Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Regional Water Supply Commission

Wednesday, February 21, 2024 | **11:30 AM** | **6th Floor Boardroom, 625 Fisgard St., Victoria, BC V8W 1R7**

MEMBERS:
G. Baird (Chair); K. Harper (Vice Chair); J. Caradonna; N. Chambers; C. Coleman; Z. de Vries; S. Duncan; C. Graham; S. Gray; C. Green; K. Guiry; S. Hammond; K. Jordison; S. Kim; D. Lajeunesse; T. Morrison; T. Phelps Bondaroff; J. Rogers; C. Stock; M. Wagner; M. Westhaver; A. Wickheim

1. TERRITORIAL ACKNOWLEDGEMENT

2. APPROVAL OF THE AGENDA

3. ADOPTION OF MINUTES

3.1 24-185 Minutes of the January 17, 2024 Regional Water Supply Commission Meeting

Recommendation: That the minutes of the January 17, 2024 Regional Water Supply Commission meeting be adopted.

Attachments: January 17, 2024 Draft Minutes

4. CHAIR'S REMARKS

5. PRESENTATIONS/DELEGATIONS

5.1 Delegations

5.1.1 24-229 Delegation - Leslie Miller-Brooks; Resident of Saanich: Re: Agenda Items: 8.1. Motion with Notice: K. Jordison - Delay Action on the Regional Water Supply 2022 Master Plan.

6. GENERAL MANAGER'S REPORT

7. COMMISSION BUSINESS

7.1 24-186 2017 Regional Water Supply Strategic Plan - Close-out

Recommendation: 1. That staff be directed to update the Regional Water Supply Strategic Plan; and,

2. That staff provide the Regional Water Supply Commission an updated draft Strategic Plan prior to initiating public, First Nations, and stakeholder engagement on the Plan.

Attachments: Staff Report: 2017 Regional Water Supply Strategic Plan Close-out

Appendix A: 2017 Regional Water Supply Strategic Plan

Appendix B: Regional Water Supply Strategic Plan Close-out Summary Report

7.2 24-202 Water Quality Summary Report for Greater Victoria Drinking Water System - April to December 2023

Recommendation: There is no recommendation. This report is for information only.

Attachments: Staff Report: Water Quality Summary Report for GVDWS - April-Dec 2023

Appendix A: Letter from Medical Health Officer, Island Health - Jan 16, 2024

Appendix B: Water Quality Summary Report for GVDWS - April-Dec 2023

7.3 24-188 Greater Victoria Water Supply Access and Special Use Request for Wind Data Collection - Innergex Renewable Energy Inc.

Recommendation: 1. That access be approved and special use for Innergex Renewable Energy Inc. (Innergex) to place, maintain and draw data from a wind measuring device in the Greater Victoria Water Supply Area; and,
2. That staff be directed to execute a licence of occupation with Innergex for Greater Victoria Water Supply Area access and special use.

Attachments: Staff Report: GVWS Access and Special Use Request for Wind Data Collection

Appendix A: Innergex Renewable Energy Inc. Access Request

Appendix B: Licence of Occupation Template

Appendix C: Survey Mountain Location Map

7.4 24-189 Summary of Recommendations from Other Water Commissions

Recommendation: There is no recommendation. The report is for information only.

Attachments: Summary of Recommendations from Other Water Commissions

7.5 24-190 Water Watch Report

Recommendation: There is no recommendation. The report is for information only.

Attachments: Water Watch Report

8. CORRESPONDENCE

8.1 24-230 Correspondence: From Dale Puskas, Director of Engineering, District of Central Saanich: Re: Regional Water Supply Development Cost Charges, February 14, 2024

Recommendation: There is no recommendation, the correspondence is for information only.

Attachments: Correspondence: District of Central Saanich: Re: Regional Water Supply Develc

9. NOTICE(S) OF MOTION

9.1 24-191 Motion with Notice: K. Jordison - Delay Action on the Regional Water Supply 2022 Master Plan

Recommendation: To delay further action on the Regional Water Supply 2022 Master Plan until such time as the concerns raised by the Huggett report can be investigated and addressed.

Attachments: Motion with Notice Supporting Material

9.2 24-192 Motion with Notice: N. Chambers - First Nations Consultation Re: Provincial Bill 44

Recommendation: That the commission reach out to the WSANEC Leadership Council First Nations, in the absence of consultation by the Provinces' Bill 44, regarding the impacts on infrastructure and the Goldstream River.

10. NEW BUSINESS

11. MOTION TO CLOSE THE MEETING

11.1 24-193 Motion to Close the Meeting

Recommendation: That the meeting be closed in accordance with the Community Charter, Part 4, Division 3 under section 90 (1)(e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.

12. RISE AND REPORT

13. ADJOURNMENT

Votinq Key:
NWA - Non-weighted vote of all Directors
NWP - Non-weighted vote of participants (as listed)
WA - Weighted vote of all Directors
WP - Weighted vote of participants (as listed)

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Regional Water Supply Commission

Wednesday, January 17, 2024 **11:30 AM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT:
G. Baird (Chair); K. Harper (Vice Chair); J. Caradonna; N. Chambers (EP); C. Coleman; Z. de Vries (EP); S. Duncan (EP); C. Graham (EP); S. Gray (EP); C. Green (EP); C. Harder for K. Guiry (EP); K. Jordison (EP); S. Kim; D. Lajeunesse (EP); T. Morrison (EP); T. Phelps Bondaroff (EP); J. Rogers (EP); M. Wagner (EP); M. Westhaver (EP); A. Wickheim
REGRETS:
S. Hammond; C. Stock

STAFF:
T. Robbins, CAO; A. Fraser, General Manager, Integrated Water Services; A. Constabel, Senior Manager, Watershed Protection; G. Harris Senior Manager, Environmental Protection; J. Marr, Senior Manager, Infrastructure Engineering; S. Irg, Senior Manager, Infrastructure Water Operations; S. Henderson, Senior Manager, Real Estate and Southern Gulf Islands Administration; T. Duthie, Manager, Administration Services, Integrated Water Services, M. Lagoa, Manager, Legislative Services and Deputy Corporate Officer; L. Westinghouse, Senior Financial Advisor, Financial Services; J. Zimmerman, Communications Coordinator; D. Dionne, Administrative Coordinator, Integrated Water Services; M. Risvold, Committee and Administrative Clerk, Integrated Water Services

1. TERRITORIAL ACKNOWLEDGEMENT

A. Fraser provided the territorial acknowledgement.

2. ELECTION OF CHAIR

The General Manager called for nominations for the position of Chair of the Regional Water Supply Commission for 2024.

Commissioner Wickheim nominated Commissioner Baird, Commissioner Baird accepted the nomination.

The General Manager called for nominations a second and third time.

Hearing no further nominations, the General Manager declared Commissioner Baird Chair of the Regional Water Supply Commission for 2024 by acclamation.

3. ELECTION OF VICE CHAIR

Chair Baird called for nominations for the position of Vice Chair of the Regional Water Supply Commission for 2024.

Commissioner de Vries nominated Commissioner Harper, Commissioner Harper accepted the nomination.

Chair Baird called for nominations a second time.

Commissioner Jordison nominated Commissioner Duncan, Commissioner Duncan accepted the nomination.

Chair Baird called for nominations a third and final time. Hearing no further nominations, the Chair declared nominations closed.

Each candidate addressed the Commission in favour of their candidacy. At the conclusion of the speeches, staff opened the online poll and handed out ballots to Commissioners in the room. Staff left the room to tall the votes and the result was handed to the Chair.

The Chair announced that Commissioner Harper was elected as Vice Chair for 2024.

MOVED by Commissioner Coleman and **SECONDED** by Commissioner Kim,
That the ballots be destroyed.
CARRIED

4. APPROVAL OF THE AGENDA

MOVED by Commissioner Rogers and **SECONDED** by Commissioner Caradonna,
That Item 9.2 Motion with Notice: Placement of Post Disaster Water Supply Drop Kits in Relevant Fire Halls be postponed to March.
CARRIED

MOVED by Commissioner Kim and **SECONDED** by Commissioner Wickheim,
That the agenda be approved as amended.
CARRIED

5. ADOPTION OF MINUTES

5.1. 24-065 Adoption of October 18, 2023 Regional Water Supply Commission Minutes

Attachments: October 18, 2023 Regional Water Supply Commission Minutes

MOVED by Commissioner Coleman and **SECONDED** by Commissioner Harper,
That the minutes of the October 18, 2023 Regional Water Supply Commission meeting be adopted.
CARRIED

6. CHAIR'S REMARKS

Chair Baird thanked the Commission for being selected as Chair for another term and read the following statement.

The Capital Regional District (CRD) serves the residents of the region and is always open to public feedback whether formal or informal. We are aware of some concerns raised by the Urban Development Institute (UDI) directed towards the 2022 Regional Water Supply Master Plan (Master Plan), we welcome this feedback and unique perspective. The input provided will be registered and considered as we move forward to further refine the Regional Water Supply Development Cost Charge (DCC). We would also like to provide some clarifying information to the community.

Master Plans serve as crucial high-level roadmaps, offering a strategic, 30-year vision into the future. They play a pivotal role in guiding utility service providers to effectively allocate resources and enable a focused and proactive approach to assessing potential options, and designing solutions tailored to the future needs of the water system.

Reliable and safe drinking water is a foundational requirement of any growing community. We are aware that significant population growth continues for our region and is driving the need for increased infrastructure servicing which is already contemplated in the Master Plan. As the Master Plan is implemented over the next 30 years, technical and design requirements for each project will be refined based on further feasibility studies and technical work. Prior to moving forward to implementation, the CRD will engage with the public on proposed Master Plan projects.

As investments are made in water infrastructure, water rates will increase. The CRD’s Regional Water Supply Commission (RWSC) is trying to find a fiscal balance between current property owners and future owners. By proactively implementing a Development Cost Charge (DCC) program the CRD can fund infrastructure required for growth and reduce the water rate increases to existing users and their future water rates.

Reflecting on our historical regional water supply decisions, the foresight of individuals over 100 years ago is what bestowed on us the watersheds that we rely on across greater Victoria today for ensuring drinking water supply. This legacy underscores the importance of long-term planning and vision.

In today's context, decisions are best informed by a team of expert engineering consultants. Stantec is one of the top ranked water supply consulting firms in the world and the senior professionals that worked on the Master Plan are experts in their specific disciplines related to water supply planning. They have worked on water supply projects throughout British Columbia, Canada, the USA and globally and bring a wealth of experience to the Master Plan. Their thorough reviews undergo peer scrutiny by other seasoned engineers, ensuring a foundation built on expertise rather than opinions.

7. PRESENTATIONS/DELEGATIONS

There were two late delegations requesting to address the Commission.

MOVED by Commissioner Kim and **SECONDED** by Commissioner Harper,
That the late delegations be approved to address the Commission.
FAILED
Opposed: Jordison, Rogers, Chambers

8. GENERAL MANAGER'S REPORT

8.1. 24-064 2024 Regional Water Supply Work Plan

Attachments: Regional Water Supply 2024 Work Plan

A. Fraser spoke to item 8.1.

She noted that a general overview and update of the Regional Water Supply Master Plan is being planned for the March meeting.

The Commission request that, if possible, additional time be added to that meeting to allow for questions and comments.

8.2. Regional Water Supply Development Cost Charges Program Update [Verbal]

A. Fraser spoke to item 8.2.

Discussion ensued and staff responded questions from the Commission related to:
-if the report back will incorporate Bill 46
-if the CRD has jurisdiction to implement Development Cost Charges
-Public engagement
-First Nations consultation
-Financial impact assessment

9. COMMISSION BUSINESS

9.1. 23-782 Greater Victoria Water Supply Area Land Acquisition Reserve Fund Update

Attachments: Staff Report: GVWSA Land Acquisition Reserve Fund Update
Appendix A: RWSC 21-08 Staff Report, June 2021
Appendix B: RWSC 22-07 Staff Report, June 2022

A. Constabel spoke to item 9.1.

Discussion ensued and staff responded to questions regarding:
-How land acquisition can take place
-Debt costs
-Impact on water rates

MOVED by Commissioner Rogers and **SECONDED** by Commissioner Phelps Bondaroff,
1. That a reserve fund for Greater Victoria Water Supply Area land acquisition be included when considering of a reserve fund for Regional Water Supply System Master Plan projects, and that, until reserves are established, land purchase opportunities continue to be addressed through adjustments to the existing capital program and/or debt financing;
2. That the decision whether to establish a Greater Victoria Water Supply Area land acquisition reserve fund be brought back either, when recommendation 1. Above occurs, or when a specific need arises; and,
3. That a report on land acquisition opportunities and progress be provided, in closed meeting, only when Commission decision is required or significant progress is made.

CARRIED
Opposed: Wagner, Chambers

9.2. 23-786 Motion with Notice: Commissioner Rogers: Placement of Post Disaster Water Supply Drop Kits in Relevant Fire Halls

Attachments: Motion with Notice - Placement of Post Disaster Water Supply Drop Kits in Relevant Fire Halls

Item was postponed to the March meeting.

9.3. 24-059 Regional Water Supply 2024 Capital Plan Update

Attachments: Regional Water Supply 2024 Capital Plan Update

Appendix A: Updated 2024-2028 Regional Water Five Year Capital Plan

J. Marr spoke to item 9.3.

MOVED by Commissioner Coleman and **SECONDED** by Commissioner Caradonna,
That the Regional Water Supply Commission recommends that the Capital Regional District Board:
Update the 2024 Regional Water Supply Service Capital Budget and Five Year Capital Plan to include 2024 budget updates for projects 24-19, 20-16, 20-17, 21-03, 19-16, 18-18 and 21-11 as outlined in Appendix A.
CARRIED

9.4. 23-946 2023 Public and School Tours Summary - Greater Victoria Water Supply Area

Attachments: Staff Report: 2023 Public and School Tours Summary - GVWSA

Received for information.

9.5. 24-066 Regional Water Supply Commission Representative on the Water Advisory Committee [Verbal]

A. Fraser spoke to Item 9.5.

MOVED by Commissioner Kim and **SECONDED** by Commissioner Coleman,
That the Regional Water Supply Commission appoint its Vice Chair as its representative on the Water Advisory Committee for a one-year term ending December 31, 2024.
CARRIED

9.6. 24-067 Summary of of Recommendations from Other Water Commissions

Attachments: Summary of Recommendations

Received for information.

9.7. 24-068 Water Watch Report

Attachments: Water Watch Report

Question regarding snow pack.
Inflow of water is predominately from rainfall

10. NOTICE(S) OF MOTION

Commissioner Jordison provided a notice of motion:
To delay further action on the Regional Water Supply 2022 Master Plan until such time as the concerns raised by the Huggett report can be investigated and addressed

Commissioner Chambers provided a notice of motion:
That the commission reach out to the WSANEC Leadership Council First Nations, in the absence of consultation by the Provinces' Bill 44, regarding the impacts on infrastructure and the Goldstream River.

11. NEW BUSINESS

There was no new business.

12. MOTION TO CLOSE THE MEETING

12.1. 24-069 Motion to Close the Meeting

MOVED by Commissioner Kim and **SECONDED** by Commissioner Coleman,
That the meeting be closed in accordance with the Community Charter, Part 4, Division 3 under section 90 (1):
(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality; and

(e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.
CARRIED

13. RISE AND REPORT

The Commission rose from its closed meeting at 1:13 pm without report.

14. ADJOURNMENT

MOVED by Commissioner Coleman and **SECONDED** by Commissioner Caradonna,
That the Regional Water Supply Commission meeting be adjourned at 1:13 pm.
CARRIED

CHAIR **SECRETARY**

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RWSC 24-03

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, FEBRUARY 21, 2024

SUBJECT **2017 Regional Water Supply Strategic Plan – Close-out**

ISSUE SUMMARY

To close-out the 2017 Regional Water Supply Strategic Plan, provide a summary of the accomplishments between 2018 and 2023 and to seek direction to draft an update to the Regional Water Supply Strategic Plan.

BACKGROUND

Section 5 of British Columbia Regulation 284/97 under the *Capital Region Water Supply and Sooke Hills Protection Act* required that the Capital Regional District (CRD) adopt a strategic plan for a 20-year period and that the plan be reviewed on a regular basis.

The Plan for Regional Water Supply was renewed in 2017 following public and Water Advisory Committee engagement and approved by the Regional Water Supply Commission (Commission) and the CRD Board in the Fall of 2017. The current plan sets out a 30-year planning horizon to 2050. The Plan centers around three overarching commitments, with strategic priorities and actions to ensure the commitments are upheld over the planning period.

A safe and adequate supply of drinking water is critical to the livability and sustainability of Greater Victoria. Recognizing this, the 2017 Strategic Plan (attached at Appendix A) highlights the CRD's commitment to:

- Provide high quality, safe drinking water,
- Provide an adequate, long-term supply of drinking water,
- Provide a reliable and efficient drinking water transmission system.

To achieve these commitments and ensure the service is adapting to changing factors, the Plan identifies strategic priorities and actions. The actions focus on tactics including initiatives, projects or studies intended to inform or meet near-term objectives and support the strategic priorities. It is expected that the strategic priorities would be reviewed and updated every 5 to 10 years and the actions would be planned, budgeted, and implemented (subject to Commission and Board approval) over the five years following approval of the plan (2018 – 2022).

A status report on the implementation of the actions was presented to the Regional Water Supply Commission in October 2020.

Since 2018 significant progress was made on the Plan's strategic priorities and associated actions. These accomplishments span across all three commitments and the accomplishments are summarized in Appendix B. Some of the notable accomplishments include, but are not limited to:

- Development and adoption of land acquisition priorities for the Greater Victoria Water Supply Area (GVWSA) and resulting acquisition of 56.5 ha, disposition of 5.6 ha; and extinguishment of 12 placer claims in the Leech.

- Modelling of burn severity, soil erosion and debris flow potential following wildfire in the Sooke watershed to guide post-wildfire preparedness.
- Various partnerships with academia that seek to increase the knowledge of the watershed and resiliency capacity.
- Completion of a hydrology monitoring system in the Leech WSA and upgrade of hydrology monitoring stations in the Sooke and Goldstream WSAs.
- Forest & wildfire resilience trial [of thinning] to better protect and enhance forest health and resilience in the face of climate change.
- ISO 17025 laboratory accreditation.
- Creation of a Dam Safety Risk Register which is used to prioritize capital work.
- Completion of the 2021 Supply System Risk and Resilience Study which identifies risks to critical water supply assets and prioritizes strategies/capital investments to reduce risk.
- Completion of the 2022 Master Plan which provides a high-level roadmap that offers a 30-year vision into the future requirements for the Service, considering future needs-related sources of water, treatment, and conveyance considering future demand projections, hydraulic capacity limitations and risks to the system.
- Began discussions with the First Nations to negotiate terms of first bulk Water Supply Service Agreements.
- Creation of a seismic resilient transmission system, development of a critical spare inventory for transmission main repair and distribution units/kits that can be leveraged in the event of transmission main failures. These systems would be critical to response after a seismic event.

There are some actions that have yet to be completed, these have also been noted in Appendix B. Staff will continue to progress these future actions and they will be carried forward to a new Strategic Plan.

Given the progress and accomplishments made since 2018, a review of the strategic priorities and actions should be conducted to refresh the Plan for the next 5 to 10-year time horizon.

ALTERNATIVES

Alternative 1

1. That staff be directed to update the Regional Water Supply Strategic Plan; and,

2. That staff provide the Regional Water Supply Commission an updated draft Strategic Plan prior to initiating public, First Nations, and stakeholder engagement on the Plan.

Alternative 2

That staff be directed to maintain the existing plan and complete the outstanding actions.

Alterative 3

That this report be referred back to staff for more information.

IMPLICATIONS

Service Delivery Implications

The update of the Strategic Plan would include workshopping current opportunities and challenges with CRD staff followed by public, First Nations, and stakeholder engagement. This engagement would include sharing the draft plan, gathering feedback from the Regional Water Supply Commission, the Water Advisory Committee, the municipal and First Nations water purveyors, the regulators, and the public, to prior to finalizing. Staff anticipate seeking final approval of the updated Plan by the end of 2024.

By not moving forward, staff may not be able to proactively react to emerging risks and over time service level may be impacted.

Financial Implications

Updates to the Strategic Plan and associated priorities may result in required adjustments to the 2025 to 2030 capital plan.

CONCLUSION

In 2017, the Capital Regional District (CRD) set out a 30-year plan of renewed commitments, strategic priorities and actions in a *Strategic Plan for Regional Water Supply*. After seven years of working under this Plan, many of these key actions have been completed or operationalized while new trends and challenges face the Regional Water Supply service. The Strategic Plan needs to be updated to define actions for the next 5- to 10-year planning horizon. The refresh of the Strategic Plan would include workshopping current opportunities and challenges with staff and the management team followed by stakeholder engagement. This engagement would include sharing the plan, gathering feedback from the Regional Water Supply Commission, the Water Advisory Committee, the municipal and First Nations water purveyors, the regulators, and the public, prior to finalizing. We anticipate seeking final approval of the updated Plan by the end of 2024.

RECOMMENDATION

1. That staff be directed to update the Regional Water Supply Strategic Plan; and,

2. That staff provide the Regional Water Supply Commission an updated draft Strategic Plan prior to initiating public, First Nations, and stakeholder engagement on the Plan.

Submitted by:	Alicia Fraser, P. Eng., General Manager, Integrated Water Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT(S)

Appendix A: 2017 Regional Water Supply Strategic Plan
Appendix B: Regional Water Supply Strategic Plan Close-out Summary Report

Capital Regional District

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Victoria, BC V8W 2S6
250.360.3000

Website: www.crd.bc.ca
Twitter: @crd_bc
Facebook: Capital Regional District

Regional Water Supply
2017 Strategic Plan

Making a difference...together

Table of Contents

Introduction

The Capital Regional District (CRD) supplies drinking water for more than 370,000 people, supporting residential, commercial, institutional, light industrial, agricultural and public safety uses across the Greater Victoria area on Vancouver Island in British Columbia. Greater Victoria is growing and factors affecting water supply continue to change. A safe and adequate supply of drinking water is critical to the livability and sustainability of Greater Victoria. Recognizing this, the CRD is committed to:

Provide high quality, safe drinking water

Provide an adequate, long-term supply of drinking water

Provide a reliable and efficient drinking water transmission system

This Strategic Plan for Regional Water Supply sets Commitments and identifies Strategic Priorities and Actions, with a planning horizon to the year 2050, that will guide the future direction for the Regional Water Supply Service. The Strategic Plan will also support CRD Board priorities, provide context for water servicing policy, and align with other CRD strategies and plans.

Sooke Lake Dam

Context for the Strategic Plan

In 1997, the service authority for Regional Water Supply transferred from the Greater Victoria Water District to the CRD under the Capital Region Water Supply and Sooke Hills Protection Act and Regulation, provincial legislation enacted to establish a new model for the delivery of Regional Water Supply.

The Regulation required the CRD to establish a strategic plan for water supply. The first strategic plan was completed in 1999 and has been reviewed and updated in 2004 and 2012. The previous plans have resulted in the implementation of a number of initiatives in the areas of water conservation, management of the watershed lands, investment in treatment and transmission infrastructure, climate change adaptation, and addressing changing trends in water use.

Moving forward, there will be a periodic review of the Strategic Prioirities, and an update of the Actions set out in this plan every five years.

The CRD treats and delivers an average of

130 million

litres of water every day.

Service Governance & Stakeholders

The water supply system operates under a CRD regional service, known as the Regional Water Supply Service, which is administered by the Regional Water Supply Commission, a Commission of the CRD Board.

The Regional Water Supply Commission is a body of 22 elected officials who represent and provide political leadership and decision making on behalf of the local authorities that receive water supply service. The Water Advisory Committee is the public advisory committee that provides advice to the Commission on matters related to the service including water supply, water quality, water conservation and stewardship of the water supply area lands.

There are many stakeholders involved in the supply and delivery of safe drinking water, each with specific roles and responsibilities.

Some of the key stakeholders are:

Canada

The Guidelines for Canadian Drinking Water Quality, published by Health Canada, set out the basic microbiological, chemical and radiological parameters and the physical characteristics, such as taste and odour, that water systems such as the Regional Water Supply System strive to achieve in order to provide the cleanest, safest and most reliable drinking water possible.

