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## SAANICH PENINSULA WASTEWATER COMMISSION

Notice of Meeting on **Thursday, April 16, 2015 at 9 am**

Saanich Peninsula Treatment Plant Meeting Room, 9055 Mainwaring Road, North Saanich, BC

M. Williams (Chair)	P. Wainwright (Vice-Chair)	R. Barnhardt	M. Doehnel
Z. King	M. Lougher-Goodey	A. Rowland	C. Stock
J. Thornburgh	R. Windsor		

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### AGENDA

1. Approval of Agenda
2. Adoption of Minutes of February 19, 2015
3. Chair's Remarks
4. Presentations/Delegations
  - No one has registered to speak
5. Renewal of Wastewater Service Agreement with Victoria Airport Authority (Staff Report #SPWWC 2015 – 01)
6. Saanich Peninsula Wastewater Participating Municipalities Estimated Inflow & Infiltration (Staff Report #SPWWC 2015 - 02)
7. Saanich Peninsula Wastewater Treatment Plant – Biosolids History and Operation (Staff Report #SPWWC 2015 - 03)
8. Regional Source Control Program – 2013 Annual Report
9. New Business
10. Adjournment

#### **Distribution:**

Staff/Town Halls, etc.

R. Lapham  
L. Hutcheson  
D. Lokken  
A. Orr  
J. Poncelet  
G. Harris

T. Robbins  
P. Sparanese  
D. Robson  
M. Montague  
Commission file

P. Robins, Central Saanich  
D. McAllister, Central Saanich  
R. Buchan, North Saanich  
P. O'Reilly, North Saanich  
R. Humble, Sidney  
Tsartlip First Nation



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**Minutes of a Meeting of the Saanich Peninsula Wastewater Commission  
Held February 19, 2015 in the Saanich Peninsula Treatment Plant Meeting Room  
9055 Mainwaring Road, North Saanich, BC**

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**PRESENT:**     **Commissioners:** M. Williams, M. Lougher-Goodey, C. Stock, J. Thornburgh, P. Wainwright, R. Windsor, M. Doehnel, Z. King, A. Rowland  
**Staff:**        T. Robbins, General Manager, Integrated Water Services; P. Sparanese, Senior Manager, Infrastructure Engineering & Operations; G. Harris, Senior Manager, Parks Environmental Protection; D. Robson, Manager, Saanich Peninsula & Gulf Island Operations; C. Lowe, Environmental Science Officer, Environmental Protection; M. Montague (recorder)

The meeting was called to order at 9:50 am.

**1.     ELECTION OF CHAIR AND VICE CHAIR**

T. Robbins welcomed everyone to the first meeting of the Saanich Peninsula Water Commission for 2015, and called for nominations for the Chair of the Saanich Peninsula Wastewater Commission for 2015.

- M. Lougher-Goodey nominated M. Williams

T. Robbins called a second and third time for further nominations and, as there were none, M. Williams was declared Chair of the Saanich Peninsula Wastewater Commission for 2015 by acclamation.

Chair Williams assumed the Chair and called for nominations for the position of Vice-Chair of the Saanich Peninsula Wastewater Commission for 2015.

- J. Thornburgh nominated P. Wainwright

Chair Williams called a second and third time for further nominations and, as there were none, P. Wainwright was declared Vice-Chair of the Saanich Peninsula Wastewater Commission for 2015 by acclamation.

**2.     APPROVAL OF AGENDA**

**MOVED** by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock, that the Saanich Peninsula Wastewater Commission approve the agenda.

CARRIED

**3.     ADOPTION OF MINUTES**

**MOVED** by Commissioner Lougher-Goodey, **SECONDED** by Commissioner Stock, that the Saanich Peninsula Wastewater Commission adopt the minutes of the October 2, 2014 meeting.

CARRIED

**4.     CHAIR'S REMARKS**

The Chair made no remarks.

**5. COMMISSION ORIENTATION**

T. Robbins made a presentation to the Commission on the Saanich Peninsula Wastewater Service.

The following items were discussed:

- Reporting schedule to the Federal and Provincial Government
- Pharmaceuticals
- Production and beneficial use of biosolids

**MOVED** by Commissioner Wainwright, **SECONDED** by Commissioner Stock, that the Saanich Peninsula Wastewater Commission request staff to prepare a report on the history, decisions and recommendations made by the Saanich Peninsula Wastewater Commission regarding the use of biosolids, changes that have occurred through the Liquid Waste Management Plan, and impacts associated with Amendment 9 on the Saanich Peninsula Wastewater Commission.

CARRIED

**6. SAANICH PENINSULA TREATMENT PLANT WASTEWATER AND MARINE ENVIRONMENT PROGRAM 2013 ANNUAL REPORT AND UPDATE ON TECHNICAL WATER QUALITY REVIEW PANEL ACTIVITIES**

C. Lowe spoke to the report.

**MOVED** by Commissioner King, **SECONDED** by Commissioner Stock, that the Saanich Peninsula Wastewater Commission:

1. Receive the Technical Water Quality Review Panel progress update and the *Saanich Peninsula Treatment Plant Wastewater and Marine Environment Program 2013 Annual Report* for information;
  - (a) Forward the *Saanich Peninsula Treatment Plant Wastewater and Marine Environment Program 2013 Annual Report*, to the Capital Regional District Board for approval; and
  - (b) Request that the Board direct staff to forward the final report to the Ministry of Environment and all participating stakeholders, and post it on the CRD website.

CARRIED

**7. NEW BUSINESS**

There was no new business.

**8. ADJOURNMENT**

**MOVED** by Commissioner King, **SECONDED** by Commissioner Stock, that the Saanich Peninsula Wastewater Commission meeting be adjourned at 11:12 am.

CARRIED

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**CHAIR**



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**REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION  
MEETING OF TUESDAY, APRIL 16, 2015**

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**SUBJECT**      **RENEWAL OF WASTEWATER SERVICE AGREEMENT WITH VICTORIA  
AIRPORT AUTHORITY**

**ISSUE**

The service agreement for accepting and disposal of wastewater from the Victoria Airport Authority (VAA) is expiring and requires renewal.

**BACKGROUND**

The wastewater from the Institute of Ocean Sciences (IOS), Pauquachin First Nation and Tseycum First Nation flows into the VAA wastewater system, then into the Town of Sidney system as illustrated in Figure 1. In 2000, the VAA, IOS and the First Nations entered into a wastewater service agreement through VAA, with CRD, with a 15 year term with the option of two consecutive five year extensions. In 2014, the VAA-CRD agreement was amended to define the date of commencement as January 30, 2000.

Additionally, VAA has separate servicing agreements with IOS, Pauquachin First Nation and Tseycum First Nation to receive and convey their wastewater through the VAA system to the Capital Regional District (CRD) Saanich Peninsula wastewater system.

Although the agreement between the VAA and Capital Regional District (CRD) expired on January 31, 2015, minor revisions to the terms of agreement have been in progress since November 2014. The original October 1998 agreement required some housekeeping amendments, including definitions and the length of the agreement. No significant changes to the agreement are being proposed. The draft agreement amendment has been reviewed by CRD legal counsel; the proposed agreement amendment is attached and, other than the amendments, the original agreement's terms and conditions remain in effect. The CRD also has wastewater service agreements with IOS, Pauquachin First Nation and Tseycum First Nation. These agreements are also in the process of being renewed and draft documents have been sent to the participating members for comment.

**SAANICH PENINSULA LIQUID WASTE MANAGEMENT PLAN**

The Saanich Peninsula Liquid Waste Management Plan (LWMP) was approved by the province in 1996, and sets out a number of commitments made by the service participants, including the CRD, to address and manage several issues including wastewater treatment, source control, inflow and infiltration and stormwater quality. The VAA agreement and the other agreements currently being updated do not specifically reference the LWMP or the participants' responsibilities to meet the commitments of the plan. The CRD is responsible for administering the LWMP including proposing any amendments to the plan and any reporting to the province in relation to the plan. The last audit of the plan was conducted in April 2002. In order to ensure the objectives and commitments of the plan are being met, it is recommended that the CRD establish a LWMP oversight committee with representation from all of the participants, to

determine the current status of the the commitments, monitor progress and establish a reporting process. This will also help inform how future wastewater service agreements could be linked to commitments in the LWMP.

## **ALTERNATIVES**

### **Alternative 1**

That the Saanich Peninsula Wastewater Commission:

1. Approve the renewal of the Victoria Airport Authority wastewater service agreement for the term January 31, 2015 – January 30, 2020, and,
2. Direct CRD staff to develop a terms of reference for a Saanich Peninsula Liquid Waste Management Plan Oversight Committee in consultation with staff from the participating areas, for the Commission's consideration.

### **Alternative 2**

That the Saanich Peninsula Wastewater Commission not proceed with renewal of the service agreement as amended and re-negotiate the agreement.

## **IMPLICATIONS**

Alternative 1 – The Victoria Airport Authority has contributed their share of the initial capital costs and continues to contribute to the ongoing costs, both operational and maintenance. Service to this participant was anticipated in the initial design and does not have any negative impacts on the system.

Alternative 2 – The 25 year term of the agreement (with two extensions) was intended to coincide with the service life and original design capacity of the system. However, given the lower than expected flows to the plant, expansion will likely be delayed, along with a delay in new capital costs that would have potentially been reflected in the financial terms of the agreement.

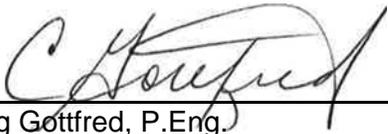
## **CONCLUSION**

The CRD has had a wastewater service agreement with the Victoria Airport Authority without issue since the construction of the Saanich Peninsula Wastewater System. There is a good relationship with these participants and there are no negative impacts resulting from the flows on the Saanich Peninsula system. However, in order to ensure all of the service participants are meeting the commitments and objectives of the LWMP, it is proposed to establish a LWMP oversight committee.

**RECOMMENDATION**

That the Saanich Peninsula Wastewater Commission:

1. Approve the renewal of the Victoria Airport Authority wastewater service agreement for the term January 31, 2015 – January 30, 2020, and,
2. Direct CRD staff to develop a terms of reference for a Saanich Peninsula Liquid Waste Management Plan Oversight Committee in consultation with staff from the participating areas, for the Commission's consideration.



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Craig Gottfred, P.Eng.  
Manager, Wastewater Engineering and  
Planning



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Dan Robson,  
Manager, Saanich Peninsula & Gulf Islands  
Operations



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Peter Sparanese, P.Eng.  
Senior Manager, Infrastructure Engineering  
and Operations  
Concurrence



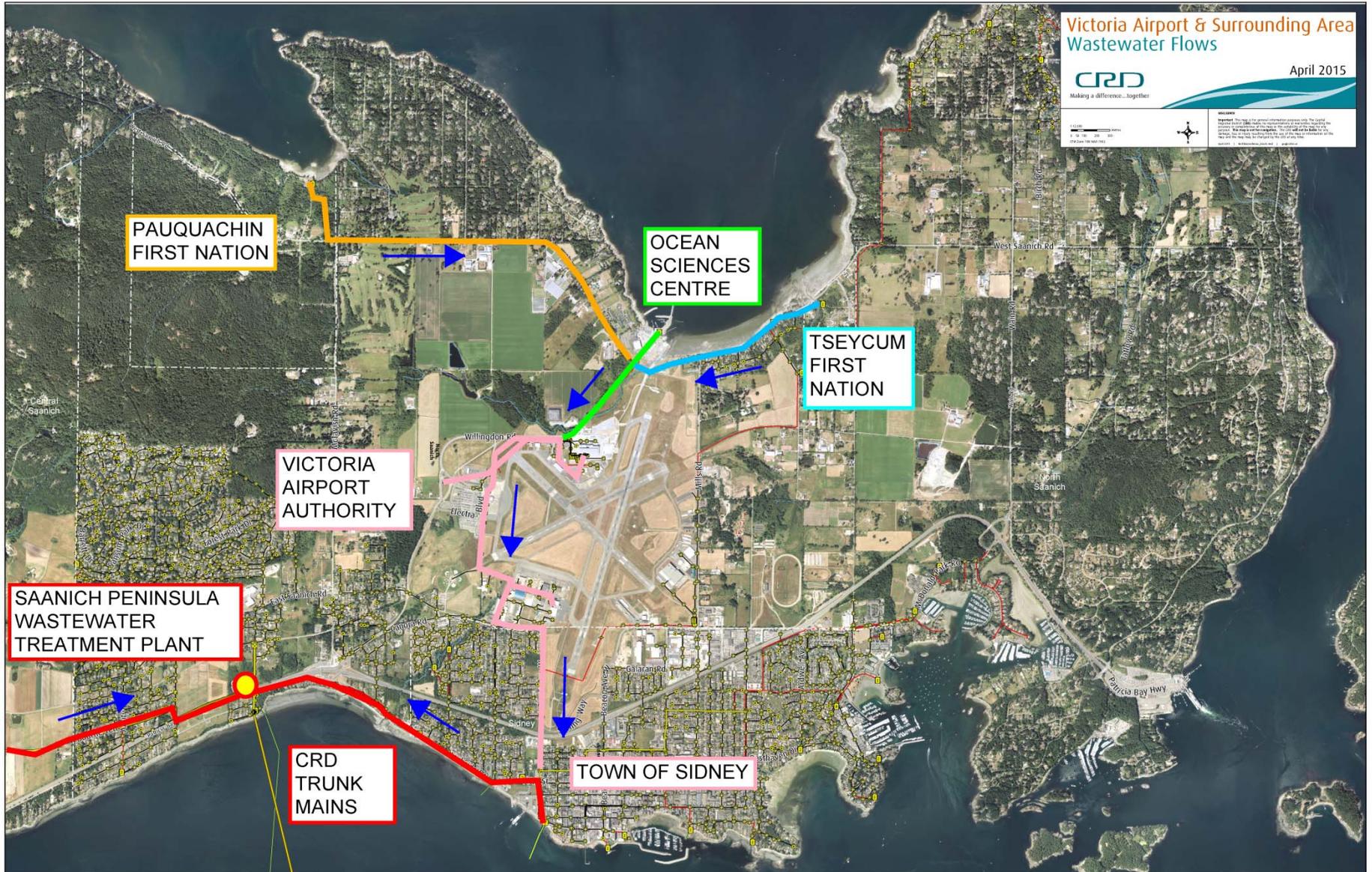
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Ted Robbins, B.Sc., C.Tech.  
General Manager, Integrated Water Services  
Concurrence

CG:TR:mm

Attachments: Original Saanich Peninsula System Airport Agreement  
Amendment No.1 – Saanich Peninsula System Airport Agreement  
Amendment No.2 – Saanich Peninsula System Airport Agreement

FIGURE 1



**SAANICH PENINSULA SYSTEM  
AIRPORT AGREEMENT**

**THIS AGREEMENT** made this **29<sup>th</sup>** day of **OCTOBER**, 19**98**

**BETWEEN:**

**CAPITAL REGIONAL DISTRICT**

P.O. Drawer 1000  
524 Yates Street  
Victoria, British Columbia  
V8W 2S6

**(hereinafter called "CRD")**

**OF THE FIRST PART**

**AND:**

**VICTORIA AIRPORT AUTHORITY**

Victoria International Airport  
Sidney, British Columbia

**(hereinafter called "the Authority")**

**OF THE SECOND PART**

**WHEREAS:**

A. The CRD operates a trunk sewer and sewage treatment systems and sewage disposal facilities within the Town of Sidney, the District of North Saanich and the District of Central Saanich.

B. The CRD and the Authority have agreed to participate in the funding for land acquisition, design, construction, operation, maintenance and improvements to the proposed CRD Peninsula System to include the Peninsula Treatment Plant and associated sludge handling and disposal systems, sewer outfall systems, flow measurement and SCADA systems, and trunk sewer pump stations and trunk sewer systems to be constructed or operated to serve the Cole Bay Reserve, and the Airport, the Institute of Ocean Sciences, the Marine Technology Centre, Sidney, and portions of North Saanich and Central Saanich.

C. Her Majesty the Queen in Right of Canada as represented by the Minister of Transport and the CRD entered into an agreement dated August 31, 1976 (the "1976 Agreement") whereby the CRD agreed to accept sewage from the Airport and for treatment and disposal at the Sidney treatment plant and Transport agreed

to contribute a share of the capital costs of the alterations to the Sidney treatment plant and to pay a user's rate to the CRD to accommodate sewage from the Airport and the Institute of Ocean Sciences at Patricia Bay.

D. The Authority has agreed to contribute its share of the capital costs of the funding for land acquisition, design and construction of the proposed CRD Peninsula System designed to replace the Sidney treatment plant and to include a Peninsula Treatment Plant and associated sludge handling and disposal systems, sewer outfall systems, flow measurement and SCADA systems, and trunk sewer pump stations and trunk sewer systems to be constructed or operated to serve the Airport, the Cole Bay Reserve, the Institute of Ocean Sciences, the Marine Technology Centre, Sidney, North Saanich and Central Saanich;

E. The CRD has agreed to accept sewage effluent from the Airport for treatment and disposal through the CRD Peninsula System and the Authority has agreed to pay a user rate to the CRD in consideration for the service;

F. The Institute System, which includes the Marine Technology Centre, is connected to the CRD System through the Airport Sewer System and it is proposed that the Cole Bay System be connected to the CRD Peninsula System through the Airport System;

G. The CRD has established a local service for the collection, conveyance, treatment and disposal of sewage as a local service which includes, as participating areas, Sidney, Central Saanich and portions of North Saanich;

H. Transport has assigned the 1976 Agreement to the Authority and the Authority has agreed to permit the Pauquachin Band of Indians to transport sewage from the Cole Bay Reserve through the Airport System to the CRD Peninsula System for treatment and disposal;

I. The Regional Board has, by bylaw adopted the \_\_\_\_\_ day of \_\_\_\_\_, 1998, authorized the CRD to enter into this Agreement.

**NOW THEREFORE IN CONSIDERATION** of the premises and the mutual covenants and agreements contained herein the parties hereby covenant and agree each with the other as follows:

## **1.00 Definitions**

### **1.01 In this Agreement:**

- (a) "Accessible" means a part or parts of the CRD Peninsula System which can be inspected or tested without soil excavation or unreasonable disassembly of system components;

- (b) "Airport" means the Victoria International Airport as shown generally on the plan attached to this Agreement as Schedule "A";
- (c) "Airport System" means the sewer system owned and operated by the Authority or a successor in title to the Airport within the boundaries of the Airport and which is connected to the CRD Peninsula System;
- (d) "Annual Average Flow" means the measured yearly average daily flow.
- (e) "Band" means the Pauquachin Band for whose use and benefit the Cole Bay Reserve has been set aside;
- (f) "Central Saanich" means the District of Central Saanich;
- (g) "Cole Bay System" means a sewage collection system constructed on the Cole Bay Indian Reserve and connected to the CRD Peninsula System through the Airport System;
- (h) "Commencement Date" means the date on which the CRD Peninsula System commences operation and is capable of accepting and disposing of sewage from the parties;
- (i) "CRD Peninsula System" means:
  - (i) the Peninsula Treatment Plant;
  - (ii) Sludge handling and disposal systems;
  - (iii) Sewer outfall system;
  - (iv) Flow measurement and SCADA system;
  - (v) Trunk sewer pump stations;
  - (vi) Trunk sewer systems;

to be constructed or operated by the CRD to serve the Reserve, the Airport, Sidney and portions of North Saanich and Central Saanich;
- (j) "Design Annual Average Flow" means the yearly average daily flow which the Peninsula Treatment Plant has been designed to accommodate;
- (k) "Design Flow Allocations" means the Design Annual Average Flow and the Design Peak Flow allocated to a participating area in a trunk sewer, sewage treatment plant or other system as shown on Schedule "B";

- (l) "Design Peak Flow" means the largest instantaneous flow which determines the required hydraulic capacity of the system or system component;
- (m) "Enactment" means an enactment as defined in the *Interpretation Act (British Columbia)*;
- (n) "Institute of Ocean Sciences" means the federal scientific research institutions located at Patricia Bay as of the date of this Agreement and includes the Marine Technology Centre;
- (o) "Institute System" means the sewer system owned and operated by Ocean Sciences within the boundaries of the Institute of Ocean Sciences and connected to the CRD Peninsula System through the Airport System;
- (p) "Marine Technology Centre" means the research facility owned and administered by the University of Victoria at Patricia Bay;
- (q) "Municipalities" means Sidney, North Saanich and Central Saanich;
- (r) "National Defence System" means the sewer system located on the lands within the boundaries of the Airport which are under the administration or management of the Minister of National Defence;
- (s) "North Saanich" means the District of North Saanich;
- (t) "Ocean Sciences" means Her Majesty the Queen in Right of Canada as represented by the Minister of Fisheries and Oceans;
- (u) "Participants" means each of the Municipalities, Ocean Sciences, the Band and the Authority;
- (v) "Peninsula Treatment Plant" means the sewage treatment plant and disposal facility to be constructed and operated by the CRD under this Agreement and includes all ancillary facilities and works necessary or convenient for the operation, maintenance, control or administration of the treatment plant.
- (w) "Reserve" means the Cole Bay Indian Reserve;
- (x) "SCADA System" means a supervisory control and data acquisition system;
- (y) "Sidney" means the Town of Sidney;

- (z) "Transport" means Her Majesty the Queen in Right of Canada as represented by the Minister of Transport;
- (aa) "Year" means any twelve (12) month period during the Agreement commencing on the Commencement Date or an anniversary of the Commencement Date and ending on the day immediately preceding the next anniversary of the Commencement Date.

