2018 Capital Budget and the Five Year Capital Plan;
2. Approve the 2018 Operating Budget;
3. Approve the 2018 wholesale water rate of \$0.6644 per cubic metre; and
4. Approve the 2018 agricultural water rate of \$0.2105 per cubic metre.

Submitted by:	Ted Robbins, B.Sc., C.Tech., General Manager, Integrated Water Services
Concurrence:	Ben Semmens, BCom, CPA, CMA, Senior Financial Advisor, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer, Financial Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

TR:mm

Attachments: 5

**CAPITAL REGIONAL DISTRICT**

**BYLAW NO. 4219**

\*\*\*\*\*  
**A BYLAW TO AMEND BYLAW 2570, WATER SUPPLY LOCAL SERVICE AREA FEE  
AND CHARGE BYLAW No. 1, 1997  
(REGIONAL WATER SUPPLY)**  
\*\*\*\*\*

The Board of the Capital Regional District in open meeting assembled enacts as follows:

1. Bylaw No. 2570, "Water Supply Local Service Area Fee and Charge Bylaw No. 1, 1997" is amended as follows:
  - a) By replacing "Municipal Act" with "Local Government Act" wherever it appears in the bylaw;
  - b) By replacing "Section 816" with "Section 378" wherever it appears in the bylaw;
  - c) By replacing "Section 823(1)" with "Sections 385 and 387", and "Section 825(1)" with "Sections 386(1)(a) and 388(1)(a)" in the preamble paragraph "a";
  - d) By replacing "Section 825(2)" with "Sections 386(1)(b) and 388(1)(b)" in the preamble paragraph "b";
  - e) By deleting Schedule "A" in its entirety and substituting the attached Schedule "A", effective January 1, 2018.
2. This Bylaw may be cited for all purposes as the "Water Supply Local Service Area Fee and Charge Bylaw No. 1, 1997, Amendment Bylaw No. 19, 2017".

READ A FIRST TIME THIS	day of	2017
READ A SECOND TIME THIS	day of	2017
READ A THIRD TIME THIS	day of	2017
ADOPTED THIS	day of	2017

\_\_\_\_\_  
CHAIR

\_\_\_\_\_  
CORPORATE OFFICER

**SCHEDULE "A"**

For each cubic metre of water supplied to the District of Oak Bay, the District of Saanich, the City of Victoria/Town of Esquimalt, the Juan de Fuca Water Distribution service, and the Saanich Peninsula Water Service:

- |                      |           |
|----------------------|-----------|
| 1. Bulk Water        | \$ 0.6644 |
| 2. Agriculture Water | \$ 0.2105 |

**REPORT TO SAANICH PENINSULA WATER COMMISSION  
MEETING OF THURSDAY, OCTOBER 19, 2017**

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**SUBJECT 2018 CAPITAL AND OPERATING BUDGET**

**ISSUE**

This report provides an overview of the 2018 Saanich Peninsula Water Service operating and capital budget, highlighting the changes from the 2017 budget and the proposed 2018 budget figures. The report generally follows the sequence of information provided in the attached draft budget document (Attachment 1).

**BACKGROUND**

**2017 Operating Expenditures and Revenue**

The actual 2017 operating expense is projected to be \$36,010 under budget. The actual bulk water purchase expense is estimated to be higher than budget by \$19,125, due to the projected higher than budget demand volume at year end 2017. This corresponds with water sales revenue that is estimated to be \$27,345 higher than budget. The net revenue surplus is projected to be \$8,220 after the bulk water purchase expense is deducted. To balance the budget at year end, the proposed transfer to the capital reserve fund has been increased by \$44,230 to \$321,430.

**2018 Operating Expense**

An increase in the 2018 operating expense in the amount of \$37,415 is planned and results primarily from non-discretionary expense adjustments such as wage/salary increases and administration costs.

The bulk water purchase expense, based on the proposed 2018 Regional Water Supply wholesale water rate and the 2018 budget demand volume, has been set at \$4,185,720.

**2018 Capital Budget**

The planned transfer to the capital reserve fund in 2018 is \$450,000. At year-end 2017, the capital reserve fund balance is estimated to be \$4,668,979, which is available to fund major capital projects. The planned transfer to the equipment replacement fund in 2018 is \$50,000. At year-end 2017, the equipment replacement fund balance is estimated to be \$1,627,939, which is available to fund minor capital and operating machinery and equipment replacements. The value of the five-year (2018-2022) capital plan is currently \$4,775,000, including a \$1,500,000 (2018 phase) budget allowance to replace the 400mm diameter Deep Cove water supply main. With the current reserve fund balance, and the planned contributions over the next five years, based on the current capital plan, there will be sufficient funding in reserves for the five-year capital plan, while maintaining a positive balance for unplanned expenditures, without the need for borrowing. The service currently does not carry any debt.

There are no new projects planned in 2018 under the Development Cost Charge (DCC) program., however, completion of the program review and update has been delayed and is now expected to be finalized by year end. As reflected in the DCC capital plan, it is anticipated that the program update will confirm the need to construct additional storage at the Bear Hill Reservoir, currently planned for 2021 with a budget of \$1,000,000. Once the DCC program update is finalized, the DCC infrastructure plan, funding requirements, rates and bylaw, will be updated accordingly. At year-end 2017, the DCC reserve fund balance is estimated to be \$1,363,627.

2018 Budget Demand Volume

Water demand in the service area has been relatively stable even with regional water demand being influenced by less indoor consumption related to household conversions to low flow fixtures and high efficiency appliances. However, beginning in 2015, actual annual demand in the service area has exceeded budget demand. Again in 2017, water demand is projected to exceed budgeted demand, primarily due to increased demand resulting from unseasonal warm and dry weather this past summer and fall. In 2017, the budgeted demand is 6,270,000 cubic metres and the actual demand is projected to be 6,300,000 cubic metres. The proposed 2018 Saanich Peninsula water rate has been calculated using a budget demand of 6,300,000 cubic metres.

2018 Water Rates

The 2018 CRD Regional Water Supply wholesale water rate of \$0.6644 per cubic metre, a 4.22% increase over the 2017 rate, has been recommended by the Regional Water Supply Commission Budget Subcommittee. The 2018 agricultural rate of \$0.2105 per cubic metre has also been recommended. A summary of the agricultural water demand across the region is attached for information (Attachment 2).

The recommended Saanich Peninsula Bulk Rate is \$0.9621 per cubic metre, a 5.60% increase over the 2017 rate. The increase in annual bulk water cost for the average household using 235 cubic metres per year would be \$11.99.

The Agricultural Research Station Rate has been set at \$0.9973 per cubic metre.

The Saanich Peninsula Water rate and Regional Water Supply rate history and projection is attached (Attachment 3). The rates may be adjusted in the future to reflect actual revenue and expenditure circumstances and water demand volumes.

**RECOMMENDATION**

That the Saanich Peninsula Water Commission recommend that the CRD Board:

1. Approve the 2018 operating and capital budget;
2. Approve the 2018 Saanich Peninsula bulk water rate of \$0.9621 per cubic metre, and the Agricultural Research Station water rate of \$0.9973 per cubic metre, adjusted if necessary by any changes in the CRD Regional Water Supply wholesale water rate;
3. Balance the 2017 actual revenue and expense on the transfer to capital reserve fund; and
4. Amend the Bulk Water Rates Bylaw accordingly.

Submitted by:	Ted Robbins, BSc, CTech, General Manager, Integrated Water Services
Concurrence:	Ben Semmens, BCom, CPA, CMA, Senior Financial Advisor, Financial Services
Concurrence:	Nelson Chan, MBA, CPA, CMA, Chief Financial Officer, Financial Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

TR:mm  
Attachments: 3

**CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4217**

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**A BYLAW TO AMEND BYLAW NO. 376, BULK WATER RATES  
BYLAW, 1977 (SAANICH PENINSULA WATER)**

\*\*\*\*\*

The Board of the Capital Regional District in open meeting assembled, enacts as follows:

1. Bylaw No. 376, being "Bulk Water Rates Bylaw, 1977" is further amended as follows:
  - a) By deleting Schedule "A" in its entirety and substituting the attached Schedule "A".
2. This bylaw shall take effect January 1, 2018.
3. This bylaw may be cited as "Bulk Water Rates Bylaw, 1977, Amendment Bylaw No. 37, 2017".

READ A FIRST TIME THIS	day of	2017
READ A SECOND TIME THIS	day of	2017
READ A THIRD TIME THIS	day of	2017
ADOPTED THIS	day of	2017

\_\_\_\_\_  
CHAIR

\_\_\_\_\_  
CORPORATE OFFICER

**SCHEDULE "A"**

For each cubic metre of water supplied to the District of Central Saanich, the District of North Saanich and the Town of Sidney, the rate of \$0.9621 is effective January 1, 2018.

For each cubic metre of water supplied to the Department of Agriculture Research Station, located at 8801 East Saanich Road, Sidney, BC, the rate of \$0.9973 is effective January 1, 2018.



Making a difference...together

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

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**SUBJECT**     **CRD Sea to Sea Regional Park Traditional Use Access Agreement**

**ISSUE**

To provide access to Sea to Sea Regional Park lands to members of the T'Sou-ke Nation for purposes of traditional use.

**BACKGROUND**

The T'Sou-ke Nation has aboriginal and treaty rights that are protected by section 35 of the *Constitution Act, 1982*. As signatories to the Douglas Treaty, the T'Sou-ke Nation has rights to hunt and farm over unoccupied lands, and to carry on fisheries as formerly. The lands that make up Sea to Sea Regional Park are within the traditional territory of the T'Sou-ke Nation. Current understanding of case law suggests that Capital Regional District (CRD) lands would be considered "occupied" and, therefore, not subject to Douglas Treaty rights. However, this is not definitive, as recent court decisions are influencing our collective understanding of what Aboriginal rights and title mean. Notwithstanding, the CRD Board has indicated relationship building with First Nations as a Board priority.

The 2010 Board-approved management plan for Sea to Sea Regional Park commits that "CRD Regional Parks will work with the T'Sou-ke Nation to address issues of mutual interest such as access and harvesting rights, identification and management of sacred sites and features, and involvement in park interpretive programming" (p. 50). In that same year, the T'Sou-ke Nation expressed serious concern about the park's potential infringement on T'Sou-ke's Aboriginal rights, citing increased use of the area by park visitors, resulting in reduced opportunity for T'Sou-ke Nation members to exercise their treaty rights. In its communications with the CRD, the T'Sou-ke has made clear the park's ongoing cultural significance to the Nation.

In 2015, the CRD Board identified opening the Sea to Sea as a priority. Staff received Board approval to open all the lands in the Sea to Sea in three phases (2017-2019). Phase one of the plan included opening Mount Manuel Quimper for outdoor recreation. Phase two confirms trails to the lakes in the north part of the park, as well as the development of a backcountry camping area. Phase three builds and connects east-west trails to Sooke Hills Wilderness Regional Park.

The attached CRD Sea to Sea Traditional Use Access Agreement with the T'Sou-ke Nation (Attachment 1), concludes a commitment made in the 2010 management plan and respectfully addresses the priority the T'Sou-ke Nation has placed on traditional access to the lands and their cultural importance. The Agreement advances relationships between the CRD and the T'Sou-ke Nation while ensuring Regional Park priorities related to conservation, public safety and outdoor recreation opportunities are realized. Importantly, the Agreement is a strong statement toward reconciliation with the First Nation by a regional government.

The Agreement has been reviewed by the CRD's solicitors, staff involved with risk assessment and Corporate Occupational Health and Safety and reflects advice provided through their review.

## **ALTERNATIVES**

### *Alternative 1*

That the Capital Regional District Board approve the CRD Sea to Sea Traditional Use Access Agreement.

### *Alternative 2*

That the CRD Sea to Sea Traditional Use Access Agreement be referred back to staff for further review.

## **SOCIAL IMPLICATIONS**

The Agreement is the first of its type within the CRD's Regional Park System. It contains content that reflects modern-day treaty language and other legal arrangements with First Nations in Canada. The Agreement sets out a new relationship with the T'Sou-ke Nation and the CRD's regional parks system.

Park visitors will benefit from increased information about the cultural significance of the park's lands and how traditional ecological knowledge and western sciences, both natural and social, are working together to protect the lands and waters that make up the park.

Outdoor recreation activities will continue as before, with additional planning associated with possible temporary restrictions to areas of the park in order to respect the T'Sou-ke's Aboriginal and treaty rights. In particular, temporary area closures associated with hunting and ceremonial purposes are expected.

## **ENVIRONMENTAL IMPLICATIONS**

The Agreement recognizes the importance of the wilderness character of Sea to Sea Regional Park, and the park's significance to protecting the natural environment for the plants and animals that rely on the park for their continued existence. Further, the Agreement acknowledges the long-term commitment by the CRD to leave the park unimpaired for future generations.

Decisions about how best to manage the environmental effects of access to the lands for traditional uses and outdoor recreation are addressed through the establishment of a joint Parks Operations Management Committee. Through this committee, decisions will be made that meet the parties' interests for conservation and use. Guiding such decisions will be the application of two systems of knowledge: traditional ecological knowledge and western sciences. Traditional ecological knowledge is a combination of knowledge and experience within a cultural context. Western sciences are mainly based on systematic studies.

Underpinning decision-making is an ecosystem-based management approach that recognizes that all things are connected and that conservation and public safety are preeminent in operational decision-making.

### **ECONOMIC IMPLICATIONS**

Through the Parks Operations Management Committee, there will be opportunity to identify areas for cost-sharing associated with initiatives in any given year.

Staff work plans will be adjusted to reflect tasks agreed to through the Parks Operations Management Committee. Some costs associated with the agreed-to tasks will be accounted for through Regional Parks' existing operating budget. For example, the development and placement of interpretive signs and information, bilingual place names and kiosk information. Other costs are expected to be paid for by the First Nation through direct support or grants and other funding sources. The relationship is expected to realistically manage respective workloads through mutual understanding of the limits facing each organization.

The Agreement places the CRD in an advantageous circumstance with potential granting bodies, when formal agreements with First Nation partners are considered in the review process.

As other First Nations engage with the CRD about cooperative management arrangements and access to Regional Park lands for traditional use, the need for additional resources will be evaluated and brought forward to the Board for consideration through the service planning process.

### **INTERGOVERNMENTAL IMPLICATIONS**

The Agreement will be of interest to provincial, federal and other regional governments because of its content and approach. Parks across Canada at all levels of government are at various stages of relationship building with Canada's Indigenous peoples. This Agreement sets out important definitions and approaches to building and strengthening relationships with a neighbouring First Nation.

The federal and provincial governments may also have a particular interest due to Canada's commitment to meet the Convention on Biological Diversity's Aichi Targets, wherein 17% of Canada's terrestrial and 10% of Canada's marine environments are protected by 2020. Discussions at the federal, provincial and territorial levels presently include consideration of other protected areas in Canada, such as Regional Parks, as potential contributors to the targets. Additionally, agreements with Indigenous peoples associated with protected areas in Canada are of importance as Canada strives to meet its international commitments to biodiversity protection.

### **FIRST NATIONS IMPLICATIONS**

The Agreement makes substantial the CRD's Board commitment to relationship building with First Nations and addressing the Truth and Reconciliation Commission's (TRC) "Calls to Action" associated with local and regional governments. Additionally, and called for by the TRC, the Agreement sets out initiatives to address economic development and employment opportunities with the T'Sou-ke Nation.

The Agreement provides examples of topics that are within the decision-making authority of the Committee, such as vehicle access, locations and times for hunting, and type and timing of special

events. The agreement also lists topics that would be referred to the General Manager such as amendments to CRD bylaws and regulations and procurement methods, including sole sourcing. Boundary adjustments, and approval of CRD bylaw amendments and management plans would be referred to the CRD Regional Parks Committee and the CRD Board.

The Agreement is a significant step in relationship building with the T'Sou-ke Nation. It demonstrates the CRD's willingness to learn and understand First Nations' issues and priorities and aligns decision-making authority with decision makers. This alignment advances timely decision-making and the CRD's ability to affect change on the ground.

Should other First Nations wish to engage in similar arrangements, the Agreement is scalable and replicable at other Regional Parks in the CRD.

**CONCLUSION**

The CRD Sea to Sea Traditional Use and Access Agreement concludes the commitment made in the 2010 management plan, meets CRD Board priorities related to First Nations and respectfully addresses the priority the T'Sou-ke Nation has placed on access to the Sea to Sea Regional Park lands. The Agreement also responds to priorities in the Truth and Reconciliation Commission's "Calls to Action" related to municipal and regional governments. Ultimately, the Agreement advances relationships between the CRD and the T'Sou-ke Nation, while ensuring Regional Park priorities related to conservation, public safety and outdoor recreation opportunities are realized.

The T'Sou-ke Nation, through Band Council Resolution, supports the Agreement and encourages the CRD's ratification (Attachment 2).

**RECOMMENDATION**

That the Capital Regional District Board approve the CRD Sea to Sea Traditional Use Access Agreement.

Submitted by:	Mike Walton, PhD, Senior Manager, Regional Parks
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

MW:am

Attachment: Attachment 1 – CRD Sea to Sea Traditional Use Access Agreement  
Attachment 2 – Band Council Resolution

**CRD Sea to Sea Traditional Use Access Agreement**

This Agreement dated for reference the                    day of

BETWEEN:

CAPITAL REGIONAL DISTRICT  
P.O. Box 1000  
625 Fisgard St.  
Victoria, B.C. V8W 2S6

(the “CRD”)

AND:

T’SOU-KE FIRST NATION  
P.O. Box 307  
2154 Lazzar Rd.  
Sooke, B.C. V9Z 1G1

(“TFN”)

**WHEREAS:**

TFN and the CRD entered into a Memorandum of Understanding on November 4, 2008, in which they agreed to work together to establish a government to government relationship and develop agreements in identified areas of interest, including CRD park lands, CRD water supply lands, heritage sites and cultural protection and traditional, and sustainable land uses;

**And WHEREAS:**

TFN has aboriginal and treaty rights that are protected by s. 35 of the *Constitution Act, 1982*;

**And WHEREAS:**

TFN has significant and longstanding concerns that its ability to exercise its aboriginal and treaty rights on its traditional lands and waters is being continually eroded by non-aboriginal encroachment into, and regulatory restrictions of, its traditional use areas;

**And WHEREAS:**

The Sea to Sea Regional Park (the “Park”) is within the traditional use area of TFN;

**And WHEREAS:**

Individual members of TFN may be accessing the Park for cultural use activities on a regular basis;

**And WHEREAS:**

The CRD is formalizing public access to previously landbanked park lands, which process has the potential to impact TFN's ongoing traditional uses within the Park;

**And WHEREAS:**

The CRD and TFN (collectively, the "Parties") recognize that regional parks exist for the benefit, education and enjoyment of all residents of the CRD and are to be made use of in ways that leave them unimpaired for future generations;

**And WHEREAS:**

The Parties wish to reach an agreement to ensure safe and sustainable use of the Park by TFN and all other residents of the CRD.

**THEREFORE, THE PARTIES AGREE AS FOLLOWS:**

**Definitions and Interpretation**

1. In this Agreement, the following words and expressions shall have the following meanings:
  - a. "Agreement" means this Sea to Sea Traditional Use Access Agreement;
  - b. "Camping" means an overnight stay of at least one (1) night's duration in a temporary shelter such as a tent, and may include the building of fires in areas designated by the Operations Committee;
  - c. "Ceremonies" means ritual observances and procedures conducted in accordance with T'Sou-ke traditional laws and customs;
  - d. "Commercial Purpose" includes the sale of goods or services, and any purpose that consists of or is in anticipation or furtherance of the making of a profit;
  - e. "CRD Parks" means the Regional Parks Department of the CRD;
  - f. "CRD Regional Parks Bylaw" means Capital Regional District Parks Regulation Bylaw No. 3682, including any amendments thereto, and any bylaw that may replace it;
  - g. "Cultural Resource" means a human work, an object, or a place including a landscape and its components that because of its aesthetic, historic, archaeological, cultural, social or spiritual importance and significance for past, present and future generations of the TFN, is of value to TFN.
  - h. "Emergency" means an unexpected situation that poses an immediate risk to health, life, property or the environment;
  - i. "Fishing" means the activity of catching fish by any means, but excludes fishing for any Commercial Purpose;
  - j. "Harvesting" means the gathering and/or collection of organic materials (plants, berries, mushrooms, bark) and inorganic materials (minerals, stone), but excludes harvesting for any Commercial Purpose;
  - k. "Hunting" means shooting at, attracting, searching for, chasing, pursuing, following after or on the trail of, stalking or lying in wait for wildlife, or attempting to do any of

those things, whether or not the wildlife is then or subsequently wounded, killed or captured,

- i. with intention to capture the wildlife, or
- ii. while in possession of a firearm or other weapon;

but excludes hunting for any Commercial Purpose;

- l. "Park" means the Sea to Sea Regional Park as outlined in the map attached as Schedule 1 to this Agreement;
- m. "Trapping" means the use of a snare, net or other device for the purpose of taking or capturing of fur bearing animals, but excludes trapping for any Commercial Purpose; and
- n. "Safety Concern" means any situation, matter or thing that is hazardous or potentially hazardous for human health or life, that if left unaddressed will likely result in an emergency.

### **Purpose of the Agreement**

2. Both parties will work together to:
  - a. Learn from each other in a good way, that honours the knowledge, traditions and wisdom of both parties;
  - b. Share with each other knowledge and understanding that arises from ways of knowing about the land and water, plants and animals;
  - c. Recognize the validity of oral history, its significance and importance as a form of knowledge for understanding the historical significance of cultural sites and landscapes directly related to the TFN people in regional parks within the TFN traditional territory;
  - d. Create opportunities in the Park for youth and elders of all cultures to learn from and with each other while in traditional use areas of TFN;
  - e. Recognize and respect the history and culture of TFN in the planning, management, administration and operation of the Park;
  - f. Recognize and respect the traditional and current use of the Park's lands and waters by members of TFN;
  - g. Ensure reasonable opportunities for Fishing, Harvesting, Hunting and Trapping by TFN and its members;
  - h. Encourage public understanding, appreciation and enjoyment of the lands and waters in the Park and provide opportunities for visitors to the Park to learn about the history and culture of TFN;
  - i. Recognize the interest of the TFN people in the use of traditional aboriginal place names in the Park;
  - j. Apply and use TFN traditional place names in the Park;
  - k. Protect TFN heritage and cultural resources in the Park;
  - l. Include both traditional and scientific knowledge in the management of the natural and cultural resources of the Park;
  - m. Whenever reasonably possible provide direct economic benefits to TFN in the development, operation, management and maintenance of the Park.

## **Governance**

3. The intent of the CRD is to maximize the degree to which power and decision-making is shared between the Parties. The default is to share as much power and decision-making as reasonably and lawfully possible. To that end, a joint Regional Parks Operations Management Committee comprised of representatives of TFN and the CRD, as more fully defined under section 18 of this Agreement, will be formed by the Parties to implement joint decision-making. The desired end point for the relationship is co-management of the Park. Until co-management is achievable in CRD governance and policy, a cooperative management approach will be employed.

## **Cooperative Management**

4. For the purposes of the management of the Park, cooperative management includes the ability for senior managers within the Parties' organizations to make decisions jointly where authorities for decision-making rest with the respective senior managers. What it does not do is amalgamate accountability systems (e.g. human resources, finance, policy) of each Party's authority. In this way, the divisions of powers of the Parties remain discreet to Chief and Council and the CRD Board of Directors and CAO respectively. The Regional Parks Operations Management Committee is the body through which joint decision-making will take place.

## **Access for Traditional Use**

- 5.1 The CRD recognizes that the Park lands are within the traditional territory of TFN and are accessible to TFN members for the purposes of carrying out traditional use activities year round, subject to applicable laws. For purposes of this Agreement, traditional use activities include the following:

- a. travelling by non-motorized means on roads and waterways;
- b. Hunting;
- c. Fishing;
- d. Trapping;
- e. Camping;
- f. construction of small shelters and other temporary structures such as food drying racks;
- g. food processing;
- h. wood cutting for traditional use and ceremonial purposes;
- i. plant harvesting and bark stripping;
- j. teaching activities and cultural gatherings;
- k. Ceremonies; and
- l. walking and hiking;

but for certainty traditional use activities do not include activities undertaken for any Commercial Purpose.

- 5.2 TFN recognizes that the Park consists of designated wilderness lands, on which, subject to section 5.3 below, motorized vehicle access is not permitted, and will work with the CRD to respect this restriction.
- 5.3 TFN vehicles which have been registered with CRD Parks may travel on Harbourview Road as identified in the map attached as Schedule 1. If TFN requires the use of more than the available registered TFN vehicles for a special event, it may apply to CRD Parks for a special permit.
- 5.4 TFN members shall, at all times during their access to the Park, carry an identity or treaty card indicating they are members of TFN. The identity or treaty card is only required if the TFN member is conducting traditional use activities referred to in section 5.1 of this Agreement, but is not required if the TFN member accesses the Park only for purposes permitted to the general public.
- 5.5 If a TFN member is participating in traditional use activities referred to in section 5.1 of this Agreement within the Park, CRD staff may require the TFN member to present the member's identity or treaty card. Any person unable to present an identify or treaty card will not be in compliance with this Agreement and the CRD may require the person to stop the activity until such time as an identity or treaty card can be presented.

### **Harvesting Restrictions for Purposes of Conservation and Public Safety**

- 6.1 TFN and the CRD recognize that from time to time, for public safety and conservation purposes, areas of the lands and waters that make up the Park may need to be temporally and/or spatially restricted from certain activities by TFN members.
- 6.2 The CRD will notify TFN of any proposed restrictions on TFN activities through the Regional Parks Operations Management Committee. The Committee members will make best efforts to reach consensus on the proposal with the goal of minimizing the restriction to the extent possible required to address Safety Concerns. If the Parties are unable to reach consensus, either Party may invoke the dispute resolution provisions set out in section 23.
- 6.3 Traditional use activities within the Park will not be undertaken during working hours by those TFN members employed directly by CRD Parks or indirectly through a service contract or other form of contractual relationship.

- 6.4 No permanent structures will be built within the Park related to the carrying out of traditional use activities unless such building is approved by the Park Operations Management Committee and in accordance with this Agreement.
- 6.5 Any temporary structure built, erected or placed within the Park by a TFN member will be removed immediately following the termination of the traditional use activity for which it was established, unless otherwise approved by the Park Operations Management Committee.

### **No Harvesting Zones and Times**

- 7 For purposes of clarity, there are no “No Harvesting Zones” within portions of the Park that are within the traditional territory of TFN, and all areas of the Park are open to use for traditional use activities by TFN members, subject to any restrictions set out in this Agreement, and subject to any restrictions to access determined to be necessary for purposes of conservation, environmental protection and public safety in accordance with the process set out in section 18 of this Agreement.

### **Restrictions generally or during Emergency or Extraordinary Circumstances**

- 8.1 Access to sections of the Park for certain traditional use activities may be restricted or reduced by the CRD where necessary in the following circumstances:
- a. where a known Safety Concern exists;
  - b. during an Emergency event or response to an Emergency event; and
  - c. where forecasted extreme weather events may cause a safety or environmental danger.
- 8.2 Under the circumstances referred to in section 8.1, the Parks Operations Management Committee will be contacted to ensure that TFN is informed of the restrictions.

### **Cultural Resources**

- 9 The use of Cultural Resources within the Park for interpretation, education and outreach activities, and for purposes restricted to TFN, will be at the sole discretion of TFN.

### **Traditional Knowledge**

- 10 TFN knowledge about the lands and waters of the Park, their interrelationships, and the collection and transmission of such knowledge, rests solely with TFN. Sharing, collection and transmission of such knowledge will be directed by TFN through the Parks Operations Management Committee or as otherwise agreed to by the Parties.

## **Western Science**

- 11.1 CRD knowledge about the lands and waters of the Park, their interrelationships, and the collection and transmission of such knowledge, will be open and available to TFN, unless otherwise restricted for contractual reasons or pursuant to any applicable law.
- 11.2 Whenever reasonably possible, opportunities for TFN involvement in research project design and collection related to the Park will be considered so that sharing of knowledge can take place with TFN.
- 11.3 Without limiting section 11.2, whenever reasonably possible, TFN youth and elders will be invited to participate in the CRD's research initiatives related to the Park.

## **Education Outreach and Interpretation**

- 12.1 Information considered for use in education, outreach and interpretation programs that addresses TFN culture, heritage and way of life, may be produced collaboratively by the Parties, but shall be subject to approval at the sole discretion of the TFN, and shall serve the intention of sharing knowledge to achieve understanding and reconciliation.
- 12.2 Whenever reasonably possible, opportunities for TFN youth and elders to be included in programs referred to in section 12.1 will be pursued.

## **Management Planning**

- 13 TFN members will be invited to participate in any amendments to the existing CRD management plan for the Park, and will be invited to participate in any future management planning for the Park.

## **Direct Economic Opportunities**

- 14.1 The CRD, through CRD Parks, will make all reasonable efforts to secure opportunities to provide direct economic benefit to TFN members associated with the Park. The procurement of goods and services from TFN businesses, in accordance with CRD procurement policies and applicable laws, will be undertaken where reasonably possible.
- 14.2 TFN will make all reasonable efforts to make the CRD aware of the skill sets, businesses and capacity of TFN and its members to provide goods and services to CRD Parks.

## **Direct Employment Opportunities**

- 15.1 The CRD will make TFN aware of employment opportunities with CRD Parks, through direct communication of opportunities.

15.2 Upon invitation by TFN, the CRD may provide workshops associated with resume and application preparation.

### **Deceased Eagles or Other Wildlife**

16 The CRD will notify TFN when it becomes aware of naturally deceased or euthanized wildlife in the Park, including eagles.

### **Cultural Awareness**

17.1 In cooperation with TFN, cultural awareness training for CRD Parks staff will be developed and implemented. Through such opportunities for shared learning, CRD Parks staff will be informed about the intention and contents of this Agreement and what are considered respectful and non-respectful ways of interacting with TFN members.

17.2 CRD Parks will, upon the coming into effect of this Agreement, arrange with TFN opportunities to meet with CRD Parks staff to develop the content of the cultural awareness training program.

17.3 Efforts to make CRD Parks staff and TFN members aware of the content and intent of this Agreement will assist in ensuring TFN members feel comfortable using the Park for traditional uses in accordance with the terms of this Agreement without interference or harassment or the perception of interference or harassment. Similarly, such efforts will assist in ensuring CRD Parks staff feel comfortable in the performance of their duties given these new understandings.

### **Regional Parks Operations Management Committee**

18.1 The Regional Parks Operations Management Committee (the “Committee”) is a committee made up of TFN members and CRD Parks members, assigned the responsibility of implementing this Agreement. It is anticipated that the Committee will meet at least six (6) times per year or as often as necessary to ensure shared understanding of roles and responsibilities and achieve cooperative management of the lands and waters of the Park.

18.2 The following composition is proposed for the Committee:

TFN:

Environmental Resources Worker or other appointed staff member  
Band Council representative

CRD Parks:

Senior Manager Regional Parks  
Operations Manager Regional Parks

- 18.3 The Committee, by way of this Agreement, has the authority to act on decisions made that are within the authority of the Senior Manager Regional Parks.
- 18.4 Actions or decisions beyond the authority of the Senior Manager Regional Parks will be put forward to the CRD's General Manager, Parks and Environmental Services (the "General Manager") for determination, who will be provided with the recommendations of the members of the Committee. If the Committee is unable to reach consensus on the recommendations, the General Manager will be provided with the differing views of the Committee members. If the General Manager makes a decision that does not follow the recommendations of the Committee, or if the members of the Committee presented the General Manager with differing views, the General Manager will provide written reasons to the Committee in respect of the decision. When a decision of the General Manager does not accord with the recommendations of one or more members of the Committee, either Party may invoke the dispute resolution provisions set out in section 23 of this Agreement.
- 18.5 The Parties acknowledge that some decisions that may impact the implementation of this Agreement are beyond the decision-making authority of the Committee or the General Manager, and will be made by the CRD Board on recommendation by the Regional Parks Committee. When the CRD Board is considering a decision that will impact the rights of the Parties under this Agreement, the CRD will notify TFN of the matter through the Committee, and TFN will have the opportunity to present its views to the Regional Parks Committee and the CRD Board prior to the decision being made.
- 18.6 For the purposes of this Agreement, the following matters are operational issues and decisions within the authority of the Committee:
- routes, methods and ways of access for Harvesting, Hunting and Trapping;
  - campsite locations;
  - campfire locations;
  - Harvesting, Hunting and Trapping restrictions under section 6.1, if necessary;
  - locations and times for Harvesting, Hunting and Trapping;
  - the management of Cultural Resources;
  - the management of natural resources, including the adjustment of TFN activities to mitigate any potential adverse environmental effects;
  - recommending revisions and/or amendments to an existing management plan;
  - means to integrate traditional and scientific knowledge in the management of the natural and cultural resources of the Park;
  - times and locations for cultural camps;
  - recommendations for approval for the type and timing of special events, including public events; and
  - vehicle access for Harbourview Road.

18.7 The following are examples of issues potentially identified by TFN and the Committee that will be referred to the General Manager:

- amendments to existing CRD bylaws and regulations ;
- procurement methods and procedures, including sole sourcing.

18.8 The following are examples of items that could be referred to the CRD Regional Parks Committee and CRD Board:

- boundary adjustments;
- additions and deletions of park lands;
- amendments to existing CRD bylaws and regulations;
- identification of proposed new bylaws and regulations;
- regional park management plans or amendments.

18.9 Should disputes occur in relation to the matters referred to in sections 18.5 to 18.8, the dispute resolution process described in section 23 will be followed.

### **General Clauses**

19.1 This Agreement is not a treaty or a land claims agreement within the meaning of s. 35 of the *Constitution Act, 1982*.

19.2 This Agreement does not recognize, create, modify, extinguish, suspend, abrogate from or derogate from any of TFN's s. 35 rights, nor does the CRD have jurisdiction to do any of those things.

19.3 This Agreement is without prejudice to the position of either party in respect of the existence, scope, extent or effect of any s. 35 right held by TFN.

### **Breach of Agreement**

20 If any term of this Agreement is breached, the CRD or TFN, as the case may be, will give written notice to the other party of the breach and request a resolution within fourteen (14) days. If the matter is not addressed within fourteen (14) days and resolved within thirty (30) days of the notice of breach, or other such time as agreed to by the Parties, either Party may terminate this Agreement in writing without further notice. Where appropriate, the Parties may agree to use the dispute resolution processes set out in section 23 of this Agreement.

### **Indemnity and Releases**

21 TFN releases and will indemnify and save harmless the CRD, its elected and appointed officials, employees, agents and contractors (collectively, the "CRD Parties") from and

against any and all liability, claims, damages, costs (including legal costs on a solicitor and own client basis) and expenses whatsoever (collectively, “Liability”) that the CRD Parties or any of them or any other person may suffer or incur as a result of the exercise by TFN or any of its members or any other person permitted by TFN (collectively, the “TFN Parties”) of TFN’s rights and privileges under this Agreement, or the negligence, willful misconduct, or breach of this Agreement by the TFN Parties or any of them, including without limitation any Liability resulting from wildfire or environmental damage and the suppression or remediation of the same.

## **Insurance**

- 22 T’Sou-ke First Nation must, at its sole expense, obtain and maintain for so long as this Agreement remains in effect, with an insurer licensed to carry on business in British Columbia, a commercial general liability policy covering losses to a third party for bodily injury or death, property damage and firefighting expenses. The insurance shall be in an amount not less than THREE MILLION (\$3,000,000) on an occurrence basis. Such policy must specify coverage for the Park, and must name the CRD as an additional insured. TFN shall be solely responsible for maintaining such further and other insurance as it may deem necessary or desirable to protect the interests of the TFN Parties and to satisfy the obligations of the TFN under this Agreement.

## **Dispute Resolution Process**

- 23 If a disagreement arises between the Parties relating to the interpretation or implementation of this Agreement (a “Dispute”), the Parties agree to work together to address the Dispute in accordance with the following process:
- a. If the Parties are unable to resolve the Dispute within the Committee, the Senior Administrative Officer of TFN will meet with the General Manager within 15 days of either party giving notice of a Dispute, and will make every reasonable attempt to meet and to find a solution which respects the letter and spirit of this Agreement.
  - b. If the issue remains unresolved following the meeting referred to in paragraph (a) above, the Chief of TFN and the Chief Administrative Officer of the CRD will meet within 15 days of notice from either of the Parties’ senior administrators setting out in sufficient detail the nature and history of the issue. At this meeting, the Parties’ representatives will attempt in good faith to understand and explore the nature of the issue, develop options for possible solutions and reach a resolution of the issue.
  - c. In the absence of an agreed resolution within 30 days of the date of the meeting described in paragraph (b) above, the Parties agree first to try in good faith to settle the dispute by mediation administered by the British Columbia Arbitration and Mediation Institute under its mediation rules. CRD will pay for the fees and expenses of the Mediator, but each Party will be responsible for their own legal costs or other mediation costs as between each other.

## **Review of Agreement**

24 This Agreement shall be reviewed annually by the Parties and may be amended only by the written agreement of both Parties.

## **Notice to terminate**

25 Either party may terminate this Agreement by giving 30 days' prior notice in writing to the other Party.

## **Other Considerations**

26 Nothing in this Agreement shall be construed as permitting or authorizing any activity or use of the Park by any person that is contrary to any applicable law, including without limitation the CRD Regional Parks Bylaw. For greater clarity, to the extent this Agreement authorizes any activity that requires a permit under the CRD Regional Parks Bylaw, this Agreement operates as such a permit in accordance with its terms and conditions.

## **Coming into effect**

27 This Agreement comes into effect upon its execution by both Parties.

## **Notice**

28 Notices under this Agreement shall be delivered to:

T'Sou-ke First Nation:  
Band Administrator  
2154 Lazzar Rd Sooke IR, BC Canada  
Tel: (250) 642-3957  
Email: [administrator@tsoukenation.com](mailto:administrator@tsoukenation.com)

CRD:  
Chief Administrative Officer  
Capital Regional District  
625 Fisgard Street, Victoria, BC V8W 2S6  
Tel: (250) 360-3124  
Email: [rlapham@crd.bc.ca](mailto:rlapham@crd.bc.ca)

Signed on behalf of:  
**T'Sou-ke First Nation**

Date: \_\_\_\_\_

\_\_\_\_\_  
Chief Gordon Planes

\_\_\_\_\_  
Councillor Allan Planes

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Councillor Rose Dumont

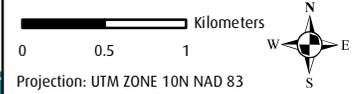
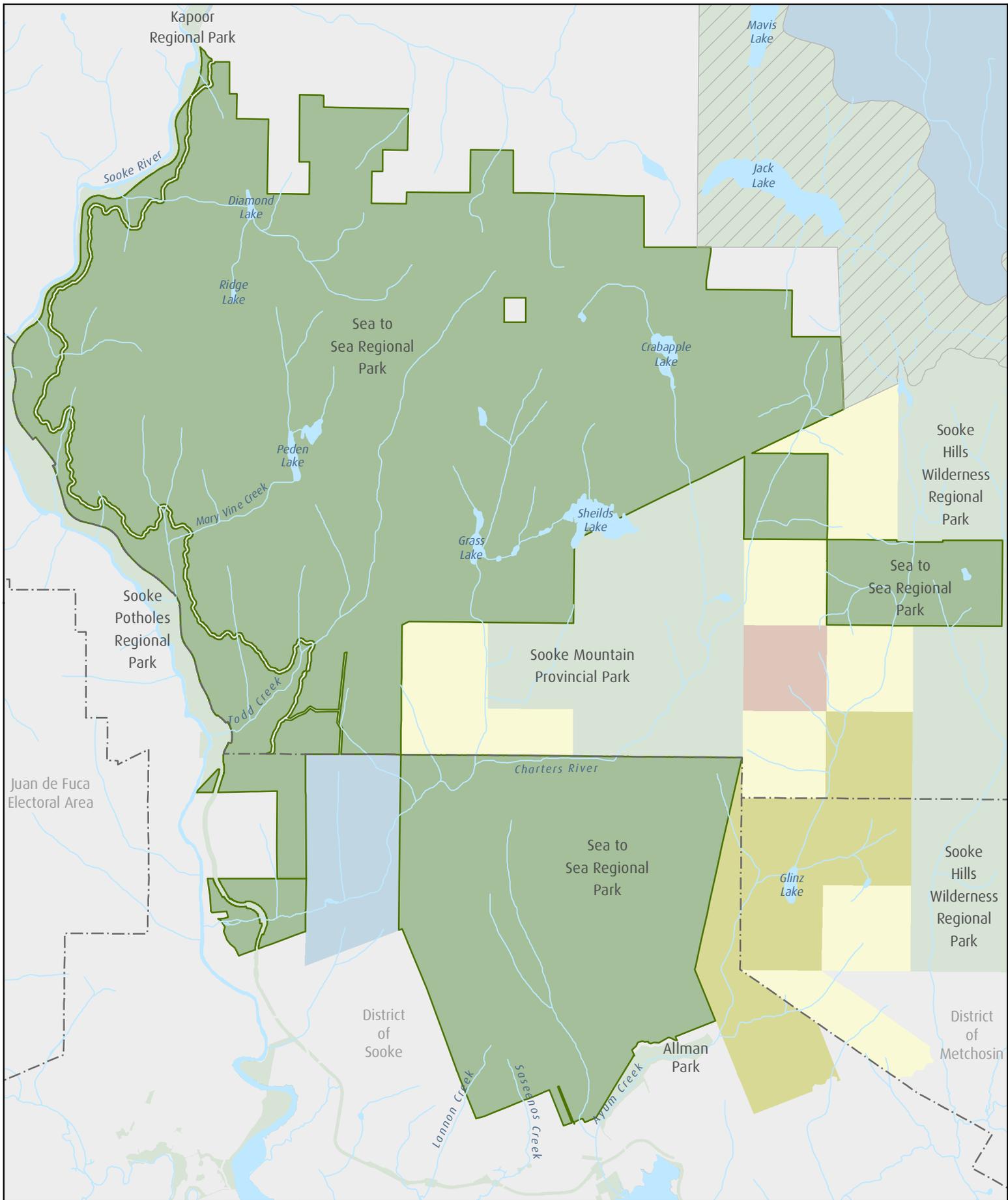
Signed on behalf of:  
**Capital Regional District**

Date: \_\_\_\_\_

\_\_\_\_\_  
Barb Desjardins, CRD Board Chair

\_\_\_\_\_  
Witness

DRAFT



- Sea to Sea Regional Park
- Other Park
- YMCA - Camp Thunderbird
- Private Parcel
- Crown Parcel
- CRD Lands
- Drinking Water Protection Zone

**Capital Regional District**  
**Schedule 1:**  
**Sea to Sea Regional Park**

**Important** This map is for general information purposes only. The Capital Regional District (CRD) makes no representations or warranties regarding the accuracy or completeness of this map or the suitability of the map for any purpose. **This map is not for navigation.** The CRD **will not be liable** for any damage, loss or injury resulting from the use of the map or information on the map and the map may be changed by the CRD at any time.

**BAND COUNCIL RESOLUTION  
RESOLUTION DE CONSEIL DE BANDE**

**ATTACHMENT 2**

Chronological no. – N° consecutive
File reference no. – N° de reference du dossier <b>545</b>

NOTE: The words "from our band funds" "capital" or "revenue" whichever is the case, must appear in all resolutions requesting expenditures from band funds.  
 NOTA: Les mots "des fonds de notre bande" "capital" ou "revenue" selon les cas doivent paraître dans tous les résolutions portant sur des dépenses à même les fonds des bandes.

The council of the Le conseil de	T'Sou-ke First Nation	Cash free balance	
Date of duly convened meeting Date de l'assemblée dument convoquée	17/11/2017 DD / MM / YYYY JJ / MM / AAAA	Province B.C.	Capital account Compte capital \$ _____  Revenue account Compte revenu \$ _____

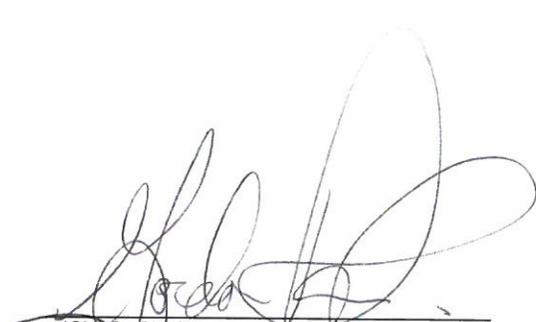
**DO HEREBY RESOLVE:  
DÉCIDE PAR LES PRESENTES:**

**WHEREAS:** *T'Sou-ke First Nation and CRD Regional Parks Managers have engaged in discussions to ensure respect and recognition of T'Sou-ke's historic and ongoing connection to the lands and waters with the boundary of the Sea to Sea Regional Park;*

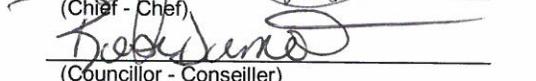
**And Whereas:** *T'Sou-ke First Nation and CRD Parks Managers have reached terms of an Agreement regarding T'Sou-ke's ongoing traditional use and management participation in the Sea to Sea Regional Park;*

**Therefore the Council resolves:** *To direct the CRD to present the Agreement to the CRD Parks Committee for review, and to the CRD Board for ratification*

Quorum: 2



(Chief - Chef)



(Councillor - Conseiller)

_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)

FOR DEPARTMENTAL USE ONLY – RÉSERVÉ AU MINISTRE					
Expenditure - Depenses	Authority (Indian Act section) – Autorite (Article sur la loi des Indiens)	Source of Funds Sources des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue - Revenu	Expenditure - Depenses	Authority (Indian Act section) – Autorite (Article sur la loi des Indiens)	f Funds Sources des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue - Revenu
Recommending officer – Recommandé par			Recommending officer – Recommandé par		
_____ Signature		_____ Date	_____ Signature		_____ Date
Approving Officer – Approuvé par			Approving Officer – Approuvé par		
_____ Signature		_____ Date	_____ Signature		_____ Date



**REPORT TO CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

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**SUBJECT**     **Homelessness Partnering Strategy - Additional Funding for 2018-2019**

**ISSUE**

The Government of Canada has notified the Capital Regional District (CRD) that it is eligible for additional funding under the Homelessness Partnering Strategy. The Agreements that the CRD has signed with the Government of Canada will need to be amended to include the additional funding.

**BACKGROUND**

On April 23, 2010, the CRD was approved by the Federal Government as the Community Entity for Greater Victoria under the Federal Homelessness Partnership Strategy (HPS). The CRD has signed two Agreements (see Appendix A) with the Government of Canada under which the CRD carries out due diligence and awards funding under the program. Over the past six years, the funding has been used to support capital projects and services oriented toward addressing issues related to homelessness in the region. A portion of the funding also pays for the CRD salary and administrative costs associated with managing the program on behalf of the Government of Canada. The Agreements end on March 31, 2019.

In the 2017 Federal Budget, the Government of Canada announced that it would increase the investment in HPS for the period April 1, 2018 to March 31, 2019 and has recently notified the CRD that the region is eligible to receive additional amounts of \$228,198 through the Designated Communities funding stream, and \$168,628 through the Aboriginal Homelessness funding stream. An additional \$49,910 has also been approved under the Designated Communities funding stream toward conducting a Homelessness Point-in-Time Count in 2018 bringing the total additional funding amount to \$446,736.

These additions will increase the total amount allocated to the region to \$4,409,503 over the five-year term of the Agreements. Confirmation of funding is attached in Appendix B.

The existing Funding Agreements between the CRD and Government of Canada must be amended to reflect the increase.

**ALTERNATIVES**

*Alternative 1*

1. Approve amending the Homelessness Partnering Strategy Funding Agreements with the Government of Canada to include the management of \$446,736 in additional funding between April 1, 2018 and March 31, 2019; and
2. Authorize the Capital Regional District Board Chair and Corporate Officer to execute the agreements.

*Alternative 2*

Provide Capital Regional District staff with alternative direction.

**IMPLICATIONS**

**Social Implications**

The CRD works closely with the Greater Victoria Coalition to End Homelessness to award HPS funding to community organizations in support of projects that provide essential services and promote system improvements that will help support successful implementation of the Regional Housing First Program. Addressing these needs will also help contribute to general improved quality of life within communities throughout the region that currently experience the negative impacts of homelessness.

**Intergovernmental Implications**

The actions recommended in this report will impact the existing Agreements the CRD has with the Government of Canada. Amending the Agreements will demonstrate to the Government of Canada the CRD's ongoing commitment to its partnership in addressing homelessness.

**Financial Implications**

The financial implications of this increase will be incorporated into the 2018 and 2019 service plans and budgets for Regional Housing.

**CONCLUSION**

The capital region benefits from federal investment in homelessness reduction and prevention, and the additional funding offered under the amended Agreements will further support residents experiencing homeless. The recommendation is consistent with the CRD's ongoing partnership with the Government of Canada in administering the HPS portfolio.

**RECOMMENDATIONS**

1. Approve amending the Homelessness Partnering Strategy Funding Agreements with the Government of Canada to include the management of \$446,736 in additional funding between April 1, 2018 and March 31, 2019; and
2. Authorize the Capital Regional District Board Chair and Corporate Officer to execute the agreements.

Submitted by:	John Reilly, MSW RSW, Manager Housing Planning and Programs
Concurrence:	Christine Culham, Senior Manager Regional Housing
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager Planning and Protective Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

JR:ce

Attachments: Appendix A – Existing HPS Funding Agreements between the CRD and the Government of Canada  
Appendix B – Confirmation of funding from the Government of Canada

Existing Funding Agreements between  
Capital Regional District and  
Government of Canada

Homelessness Partnering Strategy  
Aboriginal Homelessness Agreement #012804670  
and  
Homelessness Partnering Strategy  
Designated Communities Agreement #012593166





Project #: 012503168  
Amendment: 2

Homelessness Partnering Strategy

Community Entity

Designated Communities

FUNDING AGREEMENT

BETWEEN

Her Majesty the Queen in Right of Canada (hereinafter  
referred to as "Canada"), as represented by the Minister  
of Employment and Social Development Canada AND

Capital Regional District  
(hereinafter referred to as "the Recipient")

Hereinafter collectively referred to as "the Parties"

Articles of Agreement

Whereas Canada has established the Homelessness Partnering Strategy (hereinafter referred to as "the Program") to support projects aimed at reducing homelessness, primarily through the Housing First approach, and includes projects aimed at preventing individuals and families at imminent risk from becoming homeless;

Whereas the Recipient has applied to Canada for funding to carry out the project described in Schedule A;

Whereas Canada has determined that the Recipient is eligible to apply for funding under the Program and that the Project qualifies for support under the Program; and

Whereas Canada has agreed to make a contribution to the Recipient towards the costs of the Project;

Now therefore, Canada and the Recipient agree as follows:

1.0 AGREEMENT

1.1 The following documents, and any amendments thereto, constitute the entire agreement between the Recipient and Canada with respect to its subject matter and supersedes all previous understandings, agreements, negotiations and documents collateral, oral or otherwise between them relating to its subject matter:

- (a) These Articles of Agreement;
- (b) Schedule A - entitled "Project Description";
- (c) Schedule B - entitled "Financial Provisions"; and
- (d) Schedule C - entitled "Additional Provisions"

2.0 INTERPRETATION

2.1 Unless the context requires otherwise, the expressions listed below have the following meanings for the purposes of this Agreement:

"Eligible Expenditures" means the expenditures which are listed in the Project Budget in Schedule B, and in compliance with the Conditions Governing the Eligibility of Expenditures set out in Schedule B

"Fiscal Year" means the period commencing on April 1 in one calendar year and ending on March 31 in the next calendar year;

"Project" means the project described in Schedule A.

"Project Period" means the period beginning on the Project Start Date specified in Schedule A and ending on the Project End Date specified in Schedule A; and

"Working Day" means Monday through Friday except statutory holidays

3.0 EFFECTIVE DATE AND DURATION

3.1 This Agreement shall come into effect on the date it is signed by the last of the Parties to do so and, subject to section 3.2, shall expire at the end of the Project Period unless the Agreement is terminated on a prior date in accordance with the terms of this Agreement.

3.2 All obligations of the Recipient shall expressly or by their nature survive termination or expiry of this Agreement and shall continue in full force subsequent to and notwithstanding such termination or expiry until and unless they are satisfied or by their nature expire

4.0 PURPOSE OF THE CONTRIBUTION

4.1 The purpose of Canada's funding is to enable the Recipient to carry out the Project. The funding shall be used by the Recipient solely for the purpose of paying the Eligible Expenditures.



## 5.0 CANADA'S CONTRIBUTION

5.1 Subject to the terms and conditions of this Agreement, Canada agrees to make a contribution to the Recipient in respect of the Eligible Expenditures. The amount of Canada's contribution shall not exceed the total maximum amount specified in section 1.1 of Schedule B.

5.2 Where the Project Period covers more than one Fiscal Year, the amount payable by Canada on account of its contribution in each Fiscal Year of the Project Period shall not exceed the amount shown in section 1.2 of Schedule B for that Fiscal Year.

## 6.0 APPROPRIATION

6.1 Any payment under this Agreement is subject to the appropriation of funds by Parliament for the Fiscal Year in which the payment is to be made.

## 7.0 REDUCTION OR TERMINATION OF FUNDING

### 7.1 If

- (a) the Program named in this Agreement is cancelled,
- (b) the level of funding for the Program named in this Agreement for any Fiscal Year in which payment is to be made under the Agreement is reduced as a result of a governmental or departmental spending decision, or
- (c) Parliament reduces the overall level of funding for the programs of the Department of Employment and Social Development for any Fiscal Year in which payment is to be made under the Agreement,

Canada may, upon not less than ninety (90) days notice, reduce its funding under this Agreement or terminate the Agreement.

7.2 Where, pursuant to section 7.1 Canada gives notice of its intention to reduce its funding, and where, as a result of the reduction in funding, the Recipient is of the opinion that it will be unable to complete the Project or will be unable to complete the Project in the manner desired by the Recipient, the Recipient shall notify Canada of same as soon as possible after receiving notice of the funding reduction and may, upon not less than thirty (30) days written notice to Canada, terminate the Agreement.

## 8.0 RECIPIENT DECLARATIONS

### 8.1 The Recipient

- (a) declares that it has provided Canada with a true and accurate list of all amounts owing to the Government of Canada under legislation or funding agreements which were past due and in arrears at the time of the Recipient's application for funding under the Program named in this Agreement,
- (b) agrees to declare any amounts owing to the Government of Canada under legislation or funding agreements which have become past due and in arrears following the date of its application for funding; and
- (c) recognizes that Canada may recover any amounts referred to in paragraph (a) or (b) that are owing by deducting or setting off such amounts from any sum of money that may be due or payable to the Recipient under this Agreement.

8.2 The Recipient declares that any person who has been lobbying on its behalf to obtain the contribution that is the subject of this Agreement was in compliance with the provisions of the Lobbying Act (R.S.C. 1985 c. 44 (4th Supp.)), as amended from time to time, at the time the lobbying occurred and that any such person to whom the aforementioned act applies, has received, or will receive, no payment, directly or indirectly, from the Recipient that is in whole or in part contingent on obtaining this Agreement.

## 9.0 PROJECT RECORDS

### 9.1 The Recipient shall

- (a) keep proper books and records, in accordance with generally accepted accounting principles, of all expenditures and revenues relating to the Project, including cash contributions received from Canada and cash contributions from other sources, as well as records substantiating the receipt and value of any in-kind contributions to the costs of the Project referred to in the Project Budget in Schedule B,
- (b) keep records of all Project-related contracts and agreements and all invoices, receipts and vouchers relating to Eligible Expenditures, and
- (c) keep records of all Project-related activity, progress and evaluation reports and reports of Project reviews or audits carried out by, or on behalf of, the Recipient.

9.2 The Recipient shall retain the books and records referred to in section 9.1 for a period of six (6) years following the Project Period.

## 10.0 CANADA'S RIGHT TO AUDIT

10.1 During the Project Period and for a period of six (6) years thereafter, the Recipient shall, upon request, grant representatives of Canada access to the books and records referred to in section 9.0 for the purpose of conducting an audit to verify compliance with the terms and conditions of this Agreement and verify expenses claimed by the Recipient as Eligible Expenditures. The Recipient shall permit Canada's representative(s) to take copies and extracts from such accounts and records. The Recipient shall also provide Canada with such additional information as Canada may require with reference to such books and records.



#### 11.0 FINANCIAL AND ACTIVITY MONITORING

11.1 During the Project Period, the Recipient shall grant representatives of Canada reasonable access to the Project site and business premises of the Recipient, if different from the Project site, and to all Project-related books and records referred to in section 9.6 at all reasonable times for the purpose of conducting periodic financial and activity monitoring reviews of the Project. The Recipient shall also, upon request, provide representatives of Canada with copies and extracts from such books and records.

#### 12.0 INQUIRY BY THE AUDITOR GENERAL OF CANADA

12.1 If, during the Project Period or within a period of six years thereafter, the Auditor General of Canada, in relation to an inquiry conducted under subsection 7.1(1) of the *Auditor General Act* [R.S.C., 1985, c. A-17], requests that the Recipient provide him or her with any records, documents or other information pertaining to the utilization of the funding provided under this Agreement, the Recipient shall provide the records, documents or other information within such period of time as may be reasonably requested in writing by the Auditor General of Canada.

#### 13.0 FINAL REPORT

13.1 Unless the Recipient is required under a schedule to this Agreement to provide another, more specific, final report outlining the results of the Project, the Recipient shall provide Canada with a final report that summarizes the Project scope, describes the results achieved, explains any discrepancies between the results and the planned or expected results and contains such other information as Canada may specify in writing to the Recipient. The Recipient shall provide Canada with the final report within sixty (60) days following the Project Period.

#### 14.0 EVALUATION

14.1 The Recipient agrees to cooperate with Canada in the conduct of any evaluation of the Project and/or the Program named in this agreement that Canada may carry out during the Project Period or within a period of three years thereafter. Without limiting the generality of the foregoing, if requested by Canada to do so for the purpose of conducting an evaluation, the Recipient agrees to:

- (a) participate in any survey, interview, case study or other data collection exercise initiated by Canada; and
- (b) subject to section 14.2, provide Canada with contact information of the Project partner organizations, if any, who participated in the Project, and of the members of the board of directors of the Recipient.

14.2 The Recipient shall provide Canada with the contact information of a person (name, address, phone number and e-mail address) referred to in paragraph 14.1(b) only if the person has given their written consent to the release of the information to Canada. The Recipient agrees to make all reasonable efforts to secure such consent during the Project Period. When providing a person's contact information to Canada, the Recipient shall provide Canada with an accompanying written statement certifying that the person has given their consent to the sharing of their contact information with Canada.

#### 15.0 CONTRACTING PROCEDURES

##### *Contracting*

15.1 (1) Subject to subsection (2), the Recipient shall use a fair and accountable process, involving soliciting a minimum of three bids or proposals, when procuring goods and services from contractors in relation to the Project. The Recipient shall select the bid or proposal offering the best value at the lowest cost.

(2) The requirement under subsection (1) shall apply unless otherwise authorized in writing by Canada, to all goods or services contracts valued at \$25,000 or more (including taxes and duties). The Recipient must not unnecessarily divide a requirement for goods or services into a number of smaller contracts to avoid this requirement.

##### *Restrictions Regarding Non-Arms-Length Contracts*

15.2 (1) Unless otherwise authorized in writing by Canada, all goods or services contracts, regardless of their value, entered into in relation to the Project between the Recipient and

- (a) an officer, director or employee of the Recipient,
- (b) a member of the immediate family of an officer, director or employee of the Recipient,
- (c) a business in which an officer, director or employee of the Recipient, or a member of their immediate family, has a financial interest, or
- (d) a business which is related to or associated or affiliated with, the Recipient.

require the prior written approval of Canada. In any such contract, the Recipient shall ensure that Canada has a right of access to the relevant records of the supplying entity for the purpose of verifying, if necessary, the amount of the expenditure claimed by the Recipient in relation to a contract referred to in this subsection.

(2) In this section, "immediate family" means the father, mother, step-father, step-mother, brother, sister, spouse (including common law partner), child (including child of common law partner), step-child, ward, father in law, mother in law or relative permanently residing in the household of the officer, director or employee.

##### *Restrictions Regarding Sub-contracting of Recipient Duties or Responsibilities*

15.3 The Recipient shall not subcontract the performance of any of its duties or responsibilities in managing the Project to another party without the prior written consent of Canada unless the Recipient has already indicated in the approved Project Description attached as Schedule A to this Agreement that it intends to use a subcontractor or subcontractors to perform those duties or responsibilities.



**16.0 TERMINATION OF AGREEMENT**

*Termination for Default*

16.1 (1) The following constitute Events of Default:

- (a) the Recipient becomes bankrupt, has a receiving order made against it, makes an assignment for the benefit of creditors, takes the benefit of the statute relating to bankrupt or insolvent debtors or an order is made or resolution passed for the winding up of the Recipient;
- (b) the Recipient ceases to operate;
- (c) the Recipient is in breach of the performance of, or compliance with, any provision of this Agreement;
- (d) the Recipient, in support of its application for Canada's contribution or in connection with this Agreement, has made materially false or misleading representations, statements or declarations, or provided materially false or misleading information to Canada; or
- (e) in the opinion of Canada, there is a material adverse change in risk in the Recipient's ability to complete the Project or to achieve the expected results of the Project set out in Schedule A.

(2) If

- (a) an Event of Default specified in paragraph (1)(a) or (b) occurs, or
- (b) an Event of Default specified in paragraphs (1)(c), (d) or (e) occurs and has not been remedied within thirty (30) days of receipt by the Recipient of written notice of default, or a plan satisfactory to Canada to remedy such Event of Default has not been put into place within such time period,

Canada may, in addition to any remedies otherwise available, immediately terminate the Agreement by written notice. Upon providing such notice of termination, Canada shall have no obligation to make any further contribution to the Recipient.

(3) In the event Canada gives the Recipient written notice of default pursuant to paragraph (2)(b), Canada may suspend any further payment under this Agreement until the end of the period given to the Recipient to remedy the Event of Default.

(4) The fact that Canada refrains from exercising a remedy it is entitled to exercise under this Agreement shall not be considered to be a waiver of such right and, furthermore, partial or limited exercise of a right conferred upon Canada shall not prevent Canada in any way from later exercising any other right or remedy under this Agreement or other applicable law.

*Termination for Convenience*

16.2 Canada may also terminate this Agreement at any time without cause upon not less than ninety (90) days written notice of intention to terminate.

*Obligations Relating to Termination under section 7.1 or 16.2 and Minimizing Cancellation Costs*

16.3 In the event of a termination notice being given by Canada under section 7.1 or 16.2,

- (a) the Recipient shall make no further commitments in relation to the Project and shall cancel or otherwise reduce, to the extent possible, the amount of any outstanding commitments in relation thereto; and
- (b) all Eligible Expenditures incurred by the Recipient up to the date of termination will be paid by Canada, including the Recipient's costs of, and incidental to, the cancellation of obligations incurred by it as a consequence of the termination of the Agreement; provided always that payment and reimbursement under this paragraph shall only be made to the extent that it is established to the satisfaction of Canada that the costs mentioned herein were actually incurred by the Recipient and the same are reasonable and properly attributable to the termination of the Agreement.

16.4 The Recipient shall negotiate all contracts related to the Project, including employment contracts with staff, on terms that will enable the Recipient to cancel same upon conditions and terms that will minimize to the extent possible their cancellation costs in the event of a termination of this Agreement. The Recipient shall cooperate with Canada and do everything reasonably within its power at all times to minimize and reduce the amount of Canada's obligations under section 16.3 in the event of a termination of the Agreement.

**17.0 INDEMNIFICATION**

17.1 The Recipient shall, both during and following the Project Period, indemnify and save Canada harmless from and against all claims, losses, damages, costs, expenses and other actions made, sustained, brought, threatened to be brought or prosecuted, in any manner based upon, occasioned by or attributable to any injury or death of a person, or loss or damage to property caused or alleged to be caused by any willful or negligent act, omission or delay on the part of the Recipient or its employees or agents, and participating employers or Project participants, if any, in connection with anything purported to be or required to be provided by or done by the Recipient pursuant to this Agreement or done otherwise in connection with the implementation of the Project.



## 18.0 INSURANCE

18.1 The Recipient shall arrange and maintain, during the Project Period, appropriate comprehensive general liability insurance coverage to cover claims for bodily injury or property damage resulting from anything done or omitted by the Recipient or its employees, agents or Project participants, if any, in carrying out the Project.

## 19.0 RELATIONSHIP BETWEEN THE PARTIES AND NON-LIABILITY OF CANADA

19.1 The management and supervision of the Project are the sole and absolute responsibility of the Recipient. The Recipient is not in any way authorized to make a promise, agreement or contract on behalf of Canada. This Agreement is a funding agreement only, not a contract for services or a contract of service or employment. Canada's responsibility is limited to providing financial assistance to the Recipient towards the Eligible Expenditures. The parties hereto declare that nothing in this agreement shall be construed as creating a partnership, an employer-employee or agency relationship between them. The Recipient shall not represent itself as an agent, employee or partner of Canada.

19.2 Nothing in this Agreement creates any undertaking, commitment or obligation by Canada respecting additional or future funding of the Project beyond the Project Period, or that exceeds the maximum contribution specified in Schedule B. Canada shall not be liable for any loan, capital lease or other long-term obligation which the Recipient may enter into in relation to carrying out its responsibilities under this Agreement or for any obligation incurred by the Recipient toward another party in relation to the Project.

## 20.0 CONFLICT OF INTEREST

20.1 No current or former public servant or public office holder to whom the *Conflict of Interest Act* [S.C. 2006, c. 9 s. 2], the *Policy on Conflict of Interest and Post-Employment* or the *Values and Ethics Code for the Public Sector* applies shall derive a direct benefit from the Agreement unless the provision or receipt of such benefit is in compliance with the said legislation or codes.

20.2 No member of the Senate or the House of Commons shall be admitted to any share or part of the Agreement or to any benefit arising from it that is not otherwise available to the general public.

## 21.0 INFORMING CANADIANS OF THE GOVERNMENT OF CANADA'S CONTRIBUTION

21.1 The Recipient shall allow Canada sixty (60) days from the date of signature of the Agreement to announce the Project. During this 60 day period, the Recipient shall not make any public announcements of funding, deferring all questions to Canada. After the expiry of the 60 day period, the Recipient may begin its own communication activities for the Project.

21.2 The Recipient shall notify Canada twenty (20) working days in advance of any initial and subsequent official ceremonies related to the announcement of the funding and promotion of the Project. Canada reserves the right to approve the time, place and agenda of the ceremony.

21.3 The Recipient shall notify Canada fifteen (15) working days in advance of any and all communications activities, publications, advertising and press releases planned by the Recipient or by a third party with whom it has an agreement relating to the Project.

21.4 The Recipient shall ensure that in any and all communication activities, publications, advertising and press releases regarding the Project, recognition, in terms and in a form and manner satisfactory to Canada, are given to Canada's financial assistance to the Project.

21.5 The Recipient agrees to display such signs, plaques or symbols as Canada may provide in such locations on its premises as Canada may designate.

21.6 The Recipient shall cooperate with representatives of Canada during any official news release or ceremonies relating to the announcement of the Project.

## 22.0 ACCESS TO INFORMATION

22.1 The Recipient acknowledges that Canada is subject to the *Access to Information Act* [RSC 1985, Chapter A-1], and information obtained by Canada pertaining to this Agreement may be disclosed by Canada to the public upon request under the aforementioned act.

## 23.0 PROACTIVE DISCLOSURE

23.1 The Recipient acknowledges that the name of the Recipient, the amount of the contributions and the general nature of the Project may be made publicly available by Canada in accordance with the Government of Canada's commitment to proactively disclose the awarding of grants and contributions.

## 24.0 DISPOSITION OF CAPITAL ASSETS

24.1 During the Project Period, the Recipient shall preserve any capital asset purchased by the Recipient with funding provided under this Agreement and shall not dispose of it unless Canada authorizes its disposition.

24.2 At the end of the Project Period, or upon termination of this Agreement, if earlier, Canada reserves the right to direct the Recipient to dispose of any capital asset purchased by the Recipient with funding provided under this Agreement by:

- (a) selling it at fair market value and applying the funds realised from such sale to offset Canada's contribution to the Eligible Expenditures;
- (b) turning it over to another organization or to an individual designated or approved by Canada; or
- (c) disposing of it in such other manner as may be determined by Canada.

24.3 Where Canada elects to exercise its right under section 24.2, the Recipient agrees to comply with the related direction provided by Canada.

24.4 For the purposes of section 24.0, "capital asset" means any single item, or a collection of items which form one identifiable functional unit, that:

- (a) is not physically incorporated into another product or not fully consumed by the end of the Project, and



- (b) has a purchase or lease value of more than \$1 000 (before taxes).

but does not include land or buildings purchased or leased by the Recipient in connection with the implementation of the Project

#### 25.0 INTELLECTUAL PROPERTY

25.1 Where in the course of carrying out the Project, the Recipient produces any work using funds provided by Canada, the copyright in the work shall vest in the Recipient. However, the Recipient hereby grants to Canada a non-exclusive, irrevocable and royalty free license to use, translate, adapt, record by any means or reproduce, except for commercial sale in competition with the Recipient, any such work which is produced by the Recipient

25.2 The license granted under section 25.1 shall be for the duration of the copyright and shall include

- (a) the right to sub-license the use of the work to any contractor engaged by Canada solely for the purpose of performing contracts with Canada, and
- (b) the right to distribute the work outside the Department of Employment and Social Development as long as the distribution does not undermine any commercial use of the work intended by the Recipient.

25.3 The Recipient agrees to execute any acknowledgements, agreements, assurances or other documents deemed necessary by Canada to establish or confirm the license granted under section 25.1

25.4 Additionally, with respect to any work licensed under section 25.1, the Recipient:

- (a) warrants that the work shall not infringe on the copyrights of others;
- (b) agrees to indemnify and save harmless Canada from all costs, expenses and damages arising from any breach of any such warranty; and
- (c) shall include an acknowledgment, in a manner satisfactory to Canada, on any work which is produced by it with funds contributed by Canada under this Agreement, acknowledging that the work was produced with funds contributed by Canada and identifying the Recipient as being solely responsible for the content of such work.

25.5 The Recipient shall include in the final report for the Project, which the Recipient is required to submit to Canada under the terms of this Agreement, a copy of any work licensed under section 25.1.

#### 26.0 NOTICES

26.1 Any notices to be given and all reports, information, correspondence and other documents to be provided by either party under this Agreement shall be given or provided by personal delivery, mail, courier service, fax or email at the postal address, fax number or email address, as the case may be, of the receiving party as shown in Schedule A. If there is any change to the postal address, fax number or email address or contact person of a party, the party concerned shall notify the other in writing of the change as soon as possible.

26.2 Notices, reports, information, correspondence and other documents that are delivered personally or by courier service shall be deemed to have been received upon delivery or if sent by mail five (5) working days after the date of mailing, or in the case of notices and documents sent by fax or email, one (1) working day after they are sent

#### 27.0 DISPUTE RESOLUTION

27.1 In the event of a dispute arising under the terms of this Agreement, the Parties agree to make a good faith attempt to settle the dispute. In the event that the Parties are unable to resolve the dispute through negotiation, they agree to give good faith consideration to resorting to other alternate dispute resolution processes to resolve the dispute. However, the Parties agree that nothing contained in this section shall affect, alter or modify the rights of either Party to terminate the Agreement.

#### 28.0 ASSIGNMENT OF THE AGREEMENT

28.1 The Recipient shall not assign this Agreement or any part thereof without the prior written consent of Canada.

#### 28.0 SUCCESSORS AND ASSIGNS

28.1 This Agreement is binding upon the parties and their respective successors and assigns.

#### 30.0 COMPLIANCE WITH LAWS

30.1 The Recipient shall carry out the Project in compliance with all applicable federal, provincial and municipal laws, by-laws and regulations, including any environmental legislation and legislation related to protection of information and privacy. The Recipient shall obtain, prior to the commencement of the Project, all permits, licenses, consents and other authorizations that are necessary to the carrying out of the Project.

#### 31.0 APPLICABLE LAW

31.1 This Agreement shall be governed by and construed in accordance with the applicable laws of the province or territory where the Project will be performed or, if the Project is to be carried out in more than one province or territory, of the province or territory where the Recipient has its main place of business.

#### 32.0 AMENDMENT

32.1 This Agreement may be amended by mutual consent of the parties. To be valid, any amendment to this Agreement shall be in writing and signed by the parties

#### 33.0 UNINCORPORATED ASSOCIATION

33.1 If the Recipient is an unincorporated association, it is understood and agreed by the persons signing this Agreement on behalf of the Recipient that in addition to signing this Agreement in their representative capacities on behalf of the members of the Recipient, they shall be personally, jointly and severally liable for



the obligations of the Recipient under this Agreement, including the obligation to pay any debt that may become owing to Canada under this Agreement.

#### 34.0 COUNTERPARTS

34.1 This Agreement may be executed in counterparts, each of which shall be deemed an original but both of which taken together shall constitute one and the same agreement. The exchange of copies of this Agreement and of signature pages by facsimile or electronic transmission shall constitute effective execution and delivery of this Agreement as to the parties and may be used in lieu of the original Agreement for all purposes. Signatures of the parties transmitted by facsimile or electronic transmission shall be deemed to be their original signatures for all purposes.



SIGNATURES

Signed this 4<sup>th</sup> day of October 2016

For the Recipient, by the following authorized officer(s):

Barbara Desjardins  
(Name, please print)

Brent Reems  
(Name, please print)

*Barbara Desjardins*  
(Signature)

*Brent Reems*  
(Signature)

Barbara Desjardins,  
Board Chair  
(Position)

Corporate Officer  
(Position)

And signed this 11 day of October 2016

For Canada, by the following authorized officer:

Michael Gardiner  
(Name, please print)

*Michael Gardiner*  
(Signature)

Assistant Deputy Minister  
(Position)

AGREEMENT AUTHORIZATION

Content	Initial	Date
Procurement	<i>BR</i>	13-Sep-16
Financial Plan	<i>BR</i>	13-Sep-16
Content	<i>BR</i>	13-Sep-16
GM Approval	<i>BR</i>	Sept 20/16
Form	<i>BR</i>	Sept 22/16
Authority	<i>BR</i>	Sept 22/16



SCHEDULE A

PROJECT DESCRIPTION

NAME OF RECIPIENT Capital Regional District	
PROJECT TITLE Greater Victoria HPS Designated Initiative	
Recipient	Canada
Complete Mailing Address:	Complete Mailing Address:
825 Flagard Street P.O. Box 1000 Victoria, BC V8W 2S6	754 Fort Street, Suite #301 Victoria, BC V8W 1H2
Primary Contact John Reilly	Primary Contact Donna Wingfield
Telephone Number 250-360-3081	Telephone Number 250-419-0237
Fax Number 250-361-4970	Fax Number 250-363-0243
Email Address jreilly@crd.bc.ca	Email Address donna.wingfield@servicecanada.gc.ca
Secondary Contact Gina Dolinsky	Secondary Contact Grace Kerr
Telephone Number 250-360-3319	Telephone Number 250-419-0242
Fax Number	Fax Number 250-363-0243
Email Address gdolinsky@crd.bc.ca	Email Address grace.kerr@servicecanada.gc.ca

Project Start Date	Project End Date	Total Number of Participants (if applicable)	N/A
yyyy-mm-dd 2014-04-01	yyyy-mm-dd 2019-03-31		

Project Description

Objectives

**Amendment #2**  
Amendment #2 will increase the maximum contribution in fiscal year 2016/2017 and 2017/2018 by \$228,190 per year which will increase the maximum total contribution for the agreement to \$2,782,371.

As part of the Government of Canada's support for social infrastructure, Budget 2016 is investing an additional \$111.8 million to enhance services to address homelessness through the Homelessness Partnering Strategy over two years, starting in 2016/17. The additional investment will provide communities across Canada with the flexibility and support they need to help prevent and reduce homelessness.

**Amendment #1**  
Amendment #1 is to amend funding in the agreement to support participation in the 2016 HPS Coordinated Point-in-Time (PIT) Count. Funding is increased from \$2,281,975 to \$2,325,975. A PIT work plan is attached to the agreement specifying the activities necessary for the PIT count, and the deliverables to be provided to the HPS.

For the duration of April 1, 2014 to March 31, 2019, the CRD as the Community Entity (CE) will administer HPS - Designated Communities funding, thereby responding to the Community Plan priorities of the people who are homeless or at imminent risk of homelessness in Victoria.

The annual Designated Communities funding allocation for Victoria is \$456,365.

HPS funds will be used to fund projects, based on Community Plan priorities, eligible under the terms and conditions and related policies and directives of the HPS and recommendations from the CAB.

Activities

The CRD will administer the HPS Designated Communities funding as the CE for Victoria. This will include the following activities which will be monitored against milestones in the Work Plan:

The CE is responsible for implementing strategies to address Community Plan priorities, as well as providing a leadership role in the local implementation of Housing First. The CE will engage the community stakeholders and funding partners to actively work together to prevent and reduce homelessness. The CE will identify funding other than the HPS from partners to meet the community contribution matching requirement.

The CE is responsible for providing support and guidance to the CAB regarding program delivery and administration and assisting to establish the terms of reference for the project selection and recommendation processes. The CE will implement selection processes and solicit and confirm eligibility criteria of sub-project proposals in an open, impartial and fair manner. The CE will assess, approve and enter into funding agreements with sub-agreement holders recommended by the CAB that meet the Community Plan priorities and terms and conditions of the HPS and related policies and directives including eligible activities under the following activity areas: Housing First; Support Services; Capital Investments; Coordination of Resources and Leveraging; and Data Collection and Use.

The CE is responsible for the management of sub-project funding agreements, including financial and activity monitoring of sub-projects to ensure compliance with sub-agreements, and monitoring sub-projects for achievement of expected results. The CE will inform the CAB about the status of sub-projects (including results) and other activities related to the prevention and reduction of homelessness in the community. The CE will report on its activities, including the management of sub-agreements and investment targets, to Canada in accordance with the reporting requirements described in the HPS funding agreement, as well as any additional reporting as required by the HPS.

The CE will ensure the participation and representation of Aboriginal organizations in the planning and implementation of the Community Plan priorities as appropriate.

The CE will conduct a point-in-time count within the first 60 days of 2016 in accordance with the HPS 2016 PIT Count Work Plan.

Expected Results



**Outputs:**

By March 31, 2019, the CRD as the CE will fully invest the HPS Designated Communities funding to address priorities identified in the Community Plan.

The CRD will ensure implementation of the Community Plan as established by the CAB and approved by Canada.

HPS funding will be matched with local community funding partners in the implementation of the Community Plan.

**Outcomes:**

Increased investments in Housing First activities to house chronically and episodically homeless population which will be identified and reported on annually in the Community Plan update.

Victoria as a designated community with an allocation greater than \$200K is required to invest a minimum of 40% of their HPS contribution towards Housing First activities annually starting April 1, 2018.

Reduction in the number of homeless individuals and families using emergency shelters, moving them into stable living environments with access to the services and supports leading to increased self-sufficiency, and the prevention of returning to homelessness.

Creation and maintenance of partnerships to improve services and facilities for homeless individuals and families.

Best use of investments toward alleviating homelessness based on an inclusive decision making process

Specific performance indicators will be included in the Community Plan, which will form part of the funding agreement. Targets will be established by the CAB, in consultation with community stakeholders, based on baseline data that will also be established in the Community Plan. Achievement of project objectives will be reviewed periodically and continuation of funding is subject to demonstrated progress against established targets.

Signatures		
		
RECIPIENT	RECIPIENT	CANADA
Barbara Desjardins, Board Chair October 4, 2016	October 4, 2016	OCT 11 2016
DATE	DATE	DATE



SCHEDULE B  
FINANCIAL PROVISIONS

LEGAL NAME OF RECIPIENT	Capital Regional District
PROJECT TITLE	Greater Victoria HPS Designated Initiative

1.0 MAXIMUM CONTRIBUTION OF CANADA

1.1 The total maximum amount of Canada's contribution towards the Eligible Expenditures of the Project is \$2,782,371

1.2 The maximum amount payable by Canada in each Fiscal Year of the Project Period on account of the contribution is as follows, unless otherwise authorized in writing by Canada:

- \$456,395 in Fiscal Year 2014/2015
- \$500,395 in Fiscal Year 2015/2016
- \$584,593 in Fiscal Year 2016/2017
- \$684,593 in Fiscal Year 2017/2018
- \$456,395 in Fiscal Year 2018/2019

2.0 INTEREST EARNED ON CONTRIBUTION

2.1 If, under section 1.0 of this Schedule, Canada has made payment of its contribution by way of advances and if the amount of interest earned on the advance payments is in excess of one hundred dollars (\$100), such interest is deemed to be part payment of Canada's contribution and will be taken into account in the calculation of the final payment by Canada, or repayment by the Recipient as may be appropriate in the circumstances

3.0 REPAYMENT REQUIREMENTS

3.1 In the event payments made to the Recipient exceed the amount to which the Recipient is entitled under this agreement, the amount of the excess is a debt owing to Canada and shall be promptly repaid to Canada upon receipt of notice to do so and within the period specified in the notice. Without limiting the generality of the foregoing, amounts to which the Recipient is not entitled include:

- (a) the amount of any expenditures paid for with the contribution which are disallowed or determined to be ineligible; and
- (b) any amount paid in error or any amount paid in excess of the amount of the expenditure actually incurred

3.2 Interest shall be charged on overdue repayments owing under section 3.1 in accordance with the Interest and Administrative Charges Regulations (SOR/86-180) (the "Regulations") made pursuant to the Financial Administration Act (R.S.C. 1985 c. F-11). Interest is calculated and compounded monthly at the "average bank rate" within the meaning of such expression as contained in the Regulations, plus three per cent (3%) during the period beginning on the due date specified in the notice to repay and ending on the day before the day on which payment is received by Canada.

3.3 The Recipient acknowledges that where an instrument tendered in payment or settlement of an amount due to Canada under section 3.1 is, for any reason, dishonoured, an administrative charge of \$15 is payable by the Recipient to Canada in accordance with the Regulations.

4.0 OTHER SOURCES OF FUNDING

4.1 The Recipient declares that it has received or is entitled to receive:

a) goods, services or other non-cash contributions for the Project from the following sources, having the following agreed estimated fair and reasonable monetary value:

- (i) Capital Regional District - \$117,000

4.2 The Recipient agrees to inform Canada promptly in writing of any change to the declaration made under section 4.1

4.3 The Recipient agrees that where there is a change to the declaration made in section 4.1 Canada may, in its discretion, reduce the amount of its maximum contribution to the Project by such amount, not exceeding the amount of the change in assistance received, that it considers appropriate.

4.4 If the amount of Canada's contribution already paid to the Recipient exceeds the reduced maximum contribution, as determined under section 4.3, the amount of the excess shall be deemed to be an amount to which the Recipient is not entitled and shall be repaid to Canada in accordance with section 3.0 of this Schedule (Repayment Requirements).

4.5 Upon completion of the Project, and if the amount set out in section 1.1 is in excess of \$100,000, the Recipient agrees to provide Canada with a statement identifying the total funding provided from all sources for the Project, including total funding received for the Project from federal, provincial/territorial and municipal governments.

5.0 PROJECT BUDGET

5.1 The following is the Project Budget



COST CATEGORIES	ESDC	OTHER SOURCES		TOTAL
		CASH	IN-KIND	
1 Administrative Costs				
a Administrative costs				
b Sub-projects Administrative Costs				
2 Capital Costs	\$0.00			
a Facilities				
b Capital assets				
3 Direct Costs	\$2782371.00			
a Staff wages *	\$309 761.00			
b Participant costs				
c Project costs	\$50 199.00			
d Partnership development				
e Child care costs				
f Sub-projects Project Costs *	\$2 416 411.00			
<b>TOTAL</b>	<b>\$2782371.00</b>	<b>117000</b>		<b>\$2,899,371.00</b>

**Budget notes:**

"Administrative Costs" means any expenditure incurred by the Recipient in the course of its regular or ongoing operations that, though indirectly related to the Project, enable the Recipient to manage the Project successfully;

"Sub-Project Administrative Costs" means any expenditure incurred by a Third Party in the course of its regular or ongoing operations that, though indirectly related to the Sub-Project, enable the Third Party to manage the Sub-Project successfully;

"Facilities" means any expenditure incurred by the Recipient, in direct relation to a Project activity towards the purchase of land or a building, construction or renovation of a building, or accomplishing any pre-development activities leading up to any of the latter ends;

"Capital Assets" means any expenditure incurred by the Recipient towards the purchase or leasing-to-own of materials subject to the provisions of section 24.0 of the Articles of Agreement;

"Staff Wages" means any wages, mandatory employment related costs (as required by law) or benefits (as required by a collective agreement or company policy) paid by the Recipient to or on behalf of an employee of the Recipient working directly on the Project;

"Participant Costs" means any wages, mandatory employment related costs (as required by law) or benefits (as required by a collective agreement or company policy), and any support payments (for travel, emergencies, disability, living expenses, dependent care, materials, etc.), tuition fees, or program participation or completion bonuses paid by the Recipient to, or on behalf of, Project Participants;

"Project Costs" means any expenditure incurred by the Recipient in direct relation to the Project activities that is not covered by any other cost category in the Project Budget;

"Partnership Development" means any expenditure incurred by the Recipient towards the development or maintenance of partnerships that support or contribute materially to the goals of the Project.

"Child Care Costs" means any expenditure incurred by the Recipient in support of child care service offerings to aboriginal persons that are adapted to the particular needs of this clientele, and

"Sub-Project Project Costs" means any expenditure incurred by a Third Party in respect of a Sub-Project that does not meet the definition of expenditures included in the Sub-Project Administrative Costs cost category

**6.0 BUDGET FLEXIBILITY**

6.1 The Recipient may except in cases specified in section 6.2 make adjustments to its allocation of funds between any of the cost categories identified in the Project Budget without having to obtain Canada's approval, provided the adjustments do not result in an increase in Canada's maximum contribution set out in section 1.1. However, where the Recipient makes an adjustment allowed by this section, it shall notify Canada promptly in writing of the adjustment.

6.2 The Recipient must obtain Canada's written approval prior to making an adjustment to the Project Budget that increases or decreases the subtotal amount budgeted for:

- (i) any cost category identified with an asterisk (\*) by any amount, or
- (ii) any other cost category by more than 10%.

6.3 Depending upon the extent and significance of the adjustments, written approval by Canada of adjustments made under section 6.2 may be required by Canada to be documented by way of a formal amending agreement signed by both parties.

**7.0 CONDITIONS GOVERNING THE ELIGIBILITY OF EXPENDITURES**



7.1 The expenditures set out in the Project Budget above are subject to the following conditions.

- (a) expenditures must, subject to section 7.2, be incurred during the Project Period;
- (b) expenditures must, in the opinion of Canada, be reasonable;
- (c) the portion of the cost of any travel, meals and accommodation costs that exceeds the rates for public servants set out in the National Joint Council of Canada's Travel Directive is not eligible for reimbursement;
- (d) the portion of hospitality costs that exceed the rates set out in the Directive on Travel, Hospitality Conference and Event Expenditures, Appendix 2 of Canada's Treasury Board is not eligible for reimbursement;
- (e) the portion of the cost of any goods and services purchased by the Recipient for which the Recipient may claim a tax credit or reimbursement is not eligible for reimbursement;
- (f) depreciation of capital assets is not eligible for reimbursement;
- (g) fines and penalties are not eligible for reimbursement;
- (h) the cost of alcoholic beverages are not eligible for reimbursement;
- (i) costs associated with software development and/or the purchase of hardware for the collection and/or management of homelessness data that results in an inability to participate in the National Homelessness Information System Initiative (NHIS); and that constitutes a redundant use of funds and duplicates activities already offered through the Homeless Individuals and Families Information System (HIFIS) software are not eligible for reimbursement.

7.2 If, under the terms of this Agreement, the Recipient is required to provide in Canada an audited annual financial report at the end of the Project Period, and if the cost of the audit is otherwise an Eligible Expenditure, the audit cost is an Eligible Expenditure notwithstanding that it is incurred outside the Project Period.

#### 8.0 TERMS OF PAYMENT

8.1 Subject to section 8.2, Canada will make payments of its contribution by way of advances. Each payment shall cover a quarterly period (hereinafter referred to as the "Payment Period") during the Project Period.

8.2 (1) Subject to subsection (2), Canada may, at any time and in its sole discretion,

- (a) change the basis of payments of its contribution to the Recipient to progress payments for any period during the Project Period, or
- (b) change the Payment Period to a monthly period, or
- (c) change both (a) and (b).

(2) Where Canada decides to make a payment change pursuant to subsection (1), Canada shall notify the Recipient in writing of the change and of the period during which the change will be applicable.

(3) For the purposes of this Schedule,

"progress payments" means payments to reimburse the Recipient for Eligible Expenditures after they have been incurred,

"monthly period" means a calendar month that falls within the Project Period or if the calendar month falls only partially within the Project Period, such portion thereof, and

"quarterly period", in relation to a series of consecutive three-month periods encompassing the Project Period and beginning on the first day of the calendar month determined by Canada for purposes of administering this agreement, means such a quarter that falls within the Project Period or, if the quarter falls only partially within the Project Period, such portion thereof.

8.3 (1) Where Canada makes payments of its contribution to the Recipient by way of advances,

- (a) each advance shall cover the Recipient's estimated financial requirements for each Payment Period. Such estimate shall be based upon a cash flow forecast that, in the opinion of Canada, is reliable and up-to-date; and
- (b) if the amount of an advance payment for a Payment Period exceeds the actual amount of Eligible Expenditures incurred by the Recipient during the Payment Period, Canada reserves the right to deduct the excess amount from any subsequent advance payment to be made under this Agreement.

(2) Where Canada makes payments of its contribution to the Recipient by way of progress payments, each progress payment shall cover the Recipient's actual Eligible Expenditures incurred during the Payment Period as approved by Canada following submission by the Recipient of the financial claim referred to in section 8.4 (1).

8.4 (1) Following the end of each Payment Period of the Agreement, the Recipient shall provide Canada with a financial claim using a form provided by Canada and signed/certified as true and accurate by an authorized official (or officials) of the Recipient. The financial claim shall contain

- (a) a summary breakdown, per cost category in the Project Budget, of Eligible Expenditures incurred during the Payment Period;
- (b) an updated forecast of Project expenditures



- (c) an activity report describing the work completed on the Project during the Payment Period, and
- (d) any supporting documentation relative to the financial claim that may be requested by Canada (e.g. a copy of the general ledger).

(2) The Recipient shall submit the financial claim required under subsection (1) no later than

(a) if the Payment Period is monthly, forty-five (45) days following the Payment Period,

and

(b) if the Payment Period is quarterly, sixty (60) days following the Payment Period.

8.5 (1) Canada may withhold any advance payment due to the Recipient under this Agreement

- (a) if the Recipient has failed to submit when due
  - (i) a financial claim under section 8.1 (1); or
  - (ii) any other document required by Canada under this Agreement, or
- (b) pending the completion of an audit of the Recipient's books and records, should Canada decide to undertake such an audit.

(2) Canada may also withhold any progress payment due to the Recipient under this Agreement

- (a) if the Recipient has failed to submit when due any other document required by Canada under this agreement; or
- (b) pending the completion of an audit of the Recipient's books and records, should Canada decide to undertake such an audit.

8.6 Canada may retain a holdback of an amount up to 10% of its maximum contribution at the end of the Project Period pending

- (a) receipt and verification by Canada of a final financial claim for the last Payment Period where advances have been made,
- (b) receipt and acceptance by Canada of the final report for the Project that the Recipient is required to submit to Canada under the terms of this Agreement, and
- (c) receipt of any other Project-related record that may be required by Canada.

#### 9.0 ANNUAL FINANCIAL REPORTS

9.1 (1) Within one hundred and twenty (120) days following the end of each "Reporting Period" during the Project Period, the Recipient shall provide to Canada a financial report containing,

(a) a statement setting out:

- (i) the total amount received from Canada under this Agreement during the Reporting Period,
- (ii) the total revenue received from other sources for the Project during the Reporting Period, including cash and the value of in-kind contributions,
- (iii) the total amount of GST/HST rebates and interest earned by the Recipient during the Reporting Period on advances of Canada's contribution if the amount of interest earned is in excess of one hundred dollars (\$100), and
- (iv) the amounts realized during the Reporting Period from the disposition of any capital assets that had been originally purchased with funds from Canada's contribution under this Agreement, and

(b) an itemized statement setting out, by expenditure category as per the Project Budget, the total amount of the expenditures incurred during the Reporting Period in relation to the Project and to the corresponding approved Investment Plan.

(2) For greater certainty, failure on the part of the Recipient to submit financial reports within the timeframe specified under subsection (1) may result in Canada withholding payment of an advance or progress payment in accordance with subsections 8.5(1) or (2) of this Schedule or withholding payment of any holdback retained by Canada in accordance with section 8.6 of this Schedule.

(3) For the purposes of this section, "Reporting Period" means each Fiscal Year that falls within the Project Period or, if the Fiscal Year falls only partially within the Project Period, such portion thereof.

8.2 Each financial report submitted to Canada pursuant to section 9.1 shall be accompanied by such supporting documentation as may be requested by Canada.

#### Audit Requirement

9.3 (1) Unless otherwise notified by Canada in writing, the Recipient shall engage an independent licensed public accountant to audit, in accordance with Canadian generally accepted auditing standards, each financial report required under section 9.1. The Recipient's letter of audit engagement shall include the requirements set out under section 9.1.

(2) If requested by Canada to do so, the Recipient shall allow representatives of Canada to discuss any audited financial report referred to in this section with the Recipient's auditors. The Recipient shall execute such directions, consents and other authorizations as may be required in order to permit its auditors to discuss the report with representatives of Canada and provide any requested information to them in relation



to the audit.

Signatures		
 RECIPIENT	 RECIPIENT	 CANADA
Barbara Desjardins, Board Chair October 4, 2016 DATE	Oct. 4, 2016 DATE	OCT 11 2016 DATE



SCHEDULE C

ADDITIONAL CONDITIONS

LEGAL NAME OF RECIPIENT Capital Regional District
PROJECT TITLE: Greater Victoria HPS Designated Initiative

1.0 WORK PLAN

1.1 For each Fiscal Year that falls within the Project Period or, if the Fiscal Year falls only partially within the Project Period, such portion thereof, the Recipient shall provide to Canada for approval a "Work Plan" outlining the activities to be undertaken by the Recipient in implementing the Project during the Fiscal Year or part thereof. Each Work Plan shall be prepared in accordance with guidelines issued by Canada.

1.2 The Recipient's approved Work Plan for the first Fiscal Year or part thereof of the Project Period is attached to and forms an integral part of Schedule A (Project Description) to this Agreement. The Work Plan for each subsequent Fiscal Year or part thereof shall be provided to Canada for approval no later than sixty (60) days prior to the beginning of each Fiscal Year to which it relates.

1.3 Canada will notify the Recipient of its approval of each subsequent Work Plan no later than thirty (30) days following receipt of each plan. Upon approval, each subsequent Work Plan shall be attached to and form an integral part of Schedule A.

1.4 The Recipient shall implement the Project in accordance with the approved Work Plans. The Recipient shall not make any material change to an approved Work Plan without the written approval of Canada.

2.0 REDISTRIBUTION OF FUNDING TOWARDS SUB-PROJECTS

Interpretation

2.1 For the purposes of this Agreement,

"Sub-Agreement Holder" means an organization other than the Recipient, to whom funding provided to the Recipient under this Agreement is further distributed to enable the organization to carry out a Sub-Project; and

"Sub-Project" means

- (a) an activity eligible for financial support under the Project which is implemented by a Sub-Agreement Holder; or
- (b) an activity eligible for financial support under the Project implemented directly by the Recipient.

Sub-Project Selection Process

2.2 (1) The Recipient shall put into place a process satisfactory to Canada for ensuring that proposals for Sub-Projects to be funded with Canada's contribution, including Sub-Projects implemented directly by the Recipient, are assessed and selected in an open, impartial and fair manner. The Recipient agrees that part of the process will involve consultation on all such proposals with the Community Advisory Board. The Recipient must ensure that Sub-Project proposals of a capital nature address their sustainability. For Sub-Projects of a capital nature, Canada will provide a form to address this aspect that is to be included as part of such proposals.

(2) The Recipient shall also put into place written operational policies and procedures relating to its financial management of the Project and its administration of Sub-Projects, and shall provide a copy of those policies and procedures to Canada, together with the names and positions of personnel within the Recipient's organization with responsibilities for the financial management and decision making in connection with the carrying out of the responsibilities of the Recipient under this Agreement. The Recipient shall notify Canada promptly of any changes in such personnel that occur from time to time.

(3) A sub-project shall not be funded under this Agreement unless the organization demonstrates that it applies sound financial management practices and respects the highest level of integrity.

(4) Without limiting the foregoing and subject to subsection 5, a sub-project shall not be funded under this Agreement if a review, audit or investigation conducted by the federal government, the government of a province or a public body created under the law of a province in the previous 3 years concludes to irregularities in the organization's financial management practices or raises integrity issues.

(5) The restriction in subsection 4 does not apply if an organization demonstrates that the irregularities and issues have been resolved and that measures have been diligently put in place to prevent recurrence.

Agreements with Sub-Agreement Holders

2.3 (1) When the Recipient provides funding to a Sub-Agreement Holder to support the costs of a Sub-Project, the Recipient shall ensure that there is a written agreement between it and the Sub-Agreement Holder that sets out the terms and conditions under which the Recipient is providing funding to the Sub-Agreement Holder.

(2) The written agreement referred to in subsection (1) shall include:

- (a) an identification of the Sub-Agreement Holder (proper legal name and address);
- (b) a description of the purpose of the funding;
- (c) the effective date, the date of signing and the duration of the agreement.



- (d) the financial and/or non-financial conditions attached to the funding and the consequence of failing to adhere to these conditions, including provision for a right of termination of the agreement in the event of a breach of the agreement;
- (e) the costs of the Sub-Project eligible for reimbursement;
- (f) the conditions to be met before payment is made and the schedule and basis of payment;
- (g) the maximum amount payable;
- (h) the provision of such reports by the Sub-Agreement Holder on its Sub-Project, outcomes and results as may be specified by Canada in any reporting guidelines or instructions provided to the Recipient by Canada or as may be specified elsewhere in this Agreement;
- (i) a provision giving both Canada and the Recipient the right to conduct an audit of the books and records of the Sub-Agreement Holder, even though an audit may not always be undertaken, and to have access to the business premises and business site of the Sub-Agreement Holder to monitor and inspect the administration of the Sub-Project;
- (j) a requirement for the Sub-Agreement Holder to repay to the Recipient the amount of any funding provided to which it is not entitled. The agreement should specify that amounts to which it is not entitled include the amount of any payments:
  - (i) made in error;
  - (ii) made for costs in excess of the amount actually incurred for those costs; and
  - (iii) that were used for costs that were not eligible for reimbursement under the agreement;
- (k) if the Sub-Project involves an activity described in section 4.1 or 4.3:
  - (i) a repayment requirement modeled on the provisions of section 4.1 or 4.3, as the case may be, except that every reference to "Recipient" in those provisions shall be replaced by a reference to the term used by the Recipient to identify the Sub-Agreement Holder in its agreement with the Sub-Agreement Holder and every reference to "Canada" shall be replaced by a reference to the term used by the Recipient to identify itself in its agreement with the Sub-Agreement Holder; and
  - (ii) a provision giving both Canada and the Recipient, for the number of years following the end-date of the Sub-Project in respect of which the repayment requirement referred to in subparagraph (i) applies to the Sub-Agreement Holder, the right to inspect the operation of the facility referred to in section 4.1 or 4.3 at any reasonable time to verify the continuing use of the facility for the purposes for which it was funded; and
  - (iii) a provision stipulating that the Sub-Agreement holder shall not mortgage, charge or otherwise encumber the facility property during the period of the Sub-Project, or for the number of years following the end-date of the Sub-Project in respect of which the repayment requirement referred to in subparagraph (i) applies to the Sub-Agreement Holder without the prior written approval of the Recipient; and
  - (iv) a provision stipulating that the Sub-Agreement Holder shall ensure that all environmental protection measures, standards and rules relating to the Sub-Project established by competent authorities are respected;
- (l) a provision stipulating that payment of any funding under the agreement is subject to the availability of funds and that payment of funding may be cancelled or reduced in the event that Canada cancels or reduces its funding to the Recipient;
- (m) a requirement for the Sub-Agreement Holder to give appropriate recognition of the contribution of Canada to the Sub-Project being carried out in its publicity and signage relating to the Sub-Project, including any information provided to the public on any web site maintained by the Sub-Agreement Holder;
- (n) a requirement that the Sub-Agreement Holder notify the Recipient (Community Entity) twenty (20) working days in advance of any and all communications activities, publications, advertising and press releases planned by the Sub-Agreement Holder relating to the Sub-Project; and
- (o) a requirement for the Sub-Agreement Holder to cooperate with representatives of Canada during any official news release or ceremonies relating to the announcement of the Sub-Project.

**Internal Memoranda of Understanding (MOU)**

2.4 When the Recipient is implementing a Sub-Project directly, the Recipient shall ensure that there is an internal memorandum of understanding (MOU) with the head of the branch or division of its organization responsible for implementing the Sub-Project, as if the head of the branch or division implementing the Sub-Project was a Sub-Agreement Holder, setting out terms and conditions of the funding modelled on the requirements of section 2.3, with such modifications as the circumstances may require.

**Provision of Copies of Agreements and MOUs**

2.5 Upon request, the Recipient shall provide Canada with a copy of any or all agreements with Sub-Agreement Holders and MOUs referred to in sections 2.3 and 2.4, respectively

**Monitoring and Audit of Sub-Projects**

2.6 The Recipient shall exercise due diligence in the administration of its agreements with Sub-Agreement



Holder and of its MOUs referred to in section 2.4. Without limiting the generality of the foregoing, in exercising due diligence, the Recipient shall take appropriate measures for ensuring compliance by Sub-Agreement Holders and, in the case of MOUs referred to in section 2.4, by the responsible branch or division head of the Recipient, with the terms and conditions of the agreement or MOU, as the case may be, including:

- (a) monitoring the Sub-Project through, as appropriate, periodic visits to the Sub-Project site or other means such as telephone calls and questionnaires;
- (b) undertaking periodic audits or inspections of financial records to verify that costs claimed under the agreement or MOU were actually incurred and were in accordance with the agreement or MOU as the case may be;
- (c) furnishing the Sub-Agreement Holder or the branch or division head of the Recipient, as the case may be, with necessary advice, support and training to assist it in carrying out the Sub-Project and in realizing the objectives and achieving the results of the Sub-Project;
- (d) where there are breaches of the agreement or MOU, taking appropriate measures to resolve the situation, including, in the case of an agreement with a Sub-Agreement Holder, termination of the agreement with the Sub-Agreement Holder or legal action to enforce compliance with the agreement; and
- (e) in the case of an agreement with a Sub-Agreement Holder, making all reasonable efforts to recover any overpayments under the agreement.

2.7 The Recipient shall provide to Canada, upon request, a report of any monitoring review or audit of a Sub-Project undertaken by the Recipient under section 2.6.

2.8 Where Canada desires to exercise its right to audit the books and records of a Sub-Agreement Holder or to monitor and inspect its Sub-Project, Canada shall notify the Recipient of its desire to do so. The Recipient shall cooperate with Canada in obtaining access to the financial records and, if required by Canada, it shall take all necessary steps to enforce the Recipient's and Canada's right of access to the Sub-Agreement Holder's records, including taking legal proceedings against the Sub-Agreement Holder.

### 3.0 REPORTING

#### *Report of Approved Sub-Projects*

3.1 Each financial claim submitted to Canada pursuant to section 8 (Terms of Payment) of Schedule B to this Agreement shall be accompanied by a report identifying all agreements with Sub-Agreement Holders and MOUs approved by the Recipient to date containing the following information about each Sub-Project:

- (a) the Sub-Project file identifier;
- (b) in the case of agreements with Sub-Agreement Holders, the legal name of the Sub-Agreement Holder and Sub-Agreement Holder contact information;
- (c) in the case of MOUs, the name of the branch or division within the Recipient's organization responsible for carrying out the Sub-Project and Recipient branch or division contact information;
- (d) the amount of funding provided under this Agreement to be provided by the Recipient for the Sub-Project;
- (e) identification of the applicable HPS funding stream;
- (f) the Sub-Project start and end dates; and
- (g) the activity area(s) supported by the Sub-Project, i.e. (i) Housing First; (ii) support services; (iii) capital investments; (iv) activities to ensure coordination or resources and leveraging; or (v) activities to improve data collection and use.

#### *Results Reporting*

3.2 Within thirty (30) days of the start date of each Sub-Project, the Recipient shall provide to Canada, using an online results reporting system provided by Canada, a "Project Details Report" acceptable to Canada in both scope and detail, that sets out the detailed description of the Sub-Project. Any changes to the funding amount, activities, or end date of a Sub-Project approved by the Recipient will require a revised Project Details Report that must be provided to Canada, using the online system, within thirty (30) days of the change.

3.3 Where applicable, the Recipient shall provide to Canada, no later than forty-five (45) days following each Fiscal Year that falls within the period of the Sub-Project, an "Annual Results Report" detailing the outputs and outcomes achieved in implementing each Sub-Project during the Fiscal Year. Each Annual Results Report shall be provided to Canada using the online system referred to in section 3.2.

#### *Annual Community Plan Update*

3.4 If the Recipient is funded by the HPS Designated Communities funding stream, or funded by the Aboriginal Homelessness funding stream with a community allocation greater than \$200,000, the Recipient shall provide annually to Canada, using a form provided by Canada, no later than sixty (60) days following the period covered by the report, a report, satisfactory to Canada in scope and detail, on:

- (a) progress in meeting Community Plan priorities;
- (b) expenditures supporting investment targets including minimum Housing First requirement mentioned under Expected Results in Schedule A;
- (c) Community Contribution received (for Designated Communities funding stream only);
- (d) updating Community Plan priorities and targets for subsequent years (if required); and
- (e) any other update as may be required by Canada.



**4.0 REQUIREMENTS IN RESPECT OF FACILITY PROPERTY AND REPAYMENT**

*Project Funding Used to Purchase Land or a Building for a Facility*

**4.1 If**

(a) funding provided for a Sub-Project is used towards the costs of purchasing land or a building to establish a new facility to provide shelter space, transitional or supportive housing or other services for the homeless, and

(b) the amount of the funding referred to in paragraph (a) is in excess of \$50,000, the Recipient shall repay as a debt owing to Canada,

(c) an amount equal to 100% of the funding referred to in paragraph (a) if,

(i) five (5) years following the end date of the Sub-Project, a facility that provides shelter space, transitional or supportive housing or other services for the homeless has not been established on the property referred to in paragraph (a), or

(ii) at any time during the five-year period following the end date of the Sub-Project, Canada concludes, based on

(A) information provided by the Recipient under section 4.7, or

(B) the results of a site inspection conducted by Canada under section 4.9

that the facility referred to in paragraph (a) will not be established during said five-year period and notifies the Recipient of such conclusion in writing, and

(d) an amount determined in accordance with section 4.2 if, within five (5) years following the end date of the Sub-Project, the land or building referred to in paragraph (a) is sold and the proceeds of disposition are not forthwith committed to supporting a facility providing similar services to the homeless that is approved by Canada.

**4.2** The amount repayable by the Recipient under paragraph 4.1(d), if the event referred to in that paragraph occurs, shall be determined as follows:

(a) if the event occurs within one year of the end date of the Sub-Project, a sum equal to 100% of the funding referred to in paragraph 4.1(a);

(b) if the event occurs within two years, but after one year of the end date of the Sub-Project, a sum equal to 80% of the funding referred to in paragraph 4.1(a);

(c) if the event occurs within three years, but after two years of the end date of the Sub-Project, a sum equal to 60% of the funding referred to in paragraph 4.1(a);

(d) if the event occurs within four years, but after three years of the end date of the Sub-Project, a sum equal to 40% of the funding referred to in paragraph 4.1(a); or

(e) if the event occurs within five years, but after four years of the end date of the Sub-Project, a sum equal to 20% of the funding referred to in paragraph 4.1(a).

*Project Funding Used for Construction or Renovations*

**4.3 If**

(a) funding provided for a Sub-Project is used towards the costs of constructing or renovating a building to establish a new facility to provide shelter space, transitional or supportive housing or other services for the homeless or towards the costs of expanding or renovating an existing facility that provides shelter space, transitional or supportive housing or other services for the homeless, and

(b) the amount of the funding referred to in paragraph (a) is in excess of \$50,000, the Recipient shall repay as a debt owing to Canada,

(c) an amount equal to 100% of the funding referred to in paragraph (a) if the Sub-Project referred to in that paragraph is not completed by the end date of the Sub-Project, and

(d) an amount determined in accordance with section 4.4 if the activity referred to in paragraph (a) is completed by the end date of the Sub-Project but within five (5) years following the end date of the Sub-Project either of the following events occurs:

(i) the facility ceases to operate for its intended purpose and is not used for some other service approved by Canada in support of the homeless but is converted to some other use, or

(ii) the facility is sold and the proceeds of disposition are not forthwith committed to supporting a facility providing similar services to the homeless that is approved by Canada.

**4.4** The amount repayable by the Recipient under paragraph 4.3(d) if either event referred to in subparagraph 4.3(d)(i) or (ii) occurs shall be determined as follows:

(a) for renovations representing 30% or less of the market value of the facility established as part of the project assessment process, if the event occurs within:

(i) one year of the end date of the Sub-Project a sum equal to 100% of the funding referred to in paragraph 4.3(a); or

(ii) two years, but after one year of the end date of the Sub-Project, a sum equal to 80% of the funding referred to in paragraph 4.3(a), and



(b) for construction and for renovations representing more than 30% of the market value of the facility established as part of the project assessment process, if the event occurs within

- (i) one year of the end date of the Sub-Project, a sum equal to 100% of the funding referred to in paragraph 4.3(a);
- (ii) two years, but after one year of the end date of the Sub-Project, a sum equal to 80% of the funding referred to in paragraph 4.3(a);
- (iii) three years, but after two years of the end date of the Sub-Project, a sum equal to 60% of the funding referred to in paragraph 4.3(a);
- (iv) four years, but after three years of the end date of the Sub-Project, a sum equal to 40% of the funding referred to in paragraph 4.3(a); or
- (v) five years, but after four years of the end date of the Sub-Project, a sum equal to 20% of the funding referred to in paragraph 4.3(a).

4.5 For greater certainty, the Recipient acknowledges that the repayment requirements in sections 4.1 and 4.3 apply to it not only where the Sub-Project is implemented by it directly but also where it is being implemented by a Sub-Agreement Holder. Consequently, where the Recipient provides funding to a Sub-Agreement Holder for a Sub-Project that involves an activity referred to in section 4.1 or 4.3, the Recipient must ensure pursuant to paragraph 2.3(k) that its agreement with the Sub-Agreement Holder includes repayment obligations on the part of the Sub-Agreement Holder that are modeled on the provisions of section 4.1 or 4.3, as the case may be, except that every reference to "Recipient" in those provisions shall be replaced by a reference to the term used by the Recipient to identify the Sub-Agreement Holder in its agreement with the Sub-Agreement Holder and every reference to "Canada" shall be replaced by a reference to the term used by the Recipient to identify itself in its agreement with the Sub-Agreement Holder.

*Repayment to Canada of Amounts Recovered from Sub-Agreement Holders*

4.8 Where a Sub-Agreement Holder is required, under the terms of its agreement with the Recipient, to repay an amount to a Recipient pursuant to a repayment obligation referred to in section 4.5, the Recipient shall repay to Canada any such amount recovered by the Recipient from the Sub-Agreement Holder.

*Annual Monitoring of, and Declaration on, Facility Establishment and/or Utilization Following Completion*

4.7 If a Sub-Project involves an activity described in section 4.1 or 4.3, the Recipient shall, for the number of years following the end-date of the Sub-Project in respect of which the repayment requirements in section 4.2 or 4.4, as the case may be, are applicable (hereinafter "the Monitoring Period")

- (a) annually monitor, as the case may be,
  - (i) progress made towards the establishment of the facility, or
  - (ii) the use of the facility to verify its continuing use for the purposes for which the Recipient had provided its funding, and
 immediately notify Canada if the activities leading to the establishment of a facility have ceased, the facility property has been sold or the facility has ceased to be used for its intended purposes, and
- (b) provide annually to Canada, using a form provided by Canada, a declaration regarding, as the case may be,
  - (i) the progress made towards the establishment of the facility during the year covered by the declaration, or
  - (ii) utilization of the facility during the year covered by the declaration.

4.8 Each annual declaration referred to in section 4.7 shall be provided to Canada no later than ninety (90) days following the end of the year covered by the declaration.

4.9 During the Monitoring Period, the Recipient shall ensure that representatives of Canada are allowed to inspect the operation of the facility at any reasonable time to verify its continuing use for the purposes for which it was funded.

*No Mortgaging or Charging of Facility Property*

4.10 If the Recipient itself carries out a Sub-Project involving an activity described in section 4.1 or 4.3, the Recipient shall not mortgage, charge or otherwise encumber the facility property during the period of the Sub-Project or during the Monitoring Period, without the prior written approval of Canada. Canada undertakes that its approval shall not be unreasonably withheld.

4.11 If a Sub-Agreement Holder is carrying out a Sub-Project involving an activity described in section 4.1 or 4.3, the Recipient shall ensure that the Sub-Agreement Holder does not mortgage, charge or otherwise encumber the facility property during the period of the Sub-Project or during the Monitoring Period, without the prior written approval of the Recipient.

**5.0 ENVIRONMENTAL PROTECTION**

5.1 The Recipient shall:

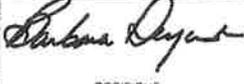
- (a) maintain and implement any and all environmental protection measures prescribed by Canada for ensuring that the harm to the environment resulting from the Project, if any, will remain minimal; and
- (b) ensure that all environmental protection measures, standards and rules relating to the Project established by competent authorities are respected.



6.0 OFFICIAL LANGUAGES

6.1 The Recipient shall

(a) provide its services, where appropriate, in such a manner as to address the needs of both official language communities

Signatures		
 RECIPIENT	 RECIPIENT	 CANADA
Barbara Desjardins, Board Chair October 4, 2016 DATE	Oct 4, 2016 DATE	OCT 11 2016 DATE



**Funding Agreement between  
Capital Regional District and  
Government of Canada**

**Homelessness Partnering Strategy  
Aboriginal Homelessness Agreement #012804670**





Project #: D12804670  
Amendment 1

**Homelessness Partnering Strategy**

**Community Entity**

**Aboriginal Homelessness**

**FUNDING AGREEMENT**

**BETWEEN**

**Her Majesty the Queen in Right of Canada (hereinafter  
referred to as "Canada"), as represented by the Minister  
of Employment and Social Development Canada AND**

**Capital Regional District  
(hereinafter referred to as "the Recipient")**

**Hereinafter collectively referred to as "the Parties"**

**Articles of Agreement**

Whereas Canada has established the Homelessness Partnering Strategy (hereinafter referred to as "the Program") to support projects aimed at reducing homelessness, primarily through the Housing First approach, and includes projects aimed at preventing individuals and families at imminent risk from becoming homeless;

Whereas the Recipient has applied to Canada for funding to carry out the project described in Schedule A;

Whereas Canada has determined that the Recipient is eligible to apply for funding under the Program and that the Project qualifies for support under the Program; and

Whereas Canada has agreed to make a contribution to the Recipient towards the costs of the Project;

Now, therefore, Canada and the Recipient agree as follows:

**1.0 AGREEMENT**

1.1 The following documents, and any amendments thereto, constitute the entire agreement between the Recipient and Canada with respect to its subject matter and supersedes all previous understandings, agreements, negotiations and documents collateral, oral or otherwise between them relating to its subject matter:

- (a) These Articles of Agreement;
- (b) Schedule A - entitled "Project Description";
- (c) Schedule B - entitled "Financial Provisions" and
- (d) Schedule C - entitled "Additional Provisions".

**2.0 INTERPRETATION**

2.1 Unless the context requires otherwise, the expressions listed below have the following meanings for the purposes of this Agreement:

"Eligible Expenditures" means the expenditures which are listed in the Project Budget in Schedule B, and in compliance with the Conditions Governing the Eligibility of Expenditures set out in Schedule B

"Fiscal Year" means the period commencing on April 1 in one calendar year and ending on March 31 in the next calendar year;

"Project" means the project described in Schedule A;

"Project Period" means the period beginning on the Project Start Date specified in Schedule A and ending on the Project End Date specified in Schedule A; and

"Working Day" means Monday through Friday except statutory holidays

**3.0 EFFECTIVE DATE AND DURATION**

3.1 This Agreement shall come into effect on the date it is signed by the last of the Parties to do so and, subject to section 3.2, shall expire at the end of the Project Period unless the Agreement is terminated on a prior date in accordance with the terms of this Agreement.

3.2 All obligations of the Recipient shall expressly or by their nature survive termination or expiry of this Agreement and shall continue in full force subsequent to and notwithstanding such termination or expiry until and unless they are satisfied or by their nature expire.

**4.0 PURPOSE OF THE CONTRIBUTION**

4.1 The purpose of Canada's funding is to enable the Recipient to carry out the Project. The funding shall be used by the Recipient solely for the purpose of paying the Eligible Expenditures.