Province of British Columbia

The provincial Public Health Act and Regulation sets out the role and powers of health

The Regional Water Supply service provides bulk water to the municipalities listed below and the CRD, who operate water distribution systems that deliver water directly to customers across Greater Victoria.

- District of Central Saanich
- District of North Saanich
- District of Oak Bay
- District of Saanich
- Town of Sidney
- City of Victoria/Township of Esquimalt
- CRD Juan de Fuca Water System
  (Serving Town of View Royal, City of Colwood, City of Langford, District of Metchosin, District of Highlands, District of Sooke, East Sooke in the Juan de Fuca Electoral Area, Beecher Bay First Nation, Esquimalt First Nation, Songhees First Nation, T'Souke First Nation)

officials and the requirements for planning, reporting and regulation of activities that may affect public health, including the provision of drinking water. The Public Health Act works in concert with the Drinking Water Protection Act and Regulation which pertains specifically to drinking water supply and protection requirements. The CRD also meets the requirements of the Water Sustainability Act which sets out requirements to ensure a sustainable supply of fresh, clean water that meets the needs of BC residents today and into the future.

Island Health

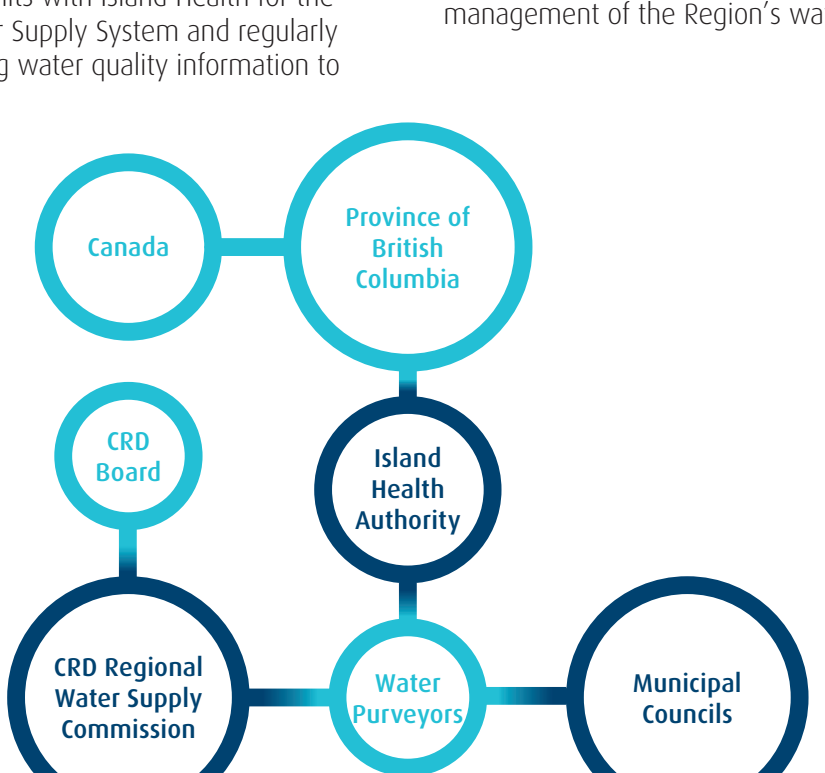
Island Health is the Vancouver Island Health Authority that administers and enforces the applicable provincial legislation through water system operating permits. The CRD holds operating permits with Island Health for the Regional Water Supply System and regularly reports drinking water quality information to Island Health.

Water Purveyors

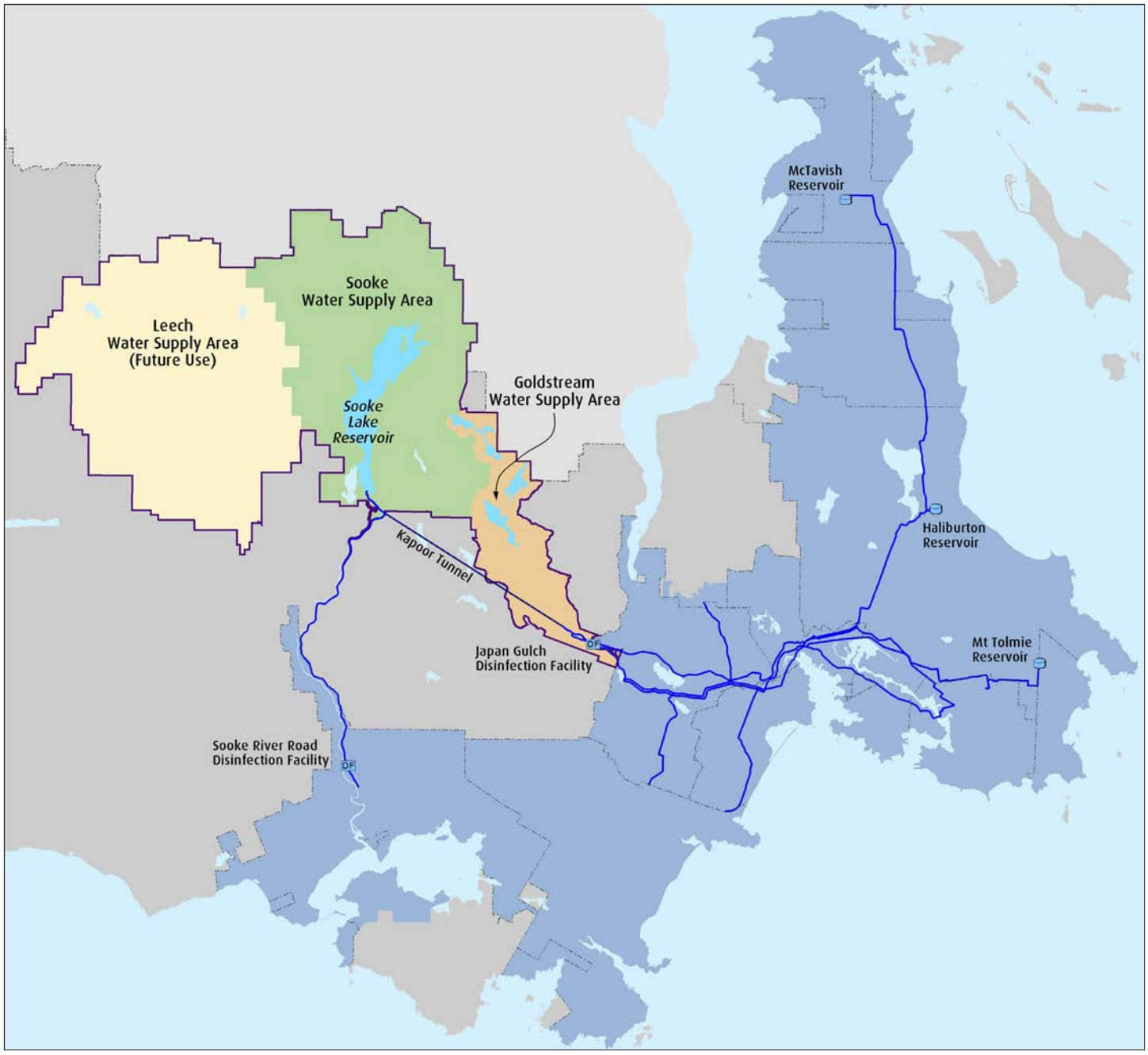
The CRD, municipalities and First Nations in the Region own and operate water systems that receive water from the Regional Water Supply Service, then distribute water directly to water customers. Water purveyors are responsible for the provision of safe drinking water as well as managing all other aspects of the distribution system.

Water Customers

All water customers connected to a public water system are responsible for ensuring that the public system is not exposed to any contamination that could be introduced through private water plumbing systems by cross connection or backflow, and for using water responsibly, particularly when using water for discretionary purposes, to assist with management of the Region's water supply.



Regional Water Supply System



Regional Water Supply System – Serving Greater Victoria

Regional Water Supply Area:

20,549 HECTARES OF PROTECTED DRINKING WATER CATCHMENT LANDS

- Primary Supply Source: Sooke Lake Watershed & Reservoir
- Secondary Supply Source: Goldstream Watershed & Reservoir System
- Future Water Supply Area: Leech Watershed

Water Treatment

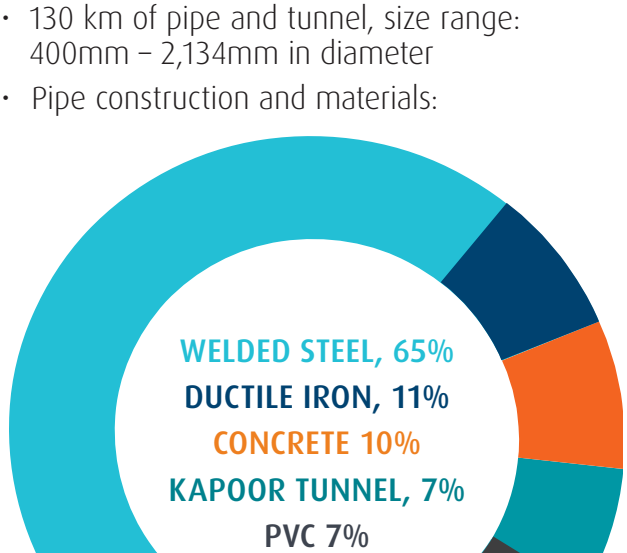
- Unfiltered Source Water
- Primary Disinfection:
  - Ultraviolet light – targets parasites
  - Free chlorine – targets bacteria and viruses
- Secondary Disinfection:
  - Ammonia to produce chloramine – long lasting disinfectant

Bulk Water Supply Points to water distribution systems

187 POINTS

Water Transmission Mains

- 130 km of pipe and tunnel, size range: 400mm – 2,134mm in diameter
- Pipe construction and materials:



The Regional Water Supply Strategic Plan Overview

This update of the Strategic Plan for Regional Water Supply sets out the Commitments, Strategic Priorities and Actions for the Regional Water Supply Service.

Commitments

There are three key water supply Commitments the CRD makes today and into the future. These long term Commitments are foundational to the plan and to achieving the service authority and mandate. The Commitments are expected to remain virtually unchanged for decades.

Strategic Priorities & Actions

Each Commitment has supporting Strategic Priorities and Actions which will guide shorter term initiatives as well as service planning and delivery. It is expected that Strategic Priorities would be reviewed and updated every 5-10 years and Actions would be planned, budgeted and implemented over the five-year cycle.

Planning Horizon

The planning horizon for the development of the plan is to the year 2050 based on the following considerations:

- 2050 is the projected earliest date that the Leech Water Supply Area may be required to supplement the Sooke Lake Reservoir to meet regional water supply demand based on higher population growth rate projections
- Water supply system components can have a useful life as short as 15 years and as long as 80 years or more
- Approximately 30 years from now strikes a balance with what can reasonably be planned considering the projected water supply needs of the Region and other factors such as climate change and advances in technology, while looking far enough ahead to allow informed decision making regarding key infrastructure and financial decisions

Areas of Focus

There are six areas of focus that emerge from the Strategic Priorities and Actions that will influence operational, capital and financial aspects of the Regional Water Supply Service over the next five years and beyond. The six areas of focus are:

CRD BOARD PRIORITIES – SUSTAINABLE AND LIVABLE REGION

The current CRD Board Strategic Priorities include 12 priority areas and 51 strategic priorities, which support a vision for a sustainable, livable, vibrant, collaborative and service oriented Region. In addition, the CRD has identified corporate and core service priorities - the Drinking Water and Regional Infrastructure priority areas directly relate to Regional Water Supply and the importance of the service in supporting a sustainable and livable region. The Regional Water Supply Commission supports these priority objectives.

CLIMATE CHANGE IMPACTS – MITIGATION AND ADAPTATION

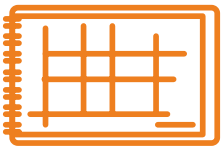
Preparing for and mitigating or adapting to climate change will be necessary in the Capital Region. In the years to come, it can be expected that there will be warmer winter temperatures, more extreme hot days and longer dry spells in the summer, more precipitation in fall, winter and spring and more intense, extreme weather events. All of these weather changes can have an impact on water supply, water quality and the health and resilience of forests in the watersheds. The CRD will respond to the climate change challenges by integrating climate change implications into risk register and infrastructure management decision making and plans.

PREPARING FOR EMERGENCY AND POST-DISASTER WATER SUPPLY

Planning and preparing for the potential impacts of a destructive earthquake and other natural disasters on regional and municipal infrastructure is a priority for the CRD and municipal partners. Water supply and distribution in a post-disaster situation is a key aspect of regional emergency planning. Furthering infrastructure resiliency, coordinating emergency planning with other local governments and senior governments, and preparing for emergency water supply and distribution are priorities.

SUPPLY SYSTEM INFRASTRUCTURE INVESTMENT – RENEWING EXISTING AND PREPARING FOR NEW INFRASTRUCTURE

Infrastructure renewal is an integral component of the management of the Regional Water Supply System. The goal is to ensure that water supply infrastructure is replaced or upgraded prior to the end of its projected service life to ensure the system performs reliably, while maximizing the service life of the assets. Planning for new infrastructure related to water treatment requirements, to meet water supply and demand capacity expectations, and to address redundancy and seismic resiliency will be a priority.



PLANNING FOR THE FUTURE USE OF THE LEECH WATER SUPPLY AREA

The Leech Water Supply Area (LWSA) was acquired by the CRD in 2007 as the future water supply area for the Regional Water Supply System. The LWSA will serve as an additional water catchment area that will provide more water runoff into the Sooke Lake Reservoir when it is brought into service. Although the actual year the LWSA will be required will be subject to changing water demand and climate change impacts, as well as actual population growth rates, it is estimated that the LWSA will not be required to supplement the Sooke Lake Reservoir storage volumes until around 2070 with a moderate population growth projection or as early as around 2050 with a higher population growth rate projection. To prepare for the eventual use of the LWSA, further work is required to plan for the water quality impacts of the different raw water sources, rehabilitation of the water supply area forests and drainage structures, and infrastructure necessary to convey the LWSA flows into Sooke Lake Reservoir.

DEMAND MANAGEMENT - ADDRESSING CHANGING TRENDS IN WATER DEMAND

It is expected that the trend of declining per capita water demand across the Capital Region will continue at a rate of approximately 1% per year over the next 10 years. The declining demand is largely related to declining indoor demand resulting from ongoing household conversions to low flow fixtures and high efficiency appliances, as well as declining outdoor demand as public attitudes and behavior towards discretionary outdoor water use change. However, it remains a priority to achieve a further reduction in per capita water use in order to defer the need to build water supply, treatment and transmission capacity in the supply system, until it is necessary to support population growth. Water conservation and understanding the value of water will continue to be key elements of demand management.

COMMITMENT:

Provide high quality, safe drinking water

1 Manage and protect the Greater Victoria Water Supply Area (GVWSA).

- Continue to actively protect the GVWSA and water supply infrastructure from unauthorized activities and seek opportunities to acquire ownership and control of the remaining catchment lands and critical adjacent lands to act as a buffer.
- Reduce risk to water supply and ecosystems from contaminants and invasive plants, animals and pathogens by completing a biosecurity risk assessment and implementing biosecurity mitigation measures.
- Implement the GVWSA climate change adaptation initiatives to reduce the impact of the potential types, magnitude and rate of climate change on GVWSA ecosystems, water quality and infrastructure.
- Assess the need for more active forest management to protect and enhance forest health and resilience.
- Reduce risk of landscape level wildfire by designing and implementing forest fuel management treatments.

47.6M m^3 of drinking water was delivered in 2016 through the regional water supply system

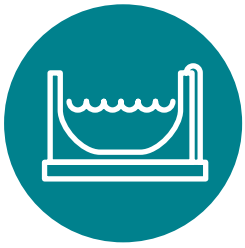
CRD Water Quality Laboratory

2 Maintain a multi-barrier approach to drinking water quality protection.

- Continually evaluate the effectiveness of the water treatment processes.
- Use the Regional Water Supply Service drinking water safety plan in operational and capital project decision making.
- Maintain multiple accreditiations to ensure highest quality drinking water testing.
- Continue to develop and refine the Utility Operator Training Program and ensure adherence to Environmental Operator Certification Program requirements.
- Identify and implement progressive and innovative training and development opportunities with respect to utility operations and management for departmental staff.

3 Maintain a risk register for the Regional Water Supply System that identifies potential risks to water quality, water supply and water transmission and provide mitigation and adaptation measures.

- Regularly review Regional Water System hazards, risks and vulnerabilities and update the risk register.
- Continue the emphasis on wildfire prevention, early detection and suppression capability, preparedness, forest fuel management and post-fire rehabilitation planning to reduce and mitigate the risk of a large-scale wildfire affecting the water supply area and source water quality.
- Continue to monitor and evaluate the implications of the reliance on unfiltered source water and the absence of a filtration step in the water treatment process.
- Conduct specific seismic risk evaluations of critical assets.

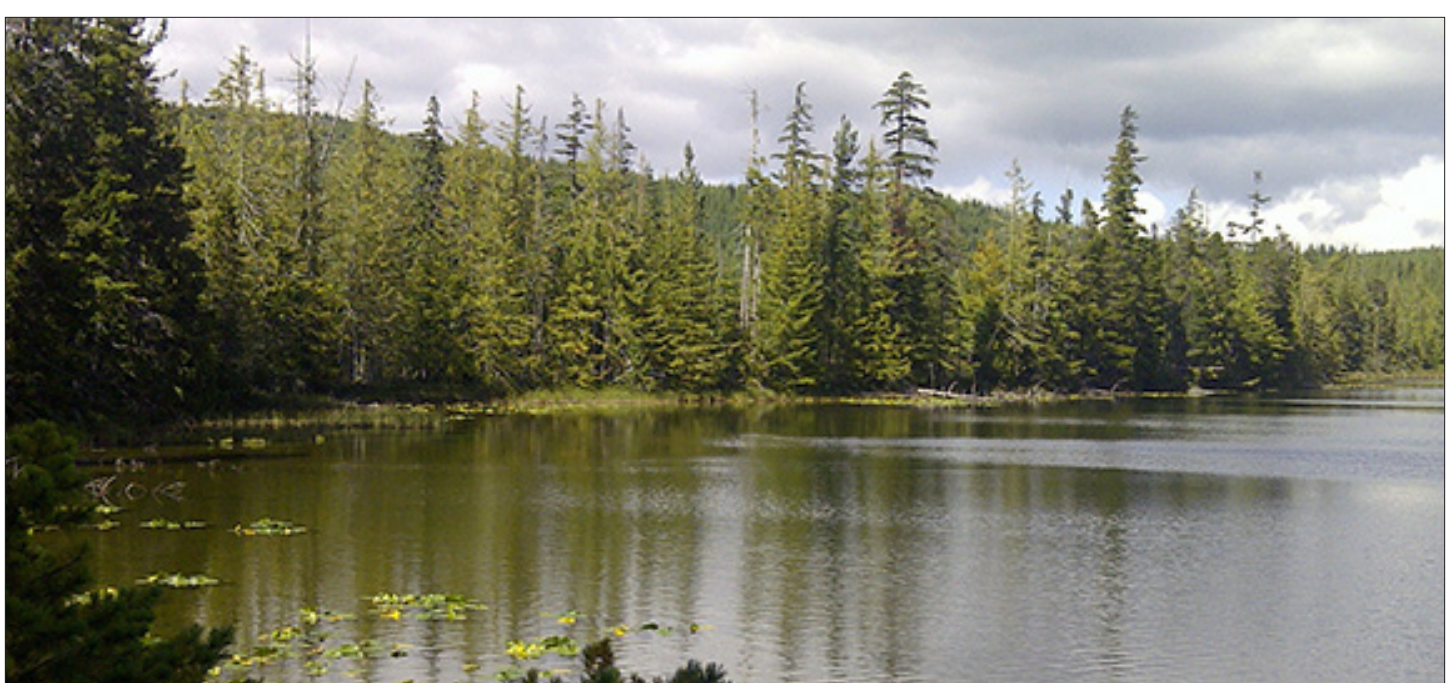


COMMITMENT:

Provide an adequate, long-term supply of drinking water

1 Plan and prepare for future water supply needs to meet demand considering impacts of climate change, population growth, and per-capita demand rates.

- Evaluate climate change impacts and risks on water supply and incorporate mitigation and adaptation recommendations in operating and capital plans.
- Update service population and service population growth rate forecasts with current census data, considering municipal Official Community Plan land use and population directions, to estimate growth related water demand.
- Establish long-term per capita demand rate projections and Demand Management Program objectives to achieve rates and determine annual water demand by sector.
- Undertake regular monitoring and assessment of the physical, chemical, and biological parameters of the Leech Water Supply Area (WSA) source water and determine a plan to address potential water quality, ecological and ecosystem implications at Sooke Lake Reservoir resulting from diversion of Leech WSA source water (Leech River water) to Sooke Lake Reservoir (ie. combining source waters).
- Develop a plan to undertake more 'intensive' monitoring of Leech River water quality to inform treatability recommendations and long term treatment strategy.
- Determine conceptual 'hard' capital infrastructure plan to design and construct the necessary infrastructure to divert Leech WSA flows to Sooke Lake Reservoir.
- Conduct a feasibility study to explore the design and construction of supply and transmission infrastructure at Sooke Lake Reservoir to provide increased resiliency, including consideration of a deep northern intake and a secondary transmission pipe between the reservoir and the treatment facilities.
- Undertake biannual Supply System hydraulic modelling to confirm system capacity.



Jarvis Lake in the Leech Water Supply Area

2 Develop a higher level of public understanding of the drinking water supply system and value of water through education and engagement.

- Continue to improve Regional Water Supply service and system information available to the public through a variety of media streams, to raise awareness around specific topics including water supply and conservation, and supply infrastructure investment.
- Continue to promote the value of the drinking water resource through Water Supply Area public and school tours and other outreach.
- Continue to have two-way dialogue with the Water Advisory Committee regarding water supply matters.
- Explore opportunities for mutually beneficial collaborative partnerships to carry out research and monitoring initiatives in the water supply area and across the system.

9,628 Hectares of protected catchment lands within the Leech Water Supply Area acquired in 2007 for future drinking water supply area.

COMMITMENT:

Provide a reliable and efficient drinking water transmission system

1 Maintain a capital planning process and appropriate investment in water supply infrastructure to ensure reliable system performance

- Complete a short term (annual and 5-year), medium term (5-10 year), long term (10-20 year) and long range (20-50 year) asset management plan – informed by asset condition and remaining service life assessment, water operation and maintenance history, water audit, changing regulatory requirements, Hazard, Risk and Vulnerability Assessment (HRVA) recommendations, and system capacity requirements.
- Explore Regional Water Development Cost Charges to fund future growth related supply system infrastructure improvements.
- In collaboration with municipal and First Nations water purveyors, establish water supply service agreements.

2 Continually review cost effectiveness of service respecting operations and maintenance and capital investment decisions.

- Continue to review reactive, preventive and predictive operations and maintenance history and confirm operation and maintenance service levels for the Regional Water Supply Service that consider best practices and reliability centered maintenance approach.
- Consider life cycle costs with new infrastructure design and asset replacement.
- In asset replacement decisions, balance maximizing infrastructure service life with infrastructure reliability.
- Optimize capital investment taking into consideration priority, annual and long term budget and water rate impacts and resource availability to deliver the projects.

Japan Gulch Ultraviolet Disinfection Plant

3 Develop and manage emergency bulk drinking water supply systems for Greater Victoria.

- Establish emergency and post-disaster water supply protocols and obtain necessary supplies, materials and equipment to implement protocols. Establish water purveyor support roles and responsibilities in emergency water supply and distribution.
- Outline how an emergency/post disaster drinking water supply can be supported by regional emergency management plans and available senior government supports under certain conditions.

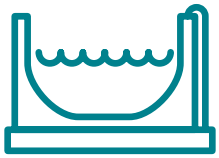
4 Continue to focus on retaining and recruiting experienced and professional employees responsible for the Regional Water Supply System engineering, system operation and maintenance, and management of the water supply area.

- Develop a succession plan to ensure key positions are backfilled by experienced and knowledgeable employees, and that system knowledge is preserved.
- In alignment with CRD organizational development initiatives, provide learning and development opportunities for employees.

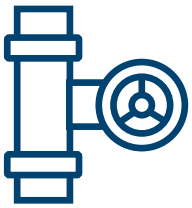
Over $130 million has been invested in supply system infrastructure renewal since 1995.

