Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Regional Water Supply Commission

Wednesday, February 16, 2022 | **11:30 AM** | **6th Floor Boardroom, 625 Fisgard St., Victoria, BC V8W 1R7**

MEMBERS:
L. Szpak (Chair); G. Baird (V. Chair); C. Chambers; Z. De Vries; S. Dubow; S. Duncan; C. Graham; K. Harper; M. Hicks; B. Isitt; K. Kahakauwila; G. Logan; J. Loveday; R. Mersereau; T. Morrison; J. Rogers; C. Stock; T. St-Pierre; N. Taylor; R. Wade; G. Young; E. Wood Zhelka

1. TERRITORIAL ACKNOWLEDGEMENT

2. APPROVAL OF THE AGENDA

3. ADOPTION OF MINUTES

3.1. 22-117 Adoption of Minutes

Recommendation: That the minutes of the January 19, 2022 Regional Water Supply Commission meeting be adopted.

Attachments: Draft Minutes: January 19, 2022

4. CHAIR'S REMARKS

5. PRESENTATIONS/DELEGATIONS

This meeting will be held by Live Webcast without the public present.

Presentations and delegations requests can be made online at www.crd.bc.ca/about/board-committees/addressing-the-board, a printable form is also available. Requests must be received no later than 4:30 p.m. two calendar days prior to the meeting.

5.1. Delegation: Kym Hill, Westcoast Flyfishers Association: Re: Agenda Item 7.1

6. GENERAL MANAGER'S REPORT

No report

7. COMMISSION BUSINESS

7.1. 22-118 2022 Leech Water Supply Area Westcoast Flyfishers Access Request

Recommendation: That the Regional Water Supply Commission authorize the Westcoast Flyfishers Association access and special use of the Leech Water Supply Area for a maximum of 20 members for one day, when the Fire Danger Rating is less than Extreme (planned for May 29, 2022), to fish in Weeks Lake, under the conditions of the access permit which limits the type of vessels to those that can be effectively decontaminated, and pending evidence of insurance and completion of waivers to the satisfaction of the CRD.

Attachments:
- Staff Report: 2022 Leech Water Supply Area Westcoast Flyfishers Access Requ
- Appendix A: Leech WSA Access & Special Use Permits Information Sheet
- Appendix B: Westcoast Flyfishers Access Application - Redacted
- Appendix C: Draft Access and Special Use Permit: Westcoast Flyfishers Assoc
- Appendix D: Newspaper Article
- Appendix E: 2017 Thank You Letter from Westcoast Flyfishers Association

7.2. 22-112 Greater Victoria pH & Corrosion Study - Update

Recommendation: That the Regional Water Supply Commission receive the Greater Victoria pH & Corrosion Study report for information.

Attachments:
- Staff Report: Greater Victoria pH & Corrosion Study - Update
- Appendix A: Water Quality Tap Sampling - Lead and Copper Results

7.3. 22-126 Water Quality Summary Report for Greater Victoria Drinking Water System - October to December 2021

Recommendation: That the Water Quality Summary Report for the Greater Victoria Drinking Water System - October to December 2021 be received for information.

Attachments:
- Staff Report: Water Quality Summary Report - GVDWS - Oct-Dec 2021
- Appendix A: Water Quality Summary Report for GVDWS - Oct-Dec 2021

7.4. 22-119 Summary of Recommendations from Other Water Commissions

Recommendation: That the Summary of Recommendations from other Water Commissions be received for information.

Attachments: Summary of Recommendations from Other Water Commissions

7.5. 22-120 Water Watch Report

Recommendation: That the Water Watch Report be received for information.

Attachments: Water Watch Report

8. NOTICE(S) OF MOTION

9. NEW BUSINESS

10. MOTION TO CLOSE THE MEETING

10.1. 22-121 Motion to Close the Meeting

Recommendation: 1. That the meeting be closed for Appointments in accordance with Section 90(1)(a) of the Community Charter [1 item]
2. That the meeting be closed for Intergovernmental Negotiations under Section 90(2)(b) of the Community Charter [1 item]

11. RISE AND REPORT

12. ADJOURNMENT

Next Meeting: March 23, 2022

To ensure quorum, please contact Denise Dionne at ddionne@crd.bc.ca or 250.360.3087 if you or your alternate cannot attend.

Capital Regional District
625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Regional Water Supply Commission

Wednesday, January 19, 2022 **11:30 AM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT:
G. Baird (EP); N. Chambers; Z. De Vries (EP); S. Dubow (EP); S. Duncan (EP); C. Graham; K. Harper (EP); M. Hicks (EP); B. Isitt (EP); K. Kahakauwila (EP); G. Logan (EP); J. Loveday (EP); R. Mersereau (EP); T. Morrison (EP); J. Rogers (EP); T. St-Pierre (EP); L. Szpak; C. Stock; N. Taylor; G. Young (EP); R. Wade (EP); E. Wood Zhelka (EP)

STAFF: T. Robbins, General Manager; A. Constabel, Senior Manager, Watershed Protection; G. Harris, Senior Manager, Environmental Programs; I. Jesney (EP), Senior Manager, Infrastructure Engineering; S. Irg (EP), Senior Manager, Integrated Water Operations; T. Duthie, Manager, Administration Services; D. Dionne, Administrative Coordinator, Recording Secretary; T. Pillipow, Committee Clerk; A. Doiron, Administrative Assistant

EP = Electronic Participation

1. CALL TO ORDER

The meeting was called to order at 11:31 a.m.

2. TERRITORIAL ACKNOWLEDGEMENT

T. Robbins gave the Territorial Acknowledgement.

3. ELECTION OF CHAIR

The General Manager called for nominations for the position of Chair of the Regional Water Supply Commission for 2022.

