



Making a difference...together

SAANICH PENINSULA WASTEWATER COMMISSION

Notice of Meeting on **Thursday, January 20, 2022 at 9:30 a.m.**

Meeting Room #6 Greenglade Community Centre, 2151 Lannon Way, Sidney BC

For members of the **public who wish to listen to the meeting** via telephone please call **1-833-353-8610** and enter the **Participant Code 1911461 followed by #**. You will not be heard in the meeting room but will be able to listen to the proceedings.

M. Doehnel
S. Duncan
D. Halldorson
D. Kelbert

Z. King
T. Lomas
C. McNeil-Smith
G. Orr

M. Weisenberger
R. Windsor

AGENDA

1. CALL TO ORDER

By General Manager, Integrated Water Services

2. TERRITORIAL ACKNOWLEDGEMENT

3. ELECTION OF CHAIR

(Pursuant to Section 2(e) Bylaw No. 3427)

Election conducted by General Manager, Integrated Water Services

4. ELECTION OF VICE CHAIR

(Pursuant to Section 2(e) Bylaw No. 3427)

Election conducted by General Manager, Integrated Water Services

5. APPROVAL OF AGENDA

6. ADOPTION OF MINUTES3

Recommendation: That the minutes of the October 21, 2021 Saanich Peninsula Wastewater Commission meeting be adopted.

7. CHAIR'S REMARKS

8. PRESENTATIONS/DELEGATIONS

Due to limited seating capacity this meeting will be held without the public present. A phone in number is provided above that will allow the public to listen to the meeting.

Presentation and Delegation requests can be made [online](#) or complete this [printable form](#) (PDF). Requests must be received no later than 4:30 p.m. two calendar days prior to the meeting.

*To ensure quorum, advise **Denise Dionne, 250.360.3087** if you cannot attend.*

**Saanich Peninsula Wastewater Commission
Agenda – January 20, 2022**

2

9. GENERAL MANAGER’S REPORT

- 9.1. Weather Event and Impacts [Verbal]
- 9.2. COVID-19 Update [Verbal]
- 9.3. Saanich Peninsula Wastewater Commission Orientation [Presentation].....6

10. COMMISSION BUSINESS

- 10.1. Saanich Peninsula Wastewater Treatment Plant Capacity Update 202223

Recommendation: That the Saanich Peninsula Wastewater Commission receive this report for information.

11. CORRESPONDENCE

- 11.1. Saanich Peninsula Liquid Waste Management Plan Audit Findings30

Recommendation: That the Saanich Peninsula Wastewater Commission receive this correspondence for information.

12. NEW BUSINESS

13. ADJOURNMENT

Next Meeting: Thursday, March 17, 2022



Making a difference...together

MINUTES OF A MEETING OF THE Saanich Peninsula Wastewater Commission, held Thursday, October 21, 2021 at 9:30 am, Meeting Room #6 Greenglade Community Centre, 2151 Lannon Way, Sidney BC

PRESENT: Commissioners: R. Barnhart (Chair); M. Doehnel (V. Chair); S. Duncan (EP); D. Kelbert (EP); B. Fallot for C. McNeil-Smith; G. Orr (EP); M. Weisenberger; M. Williams; R. Windsor (EP)

Staff: R. Lapham, CAO; T. Robbins, General Manager; I. Jesney, Senior Manager, Infrastructure Engineering; G. Harris, Senior Manager, Environmental Protection; S. Irg, Senior Manager, Infrastructure Water Operations (EP); J. Rilkoff, Senior Financial Advisor; D. Dionne (Recorder) ; M. Risvold, Committee Clerk

REGRETS: Z. King

EP = Electronic Participation

The meeting was called to order at 10:28 am.

1. TERRITORIAL ACKNOWLEDGEMENT

The Territorial Acknowledgement was provided in the meeting previous to this one.

2. APPROVAL OF AGENDA

MOVED by Commissioner Weisenberger, **SECONDED** by Commissioner Williams, That the agenda be approved as circulated.

CARRIED

3. ADOPTION OF MINUTES

MOVED by Alternate Commissioner Fallot, **SECONDED** by Commissioner Weisenberger, That the minutes of the May 20, 2021 Saanich Peninsula Wastewater Commission meeting be adopted.

CARRIED

4. CHAIR'S REMARKS

The Chair made no remarks.

5. PRESENTATIONS/DELEGATIONS

There were no presentations or delegations.

6. COMMISSION BUSINESS

6.1. 2022 Service Planning - Wastewater

T. Robbins spoke to Item 6.1 noting that the service plan documents will be going to the Committee of the Whole for final approval.

Discussion ensued regarding:

- Long term biosolids management plan.

- Ending the closure of Shellfish harvesting and impacts on Coles Bay.
- Review Coles Bay issues through the Harbour Environmental Action service.

MOVED by Commissioner Weisenberger, **SECONDED** by Commissioner Williams, The Saanich Peninsula Wastewater Commission recommends the Committee of the Whole recommend to the Capital Regional District Board:

That Appendix A, Community Need Summary – Wastewater be approved as presented and form the basis of the 2022-2026 Financial Plan.

CARRIED

6.2. Saanich Peninsula Wastewater Service 2022 Operating and Capital Budget

T. Robbins spoke to Item 6.2.

Discussion ensued regarding:

- Heat exchange issues at Panorama Recreation Centre, no financial implications due to having met the 10 year operating commitment. Staff will report early in the New Year the findings of a review of the issues and bring forward a long term plan.
- 2022 costs for biosolids, staff anticipate the budget is adequate.

R. Windsor left the meeting

- Loan authorization process planned for 2023 to fund the 2024-2028 capital plan, staff will work to find a balance with reserve contributions and debt balancing.

MOVED by Commissioner Weisenberger, **SECONDED** by Commissioner Williams, The Saanich Peninsula Wastewater Commission recommends that the Committee of the Whole recommend the CRD Board:

1. Approve the 2022 Saanich Peninsula trunk sewers, treatment and disposal operating and capital budget and the 2022 Saanich Peninsula Liquid Waste Management Plan (LWMP) program budgets including the LWMP administration budget, the Saanich Peninsula Stormwater Quality Management Program budget and the Saanich Peninsula Stormwater Source Control budget; and
2. Direct staff to balance the 2021 actual revenue and expense on the transfer to capital reserve fund.