## **2.00 CRD Peninsula System**

- 2.01 Provided that the CRD receives its expected grant in the order of \$13,499,086 from the Province, the CRD will construct those parts of the CRD Peninsula System not already built as of the date of this Agreement, operate, repair and maintain the CRD Peninsula System during the term of this Agreement, including any renewals, and will have the CRD Peninsula System substantially completed and operational on or before December 31, 1999.
- 2.02 It is acknowledged that within the boundaries of the Airport there are lands which are under the administration or management of the Minister of National Defence, that the National Defence System which is on these lands is connected to the Airport System and that there is a separate arrangement between the Minister of Transport and the Minister of National Defence with respect to the connection of the National Defence System to the Airport System.
- 2.03 For the purposes of this Agreement, the National Defence System shall be considered part of the Airport System.
- 2.04 It is acknowledged that sewage from the Institute System flows through the Airport System to the CRD Peninsula System and that there is a separate arrangement between the Authority and the Minister of Fisheries and Oceans for the use of the Airport System by the Minister of Fisheries and Oceans for this purpose.
- 2.05 It is acknowledged that sewage from the Cole Bay System flows through the Airport System to the CRD Peninsula System, that there are separate arrangements between the Authority and the Band for the use of the Airport System by the Band for this purpose and that there are separate arrangements between the CRD and the Band for the use by the Band of the CRD Peninsula System.
- 2.06 For the purposes of this Agreement, neither of the Institute System or the Cole Bay System shall be considered part of the Airport System.

### 3.00 Contribution to Capital Cost

- 3.01 Subject to section 3.03, the Authority will pay to the CRD as a contribution to the capital cost of the construction of the CRD Peninsula System a certain percentage of the capital cost of the construction which is determined in accordance with the formula described in Schedule "C" payable in accordance with the timetable set out in Schedule "D".
- 3.02 Based on the presently available information and the formula described in section 3.01, the Authority's contribution to the capital cost of the construction of the CRD Peninsula System is expected to be \$1,096,658.00 representing 3.305% of the capital cost. For greater certainty, it is acknowledged and agreed that the contribution by the Authority to the capital cost as provided in section 3.01 is based on the average annual flow originating from the Airport at Commencement Date of 228m<sup>3</sup>/day and a design annual average flow in 2012 of 682m<sup>3</sup>/day. The approximate share of capital costs for the CRD Peninsula System is based on Blended Flow option 3a of the Saanich Peninsula Liquid Waste Management Plan, and using a projected uniform increase in annual average flow at Commencement Date with design flow allocation over a 15 year term in accordance with Schedule "C".
- 3.03 Subject to section 3.07, the maximum contributions to the capital cost of the construction of the CRD Peninsula System by the Authority shall be \$1,274,000.00, however the CRD shall not invoice the Authority for any amount in excess of the amounts set out in section 3.02 without first consulting with the Authority as to the reasons for the increased costs of the CRD Peninsula System.
- 3.04 In the event that the amount of the grants referred to in section 2.01 is not received by the CRD and the CRD determines that it cannot meet its obligations under section 2.01, then the CRD may terminate this Agreement on 10 days written notice to the Authority and within 30 days of giving such notice, shall repay to the Authority all contributions received from the Authority less any amounts already spent by the CRD.
- 3.05 It is acknowledged and agreed by the parties that they may agree to a cost sharing formula which differs from that described in section 3.01 and if this occurs, then the contribution of the Authority under section 3.01 will be determined and adjusted as required by the new agreed upon formula. If any contributions have become due or have been paid by the Authority prior to an agreement on a new formula, those contributions will be adjusted in accordance with the new formula and the Authority will pay any deficiency and will be credited with any surplus.

- 3.06 The Authority shall provide the SCADA RTU and communication devices meeting the requirements of the CRD for the transmission of data from Pump Station #3 to the Peninsula System. The Authority shall pay to the CRD the actual costs to oversee installation and necessary software modifications to the pump station upon receipt of an invoice from CRD. The estimated cost for Pump Station #3 is set out in Schedule "D".
- 3.07 In the event that the Authority makes a contribution in excess of that required under this Agreement, the amount of the overpayment shall be a debt owing from the CRD to the Authority and shall be repaid by the CRD within 60 days of the determination that such overpayment has been made.
- 3.08 Capital cost of construction, under article 3.01, means the items listed as Allowable Costs in Schedule "D".

#### **4.00 Use Of CRD Peninsula System**

- 4.01 The CRD shall accept sewage originating from:
- (a) the Airport;
  - (b) where the CRD has executed an agreement with Her Majesty the Queen in Right of Canada as represented by the Minister of Fisheries and Oceans, the Institute of Ocean Sciences;
  - (c) where the CRD has executed an agreement with the Pauquachin Band of Indians, the Cole Bay Reserve;
  - (d) other Federally owned lands which may be acquired by the Authority adjacent to the Airport;

into the CRD Peninsula System and shall treat and dispose of such sewage at the Peninsula Treatment Plant from the Commencement Date.

- 4.02 The Design Annual Average Flow and Design Peak Flow rate into the CRD Peninsula System for the Authority are set out in Schedule "A".
- 4.03 The rates of sewage flow permitted under this Agreement shall be equal to or less than the rates set out in Schedule "A" measured at Pump Station #3.
- 4.04 The Authority shall not discharge any sewage into the CRD Peninsula System except as permitted in paragraphs 4.01 to 4.03.
- 4.05 Sewage discharged by the Authority into the CRD Peninsula System may consist of the sewage originating from the areas described in article 4.01(a) to (d) but not elsewhere.

## 5.00 User Fee

- 5.01 The Authority shall pay to the CRD an annual user fee for the use of the CRD Peninsula System. The annual fee payable by the Authority will be calculated on the basis of measurements for the year ending on October 1 of the year prior to the year in respect of which the annual fee is imposed (the "Previous Year") based on annual average flow as follows:

The Authority Annual user Fee =  $A/B \times$  Annual Budget.

A = annual average daily sewage flow measured from the Airport System less the amounts of annual average daily sewage flow from the Institute System and the Cole Bay System for the year ending on October 1 of the Previous Year.

B = annual average daily sewage flow measured at the Peninsula Treatment Plant for the year ending on October 1 of the Previous Year.

- 5.02 Annual budget in section 5.01 shall be the total annual budget as approved by the Board of the CRD for the operation and maintenance of the CRD Peninsula System. The CRD will consult with the Authority with regard to any proposed expenditure which will or is likely to materially increase the User Fee payable, provided that nothing in this Agreement is to be interpreted as impairing the Regional District's discretion with respect to preparation and adoption of its annual budget.
- 5.03 Where data is not available to determine the average annual sewage flow under section 5.01, the CRD shall use reasonable efforts to estimate the likely flow using other available data.
- 5.04 The CRD will measure the rate of sewage flow from each of the sewer systems connected to the CRD Peninsula System at locations determined by the CRD. Meter readings will be forwarded to the CRD via SCADA System remote terminal unit. Meter readings shall be taken continuously provided that if the meter ceases to function for any reason during any period, flows shall be estimated from the previous months readings for the months in which the meters do not function or if there is no data available regarding previous months readings, the value of A will represent the design flow allocation for the Airport,
- (a) The CRD will measure sewage flow from the Airport System to the CRD Peninsula System by a flow meter and a SCADA field device provided by the Authority at its cost and maintained and calibrated by the CRD as part of the CRD Peninsula System.

- (b) The CRD will measure the sewage flow from the Institute System to the CRD Peninsula System by a flow meter and a SCADA field device provided by Ocean Sciences at its cost and maintained and calibrated by the CRD as part of the CRD Peninsula System.
  - (c) The CRD will measure the flow of sewage passing from the Reserve System into the CRD Peninsula System by means of a flow meter and SCADA field device provided by the Band at its cost and maintained and calibrated by the CRD as part of the CRD Peninsula System.
- 5.05 The CRD will provide to the Authority an invoice of the annual user fees showing the calculation of annual user fees payable under this Agreement on or before April 15th of the year for which the contribution is payable.
- 5.06 Payments required to be made under this Agreement for a calendar year shall be made by the Authority on an annual basis on or before the 30th day of June in each year.
- 5.07 The entire cost of providing the service of sewage treatment and disposal to the Authority under this Agreement is a debt owed to the CRD by the Authority.
- 5.08 At the end of each calendar year the CRD will calculate the actual operating costs of the CRD Peninsula System for that calendar year and any surplus generated or any deficit realized will be carried forward to the annual budget for the CRD Peninsula System for the next calendar year either reducing or increasing the amount of the User Fee payable by the Authority for that next year.
- 5.09 If Sidney or North Saanich imposes property taxes or other charges on the Authority:
- (a) in relation to a part of the Airport sewered by the Airport System; and
  - (b) for the purpose of recovering any portion of the CRD requisition in relation to the annual operating costs of the CRD Peninsula System,
- the Airport Authority may provide to the CRD evidence regarding the amount of such taxes or other charges and the CRD shall reduce the amount of the user fee payable under this Agreement for that year by the Authority by such amount.
- 5.10 Section 5.09 shall not be interpreted as affecting the arrangements between the CRD and the Authority in relation to portions of the Airport not served by the Airport system that are served by Sidney or North Saanich directly.

5.11 In the event of a dispute between the parties as to whether or not section 5.09 of this Agreement applies to a tax or other charge imposed by Sidney or North Saanich, the dispute may be submitted for resolution by arbitration in accordance with the procedure set out in sections 19.02 to 19.05 of this Agreement.

## **6.00 Records**

6.01 The CRD will upon the request of the Authority make available for inspection and copying records of financial and technical data of the CRD which will allow the Authority to confirm by independent audit that the capital contribution and all user fees paid under this Agreement were duly expended for the purposes of constructing, repairing, operating, maintaining and administering the CRD Peninsula System.

## **7.00 Flow from the Reserve**

7.01 Nothing in this Agreement shall be interpreted as affecting the arrangements between the CRD and the Band with respect to the use of the CRD Peninsula System by the Band.

7.02 Without limiting section 7.01, nothing in this Agreement shall be interpreted as preventing or hindering the CRD from temporarily or permanently restricting or stopping the flow of sewage from the Cole Bay Reserve at the connection point between the Cole Bay System and the Cole Bay Force Main.

## **8.0 Maintenance**

8.01 It is a condition of the treatment and disposal of sewage from the Airport Sewer System under section 4.01 of this Agreement that the Authority shall construct, repair, operate and maintain the Airport Sewer System in accordance with the usual engineering standards of the CRD, good engineering practices, the British Columbia Plumbing Code and all applicable federal, provincial and local government laws, regulations, bylaws and orders.

8.02 The CRD shall not be responsible for the construction, repair, operation or maintenance of the Airport Sewer System or its use or any cost associated therewith.

8.03 The Authority shall not be responsible for the construction, repair, operation or maintenance of the Institute System or the Reserve System or its use or any cost associated therewith.

8.04 The Authority shall comply with the standards and conditions for effluent discharge established or made under all applicable enactments which govern

the types of waste which may or may not be discharged into the CRD Peninsula System.

8.05 In this Agreement "good engineering practices" will be determined having reference to the CRD Sewer Use Bylaw.

#### **9.00 Indemnity**

9.01 The Authority shall indemnify and save harmless the CRD from and against all claims, demands, losses, penalties, damages, actions, suits or proceedings by whomever made, brought or prosecuted, and in any manner based upon, arising out of or related to, occasioned by or attributed to any failure to maintain, operate or repair the Airport System or from the original design and construction of the Airport System or from a breach of any provision of this Agreement to be performed by the Authority, or its employees, agents and contractors and without restricting the generality of the foregoing arising out of a failure to comply with sections 8.01 and 8.04 of this Agreement.

9.02 In the event that a spill occurs from the CRD Peninsula System serving the Airport and the spill resulted from the capacity of the CRD Peninsula System being exceeded and by measurement it may be determined that flows from the Airport exceeded the rates of sewage flow permitted under this Agreement and a fine is imposed against the Capital Regional District following a conviction under an enactment or the Capital Regional District is held liable by a court of competent jurisdiction for damages as a result of the spill, then the amount of the fine, damages or other liability and associated legal costs directly attributable to the spill shall be paid by the party determined to have caused the spill and the amount payable shall be a debt owed to the CRD by the Authority.

9.03 If more than one participant exceeded the permitted rates of sewage flow, then the amount of the fine, damages or liability and associated legal costs directly attributable to the spill shall be apportioned among the parties on the basis of the Design Annual Average Flow among the Participants determined to have contributed to the spill or, where flow records indicate that the maximum Design Peak Flow of one or more Participants was exceeded, on the basis of the proportion of the amounts by which the Design Peak Flow was exceeded by one or more Participants.

#### **10.00 Right of Entry for Inspection**

10.01 The Authority hereby authorizes the CRD to inspect and calibrate the flow meter, maintain the Remote Terminal Unit at Pump Station #3, inspect, sample effluent from, or conduct closed studies on the Airport System for the purpose of assessing volumes of sewage flow, determining the source and quantity of ground water infiltration or the source and quantity of chemical

contaminants entering the Airport Sewer System or the CRD Peninsula System where or when such increased domestic flow, inflow, infiltration or contamination is judged by the CRD to be adversely affecting the operation or the performance of the CRD Peninsula System to which the Airport Sewer System is connected, or preventing the CRD from meeting regulatory requirements, or resulting in sewage spills.

10.02 The Authority may at all reasonable times inspect all accessible portions of the CRD Peninsula System for the purpose of monitoring or auditing the performance of the CRD Peninsula System and for the purpose of determining whether the Authority has any liability to indemnify the CRD or pay any amount pursuant to this Agreement.

#### **11.00 Notice to Repair or Maintain and Remedial Action**

11.01 The CRD may, at any time, give to the Authority notice that in the opinion of the CRD, the Authority is not operating, maintaining or repairing the Airport Sewer System in accordance with this Agreement or as otherwise required for the purpose of ensuring that the Airport System will not cause damage to persons or property or to the CRD Peninsula System or affect the proper and permitted operation of the CRD Peninsula System ("Notice to Correct").

11.02 Upon receipt of a Notice to Correct under section 11.01, the Authority shall within 30 days carry out such remedial action as is required to remedy the deficiencies set out in the notice from the CRD at the cost of the Authority except that in the case of an emergency, such remedial action shall be carried out immediately.

11.03 Despite 11.02, if the default by either party hereto reasonably requires more than thirty (30) days to cure, such party hereto shall not be in default, provided that the curing of the default is promptly commenced upon receipt by such party hereto of the Notice of Default, and with due diligence is thereafter continuously prosecuted to completion and is completed within a reasonable period of time, and provided that the party hereto in receipt of the Notice of Default keeps the other well informed at all times of its progress in curing the default.

11.05 If the Authority fails to carry out remedial action to remedy the deficiencies set out in the notice under this section, the Authority shall indemnify and save harmless the CRD from any and all costs, fines, fees, expenses, actions and other expenditures that result from the unremedied deficiency.

11.06 The CRD shall undertake its best efforts to operate and maintain the CRD Peninsula System in accordance with this Agreement or as otherwise required for the purpose of ensuring that the CRD Peninsula System will not

cause damage to persons or property or to the Airport System or affect the proper operation of the Airport System.

#### **12.00 Default, Interest and Flow Restriction**

- 12.01 Subject to 12.02 if there is default in any payment required to be made to the CRD by the Authority, then interest shall be payable at the rate of one and one-half percent per month on any amount more than 30 days in arrears.
- 12.02 If the Authority exceeds the Design Peak Flow Allocations set out in Schedule "A", the CRD may, in its discretion on fourteen days' written notice to the Authority, temporarily or permanently restrict the flow of sewage from the Airport System or the Institute System as appropriate, to the Design Flow Allocation and the Authority agrees that the CRD, by its agents or contractors, may enter onto the Airport to carry out such work and the Authority shall have no claim or cause of action against the CRD for such restriction of sewage flow.

#### **13.00 Duration Of This Agreement**

- 13.01 Subject to any extension of this Agreement as provided in sections 13.02 and 13.03, the term of this Agreement shall be for a FIFTEEN (15) year period commencing on the Commencement Date.
- 13.02 The Authority, if not in breach of any material term or condition of this Agreement, may extend this Agreement insofar as the Agreement involves the covenants and agreements between the CRD and the Authority for two consecutive FIVE (5) year periods after the first FIFTEEN (15) year period by giving the CRD notice thereof during the final year of the term but not later than THIRTY (30) days before the commencement date of the new FIVE (5) year period. The renewal shall not include articles 3.00, 13.00, 14.01(a) and (b) and Schedules "B" and "C".
- 13.03 Upon the termination of this Agreement the CRD may disconnect the CRD Peninsula System from the Airport System or the Authority may require the CRD to disconnect the CRD Peninsula System from the Airport System and the CRD will comply with this requirement within a reasonable time.

#### **14.00 Future Repairs**

- 14.01 The Authority agrees that it will share with the other users of the CRD Peninsula System the net annual capital cost or subsequent net annual debt cost for future works incurred by the CRD for design and construction of major repair and improvements ("Repair Works") made by the CRD to the CRD Peninsula System apportioned annually using the unitized approach among the Participants as follows:

- (a) In the first year following commencement of use of the CRD Peninsula System by the Municipalities, the Band and the Authority, on the basis of
  - (i) 50% based on the proportion of Design Annual Average Flow Allocation for the Authority;
  - (ii) 50% based on annual average flows from the Participants as of October 1 of the year prior to the year in which the Repair Works are carried out, in proportion to the total average annual flows from all parties as more particularly set out in Schedule "B";
- (b) For years 2 through 14, on the basis of the calculations set out in paragraph (a), except the proportion based on Design Annual Average Flow will drop annually in a straight line to 0% in year 15 and the proportion based on annual average flow will rise in a straight line to 100% in year 15 as set out in Schedule "B".
- (c) If this Agreement is renewed, during any renewal period on the basis of 100% of on the annual average flows from the Participants as of October 1 of the previous year in proportion to the total average annual flows from all parties;

14.02 It is acknowledged and agreed that the agreement of the Authority to share the capital cost or net annual debt cost is an agreement to pay for the cost of services or to make a contribution to pay these amounts and does not constitute a borrowing of funds or a guarantee of any loan and CRD agrees that it will not hold out the Authority as a partner or joint venturer of the CRD.

14.03 The CRD agrees that upon termination of this Agreement or any renewals thereto, unamortized costs of repairs will be credited on a prorated basis to the Authority.

#### **15.00 Expansion**

15.01 The Authority agrees that if the capacity of the CRD Peninsula System is to be expanded, and if the Authority wishes to acquire additional capacity in the CRD Peninsula System it shall do so in accordance with the process described in article 19.00.

#### **16.00 Liability Insurance**

16.01 The Authority shall obtain and carry personal injury and property damage liability insurance which policy shall not be subject to cancellation for any

reason without 30 days notice to the CRD in an amount not less than FIVE MILLION DOLLARS (\$5,000,000) which amount shall be reviewed every five years.

#### **17.00 Spills**

17.01 The CRD shall be responsible for and report all spills which take place as a result of the operation of the CRD Peninsula System, to the Waste Management Branch and/or the Provincial Emergency Program and/or Environment Canada as required by law.

17.02 The Authority shall be responsible for and report all spills which take place as a result of the operation of the Airport Sewer System to the Waste Management Branch and/or the Provincial Emergency Program and/or Environment Canada as required by law.

#### **18.00 Storm Water Abatement**

18.01 The Authority will systematically take action to minimize storm water inflow and infiltration into the Airport System which may cause overflow from the CRD Peninsula System, rather than the CRD expanding the CRD Peninsula System to accommodate such additional flow.

#### **19.00 Additional Capacity**

19.01 If the Authority uses 90% of the design flow allocations under Schedule "C", and desires additional capacity, then it shall commence negotiations with the Participants for a reallocation of capacity and payment of an additional amount for capacity purchase or reallocation of the debt cost, as appropriate.

19.02 In the event the Participants cannot reach agreement, the dispute shall be settled by arbitration by an arbitrator to be chosen by the Board of the CRD and the Authority, and if the parties cannot agree on the choice of an arbitrator, then he or she shall be selected by a Judge of the Supreme Court of British Columbia.

19.03 The decision of the arbitrator must not increase the cost to any Participant which is not using 90% or more of its maximum allocated capacity expressed as design average annual flow allocated to that Participant where the Participant does not expect to use more than 100% of its allocated capacity, nor shall the arbitrator's decision require a Participant to give up allocated capacity against its wishes.

19.04 The decision of the arbitrator shall be final and binding on the parties.

19.05 The costs of the arbitration shall be allocated among the parties as agreed by the parties, but if the parties cannot agree, then as decided by the mediator or arbitrator, but in no case shall a party not involved in an arbitration be responsible for any costs of an arbitration.

#### **20.00 Adjustments under the 1976 Agreement**

20.01 The 1976 Agreement between Transport and the CRD shall continue in force until the CRD Peninsula System is fully operational and shall then be replaced by this Agreement, subject however to any accrued rights and obligations under the 1976 Agreement.

20.02 The Authority warrants and represents to the Capital Regional District that the interest of Her Majesty the Queen in Right of Canada as represented by the Minister of Transport in the 1976 Agreement has been assigned to the Authority.

#### **21.00 Assignment**

21.01 No party to this Agreement may assign its interest in this Agreement without the consent of each of the others first had in writing.

#### **22.00 Miscellaneous**

22.01 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 the intent of this Agreement.

22.02 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 and private statutes, bylaws, orders and regulations, all of which may be fully and effectively exercised in relation to the CRD Peninsula System as if this Agreement had not been executed and delivered by the parties.

22.03 This Agreement shall not be construed so as to create any greater standard of care or liability on the part of the CRD in respect of the supplying of sanitary sewage services to the Airport or the Institute of Ocean Science than that which applies to the supply of such services within the Municipalities.

22.04 No member of the House of Commons shall be admitted to any share of part of this Agreement or to any benefit to arise from this Agreement.

22.05 Nothing in this Agreement shall be interpreted as creating an agency, partnership or joint venture between the CRD and the Authority.