Commissioner Kahakauwila nominated Commissioner Szpak. Commissioner Szpak accepted the nomination.

The General Manager called for nominations a second time.

Commissioner Mersereau nominated Commissioner Taylor. Commissioner Taylor accepted the nomination.

The General Manager called for nominations a third and final time. Hearing no further nominations, the General Manager declared nominations closed.

Each candidate addressed the Commission in favour of their candidacy. At the conclusion of the speeches, staff opened up the online anonymous and

confidential poll and handed out ballots to Commissioners in the room. Staff left the room to tally the votes and the result was handed to the General Manager.

The General Manager declared Commissioner Szpak Chair of the Regional Water Supply Commission for 2022.

MOVED by Commissioner Graham and SECONDED by Commissioner Taylor,
That the ballots be destroyed.
CARRIED

4. ELECTION OF VICE CHAIR

The General Manager called for nominations for the position of Vice Chair of the Regional Water Supply Commission for 2022.

Commissioner Chambers nominated Commissioner Baird. Commissioner Baird accepted the nomination.

The General Manager called for nominations a second time.

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

Hearing no further nominations, The General Manager declared Commissioner Baird Vice Chair of the Regional Water Supply Commission for 2022 by acclamation.

5. APPROVAL OF THE AGENDA

MOVED by Commissioner Stock and SECONDED by Commissioner Taylor,
That the agenda be approved as circulated.
CARRIED

6. ADOPTION OF MINUTES

6.1. 22-044 Adoption of November 17, 2021 Minutes

Attachments: Minutes: Draft November 17, 2021

MOVED by Commissioner Stock and SECONDED by Commissioner Taylor,
That the Minutes of the Regional Water Supply Commission meeting of November 17, 2021 be adopted.
CARRIED

7. CHAIR'S REMARKS

Chair Szpak made the following remarks:

- Thanked the Commission for supporting her as Chair for another term
- Congratulated Commissioner Baird on being reelected as Vice Chair
- Commended Commissioner Taylor for accepting his nomination for Chair

8. PRESENTATIONS/DELEGATIONS

There were no presentations or delegations.

9. GENERAL MANAGER'S REPORT

9.1. Weather Events and Impacts [Verbal]

T. Robbins spoke to the item 9.1

- No significant operational impacts
- Resiliency of the system thanks to ongoing investment in infrastructure
- Relatively minor undermining of the Transmission Main No. 4
- Postponed Kapoor Tunnel inspections due to the weather, rescheduling for March

9.2. COVID-19 Update [Verbal]

T. Robbins spoke to Item 9.2

- Reinstated operational measures that were in place in the first phases of the Pandemic
- Efforts to maintain critical staffing levels
- Short term work from home arrangements to accommodate Covid-related circumstances
- Staffing absence levels not affecting service delivery
- Thanked staff for dedication and willingness to push through the Pandemic fatigue in order to maintain essential service delivery

9.3. Water Advisory Committee Appointments Update [Verbal]

T. Robbins spoke to Item 9.3

- Received a great response to a recent request for Water Advisory Committee applications, receiving 13 applications
- Will be convening the nominating committee to finalize an appointment recommendation

Staff responded to questions from the Commission regarding weather impacts:

- Activation of Emergency Management Protocols
- Sooke Reservoir storage capacity and releases
- Tsunami warning systems

MOVED by Commissioner Chambers and SECONDED by Commissioner Stock,

That the Regional Water Supply Commission receive the General Manager's Report for information.
CARRIED

10. WATER ADVISORY COMMITTEE

10.1. Appointment of Regional Water Supply Commission representative to the Water Advisory Committee for 2022

MOVED by Commissioner Graham and SECONDED by Commissioner Chambers,
That the Regional Water Supply Commission appoint its Vice Chair as the Commissions' representative on the Water Advisory Committee for a one year term ending December 31, 2022.
CARRIED

11. COMMISSION BUSINESS

11.1. 22-043 2022 Greater Victoria Water Supply Area Mining Access Requests

Attachments: Staff Report: 2022 GVWSA Mining Access Requests
Appendix A: Summary of 2022 Mining Access and Special Use Applications
Appendix B: Mining Tenure Maps
Appendix C: Template Access Agreement

A. Constabel spoke to Item 11.1

Staff responded to questions regarding:
- Tenure located at Leech Tunnel
- Undecided miners - potential of Capital Regional District offering a buyout
- Cost of purchasing claims

MOVED by Commissioner Graham and SECONDED by Commissioner Chambers,
That the Regional Water Supply Commission authorize Greater Victoria Water Supply Area access and special use to the mining tenure holders and their agents (where agency is confirmed) and workers (that hold valid free mining certificates) that meet Capital Regional District insurance requirements, as listed in Tables 1 and 2 of Appendix A, subject to the conditions of their Access Agreement, for the valid mining tenures they hold.
CARRIED

11.2. 22-045 Summary of Recommendations from other Water Commissions

Attachments: Summary of Recommendations

MOVED by Commissioner Stock and SECONDED by Commissioner Young,

That the Summary of Recommendations from other Water Commissions be received for information.
CARRIED

11.3. 22-046 Water Watch Report

Attachments: Water Watch Report

Staff responded to a question regarding daily consumption.

MOVED by Commissioner Chambers and SECONDED by Commissioner Taylor,
That the January 10, 2022 Water Watch Report be received for information.
CARRIED

12. NOTICE(S) OF MOTION

There were no notices of motions.

13. NEW BUSINESS

There was no new business.

14. ADJOURNMENT

MOVED by Commissioner Graham and SECONDED by Commissioner Taylor,
That the January 19, 2022 Regional Water Supply Commission meeting be adjourned at 12:20 p.m.
CARRIED

_____
CHAIR

_____
SECRETARY

Making a difference...together

RWSC 22-02

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, FEBRUARY 16, 2022

SUBJECT **2022 Leech Water Supply Area Westcoast Flyfishers Access Request**

ISSUE SUMMARY

To seek approval for access and special use for a one day recreational activity in the Leech Water Supply Area for the Westcoast Flyfishers Association, under Greater Victoria Water Supply Area (GVWSA) Protection Bylaw No. 2804.