CARRIED

7. COMMISSION MEMBERSHIP

Discussion regarding Agriculture and First Nations Representation and the member terms, for continuity would like to see longer term memberships recommended.

8. NOTICE(S) OF MOTION

There was no notices of motion.

9. NEW BUSINESS

Staff responded to a request for an update on the rotary press installation, noting that the press is arriving next week and site preparation is underway, installation should be completed by the end of February 2022.

10. ADJOURNMENT

MOVED by Commissioner Williams, **SECONDED** by Commissioner Weisenberger,
That the October 21, 2021 meeting be adjourned at 11:16 am.

CARRIED

CHAIR

SECRETARY

Saanich Peninsula Wastewater Service

Commission Orientation

January 20, 2022



Presentation Overview



- Service and Governance Framework
- Saanich Peninsula Liquid Waste Management Plan
- System Infrastructure Overview
 - Collection and Conveyance System
 - Wastewater Treatment Plant
 - Residuals Management
 - District Energy System
- Service Delivery - CRD Departmental Programs
 - Wastewater Infrastructure Operations & Engineering
 - Plant Maintenance & Fleet
 - Environmental Protection & Engineering
 - Stormwater Management
- Service Budgets
 - Operating & Capital
 - Budget Summaries

Service & Governance Framework

CRD



CRD Bylaws & Policies

- CRD Bylaw No. 2388 – Liquid Waste Management Authority Conversion – Saanich Peninsula Local Service Bylaw
- CRD Bylaw No. 3427 – Saanich Peninsula Wastewater Commission Bylaw (Amending Bylaw 4133)
- CRD Bylaw No. 3208 – Water & Wastewater Development Cost Charge Bylaw (Amending Bylaw 4251)
- CRD Bylaw No. 2922 – Sewer Use Bylaw (Amending Bylaw 4221)
- CRD Bylaw No. 4168 – Stormwater Regulation Bylaw (Amending Bylaw 4229)
- CRD Bylaw No. 3906 – Stormwater Source Control Bylaw (Amending Bylaw 4140)
- CRD Procurement (& Delegation) Policy

Service & Governance Framework

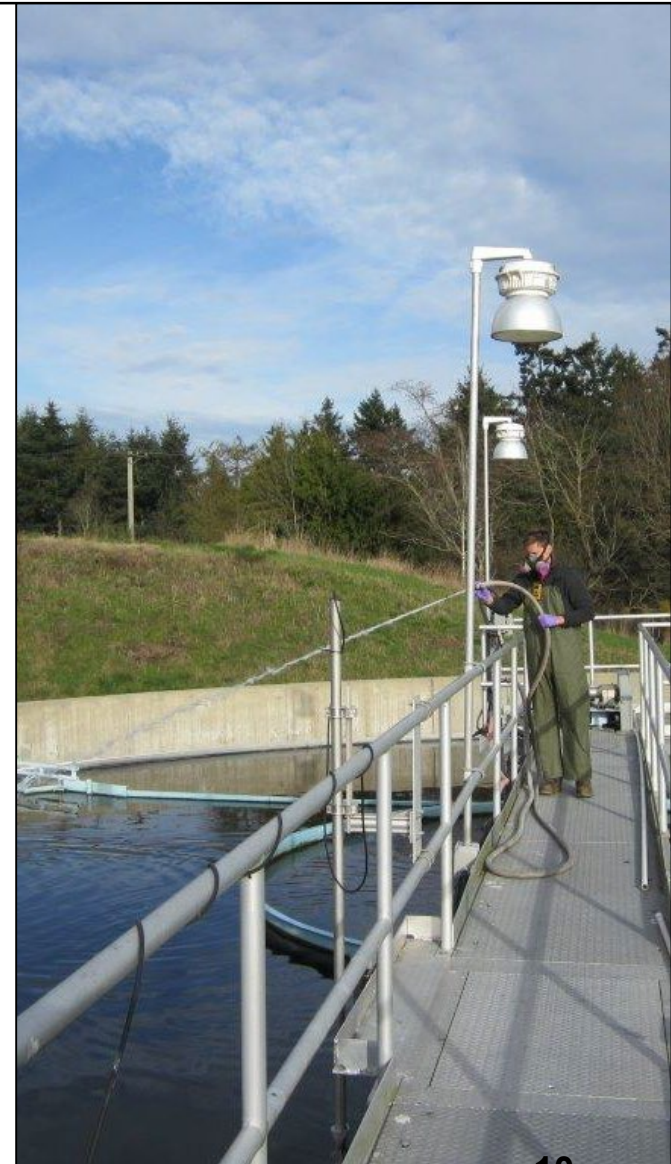


- CRD Board – Chair Colin Plant
- 2019 – 2022 Saanich Peninsula Water Commission – Chair & Vice Chair TBD
 - Cliff McNeil-Smith, Mayor, Sidney
 - Sara Duncan, Councillor, Sidney
 - Tony Lomas, Community, Sidney
 - Geoff Orr, Mayor, North Saanich
 - Murray Weisenberger, Councillor, North Saanich
 - Dwayne Halldorson, Community, North Saanich
 - Mike Doehnel, Peninsula Agricultural Commission
 - Ryan Windsor, Mayor, Central Saanich
 - Zeb King, Councillor, Central Saanich
 - David Kelbert, Community, Central Saanich

Saanich Peninsula Liquid Waste Management Plan

CRD

- Liquid Waste Management Plan for Central Saanich, North Saanich & Sidney – established in 1996
- Plan Commitments – CRD & Municipal Commitments:
 - Source Control Program
 - Inflow & Infiltration Reduction Program
 - Wastewater & Marine Assessment Program
 - Wastewater Treatment & Residuals Management
 - On-site Septic System & Septage Collection
 - Water Conservation & Wastewater Recycling
 - Stormwater Quality Program



