



Making a difference...together

**JUAN DE FUCA WATER DISTRIBUTION COMMISSION**  
Notice of a Meeting on **Tuesday, November 1, 2016 at 12:00 pm**  
**Main Conference Room**, 479 Island Highway, Victoria, BC

B. Gramigna  
M. Hicks  
G. Baird

J. Rogers  
G. Logan  
L. Szpak

K. Pearson  
W. Sifert

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**AGENDA**

1. Approval of Agenda
2. Adoption of Minutes of October 4, 2016
3. Chair's Remarks
4. Presentations/Delegations
  - No one has registered to speak
5. Juan de Fuca Five Year Accelerated Fire Upgrade Program – Budget Increase (Report #JWDC 2016-18)
6. Bear Mountain Parkway Expansion – Water Infrastructure Procurement (Report #JWDC 2016-19)
7. Canada-British Columbia Clean Water and Wastewater Fund Grant Application
  - Anderson Cove (East Sooke) Water Service Extension Project (Report to Follow)
8. CRD Board Decisions
  - Juan de Fuca Water Distribution Commission Matters (Verbal Report from Chair)
9. Water Watch
10. Adjournment

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*To ensure a quorum, advise Margaret at 250.474.9606 if you or your alternate cannot attend.*



Making a difference...together

**MINUTES OF A MEETING OF THE JUAN DE FUCA WATER DISTRIBUTION COMMISSION  
Held Tuesday, October 4, 2016, Main Conference Room, 479 Island Highway**

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**PRESENT:** **Commissioners:** B. Gramigna, J. Rogers, M. Hicks, G. Baird, K. Pearson, L. Szpak  
**Staff:** T. Robbins, J. van Niekerk, M. McCrank, M. Cowley, B. Semmens, M. Montague (Recorder)

The meeting was called to order at 12:03 pm.

**1. APPROVAL OF AGENDA**

**MOVED** by Commissioner Rogers and **SECONDED** by Commissioner Baird,  
That the Juan de Fuca Water Distribution Commission approve the agenda.

CARRIED

**2. ADOPTION OF MINUTES OF SEPTEMBER 20, 2016**

**MOVED** by Commissioner Baird and **SECONDED** by Commissioner Szpak,  
That the Juan de Fuca Water Distribution Commission adopt the minutes of  
September 20, 2016 as distributed.

CARRIED

**3. CHAIR'S REMARKS**

The Chair remarked as follows:

- He introduced, B. Semmens, Senior Financial Analyst for Integrated Water Services.
- He reported on the Provincial announcement on Friday, September 30, 2016 of the program launch of the Canada-British Columbia Clean Water and Wastewater Fund (CWWF). The CWWF will support the rehabilitation of local government drinking water, wastewater and stormwater infrastructure, and the planning and design of future facilities and upgrades to existing systems.

**4. PRESENTATIONS/DELEGATIONS**

There were no presentations/delegations.

**5. EVENT REPORT - MAIN BREAK ON LAGOON ROAD, COLWOOD – AUGUST 1, 2016**

M. McCrank spoke to the report. He noted that the main break that began on July 31 and escalated on August 1, 2016 was an unusual occurrence. The Operations staff responded using the knowledge and tools at their disposal and made a risk based decision to complete the repair on the next business day. However, the leak escalated in severity resulting in repairs being completed on August 1, 2016. Operations is continually refining its response to minor and major issues. This incident has resulted in Japan Gulch Water Treatment Plant and water distribution Operations staff reviewing and improving the decision making process in order to minimize the chance of this type of situation occurring in the future.

**MOVED** by Commissioner Rogers and **SECONDED** by Commissioner Baird,  
That the Juan de Fuca Water Distribution Commission receive the staff report for  
information.

CARRIED

**6. AWARD OF CONTRACT - SUPPLY OF HIRED EQUIPMENT AND OPERATORS,  
DUMP TRUCKS, EXCAVATORS, AND BACKHOES**

M. McCrank spoke to the report. He noted that the existing contract for the Supply of Hired Equipment and Operators, Dump Trucks, Excavators, and Backhoes will expire on October 31, 2016. Tri-X Excavating Ltd. submitted the winning proposal in response to the Request for Proposal No. 2016-184.

**MOVED** by Commissioner Szpak and **SECONDED** by Commissioner Rogers,  
That the Juan de Fuca Water Distribution Commission approve the award of the contract for the Supply of Hired Equipment and Operators, Dump Trucks, Excavators, and Backhoes for two years to Tri-X Excavating Ltd., effective November 1, 2016, based on the evaluation of submissions from the RFP No. 2016-184.

CARRIED

**7. 2017 CAPITAL AND OPERATING BUDGET**

T. Robbins spoke to the report. He noted that this draft 2017 Juan de Fuca Water Distribution Service budget has been prepared for the Commission's consideration. The Commission will make budget recommendations to the CRD Board through the Committee of the Whole in November. The draft 2017 Juan de Fuca (JDF) Water Distribution Service budget has been prepared considering the CRD Board's 2017 service planning and financial expectations, which include identifying opportunities to realign or reallocate resources, identifying potential synergies or efficiencies between departments and services, and an ongoing review of service levels and efficiency opportunities through the service planning and budget development process.

**MOVED** by Commissioner Rogers and **SECONDED** by Commissioner Szpak,  
That the Juan de Fuca Water Distribution Commission recommends that the Capital Regional District Board:

1. Approve the 2017 operating and capital budget;
2. Approve the 2017 retail water rate of \$1.9129 per cubic metre, adjusted if necessary by any change in the Regional Water Supply wholesale water rate; and
3. Amend the Water Distribution Local Service Conditions, Fees and Charges Bylaw accordingly.

CARRIED

**8. WATER WATCH**

**MOVED** by Commissioner Rogers and **SECONDED** by Commissioner Baird,  
That the Juan de Fuca Water Distribution Commission receive the staff report for  
information.

CARRIED

**9. MOTION TO CLOSE THE MEETING**

**MOVED** by Commissioner Hicks and **SECONDED** by Commissioner Rogers,  
That the Juan de Fuca Water Distribution Commission close the meeting in accordance with the Community Charter, Part 4, s. 90(1) *(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public;* and 90(2) *(b) the consideration of information received and held in confidence relating to negotiations between the municipality and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party.*

CARRIED

The meeting reconvened at 1:55 pm.