BACKGROUND

Under Greater Victoria Water Supply Area Protection Bylaw No. 2804, the General Manager will seek approval from the Regional Water Supply Commission for access and special use of the Greater Victoria Water Supply Area.

"Special use" is defined in Bylaw 2804 as "an activity not included in the operations of the Capital Regional District (CRD) that is carried on in the water supply area by persons who are not employees or contractors of the CRD". Requests for special use must be received in the form of a completed External Applicant Access and Special Use Request application. Staff evaluate the request based on the information provided and submit a report to the Regional Water Supply Commission outlining the request, the implications and a recommendation for the Commission's consideration. The Commission may approve or not approve the request and may set conditions with approval. With Commission approval, the General Manager will issue an access and special use permit, setting out conditions if any, requirements and responsibilities of the permit holder.

Requests for access have been anticipated since the Leech was "closed" to unauthorized access by including the area under GVWSA Protection Bylaw No. 2804 in June 2016. An Information Sheet describing the access application process and basic requirements has been provided on the CRD website since June 2016 (Appendix A).

This is the second "recreational" application that has been received for access to the Leech Water Supply Area (WSA). The first was a similar access request by Westcoast Flyfishers in 2017 for a day of fishing in Weeks, Jarvis and Worley Lakes. That access request was granted by the Commission on May 17, 2017; and the day of fishing was held on June 18, 2017.

Special Use Access Request: Westcoast Flyfishers Association
An application was received from the Westcoast Flyfishers Association on January 1, 2022. The access and special use request is for one day of fishing proposed for May 29, 2022 at Weeks Lake in the Leech Water Supply Area for a group of up to 20 people with numerous vehicles and non-motorized watercraft. A summary of the request is provided below.

Access Application Summary

Applicant Contact:	Kym Hill, Dean Houston Westcoast Flyfishers Association
Water Supply Area:	Leech WSA
Date:	May 29, 2022
Time:	7:00 a.m. to 7:00 p.m.
Activity:	Fishing on Weeks Lake only, by non-motorized boat and from shore
Route:	Weeks Lake Boundary Gate – Weeks Main to Weeks Lake, and return
Motorized vehicles:	Up to 12 requested
Number of people:	Up to 20 requested
Insurance – vehicle:	Minimum $ 2 million each vehicle
Insurance – fire:	$2 million
Insurance – Commercial General Liability:	$2 million
Liability waiver:	To be signed by each individual
Adjacent landholder permission:	Westcoast Flyfishers responsibility

The submitted application with information redacted for privacy, as well as information from the Association's website is found in Appendix B.

The draft Access and Special Use Permit for this access application is provided in Appendix C. Changes to the draft permit from 2017 include an increase in the required firefighting insurance from $1 million to $2 million and removal of the requirement for a $500 deposit given a good record of cooperation and compliance in 2017 with the same group/leadership.

Expected Staff Effort

To accommodate the request staff would:

- meet the group at the Weeks Lake Boundary Gate;
- sign-in individuals and inspect vehicles, check fishing licences and collect signed waivers;
- provide vehicle spill kits, fire tools and a VHF radio;
- provide a short orientation to GVWSA procedures and any known hazards, and review conditions of the access permit; and,
- decontaminate or supervise decontamination, of any vessels or equipment entering the lakes.

Staff support is anticipated to be a crew of two at the gate at 7 a.m. and a crew or solo staff person at 7 p.m. For the most part this effort can be accommodated within a typical weekend patrol effort. Staff on patrol will check on the group and lake during the day to ensure compliance with Bylaw No. 2804 and any conditions of the access permit. At the end of the day, staff will sign out

individuals and vehicles, sign back in equipment and provide for exit from the Weeks Lake Boundary Gate.

Decontamination
Decontamination procedures for vessels and equipment entering the water involve ensuring they are clean, spraying on a mild bleach solution, and allowing 10 minutes of contact time followed by a water rinse. Any wading boots or other equipment entering the water will be soaked for 15 minutes in the bleach solution followed by a rinse bath. Decontamination will be conducted away from the lake, ideally in the nearby gravel pit.

The decontamination protocol is modelled on a Canadian standard for field work with amphibians and reptiles which is used by CRD and required of CRD contractors when equipment or boats must be transferred between waterbodies in the GVWSA. The mild bleach is effective in killing a wide variety of bacteria, viruses and pathogens but is otherwise environmentally friendly and biodegradable. After the required contact time, articles can be rinsed onto a road or similar surface to evaporate without requiring special disposal of the rinse water, making it a practical method for the GVWSA.

ALTERNATIVES

Alternative 1- Non-motorized boats and equipment with decontamination procedures

That the Regional Water Supply Commission authorize the Westcoast Flyfishers Association access and special use of the Leech Water Supply Area for a maximum of 20 members for one day, when the Fire Danger Rating is less than Extreme (planned for May 29, 2022), to fish in Weeks Lake, under the conditions of the access permit which limits the type of vessels to those that can be effectively decontaminated, and pending evidence of insurance and completion of waivers to the satisfaction of the CRD.

Alternative 2 – Fishing from shore with no boats or entry into the lakes

That the Regional Water Supply Commission authorize the Westcoast Flyfishers Association access and special use request of the Leech Water Supply Area for a maximum of 20 members for one day, when the Fire Danger Rating is less than Extreme (planned for May 29, 2022), to fish in Weeks Lake, under the conditions of the access permit which does not allow for entry of any type of vessel or wading into the water, and pending evidence of insurance and completion of waivers to the satisfaction of the CRD.