## 5.0 CANADA'S CONTRIBUTION

5.1 Subject to the terms and conditions of this Agreement, Canada agrees to make a contribution to the Recipient in respect of the Eligible Expenditures. The amount of Canada's contribution shall not exceed the total maximum amount specified in section 1.1 of Schedule B.

5.2 Where the Project Period covers more than one Fiscal Year, the amount payable by Canada on account of its contribution in each Fiscal Year of the Project Period shall not exceed the amount shown in section 1.2 of Schedule B for that Fiscal Year.

## 6.0 APPROPRIATION

6.1 Any payment under this Agreement is subject to the appropriation of funds by Parliament for the Fiscal Year in which the payment is to be made.

## 7.0 REDUCTION OR TERMINATION OF FUNDING

7.1 If

- (a) the Program named in this Agreement is cancelled,
- (b) the level of funding for the Program named in this Agreement for any Fiscal Year in which payment is to be made under the Agreement is reduced as a result of a governmental or departmental spending decision, or
- (c) Parliament reduces the overall level of funding for the programs of the Department of Employment and Social Development for any Fiscal Year in which payment is to be made under the Agreement,

Canada may, upon not less than ninety (90) days notice, reduce its funding under this Agreement or terminate the Agreement.

7.2 Where, pursuant to section 7.1, Canada gives notice of its intention to reduce its funding, and where, as a result of the reduction in funding, the Recipient is of the opinion that it will be unable to complete the Project or will be unable to complete the Project in the manner desired by the Recipient, the Recipient shall notify Canada of same as soon as possible after receiving notice of the funding reduction and may, upon not less than thirty (30) days written notice to Canada, terminate the Agreement.

## 8.0 RECIPIENT DECLARATIONS

8.1 The Recipient

- (a) declares that it has provided Canada with a true and accurate list of all amounts owing to the Government of Canada under legislation or funding agreements which were past due and in arrears at the time of the Recipient's application for funding under the Program named in this Agreement,
- (b) agrees to declare any amounts owing to the Government of Canada under legislation or funding agreements which have become past due and in arrears following the date of its application for funding, and
- (c) recognizes that Canada may recover any amounts referred to in paragraph (a) or (b) that are owing by deducting or setting off such amounts from any sum of money that may be due or payable to the Recipient under this Agreement.

8.2 The Recipient declares that any person who has been lobbying on its behalf to obtain the contribution that is the subject of this Agreement was in compliance with the provisions of the Lobbying Act [R.S.C. 1985 c. 44 (4th Supp.)], as amended from time to time, at the time the lobbying occurred and that any such person to whom the aforementioned act applies, has received, or will receive, no payment, directly or indirectly, from the Recipient that is in whole or in part contingent on obtaining this Agreement.

## 9.0 PROJECT RECORDS

9.1 The Recipient shall

- (a) keep proper books and records, in accordance with generally accepted accounting principles, of all expenditures and revenues relating to the Project, including cash contributions received from Canada and cash contributions from other sources, as well as records substantiating the receipt and value of any in-kind contributions to the costs of the Project referred to in the Project Budget in Schedule B,
- (b) keep records of all Project-related contracts and agreements and all invoices, receipts and vouchers relating to Eligible Expenditures, and
- (c) keep records of all Project-related activity, progress and evaluation reports and reports of Project reviews or audits carried out by, or on behalf of, the Recipient.

9.2 The Recipient shall retain the books and records referred to in section 9.1 for a period of six (6) years following the Project Period.

## 10.0 CANADA'S RIGHT TO AUDIT

10.1 During the Project Period and for a period of six (6) years thereafter, the Recipient shall, upon request, grant representatives of Canada access to the books and records referred to in section 9.0 for the purpose of conducting an audit to verify compliance with the terms and conditions of this Agreement and verify expenses claimed by the Recipient as Eligible Expenditures. The Recipient shall permit Canada's representative(s) to take copies and extracts from such accounts and records. The Recipient shall also provide Canada with such additional information as Canada may require with reference to such books and records.



#### 11.0 FINANCIAL AND ACTIVITY MONITORING

11.1 During the Project Period, the Recipient shall grant representatives of Canada reasonable access to the Project site and business premises of the Recipient, if different from the Project site, and to all Project-related books and records referred to in section 9.0 at all reasonable times for the purpose of conducting periodic financial and activity monitoring reviews of the Project. The Recipient shall also, upon request, provide representatives of Canada with copies and extracts from such books and records.

#### 12.0 INQUIRY BY THE AUDITOR GENERAL OF CANADA

12.1 If, during the Project Period or within a period of six years thereafter, the Auditor General of Canada, in relation to an inquiry conducted under subsection 7.1(1) of the *Auditor General Act* [R.S.C., 1985, c. A-17], requests that the Recipient provide him or her with any records, documents or other information pertaining to the utilization of the funding provided under this Agreement, the Recipient shall provide the records, documents or other information within such period of time as may be reasonably requested in writing by the Auditor General of Canada.

#### 13.0 FINAL REPORT

13.1 Unless the Recipient is required under a schedule to this Agreement to provide another, more specific, final report outlining the results of the Project, the Recipient shall provide Canada with a final report that summarizes the Project scope, describes the results achieved, explains any discrepancies between the results and the planned or expected results and contains such other information as Canada may specify in writing to the Recipient. The Recipient shall provide Canada with the final report within sixty (60) days following the Project Period.

#### 14.0 EVALUATION

14.1 The Recipient agrees to cooperate with Canada in the conduct of any evaluation of the Project and/or the Program named in this agreement that Canada may carry out during the Project Period or within a period of three years thereafter. Without limiting the generality of the foregoing, if requested by Canada to do so for the purpose of conducting an evaluation, the Recipient agrees to:

- (a) participate in any survey, interview, case study or other data collection exercise initiated by Canada; and
- (b) subject to section 14.2, provide Canada with contact information of the Project partner organizations, if any, who participated in the Project, and of the members of the board of directors of the Recipient.

14.2 The Recipient shall provide Canada with the contact information of a person (name, address, phone number and e-mail address) referred to in paragraph 14.1(b) only if the person has given their written consent to the release of the information to Canada. The Recipient agrees to make all reasonable efforts to secure such consent during the Project Period. When providing a person's contact information to Canada, the Recipient shall provide Canada with an accompanying written statement certifying that the person has given their consent to the sharing of their contact information with Canada.

#### 15.0 CONTRACTING PROCEDURES

##### *Contracting*

15.1 (1) Subject to subsection (2), the Recipient shall use a fair and accountable process, involving soliciting a minimum of three bids or proposals, when procuring goods and services from contractors in relation to the Project. The Recipient shall select the bid or proposal offering the best value at the lowest cost.

(2) The requirement under subsection (1) shall apply, unless otherwise authorized in writing by Canada, to all goods or services contracts valued at \$25,000 or more (including taxes and duties). The Recipient must not unnecessarily divide a requirement for goods or services into a number of smaller contracts to avoid this requirement.

##### *Restrictions Regarding Non Arms-Length Contracts*

15.2 (1) Unless otherwise authorized in writing by Canada, all goods or services contracts, regardless of their value, entered into in relation to the Project between the Recipient and

- (a) an officer, director or employee of the Recipient,
- (b) a member of the immediate family of an officer, director or employee of the Recipient,
- (c) a business in which an officer, director or employee of the Recipient, or a member of their immediate family, has a financial interest, or
- (d) a business which is related to, or associated or affiliated with, the Recipient.

require the prior written approval of Canada. In any such contract, the Recipient shall ensure that Canada has a right of access to the relevant records of the supplying entity for the purpose of verifying, if necessary, the amount of the expenditure claimed by the Recipient in relation to a contract referred to in this subsection.

(2) In this section, "immediate family" means the father, mother, step-father, step-mother, brother, sister, spouse (including common law partner), child (including child of common law partner), step-child, ward, father in law, mother in law or relative permanently residing in the household of the officer, director or employee.

##### *Restrictions Regarding Sub-contracting of Recipient Duties or Responsibilities*

15.3 The Recipient shall not subcontract the performance of any of its duties or responsibilities in managing the Project to another party without the prior written consent of Canada unless the Recipient has already indicated in the approved Project Description attached as Schedule A to this Agreement that it intends to use a subcontractor or subcontractors to perform those duties or responsibilities.



**16.0 TERMINATION OF AGREEMENT**

*Termination for Default*

16.1 (1) The following constitute Events of Default:

- (a) the Recipient becomes bankrupt, has a receiving order made against it, makes an assignment for the benefit of creditors, takes the benefit of the statute relating to bankrupt or insolvent debtors or an order is made or resolution passed for the winding up of the Recipient;
- (b) the Recipient ceases to operate;
- (c) the Recipient is in breach of the performance of, or compliance with, any provision of this Agreement;
- (d) the Recipient, in support of its application for Canada's contribution or in connection with this Agreement, has made materially false or misleading representations, statements or declarations, or provided materially false or misleading information to Canada; or
- (e) in the opinion of Canada, there is a material adverse change in risk in the Recipient's ability to complete the Project or to achieve the expected results of the Project set out in Schedule A.

(2) If

- (a) an Event of Default specified in paragraph (1)(a) or (b) occurs, or
- (b) an Event of Default specified in paragraphs (1)(c), (d) or (e) occurs and has not been remedied within thirty (30) days of receipt by the Recipient of written notice of default, or a plan satisfactory to Canada to remedy such Event of Default has not been put into place within such time period,

Canada may, in addition to any remedies otherwise available, immediately terminate the Agreement by written notice. Upon providing such notice of termination, Canada shall have no obligation to make any further contribution to the Recipient.

(3) In the event Canada gives the Recipient written notice of default pursuant to paragraph (2)(b), Canada may suspend any further payment under this Agreement until the end of the period given to the Recipient to remedy the Event of Default.

(4) The fact that Canada refrains from exercising a remedy it is entitled to exercise under this Agreement shall not be considered to be a waiver of such right and, furthermore, partial or limited exercise of a right conferred upon Canada shall not prevent Canada in any way from later exercising any other right or remedy under this Agreement or other applicable law.

*Termination for Convenience*

16.2 Canada may also terminate this Agreement at any time without cause upon not less than ninety (90) days written notice of intention to terminate.

*Obligations Relating to Termination under section 7.1 or 16.2 and Minimizing Cancellation Costs*

16.3 In the event of a termination notice being given by Canada under section 7.1 or 16.2,

- (a) the Recipient shall make no further commitments in relation to the Project and shall cancel or otherwise reduce, to the extent possible, the amount of any outstanding commitments in relation thereto; and
- (b) all Eligible Expenditures incurred by the Recipient up to the date of termination will be paid by Canada, including the Recipient's costs of, and incidental to, the cancellation of obligations incurred by it as a consequence of the termination of the Agreement; provided always that payment and reimbursement under this paragraph shall only be made to the extent that it is established to the satisfaction of Canada that the costs mentioned herein were actually incurred by the Recipient and the same are reasonable and properly attributable to the termination of the Agreement.

16.4 The Recipient shall negotiate all contracts related to the Project, including employment contracts with staff, on terms that will enable the Recipient to cancel same upon conditions and terms that will minimize to the extent possible their cancellation costs in the event of a termination of this Agreement. The Recipient shall cooperate with Canada and do everything reasonably within its power at all times to minimize and reduce the amount of Canada's obligations under section 16.3 in the event of a termination of this Agreement.

**17.0 INDEMNIFICATION**

17.1 The Recipient shall, both during and following the Project Period, indemnify and save Canada harmless from and against all claims, losses, damages, costs, expenses and other actions made, sustained, brought, threatened to be brought or prosecuted, in any manner based upon, occasioned by or attributable to any injury or death of a person, or loss or damage to property caused or alleged to be caused by any willful or negligent act, omission or delay on the part of the Recipient or its employees or agents, and participating employers or Project participants, if any, in connection with anything purported to be or required to be provided by or done by the Recipient pursuant to this Agreement or done otherwise in connection with the implementation of the Project.



## 18.0 INSURANCE

18.1 The Recipient shall arrange and maintain, during the Project Period, appropriate comprehensive general liability insurance coverage to cover claims for bodily injury or property damage resulting from anything done or omitted by the Recipient or its employees, agents or Project participants, if any, in carrying out the Project.

## 19.0 RELATIONSHIP BETWEEN THE PARTIES AND NON-LIABILITY OF CANADA

19.1 The management and supervision of the Project are the sole and absolute responsibility of the Recipient. The Recipient is not in any way authorized to make a promise, agreement or contract on behalf of Canada. This Agreement is a funding agreement only, not a contract for services or a contract of service or employment. Canada's responsibility is limited to providing financial assistance to the Recipient towards the Eligible Expenditures. The parties hereto declare that nothing in this agreement shall be construed as creating a partnership, an employer-employee, or agency relationship between them. The Recipient shall not represent itself as an agent, employee or partner of Canada.

19.2 Nothing in this Agreement creates any undertaking, commitment or obligation by Canada respecting additional or future funding of the Project beyond the Project Period, or that exceeds the maximum contribution specified in Schedule B. Canada shall not be liable for any loan, capital lease or other long-term obligation which the Recipient may enter into in relation to carrying out its responsibilities under this Agreement or for any obligation incurred by the Recipient toward another party in relation to the Project.

## 20.0 CONFLICT OF INTEREST

20.1 No current or former public servant or public office holder to whom the *Conflict of Interest Act* [S.C. 2006, c. 9, s. 2], the *Policy on Conflict of Interest and Post-Employment* or the *Values and Ethics Code for the Public Sector* applies shall derive a direct benefit from the Agreement unless the provision or receipt of such benefit is in compliance with the said legislation or codes.

20.2 No member of the Senate or the House of Commons shall be admitted to any share or part of the Agreement or to any benefit arising from it that is not otherwise available to the general public.

## 21.0 INFORMING CANADIANS OF THE GOVERNMENT OF CANADA'S CONTRIBUTION

21.1 The Recipient shall allow Canada sixty (60) days from the date of signature of the Agreement to announce the Project. During this 60 day period, the Recipient shall not make any public announcements of funding, deferring all questions to Canada. After the expiry of the 60 day period, the Recipient may begin its own communication activities for the Project.

21.2 The Recipient shall notify Canada twenty (20) working days in advance of any initial and subsequent official ceremonies related to the announcement of the funding and promotion of the Project. Canada reserves the right to approve the time, place and agenda of the ceremony.

21.3 The Recipient shall notify Canada fifteen (15) working days in advance of any and all communications activities, publications, advertising and press releases planned by the Recipient or by a third party with whom it has an agreement relating to the Project.

21.4 The Recipient shall ensure that in any and all communication activities, publications, advertising and press releases regarding the Project, recognition, in terms and in a form and manner satisfactory to Canada, are given to Canada's financial assistance to the Project.

21.5 The Recipient agrees to display such signs, plaques or symbols as Canada may provide in such locations on its premises as Canada may designate.

21.6 The Recipient shall cooperate with representatives of Canada during any official news release or ceremonies relating to the announcement of the Project.

## 22.0 ACCESS TO INFORMATION

22.1 The Recipient acknowledges that Canada is subject to the *Access to Information Act* [RSC 1985, Chapter A-1], and information obtained by Canada pertaining to this Agreement may be disclosed by Canada to the public upon request under the aforementioned act.

## 23.0 PROACTIVE DISCLOSURE

23.1 The Recipient acknowledges that the name of the Recipient, the amount of the contributions and the general nature of the Project may be made publicly available by Canada in accordance with the Government of Canada's commitment to proactively disclose the awarding of grants and contributions.

## 24.0 DISPOSITION OF CAPITAL ASSETS

24.1 During the Project Period, the Recipient shall preserve any capital asset purchased by the Recipient with funding provided under this Agreement and shall not dispose of it unless Canada authorizes its disposition.

24.2 At the end of the Project Period, or upon termination of this Agreement, if earlier, Canada reserves the right to direct the Recipient to dispose of any capital asset purchased by the Recipient with funding provided under this Agreement by:

- (a) selling it at fair market value and applying the funds realized from such sale to offset Canada's contribution to the Eligible Expenditures;
- (b) turning it over to another organization or to an individual designated or approved by Canada; or
- (c) disposing of it in such other manner as may be determined by Canada.

24.3 Where Canada elects to exercise its right under section 24.2, the Recipient agrees to comply with the related direction provided by Canada.

24.4 For the purposes of section 24.0, "capital asset" means any single item, or a collection of items which form one identifiable functional unit, that:

- (a) is not physically incorporated into another product or not fully consumed by the end of the Project, and



- (b) has a purchase or lease value of more than \$1 000 (before taxes),

but does not include land or buildings purchased or leased by the Recipient in connection with the implementation of the Project.

#### 25.0 INTELLECTUAL PROPERTY

25.1 Where in the course of carrying out the Project, the Recipient produces any work using funds provided by Canada, the copyright in the work shall vest in the Recipient. However, the Recipient hereby grants to Canada a non-exclusive, irrevocable and royalty free license to use, translate, adapt, record by any means or reproduce, except for commercial sale in competition with the Recipient, any such work which is produced by the Recipient.

25.2 The license granted under section 25.1 shall be for the duration of the copyright and shall include:

- (a) the right to sub-license the use of the work to any contractor engaged by Canada solely for the purpose of performing contracts with Canada; and
- (b) the right to distribute the work outside the Department of Employment and Social Development as long as the distribution does not undermine any commercial use of the work intended by the Recipient.

25.3 The Recipient agrees to execute any acknowledgements, agreements, assurances or other documents deemed necessary by Canada to establish or confirm the license granted under section 25.1

25.4 Additionally, with respect to any work licensed under section 25.1, the Recipient:

- (a) warrants that the work shall not infringe on the copyrights of others;
- (b) agrees to indemnify and save harmless Canada from all costs, expenses and damages arising from any breach of any such warranty, and
- (c) shall include an acknowledgment, in a manner satisfactory to Canada, on any work which is produced by it with funds contributed by Canada under this Agreement, acknowledging that the work was produced with funds contributed by Canada and identifying the Recipient as being solely responsible for the content of such work.

25.5 The Recipient shall include in the final report for the Project, which the Recipient is required to submit to Canada under the terms of this Agreement, a copy of any work licensed under section 25.1

#### 26.0 NOTICES

26.1 Any notices to be given and all reports, information, correspondence and other documents to be provided by either party under this Agreement shall be given or provided by personal delivery, mail, courier service fax or email at the postal address, fax number or email address, as the case may be, of the receiving party as shown in Schedule A. If there is any change to the postal address, fax number or email address or contact person of a party, the party concerned shall notify the other in writing of the change as soon as possible.

26.2 Notices, reports, information, correspondence and other documents that are delivered personally or by courier service shall be deemed to have been received upon delivery, or if sent by mail five (5) working days after the date of mailing, or in the case of notices and documents sent by fax or email, one (1) working day after they are sent.

#### 27.0 DISPUTE RESOLUTION

27.1 In the event of a dispute arising under the terms of this Agreement, the Parties agree to make a good faith attempt to settle the dispute. In the event that the Parties are unable to resolve the dispute through negotiation, they agree to give good faith consideration to resorting to other alternate dispute resolution processes to resolve the dispute. However, the Parties agree that nothing contained in this section shall affect, alter or modify the rights of either Party to terminate the Agreement.

#### 28.0 ASSIGNMENT OF THE AGREEMENT

28.1 The Recipient shall not assign this Agreement or any part thereof without the prior written consent of Canada.

#### 29.0 SUCCESSORS AND ASSIGNS

29.1 This Agreement is binding upon the parties and their respective successors and assigns.

#### 30.0 COMPLIANCE WITH LAWS

30.1 The Recipient shall carry out the Project in compliance with all applicable federal, provincial and municipal laws, by-laws and regulations, including any environmental legislation and legislation related to protection of information and privacy. The Recipient shall obtain, prior to the commencement of the Project, all permits, licenses, consents and other authorizations that are necessary to the carrying out of the Project.

#### 31.0 APPLICABLE LAW

31.1 This Agreement shall be governed by and construed in accordance with the applicable laws of the province or territory where the Project will be performed or, if the Project is to be carried out in more than one province or territory, of the province or territory where the Recipient has its main place of business.

#### 32.0 AMENDMENT

32.1 This Agreement may be amended by mutual consent of the parties. To be valid, any amendment to this Agreement shall be in writing and signed by the parties.

#### 33.0 UNINCORPORATED ASSOCIATION

33.1 If the Recipient is an unincorporated association, it is understood and agreed by the persons signing this Agreement on behalf of the Recipient that in addition to signing this Agreement in their representative capacities on behalf of the members of the Recipient, they shall be personally, jointly and severally liable for



the obligations of the Recipient under this Agreement, including the obligation to pay any debt that may become owing to Canada under this Agreement.

**34.0 COUNTERPARTS**

34.1 This Agreement may be executed in counterparts, each of which shall be deemed an original but both of which taken together shall constitute one and the same agreement. The exchange of copies of this Agreement and of signature pages by facsimile or electronic transmission shall constitute effective execution and delivery of this Agreement as to the parties and may be used in lieu of the original Agreement for all purposes. Signatures of the parties transmitted by facsimile or electronic transmission shall be deemed to be their original signatures for all purposes.



SIGNATURES

Signed this 26<sup>th</sup> day of OCTOBER, 2016

For the Recipient, by the following authorized officer(s):

David Howe (Name, please print)

Brent Reims (Name, please print)

David Howe (Signature)

Brent Reims (Signature)

Vice Chair, CRD Board (Position)

Contracts Officer (Position)

And signed this 2<sup>nd</sup> day of NOVEMBER, 2016

For Canada, by the following authorized officer:

HEATHER BACKHOUSE (Name, please print)

Heather Backhouse (Signature)

Assistant Deputy Minister (Position)

AGREEMENT AUTHORIZATION

Content	Initial	Date
Procurement	HR	19/10/16
Financial Plan	HR	19/10/16
Content	HR	19/10/16
GM Approval	KC	19/10/16
Form	MM	19/10/16
Authority	KZ	12/19/16



**SCHEDULE A**  
**PROJECT DESCRIPTION**

NAME OF RECIPIENT Capital Regional District	
PROJECT TITLE: Victoria HPS Aboriginal	
<b>Recipient</b>	<b>Canada</b>
<b>Complete Mailing Address:</b>	<b>Complete Mailing Address:</b>
625 Fitzgerald Street P.O. Box 1000 Victoria, BC V8W 2S6	754 Fort Street, Suite #301 Victoria, BC V8W 1H2
<b>Primary Contact John Reilly</b>	<b>Primary Contact Donna Wingfield</b>
<b>Telephone Number 250-360-3081</b>	<b>Telephone Number 250-419-0237</b>
<b>Fax Number 250-361-4970</b>	<b>Fax Number 250-363-0243</b>
<b>Email Address jreilly@crd.bc.ca</b>	<b>Email Address donna.wingfield@servicecanada.gc.ca</b>
<b>Secondary Contact Colleen English</b>	<b>Secondary Contact Grace Kerr</b>
<b>Telephone Number 250-360-3319</b>	<b>Telephone Number 250-419-0242</b>
<b>Fax Number</b>	<b>Fax Number 250-363-0243</b>
<b>Email Address cenglish@crd.bc.ca</b>	<b>Email Address grace.kerr@servicecanada.gc.ca</b>
<b>Project Start Date</b>	<b>Project End Date</b>
yyyy-mm-dd 2014-04-01	yyyy-mm-dd 2019-03-31
<b>Total Number of Participants:</b> N/A (If applicable)	

**Project Description**

**Objectives**

**Amendment 1**

The amendment will increase the maximum contribution in fiscal year 2016/2017 and 2017/2018 by \$168,628 per year which will increase the maximum total contribution for the agreement to \$1,160,396.

As part of the Government of Canada's support for social infrastructure, Budget 2016 is investing an additional \$111.8 million to enhance services to address homelessness through the Homelessness Partnering Strategy over two years, starting in 2016/17. The additional investment will provide communities across Canada with the flexibility and support the need to help prevent and reduce homelessness.

**Original**

For the duration of April 1, 2014 to March 31, 2019, the CRD as the Community Entity (CE) will administer HPS – Aboriginal Homelessness funding, thereby responding to the identified needs of Aboriginal people who are homeless or at imminent risk of homelessness in Victoria.

The annual Aboriginal Homelessness allocation for Victoria is \$168,628.

HPS funds will be used to fund projects, based on identified needs, eligible under the terms and conditions and related policies and directives of the HPS and recommendations from the CAB.

**Activities**

The CRD will administer the HPS Aboriginal Homelessness funding as the CE for Victoria. This will include the following activities which will be monitored against milestones in the Work Plan:

The CE is responsible for implementing strategies to address identified needs, as well as providing a leadership role in the local implementation of Housing First. The CE will engage the community stakeholders and funding partners to actively work together to prevent and reduce homelessness.

The CE is responsible for providing support and guidance to the CAB regarding program delivery and administration and assisting to establish the terms of reference for the project selection and recommendation processes. The CE will implement selection processes and solicit and confirm eligibility criteria of sub-project proposals in an open, impartial and fair manner. The CE will assess, approve and enter into funding agreements with sub-agreement holders recommended by the CAB that address identified needs and terms and conditions of the HPS and related policies and directives including eligible activities under the following activity areas: Housing First; Support Services; Capital Investments; Coordination of Resources and Leveraging; and Data Collection and Use.

The CE is responsible for the management of sub-project funding agreements, including financial and activity monitoring of sub-projects to ensure compliance with sub-agreements, and monitoring sub-projects for achievement of expected results. The CE will inform the CAB about the status of sub-projects (including results) and other activities related to the prevention and reduction of homelessness in the community. The CE will report on its activities, including the management of sub-agreements, to Canada in accordance with the reporting requirements described in the HPS funding agreement, as well as any additional reporting as required by the HPS.

The CE will ensure the participation and representation of Aboriginal organizations in the planning and implementation of the funding priorities to address identified needs as appropriate.

**Expected Results**

**Outputs:**

By March 31, 2019, the CRD as the CE will fully invest the HPS Aboriginal Homelessness funding to address identified needs.

The CRD will ensure implementation of strategies that address identified needs as established by the CAB



**Outcomes:**

Increased investments in Housing First activities to house chronically and episodically Aboriginal homeless population.

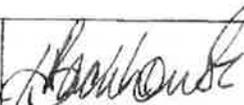
Victoria as a community that receives an allocation of \$200K or less under the Aboriginal Homelessness funding stream does not have specific targets; however a shift to Housing First is encouraged.

Reduction in the number of Aboriginal homeless individuals and families using emergency shelters, moving them into stable living environments with access to the services and supports leading to increased self-sufficiency, and the prevention of returning to homelessness.

Creation and maintenance of partnerships to improve services and facilities for Aboriginal homeless individuals and families.

Best use of investments toward alleviating Aboriginal homelessness based on an inclusive decision making process.

Achievement of project objectives will be reviewed periodically and continuation of funding is subject to demonstrated progress against established targets.

Signatures		
 RECIPIENT	 RECIPIENT	 CANADA
Oct 26, 2016 DATE	Oct 26, 2016 DATE	NOV 02 2016 DATE



**SCHEDULE B**

**FINANCIAL PROVISIONS**

<b>LEGAL NAME OF RECIPIENT</b> Capital Regional District
<b>PROJECT TITLE</b> Victoria HPS Aboriginal

**1.0 MAXIMUM CONTRIBUTION OF CANADA**

1.1 The total maximum amount of Canada's contribution towards the Eligible Expenditures of the Project is: \$1,180,396.

1.2 The maximum amount payable by Canada in each Fiscal Year of the Project Period on account of the contribution is as follows, unless otherwise authorized in writing by Canada:

- \$168,628 in Fiscal Year 2014/2015
- \$168,628 in Fiscal Year 2015/2016
- \$337,256 in Fiscal Year 2016/2017
- \$337,256 in Fiscal Year 2017/2018
- \$168,628 in Fiscal Year 2018/2019

**2.0 INTEREST EARNED ON CONTRIBUTION**

2.1 If, under section 8.0 of this Schedule, Canada has made payment of its contribution by way of advances, and if the amount of interest earned on the advance payments is in excess of one hundred dollars (\$100), such interest is deemed to be part payment of Canada's contribution and will be taken into account in the calculation of the final payment by Canada, or repayment by the Recipient, as may be appropriate in the circumstances.

**3.0 REPAYMENT REQUIREMENTS**

3.1 In the event payments made to the Recipient exceed the amount to which the Recipient is entitled under this agreement, the amount of the excess is a debt owing to Canada and shall be promptly repaid to Canada upon receipt of notice to do so and within the period specified in the notice. Without limiting the generality of the foregoing, amounts to which the Recipient is not entitled include:

- (a) the amount of any expenditures paid for with the contribution which are disallowed or determined to be ineligible, and
- (b) any amount paid in error or any amount paid in excess of the amount of the expenditure actually incurred.

3.2 Interest shall be charged on overdue repayments owing under section 3.1 in accordance with the Interest and Administrative Charges Regulations (SOR/88-188) (the "Regulations") made pursuant to the Financial Administration Act (R.S.C., 1985, c. F-11). Interest is calculated and compounded monthly at the "average bank rate", within the meaning of such expression as contained in the Regulations, plus three per cent (3%) during the period beginning on the due date specified in the notice to repay and ending on the day before the day on which payment is received by Canada.

3.3 The Recipient acknowledges that where an instrument tendered in payment or settlement of an amount due to Canada under section 3.1 is, for any reason, dishonoured, an administrative charge of \$15 is payable by the Recipient to Canada in accordance with the Regulations.

**4.0 OTHER SOURCES OF FUNDING**

4.1 The Recipient declares that it has received or is entitled to receive:

a) goods, services or other non-cash contributions for the Project from the following sources, having the following agreed estimated fair and reasonable monetary value:

- (i) Capital Regional District - \$44,000

4.2 The Recipient agrees to inform Canada promptly in writing of any change to the declaration made under section 4.1.

4.3 The Recipient agrees that where there is a change to the declaration made in section 4.1, Canada may, in its discretion, reduce the amount of its maximum contribution to the Project by such amount, not exceeding the amount of the change in assistance received, that it considers appropriate.

4.4 If the amount of Canada's contribution already paid to the Recipient exceeds the reduced maximum contribution, as determined under section 4.3, the amount of the excess shall be deemed to be an amount to which the Recipient is not entitled and shall be repaid to Canada in accordance with section 3.0 of this Schedule (Repayment Requirements).

4.5 Upon completion of the Project, and if the amount set out in section 1.1 is in excess of \$100,000, the Recipient agrees to provide Canada with a statement identifying the total funding provided from all sources for the Project, including total funding received for the Project from federal, provincial/territorial and municipal governments.

**5.0 PROJECT BUDGET**

5.1 The following is the Project Budget:



COST CATEGORIES	ESDC	OTHER SOURCES		TOTAL
		CASH	IN KIND	
1 Administrative Costs				
a Administrative costs				
b Sub-project Administrative Costs				
2 Capital Costs	\$0.00			
a Facilities				
b Capital assets				
3 Direct Costs	\$1180398.00			
a Staff wages *	\$127,271.00			
b Participant costs				
c Project costs	\$24,930			
d Partnership development				
e Child care costs				
f Sub-project Project Costs *	\$1,028,195.00			
<b>TOTAL</b>	<b>\$1180398.00</b>	<b>\$44,000.00</b>		<b>\$1,224,398.00</b>

**Budget notes:**

"Administrative Costs" means any expenditure incurred by the Recipient in the course of its regular or ongoing operations that, though indirectly related to the Project, enable the Recipient to manage the Project successfully;

"Sub-Project Administrative Costs" means any expenditure incurred by a Third Party in the course of its regular or ongoing operations that, though indirectly related to the Sub-Project, enable the Third Party to manage the Sub-Project successfully;

"Facilities" means any expenditure incurred by the Recipient, in direct relation to a Project activity, towards the purchase of land or a building, construction or renovation of a building, or accomplishing any pre-development activities leading up to any of the latter ends;

"Capital Assets" means any expenditure incurred by the Recipient towards the purchase or leasing-to-own of materials subject to the provisions of section 24.0 of the Articles of Agreement;

"Staff Wages" means any wages, mandatory employment related costs (as required by law) or benefits (as required by a collective agreement or company policy) paid by the Recipient to, or on behalf of, an employee of the Recipient working directly on the Project;

"Participant Costs" means any wages, mandatory employment related costs (as required by law) or benefits (as required by a collective agreement or company policy), and any support payments (for travel, emergencies, disability, living expenses, dependent care, materials, etc), tuition fees, or program participation or completion bonuses paid by the Recipient to, or on behalf of, Project Participants;

"Project Costs" means any expenditure incurred by the Recipient in direct relation to the Project activities that is not covered by any other cost category in the Project Budget;

"Partnership Development" means any expenditure incurred by the Recipient towards the development or maintenance of partnerships that support or contribute materially to the goals of the Project;

"Child Care Costs" means any expenditure incurred by the Recipient in support of child care service offerings to aboriginal persons that are adapted to the particular needs of this clientele; and

"Sub-Project Project Costs" means any expenditure incurred by a Third Party in respect of a Sub-Project that does not meet the definition of expenditures included in the Sub-Project Administrative Costs cost category.

**6.0 BUDGET FLEXIBILITY**

6.1 The Recipient may, except in cases specified in section 6.2, make adjustments to its allocation of funds between any of the cost categories identified in the Project Budget without having to obtain Canada's approval, provided the adjustments do not result in an increase in Canada's maximum contribution set out in section 1.1. However, where the Recipient makes an adjustment allowed by this section, it shall notify Canada promptly in writing of the adjustment.

6.2 The Recipient must obtain Canada's written approval prior to making an adjustment to the Project Budget that increases or decreases the subtotal amount budgeted for:

- (i) any cost category identified with an asterisk (\*) by any amount, or
- (ii) any other cost category by more than 10%.

6.3 Depending upon the extent and significance of the adjustments, written approval by Canada of adjustments made under section 6.2 may be required by Canada to be documented by way of a formal amending agreement signed by both parties.

**7.0 CONDITIONS GOVERNING THE ELIGIBILITY OF EXPENDITURES**



7.1 The expenditures set out in the Project Budget above are subject to the following conditions:

- (a) expenditures must, subject to section 7.2, be incurred during the Project Period;
- (b) expenditures must, in the opinion of Canada, be reasonable;
- (c) the portion of the cost of any travel, meals and accommodation costs that exceeds the rates for public servants set out in the National Joint Council of Canada's Travel Directive is not eligible for reimbursement;
- (d) the portion of hospitality costs that exceed the rates set out in the Directive on Travel, Hospitality, Conference and Event Expenditures, Appendix 2 of Canada's Treasury Board is not eligible for reimbursement;
- (e) the portion of the cost of any goods and services purchased by the Recipient for which the Recipient may claim a tax credit or reimbursement is not eligible for reimbursement;
- (f) depreciation of capital assets is not eligible for reimbursement;
- (g) fines and penalties are not eligible for reimbursement;
- (h) the cost of alcoholic beverages are not eligible for reimbursement;
- (i) costs associated with software development and/or the purchase of hardware for the collection and/or management of homelessness data that results in an inability to participate in the National Homelessness Information System initiative (NHIS); and that constitutes a redundant use of funds and duplicates activities already offered through the Homeless Individuals and Families Information System (HIFIS) software are not eligible for reimbursement.

7.2 If, under the terms of this Agreement, the Recipient is required to provide to Canada an audited annual financial report at the end of the Project Period, and if the cost of the audit is otherwise an Eligible Expenditure, the audit cost is an Eligible Expenditure notwithstanding that it is incurred outside the Project Period.

**8.0 TERMS OF PAYMENT**

8.1 Subject to section 8.2, Canada will make payments of its contribution by way of advances. Each payment shall cover a quarterly period (hereinafter referred to as the "Payment Period") during the Project Period.

8.2 (1) Subject to subsection (2), Canada may, at any time and in its sole discretion,

- (a) change the basis of payments of its contribution to the Recipient to progress payments for any period during the Project Period, or
- (b) change the Payment Period to a monthly period, or
- (c) change both (a) and (b).

(2) Where Canada decides to make a payment change pursuant to subsection (1), Canada shall notify the Recipient in writing of the change and of the period during which the change will be applicable.

(3) For the purposes of this Schedule,

"progress payments" means payments to reimburse the Recipient for Eligible Expenditures after they have been incurred,

"monthly period" means a calendar month that falls within the Project Period or, if the calendar month falls only partially within the Project Period, such portion thereof, and

"quarterly period", in relation to a series of consecutive three-month periods encompassing the Project Period and beginning on the first day of the calendar month determined by Canada for purposes of administering this agreement, means such a quarter that falls within the Project Period or, if the quarter falls only partially within the Project Period, such portion thereof.

8.3 (1) Where Canada makes payments of its contribution to the Recipient by way of advances,

- (a) each advance shall cover the Recipient's estimated financial requirements for each Payment Period. Such estimate shall be based upon a cash flow forecast that, in the opinion of Canada, is reliable and up-to-date; and
- (b) if the amount of an advance payment for a Payment Period exceeds the actual amount of Eligible Expenditures incurred by the Recipient during the Payment Period, Canada reserves the right to deduct the excess amount from any subsequent advance payment to be made under this Agreement.

(2) Where Canada makes payments of its contribution to the Recipient by way of progress payments, each progress payment shall cover the Recipient's actual Eligible Expenditures incurred during the Payment Period as approved by Canada following submission by the Recipient of the financial claim referred to in section 8.4 (1).

8.4 (1) Following the end of each Payment Period of the Agreement, the Recipient shall provide Canada with a financial claim using a form provided by Canada and signed/certified as true and accurate by an authorized official (or officials) of the Recipient. The financial claim shall contain:

- (a) a summary breakdown, per cost category in the Project Budget, of Eligible Expenditures incurred during the Payment Period;
- (b) an updated forecast of Project expenditures;



- (c) an activity report describing the work completed on the Project during the Payment Period; and
- (d) any supporting documentation relative to the financial claim that may be requested by Canada (e.g. a copy of the general ledger).

(2) The Recipient shall submit the financial claim required under subsection (1) no later than,

- (a) if the Payment Period is monthly, forty-five (45) days following the Payment Period;
- and
- (b) if the Payment Period is quarterly, sixty (60) days following the Payment Period.

8.5 (1) Canada may withhold any advance payment due to the Recipient under this Agreement

- (a) if the Recipient has failed to submit when due
  - (i) a financial claim under section 8.4 (1); or
  - (ii) any other document required by Canada under this Agreement; or
- (b) pending the completion of an audit of the Recipient's books and records, should Canada decide to undertake such an audit.

(2) Canada may also withhold any progress payment due to the Recipient under this Agreement

- (a) if the Recipient has failed to submit when due any other document required by Canada under this agreement; or
- (b) pending the completion of an audit of the Recipient's books and records, should Canada decide to undertake such an audit.

8.6 Canada may retain a holdback of an amount up to 10% of its maximum contribution at the end of the Project Period pending

- (a) receipt and verification by Canada of a final financial claim for the last Payment Period where advances have been made,
- (b) receipt and acceptance by Canada of the final report for the Project that the Recipient is required to submit to Canada under the terms of this Agreement, and
- (c) receipt of any other Project-related record that may be required by Canada.

#### 9.0 ANNUAL FINANCIAL REPORTS

9.1 (1) Within one hundred and twenty (120) days following the end of each "Reporting Period" during the Project Period, the Recipient shall provide to Canada a financial report containing,

- (a) a statement setting out:
  - (i) the total amount received from Canada under this Agreement during the Reporting Period,
  - (ii) the total revenue received from other sources for the Project during the Reporting Period, including cash and the value of in-kind contributions,
  - (iii) the total amount of GST/HST rebates and interest earned by the Recipient during the Reporting Period on advances of Canada's contribution if the amount of interest earned is in excess of one hundred dollars (\$100), and
  - (iv) the amounts realized during the Reporting Period from the disposition of any capital assets that had been originally purchased with funds from Canada's contribution under this Agreement, and
- (b) an itemized statement setting out, by expenditure category as per the Project Budget, the total amount of the expenditures incurred during the Reporting Period in relation to the Project and to the corresponding approved Investment Plan.

(2) For greater certainty, failure on the part of the Recipient to submit financial reports within the timeframe specified under subsection (1) may result in Canada withholding payment of an advance or progress payment in accordance with subsections 8.5(1) or (2) of this Schedule or withholding payment of any holdback retained by Canada in accordance with section 8.6 of this Schedule.

(3) For the purposes of this section, "Reporting Period" means each Fiscal Year that falls within the Project Period or, if the Fiscal Year falls only partially within the Project Period, such portion thereof.

9.2 Each financial report submitted to Canada pursuant to section 9.1 shall be accompanied by such supporting documentation as may be requested by Canada.

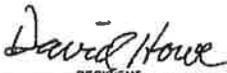
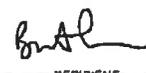
#### *Audit Requirement*

9.3 (1) Unless otherwise notified by Canada in writing, the Recipient shall engage an independent licensed public accountant to audit, in accordance with Canadian generally accepted auditing standards, each financial report required under section 9.1. The Recipient's letter of audit engagement shall include the requirements set out under section 9.1.

(2) If requested by Canada to do so, the Recipient shall allow representatives of Canada to discuss any audited financial report referred to in this section with the Recipient's auditors. The Recipient shall execute such directions, consents and other authorizations as may be required in order to permit its auditors to discuss the report with representatives of Canada and provide any requested information to them in relation



to the audit.

Signatures		
 RECIPIENT	 RECIPIENT	 CANADA
Oct. 26, 2016 DATE	Oct. 26, 2016 DATE	NOV 02 2016 DATE



**SCHEDULE C**

**ADDITIONAL CONDITIONS**

<b>LEGAL NAME OF RECIPIENT:</b> Capital Regional District
<b>PROJECT TITLE:</b> Victoria HPS Aboriginal

**1.0 WORK PLAN**

1.1 For each Fiscal Year that falls within the Project Period or, if the Fiscal Year falls only partially within the Project Period, such portion thereof, the Recipient shall provide to Canada for approval a "Work Plan" outlining the activities to be undertaken by the Recipient in implementing the Project during the Fiscal Year or part thereof. Each Work Plan shall be prepared in accordance with guidelines issued by Canada.

1.2 The Recipient's approved Work Plan for the first Fiscal Year or part thereof of the Project Period is attached to and forms an integral part of Schedule A (Project Description) to this Agreement. The Work Plan for each subsequent Fiscal Year or part thereof shall be provided to Canada for approval no later than sixty (60) days prior to the beginning of each Fiscal Year to which it relates.

1.3 Canada will notify the Recipient of its approval of each subsequent Work Plan no later than thirty (30) days following receipt of each plan. Upon approval, each subsequent Work Plan shall be attached to and form an integral part of Schedule A.

1.4 The Recipient shall implement the Project in accordance with the approved Work Plans. The Recipient shall not make any material change to an approved Work Plan without the written approval of Canada.

**2.0 REDISTRIBUTION OF FUNDING TOWARDS SUB-PROJECTS**

*Interpretation*

2.1 For the purposes of this Agreement,

"Sub-Agreement Holder" means an organization other than the Recipient, to whom funding provided to the Recipient under this Agreement is further distributed to enable the organization to carry out a Sub-Project; and

"Sub-Project" means:

- (a) an activity eligible for financial support under the Project which is implemented by a Sub-Agreement Holder, or
- (b) an activity eligible for financial support under the Project implemented directly by the Recipient.

*Sub-Project Selection Process*

2.2 (1) The Recipient shall put into place a process satisfactory to Canada for ensuring that proposals for Sub-Projects to be funded with Canada's contribution, including Sub-Projects implemented directly by the Recipient, are assessed and selected in an open, impartial and fair manner. The Recipient agrees that part of the process will involve consultation on all such proposals with the Community Advisory Board. The Recipient must ensure that Sub-Project proposals of a capital nature address their sustainability; for Sub-Projects of a capital nature Canada will provide a form to address this aspect that is to be included as part of such proposals.

(2) The Recipient shall also put into place written operational policies and procedures relating to its financial management of the Project and its administration of Sub-Projects, and shall provide a copy of those policies and procedures to Canada, together with the names and positions of personnel within the Recipient's organization with responsibilities for the financial management and decision making in connection with the carrying out of the responsibilities of the Recipient under this Agreement. The Recipient shall notify Canada promptly of any changes in such personnel that occur from time to time.

(3) A sub-project shall not be funded under this Agreement unless the organization demonstrates that it applies sound financial management practices and respects the highest level of integrity.

(4) Without limiting the foregoing and subject to subsection 5, a sub-project shall not be funded under this Agreement if a review, audit or investigation conducted by the federal government, the government of a province or a public body created under the law of a province in the previous 3 years concludes to irregularities in the organization's financial management practices or raises integrity issues.

(5) The restriction in subsection 4 does not apply if an organization demonstrates that the irregularities and issues have been resolved and that measures have been diligently put in place to prevent recurrence.

*Agreements with Sub-Agreement Holders*

2.3 (1) When the Recipient provides funding to a Sub-Agreement Holder to support the costs of a Sub-Project, the Recipient shall ensure that there is a written agreement between it and the Sub-Agreement Holder that sets out the terms and conditions under which the Recipient is providing funding to the Sub-Agreement Holder.

(2) The written agreement referred to in subsection (1) shall include:

- (a) an identification of the Sub-Agreement Holder (proper legal name and address);
- (b) a description of the purpose of the funding;



- (c) the effective date, the date of signing and the duration of the agreement;
- (d) the financial and/or non-financial conditions attached to the funding and the consequence of failing to adhere to these conditions, including provision for a right of termination of the agreement in the event of a breach of the agreement;
- (e) the costs of the Sub-Project eligible for reimbursement;
- (f) the conditions to be met before payment is made and the schedule and basis of payment;
- (g) the maximum amount payable;
- (h) the provision of such reports by the Sub-Agreement Holder on its Sub-Project, outcomes and results as may be specified by Canada in any reporting guidelines or instructions provided to the Recipient by Canada or as may be specified elsewhere in this Agreement;
- (i) a provision giving both Canada and the Recipient the right to conduct an audit of the books and records of the Sub-Agreement Holder, even though an audit may not always be undertaken, and to have access to the business premises and business site of the Sub-Agreement Holder to monitor and inspect the administration of the Sub-Project;
- (j) a requirement for the Sub-Agreement Holder to repay to the Recipient the amount of any funding provided to which it is not entitled. The agreement should specify that amounts to which it is not entitled include the amount of any payments:
- (i) made in error;
  - (ii) made for costs in excess of the amount actually incurred for those costs; and
  - (iii) that were used for costs that were not eligible for reimbursement under the agreement;
- (k) if the Sub-Project involves an activity described in section 4.1 or 4.3,
- (i) a repayment requirement modeled on the provisions of section 4.1 or 4.3, as the case may be, except that every reference to "Recipient" in those provisions shall be replaced by a reference to the term used by the Recipient to identify the Sub-Agreement Holder in its agreement with the Sub-Agreement Holder and every reference to "Canada" shall be replaced by a reference to the term used by the Recipient to identify itself in its agreement with the Sub-Agreement Holder; and
  - (ii) a provision giving both Canada and the Recipient, for the number of years following the end-date of the Sub-Project in respect of which the repayment requirement referred to in subparagraph (i) applies to the Sub-Agreement Holder, the right to inspect the operation of the facility referred to in section 4.1 or 4.3 at any reasonable time to verify the continuing use of the facility for the purposes for which it was funded; and
  - (iii) a provision stipulating that the Sub-Agreement holder shall not mortgage, charge or otherwise encumber the facility property during the period of the Sub-Project, or for the number of years following the end-date of the Sub-Project in respect of which the repayment requirement referred to in subparagraph (i) applies to the Sub-Agreement Holder, without the prior written approval of the Recipient; and
  - (iv) a provision stipulating that the Sub-Agreement Holder shall ensure that all environmental protection measures, standards and rules relating to the Sub-Project established by competent authorities are respected;
- (l) a provision stipulating that payment of any funding under the agreement is subject to the availability of funds and that payment of funding may be cancelled or reduced in the event that Canada cancels or reduces its funding to the Recipient;
- (m) a requirement for the Sub-Agreement Holder to give appropriate recognition of the contribution of Canada to the Sub-Project being carried out in its publicity and signage relating to the Sub-Project, including any information provided to the public on any web site maintained by the Sub-Agreement Holder;
- (n) a requirement that the Sub-Agreement Holder notify the Recipient (Community Entity) twenty (20) working days in advance of any and all communications activities, publications, advertising and press releases planned by the Sub-Agreement Holder relating to the Sub-Project; and
- (o) a requirement for the Sub-Agreement Holder to cooperate with representatives of Canada during any official news release or ceremonies relating to the announcement of the Sub-Project.

*Internal Memoranda of Understanding (MOU)*

2.4 When the Recipient is implementing a Sub-Project directly, the Recipient shall ensure that there is an internal memorandum of understanding (MOU) with the head of the branch or division of its organization responsible for implementing the Sub-Project, as if the head of the branch or division implementing the Sub-Project was a Sub-Agreement Holder, setting out terms and conditions of the funding modeled on the requirements of section 2.3, with such modifications as the circumstances may require.

*Provision of Copies of Agreements and MOUs*

2.5 Upon request, the Recipient shall provide Canada with a copy of any or all agreements with Sub-Agreement Holders and MOUs referred to in sections 2.3 and 2.4, respectively.

*Monitoring and Audit of Sub-Projects*



2.6 The Recipient shall exercise due diligence in the administration of its agreements with Sub-Agreement Holders and of its MOUs referred to in section 2.4. Without limiting the generality of the foregoing, in exercising due diligence, the Recipient shall take appropriate measures for ensuring compliance by Sub-Agreement Holders and, in the case of MOUs referred to in section 2.4, by the responsible branch or division head of the Recipient, with the terms and conditions of the agreement or MOU, as the case may be, including:

- (a) monitoring the Sub-Project through, as appropriate, periodic visits to the Sub-Project site or other means such as telephone calls and questionnaires;
- (b) undertaking periodic audits or inspections of financial records to verify that costs claimed under the agreement or MOU, were actually incurred and were in accordance with the agreement or MOU, as the case may be;
- (c) furnishing the Sub-Agreement Holder or the branch or division head of the Recipient, as the case may be, with necessary advice, support and training to assist it in carrying out the Sub-Project and in realizing the objectives and achieving the results of the Sub-Project;
- (d) where there are breaches of the agreement or MOU, taking appropriate measures to resolve the situation, including, in the case of an agreement with a Sub-Agreement Holder, termination of the agreement with the Sub-Agreement Holder or legal action to enforce compliance with the agreement, and
- (e) in the case of an agreement with a Sub-Agreement Holder, making all reasonable efforts to recover any overpayments under the agreement.

2.7 The Recipient shall provide to Canada, upon request, a report of any monitoring review or audit of a Sub-Project undertaken by the Recipient under section 2.6.

2.8 Where Canada desires to exercise its right to audit the books and records of a Sub-Agreement Holder or to monitor and inspect its Sub-Project, Canada shall notify the Recipient of its desire to do so. The Recipient shall cooperate with Canada in obtaining access to the financial records and, if required by Canada, it shall take all necessary steps to enforce the Recipient's and Canada's right of access to the Sub-Agreement Holder's records, including taking legal proceedings against the Sub-Agreement Holder.

### 3.0 REPORTING

#### *Report of Approved Sub-Projects*

3.1 Each financial claim submitted to Canada pursuant to section 8 (Terms of Payment) of Schedule B to this Agreement shall be accompanied by a report identifying all agreements with Sub-Agreement Holders and MOUs approved by the Recipient to date containing the following information about each Sub-Project:

- (a) the Sub-Project file identifier;
- (b) in the case of agreements with Sub-Agreement Holders, the legal name of the Sub-Agreement Holder and Sub-Agreement Holder contact information;
- (c) in the case of MOUs, the name of the branch or division within the Recipient's organization responsible for carrying out the Sub-Project and Recipient branch or division contact information;
- (d) the amount of funding provided under this Agreement to be provided by the Recipient for the Sub-Project;
- (e) identification of the applicable HPS funding stream;
- (f) the Sub-Project start and end dates; and
- (g) the activity areas(s) supported by the Sub-Project, i.e. (i) Housing First; (ii) support services; (iii) capital investments; (iv) activities to ensure coordination or resources and leveraging; or (v) activities to improve data collection and use.

#### *Results Reporting*

3.2 Within thirty (30) days of the start date of each Sub-Project, the Recipient shall provide to Canada, using an online results reporting system provided by Canada, a "Project Details Report", acceptable to Canada in both scope and detail, that sets out the detailed description of the Sub-Project. Any changes to the funding amount, activities, or end date of a Sub-Project approved by the Recipient will require a revised Project Details Report that must be provided to Canada, using the online system, within thirty (30) days of the change.

3.3 Where applicable, the Recipient shall provide to Canada, no later than forty-five (45) days following each Fiscal Year that falls within the period of the Sub-Project, an "Annual Results Report" detailing the outputs and outcomes achieved in implementing each Sub-Project during the Fiscal Year. Each Annual Results Report shall be provided to Canada using the online system referred to in section 3.2.

#### *Annual Community Plan Update*

3.4 If the Recipient is funded by the HPS Designated Communities funding stream, or funded by the Aboriginal Homelessness funding stream with a community allocation greater than \$200,000, the Recipient shall provide annually to Canada, using a form provided by Canada, no later than sixty (60) days following the period covered by the report, a report, satisfactory to Canada in scope and detail, on

- (a) progress in meeting Community Plan priorities
- (b) expenditures supporting investment targets including minimum Housing First requirement mentioned under Expected Results in Schedule A,
- (c) Community Contribution received (for Designated Communities funding stream only),
- (d) updating Community Plan priorities and targets for subsequent years (if required); and
- (e) any other update as may be required by Canada.



#### 4.0 REQUIREMENTS IN RESPECT OF FACILITY PROPERTY AND REPAYMENT

##### *Project Funding Used to Purchase Land or a Building for a Facility*

###### 4.1 If

(a) funding provided for a Sub-Project is used towards the costs of purchasing land or a building to establish a new facility to provide shelter space, transitional or supportive housing or other services for the homeless, and

(b) the amount of the funding referred to in paragraph (a) is in excess of \$50,000, the Recipient shall repay as a debt owing to Canada,

(c) an amount equal to 100% of the funding referred to in paragraph (a) if,

(i) five (5) years following the end date of the Sub-Project, a facility that provides shelter space, transitional or supportive housing or other services for the homeless has not been established on the property referred to in paragraph (a), or

(ii) at any time during the five-year period following the end date of the Sub-Project, Canada concludes, based on

(A) information provided by the Recipient under section 4.7, or

(B) the results of a site inspection conducted by Canada under section 4.9

that the facility referred to in paragraph (a) will not be established during said five-year period and notifies the Recipient of such conclusion in writing, and

(d) an amount determined in accordance with section 4.2 if, within five (5) years following the end date of the Sub-Project, the land or building referred to in paragraph (a) is sold and the proceeds of disposition are not forthwith committed to supporting a facility providing similar services to the homeless that is approved by Canada.

4.2 The amount repayable by the Recipient under paragraph 4.1(d), if the event referred to in that paragraph occurs, shall be determined as follows:

(a) if the event occurs within one year of the end date of the Sub-Project, a sum equal to 100% of the funding referred to in paragraph 4.1(a);

(b) if the event occurs within two years, but after one year of the end date of the Sub-Project, a sum equal to 80% of the funding referred to in paragraph 4.1(a);

(c) if the event occurs within three years, but after two years of the end date of the Sub-Project, a sum equal to 60% of the funding referred to in paragraph 4.1(a);

(d) if the event occurs within four years, but after three years of the end date of the Sub-Project, a sum equal to 40% of the funding referred to in paragraph 4.1(a); or

(e) if the event occurs within five years, but after four years of the end date of the Sub-Project, a sum equal to 20% of the funding referred to in paragraph 4.1(a).

##### *Project Funding Used for Construction or Renovations*

###### 4.3 If

(a) funding provided for a Sub-Project is used towards the costs of constructing or renovating a building to establish a new facility to provide shelter space, transitional or supportive housing or other services for the homeless, or towards the costs of expanding or renovating an existing facility that provides shelter space, transitional or supportive housing or other services for the homeless, and

(b) the amount of the funding referred to in paragraph (a) is in excess of \$50,000, the Recipient shall repay as a debt owing to Canada,

(c) an amount equal to 100% of the funding referred to in paragraph (a) if the Sub-Project referred to in that paragraph is not completed by the end date of the Sub-Project, and

(d) an amount determined in accordance with section 4.4 if the activity referred to in paragraph (a) is completed by the end date of the Sub-Project but within five (5) years following the end date of the Sub-Project either of the following events occurs:

(i) the facility ceases to operate for its intended purpose and is not used for some other service approved by Canada in support of the homeless but is converted to some other use, or

(ii) the facility is sold and the proceeds of disposition are not forthwith committed to supporting a facility providing similar services to the homeless that is approved by Canada.

4.4 The amount repayable by the Recipient under paragraph 4.3(d) if either event referred to in subparagraph 4.3(d)(i) or (ii) occurs shall be determined as follows:

(a) for renovations representing 30% or less of the market value of the facility established as part of the project assessment process, if the event occurs within:

(i) one year of the end date of the Sub-Project a sum equal to 100% of the funding referred to in paragraph 4.3(a); or

(ii) two years, but after one year of the end date of the Sub-Project, a sum equal to 80% of the funding referred to in paragraph 4.3(a); and



(b) for construction and for renovations representing more than 30% of the market value of the facility established as part of the project assessment process, if the event occurs within:

- (i) one year of the end date of the Sub-Project, a sum equal to 100% of the funding referred to in paragraph 4.3(a);
- (ii) two years, but after one year of the end date of the Sub-Project, a sum equal to 80% of the funding referred to in paragraph 4.3(a);
- (iii) three years, but after two years of the end date of the Sub-Project, a sum equal to 60% of the funding referred to in paragraph 4.3(a);
- (iv) four years, but after three years of the end date of the Sub-Project, a sum equal to 40% of the funding referred to in paragraph 4.3(a), or
- (v) five years, but after four years of the end date of the Sub-Project, a sum equal to 20% of the funding referred to in paragraph 4.3(a).

4.5 For greater certainty, the Recipient acknowledges that the repayment requirements in sections 4.1 and 4.3 apply to it not only where the Sub-Project is implemented by it directly but also where it is being implemented by a Sub-Agreement Holder. Consequently, where the Recipient provides funding to a Sub-Agreement Holder for a Sub-Project that involves an activity referred to in section 4.1 or 4.3, the Recipient must ensure pursuant to paragraph 2.3(k) that its agreement with the Sub-Agreement Holder includes repayment obligations on the part of the Sub-Agreement Holder that are modeled on the provisions of section 4.1 or 4.3, as the case may be, except that every reference to "Recipient" in those provisions shall be replaced by a reference to the term used by the Recipient to identify the Sub-Agreement Holder in its agreement with the Sub-Agreement Holder and every reference to "Canada" shall be replaced by a reference to the term used by the Recipient to identify itself in its agreement with the Sub-Agreement Holder.

#### *Repayment to Canada of Amounts Recovered from Sub-Agreement Holders*

4.6 Where a Sub-Agreement Holder is required, under the terms of its agreement with the Recipient, to repay an amount to a Recipient pursuant to a repayment obligation referred to in section 4.5, the Recipient shall repay to Canada any such amount recovered by the Recipient from the Sub-Agreement Holder.

#### *Annual Monitoring of, and Declaration on, Facility Establishment and/or Utilization Following Completion*

4.7 If a Sub-Project involves an activity described in section 4.1 or 4.3, the Recipient shall, for the number of years following the end-date of the Sub-Project in respect of which the repayment requirements in section 4.2 or 4.4, as the case may be, are applicable (hereinafter "the Monitoring Period")

(a) annually monitor, as the case may be,

(i) progress made towards the establishment of the facility, or

(ii) the use of the facility to verify its continuing use for the purposes for which the Recipient had provided its funding, and

immediately notify Canada if the activities leading to the establishment of a facility have ceased, the facility property has been sold or the facility has ceased to be used for its intended purposes, and

(b) provide annually to Canada, using a form provided by Canada, a declaration regarding, as the case may be,

(i) the progress made towards the establishment of the facility during the year covered by the declaration, or

(ii) utilization of the facility during the year covered by the declaration.

4.8 Each annual declaration referred to in section 4.7 shall be provided to Canada no later than ninety (90) days following the end of the year covered by the declaration.

4.9 During the Monitoring Period, the Recipient shall ensure that representatives of Canada are allowed to inspect the operation of the facility at any reasonable time to verify its continuing use for the purposes for which it was funded.

#### *No Mortgaging or Charging of Facility Property*

4.10 If the Recipient itself carries out a Sub-Project involving an activity described in section 4.1 or 4.3, the Recipient shall not mortgage, charge or otherwise encumber the facility property during the period of the Sub-Project or during the Monitoring Period, without the prior written approval of Canada. Canada undertakes that its approval shall not be unreasonably withheld.

4.11 If a Sub-Agreement Holder is carrying out a Sub-Project involving an activity described in section 4.1 or 4.3, the Recipient shall ensure that the Sub-Agreement Holder does not mortgage, charge or otherwise encumber the facility property during the period of the Sub-Project or during the Monitoring Period, without the prior written approval of the Recipient.

### **5.0 ENVIRONMENTAL PROTECTION**

5.1 The Recipient shall:

(a) maintain and implement any and all environmental protection measures prescribed by Canada for ensuring that the harm to the environment resulting from the Project, if any, will remain minimal, and

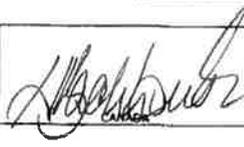
(b) ensure that all environmental protection measures, standards and rules relating to the Project established by competent authorities are respected.



6.0 OFFICIAL LANGUAGES

6.1 The Recipient shall

(a) provide its services, where appropriate, in such a manner as to address the needs of both official language communities.

Signatures		
 RECIPIENT	 RECIPIENT	 RECIPIENT
Oct. 26, 2016 DATE	Oct. 26, 2016 DATE	NOV 02 2016 DATE





Now and Tomorrow  
Excellence in Everything We Do



July 17, 2017

Dear John Reilly,

One of the Government of Canada's priorities is to empower all Canadians to build better lives for themselves and to enable them to contribute to and share in the prosperity of our society. In order to meet this commitment, the Government recognizes that it must respond to the pressing and unmet needs of communities across the country with regards to homelessness.

As part of the Government of Canada's support for social infrastructure, Budget 2017 confirmed incremental funding announced in 2016. The additional funding for 2018-2019 for HPS regional funding streams will maintain the same funding levels as 2016-17 and 2017-18. The additional investment will provide communities across Canada with the flexibility and support they need to help prevent and reduce homelessness.

As the Community Entity responsible for the administration of the Homelessness Partnering Strategy's Designated Communities Homelessness funding stream in Victoria, the Capital Regional District plays an instrumental role in supporting the development of solutions to homelessness in your community. To enhance the ongoing work to combat homelessness, an additional \$228,198 for 2018/19 has been allocated to the Designated Communities Homelessness funding stream in Victoria through Budget 2017. Investment of the incremental funding will require an amendment to your funding agreement #012593166.

This additional funding is intended to enhance the continued implementation of Housing First and complementary initiatives in your community. The supplemental funds may be used to increase funding to existing programs and services or to fund new projects in accordance with your Homelessness Partnering Strategy Community Plan priorities. However, you are expected to maintain a minimum investment of 40% in Housing First activities.

In order to make this funding available for investment, I ask that you confirm your interest in proceeding with the proposed amendment by July 28, 2017. Following your confirmation, Service Canada will proceed with the amendment process and prepare an amended agreement to be signed by the Capital Regional District. Should you have any questions, I encourage you to communicate with Donna Wingfield by telephone at 250-419-0237 or by email at [donna.wingfield@servicecanada.gc.ca](mailto:donna.wingfield@servicecanada.gc.ca).

Thank you for your continued efforts and dedication in the fight against homelessness in Victoria.

Sincerely,

Sheila Brasnett  
Acting/Service Manager

c.c. Mayor Lisa Helps/ Greater Victoria Coalition to End Homelessness Co-Chair  
Ian Batey/ Greater Victoria Coalition to End Homelessness Co-Chair  
Don Elliott, Greater Victoria Coalition to End Homelessness Executive Director



Now and Tomorrow  
Excellence in Everything We Do



July 17, 2017

Dear John Reilly,

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As part of the Government of Canada's support for social infrastructure, Budget 2017 confirmed incremental funding announced in 2016. The additional funding for 2018-2019 for HPS regional funding streams will maintain the same funding levels as 2016-17 and 2017-18. The additional investment will provide communities across Canada with the flexibility and support they need to help prevent and reduce homelessness.

As the Community Entity responsible for the administration of the Homelessness Partnering Strategy's Aboriginal Homelessness funding stream in Victoria, the Capital Regional District plays an instrumental role in supporting the development of solutions to homelessness in your community. To enhance the ongoing work to combat homelessness, an additional \$168,628 for 2018/19 has been allocated to the Aboriginal Homelessness funding stream in Victoria through Budget 2017. Investment of the incremental funding will require an amendment to your funding agreement #012804670.

In order to make this funding available for investment, I ask that you confirm your interest in proceeding with the proposed amendment by July 28, 2017. Following your confirmation, Service Canada will proceed with the amendment process and prepare an amended agreement to be signed by the Capital Regional District. Should you have any questions, I encourage you to communicate with Donna Wingfield by telephone at 250-419-0237 or by email at [donna.wingfield@servicecanada.gc.ca](mailto:donna.wingfield@servicecanada.gc.ca).

Thank you for your continued efforts and dedication in the fight against homelessness in Victoria.

Sincerely,

Sheila Brasnett  
Acting/Service Manager

c.c. Mayor Lisa Helps /Greater Victoria Coalition to End Homelessness Co-Chair

Ian Batey/Greater Victoria Coalition to End Homelessness Co-Chair

**From:** Beardsworth, Ian I [NC]  
**Sent:** October-24-17 8:20 AM  
**To:** Shmigelsky, Lorie LD [W-T]  
**Subject:** Victoria SIF and PiT

We have had discussions with the PiT team at NHQ and to ease reporting burden for the CE it has been decided that the best path forward is for the PiT funds to be included in the Victoria DC major amendment. I verified on Sharepoint and it's still early stages so that's helpful. Victoria's DC agreement should have the PiT statement already in the Activities section (The CE will conduct point-in-time counts as required by the HPS). As long as that statement is included in the activities we are comfortable with everything else remaining similar to the major amendments currently being processed.

The funds have been approved and will be sent to the regional cost centre in the near future.

Our PiT team forwarded the information for fiscal splits (below). Let me know if you have any further questions.

<b>Community</b>	<b>FY17-18</b>	<b>FY18-19</b>
Victoria	-	\$49,910

Ian Beardsworth  
Program Officer/Agent de programme  
Homelessness Partnering Strategy  
Stratégie des partenariats de lutte contre l'itinérance  
819-654-6265  
ian.beardsworth@servicecanada.gc.ca



Making a difference...together

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

**SUBJECT**     Grants-in-Aid

**ISSUE**

To approve the grant-in-aid applications for the Electoral Areas.

**BACKGROUND**

The Supplementary Letters Patent for grants-in-aid require that Capital Regional District (CRD) Board approval be obtained before any payments for grants-in-aid are made on behalf of one or more member electoral areas to any organization deemed by the Board of the CRD to be contributing to the general interests and advantage of the area.

This service covers the Electoral Areas. Before exercising the powers described above, the Supplementary Letters Patent require that the Board obtain the written approval of the Director of each Electoral Area to the proposed grant-in-aid for such Electoral Area.

**FINANCIAL IMPLICATIONS**

These applications comply with the CRD Grants-In-Aid guidelines and budgets.

**RECOMMENDATION**

That the Electoral Area Services Committee recommend to the Capital Regional District Board:  
That the following grant-in-aid applications be approved:

- |   |    |         |
|---|----|---------|
| 1. Willis Point Volunteer Fire Fighters Association                       | \$ | 2059.00 |
| 2. Pender Island Junior Sailing Association (For payment in January 2018) | \$ | 3283.00 |

Submitted by:	Carlo Vijandre, PMP, AScT, FMP, Manager, Asset Management
Concurrence:	Rianna Lachance, BCom, CPA, CA, A/Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

Appendix A: Grant-In-Aid Applications



Making a difference...together

4<sup>th</sup> Floor | 625 Fisgard St. PO Box 1000 Victoria BC V8W 2S6 | T 250.360.3000 | F 250.360.3023 | www.crd.bc.ca

# GRANT IN AID REQUEST FORM (Vendor 900)

TO: MANAGER, ACCOUNTING SERVICES  
FINANCE & TECHNOLOGY DEPARTMENT

DATE: 20/11/2017  
(dd/mm/yy)

SUBJECT: REQUEST FOR GRANT IN AID

Electoral Area: Juan de Fuca

Organization for which the Grant in Aid is requested:

Willis Point Volunteer Fire Fighters Association

Amount Approved: \$ 2059.00

Tax Code:

Account Assignment:

B/A	G/L	Cost Centre
1001	544000	100082 – JDF _____ 100083 – SSI _____ 100085 – SGI _____

Requested by: [Signature]  
Director's Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date Received (dd/mm/yy)

FINANCE ONLY

Request received and acted upon by:

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

## CRD GRANT-IN-AID APPLICATION FORM

### *Application Submitted By*

Name and Address of Applicant: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Contact(s): \_\_\_\_\_  
(name) (phone) (fax)  
\_\_\_\_\_  
Email address

Contact(s): \_\_\_\_\_  
(name) (phone) (fax)  
\_\_\_\_\_  
Email address

### *Application Summary*

Project or purpose for which you require assistance:

Amount of grant requested \$ \_\_\_\_\_

To the best of my knowledge, all of the information that is provided in this application is true and correct. Furthermore, I hereby certify that this application for assistance is:

- **NOT** being made on behalf of an industrial, commercial, or business undertaking
- **NOT available for the personal benefit of any individual, proprietor, member or shareholder**

Steve Eldridge  
(signature of authorized signatory)

\_\_\_\_\_  
(title)

\_\_\_\_\_  
(print name)

## Applicant Profile

1. Please describe the services / benefits that your organization provides to the community. Are these services / benefits available to the community from another organization or agency?

2. Describe the geographic area that receives services or benefits from your organization.

3. Is your organization voluntary and non-profit?      NO      YES

Please detail any remuneration paid, or funds otherwise made available to members, officers, etc. of your organization.

Please indicate the number of members / volunteers in your organization and how long your organization has been in operation.



## Funding and Financial Information

1. Attach supporting financial information, i.e., budget / financial report. Ensure the following information is clearly itemized;
  - o ] roject à~ â\*^ç
  - o grants / funding from other sources,
  - o funding contributed by applicant through fund raising activities or other sources of revenue and,
  - o ~~ā ā 8ā{ ^ } ā{ ā^•~~ Total expenses for the fiscal year, including any monies and/or benefits paid to members or officers.

2. Have you applied for a grant / funding from another source(s)?      NO      YES

**If yes**, complete the following chart. **If no**, please explain \_\_\_\_\_

Name of Grant or Funding Agency	\$ Amount Applied For	Status of Grant Application		
		Approved (Y)	Denied (Y)	Pending (Y)

3. Have you received assistance (grant in aid / waiving of fees, etc.), from the CRD in previous years?

NO      YES..... **If yes**, please complete the following chart.

Year	\$ Amount	Purpose for which assistance was used

4. Does your organization:

Offer direct financial assistance to individuals or families?	Yes	No
---	-----	----

Provide services that fall within the mandate of either a senior government or a local service agency?	Yes	No
---	-----	----

Provide an opportunity for individuals to make direct Contributions to the project (e.g., fundraising for the project)?	Yes	No
--	-----	----

Or, is your organization:

part of a Provincial or National fund raising campaign?	Yes	No
---	-----	----

The information provided in Section 4 is for data collection purposes.

**Followup:**

Please refer to Page 6 of the ***Grant-In-Aid - Application Completion Guide*** regarding the following:

**1. Acknowledgement**

**2. Reporting**

**WILLIS POINT VOLUNTEER FIREFIGHTERS ASSOCIATION**  
**Kitchen Appliance Replacement Project**  
**2017 November**

*In support of the required documentation identified in the application section: "Funding and Financial Information", item 1, first three bullets.*

	<b>Budget</b>
<b><u>REVENUE</u></b>	
Grants / Funding from other sources	0.00
*Funding contributed by applicant through fund raising activities or other sources of revenue	0.00
Total Revenue	<u>0.00</u>
<b><u>**EXPENSES</u></b>	
Electric Coil Top Range	699.00
Dishwasher	599.00
OTR Microwave	399.00
Delivery	94.00
Disposal	50.00
GST	92.05
PST	125.37
Total Expenditures	<u>2058.42</u>
<b><u>PROJECT NET</u></b>	<b><u>\$ (2,058.42)</u></b>

\* WPVFFA Members will support the project through volunteer hours  
Specifically, the members will remove the existing appliances, clean the space and install the new dishwasher.

\*\* All expense figures are based on the lowest quote received - that from Trail Appliances.  
See all quotes received below.

## Trail Appliances (lowest quote)

**From:** Brandon Dolan  
**Sent:** Friday, November 10, 2017 10:55 AM  
**To:** 'keving@sendingamessage.com' <keving@sendingamessage.com>  
**Subject:** Trail Appliances / Quote

Good Morning Kevin,

Thank you for your phone call. Below are the links to the products we spoke about with pricing. If you have any questions please give me a call

Thanks,  
Brandon  
(250)475-1511

Whirlpool electric coil top range in stainless steel

<http://www.trailappliances.com/bc/products/product/5285-ywfc310s0es-whirlpool-black-on-stainless-30-in-4-8-cu-ft-coil-electric-range>

MSRP \$949     Sale \$699

Whirlpool 24" dishwasher in stainless steel

<http://www.trailappliances.com/bc/products/product/4123-wdf540padm-whirlpool-stainless-steel-5-cycle-dishwasher-with-front-controls>

MSRP \$799     Sale \$599

Whirlpool 30" OTR microwave in stainless steel

<http://www.trailappliances.com/bc/products/product/9685-ywmh31017fs-whirlpool-stainless-1-7-cu-ft-300-cfm-over-the-range-microwave>

MSRP \$499     Sale \$399

Delivery \$94 (includes full set up of the range, the dishwasher and OTR microwave will not be installed by our delivery team)

Disposal \$50 (the old dishwasher and Microwave will need to be unhooked before my delivery guys can take them away)

Total \$1841 + Tax

**Brandon Dolan** | Product Expert | **Trail Appliances Ltd.** | P.250-475-1511 | F.250-475-3013 | [www.trailappliances.com](http://www.trailappliances.com)

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# Lansdowne Quote

11/14/2017

Build Quote - Tracktail



Quote For

Lansdowne Appliance Gallery  
 Lansdowne Appliance Gallery  
 2517 Douglas St, Victoria  
 (250) 383-1275

kevin

kevin

Model	Current Price	Quantity	Total
<b>Whirlpool YWFC310S0ES</b>	\$899	1	\$899.00



**30-inch Freestanding Electric Range**

**General**

Fuel Type Electric  
 Style Counter-Depth

**Oven**

Capacity (cu. ft.) 4.8  
 Self-Cleaning Yes

**Cooktop**

Elements Coil  
 Burners/Elements 4

**Web link**

<https://www.lansdowneappliance.com/en/catalog/product/263971>

<b>Whirlpool WDF560SAFM</b>	\$499.99	1	\$499.99
-----------------------------	----------	---	----------



**24-inch Built-In Dishwasher**

**General**

Type Built-In  
 Place Settings 12  
 Silence Rating 50 dB

**Features**

Tub Material Stainless Steel

**Cycle Information**

Number of Cycles 5

**Web link**

<https://www.lansdowneappliance.com/en/catalog/product/327645>

<b>Whirlpool YWMH31017FS</b>	\$299	1	\$299.00
------------------------------	-------	---	----------



**30-inch, 1.7 cu. ft. Over-the-Range Microwave Oven**

**General**

Capacity 1.7 Cu.Ft.  
 Cooking Power 1000 W

**Web link**

<https://www.lansdowneappliance.com/en/catalog/product/356424>

*WPVFFA: Total not include \$150 for delivery and removal.  
 Comparative (inclusive) total is 1847.99*

**Total** \$1,697.99

**Bundle Price** \$0

price is net of taxes, delivery and installs not included. Delivery out of the city is done via a quote from third-party delivery agent. contact matt at strongman delivery for delivery quote if needed.

**WILLIS POINT VOLUNTEER FIREFIGHTERS ASSOCIATION**  
**2016 ACTUAL For the Year Ending September 30, 2016**  
**2016 BUDGET & 2017 BUDGET**

*In support of the required documentation identified in the application section: "Funding and Financial Information", item 1, last bullet.*

<u>REVENUE</u>	2015/16 Actual	2015/16 Budget	2016/17 Budget
	<b>2016</b>		
Firefighters Call Out & Weekly Attendance Grant	6678.00	6678.00	6678.00
Roadside for Muscular Dystrophy	1640.00	1500.00	1500.00
Donations General	380.00	300.00	300.00
Fundraising for 40th Anniversary	0.00	0.00	6000.00
Donations for Fireworks From the Community/WP Comm. Association	1415.00	1000.00	1200.00
Donation - Firefighter's Employers	1645.00	1000.00	1000.00
Net Proceeds for Halloween Happy Hour	841.00	800.00	1000.00
Sign net	0	0	0
Total Revenue	\$ 12,599.00	\$ 11,278.00	\$ 17,678.00

EXPENDITURES

Practice Night /Call Out Post Mortem Food Snacks & Beverages	3870.00	4000.00	4000.00
Christmas Party Recognition Night	2307.00	2500.00	2700.00
Donations For Muscular Distrophy	1640.00	1500.00	1500.00
Fireworks For Halloween Bonfire	757.00	800.00	800.00
Summer Picnic	522.00	500.00	250.00
AGM Expence	220.00	100.00	200.00
Open House/ wine and cheese	344.00	0.00	0.00
Bank Charges	66.00	100.00	100.00
Engraving/ AWARDS	156.00	200.00	200.00
Website Expenses	108.00	108.00	108.00
Kitchen Items	322.00	350.00	350.00
Halloween	559.00	600.00	600.00
cards and postage	119.00	120.00	120.00
Society Act Filing Fee	25.00	25.00	25.00
Licenses	94.00	100.00	100.00
Beverage	165.00	150.00	150.00
Gifts	0.00	100.00	100.00
Apparel	0.00	0.00	0.00
signs	67.00	0.00	0.00
40th Anniversary	0.00	0.00	6000.00
Total Expenditures	<u>11341.00</u>	<u>11253.00</u>	<u>17303.00</u>
Expenditures in Excess of Revenue			
Revenue in Excess of Expenditures	\$ 1,258.00	\$ 25.00	\$ 375.00



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4<sup>th</sup> Floor | 625 Fisgard St. PO Box 1000 Victoria BC V8W 2S6 | T 250.360.3000 | F 250.360.3023 | www.crd.bc.ca

# GRANT IN AID REQUEST FORM (Vendor 900)

TO: MANAGER, ACCOUNTING SERVICES  
FINANCE & TECHNOLOGY DEPARTMENT

DATE: 30/11/17  
(dd/mm/yy)

SUBJECT: **REQUEST FOR GRANT IN AID**

Electoral Area: SG1

Organization for which the Grant in Aid is requested:

Pender Island Junior Sailing Assoc

Amount Approved: \$ 3283.<sup>00</sup>

Tax Code:

Account Assignment:

B/A	G/L	Cost Centre
1001	544000	100082 – JDF _____ 100083 – SSI _____ 100085 – SGI _____

Requested by: \_\_\_\_\_

Director's Signature

David Howe

Print Name

D Howe

Date Received (dd/mm/yy)

FINANCE ONLY

Request received and acted upon by:

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

**CRD GRANT-IN-AID APPLICATION FORM**

***Application Submitted By***

Name and Address of Applicant: Pender Island Junior Sailing Association  
c/o 1200 Otter Bay Rd  
Pender Island, BC V0N 2M1

Contact(s): Bruce Waygood 250-818-8555  
(name) (phone) (fax)  
kbwaygood@shaw.ca  
Email address

Contact(s): David Reed 250-629-6773 250-629-6783  
(name) (phone) (fax)  
reedtraffic@gmail.com  
Email address

***Application Summary***

Project or purpose for which you require assistance:

Amount of grant requested \$ 3283.00

To the best of my knowledge, all of the information that is provided in this application is true and correct. Furthermore, I hereby certify that this application for assistance is:

- NOT being made on behalf of an industrial, commercial, or business undertaking
- NOT available for the personal benefit of any individual, proprietor, member or franchisee

  
(signature of authorized signatory)

Commodore  
(title)

Bruce Waygood  
(print name)

## Applicant Profile

1. Please describe the services / benefits that your organization provides to the community. Are these services / benefits available to the community from another organization or agency?

Pender Island Junior Sailing Association (PIJSA) provides 4 weeks of sailing courses during the months of July and August. The courses are taught by certified BC Sail coaches, and successful participants receive certifications indicating that they have achieved proficiency as proscribed by CanSail levels 1-4. These achievements are registered at CanSail. Approximately 70 participants have been taught annually in recent years, the majority being children at least 9 years old for CanSail 1 & 2 and 12 years old for CanSail 3 & 4. A few adults participate and the maximum capacity is 88 participants. No other organization on the Pender Islands provides this activity.

2. Describe the geographic area that receives services or benefits from your organization.

Participants are about 1/3 children resident on Pender Island; 1/3 grandchildren of Pender Island residents; 1/3 children of "weekenders" or summer residents. Occasionally participants are friends or relatives from other countries.

3. Is your organization voluntary and non-profit?  NO  YES

Please detail any remuneration paid, or funds otherwise made available to members, officers, etc. of your organization.

\$400 to one board member as reimbursement for food for 2 instructors. One director, who is a professional boat builder, is paid from time to time for major repairs to boats. All other maintenance is provided at no cost by directors, members or volunteers.

Please indicate the number of members / volunteers in your organization and how long your organization has been in operation.

PIJSA has 10 volunteer Directors. In addition to the Directors, at least 10 volunteers participate in the delivery of courses and general maintenance, and the Association has in addition another 37 members.

## Project / Proposal Profile

1. Assistance is being requested for:
  - capital project and / or equipment
  - special event
  - other purpose ( Insurance and reduction in course fees )
2. Please describe the proposal for which you are requesting assistance. Attach additional information if required.

PIJSA has for many years been covered by an omnibus insurance policy organized by the Board of Pender Island Recreation & Agriculture Hall Society at a cost of about \$250. Last year the insurer introduced a "sports exclusion" clause which effectively removed PIJSA from the omnibus policy. PIJSA asked 3 companies to seek out insurance. One company could not find insurance, another quoted \$4700 and Navis Marine insurance quoted \$3283 (see attachment). This alone would require course fees to increase from \$150 to about \$195. For many years, CRD has supported PIJSA, providing \$500/annum, which is still needed to help keep our course fees down. The primary purpose of this request is to help maintain our courses at a reasonable cost for families. If this grant is approved, it is likely that fees will still have to increase to \$160 to cover increasing costs. Without it we would have to increase fees to near \$200. At some point, fee increases will result in a decline in registration, which in turn could result in PIJSA no longer being able to offer sailing lessons.

3. Please describe how this proposal will benefit the community.

As described above, the grant will allow PIJSA to continue to offer sailing courses at a modest course fee for primarily children.

## Funding and Financial Information

1. Attach supporting financial information, i.e., budget / financial report. Ensure the following information is clearly itemized:
  - project budget,
  - grants / funding from other sources,
  - funding contributed by applicant through fund raising activities or other sources of revenue and,
  - financial statement that itemizes total expenses for the fiscal year, including any monies and/or benefits paid to members or officers.

2. Have you applied for a grant / funding from another source(s)?  NO  YES

**If yes**, complete the following chart. **If no**, please explain \_\_\_\_\_

Name of Grant or Funding Agency	\$ Amount Applied For	Status of Grant Application		
		Approved (Y)	Denied (Y)	Pending (Y)
Pender Island Yacht Club	\$500	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Magic Lake Property Owners	\$250	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nu-to-Yu	\$500	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Have you received assistance (grant in aid / waiving of fees, etc.), from the CRD in previous years?

NO  YES..... **If yes**, please complete the following chart.

Year	\$ Amount	Purpose for which assistance was used
2016	\$500	General Support
2015	\$500	General Support
2014	\$500	General Support
2013	\$500	General Support

4. Does your organization:

Offer direct financial assistance to individuals or families?  Yes  No

Provide services that fall within the mandate of either  
a senior government or a local service agency?  Yes  No

Provide an opportunity for individuals to make direct  
Contributions to the project (e.g., fundraising for the project)?  Yes  No

Or, is your organization:

part of a Provincial or National fund raising campaign?  Yes  No

The information provided in Section 4 is for data collection purposes.

**Followup:**

Please refer to Page 6 of the Grant-In-Aid - Application Completion Guide regarding the following:

**1. Acknowledgement**

**2. Reporting**



**PIJSA**

**Financial Statement 2017 (DRAFT)**

**Revenues**

Carry Over:	\$2,265	
Course Fees:	\$11,545	77 fees
Tru-Value:	\$1,200	
PIYC donation:	\$1,000	For 2016 & 2017
Nu-to-Yu grant:	\$1,000	
MLPOS grant:	\$250	
Anonymous donation:	\$300	To provide 2 free courses
<b>Total</b>	<b>\$17,560</b>	

**Expenses.**

Instructors salaries	\$6,400
Insurance	\$3,283
Equipment	\$1,818
Maintenance & Supplies	\$1,456
BCSail fees	\$1,244
Barbecues	\$937
Instructor housing	\$400
Administration	\$395
2 free courses	\$300
<b>Total</b>	<b>\$16,233</b>
Carry over to 2018	\$1,327

**PIJSA**

**Budget 2018**

**Revenues**

Carry Over:	\$1,327	
Course Fees:	\$11,200	70 fees @ \$160
CRD Grant	\$3,283	
Tru-Value:	\$1,000	
PIYC donation:	\$500	
Nu-to-Yu grant:	\$500	
MLPOS grant:	\$500	

**Total** **\$18,310**

**Expenses**

Instructors salaries	\$6,400
Insurance	\$3,500
Equipment	\$1,000
Maintenance & Supplies	\$1,000
BCSail fees	\$1,125
Barbecues	\$1,000
Instructor housing	\$400
Administration	\$500

**Total** **\$14,925**

Carry over to 2019 **\$3,385**

**Notes:**

1. Insurance deductible is \$2,500 for liability, thus \$2,500 must be kept in reserve
2. PIJSA wants to build to a reserve of \$2,500 to cover the potential that an outboard motor would have to be replaced in mid-course.

ATTACHED TO AND FORMING PART OF INTERIM COVERNOTE NO. 1782  
FOR  
PENDER ISLAND JUNIOR SAILING ASSOCIATION

Hull & Machinery Schedule:

Item	Serial Number	Other identifying characteristic	Value	Deductible
<b>Outboard Motors</b>				
Yamaha 8hp	T8M LHG 60S L1021017 H		\$1900	\$500
Yamaha 8hp	F8M LH 60R L1007800 M		\$1900	\$500
Honda 2.5 hp	BZBK2100286		\$700	\$250
<b>Other Equipment</b>				
Boat Dollies		9 @ \$500 ea	\$4,500	\$250
<b>Boats</b>				
Laser II	None	Named "Jaws"; light blue hull; jaws painted on bow.	\$3000	\$500
Laser II	None	Yellow hull	\$3000	\$500
Laser I	None	Red Hull; Named "Take Time"	\$1500	\$500
Laser I	ZFSA4318M82B	Yellow Hull	\$1500	\$500
Laser I		White Hull	\$1500	\$500
Laser I	None	Green Hull; Named "Shark Bait"	\$1500	\$500
Laser I	ZP5458047821	Beige Hull	\$1500	\$500
Byte	Q6M82103N999		\$1000	\$500
Flying Junior		Name "Sea Biscuit"; Blue trim	\$3000	\$500
Flying Junior		Name "Black Pearl"; Black Trim	\$3000	\$500
Flying Junior		Name "Jolly Roger"; Yellow trim	\$3000	\$500
Flying Junior		Name "Sassy"; Brown trim	\$3000	\$500
Livingston tender	L8026522M83A		\$500	\$250
Wooden row boat		Red Hull; varnished upper	\$2000	\$500
Zodiac		Grey	\$6500	\$500
Zodiac		Red	\$2000	\$500

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE  
MEETING OF WEDNESDAY, OCTOBER 25, 2017**

---

**SUBJECT**     **Millstream Meadows Remediation Update**

**ISSUE**

To provide an update on the status of the Millstream Meadows remediation project.

**BACKGROUND**

The Millstream Meadows site is a 32-acre property in the District of Highlands that was used for the unregulated disposal of septage, other trucked liquid and solid waste between the early 1940s to 1985; see Appendix A for site location plan and other figures. The Capital Regional District (CRD) acquired the property in 1984 and closed the site in 1985. Since then, the CRD and the Province of British Columbia (the Province) have worked cooperatively to remediate the property. Ongoing activities include divestment planning and remediation. The overall project approach, schedule and budget is managed in cooperation with, and approved by, the Province.

As anticipated in the Remediation Cost Sharing Agreement, the CRD initiated site rezoning in 2015 to Commercial Industrial Land Use. The rezoning is in accordance with the District of Highlands' Official Community Plan and is supported by both the municipality and the Province. Additionally, the CRD is seeking the release of land use restrictions on the Crown Grant and opportunities for short-term leases to offset remediation expenditures.

**REMEDICATION UPDATE**

Site remediation objectives are to protect human health and the environment, meet regulatory requirements and prepare the site for sale by obtaining a risk-based Certificate of Compliance. Although 76,000 tonnes of contaminated soil were removed in 2007-2008, surficial soil and bedrock contamination remains at the site. In January 2016, the CRD engaged SNC-Lavalin Inc. (SNC) via a competitive process to advance the project toward a risk-based Certificate of Compliance.

The CRD continues to provide bottled drinking water to nearby residents and to monitor water quality in nearby water wells as a precautionary measure. The analytical results confirm that the well quality meets applicable standards. Domestic well analytical reports for 2016 and early 2017 are included in Appendix B for reference.

**Detailed Site Investigation**

A multi-phase Detailed Site Investigation (DSI), required by the BC Ministry of Environment (MOE), is underway that will fully describe and delineate the degree and extent of contamination across all substrates (soil, water, etc.). CRD staff and consultants are strategically progressing several investigations in parallel to minimize the schedule. In this manner, significant progress has been made toward completing a DSI and delineating contamination. While the DSI work will continue through 2018, the following preliminary conclusions are appropriate based on current data:

- Although confirmation is required, delineation of soil and shallow groundwater contamination is nearly complete; stockpiled contaminated soil remaining on site from the 2007-2008 work can be managed on site, eliminating the need for costly offsite disposal.
- Bedrock geology at the site is more complex than previously understood. Physical and geophysical data identified extreme angle fractures (either nearly vertical or nearly horizontal) throughout the top 60 m of bedrock.
- Contamination was identified in bedrock at the deepest point investigated in 1 monitoring location north of the former lagoons (at approximately 60 m below ground surface).
- A preliminary risk evaluation for surface soils has concluded that unacceptable risks are primarily located in known contaminated areas around the former lagoons. These risks are expected to be mitigated with straightforward common mitigation methods (e.g., capping) that are consistent with and support anticipated future land use.

### Next Steps

The 2016 project plan anticipated that DSI and risk assessment activities would continue through 2019 and included Class C estimated costs for the anticipated work. The DSI is necessary to delineate groundwater contamination, evaluate the stability of the contaminated groundwater plume, and assess potential pathways to receptors. These are key requirements to facilitate the risk assessment approach, obtain a Certificate of Compliance, and to ensure that the CRD's potential liabilities are fully addressed.

In winter 2017-2018, staff are planning an investigation that focuses on:

- Determining contaminant transport pathways in bedrock, specifically identifying hydraulically-connected fracture zones, if any, which represent potential contaminant distribution pathways.
- Vertical delineation of contamination, as required by MOE. The drilling will advance beyond the deepest known water quality exceedance to a depth of ~120 m below surface to document the maximum depth of contamination.
- Planning the position of future horizontal delineation wells, based on information gathered. The proposed investigation methods are consistent with the Science Advisory Board for Contaminated Sites in BC.

### **ALTERNATIVES**

#### *Alternative 1*

That the Environmental Services Committee recommend to the CRD Board:

That ongoing procurement activities for planned Detailed Site Investigation and risk assessment consulting services be approved for Millstream Meadows remediation, in accordance with the Standing Offer Agreement EPro2015-083 and the CRD's procurement policy.

*Alternative 2*

That the Environmental Services Committee request additional information.

**ENVIRONMENTAL IMPLICATIONS**

Although there is residual contamination above environmental standards at the site, the property is closed to the public and there are no confirmed exposure pathways. Additionally, site-related contamination has not been observed in the CRD's offsite monitoring program. The proposed project activities will delineate the onsite contamination, evaluate any associated risk and include a plan to ensure there are no unacceptable future risks associated with the site.

**SOCIAL IMPLICATIONS**

Ongoing monitoring, site remediation and certification will result in public reassurance that the property does not pose a risk to neighbouring developments or the public, allow the site potential to be fully realized and generate economic development within the District of Highlands.

**FINANCIAL IMPLICATIONS**

As the site remediation progresses, overall uncertainty is reduced and costs are more clearly understood. Moving to a risk-based approach aligns with regulatory expectations and has resulted in significant financial savings. In 2008, the CRD and the Province estimated an overall budget of \$10.5 million to remediate the site. These costs would be shared 61% CRD, 39% provincial contribution. The majority of project costs went to the 2007-2008 remediation and totalled approximately \$9M. With remaining project costs in the range of ~\$3.9M (as of early 2016), actual project estimates are \$13.6M. Funds are in place to cover these estimates, including provincial contributions, capital on hand, requisition and transfers from the Hartland landfill tipping fees (set at \$3/tonne). Project scope, funds and expenditures are currently balanced such that no additional borrowing is anticipated.

The overall project approach and budget of \$13.9M is accepted by the Province. Similarly, each scope of work is approved by the Province prior to authorization.

**CONCLUSION**

The Millstream Meadows Remediation project objectives are to protect human health and the environment, meet regulatory requirements and prepare the site for divestment. Remediation and rezoning will ensure that the site potential and property value can be maximized. Significant progress has been made in understanding site contaminant distribution, and work continues to meet MOE requirements.

**RECOMMENDATION**

That the Environmental Services Committee recommend to the Capital Regional District Board:

That ongoing procurement activities for planned Detailed Site Investigation and risk assessment consulting services be approved for Millstream Meadows remediation, in accordance with the Standing Offer Agreement EPro2015-083 and the CRD's procurement policy.

Submitted by:	Glenn Harris, Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

KKT:cam/ss

Attachments: Appendix A – Site Drawings  
Appendix B – Domestic Well Monitoring Reports



**Important**

This map is for general information purposes only. The Capital Regional District (CRD) makes no representations or warranties regarding the accuracy or completeness of this map or the suitability of the map for any purpose. This map is not for navigation. The CRD will not be liable for any damage, loss or injury resulting from the use of the map or information on the map and the map may be changed by the CRD at any time.

Printed Fri, Mar 13, 2015

# Millstream Meadows

Intramap 2.0

Capital Regional District  
gis@crd.bc.ca  
<http://www.crd.bc.ca>







CAPITAL REGIONAL DISTRICT  
ATTN: Korene Torney  
625 Fisgard Street  
VICTORIA BC V8W 1R7

Date Received: 28-JAN-16  
Report Date: 04-FEB-16 12:05 (MT)  
Version: FINAL

Client Phone: 250-360-3214

## Certificate of Analysis

Lab Work Order #: L1728505  
Project P.O. #: MILLSTREAM DOMESTIC WELLS  
Job Reference:  
C of C Numbers:  
Legal Site Desc:

  
\_\_\_\_\_  
Jamie Lo, B.Sc.  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

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ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1728505-1 Water 26-JAN-16 10:32 2016-050-610	L1728505-2 Water 26-JAN-16 10:32 2016-050-611	L1728505-3 Water 26-JAN-16 10:39 2016-050-612	L1728505-4 Water 26-JAN-16 10:44 2016-050-613	L1728505-5 Water 26-JAN-16 11:05 2016-050-614
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	91.2	92.2	90.4	90.7	89.9
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Benzo(b&j)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	2-Methylnaphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acenaphthene d10 (%)	100.1	94.3	97.5	103.4	89.9
	Surrogate: Chrysene d12 (%)	99.1	96.2	94.5	81.3	91.5
Surrogate: Phenanthrene d10 (%)	79.9	77.0	78.8	83.7	73.7	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1728505-6	L1728505-7	L1728505-8	L1728505-9	L1728505-10
		Description	Water	Water	Water	Water	Water
		Sampled Date	26-JAN-16	26-JAN-16	26-JAN-16	26-JAN-16	26-JAN-16
		Sampled Time	11:10	11:25	11:42	11:44	11:46
		Client ID	2016-050-615	2016-050-616	2016-050-617	2016-050-618	2016-050-619
Grouping	Analyte						
<b>WATER</b>							
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	91.1	90.3	91.6	90.6	90.5	
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Benzo(b&j)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	2-Methylnaphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acenaphthene d10 (%)	93.5	93.3	106.5	97.2	96.7	
	Surrogate: Chrysene d12 (%)	82.5	93.2	98.5	103.2	107.5	
Surrogate: Phenanthrene d10 (%)	75.6	78.3	84.5	80.8	79.2		

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1728505-11 Water 26-JAN-16 11:49 2016-050-620	L1728505-12 Water 26-JAN-16 12:05 2016-050-621	L1728505-13 Water 26-JAN-16 12:08 2016-050-622	L1728505-14 Water 26-JAN-16 12:08 2016-050-623	L1728505-15 Water 26-JAN-16 12:10 2016-050-624
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	85.3	90.1	90.5	92.7	90.7
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Benzo(b&j)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	2-Methylnaphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acenaphthene d10 (%)	94.0	98.8	100.1	108.7	99.5
	Surrogate: Chrysene d12 (%)	93.6	92.4	96.9	101.2	100.0
Surrogate: Phenanthrene d10 (%)	78.1	80.2	81.7	86.7	82.4	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1728505-16 Water 26-JAN-16 12:12 2016-050-625	L1728505-17 Water 26-JAN-16 12:14 2016-050-626	L1728505-18 Water 26-JAN-16 12:55 2016-050-627		
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25		
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25		
	LEPH (mg/L)	<0.25	<0.25	<0.25		
	HEPH (mg/L)	<0.25	<0.25	<0.25		
	Surrogate: 2-Bromobenzotrifluoride (%)	92.4	94.0	93.2		
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050		
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050		
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010		
	Benzo(b&j)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050		
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050		
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050		
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050		
	2-Methylnaphthalene (mg/L)	<0.000050	<0.000050	<0.000050		
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050		
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050		
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050		
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050		
	Surrogate: Acenaphthene d10 (%)	83.4	108.6	105.7		
	Surrogate: Chrysene d12 (%)	79.8	109.5	105.0		
	Surrogate: Phenanthrene d10 (%)	69.1	90.3	85.1		

## Reference Information

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
LEPH/HEPH-CALC-CL	Water	LEPHs and HEPHs	BC MELP; CSR-Analytical Method 3
LEPH/HEPH-CL	Water	LEPHs and HEPHs	BC MELP; CSR-Analytical Method 3
PAH-BCCSR-CL	Water	PAHs - BC CSR Regs	EPA 3510/8270-GC/MS
TEH-BC-CL	Water	EPH (C10-C19) & EPH (C19-C32)	BCMoe EPH GCFID

Analysis is in accordance with BC MOE Lab Manual method "Extractable Petroleum Hydrocarbons in Water by GC/FID", v2.1, July 1999. Whole water samples are extracted with DCM prior to gas chromatography with flame ionization detection (GC-FID). EPH results include Polycyclic Aromatic Hydrocarbons (PAH) and are therefore not equivalent to Light and Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH).

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

### Chain of Custody Numbers:

#### GLOSSARY OF REPORT TERMS

*Surrogate* - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

*mg/kg* - milligrams per kilogram based on dry weight of sample.

*mg/kg wwt* - milligrams per kilogram based on wet weight of sample.

*mg/kg lwt* - milligrams per kilogram based on lipid-adjusted weight of sample.

*mg/L* - milligrams per litre.

*<* - Less than.

*D.L.* - The reported Detection Limit, also known as the Limit of Reporting (LOR).

*N/A* - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.