**10. ADJOURNMENT**

**MOVED** by Commissioner Hicks and **SECONDED** by Commissioner Szpak,  
That the meeting of the Juan de Fuca Water Distribution Commission be adjourned at 1:55 pm.

CARRIED

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Chair

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Secretary

**REPORT TO THE JUAN DE FUCA WATER DISTRIBUTION COMMISSION  
 MEETING OF TUESDAY, NOVEMBER 1, 2016**

**SUBJECT JUAN DE FUCA FIVE YEAR ACCELERATED FIRE UPGRADE PROGRAM – BUDGET INCREASE**

**ISSUE**

Additional budget is required to complete the Five Year Accelerated Fire Upgrade Program (Program). The program budget has been re-assessed and it has been determined that an additional \$150,000 (1.5% of total Program) is required to complete the scheduled projects.

**BACKGROUND**

The Five Year Accelerated Fire Upgrade Program is a Term Capital Project that was approved by the Juan de Fuca Water Distribution Commission (JWDC) at the April 5, 2011 Commission meeting for the purpose of improving the distribution system’s ability to provide flows in accordance with the Fire Underwriters Survey (FUS) recommendations. The JWDC approved the Program and requested that it be constructed over a five year period (2012 through 2016), with total Program budget of \$9.4 million (average of \$1.88 Million per year).

**Five Year Accelerated Fire Upgrade Program 2016 Projects**

Sixteen projects with a total length of 4,130m were scheduled for construction in 2016 with a total budget of \$2.98 million (\$1.1 Million Carry Forward and \$1.88 Million in 2016 funding). To date, 12 of the 16 projects are complete and the remaining 4 projects are scheduled to be completed by November 30, 2016. Operations staff have developed Estimates to Complete (ETC) for the remaining projects and have determined that \$150,000 in additional funding is required to complete construction.

Staff have summarized Costs-to-Date, and Estimated Costs to Complete, for the Five Year Accelerated Fire Upgrade Program in the table below.

<b>Approved Capital Budget</b>	<b>\$9,400,000</b>
Costs to Date	\$8,640,000
Remaining Budget	\$760,000
Estimate to Complete (ETC)	\$910,000
<b>Required Additional Funds</b>	<b>\$150,000</b>

**ALTERNATIVES**

**Alternative 1**

That the Juan de Fuca Water Distribution Commission direct staff to use \$150,000 of available funding from the 2016 Juan de Fuca Annual Small Diameter Pipe Replacement Program budget to complete the Accelerated Fire Upgrade Program scope, and revise the Small Diameter Pipe Replacement Program Project Plan accordingly.

Alternative 2

Direct staff to reduce the scope of the Accelerated Fire Upgrade Program to fit within the available remaining budget, resulting in cancelling the final project, Dicker and Klahanie Road, which consists of 270m of 200mm diameter water main estimated at \$190,000.

**IMPLICATIONS**

Alternative 1 – Transfer of Funds: The Annual Small Diameter Pipe Replacement Program 4 year schedule (2017 to 2020) was defined in the staff report #JWDC 2016-09 (April 5, 2016).

At present, \$900,000 is available in 2016 for construction of Admirals Road. CRD Operations has assessed their current obligations and have determined that capacity to undertake the Admirals Road Project will not be available until December 2016. It is proposed to defer the majority of work on the Admirals Road Project, and associated costs, to 2017. The Admirals Road Project has been coordinated with the Ministry of Transportation and Infrastructure (MoTI) to ensure the construction schedule does not impact any planned works by MoTI.

The net result of the transfer of \$150,000 of available funding from the Annual Small Diameter Replacement Program (assuming no changes in proposed budgets in future years) will be deferring the Sooke Road – Kelly to Jason Lane project from 2020 to 2021. Please see the table below for the current 2017-2020 Project Plan. This option will not result in an increase to the Juan de Fuca 2016 capital budget or the Five Year Capital Program.

Proposed Annual Pipe Replacement Projects: Years 2017 to 2020:

<b>Municipality/EA</b>	<b>Construction Year</b>	<b>Road Name</b>	<b>Length (m)</b>
View Royal	2017	Admirals Road Phase 2: Hallowell to Craigflower	550
Metchosin	2017	Metchosin Road: Happy Valley Road Intersection to Bilston Creek	870
	2018	Metchosin Road : Bilston Creek to Lomax Road	940
Langford	2018	Hull Road	152
Metchosin	2018	Derrien Place	220
	2019	Lomax Road to 3790 Metchosin Road (east of Brotherston Road)	1,200
Langford	2019	Sooke Road: 2818 Sooke Road to Ronald Road	355
Langford	2020	Sooke Road: 2818 Sooke Road to Glenshire Drive	662
<b>Colwood</b>	<b>*2020</b>	<b>Sooke Road: Kelly Road to Jason Lane</b>	<b>548</b>
<b>Total</b>			<b>5,142</b>

\*Alternative 1 - Move to 2021

Alternative 2 – If the fire upgrade project on Dicker and Klahanie Road is cancelled, this area will remain fire flow deficient. The existing Dicker and Klahanie parameters are 70 l/s at 20 psi residual (below the recommended 80 l/s at 20 psi residual). The project could be brought back in a future year, potentially under the Fire Flow Upgrade Phase 2 Program, as funds permit.

**CONCLUSION**

An additional \$150,000 (approximately 1.5% of the total Program budget) is required to complete construction of the remaining Accelerated Fire Upgrade Program projects in 2016. Funds are currently available in the Annual Small Diameter Replacement Program that can be utilized to

complete the remaining fire upgrade projects. This option will not result in an increase to the Juan de Fuca 2016 capital budget or Five Year Capital Program.

**RECOMMENDATION**

That the Juan de Fuca Water Distribution Commission direct staff to use \$150,000 of available funding from the 2016 Juan de Fuca Annual Small Diameter Pipe Replacement Program budget to complete the Accelerated Fire Upgrade Program scope, and revise the Small Diameter Pipe Replacement Program Project Plan accordingly.

Submitted by:	Ian Sander, PEng, Manager, Capital Projects
Concurrence:	Ian Jesney, PEng, Senior Manager, Infrastructure Engineering
Concurrence:	Ben Semmens, BCom, CPA, CMA, Senior Financial Advisor, Financial Services
Concurrence:	Ted Robbins, BSc, CTech, General Manager, Integrated Water Services

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**REPORT TO JUAN DE FUCA WATER DISTRIBUTION COMMISSION  
MEETING OF TUESDAY, NOVEMBER 1, 2016**

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**SUBJECT      BEAR MOUNTAIN PARKWAY EXPANSION - WATER INFRASTRUCTURE  
PROCUREMENT**

**ISSUE**

The Bear Mountain Parkway Expansion (BMPE) Water Infrastructure has been approved to proceed by the Juan de Fuca Water Distribution Commission (JWDC) and now requires further approval of the procurement model to install approximately 3 km of fire main and appurtenances on the Bear Mountain Parkway.