Commitments

Provide high quality, safe drinking water



Provide an adequate, long-term supply of drinking water



Provide a reliable and efficient drinking water transmission system

Advancing the Strategic Plan

A safe and adequate supply of drinking water is critical to the livability and sustainability of Greater Victoria and the Capital Region. The Greater Victoria area is fortunate to have a well established water supply system and a climate that has allowed for the replenishment of source water.

The Commitments outlined in the Plan will ensure that the CRD continues to provide clean, safe, reliable drinking water to the communities we serve. The Strategic Priorities and Actions will guide service planning and delivery over the coming years. The CRD will be responsive to factors affecting the uncertainty of water supply, such as climate change and future water demand, while ensuring the long term Commitments to our customers remain our priority.

Progress and outcomes will be tracked and reported annually to the Regional Water Supply Commission and the CRD Board to ensure the ongoing achievement of the Commitments, Strategic Priorities and Actions in the Strategic Plan.

The photos in this document were taken within the boundaries of the Capital Regional District, and we wish to acknowledge Helene Cyr whose work is featured here.

Regional Water Supply

COMMITMENT: Provide high quality, safe drinking water

Manage and protect the Greater Victoria Water Supply Area (GVWSA)

Actions	Accomplishments	Future Actions
Continue to actively protect the GVWSA and water supply infrastructure from unauthorized activities and seek opportunities to acquire ownership and control of the remaining catchment lands and critical adjacent lands to act as a buffer.	• Development and adoption of land acquisition priorities for the GVWSA. • Remediation of the Weeks Lake gravel pit that was contaminated with lead and hydrocarbons. • Acquired 56.5ha of watershed, disposition of 5.6ha; and extinguishment of 12 placer claims in the Leech. • Various security gate improvements.	
Reduce risk to water supply and ecosystems from contaminants and invasive plants, animals and pathogens by completing a biosecurity risk assessment and implementing biosecurity mitigation measures.	• Completion of a GVWSA biosecurity strategy for the GVWSA. • Introduced disinfection protocols and separate equipment for each water supply area. • Started a Sooke Lake Food Web Study in 2023 to identify key species for monitoring the stability and health of the ecosystem.	• Sooke Lake Food Web Study to be completed in 2024. • Updated or new spill management plan. • Further biosecurity documentation/protocols.

Regional Water Supply

COMMITMENT:
Provide high quality, safe drinking water

Manage and protect the Greater Victoria Water Supply Area (GVWSA)

Actions	Accomplishments	Future Actions
Implement the GVWSA climate change adaptation initiatives to reduce the impact of the potential types, magnitude and rate of climate change on GVWSA ecosystems, water quality and infrastructure.	• Implementation of climate change actions related to increasing the capacity of stream crossing structures and upgrade of weather and hydrology monitoring in the GVWSA. • Developed a risk-based drainage structure replacement priority map for the GVWSA that factors in climate change needs. • Initiation of a collaborative research project with the University of Victoria and Natural Resources Canada to model potential changes to the forests in the GVWSA with climate change and the implications of these changes for wildfire risk (NSERC Alliance Project). • Completed Sooke Lake Watershed Flood forecasting.	• Additional studies including reservoir operating strategies and culvert assessments. • Producing summary documents on climate change adaptation and vulnerability and risk for wider distribution. • Ongoing monitoring and mapping of forest health issues in the GVWSA to help determine the effects of changing climatic conditions. • Ongoing implementation of recommended adaptation initiatives. • NSERC Alliance Project completion (2025). • MSc study of Douglas-fir bark beetle threat to the GVWSA in a changing climate completion (2024). • Complete GVWSA ecosystem mapping (2024).
Assess the need for more active forest management to protect and enhance forest health and resilience.	• Completed Aerial and air photo mapping and ground investigation to monitor forest insect and diseases present in the GVWSA. • Worked with Provincial researcher to identify issues with chlorotic (yellow) forest stands in the Leech WSA. • Implementation of 42 ha trial of thinning for wildfire and forest resilience. • Update of ecosystem mapping to better identify forest stands vulnerable to wildfire and climate change.	• Juvenile spacing to reduce wildfire hazard, accelerate stand development and reduce potential climate impacts on the forest stands. • Completion of NSERC Alliance project (2025) to model how forest management treatments could reduce wildfire impacts help, inform active forest management. • Assessments and monitoring to determine the effects and effectiveness of the thinning trials. • Assessment of the chlorotic stands in the Leech WSA to determine if forest management options are needed.

Regional Water Supply

COMMITMENT:
Provide high quality, safe drinking water

Manage and protect the Greater Victoria Water Supply Area (GVWSA)

Actions	Accomplishments	Future Actions
Reduce risk of landscape level wildfire by designing and implementing forest fuel management treatments.	• Completion of burn probability mapping for the GVWSA to guide forest fuel management. • Completion of forest fuel management treatments by thinning, pruning and removing, chipping or burning woody debris (2 major fuel treatment corridors completed). • Creation of a Niagara North and Goldstream Connector fuel management corridor.	• Complete trial prescribed burn (when weather permits).

Regional Water Supply

COMMITMENT: Provide high quality, safe drinking water

Maintain a multi-barrier approach to drinking water quality protection

Actions	Accomplishments	Future Actions

Continually evaluate the effectiveness of the water treatment processes.	• The water quality monitoring program for the Greater Victoria Drinking Water System is continually expanded to account for population/system growth and emerging new contaminants and new technologies. Since 2018 the following have been added to the monitoring program:
	  • Addition of 16 sample locations to Westshore due to population growth; and
	  • Sampling for polyfluoroalkyl substances (PFAS) since December 2020.
		• Greater Victoria Nitrification Study planned for 2024 to investigate and identify potential water quality risks from nitrification processes.

Use the Regional Water Supply Service drinking water safety plan in operational and capital project decision making	• The Greater Victoria Drinking Water Safety Plan (DWSP), a comprehensive water quality risk registry, was completed in 2018, and is annually updated to inform operational and capital upgrades.	• Drinking Water Safety Plan (DWSP) is update on an ongoing basis and new risks captured and acted upon (Ongoing).
Maintain multiple accreditations to ensure highest quality drinking water testing.	• ISO 17025 accreditation (first certified 2017 to ISO 17025:2015, recertified in 2019 to new standard ISO 17025:2017). • Reassessed by Canadian Association for Laboratory Accreditation (CALA) every 2 years to maintain accreditation status. Requires successful participation in a semi-annual proficiency testing. • Program certified by Provincial Health Officer (PHO) for water microbiology. Maintenance of approval contingent on thrice yearly successful participation in proficiency testing program and onsite audit every 3 years.	• Ongoing recertification.

Regional Water Supply

COMMITMENT:
Provide high quality, safe drinking water

Maintain a multi-barrier approach to drinking water quality protection

Actions	Accomplishments	Future Actions
Continue to develop and refine the Utility Operator Training Program and ensure adherence to Environmental Operator Certification Program requirements.	• Environmental Operator Certification Program (EOCP) Corporate Recognition Award for IWS internal operator program. • Continued Utility Operator exposure to all utility disciplines, for well-rounded development. • Ensure compliance and progression through EOCP certifications as a requirement of the Utility Operator Program. • Development onboarding program that provides a broad exposure to the operator program over multiple years.	• Ongoing engagement and promotion of the program.
Identify and implement progressive and innovative training and development opportunities with respect to utility operations and management for departmental staff.	• Utilize professional training consultants to expand knowledge of all working environments. • Engaged with Corporate safety to ensure our training program meets requirements and achieve the highest value for the employer. • Expand hands-on field scenario training.	• Continue to seek out new and innovative ways of training through professional consultants who engage staff training from different perspectives (Ongoing.)

Regional Water Supply

COMMITMENT:
Provide high quality, safe drinking water

Maintain a risk register for the Regional Water Supply System that identifies potential risks to water quality, water supply and water transmission and provide mitigation and adaptation measures

Actions	Accomplishments	Future Actions

Regularly review Regional Water System hazards, risks and vulnerabilities and update the risk register.	• Established a Corporate Risk Register which includes Regional Water System risks.
	• A Drinking Water Safety Plan was developed that lists and categorizes risks to the RWS and tracks actions to reduce or mitigate those risks.
	• Completed:
	  • 2022 Master Plan which identified future infrastructure investments that mitigat identified risks,
	  • 2021 Supply System Risk and Resilience Study, and
	  • 2022 Seismic Assessment of Critical Facilities Study (Phase 1).
	• These reports summarize the critical RWS related risk and proposed mitigation measures.
		• Continue to include capital projects to reduce items identified in the risk registry and updating of the risk registry (Ongoing).

Continue the emphasis on wildfire prevention, early detection and suppression capability, preparedness, forest fuel management and post-fire rehabilitation planning to reduce and mitigate the risk of a large-scale wildfire affecting the water supply area and source water quality.	• Added an infrared and drone technology to assist with monitoring for wildfire. • Added new FTEs to support wildfire/security. • Completed study on post-wildfire hazards and mitigation options in the Sooke WSA.	• Complete the post-wildfire risk mitigation strategy for the Sooke WSA (2024).
Continue to monitor and evaluate the implications of the reliance on unfiltered source water and the absence of a filtration step in the water treatment process.	• Completed 2021 Regional Water Supply System Risk and Resilience Study which identifies risks to its critical water supply assets as well as, strategies/capital investments to reduce risk, this included assessment of risk to water supply as a result of unfiltered water source. • Completed the 2022 Master Plan which identified the future addition of filtration by 2035, though this will be refined based on further feasibility, piloting and design.	• Conduct ongoing water quality analysis to monitor for any change in water quality. • Continued water quality sampling to identify treatment requirements, followed by piloting studies and design of treatment requirements that consider the addition of additional source was and increase resilience to address identified risk, this would include the addition of filtration.

Regional Water Supply

COMMITMENT:
Provide high quality, safe drinking water

Maintain a risk register for the Regional Water Supply System that identifies potential risks to water quality, water supply and water transmission and provide mitigation and adaptation measures

Actions	Accomplishments	Future Actions
Conduct specific seismic risk evaluations of critical assets.	• Created a Dam Safety Risk Register which includes recommendations from various Dam Safety studies and Dam Safety Reviews. • Updated the Sooke, Saddle and Deception Dams Emergency Procedures along with dam breech scenario inundation mapping. • Completed the Supply System Risk and Resilience Study and the Seismic Assessment of Critical Facilities Study (Phase 1) and Dam Safety seismic assessments.	• Seismic Assessment of Critical Facilities (Phase 2) completion in 2025. • Deception Gulch Dam Risk Reduction Assessment in 2025. • Goldstream System Dams Updating of Seismic Hazard, Geotechnical Investigations and Deformation Analysis in 2026. • Dam Failure Mode Analysis (incl. Spillway Gates) in 2025.

Regional Water Supply

COMMITMENT:
Provide an adequate, long-term supply of drinking water

Plan & Prepare for future water supply needs to meet demand considering impacts on climate change, population & per-capita demand rates

Actions	Accomplishments	Future Actions
Evaluate climate change impacts and risks on water supply and incorporate mitigation and adaptation recommendations in operating and capital plans.	• Completion of a hydrology monitoring system in the Leech WSA and upgrade of hydrology monitoring stations in the Sooke and Goldstream WSAs. • Completed a study on the effects of climate change on Sooke Lake Reservoir. • Introduced a flood forecasting system to guide operating decisions. • Goldstream Water Supply Area Capacity Study. • Sooke Lake Reservoir – North Basin Water Quality Feasibility Study. • Completed 2021 Regional Water Supply System Risk and Resilience Study which identifies risks to its critical water supply assets from man-made, natural, and dependency hazards and prioritizes strategies/capital investments to reduce risk. • Completed the 2022 Master Plan which provides a high-level roadmap for the implementation of works that mitigate the risk to climate change.	• Development of a 3D hydrodynamic model of Sooke Lake is underway. The model will inform decisions around siting new intakes and Leech water discharge points.
Establish long-term per capita demand rate projections and Demand Management Program objectives to achieve rates and determine annual water demand by sector.	• Completed an agricultural Water Demand Model and Land Use Inventory. • Present an annual Water Demand report which provides details of the “by sector” demand and is used to inform our water conservation action plan and develop campaigns and education and outreach material, as well as to track progress in reducing demand by these sectors.	• Continue to track and update per capita demand rate projections and resulting demands.

Regional Water Supply

COMMITMENT:
Provide an adequate, long-term supply of drinking water

Plan & Prepare for future water supply needs to meet demand considering impacts on climate change, population & per-capita demand rates

Actions	Accomplishments	Future Actions
Undertake regular monitoring and assessment of the physical, chemical, and biological parameters of the Leech Water Supply Area (WSA) source water and determine a plan to address potential water quality, ecological and ecosystem implications at Sooke Lake Reservoir resulting from diversion of Leech WSA source water (Leech River water) to Sooke Lake Reservoir (i.e. combining source waters).	• Installation of hydrology monitoring system in the Leech WSA. • Collected data on bathymetry of Weeks Lake to determine volume and elevation of outlet.	• Continuing to expand methods of assessing ecological/ecosystem impacts from combined sources waters. • Installation of West Leech weather station (2025).
Develop a plan to undertake more 'intensive' monitoring of Leech River water quality to inform treatability recommendations and long-term treatment strategy.	• Water quality sampling and testing in the Leech WSA started in 2020.	• Baseline data collection and then ongoing water quality sampling/testing of Deception Reservoir to start in 2025. (Ongoing).

Regional Water Supply

COMMITMENT:
Provide an adequate, long-term supply of drinking water

Plan & Prepare for future water supply needs to meet demand considering impacts on climate change, population & per-capita demand rates

Actions	Accomplishments	Future Actions
Determine conceptual 'hard' capital infrastructure plan to design and construct the necessary infrastructure to divert Leech WSA flows to Sooke Lake Reservoir.	• Completed the 2021 RWS Service-Supply System Risk and Resilience Study which identifies risks to its critical water supply assets from man-made, natural, and dependency hazards and prioritizes strategies/capital investments to reduce risk. • Completed the 2022 Master Plan which provides a high-level roadmap that offers a 30-year vision into the future requirements for the Service, considering future needs related sources of water, treatment, and conveyance. The Master Plan identified a Phase 2 hydrology study to investigate the feasibility of direct diversion of Leech River or construction of a storage dam.	• Currently developing a hydrology model for dam safety which will inform the Phase 2 model identified in the Master Plan. • Phase 2 hydrology model development will commence in the next 5yrs.
Conduct a feasibility study to explore the design and construction of supply and transmission infrastructure at Sooke Lake Reservoir to provide increased resiliency, including consideration of a deep northern intake and a secondary transmission pipe between the reservoir and the treatment facilities.	• Completed 2022 Master Plan that addressed the supply and transmission infrastructure resiliency, long-term capacity and treatment requirements. The Master Plan recommended the addition of a Deep Northern Intake, pumping station and transmission main from Sooke Lake Reservoir to the head tank as early as 2031.	
Undertake biannual Supply System hydraulic modelling to confirm system capacity.	• Completed 2022 Master Plan which included a hydraulic capacity assessment of the transmission system.	• Future Capital Plans will include ongoing updates to the Hydraulic Capacity of the transmission system.

Regional Water Supply

COMMITMENT:
Provide an adequate, long-term supply of drinking water

Develop a higher level of public understanding of the drinking water supply system and value of water through education & engagement

Actions	Accomplishments	Future Actions
Continue to improve Regional Water Supply service and system information available to the public through a variety of media streams, to raise awareness around specific topics including water supply and conservation, and supply infrastructure investment.	• Increased use of CRD social media streams (Twitter and Facebook). • Continue to prepare the Daily, Weekly and Monthly Water Watch and include information on the CRD webpage.	• Continue to prepare the Daily, Weekly and Monthly Water Watch and include information on the CRD webpage and investigate providing more information being available online.
Continue to promote the value of the drinking water resource through Water Supply Area public and school tours and other outreach.	• Conduct annual public and school tours which are reported on annually. Feedback to tours has been positive. • Created four videos for the Public: Overview, WSA, Treatment, Conservation, Protecting Water.	• Public Tours will continue. • Future engagement with school tours and outreach/education will be incorporated into existing school curriculum development. (Ongoing).

Continue to have two-way dialogue with the Water Advisory Committee regarding water supply matters.	• The Water Advisory Committee (WAC) typically meets quarterly and has provided advice on:
	  • Post Disaster Water Supply and Distribution Plan;
	  • Demand Management program;
	  • Water Supply Area Land Acquisition Study;
	  • Impacts of Malahat Detour Route Proposal;
	  • Health Canada change in Lead Guidelines for Drinking Water and CRD Actions; and
	  • Agricultural Rate Program.
	  • Development Cost Charge Program
		• Will engage the WAC for major projects identified in the Master Plan such as the Filtration plant as planning commences. (Ongoing).

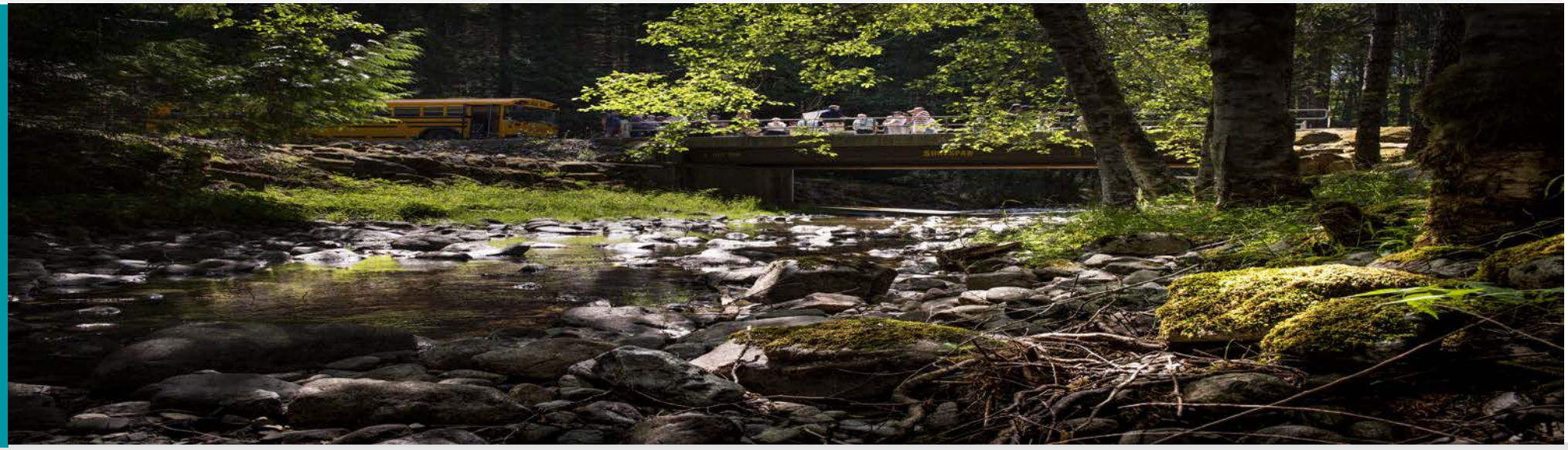
Regional Water Supply

COMMITMENT:
Provide an adequate, long-term supply of drinking water

Develop a higher level of public understanding of the drinking water supply system and value of water through education & engagement

Actions	Accomplishments	Future Actions

Explore opportunities for mutually beneficial collaborative partnerships to carry out research and monitoring initiatives in the water supply area and across the system.	• Successful research partnerships with University of Victoria, NSERC for Water network, Canadian Forest Service and UBC in the areas of:
	  • wildfire fuel and burn modelling;
	  • paleo-ecological record of large wildfires and forest changes; and
	  • hydrology of the Leech WSA.
	• Began forWater partnership to complete Dissolved Organic Carbon (DOC) characterization for Sooke Lake source water.
		• Completion of the NSERC Alliance Project in 2025. The project will inform the effects of climate change on forests and wildfire in the GVWSA and options for forest management to reduce potential impacts.
		• UBC Douglas-fir bark beetle project completion (2024).
		• forWater DOC characterization of Sooke Lake completed (2024).



Regional Water Supply

COMMITMENT:
Provide a reliable and efficient drinking water transmission system

Maintain a capital planning process & appropriate investment in water infrastructure to ensure reliable system performance

Actions	Accomplishments	Future Actions

Complete a short term (annual and 5-year), medium term (5-10 year), long term (10-20 year) and long range (20-50 year) asset management plan informed by asset condition and remaining service life assessment, water operation and maintenance history, water audit, changing regulatory requirements, Hazard, Risk and Vulnerability Assessment (HRVA) recommendations, and system capacity requirements.	• Completed a Maintenance, Repair and Replacement Strategies, as well as asset management preliminary study in 2018.
	• The Capital Plan includes various assignments related to Asset Management Planning work on each element has begun and completed to the following extent:
	  • Levels-of-Service: 60% complete,
	  • Asset inventory: 60%,
	  • Asset capacity: Complete
	  • Asset condition: 20%
	  • Asset risk: 20%
	  • Criticality assessment: 80%
		• Completion of the asset management program/plan, including each element by the end of 2025.
		• 2024-2028 Capital plans include significant Infrastructure investments including upgrades to Goldstream UV Plant and renewals to Main No 3, Main No 4 and Main No. 1.

Explore Regional Water Development Cost Charges to fund future growth-related supply system infrastructure improvements	• Completion of the Development Cost Charge Analysis Phase 1 and initiation of Phase 2, Implementation Program including Bylaw.	• Completion of a Regional Water DCC program and bylaw in 2024.
In collaboration with municipal and First Nations water purveyors, establish water supply service agreements.	• Created Draft Water Supply Service Agreements between CRD and First Nations. • Created Draft Conveyance Agreements between CRD and relevant Municipalities. • Began with discussion with the First Nations in the Region to negotiate terms of the agreements.	• Execute Water Supply agreement with the First Nations.

Regional Water Supply

COMMITMENT:
Provide a reliable and efficient drinking water transmission system

Continually review cost effectiveness of service respecting operations, maintenance & capital investment decisions

Actions	Accomplishments	Future Actions
Continue to review reactive, preventive and predictive operations and maintenance history and confirm operation and maintenance service levels for the Regional Water Supply Service that consider best practices and reliability centered maintenance approach.	• Conducted in-depth analysis of past reactive, preventive, and predictive operations and maintenance records. • Evaluating service levels for the Regional Water Supply Service to ensure they meet industry standards and user expectations. • Implementation of best practices in operations and maintenance to enhance the reliability and longevity of water supply infrastructure.	• Identify and monitor performance metrics to track the effectiveness of implemented strategies. • Continuously refining operation and maintenance processes to achieve optimal performance and customer satisfaction. • Adoption of reliability-centered maintenance approach to prioritize maintenance activities based on criticality and risk assessment. • Improvement to Work Management System to improve efficiency, real-time tracking, data quality and support initiatives above.
Consider life cycle costs with new infrastructure design and asset replacement.	• Life cycle costing is incorporated into all major design projects, this includes acquisition, operation, maintenance, renewal, and disposal.	• Ongoing
In asset replacement decisions, balance maximizing infrastructure service life with infrastructure reliability	• Utilize condition assessments to determine replacement and rehabilitation needs of critical transmission mains.	• Expand condition-based maintenance and replacement to other critical asset classes, instead of solely time based in order to maximize service life of assets.
Optimize capital investment taking into consideration priority, annual and long-term budget and water rate impacts and resource availability to deliver the projects	• Ongoing as part of Capital Plan process, staff consider output of the Corporate and RWS Risk Registers, financial impacts and staff constraints when finalizing the annual capital program.	• Ongoing

Regional Water Supply

COMMITMENT:
Provide a reliable and efficient drinking water transmission system

Develop and manage emergency bulk drinking water supply systems for Greater Victoria

Actions	Accomplishments	Future Actions
Establish emergency and post-disaster water supply protocols and obtain necessary supplies, materials and equipment to implement protocols. Establish water purveyor support roles and responsibilities in emergency water supply and distribution.	• Creation of a seismic resilient 'hardened water main grid' which provides a point of connection for the emergency water distribution modules. Currently 12 Seismically Restrained Hydrants. • Reservoir seismic valves are located at several sites, as new reservoirs are constructed seismic valves are included as part of the project. • Created a critical spares inventory for large diameter steel and ductile iron water main. • Two emergency water supply/ distribution modules are ready for deployment consisting of a trailer module and a stationary module. • Fabrication of drop kits and located strategically throughout the region. • Three portable laboratories were procured for post disaster water quality testing, these labs will be stored at three locations.	• Construction of a critical equipment storage building. This structure will be used to store critical equipment and spare parts required for an emergency response related to the water supply systems.
Outline how an emergency/post disaster drinking water supply can be supported by regional emergency management plans and available senior government supports under certain conditions.	• CRD initiated the Saanich Peninsula Post Disaster Water Supply Technical Working Group which included membership from the local municipalities, First Nations, and key stakeholder. • Provided a demonstration of the post-disaster equipment to Staff from Island Health were present and View Royal Fire Department.	• Future initiative that considers integration with Regional Emergency Management Partnership and collaboration with Municipal water purveyors in the context of the new Emergency and Disaster Management Act.