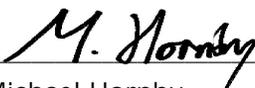
CAPITAL REGIONAL DISTRICT  
ATTN: Korene Torney  
625 Fisgard Street  
VICTORIA BC V8W 1R7

Date Received: 30-APR-16  
Report Date: 11-MAY-16 10:00 (MT)  
Version: FINAL

Client Phone: 250-360-3214

## Certificate of Analysis

Lab Work Order #: L1762424  
Project P.O. #: NOT SUBMITTED  
Job Reference:  
C of C Numbers:  
Legal Site Desc:

  
\_\_\_\_\_  
Michael Hornby  
Account Manager

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1762424-1 water 29-APR-16 09:50 2016-050-635	L1762424-2 water 29-APR-16 09:50 2016-050-636	L1762424-3 water 29-APR-16 09:56 2016-050-637	L1762424-4 water 29-APR-16 10:03 2016-050-638	L1762424-5 water 29-APR-16 10:08 2016-050-639
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	86.8	100.0	95.5	92.0	92.0
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acridine d9 (%)	75.8	95.1	85.7	81.8	71.3
	Surrogate: Chrysene d12 (%)	75.4	87.8	67.9	82.7	75.1
Surrogate: Naphthalene d8 (%)	86.8	113.2	92.4	92.3	90.1	
Surrogate: Phenanthrene d10 (%)	85.2	101.6	93.2	94.3	87.2	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1762424-6 water 29-APR-16 10:08 2016-050-640	L1762424-7 water 29-APR-16 10:27 2016-050-641	L1762424-8 water 29-APR-16 10:32 2016-050-642	L1762424-9 water 29-APR-16 10:42 2016-050-643	L1762424-10 water 29-APR-16 10:45 2016-050-644
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	93.0	99.3	88.9	95.7	98.8
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acridine d9 (%)	64.0	86.5	71.0	86.4	80.9
	Surrogate: Chrysene d12 (%)	81.3	88.6	66.9	90.5	105.0
Surrogate: Naphthalene d8 (%)	87.5	92.9	80.3	95.3	100.4	
Surrogate: Phenanthrene d10 (%)	69.8	94.1	81.9	96.5	101.2	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1762424-11 water 29-APR-16 10:50 2016-050-645	L1762424-12 water 29-APR-16 11:09 2016-050-646	L1762424-13 water 29-APR-16 11:11 2016-050-647	L1762424-14 water 29-APR-16 11:15 2016-050-648	L1762424-15 water 29-APR-16 11:15 2016-050-649
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	95.2	99.3	96.4	99.8	95.3
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acridine d9 (%)	83.0	85.0	84.8	85.9	76.1
	Surrogate: Chrysene d12 (%)	85.1	91.3	84.1	80.2	72.7
Surrogate: Naphthalene d8 (%)	101.7	97.1	91.8	99.0	84.8	
Surrogate: Phenanthrene d10 (%)	93.0	102.2	91.9	94.1	80.7	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1762424-16 water 29-APR-16 11:18 2016-050-650	L1762424-17 water 29-APR-16 11:28 2016-050-651	L1762424-18 water 29-APR-16 11:30 2016-050-652	L1762424-19 water 29-APR-16 11:33 2016-050-653	L1762424-20 water 29-APR-16 11:35 2016-050-654
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	85.0	99.1	101.7	108.3	100.5
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acridine d9 (%)	75.5	91.0	85.1	86.2	80.6
	Surrogate: Chrysene d12 (%)	73.8	90.0	95.3	101.4	100.1
Surrogate: Naphthalene d8 (%)	89.1	103.8	95.1	99.7	94.3	
Surrogate: Phenanthrene d10 (%)	77.9	105.4	101.8	108.9	99.7	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1762424-21	L1762424-22	L1762424-23
		Description	water	water	water
		Sampled Date	29-APR-16	29-APR-16	29-APR-16
		Sampled Time	11:38	11:40	13:20
		Client ID	2016-050-655	2016-050-656	2016-050-657
Grouping	Analyte				
<b>WATER</b>					
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	
	LEPH (mg/L)	<0.25	<0.25	<0.25	
	HEPH (mg/L)	<0.25	<0.25	<0.25	
	Surrogate: 2-Bromobenzotrifluoride (%)	106.2	98.6	109.8	
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	
	Benzo(a)pyrene (mg/L)	<0.000010	<0.000010	<0.000010	
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	
	Surrogate: Acridine d9 (%)	88.8	86.5	88.5	
	Surrogate: Chrysene d12 (%)	106.9	106.6	107.2	
Surrogate: Naphthalene d8 (%)	96.5	96.7	102.6		
Surrogate: Phenanthrene d10 (%)	106.5	104.4	109.8		

## Reference Information

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
<b>EPH-ME-FID-VA</b>	Water	EPH in Water	BC Lab Manual
<p>EPH is extracted from water using a hexane micro-extraction technique, with analysis by GC-FID, as per the BC Lab Manual. EPH results include PAHs and are therefore not equivalent to LEPH or HEPH.</p>			
<b>LEPH/HEPH-CALC-VA</b>	Water	LEPHs and HEPHs	BC MOE LABORATORY MANUAL (2005)
<p>Light and Heavy Extractable Petroleum Hydrocarbons in water. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Acenaphthene, Acridine, Anthracene, Fluorene, Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(a)pyrene, Fluoranthene, and Pyrene are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Water by GC/FID" (Version 2.1, July 20, 1999).</p>			
<b>PAH-ME-MS-VA</b>	Water	PAHs in Water	EPA 3511/8270D (mod)
<p>PAHs are extracted from water using a hexane micro-extraction technique, with analysis by GC/MS. Because the two isomers cannot be readily separated chromatographically, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.</p>			

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
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### Chain of Custody Numbers:

#### GLOSSARY OF REPORT TERMS

*Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.*

*mg/kg - milligrams per kilogram based on dry weight of sample.*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample.*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.*

*mg/L - milligrams per litre.*

*< - Less than.*

*D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

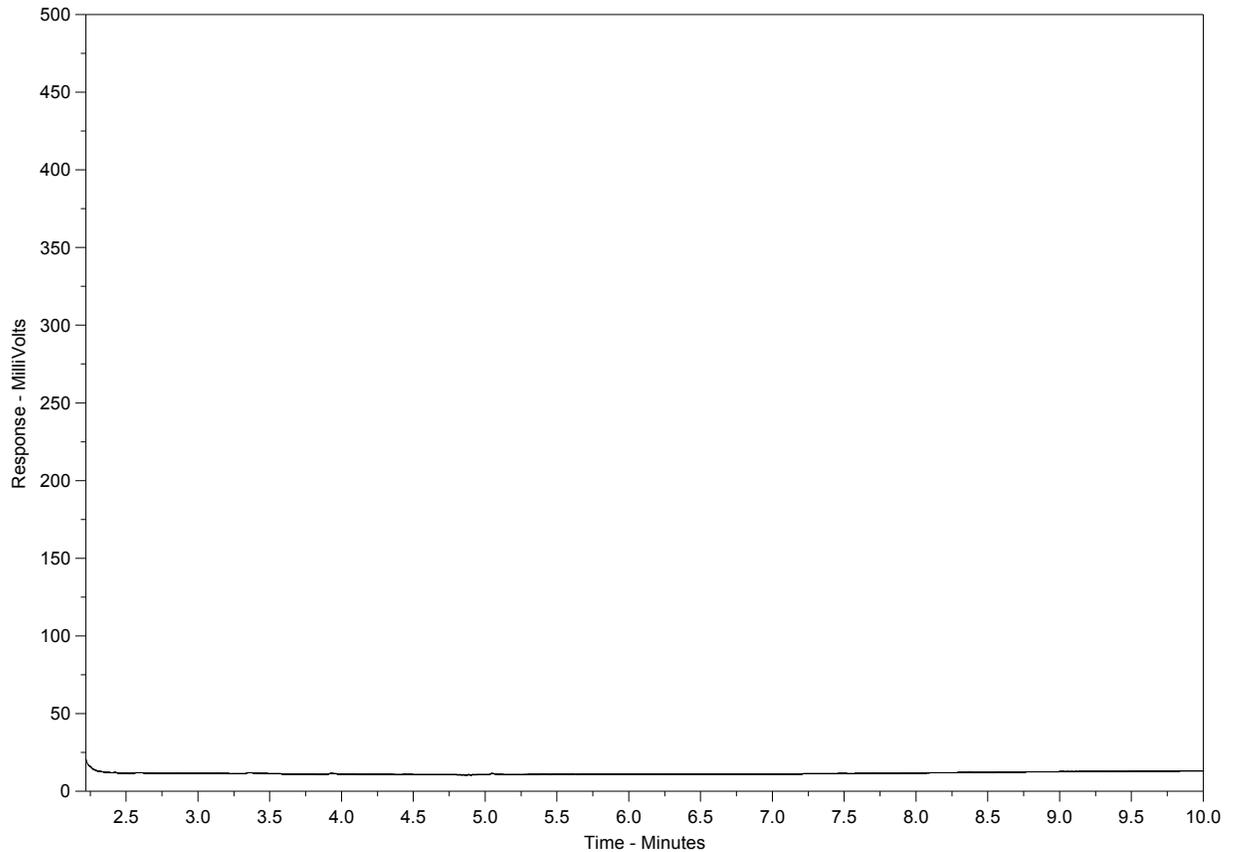
**UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.**

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-1  
Client Sample ID: 2016-050-635



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

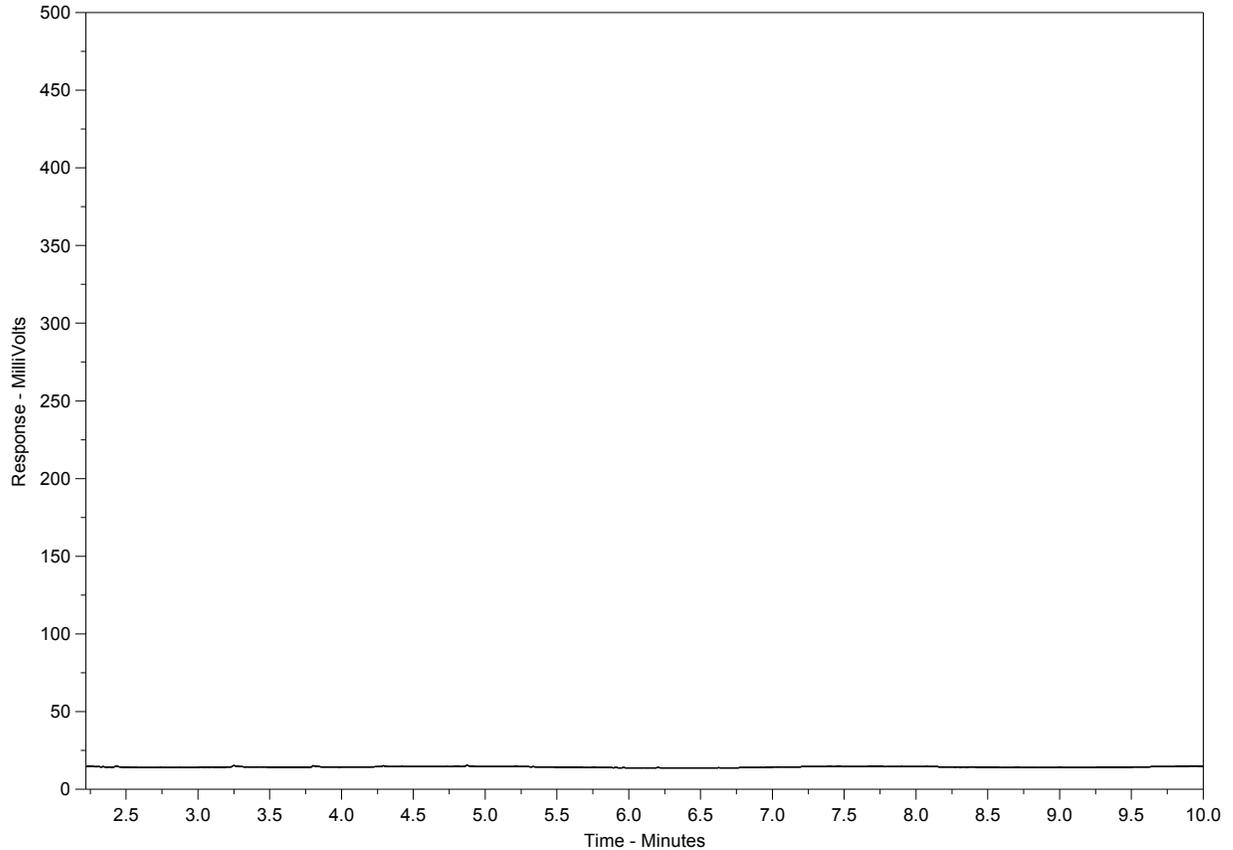
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-2  
Client Sample ID: 2016-050-636



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

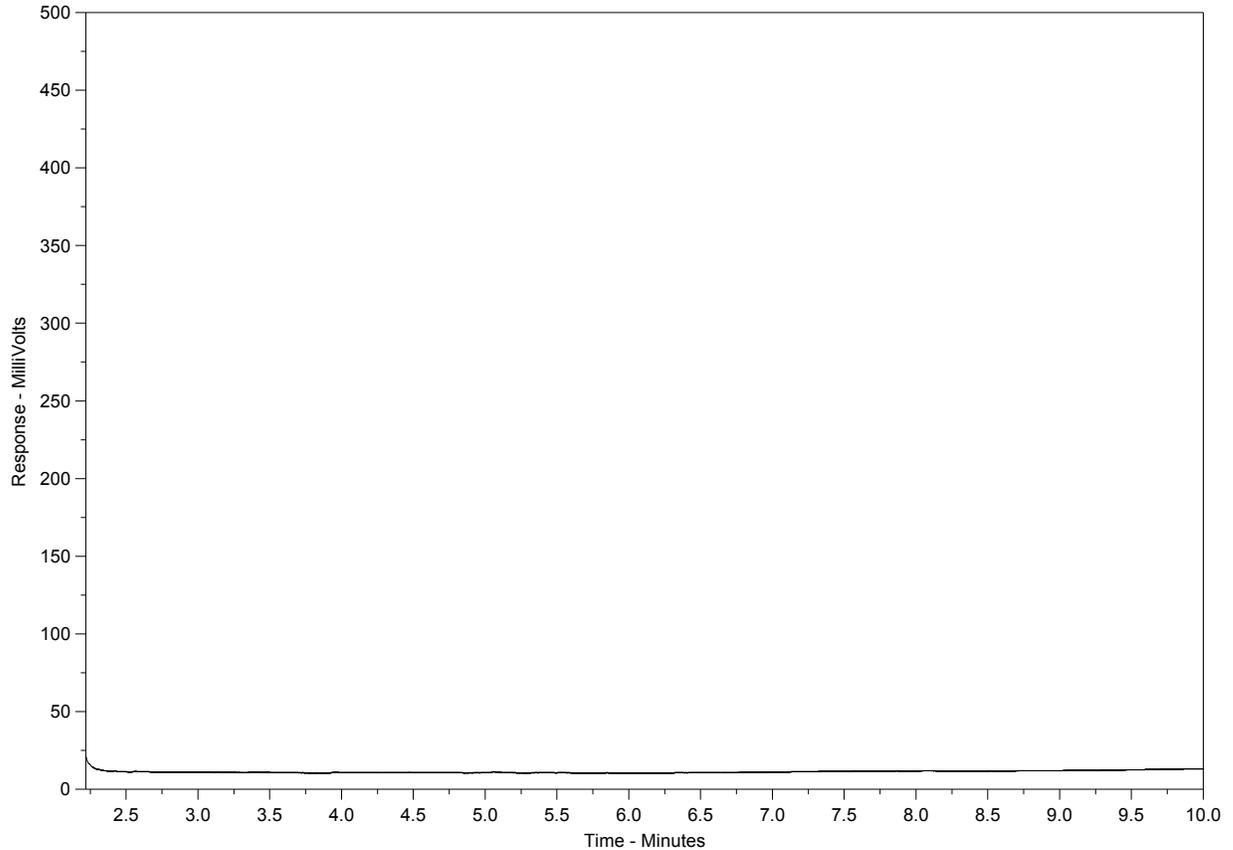
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-3  
Client Sample ID: 2016-050-637



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

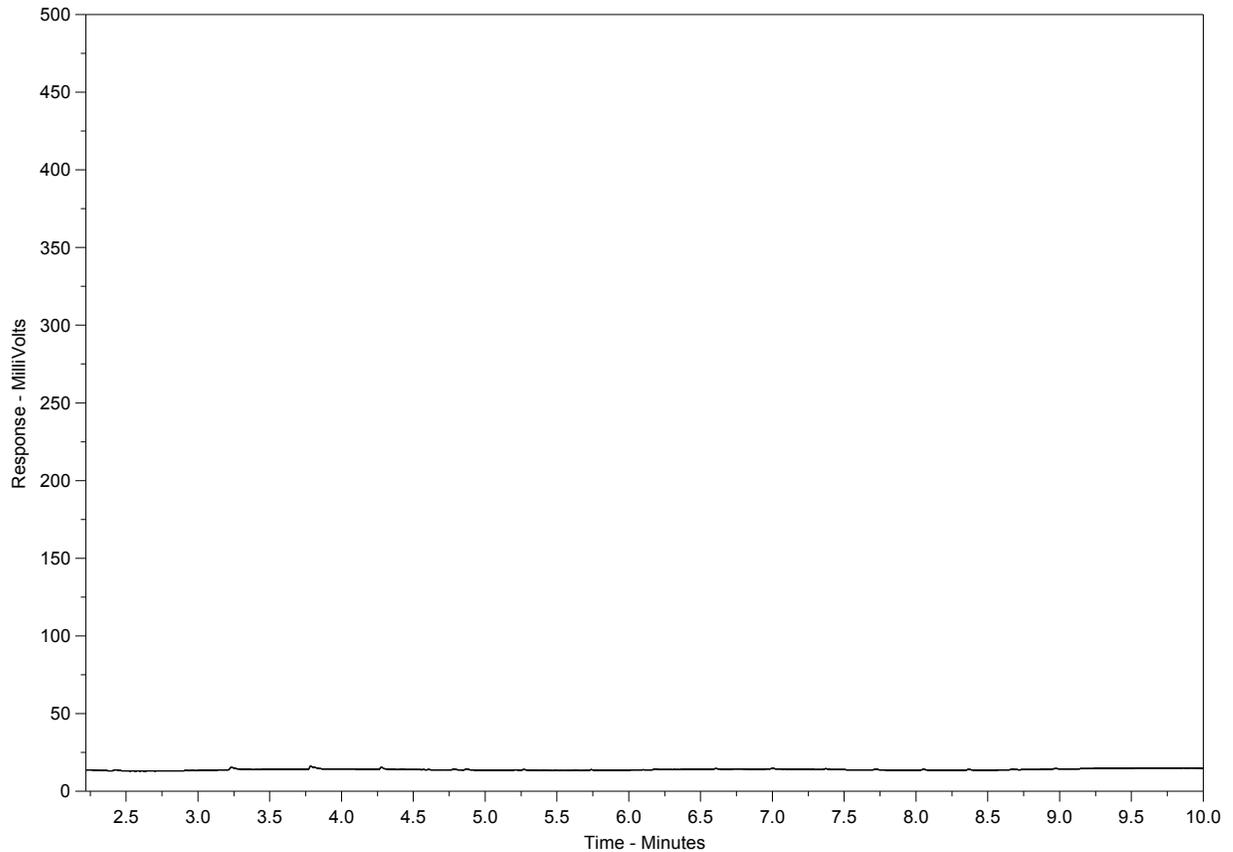
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-4  
Client Sample ID: 2016-050-638



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

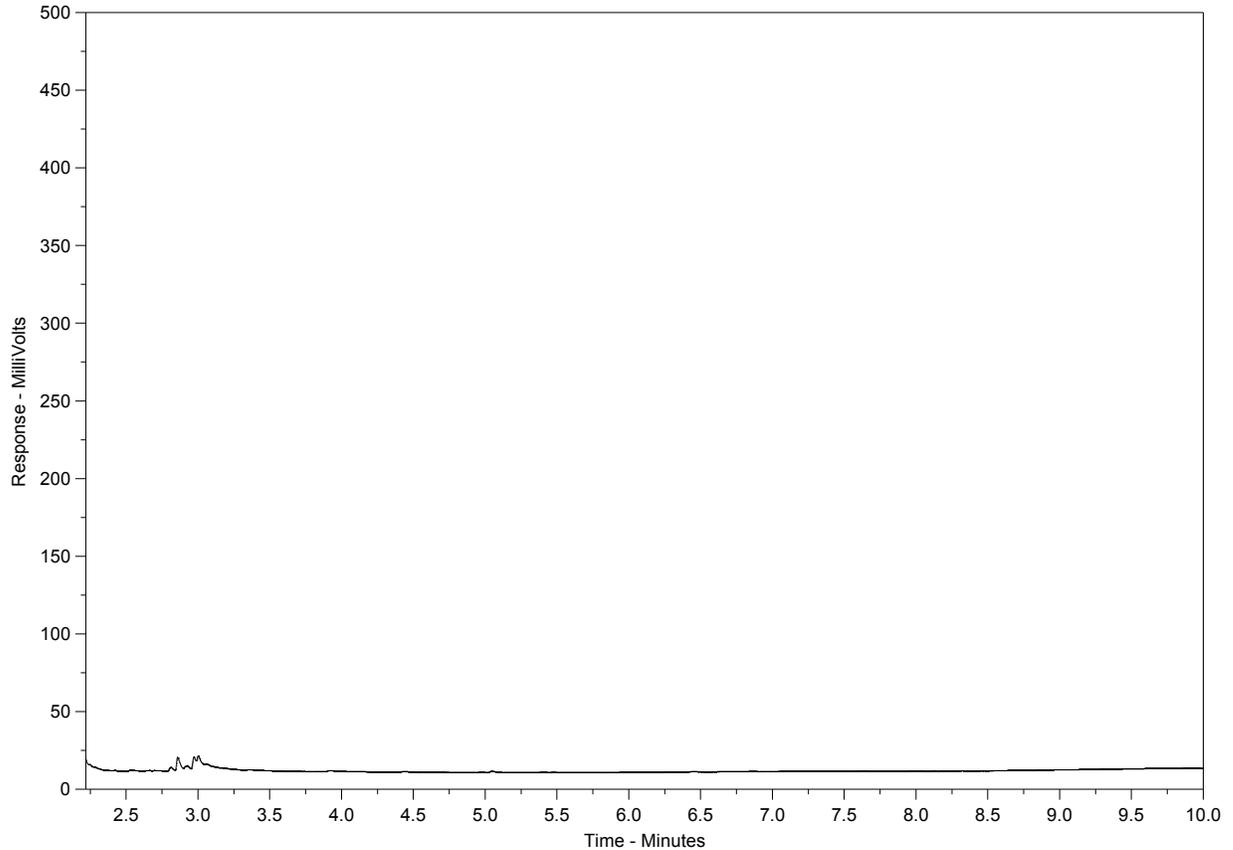
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-5  
Client Sample ID: 2016-050-639



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

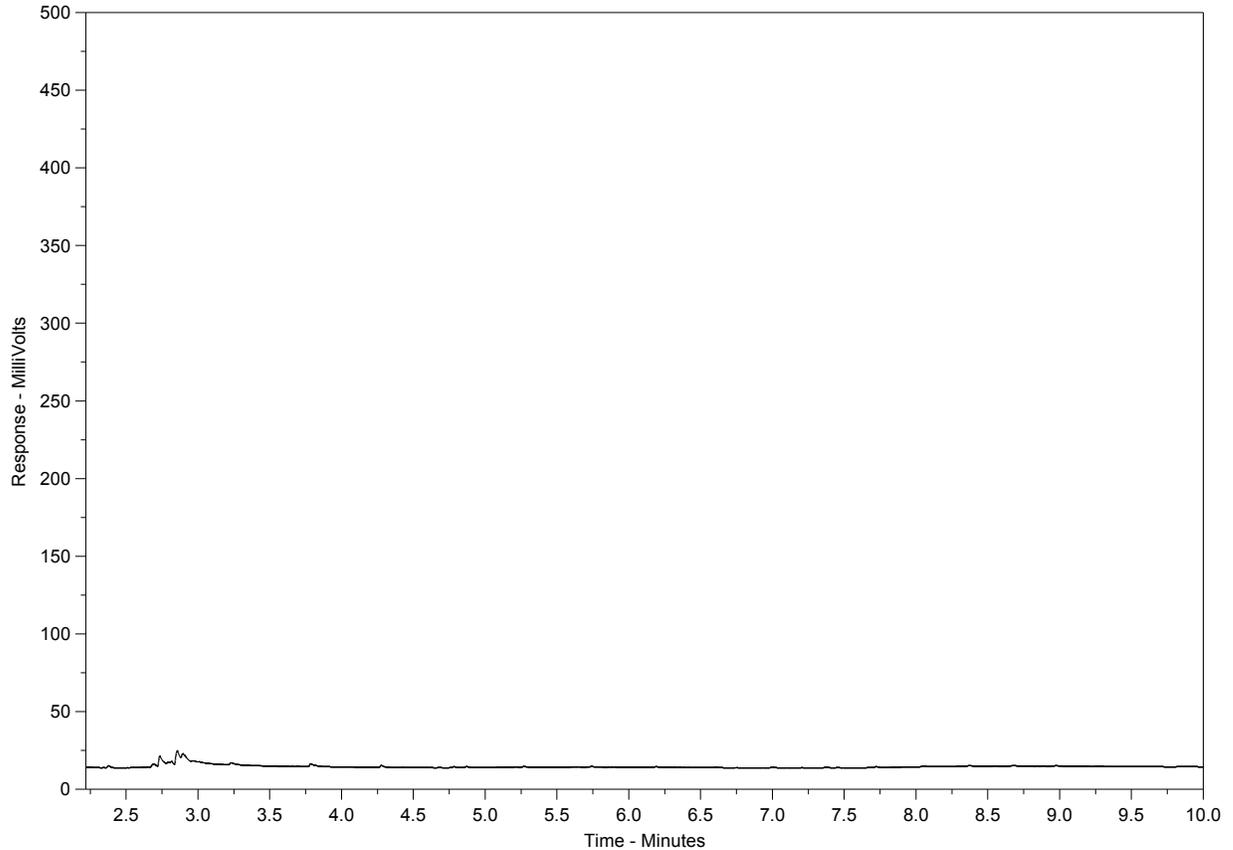
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-6  
Client Sample ID: 2016-050-640



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

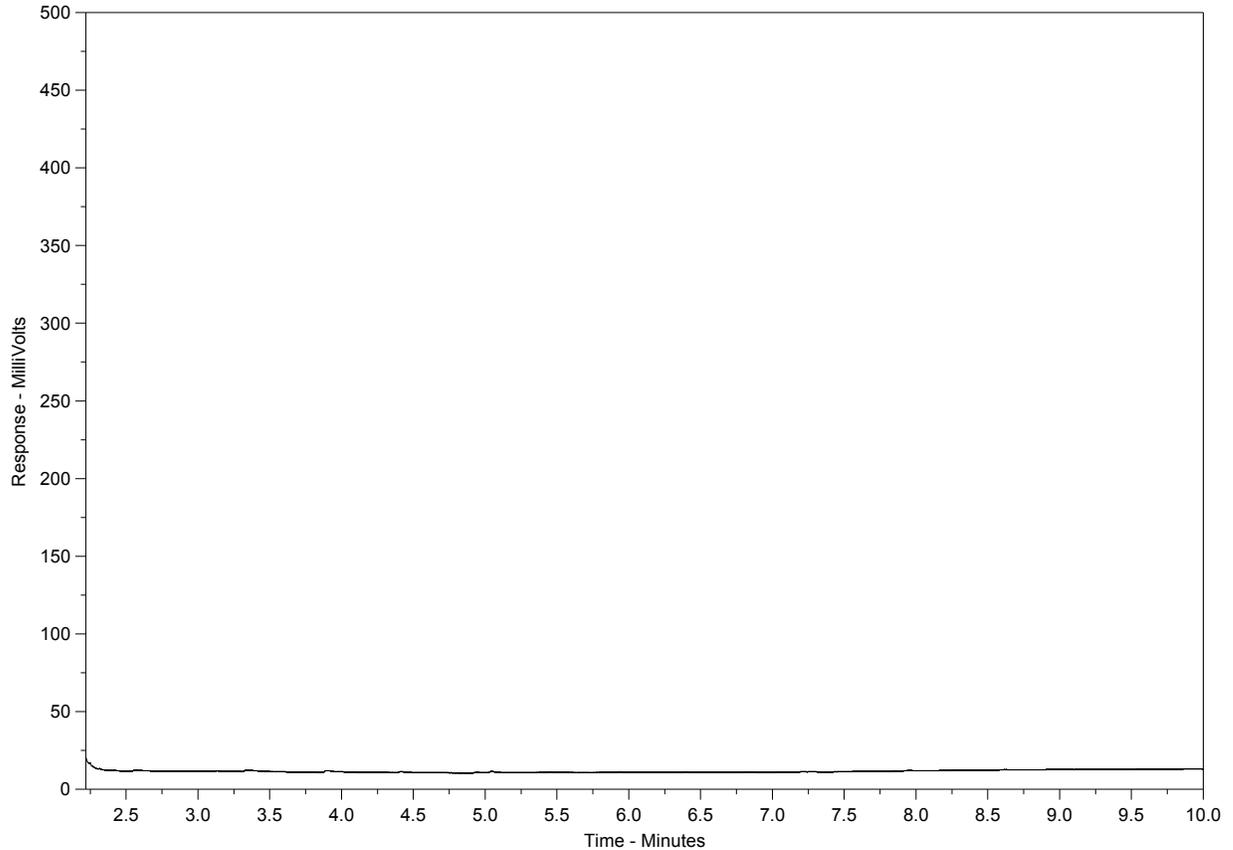
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-7  
Client Sample ID: 2016-050-641



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

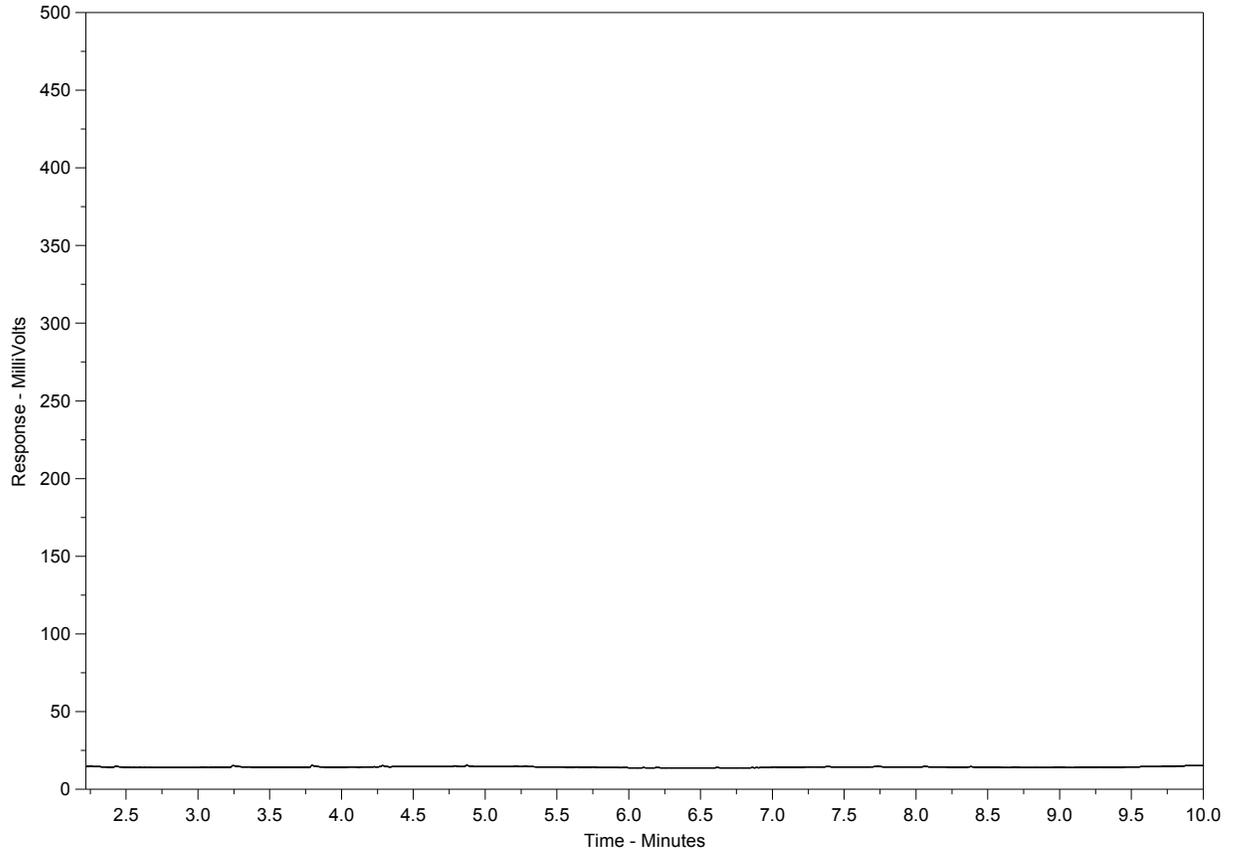
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-8  
Client Sample ID: 2016-050-642



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

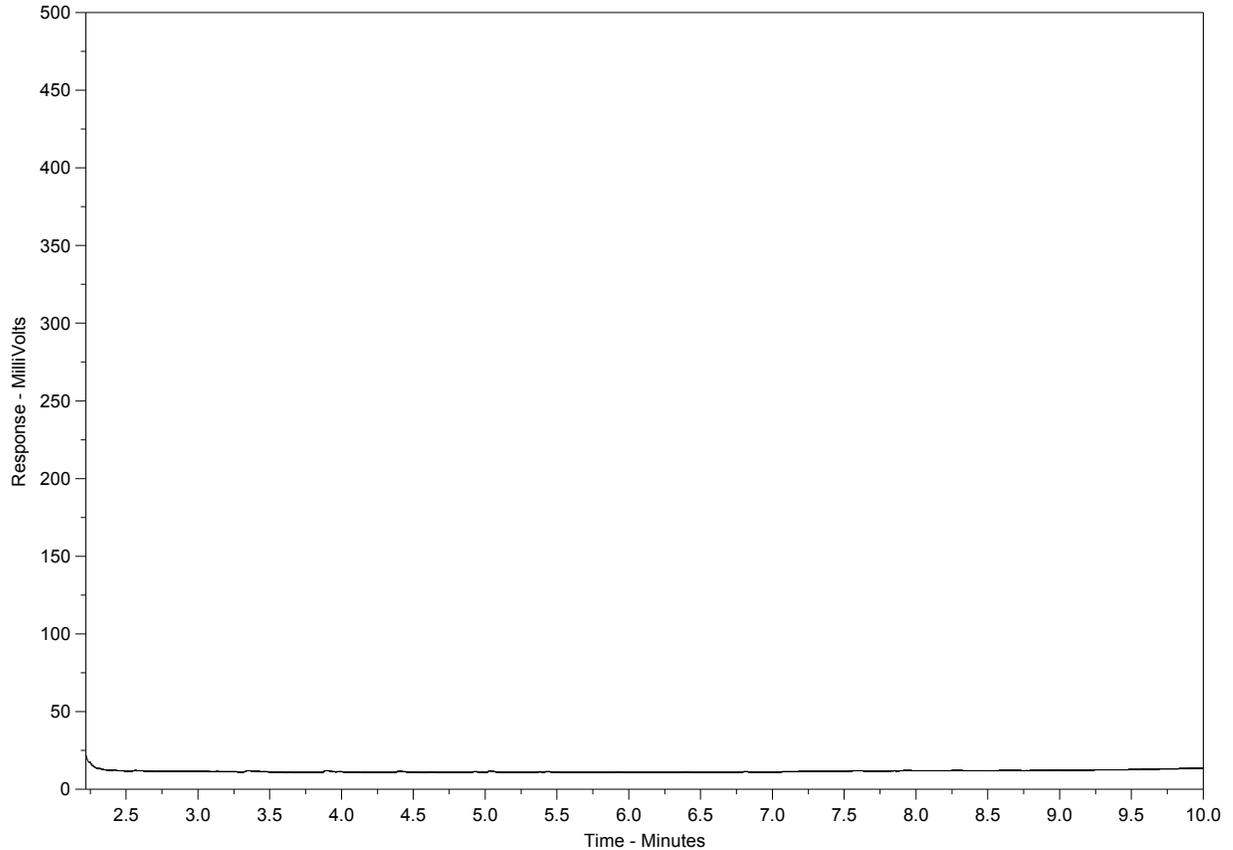
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-9  
Client Sample ID: 2016-050-643



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

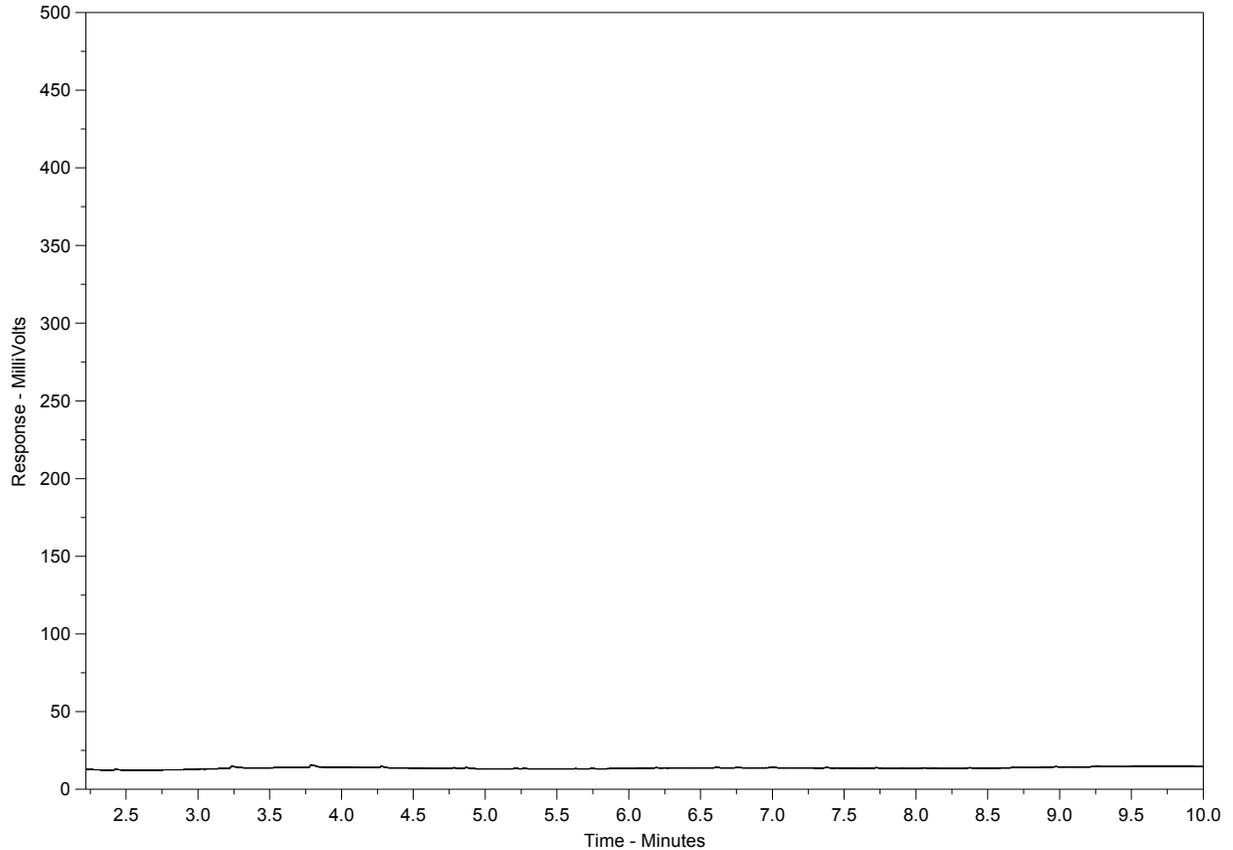
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-10  
Client Sample ID: 2016-050-644



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

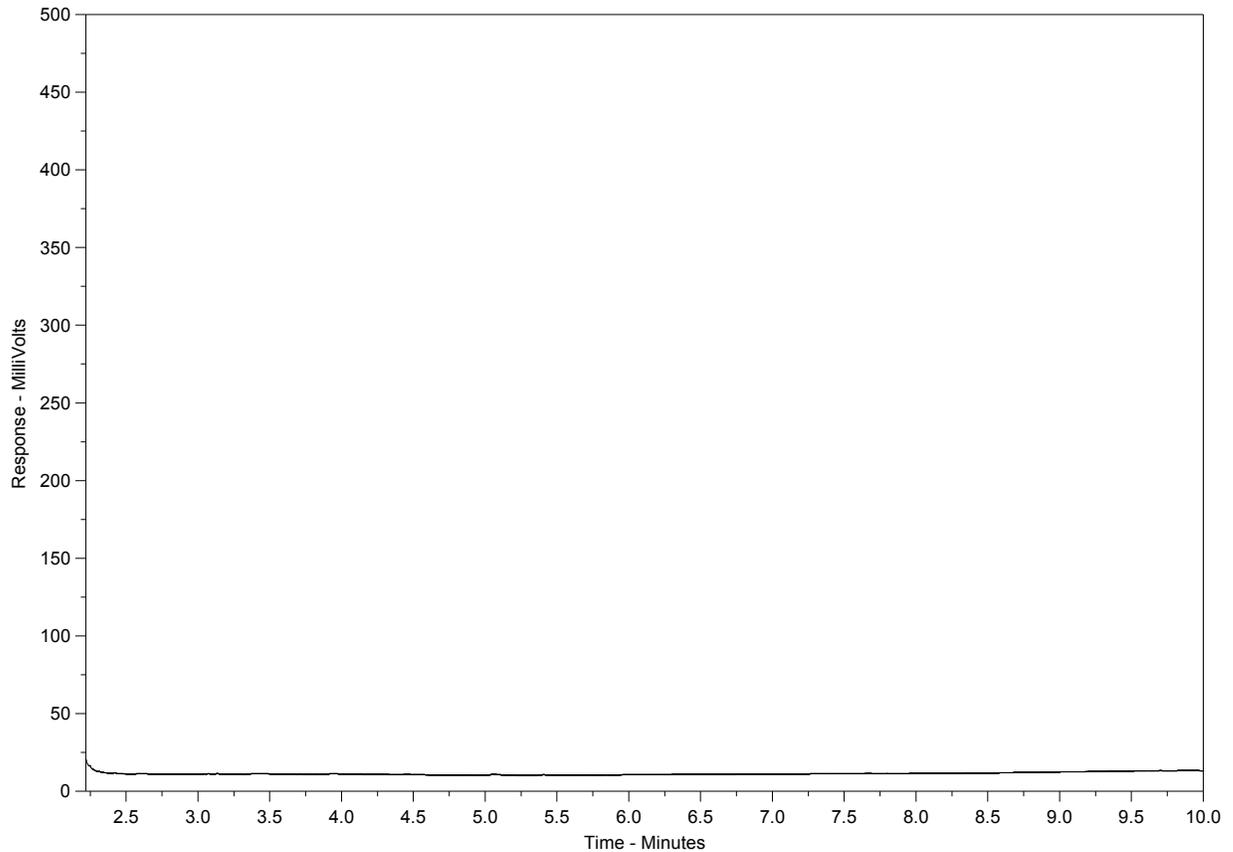
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-11  
Client Sample ID: 2016-050-645



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

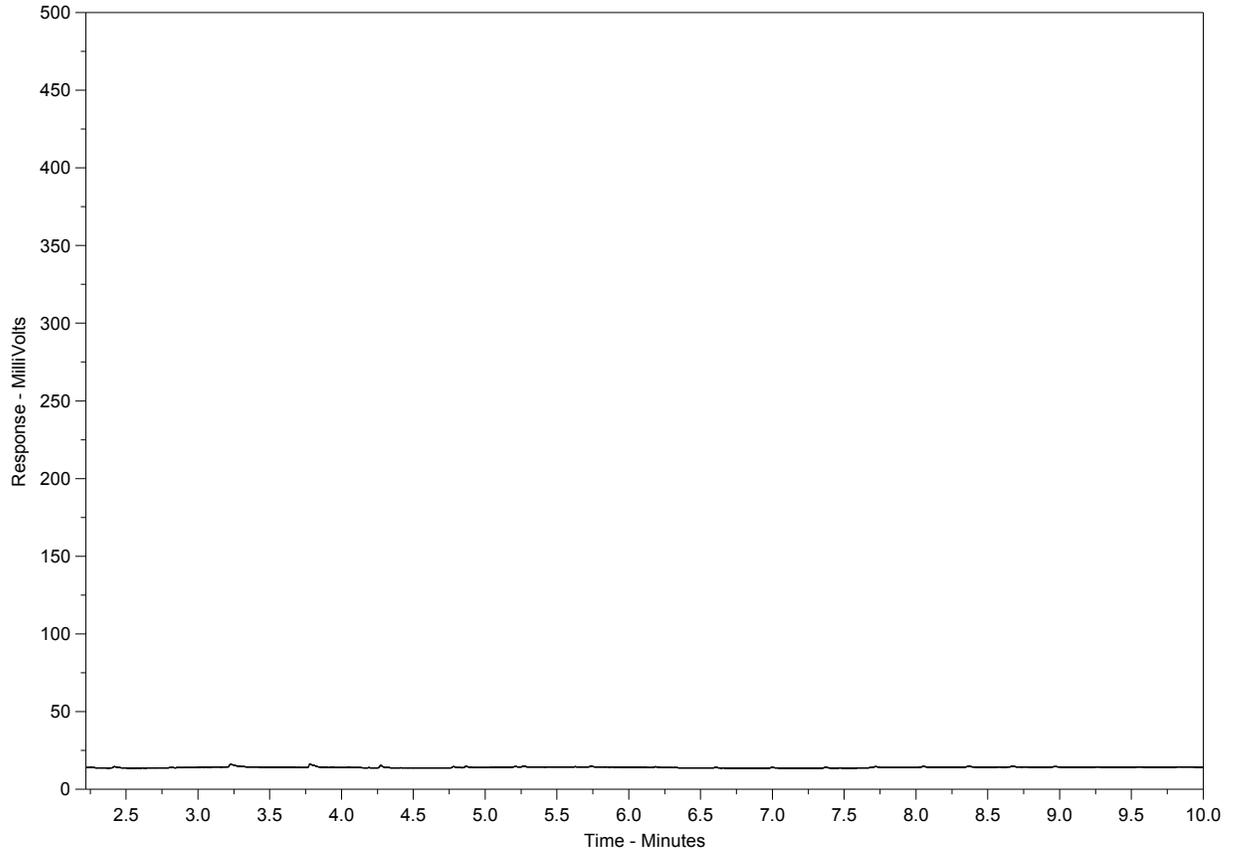
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-12  
Client Sample ID: 2016-050-646



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

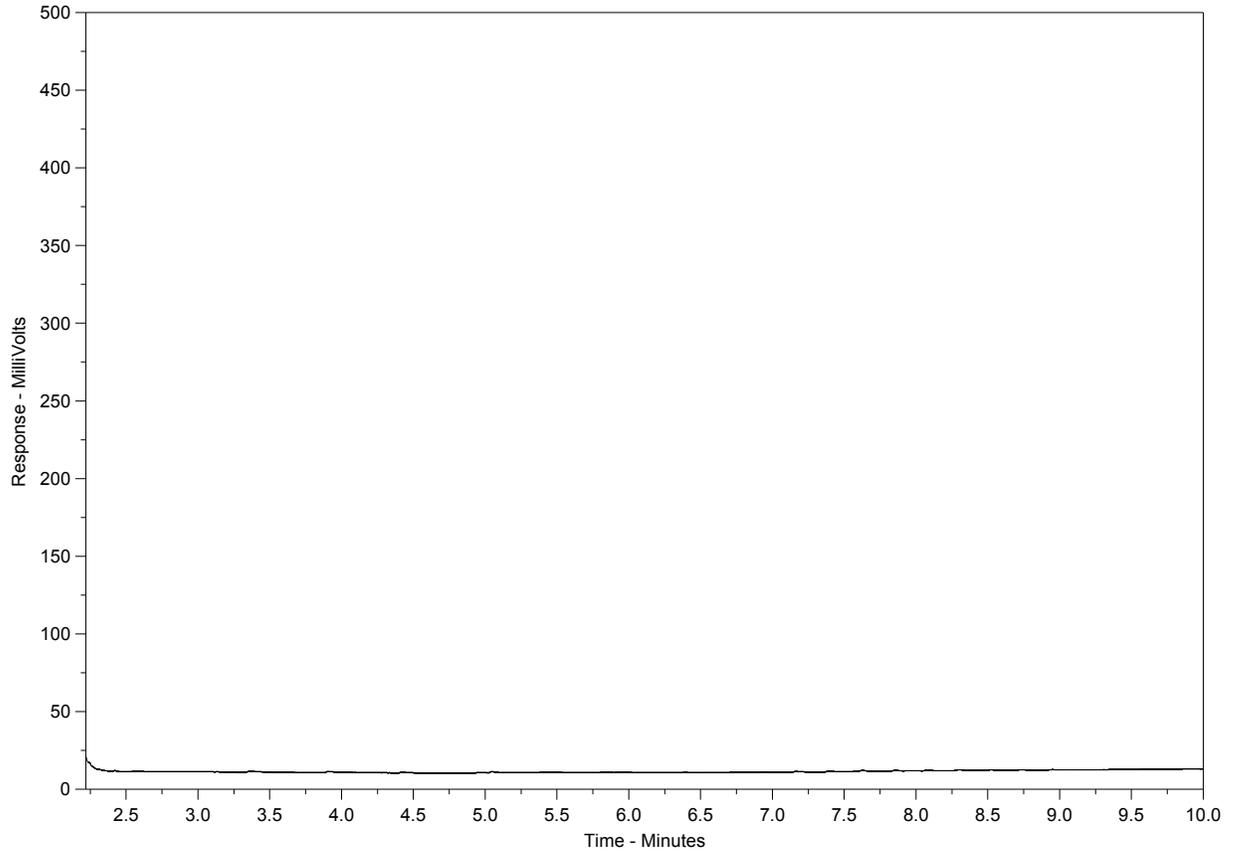
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-13  
Client Sample ID: 2016-050-647



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

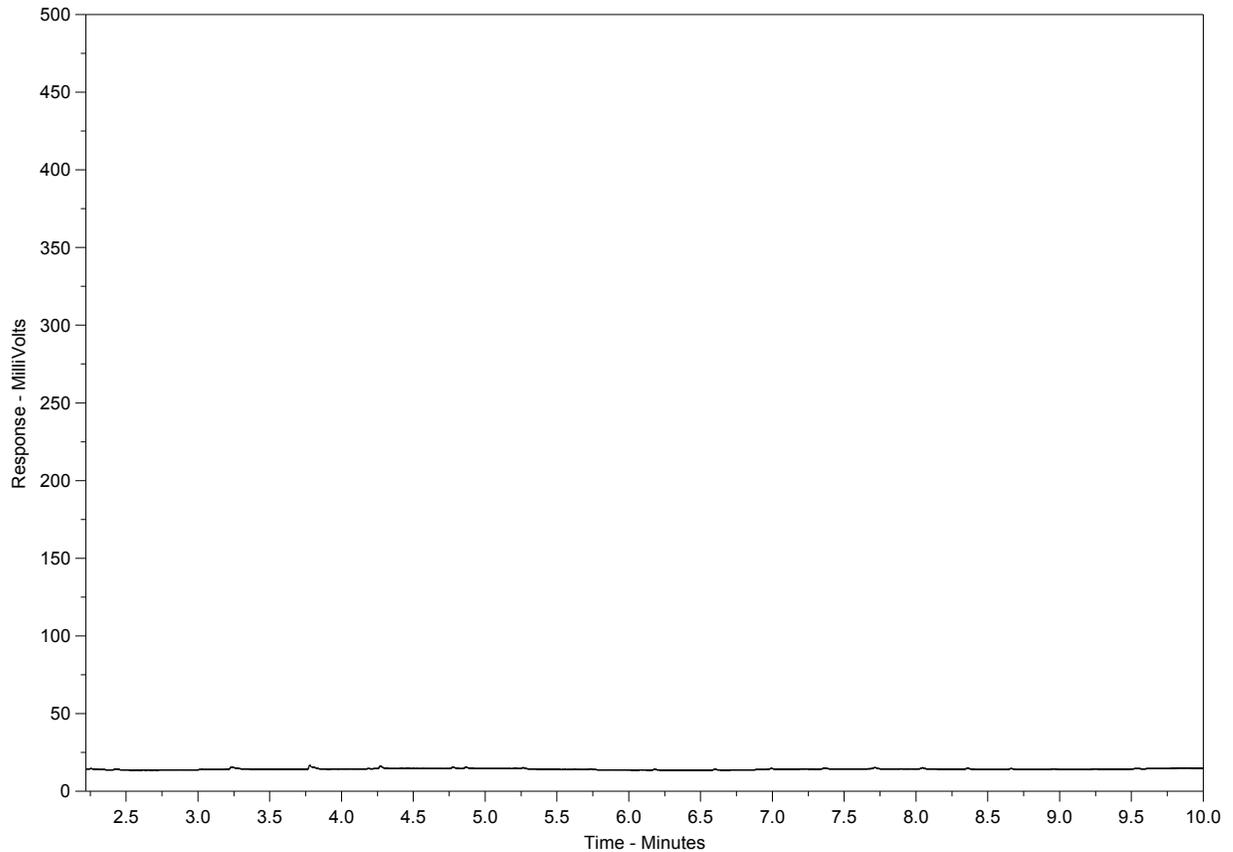
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-14  
Client Sample ID: 2016-050-648



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

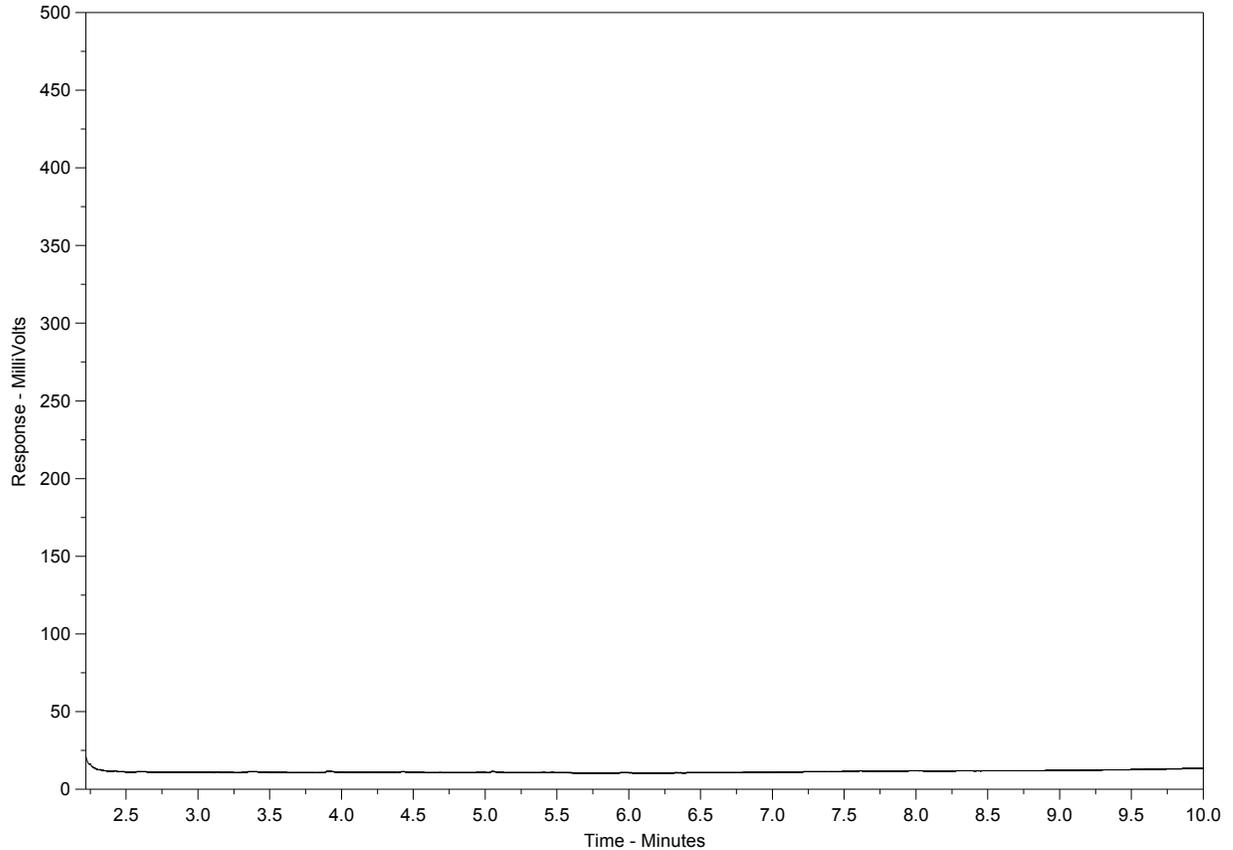
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-15  
Client Sample ID: 2016-050-649



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

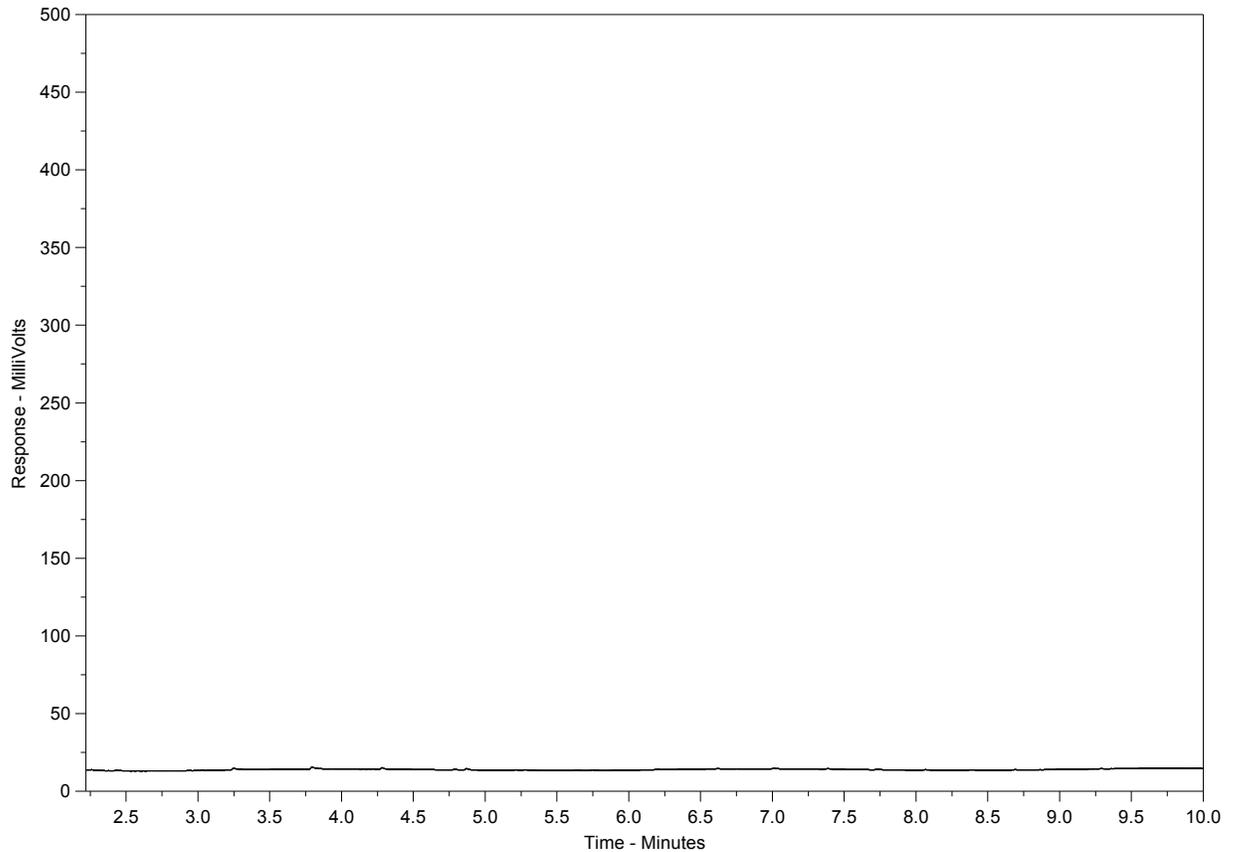
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-16  
Client Sample ID: 2016-050-650



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

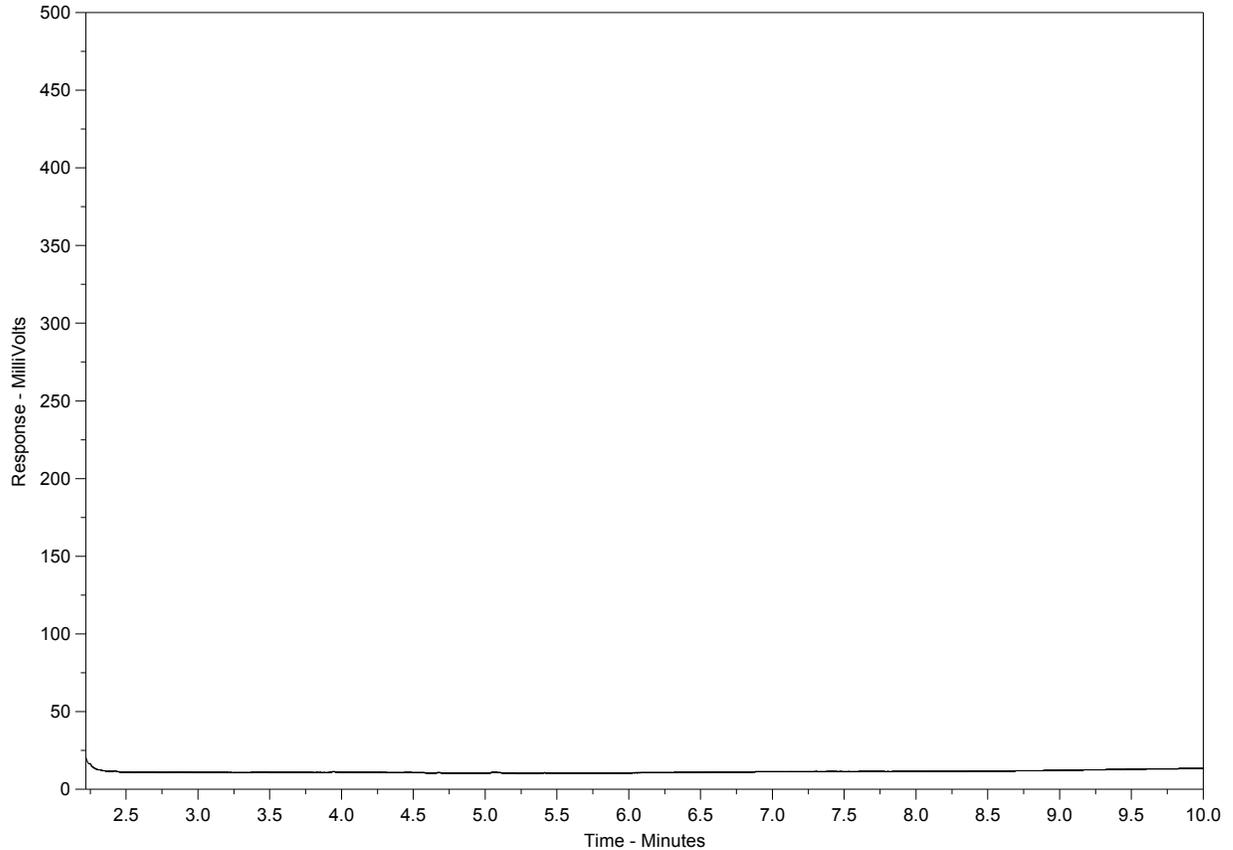
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-17  
Client Sample ID: 2016-050-651



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

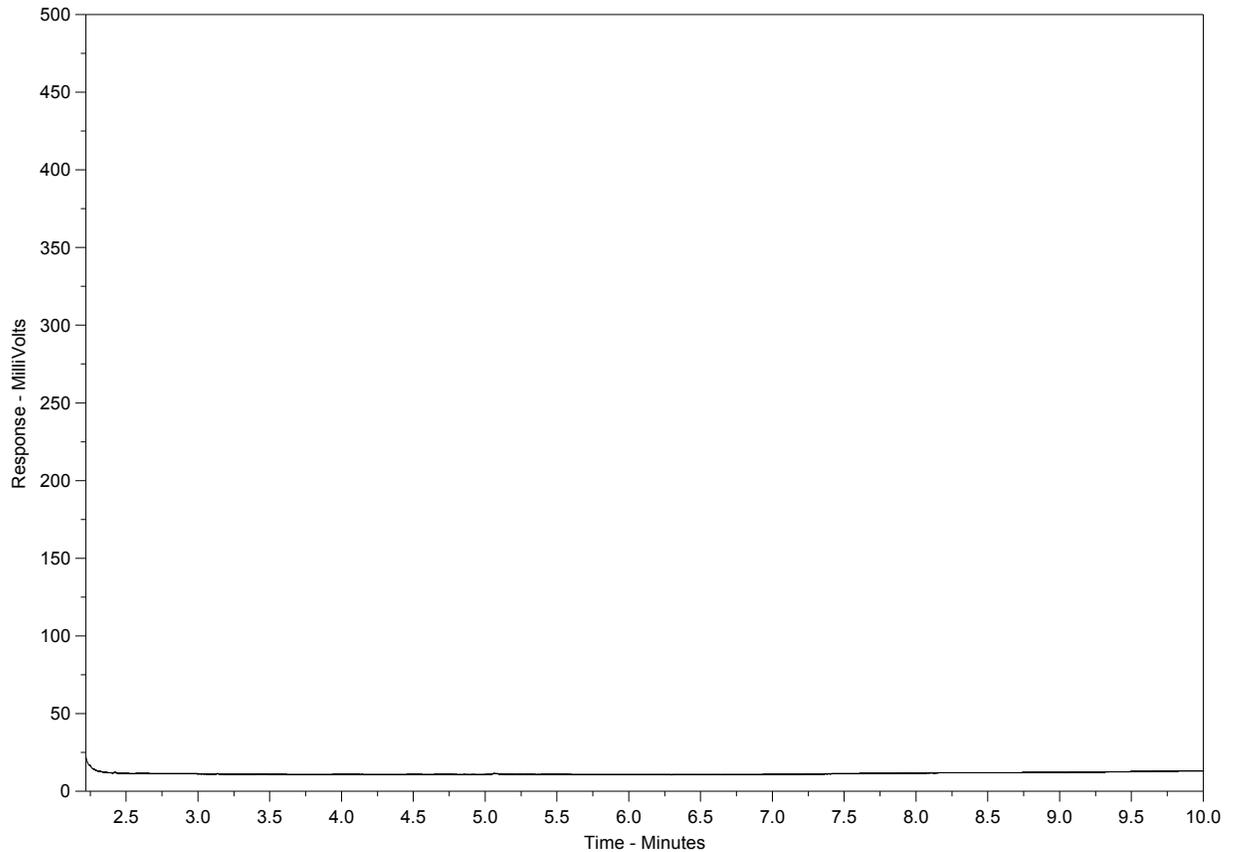
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-18  
 Client Sample ID: 2016-050-652



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		← Motor Oils / Lube Oils / Grease →
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

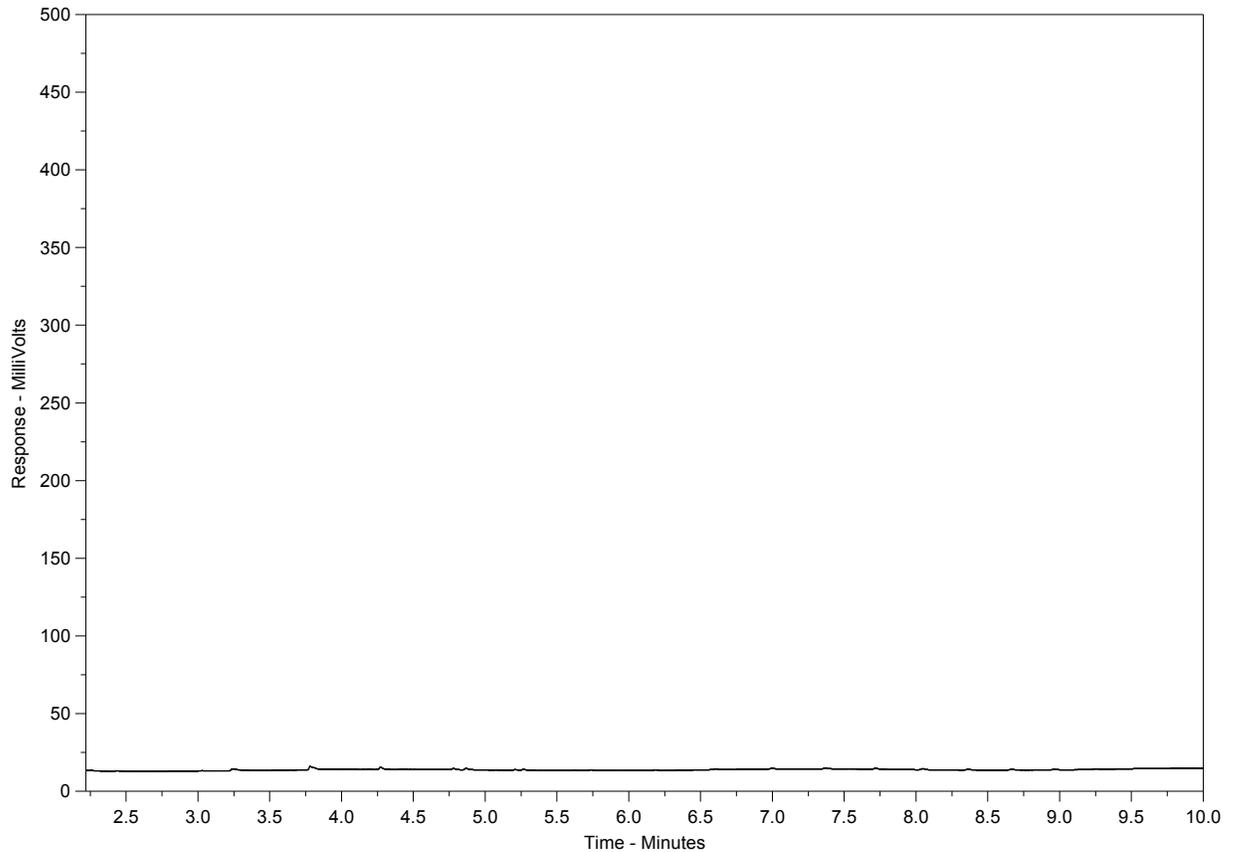
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-19  
Client Sample ID: 2016-050-653



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

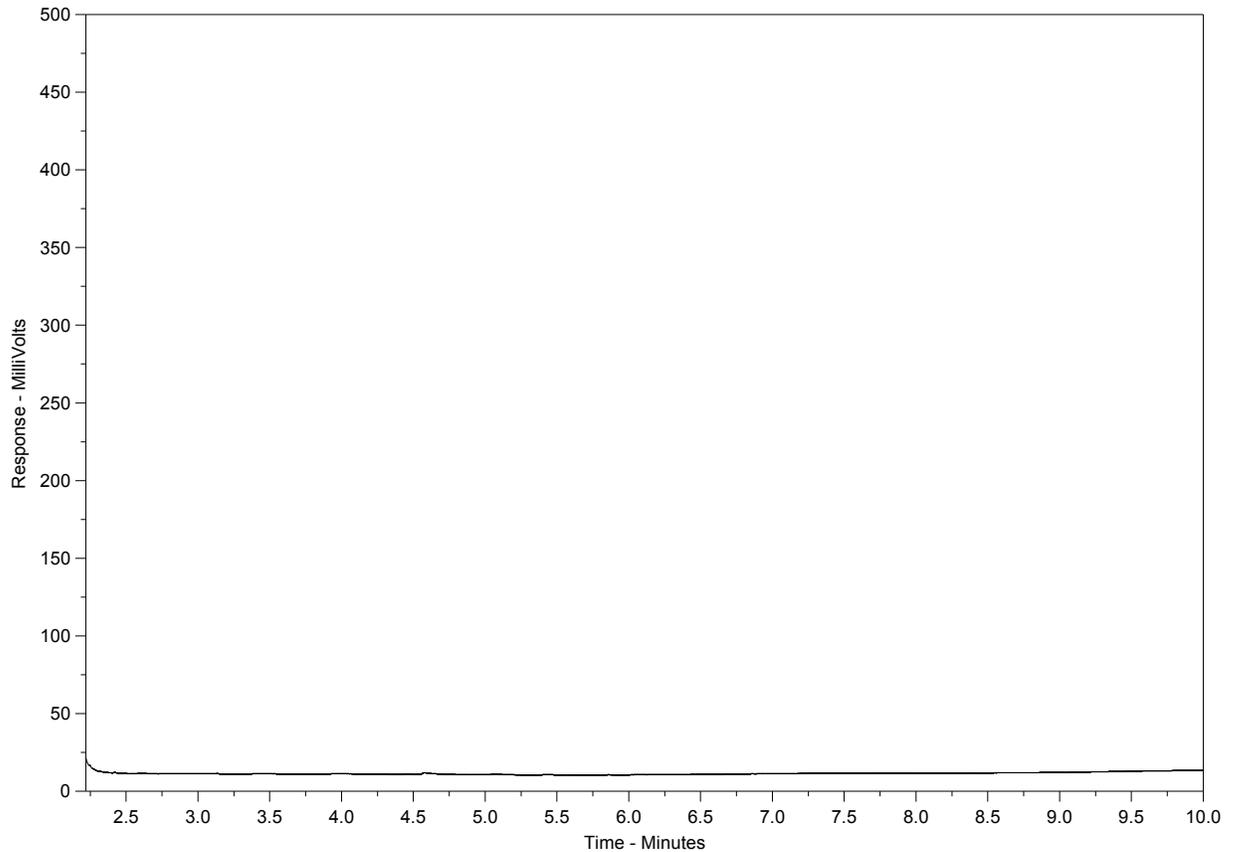
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-20  
Client Sample ID: 2016-050-654



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

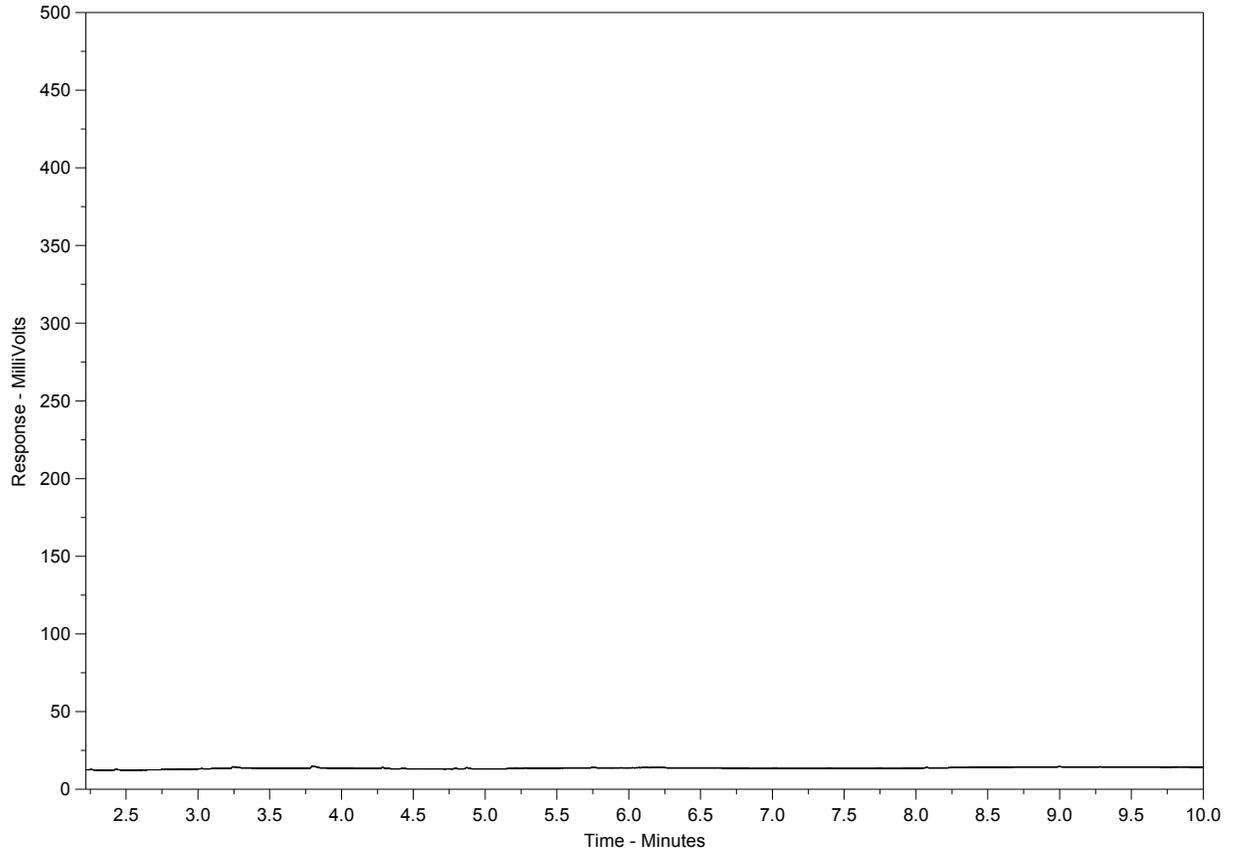
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-21  
Client Sample ID: 2016-050-655



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

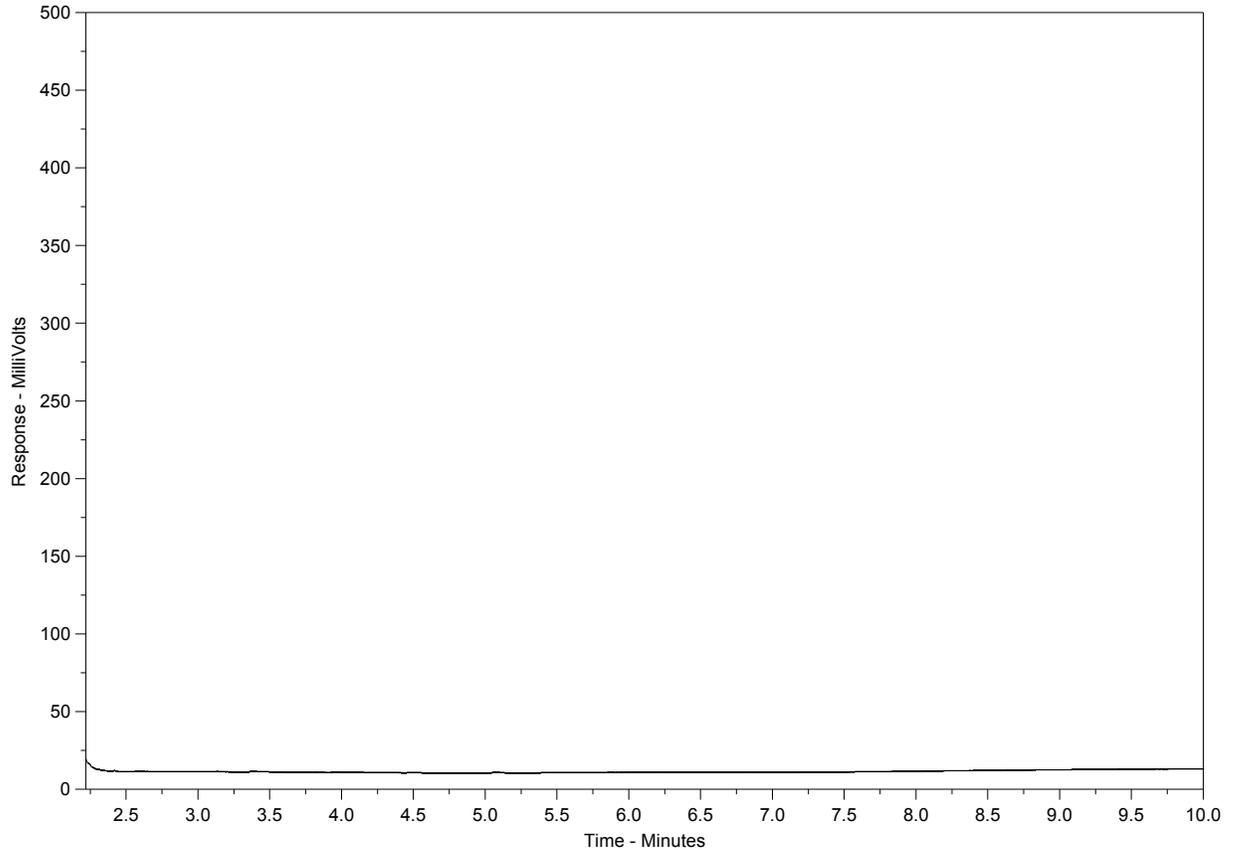
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-22  
Client Sample ID: 2016-050-656



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

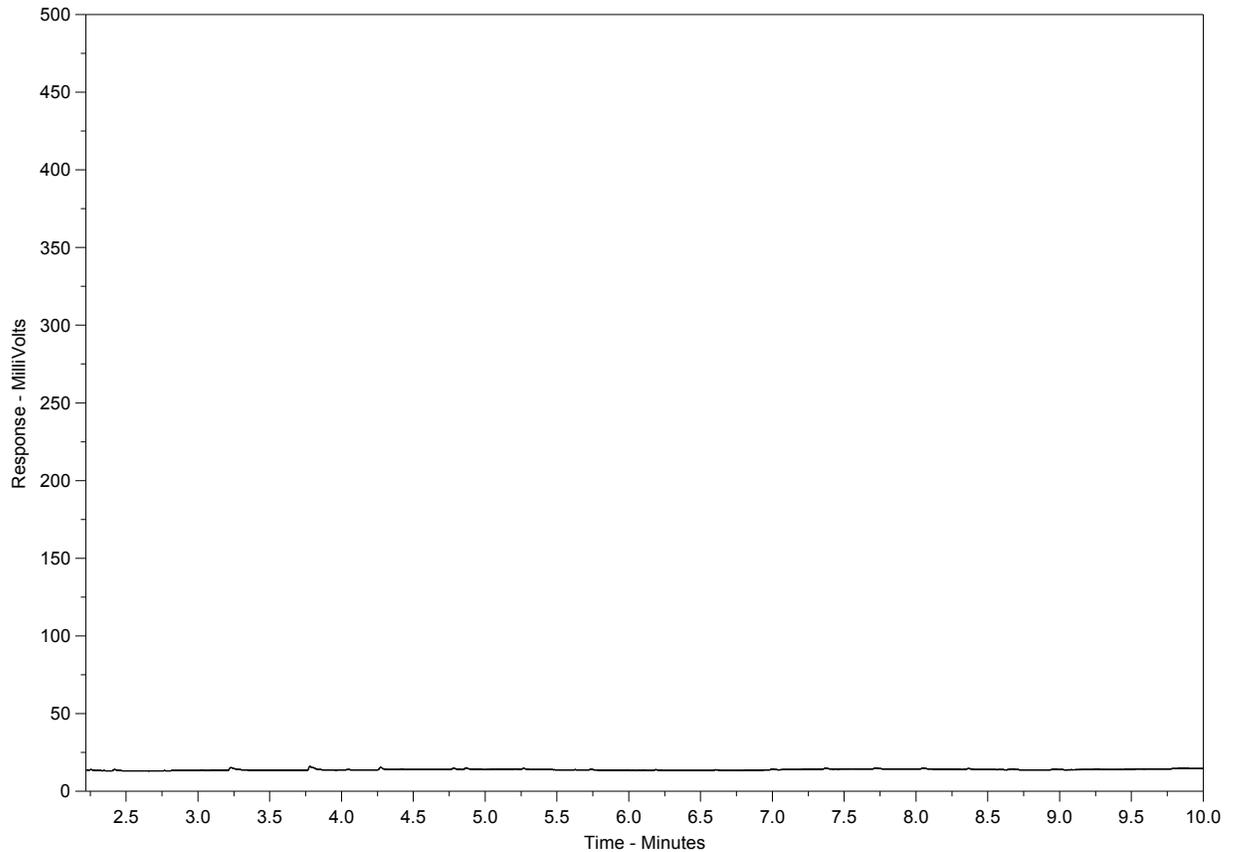
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1762424-23  
Client Sample ID: 2016-050-657



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.



**CHAIN OF CUSTODY FORM**

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )					ANALYSIS REQUESTED:																			
ADDRESS: 625 FISGARD STREET, PO BOX 1000																								
CITY: VICTORIA		PROV: BC		POSTAL CODE: V8W 2S6																				
TEL: (250) 360-3148		FAX: (250) 360-3254		CONTACT: Korene Torney																				
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS			SAMPLER: Shelley Alcock																					
QUOTE NO.:		PO NO.:		ALS CONTACT: JERRY HOLZBE																				
REPORT FORMAT																								
<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: <u>salcock@crd.bc.ca; ktorney@crd</u> <input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results																								
SAMPLE IDENTIFICATION					DATE / TIME COLLECTED		MATRIX		LEPH		HEPH		NOTES (sample specific comments, due dates, etc.)  x / cooler Charge Ground @  L1762424-COFC											
					YYYY-MM-DD		TIME																	
2016-050-635					2016-04-29		9:50		water		X X													
2016-050-636					2016-04-29		9:50		water		X X													
2016-050-637					2016-04-29		9:56		water		X X													
2016-050-638					2016-04-29		10:03		water		X X													
2016-050-639					2016-04-29		10:08		water		X X													
2016-050-640					2016-04-29		10:08		water		X X													
2016-050-641					2016-04-29		10:27		water		X X													
2016-050-642					2016-04-29		10:32		water		X X													
2016-050-643					2016-04-29		10:42		water		X X													
2016-050-644					2016-04-29		10:45		water		X X													
TURN AROUND REQUIRED: <input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)					RELINQUISHED BY: <u>Shelley Alcock</u> DATE: 2016-04-29					RECEIVED BY: <u>Shayan</u> DATE: <u>Apr. 30</u>														
					SEND INVOICE TO <input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)					TIME: 13:21					TIME: 1200									
INVOICE FORMAT <input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX					RELINQUISHED BY: _____					RECEIVED BY: _____														
SPECIAL INSTRUCTIONS:					TIME: _____					TIME: _____														
										FOR LAB USE ONLY														
Cooler Seal Intact?					Sample Temperature: <u>5</u> °C					Cooling Method?														
Yes ___ No ___ N/A					Frozen? ___ Yes ___ No					Icepacks ___ Ice ___ None														

FOR LAB USE ONLY



**CHAIN OF CUSTODY FORM**

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )					ANALYSIS REQUESTED:																							
ADDRESS: 625 FISGARD STREET, PO BOX 1000																												
CITY: VICTORIA		PROV: BC		POSTAL CODE: V8W 2S6																								
TEL: (250) 360-3148		FAX: (250) 360-3254		CONTACT: Korene Torney																								
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS			SAMPLER: Shelley Alcock																									
QUOTE NO.:		PO NO.:		ALS CONTACT: JERRY HOLZBE																								
REPORT FORMAT																	LEPH HEPH											
<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca <input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results																												
FOR LAB USE ONLY	SAMPLE IDENTIFICATION		DATE / TIME COLLECTED		MATRIX	NOTES (sample specific comments, due dates, etc.)																						
			YYYY-MM-DD	TIME																								
	2016-050-645		2016-04-29	10:50	water	X	X																					
	2016-050-646		2016-04-29	11:09	water	X	X																					
	2016-050-647		2016-04-29	11:11	water	X	X																					
	2016-050-648		2016-04-29	11:15	water	X	X																					
	2016-050-649		2016-04-29	11:15	water	X	X																					
	2016-050-650		2016-04-29	11:18	water	X	X																					
	2016-050-651		2016-04-29	11:28	water	X	X																					
	2016-050-652		2016-04-29	11:30	water	X	X																					
2016-050-653		2016-04-29	11:33	Water	X	X																						
2016-050-654		2016-04-29	11:35	Water	X	X																						
TURN AROUND REQUIRED:		<input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)			RELINQUISHED BY: Shelley Alcock		DATE: 2016-04-29		RECEIVED BY: <i>Shayan</i>		DATE: <i>Apr. 2</i>		TIME: <i>12:00</i>															
SEND INVOICE TO		<input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)			RELINQUISHED BY:		DATE:		RECEIVED BY:		DATE:		TIME:															
INVOICE FORMAT		<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX																										
SPECIAL INSTRUCTIONS:					FOR LAB USE ONLY																							
					Cooler Seal Intact?		Sample Temperature: <i>5</i> °C		Cooling Method?																			
					___ Yes ___ No ___ N/A		Frozen? ___ Yes ___ No		___ Icepacks ___ Ice ___ None																			







CAPITAL REGIONAL DISTRICT  
ATTN: Korene Torney  
625 Fisgard Street  
VICTORIA BC V8W 1R7

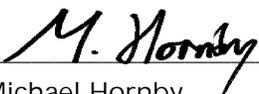
Date Received: 26-JUL-16  
Report Date: 02-AUG-16 12:30 (MT)  
Version: FINAL

Client Phone: 250-360-3214

## Certificate of Analysis

Lab Work Order #: L1804184  
Project P.O. #: NOT SUBMITTED  
Job Reference: MILLSTREAM DOMESTIC WELLS  
C of C Numbers:  
Legal Site Desc:

Comments: Please note that the Polycyclic Aromatic Hydrocarbon results, that were used in the calculation of the LEPH/HEPH results, are not reported in the following data tables, as per the client's request.

  
\_\_\_\_\_  
Michael Hornby  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700  
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1804184-1	L1804184-2	L1804184-3	L1804184-4	L1804184-5
		Description	Water	Water	Water	Water	Water
		Sampled Date	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16
		Sampled Time	10:22	10:25	10:32	10:47	10:51
		Client ID	2016-050-628	2016-050-629	2016-050-630	2016-050-631	2016-050-632
Grouping	Analyte						
<b>WATER</b>							
Hydrocarbons	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	91.3	96.8	92.7	92.2	94.5	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1804184-6	L1804184-7	L1804184-8	L1804184-9	L1804184-10
		Description	Water	Water	Water	Water	Water
		Sampled Date	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16
		Sampled Time	10:54	10:57	10:57	11:18	11:20
		Client ID	2016-050-633	2016-050-634	2016-050-658	2016-050-659	2016-050-660
Grouping	Analyte						
<b>WATER</b>							
Hydrocarbons	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	92.0	96.9	96.0	94.2	92.9	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1804184-11	L1804184-12	L1804184-13	L1804184-14	L1804184-15
		Description	Water	Water	Water	Water	Water
		Sampled Date	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16
		Sampled Time	11:24	11:44	11:45	11:52	11:54
		Client ID	2016-050-661	2016-050-662	2016-050-663	2016-050-664	2016-050-665
Grouping	Analyte						
<b>WATER</b>							
Hydrocarbons	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	93.4	94.2	91.4	93.3	94.1	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1804184-16	L1804184-17	L1804184-18	L1804184-19	L1804184-20
		Description	Water	Water	Water	Water	Water
		Sampled Date	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16
		Sampled Time	11:56	12:08	12:13	12:14	12:15
		Client ID	2016-050-666	2016-050-667	2016-050-668	2016-050-669	2016-050-670
Grouping	Analyte						
<b>WATER</b>							
Hydrocarbons	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	91.9	98.2	100.0	102.4	101.0	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1804184-21	L1804184-22	L1804184-23	L1804184-24
		Description	Water	Water	Water	Water
		Sampled Date	25-JUL-16	25-JUL-16	25-JUL-16	25-JUL-16
		Sampled Time	12:15	12:17	12:17	13:05
		Client ID	2016-050-671	2016-050-672	2016-050-673	2016-050-674
Grouping	Analyte					
<b>WATER</b>						
<b>Hydrocarbons</b>	EPH10-19 (mg/L)		<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)		<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)		<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)		<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)		102.7	100.0	102.8	105.0

## Reference Information

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
<b>EPH-ME-FID-VA</b>	Water	EPH in Water	BC Lab Manual
<p>EPH is extracted from water using a hexane micro-extraction technique, with analysis by GC-FID, as per the BC Lab Manual. EPH results include PAHs and are therefore not equivalent to LEPH or HEPH.</p>			
<b>LEPH/HEPH-CALC-VA</b>	Water	LEPHs and HEPHs	BC MOE LABORATORY MANUAL (2005)
<p>Light and Heavy Extractable Petroleum Hydrocarbons in water. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Acenaphthene, Acridine, Anthracene, Fluorene, Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(a)pyrene, Fluoranthene, and Pyrene are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Water by GC/FID" (Version 2.1, July 20, 1999).</p>			
<b>PAH-ME-MS-VA</b>	Water	PAHs in Water	EPA 3511/8270D (mod)
<p>PAHs are extracted from water using a hexane micro-extraction technique, with analysis by GC/MS. Because the two isomers cannot be readily separated chromatographically, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.</p>			

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

### Chain of Custody Numbers:

#### GLOSSARY OF REPORT TERMS

*Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.*

*mg/kg - milligrams per kilogram based on dry weight of sample.*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample.*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.*

*mg/L - milligrams per litre.*

*< - Less than.*

*D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

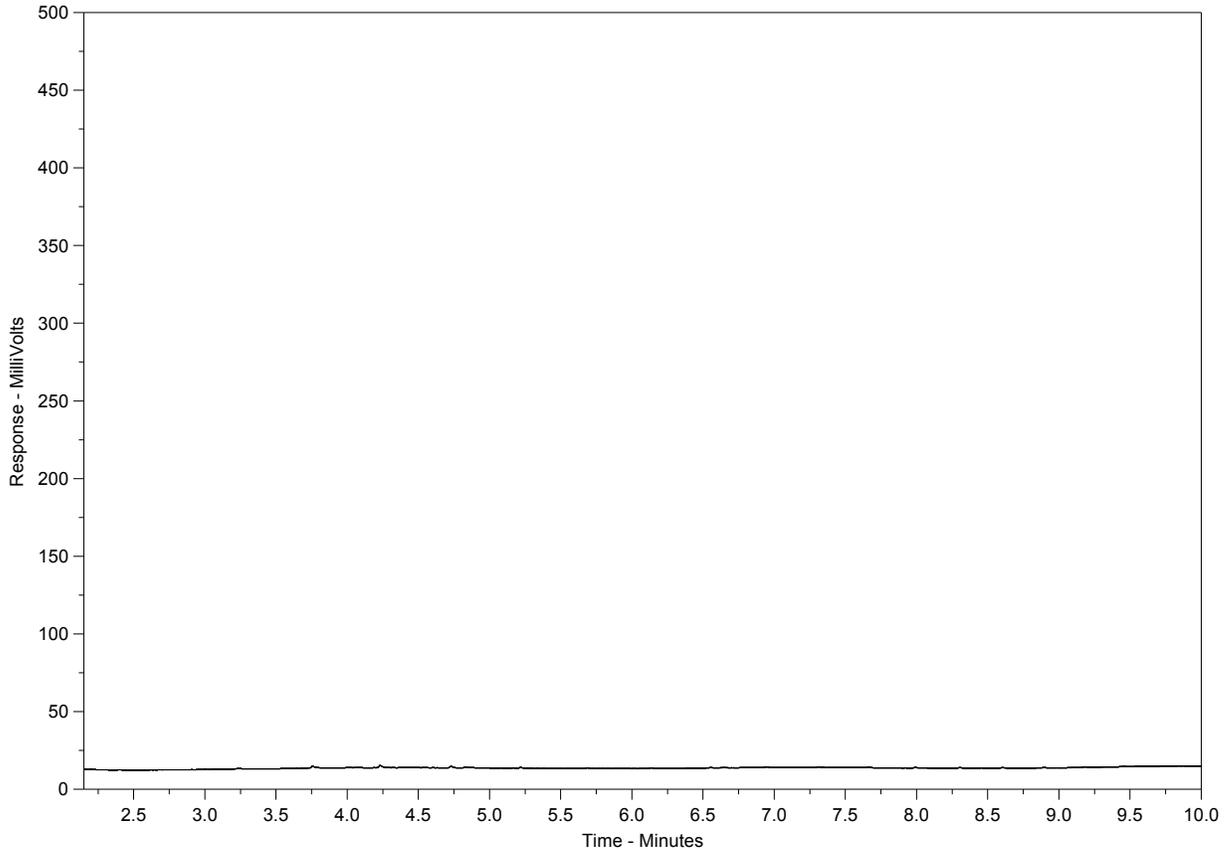
**UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.**

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-1  
Client Sample ID: 2016-050-628



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

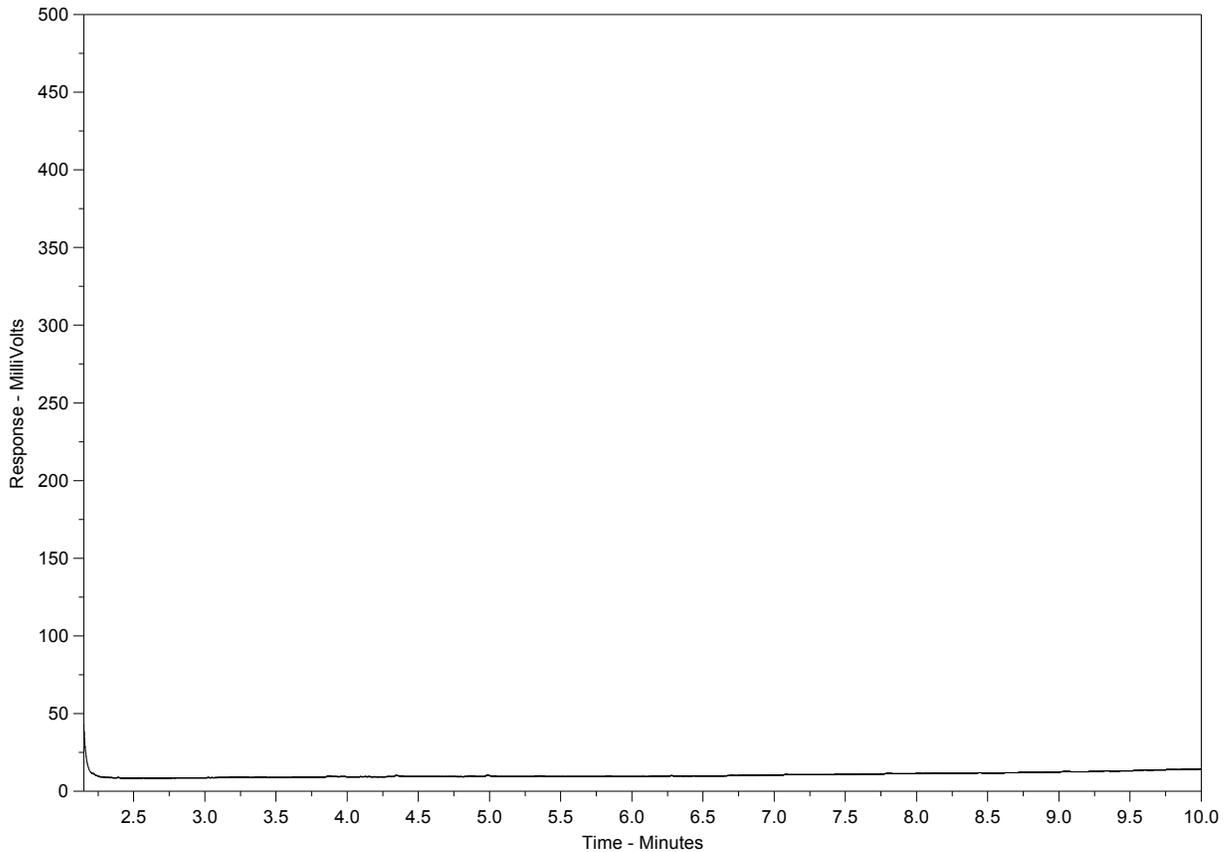
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-2  
Client Sample ID: 2016-050-629



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

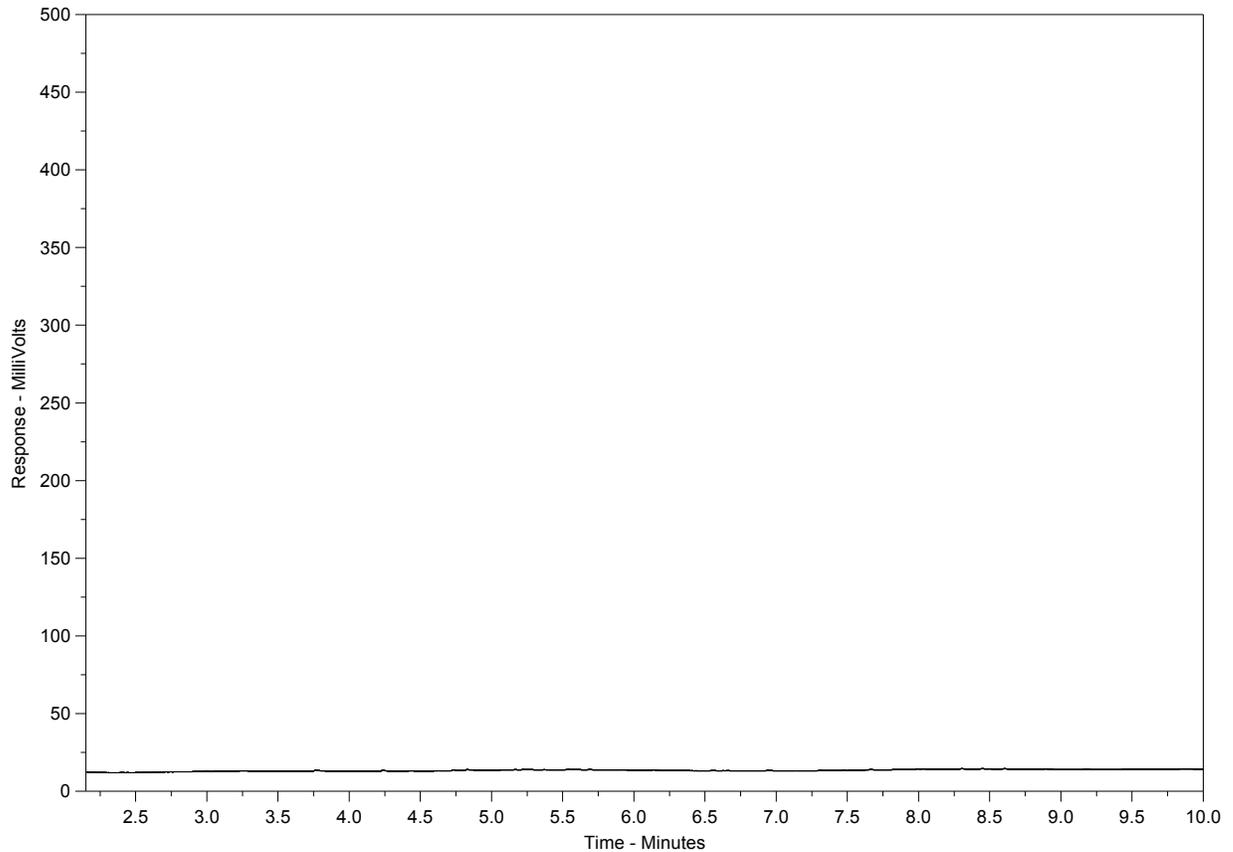
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-3  
Client Sample ID: 2016-050-630



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

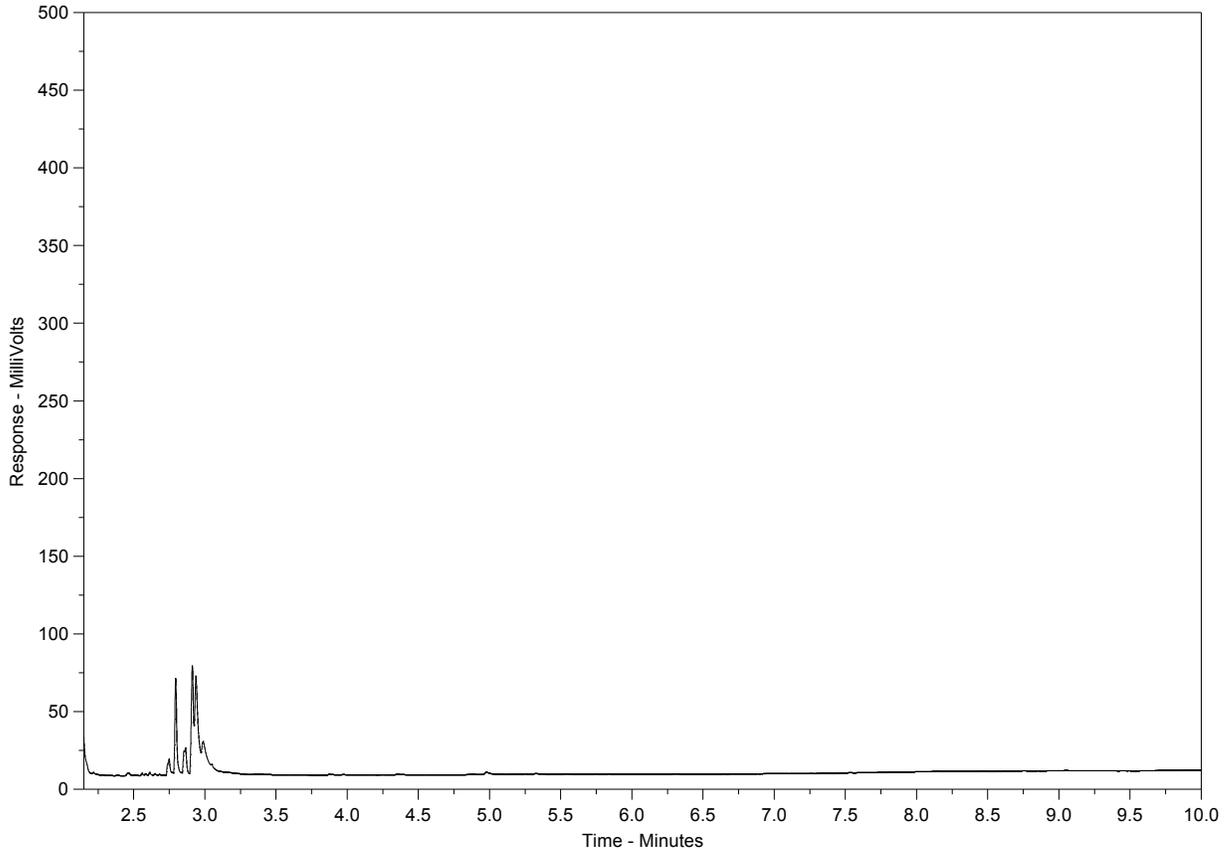
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-4  
 Client Sample ID: 2016-050-631



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		← Motor Oils / Lube Oils / Grease →
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

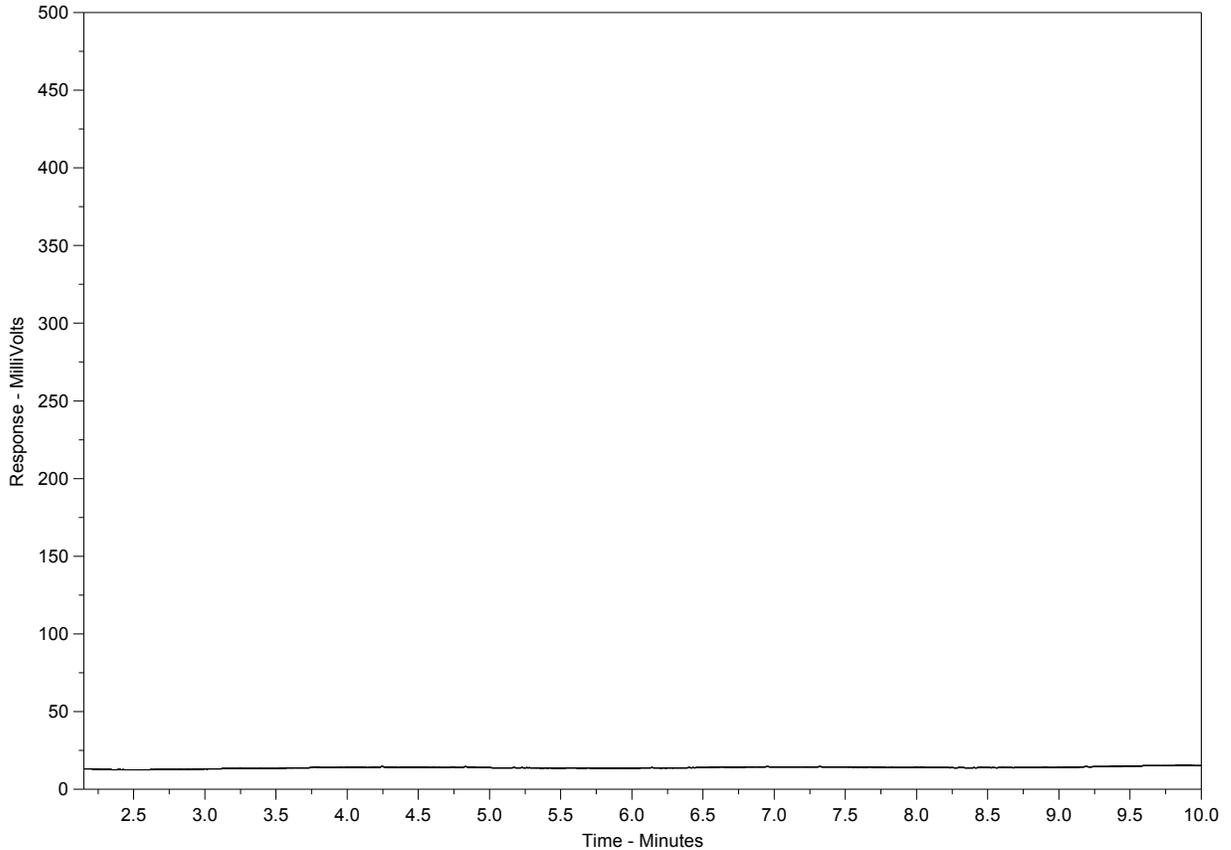
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-5  
Client Sample ID: 2016-050-632



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

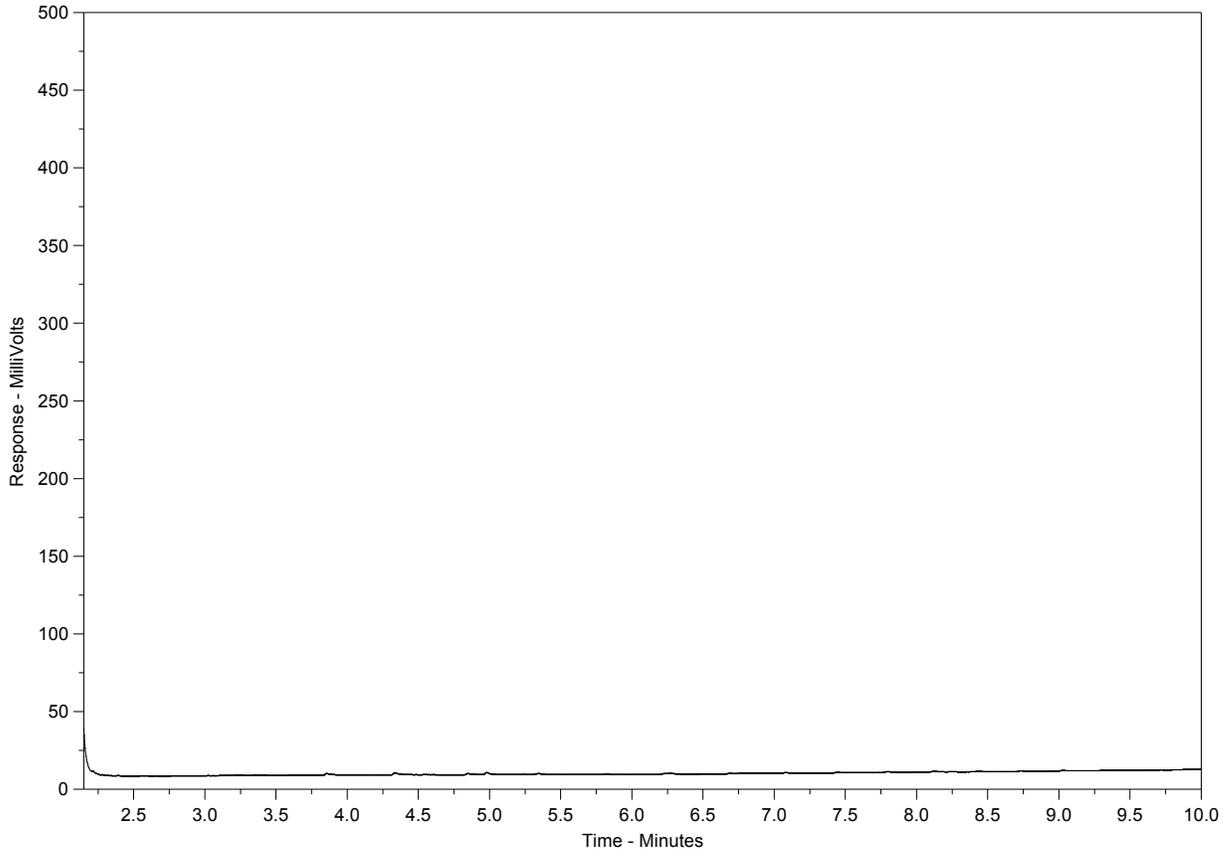
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-6  
Client Sample ID: 2016-050-633



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

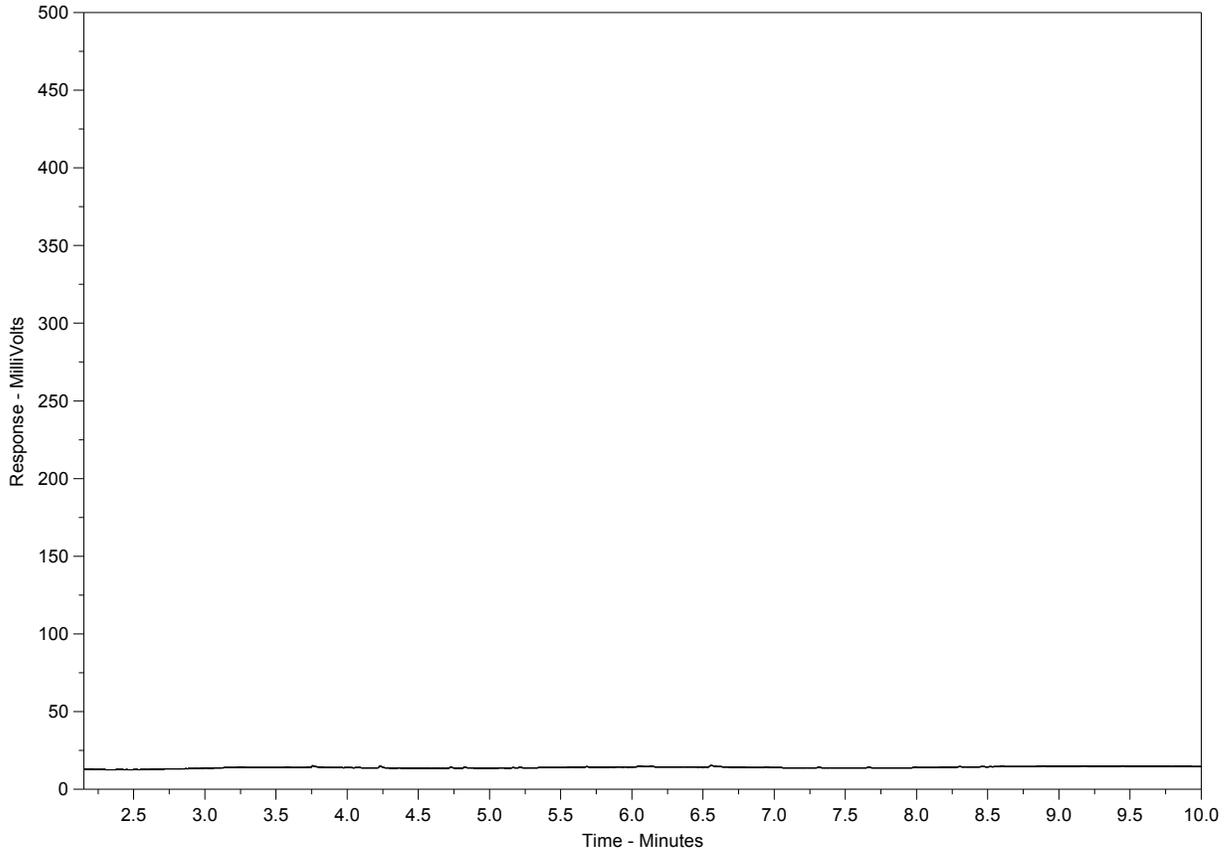
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-7  
 Client Sample ID: 2016-050-634



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">← Gasoline →</div> <div style="text-align: center;">← Diesel / Jet Fuels →</div> <div style="text-align: center;">← Motor Oils / Lube Oils / Grease →</div> </div>		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

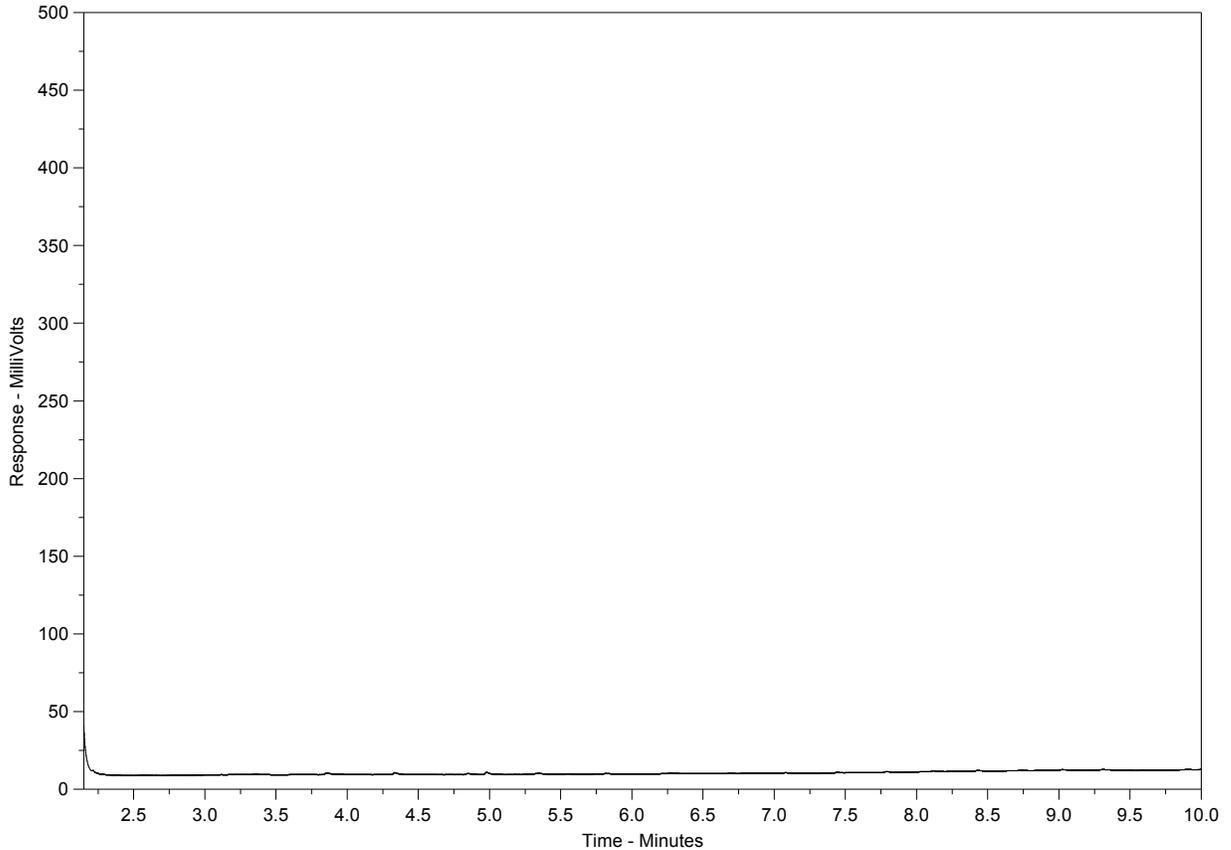
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-8  
 Client Sample ID: 2016-050-658



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
<p>← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →</p>		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

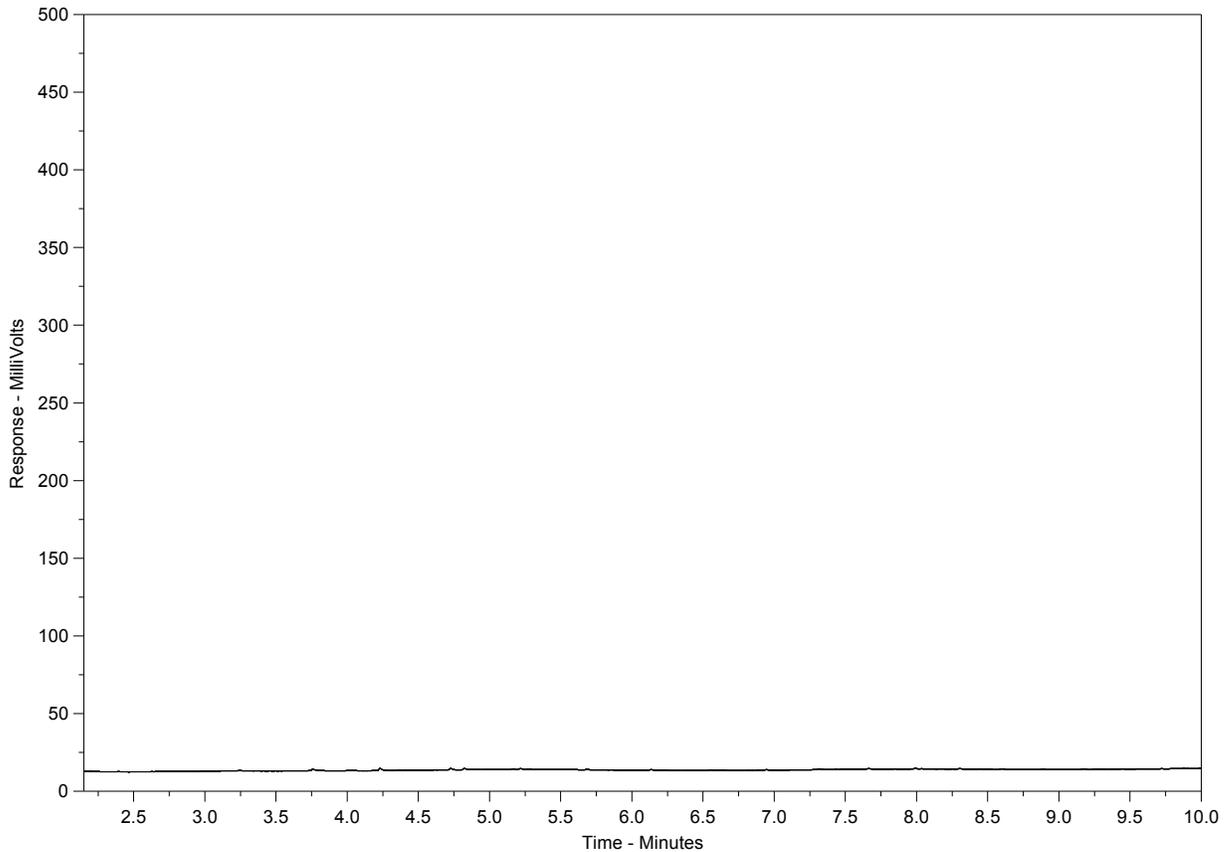
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-9  
Client Sample ID: 2016-050-659



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

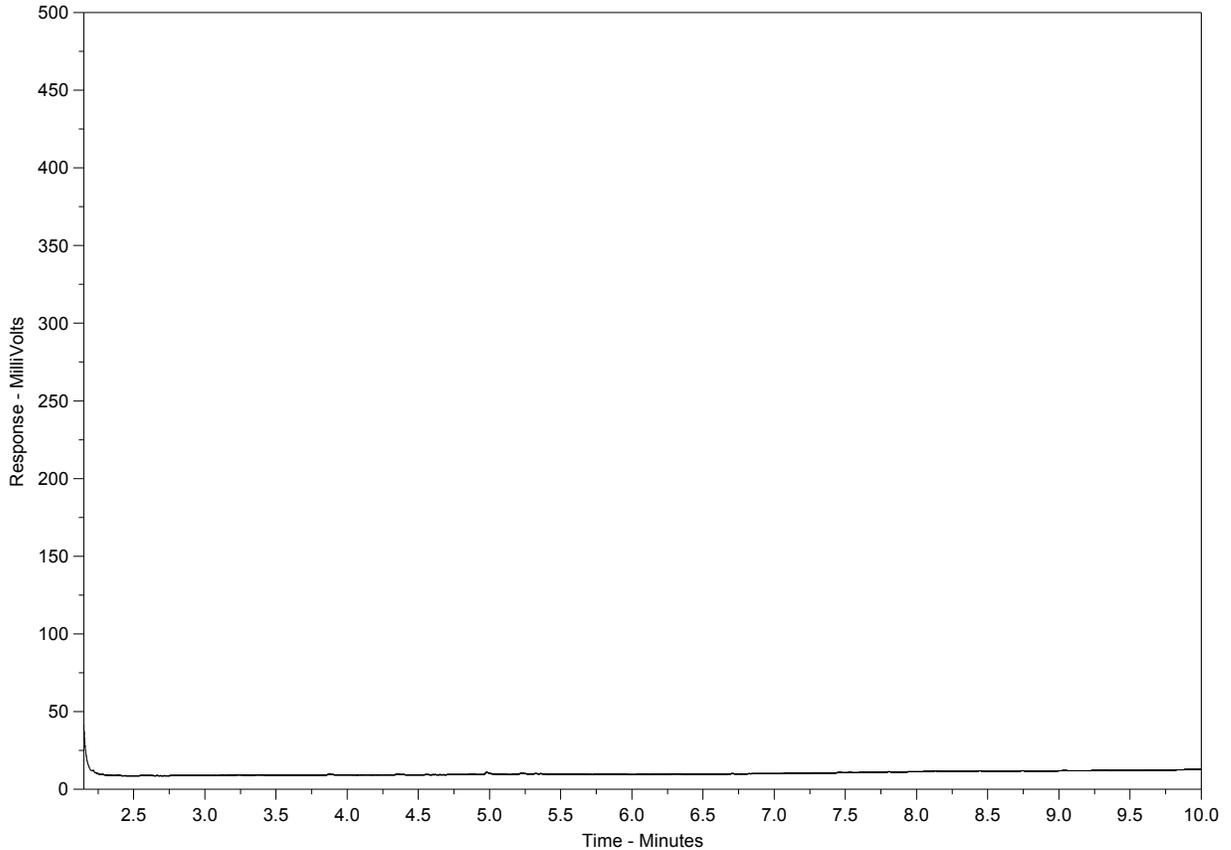
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-10  
 Client Sample ID: 2016-050-660



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		← Motor Oils / Lube Oils / Grease →
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

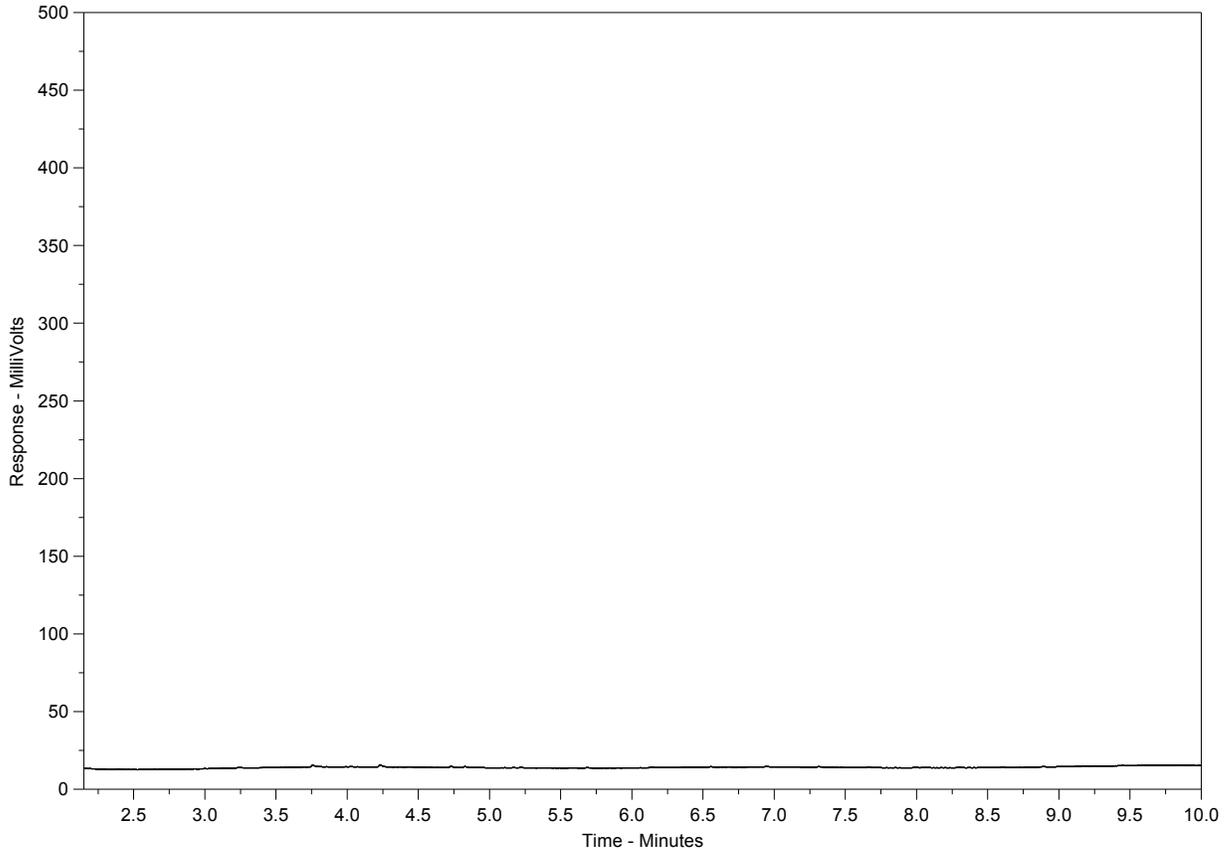
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-11  
Client Sample ID: 2016-050-661



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

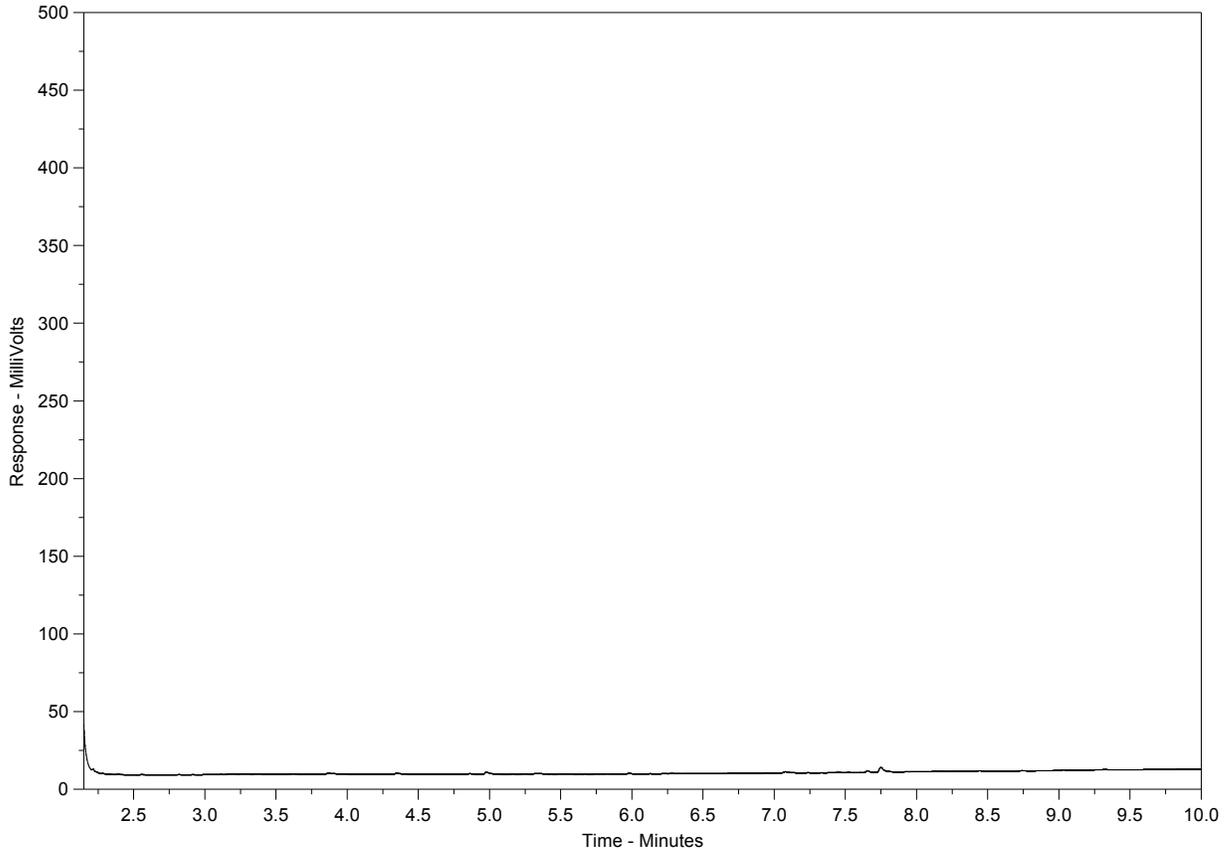
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-12  
Client Sample ID: 2016-050-662