**BACKGROUND**

At the September 20, 2016 meeting of the JWDC, staff were directed to bring back a consulting contract for McElhanney Consulting Services Ltd. (McElhanney), as well as a construction services contract for Windley Contracting (Windley) (Attachment 1 - Report #JWDC 2016-14). Both of these companies are currently under contract with the City of Langford (CoL) to design and construct the road component of the BMPE.

Staff considered two procurement options to deliver the water infrastructure project:

1. Prepare and execute separate contracts for both Windley and McElhanney directly with the Capital Regional District (CRD).
2. Use the existing contracts that the CoL has with Windley and McElhanney and have an agreement between the CRD and the CoL to expand the respective contracts for the fire main component.

Procurement Option 1 requires the preparation of new contract documents, which will require more time to prepare and may impact the timely ordering of some materials. Option 1 will also result in additional staff time in managing the contracts.

Procurement Option 2 requires the execution of a Memorandum of Understanding (MOU) with the CoL but will not require additional contract documents and will decrease the amount of staff time and resources required as opposed to Option 1.

Option 2 is the most efficient delivery method for both the McElhanney and Windley contracts considering contract administration effort and financial management aspects. As the CRD and the CoL have entered into similar MOU's in the past, staff approached the CoL to discuss the possibility of Option 2 with the resultant comments:

- The CoL is amenable to entering into an MOU with the CRD to deliver the services.
- There will be no charges from the CoL for administering the additions to the contracts.
- The CoL will invoice the CRD in keeping with the MOU with the full understanding that the CRD has an approved budget to deliver this work.

Staff have prepared a draft MOU (Attachment 2), which is still subject to CRD legal review and CoL review, but is in keeping with similar MOU's utilized by CRD and executed with the CoL in the past. Staff have also received a proposal from McElhanney outlining their scope and fee. McElhanney have also provided the CRD with a cost estimate for the proposed Windley work.

Financial

A budget of \$3.6 million (excluding taxes) has been approved to deliver both the McElhanney and Windley contracts. With information provided by McElhanney on both the contracts, the respective budget components are as follows:

<b>ITEM</b>	<b>BUDGET</b>	<b>ESTIMATED COST</b>
McElhanney contract	\$200,000	\$189,760
Windley contract	\$3,200,000	\$3,156,586
CRD staff time	\$100,000	\$100,000
Contingency	\$100,000	\$153,654
<b>Total</b>	<b>\$3,600,000</b>	<b>\$3,600,000</b>

- McElhanney estimated cost is from proposal dated October 25, 2016
- Windley contract is from McElhanney cost estimate dated October 25, 2016
- CRD staff time includes both project management and operations effort to make pipe connections to each end of proposed system

**ALTERNATIVES**

Alternative 1

That the Juan de Fuca Water Distribution Commission direct staff to enter into a Memorandum of Understanding with the City of Langford to allow the City of Langford to install approximately three km of fire main and appurtenances under their existing contracts with McElhanney Consulting Services Ltd. and Windley Contracting.

Alternative 2

That the Juan de Fuca Water Distribution Commission direct staff to consider an alternative approach to procurement and refer the approach back to staff.

**IMPLICATIONS**

Alternative 1:

1. Reduces delays in McElhanney preparing contract documents as well as Windley ordering materials that are time sensitive that could affect project delivery.
2. Reduces costs for CRD project management and consultants' costs for preparation of contract documents.
3. The MOU provides the project framework and controls to facilitate the design, installation and construction management of the water infrastructure.

Alternative 2:

1. Project will be delayed with the possible impact of the BMPE not opening on time.
2. Project costs would go up with anticipated increases to staff time and consulting effort.

**CONCLUSION**

Implementing Procurement Option 2, entering into a MOU with CoL, would result in a more cost efficient project and have less negative impacts on project delivery.

**RECOMMENDATION**

That the Juan de Fuca Water Distribution Commission direct staff to enter into a Memorandum of Understanding with the City of Langford to allow the City of Langford to install approximately three km of fire main and appurtenances under their existing contracts with McElhanney Consulting Services Ltd. and Windley Contracting.

Submitted by:	Ian Jesney, PEng, Senior Manager, Infrastructure Engineering
Concurrence:	Ted Robbins, BSc, CTech, General Manager, Integrated Water Service

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Attachments: 2

**REPORT TO THE JUAN DE FUCA WATER DISTRIBUTION COMMISSION  
SPECIAL MEETING OF TUESDAY, SEPTEMBER 20, 2016**

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**SUBJECT     BEAR MOUNTAIN PARKWAY EXPANSION – WATER INFRASTRUCTURE**

**ISSUE**

The City of Langford (Langford) is planning to construct, beginning in the fall of 2016, the Bear Mountain Parkway Extension from McCallum Road to Skirt Mountain Drive (see Attachment A) and has asked the Capital Regional District (CRD) to install water system works within the roadway prior to paving the new parkway road surface.

**BACKGROUND**

On April 18, 2016 Langford's council passed the "Bear Mountain Parkway Extension-Local Area Service Establishment Bylaw No. 1630" and "Loan Authorization Bylaw No. 1631". These Langford bylaws permit the construction and funding of the Bear Mountain Parkway Extension (BMPE) from McCallum Road to Skirt Mountain Drive (see **Attachment A**) and Langford has asked the CRD to install water system works within the roadway prior to paving the new parkway road surface.

The area covered in the BMPE has water infrastructure that is identified in the CRD 2011 Juan de Fuca Water Distribution Development Cost Charge (DCC) plan and consists of the following:

- Approximately 6.3 km of new supply and distribution mains ranging in size from 300 mm to 400 mm diameters, providing both domestic and fire flows
- A 3,100 cubic metre reservoir
- Two (2) pump stations
- Three (3) pressure reducing stations

Based on the budgets established for the above projects under the 2011 DCC plan, the value of the new work is estimated at approximately \$15 million (in 2011 dollars). All of the preceding items are eligible for DCC funding under the 2011 DCC plan however, under the plan, the works were anticipated for completion in 2021. To satisfy the Langford request, at a minimum, approximately 3.3 km of distribution main and all three (3) pressure reducing stations would need to be constructed in coordination with the BMPE project (Interim Plan). Then there is a need to secure an approach to design, construct and fund the balance of the works (Final Build-Out Plan). McElhanney Consulting is conducting a hydraulic analysis of the Interim Plan to confirm that the proposed design will perform as intended.