System Infrastructure Overview

- Total length of wastewater collection & conveyance (gravity & pressure) mains across system: 14 kilometres
- Pipe diameters range from 300mm–750mm; late 1990s construction
- Pipe material types:
 - Concrete 7%
 - Steel 12%
 - PVC 81%
- Number of Pumping Stations: 3
- Secondary Wastewater Treatment Plant
- Bazan Bay Ocean Outfall: 1.5 km



System Infrastructure Overview

CRD



Wastewater Treatment Overview

Peninsula Treatment Plant Facts:

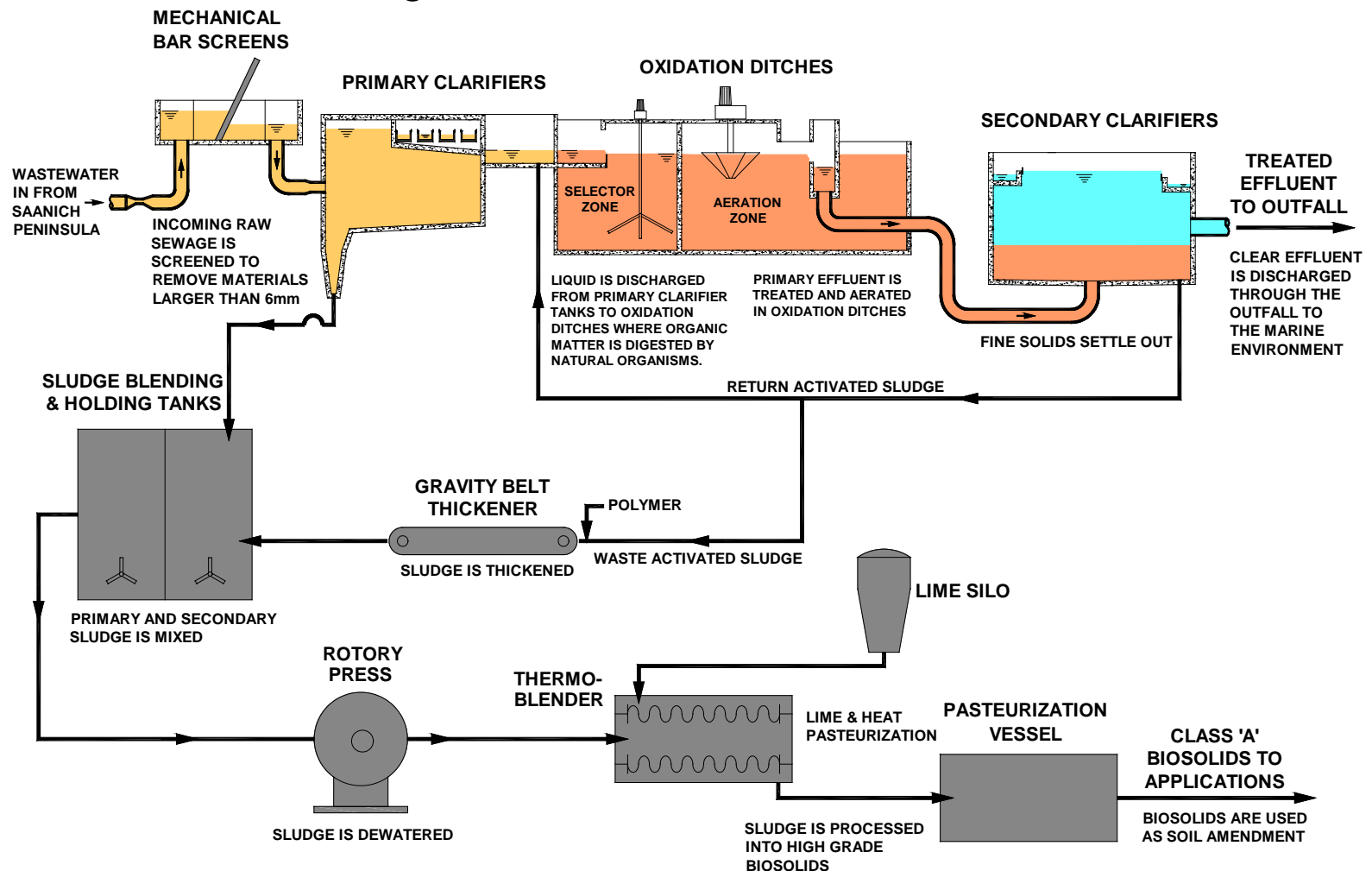
- Activated Sludge Secondary Treatment Plant
- Treatment Plant Average Dry Weather Flow Capacity: 18,500 m³/day
- Treatment Plant Peak Hour Capacity: 2,300 m³/hour
- Current Population Served: 37,000 people (estimated)
- Design Capacity Population Equivalent: 52,000 people
- Discharge Permit Effluent Quality Criteria:
 - Biochemical Oxygen Demand 45 mg/l
 - Total Suspended Solids 45 mg/l
 - Provincial Operational Certificate ME-15445