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

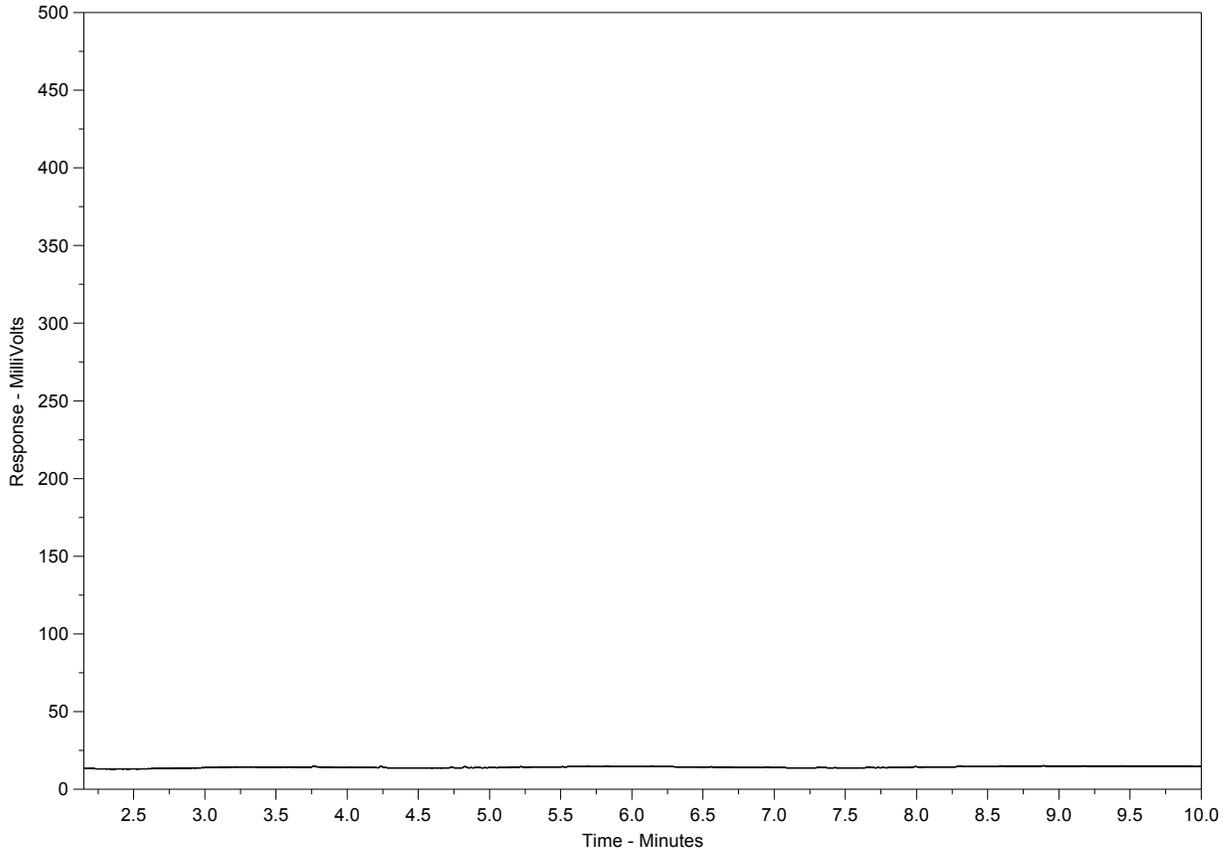
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-13  
Client Sample ID: 2016-050-663



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

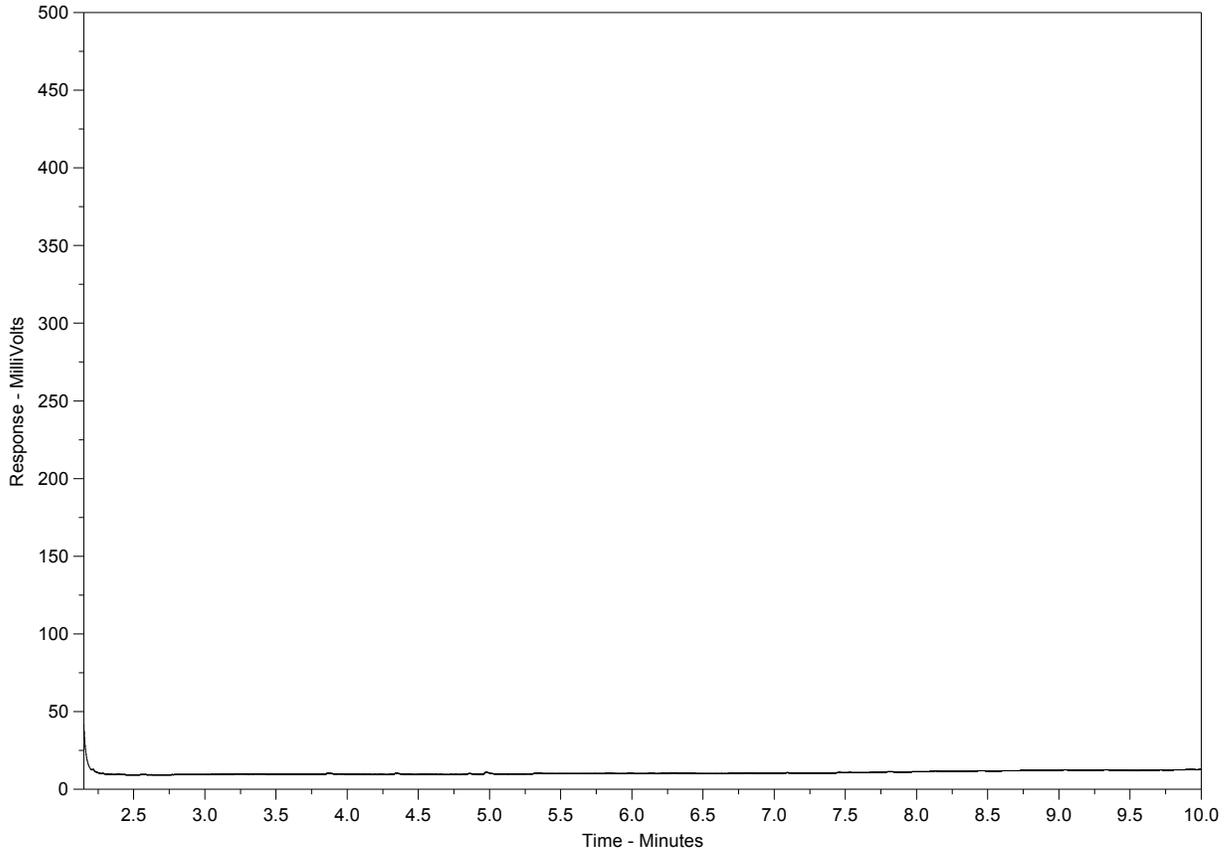
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-14  
 Client Sample ID: 2016-050-664



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
<p>← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →</p>		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

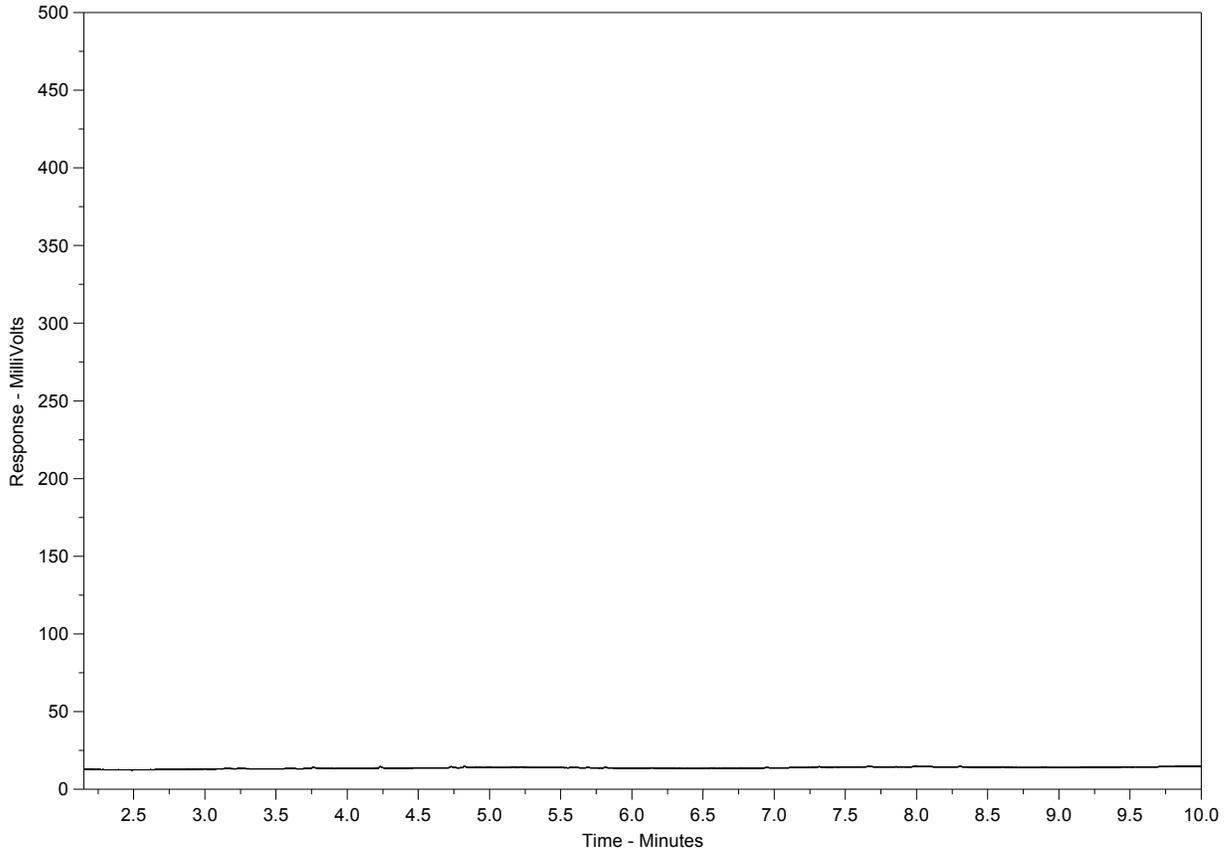
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-15  
 Client Sample ID: 2016-050-665



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

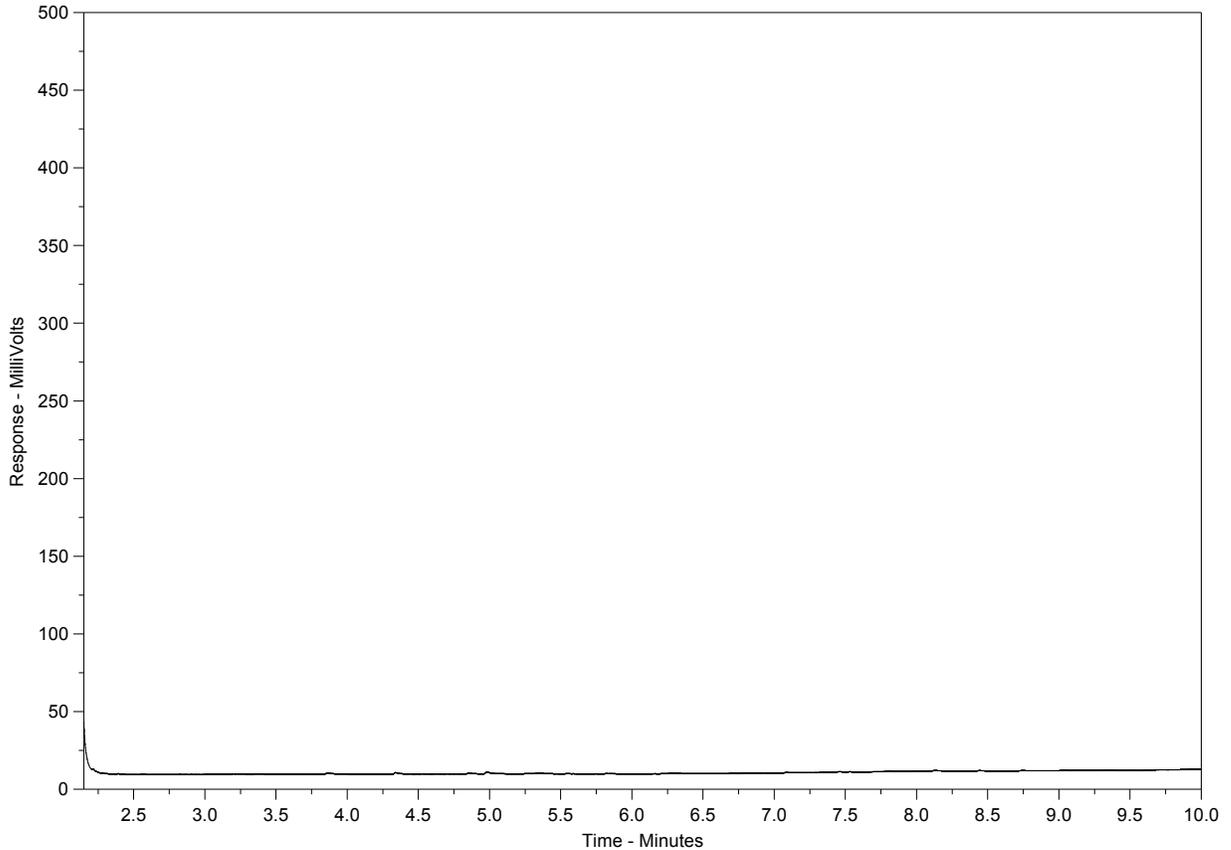
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-16  
 Client Sample ID: 2016-050-666



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

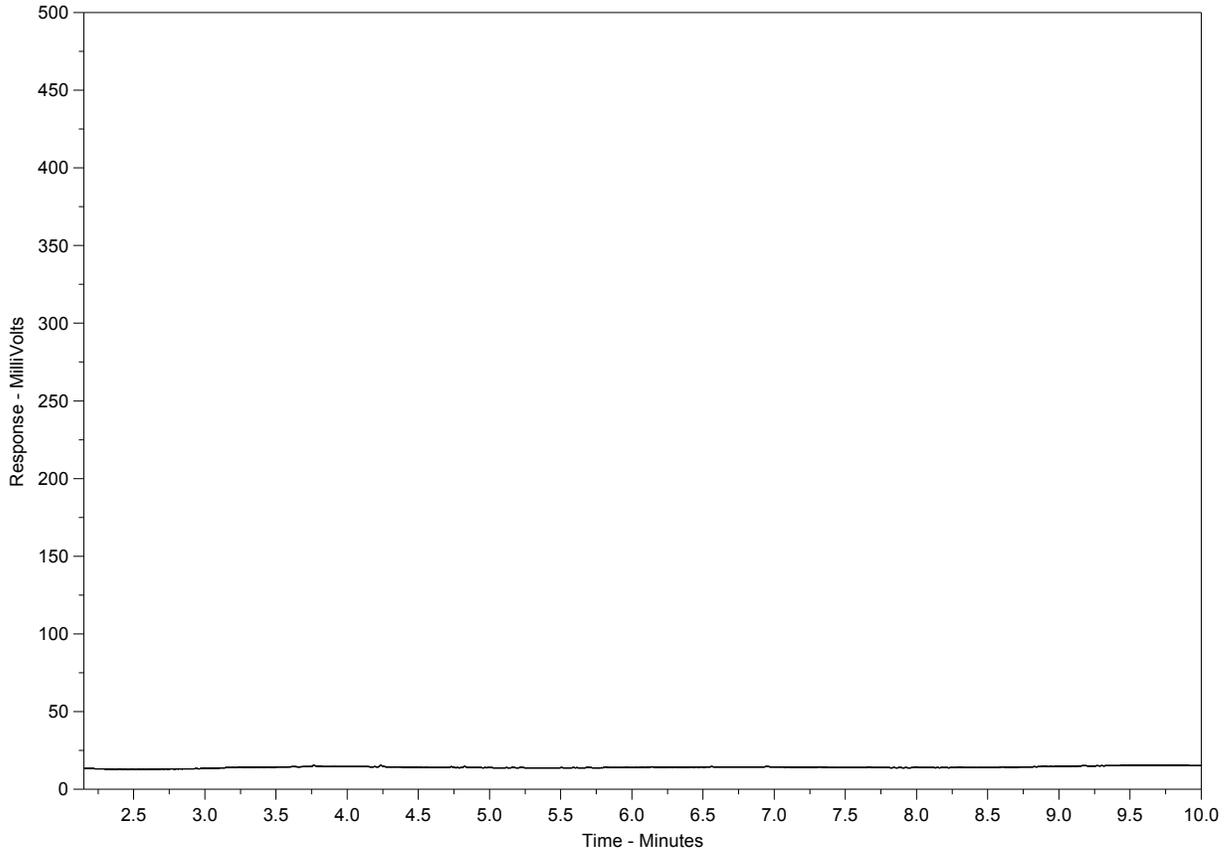
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-17  
 Client Sample ID: 2016-050-667



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

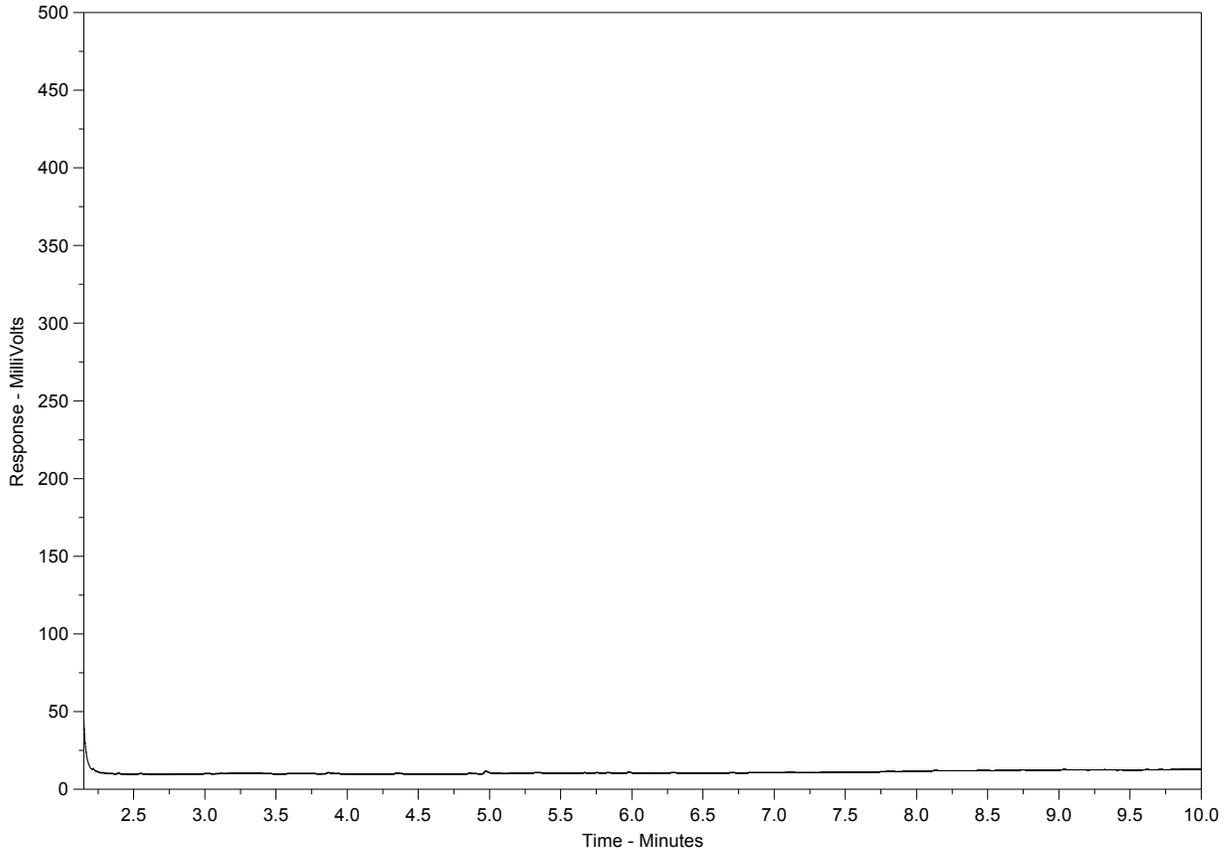
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-18  
Client Sample ID: 2016-050-668



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

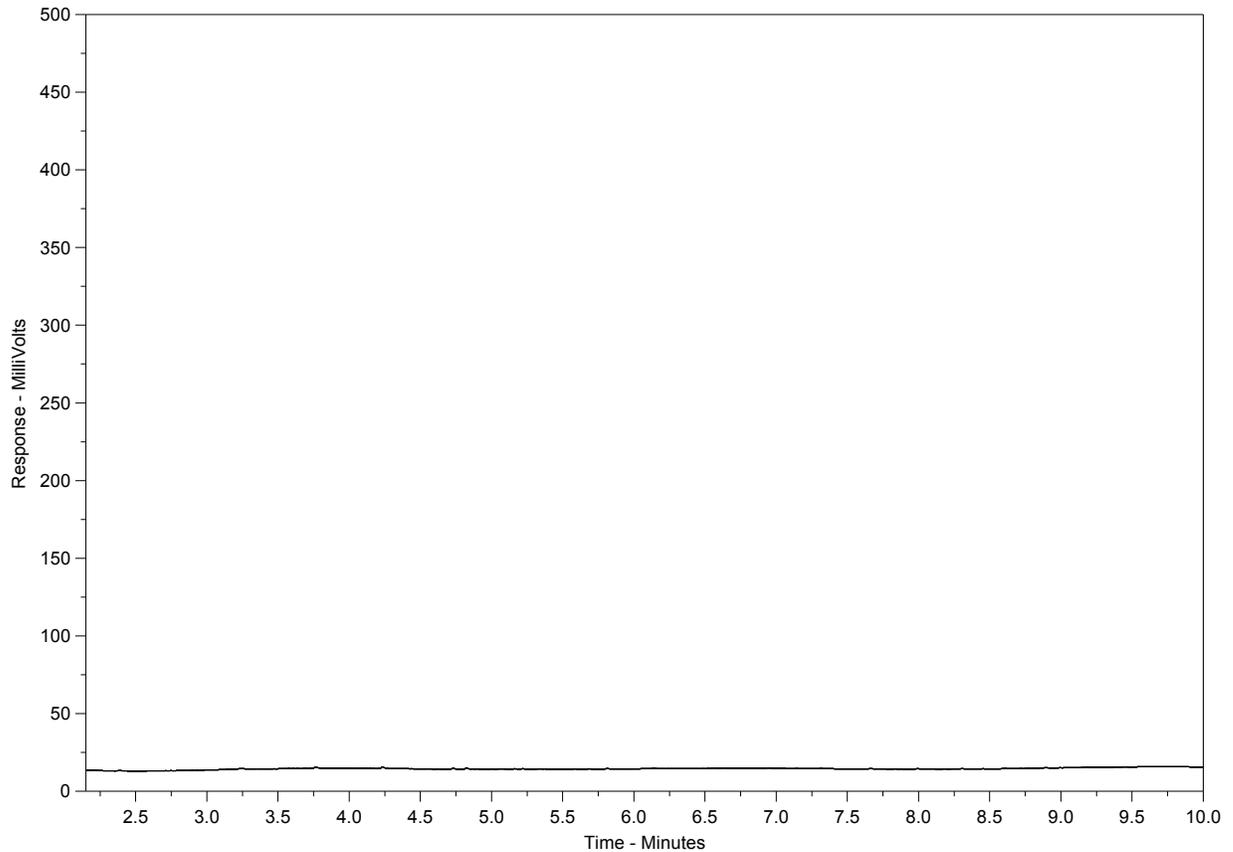
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-19  
Client Sample ID: 2016-050-669



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

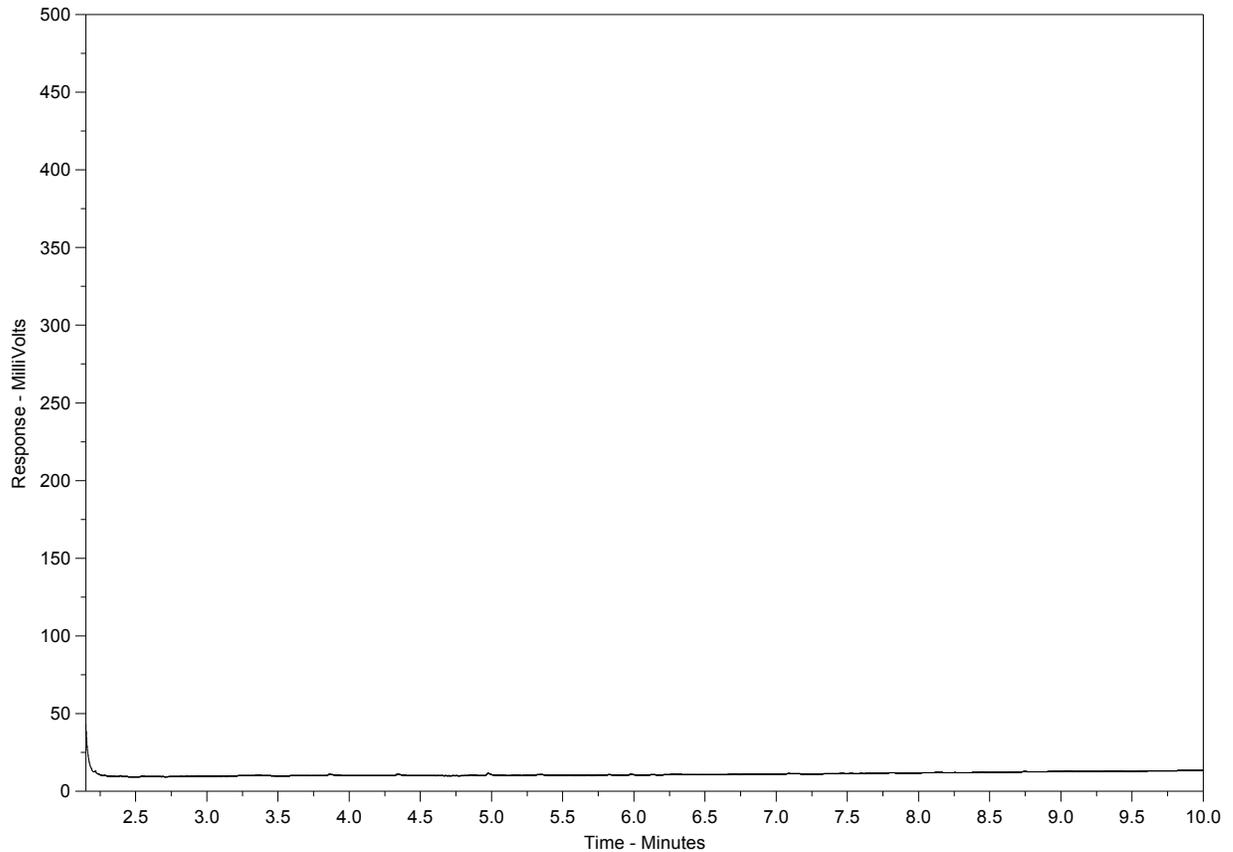
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-20  
Client Sample ID: 2016-050-670



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

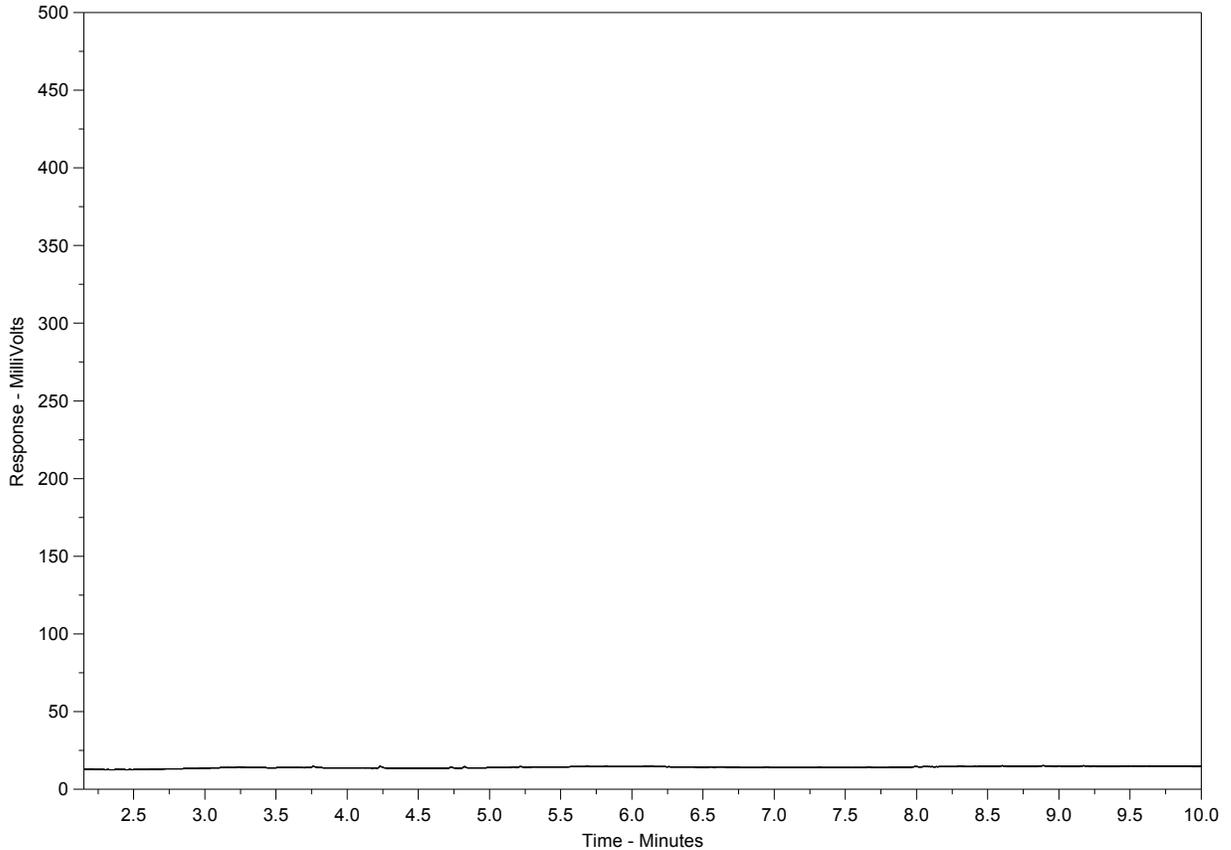
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-21  
Client Sample ID: 2016-050-671



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

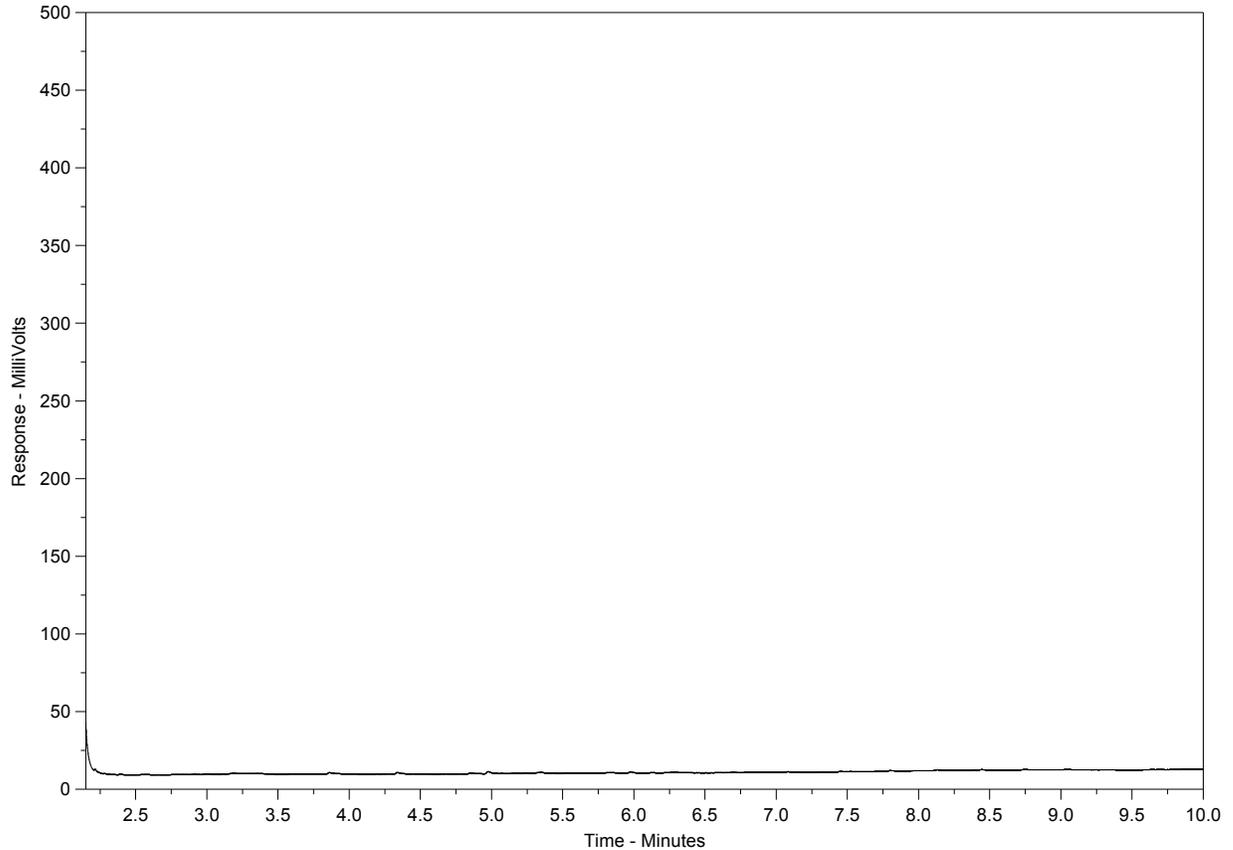
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-22  
Client Sample ID: 2016-050-672



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

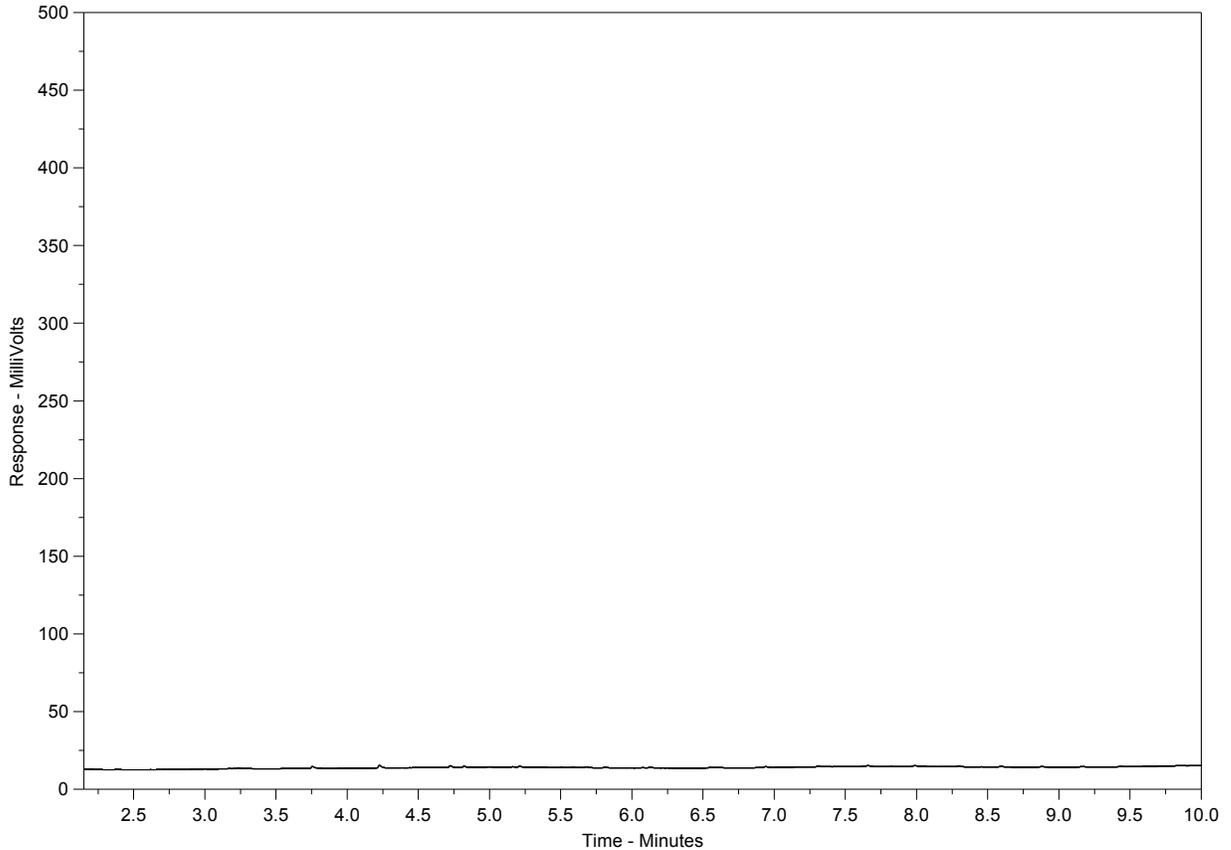
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-23  
 Client Sample ID: 2016-050-673



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

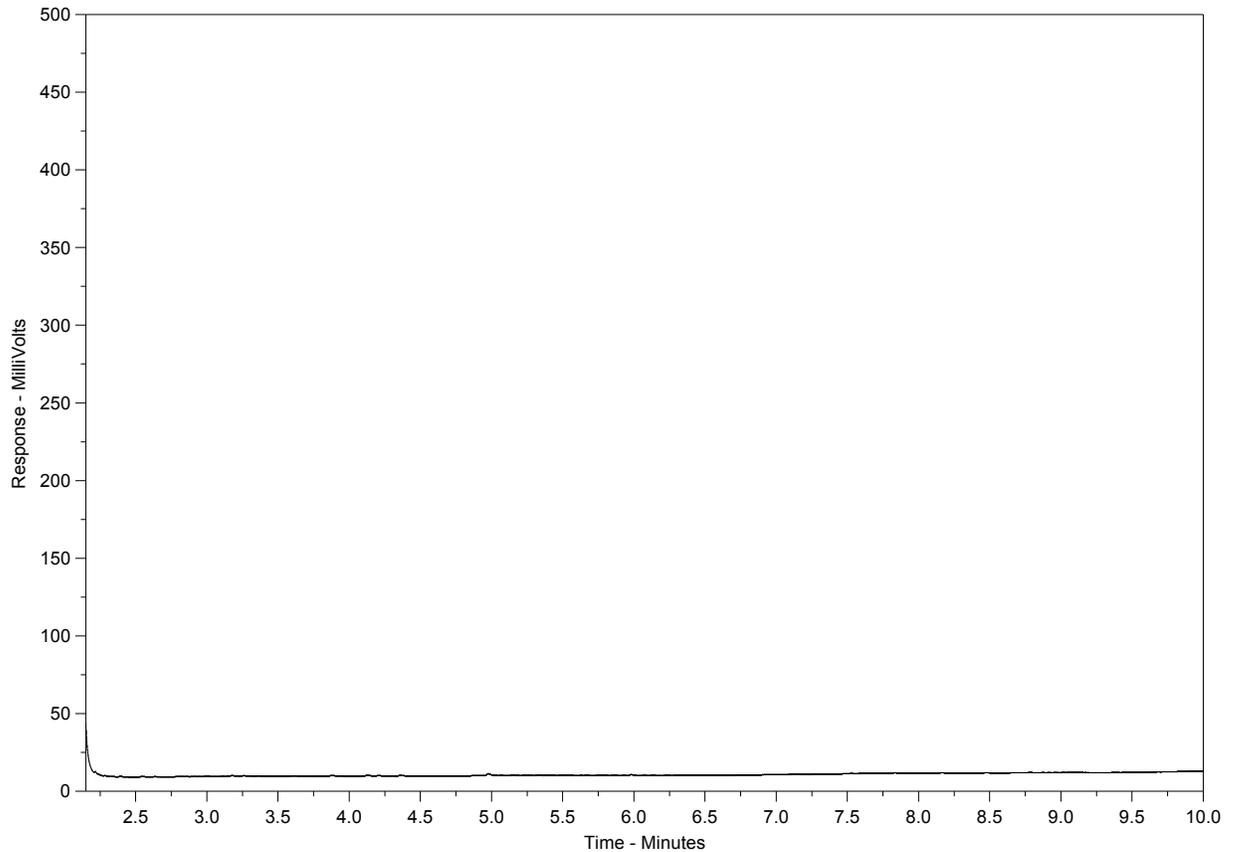
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1804184-24  
Client Sample ID: 2016-050-674



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

**CHAIN OF CUSTODY FORM**

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )				ANALYSIS REQUESTED:						
ADDRESS: 625 FISGARD STREET, PO BOX 1000				 L1804184-COFC						
CITY:	VICTORIA	PROV:	BC					POSTAL CODE:	V8W 2S6	
TEL:	(250) 360-3148	FAX:	(250) 360-3254					CONTACT:	Korene Torney	
PROJECT NAME AND NO.:		MILLSTREAM DOMESTIC WELLS						SAMPLER:	Shelley Alcock	
QUOTE NO.:		PO NO.:						ALS CONTACT:	JERRY HOLZBE	
REPORT FORMAT	<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS:		salcock@crd.bc.ca; ktorney@cr							
	<input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER:		CRD Excel Results							

**Y/C cooler Charge**  
**Ground**

	SAMPLE IDENTIFICATION	DATE / TIME COLLECTED		MATRIX	LEPH	HEPH														NOTES (sample specific comments, due dates, etc.)
		YYYY-MM-DD	TIME																	
FOR LAB USE ONLY	1	2016-050-628	2016-07-25	10:22	water	X	X													Drinking Water
	2	2016-050-629	2016-07-25	10:25	water	X	X													Drinking Water
	3	2016-050-630	2016-07-25	10:32	water	X	X													Drinking Water
	4	2016-050-631	2016-07-25	10:47	water	X	X													Drinking Water
	5	2016-050-632	2016-07-25	10:51	water	X	X													Drinking Water
	6	2016-050-633	2016-07-25	10:54	water	X	X													Drinking Water
	7	2016-050-634	2016-07-25	10:57	water	X	X													Drinking Water
	8	2016-050-658	2016-07-25	10:57	water	X	X													Drinking Water
	9	2016-050-659	2016-07-25	11:18	water	X	X													Drinking Water
	10	2016-050-660	2016-07-25	11:20	water	X	X													Drinking Water

TURN AROUND REQUIRED:	<input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)	RELINQUISHED BY: <i>SA</i>	DATE: 2016-07-25	RECEIVED BY: <i>JS</i>	DATE: July 25
SEND INVOICE TO	<input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)	Shelley Alcock	TIME: 13:27		TIME: 14:00
INVOICE FORMAT	<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX	RELINQUISHED BY: <i>SA</i>	DATE: July 26	RECEIVED BY: <i>JS</i>	DATE: 8/8
			TIME: 14:45		TIME:

SPECIAL INSTRUCTIONS:

FOR LAB USE ONLY		
Cooler Seal Intact?	Sample Temperature: _____ °C	Cooling Method?
Yes ___ No ___ N/A	Frozen? ___ Yes ___ No	Icepacks ___ Ice ___ None







CAPITAL REGIONAL DISTRICT  
ATTN: Korene Torney  
625 Fisgard Street  
VICTORIA BC V8W 1R7

Date Received: 26-OCT-16  
Report Date: 04-NOV-16 14:46 (MT)  
Version: FINAL

Client Phone: 250-360-3214

## Certificate of Analysis

Lab Work Order #: L1849230  
Project P.O. #: MILLSTREAM DOMESTIC WELLS  
Job Reference:  
C of C Numbers:  
Legal Site Desc:

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Amber Springer, B.Sc  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700  
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1849230-1	L1849230-2	L1849230-3	L1849230-4	L1849230-5
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
		Sampled Time	09:14		09:25	09:43	09:48
		Client ID	2016-050-675	2016-050-676	2016-050-677	2016-050-678	2016-050-679
Grouping	Analyte						
<b>WATER</b>							
Volatile Organic Compounds	Benzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bromodichloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bromoform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Carbon Tetrachloride (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Chlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dibromochloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichlorobenzene (mg/L)	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070
	1,3-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,4-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,2-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dichloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichloropropane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,3-Dichloropropene (cis & trans) (mg/L)	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	Ethylbenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Methyl t-butyl ether (MTBE) (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Styrene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,1,1,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Toluene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
1,1,1-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
1,1,2-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichlorofluoromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Vinyl Chloride (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
ortho-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
meta- & para-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Xylenes (mg/L)	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1849230-6	L1849230-7	L1849230-8	L1849230-9	L1849230-10
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
		Sampled Time	09:51	09:59	10:19	10:24	10:32
		Client ID	2016-050-680	2016-050-681	2016-050-682	2016-050-683	2016-050-684
Grouping	Analyte						
<b>WATER</b>							
<b>Volatile Organic Compounds</b>	Benzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bromodichloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bromoform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Carbon Tetrachloride (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Chlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dibromochloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichlorobenzene (mg/L)	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070
	1,3-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,4-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,2-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dichloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichloropropane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,3-Dichloropropene (cis & trans) (mg/L)	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	Ethylbenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Methyl t-butyl ether (MTBE) (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Styrene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,1,1,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tetrachloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,1,1-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
1,1,2-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichlorofluoromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Vinyl Chloride (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
ortho-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
meta- & para-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Xylenes (mg/L)	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1849230-11	L1849230-12	L1849230-13	L1849230-14	L1849230-15
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
		Sampled Time	10:32	11:03	11:07	11:14	11:14
		Client ID	2016-050-685	2016-050-686	2016-050-687	2016-050-688	2016-050-689
Grouping	Analyte						
<b>WATER</b>							
Volatile Organic Compounds	Benzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bromodichloromethane (mg/L)	<0.0010	0.0072	0.0089	<0.0010	<0.0010	<0.0010
	Bromoform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Carbon Tetrachloride (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Chlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dibromochloromethane (mg/L)	<0.0010	0.0051	0.0063	<0.0010	<0.0010	<0.0010
	Chloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroform (mg/L)	<0.0010	0.0092	0.0099	<0.0010	<0.0010	<0.0010
	Chloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichlorobenzene (mg/L)	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070
	1,3-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,4-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,2-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dichloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichloropropane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,3-Dichloropropene (cis & trans) (mg/L)	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	Ethylbenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Methyl t-butyl ether (MTBE) (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Styrene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,1,1,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Toluene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
1,1,1-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
1,1,2-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichlorofluoromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Vinyl Chloride (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
ortho-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
meta- & para-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Xylenes (mg/L)	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1849230-16	L1849230-17	L1849230-18	L1849230-19	L1849230-20
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
		Sampled Time	11:17	11:20	11:31	11:35	11:37
		Client ID	2016-050-690	2016-050-691	2016-050-692	2016-050-693	2016-050-694
Grouping	Analyte						
<b>WATER</b>							
Volatile Organic Compounds	Benzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bromodichloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bromoform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Carbon Tetrachloride (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Chlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dibromochloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroform (mg/L)	0.0035	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichlorobenzene (mg/L)	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070	<0.00070
	1,3-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,4-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,2-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dichloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichloropropane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,3-Dichloropropene (cis & trans) (mg/L)	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	Ethylbenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Methyl t-butyl ether (MTBE) (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Styrene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,1,1,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tetrachloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Toluene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
1,1,1-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
1,1,2-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Trichlorofluoromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Vinyl Chloride (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
ortho-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
meta- & para-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Xylenes (mg/L)	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1849230-21	L1849230-22	L1849230-23		
		Description	WATER	WATER	WATER		
		Sampled Date	25-OCT-16	25-OCT-16	25-OCT-16		
		Sampled Time	11:44	11:47	13:04		
		Client ID	2016-050-695	2016-050-696	2016-050-697		
Grouping	Analyte						
<b>WATER</b>							
Volatile Organic Compounds	Benzene (mg/L)	<0.00050	<0.00050	<0.00050			
	Bromodichloromethane (mg/L)	<0.0010	<0.0010	<0.0010			
	Bromoform (mg/L)	<0.0010	<0.0010	<0.0010			
	Carbon Tetrachloride (mg/L)	<0.00050	<0.00050	<0.00050			
	Chlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010			
	Dibromochloromethane (mg/L)	<0.0010	<0.0010	<0.0010			
	Chloroethane (mg/L)	<0.0010	<0.0010	<0.0010			
	Chloroform (mg/L)	<0.0010	<0.0010	<0.0010			
	Chloromethane (mg/L)	<0.0050	<0.0050	<0.0050			
	1,2-Dichlorobenzene (mg/L)	<0.00070	<0.00070	<0.00070			
	1,3-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010			
	1,4-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010			
	1,1-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010			
	1,2-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010			
	1,1-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010			
	cis-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010			
	trans-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010			
	Dichloromethane (mg/L)	<0.0050	<0.0050	<0.0050			
	1,2-Dichloropropane (mg/L)	<0.0010	<0.0010	<0.0010			
	cis-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010			
	trans-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010			
	1,3-Dichloropropene (cis & trans) (mg/L)	<0.0014	<0.0014	<0.0014			
	Ethylbenzene (mg/L)	<0.00050	<0.00050	<0.00050			
	Methyl t-butyl ether (MTBE) (mg/L)	<0.00050	<0.00050	<0.00050			
	Styrene (mg/L)	<0.00050	<0.00050	<0.00050			
	1,1,1,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010			
	1,1,2,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010			
	Tetrachloroethylene (mg/L)	<0.0010	<0.0010	<0.0010			
	Toluene (mg/L)	<0.00050	<0.00050	<0.00050			
	1,1,1-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010			
	1,1,2-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010			
	Trichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010			
	Trichlorofluoromethane (mg/L)	<0.0010	<0.0010	<0.0010			
Vinyl Chloride (mg/L)	<0.0010	<0.0010	<0.0010				
ortho-Xylene (mg/L)	<0.00050	<0.00050	<0.00050				
meta- & para-Xylene (mg/L)	<0.00050	<0.00050	<0.00050				
Xylenes (mg/L)	<0.00075	<0.00075	<0.00075				

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	Description	Sampled Date	Sampled Time	Client ID	L1849230-1	L1849230-2	L1849230-3	L1849230-4	L1849230-5
					WATER	WATER	WATER	WATER	WATER
		25-OCT-16	09:14	2016-050-675	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
					09:14	09:14	09:25	09:43	09:48
					2016-050-675	2016-050-676	2016-050-677	2016-050-678	2016-050-679
Grouping	Analyte								
<b>WATER</b>									
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	96.7	97.2	95.9	93.9	96.2			
	Surrogate: 1,4-Difluorobenzene (SS) (%)	102.3	104.2	102.2	100.1	99.0			
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	Surrogate: 2-Bromobenzotrifluoride (%)	124.2	107.4	104.8	105.3	105.0			
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Surrogate: Acridine d9 (%)	129.2	120.9	112.1	99.7	105.9			
	Surrogate: Chrysene d12 (%)	117.2	115.6	114.3	98.8	102.8			
Surrogate: Naphthalene d8 (%)	126.4	125.9	105.9	117.2	116.5				
Surrogate: Phenanthrene d10 (%)	128.6	115.1	109.4	97.7	100.1				

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	Description	Sampled Date	Sampled Time	Client ID	L1849230-6	L1849230-7	L1849230-8	L1849230-9	L1849230-10
					WATER	WATER	WATER	WATER	WATER
		25-OCT-16	09:51	2016-050-680	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
					09:51	09:59	10:19	10:24	10:32
					2016-050-680	2016-050-681	2016-050-682	2016-050-683	2016-050-684
Grouping	Analyte								
<b>WATER</b>									
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	95.3	91.3	95.8	94.3	94.8			
	Surrogate: 1,4-Difluorobenzene (SS) (%)	102.3	106.7	102.2	104.6	99.6			
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	Surrogate: 2-Bromobenzotrifluoride (%)	100.0	100.6	97.5	105.2	105.9			
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Surrogate: Acridine d9 (%)	110.6	111.6	113.4	109.1	106.1			
	Surrogate: Chrysene d12 (%)	104.8	110.2	103.4	100.3	106.4			
Surrogate: Naphthalene d8 (%)	116.4	120.8	120.9	118.3	110.6				
Surrogate: Phenanthrene d10 (%)	109.6	102.6	102.2	101.7	100.2				

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	Description	Sampled Date	Sampled Time	Client ID	L1849230-11	L1849230-12	L1849230-13	L1849230-14	L1849230-15
					WATER	WATER	WATER	WATER	WATER
		25-OCT-16	10:32	2016-050-685	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
					11:03	11:03	11:07	11:14	11:14
					2016-050-685	2016-050-686	2016-050-687	2016-050-688	2016-050-689
Grouping	Analyte								
<b>WATER</b>									
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	93.9	94.4	93.3	95.2	94.6			
	Surrogate: 1,4-Difluorobenzene (SS) (%)	95.4	102.5	99.7	104.2	101.7			
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	Surrogate: 2-Bromobenzotrifluoride (%)	107.6	100.9	100.9	104.7	101.5			
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Surrogate: Acridine d9 (%)	116.7	110.1	101.3	112.4	98.1			
	Surrogate: Chrysene d12 (%)	109.5	113.6	109.1	113.4	121.1			
Surrogate: Naphthalene d8 (%)	120.6	115.7	113.1	121.5	89.3				
Surrogate: Phenanthrene d10 (%)	110.6	110.3	105.1	108.1	118.3				

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	Description	Sampled Date	Sampled Time	Client ID	L1849230-16	L1849230-17	L1849230-18	L1849230-19	L1849230-20
					WATER	WATER	WATER	WATER	WATER
		25-OCT-16	11:17	2016-050-690	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16	25-OCT-16
					11:17	11:20	11:31	11:35	11:37
					2016-050-690	2016-050-691	2016-050-692	2016-050-693	2016-050-694
Grouping	Analyte								
<b>WATER</b>									
Volatile Organic Compounds	Surrogate: 4-Bromofluorobenzene (SS) (%)	92.7	92.0	92.0	91.5	90.1			
	Surrogate: 1,4-Difluorobenzene (SS) (%)	100.7	101.1	95.2	104.5	99.4			
Hydrocarbons	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	Surrogate: 2-Bromobenzotrifluoride (%)	100.8	104.0	102.6	97.5	93.6			
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000010 <sup>DLCL</sup>	<0.000050	<0.000050	<0.000050			
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Surrogate: Acridine d9 (%)	108.0	103.3	103.4	96.6	94.9			
	Surrogate: Chrysene d12 (%)	107.0	114.8	113.7	99.5	96.8			
Surrogate: Naphthalene d8 (%)	96.9	83.8	103.0	87.5	82.8				
Surrogate: Phenanthrene d10 (%)	114.2	119.1	120.8	108.8	111.8				

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1849230-21 WATER 25-OCT-16 11:44 2016-050-695	L1849230-22 WATER 25-OCT-16 11:47 2016-050-696	L1849230-23 WATER 25-OCT-16 13:04 2016-050-697		
Grouping	Analyte					
<b>WATER</b>						
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	90.4	90.9	94.0		
	Surrogate: 1,4-Difluorobenzene (SS) (%)	98.9	103.0	104.1		
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25		
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25		
	LEPH (mg/L)	<0.25	<0.25	<0.25		
	HEPH (mg/L)	<0.25	<0.25	<0.25		
	Surrogate: 2-Bromobenzotrifluoride (%)	96.9	95.2	97.0		
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050		
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050		
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050		
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050		
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050		
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050		
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050		
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050		
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050		
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050		
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050		
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050		
	Surrogate: Acridine d9 (%)	102.2	105.8	116.6		
	Surrogate: Chrysene d12 (%)	106.5	102.5	104.0		
Surrogate: Naphthalene d8 (%)	110.9	101.6	113.8			
Surrogate: Phenanthrene d10 (%)	97.9	95.3	112.4			

\* Please refer to the Reference Information section for an explanation of any qualifiers detected.

## Reference Information

### Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLCI	Detection Limit Raised: Chromatographic Interference due to co-elution.

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
<b>EPH-ME-FID-VA</b>	Water	EPH in Water	BC Lab Manual
EPH is extracted from water using a hexane micro-extraction technique, with analysis by GC-FID, as per the BC Lab Manual. EPH results include PAHs and are therefore not equivalent to LEPH or HEPH.			
<b>LEPH/HEPH-CALC-VA</b>	Water	LEPHs and HEPHs	BC MOE LABORATORY MANUAL (2005)
Light and Heavy Extractable Petroleum Hydrocarbons in water. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Acenaphthene, Acridine, Anthracene, Fluorene, Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(a)pyrene, Fluoranthene, and Pyrene are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Water by GC/FID" (Version 2.1, July 20, 1999).			
<b>PAH-ME-MS-VA</b>	Water	PAHs in Water	EPA 3511/8270D (mod)
PAHs are extracted from water using a hexane micro-extraction technique, with analysis by GC/MS. Because the two isomers cannot be readily separated chromatographically, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.			
<b>VOC-HSMS-VA</b>	Water	VOCs in water by Headspace GCMS	EPA 5021A/8260C
The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.			
<b>VOC7-HSMS-VA</b>	Water	BTEX/MTBE/Styrene by Headspace GCMS	EPA 5021A/8260C
The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.			
<b>VOC7/VOC-SURR-MS-VA</b>	Water	VOC7 and/or VOC Surrogates for Waters	EPA 5035A/5021A/8260C
<b>XYLENES-CALC-VA</b>	Water	Sum of Xylene Isomer Concentrations	CALCULATION
Calculation of Total Xylenes			
Total Xylenes is the sum of the concentrations of the ortho, meta, and para Xylene isomers. Results below detection limit (DL) are treated as zero. The DL for Total Xylenes is set to a value no less than the square root of the sum of the squares of the DLs of the individual Xylenes.			

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

### Chain of Custody Numbers:

#### GLOSSARY OF REPORT TERMS

*Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.*

*mg/kg - milligrams per kilogram based on dry weight of sample.*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample.*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.*

*mg/L - milligrams per litre.*

*< - Less than.*

*D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

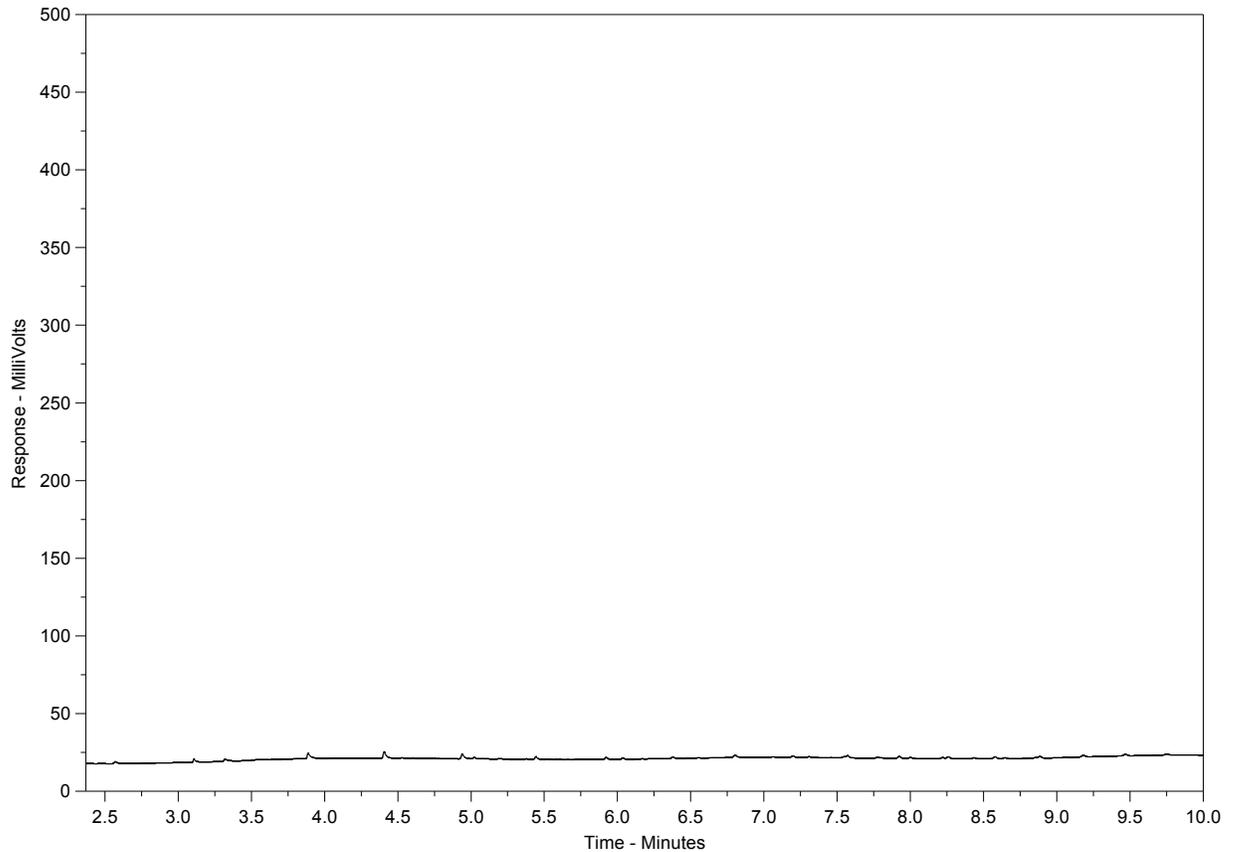
*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-1  
Client Sample ID: 2016-050-675



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

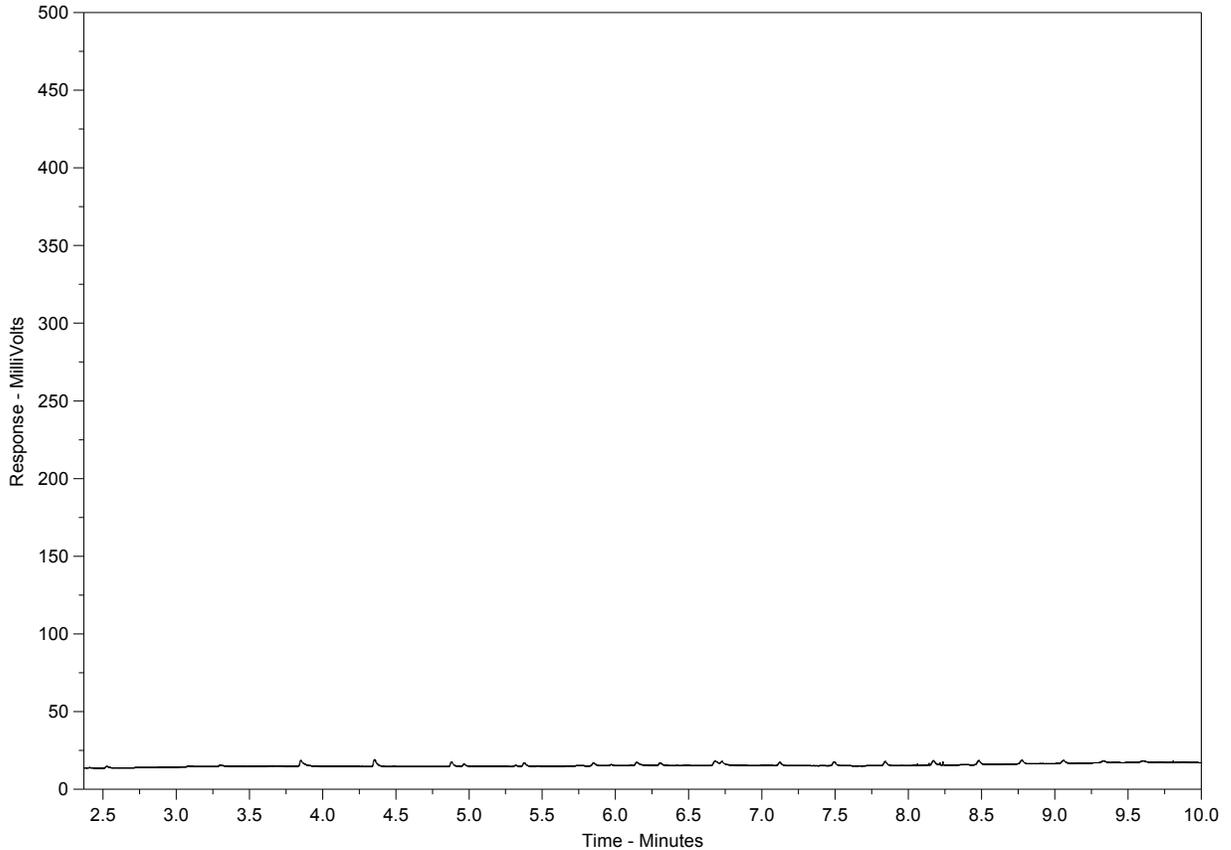
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-2  
Client Sample ID: 2016-050-676



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

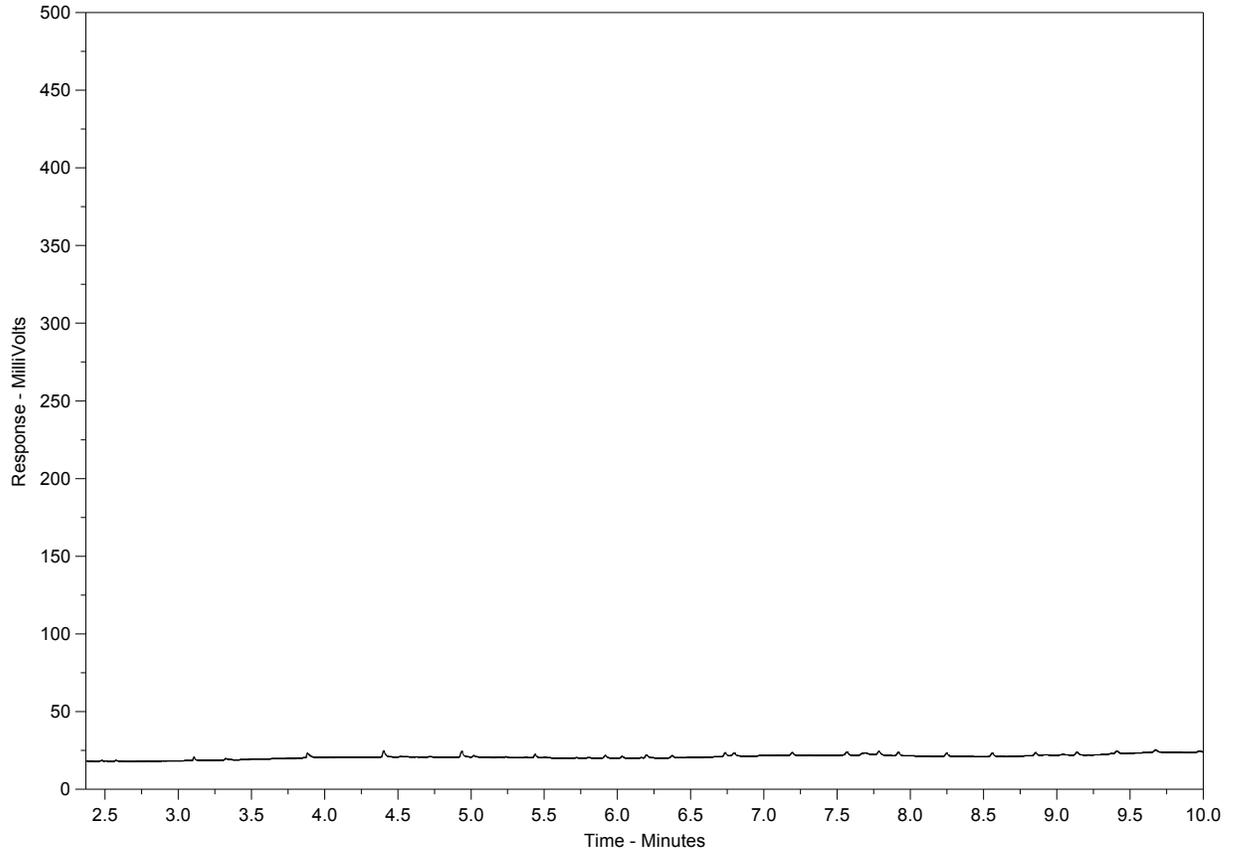
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-3  
Client Sample ID: 2016-050-677



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

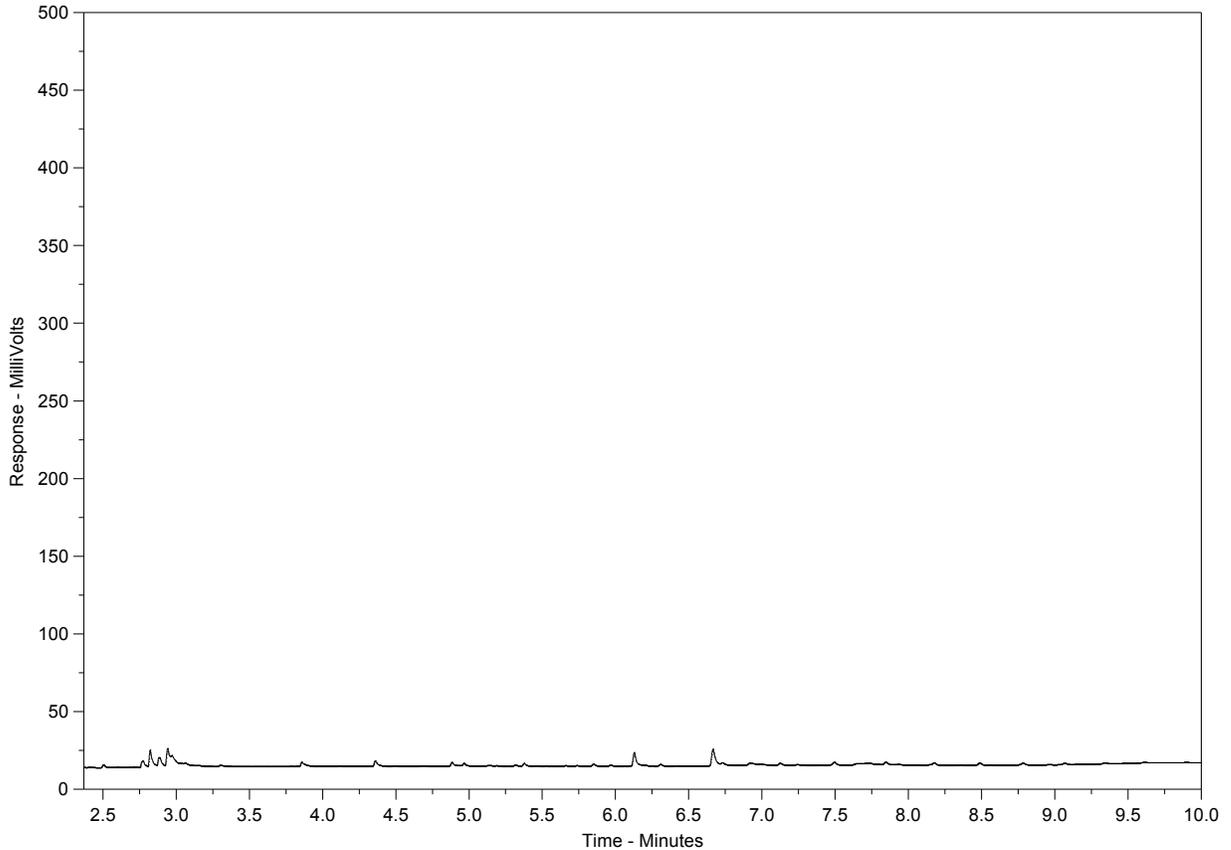
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-4  
 Client Sample ID: 2016-050-678



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		← Motor Oils / Lube Oils / Grease →
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

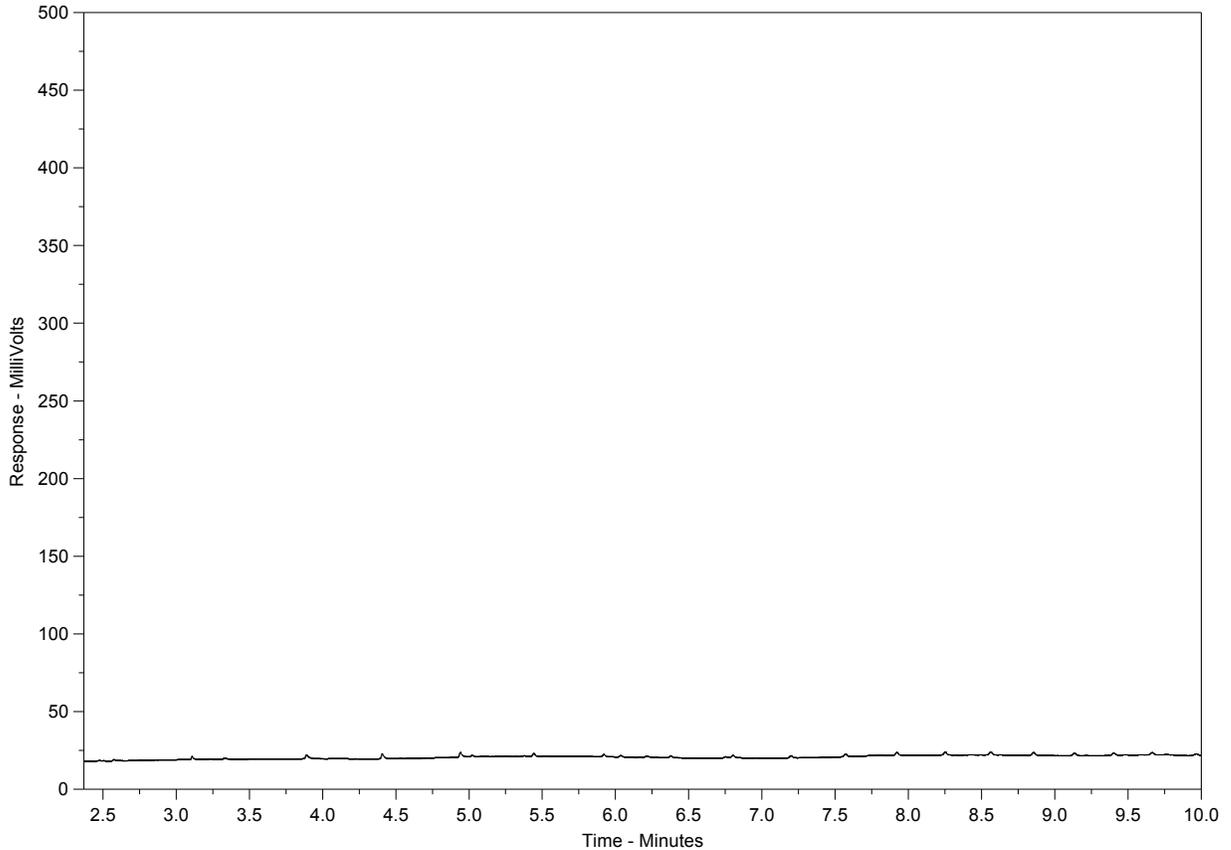
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-5  
 Client Sample ID: 2016-050-679



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

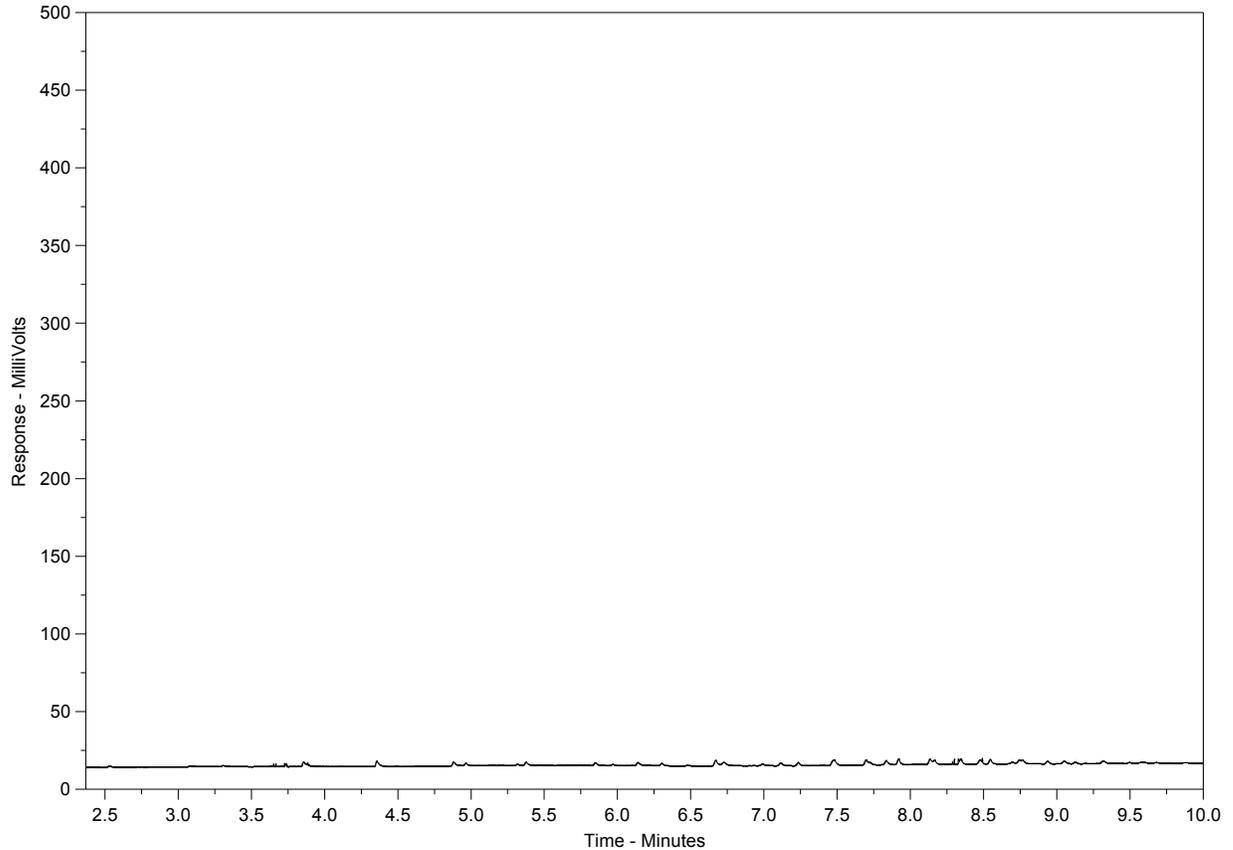
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-6  
Client Sample ID: 2016-050-680



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

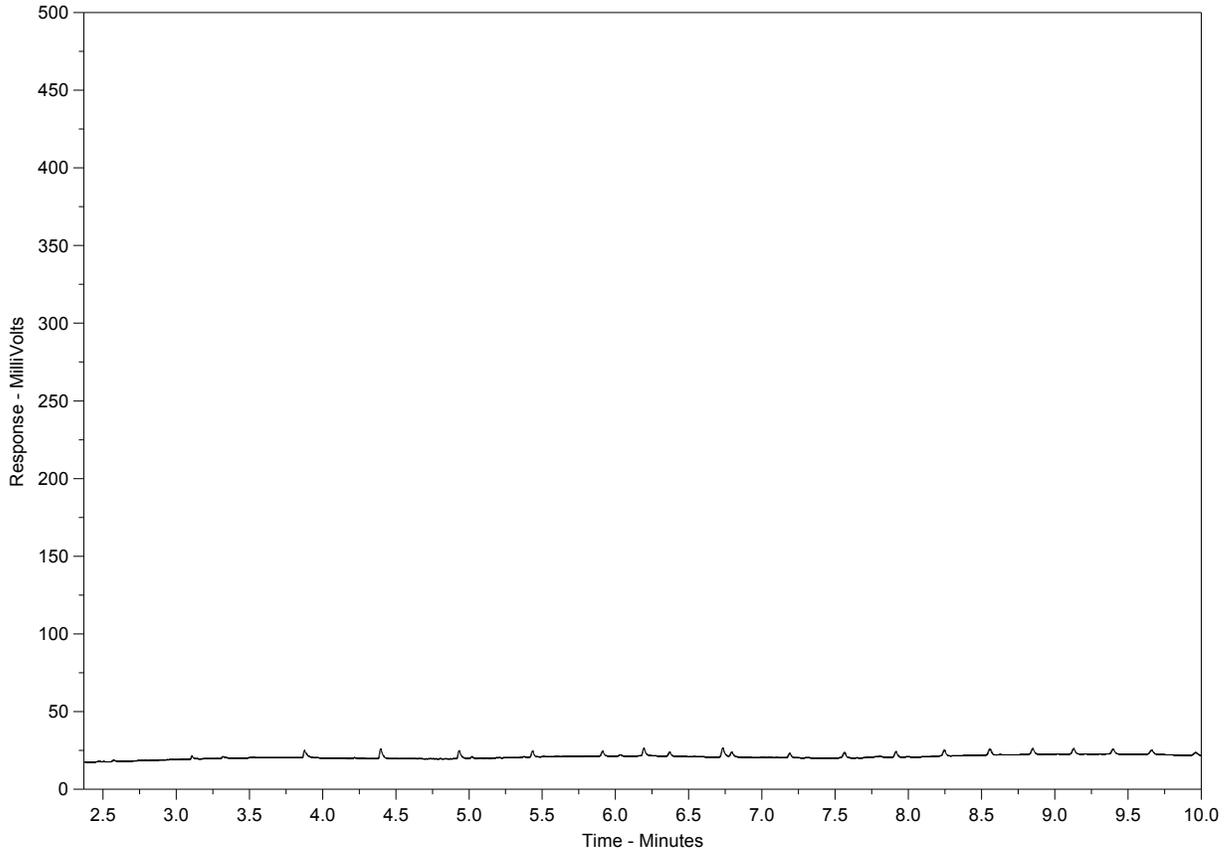
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-7  
 Client Sample ID: 2016-050-681



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		← Motor Oils / Lube Oils / Grease →
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

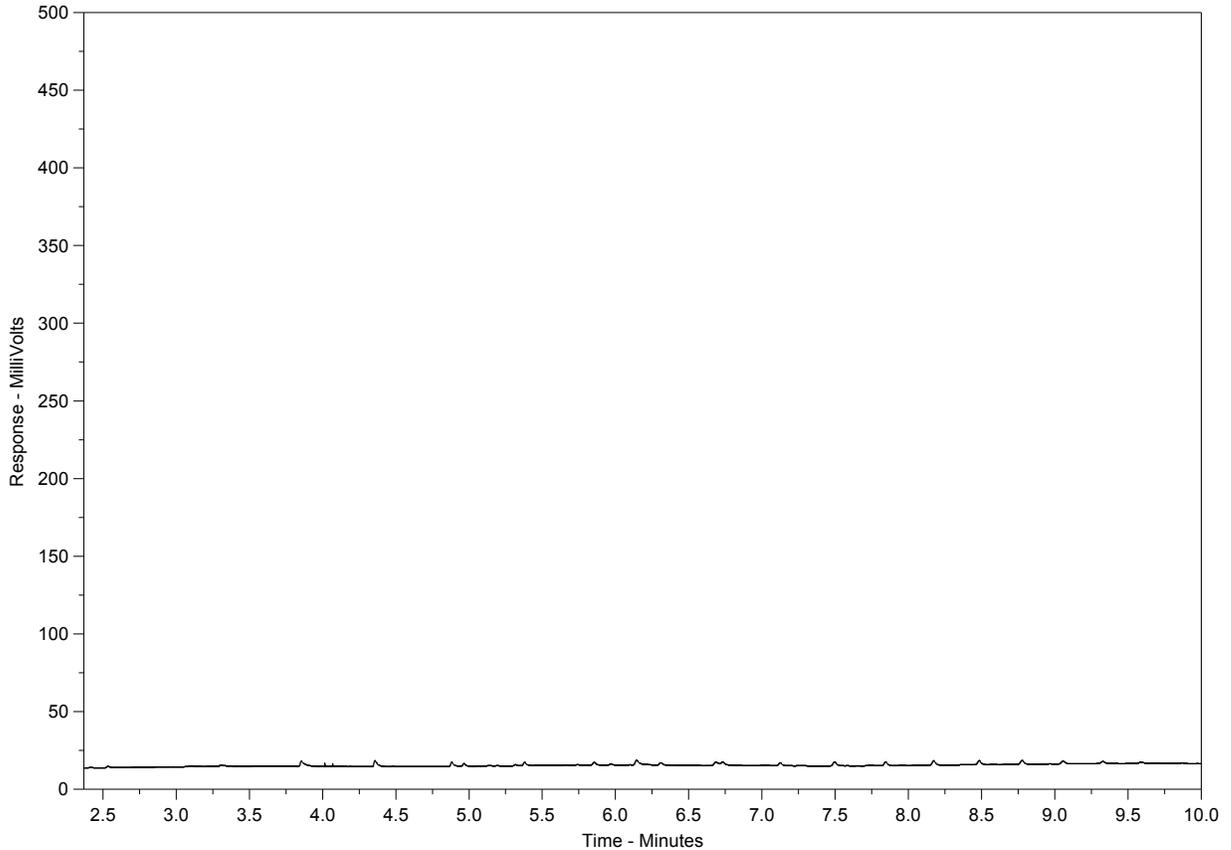
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-8  
 Client Sample ID: 2016-050-682



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

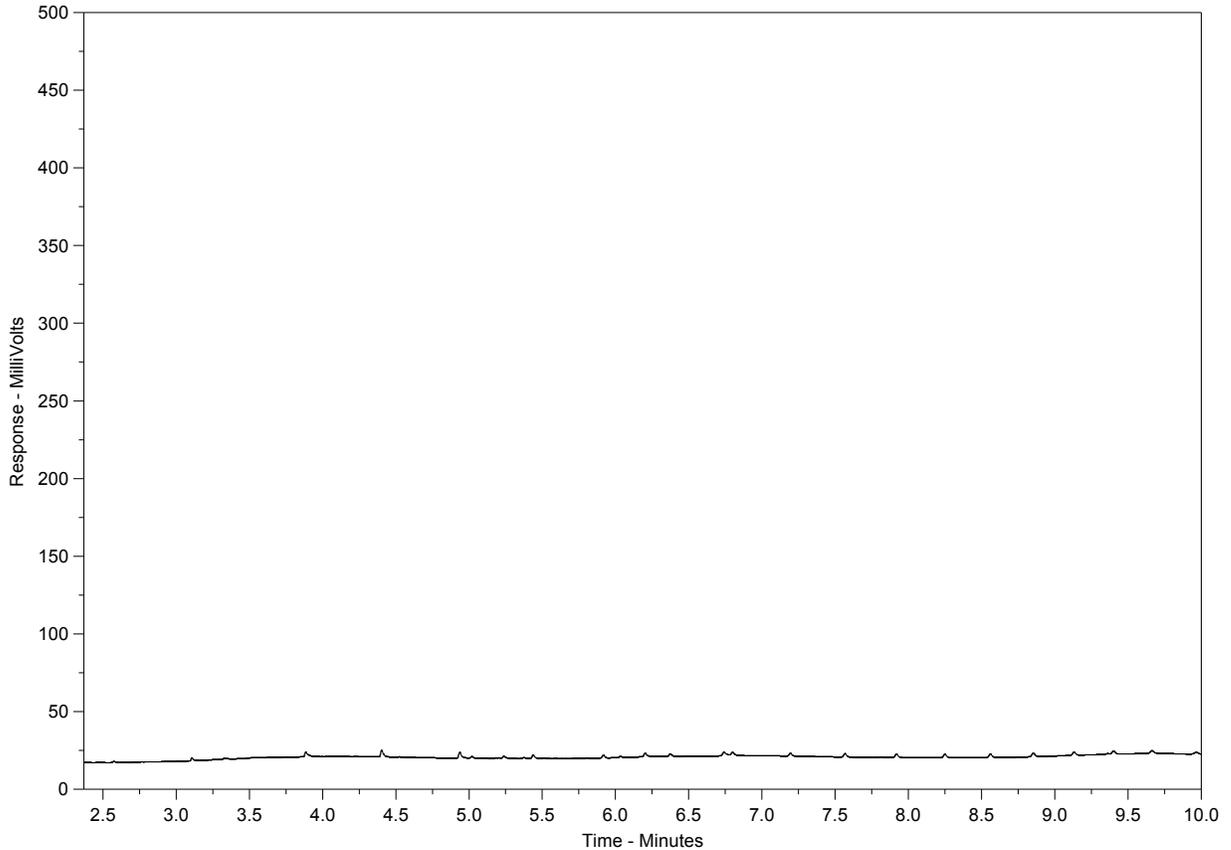
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-9  
 Client Sample ID: 2016-050-683



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

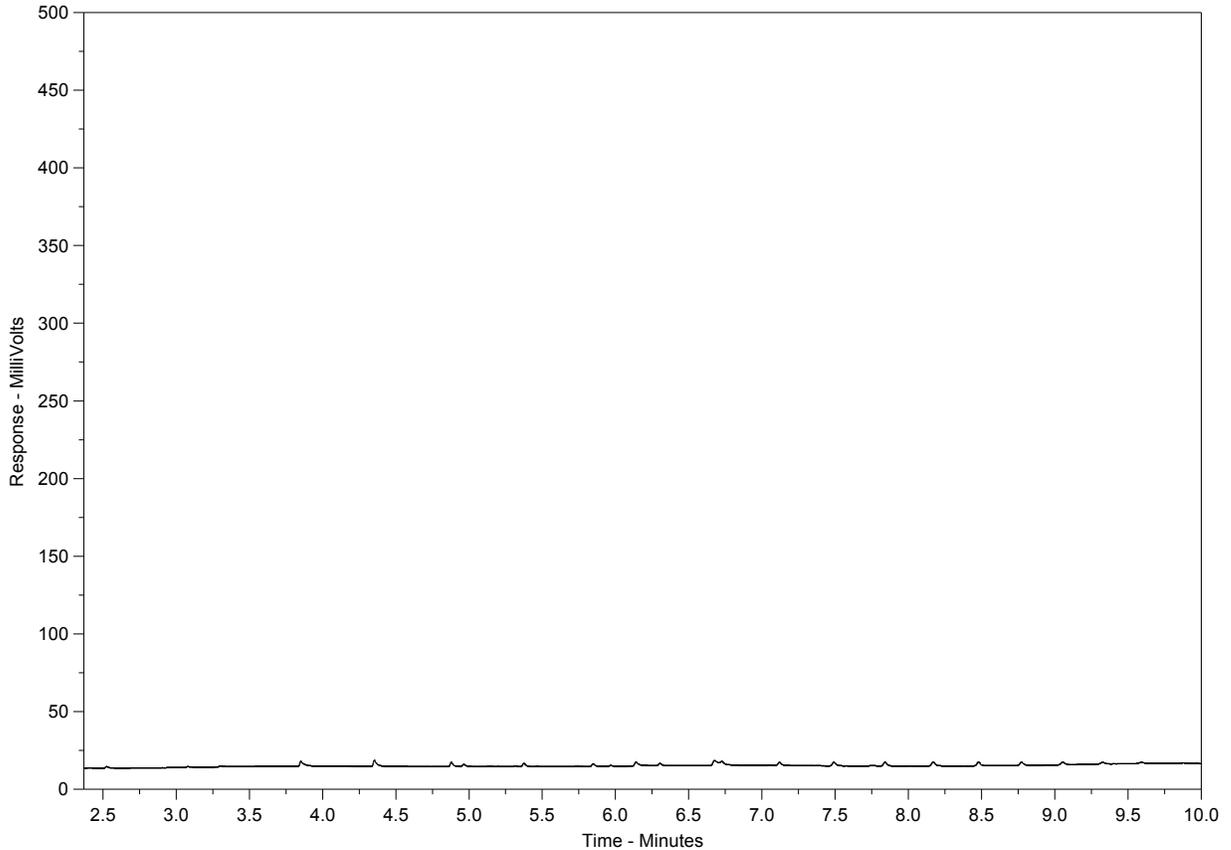
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-10  
Client Sample ID: 2016-050-684



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

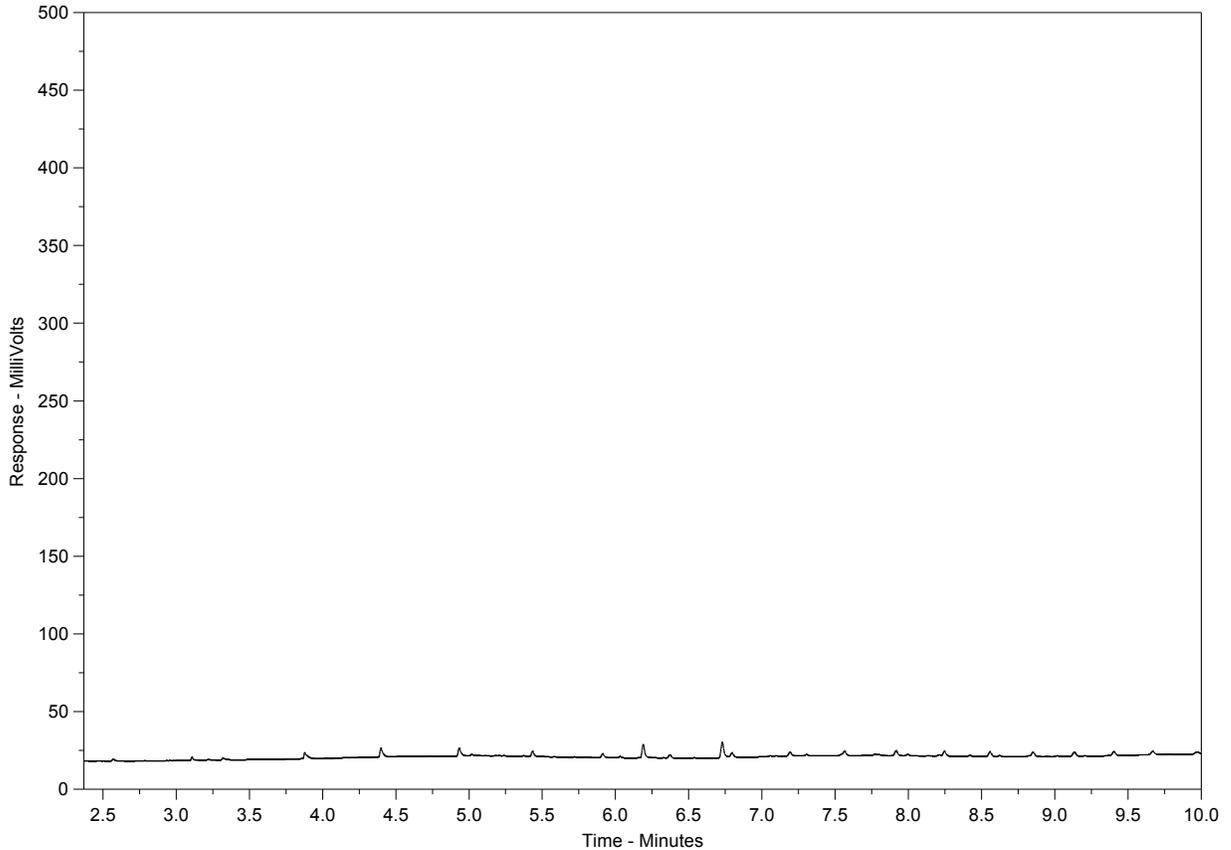
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-11  
 Client Sample ID: 2016-050-685



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		← Motor Oils / Lube Oils / Grease →
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

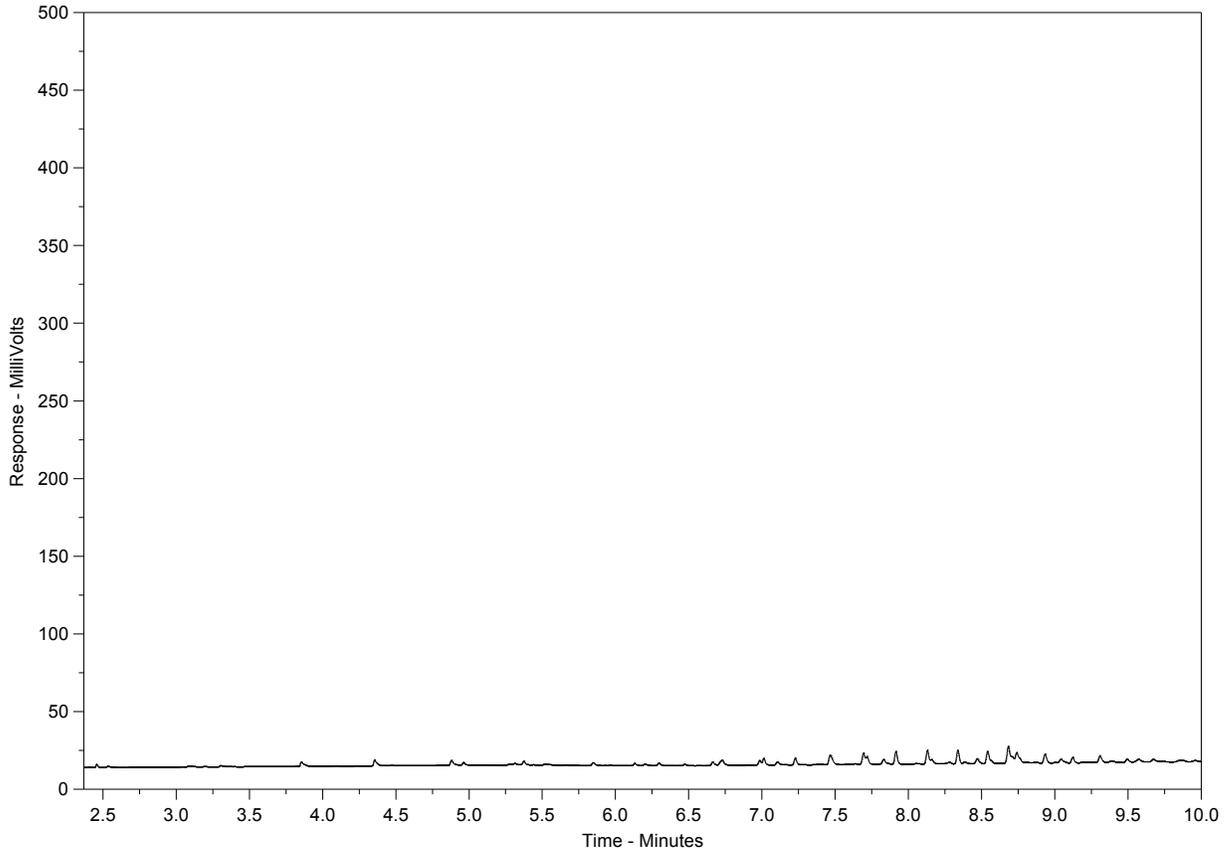
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-12  
 Client Sample ID: 2016-050-686



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

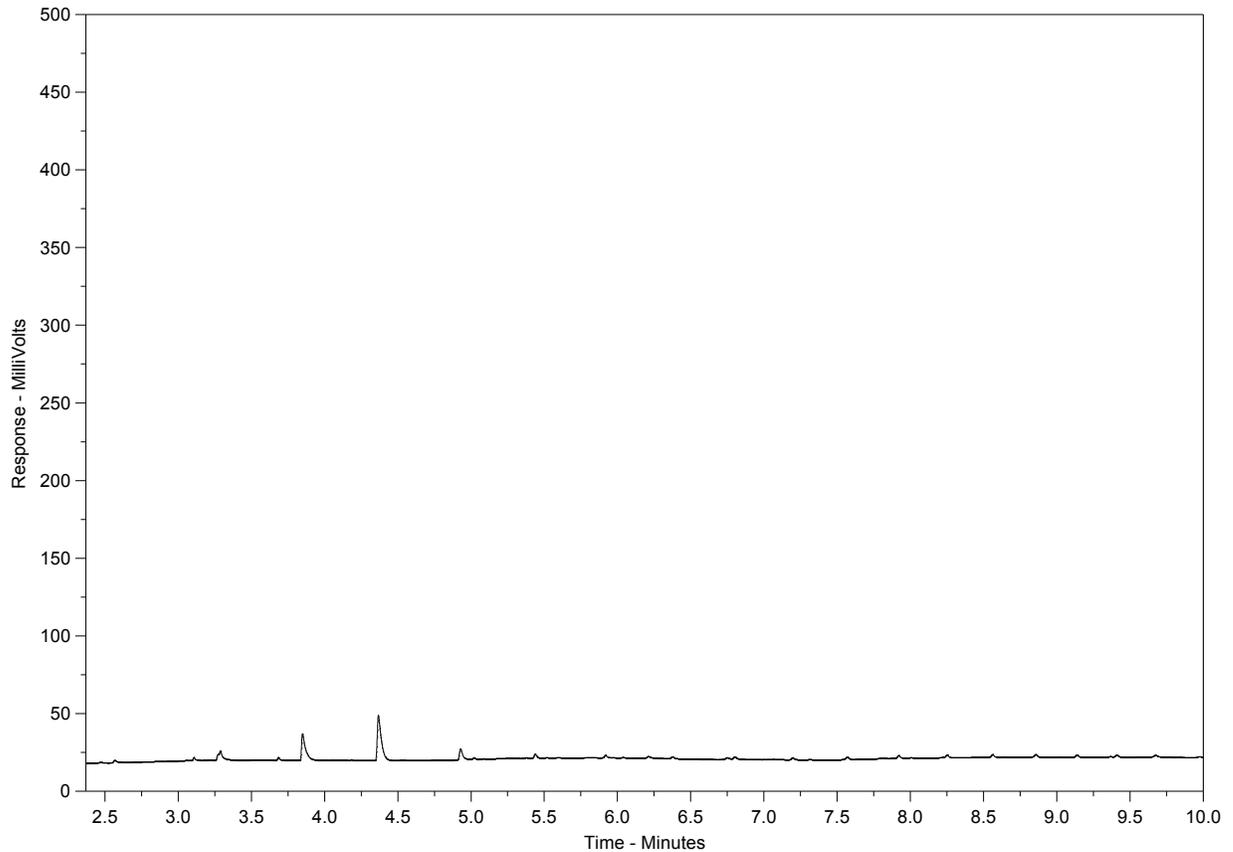
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-13  
 Client Sample ID: 2016-050-687



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

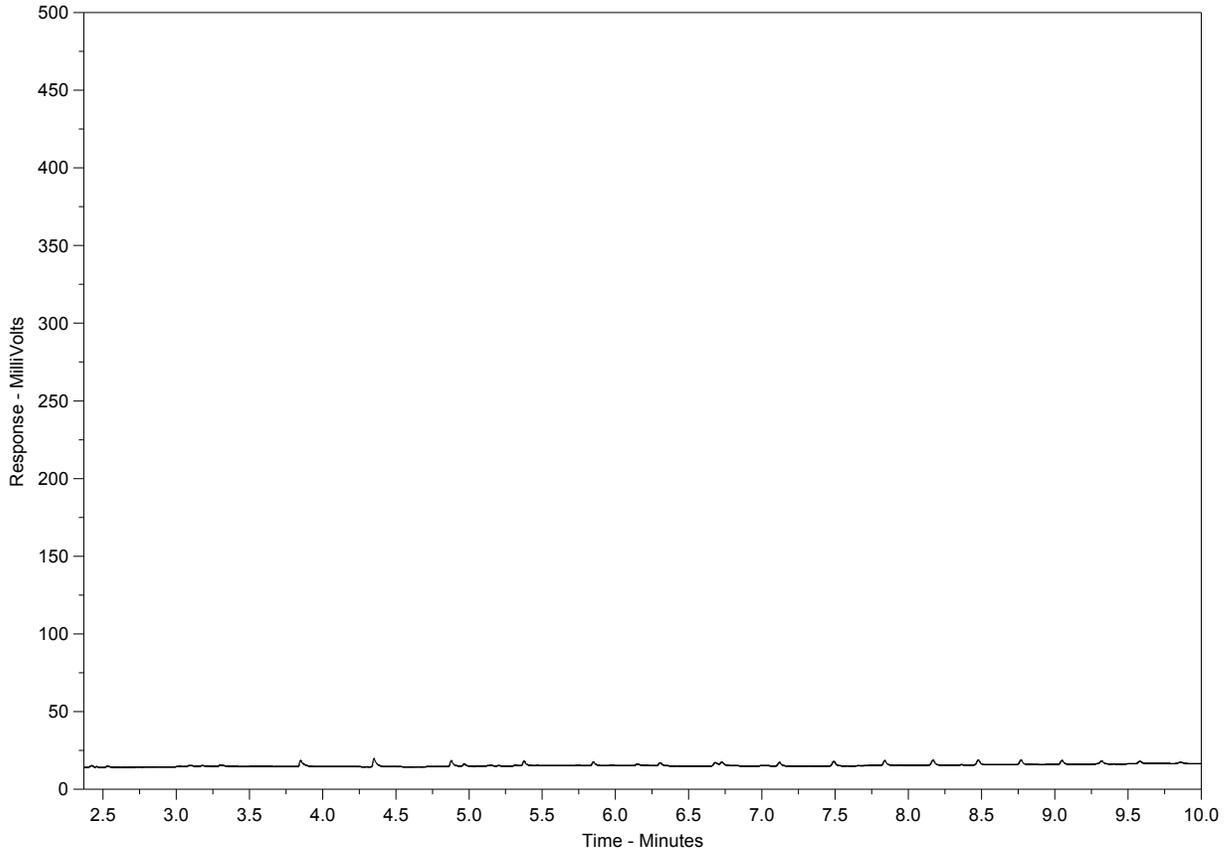
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-14  
 Client Sample ID: 2016-050-688



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

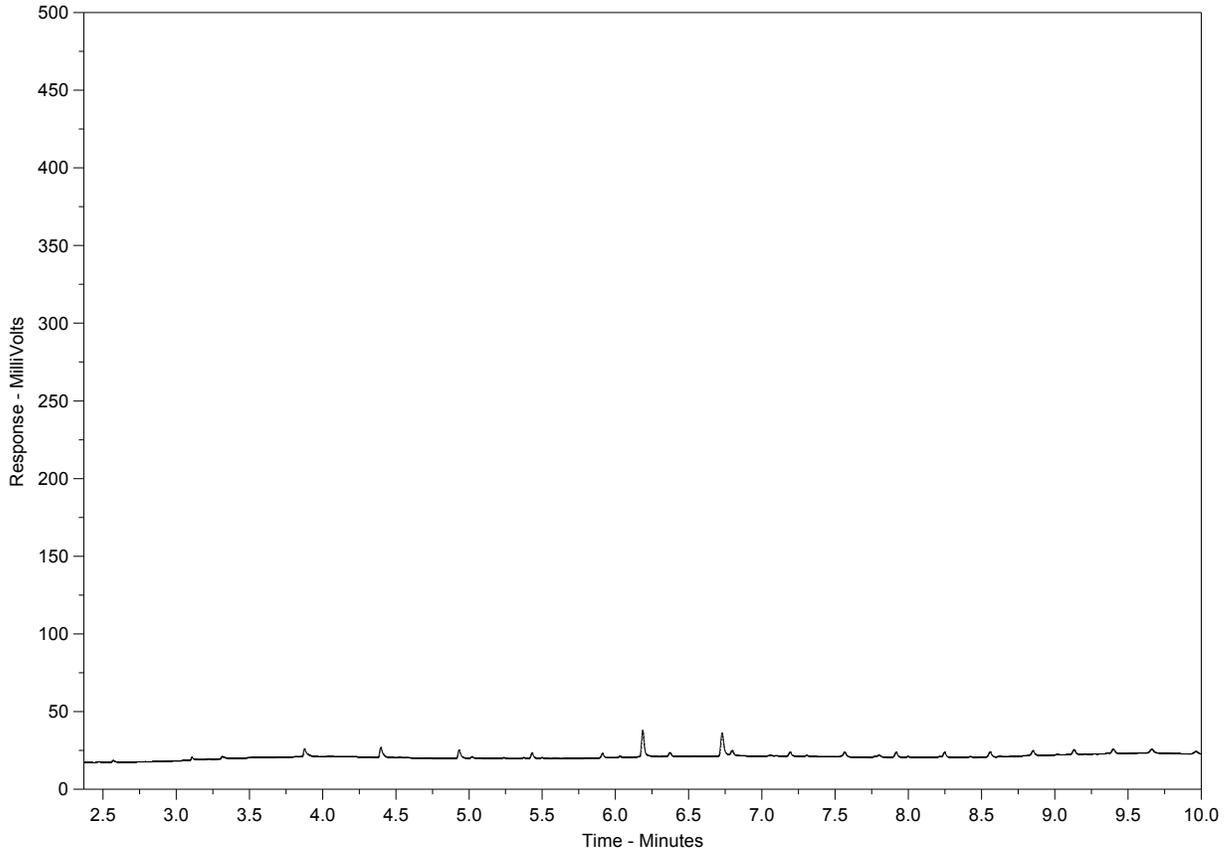
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-15  
 Client Sample ID: 2016-050-689



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

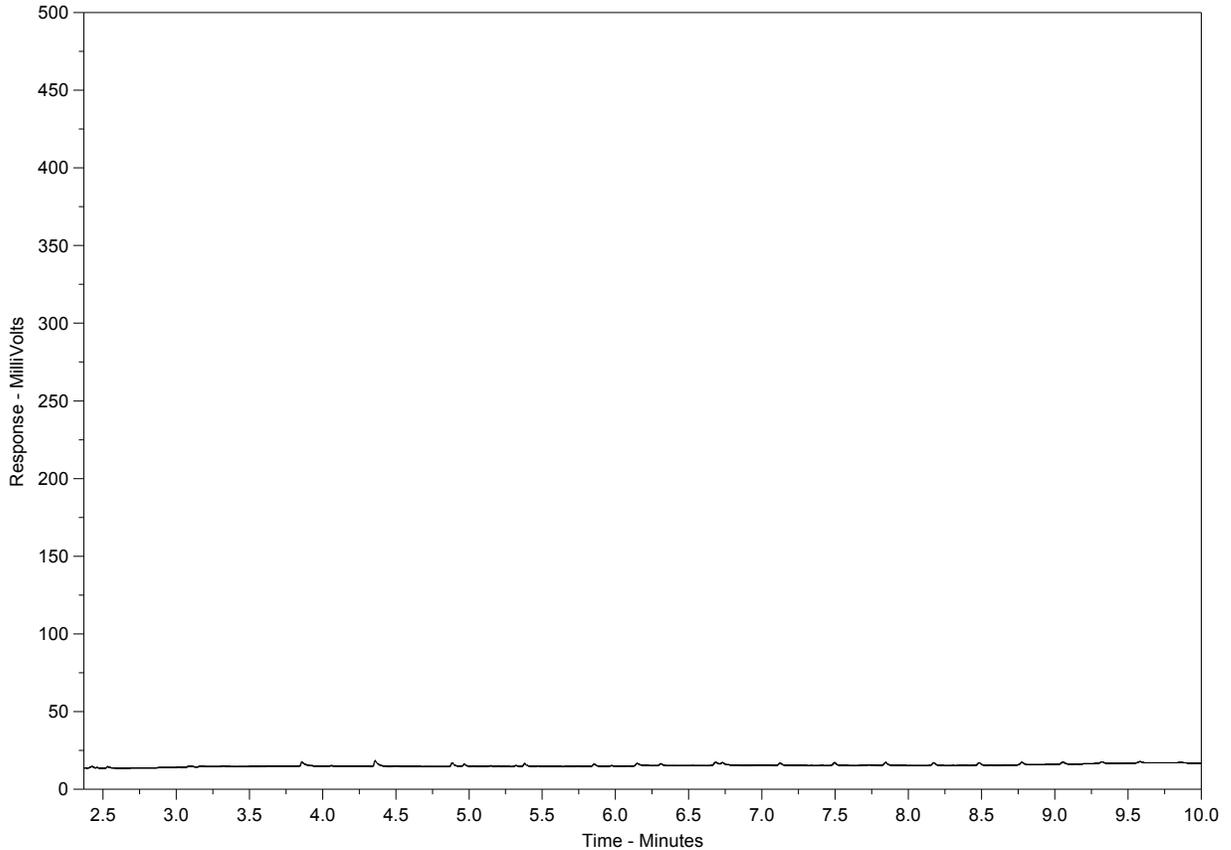
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-16  
Client Sample ID: 2016-050-690



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

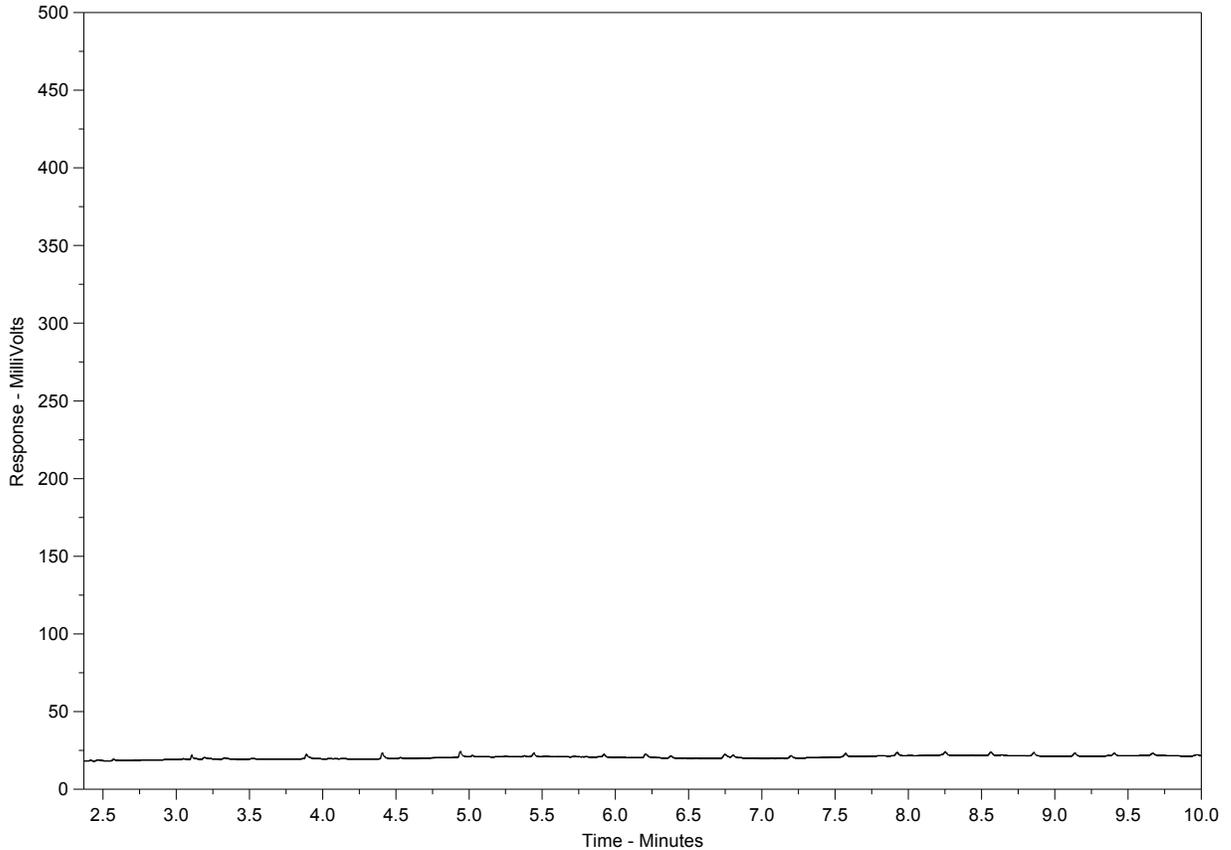
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-17  
Client Sample ID: 2016-050-691



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

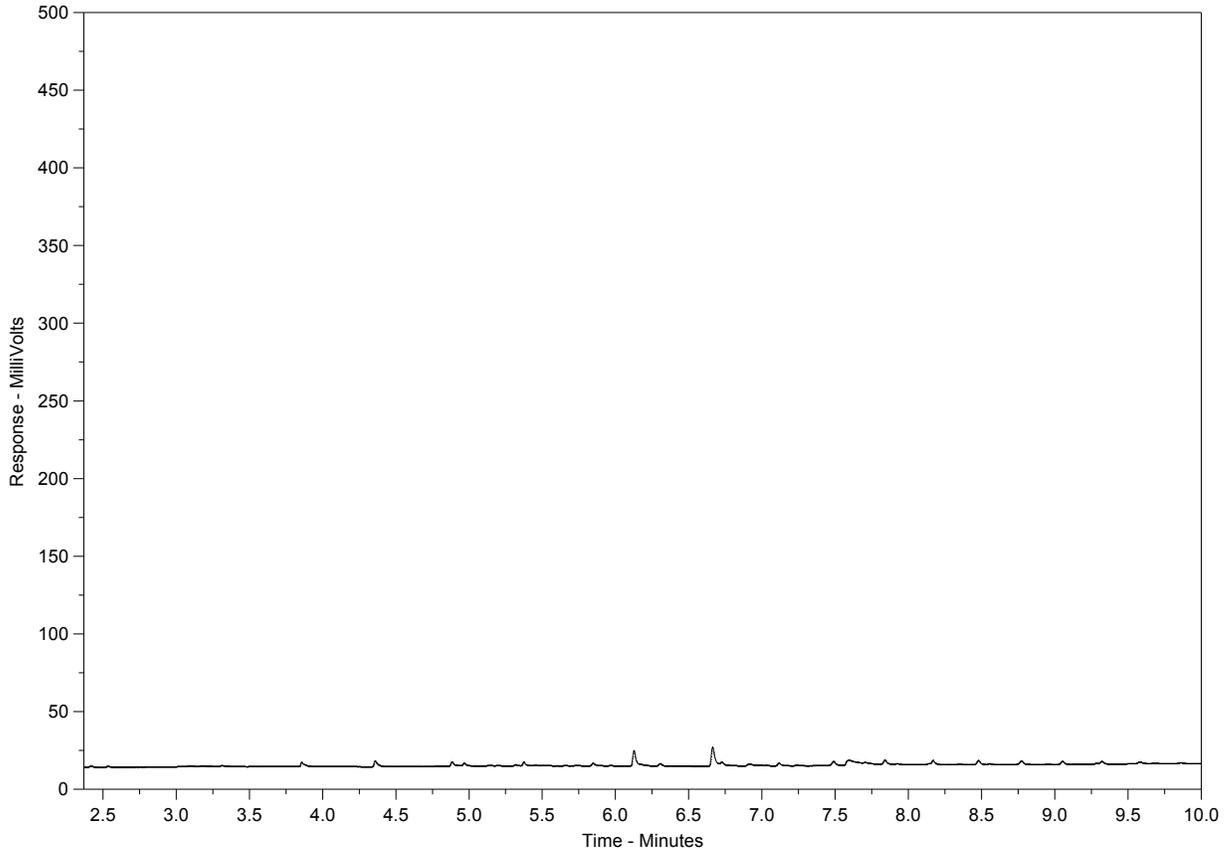
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-18  
 Client Sample ID: 2016-050-692



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

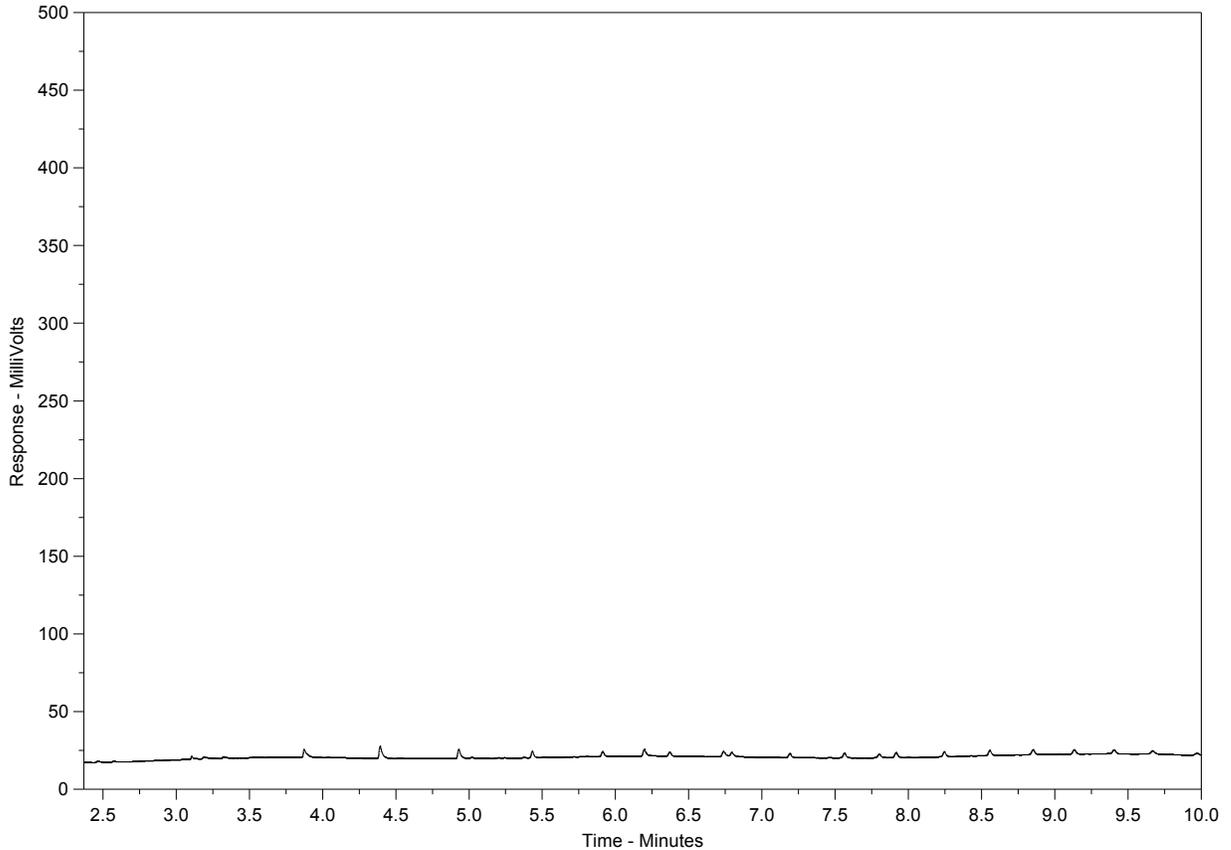
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-19  
 Client Sample ID: 2016-050-693



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

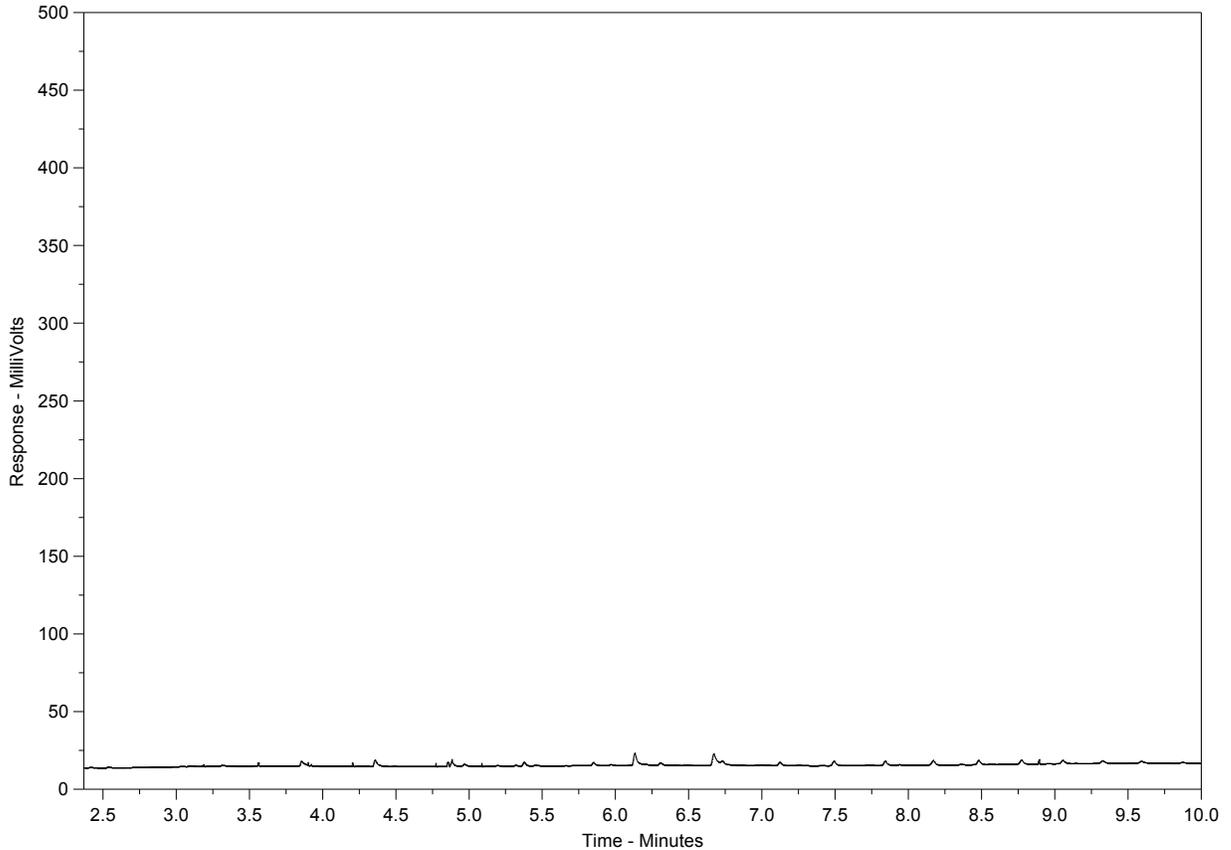
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-20  
 Client Sample ID: 2016-050-694



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

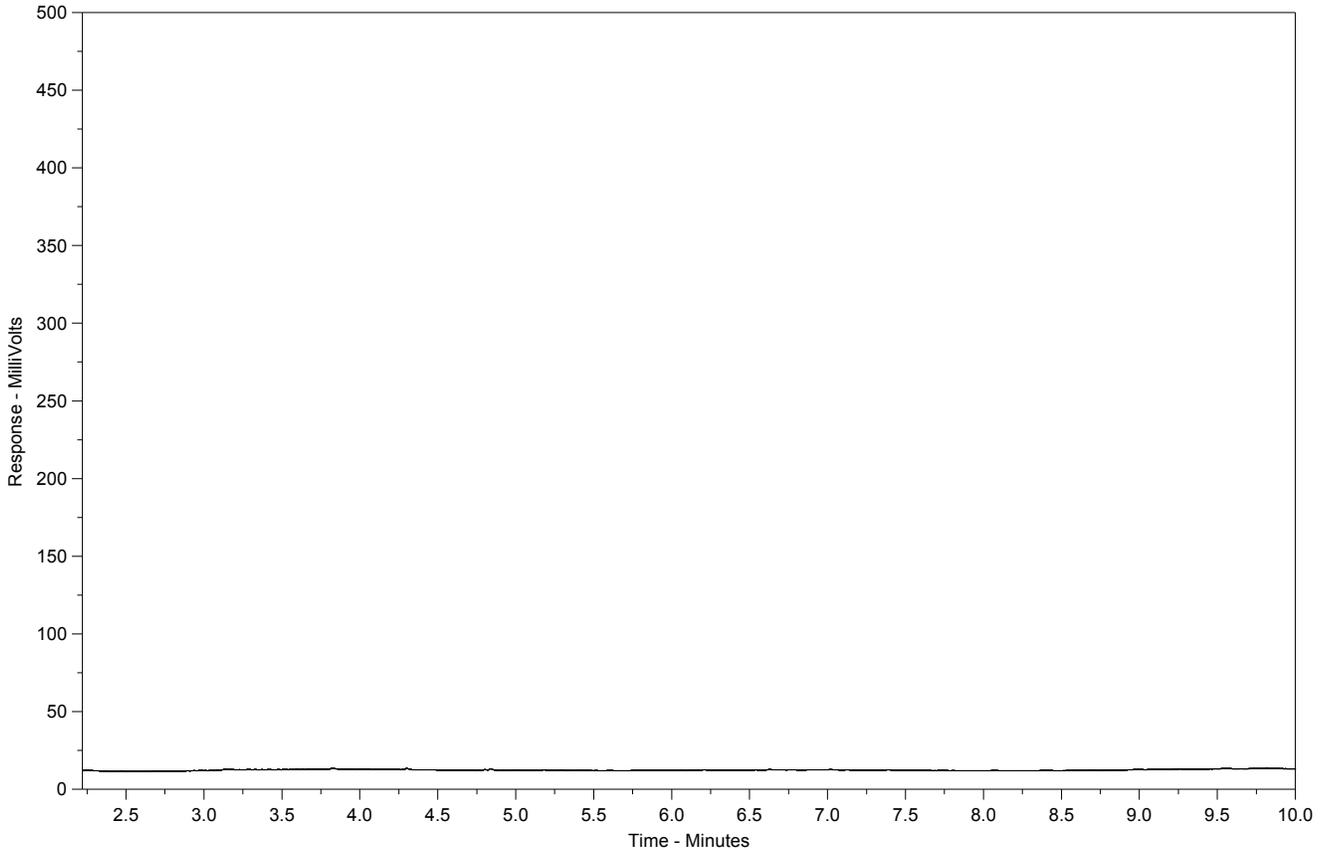
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-21  
Client Sample ID: 2016-050-695



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		
← Diesel / Jet Fuels →		
← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

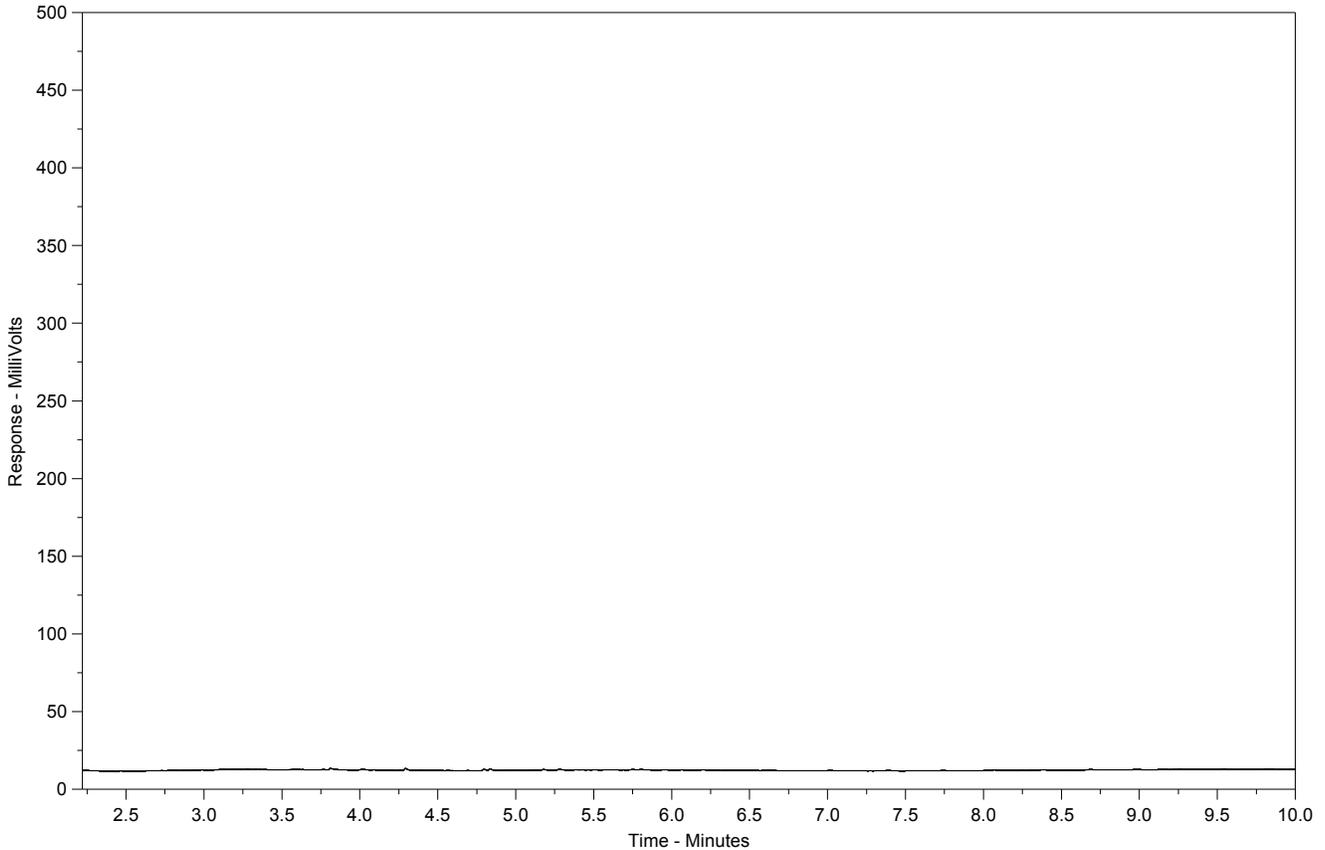
A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.