Regional Water Supply

COMMITMENT:
Provide a reliable and efficient drinking water transmission system

Continue to focus on retaining & recruiting experienced professional employees responsible for the RWS system engineering, system operation, maintenance & management of the water supply area

Actions	Accomplishments	Future Actions

Develop a succession plan to ensure key positions are backfilled by experienced and knowledgeable employees, and that system knowledge is preserved.	• Staff hiring is ongoing to replace experienced staff who retire. Cross over training is required for each departing staff member.
	• CRD's continues to invest and support the iLead program which benefits the development of the IWS management team. The iLead program supports CRD managers to meet the challenges leaders are facing today and to take their leadership to a new level, while supporting moving towards the desired outcomes as outlined by the organization's Strategic and Board Priorities and Corporate Plan.
	• The utility operator (UO) progression program is a CRD specific program that has benefited attraction and retention of operators to Integrated Water Services, between 2018 to 2023 the following advancements have occurred within this program:
	  • 21 staff moved from UO1 to UO 2
	  • 9 staff moved from UO 2 to UO 3
	  • 8 staff moved from UO 3 to UO 4	

In alignment with CRD organizational development initiatives, provide learning and development opportunities for employees.	• Efforts continue to be made to ensure knowledge is carried forward in procedures and practices such as standard operating procedures, emergency response procedures and system drawings to reduce the risk when staff retire. • Staff are required and fully supported to obtain continuing education credits so as to maintain their professional status whether it be as an engineer, technician, operator or other.	

Making a difference...together

EEP 24-06

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, FEBRUARY 21, 2024

SUBJECT **Water Quality Summary Report for Greater Victoria Drinking Water System – April to December 2023**

ISSUE SUMMARY

Staff provide regular updates on the monitoring results for water quality conditions observed in the Greater Victoria Drinking Water System in between annual reporting to the regulator.

BACKGROUND

The Capital Regional District (CRD) supplies drinking water to the water distribution systems across Greater Victoria via the Regional Water Supply System. As a requirement under the *BC Drinking Water Protection Act*, the CRD monitors and reports on water quality to ensure the region's drinking water supply is safe and potable. The results are presented on a regular basis directly to the Commission and the Island Health Authority, and to the general public through the CRD website.

All public drinking water systems in BC must comply with the *BC Drinking Water Protection Act* and the *BC Drinking Water Protection Regulation*. In addition, the CRD relies upon water quality parameters in the Guidelines for Canadian Drinking Water Quality and guidelines developed by the US Environmental Protection Agency to inform the CRD's water quality monitoring program.

Island Health is currently reviewing historic and current water quality data, the current filtration exemption the CRD holds under its operating permit and the inclusion of future filtration as part of the Regional Water Supply Master Plan. Island Health has submitted a letter (Appendix A) to outline its mandate and the criteria for evaluating water quality protection.

Water quality monitoring is one of the cornerstones of the multi-barrier approach to providing safe potable drinking water to the region's residents. The monitoring program ensures proper integration of source water information, treatment processes, distribution infrastructure and delivery of water to customers. The program also ensures that potential risks are effectively managed to ensure a safe drinking water supply.

Appendix B summarizes the monitoring results for raw water in Sooke Lake Reservoir, the treated water at the two water treatment plants, and for the treated water in various parts of the supply and distribution systems for the spring, summer and fall period from April to December 2023. In the past, quarterly update reports have been provided to the Commission. Starting in 2024, the water quality summary report interval will increase to every four months.

IMPLICATIONS

Environmental Implications

The system is monitored for physical, chemical and biological water quality parameters.

Monitoring results indicate that the CRD continues to meet guidelines for maintaining an unfiltered source water supply. Data from within the distribution systems also indicate a good balance between managing bacterial growth and ensuring good water quality with low concentrations of disinfection byproducts. Metal concentrations, including lead, are very low within the distribution systems, and physiochemical parameters indicate a low metal corrosion potential of the drinking water.

Intergovernmental Implications

The CRD provides compliance monitoring and reporting of the municipal systems, in addition to its regional commitments, to deliver effective and efficient oversight of water quality within the overall water system. Any issues that may arise remain the responsibility of the municipalities.

Social Implications

The full disclosure of water quality monitoring data maintains public confidence in the CRD to effectively manage the regional drinking water supply. The data and reports are available online through the CRD public website. Staff respond to direct customer concerns and questions, and work with CRD operational staff, municipal staff, small system operators and Island Health officials to ensure good communication and support for the overall system.

CONCLUSION

The water quality monitoring program remains an essential component in the delivery of a safe and abundant drinking water supply to the region. Monitoring results for spring, summer and fall 2023 indicate good water quality in the source water and treated drinking water; all critical parameters indicate stable general conditions. Staff are providing this report to share the latest water quality monitoring results with the Commission.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Alicia Fraser, P. Eng., General Manager, Integrated Water Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Letter from Mike Benusic, Medical Health Officer, Island Health (January 16, 2024)
Appendix B: Water Quality Summary Report for the Greater Victoria Drinking Water System – April to December 2023

Excellent health and care, for everyone, everywhere, every time.

16 January 2024

Alicia Fraser
General Manager, Integrated Water Services
Capital Regional District

Re: filtration of Greater Victoria Water Supply System

Dear Alicia,

This letter serves to outline the role of Island Health in regards to the Greater Victoria Water Supply System, specifically the consideration of beginning filtration treatment. This letter can be shared however you see fit.

Under the BC Drinking Water Protection Act, medical health officers have responsibilities as drinking water officers, and can appoint and delegate responsibilities to other drinking water officers. For Vancouver Island, medical health officers and appointed drinking water officers are employed by Island Health. Additionally, under the BC Public Health Act, medical health officers "must advise, in an independent manner, authorities and local governments within the designated area…. on public health issues".

Under the BC Drinking Water Protection Act "a water supplier must provide, to the users served by its water supply system, drinking water from the water supply system that (a)is potable water, and (b)meets any additional requirements established by the regulations or by its operating permit". The drinking water officer is responsible for issuing operating permits. In reviewing an application for, or reviewing an existing operating permit, drinking water officers must consider guidelines, which are consolidated in the Drinking Water Officers' Guide.

Within this guide is the Drinking Water Treatment Objectives (Microbiological) for Surface Water Supplies in British Columbia. This guidance includes treatment objectives that includes "Two treatment processes for surface water" and states that "To provide the most effective protection, the Guidelines for Canadian Drinking Water Quality recommend that filtration and one form of disinfection be used to meet the treatment objectives."

This section also provides criteria for a filtration exemption, of which is currently included in the operating permit of the Greater Victoria Water Supply System. Of note, the guide states that "Applying the filtration exemption criteria does not mean filtration will never be needed in the future. A consistent supply of good source water quality is critical to the approach, but source quality can change. Therefore, the exemption of filtration must be supported by continuous assessment of water supply conditions. Changing source water quality can occur with changes in watershed conditions. Increased threats identified through ongoing assessment and monitoring may necessitate filtration. Maintaining the exemption condition relies on known current and historic source water

conditions, and provides some level of assurance to water suppliers that a filtration system may not be necessary unless the risk of adverse source water quality increases."

In respect to the planning to introduce filtration into the Greater Victoria Water Supply System, I support in general actions aimed at ensuring consistently potable drinking water to those who rely on the Greater Victoria Water Supply System. I and other drinking water officers working in South Vancouver Island have received information from your office on the data and rationale for introducing filtration into the Greater Victoria Water Supply System that we are currently reviewing and will provide a subsequent letter once our review is complete.

Sincerely,

Mike Benusic, MD MPH CCFP FRCPC
Medical Health Officer, Island Health
Office: 250-519-3406
Administrative support: Georgina Di Carlo (Georgina.DiCarlo@islandhealth.ca)

CC: Dr. Reka Gustafson, Chief Medical Health Officer; Dr. Murray Fyfe, Medical Health Officer; Dr. Dee Hoyano, Medical Health Officer; Craig Nowakowski, Supervisor Health Protection and Environmental Services

WATER QUALITY SUMMARY REPORT
FOR THE GREATER VICTORIA DRINKING WATER SYSTEM
APRIL TO DECEMBER 2023

February 2024

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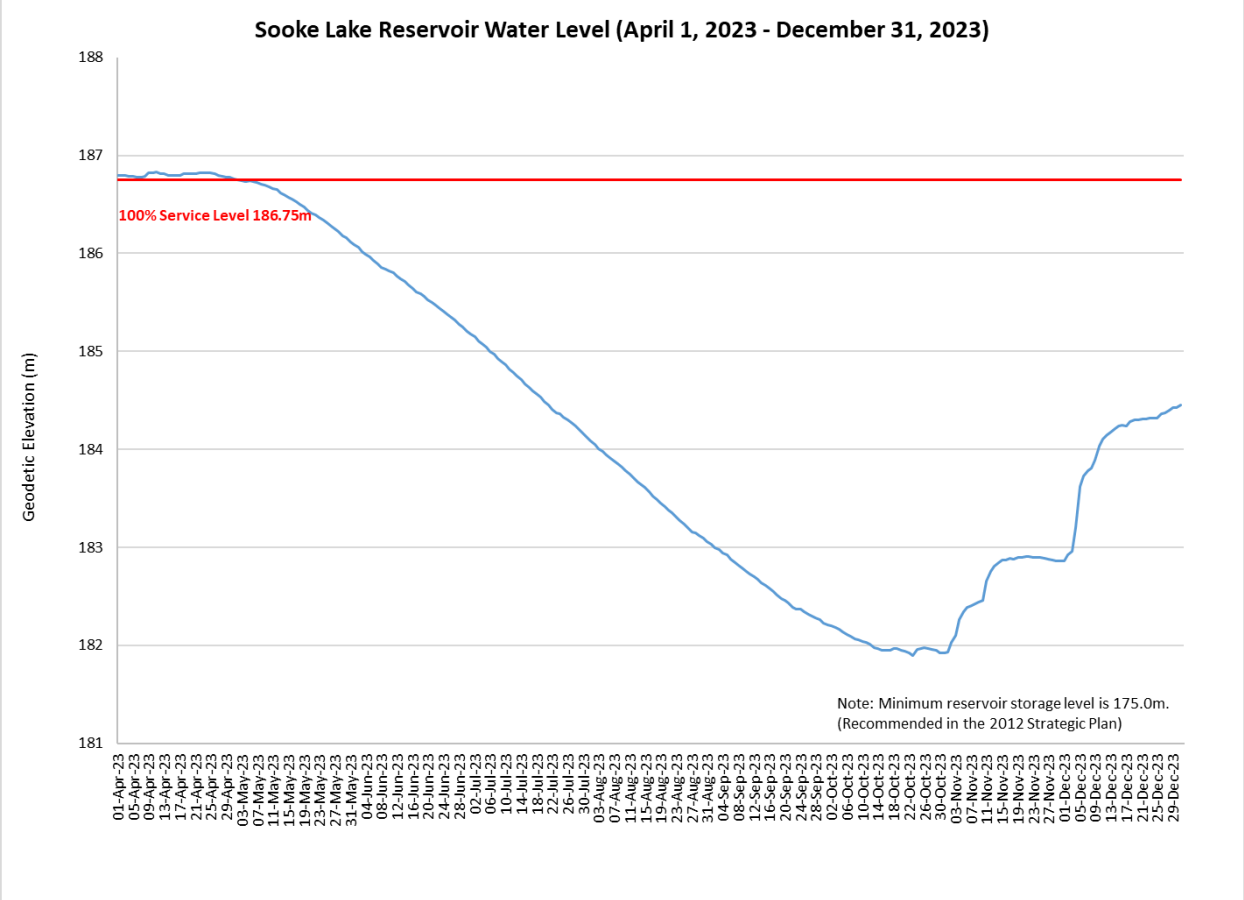
1. SOURCE WATER – SOOKE LAKE RESERVOIR

(a) Physical Parameters

Water Levels. Sooke Lake Reservoir was at 100% full capacity at the start of this reporting period on April 1, 2023 and remained at a full level until May 2 (see Figure 1). This is back in line with the historical trend, in contrast to a much later pattern in 2022. After May 2, reservoir levels continuously fell until the middle of October. On October 23, the reservoir reached its lowest level of the year at 63.9% of its full storage capacity. This is within the historical average range since the raising of the dam in 2004. By the end of the reporting period on December 31, the reservoir had filled to 82.3%, which is comparable to the end of 2022 but lower than typical over the last two decades.

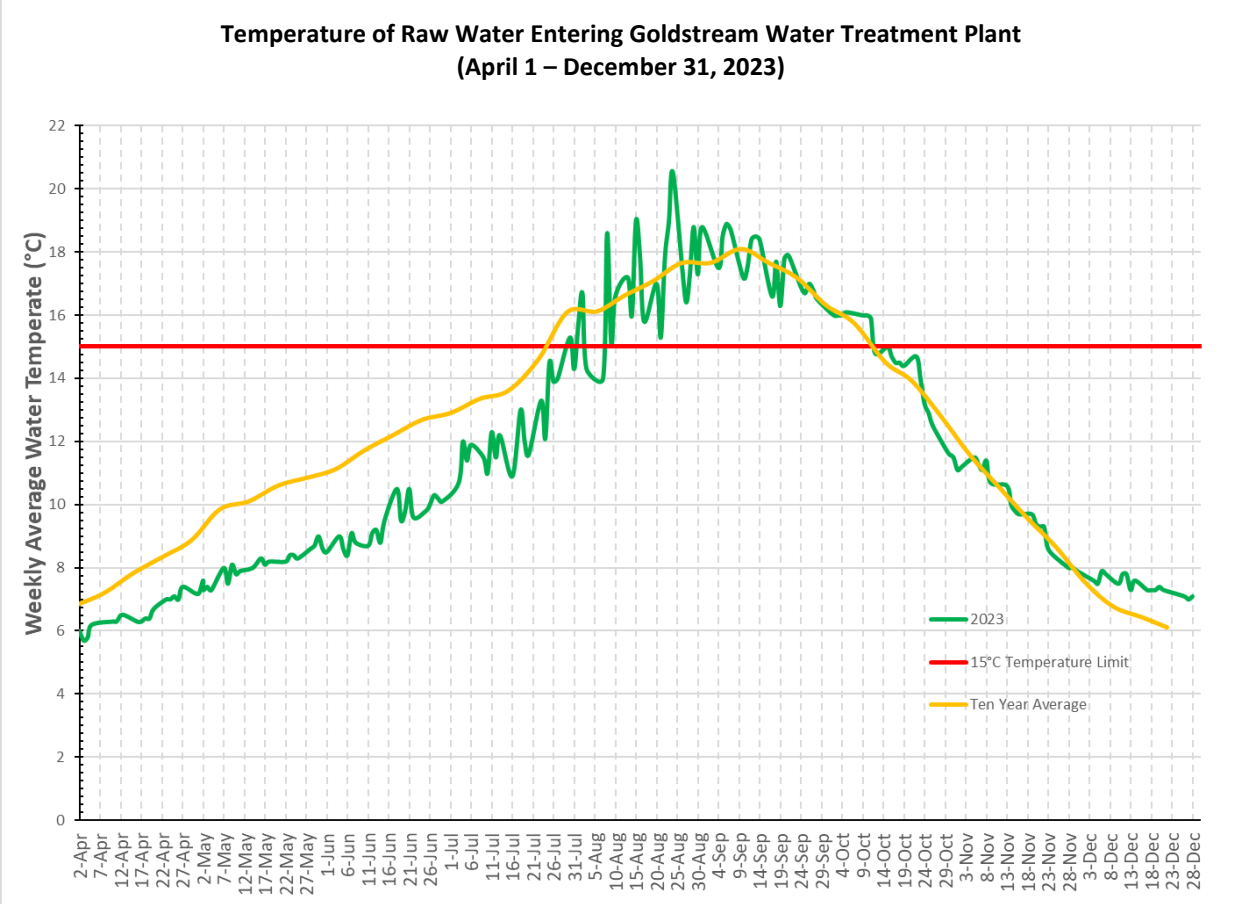
Figure 1



Water Temperature. The raw water temperature measured at the Goldstream Water Treatment Plant tracked below the long-term average trend until mid-August (see Figure 2). Thereafter, it

fluctuated just around the long-term trendline until early December. From then until the end of the year, the water temperature was notably higher than the long-term trend due to unusually mild weather in December. The end of August saw the highest water temperature of the year with >20°C, which has been a common short-term occurrence over the last few years.

Figure 2



Turbidity. Turbidity in the lake near the intake tower remained well below the 1.0 Nephelometric Turbidity Unit (NTU) limit and was very consistent for the entire reporting period (Table 1). There were no major algal events with significant impact on the raw water turbidity. Also, spring and fall rainfall and runoff events did not significantly affect the turbidity. This demonstrates the robustness of the Sooke Lake Reservoir in terms of turbidity impacts. The low turbidity of the raw water allows the ultraviolet disinfection stage to remain effective at inactivating bacteria and parasites.

Table 1

Sooke Reservoir, South Basin (1m) - SOL-00-01					
	Samples Collected	Unit of Measure	Minimum	Maximum	Mean
Turbidity	18	NTU	0.20	0.40	0.27

Water Transparency. The transparency of the lake water measured with the Secci Disc in the lake was high (between 5 and 10 m) and consistent with the long-term average. Higher algal abundance during the earlier part of the reporting period accounted for the slightly lower transparency around 5-6 m, but with no measurable impact on the treatability of the water. The annual average of the Secci Disc depth was around 8 m.

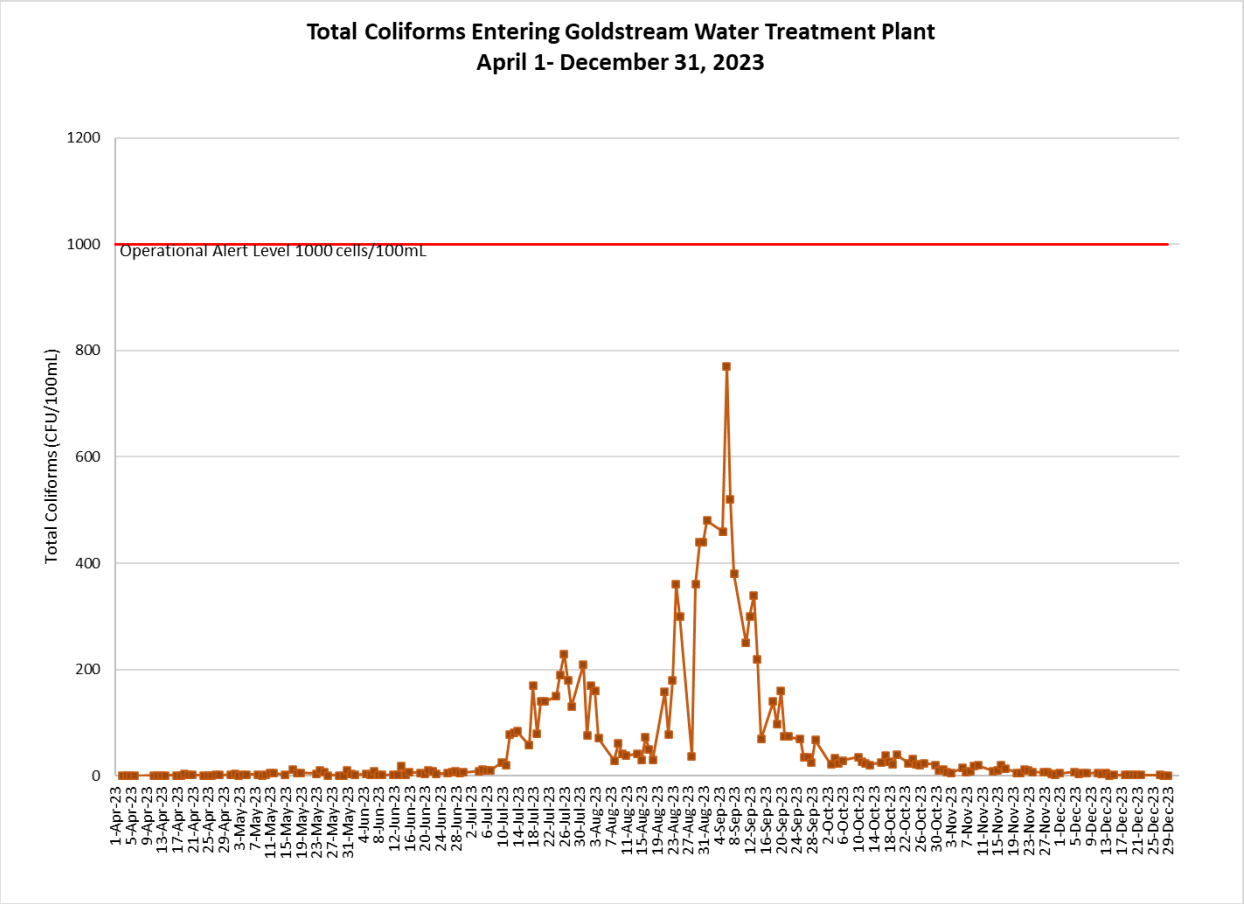
Dissolved Oxygen. New lake profiler sensor technology allowed staff to generate detailed dissolved oxygen depth profiles in three parts of Sooke Lake. The data shows that Sooke Lake remained well oxygenated throughout the summer in all depths. Even the deep part of the North Basin exhibited dissolved oxygen concentration greater than 8 mg/L throughout the summer. The lowest dissolved oxygen concentrations were measured in the South Basin near the lake bottom in September with 7 mg/L. This state prevents internal nutrient loading or metal releases in anoxic zones and is another indicator of the oligotrophic status of Sooke Lake.

(b) Bacteria

Total Coliform Bacteria and E. coli. The total coliform concentrations in the raw source water entering the Goldstream Water Treatment Plant were very low until early July. From then until mid-September, the total coliform concentrations were much higher and show two distinct waves; the first wave peaked at the end of July, with concentrations of slightly over 200 CFU/100 mL and the second peaked at the beginning of September with just under 800 CFU/100 mL (Figure 3). While these recorded concentrations are slightly higher than in previous years, this is not uncommon during the later part of the summer when bioactivity is the highest and wind-induced internal seiches can disturb the bacteria-rich benthic boundary layer at the lake bottom. This can cause sudden episodes of higher total coliform concentrations reaching the treatment plants. An extreme event of that nature was experienced in 2017 and resulted in total coliform concentrations in excess of 15,000 CFU/100 mL. Subsequent investigations concluded that Sooke Lake experiences a few internal seiches most years during the late summer period, typically without any other water quality impacts other than increased total coliform concentrations. It is assumed that the majority of such mobilized total coliform bacteria are harmless decomposers of natural organic matter and do not pose a significant health risk. From October to the end of December, the total coliform concentrations were consistently very low again.