Wastewater Treatment Plant

CRD

Plant Process Flow Diagram



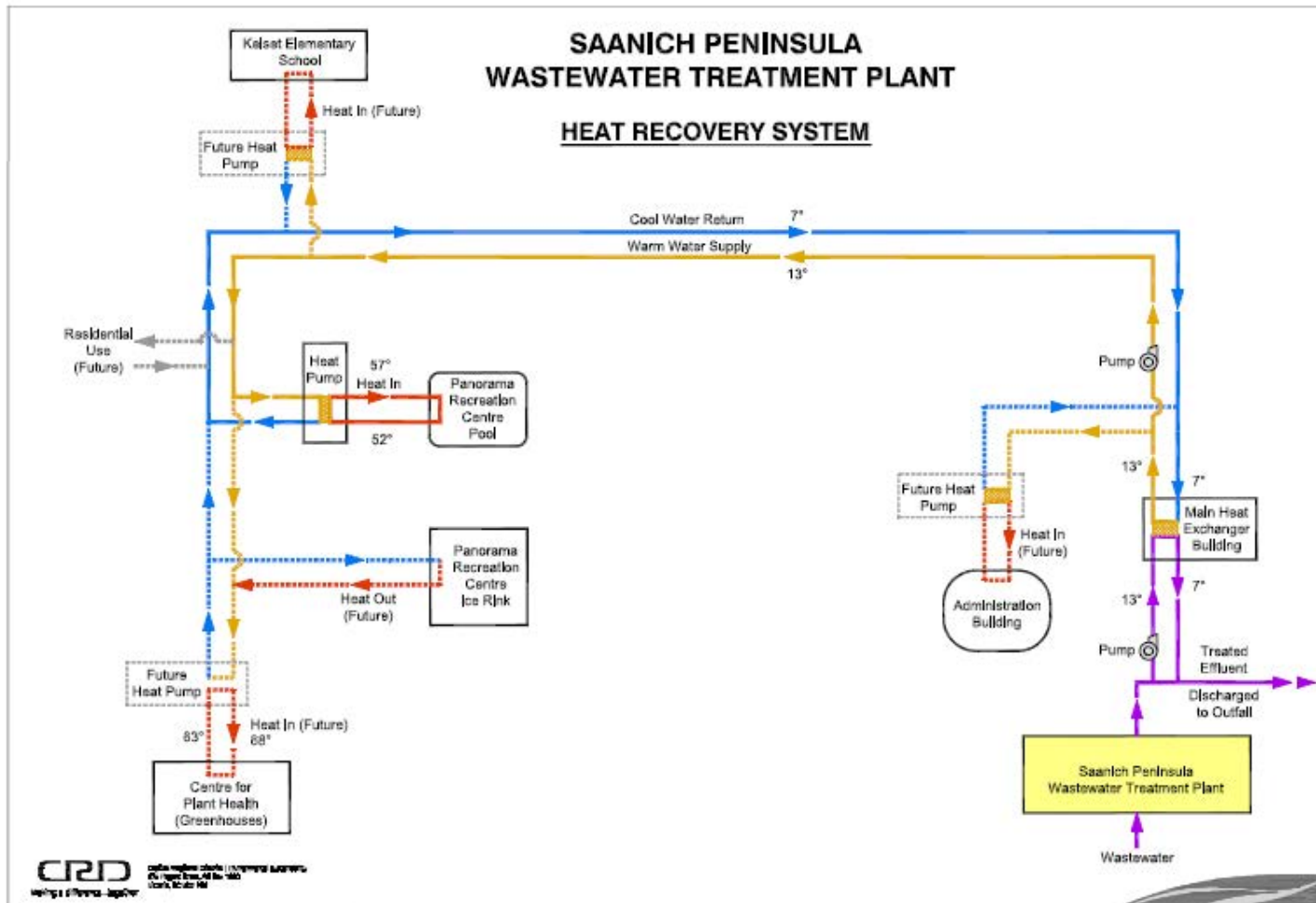
Residuals Management



- Plant Produces 3,200 metric tons/year of Raw Sludge
- Treated to produce Class A Biosolids at the Residuals Treatment Facility
- Currently beneficially used as an alternative fuel source at the Lafarge cement kiln in the Lower Mainland
- District Energy System – SPWWTP Heat Recovery System
 - System in service since 2011
 - Initial capital investment of \$2.99M – UBCM General Strategic Priorities Fund (Gas Tax Agreement Funds); 100% grant funding as pilot project
 - Capturing waste heat energy - utilized by Panorama Recreation Centre

Residuals Management

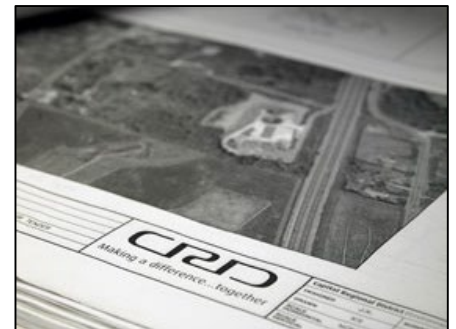
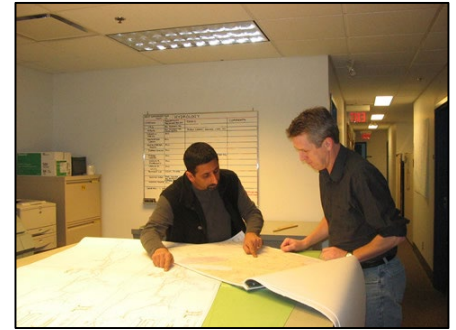
CRD



CRD Departmental Programs

CRD

- Wastewater Infrastructure Operations & Engineering
 - Wastewater System Operation and Maintenance
 - Capital Project Delivery
 - Engineering Design & Project Management
 - System Infrastructure Planning & Asset Management
 - Emergency Response
- Plant Maintenance & Fleet Management
 - Preventive Maintenance Planning & Management for Operations
 - Fleet: Service Vehicles & Heavy Equipment



CRD Departmental Programs

CRD

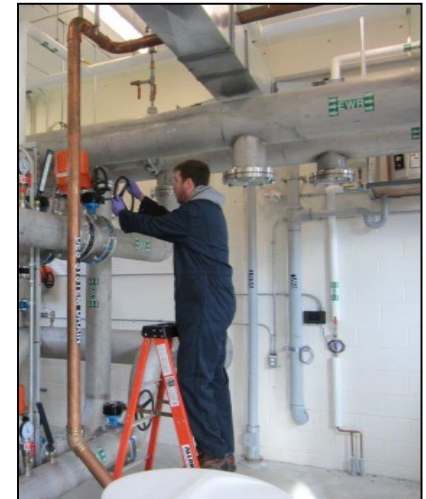
- Environmental Protection & Engineering
 - Marine Monitoring
 - Effluent Sampling and Lab Testing
 - Compliance Reporting
 - LWMP Administration
- Stormwater Management
 - Saanich Peninsula Stormwater Quality Program
 - Stormwater Source Control Program



Service Budgets

CRD

- Operating & Capital Budgets
 - Provides for all expenditures for Operation & Maintenance (O&M), administration of waste water service and capital projects
- Operating, Capital Project Lists & Supplemental budget items considered by Commission annually in September for recommendation to CRD Board
- Service Funding
 - 100% of annual operating costs funded by requisition to participants based on flow (with exception of revenue generated from sale of heat energy from DES)
 - Participants: Central Saanich, North Saanich, Sidney, Airport, Pauquachin FN, Tseycum FN, IOS
 - 100% of debt costs funded by requisition to participants calculated by capacity formula
 - Development Cost Charge Capital (DCC) – primarily funded through collection of DCC funds