Alternative 3 - Access not authorized at this time

That the Regional Water Supply Commission not authorize the West Coast Flyfishers Association access and special use of the Leech Water Supply Area at this time.

IMPLICATIONS

Risk/Implication	Access Factors	Proposed Mitigation / Impact
Environmental – Fire	• Anticipated fire danger rating – moderate or high • Personal vehicles	• No access during Extreme Fire Danger Rating • Patrol staff certified in wildfire fighting will remain in radio contact and visit the site • Fire tools will be issued and available on site • No smoking or fires allowed • $2 million firefighting insurance required • Watershed Protection and BC Wildfire Service support in case of fire start
Environmental - Contamination	• Vehicles • Boats/vessels/inflatables • Waders, boots, nets	• Non-motorized vessels only • Vehicles and vessels must be clean • Decontamination and rinsing procedures including soaking of wading boot soles • Vehicle inspections, parking away from watercourses • Pack in-pack out
Environmental - Sediment	• Vehicles • Boats/vessels	• Vehicles and vessels must be clean prior to entry • No boat trailers
Environmental – Pathogens, invasive plants or animals	• Entry into Weeks Lake, which is the Leech River headwater	• Decontamination procedures conducted or supervised by CRD staff • Any neoprene or fabric covered vessels, waders or equipment in the water also requires decontamination • Requirement for sanitation system for visitors • No swimming or wading other than decontaminated rubber waders • No pets allowed
Safety/CRD Risk	• Potential for permittees to be injured on CRD property	• Patrol staff remain in radio contact • Liability waiver signed by each participant • $2 million CGL insurance • Participant first aiders and first aid equipment

Risk/Implication	Access Factors	Proposed Mitigation / Impact
Economic	• Access requires staff to attend for entry, inspection, decontamination, exit, site visit and radio contact	• Approximately 24 hours of staff field time on a weekend • Staff on patrol available to facilitate the access and activities given no other fire or security response required • Cost of decontamination (approx. $50)
Social	• Local recreational group • May cause perception of exclusive access • May generate additional requests	• Follow GVWSA Access and Special Use Request and Approval Policy and Procedure • Consistency with First Nations Access Agreements

Aquatic Risk

The greatest concern with the recreational access request relates to the risk of direct contamination of Leech WSA source water lakes by pathogens, invasive plants or animals. Of particular concern is the spread of invasive aquatic species. Nearby Shawnigan Lake is confirmed to contain watermilfoil (*Myriophyllum* sp.) in 80 % of the lake area. Similar concerns arise from other region water bodies popular with recreational fishers known to contain invasive animals, plants and organisms (example Elk and Beaver Lake – bullfrogs). There are risks from yet unknown invasive species or ones that are predicted to arrive (e.g. zebra and quagga mussels). Once colonized it becomes impossible to eradicate such invasives and they further infest connected streams and waterbodies with significant ongoing management costs if water quality is to be maintained.

It should be noted that fishing occurred in at least Weeks and Jarvis Lakes prior to CRD ownership, but risks are increasing as invasive species become more prevalent in the region's recreational lakes.

The risks to contamination from this access request for fishing can be mitigated by:

- restricting use of motorized boats and trailers (hydrocarbons and bilge)
- inspecting and requiring cleanliness and decontamination standards
- not moving vessels from one waterbody to another within the Leech WSA

If the risk is to be entirely eliminated, then no boats or equipment should be allowed to enter the water.

Fishing

Information from CRD and Ministry of Environment sources indicates Weeks Lake (27 hectares) contains cutthroat trout and rainbow trout. If access is authorized, entrants would be required to show a valid fishing licence and the Conservation Officer will be informed of the event. The Association will also be requested to provide information on fish species caught and observed and any other information of note.

Previous Experience
The previous Commission approved day of fishing for the Westcoast Flyfishers was on June 18, 2017. There were nine people with five vehicles and approximately six canoes and one hardshelled plastic boat. Three lakes were fished (Weeks, Jarvis and Worley), a decontamination request between waterbodies was not granted and no cross contamination of vessels between waterbodies occurred. Fish were caught only at Weeks Lake. The group was met on time at 7 a.m. and signed out at 6:40 p.m. and all interactions were positive and cooperative. A debrief with a Westcoast Flyfishers representative was held at a later date with suggestions for streamlining similar future access applications, administration and staff effort. A newspaper article was written about the day by one of the group (Appendix D) and a letter of thanks was received in September (Appendix E).

CONCLUSION

The access request is for a one day fishing trip to Weeks Lake in the Leech Water Supply Area for Westcoast Flyfishers Association members. The proposed event poses some risk to future water supply primarily by potential aquatic contamination. Aquatic and other risks can be mitigated to an acceptable level with staff support. The proposed access with conditions and mitigation measures presents low risk to the Greater Victoria Water Supply Area and Regional Water Supply System.

RECOMMENDATION

That the Regional Water Supply Commission authorize the Westcoast Flyfishers Association access and special use of the Leech Water Supply Area for a maximum of 20 members for one day, when the Fire Danger Rating is less than Extreme (planned for May 29, 2022), to fish in Weeks Lake, under the conditions of the access permit which limits the type of vessels to those that can be effectively decontaminated, and pending evidence of insurance and completion of waivers to the satisfaction of the CRD.

Submitted by:	Annette Constabel, M.Sc., RPF, Senior Manager, Watershed Protection
Concurrence:	Ted Robbins, B.Sc., C.Tech., General Manager, Integrated Water Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Leech WSA Access & Special Use Permits Information Sheet
Appendix B: Westcoast Flyfishers Access Application - Redacted
Appendix C: Draft Access and Special Use Permit: Westcoast Flyfishers Association
Appendix D: Newspaper Article
Appendix E: 2017 Thank You letter from Westcoast Fylfishers Association

Leech Water Supply Area

Access & Special Use Permits Information

Who May Apply?