On June 1, 2016 Langford's council passed a resolution (see **Attachment B**) requesting that the Juan de Fuca Water Distribution Commission authorize design and construction for a significant amount of the above-noted water infrastructure be funded from the DCC Capital Reserve Fund.

Following notification of Langford's resolution, CRD staff met with Langford staff on three occasions to discuss both the technical feasibility of advancing the works ahead of schedule and the availability of funds from the DCC Capital Reserve Fund. The results of these discussions are as follows:

#### DCC Funding Status

- There are limited DCC reserves available due to in-stream DCC projects, financial liabilities from previous projects where DCC reimbursement is owing under two DCC agreements and identified projects in the current DCC Plan that have been deferred to date.
  - Deferred DCC Projects and Project Financial Liabilities - The following is a summary of deferred projects and project financial liabilities from the 2011 DCC plan with proposed actions for the 2016 DCC program update:

##### Project Financial Liability:

1. McCallum Road Water Mains – installed by the City of Langford in 2013. Potential reimbursement from the DCC program is \$1,236,200. Reimbursement has not been claimed by the City of Langford.

##### Deferred Projects:

1. Walfred Pipe Upgrade – identified in 2011 with a budget of \$668,000. Deemed a low priority by the City of Langford and will be referenced as a low priority in the 2016 DCC update.
  2. Walfred Property Acquisition – identified in 2011 with a budget of \$500,000. Deemed a low priority by the City of Langford and will be referenced as a low priority in the 2016 DCC update.
  3. PRV Mountain Heights – identified in 2011 with a budget of \$119,700. Not deemed a priority in the 2016 DCC update as it is driven by development that is not currently occurring in this area of Sooke.
  4. Throupe Road – identified in 2011 with a budget of \$741,000. Not deemed a priority in the 2016 DCC update as the District of Sooke has no current commitment to construct Throupe Road. Also not required hydraulically until 2036.
  5. Millstream Road in Highlands – identified in 2011 with a budget of \$1,207,374. Deemed a high priority in the 2016 DCC update.
- Langford committed to review their financial liability claim for the McCallum pipe installation and the deferred projects that were in the DCC program.

#### Servicing Requirements – Interim Plan vs Final Build-Out Plan

- Langford, should DCC reserve funds be available, would like to have, as a minimum, a single fire main down from the existing Skirt Reservoir down to the McCallum intersection (see **Attachment A**). Langford would like the main to be active for the purposes of fire protection and limit future disturbance of the BMPE road surface.
- The single fire main is part of the ultimate build-out of the system, as it will serve as the future distribution main without further alteration.

- The CRD requires that the main be used only for fire protection as the existing DCC agreement with Ecoasis (Bear Mountain) reserves the current domestic supply capacity in the Skirt Reservoir.
- Having a single main at this time for fire purposes also reduces the need for interim fire requirements in pump station #6 on McCallum Road. While this benefits the developer building pump station #6, it also means that the redundant space being eliminated by not requiring fire pumps is a positive result for long term maintenance of the pump station.
- The CRD and Langford staff concurred that establishing a local service area (LSA) to fund the final build-out plan, which would include benefitting development properties along the Bear Mountain Parkway Extension, would benefit both Langford and the Juan de Fuca Water Distribution System as follows:
  - A LSA would allow the CRD to construct the water system in a planned, phased, cost and construction efficient manner without negatively affecting the DCC program.
  - The water system would also not be subjected to a piecemeal construction approach where multiple developers are installing infrastructure at different times, as is the current situation.
  - The LSA approach would not apply to the single fire main down the BMPE, as it is expected that there would be adequate funds to construct this main from the DCC Capital Reserve Fund.
  - The balance of the water system works for the BMPE could be funded by either a LSA or by developer front end agreements, but the LSA is the preferred route for both Langford and the CRD to allow the CRD to control the timing of completion and the funding of the works to ensure the system functions as planned hydraulically.
  - This approach does not affect the existing Ecoasis (Bear Mountain) DCC Agreement.
- Langford was in the process of tendering the BMPE project for the road construction and has since closed tenders. Pricing for a variety of water mains was included in the tender as provisional items. Specific pricing for the single fire main was not an individual item in the tender.
- Langford is currently using McElhanney Consulting as the engineer on the BMPE project and expect to award the construction to Windley Contracting.

On August 15, 2016 Langford Council passed a resolution (see **Attachment C**) that addressed financial liabilities and deferred projects in Langford and also supported the establishment of a LSA for the purpose of facilitating timely construction along the BMPE.

Financially, there is approximately \$4.15 million in the DCC Capital Reserve Fund, (estimated at 2016 year-end) that are available for use prior to accounting for financial liabilities and deferred projects. Given the City's resolution of August 15, 2016 and the reprioritization of deferred projects, there would be approximately \$4.2 million available for project funding. Because the DCC program has debt servicing obligations of approximately \$265,000 per year (from CRD Loan Authorization Bylaw No. 3164), the amount available for use should be reduced by at least \$600,000 to cover financial obligations and miscellaneous costs for a two year period should development slow down. This would result in available DCC Capital Reserve Funds of approximately \$3.6 million to fund Langford's request for a single fire main. Preliminary review of the tender pricing from Langford indicates this would be adequate funding for the interim plan.

Alternative 1

That the Juan de Fuca Water Distribution Commission recommends:

1. That the CRD Board amend the Juan de Fuca Water Distribution 2016-2020 Financial Plan to approve up to \$3.6 million in funding from the Juan de Fuca DCC Capital Reserve Fund for the Bear Mountain Parkway Extension Water Servicing - Interim Plan; and
2. That, in order to undertake the Bear Mountain Parkway Extension Water Servicing Interim Plan, the Commission:
  - a. Directs staff to prepare a consulting services contract to retain McElhanney Consulting Services Ltd. to provide design and construction phase services for the installation of approximately 3 km of fire main with appurtenances on the BMPE, and bring back the consulting services contract for Commission review prior to execution.
  - b. Directs staff to negotiate with Windley Contracting, based on the Langford BMPE provisional water main tender, to install approximately 3 km of fire main with appurtenances on the BMPE, and bring back the construction services contract for Commission review prior to execution.
3. Endorsement of the concept proposed for the Bear Mountain Parkway Extension Water Servicing Final Build-Out Plan and directs staff to bring back a report to the Commission outlining the technical, legal and financial feasibility and development requirements of a Local Service Area.