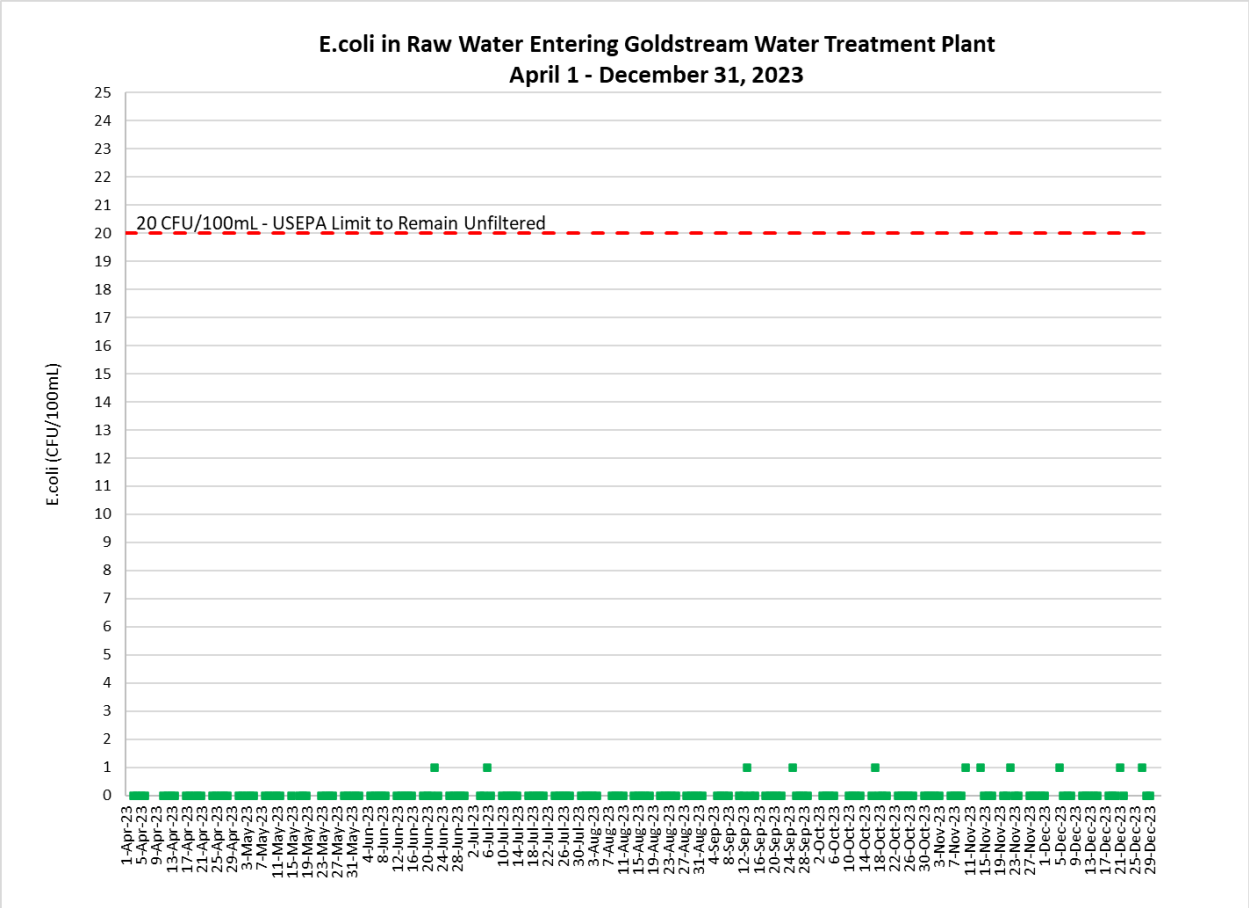
The United States Environmental Protection Agency (USEPA) Surface Water Treatment Rule for avoiding filtration has a non-critical total coliform criterion of maximum 100 CFU/100 mL at the 90 percentile of a six-month sample set. The 90 percentile of total coliform concentrations in the raw water between April and September and from July to December 2023 was 255 CFU/100 mL and was, therefore, in exceedance with this non-critical USEPA filtration exemption criterion. In context, while the total coliform concentrations increased during the warm water period, they were overall still relatively low and do not indicate any unusual activity or water contamination.

Figure 3



E. coli concentrations during the reporting period were mostly non-detected or extremely low and, therefore, consistently well under the limit for meeting the critical USEPA filtration exemption criteria for surface water used for drinking water supply (Figure 4). Meeting this criterion means compliance with the USEPA Surface Water Treatment Rule for avoiding filtration. The E. coli concentrations were also well below the benchmark used in the *2020 BC Source Drinking Water Quality Guidelines* (90 percentile E. coli ≤10 CFU/100 mL). These results are typical for Sooke Lake Reservoir during the summer and fall season.

Figure 4



(c) Nutrients

In general, the nutrient concentrations during the reporting period confirmed the ultra-oligotrophic status of Sooke Lake Reservoir, which is indicative of very low productivity in an upland lake with a virtually undisturbed catchment. This lake status is demonstrated by very low overall nutrient concentrations with a high nitrogen/phosphorus ratio and dissolved organic nitrogen being the dominant constituent of the total nitrogen. In particular, total nitrogen concentrations have been very low last summer. These conditions allow only limited biological activity in the lake, thus ensuring a good quality source for unfiltered drinking water. Slight temporary upticks were recorded in the total phosphorus concentrations, in particular in the South Basin. Since there was no rain-induced runoff introducing new nutrients to the lake until late in the reporting period, these episodes of increased phosphorus during summer and early fall are likely the result of nutrient recycling from decomposing algal or planktonic matter. The highest phosphorus peak, however, was recorded in the South Basin on November 29 following the first significant rainfall and runoff events in October and November. These recycled or newly-dintroduced nutrients are then quickly consumed by aquatic organisms. This natural cycle is an indication of a healthy and functioning food chain in the lake's ecosystem (Tables 2 and 3).

Table 2

Sooke Reservoir, South Basin (1m) - SOL-00-01					
	Samples Collected	Unit of Measure	Minimum	Maximum	Mean
Total Nitrogen	9	ug/L	77	125	94.0
Total Phosphorus	9	ug/L	1.60	7.90	3.56

Table 3

Sooke Reservoir, North Basin (1m) - SOL-04-01					
	Samples Collected	Unit of Measure	Minimum	Maximum	Mean
Total Nitrogen	9	ug/L	67	152	100.1
Total Phosphorus	9	ug/L	1.20	3.90	2.29

(d) Protozoan Parasites

In five test sets during this reporting period on the raw water entering the Goldstream Water Treatment Plant, no *Cryptosporidium* oocysts and no *Giardia* cysts were found.

(e) Algae

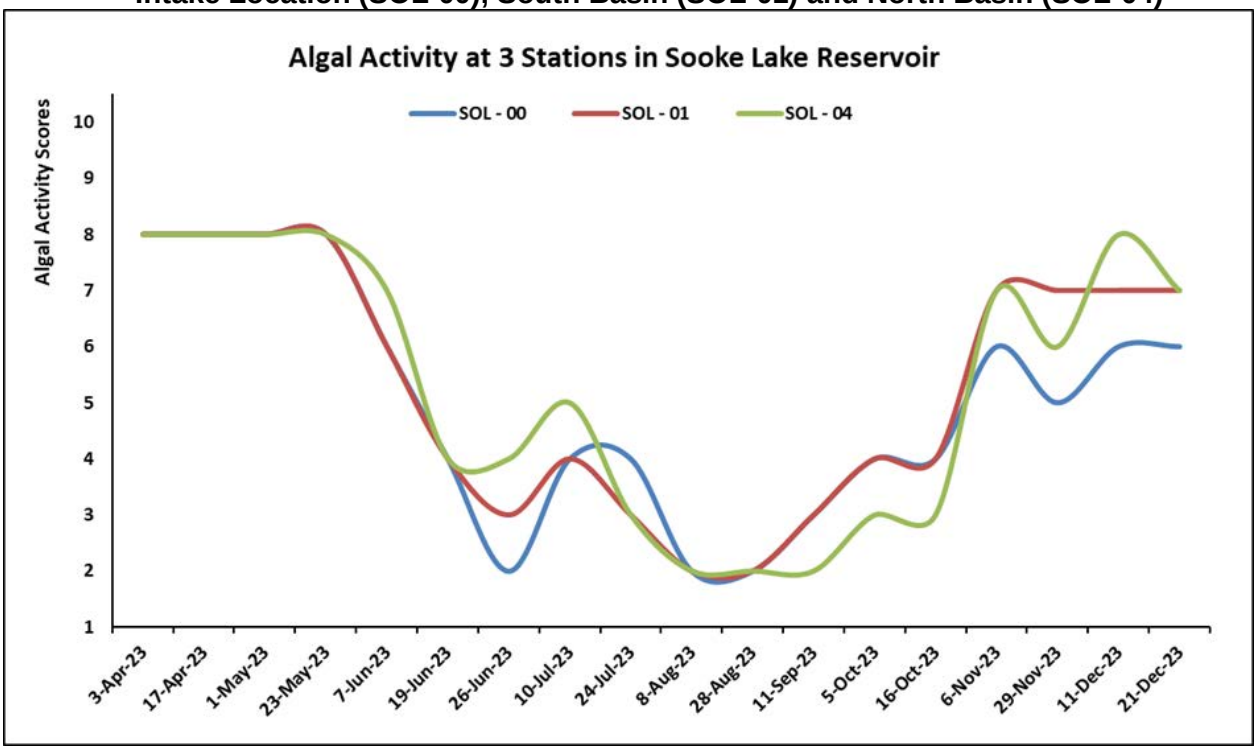
To provide a general picture of the algae activity in Sooke Lake Reservoir, an algal activity index (AA Index) was applied, ranging from 1 to 10, which is assessed via towed samples collected biweekly at three stations. The AA Index remained relatively high throughout the spring until the end of May (Figure 5). This is typically a highly productive period in Sooke Lake due to an abundance of sunshine, warming water temperatures and the availability of nutrients from winter and spring inflow. The dominant algae species was the common diatom, *Asterionella formosa*, which can cause taste and odour and/or filter-clogging issues when it blooms, but this algae population never reached a bloom level. After that, the AA index dropped sharply and remained low until October. The very low nutrient concentrations, with no external nutrient input all summer long, did not allow for proliferated growth.

During this depressed algae growth period, the algal population was dominated by a potential cyanotoxin producer, i.e., *Dolichospermum* sp. Air nitrogen-fixing cyanobacteria like *Dolichospermum* sp. can outcompete other algae under recycled-nutrient and low external-nutrient-input conditions in the summer. However, the concentrations of this cyanobacteria remained low and therefore unproblematic. With the onset of precipitation and runoff in the fall, nutrient input resulted in a typical increase of algae abundance. The diatom *Asterionella Formosa* began to dominate the phytoplankton composition again. Studies have shown that there is a significant relationship between diatom abundance and silicon concentrations, a key nutrient for diatom growth, in water bodies like Sooke Lake. Since the silicon concentration in the lake is higher during the wet season, it provides favourable growing conditions for diatoms like *Asterionella Formosa.*

Other taxa with water quality impact potential that were abundant during the reporting period included golden algae, such as *Dinobryon* spp. and *Uroglena* sp,. All of them are common in Sooke Lake but never reached concentrations where water quality impacts could be expected.

Therefore, the algae-related water quality risk remained low and no adverse water quality effect was recorded. There were no water quality concerns related to algae during this entire reporting period.

Figure 5: Algal Activity Index (AA Index) from April-December 2023, Sooke Lake Reservoir, Intake Location (SOL-00), South Basin (SOL-01) and North Basin (SOL-04)



2. WATER TREATMENT PLANTS

(a) Goldstream Water Treatment Plant

Turbidity. The raw water entering the Goldstream Water Treatment Plant was consistently well below 1 Nephelometric Turbidity Unit (NTU) during the reporting period (Table 4). On several Wednesday mornings in June, July and August, the turbidity slightly increased to peaks of up to 0.90 NTU. These excursions were a result of high watering demand and peak flows that mobilized pipe sediments in the mains just upstream of the treatment plant. These early summer turbidity excursions are known to staff and the regulator and are typically mitigated annually through springtime flushing of the responsible main sections. This time, however, the flushing procedure was already conducted in December 2022. Since introducing this flushing procedure, the number and severity of these summer turbidity excursions has significantly decreased. 2023 is the first year that saw no turbidity excursions in exceedance of 1 NTU.

Table 4

Goldstream Water Treatment Plant Turbidity - Raw Water	
Samples Collected	181
Minimum	0.15 NTU
Maximum	0.90 NTU
Mean	0.34 NTU

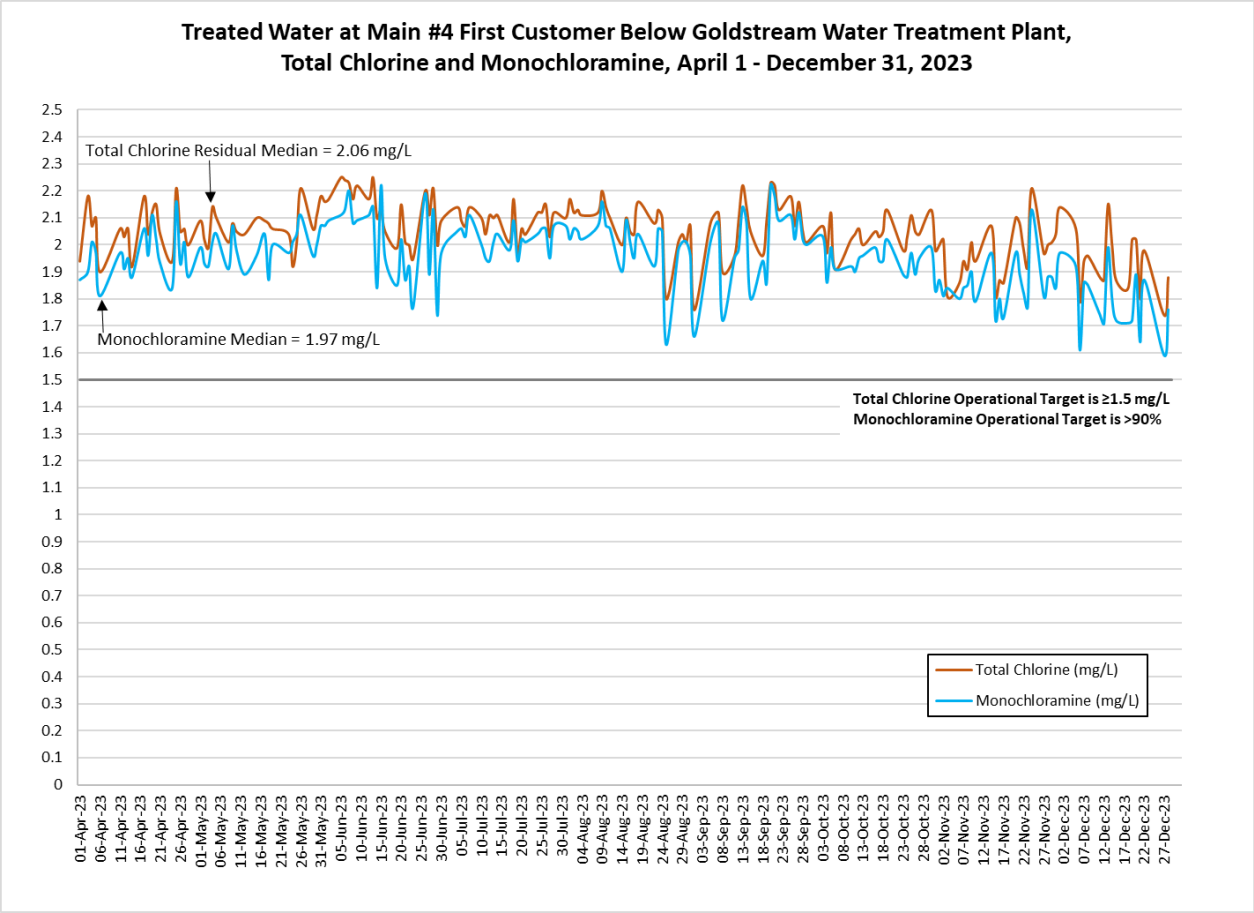
Main #4 First Customer Sampling Station Total Coliform Bacteria and E.coli. The Main #4 First Customer Sampling Station immediately downstream of the Goldstream Water Treatment Plant is sampled daily to monitor the efficacy of the disinfection treatment process. Three samples within this reporting period tested positive for total coliform bacteria – June 23: 4 CFU/100 mL, August 2: 55 CFU/100 mL and August 23: 1 CFU/100 mL. All resamples the next day were free of total coliform bacteria. An investigation into the August 2 hit could not clearly identify a source of the contamination. It is interesting to note that, at the same day and time, the Main #5 First Customer sampling station also recorded a high total coliform concentration, which would be an indication of a possible bacteria breakthrough at the Goldstream Water Treatment Plant. The raw water total coliform concentrations entering the plant that day were only moderately high and should have been no issue for the disinfection process. No malfunctions were reported from the treatment plant that day. Due to high chlorine residuals at the time of sampling and the lack of further evidence for an actual drinking water contamination, it was concluded that this total coliform hit was most likely a result of sampling or lab error. No E.coli bacteria were found in any sample collected from this site.

Main #5 First Customer Sampling Station Total Coliform Bacteria and E.coli. The Main #5 First Customer Sampling Station immediately downstream of the Goldstream Water Treatment Plant is also sampled daily to monitor the efficacy of the disinfection treatment process. Six samples within this reporting period tested positive for total coliform bacteria – April 18: 4 CFU/100 mL, May 4: 18 CFU/100 mL, May 30: ~510 CFU/100 mL, August 2: 121 CFU/100 mL, September 1: 1 CFU/100 mL and September 6: 2 CFU/100 mL. All resamples the next day were free of total coliform bacteria. Investigations into the May 30 and August 2 hits could not clearly identify a source of contamination. Due to high chlorine residuals at the times of sampling and the lack of evidence for actual drinking water contaminations, it was concluded that these unusually high total coliform hits were most likely a result of sampling or lab error. No E. coli bacteria were found in any sample collected from this site.

These results demonstrate the efficacy of the disinfection process at the Goldstream Water Treatment Plant.

Secondary Disinfection. Figure 6 shows the total chlorine and monochloramine concentrations at the Main #4 First Customer Sampling Station. The target concentration of 1.5 mg/L for total chlorine was consistently achieved. The target ratio of 90% monochloramine was also consistently achieved. Adequate and effective secondary disinfection was provided across the entire system throughout the reporting period.

Figure 6



(b) Sooke River Road Water Treatment Plant

Turbidity. The raw water entering the Sooke River Road Water Treatment Plant was consistently well under 1 NTU (Table 5).

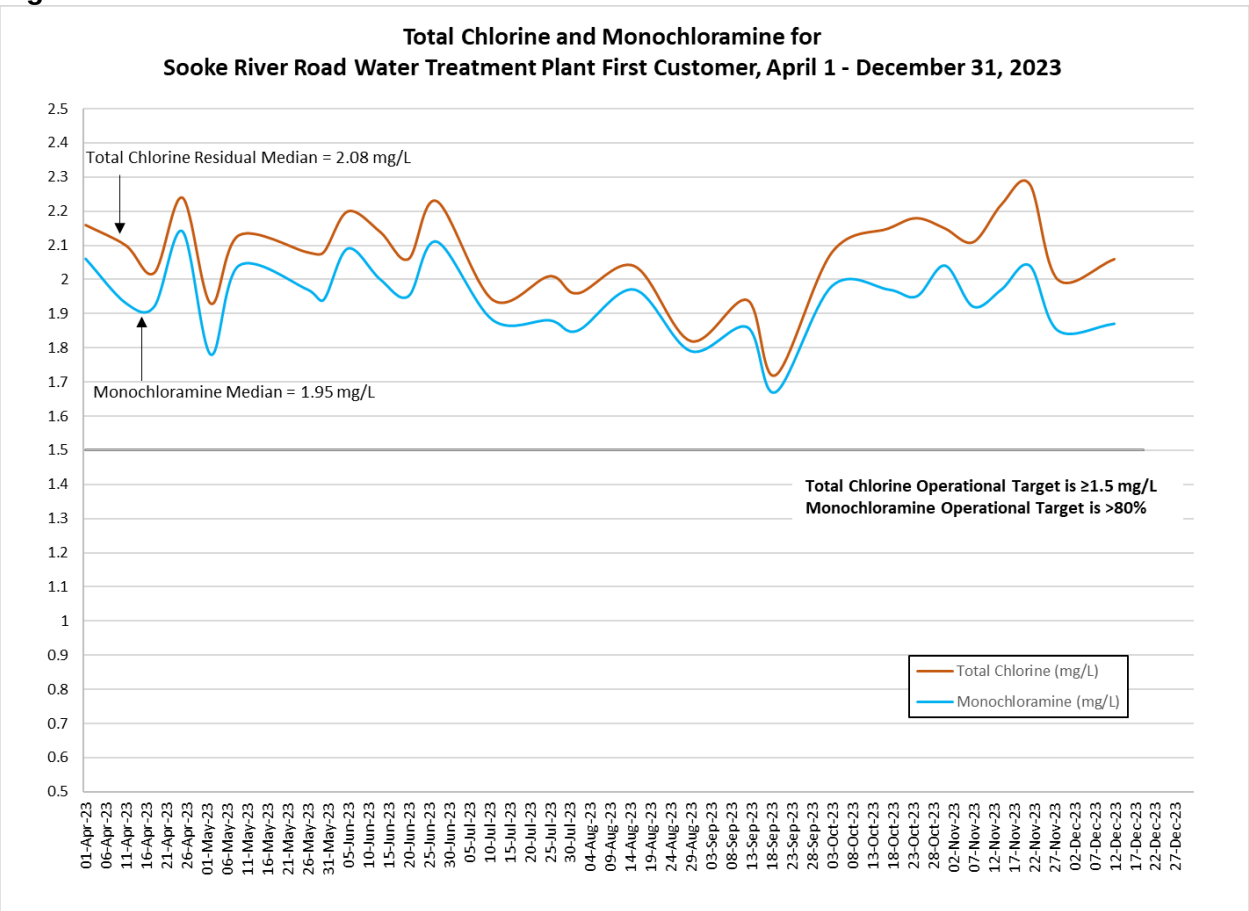
Table 5

Sooke River Road Water Treatment Plant Turbidity - Raw Water	
Samples Collected	27
Minimum	0.15 NTU
Maximum	0.55 NTU
Mean	0.28 NTU

Sooke First Customer Sampling Station Total Coliform Bacteria and E.coli. The Sooke First Customer Sampling Station, immediately downstream of the Sooke Water Treatment Plant, is sampled weekly to monitor the efficacy of the disinfection treatment process. No total coliform or *E.coli* bacteria were found in any sample collected from this site.

Secondary Disinfection. Figure 7 shows the total chlorine and monochloramine concentrations at the Sooke First Customer Sampling Station. The target concentration of 1.5 mg/L for total chlorine was consistently achieved during the reporting period. The target ratio of 80% monochloramine (older plant - therefore not as precisely controllable) was also consistently achieved. Adequate and effective secondary disinfection was provided across this much smaller distribution system.

Figure 7



3. DISTRIBUTION SYSTEMS

(a) Goldstream Service Area

Table 6

Goldstream Water Treatment Plant Service Area										
Month/Year	Samples Collected	Total Coliforms (CFU/mL)				E.coli (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC > 0	Resamples TC > 0	Samples TC > 10	Samples > 0	Samples Collected	Adverse > 1 NTU	Median mg/L as CL2	Median °C
Apr-23	362	2	0.6	0	2	0	29	2	1.65	8.9
May-23	397	4	1.0	0	1	0	32	1	1.67	11.5
Jun-23	402	2	0.5	0	2	1	28	0	1.71	13.3
Jul-23	374	4	0.5	0	0	0	33	0	1.67	15.8
Aug-23	389	1	0.3	0	0	0	26	0	1.63	18.5
Sep-23	359	2	0.6	0	0	0	23	0	1.67	18.5
Oct-23	384	1	0.3	0	0	0	38	0	1.57	15.5
Nov-23	401	3	0.7	0	0	0	40	0	1.57	11.5
Dec-23	374	0	0.0	0	0	0	30	0	1.63	9.1
Total:	3442	19	0.6	0	5	1	279	3	1.65	13.3

Total Coliform Bacteria and E.coli. Only 19 out of 3,442 distribution system samples, or 0.6% of all bacteriological samples during the reporting period, tested positive for total coliform bacteria. Five samples registered a total coliform concentration of >10 CFU/100 mL. In all cases, the resample was free of total coliform bacteria, indicating that no actual water contamination was the cause of these coliform hits.

On June 12, 2023, one sample from Amwell Drive/Aston End in Central Saanich tested positive for *E.coli* bacteria: 2 CFU/100 mL (Table 6). The total coliform concentration in the same sample was 118 CFU/100 mL. Emergency response procedures were followed and Island Health was notified. The resample and extra samples from up and downstream were free of total coliform and *E.coli* bacteria. An investigation revealed that someone had deposited a bag with dog feces inside the valve box where the samples were taken from. This was most likely the source of contamination on the sampling port and therefore not a contamination of the drinking water in the water system.