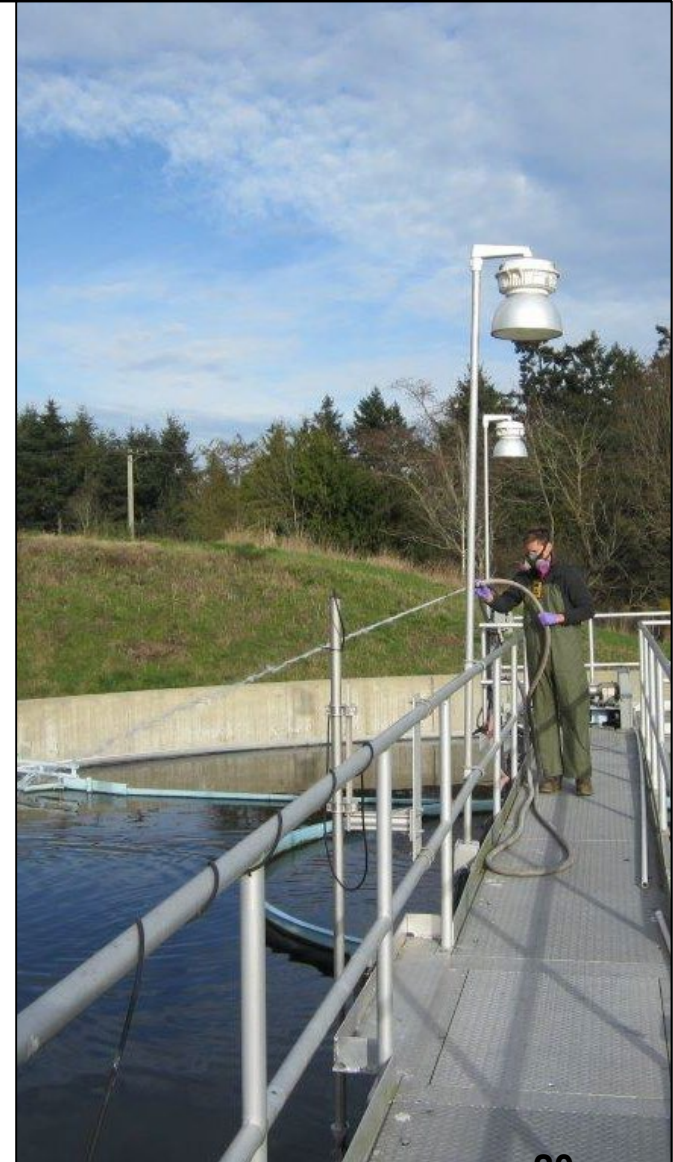


Service Budget Summaries

CRD

- 2022 Budgets:
 - Total Budget – Wastewater Operating & Capital: \$4.68 M
 - Total Budgets – LWMP & Stormwater Programs: \$293 K
 - Total Wastewater Capital: \$3.14 M
 - Total DCC Capital: \$0
 - Debt Servicing: \$0

- Reserve Funds (December 2021 balances)
 - Capital Reserve Fund \$1.35 M
 - DCC Reserve Fund: \$209 K
 - Equipment Replacement Fund \$499 K



Staff Support



- CRD Administration and Finance
 - Bob Lapham, CAO
 - Nelson Chan, CFO & GM, Finance & Technology
 - Jeremy Rilkoff, Accountant & Financial Analyst, Wastewater Services

- Saanich Peninsula Wastewater System Operations, Engineering & Commission Support
 - Ted Robbins, GM, Integrated Water Services
 - Matt McCrank, Senior Manager, IWS Wastewater Operations
 - Ian Jesney, Senior Manager, IWS Engineering
 - Jan van Niekerk, Senior Manager, Customer & Technical Services
 - Tanya Duthie, Manager, IWS Administration
 - Denise Dionne, Administration Coordinator & Commission Secretary

- Environmental Protection Programs
 - Larisa Hutcheson, GM, Parks & Environmental Services
 - Glenn Harris, Senior Manager, Environmental Protection

- Questions?

REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION MEETING OF THURSDAY, JANUARY 20, 2022

SUBJECT Saanich Peninsula Wastewater Treatment Plant Capacity Update

ISSUE SUMMARY

To provide an update on average annual and peak wastewater flows at the Saanich Peninsula Wastewater Treatment Plant for the period from October 1, 2020 to September 30, 2021.

BACKGROUND

The previous capacity update of the Saanich Peninsula Wastewater Treatment Plant (SPWWTP) was provided to the Commission at their January 16, 2020 meeting (see Appendix A for a copy of that staff report). The Commission received that report for information and directed staff to prepare an amendment to Bylaw No. 2388, to update the design flow allocations and any other required updates.

This report provides an update on the latest flow capacity at SPWWTP for last year (from October 1, 2020 to September 30, 2021) and the status of the Bylaw amendment. Flows are reported for that specific period so that the Capital Regional District (CRD) can use that data for annual financial requisitions in the upcoming budget year (i.e. 2022). The individual capacity allocations by participant and the actual measured average day and peak day flows, are noted in Tables 1 and 2, respectively.

Table 1: Annual Average Day Flow

Participant	Average Day Flow Capacity Allocation (m ³ /day)	Measured Avg. Day Flow (Oct 1, 2020 to Sep 30, 2021) (m ³ /day)	Percent (%) of Avg. Day Capacity Used
Central Saanich	7,710	3,970	51.5
Sidney	7,160	3,670	51.3
North Saanich	2,650	1,447	54.6
Institute of Ocean Sciences	79	11	13.9
Airport Authority	682	180	26.4
Pauquachin First Nation	219	81	37.0
Tseycum First Nation	96	41	42.7
TOTAL	18,596	9,400	50.5

Table 2: Peak Day Flow

Participant	Peak Day Flow Capacity Allocation (m ³ /day)	Measured Peak Day Flow (Oct 1, 2020 to Sep 30, 2021)		Percent (%) of Peak Day Design Capacity Used
	Design	(m ³)	Date	
Central Saanich	16,962	9,396	Jan 2, 2021	55.4
Sidney	15,752	11,717	Dec 21, 2020	74.4
North Saanich	5,830	3,182	Jan 2, 2021	54.6
Institute of Ocean Sciences	159 ¹	90	Dec 21, 2020	56.6
Airport Authority	1,363 ¹	1,037	Dec 21, 2020	76.1
Pauquachin First Nation	775 ¹	180	Jan 2, 2021	23.2
Tseycum First Nation	326 ¹	136	Jan 2, 2021	41.7
TOTAL	41,167	25,738	n/a	62.5

¹The allocations for IOS, Airport Authority, Pauquachin and Tseycum are all based on signed agreements with those participants.