22.06 Time shall be the essence of this Agreement.

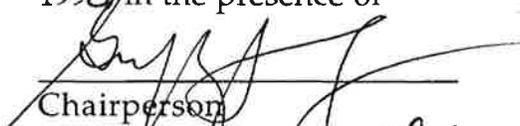
- 22.07 The headings in this Agreement are inserted for convenience and reference only and in no way define, limit or enlarge the scope or meaning of this Agreement or any provision of it.
- 22.08 This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all previous agreements, presentations, negotiations and documents in relation thereto. No implied terms or obligations of any kind by or on behalf of the CRD or the Authority shall arise from anything in this Agreement, and the express provisions and agreements herein contained are the only provisions and agreements upon which any rights against the CRD or the Authority may be founded.
- 22.09 A reference in this Agreement to a section or article shall mean a section or article of the Agreement unless otherwise provided.
- 22.10 No waiver or any term of condition of this Agreement or of a breach of any term or condition of this Agreement by either party hereto shall be effective unless it is in writing and no waiver of breach even if in writing shall be construed as a waiver of any future breach.
- 22.11 Wherever the singular, masculine and neuter are used throughout this Agreement, the same shall be construed as meaning the plural or the feminine or the body corporate or politic as the context so requires.

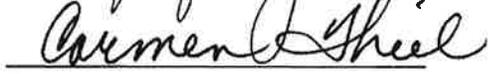
22.12 This Agreement share enure to the benefit of and be binding upon the parties hereto and their respective heirs, successors and permitted assigns.

IN WITNESS WHEREOF the parties hereto have set their hands and seals as of the day and year first above written.

The Corporate Seal of the **CAPITAL REGIONAL DISTRICT** was hereunto affixed on the ~~29<sup>th</sup>~~ day of **OCTOBER** 1998, in the presence of

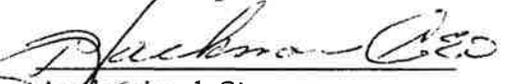
C/S

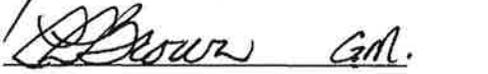
  
Chairperson

  
Secretary

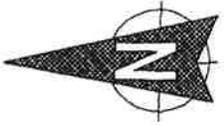
The Corporate Seal of the **VICTORIA AIRPORT AUTHORITY** was hereunto affixed on the ~~2<sup>nd</sup>~~ day of *September* 1998, in the presence of

C/S

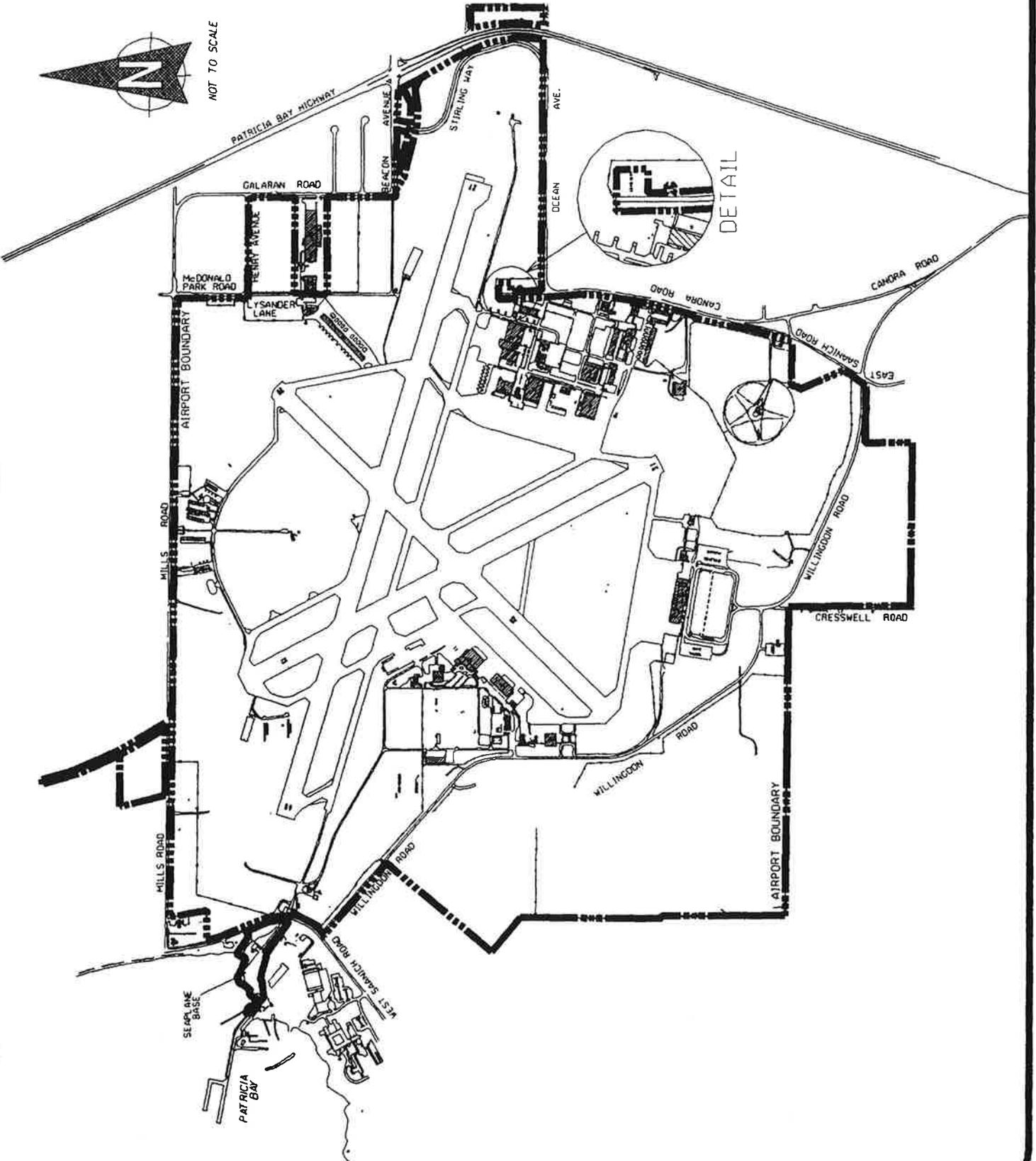
  
Authorized Signatory

  
Authorized Signatory

SCHEDULE 'A'  
VICTORIA INTERNATIONAL AIRPORT



NOT TO SCALE



CRD FILE NO: 9-517 DATE: 08/21/98

**SCHEDULE "B"**  
**Section 1.01(k)**  
**DESIGN FLOW ALLOCATIONS**

**Design Annual Average Flow**

Airport 682 m<sup>3</sup>/day

**Design Peak Flow**

Airport 1363 m<sup>3</sup>/day



**SCHEDULE 10 (AIRPORT) Agreement**

**SAANICH PENINSULA LIQUID WASTE MANAGEMENT PLAN  
COST SHARING BASED ON A BLEND OF MEASURED FLOW AND DESIGN FLOW**

	Year 1	2	3	4	5	6	7	8	9	10	11	12	13	14	Year 15
<b>Design Flow</b>	50,000%	46,430%	42,860%	39,290%	35,710%	32,140%	28,570%	25,000%	21,430%	17,860%	14,290%	10,710%	7,140%	3,570%	0.000%
<b>Wastewater</b>	21,087%	19,585%	18,076%	16,571%	15,061%	13,556%	12,049%	10,544%	9,038%	7,532%	6,027%	4,517%	3,011%	1,506%	0.000%
<b>Sewer</b>	19,593%	18,165%	16,767%	15,388%	13,986%	12,588%	11,190%	9,792%	8,393%	6,995%	5,597%	4,195%	2,796%	1,398%	0.000%
<b>San Park</b>	1,770%	1,643%	1,517%	1,391%	1,264%	1,137%	1,011%	885%	758%	632%	506%	380%	253%	126%	0.000%
<b>Victoria Airport Authority</b>	1,655%	1,530%	1,404%	1,278%	1,152%	1,026%	900%	774%	648%	522%	396%	270%	144%	18%	0.000%
<b>Federal-Ocean Sciences</b>	0,216%	0,201%	0,185%	0,170%	0,154%	0,139%	0,122%	0,108%	0,093%	0,077%	0,062%	0,046%	0,031%	0,015%	0.000%
<b>Fauguachin</b>	0,599%	0,568%	0,537%	0,506%	0,475%	0,444%	0,412%	0,381%	0,350%	0,319%	0,288%	0,257%	0,226%	0,195%	0.000%
<b>Tseyam</b>	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0.000%
<b>Saanich (New)</b>	4,879%	4,531%	4,183%	3,834%	3,485%	3,136%	2,788%	2,440%	2,091%	1,743%	1,395%	1,045%	697%	348%	0.000%
<b>Total</b>	50,000%	46,430%	42,860%	39,290%	35,710%	32,140%	28,570%	25,000%	21,430%	17,860%	14,290%	10,710%	7,140%	3,570%	0.000%

	Year 1	2	3	4	5	6	7	8	9	10	11	12	13	14	Year 15
<b>Wastewater</b>	50,000%	53,570%	57,140%	60,710%	64,290%	67,860%	71,430%	75,000%	78,570%	82,140%	85,710%	89,290%	92,860%	96,430%	100,000%
<b>Sewer</b>	21,268%	22,764%	24,259%	25,754%	27,250%	28,746%	30,242%	31,738%	33,233%	34,729%	36,225%	37,721%	39,217%	40,713%	42,209%
<b>Sidney</b>	19,513%	20,913%	22,313%	23,713%	25,113%	26,513%	27,913%	29,313%	30,713%	32,113%	33,513%	34,913%	36,313%	37,713%	39,113%
<b>Sidney Park</b>	2,592%	2,675%	2,758%	2,841%	2,924%	3,007%	3,090%	3,173%	3,256%	3,339%	3,422%	3,505%	3,588%	3,671%	3,754%
<b>Victoria Airport Authority</b>	1,067%	1,043%	1,019%	995%	971%	947%	923%	899%	875%	851%	827%	803%	779%	755%	731%
<b>Federal-Ocean Sciences</b>	0,215%	0,231%	0,246%	0,262%	0,277%	0,293%	0,308%	0,324%	0,339%	0,355%	0,370%	0,386%	0,401%	0,417%	0,432%
<b>Fauguachin</b>	0,351%	0,407%	0,464%	0,522%	0,580%	0,637%	0,695%	0,753%	0,811%	0,869%	0,927%	0,985%	1,043%	1,101%	1,159%
<b>Tseyam</b>	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%
<b>Sub-Total</b>	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618	9,618
<b>Saanich (New)</b>	4,993%	5,335%	5,677%	6,019%	6,361%	6,703%	7,045%	7,387%	7,729%	8,071%	8,413%	8,755%	9,097%	9,439%	9,781%
<b>Total</b>	50,000%	53,570%	57,140%	60,710%	64,290%	67,860%	71,430%	75,000%	78,570%	82,140%	85,710%	89,290%	92,860%	96,430%	100,000%

	Year 1	2	3	4	5	6	7	8	9	10	11	12	13	14	Year 15
<b>Wastewater</b>	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%	42,356%
<b>Sewer</b>	39,097%	39,100%	39,103%	39,106%	39,109%	39,112%	39,115%	39,118%	39,121%	39,124%	39,127%	39,130%	39,133%	39,136%	39,139%
<b>Sidney</b>	4,362%	4,318%	4,274%	4,230%	4,186%	4,142%	4,098%	4,054%	4,010%	3,966%	3,922%	3,878%	3,834%	3,790%	3,746%
<b>Sidney Park</b>	2,932%	2,975%	3,018%	3,061%	3,104%	3,147%	3,190%	3,233%	3,276%	3,319%	3,362%	3,405%	3,448%	3,491%	3,534%
<b>Victoria Airport Authority</b>	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%	0,431%
<b>Federal-Ocean Sciences</b>	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%	0,850%
<b>Fauguachin</b>	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%	0,000%
<b>Tseyam</b>	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%	90,128%
<b>Sub-Total</b>	9,872%	9,866%	9,860%	9,854%	9,848%	9,842%	9,836%	9,830%	9,824%	9,818%	9,812%	9,806%	9,800%	9,794%	9,788%
<b>Saanich (New)</b>	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%	100,000%

	Year 1	2	3	4	5	6	7	8	9	10	11	12	13	14	Year 15
<b>Capital Costs (est)</b>	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500
<b>Wastewater</b>	937,033	936,820	936,607	936,394	936,181	935,968	935,755	935,542	935,329	935,116	934,903	934,690	934,477	934,264	934,051
<b>Sewer</b>	864,832	865,614	866,396	867,178	867,960	868,742	869,524	870,306	871,088	871,870	872,652	873,434	874,216	875,000	875,782
<b>Sidney</b>	98,501	98,532	98,563	98,594	98,625	98,656	98,687	98,718	98,749	98,780	98,811	98,842	98,873	98,904	98,935
<b>Sidney Park</b>	64,870	65,810	66,750	67,690	68,630	69,570	70,510	71,450	72,390	73,330	74,270	75,210	76,150	77,090	78,030
<b>Victoria Airport Authority</b>	9,542	9,543	9,544	9,545	9,546	9,547	9,548	9,549	9,550	9,551	9,552	9,553	9,554	9,555	9,556
<b>Federal-Ocean Sciences</b>	21,016	21,308	21,600	21,900	22,200	22,500	22,800	23,100	23,400	23,700	24,000	24,300	24,600	24,900	25,200
<b>Fauguachin</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Tseyam</b>	1,993,894	1,994,027	1,994,160	1,994,293	1,994,426	1,994,559	1,994,692	1,994,825	1,994,958	1,995,091	1,995,224	1,995,357	1,995,490	1,995,623	1,995,756
<b>Sub-Total</b>	218,406	218,273	218,128	217,974	217,812	217,646	217,478	217,306	217,130	216,952	216,771	216,587	216,400	216,210	216,018
<b>Saanich (New)</b>	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300
<b>Total estimated average costs</b>	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300

	Year 1	2	3	4	5	6	7	8	9	10	11	12	13	14	Year 15
<b>Capital Costs (est)</b>	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500	\$33,164,500
<b>Wastewater</b>	937,033	936,820	936,607	936,394	936,181	935,968	935,755	935,542	935,329	935,116	934,903	934,690	934,477	934,264	934,051
<b>Sewer</b>	864,832	865,614	866,396	867,178	867,960	868,742	869,524	870,306	871,088	871,870	872,652	873,434	874,216	875,000	875,782
<b>Sidney</b>	98,501	98,532	98,563	98,594	98,625	98,656	98,687	98,718	98,749	98,780	98,811	98,842	98,873	98,904	98,935
<b>Sidney Park</b>	64,870	65,810	66,750	67,690	68,630	69,570	70,510	71,450	72,390	73,330	74,270	75,210	76,150	77,090	78,030
<b>Victoria Airport Authority</b>	9,542	9,543	9,544	9,545	9,546	9,547	9,548	9,549	9,550	9,551	9,552	9,553	9,554	9,555	9,556
<b>Federal-Ocean Sciences</b>	21,016	21,308	21,600	21,900	22,200	22,500	22,800	23,100	23,400	23,700	24,000	24,300	24,600	24,900	25,200
<b>Fauguachin</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Tseyam</b>	1,993,894	1,994,027	1,994,160	1,994,293	1,994,426	1,994,559	1,994,692	1,994,825	1,994,958	1,995,091	1,995,224	1,995,357	1,995,490	1,995,623	1,995,756
<b>Sub-Total</b>	218,406	218,273	218,128	217,974	217,812	217,646	217,478	217,306	217,130	216,952	216,771	216,587	216,400	216,210	216,018
<b>Saanich (New)</b>	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300
<b>Total estimated average costs</b>	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300	2,212,300

ASSUMPTIONS: Startup of average annual flow starts year 1.  
Sreet: Captrate

**SCHEDULE "D"****Capital Contribution****1. Payment Schedule**

First payment by the Authority will be made in the amount of \$137,461.00 for amounts accrued up to October 1, 1997, in accordance with the table set out in section 4; the remainder of payments by the Authority will be made on a quarterly basis on receipt of invoice from the CRD, likewise in accordance with the table set out in section 4; based on a total project cost of \$33,184,500.00, except that if the project cost for the CRD Peninsula System exceeds \$33,184,500.00, subject to Article 3.00 of the Agreement, additional payments will be required to be made for the share of the additional costs apportioned to the Authority in accordance with section 3.02

**2. SCADA Costs**

The Authority acknowledges that flow metering and SCADA equipment to CRD standards referred to in paragraph 5.04(a) must be provided at the cost of the Authority for Pump Station #3 for purposes of collection of billing information. Beyond the cost of provision of SCADA equipment, the Authority shall pay to CRD concurrent with the execution of this Agreement, the estimated costs for technical supervision during installation and commissioning of the equipment and for upgrade and programming of the Master station software to recognize the new equipment at each of the two locations.

The cost for CRD supervision and programming for Pump Station #3 is estimated at \$3,500.

### 3. Allowable Costs

The following types and classes of expenditures, directly associated with the CRD Peninsula System are allowable costs and are eligible for reimbursement as part of the contribution by the Authority under the Agreement:

- (a) investigation, pre-design, design, plans, value engineering, environmental impact assessment and mitigation including the studies referred to in Schedule "E";
- (b) engineering services;
- (c) professional and special services;
- (d) construction and material costs;
- (e) postage and courier services;
- (f) advertising services;
- (g) auditing services;
- (h) acquisition and modification of existing municipal infrastructure;
- (i) survey costs;
- (j) costs of acquisition of Odour Control Equipment;
- (k) land and right of way acquisition costs, including costs of expropriation;
- (l) equipment costs;
- (m) Liquid Waste Management Plan amendment and permitting costs;
- (n) cost of compliance with federal and provincial regulations;
- (o) legal costs incurred in relation to preparation of the agreement and negotiation and acquisition of land and rights of way;
- (p) training costs;
- (q) public consultation and pre-discharge system testing and commissioning costs.

## 4. Payment Schedule Table

Year	Quarter Beginning	Amount	Airport
		100%	3.305%
1998	July 1	\$19,590,500	\$647,414
	October 1	\$4,846,000	\$160,147
1999	January 1	\$3,794,000	\$125,381
	April 1	\$3,159,000	\$104,396
	July 1	\$1,279,000	\$42,267
	October 1	\$516,000	\$17,052
2000 (Final Adjustment)	March 31		
<b>Total</b>		<b>\$33,184,500</b>	<b>\$1,096,657</b>

COPY

**SAANICH PENINSULA SYSTEM  
AIRPORT AGREEMENT**

**AMENDMENT No. 1 TO AGREEMENT** dated the 21 day of January, 2014.

**BETWEEN:**

**CAPITAL REGIONAL DISTRICT**  
625 Fisgard Street  
Victoria, BC V8W 1R7

(hereinafter called the “**CRD**”)

OF THE FIRST PART

**AND**

**VICTORIA AIRPORT AUTHORITY**  
Victoria International Airport  
201 - 1640 Electra Blvd.  
Sidney, BC V8L 5V4

(hereinafter called the “**Authority**”)

OF THE SECOND PART

**WHEREAS** the CRD and the Authority entered into a Saanich Peninsula System Airport Agreement made as of the 29<sup>st</sup> day of October 1998 (hereinafter, the “Agreement”);

**AND WHEREAS** the Term of the Agreement is for a period of Fifteen (15) years commencing on the Commencement Date;

**AND WHEREAS** the “Commencement Date” is defined in the Agreement as: “the date on which the CRD Peninsula System commences operation and is capable of accepting and disposing of sewage from the parties”;

**AND WHEREAS** the CRD has confirmed that the CRD Peninsula System commenced its operation and was capable of accepting and disposing of sewage from the Authority as at January 31, 2000.

**NOW THEREFORE** in consideration of the premises and the mutual covenants contained in this Agreement, the parties agree to amend the Agreement as follows:

1. Clause 1.01 (h) shall be deleted in its entirety and replaced with the following:

“Commencement Date” means January 31, 2000.

All other terms and conditions that are not hereby amended are to remain in full force and effect.

**IN WITNESS WHEREOF** the parties hereto have executed this agreement on the day and year first above-written.

**VICTORIA AIRPORT AUTHORITY**



\_\_\_\_\_  
Geoff Dickson  
President and Chief Executive Officer

**CAPITAL REGIONAL DISTRICT**



\_\_\_\_\_  
Authorized Signatory  
Name:  
Title: **Ted Robbins**  
General Manager  
Integrated Water Services

**SAANICH PENINSULA SYSTEM  
AIRPORT AGREEMENT**

**AMENDMENT No. 2 TO AGREEMENT** with an effective date of the 31<sup>st</sup> day of January, 2015.

**BETWEEN:**

**CAPITAL REGIONAL DISTRICT**  
625 Fisgard Street  
Victoria, BC V8W 1R7

(the “**CRD**”)

OF THE FIRST PART

**AND**

**VICTORIA AIRPORT AUTHORITY**  
Victoria International Airport  
201 - 1640 Electra Blvd.  
Sidney, BC V8L 5V4

(the “**Authority**”)

OF THE SECOND PART

**WHEREAS** the CRD and the Authority entered into a Saanich Peninsula System Airport Agreement dated October 29, 1998 and as amended January 24, 2014 (hereinafter collectively, the “Agreement”);

**AND WHEREAS** the Term of the Agreement is scheduled to expire on January 30, 2015;

**AND WHEREAS** pursuant to Article 13.02 of the Agreement on November 21, 2014 the Authority gave Notice to the CRD of its desire to renew the Agreement and the CRD accepts such Notice to Renew;

**AND WHEREAS** the CRD and the Authority wish to enter into an agreement to provide for the renewal of the Agreement and to make certain changes to the provisions contained in the Agreement;

**NOW THEREFORE** in consideration of the premises and the mutual covenants contained in this Agreement, the parties agree to amend the Agreement as follows:

1. All capitalized terms used in this Amending Agreement will have the same meaning assigned to them in the Agreement unless specifically otherwise defined herein.
2. The term of the Agreement shall be renewed and extended for a period of five (5) years commencing on January 31, 2015 and ending on January 30, 2020.