An individual, group or organization may apply for access to the Leech Water Supply Area (WSA). Access permits are specific to individuals – an organization must list specific members, and only those listed will be included in the permit and allowed access.

How do I Apply?

By completing the External Applicant Access and Special Use Request form and submitting it to the CRD by one of the following methods:

- Email to: securitychargehand@crd.bc.ca
- Mail to:
  Security Chargehand
  Field Operations Centre - Integrated Water Services
  479 Island Highway,
  Victoria, BC V9B 1H7
- Fax to: 250.478.4521

What is Required?

The following items are required in order for the Regional Water Supply Commission to consider the application. Please click the appropriate boxes in the application form and attach supporting documentation including:

1. Insurance

- Vehicle liability insurance – minimum $2 million; (not required if vehicles are not driven into the Leech WSA)
- Commercial General Liability - covering losses to a third party for bodily injury or death and property damage, on an occurrence basis with a minimum limit of two million and the Capital Regional District shall be added as an additional insured
- Wildfire suppression insurance – minimum $1 million (required during fire season April 1 to October 31)

2. Permission from adjacent private landholders to transit

- The Leech WSA is surrounded by private forest lands (TimberWest and Island Timberlands). The CRD requires written confirmation that access to the Leech WSA by you or your group is expressly permitted by the surrounding landholder.

3. Ability to enter into an access permit agreement with the CRD and follow any conditions of access including signing of a waiver(s) by you or all members of the group/organization.

4. Receipt of a security deposit of $500 due at the time of application.

Who Makes the Decision?

The Regional Water Supply Commission made up of elected municipal officials across the CRD will determine on a case-by-case basis whether access and special use of the Leech Water Supply Area will be authorized considering the application information received and staff recommendation.

What Happens with my Submitted Application?

1. Upon receiving the application, CRD staff will confirm via email that the application was received.
2. CRD staff will review the submitted information and assess the request in terms of risks to water quality, consistency with watershed management and other operational factors. If there are any questions regarding the proposed activities or submitted information, CRD will contact the applicant for further information.
3. A) If all requirements for the application are met, CRD staff will draft a summary and provide recommendation to the Regional Water Supply Commission (RWSC) for decision at the next possible meeting (the RWSC typically meets once per month). The submitted access application and any supplementary information will be provided to the RWSC (personal information is redacted for privacy). CRD staff will inform the applicant of the date of the meeting that access authorization will be determined. Meetings are open to the public.

   B) If all requirements for the application are not met, CRD staff will inform the applicant of the reasons for not considering the application by email or letter, and return the security deposit.
4. If access authorization is granted by the RWSC, CRD staff will prepare an access permit document, statement of conditions and waivers for applicant(s) signature and arrange details of the planned access and activities.

How Long Will it Take to Get a Permit?

Depending on whether the application is complete and includes all necessary documentation, CRD staff operational workload and the schedule of the Regional Water Supply Commission, consideration of an access application is likely to take up to 3 months.

Should you have any further questions, please contact:

Security Chargehand, Watershed Protection
Email: securitychargehand@crd.bc.ca
Phone: 250-391-3551

Making a difference...together

Integrated Water Services, Watershed Protection Division

EXTERNAL APPLICANT ACCESS AND SPECIAL USE REQUEST GREATER VICTORIA WATER SUPPLY AREA

Application No. ____

Please Fill Out All Applicable Sections.

Primary Contact

Applicant's Name: KYM HILL
Name of Agency:* WESTCOAST FLYFISHERS ASSOC. (WFA)
Applicant's Title: MEMBER AT LARGE ★
Phone: [redacted]
Applicant's Supervisor: DEAN HOUSTON (WFA PRES.)
Phone: [redacted]
Agency Street Address: [redacted]
City/Prov: [redacted], B.C.
P. Code: [redacted]
Agency Email: westcoastflyfishersassociation@gmail.com
Agency Fax: N/A
Other Agency Numbers *(cell, pager)*: N/A
Agency Emergency Contact: Name: ALEX MORRISS
Phone: [redacted]

Note: If Applicant is representing a group or work crew that will be using a single vehicle and working in the same location at all times, only one full application form is required. Provide contact information for all of the other workers in the crew on an *Additional Applicants Access Request* form. Orientation is required for the entire group.
* If Applicant is not representing a group or agency, indicate 'Individual'.

Personal Contact Information (*See Privacy Statement below.*)

Home Address: Street: [redacted]
City: [redacted]
Prov. B.C.
P. Code: [redacted]
Home Phone: [redacted]
Cell Phone: [redacted]
Email: [redacted]
Other: N/A
Personal Emergency Contact: Name: CHARLES KNIGHTON
Phone: [redacted]

Privacy Statement

Personal information contained on this form is collected under the authority of the Local Government Act and is subject to the Freedom of Information and Protection of Privacy Act. The personal information will be used for purposes associated with the security of infrastructure and personnel within the Greater Victoria Water Supply Area. Enquiries about the collection or use of information in this form can be directed to the Manager of Wildfire, Security and Emergency Response at 250-391-3566. The form may be shared with the Regional Water Supply Commission with some personal identifiers redacted.

Project / Purpose / Proposed Activity

Project Name / Purpose of Application (*please provide supporting documents*)/Proposed Activity:

ON MAY 29/2022, A SINGLE DAY FISHING TRIP BY WFA MEMBERS TO WEEKS LAKE... ... WITH A FOLLOW-UP REPORT TO BE SUBMITTED TO J. USARY (GVWD BIOLOGIST)(FOR USE IN DATA COLLECTION).