Alternative 2

That the Juan de Fuca Water Distribution Commission recommends an alternative approach to the Bear Mountain Parkway Extension Water Servicing Interim and Final Build-Out Plans and refers an approach back to staff.

**IMPLICATIONS**

Alternative 1:

1. Installation of the fire main in coordination with the BMPE construction will decrease costs of installation due to lower road reinstatement costs.
2. Installation of the fire main will decrease costs of Pump Station #6 due to the removal of interim fire pumps and associated operations and maintenance costs of the equipment.
3. Fire protection will be provided for approximately 3 km of the BMPE.
4. The Interim Water Servicing Plan allows for the construction and funding of the water works required to meet Langford's advanced schedule for the BMPE construction, while the Final Build-Out Water Servicing Plan concept allows for an approach to design, construct and fund the balance of the works.
5. The advanced completion of the water system works and the utilization of up to \$3.6 million in DCC Capital Reserve Funds will not allow for any other 'out of sequence' DCC projects to be funded from reserves until the fund is replenished through DCC contributions.
6. As this project was not previously in the departmental work plan, a reprioritization of departmental projects and resources will be necessary to meet the project schedule and deliverables.

Alternative 2:

1. An alternative approach could potentially result in increased project costs related to the installation of the fire main under the paved surface at a later date and costs associated with 'throw-away' equipment in pump stations that would be required as a result of the need to have the system perform hydraulically prior to full build-out.
2. Fire protection would only be provided along the BMPE as development proceeds between individual developers and their phasing.

**CONCLUSION**

Implementing the Interim Water Servicing Plan would result in a cost effective solution that best utilizes DCC funds and allows the BMPE water system to be developed with a planned approach that achieves the City of Langford's project objectives.

**RECOMMENDATION**

That the Juan de Fuca Water Distribution Commission recommends:

1. That the CRD Board amend the Juan de Fuca Water Distribution 2016-2020 Financial Plan to approve up to \$3.6 million in funding from the Juan de Fuca DCC Capital Reserve Fund for the Bear Mountain Parkway Extension Water Servicing - Interim Plan; and
2. That, in order to undertake the Bear Mountain Parkway Extension Water Servicing Interim Plan, the Commission:
  - a. Directs staff to prepare a consulting services contract to retain McElhanney Consulting Services Ltd. to provide design and construction phase services for the installation of approximately 3 km of fire main with appurtenances on the BMPE, and bring back the consulting services contract for Commission review prior to execution.
  - b. Directs staff to negotiate with Windley Contracting, based on the Langford BMPE provisional water main tender, to install approximately 3 km of fire main with appurtenances on the BMPE, and bring back the construction services contract for Commission review prior to execution.
3. Endorsement of the concept proposed for the Bear Mountain Parkway Extension Water Servicing Final Build-Out Plan and directs staff to bring back a report to the Commission outlining the technical, legal and financial feasibility and development requirements of a Local Service Area.

Submitted by:	Ian Jesney, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence:	Ted Robbins, B.Sc., C.Tech., General Manager, Integrated Water Service
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

IJ/TR:mm

Attachments:

A – Skirt Mountain DCC and LSA Works

B – Resolution from Langford Council Dated June 1, 2016

C – Letter from City of Langford re: South Skirt/Bear Mountain Water System

### MEMORANDUM OF UNDERSTANDING

Between

Capital Regional District  
625 Fisgard Street  
Victoria, BC, V8W 1R7

and

City of Langford  
2nd Floor, 877 Goldstream Avenue  
Langford, BC, V9B 2X8

This Memorandum of Understanding (MOU) is hereby entered into by the Capital Regional District, hereinafter referred to as CRD, and City of Langford, hereinafter referred to as CoL.

#### 1. Purpose

The CoL will be constructing a new road referenced as the Bear Mountain Parkway Expansion (BMPE) from McCallum Road to Skirt Mountain Drive starting in the fall of 2016. CoL has recently awarded a construction contract to Windley Contracting for this work.

The CoL has requested that the CRD install Development Cost Charge (DCC) interim, fire flow only, (no domestic supply), water main within the new road. At its September 20, 2016 meeting, the Juan de Fuca Water Distribution Commission resolved that the CRD Board amend the 2016-2020 Financial Plan to approve up to \$3.6 million in funding from the Juan de Fuca Capital Reserve Fund for the Bear Mountain Water Servicing – Interim Plan.

The purpose of this Memorandum is to provide the framework to facilitate the design, installation and construction management of the water infrastructure and agree on the logistics of partnering together for this work.

#### 2. Background

The CoL has plans to construct a new road (BMPE) from McCallum Road to Skirt Mountain Drive beginning in the fall of 2016, estimated to be completed by the fall of 2017. The CRD has a multi-year DCC water infrastructure upgrade program that contains works along the proposed BMPE.

The CRD's DCC report of September 27, 2011 includes both supply and distribution water mains for the length of the project. At this time, only the distribution main is proposed to be constructed to provide fire protection along BMPE as part of this project. The DCC plan indicates that approximately 3.3 km of 300mm and 400mm distribution water line and 3 PRV's (the water infrastructure) would be installed as part of this project to provide fire protection and be within the paved surface of the BMPE. The remaining supply main is proposed to be installed at a later date outside of the proposed paved surface.

The CoL has retained an engineering consultant, McElhanney Consulting Services Ltd. (McElhanney), to provide engineering services for the BMPE project.

### **3. Mutual Benefit and Interests**

It is understood that the CRD and CoL want the water main installed while construction of the BMPE is underway. The benefits of this approach would be reduced capital and construction administration, costs, elimination of disturbance to new surface works, and disruption to local traffic.

It has been proposed that the CoL, as the Owner of the BMPE project, as well as the tendered contractor (Windley Contracting) will include the water main installation as part of the BMPE project and the CRD will make payment for the work associated with CRD's water main.

It is understood that the project has been publicly tendered and has met all tendering guidelines of the New West Partnership Trade Agreement and the CoL procurement policy.

The CoL has evaluated the tenders in accordance with the above noted procurement parameters and has awarded the project to the lowest acceptable compliant bidder for the project. The CRD will have the option to add or delete water infrastructure components from the project at their sole discretion.