3. Pursuant to Article 13.02 of the Agreement, the following articles shall be deleted from the Agreement: Articles 3.00, 14.01(a) and (b).
4. Pursuant to Article 13.02 of the Agreement, *Schedule “C” and Schedule “B”* are deleted from the Agreement.
5. Recital B is amended by inserting the words, “the Union Bay Reserve” immediately after the words, “Cole Bay Reserve,”.
6. Recital D is amended by inserting the words, “the Union Bay Reserve” immediately after the words, “Cole Bay Reserve,”.
7. Article 1.01 is amended by deleting the definition of “**Band**” and substituting the following therefor in the correct alphabetical sequence:

“**Pauquachin**” means the Pauquachin Band for whose use and benefit the Cole Bay Reserve has been set aside. For certainty, wherever in the Agreement the word Band appears in reference to the Pauquachin Band it shall be understood to mean Pauquachin.

8. Article 1.01 is further amended by deleting the definition of “**CRD Peninsula System**” and substituting the following therefor in the correct alphabetical sequence:

“**CRD Peninsula System**” means the Saanich Peninsula Waste Water Treatment Plant facility, sludge handling and disposal systems, sewer outfall system, gravity trunk and pressurized sewer systems, cathodic protection systems, pump stations, flow measurement, and SCADA systems, and all equipment and appurtenances associated with the ongoing maintenance and operation of the facility and associated systems, constructed or operated by the CRD to serve the Union Bay Indian Reserve, the Cole Bay Indian Reserve, the Airport, the Institute of Ocean Sciences, the Marine Technology Centre, Sidney, and portions of North Saanich and Central Saanich.

9. Article 1.01 is further amended by deleting the definition of “**National Defence System**”.

10. Article 1.01 is further amended by deleting the definition of “**Reserve**” and substituting the following therefor in the correct alphabetical sequence:

“**Reserve**” means the Cole Bay Indian Reserve and the Union Bay Indian Reserve.

11. Article 1.01 is further amended by inserting thereto the following definition in the correct alphabetical sequence:

**“SCADA RTU”** means the communication and measuring devices for the transmission of data and measurement of flows to the Peninsula System and shall be the property of the CRD.

12. Article 1.01 is further amended by inserting thereto the following definition in the correct alphabetical sequence:

**“System”** means a sewage collection and conveyance system comprising of gravity and pressurized sewer pipes, manholes, pump station and all equipment and appurtenances associated with a sewage collection and conveyance system.

13. Article 1.01 is further amended by inserting thereto the following definition in the correct alphabetical sequence:

**“Tseycum”** means the Tseycum Band of Indians for whose use and benefit the Union Bay Indian Reserve has been set aside.

14. Article 1.01 is further amended by inserting thereto the following definition in the correct alphabetical sequence:

**“Union Bay System”** means a sewage collection system constructed on the Union Bay Indian Reserve and connected to the CRD Peninsula System through the Airport System.

15. Article 2.02 is deleted in its entirety.

16. Article 2.03 is deleted in its entirety.

17. Article 2.06 is deleted in its entirety and the following is substituted therefor:

2.06 For the purposes of this Agreement, neither of the Institute System, the Cole Bay System, nor the Union Bay System shall be considered part of the Airport System.

18. Insert the following new Article 2.07:

2.07 It is acknowledged that sewage from the Union Bay System flows through the Airport System to the CRD Peninsula System, that there are separate arrangements between the Authority and Tseycum for the use of the Airport System by Tseycum for this purpose and that there are separate arrangements between the CRD and Tseycum for the use by Tseycum of the CRD Peninsula System.

19. The following new Article 4.01 (e) is inserted:  

4.01 (e) “where the CRD has executed an agreement with the Tseycum Band of Indians, the Union Bay Indian Reserve;”
20. Article 4.05 is amended by deleting therefrom the words “in article 4.01(a) to (d)” and replacing them with the words “in article 4.01(a) to (e)”.
21. Article 5.01 is amended under its paragraph definition ‘A’, by inserting the words, “and the Union Bay System” immediately after the words, “Cole Bay System”.
22. Article 5.04 (c) is deleted in its entirety and the following is substituted therefor:  

5.04 (c) The CRD will measure the flow of sewage passing from the Cole Bay System into the CRD Peninsula System by means of a flow meter and SCADA field device provided by Pauquachin at its cost and maintained and calibrated by the CRD as part of the CRD Peninsula System.
23. The following new Article 5.04 (d) is inserted:  

5.04 (d) The CRD will measure the flow of sewage passing from the Union Bay Reserve System into the CRD Peninsula System by means of a flow meter and SCADA field device provided by Tseycum at its cost and maintained and calibrated by the CRD as part of the CRD Peninsula System.
24. Article 7.01 is deleted in its entirety and the following is substituted therefor:  

7.01 Nothing in this Agreement shall be interpreted as affecting the arrangements between the CRD and Pauquachin or Tseycum with respect to the use of the CRD Peninsula System by either the Pauquachin or Tseycum.
25. The following new Article 7.03 is inserted:  

7.03 Without limiting section 7.01, nothing in this Agreement shall be interpreted as preventing or hindering the CRD from temporarily or permanently restricting or stopping the flow of sewage from,

  - (a) the Cole Bay Reserve at the connection point between the Cole Bay System and the Cole Bay Force Main; or

- (b) the Union Bay Reserve at the connection point between the Union Bay System and the Union Bay Force Main.

26. Article 8.03 is deleted in its entirety and the following is substituted therefor:

8.03 The Authority shall not be responsible for the construction, repair, operation or maintenance of the Institute System, the Cole Bay Reserve System, or the Union Bay System or its use or any cost associated therewith.

27. The following new Article 8.06 is inserted:

8.06 The CRD will operate, maintain and repair SCADA RTU, communication and measuring devices for the transmission of data and measurement of flows to the Peninsula System.

28. Insert the following new Article 9.04:

9.04 The CRD shall indemnify and save harmless the Authority and Her Majesty the Queen in Right of Canada as represented by the Minister of Transport from and against all claims, demands, losses, penalties, damages, actions, suits or proceedings by whomever made, brought or prosecuted, and in any manner based upon, arising out of or related to, occasioned by or attributed to any failure to maintain, operate or repair the CRD Peninsula System or from a breach of any provision of this Agreement to be performed by the CRD, or its employees, agents and contractors.

29. Article 11.01 is deleted in its entirety and the following is substituted therefor:

11.01 The CRD may, at any time, give to the Authority notice that in the opinion of the CRD, the Authority is not operating, maintaining or repairing the Airport Sewer System in accordance with this Agreement or as otherwise required for the purpose of ensuring that the Airport System will not cause damage to persons or property or to the CRD Peninsula System or affect the proper and permitted operation of the CRD Peninsula System. The Authority may, at any time, give to the CRD notice that in the opinion of the Authority, the CRD is not operating, maintaining or repairing the CRD Peninsula System as required for the purpose of ensuring that the CRD Peninsula System will not cause damage to persons or property or to the Airport System or affect the proper and permitted operation of the Airport System (hereinafter, such notice by either party (the "Issuing Party") to the other (the "Receiving Party") shall be referred to as a "Notice to Correct").

30. Article 11.02 is deleted in its entirety and the following is substituted therefor:

11.02 Upon receipt of a Notice to Correct under section 11.01, the Receiving Party shall within thirty (30) calendar days and at its own cost carry out such remedial action as is required to remedy the deficiencies set out in the notice from the Issuing Party except that in the case of an emergency, such remedial action shall be carried out immediately.

31. Article 11.03 is amended by deleting therefrom the term, "Notice of Default" wherever it appears and replacing it in each instance with the term, "Notice to Correct".

32. Article 11.05 is deleted in its entirety and the following is substituted therefor:

11.05 If the Receiving Party fails to carry out remedial action to remedy the deficiencies set out in the notice under this section, the Receiving Party shall indemnify and save harmless the Issuing Party from any and all costs, fines, fees, expenses, actions and other expenditures that result from the unremedied deficiency.

33. Article 11.06 is deleted in its entirety and the following is substituted therefor:

11.06 The parties hereto shall undertake their best efforts to operate and maintain their respective CRD Peninsula System and Airport System in accordance with this Agreement or as otherwise required for the purpose of ensuring that each party's System will not cause damage to persons or property or to the other party's System or affect the proper operation of the other party's System.

34. Article 16.01 is deleted in its entirety and the following is substituted therefor:

16.01 Each party hereto shall obtain and carry personal injury and property damage liability insurance which policy shall not be subject to cancellation for any reason without thirty (30) calendar days' notice to the other party in an amount not less than FIVE MILLION DOLLARS (\$5,000,000) which amount shall be reviewed every five years.

35. Article 22.10 is deleted in its entirety and the following is substituted therefor:

22.10 No waiver of any term or condition of this Agreement or of a breach of any term or condition of this Agreement by either party hereto shall be effective unless it is in writing and no waiver of breach even if in writing shall be construed as a waiver of any future breach.

36. *Schedule “A”: Plan of the Airport* is deleted from the Agreement in its entirety and is replaced with the form of *Schedule “A”: Plan of the Airport* dated November 26, 2014 and attached to this Amendment No. 2 as “Schedule A”.

37. Items 1 and 4 from *Schedule “D”: Capital Contribution* are deleted in their entirety.

All amendments provided for in this Amending Agreement will take effect on the Effective Date of this Amending Agreement and will continue for the term. All other terms and conditions of the Agreement that are not herein amended are to remain in full force and effect.

**IN WITNESS WHEREOF** the parties hereto have executed this agreement on the day and year first above-written.

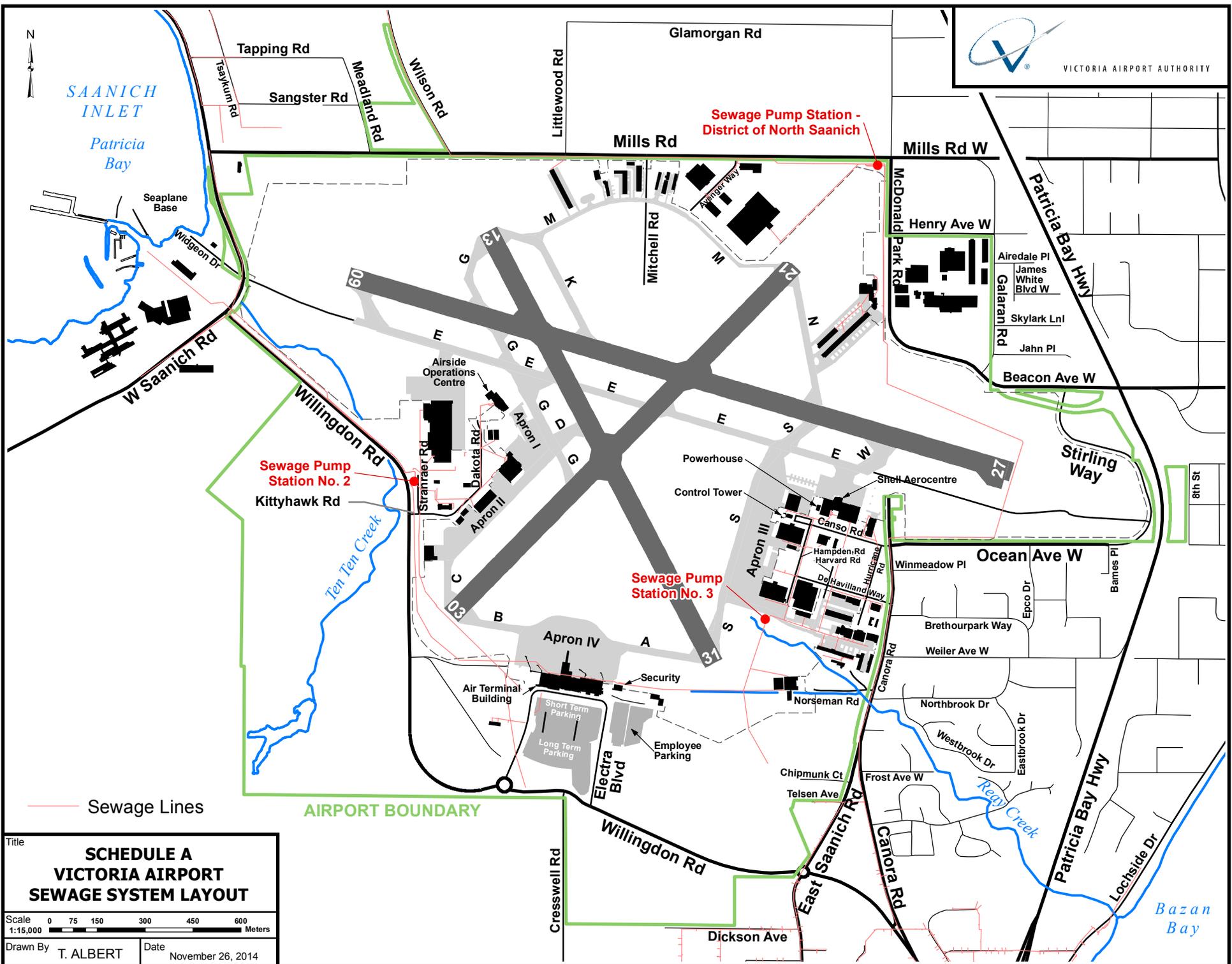
**VICTORIA AIRPORT AUTHORITY**

\_\_\_\_\_  
Geoff Dickson, President & CEO

**CAPITAL REGIONAL DISTRICT**

\_\_\_\_\_  
Authorized Signatory

**SCHEDULE 'A'**  
**PLAN OF THE AIRPORT**



— Sewage Lines

**AIRPORT BOUNDARY**

Title

### SCHEDULE A VICTORIA AIRPORT SEWAGE SYSTEM LAYOUT

Scale 0 75 150 300 450 600  
1:15,000 Meters

Drawn By T. ALBERT Date November 26, 2014



**REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION  
MEETING OF THURSDAY, APRIL 16, 2015**

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**SUBJECT**     **SAANICH PENINSULA WASTEWATER - PARTICIPATING MUNICIPALITIES  
INFLOW & INFILTRATION**

**ISSUE**

To provide an update of the annual volume of inflow and infiltration (I&I) entering the Saanich Peninsula Wastewater conveyance system and treatment plant (SPWWTP) and progress toward commitments under the Liquid Waste Management Plan.

**BACKGROUND**

At the meeting on February 19, 2015, the Saanich Peninsula Wastewater Commission requested a staff report regarding the amount of I&I entering the Saanich Peninsula Wastewater Treatment Plant by each of the service participants.

The Saanich Peninsula Liquid Waste Management Plan (LWMP) was originally approved in 1996. As part of the LWMP, the CRD and the service participants committed to a reduction of I&I to sanitary sewers to ensure that primarily only wastewater was treated and not storm or ground water. Summarized pertinent paragraphs from Section 4.2, Reduction of Inflow and Infiltration to Sanitary Sewers from the LWMP (see attached) are below:

*The Capital Regional District (CRD) and its participating member municipalities, namely the districts of Central Saanich and North Saanich, and the Town of Sidney, and those federal jurisdictions located on the Saanich Peninsula, namely the Tseycum, Pauquachin, Tsartlip and Tsawout Indian Bands, the Department of Transportation and the Department of Fisheries and Oceans commit:*

- *To develop and carry out a detailed program for identification and sources and quantity of inflow and infiltration (I&I) by the end of 1999.*  
Status: The CRD is installing three (3) flow metering devices at the Sidney, Keating and Turgoose pump stations, which provide detailed recording of flow.
- *To develop guidelines for use by the member municipalities and federal jurisdictions to prioritize areas within which rehabilitation works are warranted and cost effective*  
Status: It is proposed to establish a LWMP Oversight Committee, with staff representatives from all of the participants – guideline development could be considered by the committee.
- *To provide additional funds for I&I reduction that are either economically or environmentally justified by avoidance of future costs to convey, treat and dispose of I&I, or by protecting effluent quality*  
Status: To date, the CRD has aided participating municipalities with data acquisition of pump station flows for the municipalities' assessment of their respective system.

- *Where rehabilitation works for I&I reduction are undertaken, to measure flows before and after carrying out such works, to document I&I expenditures and achievements, and to use this information to redefine cost benefit curves developed to optimize expenditures*  
Status: No rehabilitation works for I&I reduction have been carried out by the CRD, coordination with participating municipalities will be required to evaluate their past projects.
- *To standardize and pass appropriate bylaws, or amendments to bylaws, in each municipality or jurisdiction to reduce or eliminate the incidence of stormwater connections to the sanitary sewer system.*  
Status: Each participating municipality currently has bylaws pertaining to stormwater cross connections.
- *That in areas of high infiltration, to address concerns of exfiltration from the systems to groundwater.*  
Status: Areas of high infiltration have not been identified.
- *That the CRD, as an aspect of operating the wastewater treatment plant, shall monitor flows from the participants and shall advise of the need for investigation of I&I problems.*  
Status: In an effort to better identify areas of where more investigation of I&I problems exist, 3 flow meters are being proposed at the Sidney, Keating and Turgoose pump stations.

CRD staff met with the participating municipalities December 10, 2014 to present the CRD's Saanich Peninsula Wastewater Strategic Plan to the participating municipalities and to obtain feedback to ensure they are aligned with goals of the report. The issue of monitoring and reduction of I&I and the commitments under the LWMP were discussed.

The CRD is committed to working with participating municipalities and as such, will establish a working group with key people from each municipality with the goal of reduction of inflow and infiltration as directed in the Saanich Peninsula Liquid Waste Management Plan. In 2015, CRD will install three new flow meters to record flow at Sidney, Keating and Turgoose pump stations, which will provide data to the participating municipalities to aid in their analysis and flow characterization of their municipal systems. Staff will also recommend additional work that is traditionally included in an I&I program for the CRD Trunk Sewer system for the 2016 budget.

#### SAANICH PENINSULA CALCULATED INFLOW & INFILTRATION

The annual rainfall I&I volumes for Central Saanich, North Saanich and Sidney have been calculated for the last 4 years based on daily metered flows coming into the SPWWTP, see Table 1. To estimate the I&I for the Saanich Peninsula Wastewater (SPWW) system, the dry weather flow is subtracted from the wet weather flow. The average daily dry weather wastewater flow is based on the recorded flow during the months June to August is calculated. The wet weather flow is based on the metered flow from September to May. The annual wastewater and calculated annual I&I volumes are summarized in Table 1 for the cost sharing years 2012 to 2015.

Table 1 – SPWW Annual Flows & I&I Volumes from 2012 to 2015

Date (from)	Date (to)	CENTRAL SAANICH		NORTH SAANICH		SIDNEY	
		Annual Flow (m <sup>3</sup> )	I&I (m <sup>3</sup> )	Annual Flow (m <sup>3</sup> )	I&I (m <sup>3</sup> )	Annual Flow (m <sup>3</sup> )	I&I (m <sup>3</sup> )
Oct 2010	Sep 2011	1,483,063	208,670	447,648	42,610	1,378,158	254,040
Oct 2011	Sep 2012	1,392,137	151,130	439,340	25,180	1,239,002	140,460
Oct 2012	Sep 2013	1,425,138	182,630	454,197	45,490	1,337,648	230,740
Oct 2013	Sep 2014	1,338,409	162,540	432,923	32,071	1,250,680	187,465

The percentage of I&I of annual wastewater is periodically used to estimate how much a municipal wastewater system is affected by inflow and infiltration. This method can be used to gauge a level of I&I in wastewater systems, but it is very susceptible to the amount of precipitation i.e. years with less rainfall will have less I&I and therefore, the percentage of annual wastewater as I&I will be lower, giving a false impression of the amount of I&I, and this method does not address peak flows. This method still has merit as an indicator when used over longer periods of time. Stantec's 2013 Saanich Peninsula Wastewater Strategic Plan outlines that the SPWWTP has been designed to a 1.30 (30% increase) maximum month flow to average daily flow, this is very similar to a 30% estimate of I&I to total annual flow; the estimated municipal I&I flows follow in Table 2.

Table 2 - SPWW I&I flow as a Percentage of Total Annual Wastewater Flow

COST SHARING YEAR	CENTRAL SAANICH	NORTH SAANICH	SIDNEY
2012	14%	10%	18%
2013	11%	6%	11%
2014	13%	10%	17%
2015	12%	7%	15%

Annual precipitation has a major influence on the wastewater flows within the Saanich Peninsula wastewater system, the variation noticed between 2012 and 2013 is attributed to the low amount of precipitation for the 2013 year. The variation noted was also observed in the Core Area at Macaulay Point and Clover Point for the same period and correlates to the drop in annual precipitation. Charts illustrating the relationship between the monthly precipitation, total wastewater flow and estimated dry weather flow for Central Saanich, North Saanich and Sidney are included in Appendix 1.

The current analysis is unable to accurately assess the peak flows within the Saanich Peninsula wastewater system. There have been two events in the last 10 years where the daily wastewater flow exceeded the peak day design flow capacity of the SPWWTP of 39,930 m<sup>3</sup>/day. The peak wastewater flows were recorded December 3, 2007 (41,906 m<sup>3</sup>) and December 13, 2010 (35,711 m<sup>3</sup>), they were directly related to high rainfall events. The high peak wastewater flows resulted in overwhelming the Keating Pump Station, which overflows to the Tsawout wastewater treatment plant, and unscreened discharges from the Sidney pumpstation to the marine environment, to alleviate the flows to the SPWWTP. The 2013 Stantec report states that the SPWWTP was designed to have a 2.20 peak day flow to average day flow, this has been exceeded 6 times between 2004 and 2011 indicating that the wastewater system is over the designed peak flow ratio and would merit a full I&I study.

Review of recent (2014) annual wastewater flows and peak flows from Central Saanich, Sidney and North Saanich indicate that they do not exceed the annual average and design peak flows outlined in CRD Bylaw 2439, Schedule A (attached), and summarized in Table 3 with 2015 annual average flow and peak flows.