Note: Research Applications must be coordinated through the Watershed Protection Division. Please attach a copy of the research proposal and or work plan

Placer Miner Application - Attach claim location map and Claim Number: ____

Sponsoring Integrated Water Services (IWS) Division or other CRD Department (*check one*):

☐ Infrastructure Operations ☐ Infrastructure Engineering ☐ Watershed Protection
☐ Water Quality ☐ Other CRD Department: ____
☐ No CRD Sponsor

Name of Water Services Access Sponsor (Division Representative): ____

Name of Water Supply Area Co-Sponsor (Project Manager): ____
(*If Required*)

★ WFA MEMBER ASSIGNED TO "SPECIAL PROJECTS"

Vehicle, Equipment and Transporting Dangerous Materials Information

Vehicle Make: _____ Model: _____ Colour: _____

Vehicle Marking *(Logo etc.)*: _____ License Plate Number: _____

Transporting Other Equipment *(i.e. Heavy Equipment, Boat)*? ☐ Yes ☐ No

If yes, what is it? _____

Transporting Fuel, Lubricants(1), Chemicals or other Hazardous or Dangerous Material? ☐ Yes ☐ No

If yes(2), what is it and how much? _____

Transporting Dangerous Goods Certification Required? ☐ Yes ☐ No

Transporting Dangerous Goods Certification Number : _____

(1) *Over and above that normally found in the vehicle or piece of equipment.* (2) *Please attach MSDS for each product.*

Access Requirements *To be filled out in consultation with Sponsor*

Location of Work or Activity *(be specific and note all locations)*: _____

Access Dates: From: _____ To: _____

☐ Monday to Friday Times: _____ ☐ Weekend Times: _____

☐ Statutory Holidays Which ones? _____ Times: _____

Equipment Requirements *To be filled out in consultation with Sponsor*

The following equipment is required; please indicate if you are requesting a loan.

VHF Radio - CRD Water Frequencies (1)	Loan Requested?	☐ Yes	☐ No
Emergency Spill Kit	Loan Requested?	☐ Yes	☐ No
Wildfire Equipment	Loan Requested?	☐ Yes	☐ No

(1) *If requesting approval to program personal radio to CRD Water Frequencies, please provide the following information:*

Industry Canada File and License Number: _____

On Site Safety Considerations

Applicable Safety Plan provided? (details) _____

First Aid certif. / equip. to be provided: _____

Insurance

Proof of Insurance Provided:

Vehicle: ☐ Yes ☐ No Firefighting (April 1 – October 31) ☐ Yes ☐ No

General Liability ☐ Yes ☐ No

Permission to Transit Adjacent Private Property

Permission Granted: ☐ Yes ☐ No ☐ N/A Written Permission Attached: ☐ Yes ☐ No

Note: By signing here the Applicant declares (and declares on behalf of group applicants), that the information provided is true and accurate.

Applicant's Signature: [redacted] (K. HILL) **Date:** FEB 3/2022

IWS Sponsor Signature: _____ **Date:** _____

WSA Co-Sponsor: (If Required) _____ **Date:** _____

For Internal CRD Use Only

Initial Risk Review

- ☐ Contaminants (Hazardous material amounts, boat, heavy equipment) _____
- ☐ Pathogens (Sani facilities, animals) _____
- ☐ Wildfire (Blasting, grinding, welding) _____
- ☐ Sediments / Nutrients _____
- ☐ Cultural / Environmental _____
- ☐ Safety (Training & Equip., Appropriate Plan / Procedures) _____

Initial Comments: _____

_____

_____

Conditions and Restrictions: _____

_____

☐ Risk Mgmt. Plan _____

Assessed Overall Risk to Water Quality or Other Values

Comments: _____

☐ Low ☐ Medium[1] ☐ High [1]

[1] Any application deemed a Medium or High Risk must be reviewed by the Senior Manager, Watershed Protection or Access Review Committee. Attach rationale for Medium or High Risk designation and recommendations on course of action.

Fire Danger Rating

Expected fire danger rating during access dates ☐ Very Low ☐ Low ☐ Moderate ☐ High ☐ Extreme

Inspections

Does the applicant require inspections or other action upon entry?

☐ No ☐ Yes Provide Details: _____

Insurance

Proof of Insurance Provided:

Vehicle: ☐ Yes ☐ No Firefighting (April 1 – October 31) ☐ Yes ☐ No

General Liability ☐ Yes ☐ No

Security Chargehand Comments

Previous Issues / Application Checks _____

Initial Determination

- ☐ Recommend approval of the application
- ☐ Do not recommend approval of the application (be specific): _____

_____

- ☐ Recommend approval of the application with requirements / restrictions as above and in addition:

_____

_____

- ☐ Refer to Sr. Manager, or ARC (Medium or High Risk) _____

Results of Further Risk Review: _____

For Internal CRD Use Only

Initial Risk Review

- ☐ Contaminants (Hazardous material amounts, boat, heavy equipment) _____
- ☐ Pathogens (Sani facilities, animals) _____
- ☐ Wildfire (Blasting, grinding, welding) _____
- ☐ Sediments / Nutrients _____
- ☐ Cultural / Environmental _____
- ☐ Safety (Training & Equip., Appropriate Plan / Procedures) _____

Initial Comments: _____

_____

_____

Conditions and Restrictions: _____

_____

☐ Risk Mgmt. Plan _____

Assessed Overall Risk to Water Quality or Other Values

Comments: _____

☐ Low ☐ Medium[1] ☐ High [1]

[1] Any application deemed a Medium or High Risk must be reviewed by the Senior Manager, Watershed Protection or Access Review Committee. Attach rationale for Medium or High Risk designation and recommendations on course of action.

Fire Danger Rating

Expected fire danger rating during access dates ☐ Very Low ☐ Low ☐ Moderate ☐ High ☐ Extreme

Inspections

Does the applicant require inspections or other action upon entry?