### **4. Responsibilities of the Parties**

Working in partnership toward achieving these objectives, the responsibilities of the parties are:

#### On the part of the CRD

Should the CRD decide, in its sole discretion, to move forward with the water main portion of the project, the CRD will be solely responsible for payment to the CoL related to all installation of works related to the CRD's proposed water main that the CoL, or their contractor, undertakes on CRD's behalf. Technical and operational decisions of interest to the CRD will be made in conjunction with the CRD and the CoL. All water infrastructure is to be installed in accordance with CRD standards and specifications. Financial decisions of interest to the CRD will be made by the CRD. The total costs of the water infrastructure project, including engineering, contract administration, construction inspection, and construction of the proposed water infrastructure work, shall not exceed \$3.4 million without the written consent of the CRD.

The scope of engineering, contract administration, and construction inspection work shall be as described in the attached letter proposal dated October 25, 2016.

The scope of construction work shall be generally as described in the attached schedule of quantities and cost estimate dated October 25, 2016.

The CRD will make payment to the CoL, for consulting services (McElhanney) and construction services (Windley), in accordance with a payment schedule mutually agreed to by both parties.

#### On the part of the CoL

The CoL and/or their consultant (McElhanney) will be responsible for the engineering, contract administration, construction inspection, and construction of the proposed water infrastructure work in conjunction with the CRD. The CoL will be solely responsible for payment of all other work related to the project other than the described water infrastructure work.

The CoL will ensure a 1 year warranty period is in place for the water infrastructure work. Following substantial completion of the works, any issues arising during the warranty period related to the water infrastructure work will be directed through the CoL to the contractor in accordance with the terms and conditions of the contract between the CoL and the contractor.

## **5. Project Milestones**

The parties agree to work cooperatively to accomplish the tasks contemplated by this MOU and in particular, will strive to achieve the following project milestones on or before the following dates:

Detailed water infrastructure design	Complete by December 2016
Construction completion	Complete by September 2017

## **6. General Conditions**

### Reliance/Good Faith

Each party shall carry out the tasks set out in this MOU in good faith, including providing complete and accurate information to each other as may be necessary to complete the project in a timely manner. The parties agree to coordinate their relationships with third parties involved in the development of the project. Should there be a disagreement, the parties agree to work together in good faith to resolve such disagreements.

### Final Agreement

If the CRD agrees to have the water main included in the project, the CRD will issue a Purchase Order in favour of the CoL for payment related to the scope of work described in this MOU.

## **COMMENCEMENT/TERMINATION**

This MOU takes effect upon execution and shall remain in effect from the date of execution until 12 months after Substantial Completion of the Bear Mountain Parkway Expansion Project. This MOU may be extended or amended upon written request of either party. Either party may terminate this MOU with a 30-day written notice to the other(s).

## **PRINCIPAL CONTACTS**

For the purposes of carrying out and following through on the understandings contained in the MOU, the prime contact person representing each party shall be:

### For the CRD

Ted Robbins  
General Manager, Integrated Water Services  
479 Island Highway  
Victoria, BC, V9B 1H7  
250.360.3061  
[trobbs@crd.bc.ca](mailto:trobbs@crd.bc.ca)

For the CoL

Jim Bowden  
Chief Administrative Officer  
2<sup>nd</sup> Floor, 877 Goldstream Avenue  
Langford, BC, V9B 2X8  
250.478.7882  
[jbowden@cityoflangford.ca](mailto:jbowden@cityoflangford.ca)

The designation of such person(s) may be changed at any time by either party upon written notice to the other.

**IN WITNESS WHEREOF** the parties hereto have executed this Agreement.

**CAPITAL REGIONAL DISTRICT**

by its authorized signatories this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Chair, Juan de Fuca Water Distribution Commission

**THE CITY OF LANGFORD**

by its authorized signatories this \_\_\_\_\_ day of \_\_\_\_\_, 2016

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

**CAPITAL REGIONAL DISTRICT - INTEGRATED WATER SERVICES****Water Watch**

Issued: Oct. 24 2016

**Water Supply System Summary:****1. Useable Volume in Storage:**

Reservoir	October 31 5 Year Ave		October 31/15		October 23/16		% Existing Full Storage
	ML	MIG	ML	MIG	ML	MIG	
Sooke	65,945	14,508	61,281	13,482	66,941	14,727	72.2%
Goldstream	6,195	1,363	5,745	1,264	7,144	1,572	72.7%
Total	72,140	15,871	67,026	14,746	74,085	16,299	72.2%

**2. Average Daily Demand:**

For the month of October	109.7 MLD	24.14 MIGD
For week ending October 23, 2016	103.3 MLD	22.73 MIGD
Max. day October 2016, to date:	129.0 MLD	28.39 MIGD

**3. Average 5 Year Daily Demand for October**

Average (2011 - 2015)	111.0 MLD <sup>1</sup>	24.42 MIGD <sup>2</sup>
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<sup>1</sup>MLD = Million Litres Per Day      <sup>2</sup>MIGD = Million Imperial Gallons Per Day**4. Rainfall October:**

Average (1914 - 2015):	167.8 mm
Actual Rainfall to Date	347.6 (207% of monthly average)

**5. Rainfall: Sep 1 - Oct 23**

Average (1914 - 2015):	175.1 mm
2016	406.1 (232% of average)

**6. Water Conservation Action Required:**

To avoid possible leaks next spring, now is the time to winterize your sprinkler system.

Check our website at [www.crd.bc.ca/water](http://www.crd.bc.ca/water) for more information.