Table 3 – Saanich Peninsula Design Flow Allocations

MUNICIPALITY	DESIGN FLOWS		2014 ACTUAL FLOWS	
	ANNUAL AVERAGE (m <sup>3</sup> /d)	PEAK FLOW (m <sup>3</sup> /d)	ANNUAL AVERAGE (m <sup>3</sup> /d)	PEAK FLOW (m <sup>3</sup> /d)
Central Saanich	7,710	24,000	3,667	9,975
North Saanich	2,850	9,300	1,186	1,742
Sidney	7,160	23,600	3,427	11,693

### **ALTERNATIVES**

The following alternatives are proposed:

#### **Alternative 1**

That the Saanich Peninsula Wastewater Commission receive the staff report for information and direct CRD staff to proceed with establishment of a working group with key people from each municipality to implement a coordinated inflow and infiltration program with follow-up report at the end of the year.

#### **Alternative 2**

That the Saanich Peninsula Wastewater Commission request additional information from CRD staff.

### **IMPLICATIONS**

Alternative 1 – The report will be received for information, with no further action taken.

Alternative 2 – Associated costs may be required for gathering additional information.

### **CONCLUSION**

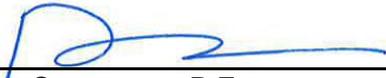
Currently, the only flow data available is recorded at SPWWTP and it is not recommended to draw conclusions regarding the level of I&I from each municipality. The additional flow meters that will be installed by CRD in 2015 will provide data to assist in determining I&I from each municipality, and improve accuracy and validity of the calculations.

**RECOMMENDATION**

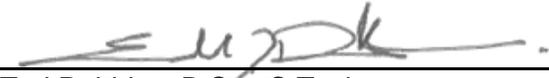
That the Saanich Peninsula Wastewater Commission receive the staff report for information.



Craig Gottfred, P.Eng.  
Manager, Wastewater Engineering and  
Planning



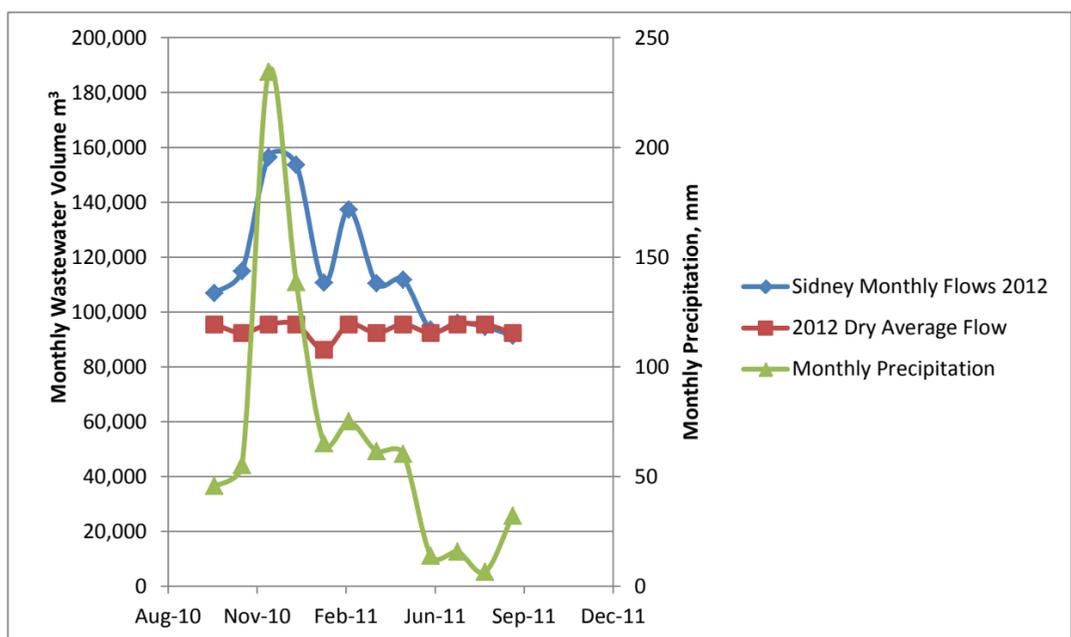
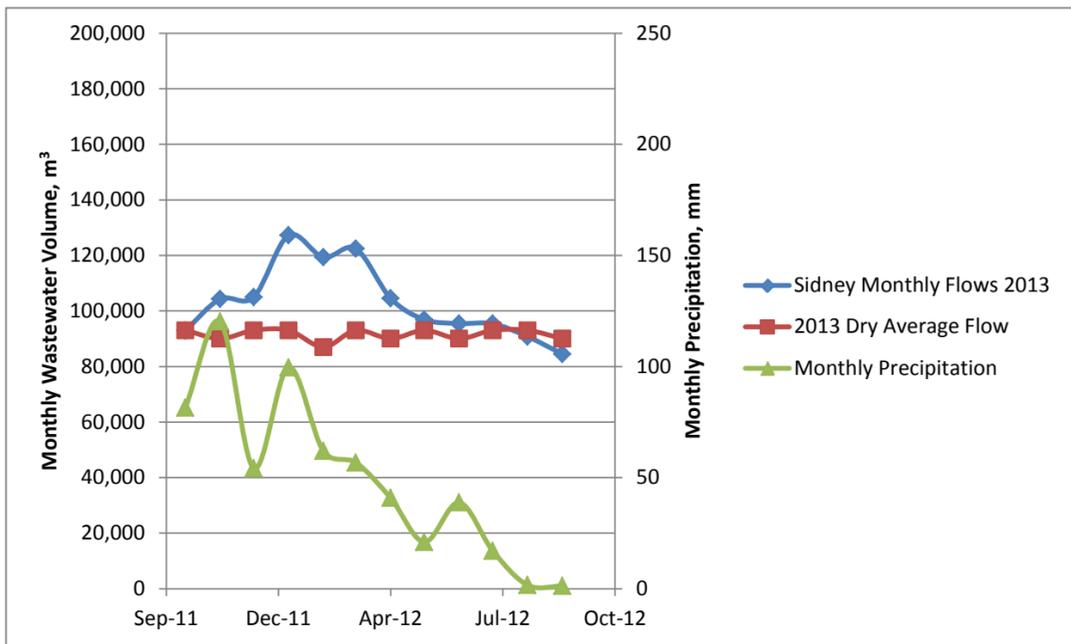
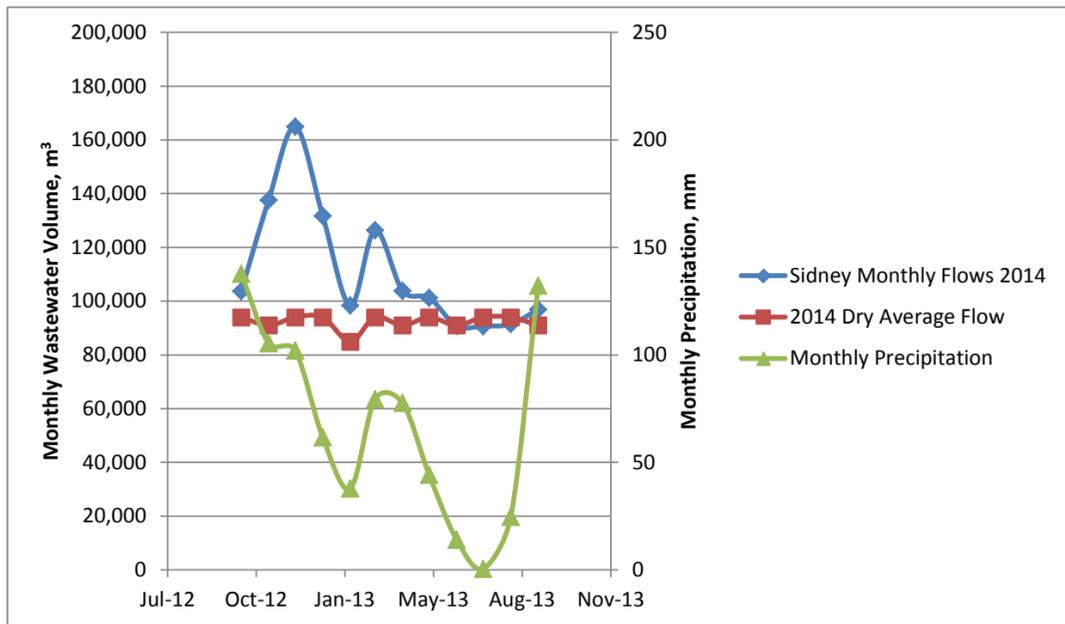
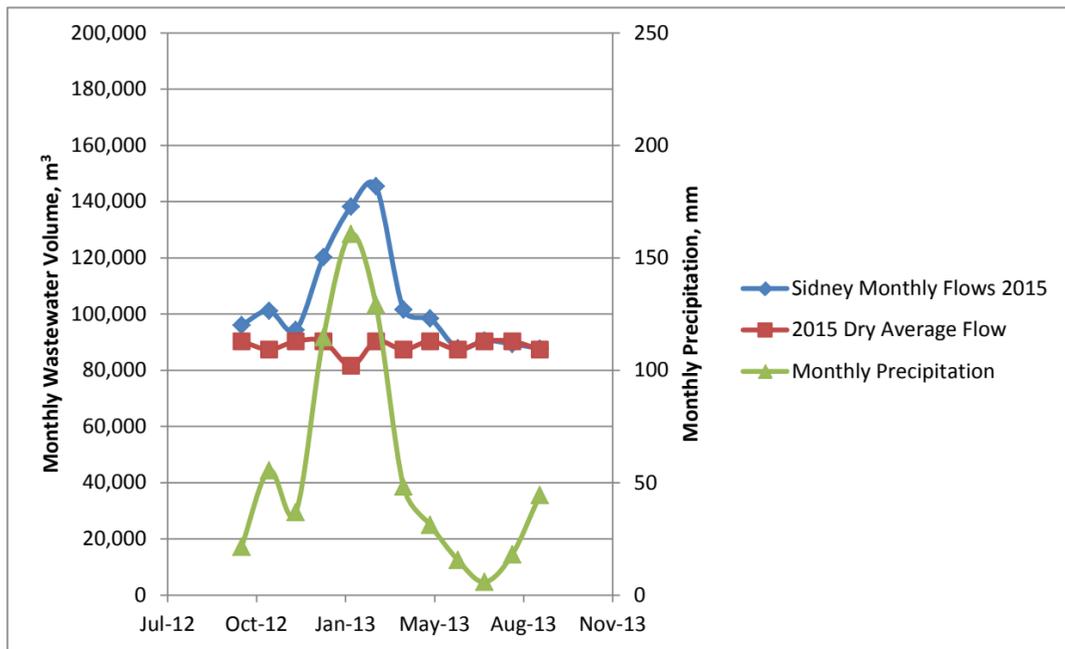
Peter Sparanese, P.Eng.  
Senior Manager, Infrastructure Engineering  
and Operations  
Concurrence

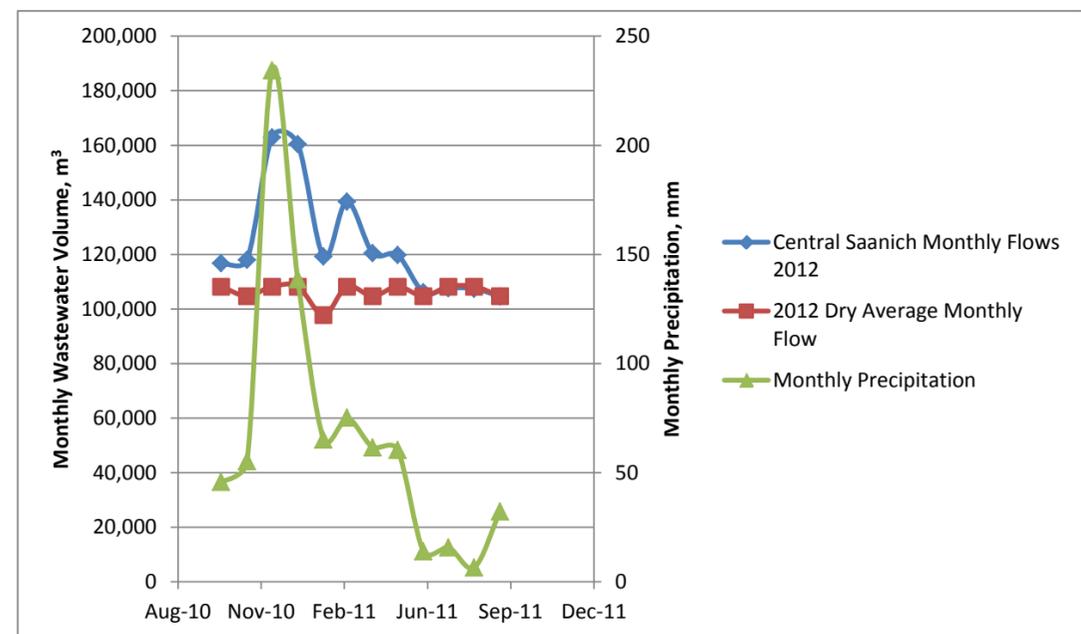
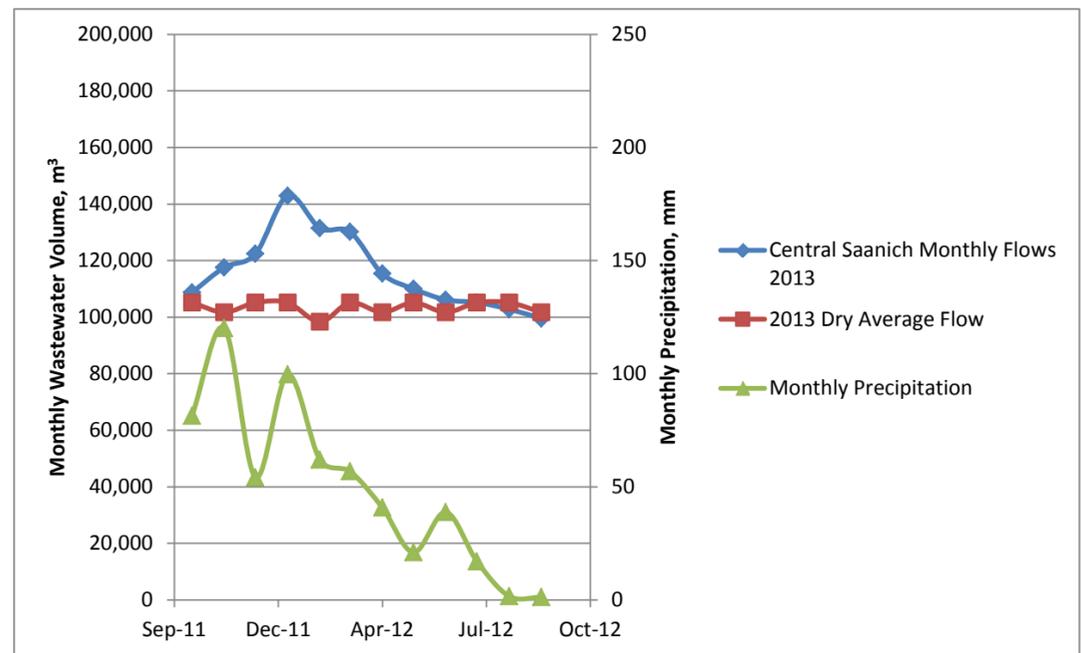
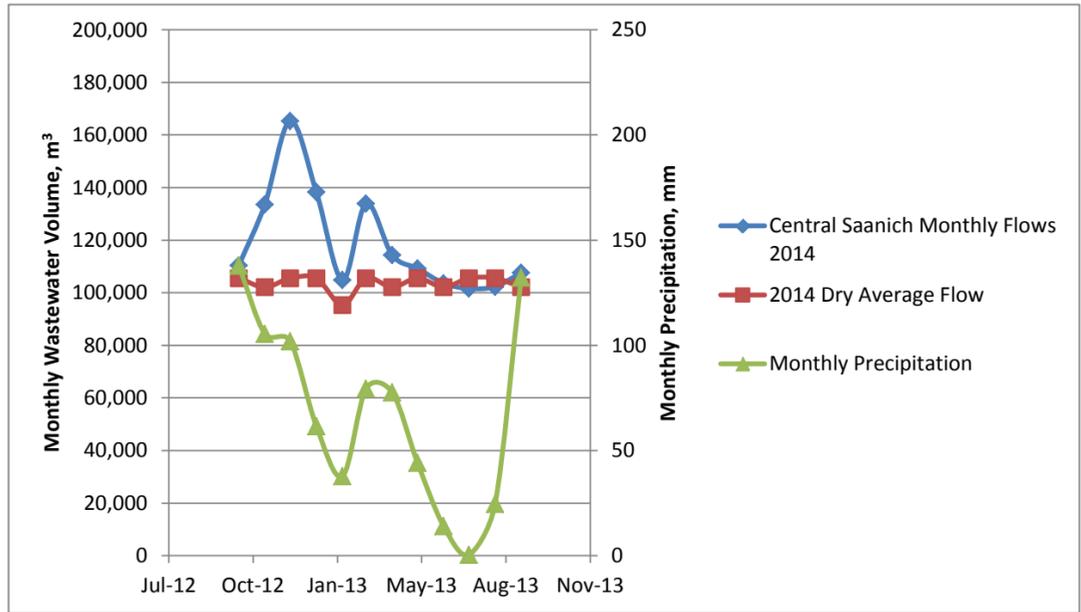
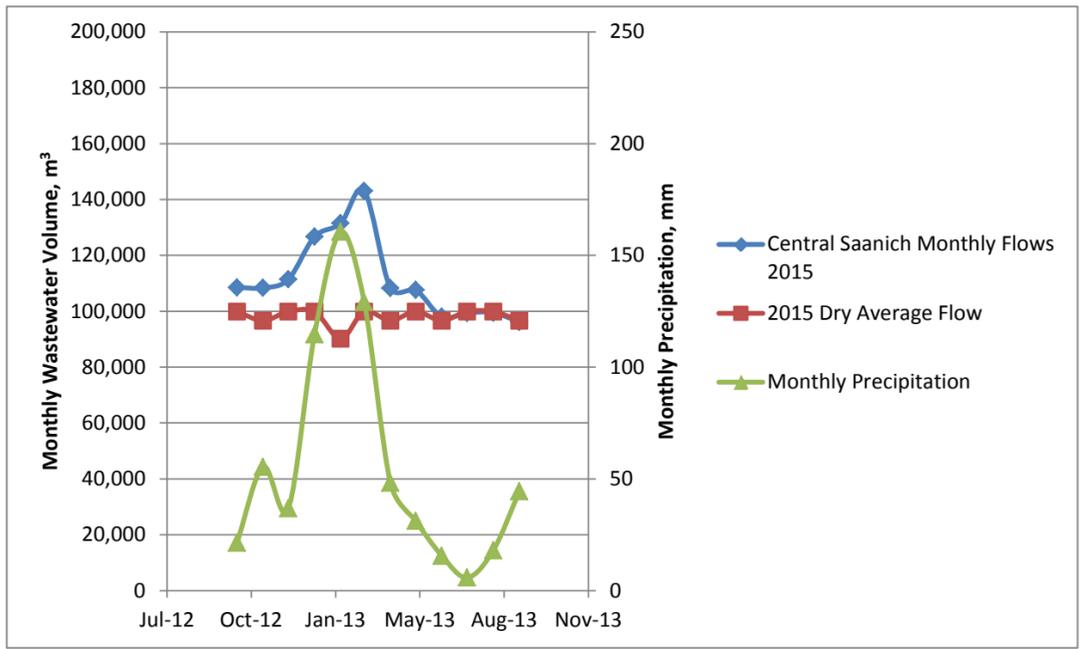