# Hydrocarbon Distribution Report



ALS Sample ID: L1849230-23  
Client Sample ID: 2016-050-697



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →		
← Diesel / Jet Fuels →		
← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.





L1849230-COFC

ALS Environmental  
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#2 -21 Highfield Circle SE, Calgary, AB Canada T2G 5N6 Tel: 403-214-5431 Toll Free: 1-866-722-6231 Fax: 403-214-5430  
#2 - 8820 100th Street, Fort St. John, BC Canada V1J 3W9 Tel: 250-785-8281 Fax: 250-785-8286

www.alsenviro.com

### CHAIN OF CUSTODY FORM

PAGE 2 OF 3

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )					ANALYSIS REQUESTED:																	
ADDRESS: 625 FISGARD STREET, PO BOX 1000																						
CITY:	VICTORIA	PROV:	BC	POSTAL CODE:														V8W 2S6				
TEL:	(250) 360-3148	FAX:	(250) 360-3254	CONTACT:														Korene Torney				
PROJECT NAME AND NO.:		MILLSTREAM DOMESTIC WELLS		SAMPLER:														Shelley Alcock				
QUOTE NO.:		PO NO.:		ALS CONTACT:														JERRY HOLZBE				
REPORT FORMAT	<input type="checkbox"/> HARDCOPY		<input checked="" type="checkbox"/> EMAIL - ADDRESS:															salcock@crd.bc.ca; ktorney@cr				
	<input type="checkbox"/> FAX		<input type="checkbox"/> EXCEL															<input checked="" type="checkbox"/> PDF	<input checked="" type="checkbox"/> OTHER: CRD Excel Results			
SAMPLE IDENTIFICATION																		DATE / TIME COLLECTED		MATRIX	LEPH	HEPH
					YYYY-MM-DD	TIME																
FOR LAB USE ONLY	2016-050-685					2016-10-25	10:32	water	X	X	X											Drinking Water
	2016-050-686					2016-10-25	11:03	water	X	X	X											Drinking Water
	2016-050-687					2016-10-25	11:07	water	X	X	X											Drinking Water
	2016-050-688					2016-10-25	11:14	water	X	X	X											Drinking Water
	2016-050-689					2016-10-25	11:14	water	X	X	X											Drinking Water
	2016-050-690					2016-10-25	11:17	water	X	X	X											Drinking Water
	2016-050-691					2016-10-25	11:20	water	X	X	X											Drinking Water
	2016-050-692					2016-10-25	11:31	water	X	X	X											Drinking Water
	2016-050-693					2016-10-25	11:35		X	X	X											Drinking Water
2016-050-694					2016-10-25	11:37		X	X	X											Drinking Water	
TURN AROUND REQUIRED:		<input checked="" type="radio"/> ROUTINE			<input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)			RELINQUISHED BY: Shelley Alcock		DATE: 2016-10-25		RECEIVED BY:		DATE:								
								TIME: 13:04				TIME:										
SEND INVOICE TO		<input checked="" type="checkbox"/> SAME AS REPORT			<input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)			RELINQUISHED BY:		DATE:		RECEIVED BY:		DATE:								
INVOICE FORMAT		<input type="checkbox"/> HARDCOPY			<input checked="" type="checkbox"/> PDF						TIME:		TIME:									
SPECIAL INSTRUCTIONS:							FOR LAB USE ONLY															
							Cooler Seal Intact?		Sample Temperature: _____ °C			Cooling Method?										
							Yes ___ No ___ N/A ___		Frozen? ___ Yes ___ No ___			--Icepacks ___ Ice ___ None ___										



L1849230-COFC



EXCELLENCE IN ANALYTICAL TESTING

1988 Triumph Street, Vancouver, BC Canada V5L 1K5 Tel: 604-253-4188 Toll Free: 1-800-665-0243 Fax: 604-253-6700
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#2 - 8820 100th Street, Fort St. John, BC Canada V1J 3W9 Tel: 250-785-8281 Fax: 250-785-8286

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CHAIN OF CUSTODY FORM

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )
ADDRESS: 625 FISGARD STREET, PO BOX 1000
CITY: VICTORIA PROV: BC POSTAL CODE: V8W 2S6
TEL: (250) 360-3148 FAX: (250) 360-3254 CONTACT: Korene Torney
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS SAMPLER: Shelley Alcock
QUOTE NO.: PO NO.: ALS CONTACT: JERRY HOLZBE
REPORT FORMAT [ ] HARDCOPY [X] EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca [ ] FAX [ ] EXCEL [X] PDF [X] OTHER: CRD Excel Results

ANALYSIS REQUESTED:

Table with columns: SAMPLE IDENTIFICATION, DATE / TIME COLLECTED, MATRIX, LEPH, HEPH, VOCs, NOTES. Includes sample entries for 2016-050-695, 2016-050-696, and 2016-050-697.

TURN AROUND REQUIRED: [X] ROUTINE [ ] RUSH SPECIFY DATE: (surcharge may apply)
SEND INVOICE TO: [X] SAME AS REPORT [ ] DIFFERENT FROM REPORT (provide details below)
INVOICE FORMAT: [ ] HARDCOPY [X] PDF [ ] FAX
SPECIAL INSTRUCTIONS:
FOR LAB USE ONLY: Cooler Seal Intact? Sample Temperature: Cooling Method?
Yes \_\_\_ No \_\_\_ N/A \_\_\_ Frozen? \_\_\_ Yes \_\_\_ No \_\_\_ Icepacks \_\_\_ Ice \_\_\_ None \_\_\_



CAPITAL REGIONAL DISTRICT  
ATTN: Korene Torney  
625 Fisgard Street  
VICTORIA BC V8W 1R7

Date Received: 28-JAN-17  
Report Date: 09-FEB-17 10:43 (MT)  
Version: FINAL

Client Phone: 250-360-3214

## Certificate of Analysis

Lab Work Order #: L1884636  
Project P.O. #: MILLSTREAM DOMESTIC WELLS  
Job Reference:  
C of C Numbers:  
Legal Site Desc:

---

Amber Springer, B.Sc  
Account Manager

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1884636-1 WATER 27-JAN-17 11:40 2017-050-600	L1884636-2 WATER 27-JAN-17 11:45 2017-050-601	L1884636-3 WATER 27-JAN-17 11:50 2017-050-602	L1884636-4 WATER 27-JAN-17 12:14 2017-050-603	L1884636-5 WATER 27-JAN-17 12:22 2017-050-604
Grouping	Analyte					
<b>WATER</b>						
Volatile Organic Compounds	Benzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bromodichloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bromoform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Carbon Tetrachloride (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Chlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dibromochloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichlorobenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,3-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,4-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,2-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dichloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichloropropane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,3-Dichloropropene (cis & trans) (mg/L)	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	Ethylbenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Methyl t-butyl ether (MTBE) (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Styrene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,1,1,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tetrachloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene (mg/L)	<0.00045	<0.00045	<0.00045	<0.00045	<0.00045
	1,1,1-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Trichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Trichlorofluoromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Vinyl Chloride (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
ortho-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
meta- & para-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Xylenes (mg/L)	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	





## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1884636-16	L1884636-17	L1884636-18	L1884636-19
		Description	WATER	WATER	WATER	WATER
		Sampled Date	27-JAN-17	27-JAN-17	27-JAN-17	27-JAN-17
		Sampled Time	13:52	13:53	14:00	14:43
		Client ID	2017-050-615	2017-050-616	2017-050-617	2017-050-618
Grouping	Analyte					
<b>WATER</b>						
Volatile Organic Compounds	Benzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bromodichloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bromoform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Carbon Tetrachloride (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Chlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dibromochloromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloroform (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Chloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichlorobenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,3-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,4-Dichlorobenzene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,2-Dichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,2-Dichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Dichloromethane (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	1,2-Dichloropropane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	cis-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	trans-1,3-Dichloropropylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,3-Dichloropropene (cis & trans) (mg/L)	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	Ethylbenzene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Methyl t-butyl ether (MTBE) (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Styrene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	1,1,1,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2,2-Tetrachloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Tetrachloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene (mg/L)	<0.00045	<0.00045	<0.00045	<0.00045	<0.00045
	1,1,1-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1,1,2-Trichloroethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Trichloroethylene (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Trichlorofluoromethane (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vinyl Chloride (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
ortho-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
meta- & para-Xylene (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Xylenes (mg/L)	<0.00075	<0.00075	<0.00075	<0.00075	<0.00075	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	Description	Sampled Date	Sampled Time	Client ID	L1884636-1	L1884636-2	L1884636-3	L1884636-4	L1884636-5
					L1884636-1 WATER 27-JAN-17 11:40 2017-050-600	L1884636-2 WATER 27-JAN-17 11:45 2017-050-601	L1884636-3 WATER 27-JAN-17 11:50 2017-050-602	L1884636-4 WATER 27-JAN-17 12:14 2017-050-603	L1884636-5 WATER 27-JAN-17 12:22 2017-050-604
Grouping	Analyte								
<b>WATER</b>									
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	96.8	96.6	76.0	85.9	78.5			
	Surrogate: 1,4-Difluorobenzene (SS) (%)	98.3	99.7	98.4	95.9	96.7			
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25			
	Surrogate: 2-Bromobenzotrifluoride (%)	105.3	103.9	102.4	101.0	102.7			
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050			
	Surrogate: Acridine d9 (%)	107.0	110.7	108.4	101.0	101.3			
	Surrogate: Chrysene d12 (%)	109.8	117.1	115.9	107.4	103.8			
Surrogate: Naphthalene d8 (%)	109.6	112.9	112.4	101.7	104.2				
Surrogate: Phenanthrene d10 (%)	120.4	125.8	124.8	112.9	114.3				

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1884636-6	L1884636-7	L1884636-8	L1884636-9	L1884636-10
		WATER	WATER	WATER	WATER	WATER
		27-JAN-17	27-JAN-17	27-JAN-17	27-JAN-17	27-JAN-17
		12:25	12:44	12:49	13:15	13:17
		2017-050-605	2017-050-606	2017-050-607	2017-050-608	2017-050-609
Grouping	Analyte					
<b>WATER</b>						
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	83.9	79.5	78.9	83.0	78.0
	Surrogate: 1,4-Difluorobenzene (SS) (%)	95.5	95.2	95.5	95.6	96.0
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	104.2	103.0	101.3	107.4	105.5
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acridine d9 (%)	98.1	99.2	101.5	98.0	100.0
	Surrogate: Chrysene d12 (%)	104.8	104.3	109.9	101.4	106.2
Surrogate: Naphthalene d8 (%)	103.4	102.0	108.0	101.8	104.9	
Surrogate: Phenanthrene d10 (%)	113.3	111.6	118.3	111.5	115.7	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1884636-11 WATER 27-JAN-17 13:20 2017-050-610	L1884636-12 WATER 27-JAN-17 13:25 2017-050-611	L1884636-13 WATER 27-JAN-17 13:27 2017-050-612	L1884636-14 WATER 27-JAN-17 13:47 2017-050-613	L1884636-15 WATER 27-JAN-17 13:50 2017-050-614
Grouping	Analyte					
<b>WATER</b>						
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	77.5	82.5	83.2	84.3	81.4
	Surrogate: 1,4-Difluorobenzene (SS) (%)	94.5	95.1	96.2	96.6	97.0
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	<0.25
	Surrogate: 2-Bromobenzotrifluoride (%)	106.6	97.3	95.2	103.8	96.8
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Surrogate: Acridine d9 (%)	103.8	101.4	102.1	100.4	101.1
	Surrogate: Chrysene d12 (%)	107.8	106.7	105.7	106.6	110.1
Surrogate: Naphthalene d8 (%)	102.9	105.7	105.7	106.1	107.9	
Surrogate: Phenanthrene d10 (%)	112.9	117.4	113.7	116.6	119.0	

## ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1884636-16	L1884636-17	L1884636-18	L1884636-19
		Description	WATER	WATER	WATER	WATER
		Sampled Date	27-JAN-17	27-JAN-17	27-JAN-17	27-JAN-17
		Sampled Time	13:52	13:53	14:00	14:43
		Client ID	2017-050-615	2017-050-616	2017-050-617	2017-050-618
Grouping	Analyte					
<b>WATER</b>						
<b>Volatile Organic Compounds</b>	Surrogate: 4-Bromofluorobenzene (SS) (%)	79.6	82.6	80.4	84.7	
	Surrogate: 1,4-Difluorobenzene (SS) (%)	97.1	97.2	96.9	97.2	
<b>Hydrocarbons</b>	EPH10-19 (mg/L)	<0.25	<0.25	<0.25	<0.25	
	EPH19-32 (mg/L)	<0.25	<0.25	<0.25	<0.25	
	LEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	
	HEPH (mg/L)	<0.25	<0.25	<0.25	<0.25	
	Surrogate: 2-Bromobenzotrifluoride (%)	93.8	93.7	96.4	96.7	
<b>Polycyclic Aromatic Hydrocarbons</b>	Acenaphthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Acenaphthylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Acridine (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Benz(a)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Benzo(a)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Benzo(b)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Benzo(g,h,i)perylene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Benzo(k)fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Chrysene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Dibenz(a,h)anthracene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Fluoranthene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Fluorene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Indeno(1,2,3-c,d)pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Naphthalene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Phenanthrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Pyrene (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Quinoline (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Surrogate: Acridine d9 (%)	97.9	96.5	100.3	106.6	
	Surrogate: Chrysene d12 (%)	109.2	110.0	106.7	114.7	
Surrogate: Naphthalene d8 (%)	103.5	102.8	103.5	106.6		
Surrogate: Phenanthrene d10 (%)	113.9	113.9	113.7	118.6		

## Reference Information

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
<b>EPH-ME-FID-VA</b>	Water	EPH in Water	BC Lab Manual
<p>EPH is extracted from water using a hexane micro-extraction technique, with analysis by GC-FID, as per the BC Lab Manual. EPH results include PAHs and are therefore not equivalent to LEPH or HEPH.</p>			
<b>LEPH/HEPH-CALC-VA</b>	Water	LEPHs and HEPHs	BC MOE LABORATORY MANUAL (2005)
<p>Light and Heavy Extractable Petroleum Hydrocarbons in water. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Acenaphthene, Acridine, Anthracene, Fluorene, Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(a)pyrene, Fluoranthene, and Pyrene are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Water by GC/FID" (Version 2.1, July 20, 1999).</p>			
<b>PAH-ME-MS-VA</b>	Water	PAHs in Water	EPA 3511/8270D (mod)
<p>PAHs are extracted from water using a hexane micro-extraction technique, with analysis by GC/MS. Because the two isomers cannot be readily separated chromatographically, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.</p>			
<b>VOC-HSMS-VA</b>	Water	VOCs in water by Headspace GCMS	EPA 5021A/8260C
<p>The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.</p>			
<b>VOC7-HSMS-VA</b>	Water	BTEX/MTBE/Styrene by Headspace GCMS	EPA 5021A/8260C
<p>The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.</p>			
<b>VOC7/VOC-SURR-MS-VA</b>	Water	VOC7 and/or VOC Surrogates for Waters	EPA 5035A/5021A/8260C
<b>XYLENES-CALC-VA</b>	Water	Sum of Xylene Isomer Concentrations	CALCULATION
<p>Calculation of Total Xylenes</p> <p>Total Xylenes is the sum of the concentrations of the ortho, meta, and para Xylene isomers. Results below detection limit (DL) are treated as zero. The DL for Total Xylenes is set to a value no less than the square root of the sum of the squares of the DLs of the individual Xylenes.</p>			

\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

### Chain of Custody Numbers:

#### GLOSSARY OF REPORT TERMS

*Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.*

*mg/kg - milligrams per kilogram based on dry weight of sample.*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample.*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.*

*mg/L - milligrams per litre.*

*< - Less than.*

*D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

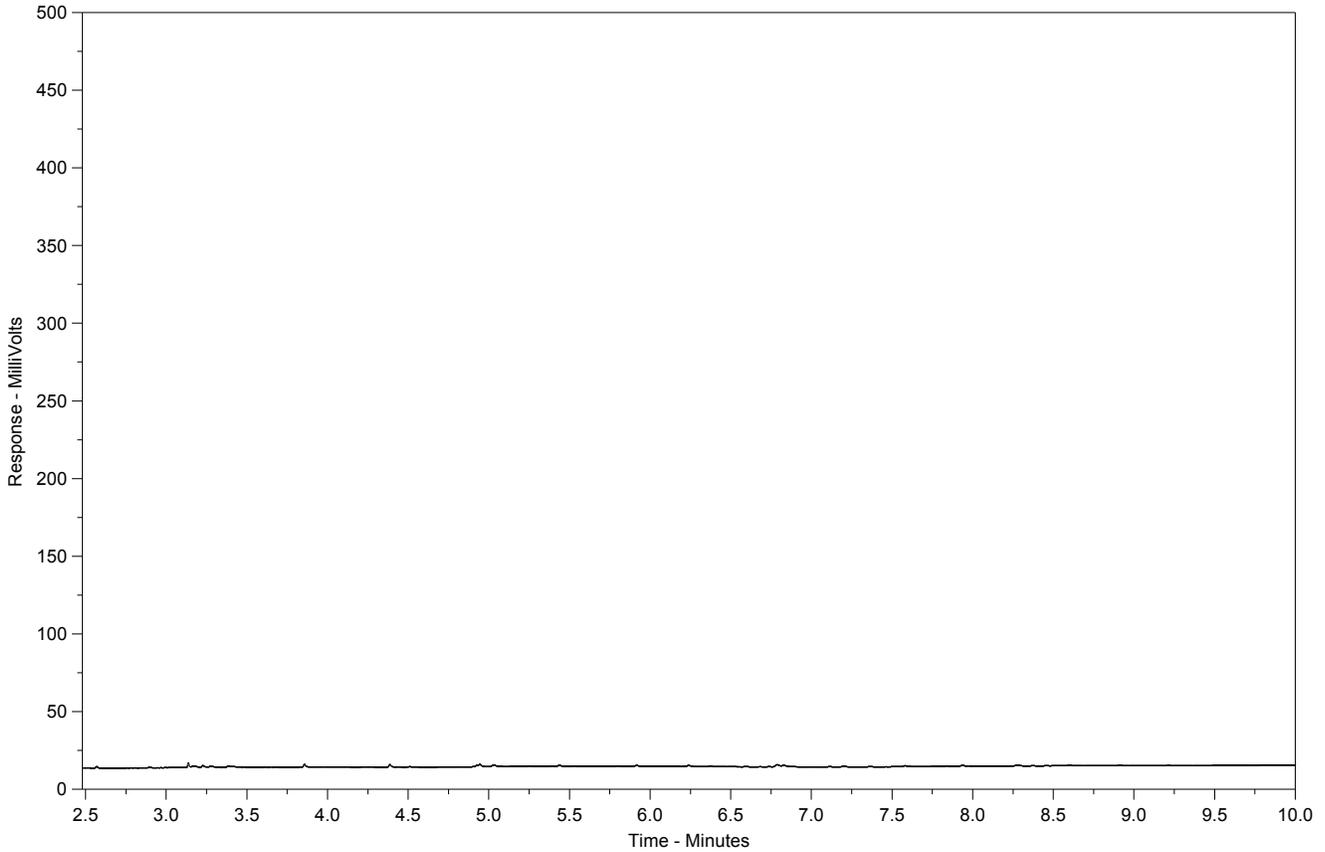
*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-1  
 Client Sample ID: 2017-050-600



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

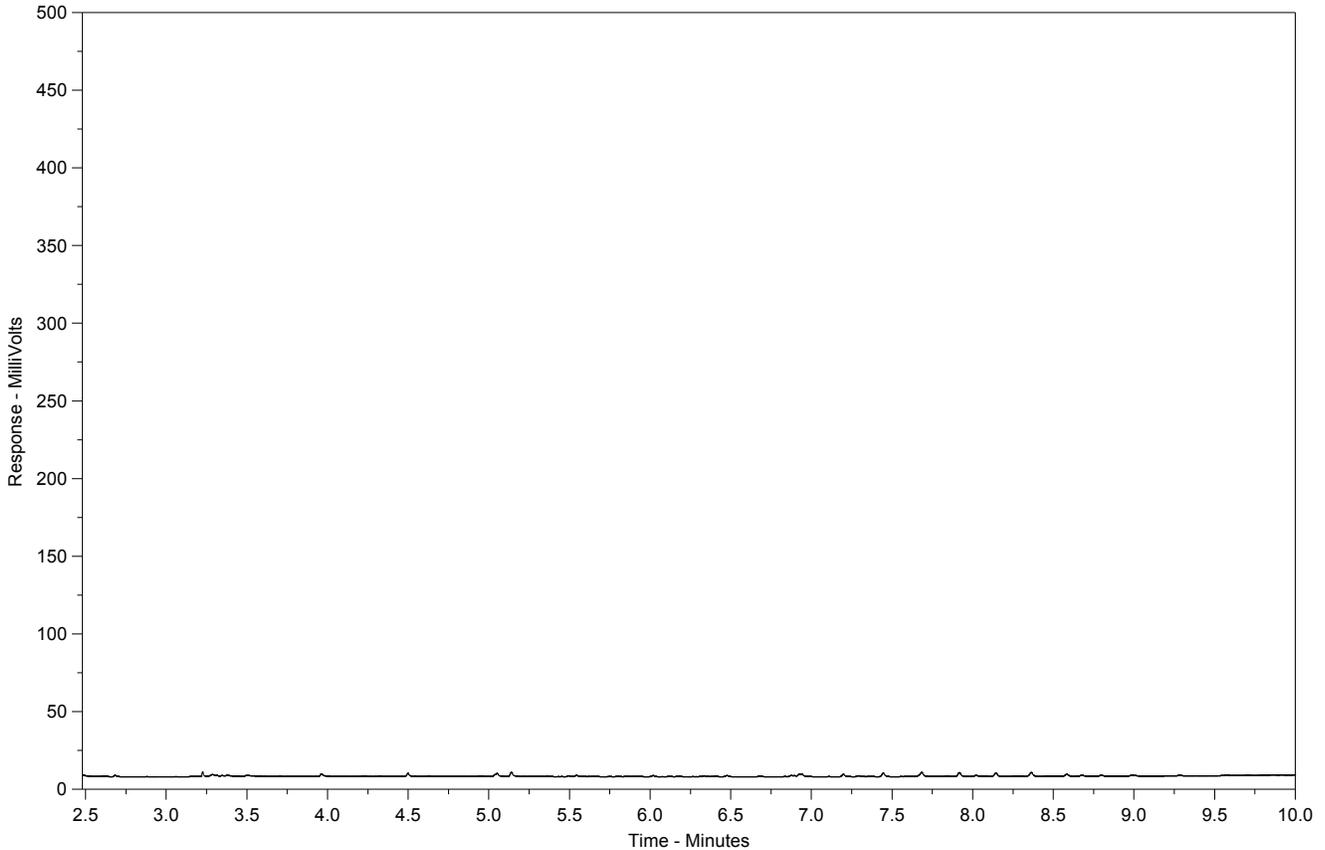
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-2  
 Client Sample ID: 2017-050-601



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

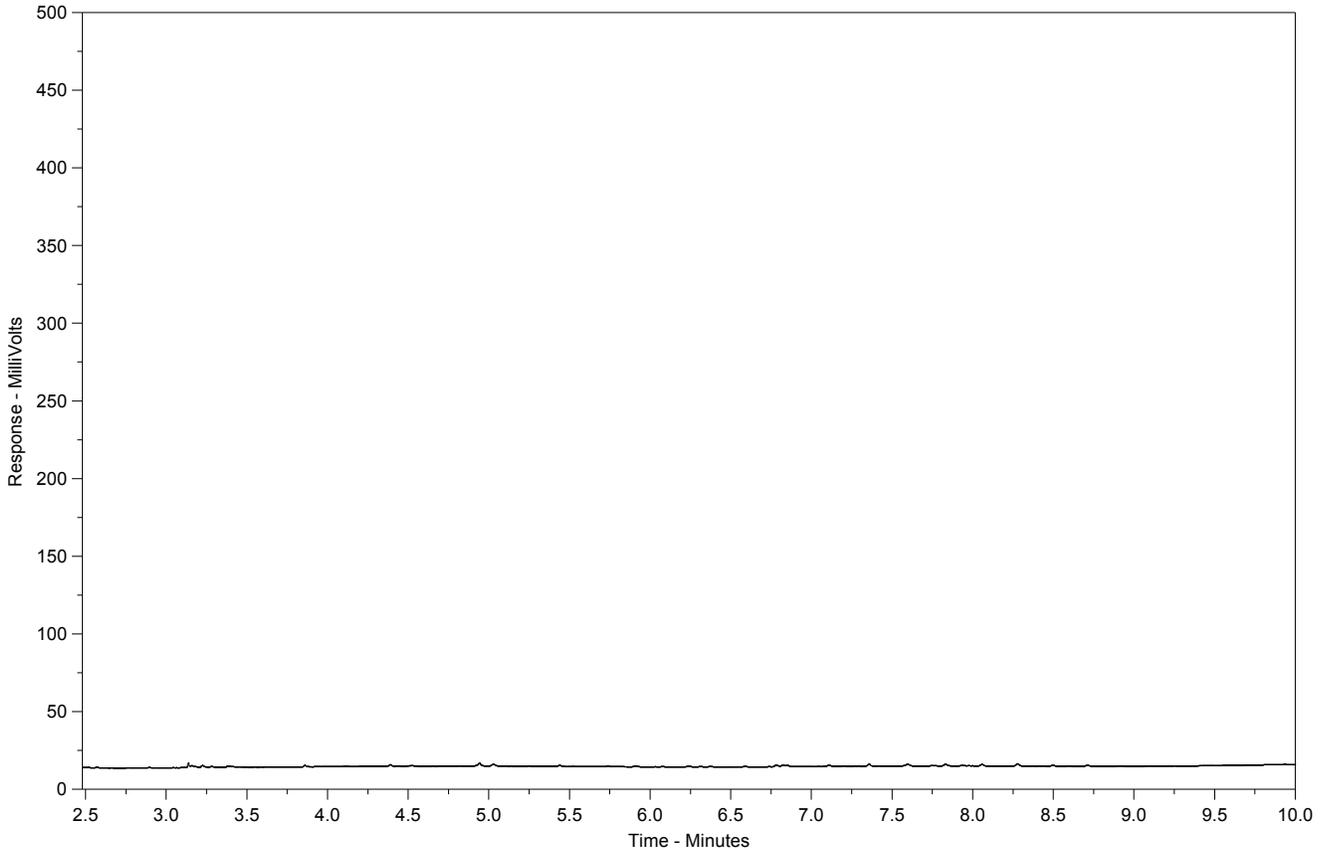
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-3  
 Client Sample ID: 2017-050-602



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →                      ← Diesel / Jet Fuels →                      ← Motor Oils / Lube Oils / Grease →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

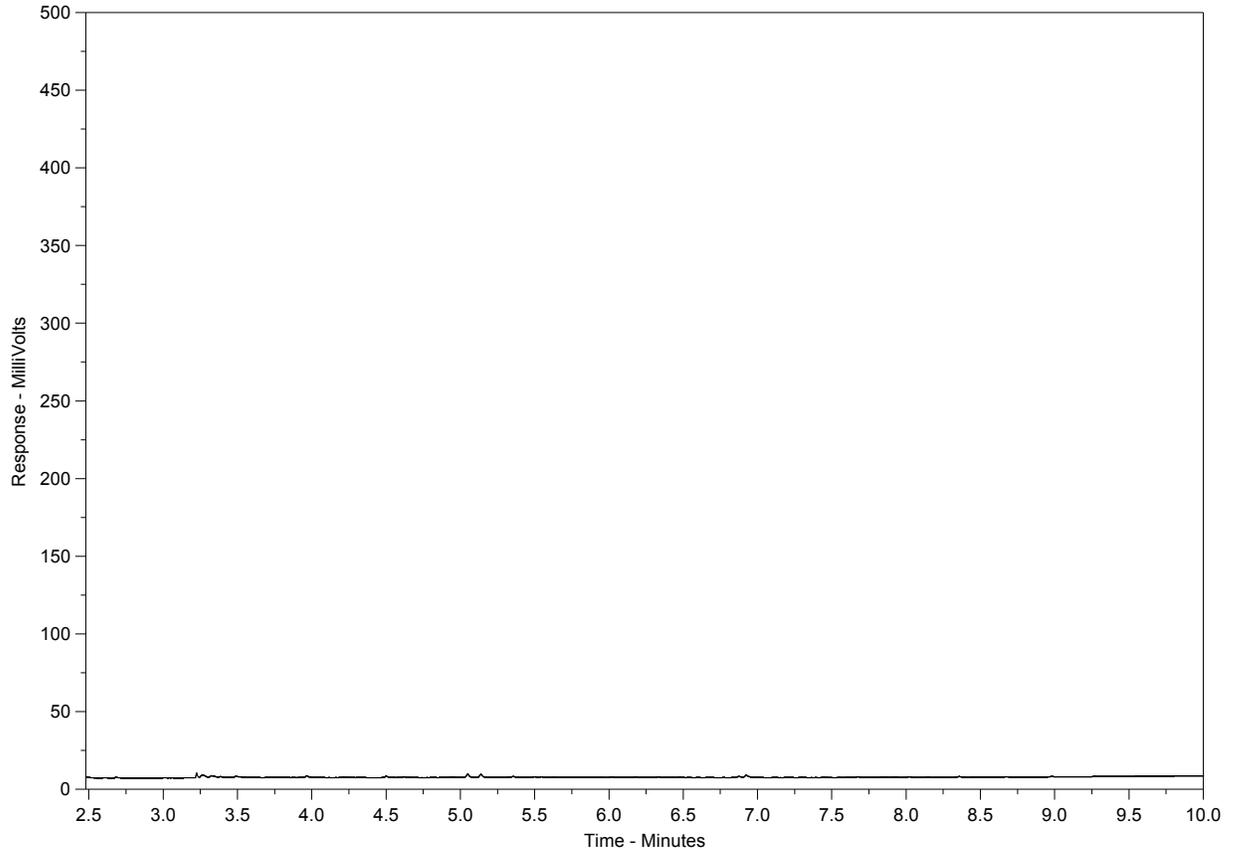
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-4  
 Client Sample ID: 2017-050-603



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
<p>← Gasoline →      ← Diesel / Jet Fuels →      ← Motor Oils / Lube Oils / Grease →</p>		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

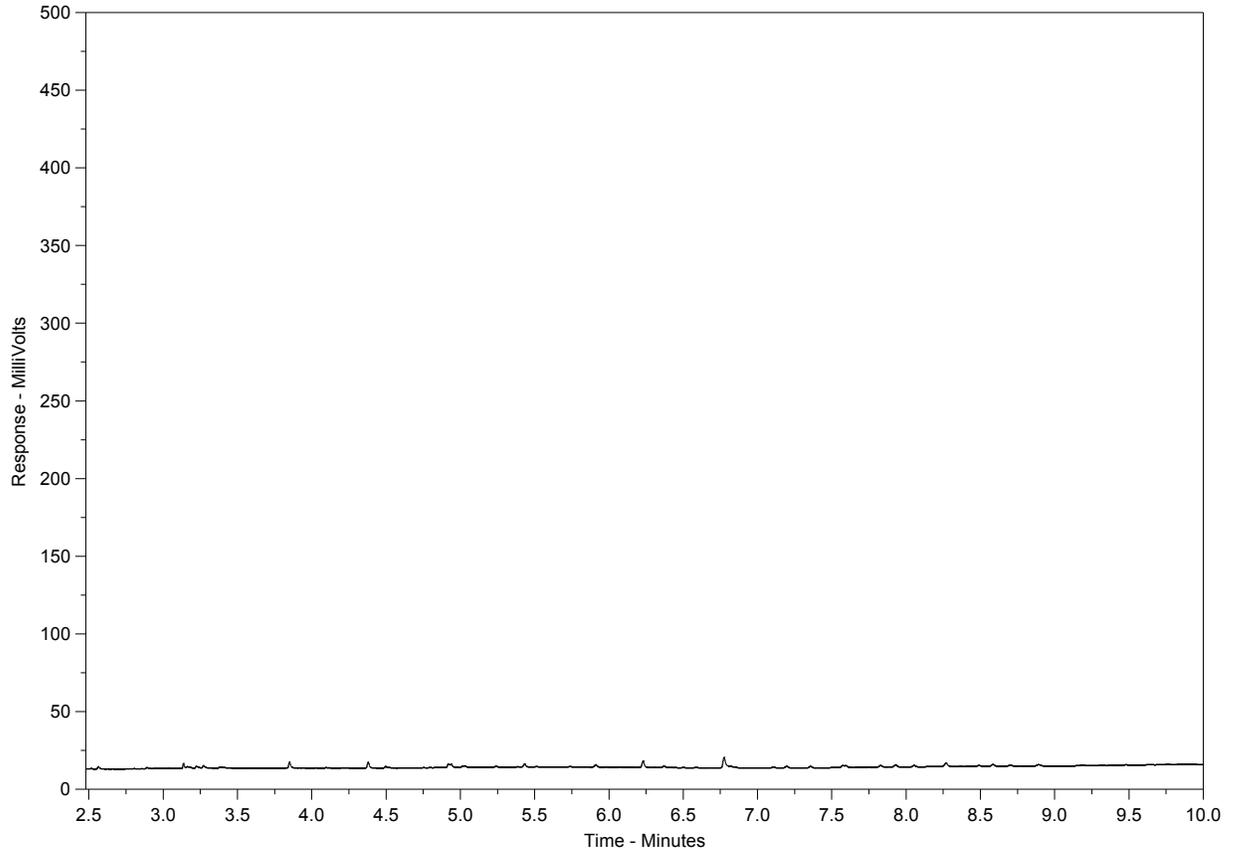
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-5  
Client Sample ID: 2017-050-604



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

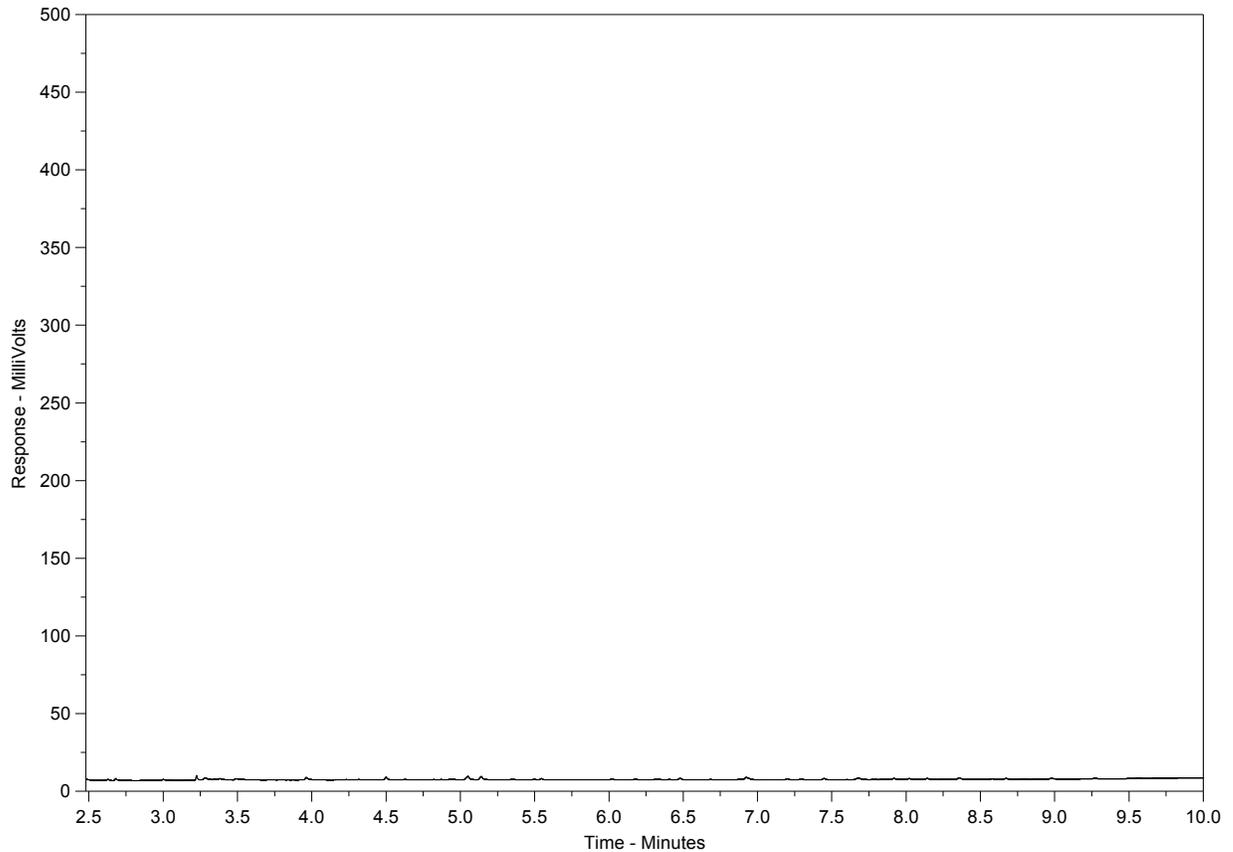
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-6  
Client Sample ID: 2017-050-605



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

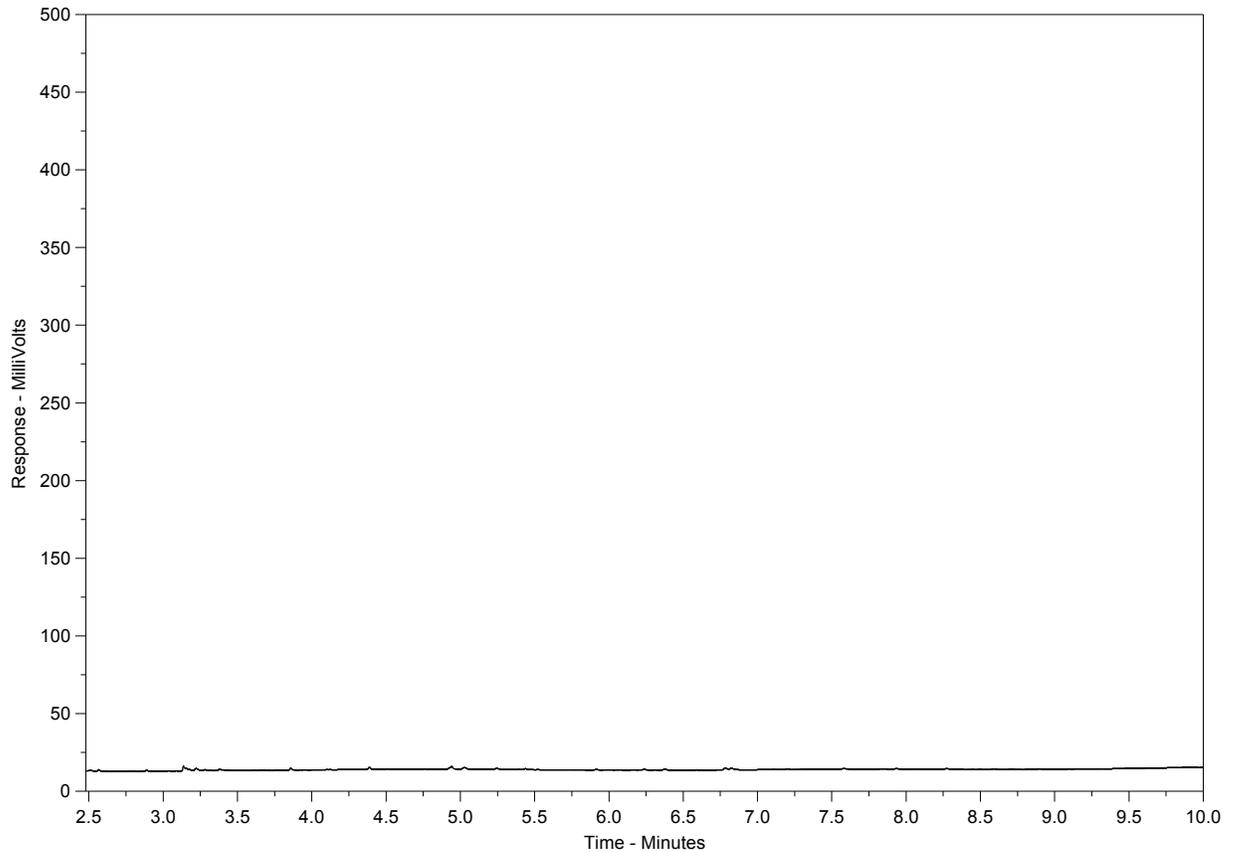
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-7  
Client Sample ID: 2017-050-606



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

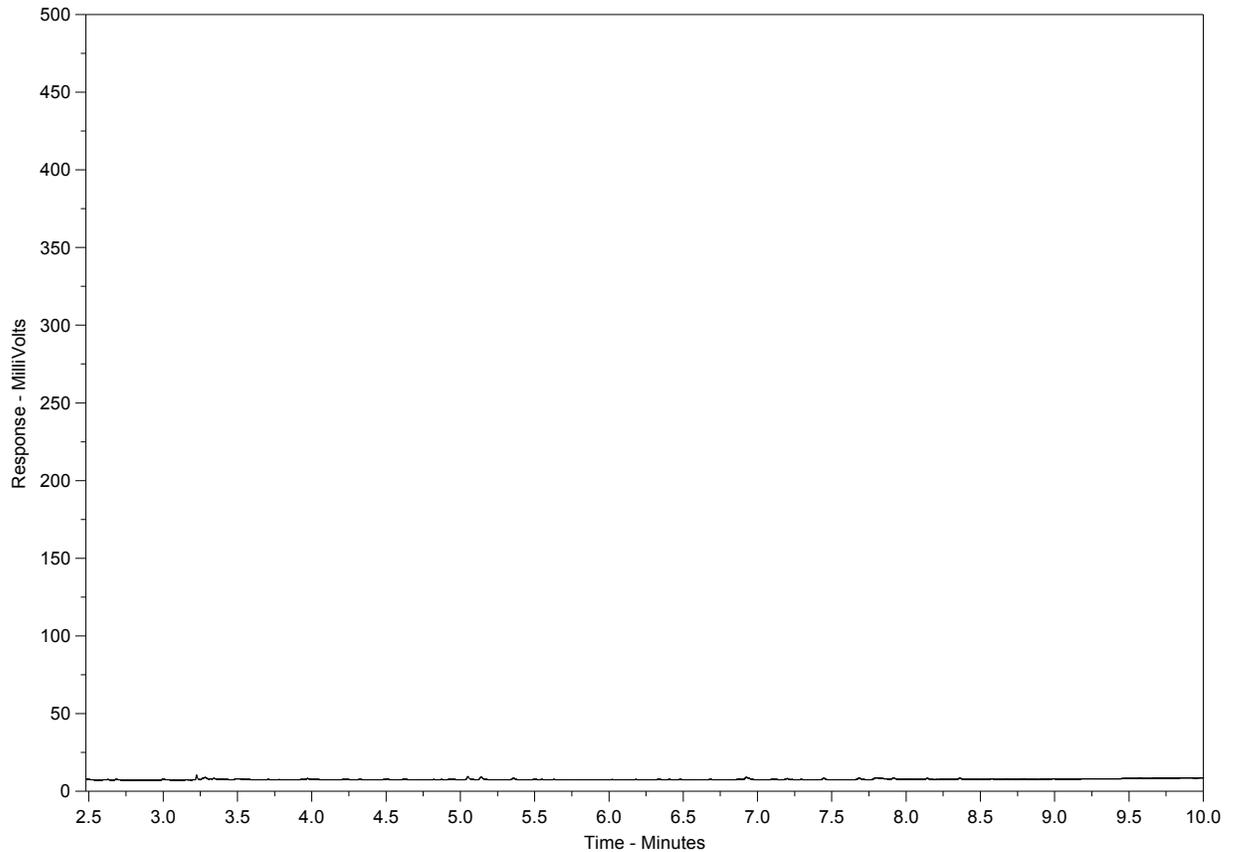
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-8  
Client Sample ID: 2017-050-607



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

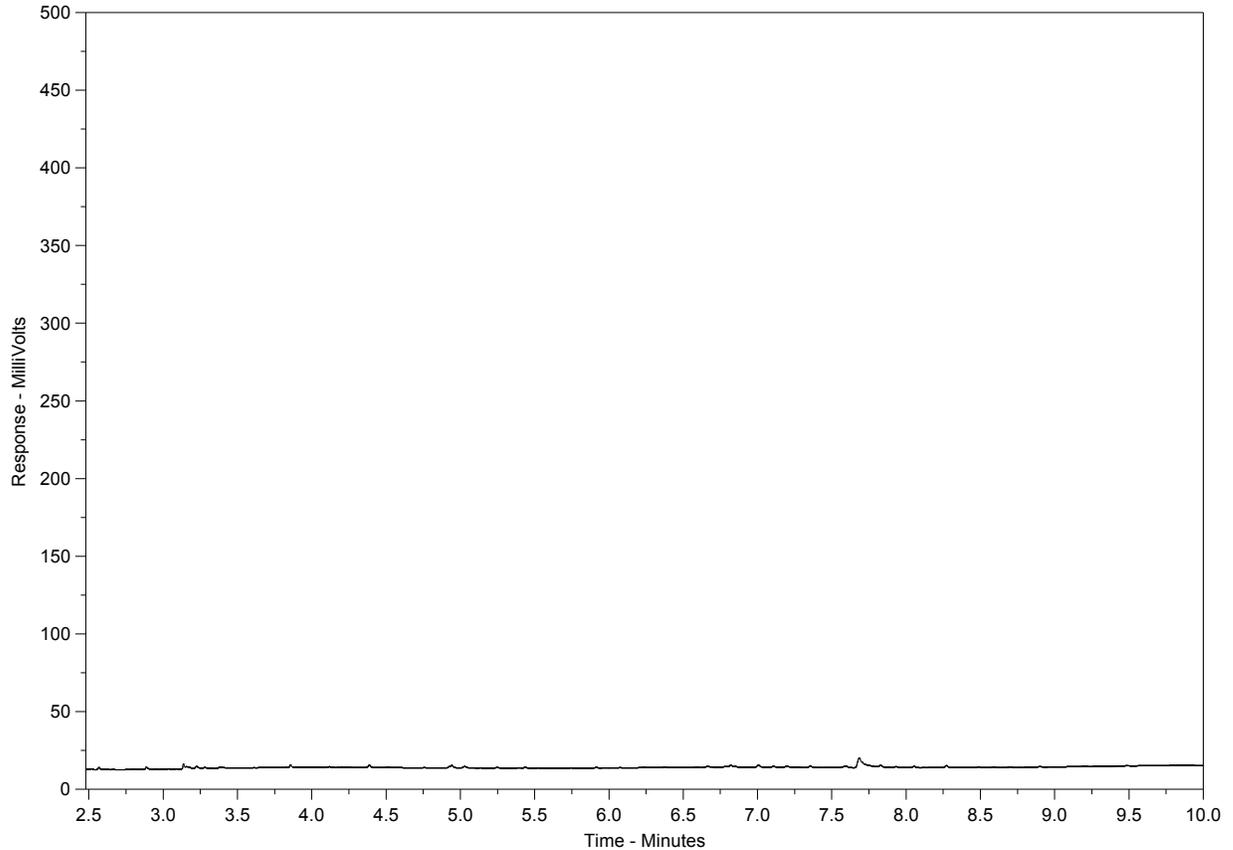
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-9  
Client Sample ID: 2017-050-608



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

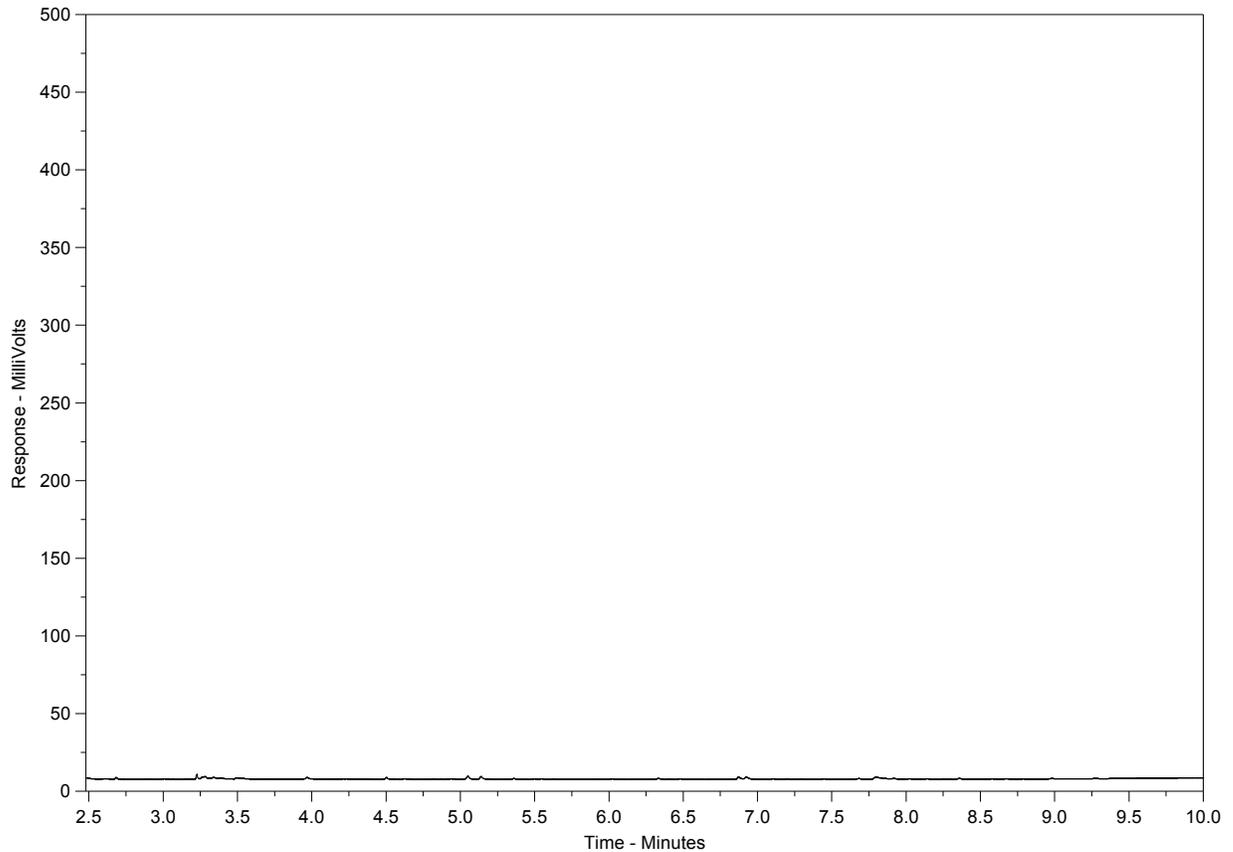
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-10  
Client Sample ID: 2017-050-609



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

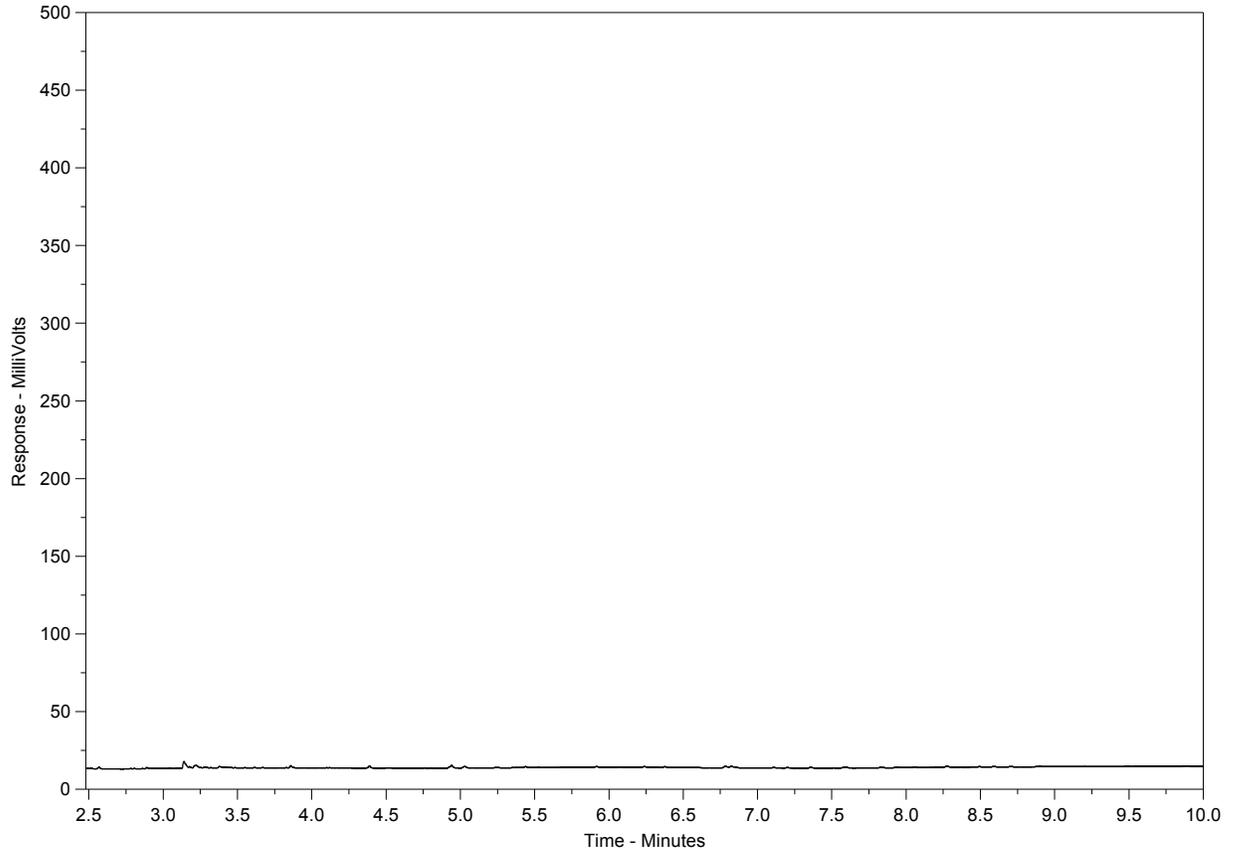
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-11  
Client Sample ID: 2017-050-610



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

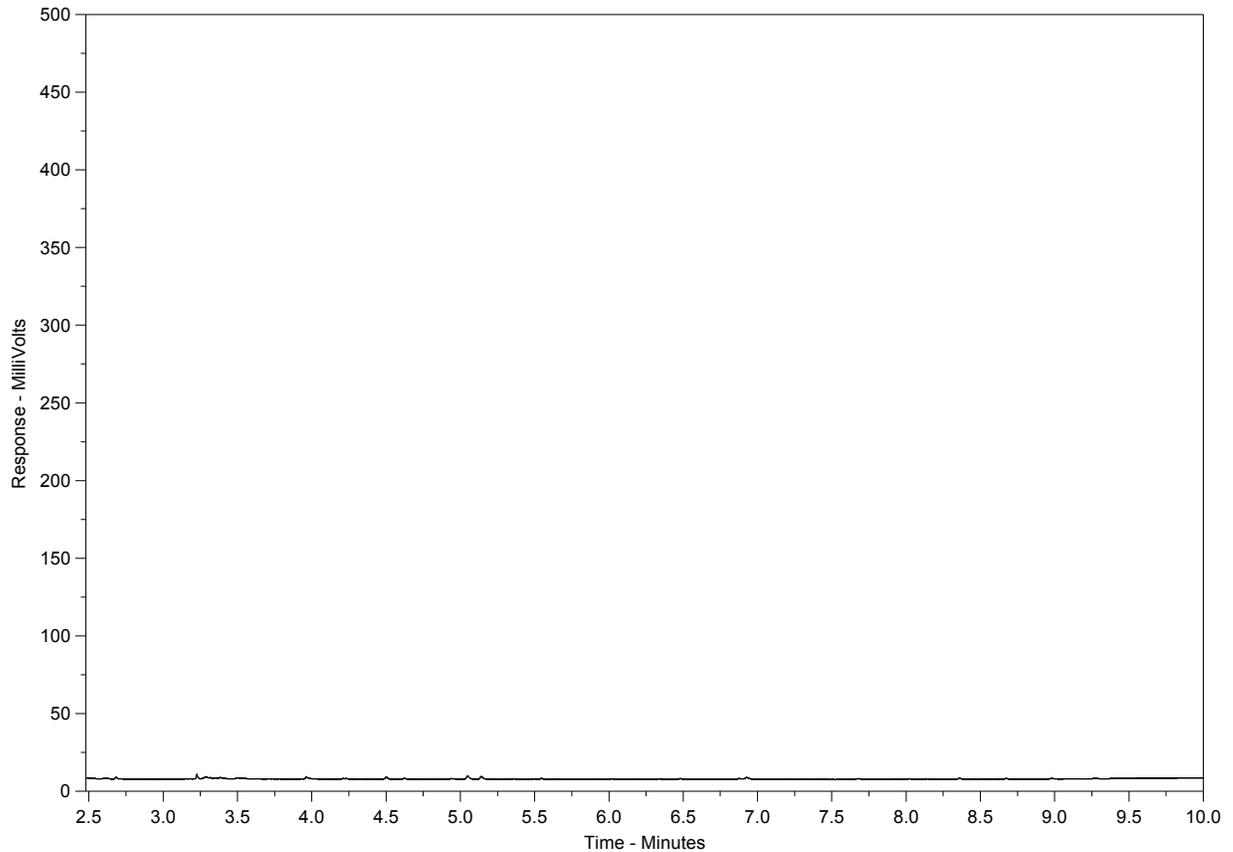
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-12  
Client Sample ID: 2017-050-611



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

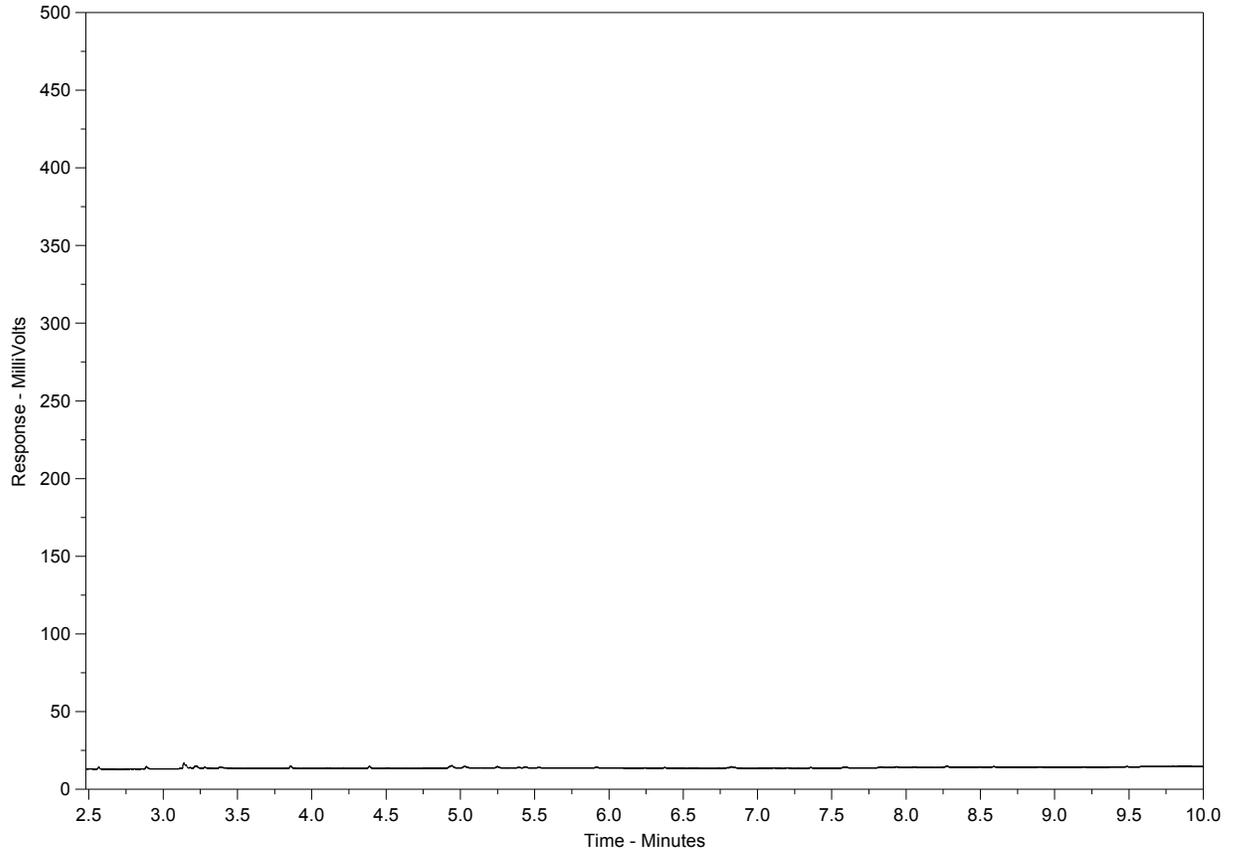
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-13  
Client Sample ID: 2017-050-612



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

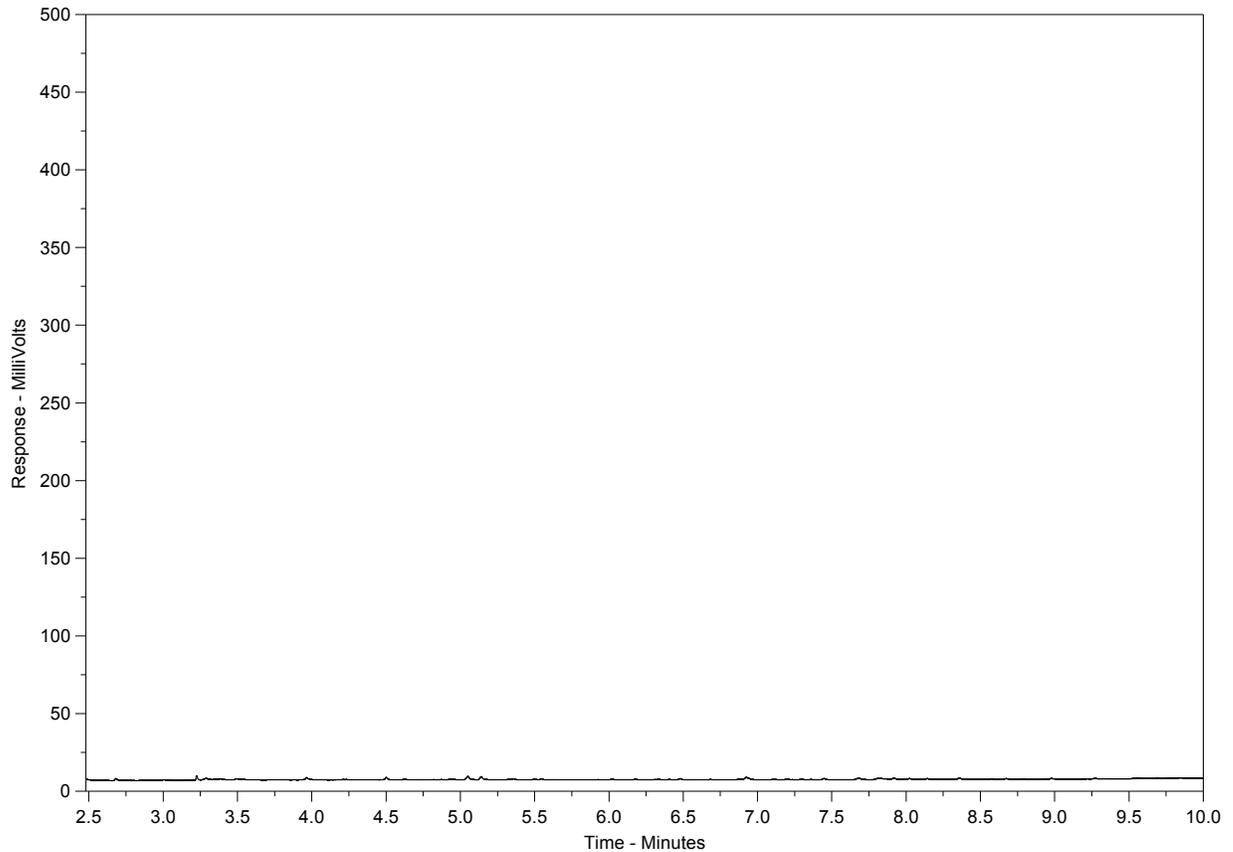
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-14  
Client Sample ID: 2017-050-613



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

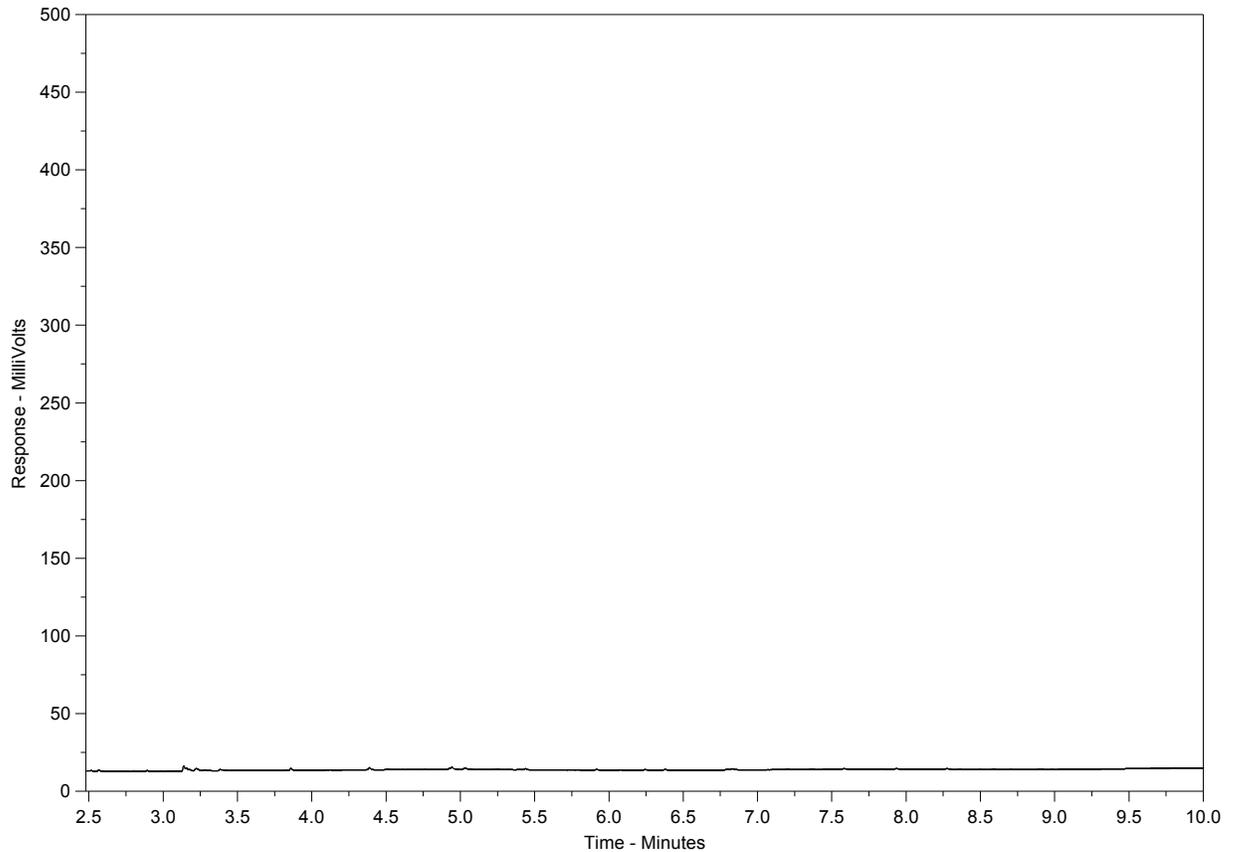
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-15  
Client Sample ID: 2017-050-614



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

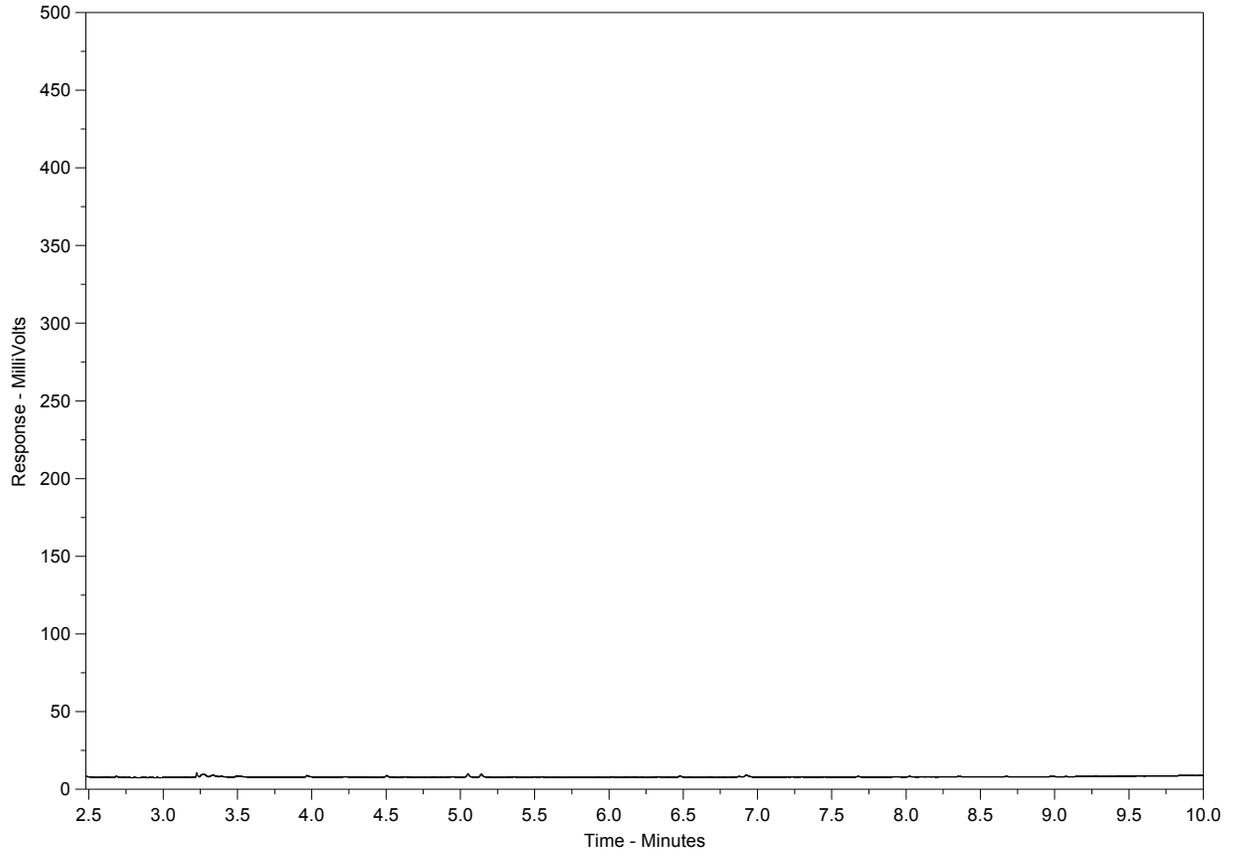
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-16  
Client Sample ID: 2017-050-615



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

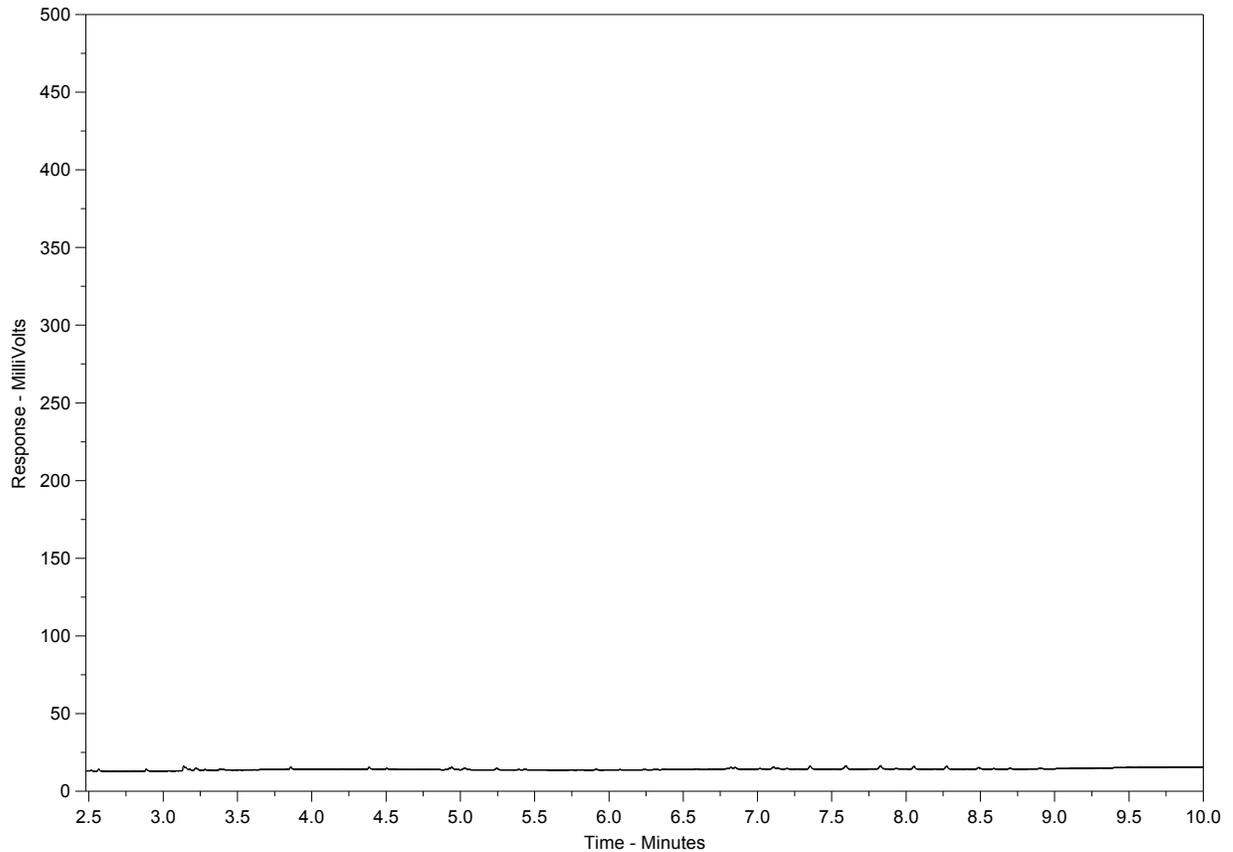
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-17  
 Client Sample ID: 2017-050-616



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

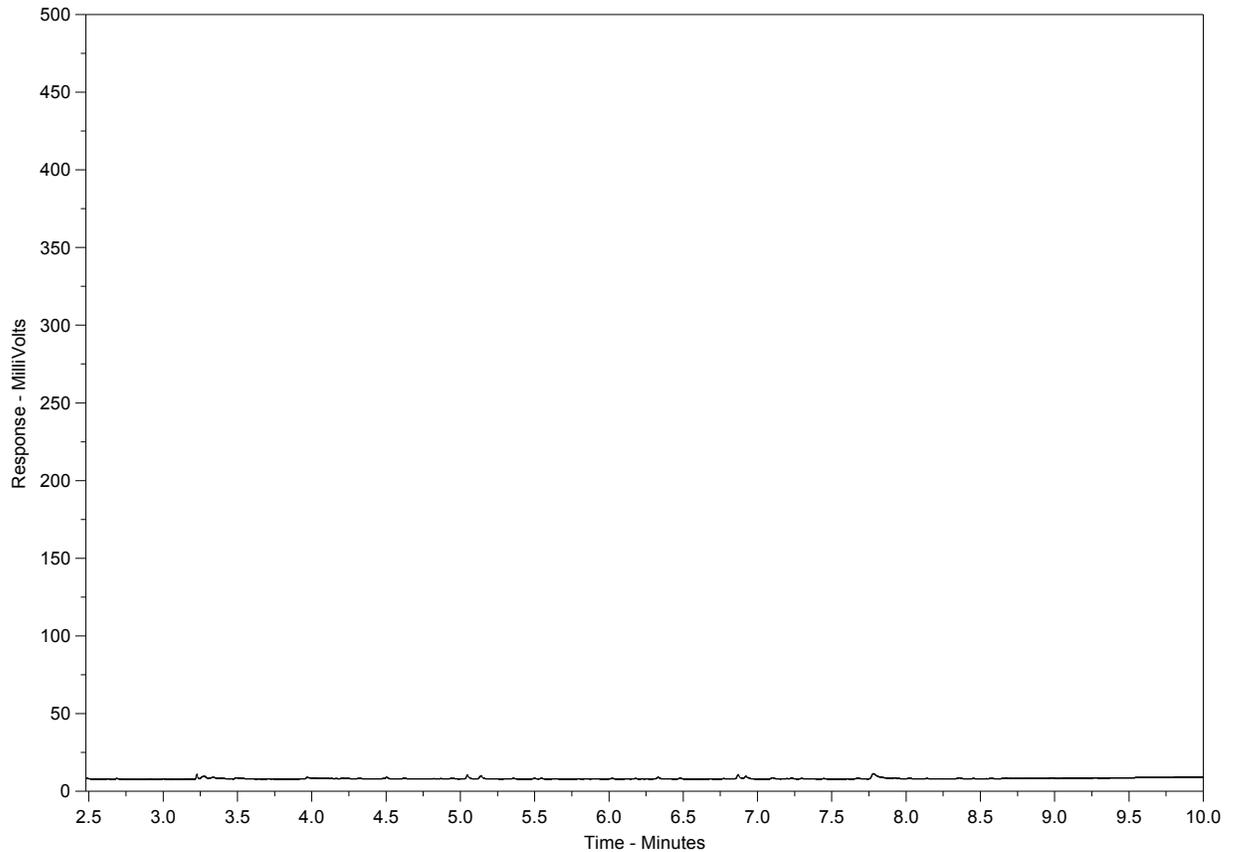
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-18  
Client Sample ID: 2017-050-617



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

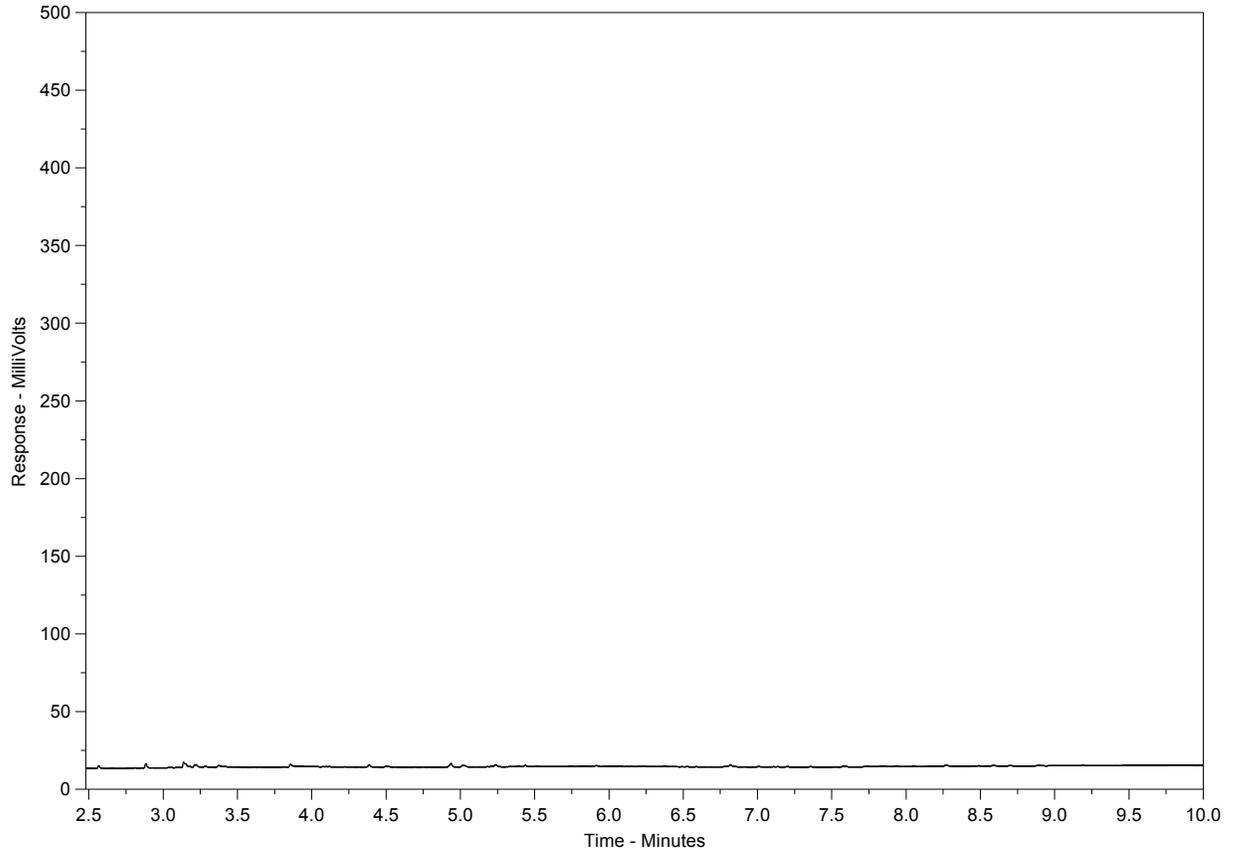
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

# Hydrocarbon Distribution Report



ALS Sample ID: L1884636-19  
Client Sample ID: 2017-050-618



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Diesel / Jet Fuels →	← Motor Oils / Lube Oils / Grease →

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on [www.alsglobal.com](http://www.alsglobal.com) or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.





L1884636-COFC

1988 Triumph Street, Vancouver, BC Canada V5L 1K5 Tel: 604-253-4188 Toll Free: 1-800-665-0243 Fax: 604-253-6700
#2 -21 Highfield Circle SE, Calgary, AB Canada T2G 5N6 Tel: 403-214-5431 Toll Free: 1-866-722-6231 Fax: 403-214-5430
#2 - 8820 100th Street, Fort St. John, BC Canada V1J 3W9 Tel: 250-785-8281 Fax: 250-785-8286

www.alsenviro.com

CHAIN OF CUSTODY FORM

PAGE 2 OF 2

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )
ADDRESS: 625 FISGARD STREET, PO BOX 1000
CITY: VICTORIA PROV: BC POSTAL CODE: V8W 2S6
TEL: (250) 360-3148 FAX: (250) 360-3254 CONTACT: Korene Torney
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS SAMPLER: Shelley Alcock
QUOTE NO.: PO NO.: ALS CONTACT: JERRY HOLZBE
REPORT FORMAT: [ ] HARDCOPY [X] EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca
[ ] FAX [ ] EXCEL [X] PDF [X] OTHER: CRD Excel Results

ANALYSIS REQUESTED:

Table with columns: SAMPLE IDENTIFICATION (ID, DATE/TIME COLLECTED, MATRIX), ANALYSIS REQUESTED (LEPH, HEPH, VOCs, etc.), and NOTES (sample specific comments, due dates, etc.). Rows include samples 2017-050-610 through 2017-050-618, all identified as water and marked as Drinking Water.

FOR LAB USE ONLY

TURN AROUND REQUIRED: [X] ROUTINE [ ] RUSH SPECIFY DATE: (surcharge may apply)
SEND INVOICE TO: [X] SAME AS REPORT [ ] DIFFERENT FROM REPORT (provide details below)
INVOICE FORMAT: [ ] HARDCOPY [X] PDF [ ] FAX
SPECIAL INSTRUCTIONS:
FOR LAB USE ONLY: Cooler Seal Intact? Yes \_\_\_ No \_\_\_ N/A Sample Temperature: \_\_\_ °C Cooling Method? Icepacks \_\_\_ Ice \_\_\_ None

Your Project #: MILLSTREAM DOMESTIC WELLS  
Your C.O.C. #: 08436686

**Attention: SHELLEY ALCOCK**

CAPITAL REGIONAL DISTRICT  
CRD-VIC 625 FISGARD  
PO Box 1000  
625 Fisgard Street  
VICTORIA, BC  
Canada V8W 2S6

**Report Date: 2017/05/02**  
Report #: R2376605  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B730513**

**Received: 2017/04/25, 14:05**

Sample Matrix: DRINKING WATER  
# Samples Received: 22

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
EPH in Water when PAH required	20	2017/04/26	2017/04/26	BBY8SOP-00029	BCMOE EPH w 12/00 m
EPH in Water when PAH required	2	2017/04/27	2017/04/27	BBY8SOP-00029	BCMOE EPH w 12/00 m
PAH in Water by GC/MS (SIM)	2	2017/04/26	2017/04/28	BBY8SOP-00021	EPA 8270d R5 m
PAH in Water by GC/MS (SIM)	18	2017/04/26	2017/04/29	BBY8SOP-00021	EPA 8270d R5 m
PAH in Water by GC/MS (SIM)	2	2017/04/27	2017/04/28	BBY8SOP-00021	EPA 8270d R5 m
Total LMW, HMW, Total PAH Calc	22	N/A	2017/05/01	BBY WI-00033	Auto Calc
EPH less PAH in Water by GC/FID	22	N/A	2017/05/01	BBY WI-00033	Auto Calc
VOCs, VH, F1, LH in Water by HS GC/MS	2	2017/04/26	2017/04/27	BBY8SOP-00009/11/12	BC Lab Manual 2007
VOCs, VH, F1, LH in Water by HS GC/MS	9	2017/04/26	2017/04/28	BBY8SOP-00009/11/12	BC Lab Manual 2007
VOCs, VH, F1, LH in Water by HS GC/MS	11	2017/04/27	2017/04/27	BBY8SOP-00009/11/12	BC Lab Manual 2007
Volatile HC-BTEX	2	N/A	2017/04/27	BBY WI-00033	Auto Calc
Volatile HC-BTEX	20	N/A	2017/04/28	BBY WI-00033	Auto Calc

**Remarks:**

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Your Project #: MILLSTREAM DOMESTIC WELLS  
Your C.O.C. #: 08436686

**Attention: SHELLEY ALCOCK**

CAPITAL REGIONAL DISTRICT  
CRD-VIC 625 FISGARD  
PO Box 1000  
625 Fisgard Street  
VICTORIA, BC  
Canada V8W 2S6

**Report Date: 2017/05/02**  
Report #: R2376605  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B730513**

**Received: 2017/04/25, 14:05**

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Debbie Nordbruket, Project Manager

Email: DNordbruket@maxxam.ca

Phone# (250)385-6112

=====  
This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0341	QY0342	QY0343	QY0344	QY0345	QY0346		
Sampling Date			2017/04/25 09:46	2017/04/25 09:51	2017/04/25 09:59	2017/04/25 09:59	2017/04/25 10:18	2017/04/25 10:25		
COC Number			08436686	08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	2017050620	2017050621	2017050622	2017050623	2017050624	2017050625	RDL	QC Batch
<b>Polycyclic Aromatics</b>										
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8611794
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8611794
Total PAH	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8611794
Quinoline	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Naphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8613184
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8613184
Acenaphthylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Acenaphthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Fluorene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Phenanthrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8613184
Acridine	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Fluoranthene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Pyrene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8613184
Chrysene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8613184
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8613184
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	8613184
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
<b>Calculated Parameters</b>										
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8611795
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8611795
<b>Ext. Pet. Hydrocarbon</b>										
EPH (C10-C19)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613177
EPH (C19-C32)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613177
<b>Surrogate Recovery (%)</b>										
O-TERPHENYL (sur.)	%	-	93	93	90	91	99	94		8613177
D10-ANTHRACENE (sur.)	%	-	100	110	101	100	118	107		8613184
D8-ACENAPHTHYLENE (sur.)	%	-	103	105	102	98	113	103		8613184
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0341	QY0342	QY0343	QY0344	QY0345	QY0346		
Sampling Date			2017/04/25 09:46	2017/04/25 09:51	2017/04/25 09:59	2017/04/25 09:59	2017/04/25 10:18	2017/04/25 10:25		
COC Number			08436686	08436686	08436686	08436686	08436686	08436686		
	<b>UNITS</b>	<b>MAC</b>	<b>2017050620</b>	<b>2017050621</b>	<b>2017050622</b>	<b>2017050623</b>	<b>2017050624</b>	<b>2017050625</b>	<b>RDL</b>	<b>QC Batch</b>
D8-NAPHTHALENE (sur.)	%	-	86	84	85	81	91	83		8613184
D9-Acridine	%	-	89	95	90	87	101	93		8613184
TERPHENYL-D14 (sur.)	%	-	99	105	97	95	110	101		8613184
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0347	QY0348	QY0349	QY0350	QY0351	QY0352		
Sampling Date			2017/04/25 10:31	2017/04/25 10:31	2017/04/25 11:00	2017/04/25 11:08	2017/04/25 11:12	2017/04/25 11:34		
COC Number			08436686	08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	2017050626	2017050627	2017050628	2017050629	2017050630	2017050631	RDL	QC Batch
<b>Polycyclic Aromatics</b>										
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8611794
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8611794
Total PAH	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8611794
Quinoline	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Naphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8613184
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8613184
Acenaphthylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Acenaphthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Fluorene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Phenanthrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8613184
Acridine	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Fluoranthene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Pyrene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8613184
Chrysene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8613184
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8613184
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	8613184
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
<b>Calculated Parameters</b>										
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8611795
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8611795
<b>Ext. Pet. Hydrocarbon</b>										
EPH (C10-C19)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613177
EPH (C19-C32)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613177
<b>Surrogate Recovery (%)</b>										
O-TERPHENYL (sur.)	%	-	91	90	90	89	94	92		8613177
D10-ANTHRACENE (sur.)	%	-	101	109	106	99	113	106		8613184
D8-ACENAPHTHYLENE (sur.)	%	-	105	104	108	104	106	105		8613184
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0347	QY0348	QY0349	QY0350	QY0351	QY0352		
Sampling Date			2017/04/25 10:31	2017/04/25 10:31	2017/04/25 11:00	2017/04/25 11:08	2017/04/25 11:12	2017/04/25 11:34		
COC Number			08436686	08436686	08436686	08436686	08436686	08436686		
	<b>UNITS</b>	<b>MAC</b>	<b>2017050626</b>	<b>2017050627</b>	<b>2017050628</b>	<b>2017050629</b>	<b>2017050630</b>	<b>2017050631</b>	<b>RDL</b>	<b>QC Batch</b>
D8-NAPHTHALENE (sur.)	%	-	88	85	91	85	86	87		8613184
D9-Acridine	%	-	92	95	93	90	89	92		8613184
TERPHENYL-D14 (sur.)	%	-	98	100	101	95	105	100		8613184
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0353	QY0354	QY0355	QY0356	QY0357	QY0358		
Sampling Date			2017/04/25 11:37	2017/04/25 11:41	2017/04/25 11:43	2017/04/25 11:47	2017/04/25 11:51	2017/04/25 12:08		
COC Number			08436686	08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	2017050632	2017050633	2017050634	2017050635	2017050636	2017050637	RDL	QC Batch
<b>Polycyclic Aromatics</b>										
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8611794
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8611794
Total PAH	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8611794
Quinoline	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Naphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8613184
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8613184
Acenaphthylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Acenaphthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Fluorene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Phenanthrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8613184
Acridine	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Fluoranthene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Pyrene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8613184
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8613184
Chrysene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8613184
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8613184
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	8613184
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8613184
<b>Calculated Parameters</b>										
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8611795
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8611795
<b>Ext. Pet. Hydrocarbon</b>										
EPH (C10-C19)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613177
EPH (C19-C32)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613177
<b>Surrogate Recovery (%)</b>										
O-TERPHENYL (sur.)	%	-	93	89	90	88	92	89		8613177
D10-ANTHRACENE (sur.)	%	-	103	99	113	106	104	101		8613184
D8-ACENAPHTHYLENE (sur.)	%	-	109	107	112	102	107	105		8613184
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0353	QY0354	QY0355	QY0356	QY0357	QY0358		
Sampling Date			2017/04/25 11:37	2017/04/25 11:41	2017/04/25 11:43	2017/04/25 11:47	2017/04/25 11:51	2017/04/25 12:08		
COC Number			08436686	08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	2017050632	2017050633	2017050634	2017050635	2017050636	2017050637	RDL	QC Batch
D8-NAPHTHALENE (sur.)	%	-	93	86	92	84	87	84		8613184
D9-Acridine	%	-	87	87	71	93	93	89		8613184
TERPHENYL-D14 (sur.)	%	-	100	96	106	99	99	97		8613184
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0359	QY0360			QY0361	QY0362		
Sampling Date			2017/04/25 12:10	2017/04/25 12:18			2017/04/25 12:22	2017/04/25 13:05		
COC Number			08436686	08436686			08436686	08436686		
	UNITS	MAC	2017050638	2017050639	RDL	QC Batch	2017050640	2017050641	RDL	QC Batch
<b>Polycyclic Aromatics</b>										
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	0.10	8611794	<0.10	<0.10	0.10	8611794
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	0.050	8611794	<0.050	<0.050	0.050	8611794
Total PAH	ug/L	-	<0.10	<0.10	0.10	8611794	<0.10	<0.10	0.10	8611794
Quinoline	ug/L	-	<0.020	<0.020	0.020	8613184	<0.020	<0.020	0.020	8613710
Naphthalene	ug/L	-	<0.10	<0.10	0.10	8613184	<0.10	<0.10	0.10	8613710
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	0.10	8613184	<0.10	<0.10	0.10	8613710
Acenaphthylene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
Acenaphthene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
Fluorene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
Phenanthrene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
Anthracene	ug/L	-	<0.010	<0.010	0.010	8613184	<0.010	<0.010	0.010	8613710
Acridine	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
Fluoranthene	ug/L	-	<0.020	<0.020	0.020	8613184	<0.020	<0.020	0.020	8613710
Pyrene	ug/L	-	<0.020	<0.020	0.020	8613184	<0.020	<0.020	0.020	8613710
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	0.010	8613184	<0.010	<0.010	0.010	8613710
Chrysene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.020	<0.020	0.020	8613710
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	0.030	8613184	<0.030	<0.030	0.030	8613710
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	0.0050	8613184	<0.0050	<0.0050	0.0050	8613710
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	0.0030	8613184	<0.0030	<0.0030	0.0030	8613710
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	0.050	8613184	<0.050	<0.050	0.050	8613710
<b>Calculated Parameters</b>										
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	0.20	8611795	<0.20	<0.20	0.20	8611795
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	0.20	8611795	<0.20	<0.20	0.20	8611795
<b>Ext. Pet. Hydrocarbon</b>										
EPH (C10-C19)	mg/L	-	<0.20	<0.20	0.20	8613177	<0.20	<0.20	0.20	8613740
EPH (C19-C32)	mg/L	-	<0.20	<0.20	0.20	8613177	<0.20	<0.20	0.20	8613740
<b>Surrogate Recovery (%)</b>										
O-TERPHENYL (sur.)	%	-	91	89		8613177	92	93		8613740
D10-ANTHRACENE (sur.)	%	-	100	96		8613184	111	104		8613710
D8-ACENAPHTHYLENE (sur.)	%	-	102	77		8613184	104	98		8613710
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			QY0359	QY0360			QY0361	QY0362		
Sampling Date			2017/04/25 12:10	2017/04/25 12:18			2017/04/25 12:22	2017/04/25 13:05		
COC Number			08436686	08436686			08436686	08436686		
	UNITS	MAC	2017050638	2017050639	RDL	QC Batch	2017050640	2017050641	RDL	QC Batch
D8-NAPHTHALENE (sur.)	%	-	82	91		8613184	90	80		8613710
D9-Acridine	%	-	88	93		8613184	102	107		8613710
TERPHENYL-D14 (sur.)	%	-	96	98		8613184	110	104		8613710
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0341	QY0342	QY0343	QY0344	QY0345		
Sampling Date				2017/04/25 09:46	2017/04/25 09:51	2017/04/25 09:59	2017/04/25 09:59	2017/04/25 10:18		
COC Number				08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050620	2017050621	2017050622	2017050623	2017050624	RDL	QC Batch
<b>Volatiles</b>										
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	<300	<300	300	8611528
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8613104
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Chloroform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8613104
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Chlorodibromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613104
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0341	QY0342	QY0343	QY0344	QY0345		
Sampling Date				2017/04/25 09:46	2017/04/25 09:51	2017/04/25 09:59	2017/04/25 09:59	2017/04/25 10:18		
COC Number				08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050620	2017050621	2017050622	2017050623	2017050624	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
VH C6-C10	ug/L	-	-	<300	<300	<300	<300	<300	300	8613104
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	-	-	98	100	107	106	92		8613104
4-Bromofluorobenzene (sur.)	%	-	-	95	98	96	101	81		8613104
D4-1,2-Dichloroethane (sur.)	%	-	-	101	102	111	116	99		8613104
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0346	QY0347	QY0348	QY0349	QY0350		
Sampling Date				2017/04/25 10:25	2017/04/25 10:31	2017/04/25 10:31	2017/04/25 11:00	2017/04/25 11:08		
COC Number				08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050625	2017050626	2017050627	2017050628	2017050629	RDL	QC Batch
<b>Volatiles</b>										
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	<300	<300	300	8611528
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8613104
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Chloroform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8613104
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Chlorodibromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613104
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613104
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0346	QY0347	QY0348	QY0349	QY0350		
Sampling Date				2017/04/25 10:25	2017/04/25 10:31	2017/04/25 10:31	2017/04/25 11:00	2017/04/25 11:08		
COC Number				08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050625	2017050626	2017050627	2017050628	2017050629	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613104
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613104
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613104
VH C6-C10	ug/L	-	-	<300	<300	<300	<300	<300	300	8613104
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	-	-	106	99	89	107	106		8613104
4-Bromofluorobenzene (sur.)	%	-	-	95	87	77	97	97		8613104
D4-1,2-Dichloroethane (sur.)	%	-	-	112	107	95	114	114		8613104
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0351		QY0352	QY0353	QY0354	QY0355		
Sampling Date				2017/04/25 11:12		2017/04/25 11:34	2017/04/25 11:37	2017/04/25 11:41	2017/04/25 11:43		
COC Number				08436686		08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050630	QC Batch	2017050631	2017050632	2017050633	2017050634	RDL	QC Batch

Volatiles											
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	8611528	<300	<300	<300	<300	300	8611528
Chloromethane	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Vinyl chloride	ug/L	2	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Chloroethane	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Trichlorofluoromethane	ug/L	-	-	<4.0	8613104	<4.0	<4.0	<4.0	<4.0	4.0	8613792
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	8613104	<2.0	<2.0	<2.0	<2.0	2.0	8613792
Dichlorodifluoromethane	ug/L	-	-	<2.0	8613104	<2.0	<2.0	<2.0	<2.0	2.0	8613792
1,1-dichloroethene	ug/L	14	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Dichloromethane	ug/L	50	-	<2.0	8613104	<2.0	<2.0	<2.0	<2.0	2.0	8613792
trans-1,2-dichloroethene	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
1,1-dichloroethane	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
cis-1,2-dichloroethene	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Chloroform	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
1,1,1-trichloroethane	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,2-dichloroethane	ug/L	5	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Carbon tetrachloride	ug/L	2	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Benzene	ug/L	5	-	<0.40	8613104	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	8613104	<4.0	<4.0	<4.0	<4.0	4.0	8613792
1,2-dichloropropane	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
cis-1,3-dichloropropene	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
trans-1,3-dichloropropene	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Bromomethane	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
1,1,2-trichloroethane	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Trichloroethene	ug/L	5	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Chlorodibromomethane	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
1,2-dibromoethane	ug/L	-	-	<0.20	8613104	<0.20	<0.20	<0.20	<0.20	0.20	8613792
Tetrachloroethene	ug/L	10	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Bromodichloromethane	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Toluene	ug/L	60	24	<0.40	8613104	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Ethylbenzene	ug/L	140	1.6	<0.40	8613104	<0.40	<0.40	<0.40	<0.40	0.40	8613792
m & p-Xylene	ug/L	-	-	<0.40	8613104	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Bromoform	ug/L	-	-	<1.0	8613104	<1.0	<1.0	<1.0	<1.0	1.0	8613792

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0351		QY0352	QY0353	QY0354	QY0355		
Sampling Date				2017/04/25 11:12		2017/04/25 11:34	2017/04/25 11:37	2017/04/25 11:41	2017/04/25 11:43		
COC Number				08436686		08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050630	QC Batch	2017050631	2017050632	2017050633	2017050634	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
o-Xylene	ug/L	-	-	<0.40	8613104	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Xylenes (Total)	ug/L	90	20	<0.40	8613104	<0.40	<0.40	<0.40	<0.40	0.40	8613792
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,2-dichlorobenzene	ug/L	200	3	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,3-dichlorobenzene	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,4-dichlorobenzene	ug/L	5	1	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Chlorobenzene	ug/L	80	30	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	8613104	<2.0	<2.0	<2.0	<2.0	2.0	8613792
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	8613104	<2.0	<2.0	<2.0	<2.0	2.0	8613792
Hexachlorobutadiene	ug/L	-	-	<0.50	8613104	<0.50	<0.50	<0.50	<0.50	0.50	8613792
VH C6-C10	ug/L	-	-	<300	8613104	<300	<300	<300	<300	300	8613792
<b>Surrogate Recovery (%)</b>											
1,4-Difluorobenzene (sur.)	%	-	-	106	8613104	87	107	107	100		8613792
4-Bromofluorobenzene (sur.)	%	-	-	92	8613104	84	106	100	94		8613792
D4-1,2-Dichloroethane (sur.)	%	-	-	113	8613104	86	104	103	96		8613792
No Fill	No Exceedance										
Grey	Exceeds 1 criteria policy/level										
Black	Exceeds both criteria/levels										
RDL = Reportable Detection Limit											

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0356	QY0357	QY0358	QY0359	QY0360		
Sampling Date				2017/04/25 11:47	2017/04/25 11:51	2017/04/25 12:08	2017/04/25 12:10	2017/04/25 12:18		
COC Number				08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050635	2017050636	2017050637	2017050638	2017050639	RDL	QC Batch
<b>Volatiles</b>										
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	<300	<300	300	8611528
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8613792
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613792
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613792
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613792
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Chloroform	ug/L	-	-	<1.0	<1.0	2.0	<1.0	6.1	1.0	8613792
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8613792
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Chlorodibromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	4.2	1.0	8613792
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8613792
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	5.8	1.0	8613792
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613792
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8613792
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0356	QY0357	QY0358	QY0359	QY0360		
Sampling Date				2017/04/25 11:47	2017/04/25 11:51	2017/04/25 12:08	2017/04/25 12:10	2017/04/25 12:18		
COC Number				08436686	08436686	08436686	08436686	08436686		
	UNITS	MAC	AO	2017050635	2017050636	2017050637	2017050638	2017050639	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613792
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8613792
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613792
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8613792
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8613792
VH C6-C10	ug/L	-	-	<300	<300	<300	<300	<300	300	8613792
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	-	-	108	107	97	100	95		8613792
4-Bromofluorobenzene (sur.)	%	-	-	104	98	87	95	90		8613792
D4-1,2-Dichloroethane (sur.)	%	-	-	104	105	94	97	94		8613792
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0361	QY0362		
Sampling Date				2017/04/25 12:22	2017/04/25 13:05		
COC Number				08436686	08436686		
	UNITS	MAC	AO	2017050640	2017050641	RDL	QC Batch
<b>Volatiles</b>							
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	300	8611528
Chloromethane	ug/L	-	-	<1.0	<1.0	1.0	8613792
Vinyl chloride	ug/L	2	-	<0.50	<0.50	0.50	8613792
Chloroethane	ug/L	-	-	<1.0	<1.0	1.0	8613792
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	4.0	8613792
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	2.0	8613792
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	2.0	8613792
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	0.50	8613792
Dichloromethane	ug/L	50	-	<2.0	<2.0	2.0	8613792
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	1.0	8613792
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	0.50	8613792
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	1.0	8613792
Chloroform	ug/L	-	-	6.4	<1.0	1.0	8613792
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	0.50	8613792
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	0.50	8613792
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	0.50	8613792
Benzene	ug/L	5	-	<0.40	<0.40	0.40	8613792
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	4.0	8613792
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	0.50	8613792
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	1.0	8613792
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	1.0	8613792
Bromomethane	ug/L	-	-	<1.0	<1.0	1.0	8613792
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	0.50	8613792
Trichloroethene	ug/L	5	-	<0.50	<0.50	0.50	8613792
Chlorodibromomethane	ug/L	-	-	4.0	<1.0	1.0	8613792
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	0.20	8613792
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	0.50	8613792
Bromodichloromethane	ug/L	-	-	5.6	<1.0	1.0	8613792
Toluene	ug/L	60	24	<0.40	<0.40	0.40	8613792
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	0.40	8613792
m & p-Xylene	ug/L	-	-	<0.40	<0.40	0.40	8613792
Bromoform	ug/L	-	-	<1.0	<1.0	1.0	8613792
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QY0361	QY0362		
Sampling Date				2017/04/25 12:22	2017/04/25 13:05		
COC Number				08436686	08436686		
	UNITS	MAC	AO	2017050640	2017050641	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	0.50	8613792
o-Xylene	ug/L	-	-	<0.40	<0.40	0.40	8613792
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	0.40	8613792
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	0.50	8613792
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	0.50	8613792
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	0.50	8613792
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	0.50	8613792
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	0.50	8613792
Chlorobenzene	ug/L	80	30	<0.50	<0.50	0.50	8613792
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	2.0	8613792
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	2.0	8613792
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	0.50	8613792
VH C6-C10	ug/L	-	-	<300	<300	300	8613792
<b>Surrogate Recovery (%)</b>							
1,4-Difluorobenzene (sur.)	%	-	-	97	91		8613792
4-Bromofluorobenzene (sur.)	%	-	-	90	85		8613792
D4-1,2-Dichloroethane (sur.)	%	-	-	95	88		8613792
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							

Maxxam Job #: B730513  
Report Date: 2017/05/02

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

### GENERAL COMMENTS

MAC,AO: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, February 2017.