Turbidity. Three of the 279 turbidity samples registered higher than 1 NTU (Table 6), likely as a result of water main flushing activities in the spring. Overall, these results are an indication of good drinking water quality.

Total Chlorine Residual. A median total chlorine residual concentration of 1.65 mg/L across the system indicates an effective secondary disinfection protecting the potability of the treated drinking water as it flows throughout the system (Table 6).

Water Temperature. The temperature of the drinking water in the system during this reporting period was consistently above the aesthetic objective in the *Canadian Drinking Water Quality Guidelines* (15ºC) from July through October.

Water Chemistry. The average pH of the drinking water in the Goldstream Service Area was 7.8 during the reporting period. The pH ranged from 7.1 to 8.5, which is typical when operating the hypochlorite chlorination equipment. The average alkalinity was 17.3 mg/L. Both pH and alkalinity have increased since the commissioning of the hypochlorite chlorination equipment.

Disinfection Byproducts. The three typically monitored disinfection byproducts in a drinking water system have all been well below the Health Canada established health limits in the Goldstream Service Area (Table 7).

Table 7

Disinfection Byproducts - Goldstream WTP Service Area						
Parameter	**Samples Collected**	**Unit of Measure**	**Minimum**	**Maximum**	**Mean**	**MAC (Maximum Acceptable Concentration)**
Haloacetic Acids (HAAs)	15	ug/L	<5	18.0	10.2	80
Trihalomethanes (THMs)	15	ug/L	12.0	27.0	18.1	100
NDMA	13	ng/L	<1.9	6.3	2.3	40

Metals. A comprehensive metals analysis was conducted every second month at four different locations in the Goldstream Service Area: (1) where treated water enters the Victoria/Esquimalt System, (2) the Oak Bay System, (3) one in Langford and (4) one in North Saanich. Out of the 32 tested metals, five are monitored particularly closely: iron, manganese, lead, aluminum and copper. All metal concentrations were below the respective Health Canada maximum acceptable concentration or the aesthetic objective (Table 8).

Table 8

Metals - Goldstream WTP Service Area								
Parameter	**Samples Collected**	**Unit of Measure**	**Minimum**	**Maximum**	**Mean**	**AO (Aestetic Objective)**	**OG (Operational Guideline)**	**MAC (Maximum Acceptable Concentration)**
Aluminum	17	ug/L	5.2	13.1	9.1		100	2900
Copper	17	ug/L	1.1	23.1	7.9	1000		2000
Iron	17	ug/L	8.2	36.8	19.2	300		
Lead	17	ug/L	<0.2	0.32	0.22			5
Manganese	17	ug/L	2.2	5.8	3.8	20		120

(b) Sooke Service Area

Table 9

Sooke River Road Water Treatment Plant Service Area										
Month/Year	Samples Collected	Total Coliforms (CFU/mL)				E.coli (CFU/100mL)	Turbidity		Chlorine Residual	Water Temp.
		Samples TC > 0	Percent TC > 0	Resamples TC > 0	Samples TC > 10	Samples > 0	Samples Collected	Adverse > 1 NTU	Median mg/L as CL2	Median ^{o}C
Apr-23	28	0	0.0	0	0	0	6	0	1.28	8.7
May-23	38	0	0.0	0	0	0	8	0	1.32	12.3
Jun-23	36	0	0.0	0	0	0	8	0	1.13	14.1
Jul-23	28	0	0.0	0	0	0	5	0	1.18	16.1
Aug-23	36	0	0.0	0	0	0	7	0	1.08	18.4
Sep-23	26	0	0.0	0	0	0	6	0	1.17	17.7
Oct-23	40	0	0.0	0	0	0	9	0	0.91	14.3
Nov-23	37	0	0.0	0	0	0	8	0	1.22	10.7
Dec-23	26	0	0.0	0	0	0	7	0	1.28	8.9
Total:	295	0	0.0	0	0	0	64	0	1.18	14.1

Total Coliform Bacteria and E.coli. No bacteriological sample from the Sooke Service Area tested positive for total coliform or E.coli bacteria during the entire reporting period (Table 9).

Turbidity*.* None of the 64 turbidity samples registered above 1 NTU (Table 9). This is an indication of good drinking water quality.

Total Chlorine Residual. A median total chlorine residual concentration of 1.18 mg/L across the system indicates an effective secondary disinfection protecting the potability of the treated drinking water as it flows throughout the system (Table 9).

Water Temperature. The temperature of the drinking water in the system during this reporting period was above the aesthetic objective in the *Canadian Drinking Water Quality Guidelines* (15ºC) from July through September.

Water Chemistry. The average pH of the drinking water in the Sooke Service Area was 7.6 during the reporting period. The pH ranged from 7.2 to 8.1 and is typically very stable and consistent across this system. The average alkalinity was 16.8 mg/L.

Disinfection Byproducts. The three typically monitored disinfection byproducts in a drinking water system have all been well below the Health Canada established health limits in the Sooke Service Area (Table 10).

Table 10

Disinfection Byproducts - Sooke River Road WTP Service Area						
Parameter	**Samples Collected**	**Unit of Measure**	**Minimum**	**Maximum**	**Mean**	**MAC (Maximum Acceptable Concentration)**
Haloacetic Acids (HAAs)	4	ug/L	17.0	25.0	20.5	80
Trihalomethanes (THMs)	4	ug/L	24.0	36.0	30.8	100
NDMA	3	ng/L	<1.9	3.0	2.3	40

Metals. A comprehensive metals analysis was conducted every second month in one location in the Sooke Service Area: at the end of the distribution system near Whiffen Spit. Out of the 32 tested metals, five are monitored particularly closely: iron, manganese, lead, aluminum and copper. All metal concentrations were well below the respective Health Canada maximum acceptable concentration or the aesthetic objective (Table 11).

Table 11

Metals - Sooke River Road WTP Service Area								
Parameter	**Samples Collected**	**Unit of Measure**	**Minimum**	**Maximum**	**Mean**	**AO (Aestetic Objective)**	**OG (Operational Guideline)**	**MAC (Maximum Acceptable Concentration)**
Aluminum	4	ug/L	4.6	9.5	6.7		100	2900
Copper	4	ug/L	7.1	10.4	9.0	1000		2000
Iron	4	ug/L	25.4	42.7	34.5	300		
Lead	4	ug/L	<0.2	0.32	0.26			5
Manganese	4	ug/L	2.6	6.0	3.9	20		120

CONCLUSION

During this spring, summer and fall reporting period (April-December 2023), all parameters from source water to treated water indicate stable conditions and good water quality. All trends are in line with historic data and confirm the adequacy of existing water treatment and performance of all major infrastructure components. The provincial-wide drought conditions during the summer and fall period did not have any adverse impact on the water quality. There were no water quality affecting events during this reporting period.

The emergency response procedures for a potential *E.coli* drinking water contamination were applied in June when a sample from the Central Saanich Distribution System tested positive for *E.coli* bacteria. Additional samples did not identify any actual drinking water contamination and investigations revealed that the sampling infrastructure at the particular sampling station had been contaminated by dog feces.

The multi-barrier approach applied to the Greater Victoria Drinking Water System ensures the excellent drinking water quality achieved during the reporting period.

Making a difference...together

RWSC 24-05

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, FEBRUARY 21, 2024

SUBJECT **Greater Victoria Water Supply Access and Special Use Request for Wind Data Collection – Innergex Renewable Energy Inc.**

ISSUE SUMMARY

To seek a Regional Water Supply Commission (Commission) decision regarding a Water Supply Area access and special use request.

BACKGROUND

Innergex Renewable Energy Inc. (Innergex) contacted the Capital Regional District (CRD) in late 2023 with a request to place a wind measuring device on Survey Mountain, in the Leech watershed of the Greater Victoria Water Supply Area (GVWSA) for a period of 16 months. The purpose is to investigate the potential of the area for a wind energy project.

The access request/proposal is found in Appendix A, including details of the 8-foot by 12-foot self-supported measuring device on a small trailer; and background on the firm and their intentions.

Should the Commission approve the request, a licence of occupation would be negotiated with Innergex for the access and special use (template in Appendix B).

CRD Bylaw No. 2804 GVWSA Protection requires that the General Manager seek approval from the Commission for access and special use of the GVWSA. "Special use" is defined in the bylaw as "an activity not included in the operations of the CRD that is carried on in the water supply area by persons who are not employees or contractors of the CRD". The General Manager has authority under the GVWSA Access and Special Use Request and Approval Procedure, approved by the Commission, to approve routine access and special uses for government agencies, educational institutions, mining access and escorted access; all other requests require Commission approval.

ALTERNATIVES

Alternative 1

1. That access be approved and special use for Innergex Renewable Energy Inc. (Innergex) to place, maintain and draw data from a wind measuring device in the Greater Victoria Water Supply Area; and,
2. That staff be directed to execute a licence of occupation with Innergex for Greater Victoria Water Supply Area access and special use.

Alternative 2

That the Water Supply Area access and special use request not be approved.

Alternative 3

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

IMPLICATIONS

Alignment with Board & Corporate Priorities

As stated by Innergex in their proposal, the request does align generally with the CRD Board's Climate Action & Environment priorities and CRD's Climate Action Strategy; in terms of pursuing policies and actions that reduce emissions and make use of renewable energy.

Financial Implications

A fee of $500 would be charged to Innergex on execution of the licence of occupation. There are no other financial implications currently.

Environmental Implications

The placement and implementation of a passive wind measuring device on Survey Mountain which already has road access and a clearing, presents no additional environmental risk or implication and will not require tree removal.

If there is both potential and interest for an energy project to proceed at this location, a full environmental assessment of all aspects of the project would need to be conducted.

First Nations Reconciliation

The proposal from Innergex indicates alignment with the CRD Board's priority to build strong relationships built on trust and mutual respect with First Nations. Innergex states they have contacted T'Sou-ke and Malahat First Nations regarding their access request and interest in the site/area for wind energy potential.

Service Delivery Implications

The access request has minimal service delivery implications to coordinate a location on Survey Mountain for the equipment, execute a licence of occupation, and complete access orientation for Innergex or their contract staff to enter the GVWSA.

As seen on the map in Appendix C, Survey Mountain and existing CRD communications and environmental monitoring equipment as well as a site licence in favour of National Research Council (seismic monitoring) are already located at the site. Preliminary review suggests there is room for the additional wind monitoring equipment at the site.

CONCLUSION

A private firm has requested access and special use to measure winds above Survey Mountain in the Greater Victoria Water Supply Area (GVWSA) for the purpose of investigating a potential wind energy project. The access and special use request poses low risk to the GVWSA and does not require decision regarding a wind energy project at this time nor does it make any commitment to Innergex for a future wind energy project. Investigation of a wind energy project in the GVWSA

aligns generally with CRD priorities for Climate Action; the firm also partners with local First Nations which aligns with CRD goals.

RECOMMENDATION

1. That access be approved and special use for Innergex Renewable Energy Inc. (Innergex) to place, maintain and draw data from a wind measuring device in the Greater Victoria Water Supply Area; and,
2. That staff be directed to execute a licence of occupation with Innergex for Greater Victoria Water Supply Area access and special use.

Submitted by:	Annette Constabel, M.Sc., RPF., Senior Manager, Watershed Protection
Concurrence:	Alicia Fraser, P. Eng., General Manager, Integrated Water Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT(S)

Appendix A: Innergex Renewable Energy Inc. Access Request
Appendix B: Licence of Occupation template
Appendix C: Survey Mountain Location Map

INNERGEX

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February 7th, 2024

Gord Baird, Chair
Regional Water Supply Commission
Capital Regional District
625 Fisgard St.
Victoria, BC V8W 1R7

[Sent by email to: aconstabel@crd.bc.ca]

Reference: ***Innergex Renewable Energy Inc.***
Project: ***Authorization for Wind Measurement Equipment on Survey Mountain***

Dear Chair Gord Baird and Regional Water Supply Commission,

Our team had the pleasure of connecting with Annette Constabel on November 24, 2023 and we wish to continue to develop a relationship with the Capital Regional District (CRD) to investigate a potential wind project site located on lands owned by the CRD in the vicinity of Survey Mountain. As a follow-up to our discussion, and pursuant to the attached "Authorization Proposal", we hereby request permission to: (1) access Survey Mountain via existing roads and gates, and (2) place a trailer with wind measurement equipment on Survey Mountain for a duration of up to 16 months.

By way of background, Innergex is a leading Canadian renewable energy company founded in 1990 specializing in wind, hydro, and solar energy and storage solutions. For three decades, we have not only developed a strong reputation in the renewable energy sector, but we have also grown from a small Canadian energy producer to a global corporation now operating and managing a large portfolio of high-quality assets including 85 operating facilities in Canada, the United States, France, and Chile.

We have a proven record of being a responsible developer, constructor and operator of renewable energy facilities and believe in a better world where abundant renewable energy promotes healthier communities and creates shared prosperity – generating value for our partners and host communities and contributing to a more sustainable world for future generations.

We have a proud history of developing some of the first partnerships with Indigenous communities across the country and are honoured to currently have agreements and partnerships with 31 Indigenous communities on renewable energy projects, 25 of which are in BC. In B.C. and across Canada, Innergex has a proven track record and extensive experience as a leader in cultivating respectful partnerships with Indigenous communities on renewable electricity projects. In BC, over 90% of the industry's private clean projects have First Nations participation, either as full owners, equity partners or through royalty agreements.

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As part of our commitment to respectful relationships and meaningful partnerships, Innergex has contacted local First Nations about the proposed wind project and has engaged, for example, with Malahat Nation and T'Souke Nation.

Malahat Nation has demonstrated unique sustainability and environmental leadership with the promotion of stewardship and sustainable practices throughout the marine and terrestrial environment on their traditional territory. Furthermore, Malahat Nation's recent announcement of the groundbreaking 100,000-square-foot energy storage battery manufacturing facility exemplifies their commitment to balancing economic growth with environmental responsibility. In this context, Innergex has engaged with Malahat Nation on the opportunity to collaborate on renewable energy projects such as wind energy and battery energy storage systems.

In addition, we have been engaging with and will continue the conversation with T'Sou-ke First Nation who also stand as trailblazers in renewable energy development on Vancouver Island, showcasing leadership and commitment to sustainable practices. With a forward-thinking approach, T'Sou-ke First Nation has actively embraced renewable energy initiatives, establishing itself as a model for environmental stewardship in the region. Through strategic planning and collaborative efforts, T'Sou-ke First Nation continues to play a pivotal role in shaping the landscape of renewable energy development on Vancouver Island.

In this context, we believe that there are numerous potential synergies between Innergex, Malahat Nation, T'Sou-ke First Nation and other Nations that would translate into meaningful economic reconciliation in the CRD.

Innergex has invested over $2.5 billion in British Columbia and currently operate 21 run-of-river type hydroelectric projects and one wind farm in BC. We average 6% of the province's electricity generation and are continuing our long-term commitment and investment in supporting BC's clean energy transition through our renewable energy solutions and technologies.

We are very excited about the Provincial Government's June 2023 announcement that BC Hydro will be moving forward with a call for new sources of renewable, emission-free electricity to power BC's growing clean economy launching this April.

BC Hydro's updated 10-year capital plan, "Power Pathway: Building B.C.'s Energy Future," released last month highlights the province's transition to renewable energy amid the global energy shift. With climate change impacts in mind, the plan emphasizes investing in safe, reliable, and robust renewable power sources. While B.C. benefits from clean electricity, it accounts for only 20% of the province's energy use. The update outlines a $36 billion, 10-year capital plan (2025-2034) aimed at meeting growing demand and support electrification in various sectors with a 50% increase in investments – of which $3.2 billion has been allocated to Vancouver Island for sustainment, reinforcement, electrification and GHG reduction.

In preparation for this upcoming call and anticipated subsequent procurements, we are seeking to investigate a strategic wind project location in southern Vancouver Island on land owned by the Capital Regional District.

Recent disasters like wildfires, droughts and storms make it clear that we need to take climate action seriously and the clean energy sector in B.C. plays a major role in helping British Columbia reach its climate action goals, withstand changing environmental conditions and recover quickly from events that cause outages.

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A wind project aligns seamlessly with the Capital Regional District's priorities, particularly in Climate Action & Environment. By harnessing wind energy, the project contributes directly to the goal of low carbon infrastructure, fostering sustainability and resilience in land use planning. This initiative not only reduces greenhouse gas emissions but also supports the regional approach to biodiversity, safeguarding ecological assets.

In line with the Capital Regional District Regional Water Supply 2022 Master Plan, wind energy can provide reliable and clean power for the required additional infrastructure and processes included in the document, and therefore contribute to the decarbonization of the water infrastructure.

Our commitment to clean energy is not just about protecting the environment; it's about creating economic opportunities for local communities - renewable energy projects make significant contributions to the provincial and local economy. Renewable energy projects provide long-term and well-paying jobs, contribute millions of dollars to governments annually through taxes (property tax, crown land lease, wind rental payments, water rental, and more), and generate valuable revenues for First Nations partners and host communities.

Moreover, the wind project reflects the CRD’s commitment to First Nations' priorities. Through respectful collaboration and engagement, it provides an avenue to incorporate Indigenous leadership and traditional knowledge. By enhancing economic opportunities in partnership with First Nations, the project supports shared prosperity, fostering strong Government-to-Government relationships as part of the region's holistic approach.

Attached please find an “Authorization Proposal” that describes the proposed investigative activities, equipment and access requirements. Please let us know should you require additional information to support your consent to these activities by reaching out to Ina Gjoka by email at igjoka@innergex.com or via mobile at 236-994-5812.

Sincerely yours,
Innergex Renewable Energy Inc.

Ina Gjoka
Strategist – Government Relations

Nuno Louzeiro, M.A.Sc., P.Eng.
Director – Development

Enclosure: Authorization Proposal for Wind Measurement Equipment on Survey Mountain Proposal

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Authorization Proposal
for Wind Measurement Equipment on Survey Mountain Proposal

Company Requesting Permission: **INNERGEX RENEWABLE ENERGY INC. ("Innergex")**

Installation Primary Contact: James Newby, Senior Resource Specialist, 604-209-5740

Secondary Contact Person: Nuno Louzeiro, Director – Development, 604-787-9220

Equipment:
Trailer with mounted lidar wind measurement equipment and solar power pack. The following are photos of a typical lidar/power trailer. In "measurement setup", the trailer occupies a space of about 12 feet x 8 feet.

Figure 1: Trailer in transport setup.

Figure 2: Trailer in measurement setup (with solar panels extended)

Location: Survey Mountain, approximately 18 km north of Sooke, BC, and on private land owned by CRD. We propose to park the trailer in "measurement setup" in an existing clearing adjacent to the CRD monitoring station on the summit of Survey Mountain, at approximate Lat/Long of 48°33'35"N and 123°47'58"W. The trailer will be parked in a location on the edge of the existing roads, to avoid blocking access.

Access: Access will be by motorized vehicle, and coordinated with the CRD, including directions, gate keys/codes, or other access instructions. At this time, we anticipate needing access along Sooke Lake Rd. (and the gate at the "Sooke Entrance"), then to other existing forestry roads that allow access to the Survey Mountain summit. We anticipate needing access as follows:

- Initial site reconnaissance prior to setup.
- Trailer mobilization.
- Every 2-3 months for maintenance.
- Trailer demobilization.

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Duration: Up to 16 months, commencing on installation date. Installation will be coordinated with the CRD, and is likely to occur about 1.5 to 2 months after issuance of authorization from CRD.

Fee: $500 per year (consistent with rent for a BC Crown Land Investigative Licence).

Power: At this time, we anticipate using a self-contained solar-pack to power the lidar equipment. Please advise should there be an alternative power supply source on Survey Mountain (we would pay per use), which would greatly simplify the installation.

The Capital Regional District hereby authorizes Innergex Renewable Energy Inc. to: (1) access Survey Mountain via existing roads and gates, and (2) place a trailer with lidar wind measurement equipment on Survey Mountain for a duration of up to 16 months.

Authorizer:	**CAPITAL REGIONAL DISTRICT ("CRD")**
Name of CRD Representative:	
Title:	
Signature:	
Authorization Issuance Date:	

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LICENCE OF OCCUPATION

1. START DATE: EXPIRY DATE:

2. LICENSOR: CAPITAL REGIONAL DISTRICT (the "CRD")
   625 Fisgard Street
   Victoria BC, V8W 2S6

3. LICENSEE: <COMPANY NAME>
   <ADDRESS>

4. GRANT: The Licensor grants to the Licensee, the non-exclusive licence to enter and be upon those parts of the land owned by the CRD, identified with a blue dot (the "Sites") on the attached Schedule A located on the Lands legally described as:

   <*Legal description & PID*>
   that area referred to as: <Description>

   ("Lands")

5. PURPOSE: This Licence is granted for the purpose of maintaining and operating a temporary <Equipment description> Monitoring Stations (the "Licensee's Facility") described in Schedule B and no other purpose, upon the terms agreed to herein.

6. LICENCE FEE:
   In consideration of the foregoing recitals, the promises exchanged below, the mutual alteration of legal position, and for other good and valuable consideration, the Licensee covenants with the CRD to the terms of this agreement.

7. SECURITY DEPOSIT:
   Intentionally Deleted

8. TAXES: N/A

9. MAINTENANCE AND REPAIR: The Licensee shall keep the Sites and the Licensor's roads used in connection therewith in a neat and tidy condition acceptable to the Licensor. On termination, the Licensee shall leave the Lands and any the Licensor's roads used in a condition acceptable to the Licensor.

10. IMPROVEMENTS: No improvements may be placed on, or physical changes made to, the Lands or Sites without the prior written consent of the Licensor except those permitted improvements, listed in Schedule C attached hereto, which may be amended from time to time with the consent of the Licensor. On termination the Licensee shall forthwith remove any improvements placed on the Lands or Sites if requested by the

Licensor. If such improvements are not removed within thirty (30) days of termination, they shall belong to the Licensor, without cost, at the option of the Licensor.

11. TIMBER: The Licensee shall not cut or damage or allow the cutting or damaging of trees on the Lands without the prior written consent of the Licensor.

12. ROAD USE RULES: If any of the Licensor's roads are used in connection with this Licence, the Licensee shall:
(a) Strictly observe all speed limits and traffic regulations, and
(b) Suspend use of the Licensor's roads whenever such use is likely to cause excessive damage to them.

13. PROTECTION AGAINST FIRE: The Licensee shall:
(a) Not store any flammable and/or explosive materials on the Lands.
(b) Immediately notify the Licensor and the nearest Ministry of Forests office upon discovery of any fire in the vicinity of the Lands, and
(c) Strictly observe the Licensor's and Ministry of Forests closure instructions with regard to forest fire hazards.

14. ENVIRONMENTAL RESPONSIBILITY:
(a) For the purposes of this section:

(i) "Contaminants" means any pollutants, contaminants, deleterious substances, underground or above-ground tanks, asbestos materials, hazardous, corrosive, or toxic substances, special waste or waste of any kind, or any other substance which is now or hereafter prohibited, controlled, or regulated under Environmental Laws; and

(ii) "Environmental Laws" means any statutes, laws, regulations, orders, bylaws, standards, guidelines, permits, and other lawful requirements of any governmental authority having jurisdiction over the Sites now or hereafter in force relating in any way to the environment, environmental assessment, health, occupational health and safety, or transportation of dangerous goods, including the principles of common law and equity.