☐ No ☐ Yes Provide Details: _____

Insurance

Proof of Insurance Provided:

Vehicle: ☐ Yes ☐ No Firefighting (April 1 – October 31) ☐ Yes ☐ No

General Liability ☐ Yes ☐ No

Security Chargehand Comments

Previous Issues / Application Checks _____

Initial Determination

- ☐ Recommend approval of the application
- ☐ Do not recommend approval of the application (be specific): _____

_____

- ☐ Recommend approval of the application with requirements / restrictions as above and in addition:

_____

_____

- ☐ Refer to Sr. Manager, or ARC (Medium or High Risk) _____

Results of Further Risk Review: _____

CRD Signatures

Security Chargehand, Watershed Protection — Date

Manager, Wildfire, Security & Emergency Response — Date

(If Required) Senior Manager, Sponsoring IWS Division (or Water Supply Area Co-Sponsor) — Date

(If Required) Senior Manager, Watershed Protection Division — Date

Approval for Access and Special Use Provided by Regional Water Supply Commission

☐ Yes Date: _____ ☐ No, not required

General Manager, Integrated Water Services — Date

Access Times and Keys

☐ Annual (Expires Jan 31) Date From: _____ Date To: _____

☐ 7am – 4:30pm ☐ 24/7 ☐ Monday to Friday ☐ Weekends ☐ Statutory Holidays

Autogate Access: ☐ Goldstream ☐ Sooke

Gate Key Requirements: (*refer to Water Supply Area Access Control Maps*)

☐ Gates: Specify: _____

☐ Facilities: Specify: _____

Refundable Key Deposit

☐ Contract Holdback (none) ☐ Other ($500)

Radio Frequencies

☐ Permission to Program ☐ File Number Checked ☐ Licence Number Checked

☐ Ongoing ☐ Long Term (> 1 year) ☐ Short Term Expiry: _____

Orientation and Key Loans

☐ Key Deposit Paid ☐ Orientation Complete Date: _____

☐ Photo ID Card ☐ Autogate Active ☐ Dashboard ID Card

☐ Key(s) issued / No(s): _____ ☐ Access Info. Folder

Return Date: _____ Security Chargehand or Alternate (Initials): _____

Applicant Declaration

By signing here the Applicant confirms completion of orientation; declares that they are going to an approved worksite(s) within the GVWSA to carry out work authorized by the CRD IWS or its representatives; understands and agrees to adhere to applicable Bylaws, policies and procedures; are not currently ill with a known waterborne communicable disease; will use the sanitary facilities provided, and; will follow the instructions of CRD IWS personnel when required.
The Applicant confirms equipment loans as listed above and understands that any keys or equipment issued remain the property of CRD IWS. The applicant declares (and declares on behalf of their group or work crew as required), that the keys or equipment will be surrendered upon notice, that **keys must not be copied or loaned to others** and that they will return keys and equipment on the due date or make arrangements for the renewal of borrowing privileges.

A [redacted] (K. HILL) — FEB 3/2022

Date

Routing

☐ Applicant / Water Services Access Sponsor ☐ Security Chargehand, Watershed Protection

☐ Manager Wildfire, Security and Emergency Response ☐ Senior Manager WP (and ARC - If Required)

☐ If Required, Sr. Manager, Sponsor Div. / WSA Co-Sponsor ☐ If Required, General Manager

Data Entry Date: _____ **Initials:** _____

http://westcoastflyfishers.ca/wp/

Home Page

Welcome

to

Westcoast Flyfishers Association

Looking to learn how to fly fish? Are you interested in expanding your fishing knowledge? Do you want to visit some of Vancouver Islands awesome fly fishing locations with a great group of anglers?

If you answered yes to any of these questions, you should consider joining the Westcoast Flyfishers Association (WFA).

WFA is a non-profit organization founded in 2002, dedicated to the camaraderie and the pursuit of happiness through the art of fly fishing. We are based out of Sooke, BC on Vancouver Island.

We host monthly meetings and plan fishout sessions throughout southern island.

For more information please email us at:

tightlines@westcoastflyfishers.ca

Or drop in on our **monthly meeting** on the **third Thursday,** which involves Social and Instructional Activities including fly tying, safety, fly fishing movies, etc, and our General Meeting to take care of the necessary business!

All meetings are at 7:00 pm, at the Esquimalt Anglers Association

1101 Munro Street, Victoria, British Columbia

Updated: Jan 13th, 2020 by AM

January & February 2020

AGM Jan 23rd
FO Feb 2nd Kemp Lake
EXEC Feb 4th
FO Feb 16th Langford Lake
GM Feb 20th

APPENDIX C

ACCESS and SPECIAL USE PERMIT #_____
for the Greater Victoria Water Supply Area

Dated this _____day of _____, 2022

BY AND BETWEEN:

CAPITAL REGIONAL DISTRICT
625 Fisgard Street
Victoria, BC V8W 1R7
(Hereinafter called the "**CRD**")

AND:

Name: **Westcoast Flyfishers Association**

Street Address: **c/o 2505 Westview Terrace**

City/Province: **Sooke, BC**

Postal Code: **V9Z 0Y7**

(Hereinafter called the "**Permittee**")

WHEREAS

The CRD has agreed to grant the Permittee access and specified use of the:

Leech Water Supply Area

(Water Supply Area) described in the attached Schedule A Permit Area (hereinafter referred to as the "Permit Area").

Now Therefore the Parties agree as follows:

ARTICLE 1 – PERMIT

1 The CRD, on the terms, conditions of provisions set forth herein, hereby grants the Permittee permission to enter the Permit Area for the purpose of:

one day of fishing at Weeks Lake.