Saanich Peninsula Wastewater Commission – January 20, 2022
Saanich Peninsula Wastewater Treatment Plant Capacity Update

2

As noted in the above tables, average day and peak day flow capacity used at the plant is at 50.5% and 62.5%, respectively. The peak day flow for the October 1, 2020 to September 30, 2021 period is less than it was in the previous report primarily because the storm events were not as significant in that time period. However, for the November 15, 2021 “atmospheric river” (100-year+) storm event, the peak flows did exceed the WWTP and Sidney pumpstation’s capacity (as noted in Table 3).

Table 3: Peak Day Flow for November 15, 2021 (100-year storm event)

Participant	Peak Day Flow Capacity Allocation (m ³ /day)	Measured Peak Day Flow (Nov 15, 2021)	Percent (%) of Peak Day Design Capacity Used
	Design	(m ³)	
Central Saanich	16,962	17,833 *	105.1 *
Sidney	15,752	15,253 *	96.8 *
North Saanich	5,830	9,282	159.2
Institute of Ocean Sciences	159 ¹	195	122.6
Airport Authority	1,363 ¹	2,513	184.4
Pauquachin First Nation	775 ¹	330	42.6
Tseycum First Nation	326 ¹	410	125.8
TOTAL	41,167	45,816	111.3

* The actual flow for Central Saanich and Sidney was higher than measured due to upstream overflows bypassing the meters.

The peak flow caused excessive pressure on the system and wastewater was bypassed at the plant and also discharged out the emergency outfall from Sidney pumpstation to alleviate the pressure (see Appendix B for a photo of Sidney pumpstation). Central Saanich staff also informed CRD that there were overflows from their collection system as well. The CRD informed the municipalities and the Province (Ministry of Environment) of the bypasses. Flows subsided the following day, and the plant and Sidney pumpstation were able to resume full conveyance and treatment.

The November 15, 2021 peak flow event highlights the need to reduce inflow and infiltration (I&I). The CRD is assisting participants in identifying the highest I&I areas so that staff can commence with I&I reduction measures to meet the commitments in the Saanich Peninsula Liquid Waste Management Plan (SPLWMP).

The CRD has also recently received a draft updated Asset Management Plan from AECOM which assessed the condition, capacity, and financial planning requirements for the Saanich Peninsula wastewater system. This information will be presented to the Commission when it is finalized, and it will be used to amend Bylaw No. 2388 to update the average and peak day flow allocations for the participants at each discharge location into the CRD system as directed by the Commission in the January 16, 2020 staff report.

ALTERNATIVES

Alternative 1

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

Alternative 2

That the report be referred back to staff for additional information.

IMPLICATIONS

There is still ample capacity for all participants in the Saanich Peninsula wastewater system under average annual flow conditions, but it is important for participants to reduce their inflow and infiltration to remain under peak flow capacity during storm events and meet their commitments in the SPLWMP.

CONCLUSION

Bylaw No. 2388 establishes the maximum allocated capacity for each of the Saanich Peninsula Wastewater Treatment Plant participants. The bylaw will be updated to design capacities at each discharge point into the Saanich Peninsula wastewater system. Based on the flow data for the period from October 1, 2020 to September 30, 2021, the plant operates at about 50.5% of its average daily capacity and 62.5% of its peak daily capacity. However, the 100-year storm event on November 15, 2021 resulted in most participants exceeding their peak day capacity and there were bypasses at the plant and at Sidney pumpstation. Ongoing effort is required by all participants to lower their inflow and infiltration so that peak flows do not exceed the capacity of the system and result in overflows.

RECOMMENDATION

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

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

ATTACHMENTS

Appendix A: Copy of January 16, 2020 staff report
 Appendix B: Photo of Sidney Pump Station

**REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION
MEETING OF THURSDAY, JANUARY 16, 2020**

SUBJECT Saanich Peninsula Wastewater Treatment Plant Capacity Update

ISSUE SUMMARY

To provide an average annual and peak wastewater flow update at the Saanich Peninsula Wastewater Treatment Plant for the period from October 1, 2018 to September 30, 2019.

BACKGROUND

The capacity of the Saanich Peninsula Wastewater Treatment Plant (SPWWTP), as originally designed in 1996 by Kerr Wood Leidel Gore & Storrie, was based on a population equivalent of 51,640 and a per capita discharge rate of 351 L/person/day, which equates to an average day flow (ADF) and peak day flow (PDF) of 18,150 m³/day and 39,930 m³/day, respectively.

In 2013, Stantec re-assessed the capacity of the SPWWTP and, based on actual loadings, they estimated that the plant could effectively operate with ADF of 23,000 m³/day. An updated PDF was not provided however, using the same multiplier of 2.2 as the original design, the PDF could be around 50,600 m³/day but likely lower because of limited headwork capacity at the plant.

The SPWWTP is regulated under Operational Certificate #ME-15445 as part of the Saanich Peninsula Liquid Waste Management Plan. The authorized flow rates noted in the certificate are 18,280 m³/day for ADF and 56,000 m³/day for max day flow.

Bylaw No. 2388 sets out the annual average day and peak day wastewater flow allocations to the participants who purchased capacity at the SPWWTP. The Bylaw was amended a couple of times however, the attached Schedules to the Bylaw that provide the Design Flow Allocations were not completely updated. Therefore, with some interpretation, the total allocated design flow in the Bylaw is 18,596 m³/day ADF and 60,610 m³/day PDF. The individual capacity allocations by participant and the actual measured average day and peak day flows, (for the period from October 1, 2018 to September 30, 2019), are noted in Tables 1 and 2, respectively. Flows are measured for that period so that Capital Regional District (CRD) can use that data for annual financial requisitions in the upcoming budget year (i.e. 2020).