The Licensee covenants and agrees as follows:

(b) not to use or permit to be used all or any part of the Sites for the sale, storage, manufacture, handling, disposal, use, or any other dealing with any Contaminants, without the prior written consent of the CRD, which consent may not be unreasonably withheld;

(c) to strictly comply, and cause any person for whom it is in law responsible to comply, with all Environmental Laws regarding the use and occupancy of the Sites;

(d) to promptly provide to the CRD a copy of any environmental site assessment, audit, report, or test results relating to the Sites conducted by or for the Licensee at any time;

(e) to maintain all environmental site assessments, audits, reports, and test results relating to the Sites in strict confidence and not to disclose their terms or existence to any third party (including without limitation any governmental authority) except as required by law, to the Licensee's professional advisers and lenders on a need-to-know basis, or with the prior written consent of the CRD, which consent may not be unreasonably withheld;

(f) to promptly notify the CRD in writing of any release of a Contaminant or any other occurrence or condition at the Sites or any adjacent property which could contaminate the Sites or subject the CRD or the Licensee to any fines, penalties, orders, investigations, or proceedings under Environmental Laws;

(g) on the expiry or earlier termination of this Licence, or at any time if requested by the CRD or required by any governmental authority under Environmental Laws, to remove from the Sites all Contaminants, and to remediate by removal any contamination of the Sites or any adjacent property resulting from Contaminants, in either case brought onto, used at, or released from the Sites by the Licensee or any person for whom it is in law responsible. The Licensee shall perform these obligations promptly at its own cost and in accordance with Environmental Laws. All such Contaminants shall remain the property of the Licensee, notwithstanding any rule of law or other provision of this Licence to the contrary and notwithstanding the degree of their affixation to the Sites; and

(h) to indemnify the CRD and its elected officials, appointed officers, employees, agents, successors, and assigns from any and all liabilities, actions, damages, claims, remediation cost recovery claims, losses, costs, orders, fines, penalties, and expenses whatsoever (including all legal and consultants' fees and expenses and the cost of remediation of the Sites and any adjacent property arising from or in connection with:

i. any breach of or non-compliance with the provisions of this section by the Licensee; or
ii. any release or alleged release of any Contaminants at or from the Sites related to or as a result of the use and occupation of the Sites or any act or omission of the Licensee or any person for whom it is in law responsible.

(i) The obligations of the Licensee under section (h) above shall survive the expiry or earlier termination of this Licence.

(j) Without limiting any other provision of this section, the Licensee shall:

a. only bring any foreign or outside materials onto the Lands after receiving approval from the CRD. Specifically including plant, woody material, soil, fill, gravel or other operating supplies.

15. COMPLIANCE WITH LAWS AND REGULATIONS: The Licensee shall comply with all laws, by-laws, and regulations, Federal, Provincial, Municipal or otherwise.

16. ASSUMPTION OF RISK AND LIABILITY OF LICENSEE:

(a) The Licensor has made no representations or given any warranties save as set forth herein.
(b) The Licensee assumes all risk of damage to property of, or injury to the Licensee and the Licensee's contractors, invitees, licensees, employees, agents and servants ('said Licensee") in connection with the exercise of the privileges hereunder.
(c) The Licensee shall pay for all damages resulting directly or indirectly from any act or omission of the said Licensee, whether negligent or otherwise and shall reimburse the Licensor for all expenses incurred for fighting fire resulting directly or indirectly from said Licensee's acts or omissions hereunder, whether negligent or otherwise.
(d) The Licensee shall indemnify and save harmless the CRD and its elected officials, appointed officers, employees, agents, successors, and assigns from any and all liabilities, actions, damages, claims, remediation cost recovery claims, losses, costs, orders, fines, penalties, and expenses whatsoever (including all legal and consultants' fees and expenses) asserted by third persons resulting directly or indirectly from said Licensee's acts or omissions whether negligent or otherwise.

17. ACCESS

(a) The CRD shall provide access to the Licensee with or without vehicles or equipment, at the sole risk of the Licensee on the following terms:

(i) Access is restricted to the hours between 8:30 a.m. and 5:00 p.m. Monday to Friday and only to the Licensee, its employees, contractors and agents solely for the purpose of operation, service and maintenance of the Licensee's Facility located on the Sites;

(ii) the Licensee shall specify in writing for the approval by the CRD the names of the Licensee's employees, contractors or agents who will require access to the Sites for purposes of operation, service and maintenance of the Licensee's Facility;

(iii) All Licensee representatives accessing the Licensee's Facility must attend an orientation session with the Watershed Protection division of the CRD prior to entering the Watershed Supply Area Lands unless accompanied by CRD Integrated Water Service staff;

(iv) only persons that have been approved by the CRD and who have participated in an orientations session with Watershed Protection will be authorized to access to the Sites;

(v) the CRD reserves the right to accept or deny authorization to any person other than a person approved by the CRD under paragraph (a)(ii);

(vi) the Licensee shall be responsible for requesting in writing to the CRD any changes or additions to the list approved under paragraph (a)(ii); and

(vii) the authorization list will include only persons who are specifically engaged in the routine or emergency service and maintenance of the Licensee's Facility at the Site.

(b) The Licensee may have access to the Sites outside of the hours referred to in paragraph (a)(i) in the case of an emergency that requires prompt access to protect

property or minimize a threat to the health or safety of the public or any individual. Emergency access can be arranged with the Watershed Emergency Duty Operator (WEDO) available at all times at 1-866-301-4075.

(c) Site access for the Licensee, its employees, contractors and agents for purposes other than operation, service or maintenance of the Licensee's Facility, shall require special authorization by the CRD on a case-by-case basis. Such access shall be provided at the sole discretion of the CRD.

(d) The Licensee shall, at its sole cost, repair any damage to the Sites or any equipment or facilities on the Sites or to the Lands or CRD works on the Lands by the Licensee, its employees, contractors or agents.

(e) The CRD may restrict access to the Licensee at any time where the CRD reasonably considers such access to be a threat to the security and safety of the Sites or to the property and facilities of the CRD or other Licensees.

(f) Where the Land is gated and secured, the Licensee shall ensure that on departure the Land is left secured in accordance with all applicable policies and directions of the CRD.

(g) The CRD does not assure vehicle access to the Licence Area at all times. Vehicle access may be blocked for indefinite periods as a result of storms (e.g. snowfall, windfall, wet conditions) or for the operational requirements of the CRD.

(h) The Licensee shall permit the CRD, its employees, contractors, agents and representatives to access the Licensee's Facilities at any time for the purposes of (a) inspecting those facilities to ensure compliance with this Agreement, and (b) installing, constructing, maintaining, repairing and accessing the CRD's Equipment.

(i) Radio call-in procedures must be followed when using roads in the Water Supply Area.

(j) Any keys, radios and spill kits issued to the Licensee are not transferable and may not be loaned to a third party. Keys cannot be duplicated. The Licensee is responsible for the security of issued keys and must report lost keys to the CRD representative immediately.

(k) Licensee will use the sanitary facilities provide by CRD and notify CRD representatives when the facilities require attention.

(l) The Licensee will adhere to all other terms listed in Schedule "D", the Capital Regional District Bylaw No. 2804, and the Greater Victoria Water Supply Area Protection Bylaw.

18. INSURANCE: The Licensee shall, at its own expense, provide and maintain during the Term the following insurance in a form acceptable to the Licensor with a company duly registered and authorized to conduct insurance business in the Province of British Columbia:

(a) Commercial General Liability Insurance

i) The Licensee shall purchase Commercial General Liability Insurance covering losses to a third party for bodily injury or death, property damage, and unlicensed vehicle and attached equipment operations, and

ii) this insurance shall be in an amount not less than three million ($3,000,000.00) on an occurrence basis, and

iii) the Licensor shall be named as an additional insured, and

iv) this policy shall contain a separation of insureds, and cross liability clause in the conditions of the policy, and

v) the policy shall provide that no cancellation or material alteration in the policy shall become effective until 30 days after written notice of such cancellation, or alteration has been given to the Licensor, and

vi) the Licensee shall provide the Licensor with a certificate or certificates of insurance as evidence that such insurance is in force including evidence of any insurance renewal. Every certificate, or certificates of insurance shall include a waiver of subrogation in favour of the CRD and certification by the insurance agent or the insurer that the certificate of insurance specifically conforms to all of the provisions required herein.

(b) The Licensee shall maintain Third Party Legal Liability Insurance in an amount not less than $2,000,000 per occurrence in respect of all vehicles owned and */* or operated by the Licensee in connection with this Agreement.

(c) Maintenance of such insurance and the performance by the Licensee of its obligations shall not relieve the Licensee of liability under the indemnity provisions set forth in this Agreement.

19. TERMINATION, SUSPENSION AND RENEWAL:

(a) Either party may terminate this Licence by giving the other thirty (30) days notice.

(b) If the Licensee defaults, all privileges hereunder terminate ten (10) days after notice of default is given by the Licensor to the Licensee, if the default is not remedied within such time. The Licensor's termination of this Licence shall not prejudice the Licensor's right to collect damages on account of the Licensee's breach of any term hereof.

(c) Any failure to exercise the Licensor's right to terminate this Licence in case of default does not constitute a waiver of the Licensee's obligations to perform strictly in accordance with the terms of this Licence. Any such right to terminate shall remain in effect and may be exercised as long as the default continues.

(d) The privileges granted under this Licence may be suspended or modified as the Licensor, in its sole discretion, thinks advisable.

(e) Provided the Licensee is not then and has not been in default of any of the terms and conditions of this Licence, the term may be renewed from time to time for three (3) further periods of five (5) years each by the Licensee giving to the Licensor written notice of its intention to renew at least sixty (60) days prior to the expiry of the Term or any renewal thereof as the case may be. Any renewals of the Licence shall be on the same terms and conditions as are contained in this Agreement.

20. NON-ASSIGNMENT: Neither this Licence nor the privileges hereunder may be assigned in whole or in part by operation of law or otherwise without the previous written consent of the Licensor.

21. NOTICES: All notices shall be written and deemed duly given if delivered by hand or mailed by registered mail, postage prepaid, addressed to the party concerned at the address herein set forth or at such other address as may from time to time be communicated by notice. Notices shall be deemed to have been received if delivered by hand on the day delivered and, if mailed, on the third day after posting unless there is between the time of mailing and actual receipt a mail strike, slowdown or other dispute which might affect delivery of the mail in which case notice shall be only effective when actually delivered.

22. INTENTIONALLY DELETED

OTHER TERMS:

23. DATA: The CRD shall have access to any data collected by the Licensee and to any reports generated based on that data.

24. DATA SERVICES: Where possible the Licensee may have access the CRD's data services to monitor their data remotely.

25. All Monitoring Station installations and maintenance or other work conducted on the sites shall be carried out by qualified personnel or companies subject to prior approval by the CRD, acting reasonably.

26. The Licensee acknowledges that the Lands are used by CRD's Integrated Water Services as the domestic water supply for the greater Victoria area and the Licensee shall not use the Sites or exercise its rights under this Agreement so as to interfere with or affect the CRD's use of the Lands.

27. Bandwidth or power may be provided by the CRD voluntarily at their discretion. Those items are provided without guarantee on an as and when operationally feasible basis and there will be no compensation for damages to the licensee based on any provision or suspension of these items.

28. Schedule A – Sites may be amended from time to time with the consent of both parties.

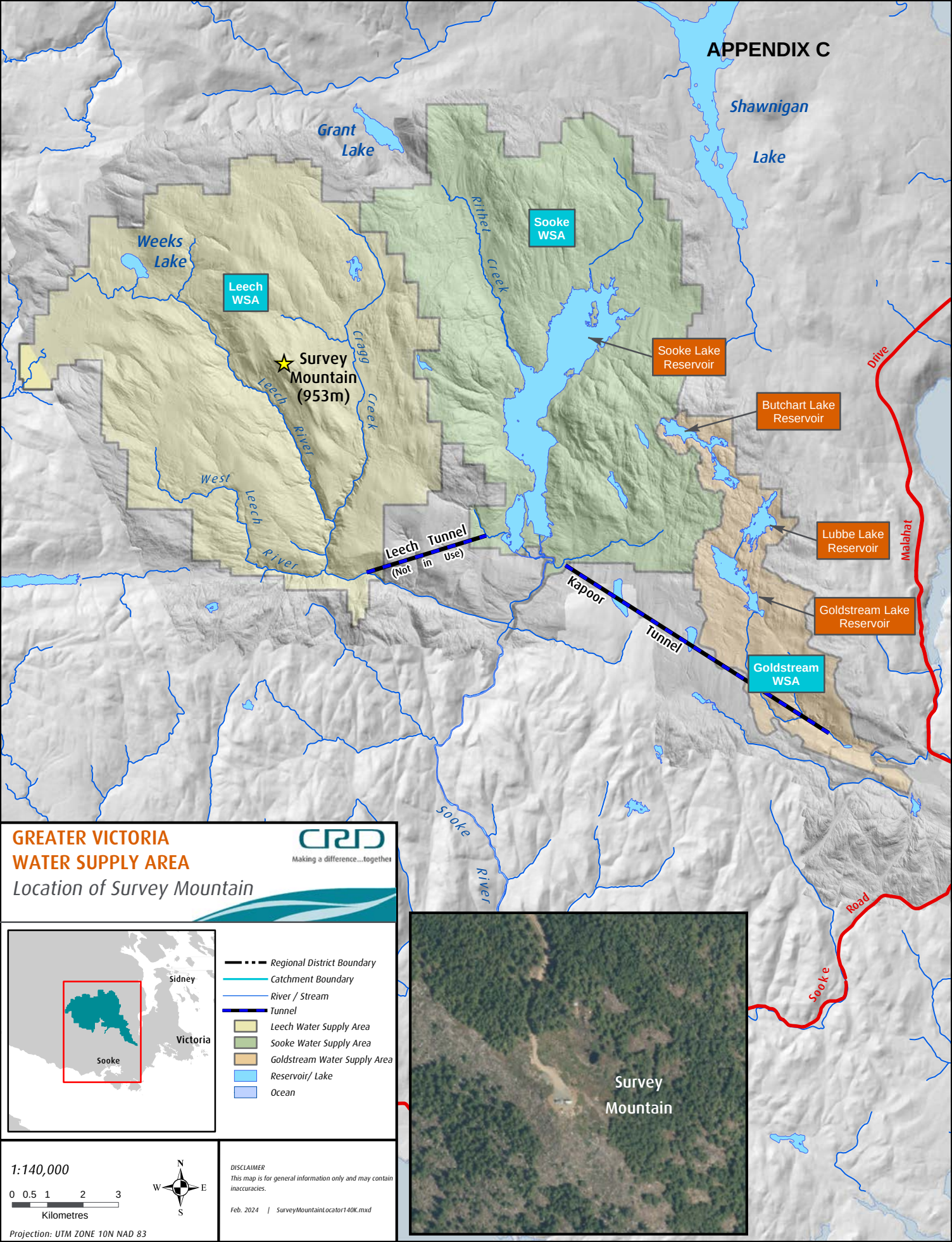
CAPITAL REGIONAL DISTRICT	**<LICENCEE>**
_____	_____
by its authorized signatory	by its authorized signatory
this ___ day of _____, 2024:	this ___ day of _____, 2024:
_____	_____
Print name:	Print name:

SCHEDULE A - Sites

SCHEDULE B - Equipment

SCHEDULE C - Permitted Improvements

APPENDIX C



GREATER VICTORIA WATER SUPPLY AREA

Location of Survey Mountain

Making a difference...together

- *Regional District Boundary*
- *Catchment Boundary*
- *River / Stream*
- *Tunnel*
- *Leech Water Supply Area*
- *Sooke Water Supply Area*
- *Goldstream Water Supply Area*
- *Reservoir/ Lake*
- *Ocean*

1:140,000

0 0.5 1 2 3

Kilometres

N W E S

Projection: UTM ZONE 10N NAD 83

DISCLAIMER

This map is for general information only and may contain inaccuracies.

Feb. 2024 | SurveyMountainLocator140K.mxd

Capital Regional District

HOTSHEET AND ACTION LIST

Saanich Peninsula Water Commission

Thursday, January 18, 2024 **9:30 AM** **Sidney Community Safety Building**
2245 Oakville Ave
Sidney BC

The following is a quick snapshot of the FINAL Saanich Peninsula Water Commission decisions made at the meeting. The minutes will represent the official record of the meeting. A name has been identified beside each item for further action and follow-up.

2. ELECTION OF CHAIR

Commissioner Kelbert was acclaimed as Chair for 2024.

3. ELECTION OF VICE CHAIR

Commissioner Doehnel was acclaimed as Vice Chair for 2024.

5. ADOPTION OF MINUTES

That the minutes of the October 19, 2023 meeting be adopted.

CARRIED

8. GENERAL MANAGER'S REPORT

8.1 2024 Saanich Peninsula Water Commission Work Plan

The Commission requested that staff provide an update in July, ahead of the October budget meeting, identifying any significant projected changes to the 2025 Capital Plan.

9. COMMISSION BUSINESS

9.1 Saanich Peninsula Water Commission Amalgamation with the Regional Water Supply Commission – Feasibility Study

Recommendation:

1. That staff be directed to undertake a feasibility study to explore the implications of amalgamating the Saanich Peninsula Water Commission with the Regional Water Supply Commission; and,
2. That this report be referred to the Regional Water Supply Commission for information.

CARRIED

9.2 Appointment of Representative to the Water Advisory Committee

Recommendation: That the Saanich Peninsula Water Commission appoint its Vice Chair to the Water Advisory Committee for a one-year term ending December 31, 2024.

CARRIED

CAPITAL REGIONAL DISTRICT - INTEGRATED WATER SERVICES

Water Watch

Issued February 12, 2024

Water Supply System Summary:

1. Useable Volume in Storage:

Reservoir	February 29 5 Year Ave		February 28/23		February 11/24		% Existing Full Storage
	ML	MIG	ML	MIG	ML	MIG	
Sooke	92,120	20,266	89,887	19,775	92,727	20,400	100.0%
Goldstream	8,417	1,852	9,825	2,162	9,906	2,179	99.9%
Total	100,537	22,118	99,712	21,937	102,633	22,579	100.0%

2. Average Daily Demand:

For the month of February	104.5 MLD	22.99 MIGD
For week ending February 11, 2024	103.8 MLD	22.84 MIGD
Max. day February 2024, to date:	107.9 MLD	23.73 MIGD

3. Average 5 Year Daily Demand for February

Average (2019 - 2023)	102.0 MLD [1]	22.43 MIGD [2]

[1]MLD = Million Litres Per Day [2]MIGD = Million Imperial Gallons Per Day

4. Rainfall February:

Average (1914 - 2023):	190.7 mm
Actual Rainfall to Date	33.8 mm (18% of monthly average)

5. Rainfall: Sep 1- Feb 11

Average (1914 - 2023):	1,138.5 mm
2023/2024	937.6 mm (82% of average)

6. Water Conservation Action Required:

To avoid possible leaks this spring, now is the time to winterize your sprinkler system.
Visit our website at www.crd.bc.ca/water for more information.

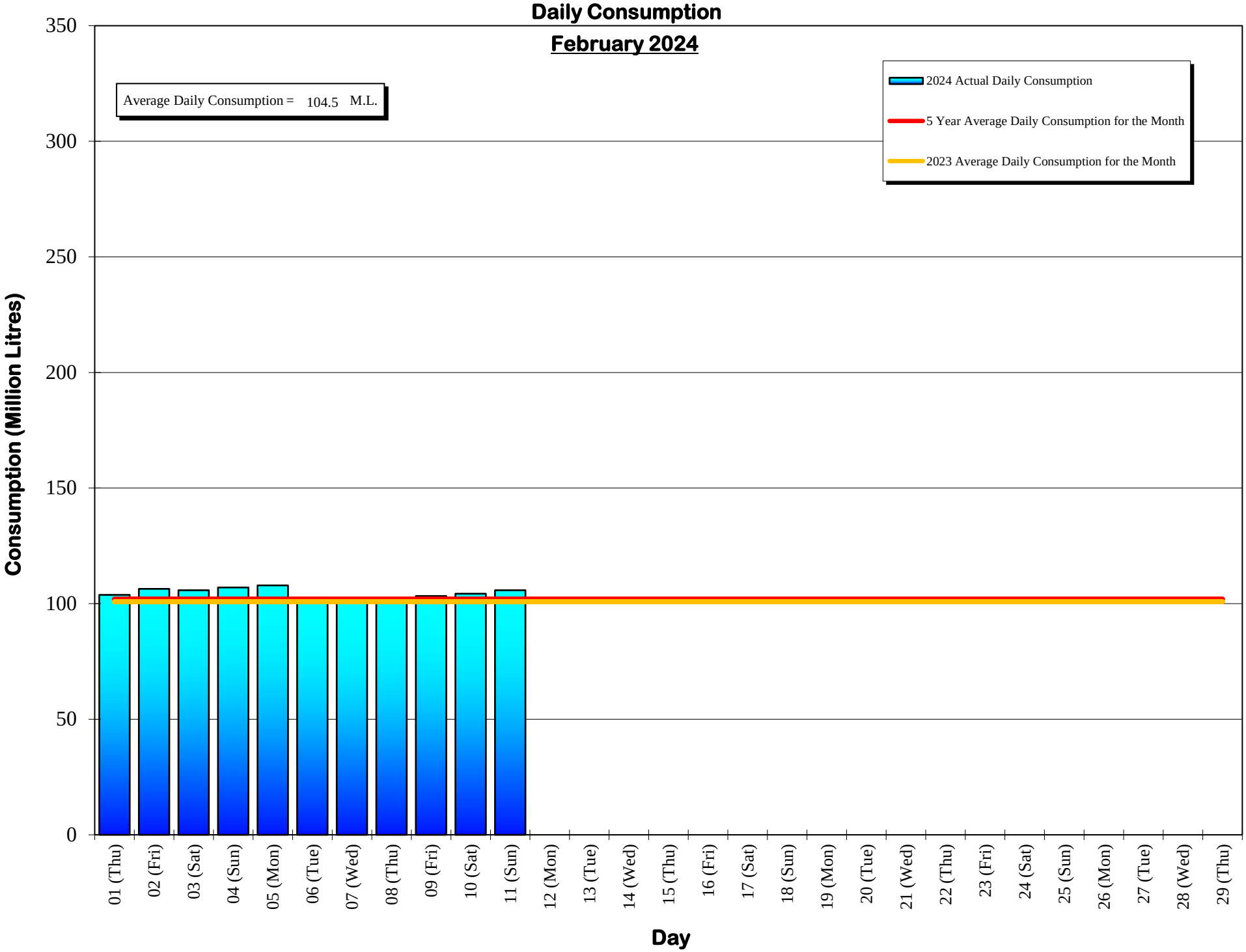
If you require further information, please contact:

Alicia Fraser, P. Eng.
General Manager, CRD - Integrated Water Services
or
Glenn Harris, Ph D., RPBio
Senior Manager - Environmental Protection

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

Daily Consumption

February 2024



J:\WATERENG\HYDROLGY\AMRIT\MONTHEND.24\H2o watch 2024Cons. Chart

Daily Consumptions: - February 2024

Date	Total Consumption			Air Temperature @ Japan Gulch		Weather Conditions	Precipitation @ Sooke Res.: 12:00am to 12:00am		
	(ML) [1.]		(MIG) [2.]	High (°C)	Low (°C)		Rainfall (mm)	Snowfall [3.] (mm)	Total Precip.
01 (Thu)	103.8		22.8	11	7	Cloudy / P. Sunny / Showers	0.3	0.0	0.3
02 (Fri)	106.4		23.4	11	6	Sunny / P. Cloudy / Showers	14.2	0.0	14.2
03 (Sat)	105.8		23.3	8	3	Cloudy / Showers	1.0	0.0	1.0
04 (Sun)	107.0		23.5	6	1	Sunny / P. Cloudy	0.0	0.0	0.0
05 (Mon)	107.9	<=Max	23.7	7	2	Sunny / P. Cloudy	0.0	0.0	0.0
06 (Tue)	102.5		22.6	7	1	Cloudy / P. Sunny / Showers	0.3	0.0	0.3
07 (Wed)	101.1	<=Min	22.2	8	3	Cloudy / Showers	0.3	0.0	0.3
08 (Thu)	101.6		22.4	6	3	Cloudy / Showers	0.5	0.0	0.5
09 (Fri)	103.3		22.7	7	1	Sunny / P. Cloudy	0.0	0.0	0.0
10 (Sat)	104.3		22.9	7	2	Cloudy / Showers	3.0	0.0	3.0
11 (Sun)	105.8		23.3	8	4	Cloudy / Showers	14.2	0.0	14.2
12 (Mon)									
13 (Tue)									
14 (Wed)									
15 (Thu)									
16 (Fri)									
17 (Sat)									
18 (Sun)									
19 (Mon)									
20 (Tue)									
21 (Wed)									
22 (Thu)									
23 (Fri)									
24 (Sat)									
25 (Sun)									
26 (Mon)									
27 (Tue)									
28 (Wed)									
29 (Thu)									
TOTAL	1149.5 ML		252.9 MIG				33.8	0	33.8
MAX	107.9		23.73	11	7		14.2	0	14.2
AVG	**104.5**		22.99	7.8	3.0		3.1	0	3.1
MIN	101.1		22.24	6	1		0.0	0	0.0