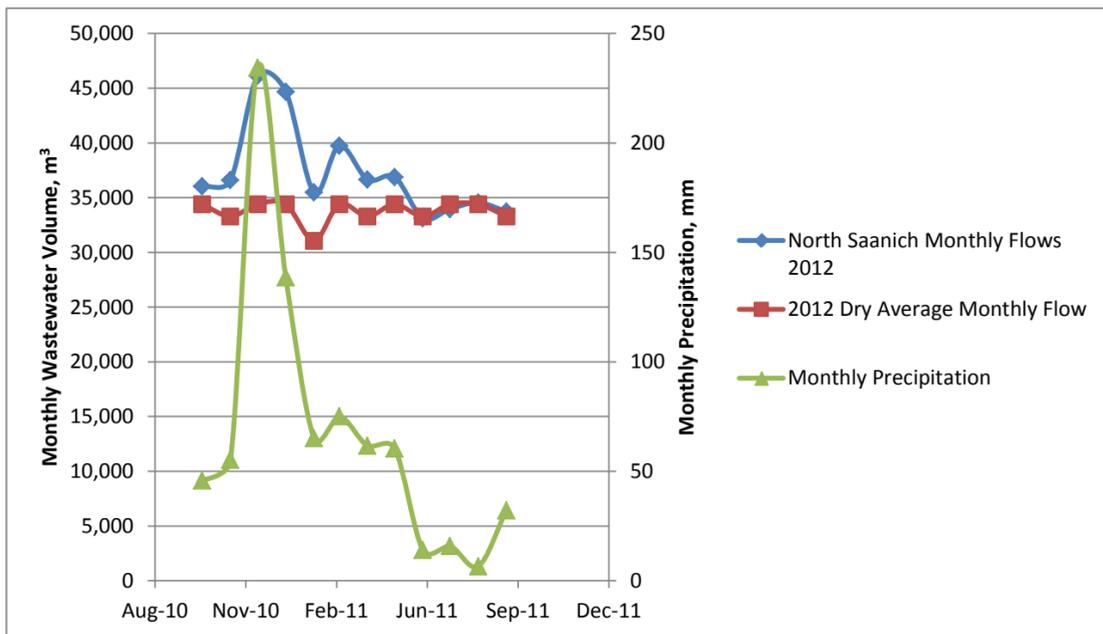
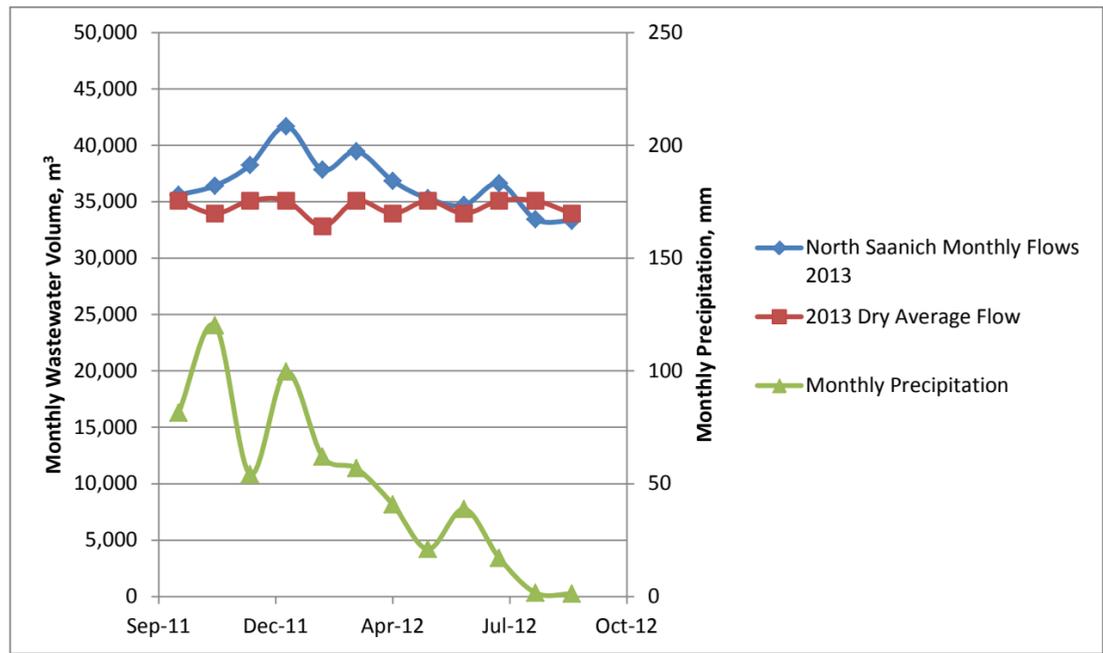
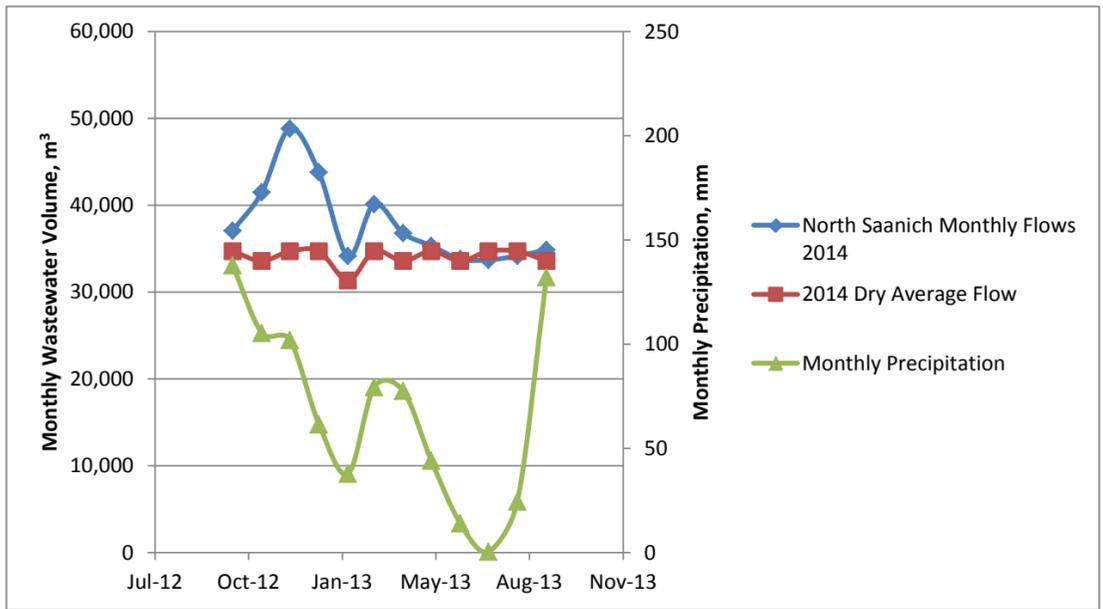
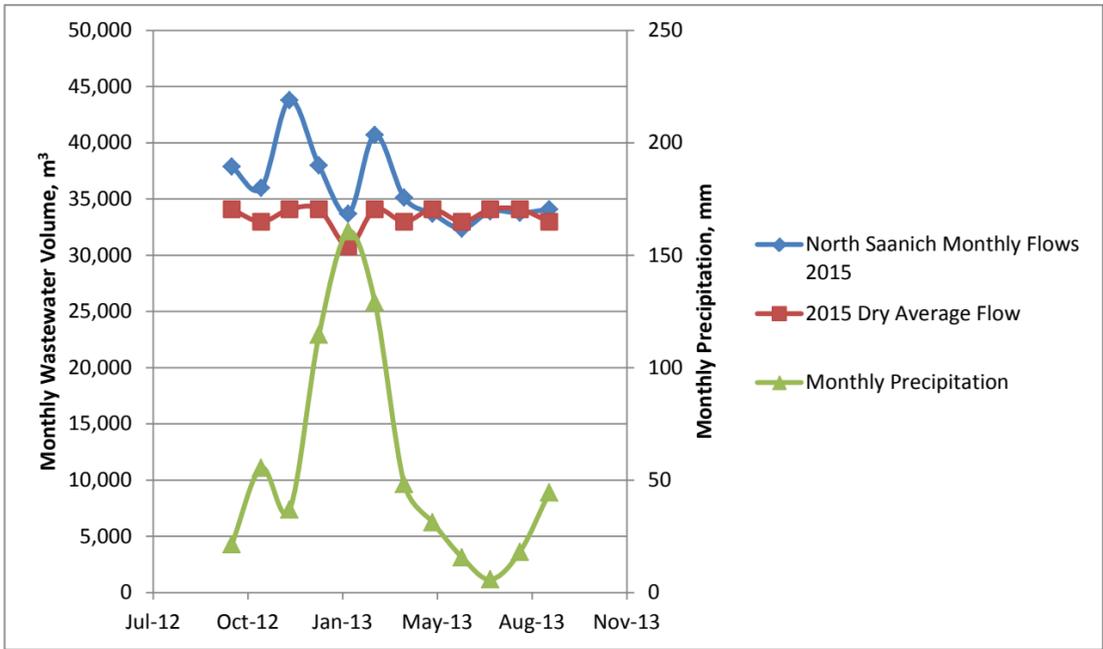
Ted Robbins, B.Sc., C.Tech.  
General Manager, Integrated Water Services  
Concurrence

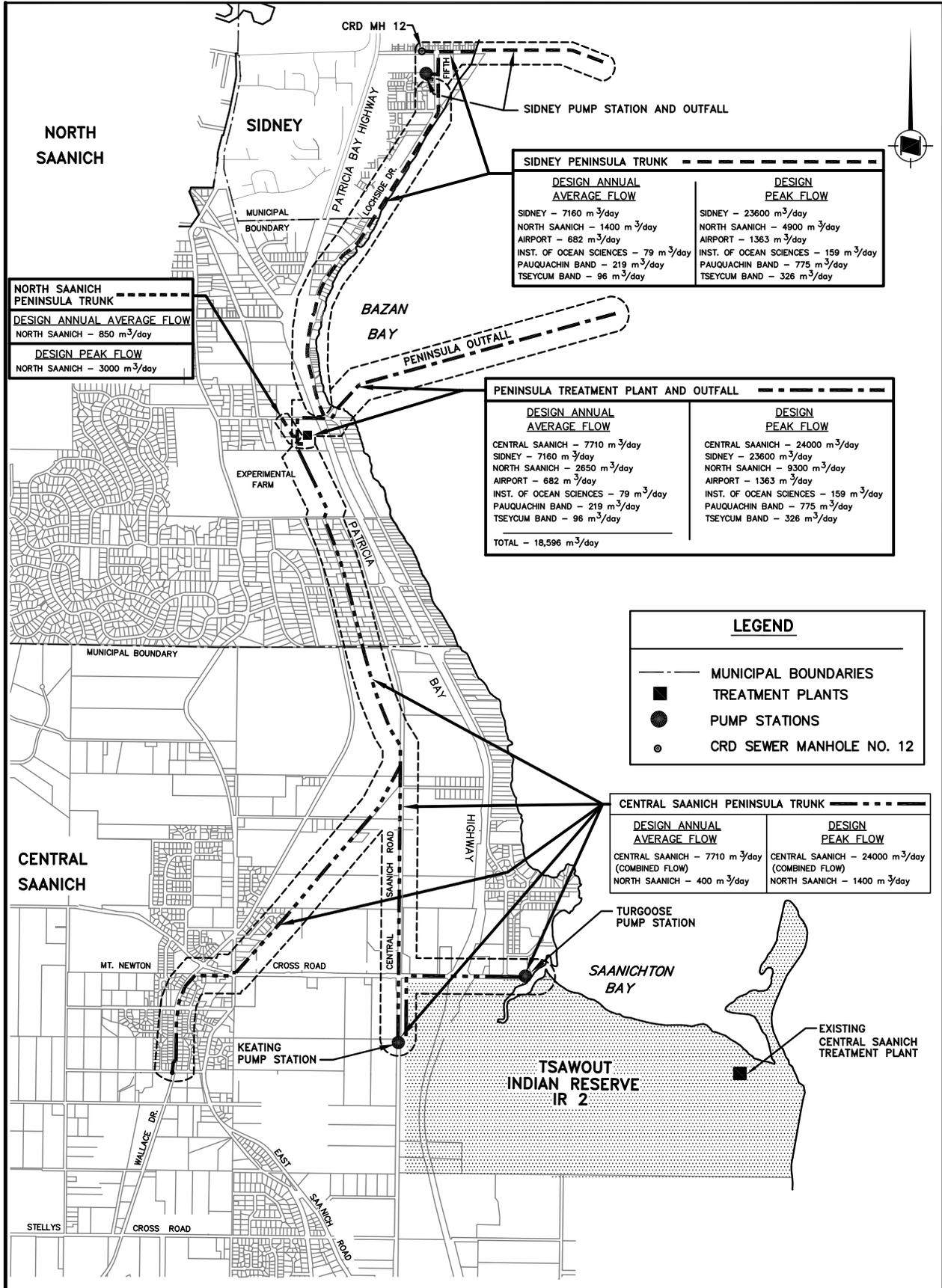
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- Attachments: Appendix 1 – 2012 – 2015 Monthly Wastewater Flows vs Precipitation  
Appendix 2 – CRD Bylaw 2439, Schedule A  
Appendix 3 – Saanich Peninsula Liquid Waste Management Plan, Section 4.2









<b>NORTH SAANICH PENINSULA TRUNK</b>
<b>DESIGN ANNUAL AVERAGE FLOW</b>
NORTH SAANICH - 850 m <sup>3</sup> /day
<b>DESIGN PEAK FLOW</b>
NORTH SAANICH - 3000 m <sup>3</sup> /day

<b>SIDNEY PENINSULA TRUNK</b>	
<b>DESIGN ANNUAL AVERAGE FLOW</b>	<b>DESIGN PEAK FLOW</b>
SIDNEY - 7160 m <sup>3</sup> /day	SIDNEY - 23600 m <sup>3</sup> /day
NORTH SAANICH - 1400 m <sup>3</sup> /day	NORTH SAANICH - 4900 m <sup>3</sup> /day
AIRPORT - 682 m <sup>3</sup> /day	AIRPORT - 1363 m <sup>3</sup> /day
INST. OF OCEAN SCIENCES - 79 m <sup>3</sup> /day	INST. OF OCEAN SCIENCES - 159 m <sup>3</sup> /day
PAUQUACHIN BAND - 219 m <sup>3</sup> /day	PAUQUACHIN BAND - 775 m <sup>3</sup> /day
TSEYUCUM BAND - 96 m <sup>3</sup> /day	TSEYUCUM BAND - 326 m <sup>3</sup> /day

<b>PENINSULA TREATMENT PLANT AND OUTFALL</b>	
<b>DESIGN ANNUAL AVERAGE FLOW</b>	<b>DESIGN PEAK FLOW</b>
CENTRAL SAANICH - 7710 m <sup>3</sup> /day	CENTRAL SAANICH - 24000 m <sup>3</sup> /day
SIDNEY - 7160 m <sup>3</sup> /day	SIDNEY - 23600 m <sup>3</sup> /day
NORTH SAANICH - 2650 m <sup>3</sup> /day	NORTH SAANICH - 9300 m <sup>3</sup> /day
AIRPORT - 682 m <sup>3</sup> /day	AIRPORT - 1363 m <sup>3</sup> /day
INST. OF OCEAN SCIENCES - 79 m <sup>3</sup> /day	INST. OF OCEAN SCIENCES - 159 m <sup>3</sup> /day
PAUQUACHIN BAND - 219 m <sup>3</sup> /day	PAUQUACHIN BAND - 775 m <sup>3</sup> /day
TSEYUCUM BAND - 96 m <sup>3</sup> /day	TSEYUCUM BAND - 326 m <sup>3</sup> /day
<b>TOTAL - 18,596 m<sup>3</sup>/day</b>	

<b>LEGEND</b>	
	MUNICIPAL BOUNDARIES
	TREATMENT PLANTS
	PUMP STATIONS
	CRD SEWER MANHOLE NO. 12

<b>CENTRAL SAANICH PENINSULA TRUNK</b>	
<b>DESIGN ANNUAL AVERAGE FLOW</b>	<b>DESIGN PEAK FLOW</b>
CENTRAL SAANICH - 7710 m <sup>3</sup> /day	CENTRAL SAANICH - 24000 m <sup>3</sup> /day
(COMBINED FLOW)	(COMBINED FLOW)
NORTH SAANICH - 400 m <sup>3</sup> /day	NORTH SAANICH - 1400 m <sup>3</sup> /day

<b>CAPITAL REGIONAL DISTRICT ENGINEERING</b>							
DESIGNED	M.C.W	<b>SCHEDULE 'A'</b>					
DRAWN	L.N.	<b>CRD PENINSULA SYSTEM AND</b>					
CHECKED		<b>DESIGN FLOW ALLOCATIONS</b>					
APPROVED	DATE AUG 3/01	SCALE N.T.S.	DWG. NO. 9-S121-1	REV. 1	SHT 1	OF 1	

**TABLE 4.1  
SOURCE CONTROL PROGRAM OBJECTIVES AND GOALS FOR THE YEAR 2000**

OBJECTIVE	GOAL
Protection of the Receiving Environment	To maintain or reduce effluent contaminant loadings to the receiving environment (continued industrial, commercial and institutional growth is anticipated for the Saanich Peninsula). <sup>1,2</sup>
Protection of Sewerage Works	To reduce blockage and corrosion of sewers and "blinding" of treatment plant screens.
Protection of Public Health	To meet WCB standards for ambient air levels of volatile organic compounds (VOC's) discharged from sewerage works. <sup>2</sup>
Protection of Sewage Sludge Quality	To meet B.C. guidelines for high grade agricultural and retail high grade sludge by 1999. <sup>2</sup>
Protection of Treatment Processes	To eliminate plant upsets due to inhibition of treatment processes by high contaminant loadings. <sup>2</sup>
Notes:	<ol style="list-style-type: none"> <li>1. Effluent contaminant loadings will be compared to 1996 levels calculated for Sidney and Central Saanich treatment plants.</li> <li>2. Ongoing influent, effluent and biosolids trend analysis will be used to identify contaminants of concern.</li> </ol>

#### **4.2 Reduction of Inflow and Infiltration to Sanitary Sewers**

##### Commitments

The Capital Regional District (CRD) and its participating member municipalities, namely the districts of Central Saanich and North Saanich, and the Town of Sidney, and those federal jurisdictions located on the Saanich Peninsula, namely the Tseycum, Pauquachin, Tsartlip and Tsawout Indian Bands, the Department of Transport and the Department of Fisheries and Oceans commit:

- To develop and carry out a detailed program for identification and sources and quantity of inflow and infiltration (I & I) by the end of 1999.
- To develop guidelines for use by the member municipalities and federal jurisdictions to prioritize areas within which rehabilitation works are warranted and cost effective.
- To provide additional funds for I & I reduction that are either economically or environmentally justified by avoidance of future costs to convey, treat and dispose of I & I, or by protecting effluent quality.
- Where rehabilitation works for I & I reduction are undertaken, to measure flows before and after carrying out such works, to document I & I expenditures and achievements, and to use this information to refine cost benefit curves developed to optimize expenditures.
- To standardize and pass appropriate bylaws, or amendments to bylaws, in each municipality or jurisdiction to reduce or eliminate the incidence of stormwater connections to the sanitary sewer system.

- That in areas of high infiltration, to address concerns of exfiltration from the systems to groundwater.
- That the CRD, as an aspect of operating the wastewater treatment plant, shall monitor flows from the participants and shall advise of the need for investigation of I & I problems.

Definitions:

**Inflow**

Inflow is rainwater which enters into the sanitary sewer systems through directly connected sources such as roof rainwater leaders, yard drains, catch basins, basement sump pumps or manhole lids or covers lying below grade.

**Infiltration**

Infiltration is groundwater which enters into cracks, joints or other defects in the sewer system. *Groundwater infiltration* refers to the movement of groundwater into the system where the sewer lies in a saturated zone. *Rainfall induced infiltration* is the seepage of rainwater through permeable soil into the sewer system.

Objectives of Inflow and Infiltration Reduction Program

The objective of the program is to evaluate and quantify I & I within each municipality or federal jurisdiction and, where required, to reduce I & I to levels that minimize total conveyance, treatment and disposal system costs, coincident with reduction of I & I induced overflows to acceptable levels, in accordance with guidelines contained in the (proposed) provincial *municipal sewage discharge criteria* and with those developed under this program.

The CRD, participating member municipalities and federal jurisdictions will achieve this objective by adopting programs to determine the nature and extent of I & I and to determine the expenditure on I & I that is economically justified by avoidance of increased costs to convey and treat the additional I & I. A preliminary implementation plan will be developed and its impact on overflows of wastewater to the environment will be assessed, as well as agreement of the plan with guidelines contained in the *municipal sewage discharge criteria*. A final implementation plan will be prepared for implementation by the municipalities, federal interests and the CRD.

**4.3 Wastewater and Marine Assessment Program**

Commitments

The Capital Regional District (CRD) and its participating member municipalities, namely the districts of Central Saanich, North Saanich and the Town of Sidney, commit to supply an appropriate level of wastewater treatment and outfall design/siting, to provide receiving environment and human health protection, both now and in the future, by developing and carrying out a pre- and post-discharge wastewater and marine assessment program and a long term pre- and post-discharge program.

**REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION**  
**MEETING OF THURSDAY, APRIL 16, 2015**

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**SUBJECT SAANICH PENINSULA WASTEWATER TREATMENT PLANT – BIOSOLIDS**  
**HISTORY AND OPERATION**

**ISSUE**

To present the history of Class A biosolids production at the Saanich Peninsula Wastewater Treatment Plant (SPWWTP).

**BACKGROUND**

In the 1990's, the Town of Sidney and District of Central Saanich were serviced by sewage treatment plants, which had insufficient capacity and did not meet the requirements of their discharge permits. With the support from Central Saanich, North Saanich and Sidney, the Capital Regional District (CRD) Board unanimously passed a resolution to prepare a Liquid Waste Management Plan (LWMP) on August 10, 1994. The need for a sub-regional plan that included wastewater service for the Pauquachin, Tseycum, Tsawout, and Tsartlip First Nations, Victoria Airport Authority, and the Institute of Ocean Sciences Centre was also recognized. The LWMP was developed to address the sewage treatment requirements, source control of contaminants, inflow and infiltration reduction, stormwater and septage management. The LWMP was approved by the BC Ministry of Environment November 8, 1996. The LWMP outlined commitments for wastewater treatment and disposal for residuals management directly related to biosolids, stated below:

*The Capital Regional District and its participating member municipalities commit to:*

- a) *Set as an objective the beneficial use of biosolids, and application to peninsula farmland as the primary option for beneficial use;*

The approval of the LWMP allowed for the design and construction of the SPWWTP, which was completed in January 2000. In order to meet the commitments of the LWMP, production of Class A biosolids at the SPWWTP started in March 2000.

A brief timeline of events since the SPWWTP started production of Class A biosolids follows:

- Initially, Class A biosolids were being distributed as a soil additive product to larger farms on the Saanich Peninsula. The land application was being conducted under the provincial Organic Matter Recycling Regulation (OMRR).
- In 2002, an independent audit was conducted as required by the LWMP; relevant pages are attached as Appendix A. The audit concluded that the CRD had fulfilled the commitment under the LWMP for seeking options for the beneficial use of biosolids to farmland on the Saanich Peninsula.
- Between 2004 and 2006, the CRD held an agreement with Sylvis Environmental, who received the Class A biosolids and produced a blended soil product that was used as cover in the gravel pit reclamation process at Producer's Pit on the west shore. During this

contract approximately 1,300 tonnes per year of biosolids were being produced and beneficially utilized.