Criteria A = Maximum Acceptable Concentration (MAC) / Criteria B = Aesthetic Objectives (AO) / Criteria C = Operational Guidance Values (OG)  
It is recommended to consult these guidelines when interpreting your data since there are non-numerical guidelines that are not included on this report.

**Turbidity Guidelines:**

1. Chemically assisted filtration: less than or equal to 0.3 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 1.0 NTU at any time.
2. Slow sand / diatomaceous earth filtration: less than or equal to 1.0 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 3.0 NTU at any time.
3. Membrane filtration: less than or equal to 0.1 NTU in 99% of the measurements made or at least 99% of the time each calendar month. Shall not exceed 0.3 NTU at any time.

**Results relate only to the items tested.**

Maxxam Job #: B730513  
Report Date: 2017/05/02

**QUALITY ASSURANCE REPORT**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8613104	1,4-Difluorobenzene (sur.)	2017/04/27	98	70 - 130	98	70 - 130	98	%		
8613104	4-Bromofluorobenzene (sur.)	2017/04/27	101	70 - 130	102	70 - 130	90	%		
8613104	D4-1,2-Dichloroethane (sur.)	2017/04/27	102	70 - 130	101	70 - 130	102	%		
8613177	O-TERPHENYL (sur.)	2017/04/26	98	60 - 140	95	60 - 140	101	%		
8613184	D10-ANTHRACENE (sur.)	2017/04/28	104	60 - 130	98	60 - 130	114	%		
8613184	D8-ACENAPHTHYLENE (sur.)	2017/04/28	100	50 - 130	99	50 - 130	106	%		
8613184	D8-NAPHTHALENE (sur.)	2017/04/28	81	50 - 130	78	50 - 130	86	%		
8613184	D9-Acridine	2017/04/28	84	50 - 130	88	50 - 130	97	%		
8613184	TERPHENYL-D14 (sur.)	2017/04/28	98	60 - 130	98	60 - 130	113	%		
8613710	D10-ANTHRACENE (sur.)	2017/04/28	99	60 - 130	101	60 - 130	115	%		
8613710	D8-ACENAPHTHYLENE (sur.)	2017/04/28	101	50 - 130	102	50 - 130	110	%		
8613710	D8-NAPHTHALENE (sur.)	2017/04/28	88	50 - 130	81	50 - 130	94	%		
8613710	D9-Acridine	2017/04/28	106	50 - 130	115	50 - 130	115	%		
8613710	TERPHENYL-D14 (sur.)	2017/04/28	102	60 - 130	101	60 - 130	113	%		
8613740	O-TERPHENYL (sur.)	2017/04/27	95	60 - 140	93	60 - 140	102	%		
8613792	1,4-Difluorobenzene (sur.)	2017/04/27	99	70 - 130	105	70 - 130	91	%		
8613792	4-Bromofluorobenzene (sur.)	2017/04/27	106	70 - 130	107	70 - 130	84	%		
8613792	D4-1,2-Dichloroethane (sur.)	2017/04/27	97	70 - 130	98	70 - 130	81	%		
8613104	1,1,1,2-tetrachloroethane	2017/04/27	96	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8613104	1,1,1-trichloroethane	2017/04/27	93	70 - 130	90	70 - 130	<0.50	ug/L	NC	30
8613104	1,1,2,2-tetrachloroethane	2017/04/27	105	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
8613104	1,1,2Trichloro-1,2,2Trifluoroethane	2017/04/27					<2.0	ug/L	NC	30
8613104	1,1,2-trichloroethane	2017/04/27	99	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
8613104	1,1-dichloroethane	2017/04/27	94	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8613104	1,1-dichloroethene	2017/04/27	107	70 - 130	105	70 - 130	<0.50	ug/L	NC	30
8613104	1,2,3-trichlorobenzene	2017/04/27	99	70 - 130	97	70 - 130	<2.0	ug/L	NC	30
8613104	1,2,4-trichlorobenzene	2017/04/27	102	70 - 130	101	70 - 130	<2.0	ug/L	NC	30
8613104	1,2-dibromoethane	2017/04/27	98	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
8613104	1,2-dichlorobenzene	2017/04/27	109	70 - 130	107	70 - 130	<0.50	ug/L	NC	30
8613104	1,2-dichloroethane	2017/04/27	90	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8613104	1,2-dichloropropane	2017/04/27	98	70 - 130	95	70 - 130	<0.50	ug/L	NC	30

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8613104	1,3-dichlorobenzene	2017/04/27	104	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
8613104	1,4-dichlorobenzene	2017/04/27	103	70 - 130	102	70 - 130	<0.50	ug/L	NC	30
8613104	Benzene	2017/04/27	93	70 - 130	87	70 - 130	<0.40	ug/L	NC	30
8613104	Bromodichloromethane	2017/04/27	91	70 - 130	89	70 - 130	<1.0	ug/L	NC	30
8613104	Bromoform	2017/04/27	91	70 - 130	87	70 - 130	<1.0	ug/L	NC	30
8613104	Bromomethane	2017/04/27	102	60 - 140	89	60 - 140	<1.0	ug/L	NC	30
8613104	Carbon tetrachloride	2017/04/27	90	70 - 130	88	70 - 130	<0.50	ug/L	NC	30
8613104	Chlorobenzene	2017/04/27	96	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
8613104	Chlorodibromomethane	2017/04/27	95	70 - 130	91	70 - 130	<1.0	ug/L	NC	30
8613104	Chloroethane	2017/04/27	86	60 - 140	85	60 - 140	<1.0	ug/L	NC	30
8613104	Chloroform	2017/04/27	94	70 - 130	91	70 - 130	<1.0	ug/L	NC	30
8613104	Chloromethane	2017/04/27	108	60 - 140	103	60 - 140	<1.0	ug/L	NC	30
8613104	cis-1,2-dichloroethene	2017/04/27	99	70 - 130	97	70 - 130	<1.0	ug/L	NC	30
8613104	cis-1,3-dichloropropene	2017/04/27	94	70 - 130	80	70 - 130	<1.0	ug/L	NC	30
8613104	Dichlorodifluoromethane	2017/04/27	100	60 - 140	96	60 - 140	<2.0	ug/L	NC	30
8613104	Dichloromethane	2017/04/27	97	70 - 130	94	70 - 130	<2.0	ug/L	NC	30
8613104	Ethylbenzene	2017/04/27	101	70 - 130	98	70 - 130	<0.40	ug/L	NC	30
8613104	Hexachlorobutadiene	2017/04/27	93	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8613104	m & p-Xylene	2017/04/27	105	70 - 130	103	70 - 130	<0.40	ug/L	NC	30
8613104	Methyl-tert-butylether (MTBE)	2017/04/27	107	70 - 130	104	70 - 130	<4.0	ug/L	NC	30
8613104	o-Xylene	2017/04/27	107	70 - 130	103	70 - 130	<0.40	ug/L	NC	30
8613104	Styrene	2017/04/27	87	70 - 130	85	70 - 130	<0.50	ug/L	NC	30
8613104	Tetrachloroethene	2017/04/27	92	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
8613104	Toluene	2017/04/27	99	70 - 130	96	70 - 130	<0.40	ug/L	NC	30
8613104	trans-1,2-dichloroethene	2017/04/27	95	70 - 130	94	70 - 130	<1.0	ug/L	NC	30
8613104	trans-1,3-dichloropropene	2017/04/27	72	70 - 130	61 (1)	70 - 130	<1.0	ug/L	NC	30
8613104	Trichloroethene	2017/04/27	95	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8613104	Trichlorofluoromethane	2017/04/27	117	60 - 140	112	60 - 140	<4.0	ug/L	NC	30
8613104	VH C6-C10	2017/04/27			109	70 - 130	<300	ug/L	NC	30
8613104	Vinyl chloride	2017/04/27	113	60 - 140	109	60 - 140	<0.50	ug/L	NC	30
8613104	Xylenes (Total)	2017/04/27					<0.40	ug/L	NC	30

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8613177	EPH (C10-C19)	2017/04/26	99	60 - 140	95	70 - 130	<0.20	mg/L	NC	30
8613177	EPH (C19-C32)	2017/04/26	91	60 - 140	92	70 - 130	<0.20	mg/L	NC	30
8613184	2-Methylnaphthalene	2017/04/29	90	50 - 130	85	50 - 130	<0.10	ug/L	NC	40
8613184	Acenaphthene	2017/04/29	91	50 - 130	89	50 - 130	<0.050	ug/L	NC	40
8613184	Acenaphthylene	2017/04/29	92	50 - 130	89	50 - 130	<0.050	ug/L	NC	40
8613184	Acridine	2017/04/29	78	50 - 130	81	50 - 130	<0.050	ug/L	NC	40
8613184	Anthracene	2017/04/29	100	60 - 130	100	60 - 130	<0.010	ug/L	NC	40
8613184	Benzo(a)anthracene	2017/04/29	88	60 - 130	87	60 - 130	<0.010	ug/L	NC	40
8613184	Benzo(a)pyrene	2017/04/29	98	60 - 130	100	60 - 130	<0.0050	ug/L	NC	40
8613184	Benzo(b&j)fluoranthene	2017/04/29	96	60 - 130	94	60 - 130	<0.030	ug/L	NC	40
8613184	Benzo(g,h,i)perylene	2017/04/29	59 (1)	60 - 130	102	60 - 130	<0.050	ug/L	NC	40
8613184	Benzo(k)fluoranthene	2017/04/29	95	60 - 130	102	60 - 130	<0.050	ug/L	NC	40
8613184	Chrysene	2017/04/29	89	60 - 130	88	60 - 130	<0.050	ug/L	NC	40
8613184	Dibenz(a,h)anthracene	2017/04/29	57 (1)	60 - 130	100	60 - 130	<0.0030	ug/L	NC	40
8613184	Fluoranthene	2017/04/29	90	60 - 130	87	60 - 130	<0.020	ug/L	NC	40
8613184	Fluorene	2017/04/29	84	50 - 130	83	50 - 130	<0.050	ug/L	NC	40
8613184	Indeno(1,2,3-cd)pyrene	2017/04/29	62	60 - 130	105	60 - 130	<0.050	ug/L	NC	40
8613184	Naphthalene	2017/04/29	84	50 - 130	78	50 - 130	<0.10	ug/L	NC	40
8613184	Phenanthrene	2017/04/29	89	60 - 130	81	60 - 130	<0.050	ug/L	NC	40
8613184	Pyrene	2017/04/29	91	60 - 130	89	60 - 130	<0.020	ug/L	NC	40
8613184	Quinoline	2017/04/29	111	50 - 130	111	50 - 130	<0.020	ug/L	NC	40
8613710	2-Methylnaphthalene	2017/04/29	86	50 - 130	84	50 - 130	<0.10	ug/L	NC	40
8613710	Acenaphthene	2017/04/29	98	50 - 130	94	50 - 130	<0.050	ug/L	NC	40
8613710	Acenaphthylene	2017/04/29	93	50 - 130	87	50 - 130	<0.050	ug/L	NC	40
8613710	Acridine	2017/04/29	104	50 - 130	102	50 - 130	<0.050	ug/L	NC	40
8613710	Anthracene	2017/04/29	99	60 - 130	96	60 - 130	<0.010	ug/L	NC	40
8613710	Benzo(a)anthracene	2017/04/29	102	60 - 130	100	60 - 130	<0.010	ug/L	NC	40
8613710	Benzo(a)pyrene	2017/04/29	93	60 - 130	90	60 - 130	<0.0050	ug/L	NC	40
8613710	Benzo(b&j)fluoranthene	2017/04/29	101	60 - 130	107	60 - 130	<0.030	ug/L	NC	40
8613710	Benzo(g,h,i)perylene	2017/04/29	95	60 - 130	96	60 - 130	<0.050	ug/L	NC	40
8613710	Benzo(k)fluoranthene	2017/04/29	107	60 - 130	106	60 - 130	<0.050	ug/L	NC	40

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8613710	Chrysene	2017/04/29	99	60 - 130	101	60 - 130	<0.020	ug/L	NC	40
8613710	Dibenz(a,h)anthracene	2017/04/29	95	60 - 130	95	60 - 130	<0.0030	ug/L	NC	40
8613710	Fluoranthene	2017/04/29	97	60 - 130	95	60 - 130	<0.020	ug/L	NC	40
8613710	Fluorene	2017/04/29	92	50 - 130	88	50 - 130	<0.050	ug/L	NC	40
8613710	Indeno(1,2,3-cd)pyrene	2017/04/29	98	60 - 130	100	60 - 130	<0.050	ug/L	NC	40
8613710	Naphthalene	2017/04/29	81	50 - 130	82	50 - 130	<0.10	ug/L	NC	40
8613710	Phenanthrene	2017/04/29	91	60 - 130	93	60 - 130	<0.050	ug/L	NC	40
8613710	Pyrene	2017/04/29	97	60 - 130	99	60 - 130	<0.020	ug/L	NC	40
8613710	Quinoline	2017/04/29	108	50 - 130	103	50 - 130	<0.020	ug/L	NC	40
8613740	EPH (C10-C19)	2017/04/27	101	60 - 140	98	70 - 130	<0.20	mg/L	NC	30
8613740	EPH (C19-C32)	2017/04/27	89	60 - 140	87	70 - 130	<0.20	mg/L	NC	30
8613792	1,1,1,2-tetrachloroethane	2017/04/27	94	70 - 130	82	70 - 130	<0.50	ug/L	NC	30
8613792	1,1,1-trichloroethane	2017/04/27	95	70 - 130	83	70 - 130	<0.50	ug/L	NC	30
8613792	1,1,2,2-tetrachloroethane	2017/04/27	86	70 - 130	82	70 - 130	<0.50	ug/L	NC	30
8613792	1,1,2Trichloro-1,2,2Trifluoroethane	2017/04/27					<2.0	ug/L	NC	30
8613792	1,1,2-trichloroethane	2017/04/27	91	70 - 130	82	70 - 130	<0.50	ug/L	NC	30
8613792	1,1-dichloroethane	2017/04/27	89	70 - 130	80	70 - 130	<0.50	ug/L	NC	30
8613792	1,1-dichloroethene	2017/04/27	97	70 - 130	85	70 - 130	<0.50	ug/L	NC	30
8613792	1,2,3-trichlorobenzene	2017/04/27	88	70 - 130	72	70 - 130	<2.0	ug/L	NC	30
8613792	1,2,4-trichlorobenzene	2017/04/27	95	70 - 130	78	70 - 130	<2.0	ug/L	NC	30
8613792	1,2-dibromoethane	2017/04/27	91	70 - 130	81	70 - 130	<0.20	ug/L	NC	30
8613792	1,2-dichlorobenzene	2017/04/27	101	70 - 130	87	70 - 130	<0.50	ug/L	NC	30
8613792	1,2-dichloroethane	2017/04/27	80	70 - 130	77	70 - 130	<0.50	ug/L	NC	30
8613792	1,2-dichloropropane	2017/04/27	92	70 - 130	80	70 - 130	<0.50	ug/L	NC	30
8613792	1,3-dichlorobenzene	2017/04/27	102	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8613792	1,4-dichlorobenzene	2017/04/27	100	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8613792	Benzene	2017/04/27	94	70 - 130	82	70 - 130	<0.40	ug/L	NC	30
8613792	Bromodichloromethane	2017/04/27	90	70 - 130	80	70 - 130	<1.0	ug/L	NC	30
8613792	Bromoform	2017/04/27	88	70 - 130	76	70 - 130	<1.0	ug/L	NC	30
8613792	Bromomethane	2017/04/27	96	60 - 140	81	60 - 140	<1.0	ug/L	NC	30
8613792	Carbon tetrachloride	2017/04/27	107	70 - 130	84	70 - 130	<0.50	ug/L	NC	30

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8613792	Chlorobenzene	2017/04/27	89	70 - 130	84	70 - 130	<0.50	ug/L	NC	30
8613792	Chlorodibromomethane	2017/04/27	94	70 - 130	83	70 - 130	<1.0	ug/L	NC	30
8613792	Chloroethane	2017/04/27	118	60 - 140	108	60 - 140	<1.0	ug/L	NC	30
8613792	Chloroform	2017/04/27	91	70 - 130	81	70 - 130	<1.0	ug/L	NC	30
8613792	Chloromethane	2017/04/27	96	60 - 140	87	60 - 140	<1.0	ug/L	NC	30
8613792	cis-1,2-dichloroethene	2017/04/27	95	70 - 130	84	70 - 130	<1.0	ug/L	NC	30
8613792	cis-1,3-dichloropropene	2017/04/27	103	70 - 130	92	70 - 130	<1.0	ug/L	NC	30
8613792	Dichlorodifluoromethane	2017/04/27	100	60 - 140	89	60 - 140	<2.0	ug/L	NC	30
8613792	Dichloromethane	2017/04/27	91	70 - 130	81	70 - 130	<2.0	ug/L	NC	30
8613792	Ethylbenzene	2017/04/27	95	70 - 130	82	70 - 130	<0.40	ug/L	NC	30
8613792	Hexachlorobutadiene	2017/04/27	96	70 - 130	78	70 - 130	<0.50	ug/L	NC	30
8613792	m & p-Xylene	2017/04/27	103	70 - 130	88	70 - 130	<0.40	ug/L	NC	30
8613792	Methyl-tert-butylether (MTBE)	2017/04/27	106	70 - 130	94	70 - 130	<4.0	ug/L	NC	30
8613792	o-Xylene	2017/04/27	101	70 - 130	87	70 - 130	<0.40	ug/L	NC	30
8613792	Styrene	2017/04/27	101	70 - 130	84	70 - 130	<0.50	ug/L	NC	30
8613792	Tetrachloroethene	2017/04/27	97	70 - 130	82	70 - 130	<0.50	ug/L	NC	30
8613792	Toluene	2017/04/27	95	70 - 130	83	70 - 130	<0.40	ug/L	NC	30
8613792	trans-1,2-dichloroethene	2017/04/27	93	70 - 130	81	70 - 130	<1.0	ug/L	NC	30
8613792	trans-1,3-dichloropropene	2017/04/27	92	70 - 130	82	70 - 130	<1.0	ug/L	NC	30
8613792	Trichloroethene	2017/04/27	94	70 - 130	81	70 - 130	<0.50	ug/L	NC	30
8613792	Trichlorofluoromethane	2017/04/27	112	60 - 140	98	60 - 140	<4.0	ug/L	NC	30
8613792	VH C6-C10	2017/04/27			104	70 - 130	<300	ug/L	NC	30
8613792	Vinyl chloride	2017/04/27	103	60 - 140	92	60 - 140	<0.50	ug/L	NC	30

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8613792	Xylenes (Total)	2017/04/27					<0.40	ug/L	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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CAPITAL REGIONAL DISTRICT  
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Sampler Initials: SA

### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



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Andy Lu, Ph.D., P.Chem., Scientific Specialist

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Ph: (604) 734-7276 Fax: (604) 731-2386, Toll Free: (800) 665-8566  
 Project Name: Millstream Meadows Domestic Wells  
 Contract #: EPRO2016-085



CHAIN OF CUSTODY FORM

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SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )					ANALYSIS REQUESTED:																	
ADDRESS: 625 FISGARD STREET, PO BOX 1000																						
CITY: VICTORIA		PROV: BC		POSTAL CODE: V8W 2S6																		
TEL: (250) 360-3148		FAX: (250) 360-3254		CONTACT: Korene Torney																		
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS			SAMPLER: Shelley Alcock																			
QUOTE NO.:		PO NO.:		ALS CONTACT: JERRY HOLZBE																		
REPORT FORMAT																						
<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca																						
<input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results																						
SAMPLE IDENTIFICATION					DATE / TIME COLLECTED		MATRIX	LEPH	HEPH	VOCs											NOTES (sample specific comments, due dates, etc.)	
					YYYY-MM-DD	TIME																
FOR LAB USE ONLY	2017-050-620	2017-04-25	9:46	water	X	X	X											Drinking Water				
	2017-050-621	2017-04-25	9:51	water	X	X	X											Drinking Water				
	2017-050-622	2017-04-25	9:59	water	X	X	X											Drinking Water				
	2017-050-623	2017-04-25	9:59	water	X	X	X											Drinking Water				
	2017-050-624	2017-04-25	10:18	water	X	X	X											Drinking Water				
	2017-050-625	2017-04-25	10:25	water	X	X	X											Drinking Water				
	2017-050-626	2017-04-25	10:31	water	X	X	X											Drinking Water				
	2017-050-627	2017-04-25	10:31	water	X	X	X											Drinking Water				
	2017-050-628	2017-04-25	11:00	water	X	X	X											Drinking Water				
	2017-050-629	2017-04-25	11:08	water	X	X	X											Drinking Water				
TURN AROUND REQUIRED:		<input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)			RELINQUISHED BY: Shelley Alcock		DATE: 2017-04-25		RECEIVED BY: [Signature]		DATE: 17/04/25											
SEND INVOICE TO		<input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)			RELINQUISHED BY: [Signature]		DATE: 18-15		RECEIVED BY: [Signature]		DATE: 14:05											
INVOICE FORMAT		<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX			RELINQUISHED BY: [Signature]		DATE: [Signature]		RECEIVED BY: [Signature]		DATE: 14:05											
SPECIAL INSTRUCTIONS:					FOR LAB USE ONLY																	
Cooler Seal Intact? Yes ___ No ___ N/A					Sample Temperature: _____ °C					Cooling Method? Icepacks ___ Ice ___ None			Frozen? Yes ___ No ___									

8,13,10



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Ph: (604) 734-7276 Fax: (604) 731-2386, Toll Free: (800) 665-8566  
 Project Name: Millstream Meadows Domestic Wells  
 Contract #: EPRO2016-085

B730513

CHAIN OF CUSTODY FORM

08936686

PAGE 2 OF 3

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )					ANALYSIS REQUESTED:																						
ADDRESS: 625 FISGARD STREET, PO BOX 1000																											
CITY: VICTORIA		PROV: BC		POSTAL CODE: V8W 2S6																							
TEL: (250) 360-3148		FAX: (250) 360-3254		CONTACT: Korene Torney																							
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS			SAMPLER: Shelley Alcock																								
QUOTE NO.:		PO NO.:		ALS CONTACT: JERRY HOLZBE																							
REPORT FORMAT																											
<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca																											
<input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results																											
SAMPLE IDENTIFICATION					DATE / TIME COLLECTED		MATRIX	LEPH	HEPH	VOCs												NOTES (sample specific comments, due dates, etc.)					
					YYYY-MM-DD	TIME																					
FOR LAB USE ONLY	2017-050-630				2017-04-25	11:12	water	X	X	X															Drinking Water		
	2017-050-631				2017-04-25	11:34	water	X	X	X																Drinking Water	
	2017-050-632				2017-04-25	11:37	water	X	X	X																Drinking Water	
	2017-050-633				2017-04-25	11:41	water	X	X	X																	Drinking Water
	2017-050-634				2017-04-25	11:43	water	X	X	X																	Drinking Water
	2017-050-635				2017-04-25	11:47	water	X	X	X																	Drinking Water
	2017-050-636				2017-04-25	11:51	water	X	X	X																	Drinking Water
	2017-050-637				2017-04-25	12:08	water	X	X	X																	Drinking Water
	2017-050-638				2017-04-25	12:10	water	X	X	X																	Drinking Water
2017-050-639				2017-04-25	12:18	water	X	X	X																	Drinking Water	
TURN AROUND REQUIRED:		<input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)			RELINQUISHED BY: Shelley Alcock		DATE: 2017-04-25		RECEIVED BY: [Signature]		DATE: 17/04/25																
SEND INVOICE TO		<input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)			RELINQUISHED BY: [Signature]		DATE: 13/05		RECEIVED BY: [Signature]		DATE: 14/05																
INVOICE FORMAT		<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX					TIME: [Signature]		TIME: 1405																		
SPECIAL INSTRUCTIONS:					FOR LAB USE ONLY																						
					Cooler Seal Intact?		Sample Temperature: _____ °C		Cooling Method?																		
					Yes ___ No ___ N/A		Frozen? Yes ___ No ___		Icepacks ___ Ice ___ None																		



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Ph: (604) 734-7276 Fax: (604) 731-2386, Toll Free: (800) 665-8566  
 Project Name: Millstream Meadows Domestic Wells  
 Contract #: EPRO2016-085

B730513

CHAIN OF CUSTODY FORM

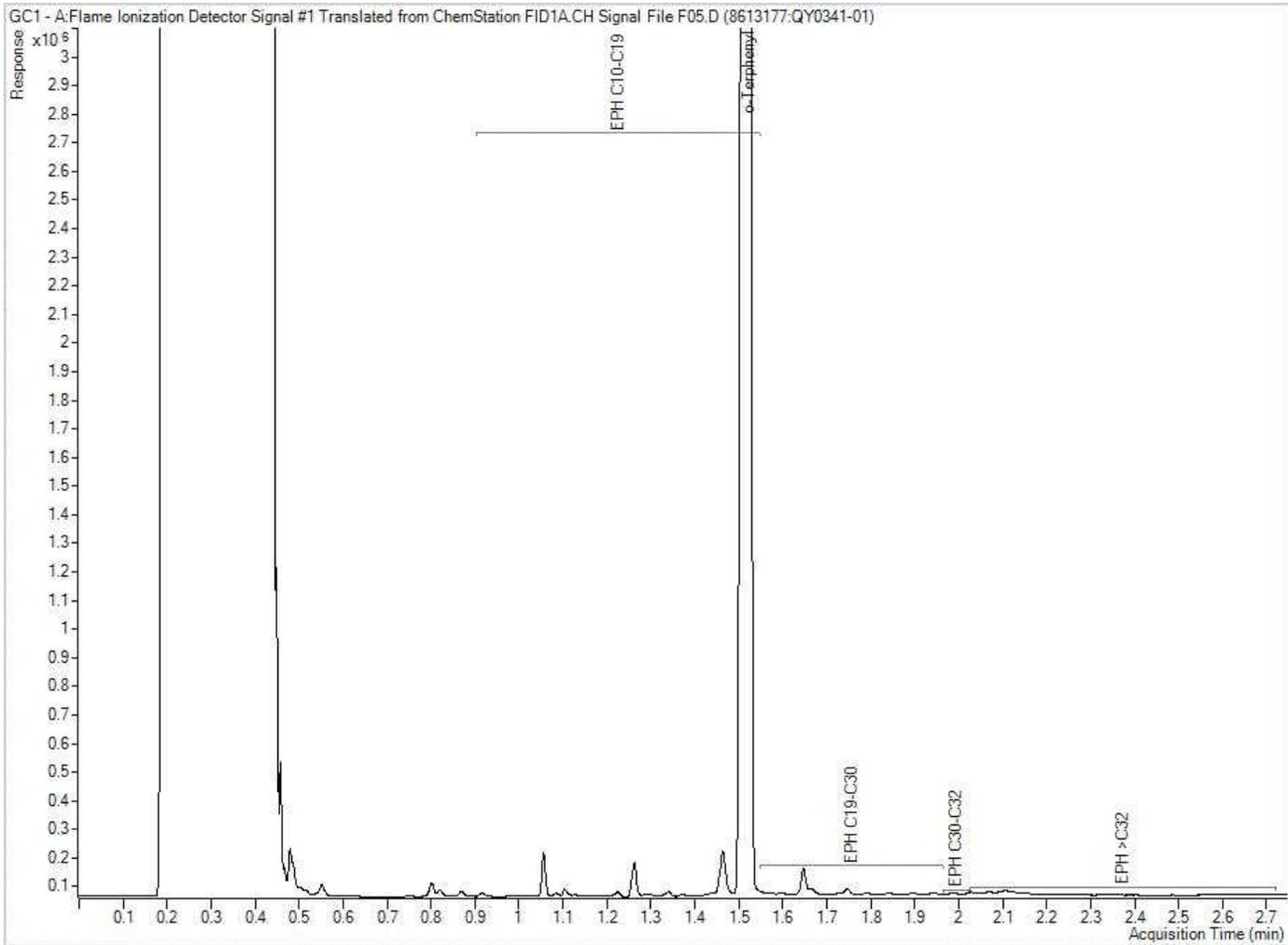
08436686

PAGE 3 OF 3

SEND REPORT TO:

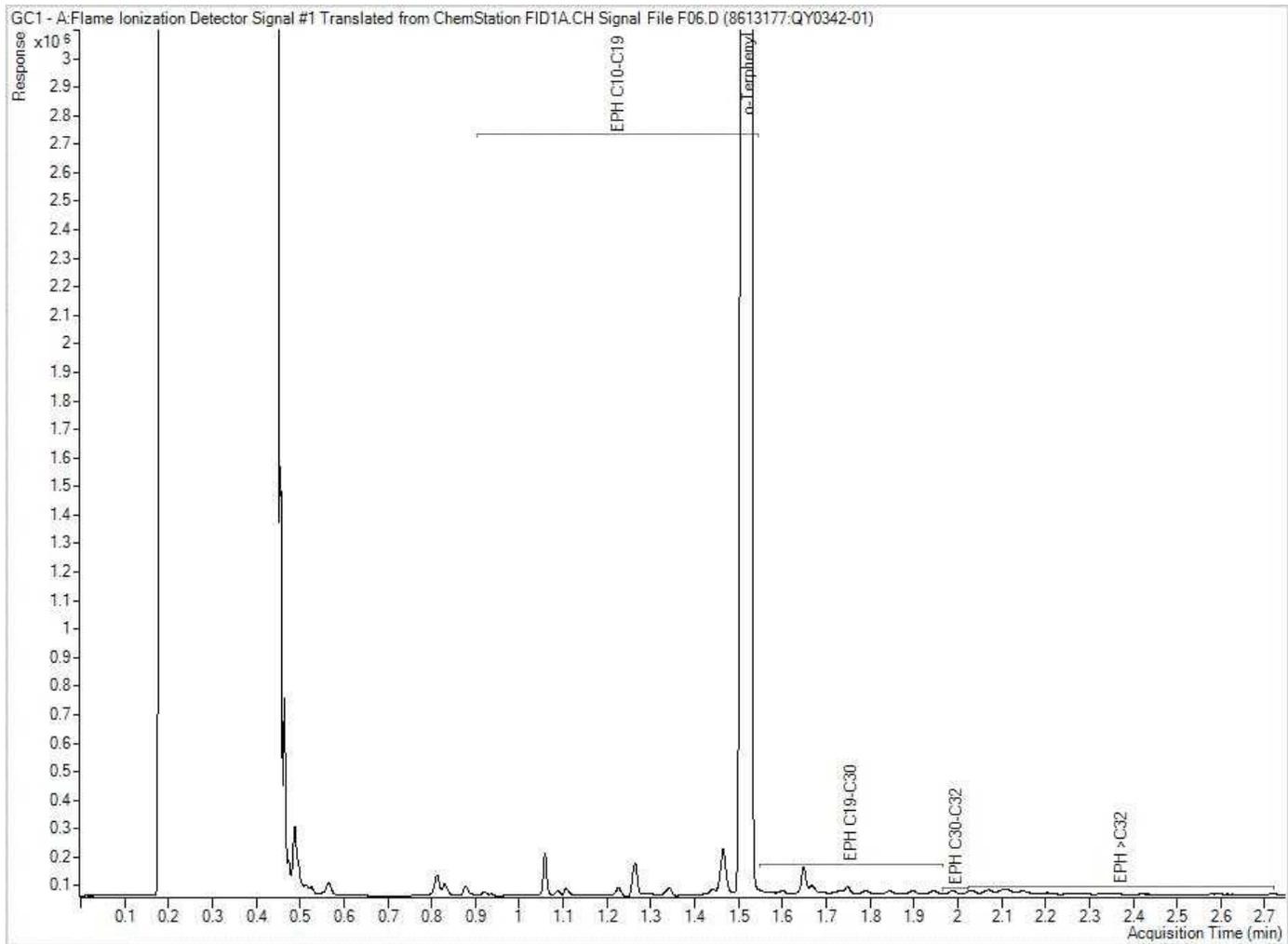
COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )					ANALYSIS REQUESTED:											
ADDRESS: 625 FISGARD STREET, PO BOX 1000																
CITY:	VICTORIA	PROV:	BC	POSTAL CODE:											V8W 2S6	
TEL:	(250) 360-3148	FAX:	(250) 360-3254	CONTACT:											Korene Torney	
PROJECT NAME AND NO.:	MILLSTREAM DOMESTIC WELLS		SAMPLER:	Shelley Alcock												
QUOTE NO.:	PO NO.:	ALS CONTACT:	JERRY HOLZBE													
REPORT FORMAT	<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca															
	<input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results															
FOR LAB USE ONLY	SAMPLE IDENTIFICATION		DATE / TIME COLLECTED		MATRIX	LEPH	HEPH	VOCs								NOTES (sample specific comments, due dates, etc.)
			YYYY-MM-DD	TIME												
	2017-050-640		2017-04-25	12:22	water	X	X	X								Drinking Water
	2017-050-641		2017-04-25	13:05	water	X	X	X								Drinking Water
TURN AROUND REQUIRED:	<input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)				RELINQUISHED BY:	DATE:	2017-04-25	RECEIVED BY:	DATE:							
					Shelley Alcock	TIME:	12:15	14:05	TIME:							
SEND INVOICE TO	<input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)				RELINQUISHED BY:	DATE:		RECEIVED BY:	DATE:	17/04/05						
INVOICE FORMAT	<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX					TIME:		14:05	TIME:	14:05						
SPECIAL INSTRUCTIONS:					FOR LAB USE ONLY											
					Cooler Seal Intact?	Sample Temperature: _____ °C	Cooling Method?									
					Yes ___ No ___ N/A	Frozen? ___ Yes ___ No	Icepacks ___ Ice ___ None									

EPH in Water when PAH required Chromatogram



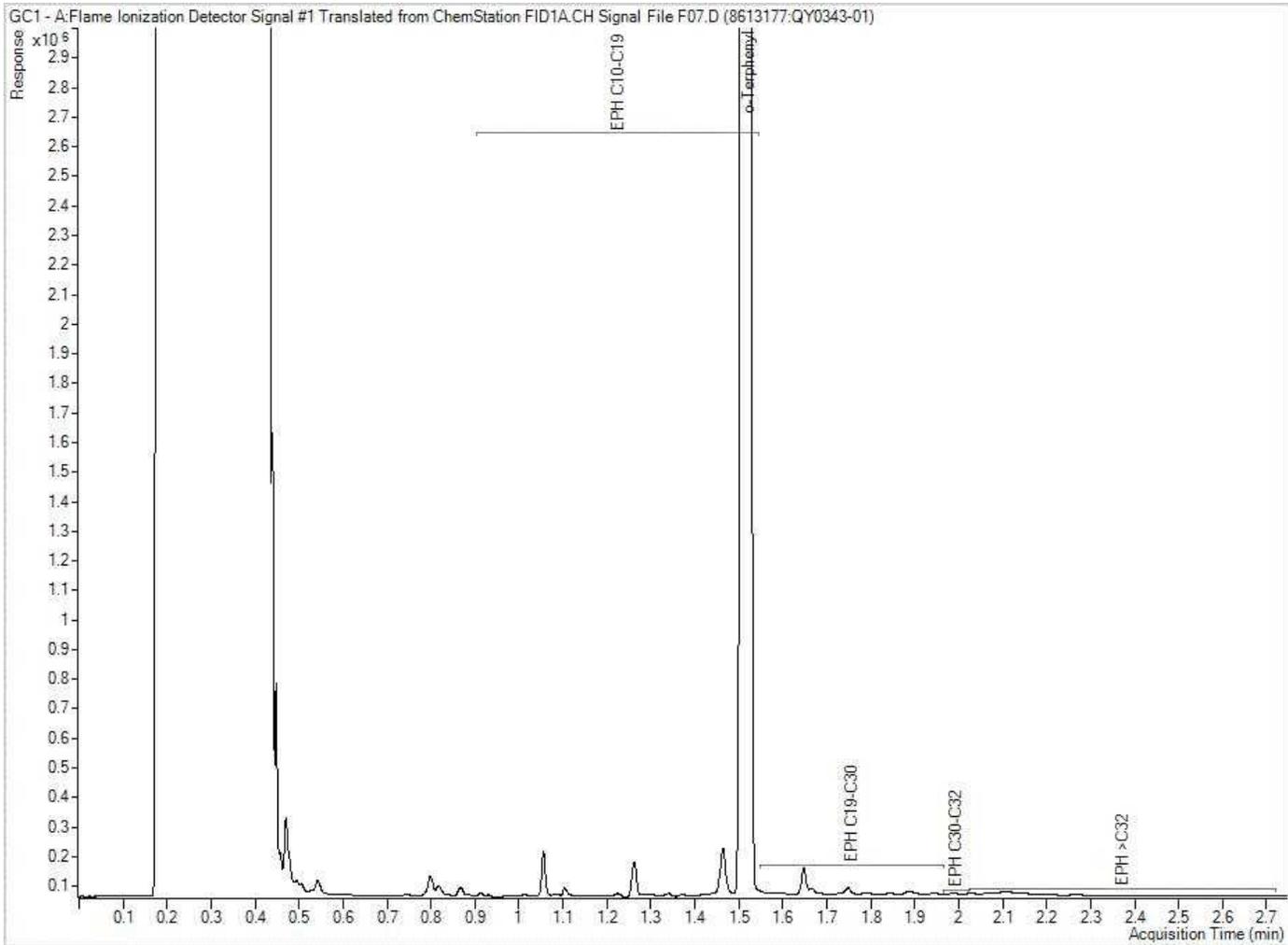
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

EPH in Water when PAH required Chromatogram



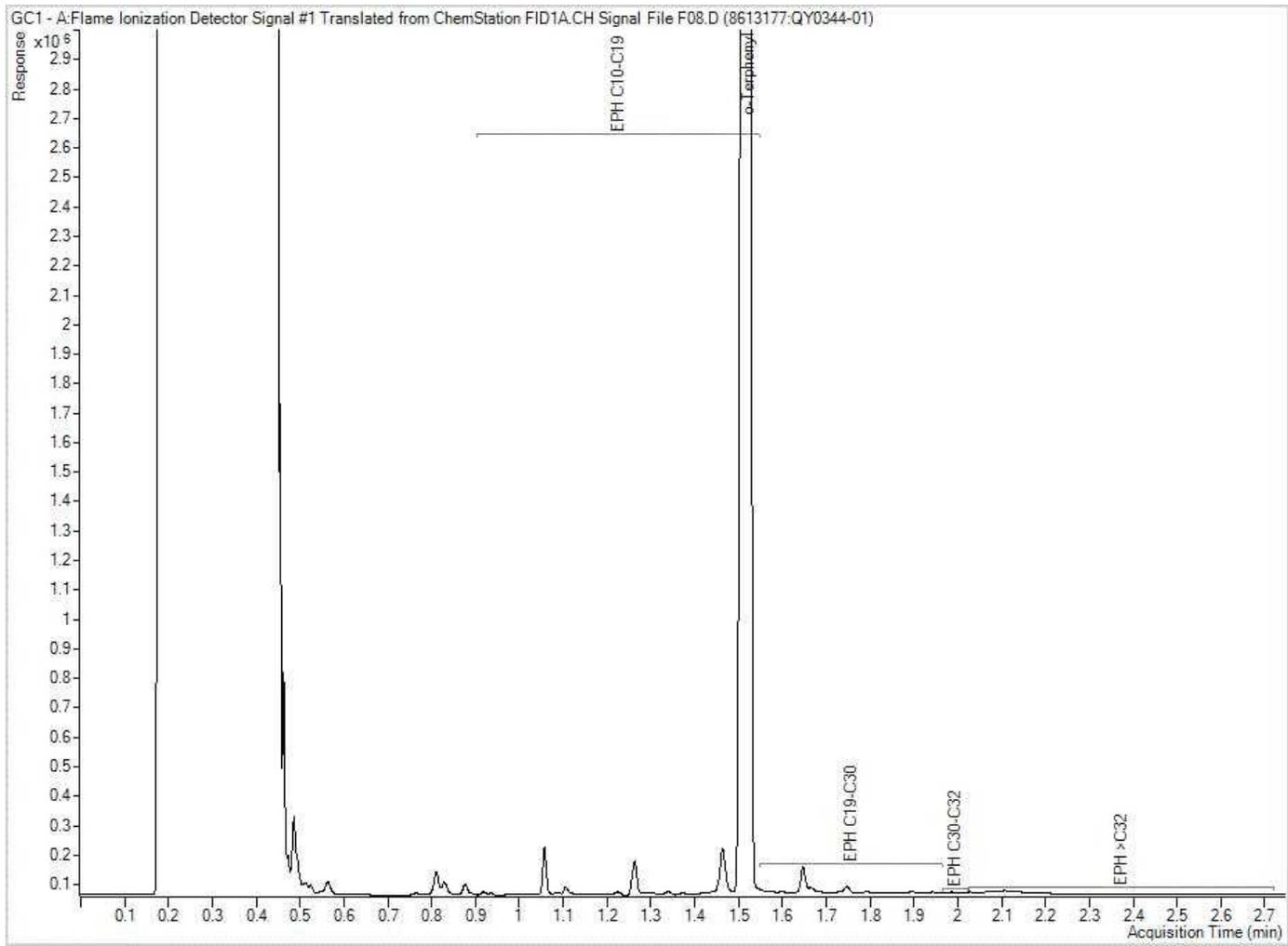
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



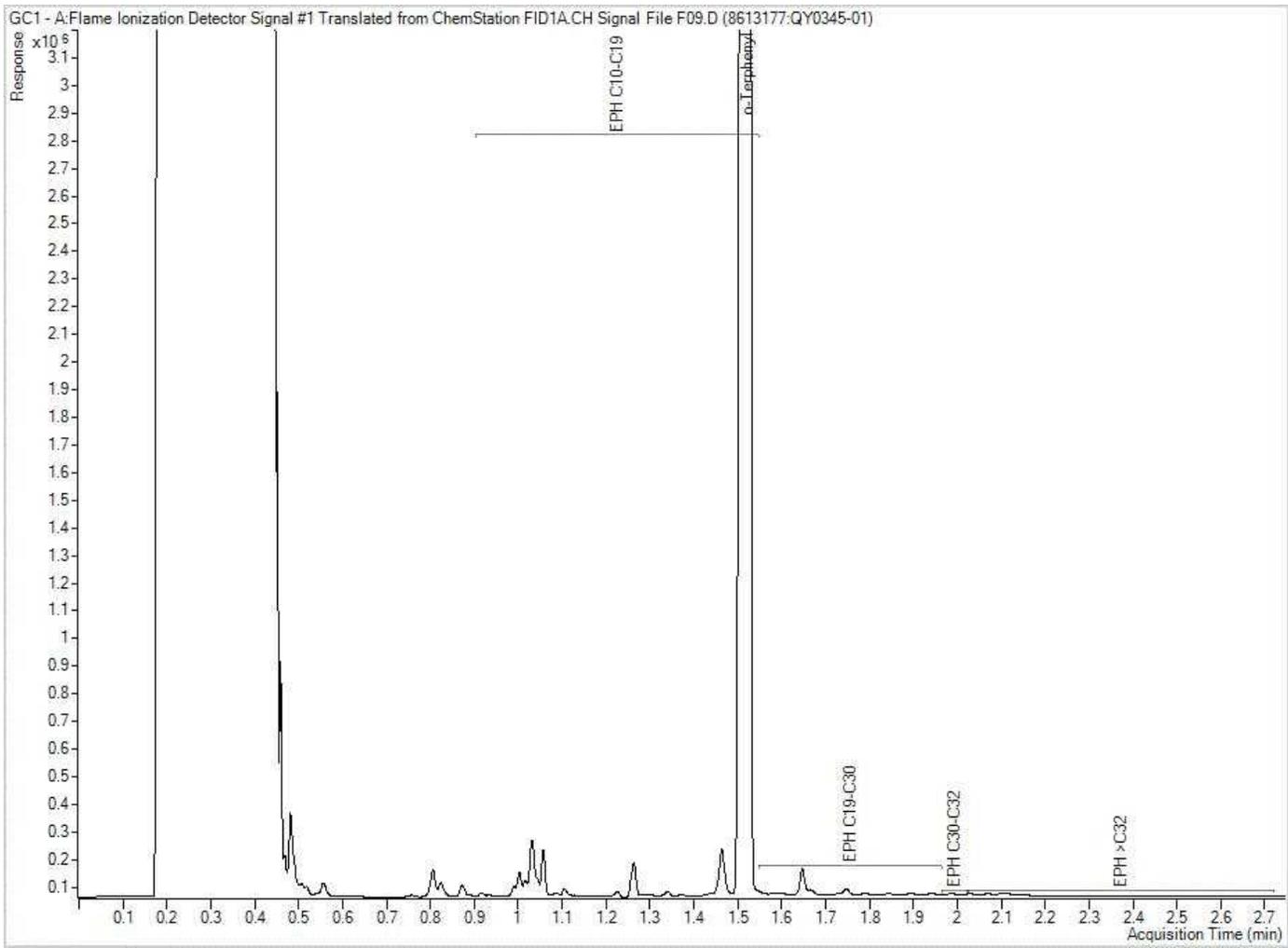
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



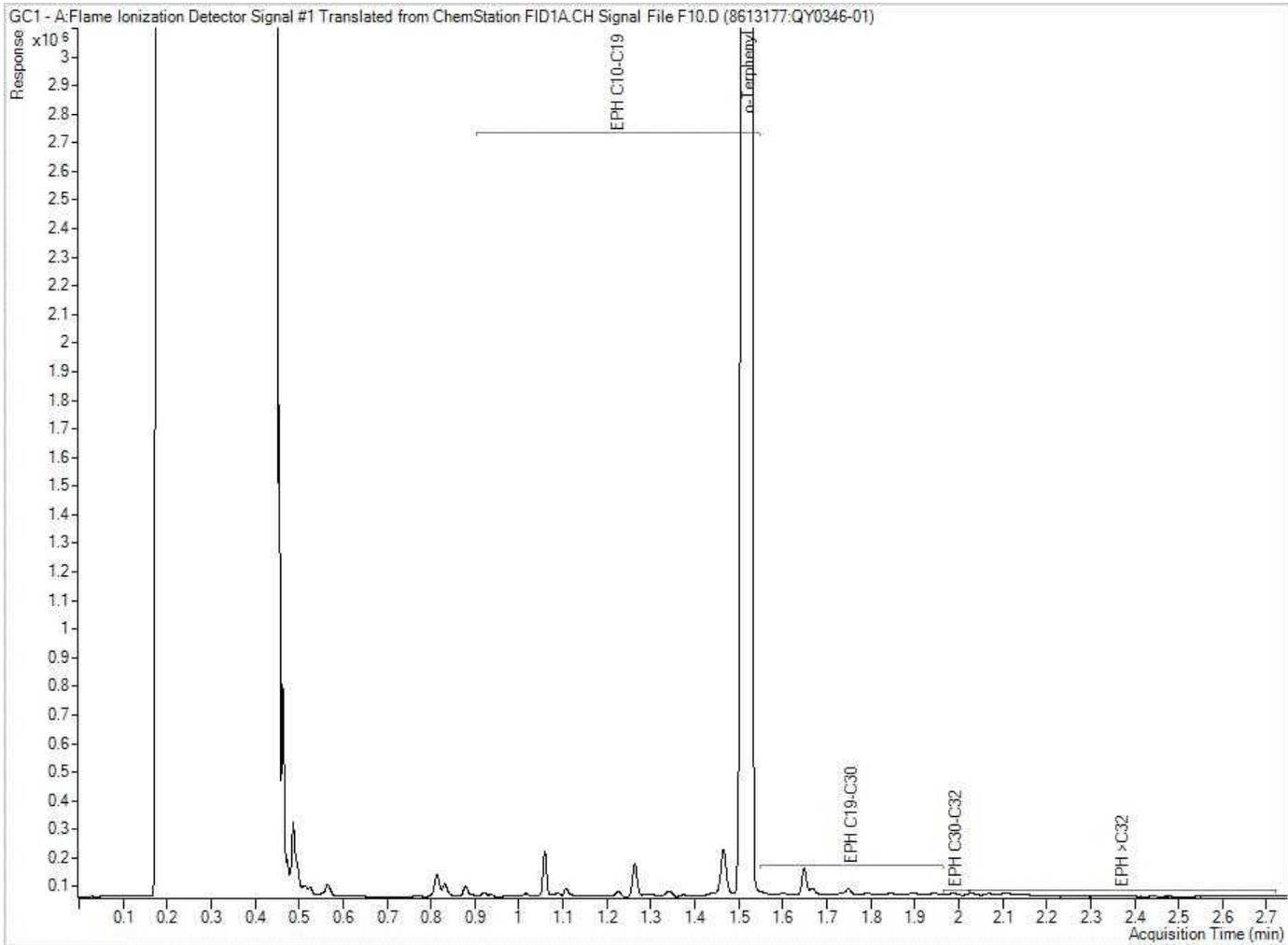
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



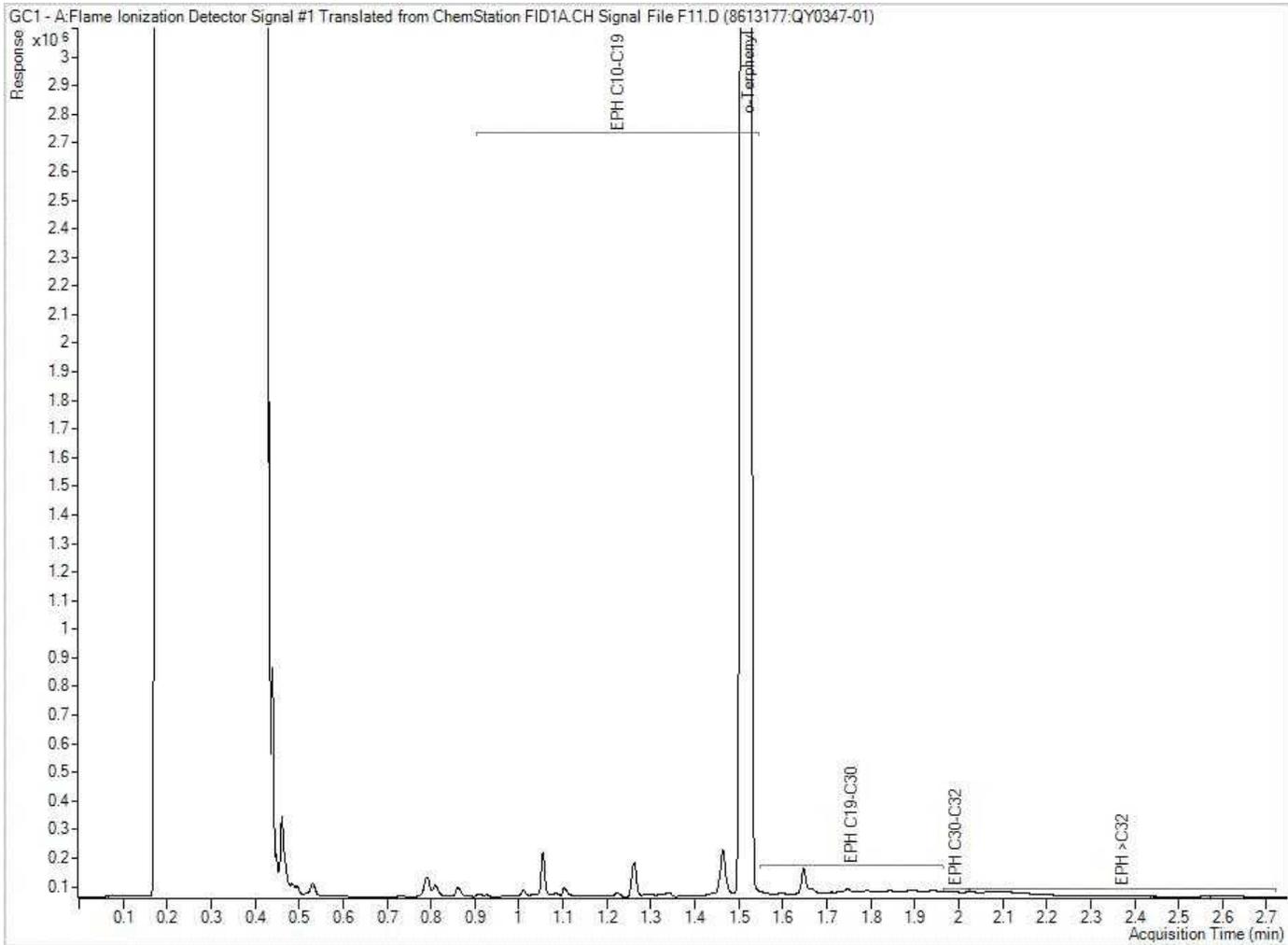
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



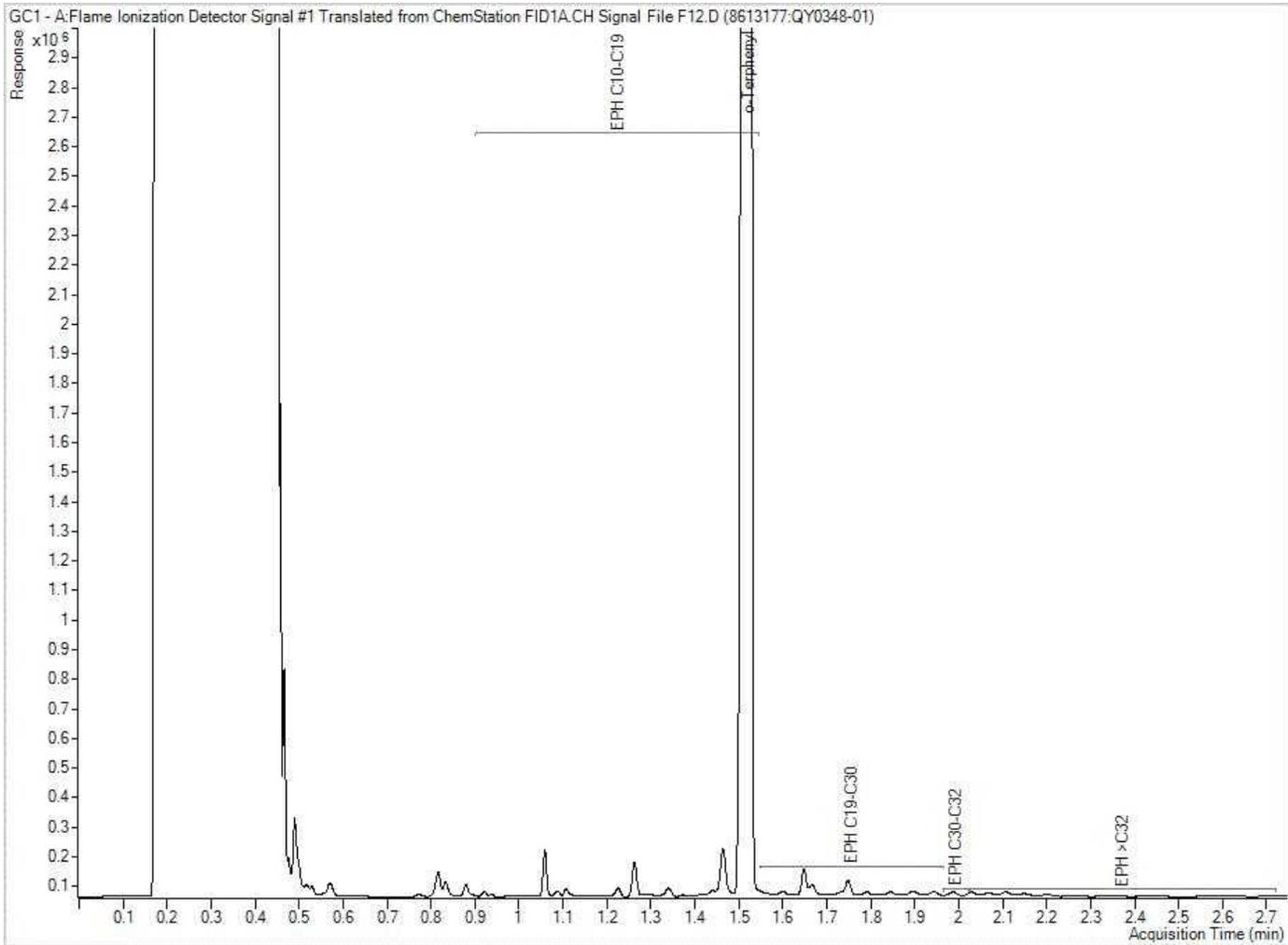
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



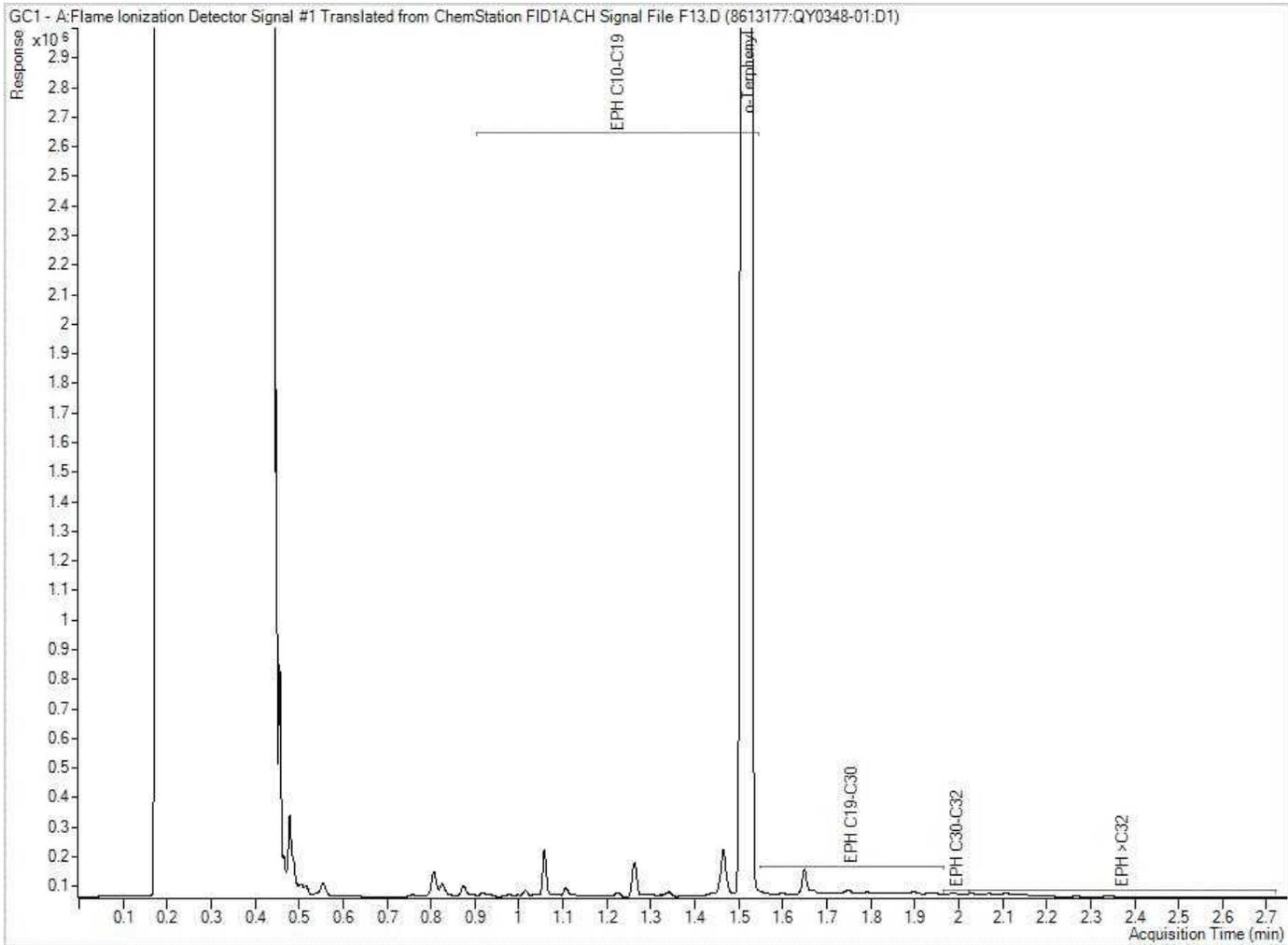
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

EPH in Water when PAH required Chromatogram



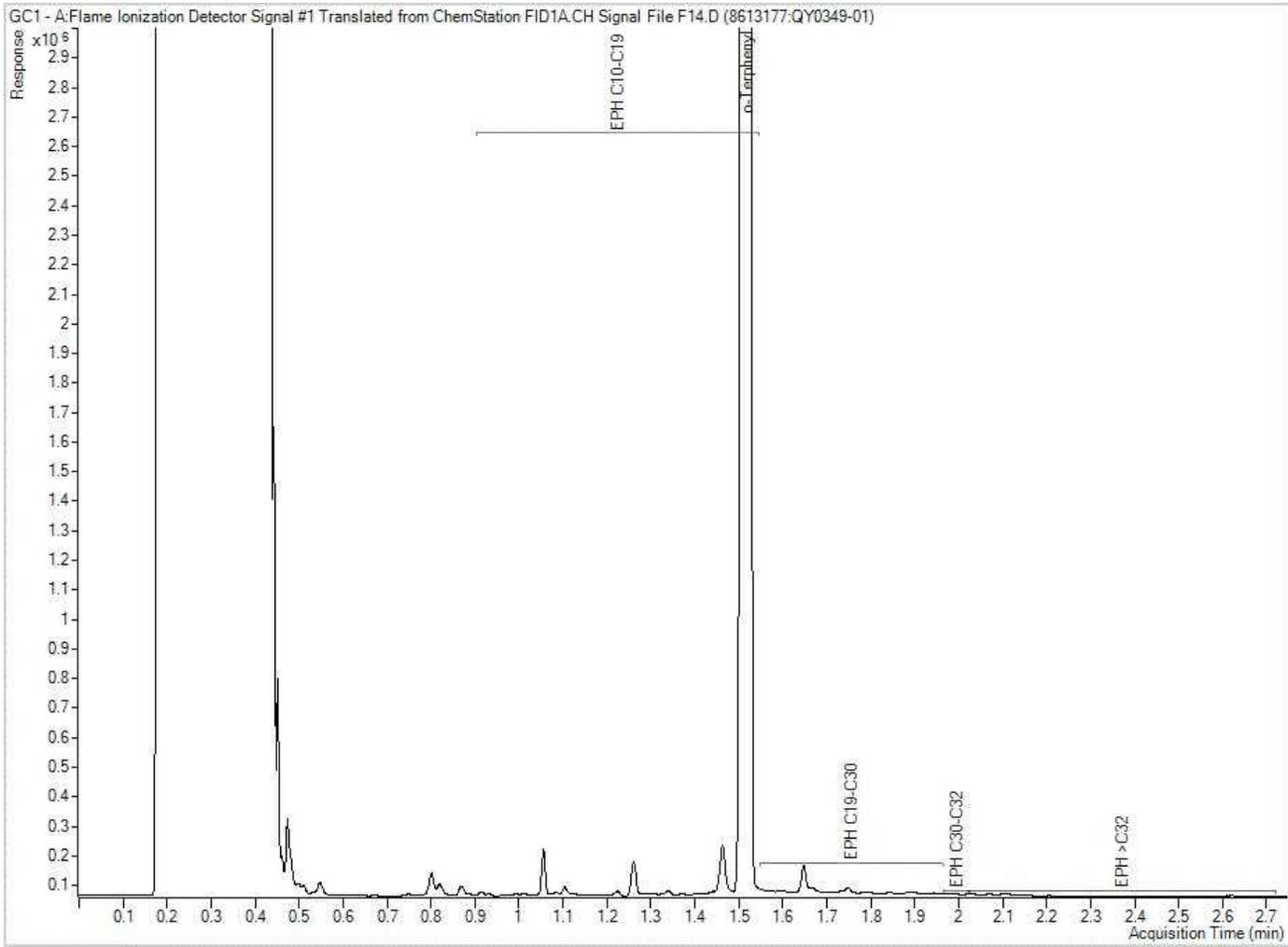
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

EPH in Water when PAH required Chromatogram



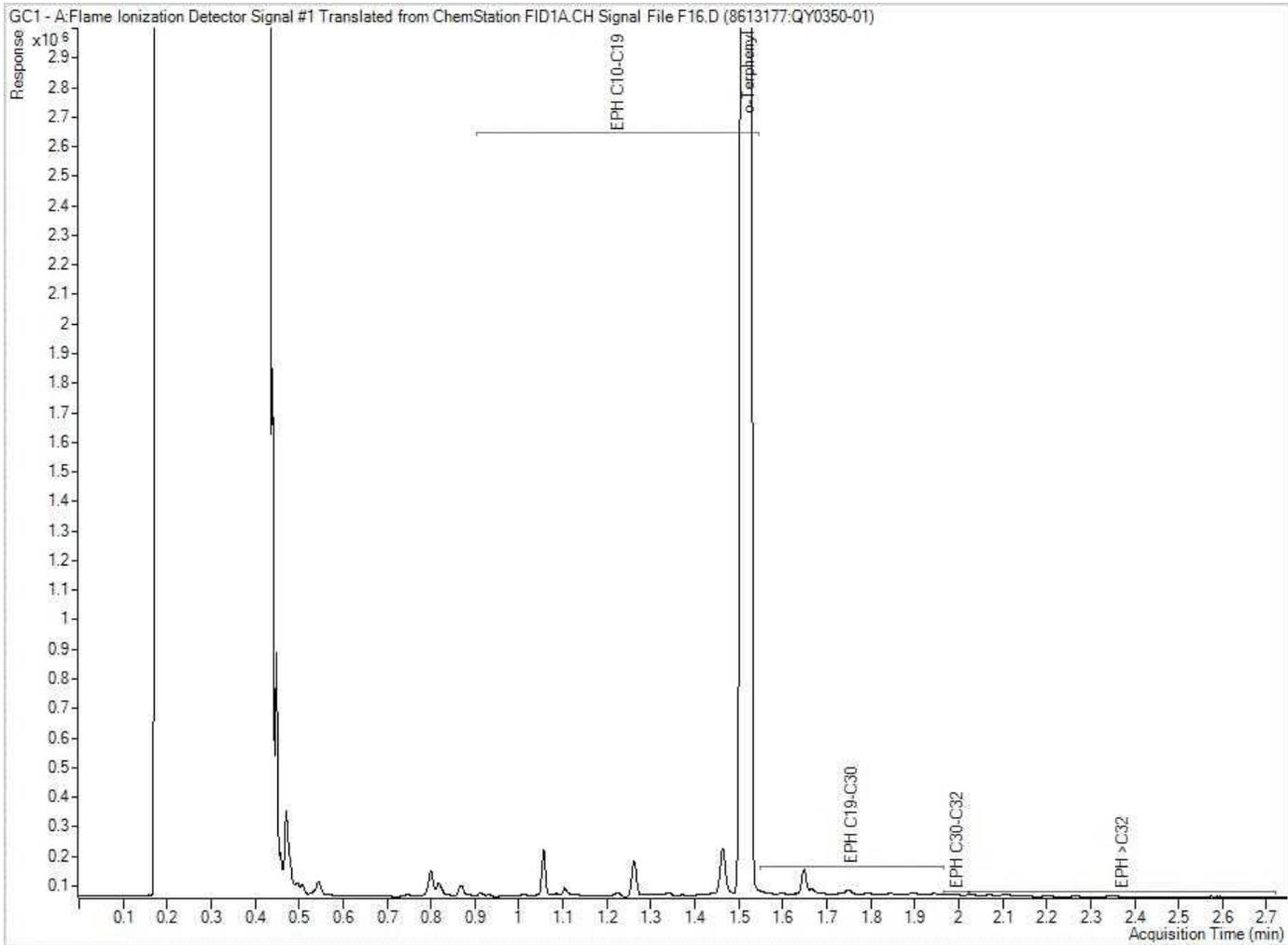
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

EPH in Water when PAH required Chromatogram



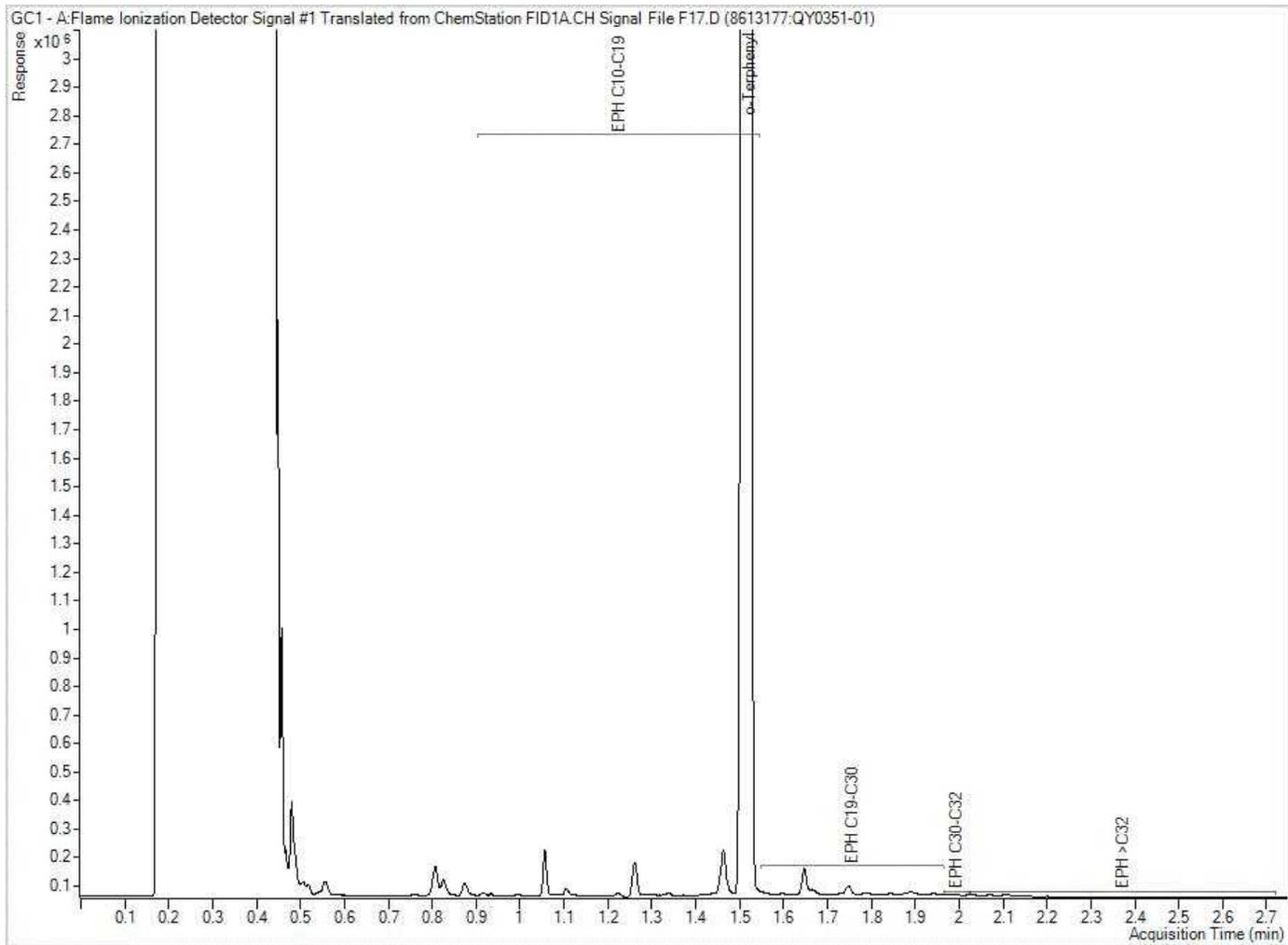
**Note:** This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



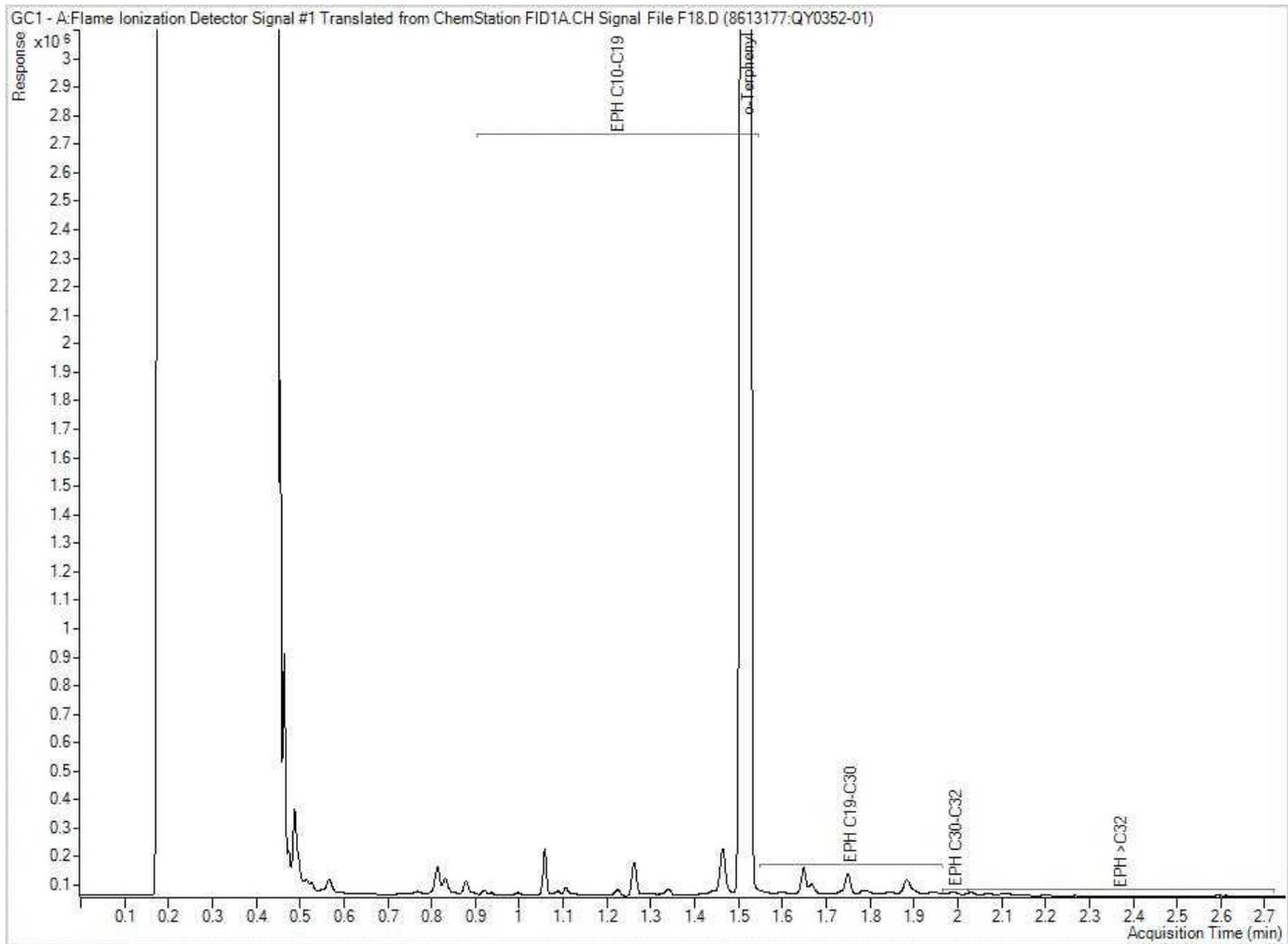
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

EPH in Water when PAH required Chromatogram



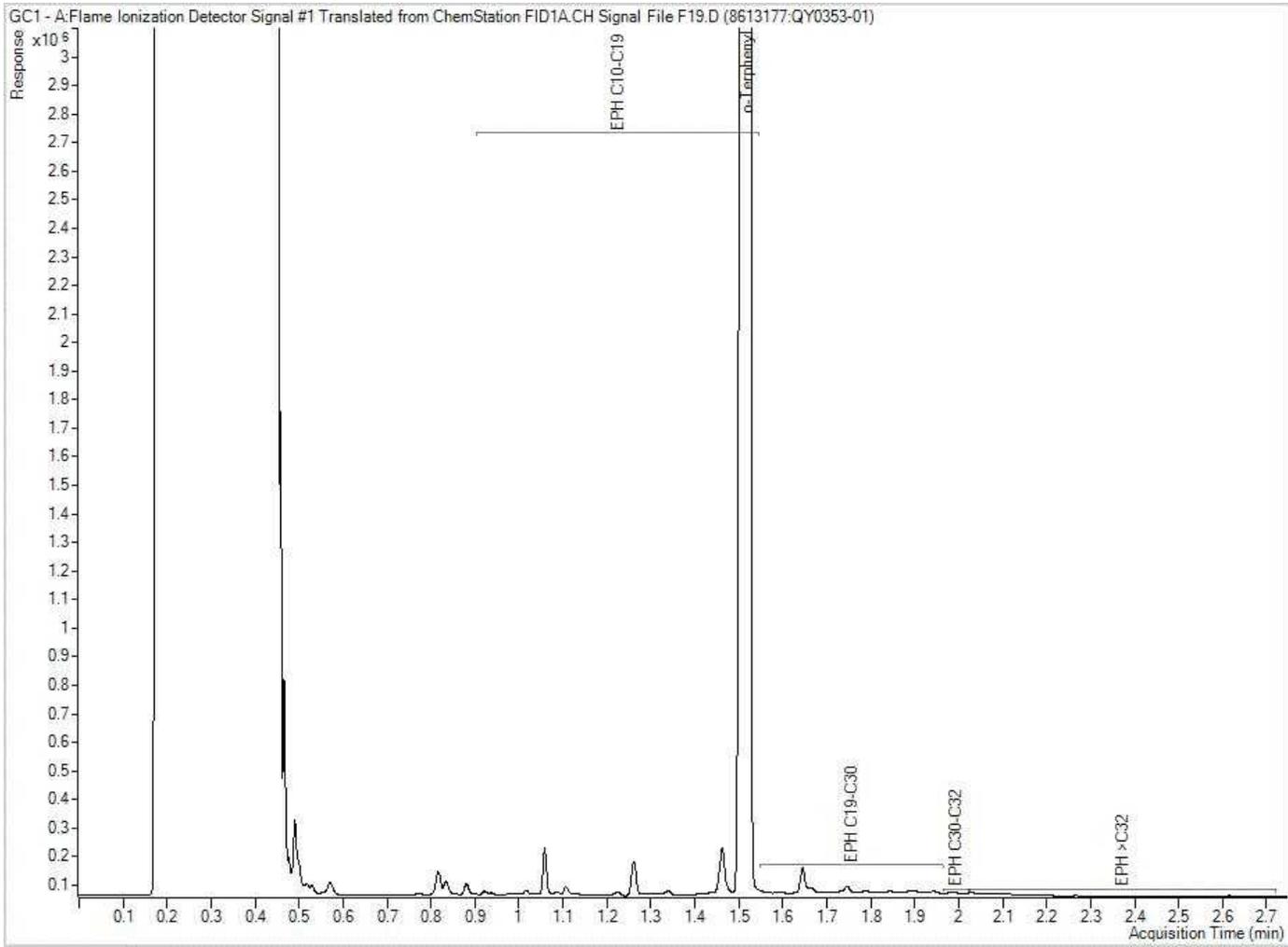
**Note:** This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



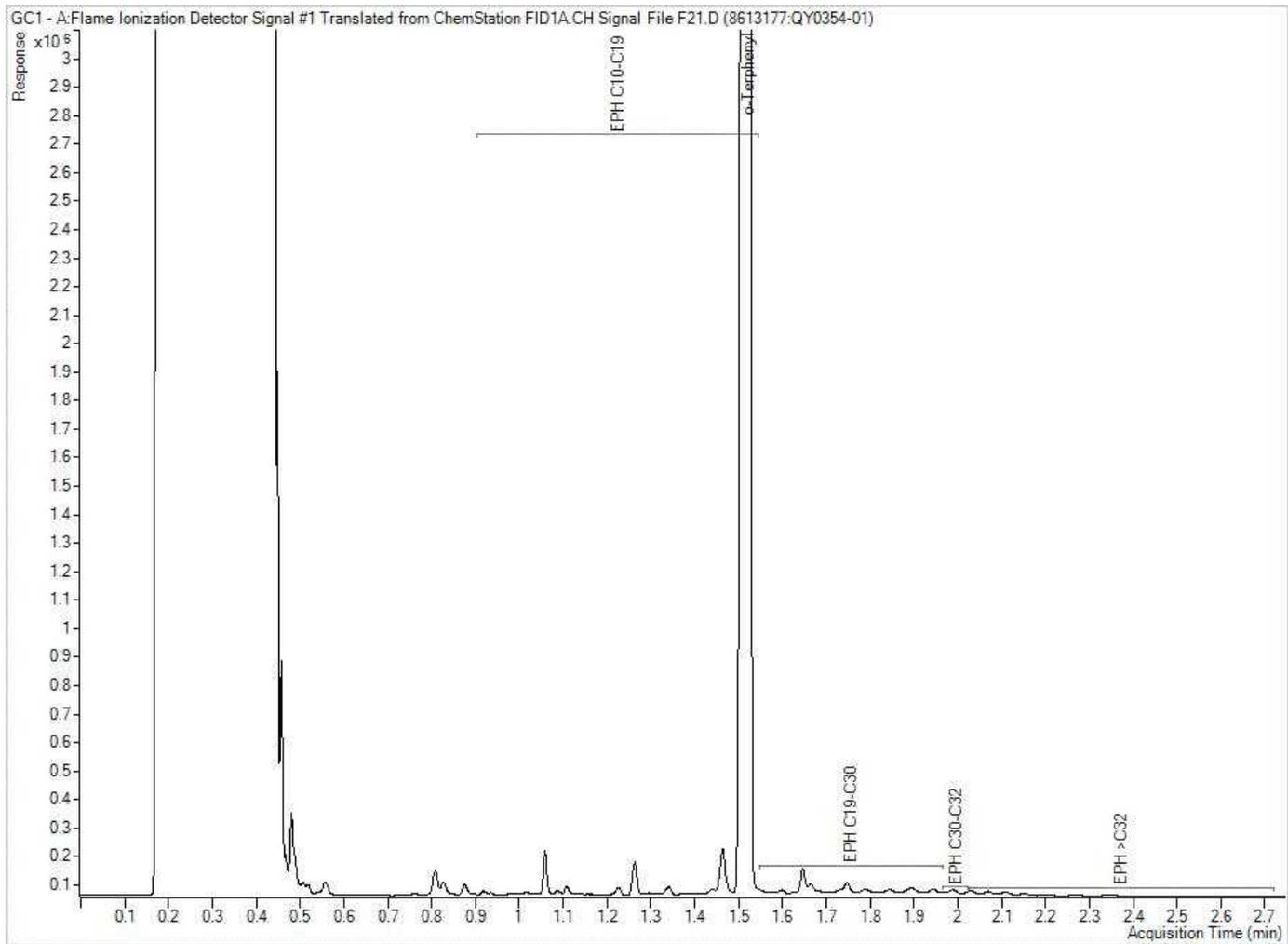
**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

EPH in Water when PAH required Chromatogram



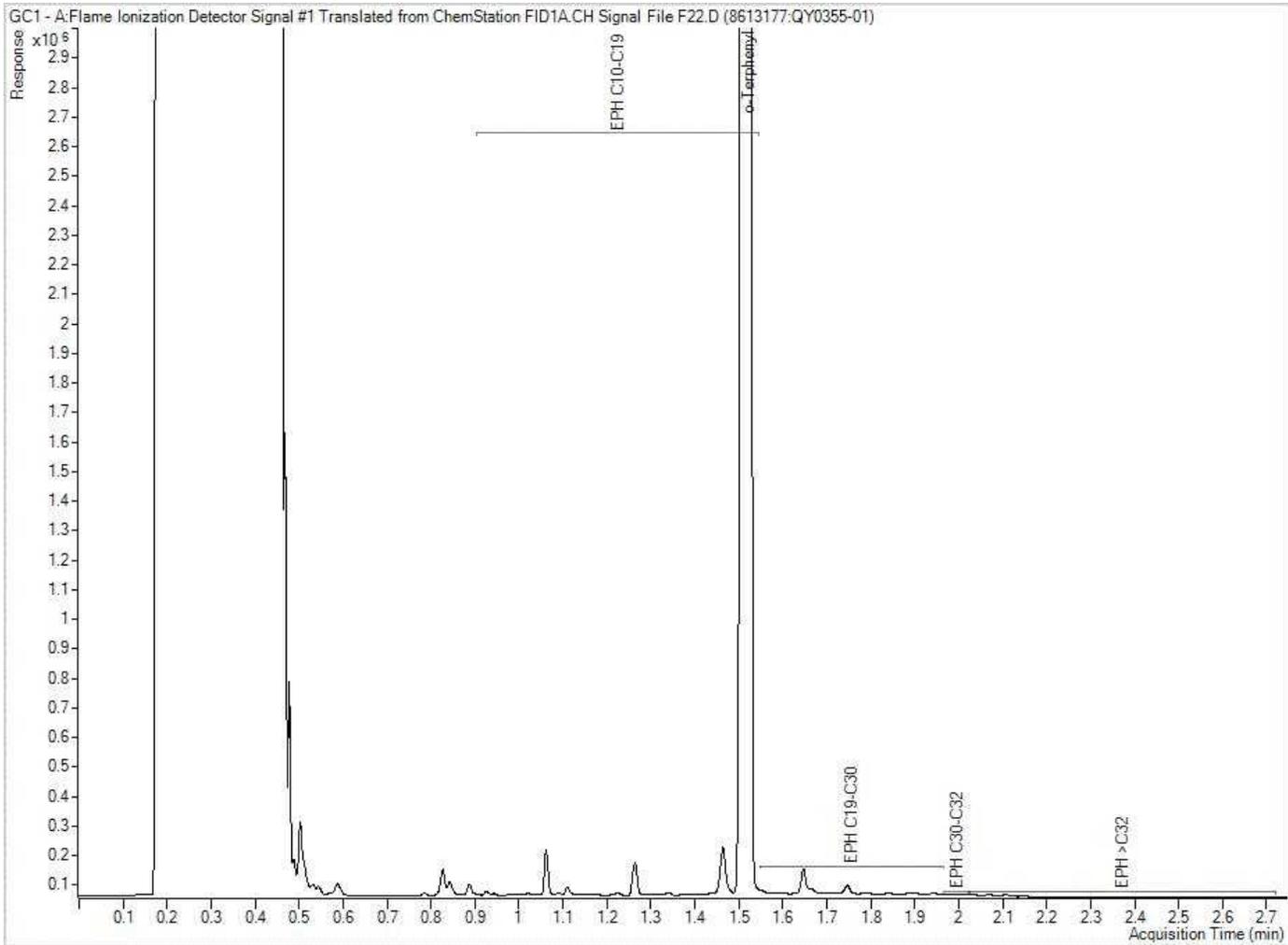
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



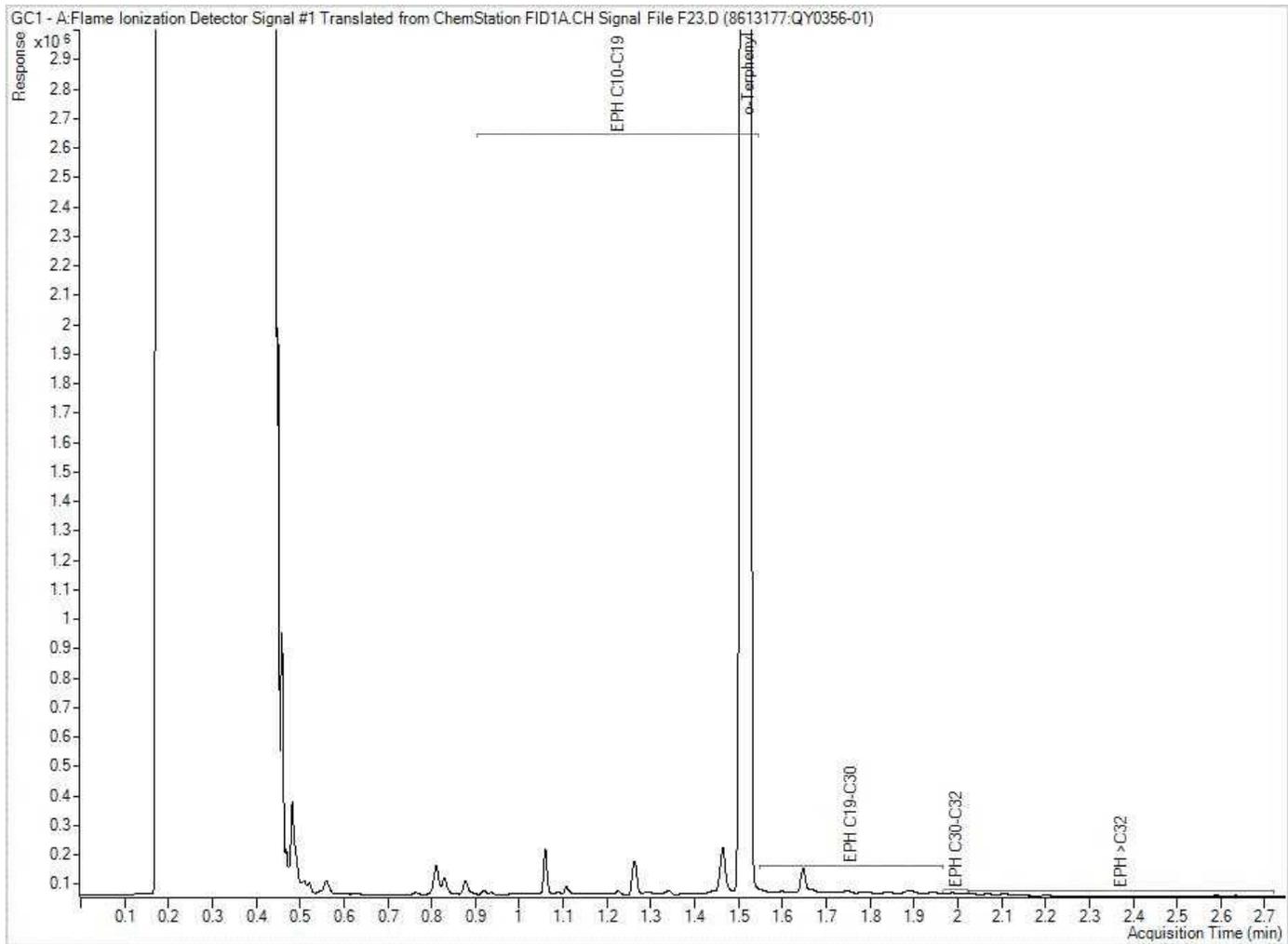
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EPH in Water when PAH required Chromatogram



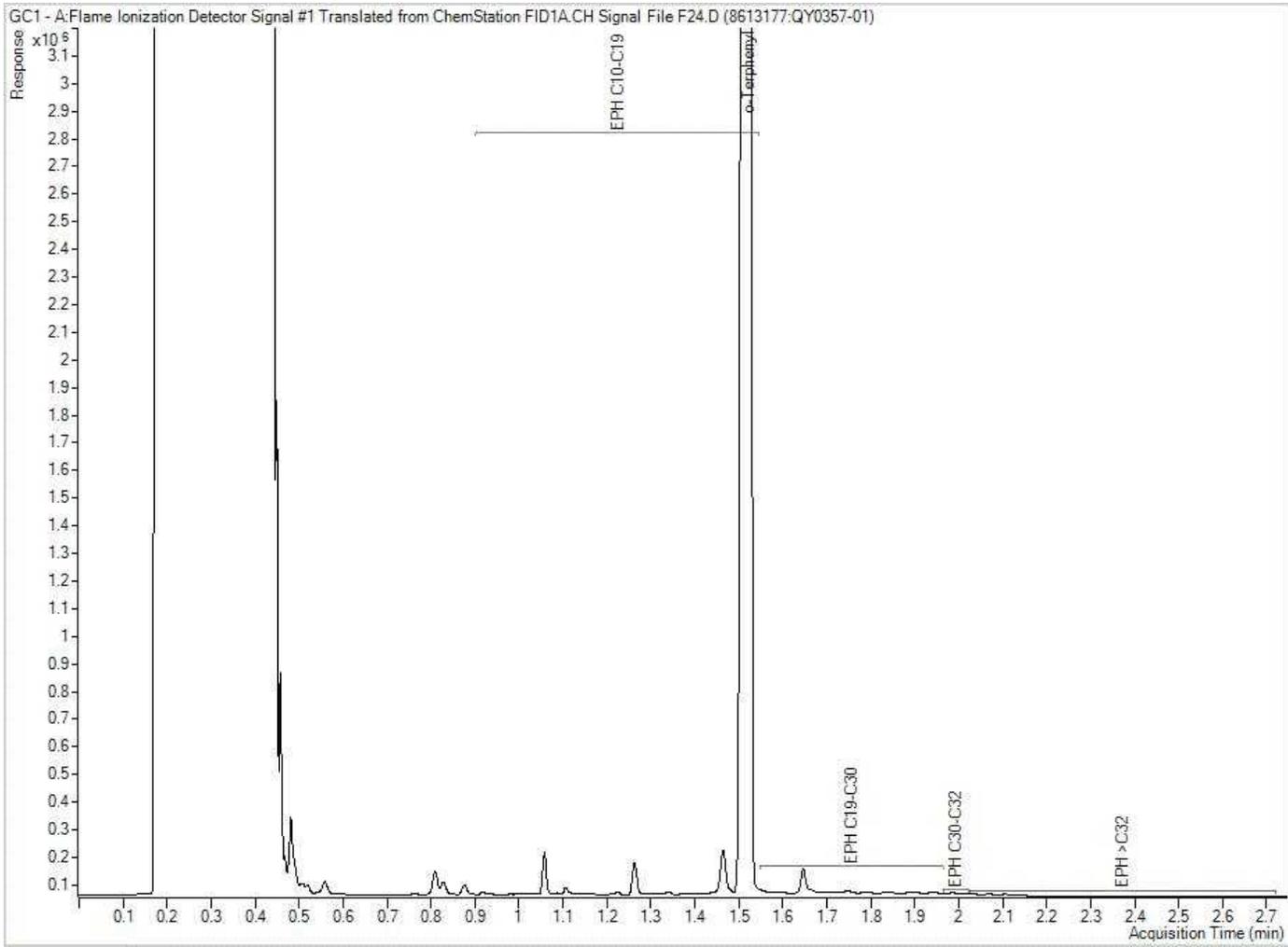
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EPH in Water when PAH required Chromatogram



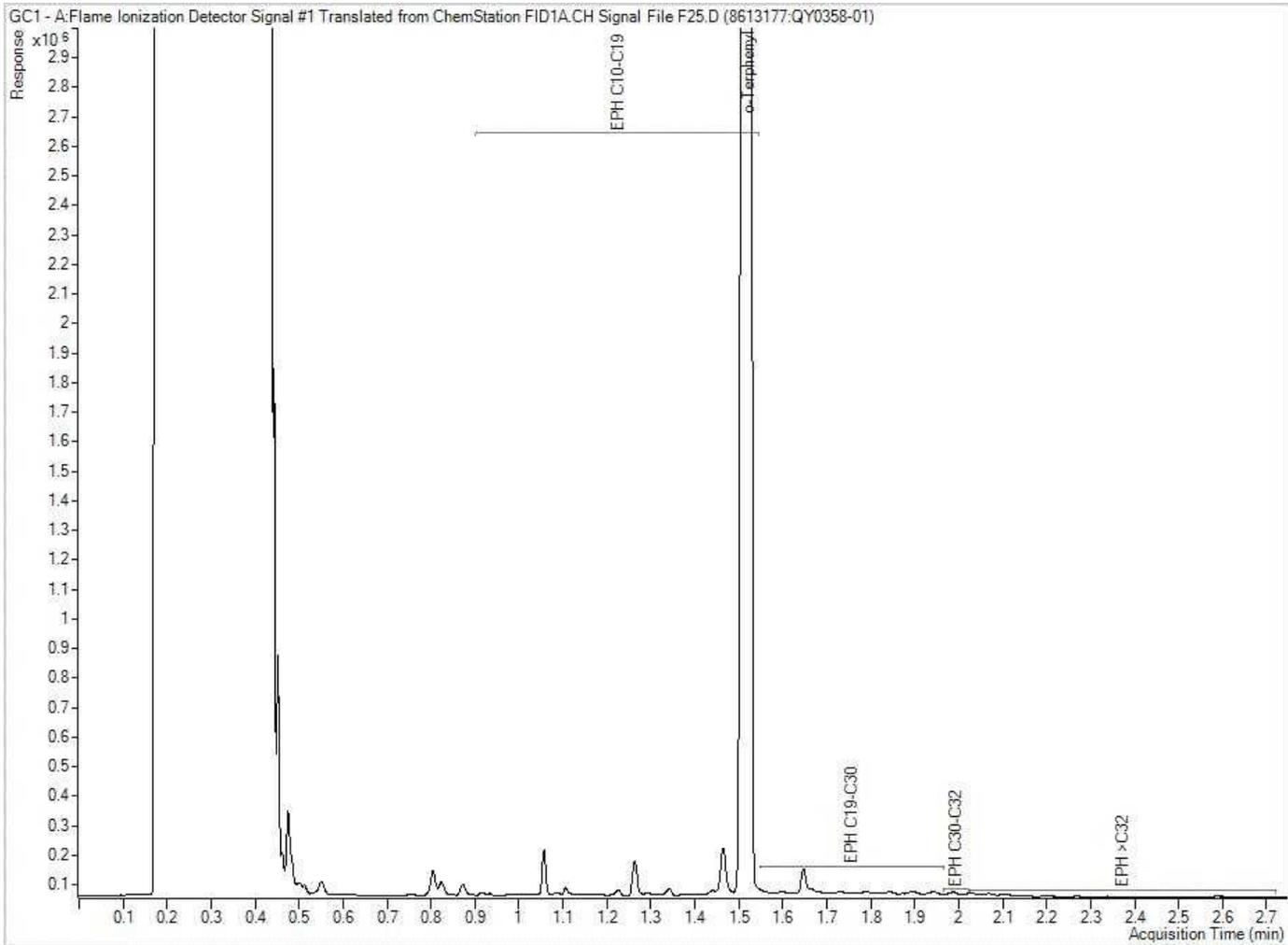
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EPH in Water when PAH required Chromatogram



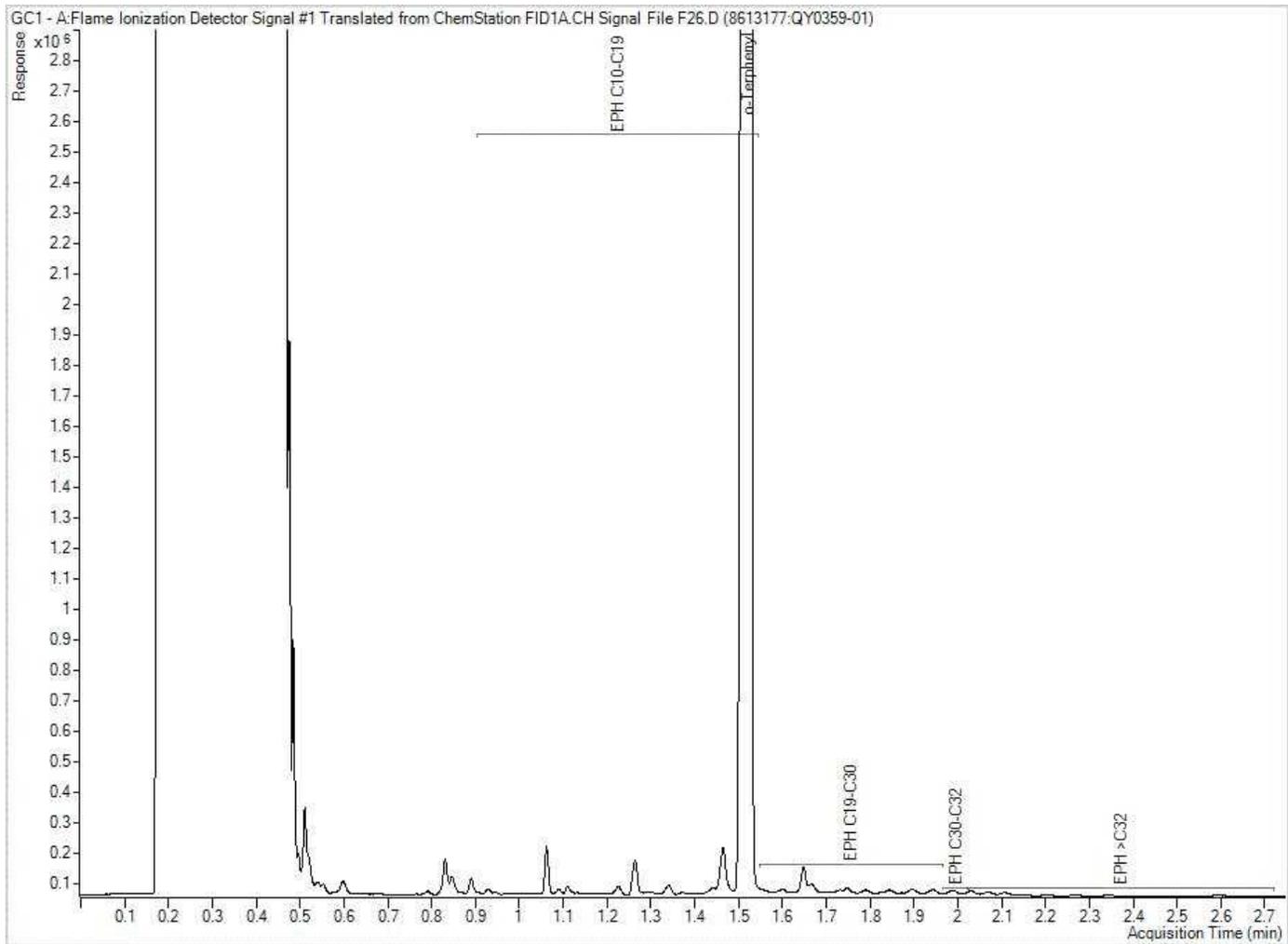
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



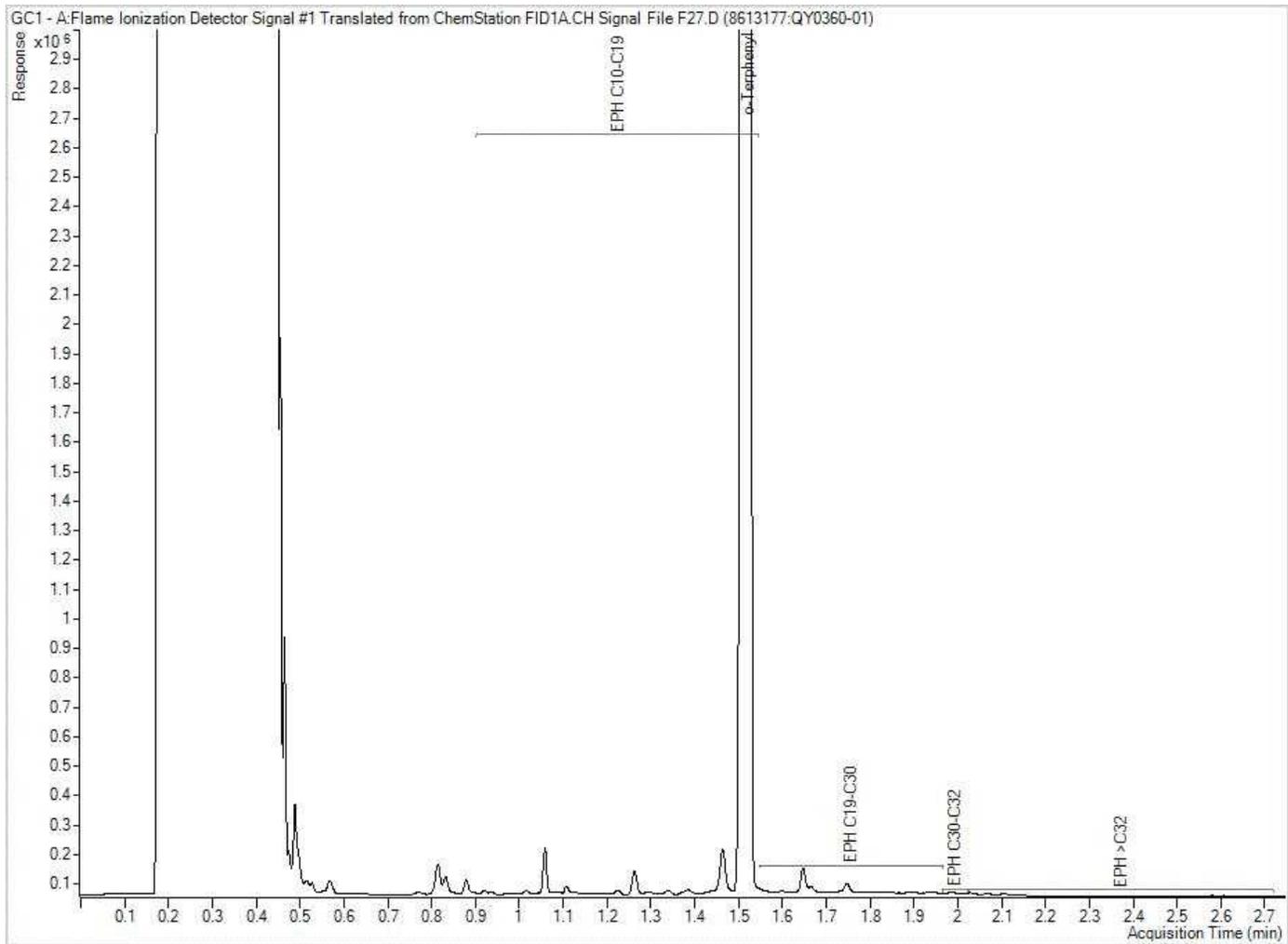
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EPH in Water when PAH required Chromatogram



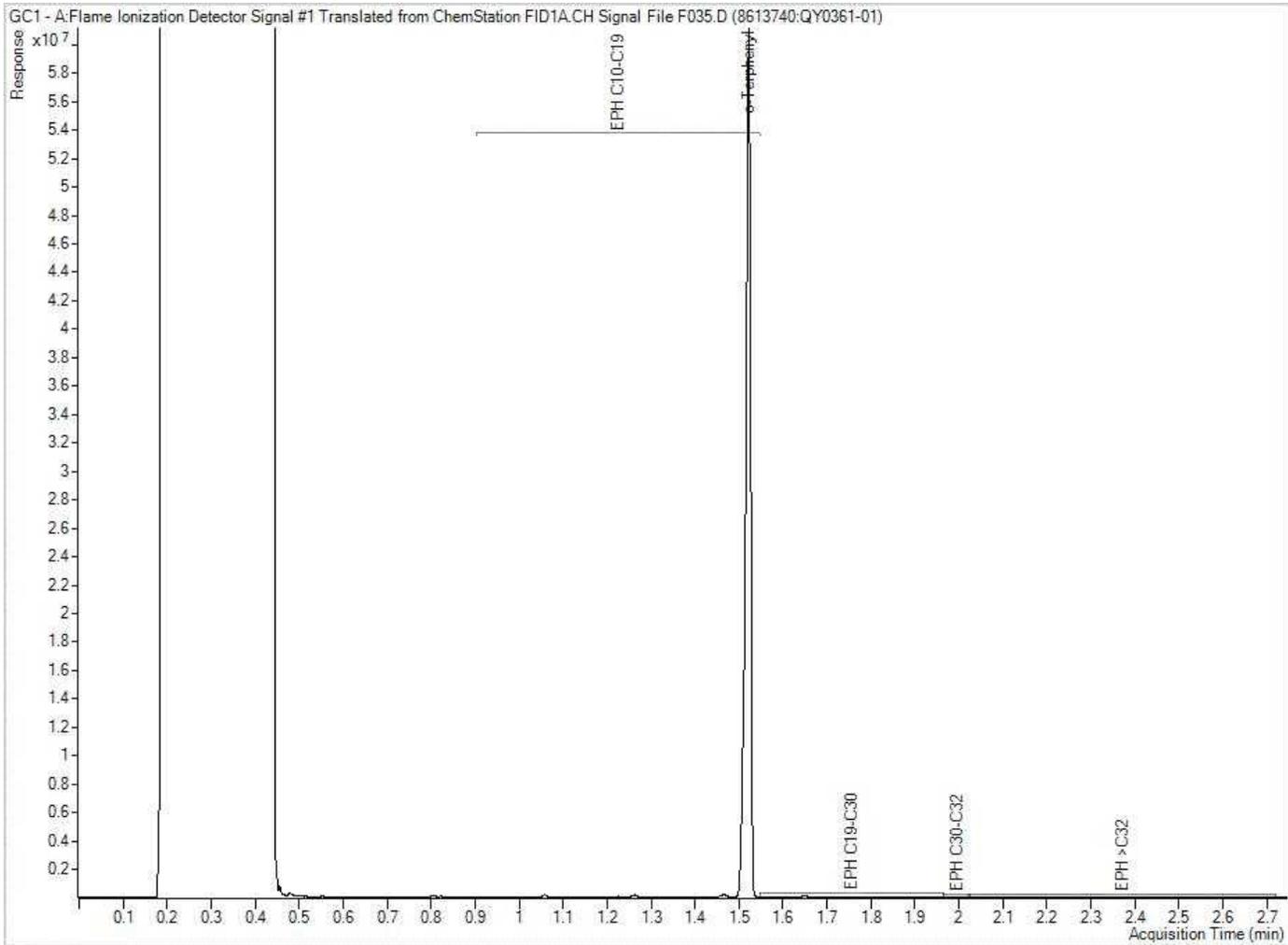
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Water when PAH required Chromatogram



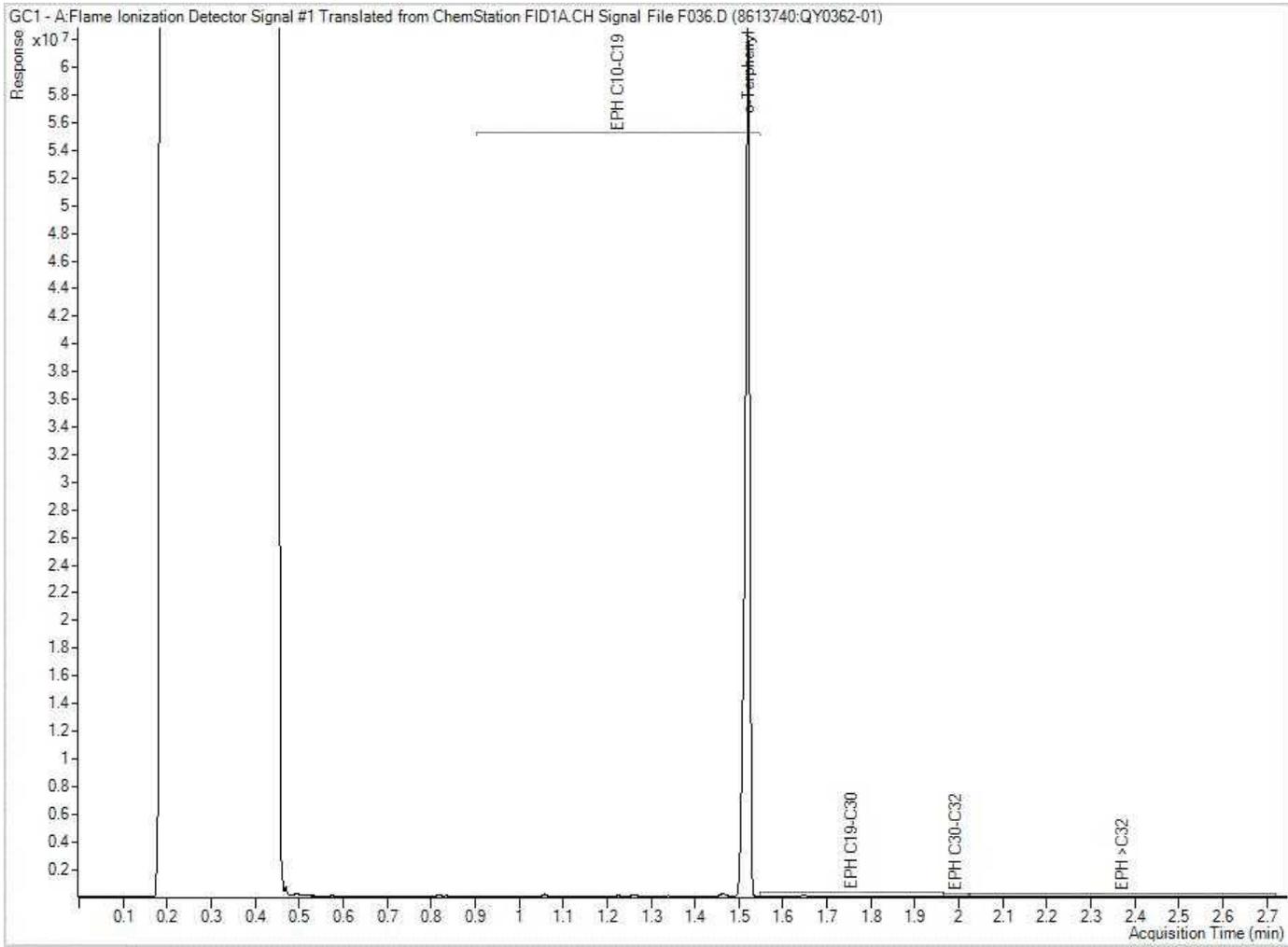
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EPH in Water when PAH required Chromatogram



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EPH in Water when PAH required Chromatogram



**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

Your Project #: MILLSTREAM DOMESTIC WELLS  
Your C.O.C. #: 08436553

**Attention: SHELLEY ALCOCK**

CAPITAL REGIONAL DISTRICT  
CRD-VIC 625 FISGARD  
PO Box 1000  
625 Fisgard Street  
VICTORIA, BC  
Canada V8W 2S6

**Report Date: 2017/05/10**  
Report #: R2380665  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B733656**

**Received: 2017/05/04, 13:32**

Sample Matrix: DRINKING WATER  
# Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
EPH in Water when PAH required	1	2017/05/08	2017/05/08	BBY8SOP-00029	BCMOE EPH w 12/00 m
PAH in Water by GC/MS (SIM)	1	2017/05/08	2017/05/08	BBY8SOP-00021	EPA 8270d R5 m
Total LMW, HMW, Total PAH Calc	1	N/A	2017/05/10	BBY WI-00033	Auto Calc
EPH less PAH in Water by GC/FID	1	N/A	2017/05/10	BBY WI-00033	Auto Calc
VOCs, VH, F1, LH in Water by HS GC/MS	1	2017/05/08	2017/05/09	BBY8SOP-00009/11/12	BC Lab Manual 2007
Volatile HC-BTEX	1	N/A	2017/05/09	BBY WI-00033	Auto Calc

**Remarks:**

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: MILLSTREAM DOMESTIC WELLS  
Your C.O.C. #: 08436553

**Attention: SHELLEY ALCOCK**

CAPITAL REGIONAL DISTRICT  
CRD-VIC 625 FISGARD  
PO Box 1000  
625 Fisgard Street  
VICTORIA, BC  
Canada V8W 2S6

**Report Date: 2017/05/10**  
Report #: R2380665  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B733656**  
**Received: 2017/05/04, 13:32**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Debbie Nordbruget, Project Manager

Email: DNordbruget@maxxam.ca

Phone# (250)385-6112

=====

This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B733656  
Report Date: 2017/05/10

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

<b>Maxxam ID</b>			QZ5718		
<b>Sampling Date</b>			2017/05/04 10:25		
<b>COC Number</b>			08436553		
	<b>UNITS</b>	<b>MAC</b>	<b>2017050642</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Polycyclic Aromatics</b>					
Low Molecular Weight PAH's	ug/L	-	<0.10	0.10	8620337
High Molecular Weight PAH's	ug/L	-	<0.050	0.050	8620337
Total PAH	ug/L	-	<0.10	0.10	8620337
Quinoline	ug/L	-	<0.020	0.020	8623291
Naphthalene	ug/L	-	<0.10	0.10	8623291
2-Methylnaphthalene	ug/L	-	<0.10	0.10	8623291
Acenaphthylene	ug/L	-	<0.050	0.050	8623291
Acenaphthene	ug/L	-	<0.050	0.050	8623291
Fluorene	ug/L	-	<0.050	0.050	8623291
Phenanthrene	ug/L	-	<0.050	0.050	8623291
Anthracene	ug/L	-	<0.010	0.010	8623291
Acridine	ug/L	-	<0.050	0.050	8623291
Fluoranthene	ug/L	-	<0.020	0.020	8623291
Pyrene	ug/L	-	<0.020	0.020	8623291
Benzo(a)anthracene	ug/L	-	<0.010	0.010	8623291
Chrysene	ug/L	-	<0.020	0.020	8623291
Benzo(b&j)fluoranthene	ug/L	-	<0.030	0.030	8623291
Benzo(k)fluoranthene	ug/L	-	<0.050	0.050	8623291
Benzo(a)pyrene	ug/L	0.04	<0.0050	0.0050	8623291
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	0.050	8623291
Dibenz(a,h)anthracene	ug/L	-	<0.0030	0.0030	8623291
Benzo(g,h,i)perylene	ug/L	-	<0.050	0.050	8623291
<b>Calculated Parameters</b>					
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	0.20	8620339
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	0.20	8620339
<b>Ext. Pet. Hydrocarbon</b>					
EPH (C10-C19)	mg/L	-	<0.20	0.20	8623300
EPH (C19-C32)	mg/L	-	<0.20	0.20	8623300
<b>Surrogate Recovery (%)</b>					
O-TERPHENYL (sur.)	%	-	100		8623300
D10-ANTHRACENE (sur.)	%	-	110		8623291
D8-ACENAPHTHYLENE (sur.)	%	-	100		8623291
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					

Maxxam Job #: B733656  
Report Date: 2017/05/10

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

<b>Maxxam ID</b>			QZ5718		
<b>Sampling Date</b>			2017/05/04 10:25		
<b>COC Number</b>			08436553		
	<b>UNITS</b>	<b>MAC</b>	<b>2017050642</b>	<b>RDL</b>	<b>QC Batch</b>
D8-NAPHTHALENE (sur.)	%	-	83		8623291
D9-Acridine (sur.)	%	-	120		8623291
TERPHENYL-D14 (sur.)	%	-	108		8623291
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					

Maxxam Job #: B733656  
Report Date: 2017/05/10

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				QZ5718		
Sampling Date				2017/05/04 10:25		
COC Number				08436553		
	UNITS	MAC	AO	2017050642	RDL	QC Batch
<b>Volatiles</b>						
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	300	8620065
Chloromethane	ug/L	-	-	<1.0	1.0	8623537
Vinyl chloride	ug/L	2	-	<0.50	0.50	8623537
Chloroethane	ug/L	-	-	<1.0	1.0	8623537
Trichlorofluoromethane	ug/L	-	-	<4.0	4.0	8623537
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	2.0	8623537
Dichlorodifluoromethane	ug/L	-	-	<2.0	2.0	8623537
1,1-dichloroethene	ug/L	14	-	<0.50	0.50	8623537
Dichloromethane	ug/L	50	-	<2.0	2.0	8623537
trans-1,2-dichloroethene	ug/L	-	-	<1.0	1.0	8623537
1,1-dichloroethane	ug/L	-	-	<0.50	0.50	8623537
cis-1,2-dichloroethene	ug/L	-	-	<1.0	1.0	8623537
Chloroform	ug/L	-	-	<1.0	1.0	8623537
1,1,1-trichloroethane	ug/L	-	-	<0.50	0.50	8623537
1,2-dichloroethane	ug/L	5	-	<0.50	0.50	8623537
Carbon tetrachloride	ug/L	2	-	<0.50	0.50	8623537
Benzene	ug/L	5	-	<0.40	0.40	8623537
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	4.0	8623537
1,2-dichloropropane	ug/L	-	-	<0.50	0.50	8623537
cis-1,3-dichloropropene	ug/L	-	-	<1.0	1.0	8623537
trans-1,3-dichloropropene	ug/L	-	-	<1.0	1.0	8623537
Bromomethane	ug/L	-	-	<1.0	1.0	8623537
1,1,2-trichloroethane	ug/L	-	-	<0.50	0.50	8623537
Trichloroethene	ug/L	5	-	<0.50	0.50	8623537
Chlorodibromomethane	ug/L	-	-	<1.0	1.0	8623537
1,2-dibromoethane	ug/L	-	-	<0.20	0.20	8623537
Tetrachloroethene	ug/L	10	-	<0.50	0.50	8623537
Bromodichloromethane	ug/L	-	-	<1.0	1.0	8623537
Toluene	ug/L	60	24	<0.40	0.40	8623537
Ethylbenzene	ug/L	140	1.6	<0.40	0.40	8623537
m & p-Xylene	ug/L	-	-	<0.40	0.40	8623537
Bromoform	ug/L	-	-	<1.0	1.0	8623537
No Fill	No Exceedance					
Grey	Exceeds 1 criteria policy/level					
Black	Exceeds both criteria/levels					
RDL = Reportable Detection Limit						

Maxxam Job #: B733656  
Report Date: 2017/05/10

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

<b>Maxxam ID</b>				QZ5718		
<b>Sampling Date</b>				2017/05/04 10:25		
<b>COC Number</b>				08436553		
	<b>UNITS</b>	<b>MAC</b>	<b>AO</b>	<b>2017050642</b>	<b>RDL</b>	<b>QC Batch</b>
Styrene	ug/L	-	-	<0.50	0.50	8623537
o-Xylene	ug/L	-	-	<0.40	0.40	8623537
Xylenes (Total)	ug/L	90	20	<0.40	0.40	8623537
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	0.50	8623537
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	0.50	8623537
1,2-dichlorobenzene	ug/L	200	3	<0.50	0.50	8623537
1,3-dichlorobenzene	ug/L	-	-	<0.50	0.50	8623537
1,4-dichlorobenzene	ug/L	5	1	<0.50	0.50	8623537
Chlorobenzene	ug/L	80	30	<0.50	0.50	8623537
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	2.0	8623537
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	2.0	8623537
Hexachlorobutadiene	ug/L	-	-	<0.50	0.50	8623537
VH C6-C10	ug/L	-	-	<300	300	8623537
<b>Surrogate Recovery (%)</b>						
1,4-Difluorobenzene (sur.)	%	-	-	104		8623537
4-Bromofluorobenzene (sur.)	%	-	-	95		8623537
D4-1,2-Dichloroethane (sur.)	%	-	-	120		8623537
No Fill	No Exceedance					
Grey	Exceeds 1 criteria policy/level					
Black	Exceeds both criteria/levels					
RDL = Reportable Detection Limit						

Maxxam Job #: B733656  
Report Date: 2017/05/10

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

### GENERAL COMMENTS

MAC,AO: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, February 2017.