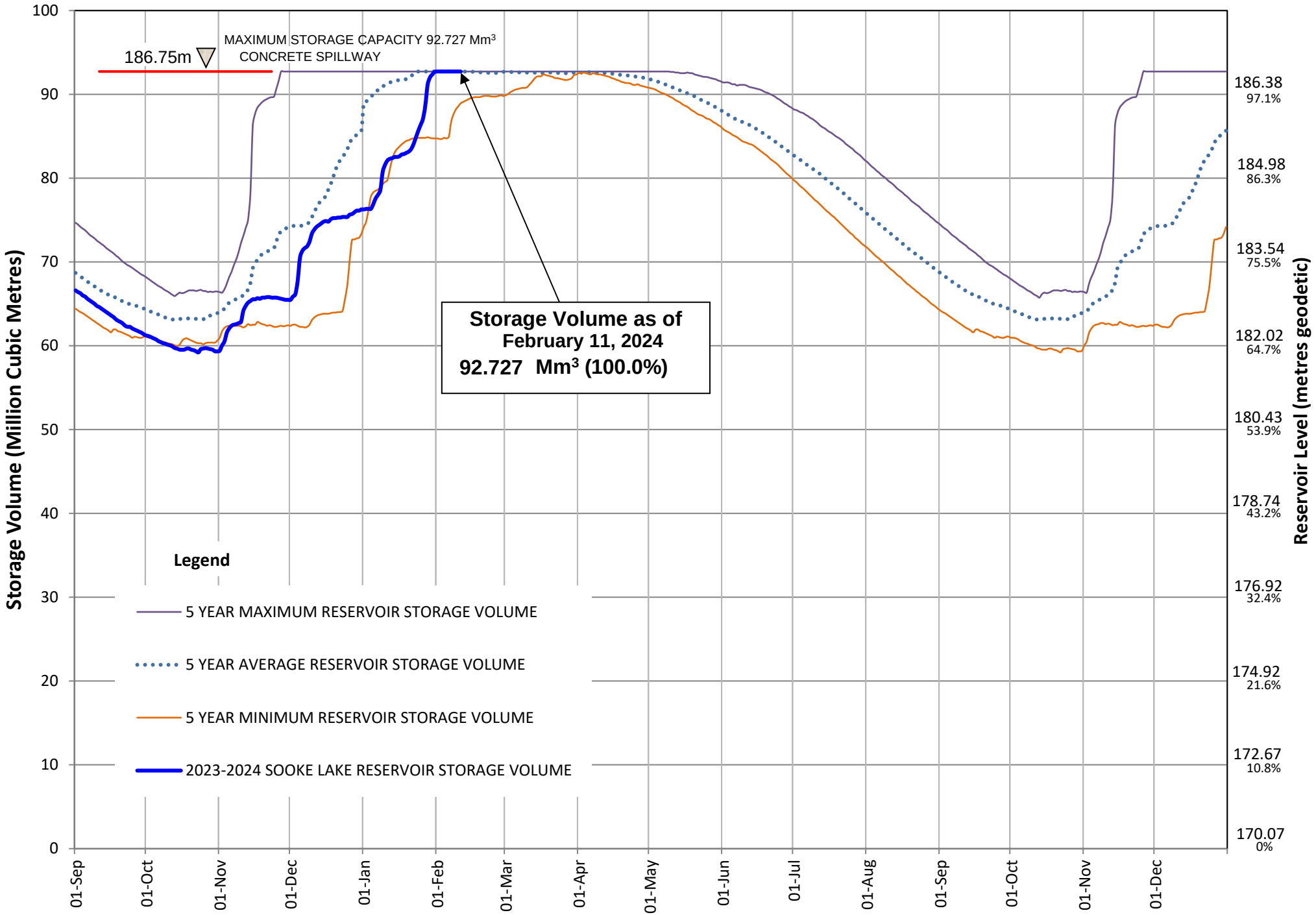
1. ML = Million Litres 2. MIG = Million Imperial Gallons 3. 10% of snow depth applied to rainfall figures for snow to water equivalent.

Average Rainfall for February (1914-2023)	190.7	mm
Actual Rainfall: February	33.8	mm
% of Average	18%	
Average Rainfall (1914-2023): Sept 01 - Feb 11	1,138.5	mm
Actual Rainfall (2023/24): Sept 01 - Feb 11	937.6	mm
% of Average	82%	

Number days with precip. 0.2 or more
8

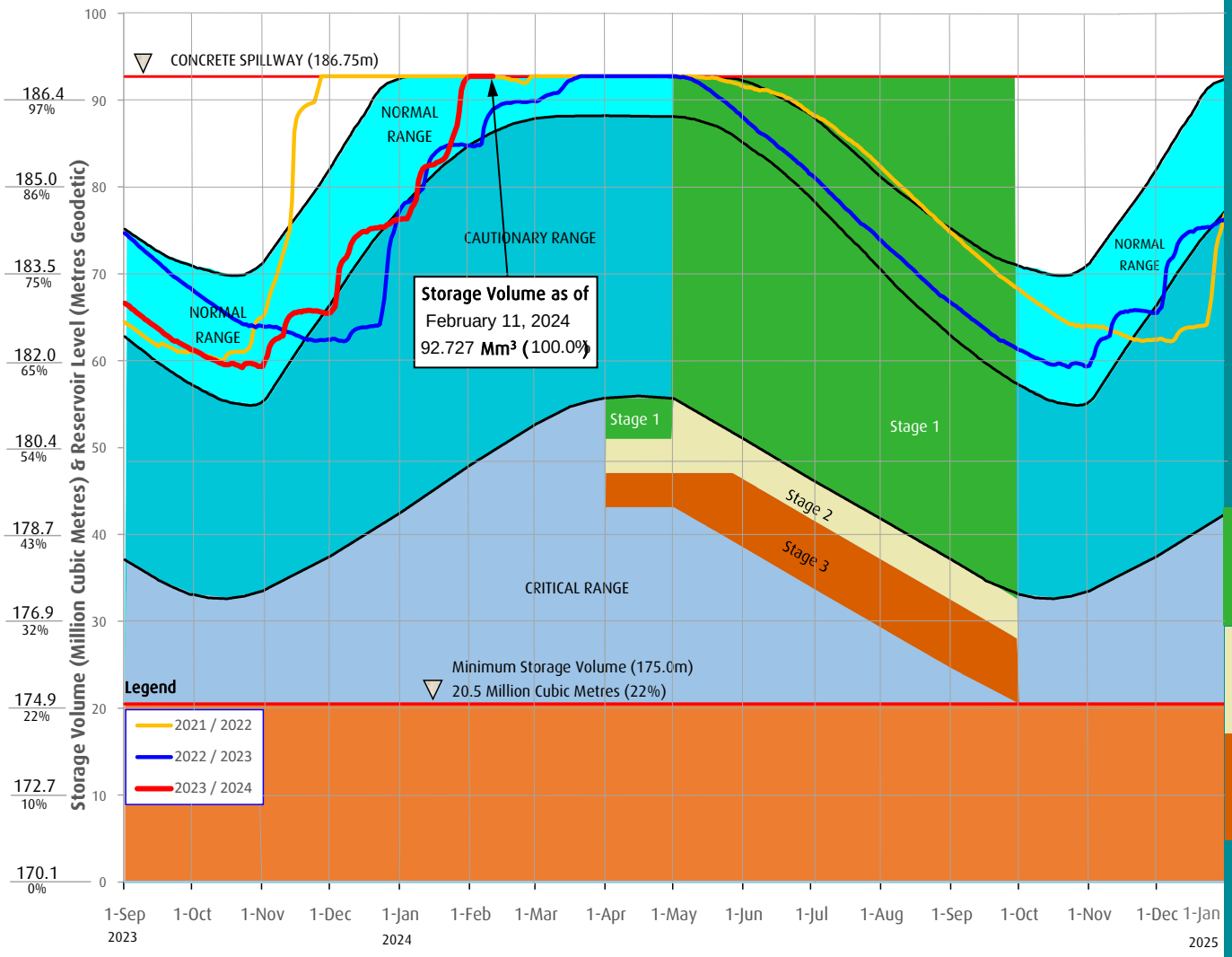
Water spilled at Sooke Reservoir to date (since Sept. 1) = 0.16 Billion Imperial Gallons
= 0.70 Billion Litres

SOOKE LAKE RESERVOIR STORAGE SUMMARY
2023 / 2024



Sooke Lake Reservoir Storage Level

Water Supply Management Plan



FAQs

How are water restriction stages determined?

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

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

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

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

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

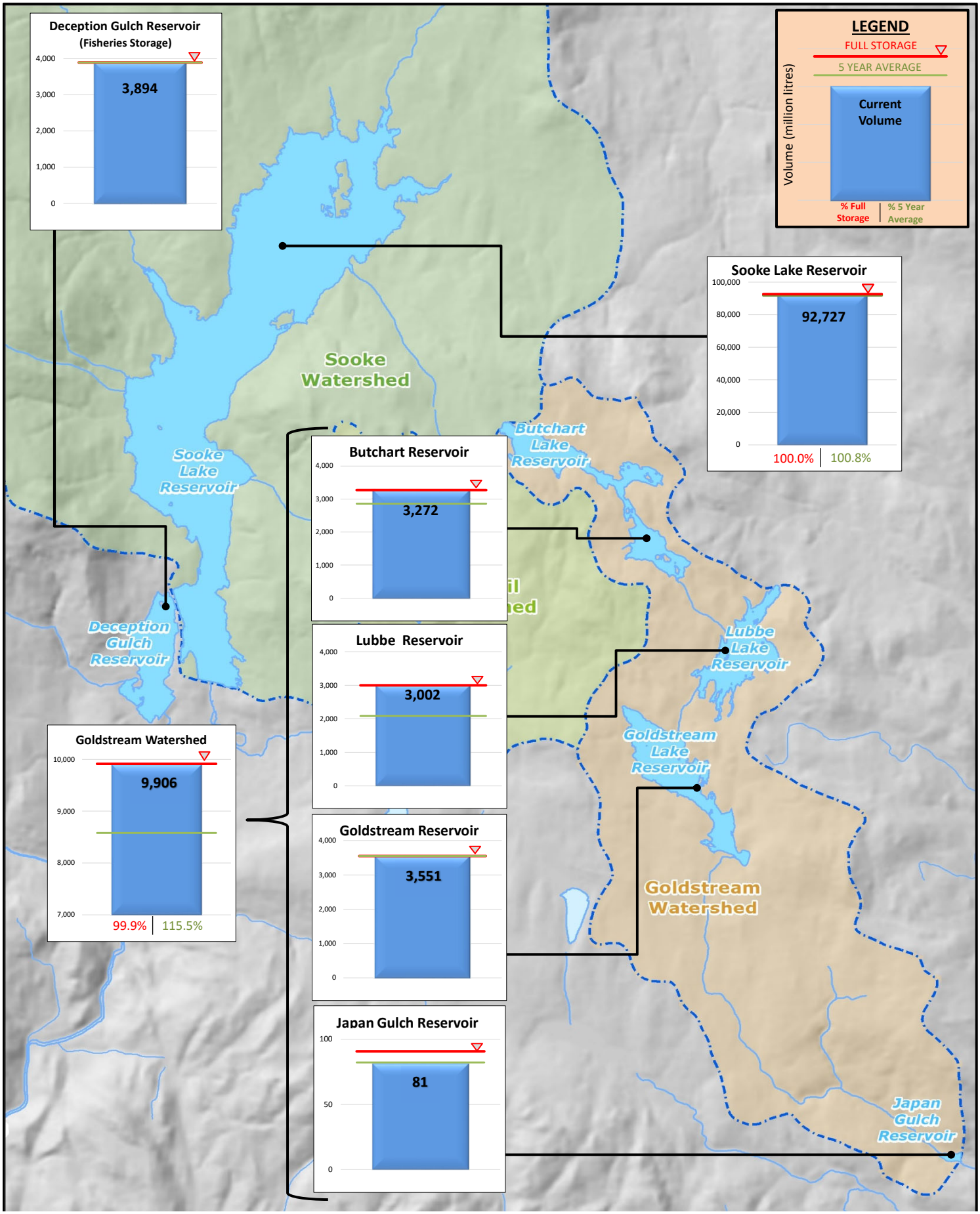
Stage 2 Is initiated when it is determined that there is an acute water supply shortage. During this time, lawn water is permitted once a week at different times for even and odd numbered addresses.

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

For more information, visit www.crd.bc.ca/drinkingwater

Making a difference...together

Useable Reservoir Volumes in Storage for February 11, 2024



Central Saanich

February 14, 2024 File No. 0400-60/24

Patrick Stephens, Project Manager
Capital Regional District
625 Fisgard Street
Victoria, BC V8W 2S6

Via email: pstephens@crd.bc.ca

Dear Mr. Stephens:

Re: Regional Water Service Development Cost Charges

Following the presentation from yourself and Urban Consultants, at the Council meeting of February 12, 2024, the District of Central Saanich passed the following motion:

1. *That the District of Central Saanich ask the Regional Water Supply Commission to provide an independent third party review pertaining to the study assumptions and core items, ahead of any capital expenditure; and*
2. *That the District request that the Capital Regional District consider bulk water rate supports for agricultural land users and Development Cost Charge waivers for affordable and rental housing.*

Should you have any questions with respect to the above, please do not hesitate to contact the undersigned by phone at 250.544.4211 or by email at Dale.Puskas@csaanich.ca.

Regards,

Dale Puskas, P.Eng.
Director of Engineering

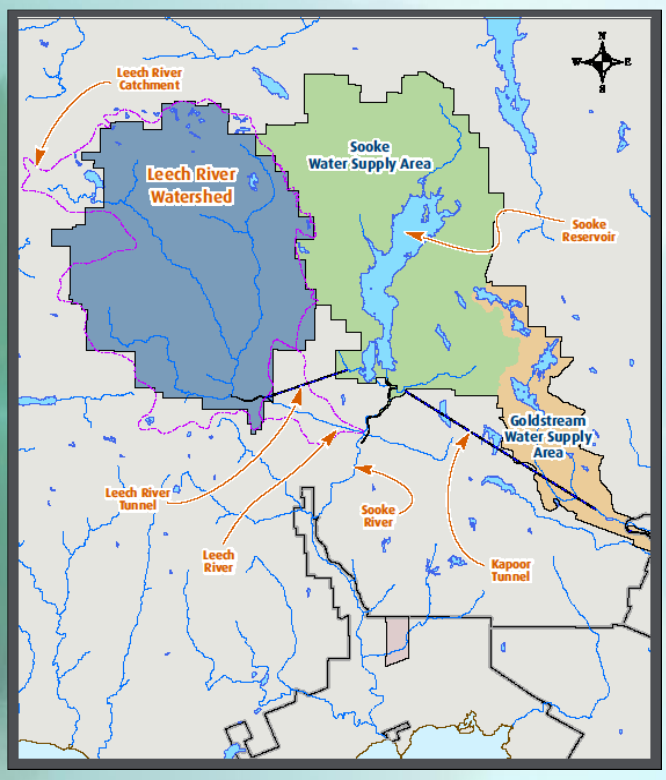
REGIONAL WATER SUPPLY COMMISSION

Capital Regional District | Regional Water Supply 2022 Master Plan – A Guide to Future Water Supply Planning

February 21, 2024

Commissioner Kim Jordison

Water Supply Lands



- Owned
- Protected
- No public access
- Managed for water supply and ecological values

RETHINKING THE

Capital Regional District | Regional Water Supply 2022 Master Plan – A Guide to Future Water Supply Planning

Sooke Lake Reservoir – Gently Rolling Hills

Very Different Terrain Than Above

Rationale for Filtration in Other Communities

Location	Rational for Filtration
Vancouver (Seymour-Capilano)	Turbidity too high to remain unfiltered
Seattle (Tolt)	Turbidity too high to remain unfiltered
Tacoma	Multi-use watershed (11% ownership)
Nanaimo & Comox	Multi-use watersheds
Portland (Bull Run)	Filtration in 2027 to address cryptosporidium
CRD	Meets requirements to remain unfiltered

TIMELINE

01 The **1994 Long Term Water Supply Plan** for the Regional Water Service was created. This plan assumed there would be no further declines in demand but that demands would increase at the same rate as population growth.

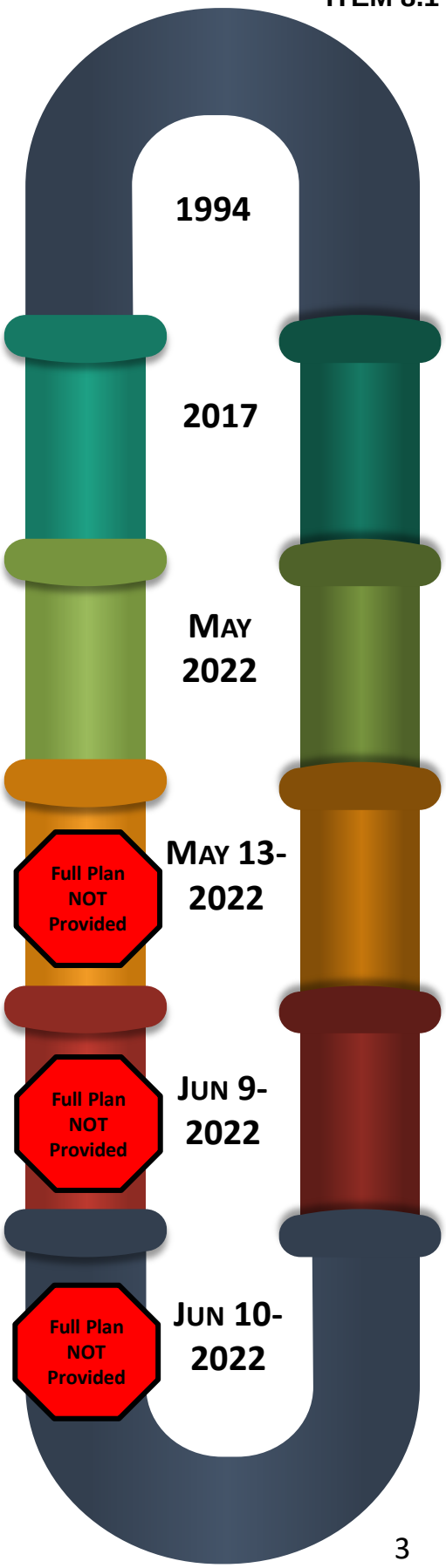
02 The **2017 Regional Water Supply Strategic Plan** was released setting out requirements for service upgrades based on a 2050 planning horizon.

03 May 2022, the CRD receives **Stantec's Capital Regional District | Regional Water Supply 2022 Master Plan**. The 2022 Master Plan has been prepared to address the primary objectives and strategic priorities outlined in the 2017 Strategic Plan.

04 May 13, 2022, the **Water Advisory Committee** receives a PowerPoint presentation outlining the 2022 Regional Water Supply Master Plan, a staff report, and the 2022 Executive Summary of the Plan.

05 Jun 9, 2022, the CRD Regional Water Supply Commission releases the 2022 Master Plan and **announces that public engagement is open** for review and comment until Jul 6, 2022 at getinvolved.crd.bc.ca. **Consultation is scheduled over the Summer**.

06 Jun 10, 2022, the CRD sends a **First Nations Consultation letter out via e-mail to 16 First Nations** across southern Vancouver Island. E-mails went out late Friday with a request to RSVP by the following Tuesday to attend a consultation session that Thursday. The Executive Summary was provided, not the full plan.



TIMELINE CONTINUED...

07 **Jun 15, 2022**, the RWSC discusses public engagement concerns and improving outreach and feedback for the plan.

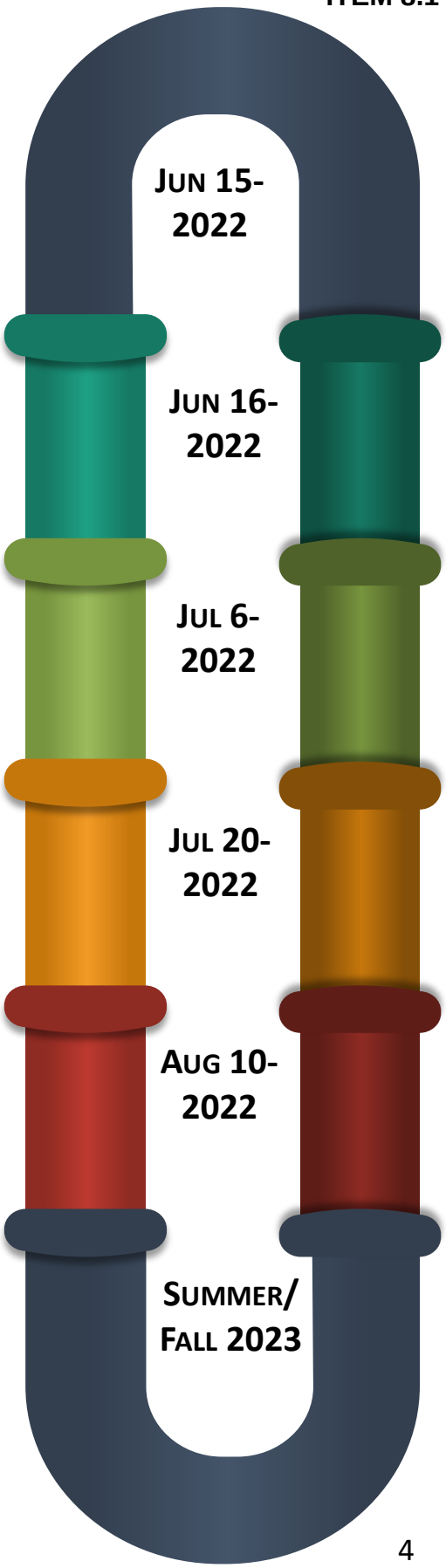
08 **Jun 16, 2022**, the CRD hosts a First Nations consultation session.

09 **Jul 6, 2022**, public engagement on the 2022 Master Plan closes.

10 **Jul 20, 2022**, the 2022 Master Plan is approved at RWSC with the addition of amended wording and understanding to be added "as a guide to future water supply planning."

11 **Aug 10, 2022,** the CRD Board approves the 2022 Master Plan, as a guide to future water supply planning, however no where does it state it's a guide except in a motion. Why not add that verbiage to the plan?

12 **Summer/Fall 2023**, the CRD and Urban Systems begin presentations to municipal staff to confirm growth estimates and to inform Mayors and Councils of the proposed program as well as answer any immediate questions about the initiative.

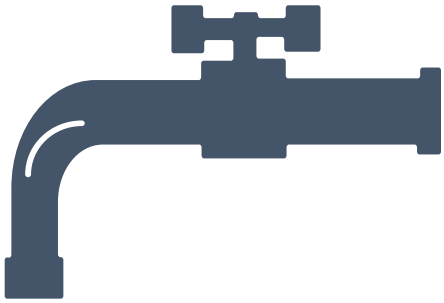


CRD's 2017 Strategic Plan

1. To provide high quality, safe drinking water (**Quality**)
2. To provide an adequate, long-term supply of drinking water (**Quantity**)
3. To provide a reliable and efficient drinking water transmission system (**System Capacity**)

2022 Regional Supply Master Plan

- Addresses primary objectives and strategic priorities outlined in the CRDs 2017 Strategic Plan for water service
- Provides an implementation schedule and cost estimates based on several assumptions
- CRD has accepted the validity of the assumptions as it is proceeding with implementation



Why am I raising concerns about implementation of the 2022 Master Plan?

1. **Lack of public consultation on a $2 billion plan**
2. **Lack of analysis of water demand trends**
3. **Lack of analysis of the economic impact of expenditures**
4. **Speculative impact of climate change on water quality**

NEXT STEPS

Current Notice of Motion:

To delay further action on the Regional Water Supply 2022 Master Plan until such time as the concerns raised by the Huggett report can be investigated and addressed.

I feel there are benefits in pausing the implementation of the Regional Water Supply 2022 Master Plan…

To be clearer and more concise:

To pause and delay further action on the Regional Water Supply 2022 Master Plan until such time as an Independent Peer Review addressing the following has been commissioned:

1. **A review of the demand projection has been undertaken (i.e., water use in existing vs. new developments in developing per-capita demand trends.**
2. **New/expanded demand management initiatives (incentives) for climate change adaptation for discretionary water use are developed.**
3. **An economic analysis of the demand implications of significant increases in water cost for discretionary water use has been undertaken.**
4. **Until a comprehensive watershed management plan has been developed (i.e., similar to Seattle's) including climate change adaptations.**