Table 1: Annual Average Day Flow

Participant	Average Day Flow Capacity Allocation (m³/day)	Measured Average Day Flow (Oct 1, 2018 to Sep 30, 2019) (m³/day)	Percent of Average Day Capacity Used (%)
Central Saanich	7,710	3,721	48.3
Sidney	7,160	3,539	49.4
North Saanich	2,650	1,369	51.7
Institute of Ocean Sciences	79	15	18.9
Airport Authority	682	168	24.6
Pauquachin First Nation	219	77	35.3
Tseycum First Nation	96	32	33.2
TOTAL	18,596	8,921	47.9

Saanich Peninsula Wastewater Commission – January 16, 2020
Saanich Peninsula Wastewater Treatment Plant Capacity Update

There is still plenty of surplus capacity available at the WWTP under average day flow due to lower population growth and lower discharge rates than expected (ie. the per capita discharge rate is closer to 200-225 L/person/day due to the uptake of low flow fixtures over the last decade).

Table 2: Peak Day Flow

Participant	Peak Day Flow Capacity Allocation (m ³ /day)		Measured Peak Day Flow (between Oct 1, 2018 to Sep 30, 2019)		Percent of Peak Day Design Capacity Used
	Design	Bylaw	(m ³)	Date	
Central Saanich	16,962	24,000	11,008	Jan 4, 2019	64.9
Sidney	15,752	23,600	13,134	Jan 4, 2019	83.4
North Saanich	5,830	9,300	3,932	Jan 4, 2019	67.4
Institute of Ocean Sciences	159 ¹	2,610	113	Jan 4, 2019	71.1
Airport Authority	1,363 ¹		1,055	Dec 20, 2018	77.4
Pauqauchin First Nation	775 ¹	775	218	Jan 4, 2019	28.1
Tseycum First Nation	326 ¹	325	154	Jan 4, 2019	47.2
TOTAL	41,167	60,610	29,614	n/a	71.9

¹The allocations noted for IOS, Airport Authority, Pauqauchin and Tseycum are all based on signed agreements with those participants.

As noted in Table 2, and in the background above, there are some discrepancies between the original design flow capacity, operational certificate flow rate, and the Bylaw. It is recommended that the Bylaw be amended so that the design flow allocations are in agreement with the actual design capacities of the plant. Also, the design flow allocations in the Bylaw should be provided at each discharge location into the regional system so that the participants can plan for growth in each of their specific catchments.

Regardless, comparing the measured average and peak day flow, (from October 1, 2018 to September 30, 2019) to the design capacities noted in the tables, the percent used is about 48% and 72%. All participants are under their allocated average daily flow, but most are nearing their peak design flow allocation and are about three times the average annual daily flow. Although the plant is able to process the short duration peak flow, the high flows during storm events do indicate that inflow and infiltration (I&I) is a significant factor. Participants are encouraged to undertake the I&I reduction measures as outlined in the Saanich Peninsula Liquid Waste Management Plan.

ALTERNATIVES

Alternative 1

That the Saanich Peninsula Wastewater Commission:

1. Receives this report for information.
2. Directs staff to prepare an amendment to Bylaw No. 2388, to update the design flow allocations and any other required updates.

Alternative 2

The Saanich Peninsula Wastewater Commission requests additional information.

IMPLICATIONS

Alternative 1 – Updating the Bylaw will ensure that the allocated flows do not exceed the design capacity of the plant which would result in overflows to the receiving environment. Providing

Saanich Peninsula Wastewater Commission – January 16, 2020
Saanich Peninsula Wastewater Treatment Plant Capacity Update

3

allocated flows at each discharge point into the regional system will enable the participants to properly plan for future growth.

Alternative 2 – Staff can provide additional information to the Commission if required.

CONCLUSION

Bylaw No. 2388 establishes the maximum allocated capacity for each of the Saanich Peninsula Wastewater Treatment Plant (SPWWTP) participants. The Bylaw needs to be updated to reflect the actual design capacities of the regional conveyance system and the SPWWTP. Based on last year's (from October 1, 2018 to September 30, 2019) flow data, the plant operates at about 48% of its average daily capacity however during peak day flow it is at about 72% of its capacity. Ongoing effort is required by all participants to lower their inflow and infiltration so that peak flows do not exceed the capacity of the system and result in overflows.

RECOMMENDATION

That the Saanich Peninsula Wastewater Commission:

1. Receives this report for information.
2. Directs staff to prepare an amendment to Bylaw No. 2388, to update the design flow allocations and any other required updates.

Submitted by:	Malcolm Cowley, P.Eng., Manager Wastewater Engineering and Planning
Concurrence:	Ian Jesney, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence:	Ted Robbins, B. Sc., C. Tech., General Manager, Integrated Water Services
Concurrence:	Robert Lapham, M.C.I.P., R.P.P., Chief Administrative Officer

ATTACHMENTS

Appendix A: Bylaw 2388

Appendix B: Bylaw 2439

Photo of Sidney Pump Station



Photo of max wastewater level in Sidney pump station wet well staircase on Nov 15, 2021



Making a difference...together

Parks & Environmental Services
625 Fisgard Street, PO Box 1000
Victoria, BC, Canada V8W 2S6

T: 250.360.3078
F: 250.360.3079
www.crd.bc.ca

January 13, 2022

File: 0620-20
Saanich Peninsula Liquid Waste Management Plan

Mayors and Council
District of Central Saanich (municipalhall@csaanich.ca)
District of North Saanich (admin@northsaanich.ca)
Town of Sidney (admin@sidney.ca)

Dear Mayors and Council:

RE: SAANICH PENINSULA LIQUID WASTE MANAGEMENT PLAN – SUMMARY OF AUDIT FINDINGS

In 2019, the Capital Regional District (CRD) completed an audit of the Saanich Peninsula Liquid Waste Management Plan (the Plan). Your municipality is a participant in this plan.