If you require further information, please contact:

Ted Robbins, B.Sc., C.Tech  
General Manager, CRD - Integrated Water Services  
or

Deborah Walker  
Demand Management Coordinator

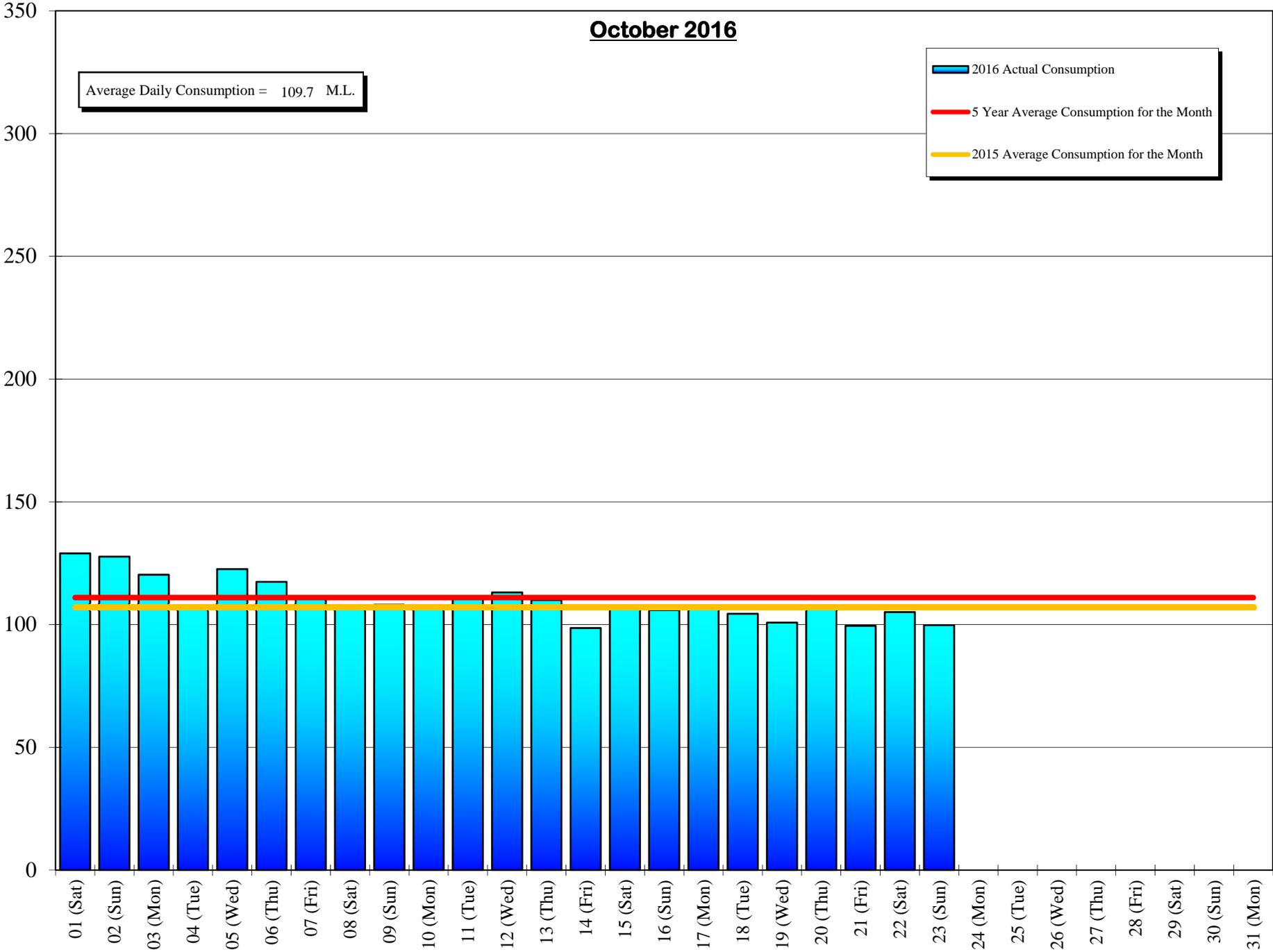
Capital Regional District Integrated Water Services  
479 Island Highway  
Victoria, BC V9B 1H7  
(250) 474-9600

**October 2016**

Average Daily Consumption = 109.7 M.L.

2016 Actual Consumption  
5 Year Average Consumption for the Month  
2015 Average Consumption for the Month

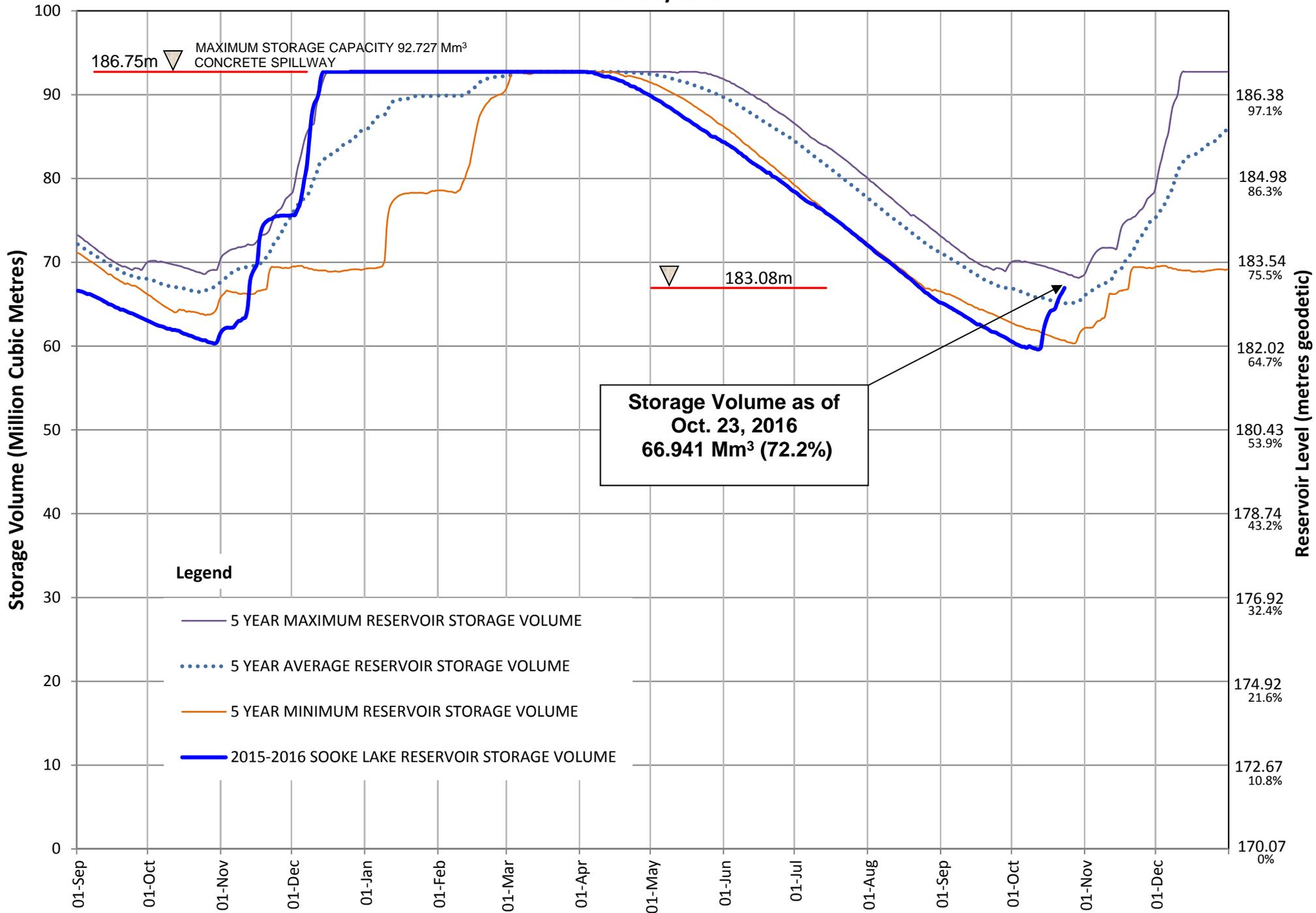
Consumption (Million Litres)