- To augment the distribution program, between 2009 and 2011, the Class A biosolid product was made available in smaller quantities to residential customers under the 'Pengrow' label. Approximately 180 tonnes per year were being produced for this purpose.
- At the July 13, 2011 CRD Board meeting, a motion to Protect Local Farmland and to Harmonize Sewage Treatment Strategies within the CRD was presented, effectively banning the production of biosolids at CRD regional facilities and the land application of Class A biosolids within the CRD. The CRD Regional Growth Strategy - protecting the "integrity of rural communities" and "regional green and blue spaces", and managing "natural resources and environmental sustainability" are important – and the Capital Region Food and Health Action Plan – "improving population health and regional food security" were cited, with concerns regarding "polycyclic aromatic hydrocarbons, heavy metals, pharmaceuticals and other emerging compounds of concern on land, in food, and in the regional water table" included. The motion was carried pending additional information and amendments to the motion. Meeting minutes are attached.
- The CRD Board received a motion that biosolids from SPWWTP could be used at Hartland as landfill capping at the October 12, 2011 meeting. The motion was carried pending additional information.
- The SPWWTP ceased production of Class A biosolids by the end of 2011 and disposed of all treatment residuals as controlled waste at the Hartland landfill.
- The SPWWC directed staff to proceed with an invitation for Expressions of Interest in order to find an alternative beneficial use for the biosolids at its November 10, 2011 meeting.
- Staff reported at the April 19, 2012 SPWWC meeting that a total of 6 companies submitted Expressions of Interest, all proponents were offering to manage the biosolids via land application. This was contrary to the CRD Board resolution and all Expressions of Interest were rejected by the Commission.
- In order to keep the LWMP residuals management commitment current, and as directed by the SPWWC at its April 2012 meeting, staff submitted a letter to Ministry of Environment proposing an amendment to the LWMP. The amendment would permit hauling of all SPWWTP sludge to Hartland landfill as an interim solution and harmonize the current biosolids management plan with the CRD's Core Area LWMP biosolids management strategy as the long-term solution.
- At the October 30, 2013 CRD Board meeting, a review of the Regional Biosolids Management Policy was conducted. The policy adopted July 13, 2011 regarding the banning of the land application of biosolids was confirmed. Meeting minutes are attached.

### Current Biosolids Production

On average, SPWWTP produces approximately 300 tonnes per month of sludge (not Class A biosolids) for an annual production of approximately 3,600 tonnes. Sludge is currently hauled to the Hartland landfill for disposal with a 2015 budgeted hauling and annual disposal cost of approximately \$450,000, or approximately \$125 / tonne, including trucking and tipping. As indicated in the 2013 Stantec Saanich Peninsula Wastewater Strategic Plan, to resume Class A biosolids production, significant capital expenditures will be required due to the condition of the thermoblender and lime addition equipment and the need to construct a permanent curing building with odour management equipment.

### Future Plans for Biosolids

Under the currently approved Core Area LWMP, a resource recovery centre was proposed at the Hartland landfill that would treat the sludge from the Core Area wastewater treatment plant, as well as the Saanich Peninsula wastewater treatment plant, through a thermophilic anaerobic digestion process. The facility would capture biogas that would be upgraded to biomethane (for use in the natural gas system), recover waste heat, dewater and dry the digested biosolids for use as a fuel, and recover phosphorous for use as a fertilizer. However, this plan is currently on hold, while new treatment solutions are being considered by the Core Area Eastside and Westside participants through select committees of the Core Area Liquid Waste Management Committee. The attached work plan sets out the current proposed timeline to develop a new solution for wastewater treatment in the Core Area and complete new planning and implementation phases. Based on this work plan, it is anticipated that by the end of December 2015, a new Core Area wastewater treatment plan will be presented to the CRD Board that will include a solution for residuals management. Staff will continue to ensure that the incorporation of sludge from the SPWWTP remains a consideration in the Core Area project as new solutions are being developed. Once there is further direction on the Core Area wastewater treatment plan with respect to residuals management, staff can provide a report to the SPWWC so that next steps can be considered.

### **ALTERNATIVES**

1. That the Saanich Peninsula Wastewater Commission receive the staff report for information and direct staff to provide a follow-up report in December 2015 – January 2016 with options for next steps regarding biosolids management.
2. That the Saanich Peninsula Wastewater Commission receive the staff report for information and request additional information from CRD staff.

### **IMPLICATIONS**

Alternative 1 – Should this alternative be chosen, no further action will be taken at this time. CRD staff will prepare a follow-up staff report when the Core Area has defined a solution.

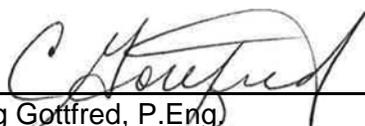
Alternative 2 – Staff will receive direction from the Commission and reply accordingly.

### **CONCLUSION**

The Saanich Peninsula Wastewater Treatment Plant produced Class A biosolids prior to the CRD ban and land application of biosolids based on environmental and health concerns. Since the ban, the treatment plant has ceased production and will require equipment replacement to resume biosolids production.

### **RECOMMENDATION**

That the Saanich Peninsula Wastewater Commission receive the staff report for information and direct staff to provide a follow-up report in December 2015 – January 2016 with options for next steps regarding biosolids management.



Craig Gottfred, P.Eng.  
Manager, Wastewater Engineering  
and Planning



Dan Robson,  
Manager, Saanich Peninsula & Gulf Islands  
Concurrence



Peter Sparanese, P.Eng.  
Senior Manager, Infrastructure Engineering  
and Operations  
Concurrence



Ted Robbins, BSc, CTech  
General Manager, Integrated Water  
Services  
Concurrence

DP:mm

Attachments:

- Appendix A Saanich Peninsula Liquid Waste Management Plan Section 4.4.3
- Appendix B 2002 5-Year Independent Audit, page 43
- Appendix C July 13, 2011 CRD Board Motion to Protect Local Farmland and to Harmonize Sewage Treatment Strategies within the CRD
- Appendix D October 30, 2013 CRD Board Motion to Carry the Review of Regional Biosolids Policy
- Appendix E Core Area Proposed Work Plan Overlay

APPENDIX A

**Attachment A**

**AMENDMENT NO. 3**

Amendment No. 3 deletes the current Section 4.4.3 which is as follows:

**4.4.3 Residuals Management:**

The Capital Regional District and its participating member municipalities commit to implementing the following Biosolids Management Plan:

Commitments

- pursue an effective and diversified program for the beneficial use of Class A biosolids that incorporates economically viable and long-term solutions
- mitigate nuisances associated with the production and application of biosolids including odour, noise, truck traffic and dust
- manage biosolids to ensure that detrimental effects to public health and the environment are avoided.

**Biosolids Management Plan**

The CRD entered into a four-year contract with Sylvis Environmental Inc. commencing January 1, 2005, to deliver biosolids to Lehigh Northwest Materials Ltd. Producer's Pit in Colwood. Biosolids will be mixed with other materials at this location to fabricate top soil for reclamation of the mine site. One objective of this initiative is to develop public awareness and support within the community for the beneficial use of biosolids. This initiative also presents an opportunity to optimize the production process to achieve biosolids of exceptional quality and character for beneficial use.

Over the contract term, the CRD will identify and develop markets for future land application programs. Biosolids may be used to manufacture top soil for residential and commercial landscaping, nurseries and municipal parks and gardens. Biosolids may also be applied to farmland within the region including hayfields and pasture land.

As a contingency plan, in the event that beneficial use options fail, the CRD will haul sludge to Hartland landfill, which is owned and operated by the CRD. The CRD's Solid Waste Management Plan allows for the disposal of raw sludge at this site as a controlled waste.

Amendment No. 3 replaces the current Section 4.4.3 with the amended Section 4.4.3 as follows:

**4.4.3 Residuals Management:**

The Capital Regional District and its participating member municipalities commit to implementing the following Biosolids Management Plan:

Commitments

- pursue an effective and diversified program for the beneficial use of Class A biosolids that incorporates economically viable and long-term solutions
- mitigate nuisances associated with the production and application of biosolids including odour, noise, truck traffic and dust
- manage biosolids to ensure that detrimental effects to public health and the environment are avoided.

#### **Biosolids Management Plan**

The CRD has developed a "PenGrow" soil enhancer program that began as a pilot in 2008 at Hartland Landfill. Based on the success of this pilot program, it is planned to initially process about 300 tonnes of cured Class A biosolids and distribute it to the public at Hartland in bagged or bulk form. The plan is to then expand the "PenGrow" program to include processing and distributing the biosolids at the three Peninsula municipal public works yards.

The CRD plans to continue to seek opportunities to diversify biosolids beneficial use markets to include individual residences, commercial operations and farms.

In the long term, the CRD will ensure that the Saanich Peninsula biosolids management program will pursue any biosolids management opportunities that become available through the CRD's Core Area wastewater treatment project. There may be economies of scale savings to be achieved by managing the Core Area and Peninsula biosolids together.

As an interim plan, the CRD will continue to haul a portion of the sludge to Hartland landfill. The CRD's Solid Waste Management Plan allows for the disposal of raw sludge at this site as a controlled waste.

APPENDIX B

The Panel recommended that the need for disinfection should be re-evaluated within 10 years (i.e. by 2011) or sooner if one of the following conditions arises:

- Average effluent flow exceeds 15,000 m<sup>3</sup>/day
- Recommendation for an evaluation by the Marine Monitoring Advisory Committee
- Significant degradation in effluent quality (ten-fold increase in the annual mean over one year)

The evaluation is summarized in the Panel's report "*Saanich Peninsula Outfall Technical Water Quality Review Panel - Final Report*" (May 2001).

**Wastewater Treatment and Disposal Commitment #3a**  
**(Residuals Management)**

The Capital Regional District and its participating member municipalities commit to:

- a) set as an objective the beneficial use of biosolids, and application to peninsula farmland as the primary option for beneficial use;

**Status:** Commitment Fulfilled (Program Ongoing)

The CRD and the three Saanich Peninsula municipalities fulfilled this commitment upon adoption of the Saanich Peninsula Liquid Waste Management Plan. The CRD and member municipalities have maintained this commitment by actively seeking options for the beneficial use of biosolids to farmland on the Saanich Peninsula.

The CRD entered into a contract with Orca Environmental Corporation (Contract No. 99-1358) for the application of biosolids onto the Qualicum Farm lands. Unfortunately, Orca Environmental Corporation breached the terms of the contract and the contract was terminated on March 30, 2001 (Letter "*Termination of Contract 99-1358*", March 30, 2001).

The CRD is currently negotiating with a daffodil farm located on the Saanich Peninsula for the application of the biosolids onto farmland. The application plan has been forwarded to the District of Central Saanich for review and comments. With the adoption of the provincial "*Organic Matter Recycling Regulation*" (February 4, 2002), the negotiations are expected to be completed in 2002.

APPENDIX C

CRD Board Hotsheet (Action List)

-2-

July 13, 2011

**2. Grants-In-Aid**

- That the following grants-in-aid applications be approved for payment:
  1. Juan de Fuca Grants-in-Aid as approved by Director Hicks
    - a) Shirley Community Association \$4,800
  2. Salt Spring Island Grants-in-Aid as approved by Director Hendren
    - a) Canadian Red Cross \$5,014
  3. Southern Gulf Islands Grants-in-Aid as approved by Director Hancock
    - a) Mayne Island Integrated Water Systems Society \$3,607
    - b) Pender Community Transition Society \$2,000
    - c) Saturna Heritage Committee \$2,000

Diana Lokken

**5.3 ENVIRONMENTAL SUSTAINABILITY COMMITTEE – May 25, 2011**

**1. Motion to Protect Local Farmland and to Harmonize Sewage Treatment Strategies within the CRD – Director Lucas**

- Whereas the CRD is committed to developing regional sewage treatment strategies that have the lowest impact on both the environment and public health, and the highest resource recovery potential;

*And Whereas the Core Area Liquid Waste Management Committee has passed a motion banning the land application of biosolids in order to address legitimate public health and environmental concerns about the accumulation and dispersal of Polycyclic Aromatic Hydrocarbons, heavy metals, pharmaceuticals, and other Emerging Compounds of Concern (ECCs)<sup>1</sup> on our land, in our food, and in the regional water table;*

*And Whereas protecting the “integrity of rural communities” and “regional green and blue spaces”, and managing “natural resources and environmental sustainability” are important and explicit goals and responsibilities of the CRD as outlined in the Regional Growth Strategy (<http://tinyurl.com/65wdd8p>), and “improving population health and regional food security” are noted as Priority Actions in the Capital Region Food and Health Action Plan (<http://tinyurl.com/4xetqbz>);*

*Be it so moved that the CRD will harmonize current and long-term practices at all CRD-owned regional facilities and parks 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. ~~until technologies are put in place to effectively monitor and remove heavy metals, hydrocarbons, pharmaceuticals, and other Emerging Chemicals of Concern (ECCs);~~ and*

*Be it further moved that the CRD does not support the application of biosolids on farmland in the CRD under any circumstances ~~unless technologies are put in place to effectively monitor and remove heavy metals, hydrocarbons, pharmaceuticals, and other Emerging Chemicals of Concern~~, and let this policy be reflected in the upcoming Regional Sustainability Strategy.*

*\*Director Ranns objected to these phrases as they provided a loophole. Dir. Lucas accepted these as friendly amendments.*

Larisa Hutcheson

APPENDIX D



**Minutes of a Special Meeting of the Capital Regional District Board  
held Wednesday, October 30, 2013 in the Board Room, 625 Fisgard Street, Victoria, BC**

- PRESENT:** **Directors:** A. Bryson (Chair), D. Blackwell (Vice Chair), M. Alto, J. Brownoff, T. Daly, V. Derman, B. Desjardins, D. Fortin, P. Gerrard (for S. Brice), C. Hamilton, D. Howe, B. Isitt, N. Jensen, W. McIntyre, W. Milne, J. Ranns, K. Roessingh (for J. Mendum), V. Sanders (for F. Leonard), D. Screech (for G. Hill), L. Seaton, L. Wergeland and G. Young  
**Staff:** B. Lapham, Chief Administrative Officer; J. Hull, Interim Program Director, Core Area Wastewater Treatment Program; A. Sweetnam, Program Director, Core Area Wastewater Treatment Program; L. Hutcheson, General Manager, Parks and Environmental Services; D. Lokken, General Manager, Corporate Services; T. Robbins, General Manager, Integrated Water Services; M. Rachwalski, Acting General Manager, Planning and Protective Services; G. Harris, Senior Manager, Environmental Protection; S. Hallatt, Manager, Aboriginal Initiatives; A. Orr, Senior Manager, Corporate Communications; S. Norton, Deputy Corporate Officer; N. More (Recorder)
- ABSENT:** **Directors:** L. Cross, M. Hicks

The Chair called the meeting to order at 3:30 pm.

1. **APPROVAL OF THE AGENDA**

**MOVED** by Director Derman, **SECONDED** by Director Blackwell,  
That the agenda be approved.

2. **REPORT OF COMMITTEE OF THE WHOLE – October 30, 2013**

1. **Review of Regional Biosolids Management Policy**

**MOVED** by Director Derman, **SECONDED** by Director Isitt,  
That the current policy, adopted July 13, 2011, regarding the banning of the land application of biosolids be confirmed.

**CARRIED**  
**Blackwell, Bryson, Sanders, Young** **OPPOSED**

**MOVED** by Director Derman, **SECONDED** by Director Desjardins,  
That staff be directed to identify possible linkages between the region's solid waste and liquid waste management systems and report to the Environmental Services Committee.

**CARRIED**  
**Fortin, Young** **OPPOSED**

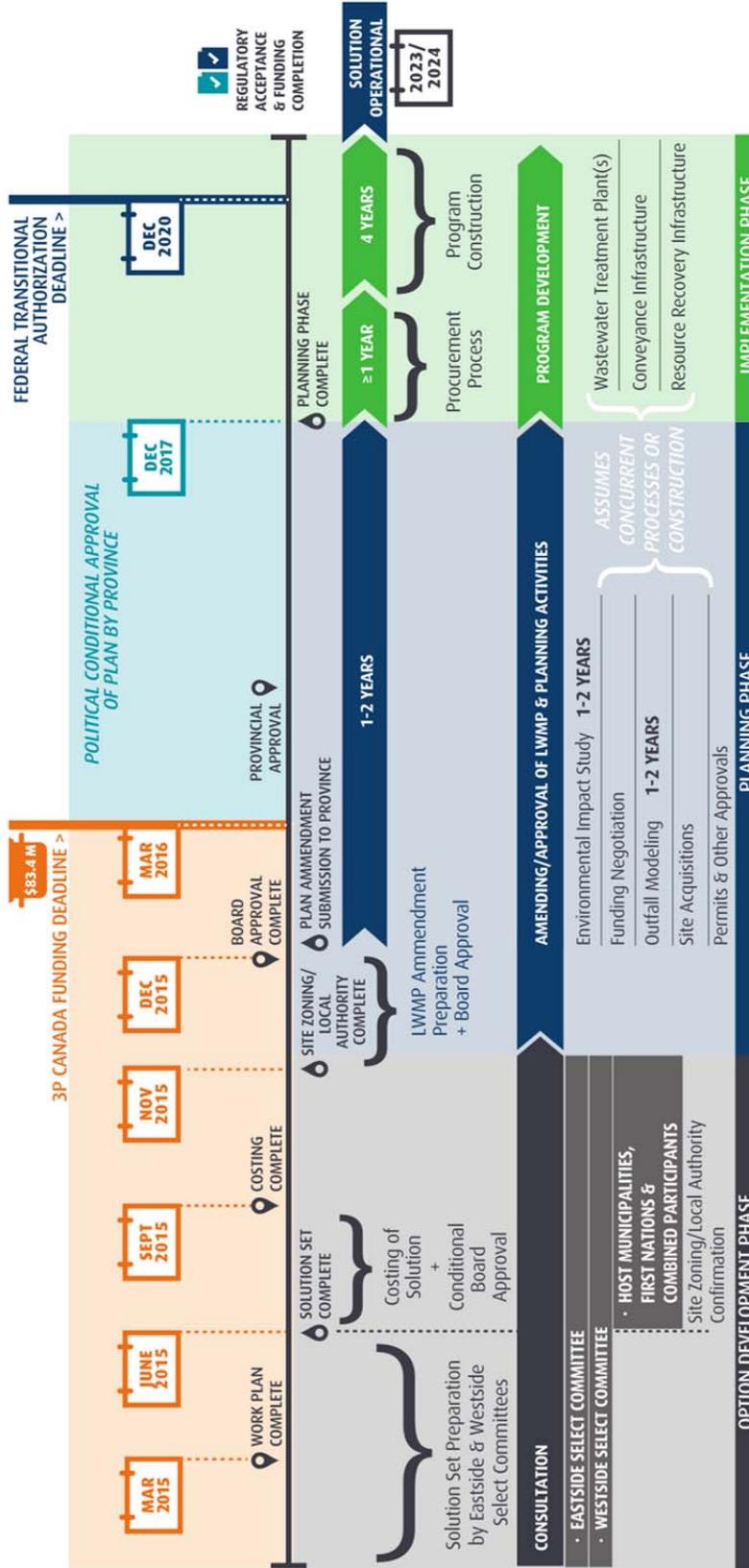
Appendix E

Appendix B

# Proposed Work Plan Overlay

## 3P CANADA FUNDING CONSIDERATIONS

OPTION DEVELOPMENT, PLANNING & IMPLEMENTATION PHASES





**REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION  
MEETING OF THURSDAY, APRIL 16, 2015**

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**SUBJECT    REGIONAL SOURCE CONTROL PROGRAM – 2013 ANNUAL REPORT**

**ISSUE**

To update the Saanich Peninsula Wastewater Commission (SPWWC) on the activities and accomplishments of the Regional Source Control Program (RSCP) in 2013.

**BACKGROUND**

On October 8, 2014, the Core Area Liquid Waste Management Committee received staff report #EPT 14-44, Core Area Liquid Waste Management Plan 2013 Annual Programs Report. The consolidated report includes a summary of the Regional Source Control Program 2013 Annual Report (executive summary attached as Appendix A). A copy of the annual report has been forwarded to the Ministry of Environment as recommended following approval by the Board. This staff report has been prepared for information and comment by the SPWWC. A detailed copy of the Regional Source Control Program 2013 Annual Report can be obtained upon request from the Environmental Partnerships Division (Partnerships).

**FINANCIAL IMPLICATIONS**

Preparation of the annual report was included in the RSCP budget for 2014.

**ENVIRONMENTAL IMPLICATIONS**

The RSCP five-year plan, guiding delivery of the program over the period 2011-2015, is attached as Appendix B. Progress on the strategies and activities of the plan in 2013, and their associated environmental implications, are outlined below under each of the plan's four main components.

**Coordinated Inspections and Monitoring**

In 2013, the RSCP continued to apply a "sector-by-sector" approach to inspections, focusing on six code-of-practice sectors (food service, fermentation, dental, photographic imaging, carpet cleaning and recreation facilities). This approach resulted in a greater number of inspections, repeat site visits and more comprehensive and coordinated investigations in comparison to 2012. Overall, business compliance rates remained high in 2013. The percentage of regulated businesses with proper waste treatment installed reached 97%, resulting in long-term reductions in the amounts of contaminants discharged to the local marine environment.

Efforts to share information and coordinate inspections within Partnerships (Cross Connection Control and Demand Management), regulatory partners (Vancouver Island Health Authority (VIHA) and municipal inspectors) and other CRD divisions have been very successful, with 500 coordinated inspections being completed in 2013.

### **Coordinated Outreach and Education**

Outreach and education efforts in 2013 focused on developing integrated messaging with other CRD programs. The RSCP was the main lead in developing and launching two “Green 365” campaigns in 2013. These residential campaigns successfully promoted environmental practices associated with indoor and outdoor home improvement.

Other outreach initiatives included distribution of point-of-sale material to local pharmacies and working collaboratively with community health care staff to promote proper waste medication disposal to residents. Medications returns within the region in 2013 increased by 33% over the amount collected in 2012.

Four high schools across the region submitted environmental plans that committed to reducing their school’s eco-footprint, raising student environmental awareness and changing behaviour as part of the “My Green High School Plan” challenge. Source control messaging was included and all four high schools received funding to implement their green plans. Approximately 4,000 students were reached through this campaign.

### **Program Review and Metrics**

A long-term assessment (1990-2011) of wastewater trends for Macaulay Point, Clover Point and the Saanich Peninsula wastewater treatment plant (SPWWTP) was undertaken in 2012. Trend results confirmed findings of previous studies, showing even stronger evidence of stable or decreasing loads of priority substances in wastewater. For example, at the SPWWTP, influent loads of seven toxic metals showed significant decreasing trends ranging from 4% to 26% per year.