Criteria A = Maximum Acceptable Concentration (MAC) / Criteria B = Aesthetic Objectives (AO) / Criteria C = Operational Guidance Values (OG)  
It is recommended to consult these guidelines when interpreting your data since there are non-numerical guidelines that are not included on this report.

**Turbidity Guidelines:**

1. Chemically assisted filtration: less than or equal to 0.3 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 1.0 NTU at any time.
2. Slow sand / diatomaceous earth filtration: less than or equal to 1.0 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 3.0 NTU at any time.
3. Membrane filtration: less than or equal to 0.1 NTU in 99% of the measurements made or at least 99% of the time each calendar month. Shall not exceed 0.3 NTU at any time.

**Results relate only to the items tested.**

Maxxam Job #: B733656  
Report Date: 2017/05/10

**QUALITY ASSURANCE REPORT**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8623291	D10-ANTHRACENE (sur.)	2017/05/08	118	60 - 130	113	60 - 130	110	%		
8623291	D8-ACENAPHTHYLENE (sur.)	2017/05/08	109	50 - 130	99	50 - 130	97	%		
8623291	D8-NAPHTHALENE (sur.)	2017/05/08	96	50 - 130	85	50 - 130	75	%		
8623291	D9-Acridine (sur.)	2017/05/08	113	50 - 130	105	50 - 130	100	%		
8623291	TERPHENYL-D14 (sur.)	2017/05/08	116	60 - 130	109	60 - 130	108	%		
8623300	O-TERPHENYL (sur.)	2017/05/08	103	60 - 140	100	60 - 140	98	%		
8623537	1,4-Difluorobenzene (sur.)	2017/05/09			104	70 - 130	104	%		
8623537	4-Bromofluorobenzene (sur.)	2017/05/09			106	70 - 130	106	%		
8623537	D4-1,2-Dichloroethane (sur.)	2017/05/09			122	70 - 130	117	%		
8623291	2-Methylnaphthalene	2017/05/08	98	50 - 130	86	50 - 130	<0.10	ug/L	NC	40
8623291	Acenaphthene	2017/05/08	108	50 - 130	95	50 - 130	<0.050	ug/L	NC	40
8623291	Acenaphthylene	2017/05/08	102	50 - 130	89	50 - 130	<0.050	ug/L	NC	40
8623291	Acridine	2017/05/08	122	50 - 130	105	50 - 130	<0.050	ug/L	NC	40
8623291	Anthracene	2017/05/08	122	60 - 130	107	60 - 130	<0.010	ug/L	NC	40
8623291	Benzo(a)anthracene	2017/05/08	106	60 - 130	94	60 - 130	<0.010	ug/L	NC	40
8623291	Benzo(a)pyrene	2017/05/08	97	60 - 130	88	60 - 130	<0.0050	ug/L	NC	40
8623291	Benzo(b&j)fluoranthene	2017/05/08	105	60 - 130	93	60 - 130	<0.030	ug/L	NC	40
8623291	Benzo(g,h,i)perylene	2017/05/08	100	60 - 130	90	60 - 130	<0.050	ug/L	NC	40
8623291	Benzo(k)fluoranthene	2017/05/08	110	60 - 130	95	60 - 130	<0.050	ug/L	NC	40
8623291	Chrysene	2017/05/08	109	60 - 130	96	60 - 130	<0.020	ug/L	NC	40
8623291	Dibenz(a,h)anthracene	2017/05/08	101	60 - 130	89	60 - 130	<0.0030	ug/L	NC	40
8623291	Fluoranthene	2017/05/08	94	60 - 130	104	60 - 130	<0.020	ug/L	NC	40
8623291	Fluorene	2017/05/08	100	50 - 130	89	50 - 130	<0.050	ug/L	NC	40
8623291	Indeno(1,2,3-cd)pyrene	2017/05/08	104	60 - 130	91	60 - 130	<0.050	ug/L	NC	40
8623291	Naphthalene	2017/05/08	95	50 - 130	83	50 - 130	<0.10	ug/L	NC	40
8623291	Phenanthrene	2017/05/08	100	60 - 130	92	60 - 130	<0.050	ug/L	NC	40
8623291	Pyrene	2017/05/08	94	60 - 130	105	60 - 130	<0.020	ug/L	0.50	40
8623291	Quinoline	2017/05/08	112	50 - 130	109	50 - 130	<0.020	ug/L	NC	40
8623300	EPH (C10-C19)	2017/05/08	99	60 - 140	102	70 - 130	<0.20	mg/L	NC	30
8623300	EPH (C19-C32)	2017/05/08	93	60 - 140	91	70 - 130	<0.20	mg/L	NC	30
8623537	1,1,1,2-tetrachloroethane	2017/05/09			81	70 - 130	<0.50	ug/L		

Maxxam Job #: B733656  
Report Date: 2017/05/10

**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8623537	1,1,1-trichloroethane	2017/05/09			113	70 - 130	<0.50	ug/L	NC	30
8623537	1,1,2,2-tetrachloroethane	2017/05/09			94	70 - 130	<0.50	ug/L		
8623537	1,1,2Trichloro-1,2,2Trifluoroethane	2017/05/09					<2.0	ug/L		
8623537	1,1,2-trichloroethane	2017/05/09			110	70 - 130	<0.50	ug/L	NC	30
8623537	1,1-dichloroethane	2017/05/09			109	70 - 130	<0.50	ug/L	NC	30
8623537	1,1-dichloroethene	2017/05/09			115	70 - 130	<0.50	ug/L	NC	30
8623537	1,2,3-trichlorobenzene	2017/05/09			116	70 - 130	<2.0	ug/L		
8623537	1,2,4-trichlorobenzene	2017/05/09			123	70 - 130	<2.0	ug/L		
8623537	1,2-dibromoethane	2017/05/09			86	70 - 130	<0.20	ug/L	NC	30
8623537	1,2-dichlorobenzene	2017/05/09			121	70 - 130	<0.50	ug/L		
8623537	1,2-dichloroethane	2017/05/09			101	70 - 130	<0.50	ug/L	NC	30
8623537	1,2-dichloropropane	2017/05/09			112	70 - 130	<0.50	ug/L		
8623537	1,3-dichlorobenzene	2017/05/09			117	70 - 130	<0.50	ug/L		
8623537	1,4-dichlorobenzene	2017/05/09			115	70 - 130	<0.50	ug/L		
8623537	Benzene	2017/05/09			112	70 - 130	<0.40	ug/L		
8623537	Bromodichloromethane	2017/05/09			109	70 - 130	<1.0	ug/L		
8623537	Bromoform	2017/05/09			78	70 - 130	<1.0	ug/L		
8623537	Bromomethane	2017/05/09			112	60 - 140	<1.0	ug/L		
8623537	Carbon tetrachloride	2017/05/09			103	70 - 130	<0.50	ug/L		
8623537	Chlorobenzene	2017/05/09			81	70 - 130	<0.50	ug/L		
8623537	Chlorodibromomethane	2017/05/09			87	70 - 130	<1.0	ug/L		
8623537	Chloroethane	2017/05/09			129	60 - 140	<1.0	ug/L		
8623537	Chloroform	2017/05/09			106	70 - 130	<1.0	ug/L		
8623537	Chloromethane	2017/05/09			93	60 - 140	<1.0	ug/L		
8623537	cis-1,2-dichloroethene	2017/05/09			112	70 - 130	<1.0	ug/L	NC	30
8623537	cis-1,3-dichloropropene	2017/05/09			101	70 - 130	<1.0	ug/L		
8623537	Dichlorodifluoromethane	2017/05/09			81	60 - 140	<2.0	ug/L		
8623537	Dichloromethane	2017/05/09			115	70 - 130	<2.0	ug/L		
8623537	Ethylbenzene	2017/05/09			77	70 - 130	<0.40	ug/L		
8623537	Hexachlorobutadiene	2017/05/09			107	70 - 130	<0.50	ug/L		
8623537	m & p-Xylene	2017/05/09			74	70 - 130	<0.40	ug/L		

Maxxam Job #: B733656  
Report Date: 2017/05/10

**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8623537	Methyl-tert-butylether (MTBE)	2017/05/09			109	70 - 130	<4.0	ug/L		
8623537	o-Xylene	2017/05/09			84	70 - 130	<0.40	ug/L		
8623537	Styrene	2017/05/09			72	70 - 130	<0.50	ug/L		
8623537	Tetrachloroethene	2017/05/09			110	70 - 130	<0.50	ug/L	NC	30
8623537	Toluene	2017/05/09			106	70 - 130	<0.40	ug/L		
8623537	trans-1,2-dichloroethene	2017/05/09			108	70 - 130	<1.0	ug/L	NC	30
8623537	trans-1,3-dichloropropene	2017/05/09			86	70 - 130	<1.0	ug/L		
8623537	Trichloroethene	2017/05/09			109	70 - 130	<0.50	ug/L	NC	30
8623537	Trichlorofluoromethane	2017/05/09			120	60 - 140	<4.0	ug/L		
8623537	VH C6-C10	2017/05/09			104	70 - 130	<300	ug/L		
8623537	Vinyl chloride	2017/05/09			100	60 - 140	<0.50	ug/L		
8623537	Xylenes (Total)	2017/05/09					<0.40	ug/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Job #: B733656  
Report Date: 2017/05/10

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM DOMESTIC WELLS  
Sampler Initials: SA

### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Andy Lu, Ph.D., P.Chem., Scientific Specialist

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Ph: (604) 734-7276 Fax: (604) 731-2386, Toll Free: (800) 665-8566  
 Project Name: Millstream Meadows Domestic Wells  
 Contract #: EPRO2016-085

B733656

CHAIN OF CUSTODY FORM

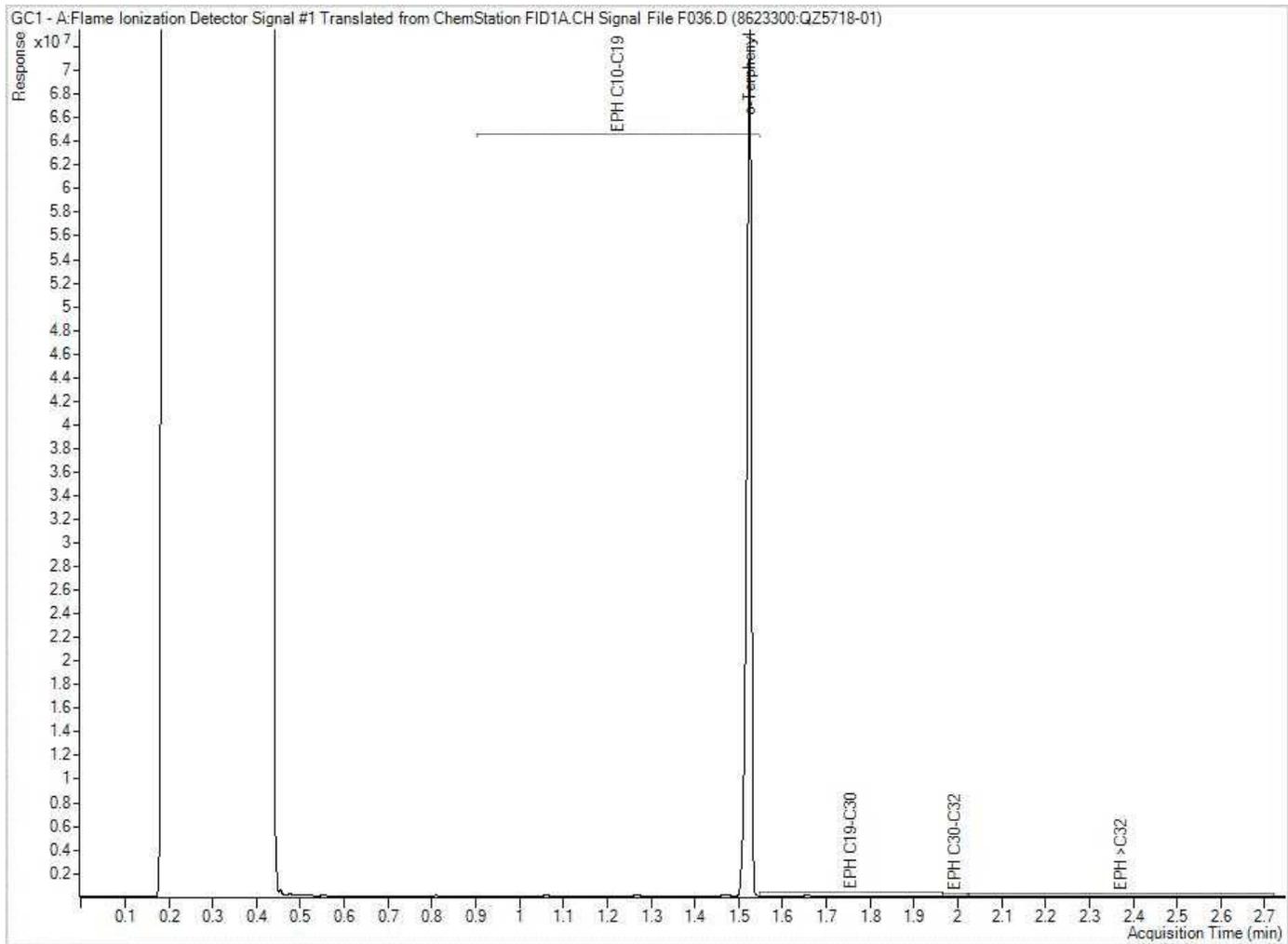


PAGE 1 OF 1

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )				ANALYSIS REQUESTED:												
ADDRESS: 625 FISGARD STREET, PO BOX 1000																
CITY:	VICTORIA	PROV:	BC	POSTAL CODE:	V8W 2S6											
TEL:	(250) 360-3148	FAX:	(250) 360-3254	CONTACT:	Korene Torney											
PROJECT NAME AND NO.:		MILLSTREAM DOMESTIC WELLS		SAMPLER:	Shelley Alcock											
QUOTE NO.:		PO NO.:		ALS CONTACT:	JERRY HOLZBE											
REPORT FORMAT																
<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca <input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results																
FOR LAB USE ONLY	SAMPLE IDENTIFICATION		DATE / TIME COLLECTED		MATRIX			LEPH	HEPH	VOCs						NOTES (sample specific comments, due dates, etc.)
			YYYY-MM-DD	TIME												
	2017-050-642		2017-05-04	10:25	water			X	X	X						Drinking Water
TURN AROUND REQUIRED:	<input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)			RELINQUISHED BY:		DATE:	2017-05-04	RECEIVED BY:	DATE:							
SEND INVOICE TO	<input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)			Shelley Alcock		TIME:	<del>10:05</del>	RECEIVED BY:	DATE:							
INVOICE FORMAT	<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX			RELINQUISHED BY:		DATE:	13:32	RECEIVED BY:	DATE:	2017/05/04						
SPECIAL INSTRUCTIONS:						TIME:		RECEIVED BY:	DATE:	13:32						
				FOR LAB USE ONLY												
				Cooler Seal Intact?		Sample Temperature: 8.37°C		Cooling Method?								
				Yes ___ No ___ N/A ___		Frozen? Yes ___ No ___		<input checked="" type="checkbox"/> Capacks <input type="checkbox"/> Ice <input type="checkbox"/> None								

EPH in Water when PAH required Chromatogram



**Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.**

Your Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Your C.O.C. #: 08437117

**Attention: SHELLEY ALCOCK**

CAPITAL REGIONAL DISTRICT  
CRD-VIC 625 FISGARD  
PO Box 1000  
625 Fisgard Street  
VICTORIA, BC  
Canada V8W 2S6

**Report Date: 2017/08/01**  
Report #: R2422033  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B761682**

**Received: 2017/07/25, 15:20**

Sample Matrix: DRINKING WATER  
# Samples Received: 23

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
EPH in Water when PAH required	6	2017/07/29	2017/07/30	BBY8SOP-00029	BCMOE EPH w 12/00 m
EPH in Water when PAH required	3	2017/07/31	2017/07/31	BBY8SOP-00029	BCMOE EPH w 12/00 m
EPH in Water when PAH required	14	2017/07/31	2017/08/01	BBY8SOP-00029	BCMOE EPH w 12/00 m
PAH in Water by GC/MS (SIM)	6	2017/07/29	2017/07/30	BBY8SOP-00021	EPA 8270d R5 m
PAH in Water by GC/MS (SIM)	5	2017/07/31	2017/07/31	BBY8SOP-00021	EPA 8270d R5 m
PAH in Water by GC/MS (SIM)	12	2017/07/31	2017/08/01	BBY8SOP-00021	EPA 8270d R5 m
Total LMW, HMW, Total PAH Calc	1	N/A	2017/07/31	BBY WI-00033	Auto Calc
Total LMW, HMW, Total PAH Calc	22	N/A	2017/08/01	BBY WI-00033	Auto Calc
EPH less PAH in Water by GC/FID	1	N/A	2017/07/31	BBY WI-00033	Auto Calc
EPH less PAH in Water by GC/FID	22	N/A	2017/08/01	BBY WI-00033	Auto Calc
VOCs, VH, F1, LH in Water by HS GC/MS	7	2017/07/27	2017/07/28	BBY8SOP-00009/11/12	BC Lab Manual 2007
VOCs, VH, F1, LH in Water by HS GC/MS	15	2017/07/28	2017/07/29	BBY8SOP-00009/11/12	BC Lab Manual 2007
VOCs, VH, F1, LH in Water by HS GC/MS	1	2017/07/28	2017/07/30	BBY8SOP-00009/11/12	BC Lab Manual 2007
Volatile HC-BTEX	7	N/A	2017/07/29	BBY WI-00033	Auto Calc
Volatile HC-BTEX	16	N/A	2017/07/31	BBY WI-00033	Auto Calc

**Remarks:**

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope

Your Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Your C.O.C. #: 08437117

**Attention: SHELLEY ALCOCK**

CAPITAL REGIONAL DISTRICT  
CRD-VIC 625 FISGARD  
PO Box 1000  
625 Fisgard Street  
VICTORIA, BC  
Canada V8W 2S6

**Report Date: 2017/08/01**  
Report #: R2422033  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B761682**

**Received: 2017/07/25, 15:20**

dilution methods.

Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Debbie Nordbruget, Project Manager

Email: DNordbruget@maxxam.ca

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Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9674	RO9675	RO9676	RO9677	RO9678	RO9679		
Sampling Date			2017/07/25 10:58	2017/07/25 11:05	2017/07/25 11:13	2017/07/25 11:34	2017/07/25 11:38	2017/07/25 11:44		
COC Number			08437117	08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	2017050643	2017050644	2017050645	2017050646	2017050647	2017050648	RDL	QC Batch
<b>Polycyclic Aromatics</b>										
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8705700
Total PAH	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
Quinoline	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8710687
Naphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8710687
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8710687
Acenaphthylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
Acenaphthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
Fluorene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
Phenanthrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
Anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8710687
Acridine	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
Fluoranthene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8710687
Pyrene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8710687
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8710687
Chrysene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8710687
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8710687
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8710687
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	8710687
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8710687
<b>Calculated Parameters</b>										
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
<b>Ext. Pet. Hydrocarbon</b>										
EPH (C10-C19)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8710695
EPH (C19-C32)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8710695
<b>Surrogate Recovery (%)</b>										
O-TERPHENYL (sur.)	%	-	102	102	101	102	101	103		8710695
D10-ANTHRACENE (sur.)	%	-	94	96	95	97	96	98		8710687
D8-ACENAPHTHYLENE (sur.)	%	-	97	97	96	97	97	98		8710687
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9674	RO9675	RO9676	RO9677	RO9678	RO9679		
Sampling Date			2017/07/25 10:58	2017/07/25 11:05	2017/07/25 11:13	2017/07/25 11:34	2017/07/25 11:38	2017/07/25 11:44		
COC Number			08437117	08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	2017050643	2017050644	2017050645	2017050646	2017050647	2017050648	RDL	QC Batch
D8-NAPHTHALENE (sur.)	%	-	107	105	103	103	106	105		8710687
TERPHENYL-D14 (sur.)	%	-	89	94	92	94	94	96		8710687
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9680	RO9681	RO9682	RO9683	RO9684	RO9685		
Sampling Date			2017/07/25 12:03	2017/07/25 12:06	2017/07/25 12:16	2017/07/25 12:20	2017/07/25 12:40	2017/07/25 12:40		
COC Number			08437117	08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	2017050649	2017050650	2017050651	2017050652	2017050653	2017050654	RDL	QC Batch
<b>Polycyclic Aromatics</b>										
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8705700
Total PAH	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
Quinoline	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Naphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8712442
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8712442
Acenaphthylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Acenaphthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Fluorene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Phenanthrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8712442
Acridine	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Fluoranthene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Pyrene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8712442
Chrysene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8712442
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8712442
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	8712442
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
<b>Calculated Parameters</b>										
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
<b>Ext. Pet. Hydrocarbon</b>										
EPH (C10-C19)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8711882
EPH (C19-C32)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8711882
<b>Surrogate Recovery (%)</b>										
O-TERPHENYL (sur.)	%	-	106	106	107	107	109	108		8711882
D10-ANTHRACENE (sur.)	%	-	93	99	102	99	99	101		8712442
D8-ACENAPHTHYLENE (sur.)	%	-	88	82	79	85	89	85		8712442
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9680	RO9681	RO9682	RO9683	RO9684	RO9685		
Sampling Date			2017/07/25 12:03	2017/07/25 12:06	2017/07/25 12:16	2017/07/25 12:20	2017/07/25 12:40	2017/07/25 12:40		
COC Number			08437117	08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	2017050649	2017050650	2017050651	2017050652	2017050653	2017050654	RDL	QC Batch
D8-NAPHTHALENE (sur.)	%	-	53	53	47 (1)	51	57	58		8712442
TERPHENYL-D14 (sur.)	%	-	93	98	101	96	98	100		8712442

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.	

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9686	RO9687	RO9688	RO9689	RO9690	RO9691		
Sampling Date			2017/07/25 12:46	2017/07/25 12:50	2017/07/25 12:55	2017/07/25 12:55	2017/07/25 13:15	2017/07/25 13:18		
COC Number			08437117	08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	2017050655	2017050656	2017050657	2017050658	2017050659	2017050660	RDL	QC Batch
<b>Polycyclic Aromatics</b>										
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8705700
Total PAH	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
Quinoline	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Naphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8712442
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8712442
Acenaphthylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Acenaphthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Fluorene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Phenanthrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8712442
Acridine	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Fluoranthene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Pyrene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8712442
Chrysene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8712442
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8712442
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	8712442
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
<b>Calculated Parameters</b>										
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
<b>Ext. Pet. Hydrocarbon</b>										
EPH (C10-C19)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8711882
EPH (C19-C32)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8711882
<b>Surrogate Recovery (%)</b>										
O-TERPHENYL (sur.)	%	-	108	104	99	104	105	93		8711882
D10-ANTHRACENE (sur.)	%	-	101	101	100	102	95	94		8712442
D8-ACENAPHTHYLENE (sur.)	%	-	77	81	81	85	79	84		8712442
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9686	RO9687	RO9688	RO9689	RO9690	RO9691		
Sampling Date			2017/07/25 12:46	2017/07/25 12:50	2017/07/25 12:55	2017/07/25 12:55	2017/07/25 13:15	2017/07/25 13:18		
COC Number			08437117	08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	2017050655	2017050656	2017050657	2017050658	2017050659	2017050660	RDL	QC Batch
D8-NAPHTHALENE (sur.)	%	-	56	53	53	54	48 (1)	52		8712442
TERPHENYL-D14 (sur.)	%	-	100	100	96	101	95	91		8712442

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.	

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9692	RO9693	RO9694	RO9695	RO9696		
Sampling Date			2017/07/25 13:20	2017/07/25 13:23	2017/07/25 13:27	2017/07/25 13:29	2017/07/25 14:54		
COC Number			08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	2017050661	2017050662	2017050663	2017050664	2017050665	RDL	QC Batch
<b>Polycyclic Aromatics</b>									
Low Molecular Weight PAH's	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
High Molecular Weight PAH's	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8705700
Total PAH	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8705700
Quinoline	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Naphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8712442
2-Methylnaphthalene	ug/L	-	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	8712442
Acenaphthylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Acenaphthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Fluorene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Phenanthrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8712442
Acridine	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Fluoranthene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Pyrene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Benzo(a)anthracene	ug/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8712442
Chrysene	ug/L	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	8712442
Benzo(b&j)fluoranthene	ug/L	-	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8712442
Benzo(k)fluoranthene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Benzo(a)pyrene	ug/L	0.04	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8712442
Indeno(1,2,3-cd)pyrene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
Dibenz(a,h)anthracene	ug/L	-	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0030	8712442
Benzo(g,h,i)perylene	ug/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8712442
<b>Calculated Parameters</b>									
LEPH (C10-C19 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
HEPH (C19-C32 less PAH)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8705702
<b>Ext. Pet. Hydrocarbon</b>									
EPH (C10-C19)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8711882
EPH (C19-C32)	mg/L	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8711882
<b>Surrogate Recovery (%)</b>									
O-TERPHENYL (sur.)	%	-	106	102	110	110	108		8711882
D10-ANTHRACENE (sur.)	%	-	94	98	101	99	108		8712442
D8-ACENAPHTHYLENE (sur.)	%	-	78	85	80	79	91		8712442
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**LEPH & HEPH WITH CSR/CCME PAH IN WATER (DRINKING WATER)**

Maxxam ID			RO9692	RO9693	RO9694	RO9695	RO9696		
Sampling Date			2017/07/25 13:20	2017/07/25 13:23	2017/07/25 13:27	2017/07/25 13:29	2017/07/25 14:54		
COC Number			08437117	08437117	08437117	08437117	08437117		
	<b>UNITS</b>	<b>MAC</b>	<b>2017050661</b>	<b>2017050662</b>	<b>2017050663</b>	<b>2017050664</b>	<b>2017050665</b>	<b>RDL</b>	<b>QC Batch</b>
D8-NAPHTHALENE (sur.)	%	-	53	60	57	50	62		8712442
TERPHENYL-D14 (sur.)	%	-	93	97	100	98	106		8712442
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9674	RO9675	RO9676	RO9677	RO9678		
Sampling Date				2017/07/25 10:58	2017/07/25 11:05	2017/07/25 11:13	2017/07/25 11:34	2017/07/25 11:38		
COC Number				08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	AO	2017050643	2017050644	2017050645	2017050646	2017050647	RDL	QC Batch

Volatiles										
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	<300	<300	300	8705704
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8708544
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8708544
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8708544
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8708544
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
Chloroform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8708544
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8708544
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Chlorodibromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8708544
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8708544
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8708544
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8708544
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8708544

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9674	RO9675	RO9676	RO9677	RO9678		
Sampling Date				2017/07/25 10:58	2017/07/25 11:05	2017/07/25 11:13	2017/07/25 11:34	2017/07/25 11:38		
COC Number				08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	AO	2017050643	2017050644	2017050645	2017050646	2017050647	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8708544
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8708544
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8708544
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8708544
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8708544
VH C6-C10	ug/L	-	-	<300	<300	<300	<300	<300	300	8708544
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	-	-	90	108	108	107	94		8708544
4-Bromofluorobenzene (sur.)	%	-	-	79	101	98	86	85		8708544
D4-1,2-Dichloroethane (sur.)	%	-	-	84	101	102	101	87		8708544
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9679	RO9680		RO9681	RO9682	RO9683		
Sampling Date				2017/07/25 11:44	2017/07/25 12:03		2017/07/25 12:06	2017/07/25 12:16	2017/07/25 12:20		
COC Number				08437117	08437117		08437117	08437117	08437117		
	UNITS	MAC	AO	2017050648	2017050649	QC Batch	2017050650	2017050651	2017050652	RDL	QC Batch

Volatiles											
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	8705704	<300	<300	<300	300	8705704
Chloromethane	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
Vinyl chloride	ug/L	2	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Chloroethane	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	8708544	<4.0	<4.0	<4.0	4.0	8710361
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/L	-	-	<2.0	<2.0	8708544	<2.0	<2.0	<2.0	2.0	8710361
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	8708544	<2.0	<2.0	<2.0	2.0	8710361
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Dichloromethane	ug/L	50	-	<2.0	<2.0	8708544	<2.0	<2.0	<2.0	2.0	8710361
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
Chloroform	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Benzene	ug/L	5	-	<0.40	<0.40	8708544	<0.40	<0.40	<0.40	0.40	8710361
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	8708544	<4.0	<4.0	<4.0	4.0	8710361
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
Bromomethane	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Trichloroethene	ug/L	5	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Chlorodibromomethane	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	8708544	<0.20	<0.20	<0.20	0.20	8710361
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361
Toluene	ug/L	60	24	<0.40	<0.40	8708544	<0.40	<0.40	<0.40	0.40	8710361
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	8708544	<0.40	<0.40	<0.40	0.40	8710361
m & p-Xylene	ug/L	-	-	<0.40	<0.40	8708544	<0.40	<0.40	<0.40	0.40	8710361
Bromoform	ug/L	-	-	<1.0	<1.0	8708544	<1.0	<1.0	<1.0	1.0	8710361

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9679	RO9680		RO9681	RO9682	RO9683		
Sampling Date				2017/07/25 11:44	2017/07/25 12:03		2017/07/25 12:06	2017/07/25 12:16	2017/07/25 12:20		
COC Number				08437117	08437117		08437117	08437117	08437117		
	UNITS	MAC	AO	2017050648	2017050649	QC Batch	2017050650	2017050651	2017050652	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
o-Xylene	ug/L	-	-	<0.40	<0.40	8708544	<0.40	<0.40	<0.40	0.40	8710361
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	8708544	<0.40	<0.40	<0.40	0.40	8710361
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
Chlorobenzene	ug/L	80	30	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	8708544	<2.0	<2.0	<2.0	2.0	8710361
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	8708544	<2.0	<2.0	<2.0	2.0	8710361
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	8708544	<0.50	<0.50	<0.50	0.50	8710361
VH C6-C10	ug/L	-	-	<300	<300	8708544	<300	<300	<300	300	8710361
<b>Surrogate Recovery (%)</b>											
1,4-Difluorobenzene (sur.)	%	-	-	91	98	8708544	107	108	107		8710361
4-Bromofluorobenzene (sur.)	%	-	-	84	87	8708544	89	88	87		8710361
D4-1,2-Dichloroethane (sur.)	%	-	-	84	92	8708544	111	112	113		8710361
No Fill	No Exceedance										
Grey	Exceeds 1 criteria policy/level										
Black	Exceeds both criteria/levels										
RDL = Reportable Detection Limit											

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9684	RO9685	RO9686	RO9687	RO9688		
Sampling Date				2017/07/25 12:40	2017/07/25 12:40	2017/07/25 12:46	2017/07/25 12:50	2017/07/25 12:55		
COC Number				08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	AO	2017050653	2017050654	2017050655	2017050656	2017050657	RDL	QC Batch
<b>Volatiles</b>										
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	<300	<300	300	8705704
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8710361
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Chloroform	ug/L	-	-	5.9	5.6	5.3	<1.0	3.1	1.0	8710361
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8710361
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Chlorodibromomethane	ug/L	-	-	4.6	4.6	4.7	<1.0	<1.0	1.0	8710361
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8710361
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Bromodichloromethane	ug/L	-	-	5.7	5.6	5.8	<1.0	<1.0	1.0	8710361
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9684	RO9685	RO9686	RO9687	RO9688		
Sampling Date				2017/07/25 12:40	2017/07/25 12:40	2017/07/25 12:46	2017/07/25 12:50	2017/07/25 12:55		
COC Number				08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	AO	2017050653	2017050654	2017050655	2017050656	2017050657	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
VH C6-C10	ug/L	-	-	<300	<300	<300	<300	<300	300	8710361
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	-	-	107	107	108	108	109		8710361
4-Bromofluorobenzene (sur.)	%	-	-	88	88	87	88	87		8710361
D4-1,2-Dichloroethane (sur.)	%	-	-	113	113	114	114	112		8710361
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9689	RO9690	RO9691	RO9692	RO9693		
Sampling Date				2017/07/25 12:55	2017/07/25 13:15	2017/07/25 13:18	2017/07/25 13:20	2017/07/25 13:23		
COC Number				08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	AO	2017050658	2017050659	2017050660	2017050661	2017050662	RDL	QC Batch

Volatiles										
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	<300	<300	300	8705704
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8710361
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Chloroform	ug/L	-	-	3.1	<1.0	<1.0	<1.0	<1.0	1.0	8710361
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	8710361
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Chlorodibromomethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8710361
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8710361

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9689	RO9690	RO9691	RO9692	RO9693		
Sampling Date				2017/07/25 12:55	2017/07/25 13:15	2017/07/25 13:18	2017/07/25 13:20	2017/07/25 13:23		
COC Number				08437117	08437117	08437117	08437117	08437117		
	UNITS	MAC	AO	2017050658	2017050659	2017050660	2017050661	2017050662	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8710361
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8710361
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8710361
VH C6-C10	ug/L	-	-	<300	<300	<300	<300	<300	300	8710361
<b>Surrogate Recovery (%)</b>										
1,4-Difluorobenzene (sur.)	%	-	-	107	107	109	107	109		8710361
4-Bromofluorobenzene (sur.)	%	-	-	88	88	97	87	87		8710361
D4-1,2-Dichloroethane (sur.)	%	-	-	112	113	100	115	113		8710361
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9694	RO9695	RO9696		
Sampling Date				2017/07/25 13:27	2017/07/25 13:29	2017/07/25 14:54		
COC Number				08437117	08437117	08437117		
	UNITS	MAC	AO	2017050663	2017050664	2017050665	RDL	QC Batch
<b>Volatiles</b>								
VPH (VHW6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	300	8705704
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	0.50	8710361
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	4.0	8710361
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	2.0	8710361
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	2.0	8710361
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	0.50	8710361
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	2.0	8710361
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
Chloroform	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	0.50	8710361
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	0.50	8710361
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	0.40	8710361
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	4.0	8710361
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	0.50	8710361
Chlorodibromomethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
1,2-dibromoethane	ug/L	-	-	<0.20	<0.20	<0.20	0.20	8710361
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	0.50	8710361
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	0.40	8710361
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	0.40	8710361
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	0.40	8710361
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	1.0	8710361
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

**CSR VOC + VPH IN WATER (DRINKING WATER)**

Maxxam ID				RO9694	RO9695	RO9696		
Sampling Date				2017/07/25 13:27	2017/07/25 13:29	2017/07/25 14:54		
COC Number				08437117	08437117	08437117		
	UNITS	MAC	AO	2017050663	2017050664	2017050665	RDL	QC Batch
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	0.40	8710361
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	0.40	8710361
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	0.50	8710361
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	0.50	8710361
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	0.50	8710361
1,2,3-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	2.0	8710361
1,2,4-trichlorobenzene	ug/L	-	-	<2.0	<2.0	<2.0	2.0	8710361
Hexachlorobutadiene	ug/L	-	-	<0.50	<0.50	<0.50	0.50	8710361
VH C6-C10	ug/L	-	-	<300	<300	<300	300	8710361
<b>Surrogate Recovery (%)</b>								
1,4-Difluorobenzene (sur.)	%	-	-	109	109	109		8710361
4-Bromofluorobenzene (sur.)	%	-	-	86	87	87		8710361
D4-1,2-Dichloroethane (sur.)	%	-	-	114	113	112		8710361
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								

Maxxam Job #: B761682  
Report Date: 2017/08/01

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

### GENERAL COMMENTS

MAC,AO: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, February 2017.

Criteria A = Maximum Acceptable Concentration (MAC) / Criteria B = Aesthetic Objectives (AO) / Criteria C = Operational Guidance Values (OG)  
It is recommended to consult these guidelines when interpreting your data since there are non-numerical guidelines that are not included on this report.

**Turbidity Guidelines:**

1. Chemically assisted filtration: less than or equal to 0.3 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 1.0 NTU at any time.
2. Slow sand / diatomaceous earth filtration: less than or equal to 1.0 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 3.0 NTU at any time.
3. Membrane filtration: less than or equal to 0.1 NTU in 99% of the measurements made or at least 99% of the time each calendar month. Shall not exceed 0.3 NTU at any time.

**Results relate only to the items tested.**

Maxxam Job #: B761682  
Report Date: 2017/08/01

**QUALITY ASSURANCE REPORT**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8708544	1,4-Difluorobenzene (sur.)	2017/07/28	102	70 - 130	89	70 - 130	96	%		
8708544	4-Bromofluorobenzene (sur.)	2017/07/28	103	70 - 130	90	70 - 130	95	%		
8708544	D4-1,2-Dichloroethane (sur.)	2017/07/28	102	70 - 130	93	70 - 130	96	%		
8710361	1,4-Difluorobenzene (sur.)	2017/07/29	99	70 - 130	105	70 - 130	108	%		
8710361	4-Bromofluorobenzene (sur.)	2017/07/29	103	70 - 130	102	70 - 130	88	%		
8710361	D4-1,2-Dichloroethane (sur.)	2017/07/29	99	70 - 130	105	70 - 130	111	%		
8710687	D10-ANTHRACENE (sur.)	2017/07/30	95	60 - 130	95	60 - 130	99	%		
8710687	D8-ACENAPHTHYLENE (sur.)	2017/07/30	96	50 - 130	97	50 - 130	97	%		
8710687	D8-NAPHTHALENE (sur.)	2017/07/30	99	50 - 130	98	50 - 130	100	%		
8710687	TERPHENYL-D14 (sur.)	2017/07/30	94	60 - 130	93	60 - 130	95	%		
8710695	O-TERPHENYL (sur.)	2017/07/30	105	60 - 140	106	60 - 140	107	%		
8711882	O-TERPHENYL (sur.)	2017/07/31	100	60 - 140	108	60 - 140	107	%		
8712442	D10-ANTHRACENE (sur.)	2017/07/31	93	60 - 130	88	60 - 130	99	%		
8712442	D8-ACENAPHTHYLENE (sur.)	2017/07/31	87	50 - 130	88	50 - 130	86	%		
8712442	D8-NAPHTHALENE (sur.)	2017/07/31	64	50 - 130	67	50 - 130	51	%		
8712442	TERPHENYL-D14 (sur.)	2017/07/31	101	60 - 130	96	60 - 130	99	%		
8708544	1,1,1,2-tetrachloroethane	2017/07/28	102	70 - 130	95	70 - 130	<0.50	ug/L		
8708544	1,1,1-trichloroethane	2017/07/28	107	70 - 130	99	70 - 130	<0.50	ug/L		
8708544	1,1,2,2-tetrachloroethane	2017/07/28	91	70 - 130	86	70 - 130	<0.50	ug/L		
8708544	1,1,2Trichloro-1,2,2Trifluoroethane	2017/07/28					<2.0	ug/L		
8708544	1,1,2-trichloroethane	2017/07/28	100	70 - 130	92	70 - 130	<0.50	ug/L		
8708544	1,1-dichloroethane	2017/07/28	102	70 - 130	94	70 - 130	<0.50	ug/L		
8708544	1,1-dichloroethene	2017/07/28	109	70 - 130	101	70 - 130	<0.50	ug/L		
8708544	1,2,3-trichlorobenzene	2017/07/28	74	70 - 130	75	70 - 130	<2.0	ug/L		
8708544	1,2,4-trichlorobenzene	2017/07/28	76	70 - 130	78	70 - 130	<2.0	ug/L		
8708544	1,2-dibromoethane	2017/07/28	99	70 - 130	93	70 - 130	<0.20	ug/L		
8708544	1,2-dichlorobenzene	2017/07/28	93	70 - 130	89	70 - 130	<0.50	ug/L		
8708544	1,2-dichloroethane	2017/07/28	113	70 - 130	96	70 - 130	<0.50	ug/L		
8708544	1,2-dichloropropane	2017/07/28	102	70 - 130	96	70 - 130	<0.50	ug/L		
8708544	1,3-dichlorobenzene	2017/07/28	93	70 - 130	95	70 - 130	<0.50	ug/L		
8708544	1,4-dichlorobenzene	2017/07/28	91	70 - 130	92	70 - 130	<0.50	ug/L		

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8708544	Benzene	2017/07/28	NC	70 - 130	94	70 - 130	<0.40	ug/L		
8708544	Bromodichloromethane	2017/07/28	101	70 - 130	94	70 - 130	<1.0	ug/L		
8708544	Bromoform	2017/07/28	99	70 - 130	94	70 - 130	<1.0	ug/L		
8708544	Bromomethane	2017/07/28	71	60 - 140	107	60 - 140	<1.0	ug/L		
8708544	Carbon tetrachloride	2017/07/28	92	70 - 130	89	70 - 130	<0.50	ug/L		
8708544	Chlorobenzene	2017/07/28	100	70 - 130	91	70 - 130	<0.50	ug/L		
8708544	Chlorodibromomethane	2017/07/28	105	70 - 130	96	70 - 130	<1.0	ug/L		
8708544	Chloroethane	2017/07/28	106	60 - 140	103	60 - 140	<1.0	ug/L		
8708544	Chloroform	2017/07/28	99	70 - 130	90	70 - 130	<1.0	ug/L		
8708544	Chloromethane	2017/07/28	100	60 - 140	97	60 - 140	<1.0	ug/L		
8708544	cis-1,2-dichloroethene	2017/07/28	107	70 - 130	99	70 - 130	<1.0	ug/L		
8708544	cis-1,3-dichloropropene	2017/07/28	70	70 - 130	89	70 - 130	<1.0	ug/L		
8708544	Dichlorodifluoromethane	2017/07/28	134	60 - 140	124	60 - 140	<2.0	ug/L		
8708544	Dichloromethane	2017/07/28	NC	70 - 130	94	70 - 130	<2.0	ug/L		
8708544	Ethylbenzene	2017/07/28	105	70 - 130	94	70 - 130	<0.40	ug/L		
8708544	Hexachlorobutadiene	2017/07/28			83	70 - 130	<0.50	ug/L		
8708544	m & p-Xylene	2017/07/28	NC	70 - 130	97	70 - 130	<0.40	ug/L		
8708544	Methyl-tert-butylether (MTBE)	2017/07/28	98	70 - 130	93	70 - 130	<4.0	ug/L		
8708544	o-Xylene	2017/07/28	NC	70 - 130	96	70 - 130	<0.40	ug/L		
8708544	Styrene	2017/07/28	116	70 - 130	100	70 - 130	<0.50	ug/L		
8708544	Tetrachloroethene	2017/07/28	106	70 - 130	97	70 - 130	<0.50	ug/L		
8708544	Toluene	2017/07/28	NC	70 - 130	95	70 - 130	<0.40	ug/L		
8708544	trans-1,2-dichloroethene	2017/07/28	104	70 - 130	96	70 - 130	<1.0	ug/L		
8708544	trans-1,3-dichloropropene	2017/07/28	82	70 - 130	77	70 - 130	<1.0	ug/L		
8708544	Trichloroethene	2017/07/28	104	70 - 130	97	70 - 130	<0.50	ug/L		
8708544	Trichlorofluoromethane	2017/07/28	130	60 - 140	119	60 - 140	<4.0	ug/L		
8708544	VH C6-C10	2017/07/28			110	70 - 130	<300	ug/L		
8708544	Vinyl chloride	2017/07/28	107	60 - 140	110	60 - 140	<0.50	ug/L		
8708544	Xylenes (Total)	2017/07/28					<0.40	ug/L		
8710361	1,1,1,2-tetrachloroethane	2017/07/29	97	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
8710361	1,1,1-trichloroethane	2017/07/29	100	70 - 130	97	70 - 130	<0.50	ug/L	NC	30

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8710361	1,1,2,2-tetrachloroethane	2017/07/29	101	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
8710361	1,1,2Trichloro-1,2,2Trifluoroethane	2017/07/29					<2.0	ug/L	NC	30
8710361	1,1,2-trichloroethane	2017/07/29	98	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
8710361	1,1-dichloroethane	2017/07/29	99	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
8710361	1,1-dichloroethene	2017/07/29	105	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
8710361	1,2,3-trichlorobenzene	2017/07/29	114	70 - 130	106	70 - 130	<2.0	ug/L	NC	30
8710361	1,2,4-trichlorobenzene	2017/07/29	113	70 - 130	106	70 - 130	<2.0	ug/L	NC	30
8710361	1,2-dibromoethane	2017/07/29	96	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
8710361	1,2-dichlorobenzene	2017/07/29	107	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
8710361	1,2-dichloroethane	2017/07/29	96	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
8710361	1,2-dichloropropane	2017/07/29	98	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
8710361	1,3-dichlorobenzene	2017/07/29	108	70 - 130	105	70 - 130	<0.50	ug/L	NC	30
8710361	1,4-dichlorobenzene	2017/07/29	106	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
8710361	Benzene	2017/07/29	100	70 - 130	100	70 - 130	<0.40	ug/L	NC	30
8710361	Bromodichloromethane	2017/07/29	95	70 - 130	92	70 - 130	<1.0	ug/L	NC	30
8710361	Bromoform	2017/07/29	90	70 - 130	86	70 - 130	<1.0	ug/L	NC	30
8710361	Bromomethane	2017/07/29	107	60 - 140	105	60 - 140	<1.0	ug/L	NC	30
8710361	Carbon tetrachloride	2017/07/29	99	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
8710361	Chlorobenzene	2017/07/29	93	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8710361	Chlorodibromomethane	2017/07/29	95	70 - 130	92	70 - 130	<1.0	ug/L	NC	30
8710361	Chloroethane	2017/07/29	74	60 - 140	104	60 - 140	<1.0	ug/L	NC	30
8710361	Chloroform	2017/07/29	100	70 - 130	98	70 - 130	<1.0	ug/L	NC	30
8710361	Chloromethane	2017/07/29	113	60 - 140	112	60 - 140	<1.0	ug/L	NC	30
8710361	cis-1,2-dichloroethene	2017/07/29	100	70 - 130	100	70 - 130	<1.0	ug/L	NC	30
8710361	cis-1,3-dichloropropene	2017/07/29	101	70 - 130	99	70 - 130	<1.0	ug/L	NC	30
8710361	Dichlorodifluoromethane	2017/07/29	140	60 - 140	137	60 - 140	<2.0	ug/L	NC	30
8710361	Dichloromethane	2017/07/29	100	70 - 130	99	70 - 130	<2.0	ug/L	NC	30
8710361	Ethylbenzene	2017/07/29	99	70 - 130	101	70 - 130	<0.40	ug/L	NC	30
8710361	Hexachlorobutadiene	2017/07/29	110	70 - 130	102	70 - 130	<0.50	ug/L	NC	30
8710361	m & p-Xylene	2017/07/29	112	70 - 130	113	70 - 130	<0.40	ug/L	NC	30
8710361	Methyl-tert-butylether (MTBE)	2017/07/29	95	70 - 130	96	70 - 130	<4.0	ug/L	NC	30

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8710361	o-Xylene	2017/07/29	102	70 - 130	104	70 - 130	<0.40	ug/L	NC	30
8710361	Styrene	2017/07/29	86	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8710361	Tetrachloroethene	2017/07/29	99	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
8710361	Toluene	2017/07/29	95	70 - 130	97	70 - 130	<0.40	ug/L	NC	30
8710361	trans-1,2-dichloroethene	2017/07/29	99	70 - 130	97	70 - 130	<1.0	ug/L	NC	30
8710361	trans-1,3-dichloropropene	2017/07/29	91	70 - 130	91	70 - 130	<1.0	ug/L	NC	30
8710361	Trichloroethene	2017/07/29	98	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
8710361	Trichlorofluoromethane	2017/07/29	122	60 - 140	118	60 - 140	<4.0	ug/L	NC	30
8710361	VH C6-C10	2017/07/29			121	70 - 130	<300	ug/L	NC	30
8710361	Vinyl chloride	2017/07/29	119	60 - 140	120	60 - 140	<0.50	ug/L	NC	30
8710361	Xylenes (Total)	2017/07/29					<0.40	ug/L	NC	30
8710687	2-Methylnaphthalene	2017/07/30	90	50 - 130	84	50 - 130	<0.10	ug/L	NC	40
8710687	Acenaphthene	2017/07/30	94	50 - 130	90	50 - 130	<0.050	ug/L	NC	40
8710687	Acenaphthylene	2017/07/30	88	50 - 130	84	50 - 130	<0.050	ug/L	NC	40
8710687	Acridine	2017/07/30	94	50 - 130	89	50 - 130	<0.050	ug/L	NC	40
8710687	Anthracene	2017/07/30	95	60 - 130	90	60 - 130	<0.010	ug/L	NC	40
8710687	Benzo(a)anthracene	2017/07/30	88	60 - 130	85	60 - 130	<0.010	ug/L	NC	40
8710687	Benzo(a)pyrene	2017/07/30	91	60 - 130	87	60 - 130	<0.0050	ug/L	NC	40
8710687	Benzo(b&j)fluoranthene	2017/07/30	94	60 - 130	89	60 - 130	<0.030	ug/L	NC	40
8710687	Benzo(g,h,i)perylene	2017/07/30	92	60 - 130	88	60 - 130	<0.050	ug/L	NC	40
8710687	Benzo(k)fluoranthene	2017/07/30	93	60 - 130	91	60 - 130	<0.050	ug/L	NC	40
8710687	Chrysene	2017/07/30	87	60 - 130	84	60 - 130	<0.020	ug/L	NC	40
8710687	Dibenz(a,h)anthracene	2017/07/30	95	60 - 130	92	60 - 130	<0.0030	ug/L	NC	40
8710687	Fluoranthene	2017/07/30	88	60 - 130	85	60 - 130	<0.020	ug/L	NC	40
8710687	Fluorene	2017/07/30	87	50 - 130	84	50 - 130	<0.050	ug/L	NC	40
8710687	Indeno(1,2,3-cd)pyrene	2017/07/30	98	60 - 130	95	60 - 130	<0.050	ug/L	NC	40
8710687	Naphthalene	2017/07/30	93	50 - 130	87	50 - 130	<0.10	ug/L	NC	40
8710687	Phenanthrene	2017/07/30	89	60 - 130	86	60 - 130	<0.050	ug/L	NC	40
8710687	Pyrene	2017/07/30	92	60 - 130	87	60 - 130	<0.020	ug/L	NC	40
8710687	Quinoline	2017/07/30	112	50 - 130	107	50 - 130	<0.020	ug/L	NC	40
8710695	EPH (C10-C19)	2017/07/30	99	60 - 140	99	70 - 130	<0.20	mg/L	NC	30

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**QUALITY ASSURANCE REPORT(CONT'D)**

CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8710695	EPH (C19-C32)	2017/07/30	108	60 - 140	101	70 - 130	<0.20	mg/L	NC	30
8711882	EPH (C10-C19)	2017/07/31	99	60 - 140	101	70 - 130	<0.20	mg/L	NC	30
8711882	EPH (C19-C32)	2017/07/31	91	60 - 140	90	70 - 130	<0.20	mg/L	NC	30
8712442	2-Methylnaphthalene	2017/07/31	107	50 - 130	103	50 - 130	<0.10	ug/L	NC	40
8712442	Acenaphthene	2017/07/31	99	50 - 130	97	50 - 130	<0.050	ug/L	NC	40
8712442	Acenaphthylene	2017/07/31	96	50 - 130	95	50 - 130	<0.050	ug/L	NC	40
8712442	Acridine	2017/07/31	90	50 - 130	98	50 - 130	<0.050	ug/L	NC	40
8712442	Anthracene	2017/07/31	92	60 - 130	86	60 - 130	<0.010	ug/L	NC	40
8712442	Benzo(a)anthracene	2017/07/31	93	60 - 130	96	60 - 130	<0.010	ug/L	NC	40
8712442	Benzo(a)pyrene	2017/07/31	88	60 - 130	96	60 - 130	<0.0050	ug/L	NC	40
8712442	Benzo(b&j)fluoranthene	2017/07/31	91	60 - 130	103	60 - 130	<0.030	ug/L	NC	40
8712442	Benzo(g,h,i)perylene	2017/07/31	67	60 - 130	88	60 - 130	<0.050	ug/L	NC	40
8712442	Benzo(k)fluoranthene	2017/07/31	94	60 - 130	97	60 - 130	<0.050	ug/L	NC	40
8712442	Chrysene	2017/07/31	96	60 - 130	97	60 - 130	<0.020	ug/L	NC	40
8712442	Dibenz(a,h)anthracene	2017/07/31	68	60 - 130	90	60 - 130	<0.0030	ug/L	NC	40
8712442	Fluoranthene	2017/07/31	90	60 - 130	92	60 - 130	<0.020	ug/L	NC	40
8712442	Fluorene	2017/07/31	92	50 - 130	93	50 - 130	<0.050	ug/L	NC	40
8712442	Indeno(1,2,3-cd)pyrene	2017/07/31	70	60 - 130	91	60 - 130	<0.050	ug/L	NC	40
8712442	Naphthalene	2017/07/31	121	50 - 130	117	50 - 130	<0.10	ug/L	NC	40
8712442	Phenanthrene	2017/07/31	91	60 - 130	97	60 - 130	<0.050	ug/L	NC	40
8712442	Pyrene	2017/07/31	94	60 - 130	94	60 - 130	<0.020	ug/L	NC	40
8712442	Quinoline	2017/07/31	103	50 - 130	109	50 - 130	<0.020	ug/L	NC	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Job #: B761682  
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CAPITAL REGIONAL DISTRICT  
Client Project #: MILLSTREAM MEADOWS DOMESTIC WE  
Sampler Initials: SA

### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



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Andy Lu, Ph.D., P.Chem., Scientific Specialist

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Ph: (604) 734-7276 Fax: (604) 731-2386, Toll Free: (800) 665-8566  
 Project Name: Millstream Meadows Domestic Wells  
 Contract #: EPRO2016-085

B761682

CHAIN OF CUSTODY FORM

08437117

PAGE 1 OF 3

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )				ANALYSIS REQUESTED:																
ADDRESS: 625 FISGARD STREET, PO BOX 1000																				
CITY: VICTORIA		PROV: BC		POSTAL CODE: V8W 2S6																
TEL: (250) 360-3148		FAX: (250) 360-3254		CONTACT: Korene Torney																
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS				SAMPLER: Shelley Alcock																
QUOTE NO.:		PO NO.:		ALS CONTACT: JERRY HOLZBE																
REPORT FORMAT																				
<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@crd.bc.ca																				
<input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results																				
SAMPLE IDENTIFICATION			DATE / TIME COLLECTED		MATRIX	LEPH	HEPH	VOCs												
			YYYY-MM-DD	TIME					NOTES (sample specific comments, due dates, etc.)											
FOR LAB USE ONLY	2017-050-643		2017-07-25	10:58	water	X	X	X	Drinking Water											
	2017-050-644		2017-07-25	11:05	water	X	X	X	Drinking Water											
	2017-050-645		2017-07-25	11:13	water	X	X	X	Drinking Water											
	2017-050-646		2017-07-25	11:34	water	X	X	X	Drinking Water											
	2017-050-647		2017-07-25	11:38	water	X	X	X	Drinking Water											
	2017-050-648		2017-07-25	11:44	water	X	X	X	Drinking Water											
	2017-050-649		2017-07-25	12:03	water	X	X	X	Drinking Water											
	2017-050-650		2017-07-25	12:06	water	X	X	X	Drinking Water											
	2017-050-651		2017-07-25	12:16	water	X	X	X	Drinking Water											
	2017-050-652		2017-07-25	12:20	water	X	X	X	Drinking Water											
TURN AROUND REQUIRED:		<input checked="" type="radio"/> ROUTINE <input type="radio"/> RUSH SPECIFY DATE: _____ (surcharge may apply)		RELINQUISHED BY: Shelley Alcock		DATE: 2017-07-25		RECEIVED BY: [Signature]		DATE: 2017-07-25		TIME: 9:49		TIME: 15:19						
SEND INVOICE TO		<input checked="" type="checkbox"/> SAME AS REPORT <input type="checkbox"/> DIFFERENT FROM REPORT (provide details below)		RELINQUISHED BY: [Signature]		DATE: [Signature]		RECEIVED BY: [Signature]		DATE: 2017/07/25		TIME: 15:26		TIME: 15:26						
INVOICE FORMAT		<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FAX		FOR LAB USE ONLY																
SPECIAL INSTRUCTIONS:				Cooler Seal Intact? Yes ___ No ___ N/A	Sample Temperature: ___ °C	Frozen? Yes ___ No ___	Cooling Method? Icepacks ___ Ice ___ None ___													

6,17,19 JS.



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Ph: (604) 734-7276 Fax: (604) 731-2386, Toll Free: (800) 665-8566  
 Project Name: Millstream Meadows Domestic Wells  
 Contract #: EPRO2016-085

B761682

CHAIN OF CUSTODY FORM

08437117

SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )					ANALYSIS REQUESTED:																
ADDRESS: 625 FISGARD STREET, PO BOX 1000																					
CITY:	VICTORIA	PROV:	BC	POSTAL CODE:														V8W 2S6			
TEL:	(250) 360-3148	FAX:	(250) 360-3254	CONTACT:														Korene Torney			
PROJECT NAME AND NO.:		MILLSTREAM DOMESTIC WELLS		SAMPLER:														Shelley Alcock			
QUOTE NO.:		PO NO.:		ALS CONTACT:														JERRY HOLZBE			
REPORT FORMAT		<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@cr																			
		<input type="checkbox"/> FAX <input type="checkbox"/> EXCEL <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> OTHER: CRD Excel Results																			
FOR LAB USE ONLY	SAMPLE IDENTIFICATION		DATE / TIME COLLECTED		MATRIX	LEPH	HEPH	VOCs	NOTES (sample specific comments, due dates, etc.)												
			YYYY-MM-DD	TIME																	
		2017-050-653	2017-07-25	12:40	water	X	X	X	Drinking Water												
		2017-050-654	2017-07-25	12:40	water	X	X	X	Drinking Water												
		2017-050-655	2017-07-25	12:46	water	X	X	X	Drinking Water												
		2017-050-656	2017-07-25	12:50	water	X	X	X	Drinking Water												
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SPECIAL INSTRUCTIONS:					TIME:		15:20		TIME:		15:20										
FOR LAB USE ONLY																					
Cooler Seal Intact?					Sample Temperature: _____ °C					Cooling Method?											
Yes ___ No ___ N/A					Frozen? Yes ___ No ___					Icepacks ___ Ice ___ None ___											

6, 17, 19 JS



Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Ph: (604) 734-7276 Fax: (604) 731-2386, Toll Free: (800) 665-8566  
 Project Name: Millstream Meadows Domestic Wells  
 Contract #: EPRO2016-085

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CHAIN OF CUSTODY FORM

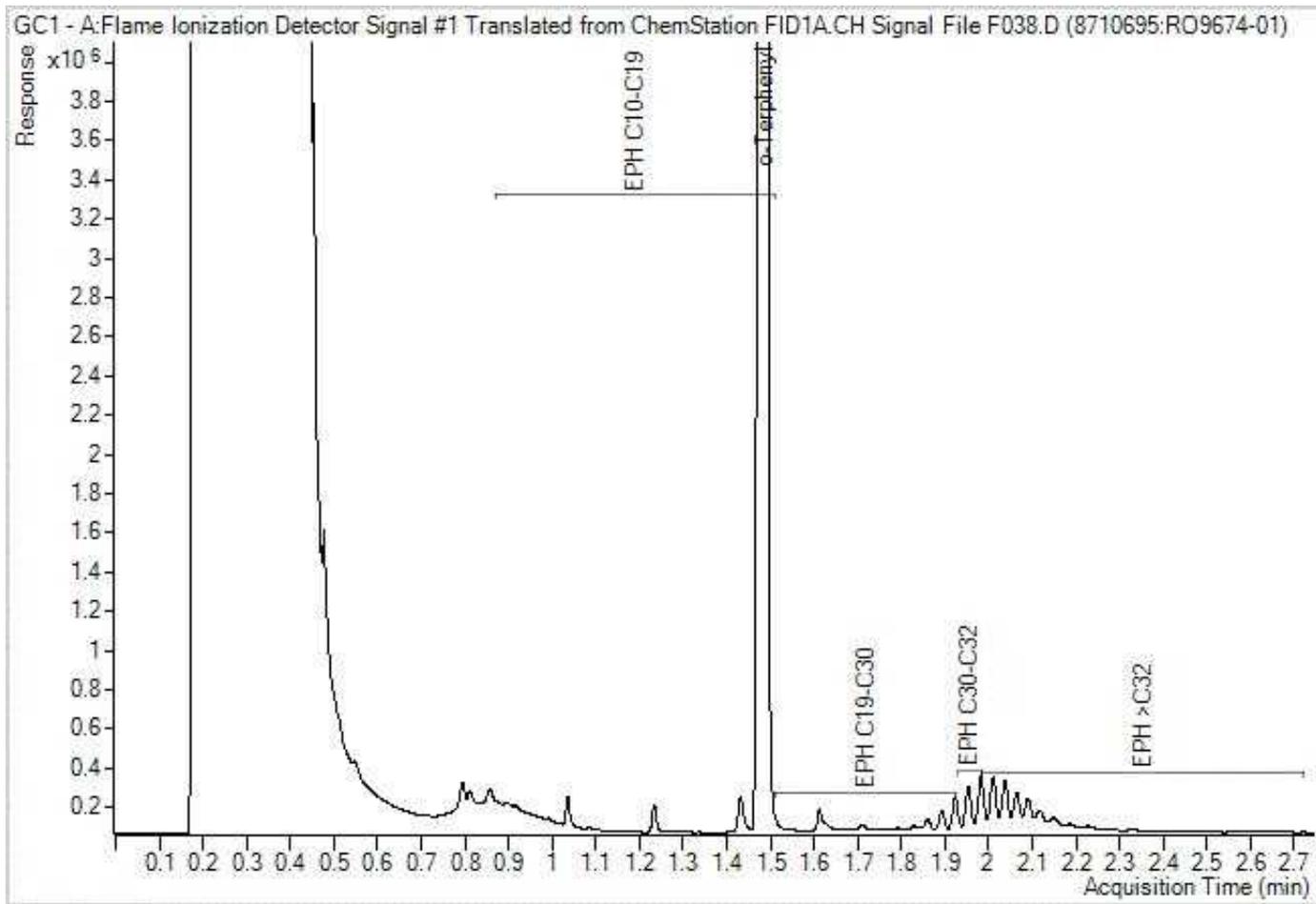
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SEND REPORT TO:

COMPANY: CAPITAL REGIONAL DISTRICT ( CRD )				ANALYSIS REQUESTED:																			
ADDRESS: 625 FISGARD STREET, PO BOX 1000																							
CITY: VICTORIA		PROV: BC		POSTAL CODE: V8W 2S6																			
TEL: (250) 360-3148		FAX: (250) 360-3254		CONTACT: Korene Torney																			
PROJECT NAME AND NO.: MILLSTREAM DOMESTIC WELLS				SAMPLER: Shelley Alcock																			
QUOTE NO.:		PO NO.:		ALS CONTACT: JERRY HOLZBE																			
REPORT FORMAT				<input type="checkbox"/> HARDCOPY <input checked="" type="checkbox"/> EMAIL - ADDRESS: salcock@crd.bc.ca; ktorney@cr																			
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FOR LAB USE ONLY	SAMPLE IDENTIFICATION			DATE / TIME COLLECTED		MATRIX	LEPH	HEPH	VOCs													NOTES (sample specific comments, due dates, etc.)	
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SPECIAL INSTRUCTIONS:				FOR LAB USE ONLY																			
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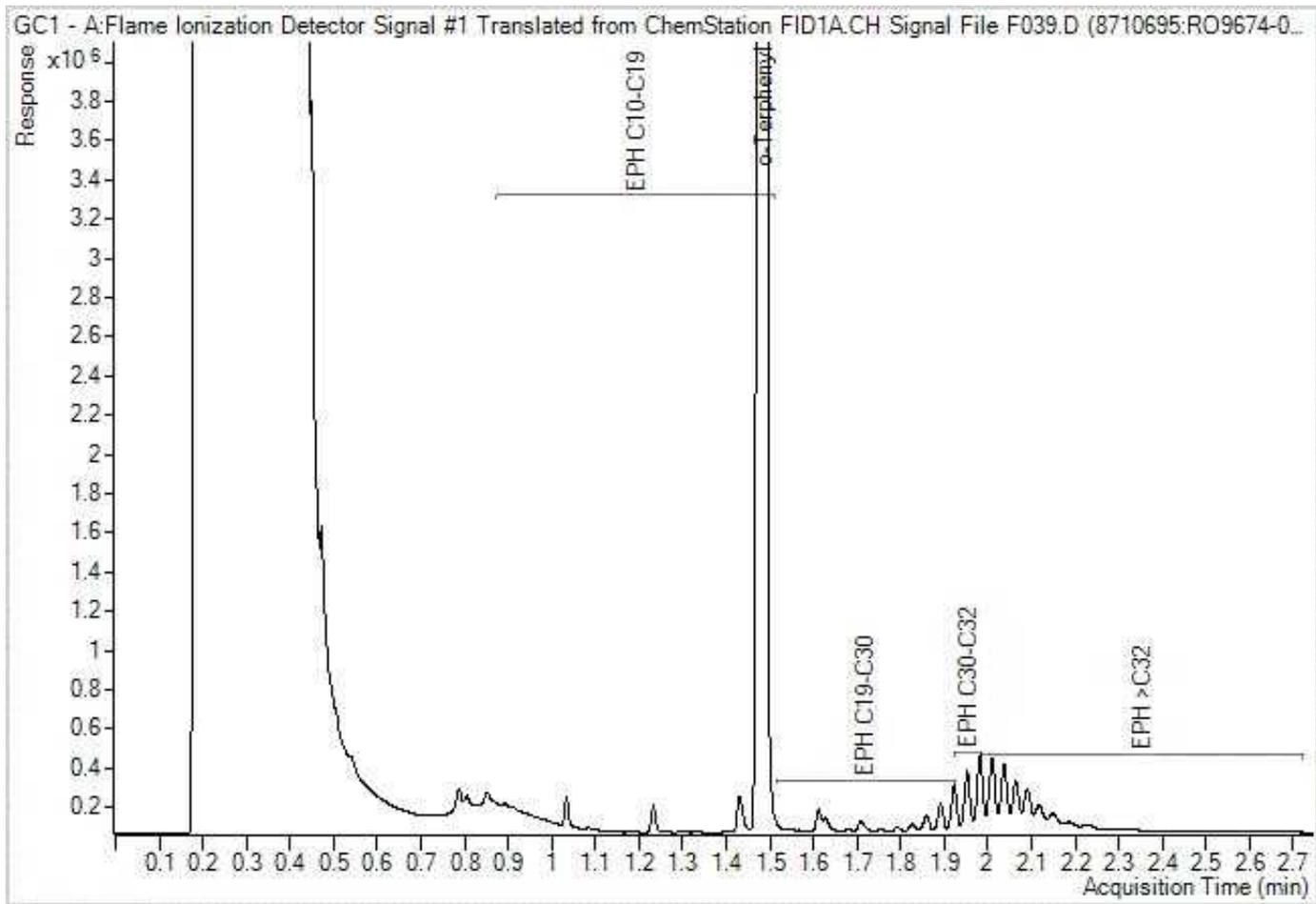
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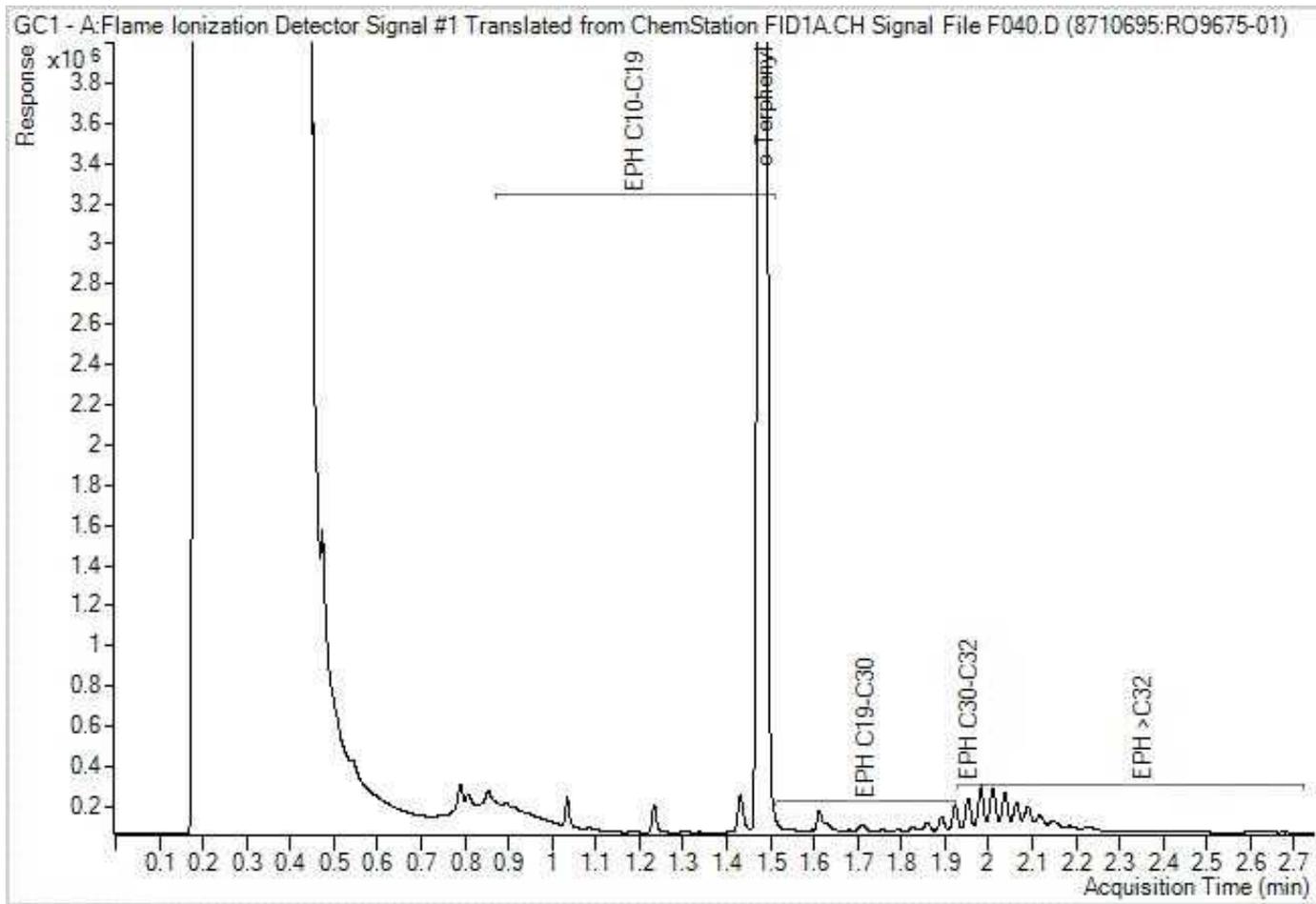
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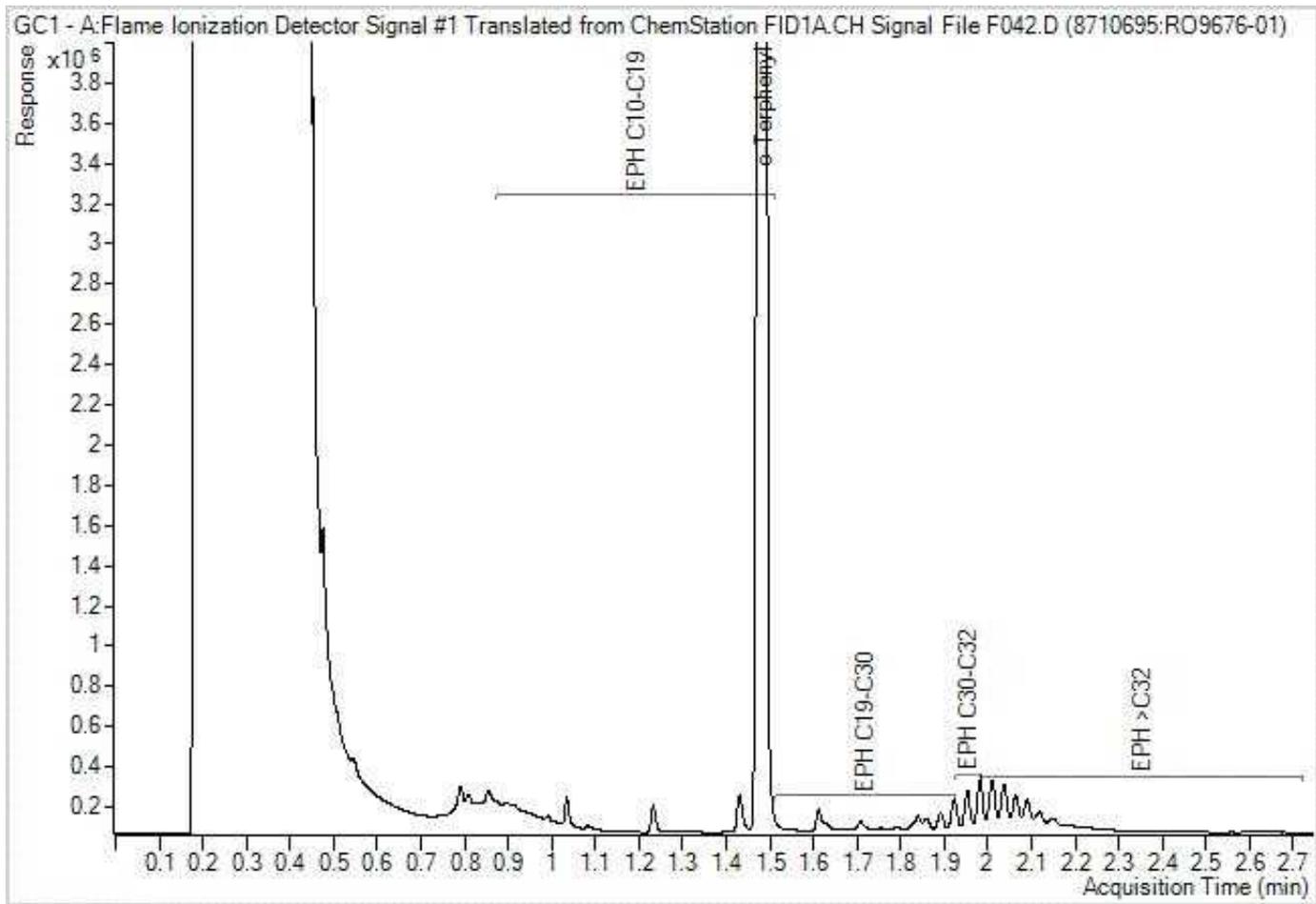
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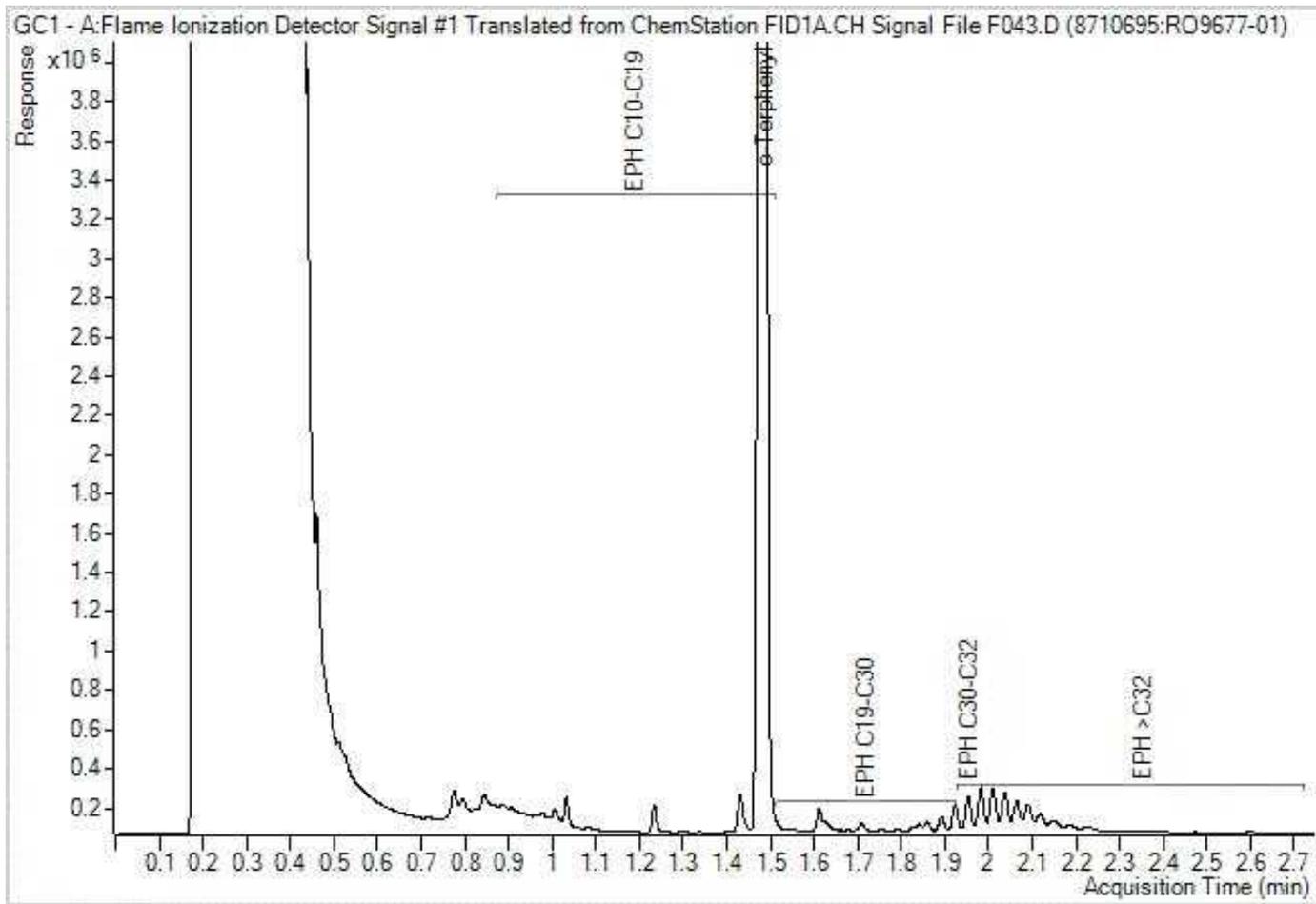
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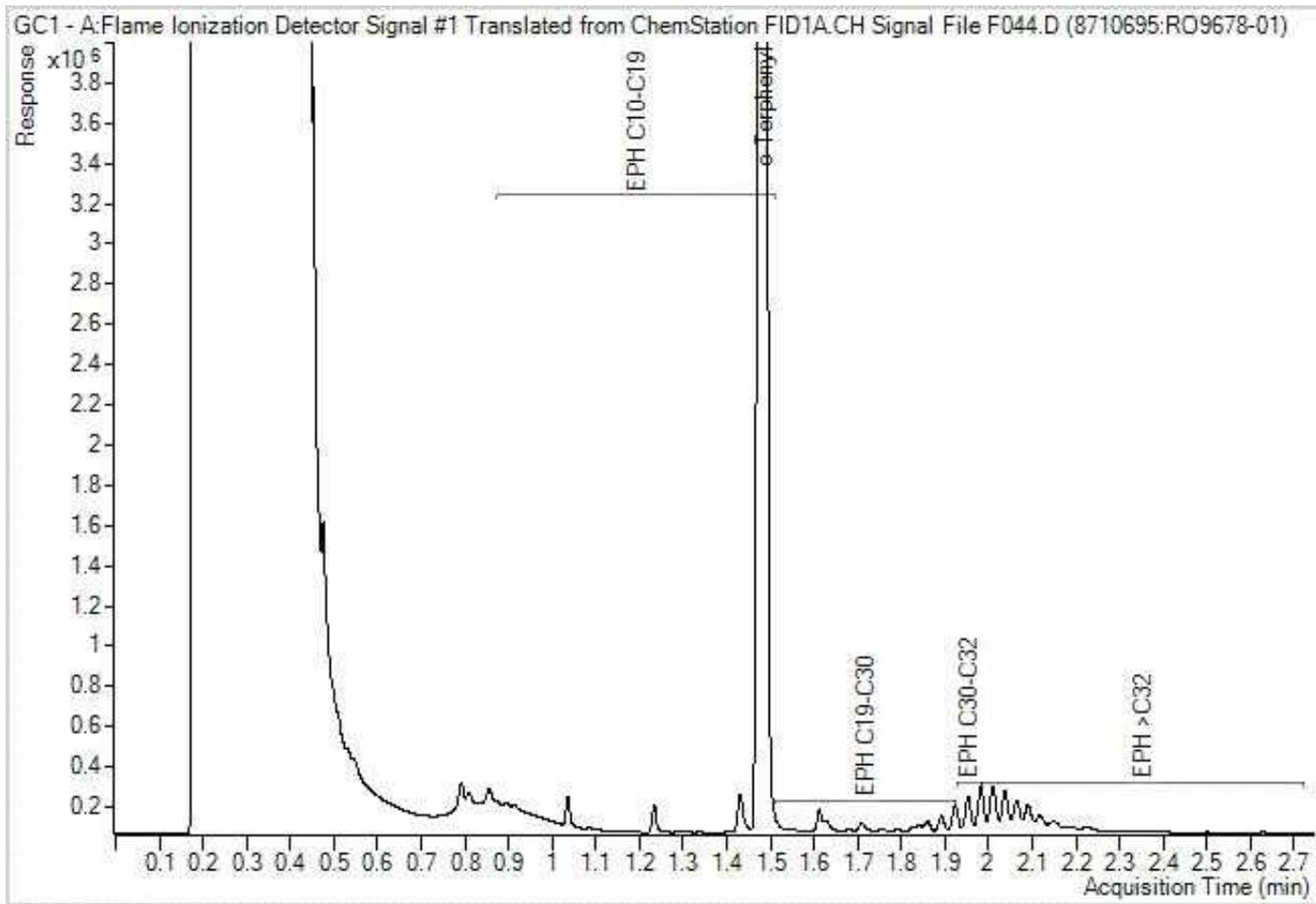
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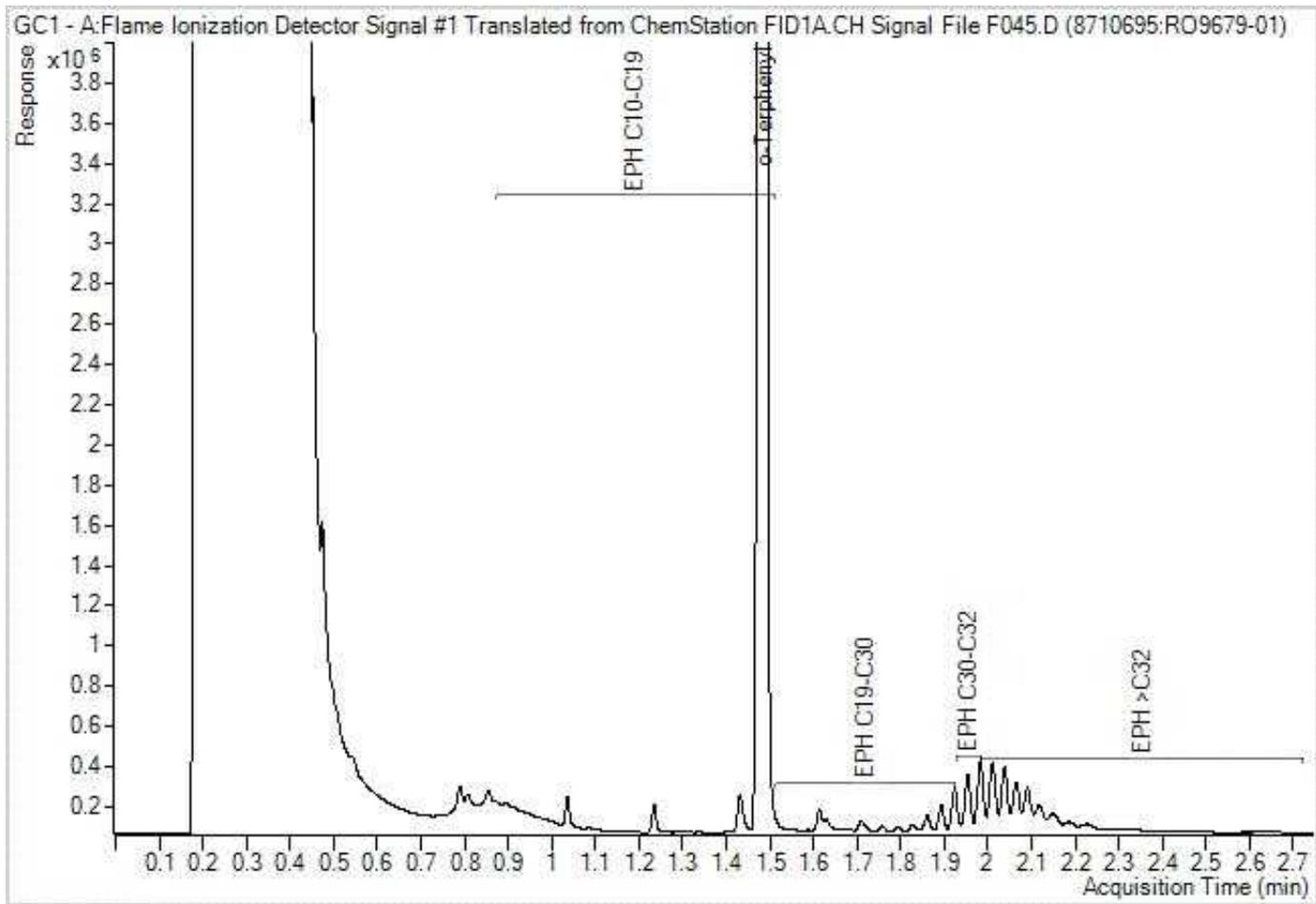
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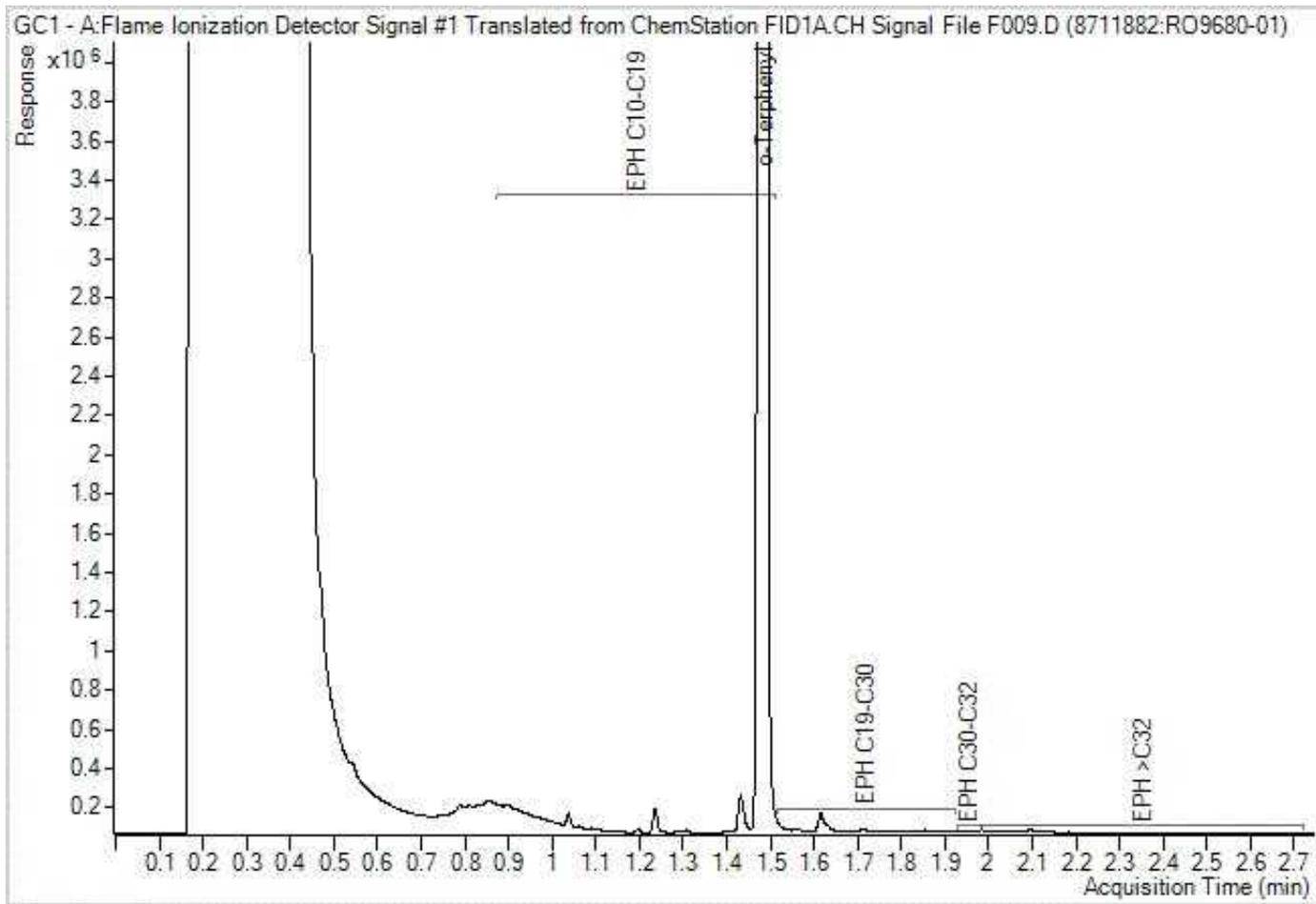
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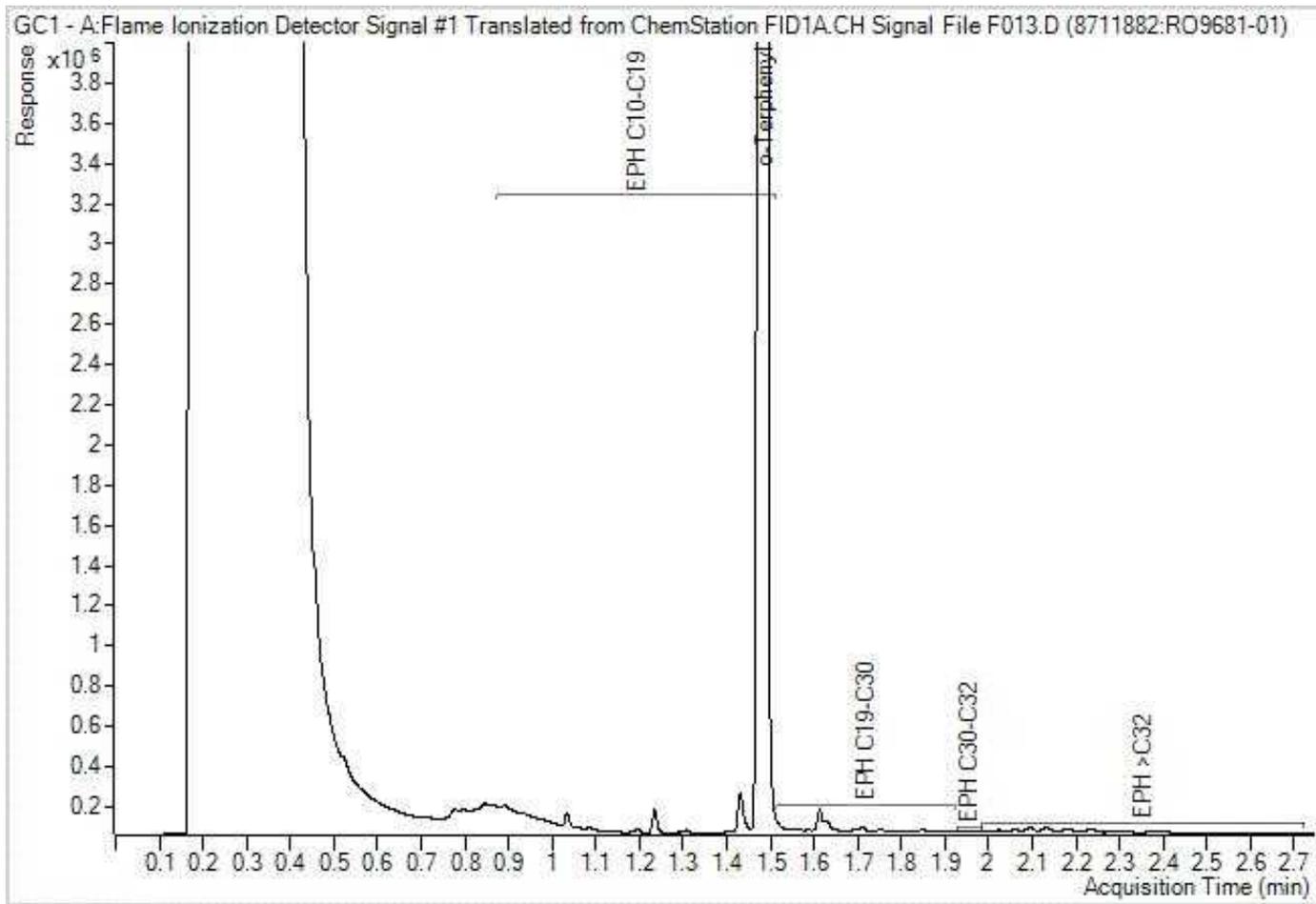
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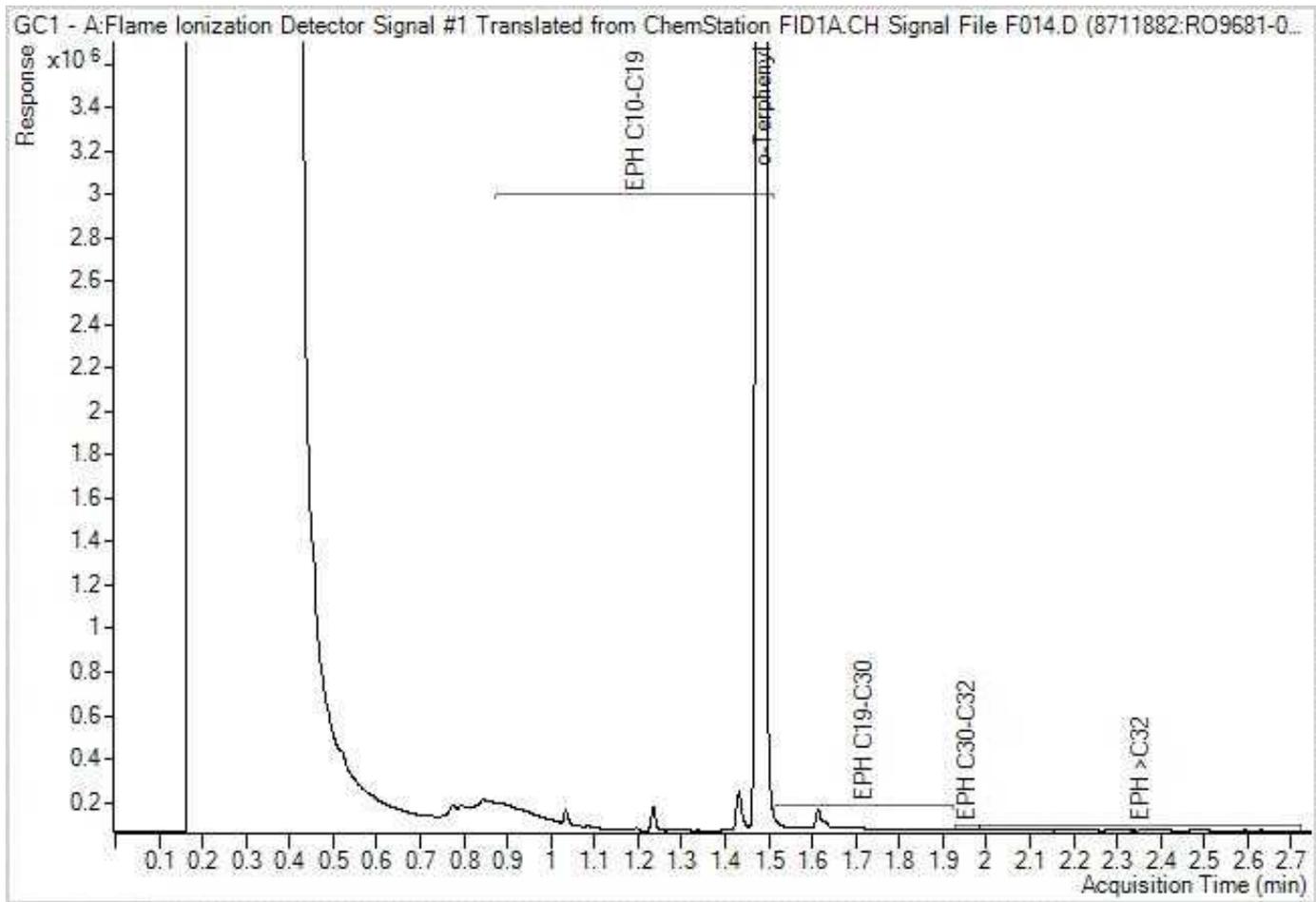
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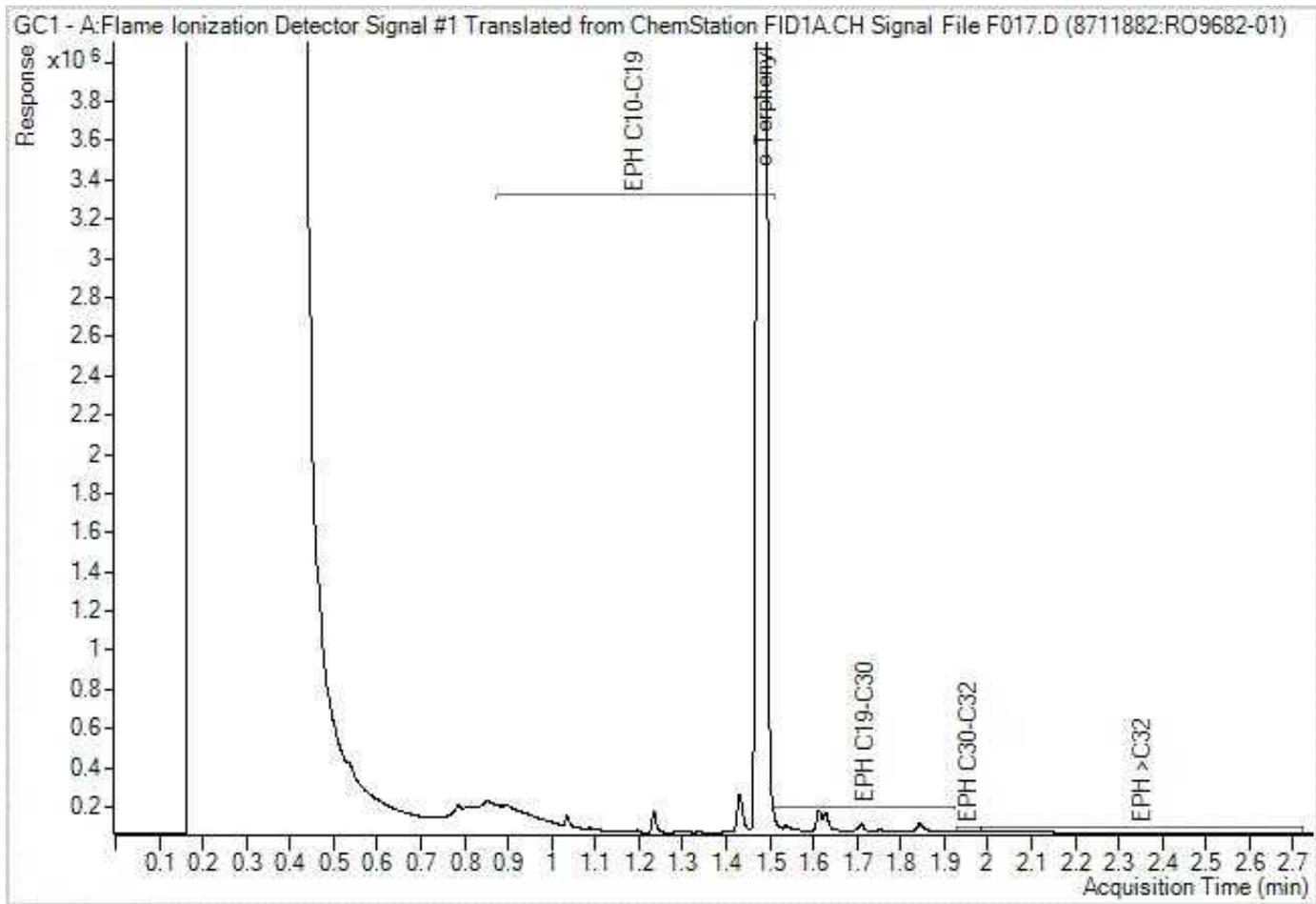
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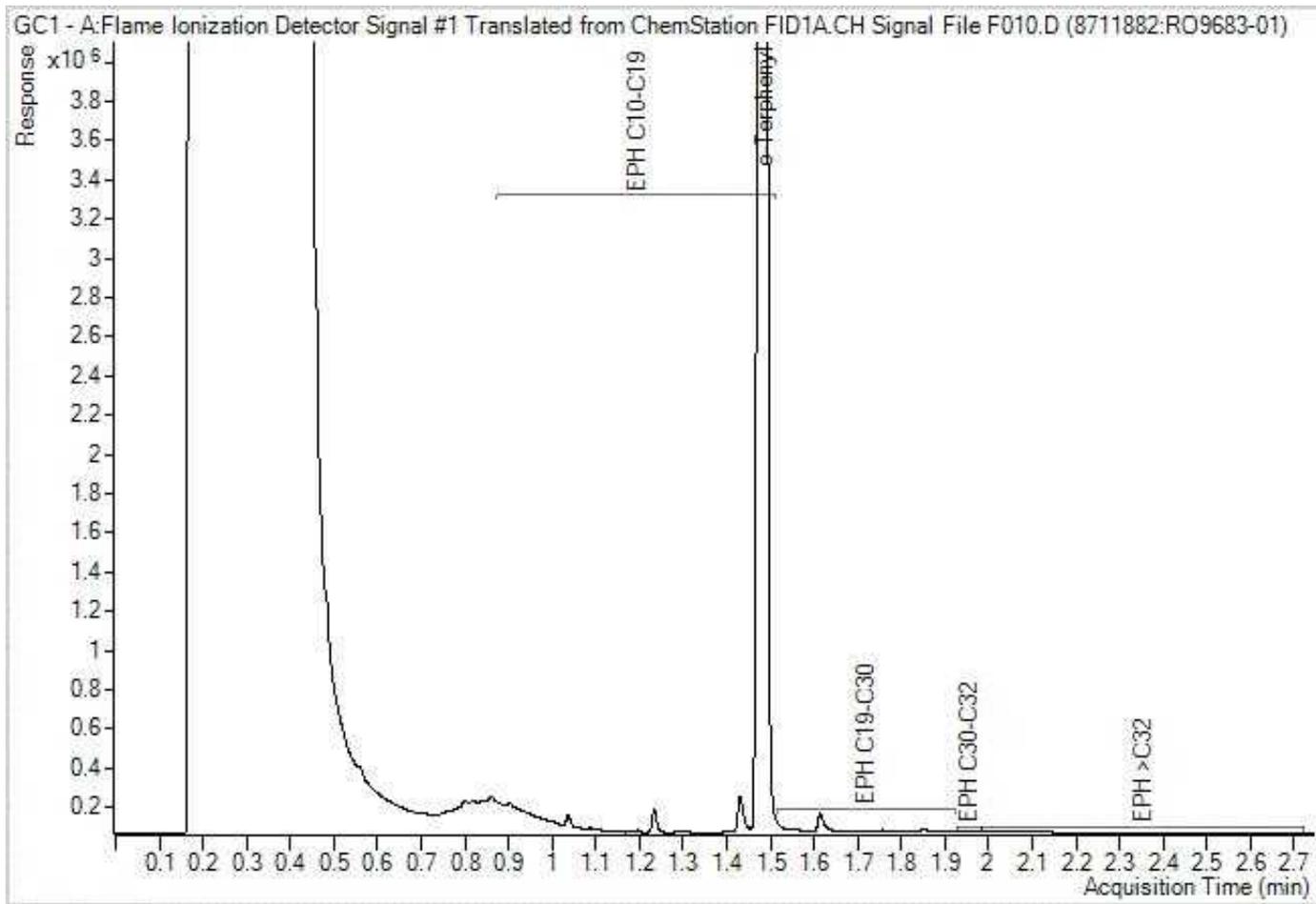
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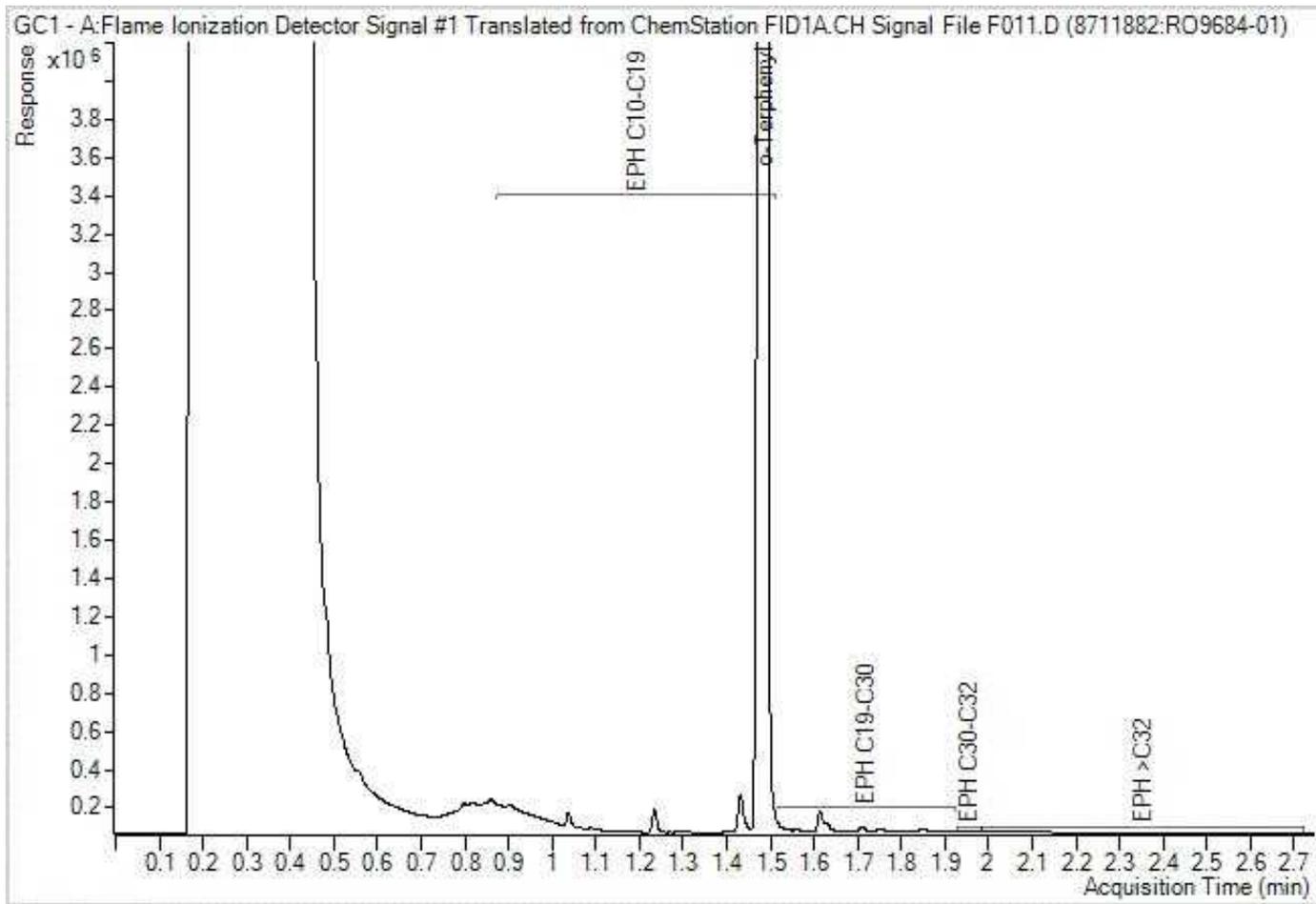
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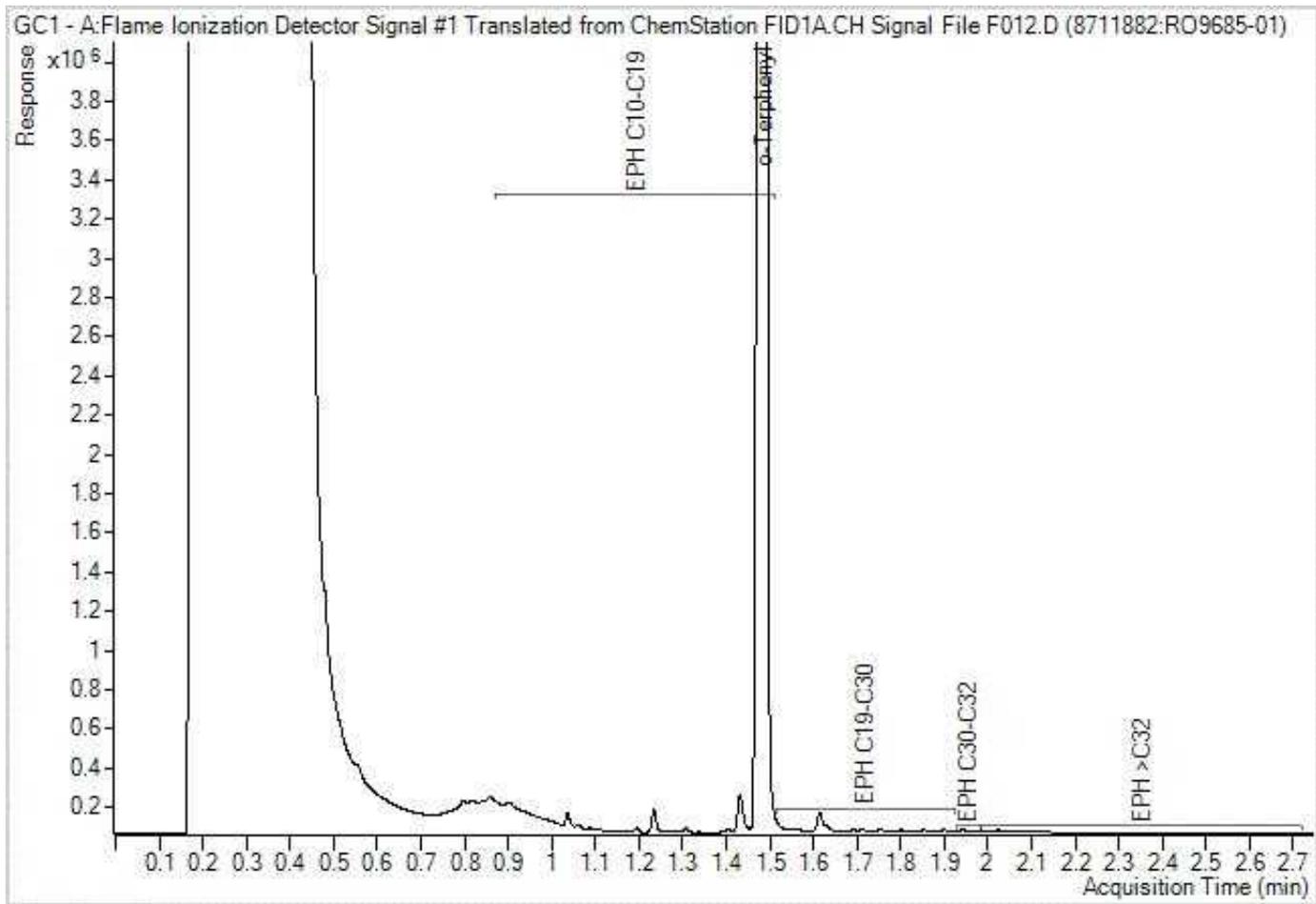
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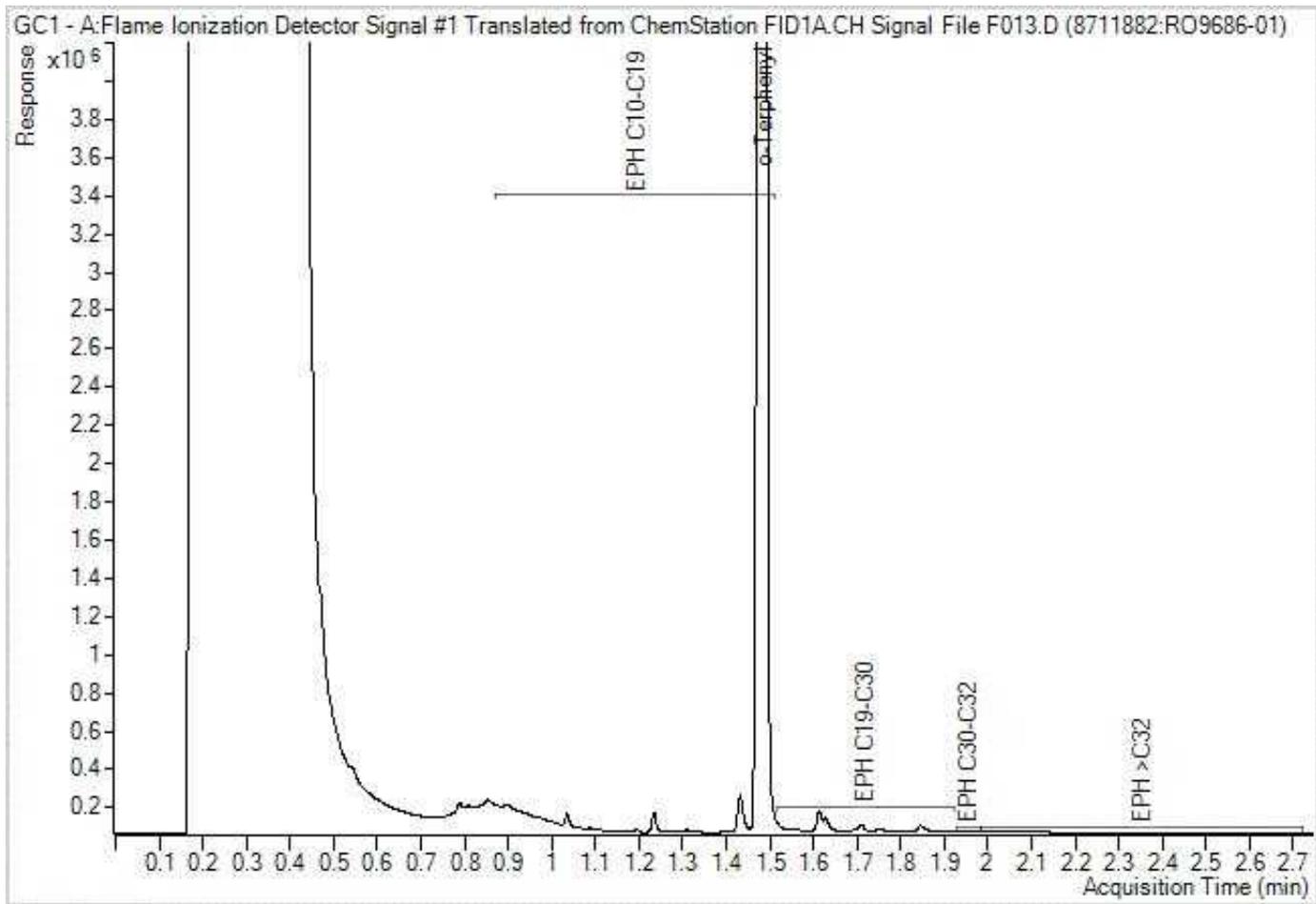
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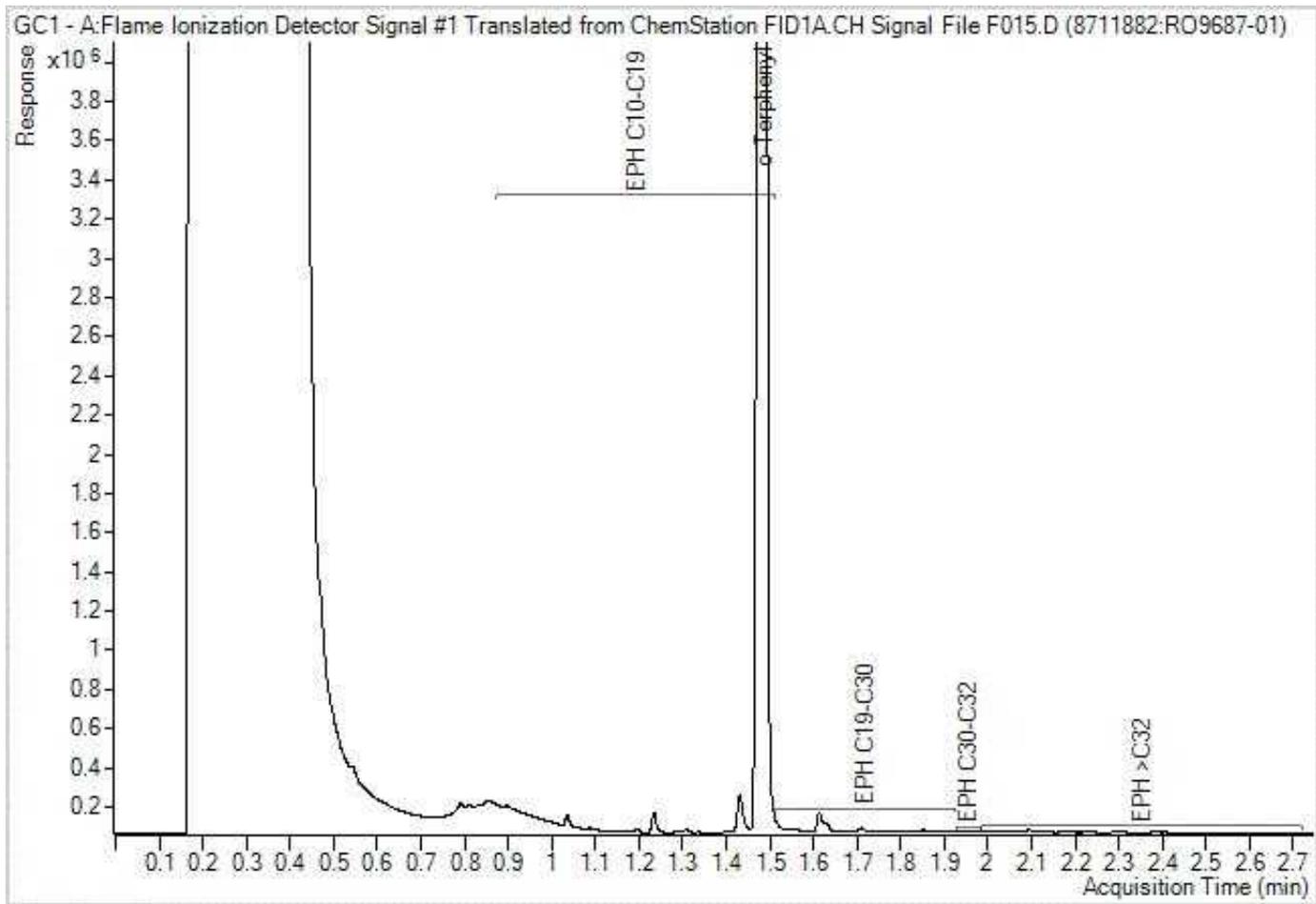
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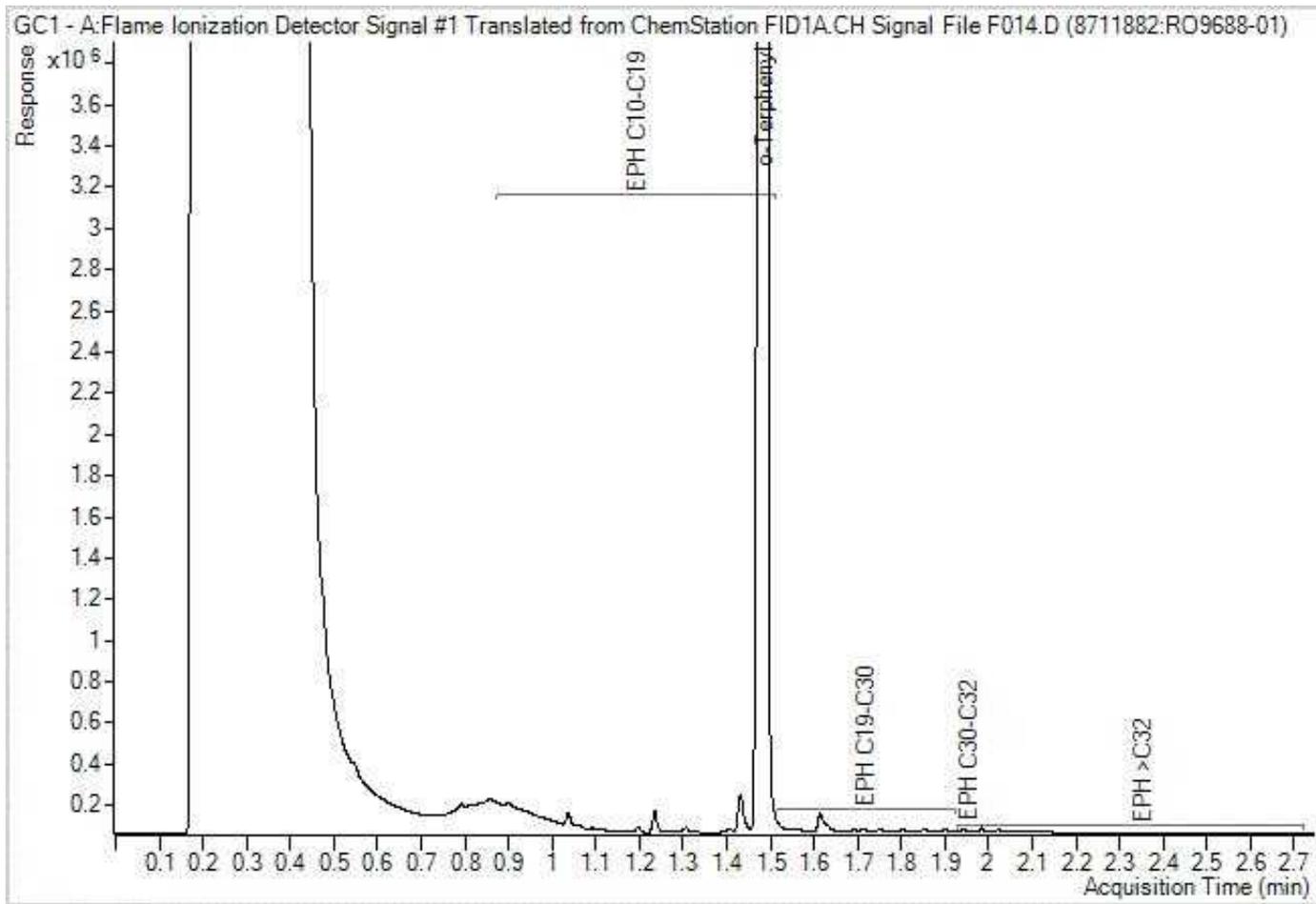
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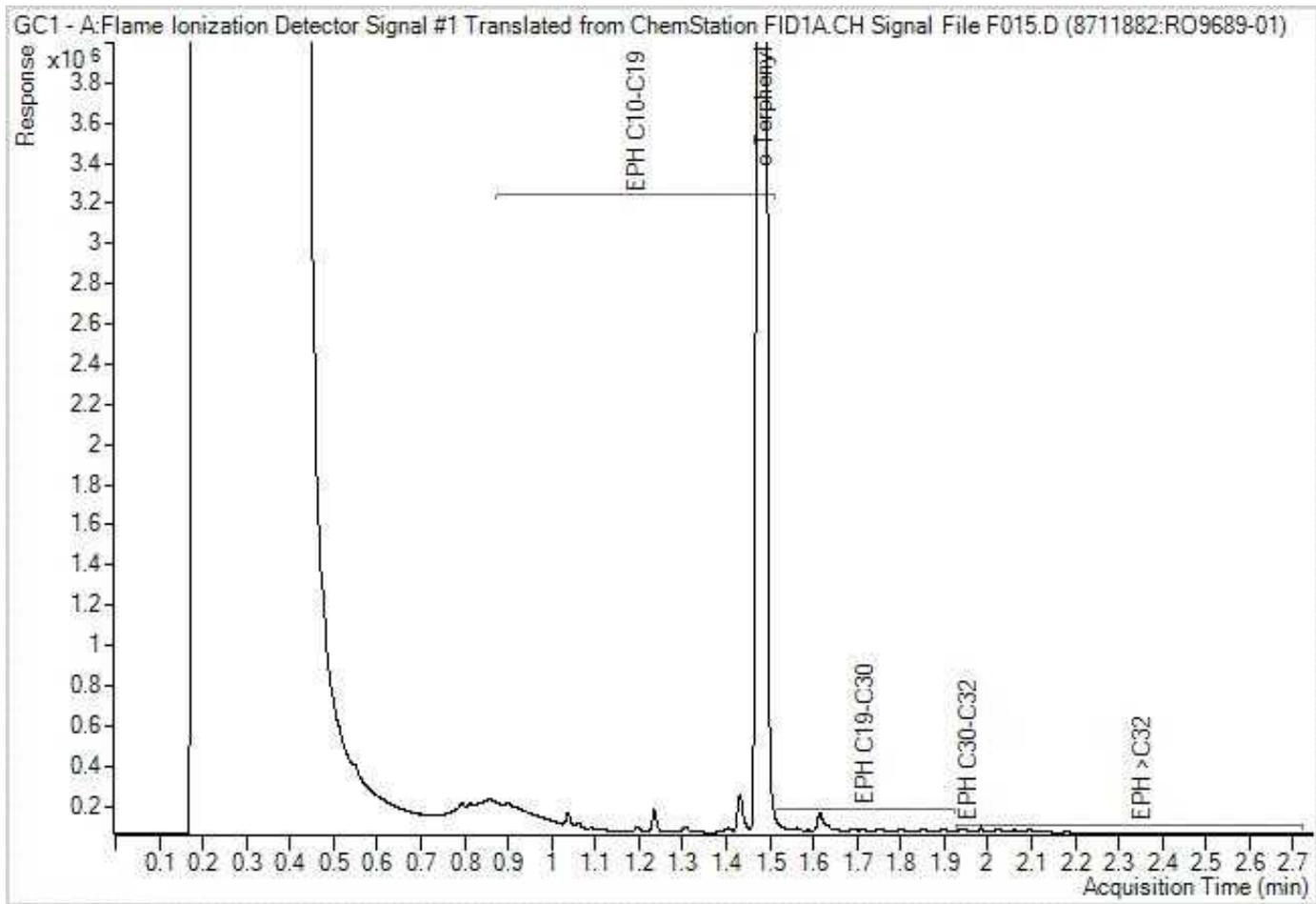
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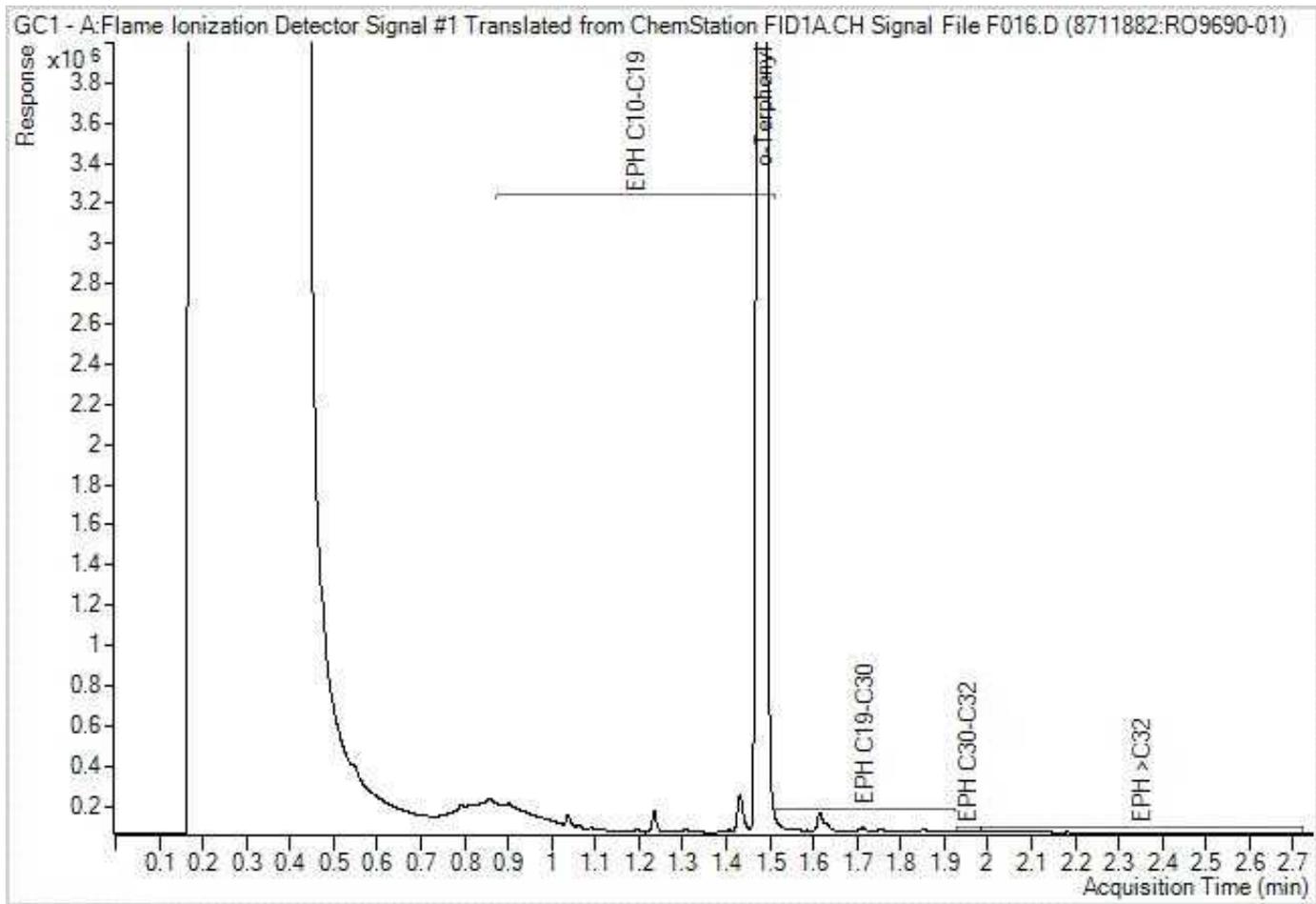
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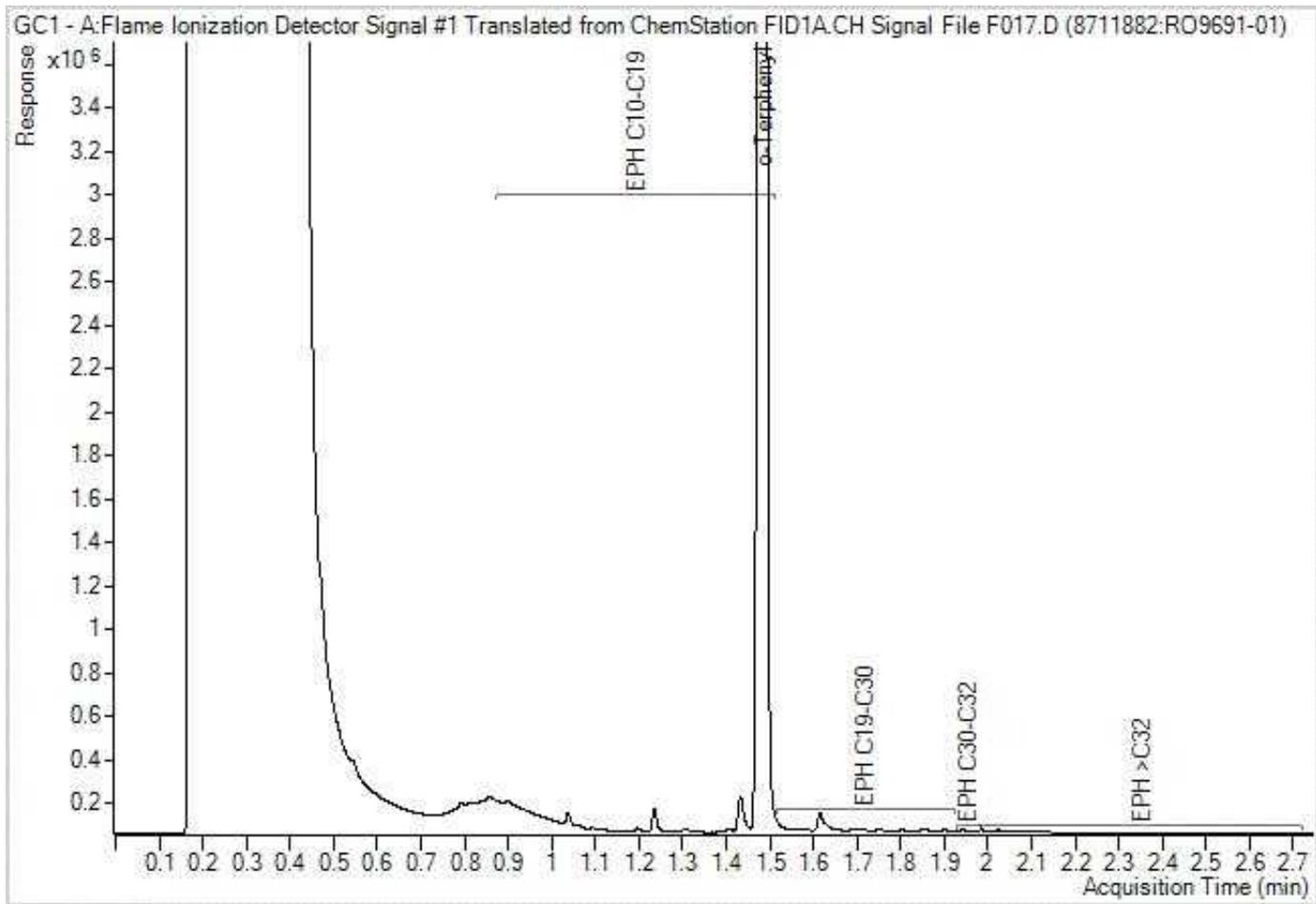
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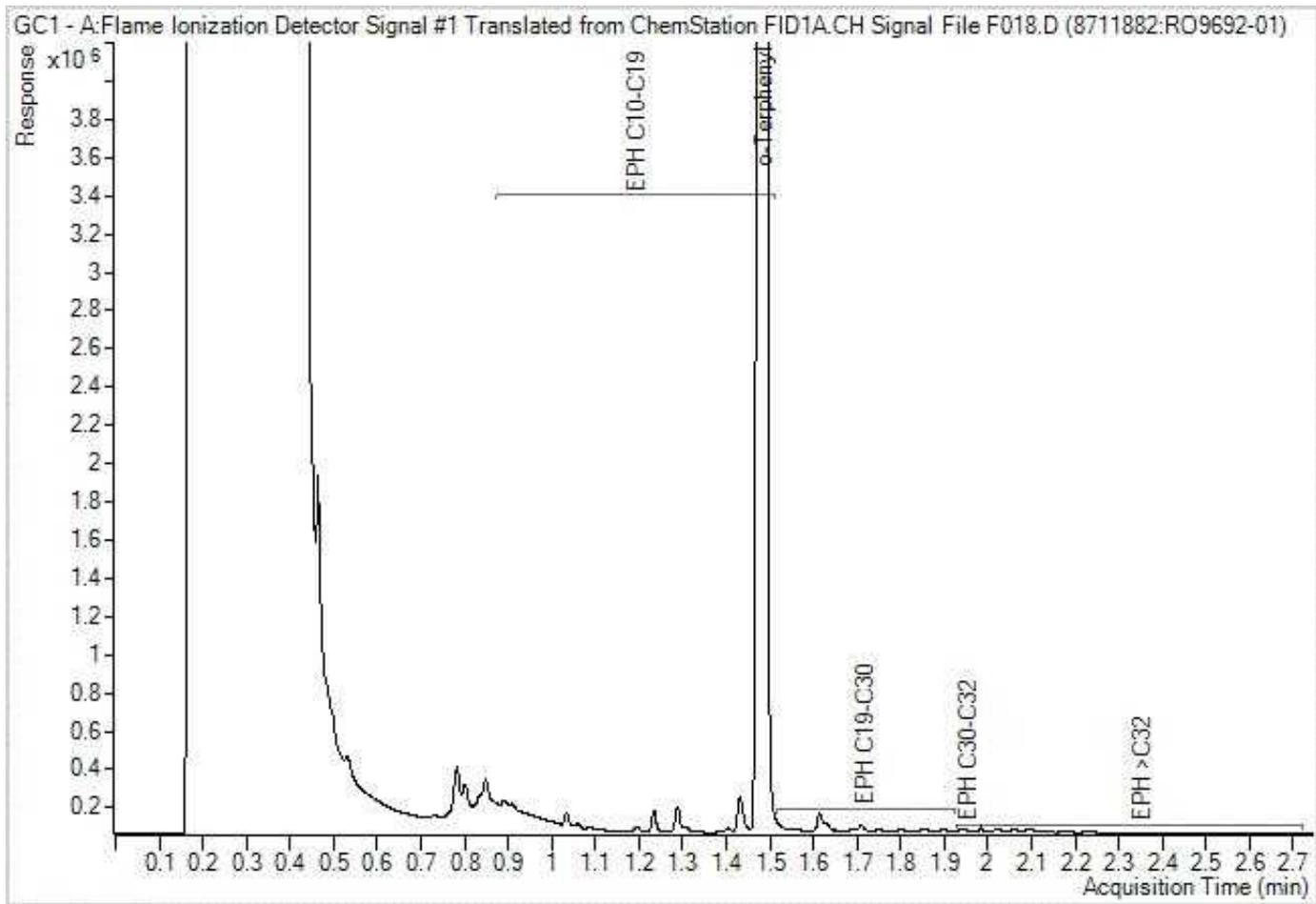
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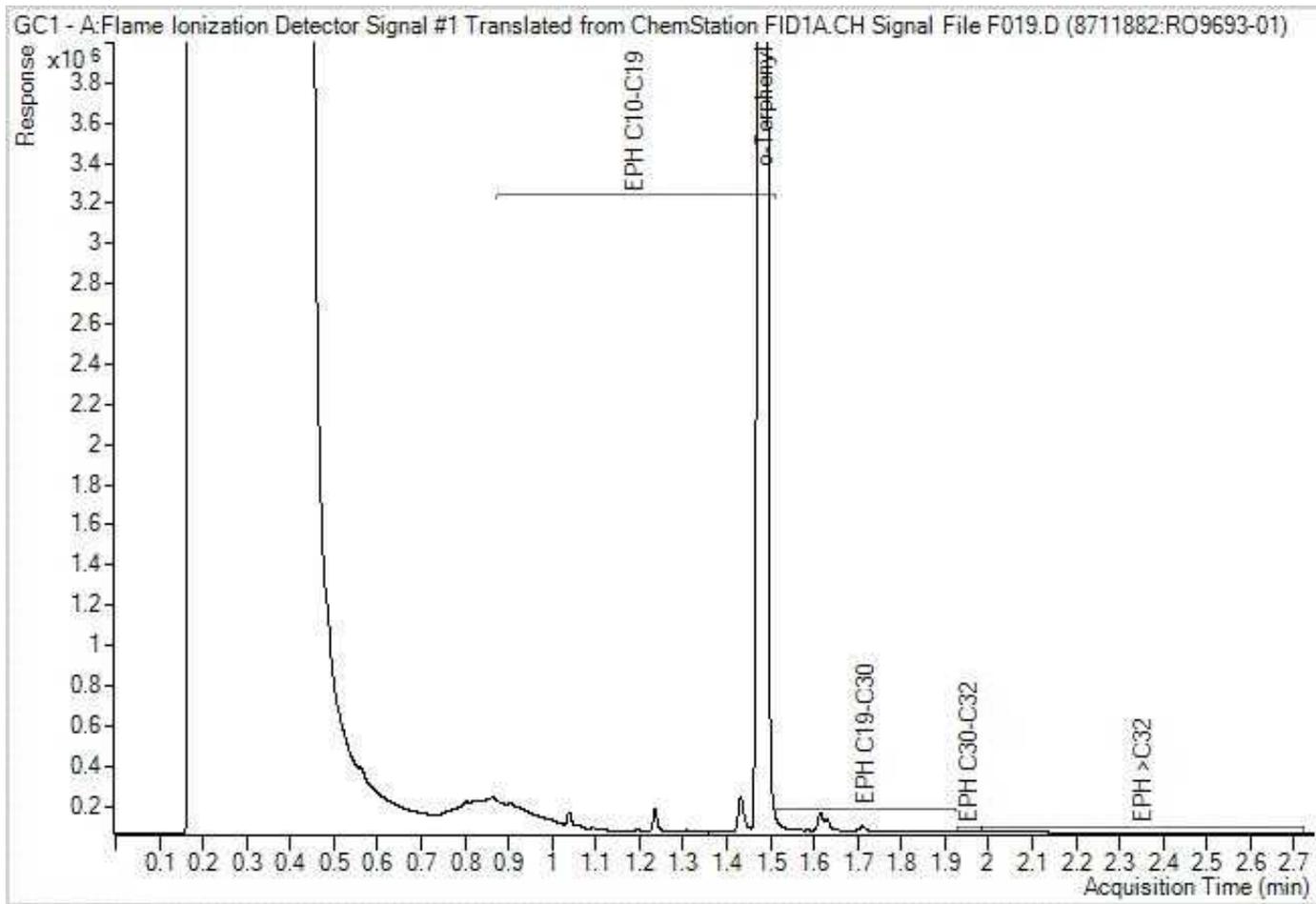
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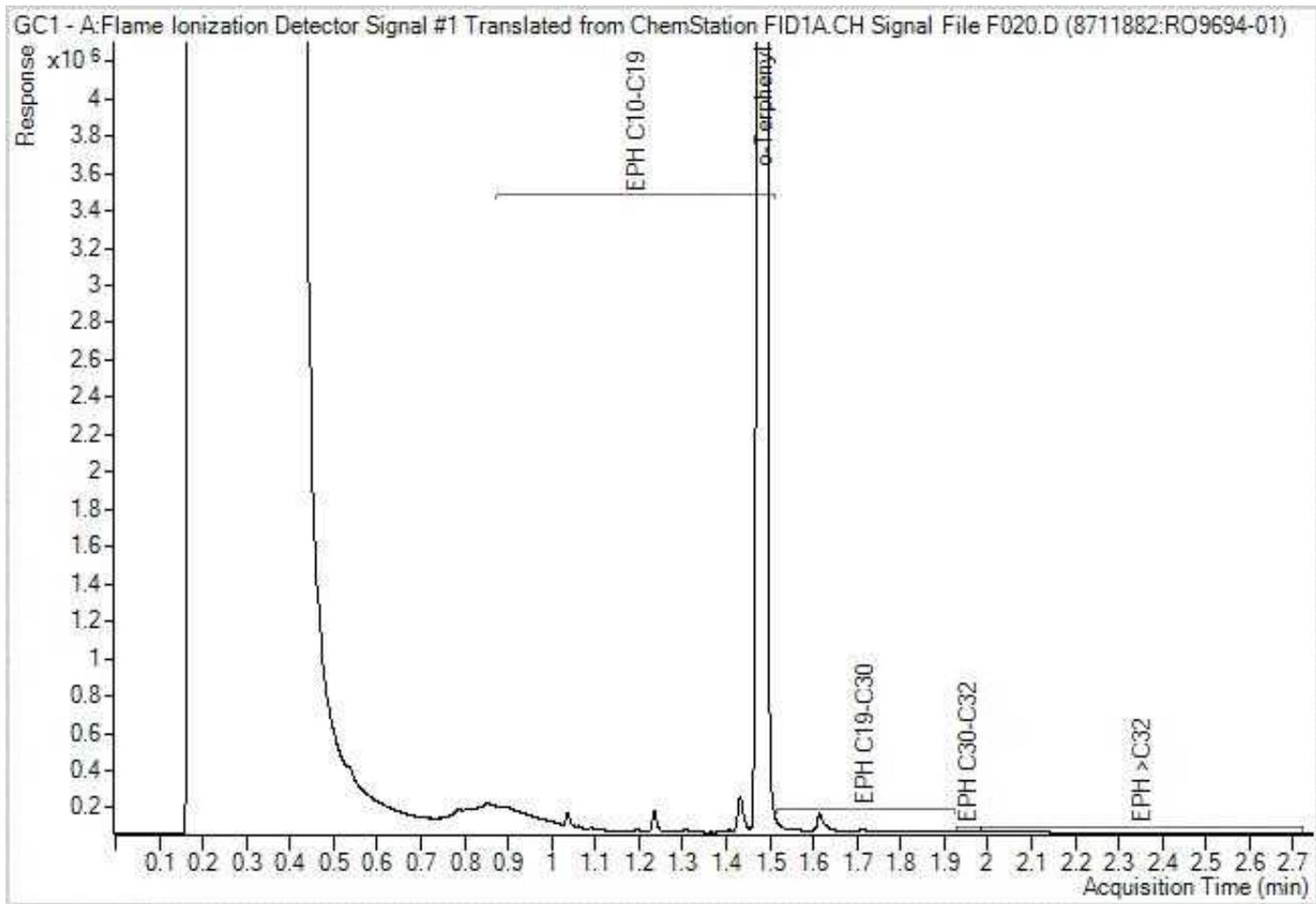
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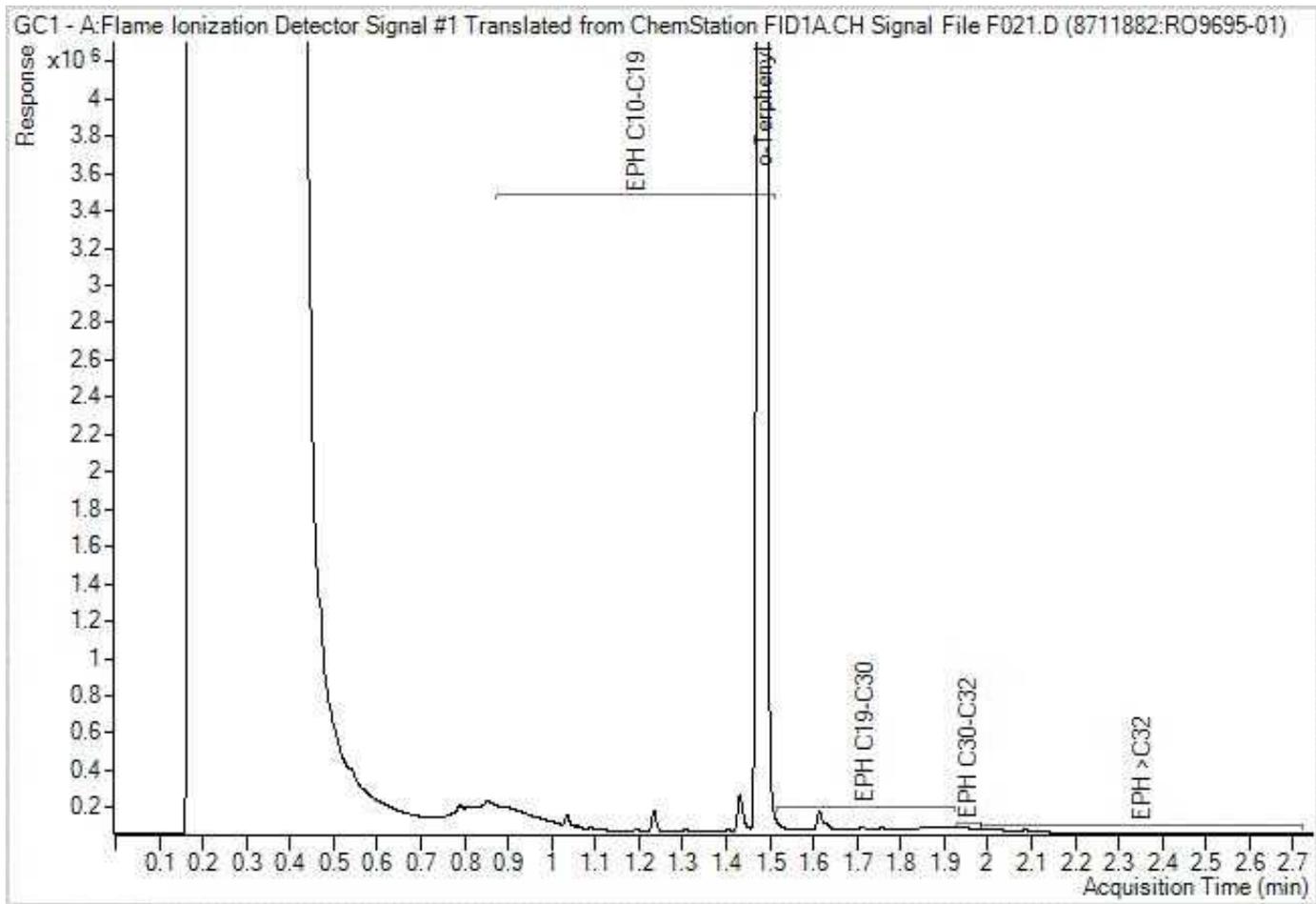
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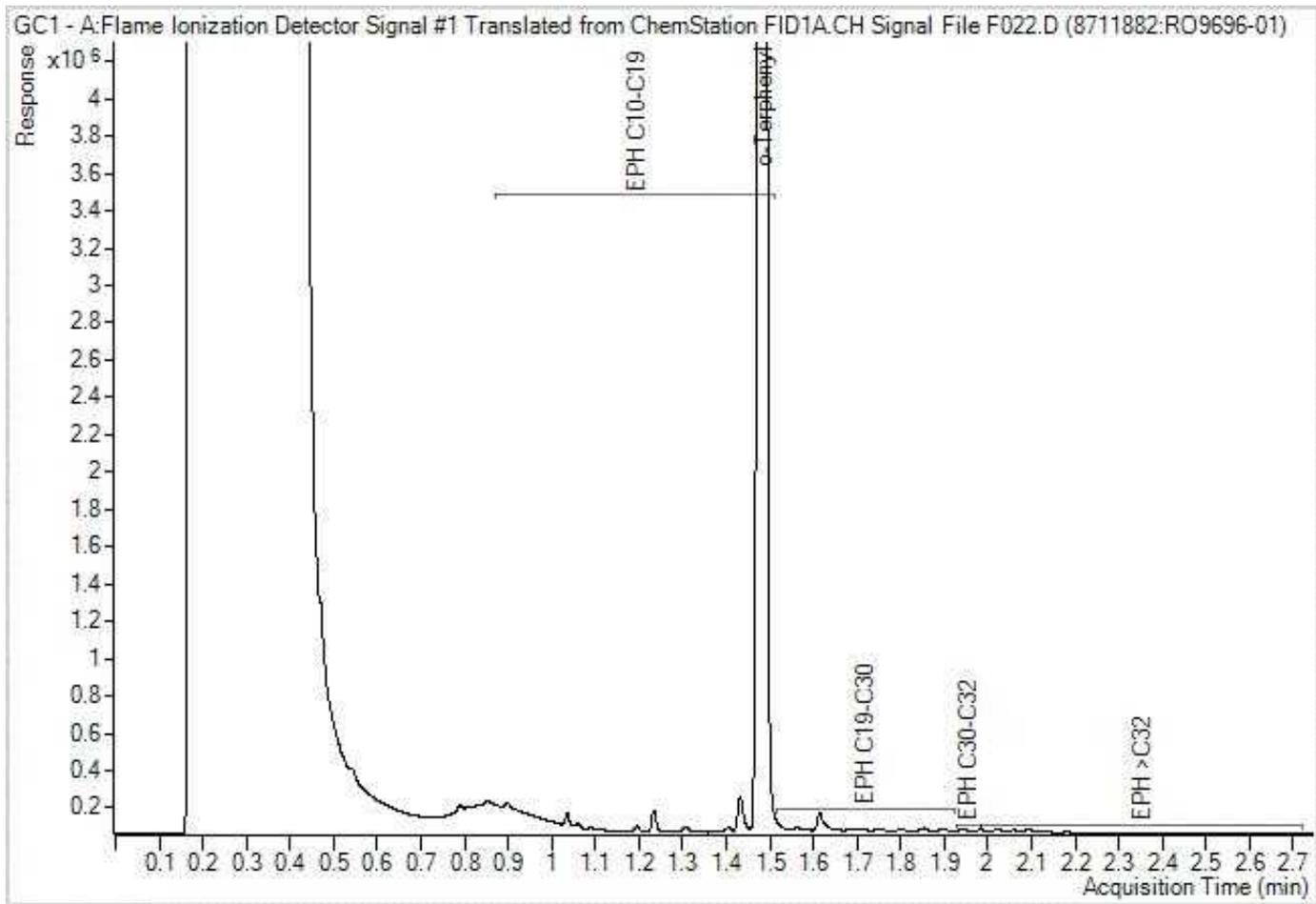
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**REPORT TO CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