Upon receipt of the audit report in June 2020, the Saanich Peninsula Wastewater Commission (SPWWC) directed “*staff to prepare a letter on behalf of the Commission, to the Saanich Peninsula member Councils and First Nations, to inform them of the non-compliance issues noted within the Liquid Waste Management Plan Audit report and to request that each Council report back to the Commission with their response to the non-compliance issues within six months.*”

BACKGROUND

Liquid Waste Management plans allow municipal and regional governments to develop community-specific solutions for wastewater management in accordance with provincial legislation. The current Plan was originally approved by the Minister of Environment in 1996, and was last consolidated with Amendment 4 in 2009.

The majority of Plan commitments have been completed, or were compliant, but a small number of the goals and commitments have not been met (Table 1).

Table 1: Summary of Audit Findings

Complete	Compliant ¹	Non-compliant, in progress	Non-compliant	Not applicable
37	67	5	7	5

Note: ¹Includes commitments rated as Compliant Ongoing Program and in Progress on Schedule

Non-compliant commitments are associated with municipal responsibilities and were related to:

- participation in the regional Onsite Program for regulation of septic systems.
- establishment of design criteria for stormwater retention ponds.
- resolution of stormwater runoff problems associated with Tseycum Creek.
- provision of oil/water separators for stormwater runoff.
- regular inspection and maintenance of storm drainage systems.
- working toward understanding the needs of agriculture and habitat in stormwater management.
- programming for reduction of Inflow & Infiltration in the sanitary sewer.

Mayors and Council**Districts of Central Saanich, North Saanich and Town of Sidney – January 13, 2022****Re: Saanich Peninsula Liquid Waste Management Plan – Summary of Audit Findings****Page 2**

More detailed information about the status of the Plan commitments can be found in the attached audit report.

CRD staff are currently initiating a review and update of the Plan. As this is a CRD-initiated update, there is no regulatory deadline date.

A soon-to-be-formed Saanich Peninsula Liquid Waste Management Plan Technical Advisory Committee (terms of reference attached) will be tasked with evaluating the technical and regulatory components of the Plan. They will provide advice and recommendations to the SPWWC regarding planning and priority setting for liquid waste management to ensure protection of human health and the environment into the future. Invitations have been sent to your engineering staff.

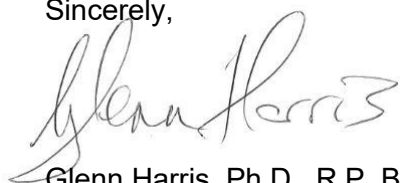
TIMELINE

CRD staff will coordinate and facilitate the Plan review process, and plan to initiate the dialog with a kick-off Technical Advisory Committee meeting early in 2022. The municipal input stage is anticipated to take about five to six months, with further interaction after that, as needed.

While the SPWWC requested that councils respond to the audit findings to the Commission itself, it may be more appropriate for Councils to work with, and advise through, your engineering staff representatives on the Technical Advisory Committee.

If you have questions, please contact me at 250.360.3090 or gharris@crd.bc.ca or Chris Lowe, Supervisor, Environmental Monitoring Programs at clowe@crd.bc.ca or 250.360.3296.

Sincerely,



Glenn Harris, Ph.D., R.P. Bio.
Senior Manager, Environmental Protection

CL:slw

Attachments: 2 Saanich Peninsula Liquid Waste Management Plan Audit Report – Final – Morrison Hershfield (November 28, 2019)

Terms of Reference, Saanich Peninsula Liquid Waste Management Plan
Technical Advisory Committee

cc: Larisa Hutcheson, General Manager, Parks & Environmental Services



Saanich Peninsula Liquid Waste Management Plan Audit Report - Final

Presented to:

Capital Regional District

Avrael Perreault, B. Sc.
Environmental Science Officer

Report No. 190313100.02

November 28, 2019

EXECUTIVE SUMMARY

The Saanich Peninsula Liquid Waste Management Plan (SPLWMP) was approved by the BC Minister of Environment in 1996 and has had four amendments, most recently consolidated in 2009. The Capital Regional District (CRD), on behalf of the Saanich Peninsula participant communities of Central Saanich, North Saanich, Sidney, Tseycum First Nation, Pauquachin First Nation, Tsawout First Nation and Tsartlip First Nation, manages wastewater and stormwater according to the strategies and activities outlined in the SPLWMP.

The final commitment in the Plan is a requirement to conduct an independent audit of compliance with Plan commitments on the third and fifth anniversaries of the Plan approval. This commitment was fulfilled with audits carried out in 2000 and 2002 by Carley Environmental. An independent audit of the Plan has not been carried out since 2002.

The Capital Regional District retained Morrison Hershfield (MH) to conduct this Plan audit, with the objective of determining and documenting the extent to which the CRD and the participating municipalities of Central Saanich, North Saanich, and Sidney have complied with the commitments described in the SPLWMP and four subsequent amendments. Member First Nation communities of Tseycum First Nation, Pauquachin First Nation, Tsawout First Nation and Tsartlip First Nation were not audited. It was communicated to MH that CRD is carrying out auditing and engagement regarding the SPLWMP with member First Nation communities internally.

The audit was conducted in general accordance with ISO 19011:2018 Guidelines for Auditing Management Systems. Auditing activities were focused on the identification and characterization of material issues of non-compliance with the commitments in the SPLWMP. Efforts were prioritized on assessing the status of commitments made in the amendments completed since the last Plan audit and on the commitments not complete at the time of the most recent Plan audit.

Audit findings are summarized broadly in Table 1. Commitment status is based on the related findings for all participating Saanich Peninsula member communities and the CRD. In order for a commitment to be listed as “Complete” or “Compliant” in this table, all members and the CRD were required to have completed or be in compliance with the commitment. In other words, one instance of non-compliance or non-compliant, in progress of a member or the CRD would lead to an overall determination of non-compliance. Definitions for the categories shown are provided in Section 2 Methodology.

Table 1: Summary of SPLWMP Audit Findings

Complete	Compliant*	Non-compliant, in progress	Non-Compliant	Not Applicable
37	67	5	7	5

** Includes commitments rated as Compliant Ongoing Program and In Progress On Schedule*