In addition, all SPWWTP dewatered sludge samples analyzed in 2013 met Class “A” biosolids standards for metals. These trends and observed reductions are attributed to a combination of source control efforts, which include application of regulations, public and industry education regarding product selection and use of proper waste treatment and disposal practices. The next trend assessment, for the period 1990-2015, will be prepared by the Wastewater and Marine Environment Monitoring Program in 2016.

The RSCP significant incident response procedure was reviewed in 2013 following an incident involving a significant spill of Bunker “C” fuel oil into the CRD’s Lang Cove pump station.

Incident response training for Core Area and SPWWTP operations staff and RSCP inspectors was carried out early in 2014 using a modified procedure.

### **Research and Emerging Technologies**

A consultant was retained in 2013 to predict the environmental risks associated with specific emerging chemicals in local wastewater and to identify the main sources and potential source control strategies to reduce these risks. The study focused on the emerging contaminants triclosan, nonylphenol and nonylphenol ethoxylates. Project recommendations included: continuing periodic monitoring of wastewater levels of these chemicals; incorporation of information regarding avoidance of use of certain products and alternative product substitution

in outreach initiatives; and continuing to keep informed regarding federal and international reduction efforts.

A Royal Roads University project undertaken in 2013, in collaboration with the RSCP, reviewed strategies for reducing the amount of priority contaminants that are discharged into the sanitary sewer system by floor care service providers. Recommendations included: development of a best management practices (BMP) document specifically for hard floor surface cleaning and maintenance, and development and implementation of a monitoring program.

CRD staff undertook a stakeholder consultation process to assist with further development of BMPs for the arts and crafts sector in early 2013, including the preparation of a draft brochure for distribution within the sector. Engaged stakeholders supported forming a partnership with the CRD to deliver education and outreach materials to key groups within the sector and at associated events.

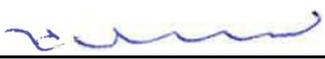
RSCP staff initiated Phase 1 of a pilot project to test the effectiveness of automatic grease recovery devices at reducing the amounts of fats, oil and grease discharged by food service sector establishments. Phase 2 of this project is continuing in 2015.

**CONCLUSION**

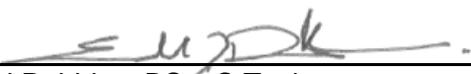
In addition to achieving high business compliance levels, maintaining a consistent inspection presence, further developing successful outreach initiatives and continuing decreasing trends for wastewater contaminants, the RSCP continued to be a key contributor to the mandate of the Environmental Partnerships Division. This included continuing coordinated inspections and development of integrated messaging with other programs within Parks & Environmental Services.

**RECOMMENDATION**

That the Saanich Peninsula Wastewater Commission receive the above report for information.

  
\_\_\_\_\_  
Heidi Gibson, M.N.R.M.  
Senior Manager, Environmental Partnerships

  
\_\_\_\_\_  
Larisa Hutcheson, P.Eng.  
General Manager  
Parks & Environmental Services  
Concurrence

  
\_\_\_\_\_  
Ted Robbins, BSc, C.Tech  
General Manager, Integrated Water Services  
Concurrence

TS:ce

Attachments: 2

## REGIONAL SOURCE CONTROL PROGRAM 2013 ANNUAL REPORT

### EXECUTIVE SUMMARY

#### Introduction

The purpose of the Capital Regional District (CRD) Regional Source Control Program (RSCP) is to protect sewage collection and treatment facilities, public health and safety, and the marine receiving environment by reducing the amount of contaminants that industries, businesses, institutions and households discharge into the district's sanitary sewer systems.

The CRD adopted a Sewer Use Bylaw in 1994 to regulate sanitary sewer discharges. Implementation of a region-wide program began in 1995 with regulation of larger industries under a permit system, followed by adoption of the first regulatory codes of practice (COP) for commercial sectors in 1999. By the end of 2005, COP were developed, adopted and implemented to regulate discharges from approximately 2,000 businesses within 11 sectors. The RSCP works to ensure that the bylaw and its associated policies and procedures are applied consistently within all CRD sewage collection areas.

As part of the Environmental Partnerships Division (Partnerships), the RSCP shares a mission to deliver collaborative and responsible environmental services that engage and inspire changes in behaviour for the stewardship, protection and well-being of our region.

#### 2013 Program Activities

Efforts to share information and coordinate inspections within Partnerships (Cross Connection Control and Demand Management), regulatory partners (Vancouver Island Health Authority (VIHA) and municipal inspectors) and other CRD divisions have been very successful, with 500 coordinated inspections being completed in 2013.

In 2013, the RSCP continued to apply the "sector-by-sector" approach to COP inspections, focusing on the fermentation, recreation facilities, dental, carpet cleaning, photographic imaging and food services sectors. This approach resulted in a greater number of inspections, repeat site visits and more comprehensive investigations in comparison to 2012. Overall, full compliance rates for COP, permitted industrial facilities and facilities operating under authorizations remained high in 2013.

A statistical assessment of local wastewater trends over the period 1990-2011 was undertaken in 2012. Trend results confirmed findings of previous studies, indicating stronger evidence of stable or decreasing loads in a range of priority substances in wastewater discharged from the region's main sewage outfalls. These continuing decreasing trends and recent changes in loads are thought to be largely due to a combination of the success of source control efforts at regulating contaminants, increasing public and industry awareness regarding product selection, and use of proper waste treatment practices. The next wastewater trend assessment is scheduled for 2015.

In 2013, outreach and education efforts focused on developing and delivering integrated messaging with other CRD programs but continued to maintain and adapt existing RSCP campaigns, while developing and initiating new campaigns. Integrated messaging included the development of eight industry videos and taking a lead role in the development of themed campaigns under the umbrella initiative "Green 365" and ensuring that new campaigns include linked key messaging.

The source control program continues to play an important role in achieving wastewater contaminant reductions and protecting sewage collection and treatment facilities throughout the region.

The 2013 annual report presents background information, a summary of program activities and accomplishments over the period January to December 2013, and a brief account of initiatives planned for 2014. The main activities and accomplishments of the program in 2013 are outlined below.

## **Industrial, Commercial and Institutional Liquid Waste Regulation**

- COP inspections emphasized customer service in 2013 and a more qualitative “sector-by-sector” approach, with increased customer support – often requiring repeat site visits.
- Inspections focused on the fermentation, recreation facilities, dental, carpet cleaning, photographic imaging and food services sectors in 2013, providing an opportunity to review each sector and prepare for a future amendment of each COP.
- The overall inspection levels in 2013 (1254) were significantly higher than those recorded in 2012 (815), 2011 (577) and 2010 (657).
- A total of 627 food services operations were inspected in 2013, with an additional 290 follow-up visits for compliance and/or further support. For comparison, 133 dental inspections were carried out with 13 follow-up visits.
- A comprehensive investigation of the fermentation sector was launched including a review of code feasibility for solids diversion and emerging markets potentially not considered during the development of the original COP for fermentation operations in 2002-2003.
- The COP for recreation facility operations was reviewed to assess whether the code was effectively addressing contaminants of concern for the sector. The review recommended a revised best management practice (BMP) guideline for the sector along with the transfer of facilities with high volume sewer discharge and offsite waste management to authorizations in lieu of continued regulation through the code.
- Engagement with the carpet cleaning sector in 2013 included a telephone survey to help better direct and solicit industry cooperation for a thorough inspection schedule (to be conducted in 2014).
- RSCP inspectors worked with 86 facilities currently regulated under the photographic imaging code. Continued work within this sector is expected for 2014, with recommendations for modifications to the code to reflect current industry practice.
- RSCP staff initiated a pilot project to test the effectiveness of automatic grease recovery devices in the food services sector. Phase I of the study was completed in 2013 and Phase II is scheduled for 2014.
- Compliance issues related to undersized treatment works and application of alternative treatment works at three automotive facilities were resolved after a thorough review and modified operating practices resulting in all three facilities moving to regulation under authorizations.
- All permit inspections scheduled at the beginning of 2013 were completed within the year. Permits discharging priority contaminants received at least one or two additional inspections.

## **Monitoring**

- Most monitoring targets set for 2013 were achieved.
- On average, there were two scheduled audit monitoring events per permit in 2013.
- COP monitoring focused on the food services sector in 2013, with replicate sampling of five different types of facilities over time to determine the effectiveness of grease interceptors at retaining grease between clean-outs. The results of this monitoring project were inconclusive; however, some recommendations for future action were made.

## **Enforcement**

- One ticket was issued and paid under the CRD Ticket Information Authorization (TIA) Bylaw in 2013.
- Two warning notices were issued in 2013 under the TIA Bylaw.
- No charges were laid under the Sewer Use Bylaw.

## **Contaminants Management**

- A consultant was retained to predict the environmental risks associated with specific emerging chemicals in local wastewater and identify the main sources and potential source control strategies

- to reduce these risks. The study focused on the emerging contaminants triclosan, nonylphenol (NP) and nonylphenol ethoxylates (NPEs). Project recommendations included: continuing periodic monitoring of wastewater levels of these chemicals; incorporation of information regarding avoidance of use of certain products and alternative product substitution in outreach initiatives; and continuing to keep informed regarding federal and international reduction efforts. A stand-alone source control campaign aimed at triclosan reduction was not recommended due to the significant reduction efforts currently underway at the federal level in both Canada and the US.
- A Royal Roads University project with the running title *Investigation of Floor Care Trade Wastes* reviewed strategies for reducing the amount of priority contaminants that are discharged into the sanitary sewer system by floor care service providers. The investigation included a literature review, an examination of standards and regulations from other areas in Canada and Australia and interviews with a number of floor care service providers. Recommendations included: development of a BMP document specifically for hard floor surface cleaning and maintenance, and development and implementation of a monitoring program.
- CRD staff undertook a stakeholder consultation process to assist with further development of BMPs for the arts and crafts sector in early 2013, including the preparation of a draft brochure for distribution within the sector. Engaged stakeholders supported forming a partnership with the CRD to deliver education and outreach materials to key groups within the sector and at associated events.

### **Contaminant Reductions**

- Wastewater trend assessment results for Macaulay and Clover points and Saanich Peninsula wastewater treatment plant (SPWWTP) influent and effluent monitoring over the period 1990-2011 have confirmed findings of previous studies indicating stronger evidence of stable or decreasing loads in a range of priority substances in wastewater discharged from the region's main sewage outfalls.
- Loads of priority metals (those presenting the greatest concern regarding aquatic toxicity), including cadmium, chromium, copper, lead, mercury, manganese, nickel and zinc, exhibited significant decreases ranging from 1% to 19% per year in core area effluent.
- Organic compounds, including certain polynuclear aromatic hydrocarbons, 1,4-dichlorobenzene and tetrachloroethene, showed significant decreases in loads ranging from 2% to 16% per year in core area effluent.
- A significant decrease of 6% per year was also observed for total oil and grease at core area outfalls.
- The next full wastewater trend assessment for the Core Area and Saanich Peninsula is scheduled for 2015.
- For the fifth consecutive year, Ganges wastewater treatment plant mixed liquor results met the Class A criteria for all metals, including mercury. SPWWTP dewatered sludge monitoring commenced in March 2013. All of these results also met the Class A criteria for metals.

### **Significant Incident Response**

- A new significant incident response procedure was developed by RSCP staff in 2013 for implementation in 2014. The implementation process will involve response training for Core Area and SPWWTP operations staff and RSCP inspectors. The report form and response procedure was reviewed in 2013 following an incident involving a significant spill of Bunker "C" fuel oil into the CRD's Lang Cove pump station.
- There were three incidents involving fats, oils and grease build-up and one involving oily waste in municipal sewer lines in 2013 that were investigated by RSCP staff.

## **Residential Outreach**

- Point-of-sale outreach material was distributed at local pharmacies and staff continued to work collaboratively with VIHA to promote proper waste medication disposal to residents. The CRD continued to have one of the highest medication return rates per capita amongst regional districts in the province. Over 11.7 tonnes of medications were collected in the region during 2013, representing a 33% increase over the amounts collected in 2012.
- The program continued to foster and support integrated and collaborative messaging with external partners and initiatives to promote general and specific source control practices. “My Green Plan” and “Tap by Tap” were two new initiatives supported by the RSCP in 2013.
- The RSCP was the main lead in developing and piloting a departmental integrated environmental campaign: “Green 365”. In 2013, two Green 365 campaigns were launched: “Green 365 Outdoor Living” and “Green 365 Indoor Living”. The campaigns focused on promoting environmental practices associated with outdoor and indoor home improvement respectively. Two further themes will be implemented in 2014.

## **Business Outreach**

- Inspectors continued to be the front line staff delivering RSCP outreach messaging to local businesses. Outreach included distribution of RSCP sector-based posters and guidebooks. Inspectors delivered messaging regarding cross connection protection, water use reduction, the regional kitchen scraps strategy and other CRD initiatives.
- RSCP staff, in partnership with VIHA, delivered two Medications Return Program education sessions in 2013 for community health care staff and private clinicians who work with home-care patients throughout the CRD.
- The 2013 CRD EcoStar award event was co-sponsored by RSCP and staff again participated in the evaluation committee for the Water Stewardship and Waste Reduction categories.
- Two industry educational videos were released in 2013, one for food services operations and the other for the automotive repair industry. Based on the positive feedback from stakeholders, 8 more videos (4 per sector) were developed in 2013 and targeted for release in 2014.
- RSCP staff continued to participate in business outreach events. Although there was only one applicable business venue available in 2013, which RSCP staff participated in, staff also presented directly to the BC Restaurant and Food Services Association and Victoria Chapter of the BC Hotel Association at their respective membership meetings.
- A survey of businesses was conducted in 2013 to evaluate how businesses are currently receiving information on environmental regulations and best management practices and how they would prefer to receive this information. The survey was designed to support developing tools for integrated messaging associated with environmental regulations and best management practices.

## **Education**

- RSCP messaging was included in two training workshops for local educators in 2013.
- There were four youth and community engagement events in 2013 which included RSCP messaging and information.
- RSCP educational information was included in 30 Environmental Partnerships community outreach events held throughout 2013.
- In 2013, as part of the “My Green High School Plan” challenge, four high schools from across the region submitted plans that demonstrated a commitment to environmental stewardship by reducing their school’s eco-footprint, raising student awareness and changing behaviour. All four high schools received funding to implement their green plans and approximately 4000 students were engaged at participating schools.

## **Regional Source Control Program Website**

- RSCP web pages continued to be a tool used by both residents and businesses to access source control information based on web page activity analysis. In 2013, most pages showed an increase in use over 2012.
- In conjunction with the launch of the new CRD corporate web site, RSCP web pages were significantly reorganized, redesigned and updated.

## **Partnerships Initiatives**

- In total, an estimated 500 coordinated inspections were conducted in 2013. These inspections included:
  - Providing access, information and/or services for two other programs within the division (Cross Connection Control and Demand Management).
  - Representation of other CRD programs and initiatives to customers (e.g., Regional Kitchen Scraps Strategy)
  - Collaboration with other municipal or VIHA staff (including combined on-site inspections) to resolve sewer incidents, share discharge information and enhance reporting procedures.
- Partnerships with external agencies in 2013 included: Metro Vancouver, VIHA, Royal Roads University, Camosun College, School District 61, British Columbia Pharmacy Association, Health Products Stewardship Association, Shaw Ocean Discovery Centre and federal agencies.
- RSCP continued to integrate Demand Management Program (DM) water audits as an expanded inspection service and work collaboratively with the Integrated Water Services Department, delivering audits for a major recreation facility, a First Nations band office and a complex building.
- RSCP staff met with Onsite Wastewater Management Program (OWMP) staff on a bi-weekly basis to exchange information and identify synergies for sharing messaging and efforts to maximize efficiencies. Both programs collaborated on a fermentation sector review to inspect wineries, cider operations and distilleries using septic systems to provide cross messaging and confirm best management practices.

## **Data Management**

- CRIMS Spatial, an integration of the RSCP regulatory database with the CRD geographic information system, was implemented in 2012. Operational integration of this application, for inspection planning purposes, continued throughout 2013.

## **Program Planning and Development**

- The RSCP continued to meet the commitments outlined in the Core Area and Saanich Peninsula LWMPs in 2013.
- The RSCP annual report for 2012 was presented to the Core Area Liquid Waste Management Committee, as part of a consolidated annual report for all Liquid Waste Management Plan programs, in October 2013. Copies of the annual report were subsequently sent to the Ministry of Environment.
- A work plan was developed for the RSCP in January 2013 as part of a divisional initiative. This plan was updated throughout the year, assisting in setting timelines and defining responsibilities for activities and projects within the overall context of the five-year plan for the period 2011-2015.
- The next five-year independent review of the program is scheduled for 2014. The findings of this review will assist in the development of a new plan for the period 2016-2020.

## **Performance Measures**

- The percentage of regulated businesses with proper waste treatment installed in 2013 was 97%.
- For the fifth consecutive year, the percentage of mixed liquor and dewatered sludge samples that meet Class A standards for metals was 100%.
- Percentage of priority contaminants showing no increase in loads to the core area environment was 95% – based on a recent trend assessment for 1990-2011 core area wastewater data.

## **Next Steps–2014/2015**

The main areas of program development in 2014/2015 include:

- Continued implementation of the RSCP five-year plan for 2011-2015.
- COP inspections, monitoring and sector investigations will focus on the carpet cleaning, food services, automotive repair, photographic imaging and laboratory sectors in 2014.
- Collaboration with internal and external partners to develop the division's "one window approach" to customer service for businesses.
- Implementation of two pilot "Green 365" campaigns ("Green 365 In the Kitchen" and "Green 365 Spring Cleaning") in 2014.
- Implementation of an arts and crafts environmental best management practices campaign in 2014.
- Continued research regarding priority and emerging contaminants.
- Initiation of Phase II of the automatic grease recovery device pilot project in 2014.
- Implementation of a new significant incident response procedure in 2014.
- Review and development of standard operating procedures for the RSCP.
- Review, update and amendment of the Sewer Use Bylaw.
- Preparation of a five-year review of the RSCP in 2014, covering the period 2009–2013

**REGIONAL SOURCE CONTROL PROGRAM  
FIVE-YEAR PLAN – 2011-2015**

MAIN STRATEGIES AND ACTIVITIES	TIMELINE
<b>1. Coordinated Outreach and Education</b>	
<ul style="list-style-type: none"> <li>• Develop, through stakeholder consultation, new business outreach materials for industrial, commercial and institutional sectors incorporating a “one-window” approach to service delivery.</li> </ul>	2011-2015
<ul style="list-style-type: none"> <li>• Enhance and update four existing “Clean Water Begins at Home” residential outreach campaigns, including:               <ul style="list-style-type: none"> <li>- Medications return—expand to home and community care and investigate container labelling</li> <li>- Launch Source Control 201, “Sustainable U”, social media campaign</li> </ul> </li> </ul>	2011-2015 2011 2012
<ul style="list-style-type: none"> <li>• Develop and launch new “Clean Water Begins at Home” initiatives including:               <ul style="list-style-type: none"> <li>- Promote alternative household cleaners through “Clean Green”</li> <li>- Promote proper hazardous waste and hobby waste disposal</li> </ul> </li> </ul>	2011-2015 2011 2013
<ul style="list-style-type: none"> <li>• Develop education plans for K-12, post-secondary and trade schools, incorporating Regional Source Control Program (RSCP) themes and information from other CRD programs</li> </ul>	2012
<ul style="list-style-type: none"> <li>• Enhance relationships with municipal and other agency staff by establishing procedures that facilitate efficient information exchange</li> </ul>	2012
<ul style="list-style-type: none"> <li>• Update business and residential components of RSCP website, incorporating interactive features and a “one-window” approach</li> </ul>	2015
<b>2. Coordinated Inspections and Monitoring</b>	
<ul style="list-style-type: none"> <li>• Coordinate inspections and audits for all Partnerships programs               <ul style="list-style-type: none"> <li>- Demand Management, Cross Connection Control, Onsite Systems, Stormwater Source Control (Saanich Peninsula)</li> </ul> </li> </ul>	2012
<ul style="list-style-type: none"> <li>• Focus inspection efforts on priority industrial, commercial and institutional sources               <ul style="list-style-type: none"> <li>- Hospitals, metal platers, ship waste treatment, vehicle washing, photo imaging, printing</li> </ul> </li> </ul>	2011-2015
<ul style="list-style-type: none"> <li>• Enhance all RSCP monitoring plans (annual reviews) for:               <ul style="list-style-type: none"> <li>- Permits, authorizations, codes of practice, key manholes</li> </ul> </li> </ul>	2011-2015
<b>3. Program Review and Metrics</b>	
<ul style="list-style-type: none"> <li>• Maintain existing program components to ensure Liquid Waste Management Plan commitments are met</li> </ul>	2011-2015
<ul style="list-style-type: none"> <li>• Review program measures of success</li> </ul>	2012
<ul style="list-style-type: none"> <li>• Review, develop and adopt standard operating procedures for all RSCP activities</li> </ul>	2013

<ul style="list-style-type: none"> <li>• Review, update and amend the Sewer Use Bylaw (coordinate with reviews of other program bylaws)</li> </ul>	2014
<ul style="list-style-type: none"> <li>• Coordinate data management and database development with all Partnerships programs</li> </ul>	2015
<b>4. Research and Emerging Technologies</b>	
<ul style="list-style-type: none"> <li>• Research priority contaminants, sources, reduction strategies and targets               <ul style="list-style-type: none"> <li>- Investigate use of molybdenum-based corrosion inhibitors in heating/cooling systems and potential local impacts</li> <li>- Develop a reduction plan for phthalates (plasticizers)</li> <li>- Research use of copper-based algaecides and local impacts</li> <li>- Investigate local use of nano-silver products and potential impacts</li> </ul> </li> </ul>	2011-2015  2011 2012 2013 2014
<ul style="list-style-type: none"> <li>• Research and pilot test new pre-treatment technologies for effectiveness at achieving contaminant reductions and meeting regulations</li> </ul>	2011-2015