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**SUBJECT National Food Policy for Canada, Capital Regional District Recommendations**

**ISSUE**

To consider whether to provide recommendations to the Federal Agriculture and Agri-Food Minister regarding a national food policy, a long term policy and program framework for issues related to food production, processing, distribution and consumption.

**BACKGROUND**

On May 29, 2017 Agriculture and Agri-Food Minister Lawrence MacAulay, announced that the Government of Canada was launching consultations to support the development of a food policy for Canada. The Minister's mandate is to develop a food policy that promotes healthy living and safe food by putting more healthy, high-quality food, produced by Canadian ranchers and farmers, on the tables of families across the country. The consultation process is expected to conclude at the end of fall 2017. The development of a national food policy creates an opportunity to raise regional food system priorities to the federal and provincial Ministers of Agriculture.

The opportunity to provide input into the national food policy aligns with Capital Regional District (CRD) Board Strategic Priority "Enable others and advocate for supportive agricultural programs and policies by provincial and federal governments", and further supports the Regional Food and Agriculture Strategy (RFAS) desired outcome to achieve stronger partnerships with municipalities, provincial and federal government agencies, First Nations, and community organizations. Other federal policy areas that affect the region's food and agriculture community include: economic viability, wildlife impacts, drainage and run off, meat inspection, and First Nations Treaty negotiations. The Regional Food and Agriculture Task Force (RFATF), appointed by the Board on December 14, 2016, has discussed the opportunity to provide input. Appendix A reflects the input that the RFATF suggests be forwarded to the federal government.

**DISCUSSION**

The national food policy process is the first time the federal government will integrate agriculture with food through a policy document. The cross-cutting and broad nature of food adds to the complexity of developing a national policy. In addition to agriculture, poverty reduction, nutrition, food safety and economic development will also be considered. The federal government is seeking to identify where there may be potential for multi-jurisdictional collaboration. Involvement of provincial and local governments is critical to realizing a holistic approach to the food system. The federal process will also explore how best to align and coordinate current and future federal policies and programs that are linked to agriculture and food.

In developing a national food policy, the federal government is asking for input on priorities and actions related to the following four proposed themes.

**1. Increasing access to affordable food**

- Ensuring all have access to nutritious food no matter where they live
- Support growth of local and regional food production
- Making nutritious food more affordable
- Working to improve access to nutritious food around the world

**2. Improving health and food safety**

- Ensuring food is as safe as possible
- Preventing and reducing obesity and chronic diseases
- Making healthier food more available
- Preventing misleading labels or altered content of food

**3. Conserving our soil, water, and air**

- Reducing GHGs
- Conserving water, air and biodiversity
- Product labelling that makes it easier for consumers to identify with their values
- Reducing food waste

**4. Growing more high-quality food**

- Support for new farmers
- Preserving agricultural land
- Helping the food sector innovate and adapt to changing markets
- Helping business increase exports
- Enhance reputation as a preferred food supplier worldwide

Public engagement has been underway since June 2017, asking for feedback on the above proposed priorities and actions. An online survey was available until August 31, 2017. In addition, the federal government hosted an engagement session in Ottawa on June 22-23, 2017, to receive feedback primarily from not-for-profit groups. BC organizations that attended the Ottawa event included the National Zero Waste Council, Vancouver Food Policy Council, University of BC Centre for Sustainable Food, and BC Food Systems Network. Other engagement sessions were scheduled in six locations across Canada. The chair of the CRD RFATF attended the Vancouver session held on September 5, 2017.

**ALTERNATIVES**

*Alternative 1*

That a letter be sent to the federal Agriculture and Agri-Food Minister with a copy to the BC Minister of Agriculture, providing CRD recommendations for a food policy for Canada.

*Alternative 2*

That recommendations for a national food policy be received for information.

**IMPLICATIONS**

**Local Government Implications**

In the capital region, the role of local governments (regional districts and municipalities) in the food system is related to their jurisdictional responsibilities for land use and for provision of community services. Local governments also advocate for specific actions when senior government action is deemed essential to resolving issues of community concern. The new national food policy creates an opportunity to identify how the federal government can better support agriculture and food system resilience as well as improve coordination and collaboration amongst government agencies.

**CONCLUSION**

The federal government has launched a consultation process on the development of a food policy for Canada that is expected to conclude in fall 2017. The new national food policy creates an opportunity to identify how the federal government can better support agriculture and food system resilience as well as improve coordination and collaboration among government agencies. Given that participation from all levels of government is critical to realizing a holistic food system approach, staff recommend that the CRD Board support sending input to the federal and provincial Ministers of Agriculture.

**RECOMMENDATION**

That a letter be sent to the federal Agriculture and Agri-Food Minister with a copy to the BC Minister of Agriculture, providing CRD recommendations for a food policy for Canada.

Submitted by:	Jeff Weightman, MCIP, RPP, PMP, Planner, Regional & Strategic Planning
Concurrence:	Signe Bagh, MCIP, RPP, Senior Manager, Regional & Strategic Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager Planning & Protective Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

JW:kj

Attachments: Appendix A - Capital Regional District Recommendations: National Food Policy  
Appendix B – Regional Food and Agriculture Strategy Page 2 & 3 Infographic

## Capital Regional District Recommendations: National Food Policy

October 25, 2017

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### Background

The Capital Regional District (CRD) adopted the Regional Food and Agriculture Strategy ([RFAS](#)) on December 14, 2016, to address agriculture and food issues in the region. The strategy takes into account municipal policies and plans that support food and agriculture and sets out 10 key recommendations to support the development and future success of food and agriculture.

Federal leadership and intervention is necessary to:

- Enable a multi-level government approach to complex and persistent problems
- Fill a gap that cannot be addressed at the provincial and local level
- Promote a systems-based approach to considering interconnections between health, environment, nutrition and food security

The CRD has reviewed the opportunity to provide input into the National Food Policy and identifies the following priority issues and their corresponding policy areas and RFAS recommendation. More importantly, it summarizes recommended federal action that should be addressed in a Food Policy for Canada.

- **Food and farmland preservation**

Policy area: Growing more high-quality food, conserving soil

RFAS recommendation: Increase access to agricultural and food lands (#9– Appendix B)

Recommended Federal Action:

- Develop a multi-government jurisdictional approach to protect food and farmlands and ensure a productive agricultural land base in the long term
- **Water management**
- Policy area: Conserving water

RFAS recommendation: Maintain affordability and improve access to irrigation water for food and agricultural operations (#6– Appendix B); Address chronic drainage issues across the region (#4– Appendix B)

Recommended Federal Action:

- Provide funding to municipalities to invest in irrigation and drainage systems in farming areas, formerly supported by Federal-Provincial Agri-Food Regional Subsidiary Agreement

- **Wildlife and invasive species**

Policy area: Growing more high-quality food, improving health and food safety

RFAS recommendation: Continue to consider approaches to effectively address existing and emerging regional wildlife and invasive species issues (#5– Appendix B)

Recommended Federal Action:

- Provide funding to support producers in addressing these issues, such as subsidies for deer fence installation and maintain crop insurance programs for damage to fruit and vegetable crops in Southern BC
- Amend the *International Migratory Birds Convention Act* (1994) to exclude non-migratory/resident geese

- **Food waste and organic matter recycling**

Policy area: Conserving soil, water and air, growing more high-quality food

RFAS recommendation: Support organic matter recycling that benefits food and agriculture (#3 – Appendix B)

Recommended Federal Action:

- Establish and subsidize a multi-stakeholder national food loss and waste reduction campaign for implementation at the regional/local level
- Support the development of technologies and facilities to transform food waste into nutrient-rich organic matter made available to local producers, with the goal of increasing soil fertility and sequestering carbon
- Provide farmer education in areas where the above technologies are currently available

- **Local Food Economic Development**

Policy area: Growing more high-quality food, increasing access to affordable food

RFAS recommendation: Support regional economic development strategies for food and agriculture (#10– Appendix B)

Recommended Federal Action:

- Increase federal and provincial investment and support for local food systems to sustain a diverse agri-food sector that meets the needs of communities and promotes sustainable practices
- Facilitate adoption of local sustainable food sourcing and serving practices by public institutions (public procurement)

- **Reconciliation with First Nations, Metis, and Inuit Peoples**

Policy area: Growing more high-quality food, increasing access to affordable food

RFAS recommendation: Encourage a place-based regional food culture by building relationships between aboriginal and non-aboriginal communities (#7– Appendix B); Support Aboriginal food and agriculture-related activities, projects and events (#8– Appendix B). Support regional economic development strategies for food and agriculture (#10– Appendix B)

Recommended Federal Action:

- Acknowledge the impact of colonization on Canada’s food systems
- Support natural resource management practices that recognize the importance of lands that were colonized, and facilitate access to foraging, gathering, producing, and consuming foods
- Support Indigenous-led engagement around the food and nutrition issues they face and the solutions they see to addressing food insecurity and health issues in their communities
- Allocate resources specifically for food programs in Indigenous communities that support the long-term development of Indigenous food systems, including hunting, trapping, fishing, and access to traditional foods

- **Sustainable food production**

Policy area: Growing more high-quality food, Conserving our soil, air and water

RFAS recommendation: Improve the CRD’s capacity to address regional food and agriculture issues (#2– Appendix B)

Recommended Federal Action:

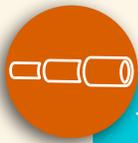
- Ensure availability and accessibility of extension services to help farmers adopt sustainable production practices and be productive and profitable in the face of climate change
- Develop and fund training and skills development program for sustainable farming
- Re-establish/ensure funding for food and agriculture research and dissemination to farmers

**Other actions that the policy should address include:**

- Consider poverty reduction and provide increased funding for affordable and supportive housing to address household food insecurity and improve nutrition and health
- Fund improved food education and promote food literacy and access to healthy food
- Create a national farm renewal program to support the next generation of producers and exiting producers
- Develop an inclusive, multi-stakeholder governance mechanism which promotes and supports broad participation in the ongoing development of food policy, for example, convene a national food policy council
- Food governance mechanism is properly resourced, accountable, and transparent, provides opportunities for meaningful participation by stakeholders from across the food system

# Setting Our Table

Capital Regional District Food & Agriculture Strategy



## VISION

The Capital Region has a vibrant, valued and evolving local food and agricultural economy that is rooted in the principles of interdependence, reciprocity and respect; it recalls and re-establishes the intimate and important relationships between our land and waters, our food, and our community.



## ROLES



### Regional (CRD)

Bulk Water  
Stormwater  
Land Bank  
Education  
Wildlife

### Municipal

Drainage  
Water Conveyance  
Zoning and Urban  
Development  
Roads

### Federal

Agriculture Canada  
Fisheries and Oceans  
Aboriginal Affairs

### Provincial

ALR  
Wildlife Management  
Water Sustainability Act  
Taxation



## OUTCOMES

-  Cleaner environment
-  Reintroduction of traditional plants
-  Improved population health
-  Strengthened relationships and partnerships
-  Broad participation
-  Engaged citizens
-  Increased knowledge of and access to traditional foods



-  Economic viability
-  Sector revitalization
-  Reduced crop loss
-  Increased sustainable harvest of traditional foods



## RECOMMENDATIONS

- 1**  Support regional, cross-sector relationships, including a food and agriculture task force.
- 2**  Improve the CRD's capacity to address regional food and agriculture issues
- 3**  Support regional organic-matter recycling approaches that benefit food and agriculture
- 4**  Address chronic drainage issues across the region
- 5**  Continue to consider approaches to effectively address existing and emerging regional wildlife and invasive species issues
- 6**  Maintain affordability and improve access to irrigation water for food and agricultural operations
- 7**  Encourage a place-based regional food culture by building relationships between Aboriginal and non-aboriginal communities.
- 8**  Support Aboriginal food and agriculture-related activities, projects and events.
- 9**  Increase access to agricultural and food lands.
- 10**  Support regional economic development strategies for food and agriculture



**REPORT TO THE CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

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**SUBJECT**     **Public Hearing Report on Bylaw No. 4187, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 131, 2017”**

**ISSUE**

To receive the Report of the Public Hearing held November 6, 2017, for proposed Bylaw No. 4187, and to consider Bylaw No. 4187 for third reading.

**BACKGROUND**

At its meeting on October 11, 2017, the Capital Regional District (CRD) Board gave first and second reading to Bylaw No. 4187, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 131, 2017”, and passed a resolution to delegate authority to the Regional Director to hold a Public Hearing with respect to Bylaw No. 4187.

Bylaw No. 4187 (Appendix 1) will amend Bylaw No. 2040, “Juan de Fuca Land Use Bylaw, 1992”, to rezone ten properties from the General Industrial (M-2) zone to a new Sooke Business Park Industrial (M-SBP) zone, in order to clarify allowable uses, respond to market demand and permit licensed medical marijuana production facilities pursuant to *Health Canada’s Access to Cannabis for Medical Purposes Regulations (ACMPR)*.

On November 6, 2017, a Public Hearing was held for Bylaw No. 4187. There was one person in attendance. The Report of the Public Hearing is attached (Appendix 2).

**ALTERNATIVES**

1. a) That the minutes that form the Report of the Public Hearing, which is certified as a fair and accurate summary of the representations that were made at the Public Hearing held on November 6, 2017, for Bylaw No. 4187, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 131, 2017”, be received;
  - b) That Bylaw No. 4187 be read a third time; and
  - c) That adoption of Bylaw No. 4187 be withheld pending
    - i) Approval of the Bylaw by the Ministry of Transportation and Infrastructure; and
    - ii) Registration of a restrictive covenant, to the satisfaction of the Chief Building Inspector, on the title of the subject properties, requiring remediation of buildings used for the production of medical marijuana at such time as the use is discontinued.
2. That the minutes that form the Report of the Public Hearing on Bylaw No. 4187, which is certified as a fair and accurate summary of the representations that were made at the Public Hearing held on November 6, 2017 for Bylaw No. 4187, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 131, 2017”, be received.

**CONCLUSION**

A Public Hearing was held on November 6, 2017, for Bylaw No. 4187, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 131, 2017”. The minutes are attached as the Report of the Public Hearing.

One person was in attendance at the public meeting. No one spoke against the proposal. No written submissions were received. Staff recommends Alternative 1 to receive the minutes and for the proposed bylaw to be given third reading and be withheld pending completion of outstanding conditions.

**RECOMMENDATIONS**

- a) That the minutes that form the Report of the Public Hearing, which is certified as a fair and accurate summary of the representations that were made at the Public Hearing held on November 6, 2017, for Bylaw No. 4187, “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 131, 2017”, be received;
- b) That Bylaw No. 4187 be read a third time; and
- c) That adoption of Bylaw No. 4187 be withheld pending
  - i) Approval of the Bylaw by the Ministry of Transportation and Infrastructure; and
  - ii) Registration of a restrictive covenant, to the satisfaction of the Chief Building Inspector, on the title of the subject properties, requiring remediation of buildings used for the production of medical marihuana at such time as the use is discontinued.

Submitted by:	Iain Lawrence, MCIP, RPP, Manager, Local Area Planning
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

IL:wm

Appendix 1 – Proposed Bylaw No. 4187

Appendix 2 – Report of the Public Hearing November 6, 2017

Appendix 1: Proposed Bylaw No. 4187

**CAPITAL REGIONAL DISTRICT  
BYLAW NO. 4187**

\*\*\*\*\*  
**A BYLAW TO AMEND BYLAW NO. 2040, THE "JUAN DE FUCA LAND USE BYLAW, 1992"**  
\*\*\*\*\*

The Capital Regional District Board, in open meeting assembled, enacts as follows:

1. Bylaw No. 2040 being the "Juan de Fuca Land Use Bylaw, 1992" is hereby amended as follows:

**A. SCHEDULE A, PART 1, SECTION 2.0 DEFINITIONS**

(a) By adding a new definition for "FOOD AND BEVERAGE PROCESSING" before the word "FREEBOARD" as follows:

"FOOD AND BEVERAGE PROCESSING" means the use of a building or structure where food and beverages are processed or otherwise prepared for human consumption. Includes the production of beer, wine and spirits in accordance with all applicable Provincial regulations. Includes tasting and retail sales accessory to the principal food and beverage processing use. Includes catering operations, but does not include a restaurant use."

(b) By adding a new definition for "HIGH TECH" before the word "HIGHWAY" as follows:

"HIGH TECH means the research, design, manufacture or production, testing, and servicing of goods or materials or things in the fields of bio-technology, computing, electronics, engineering, health care, multi-media, robotics, telecommunications, and related industries."

(c) By deleting the definition for "INDUSTRIAL USE, GENERAL" in its entirety and replacing with the words:

"INDUSTRIAL USE, GENERAL means a use providing for the research, design, manufacture, testing, servicing, storage, transportation and distribution, wholesale, wrecking or salvaging of goods, materials or things. Includes vehicle paint and body shops, soil improvement operations, food and beverage processing and high tech."

**B. SCHEDULE A, PART 1, SECTION 3.0 ADMINISTRATION AND ENFORCEMENT**

(a) By amending subsection 3.07 Zones by inserting the words, "M-SBP Sooke Business Park Industrial" after the words "M-2MM General Industrial Medical Marihuana".

**C. SCHEDULE A, PART 2 – ZONING DISTRICTS**

(a) By creating a new zone, "Sooke Business Park Industrial – M-SBP", to be inserted after Section 27A.0, and to be read as follows:

**27B.0.0 SOOKE BUSINESS PARK INDUSTRIAL ZONE - M-SBP**

**27B.01 Permitted Uses**

In addition to the uses permitted by Section 4.15 of Part 1 of this Bylaw, the following uses and no others are permitted in the Sooke Business Park Industrial (M-SBP) zone:

- (a) General industrial uses;
- (b) Business office and support services;
- (c) Athletic facilities;
- (d) Drive-in theatres;
- (e) Vehicle sales/rentals;
- (f) Equipment sales/rentals;
- (g) Auction rooms and places;

- (h) Unenclosed storage;
- (i) Retail sales of building and landscape supplies;
- (j) Retail sales accessory to a principal industrial use;
- (k) Intensive Agriculture – Medical Marihuana Production;
- (l) One dwelling unit for the use of a caretaker accessory to a principal use.

**27B.02 Prohibited Uses**

- (a) Kennels;
- (b) Uses for which a permit is required under the or *Environmental Management Act* or Regulation;
- (c) Refuse and garbage dumps, including transfer stations;
- (d) Salvage yards, including auto salvage;
- (e) The burning of vehicles and other salvage.

**27B.03 Minimum Lot Size for Subdivision Purposes** The minimum lot size shall be 900 m<sup>2</sup>.

**27B.04 Minimum frontage for Subdivision Purposes** The minimum lot frontage shall be 16 m.

**27B.05 Minimum Lot Width for Subdivision Purposes** The minimum average lot width shall be 16 m.

**27B.06 Number of Dwelling Units** One dwelling unit accessory to a principal use per lot is permitted.

**27B.07 Height**

- (a) Maximum height shall be 14 m for all buildings and structures;
- (b) Maximum height of any unenclosed storage use shall be 3.5 m within 30 m of a Residential Zone, Multiple Family Residential Zone, Commercial Zone, Rural Zone, Agricultural Zone or Institutional Zone.

**27B.08 Lot Coverage** Maximum lot coverage shall be 60 percent.

**27B.09 Required Yards**

- (a) Front yards shall be a minimum of 7.5 m;
- (b) Side yards shall be a minimum of 4.5 m except:
  - (i) where the lot abuts a Residential, Rural Residential, or Multiple Family Residential Zone, the side yard shall be a minimum of 15 m;
  - (ii) where the lot abuts an Industrial Zone, the side yard may be 0 m;
  - (iii) where the lot abuts any other Zone, the side yard shall be a minimum of 3 m;
- (c) Flanking yards shall be a minimum of 6 m CTS;
- (d) Rear yards shall be a minimum of 7.5 m, except:
  - (i) where a rear lot line abuts a Residential, Rural Residential, or Multiple Family Residential Zone the rear yard shall be a minimum of 15 m;





Appendix 2: Report of the Public Hearing

**REPORT OF PUBLIC HEARING**

held at the Juan de Fuca Local Area Services Building  
3-7450 Butler Road, Otter Point, BC  
November 6, 2017 at 7:00 p.m.

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**SUBJECT:** **BYLAW NO. 4187**, cited as “Juan de Fuca Land Use Bylaw, 1992, Amendment Bylaw No. 131, 2017”

**PRESENT:** **Director M. Hicks**, Chair by Resolution of the Capital Regional District Board on Wednesday, October 11, 2017  
**CRD Staff:** I. Lawrence, Manager, Local Area Planning; W. Miller, Recorder

**PURPOSE OF THE HEARING:**

Bylaw No. 4187 will amend Bylaw No. 2040, “Juan de Fuca Land Use Bylaw, 1992”, to rezone ten properties from the General Industrial (M-2) zone to a new Sooke Business Park Industrial (M-SBP) zone, in order to clarify allowable uses, respond to market demand and permit licensed medical marijuana production facilities pursuant to *Health Canada’s Access to Cannabis for Medical Purposes Regulations (ACMPR)*.

**NOTICE:** Notices were inserted in two (2) consecutive issues of the Sooke News Mirror appearing on October 25, 2017 and November 1, 2017.

**ATTENDANCE:** There was one person in attendance.

The Chair declared the Public Hearing open at 7:02 p.m.

The guidelines and procedures of the Public Hearing and the Notice of Public Hearing were read to those present.

The Chair called three times for further discussion on the bylaw and hearing none closed the Public Hearing on Bylaw No. 4187 at 7:05 p.m.

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CHAIR, Director M. Hicks

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RECORDER, W. Miller



Making a difference...together

**REPORT TO THE CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

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**SUBJECT**     **Board Strategic Priorities and Corporate Plan Initiatives – Priorities Dashboard Progress Report No. 4, 2017**

**ISSUE**

To provide the fourth progress report on the Board and Corporate priorities for the period up to December 12, 2017.

**BACKGROUND**

In May 2015, the Board approved the *CRD Board Strategic Priorities 2015-2018* (the “*Board Priorities*”) that identifies 12 strategic areas and 52 priority actions to be initiated over a four-year term. The *CRD Corporate Plan 2015-2018* (the “*Corporate Plan*”) was subsequently developed and introduced corporate strategies and actions that are aimed at achieving the Board Priorities.

Staff have developed a Priorities Dashboard to track progress on the strategic priorities and presented quarterly updates of the Dashboard to the Board in 2016. The fourth quarterly update of 2017 is attached as Appendix A.

Consistent with the previous Priorities Dashboard updates, priorities that have been identified as completed or operationalized in update No. 3, 2017 have been moved to the back of the Dashboard. Other initiatives that have been completed or operationalized since that time are highlighted in the first part of the document. An operationalized item is a priority that has been initiated and is now part of the operations of a department (for example, an award of contract signifies that a priority has been initiated and is underway and operationalized).

The Dashboard also denotes the status (i.e., not started, in progress or completed) of an initiative. The condition (i.e. no issues/proceeding as planned/potential or emerging issue/problem, problem/issue has arisen or timing has changed) is also identified within each of these categories.

**ALTERNATIVES**

*Alternative 1:*

That the Priorities Dashboard Progress Report No. 4 – 2017 as attached in Appendix A be confirmed.

*Alternative 2:*

That the Priorities Dashboard Progress Report No. 4 – 2017 be referred back to staff for additional information.

**IMPLICATIONS**

Progress on the Board Priorities and Corporate Plan initiatives from the fall of 2015 to date is reflected in Progress Report No. 4 – 2017. The “Comments” section provides a summary of completed actions as well as any issues or problems that have arisen that may impact progress

on the priority. The “Next Steps” section identifies future planned actions and associated timing.

As of December 12, two Board and Corporate Priorities have been completed or operationalized in the fourth quarter:

- Governance: Establish regular two-way engagement opportunities (with the public and within the organization using innovative approaches and technologies (operationalized);
- Protective Services: Oversee compliance with applicable building regulations (completed).

Following Q4, nine Board and Corporate Priorities will remain outstanding (not completed or operationalized).

Workplans have been adjusted and resources allocated to those priorities that have been operationalized and the work is ongoing. Any new or additional priorities would need to be evaluated on a case-by-case basis to determine any workplan and resource implications.

**CONCLUSION**

The Priorities Dashboard Progress Report No. 4, 2017, provides a status update on Board and Corporate priorities to December 13, 2017.

**RECOMMENDATION**

That the Priorities Dashboard Progress Report No. 4 – 2017 as attached in Appendix A be confirmed.

Submitted by:	Robert Lapham, MCIP, RPP, Chief Administrative Officer
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Attachments: Appendix A – Priorities Dashboard Progress Report No. 4, 2017

We envision reduced greenhouse gas emissions, triple bottom line solutions to managing liquid and solid waste, and land use patterns that support sustainable development and protect rural integrity.

# Sustainable



## Priorities Dashboard > Progress Report No. 8 – Q4, 2017

**BOARD PRIORITY**  
**CORPORATE PRIORITY**

CONDITION LEGEND	No issues / Proceeding as planned	Potential or emerging issue/problem	Problem/issue has arisen	Timing has changed
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Priority	Status and Condition			Resolution by Board/Committee	Comments	Next Steps	
	Not Started	In Progress	Completed			Action	Timing
<p><b>LAND USE PLANNING</b> Complete the Regional Growth Strategy (Regional Sustainability Strategy).</p>				<ul style="list-style-type: none"> <li>▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i></li> <li>▶ <i>Planning, Transportation &amp; Protective Services Committee, Jan. 27, 2016</i></li> <li>▶ <i>CRD Board, Mar. 9, 2016</i></li> <li>▶ <i>Committee of the Whole, Jun. 29, 2016</i></li> <li>▶ <i>CRD Board, Jul. 13, 2016</i></li> <li>▶ <i>Planning, Transportation &amp; Protective Services Committee, Sep. 21, 2016</i></li> <li>▶ <i>CRD Board, Nov. 23, 2016</i></li> </ul>	<p>Grant deadline for development of Regional Growth Strategy (RGS) extended to end of 2018; Board gave first and second readings to RGS bylaw; hosted public meetings on RGS bylaw and presented report to PTPSC; Board referred RGS bylaw for municipal acceptance; receiving referral responses from municipalities and other agencies; RGS not unanimously accepted by municipalities by February deadline; presented report to CRD Board recommending RGS mediator and process; disputing parties' comments will be included in report.</p> <p>Mediation scheduled for December 6-8, 2017.</p>	<ul style="list-style-type: none"> <li>▶ Proceed through final adoption process for RGS</li> </ul>	<ul style="list-style-type: none"> <li>▶ <i>Q3, 2018</i></li> </ul>

We envision healthy and active residents, an increased supply of attainable and affordable housing, programs that benefit the region's economy, and infrastructure that meets the needs of the region.

**Livable**

 **Priorities Dashboard** ➤ Progress Report No. 8 – Q4, 2017

**BOARD PRIORITY**  
**CORPORATE PRIORITY**

<b>CONDITION LEGEND</b>	 No issues / Proceeding as planned	 Potential or emerging issue/problem	 Problem/issue has arisen	 Timing has changed
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Priority	Status and Condition			Resolution by Board/Committee	Comments	Next Steps	
	Not Started	In Progress	Completed			Action	Timing
<p><b>REGIONAL INFRASTRUCTURE</b></p> <p>Ensure that resources are available for investment in current and future infrastructure, demonstrating efficiency and value for money and meeting regulatory and service requirements.</p>				<ul style="list-style-type: none"> <li>▶ <i>CRD Board, Jul. 8, 2015</i></li> <li>▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i></li> <li>▶ <i>Regional Parks Committee, Jan. 20, 2016</i></li> <li>▶ <i>Environmental Services Committee, Jan. 27, 2016</i></li> <li>▶ <i>Planning, Transportation &amp; Protective Services Committee, Jan. 27, 2016</i></li> <li>▶ <i>Finance Committee, Feb. 3, 2016</i></li> <li>▶ <i>CRD Board, May 11, 2016</i></li> <li>▶ <i>CRD Board, Jun. 8, 2016</i></li> <li>▶ <i>CRD Board, Aug. 10, 2016</i></li> </ul>	<p>Conducted detailed design and engineering for Mayne Island demonstration trail (associated with the Experience the Gulf Islands initiative); allocated new funding for development, planning and construction of Salt Spring Island/Southern Gulf Islands regional trail; conducted financial review of Environmental Resource Management division resulting in \$1.44M reduction overall in 2016 budget; developed schematic design for The Summit at Quadra Village and engaged stakeholders, completed design and groundbreaking and awarded tender; Board approved 2015-2017 Land Acquisition Strategy; presented list of proposed land acquisitions for 2016 to Regional Parks Committee; EASC, ESC, FC, PTPSC, RPC affirmed Terms of Reference and committee priorities and work program; increased security measures and regularized landfill attendant positions to meet operational needs; completed commercial scales replacement project at Hartland landfill; commissioned the East Sooke Fire Hall; Board approved contract to supply and install new underdrain system and liner infrastructure at Hartland landfill; Board amended Hartland tipping fee bylaw to increase fees for kitchen scraps and out-of-region asbestos; Board awarded maintenance contract for Hartland landfill gas power generation system; completed preliminary waste stream analysis to guide future education and policy efforts; completed construction of Cell 3 at Hartland landfill; awarded Hartland landfill operations tender; Michigan Square Redevelopment Plan unexpectedly funded through BC Housing; presented report on alternative capital finance to CRHD and CRHC.</p> <p>Received \$30,000 seed funding from CMHC for Michigan pre-design phase.</p>	<ul style="list-style-type: none"> <li>▶ Complete pre-design phase for Michigan</li> <li>▶ Develop asset evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>▶ Q2, 2018</li> <li>▶ Q2, 2018</li> </ul>

We envision diverse and accessible recreational opportunities, coordinated multi-modal transportation systems, and a culture that supports and encourages artistic and agricultural enterprises.

# Vibrant

## Priorities Dashboard > Progress Report No. 8 – Q4, 2017

BOARD PRIORITY  
CORPORATE PRIORITY

<b>CONDITION LEGEND</b>	No issues / Proceeding as planned	Potential or emerging issue/problem	Problem/issue has arisen	Timing has changed
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Priority	Status and Condition			Resolution by Board/Committee	Comments	Next Steps	
	Not Started	In Progress	Completed			Action	Timing
<b>ACTIVE &amp; MULTI-MODAL TRANSPORTATION</b> Further investigate Southern Gulf Islands and Salt Spring Island water-based passenger services.			BEHIND	<ul style="list-style-type: none"> <li>▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i></li> <li>▶ <i>Electoral Area Services Committee, Mar. 15, 2017</i></li> </ul>	Created Southern Gulf Islands Economic Development Service Plan; dock service and infrastructure may need to be considered as part of water-based passenger service; EASC affirmed Terms of Reference and committee priorities and work program; accessed grant for Integrated Service Review provided for community bus and inter-island projects; no response to request for proposals on community bus and inter-island projects; presented feasibility study on water-based passenger service to EASC; presented report on SGI community bus service requirements to EASC; exploring grant funding options for work plan.	<ul style="list-style-type: none"> <li>▶ Prepare work plan for implementing inter-island passenger ferry pilot project</li> </ul>	▶ <i>Q1, 2018</i>
<b>ACTIVE &amp; MULTI-MODAL TRANSPORTATION</b> Pursue CRD transportation service role (includes public transit and regional trails).			BEHIND	<ul style="list-style-type: none"> <li>▶ <i>CRD Board, Aug. 12, 2015</i></li> <li>▶ <i>Transportation Select Committee, Mar. 2, 2016</i></li> <li>▶ <i>CRD Board, Mar. 9, 2016</i></li> <li>▶ <i>Transportation Select Committee, Jun. 25, 2016</i></li> <li>▶ <i>Transportation Select Committee, Oct. 5, 2016</i></li> <li>▶ <i>CRD Board, Jan. 11, 2017</i></li> </ul>	Board passed resolution to pursue creation of a CRD transportation service; TSC affirmed Terms of Reference and committee priorities and work program; submitted staff report on process to establish a CRD transportation service; CRD Board directed staff to prepare transportation service bylaw and accompanying requisition policy; presented draft bylaw to TSC; TSC directed staff to prepare report on transportation service approval process; presented staff report on transportation service approval process to TSC; presented report on municipal response; received Provincial Integration Service Delivery study; Presentation of draft transportation service bylaw delayed from Q3 to Q4, 2017.  Draft bylaw given three readings by Board on Nov. 8, 2017.	<ul style="list-style-type: none"> <li>▶ Determine voter assent option</li> <li>▶ Approval from Inspector of Municipalities</li> </ul>	▶ <i>Q1, 2018</i> ▶ <i>Q1, 2018</i>
<b>AGRICULTURAL LAND &amp; FOOD SECURITY</b> Develop a regional agricultural land banking solution.  Develop policies to support agri-tourism.  Establish additional incentives and new policies to promote and encourage farming in the region.  Work with partners to find a solution to lack of abattoir, and other related farming infrastructure, in the region or on the Island.				<ul style="list-style-type: none"> <li>▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i></li> <li>▶ <i>Planning, Transportation &amp; Protective Services Committee, Jan. 27, 2016</i></li> <li>▶ <i>CRD Board, July 13, 2016</i></li> <li>▶ <i>Planning, Transportation &amp; Protective Services Committee, Nov. 23, 2016</i></li> <li>▶ <i>CRD Board, Dec. 14, 2016</i></li> <li>▶ <i>CRD Board, Apr. 12, 2017</i></li> </ul>	Completed water-demand model, agriculture land use inventory and preliminary community engagement on Southern Gulf Islands (SGI) Food & Agriculture Strategy; completed draft Food & Agriculture Strategy and presented to community-based project steering committee for review; EASC, PTPSC affirmed Terms of Reference and committee priorities and work program; conducted focus groups on Southern Gulf Islands Food & Agriculture Strategy; presented draft Food & Agriculture Strategy to PTPSC; October Forum of Councils on Food & Agriculture Strategy cancelled due to low attendance; PTPSC recommended Food & Agriculture Strategy for approval; CRD Board approved Food & Ag Strategy and established a Regional Food & Agriculture Task Force; CRD Board approved draft SGI Food & Agriculture Strategy; Reported to CRD Board on prioritization of Food & Ag Strategy recommendations scheduled for September meeting.  Presented report on prioritization of Food & Ag Strategy recommendations to Board at September meeting.	<ul style="list-style-type: none"> <li>▶ Completion of feasibility study pending budget approval.</li> </ul>	▶ <i>Q4, 2018</i>
<b>REGIONAL PARKS</b> Prepare and update park management plans.			BEHIND	<ul style="list-style-type: none"> <li>▶ <i>Regional Parks Committee, Jan. 20, 2016</i></li> <li>▶ <i>CRD Board, Nov. 9, 2016</i></li> <li>▶ <i>Regional Parks Committee, Nov. 16, 2016</i></li> <li>▶ <i>CRD Board, Dec. 14, 2016</i></li> <li>▶ <i>Regional Parks Committee, Jan. 18, 2017</i></li> </ul>	Completed draft Island View Beach Management Plan and public consultation; completed draft Regional Trails Management Plan and public consultation; RPC affirmed Terms of Reference and committee priorities and work program; Board approved 2016 Regional Trails Management Plan; RPC recommended Island View Beach Regional Park Management Plan for approval; presented Island View Beach plan to CRD Board in December, and plan referred back to committee  Submission of revised Island View Beach Management Plan delayed from Q2 to Q2, 2018, as additional stakeholder consultations continue.	<ul style="list-style-type: none"> <li>▶ Submit revised Island View Beach Management Plan to Board</li> </ul>	▶ <i>Q2, 2018</i>

We envision more open government, regional partnerships that increase our ability to meet the needs of the region's residents, and responsive and coordinated delivery of our core services.

# Priorities Dashboard > Progress Report No. 8 – Q4, 2017

BOARD PRIORITY  
CORPORATE PRIORITY

## Serve

CONDITION LEGEND	No issues / Proceeding as planned	Potential or emerging issue/problem	Problem/issue has arisen	Timing has changed
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Priority	Status and Condition			Resolution by Board/Committee	Comments	Next Steps	
	Not Started	In Progress	Completed			Action	Timing
<p><b>CORPORATE DEVELOPMENT</b></p> <p>Ensure CRD service delivery is effectively supported through the development of best practices.</p>				<p>▸ <i>Finance Committee, Feb. 3, 2016</i></p>	<p>Developed Enterprise Risk Management Framework and risk register; developed grants dashboard; evaluating and monitoring demographic and labour force trends; developed and implemented email management guidelines; FC affirmed Terms of Reference and committee priorities and work program; realigned Succession &amp; Workforce Planning Strategy; recruited new Chief Financial Officer; aligned functions within Technology &amp; Initiatives department</p> <p>Completed initial assessment of physical space requirements for non-electronic records and did not engage consultant; hired new Manager, Information Services who will continue assessment; feasibility assessment of electronic document records management system delayed from Q3, 2017 to Q2, 2018.</p>	<p>▸ Assess physical space requirements of non-electronic records</p> <p>▸ Assess feasibility of electronic document records management system</p>	<p>▸ Q1, 2018</p> <p>▸ Q2, 2018</p>
<p><b>GOVERNANCE</b></p> <p>Establish regular two-way engagement opportunities (with the public and) within the organization using innovative approaches and technologies.</p>				<p>▸ <i>CRD Board, Nov. 18, 2015</i></p> <p>▸ <i>Governance Committee, Mar. 2, 2016</i></p>	<p>Encouraged public feedback on Board initiatives using a dedicated "Get Involved" web presence and social media to drive to email feedback for the 2016 Financial Plan; Board approved recommended consultation plan on the 2016 preliminary financial plan; GC affirmed Terms of Reference and committee priorities and work program; implemented citizen engagement module (survey software); investigated and implemented Board correspondence portal for elected officials and public ahead of schedule; e-comment module for agenda system determined as not feasible. Will continue to make enhancements for a CRD web and social media presence to broaden public participation.</p>		<p>▸ <i>Operationalized</i></p>
<p><b>GOVERNANCE</b></p> <p>Recognize and support the self-governance and equality of the three electoral areas.</p>				<p>▸ <i>Governance Committee, Mar. 2, 2016</i></p> <p>▸ <i>CRD Board, Dec. 14, 2016</i></p>	<p>Received \$50,000 Union of BC Municipalities (UBCM) Strategic Priorities grant for development of Salt Spring Island/Southern Gulf Islands integrated service plan project; GC affirmed Terms of Reference and committee priorities and work program; in negotiations with potential contractor for SSI/SGL service plan project; hired contractor for SSI/SGL service plan project and implementing project; UBCM passed CRD resolution requesting provincial and federal governments to recognize rural nature of Juan de Fuca, Salt Spring Island and Southern Gulf Islands electoral areas; completed SSI Incorporation Study; presented CRD grants update and grants dashboard to Board; reviewed electoral area committees and commissions; developing plan to consolidate some SSI and SGI commissions.</p>	<p>▸ Present findings and recommendations on commission consolidation to EASC</p>	<p>▸ Q1, 2018</p>

We envision more open government, regional partnerships that increase our ability to meet the needs of the region's residents, and responsive and coordinated delivery of our core services.

# Priorities Dashboard ➤ Progress Report No. 8 – Q4, 2017

**BOARD PRIORITY**  
**CORPORATE PRIORITY**

# Serve

CONDITION LEGEND	No issues / Proceeding as planned	Potential or emerging issue/problem	Problem/issue has arisen	Timing has changed
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Page 5 of 9

Priority	Status and Condition			Resolution by Board/Committee	Comments	Next Steps	
	Not Started	In Progress	Completed			Action	Timing
<b>PROTECTIVE SERVICES</b> Collaborate with partners to prepare for, respond to and recover from emergencies.				<ul style="list-style-type: none"> <li>▶ <i>CRD Board, Dec. 9, 2015</i></li> <li>▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i></li> <li>▶ <i>Planning, Transportation &amp; Protective Services Committee, Jan. 27, 2016</i></li> <li>▶ <i>Electoral Area Services Committee, May 18, 2016</i></li> <li>▶ <i>CRD Board, Jun. 8, 2016</i></li> <li>▶ <i>CRD Board, Sep. 14, 2016</i></li> <li>▶ <i>CRD Board, Nov. 9, 2016</i></li> </ul>	Developing fire services playbook; prepared animal care plan for emergencies and disasters, integrated it into operational standards and conducted emergency tabletop exercise with key partners to validate plan components; initiated audit of emergency radio sites as part of communications infrastructure resilience and presented report on emergency radio sites audit to PTPSC; completed review of emergency radio sites and determined configuration; purchased mass notification system and completed privacy impact assessment on mass notification system; Board approved establishment of Regional Emergency Management partnership (REMP); EASC, PTPSC affirmed Terms of Reference and committee priorities and work program; entered into Memorandum of Understanding for REMP at provincial level but Emergency Management BC (EMBC) was delayed in moving forward which pushed out expected timelines; EMBC has since posted and interviewed for their senior manager position for the project and has identified the provincial reps for the REMP Steering Committee; presented report on 911 amalgamation to Board; tested implementation plan for mass notification system in Q3 and continuing to roll out; Board approved Tsunami Warning System protocol  Received outline of requirements from the Office of the Fire Commissioner for fire services playbook; development of fire training plans for report underway	<ul style="list-style-type: none"> <li>▶ Present report on fire services playbook</li> </ul>	<ul style="list-style-type: none"> <li>▶ <i>Q1, 2018</i></li> </ul>
<b>PROTECTIVE SERVICES</b> Oversee compliance with applicable building regulations.				<ul style="list-style-type: none"> <li>▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i></li> </ul>	Amending CRD Building Bylaw to incorporate changes from 2012 BC Building Code; waiting for new legislation to be enacted to amend bylaw; EASC affirmed Terms of Reference and committee priorities and work program; Building Bylaw reviewed by lawyers.  Presented to EASC and Board.		<ul style="list-style-type: none"> <li>▶ <i>Completed</i></li> </ul>

# Previously Completed & Operationalized



Sustainable: of 16 priorities, 6 are completed and 7 are operationalized

Priority	Resolution by Board/Committee	Comments	Status
<b>BIODIVERSITY &amp; ECOSYSTEM HEALTH</b> Advocate to provincial and federal governments to maintain and fulfil their roles to protect biodiversity.	▶ <i>Board, Jan. 13, 2016</i> ▶ <i>GC, Mar. 2, 2016</i>	Added to standing committee mandate	▶ <i>Completed</i>
<b>BIODIVERSITY &amp; ECOSYSTEM HEALTH</b> Determine future CRD role in regional wildlife management (fallow deer, bullfrogs, geese, etc.).	▶ <i>Board, Aug. 12, 2015</i> ▶ <i>EASC, Jan. 20, 2016</i> ▶ <i>RPC, Jan. 20, 2016</i> ▶ <i>ESC, Jan. 27, 2016</i> ▶ <i>PTPSC, Jan. 27, 2016</i> ▶ <i>RWSC, Feb. 17, 2016</i>	Management continues within operational mandate	▶ <i>Operationalized</i>
<b>BIODIVERSITY &amp; ECOSYSTEM HEALTH</b> Showcase best practices for managing invasive species on CRD lands.	▶ <i>RPC, Jan. 20, 2016</i> ▶ <i>ESC, Jan. 27, 2016</i> ▶ <i>RWSC, Feb. 17, 2016</i>	Invasive species removal continues within operational mandate	▶ <i>Operationalized</i>
<b>BIODIVERSITY &amp; ECOSYSTEM HEALTH</b> Strategically acquire protected areas which contribute to climate mitigation and adaptation goals.	▶ <i>Board, Jul. 8, 2015</i> ▶ <i>RPC, Jan. 20, 2016</i> ▶ <i>RPC, Jun. 15, 2016</i>	Land acquisition continues within operational mandate according to Land Acquisition Strategy	▶ <i>Operationalized</i>
<b>BIODIVERSITY &amp; ECOSYSTEM HEALTH</b> Work with partners to open the Sea to Sea Park.	▶ <i>RPC, Jan. 20, 2016</i>	Sea to Sea Park opening in phases	▶ <i>Completed</i>
<b>CLIMATE CHANGE</b> Accelerate corporate mitigation and adaptation activities.	▶ <i>ESC, Jan. 27, 2016</i> ▶ <i>Board, Nov. 9, 2016</i>	Corporate mitigation and adaptation activities continue within operational mandate	▶ <i>Operationalized</i>
<b>CLIMATE CHANGE</b> Advocate to senior levels of government for programs and regulations to reduce emissions and/or prepare for climate change.	▶ <i>Board, Dec. 9, 2015</i> ▶ <i>ESC, Jan. 27, 2016</i> ▶ <i>GC, Mar. 2, 2016</i> ▶ <i>Board, Jun. 8, 2016</i>	Added to standing committee mandate	▶ <i>Completed</i>
<b>CLIMATE CHANGE</b> Provide a climate lens for Board decision-making.	▶ <i>FC, Feb. 3, 2016</i> ▶ <i>Board, Jul. 13, 2016</i> ▶ <i>Board, Nov. 9, 2016</i>	Climate lens included within operational mandate	▶ <i>Operationalized</i>
<b>CLIMATE CHANGE</b> Pursue strategic partnerships to help achieve community mitigation and adaptation targets.	▶ <i>ESC, Jan. 27, 2016</i> ▶ <i>ESC, Oct. 26, 2016</i> ▶ <i>Board, Nov. 9, 2016</i> ▶ <i>Board, Apr. 12, 2017</i>	CRD Board approved Regional Climate Action Strategy	▶ <i>Completed</i>
<b>ENVIRONMENTAL PROTECTION</b> Undertake monitoring, education and remediation programs to support decision-making and management of natural resources.	▶ <i>RPC, Jan. 20, 2016</i> ▶ <i>ESC, Jan. 27, 2016</i>	Monitoring, education and remediation programs continue within operational mandate	▶ <i>Operationalized</i>
<b>INTEGRATED WASTE MANAGEMENT</b> Ensure responsible management of wastewater for the entire capital region. Investigate combined liquid and solid waste management plans. Investigate region-wide solutions to liquid and solid waste.	▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i> ▶ <i>Environmental Services Committee, Jan. 27, 2016</i> ▶ <i>CRD Board, April 13, 2016</i> ▶ <i>CRD Board, May 11, 2016</i> ▶ <i>CRD Board, Jun. 8, 2016</i> ▶ <i>CRD Board, Aug. 10, 2016</i> ▶ <i>CRD Board, Feb. 8, 2017</i>	Implemented approved IRM work plan.	▶ <i>Operationalized</i>
<b>INTEGRATED WASTE MANAGEMENT</b> Acquire additional expertise on technologies and solutions (including centralized/decentralized approaches and gasification) to liquid and solid waste treatment.	▶ <i>Board, May 25, 2016</i> ▶ <i>Board Special Meeting, Sep. 14, 2016</i>	Acquired consultant to provide expertise	▶ <i>Completed</i>

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# Previously Completed & Operationalized



### Sustainable: of 16 priorities, 6 are completed and 7 are operationalized

Priority	Resolution by Board/Committee	Comments	Status
<b>INTEGRATED WASTE MANAGEMENT</b> Establish a systematic process of evaluation for all liquid waste and solid waste decisions.	<ul style="list-style-type: none"> <li>▶ <i>Board, Jan. 13, 2016</i></li> <li>▶ <i>Board, Mar. 9, 2016</i></li> <li>▶ <i>Board, Apr. 13, 2016</i></li> <li>▶ <i>Board, Jun. 8, 2016</i></li> <li>▶ <i>Board, Jan. 11, 2017</i></li> </ul>	Established Integrated Resource Management Advisory Committee Terms of Reference	▶ <b>Completed</b>

### Livable: of 14 priorities, 6 are completed and 5 are operationalized

Priority	Resolution by Board/Committee	Comments	Status
<b>DRINKING WATER</b> Invest in the renewal and replacement of aging infrastructure to deliver an adequate supply of safe, reliable drinking water.	<ul style="list-style-type: none"> <li>▶ <i>Board, Nov. 18, 2015</i></li> <li>▶ <i>RWSC, Feb. 17, 2016</i></li> <li>▶ <i>Board, Apr. 13, 2016</i></li> </ul>	Implemented capital plan for regional water supply infrastructure projects	▶ <b>Completed</b>
<b>DRINKING WATER</b> Protect and maintain an adequate supply of safe, reliable drinking water.	<ul style="list-style-type: none"> <li>▶ <i>EASC, Jan. 20, 2016</i></li> <li>▶ <i>RWSC, Feb. 17, 2016</i></li> <li>▶ <i>Board, Jun. 8, 2016</i></li> </ul>	Management of drinking water system continues within operational mandate	▶ <b>Operationalized</b>
<b>ECONOMIC DEVELOPMENT</b> Advocate to senior levels of government to support major multi-modal transportation projects which encourage economic development.	<ul style="list-style-type: none"> <li>▶ <i>Board, Dec. 9, 2015</i></li> <li>▶ <i>EASC, Jan. 20, 2016</i></li> <li>▶ <i>RPC, Jan. 20, 2016</i></li> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>GC, Mar. 2, 2016</i></li> <li>▶ <i>TSC, Mar. 2, 2016</i></li> </ul>	Added to standing committee mandate	▶ <b>Completed</b>
<b>ECONOMIC DEVELOPMENT</b> Explore a funding mechanism to support existing agencies like the Greater Victoria Economic Development Agency.	<ul style="list-style-type: none"> <li>▶ <i>FC, Feb. 3, 2016</i></li> </ul>	Monitoring progress of the South Island Prosperity Project continues within operational mandate	▶ <b>Operationalized</b>
<b>ECONOMIC DEVELOPMENT</b> Work with municipalities, electoral areas and partners to develop a comprehensive arts and culture strategy.	<ul style="list-style-type: none"> <li>▶ <i>Board, Jan. 13, 2016</i></li> <li>▶ <i>AC, Jan. 13, 2016</i></li> <li>▶ <i>FC, Feb. 3, 2016</i></li> </ul>	Development of CRD Arts Strategic Plan continues within operational mandate	▶ <b>Operationalized</b>
<b>HEALTH &amp; WELL-BEING (CHANGING DEMOGRAPHICS)</b> Complete the Community Health & Well-Being Plan and determine appropriate roles for the CRD in its implementation.	<ul style="list-style-type: none"> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>PTPSC, Jun. 22, 2016</i></li> </ul>	Implementation of Community Health & Well-Being Action Plan continues within operational mandate	▶ <b>Operationalized</b>
<b>HOUSING</b> Support regional housing goals by sharing emerging practices and encouraging creative solutions within the Capital Region Housing Corporation, municipalities, electoral areas and other partners.	<ul style="list-style-type: none"> <li>▶ <i>Planning, Transportation &amp; Protective Services Committee, Jan. 27, 2016</i></li> <li>▶ <i>CRD Board, Nov. 9, 2016</i></li> <li>▶ <i>Hospitals &amp; Housing Committee, Mar. 29, 2017</i></li> </ul>	Hosted Regional Housing Affordability Strategy stakeholder event.	▶ <b>Completed</b>
<b>HOUSING</b> Complete the Capital Region Housing Corporation Long-Term Financial & Asset Management Plan.	<ul style="list-style-type: none"> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>CRHC, May 24, 2016</i></li> </ul>	Completed Capital Region Housing Corporation Long-Term Financial & Asset Management Plan and Housing Sustainability Strategy	▶ <b>Completed</b>

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# Previously Completed & Operationalized



## Livable: of 14 priorities, 6 are completed and 5 are operationalized - continued

Priority	Resolution by Board/Committee	Comments	Status
<p><b>HOUSING</b> Develop a standardized regional definition of “affordable” and “attainable.”</p> <p>Examine an increase in the size of the Regional Housing Trust Fund and encourage participation by all municipalities, electoral areas and First Nations.</p> <p>Leverage equity in all CRD assets (CRD, CRHC, CRHD) to develop creative solutions to providing new housing.</p>	<ul style="list-style-type: none"> <li>▶ <i>Board, Dec. 9, 2015</i></li> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>Board, Apr. 20, 2016</i></li> </ul>	Implementation of Housing First Policy and Program Framework continues within operational mandate	▶ <b>Operationalized</b>
<p><b>HOUSING</b> Establish the CRD as the overarching planning and coordinating body.</p>	<ul style="list-style-type: none"> <li>▶ <i>Board, Dec. 9, 2015</i></li> <li>▶ <i>GC, Mar. 2, 2016</i></li> <li>▶ <i>Board, Apr. 20, 2016</i></li> <li>▶ <i>Board, Sep. 14, 2016</i></li> </ul>	Board approved Regional Housing First Implementation Plan	▶ <b>Completed</b>
<p><b>REGIONAL INFRASTRUCTURE</b> Develop and implement asset management planning framework and tools to continue proactive and responsible management of assets and infrastructure, both natural and engineered.</p>	<ul style="list-style-type: none"> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>FC, Feb. 3, 2016</i></li> </ul>	Hired asset manager	▶ <b>Completed</b>

## Vibrant: of 14 priorities, 3 are completed and 4 are operationalized

Priority	Resolution by Board/Committee	Comments	Status
<p><b>RECREATION, ARTS &amp; CULTURE</b> Support increased access to community arts and recreation through programming and strategic investments.</p>	<ul style="list-style-type: none"> <li>▶ <i>Electoral Area Services Committee, Jan. 20, 2016</i></li> <li>▶ <i>Electoral Area Services Committee, June 21, 2017</i></li> <li>▶ <i>CRD Board, July 12, 2017</i></li> </ul>	Submitted Experience the Gulf Islands concept plan to EASC	▶ <b>Operationalized</b>
<p><b>REGIONAL PARKS</b> Increase access to recreational trails within park boundaries and consider opening new park reserve lands.</p>	<ul style="list-style-type: none"> <li>▶ <i>Regional Parks Committee, Jan. 20, 2016</i></li> </ul>	Completed construction of the Great Trail (formerly known as the Trans Canada Trail)/Sooke Hills Wilderness Trail	▶ <b>Completed</b>
<p><b>ACTIVE &amp; MULTI-MODAL TRANSPORTATION</b> Advocate for regional transit priorities to the Victoria Regional Transit Commission.</p>	<ul style="list-style-type: none"> <li>▶ <i>Board, Dec. 9, 2015</i></li> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>GC, Mar. 2, 2016</i></li> <li>▶ <i>TSC, Mar. 2, 2016</i></li> </ul>	Added to standing committee mandate	▶ <b>Completed</b>
<p><b>ACTIVE &amp; MULTI-MODAL TRANSPORTATION</b> Design and manage regional trails as transportation corridors for users now and in the future.</p>	<ul style="list-style-type: none"> <li>▶ <i>Board, Nov. 4, 2015</i></li> <li>▶ <i>RPC, Jan. 20, 2016</i></li> <li>▶ <i>Board, Nov. 9, 2016</i></li> </ul>	Design and management of regional trails continues within operational mandate	▶ <b>Operationalized</b>
<p><b>ACTIVE &amp; MULTI-MODAL TRANSPORTATION</b> Enable the CRD, local governments and other agencies to advance active transportation infrastructure and programming (including active and safe routes to school).</p>	<ul style="list-style-type: none"> <li>▶ <i>Board, Nov. 18, 2015</i></li> <li>▶ <i>EASC, Jan. 20, 2016</i></li> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> </ul>	Advancement of active transportation infrastructure and programming continues within operational mandate	▶ <b>Operationalized</b>
<p><b>AGRICULTURAL LAND &amp; FOOD SECURITY</b> Enable others and advocate for supportive agricultural programs and policies by provincial and federal governments</p>	<ul style="list-style-type: none"> <li>▶ <i>Board, Dec. 9, 2015</i></li> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>GC, Mar. 2, 2016</i></li> </ul>	Added to standing committee mandate	▶ <b>Completed</b>
<p><b>AGRICULTURAL LAND &amp; FOOD SECURITY</b> Establish educational programming to promote local food and its benefits.</p>	<ul style="list-style-type: none"> <li>▶ <i>ESC, Jan. 27, 2016</i></li> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> </ul>	Educational programming on local food continues within operational mandate	▶ <b>Operationalized</b>

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# Previously Completed & Operationalized



Serve: of 15 priorities, 3 are completed and 7 are operationalized

Priority	Resolution by Board/Committee	Comments	Status
<b>CORPORATE DEVELOPMENT</b> Enhance and ensure effective financial and audit reporting practices.	<ul style="list-style-type: none"> <li>▶ <i>FC, Feb. 3, 2016</i></li> <li>▶ <i>Board, Mar. 30, 2016</i></li> <li>▶ <i>FC, Jun. 1, 2016</i></li> <li>▶ <i>Board, Jun. 8, 2016</i></li> </ul>	Financial and audit reporting practices continue within operational mandate	▶ <i>Operationalized</i>
<b>CORPORATE DEVELOPMENT</b> Evaluate the use of innovative technologies and corporate support systems for continuous improvement and effective service delivery.	<ul style="list-style-type: none"> <li>▶ <i>RPC, Jan. 20, 2016</i></li> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> </ul>	Application of innovative technologies and systems continues within operational mandate	▶ <i>Operationalized</i>
<b>CORPORATE DEVELOPMENT</b> Support continued investments in workforce education, training and development.	<ul style="list-style-type: none"> <li>▶ <i>FC, Feb. 3, 2016</i></li> </ul>	Implemented aligned Training Plan	▶ <i>Completed</i>
<b>EDUCATION, OUTREACH &amp; INFORMATION</b> Demonstrate transparency and increase visibility through the provision of accessible, relevant, timely and usable data and information.	<ul style="list-style-type: none"> <li>▶ <i>PTPSC, Jan. 27, 2016</i></li> <li>▶ <i>FC, Feb. 3, 2016</i></li> </ul>	Provision of data and information continues within operational mandate	▶ <i>Operationalized</i>
<b>EDUCATION, OUTREACH &amp; INFORMATION</b> Expand on successful education partnerships and program delivery to include innovative in-person outreach and educational programs.	<ul style="list-style-type: none"> <li>▶ <i>RPC, Jan. 20, 2016</i></li> <li>▶ <i>ESC, Jan. 27, 2016</i></li> <li>▶ <i>RWSC, Feb. 17, 2016</i></li> <li>▶ <i>Board Jul. 13, 2016</i></li> </ul>	Education partnerships and program delivery continues within operational mandate	▶ <i>Operationalized</i>
<b>GOVERNANCE</b> Complete the work of the Special Task Force on First Nations Engagement.	<ul style="list-style-type: none"> <li>▶ <i>Board, Dec. 9, 2015</i></li> <li>▶ <i>GC, Mar. 2, 2016</i></li> </ul>	First Nations engagement continues within operational mandate	▶ <i>Operationalized</i>
<b>GOVERNANCE</b> Determine the role of the CRD in current governance conversations.	<ul style="list-style-type: none"> <li>▶ <i>GC, Mar. 2, 2016</i></li> <li>▶ <i>Board, Dec. 14, 2016</i></li> </ul>	Participated in Province's Capital Integrated Services & Governance Initiative	▶ <i>Completed</i>
<b>GOVERNANCE</b> Establish a Board self-evaluation process.	<ul style="list-style-type: none"> <li>▶ <i>Board, Sept. 9, 2015</i></li> <li>▶ <i>GC, Mar. 2, 2016</i></li> <li>▶ <i>GC, Sep. 7, 2016</i></li> </ul>	GC voted by consensus not to pursue self-evaluation process	▶ <i>Completed</i>
<b>GOVERNANCE</b> Review and establish a governance model which encourages exemplary decision-making and includes regular Board education and inter-jurisdictional collaboration.	<ul style="list-style-type: none"> <li>▶ <i>Board, Dec. 9, 2015</i></li> <li>▶ <i>GC, Mar. 2, 2016</i></li> </ul>	Annual review of standing committee structure and TOR continues within operational mandate	▶ <i>Operationalized</i>
<b>GOVERNANCE</b> Support regional and sub-regional dialogues between the general public, municipalities, electoral areas, First Nations and the CRD.	<ul style="list-style-type: none"> <li>▶ <i>GC, Mar. 2, 2016</i></li> </ul>	Regional and sub-regional dialogue continues within operational mandate	▶ <i>Operationalized</i>

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Making a difference...together

## REPORT TO CAPITAL REGIONAL DISTRICT BOARD MEETING OF WEDNESDAY, DECEMBER 13, 2017

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**SUBJECT**     **Year End Report from the Special Task Force on First Nations Relations**

**ISSUE**

The purpose of this report is to provide the Board with an update on the activities of the Special Task Force and the First Nations Relations Division (FNRD).

**BACKGROUND**

The 2016 year end Task Force report laid out a series of actions to be undertaken in support of strengthening relationships with First Nations, responding to the Truth and Reconciliation's (TRC) Calls to Action and providing direction to the FNRD.

The following activities were undertaken in the third and fourth quarters of this year:

**Outreach:**

In June 2017, the WSANEC Leadership Committee (WLC) and CRD held its inaugural joint meeting. The meeting was a day-long session with Chiefs, Council members, elders and staff from Tsartlip, Tseycum and Tsawout First Nations and provided opportunity to discuss a variety of common interests and initiatives, such as shellfish and shoreline environmental clean-up, derelict boats, and archeology activities. The CRD also made presentations in response to topics identified by the WLC, including environmental management practices for Hartland Landfill, and an overview of the committee and commission structure of the CRD. Since that meeting, the Task Force has continued to explore governance options on the issues raised with the WLC. Copies of the meeting agendas and records of decisions are posted on the CRD First Nations Relations webpage as they become available.

**Cultural Training:**

Building on the series of public cultural training exercise events undertaken in partnership with the First Nations Health Authority, FNRD staff developed a similar program for delivery across the organization. The purpose of the cultural safety and humility training is two-fold:

- to action the Truth and Reconciliation (TRC's) call for cultural education amongst local government workforce (Call to Action # 57), and;
- to provide a platform for further discussion with each CRD work unit, that facilitates thoughtful and informed exploration of ways the CRD can incrementally and seamlessly integrate acts of Reconciliation into its day-to-day work program.

**Other Action Items:**

1. With the transition to the new Provincial government, the Task Force reached out to relevant ministries, including Municipal Affairs, Attorney General, and Indigenous Relations and Reconciliation. The Task Force has advanced requests to the Province for assistance in

addressing both long-standing and emergent issues, such as barriers to re-interment into the Beacon Hill / Migen Ancient Cemetery, the *Local Government Act* provisions regarding Board membership, and clarification on the Province's approach to Douglas Treaty rights as they relate to local government activities and land holdings.

2. The FNRD has not yet established an inter-municipal working group, however, staff provided informal practical support to municipal colleagues by way of assistance in territorial identification, Nation contact information, and options for outreach and engagement on local planning initiatives. Staff also worked closely with the local chapter of the Local Government Management Association to develop a conference agenda with a focus on First Nations relationship building.

### **Division Activities:**

The Division's activities in the latter half of this year have built on the fledgling relationships with First Nations staff and leadership that have been fostered over the last few years. A number of successful agreements were completed, deepening the relationship and creating practical service-based connections.

The following is a summary of the third and fourth quarter activities of the Division organized by the three areas of the Division's Reporting Framework:

#### **1. Leadership**

- a. Focus on relationship building at the leadership level is primarily undertaken through the Task Force outreach activities;
- b. T'Sou-ke Nation Chief addressed the Board regarding the Sea to Sea Traditional Use Access Agreement;
- c. The CRD Chair and the Parks Chair met with Tsawout First Nation Chief and Council to discuss their concerns with the management of Island View Beach.

#### **2. Department Support**

- a. Staff have been actively supporting the Wastewater Treatment Project team with:
  - Supporting the Nation Liaisons in their work;
  - Crown consultation documentation;
  - Archeology protocols;
- b. Completion of the Draft Sea to Sea Traditional Use Access Agreement with T'Sou-ke First Nation;
- c. Resolution of the E&N Rail Trail alignment with the successful negotiation of a land use agreement with Esquimalt Nation to host a section of the trail on Nation lands;
  - i. This agreement resulted in the related resolution of a number of other long-standing issues such as the Ministry upgrade of Admirals Road and the creation of a new commercial and local traffic access for the Nation off a Town of View Royal local road.
- d. Support of the First Nations Outreach summer student position to support Environmental Services in delivering effective information and education on recycling and waste management;
- e. Support to the Derelict Boats initiative with outreach to First Nations;
- f. Development of service agreement templates for water, sewer, fire services.

### 3. Emerging Areas of Interest

- a. A process to establish a new Regional Parks management approach for Island View Beach in collaboration with Tsawout Nation is underway;
- b. Exploring opportunities for partnerships with First Nations on innovative housing projects;
- c. Creation of draft policies and procedures for archeological activities is underway in response to First Nations expectations for the CRD to follow highest and best practices under the *Heritage Conservation Act* in a way that demonstrates respect for local indigenous cultural and spiritual laws and protocols;
- d. Continuing to work collaboratively with WSA NEC Nations on the complex issue of shellfish closures on the Peninsula.

### COMMENTS FROM THE TASK FORCE CHAIR

As the 3rd year of the Task Force's mandate wraps up, we have learned and understand that the process for improving shared decision-making with First Nations will be an incremental and iterative process. While there is no current blueprint for establishing a framework, there are positive initiatives that signal a fundamental change in how the CRD relates to, acknowledges and incorporates First Nations' rights, authority and attachment to the lands in the region.

Landmark agreements such as the Sea to Sea Traditional Use Access Agreement and the emerging Island View Beach (Co)-Management Plan, are examples of a true collaboration in parks management. As mutual trust builds and knowledge and understanding of our respective governance models increases, the options for more and creative approaches to shared decision-making will be revealed. The Task Force looks forward to the final year of its mandate, as we focus on a framework for collaborative regional governance that includes First Nations and reflects Indigenous principles and processes.

### RECOMMENDATION

That the Capital Regional District Board receive this report for information.

Submitted by:	Sue Hallatt, Manager, First Nations Relations
Concurrence:	Kristen Morley, J.D., Acting Senior Manager, Corporate Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer



**REPORT TO THE CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

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**SUBJECT** Fire Dispatch Services for Capital Regional District Electoral Areas, Metchosin, Sooke, Highlands and Langford

**ISSUE**

The Capital Regional District (CRD) electoral areas and the municipalities of Metchosin, Sooke, Highlands and Langford wish to extend the contract to receive fire dispatch services through the CRD Fire Dispatch Service operating contract with Langford Fire Department for one additional year with a six month notice provision for termination and rolling annual renewals for two additional years.

**BACKGROUND**

The CRD has contracted the City of Langford (Langford) to provide a fire call relay service to the electoral areas and a number of participating municipalities for more than 20 years. The service is provided from a purpose-built post-disaster building located in Langford Fire Hall #1. Langford has a back-up agreement with BC Emergency Health Services on Leigh Road, Langford, to provide service continuity in the event that the primary fire dispatch centre is compromised.

This service has been successfully provided by Langford under the current contract since January 2013. Quarterly fire dispatch user group meetings provide regular input to the CRD to ensure service expectations are being addressed and the service performance meets or exceeds emergency call processing standards for fire dispatch during the contract tenure. The Fire Chiefs of the participating services have indicated their approval to renew the contract with Langford under the current terms of service with a more flexible term to allow for consideration of regional fire dispatch unification.

The current contract expires at the end of 2017 and as renewal of the contract was contemplated in the 2017 to 2022 Financial Plan process and has been agreed to by the participants, staff intend to proceed with the renewal as delegated, subject to the more flexible terms as agreed to by Langford.

**ALTERNATIVES**

*Alternative 1*

1. That the update on the status of the Fire Dispatch service contract with the City of Langford be received for information.
2. That staff be directed to facilitate a meeting with Victoria, Saanich, Langford and E-Comm to explore models for the unification of fire dispatch services within the region.

*Alternative 2*

That the update on the status of the CRD Fire Dispatch service contract with the City of Langford be received for information.

**IMPLICATIONS**

### **Financial Implications**

The cost for the participants of the Fire Dispatch Service will continue to be budgeted according to the current financial plan, consistent with the terms of the current contract including an allowance for increased labour contract costs. The cost for this service is borne by the participants and is based on a cost recovery approach. The funds are currently requisitioned pursuant to the authority the CRD has to provide enhanced 9-1-1 services, provided that additional services that benefit certain participants are jointly funded by those participants.

### **Operational Implications**

Currently there are three fire dispatch centres within the CRD. A fourth federal fire dispatch exists at the Department of National Defense, but it is outside the CRD's jurisdiction. Recently, Victoria and Saanich have reported that they are entering into a corporation agreement to consolidate their fire dispatch services out of the Saanich fire dispatch facility. Saanich currently has an agreement with E-Comm for computer-aided dispatch for fire services in the region which provides First Right of Refusal to expansion of E-Comm fire dispatch services in the area.

The need to renew the fire dispatch service contract with Langford prior to the end of the year does not provide sufficient time to review alternative fire dispatch service arrangements or potentially advance a unification of fire dispatch services. The fire chiefs of the participating departments have indicated their support for the continuation of the present service. While the District of Saanich has indicated that they would like the opportunity to submit proposals to provide this service, there has been insufficient time since the announcement of the formation of a new Corporation to explore this or other potential options. It is also noted that the construction of the new South Island Communications Centre (SICC) for 9-1-1 police dispatch is under construction and is expected to be complete in January 2019 with ongoing work underway to prepare for E-Comm to assume responsibility for contracted operations at that time.

### **Intergovernmental Implications**

The CRD has responsibility for fire dispatch service in the electoral areas. The fire dispatch contract with Langford operates under the 9-1-1 authority as an enhanced service agreed to by the participants, and it is intended that the dispatchers will continue to operate from the Langford fire hall.

The opportunity to modernize and improve the efficiency of different emergency dispatch services in the region through increased regional cooperation and collaboration was one of the key findings in CRD 9-1-1 and Fire Dispatch Review completed in consultation with all fire departments within the region in 2011. It has been further recommended that the CRD, as the 9-1-1 authority, should take more of a leadership role in facilitating the process to reach agreement on standards, technology, data management and record keeping in order to improve the resilience of the 9-1-1 system, and to improve call management and the availability and transfer of information to dispatch centres.

The recent agreements between the CRD and E-Comm to provide 9-1-1 Public Safety Answering Point (PSAP) services as well as the agreements between E-Comm and the three police dispatch centres, (Westshore RCMP, Saanich and Victoria) representing the five police services to deliver police dispatch services in the region at the SICC demonstrate positive movement towards a unified regional dispatch service delivery model.

The new renewal terms of the Langford fire dispatch contract would allow staff time to explore opportunities and discuss potential models for a unified regional fire dispatch service with key stakeholders while ensuring effective continuity of fire dispatch services to the participants.

**CONCLUSION**

The CRD electoral areas and the fire services of Sooke, Metchosin, Highlands and Langford have agreed to continue receiving fire dispatch services from the CRD through contract with Langford. The terms of the contract renewal allows consideration of a regional approach to fire dispatch services within the CRD while providing continuity of fire dispatch service.

**RECOMMENDATION**

1. That the update on the status of the Fire Dispatch service contract with the City of Langford be received for information.
2. That staff be directed to facilitate a meeting with Victoria, Saanich, Langford and E-Comm to explore models for the unification of fire dispatch services within the region.

Submitted by:	Shawn Carby, CD, BSc, MAL, Senior Manager, Protective Services
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager Planning and Protective Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

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Making a difference...together

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, DECEMBER 13, 2017**

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**SUBJECT**      **Federation of Canadian Municipalities International Programs**

**ISSUE**

The CRD and the Federation of Canadian Municipalities (FCM) have established a formal relationship to support the implementation of international development programs in Peru and FCM has now expressed an interest in having the CRD potentially work with a region including 12 municipalities in the country of Jordan.

**BACKGROUND**

In consultation with the Chair and past Chairs, the CAO was encouraged to pursue opportunities for the CRD to be engaged with and participate in FCM initiatives, such as the FCM international development programs. In 2016 and 2017 the CRD participated in Canadian missions to the Ancash region of Peru to participate in strategic planning provided local government expertise to resolve critical water and waste management issues as part of the Communities in Latin America Program (CISAL) program.

FCM is the national voice of municipal government in Canada and is dedicated to improving the quality of life and sustainability of local communities by promoting strong, effective and accountable municipal government. Its members include 2,000 municipal governments including the CRD, which represent over 90 percent of Canada's population, and 19 provincial and territorial municipal associations.

The main objective of FCM international development partnerships is to engage Canadian municipal expertise to assist in the provision of technical assistance, training and sharing of best practices with partner municipalities in other countries. Municipal contributions include sourcing of its municipal practitioners (elected officials and staff) on a volunteer basis or hosting delegations.

**ALTERNATIVES**

*Alternative 1:*

That the CAO be authorized to enter into a partnership agreement with FCM's Jordan Municipal Support Project to support FCM initiatives in the country of Jordan if selected by FCM.

*Alternative 2:*

That the report on FCM's international development program be received for information.

**IMPLICATIONS**

The CRD would provide an in-kind salary contribution for the volunteer time of their staff. FCM will cover participant travel, accommodation, insurance, meal and other related expenses through funding provided by Global Affairs Canada.

**RECOMMENDATION**

That the CAO be authorized to enter into a partnership agreement with FCM's Jordan Municipal Support Project to support FCM initiatives in the country of Jordan if selected by FCM.

Submitted by:	Robert Lapham, MCIP, RPP, Chief Administrative Officer
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**Notice of Motion to the Capital Regional District Board  
Meeting December 13, 2017**

WHEREAS a regional approach to provide 911 call service and police dispatch has been agreed upon by the Board and a purpose-built, post-disaster regional centre is being built to house 911 and police dispatch.

AND WHEREAS the new regional 911/police dispatch centre will have sufficient space to co-locate a regional fire dispatch centre.

AND WHEREAS co-locating 911 with police and fire dispatch in the new centre has the potential for efficiencies, cost-savings and a higher level of service which in turn will provide a greater level of public safety.

AND WHEREAS a regional approach to fire dispatch can provide a governance model that will consider and reflect the needs of all fire departments in the Capital Regional District.

THEREFORE BE IT RESOLVED THAT staff be asked to:

1. Provide an analysis of the feasibility of co-locating 911 with police and fire dispatch in the new purpose-built centre.
2. Provide advice on the process required to establish a regional fire dispatch centre and a corresponding governance model.
3. Consult with municipal staff to identify issues that will need to be addressed to create a regional fire dispatch centre and governance model.

Submitted by Director Nils Jensen

Supported by:

Chair Steve Price

Director Ryan Windsor

Director David Screech

Director Lisa Helps