Day

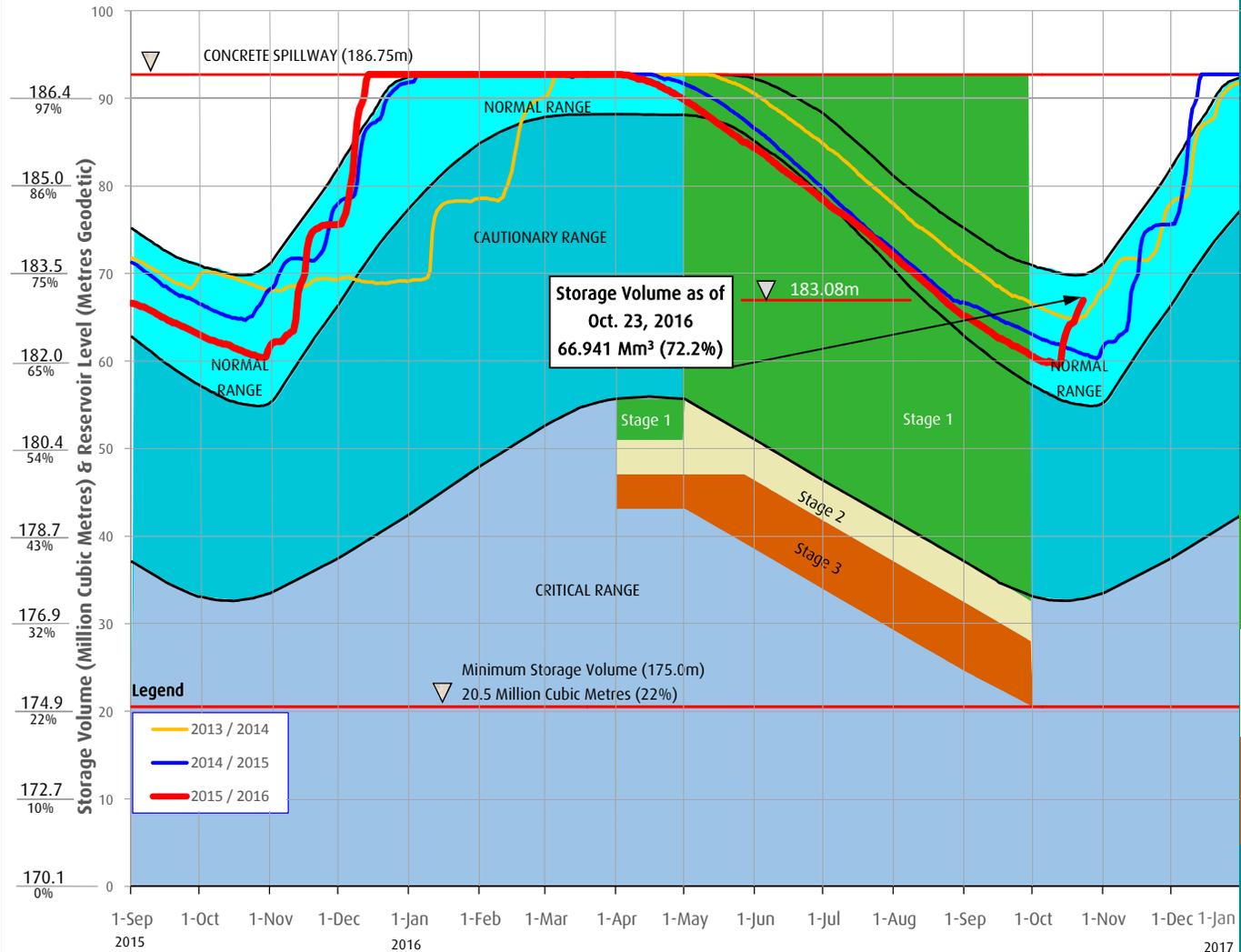
# SOOKE LAKE RESERVOIR STORAGE SUMMARY

## 2015 / 2016



# Sooke Lake Reservoir Storage Level

## Water Supply Management Plan



## FAQs

How are water restriction stages determined?

Several factors are considered when determining water use restriction stages, including,

1. Time of year and typical seasonal water demand trends;
2. Precipitation and temperature conditions and forecasts;
3. Storage levels and storage volumes of water reservoirs (Sooke Lake Reservoir and the Goldstream Reservoirs) and draw down rates;
4. Stream flows and inflows into Sooke Lake Reservoir;
5. Water usage, recent consumption and trends; and customer compliance with restriction;
6. Water supply system performance.

The Regional Water Supply Commission will consider the above factors in making a determination to implement stage 2 or 3 restrictions, under the Water Conservation Bylaw.

At any time of the year and regardless of the water use restriction storage, customers are encouraged to limit discretionary water use in order to maximize the amount of water in the Regional Water Supply System Reservoirs available for nondiscretionary potable water use.

Stage 1 is normally initiated every year from May 1 to September 30 to manage outdoor use during the summer months. During this time, lawn watering is permitted twice a week at different times for even and odd numbered addresses.

Stage 2 is initiated when it is determined that there is an acute water supply shortage. During this time, lawn water is permitted once a week at different times for even and odd numbered addresses.

Stage 3 is initiated when it is determined that there is a severe water supply shortage. During this time, lawn watering is not permitted. Other outdoor water use activities are restricted as well.

For more information, visit [www.crd.bc.ca/drinkingwater](http://www.crd.bc.ca/drinkingwater)