ARTICLE 2 – DURATION

2 The duration of the permit and the permission granted hereby shall be for a term of: **one day**, planned for **May 29, 2022**; but as may be re-scheduled between **May 21** and **June 5, 2022** with one week's notice; unless cancelled, terminated or renewed in accordance with the terms and provisions hereof.

ARTICLE 3 – ACCESS

3.1 The CRD hereby grants the Permittee access to the Permit Area by way of

Entry via: **Weeks Lake Boundary Gate – 7 a.m. or as agreed upon in advance.**

Route: **Weeks Main to Weeks Lake and return;**

Exit via: **Weeks Lake Boundary Gate – 7 p.m. or as agreed upon in advance.**

Maximum 20 people

(The location, timing and method of entry and exit)

3.2 Despite Article 2 Duration, the CRD will not permit access during periods of Extreme Fire Danger Rating as reported by the CRD weather station in closest proximity to the Permit Area, at approximately 1 p.m. each day on the CRD website under Current Fire Weather Conditions.

3.3 The CRD reserves the right to temporarily lift the permission or make alterations to the route for access permitted in the event of emergency, fire danger, other permitted uses or other operational reason.

3.4 Nothing in this Agreement shall be construed as permitting access across any lands not held by the CRD. If crossing the lands of a third party is required in order to access the Permit Area, it is the responsibility of the Permittee to obtain all necessary permissions for access directly from the third party.

ARTICLE 4 – WAIVER and IDEMNITY

4.1 The Permittee accepts and will use the GVWSA Permit Area at his/her own risk and agrees that neither the CRD nor its directors, officers, employees, officials, agents, servants, volunteers or representatives have made any warranties or representations respecting the suitability or condition of the Permit Area.

4.2 The Permittee shall assume all risks and hazards incidental to access and use of the Permit Area by the Permittee and agrees to release, absolve, save harmless and keep indemnified the CRD, its directors, officers, employees, officials, agents, servants, volunteers or representatives from and against all claims, actions, costs, expenses, and demands in respect to death, injury, loss or damage suffered or incurred by the Permittee.

4.2 No warranty is implied for use of the Permit Area and any facilities of the CRD and this agreement is to be binding on the Permittee, his/her heirs, executors, and assigns.

4.3 The Permittee is responsible for ensuring the Permit Area is appropriate for the activity; the activity is conducted in a safe, orderly manner; the activity is restricted to the Permit Area and any on site facilities; and the special use does not interfere with other permit holders, wildlife, staff or CRD operations.

4.4 The Permittee covenants and agrees that the CRD, its employees, officers, contractors and agents, will not be liable to the Permittee or any person or entity for incidental,

consequential, resulting or special loss or damage of any kind whether foreseeable or not, however caused, arising out of or in any way connected with this Permit agreement.

4.5 The Permittee covenants and agrees to indemnify and save harmless the CRD, its employee, officers, contractors and agents, from and against all losses, liabilities, claims, damages, costs, fines, fees or expenses of any kind or nature whatsoever made or brought against the CRD, arising from the Permittee's exercise of its rights under this Agreement.

4.6 The CRD is under no obligation to facilitate or otherwise assist the Permittee in accessing the Permit Area through the GVWSA.

ARTICLE 5 – INSURANCE

5.1 The Permittee will obtain and maintain throughout the term of this Agreement:

(i) Commercial general liability insurance covering losses to a third party for bodily injury or death and property damage, on an occurrence basis with a minimum limit of $2 million and the Capital Regional District shall be added as an additional insured.

(ii) Firefighting expenses liability insurance (April 1 – October 31) in which the limit of liability shall not be less than $2 million for a single occurrence.

(iii) Where vehicles are to be used in the Water Supply Area lands, automobile liability insurance covering bodily injury (including passenger hazard) and property damage arising from the operating of owned and non-owned vehicles on CRD property, with inclusive limits of not less than $2 million for any one accident.

5.2 A certificate of insurance must be received by the CRD prior to entry onto the GVWSA.

5.3 The insurance policies will contain a clause providing that the insurer will give the CRD 15 days prior written notice in the event of cancellation or material change.

5.4 It is the sole responsibility of the Permittee to determine what additional insurance coverages, if any, including but not limited to WorkSafe BC and Participants Insurance, are necessary and advisable for its own protection and/or to fulfill its obligations under this contract. Any such additional insurance shall be maintained and provided at the sole expense to the Permittee.

ARTICLE 6 - CANCELLATION

6.1 The Permittee understands and agrees that the Permit may be revoked or cancelled at any time with or without cause. The CRD will make every reasonable attempt to provide the Permittee a minimum of 48 hours' notice of a cancellation. The Permittee shall not be entitled to any compensation by the CRD, whether for damages or otherwise, in respect to the cancellation or termination of a permit.

6.2 This Permit may be cancelled immediately by the CRD and the Permittee required to leave Water Supply Area lands immediately if the conditions of this Permit are not being adhered to. A finding of non-compliance with the Permit will affect any future access and special use requests.

ARTICLE 7 – GENERAL

7.1 The Permitee convenants with the CRD:

a) To observe, abide by and comply with all laws, bylaws, orders, directions and procedures of the CRD or of any competent government authority in any way affecting the Permit Area;

b) To make reasonable attempts to notify the participants of hazardous or potentially hazardous conditions associated with the provision of this Permit;

c) To keep the Permit Area safe, clean and sanitary; and,

d) To use and occupy the Permit Area only in accordance with the provisions of the Permit and the applicable rules and procedures, being attached as Schedule B - General Conditions of Access and C - Special Conditions of Access.

7.2 The Applicant warrants and represents that if she/he executes this Permit Agreement on behalf of a Group or Organization that the Applicant has sufficient power, authority and capacity to bind the Group or Organization with his/her signature.

7.3 This Permit is not transferable by the Permittee.

7.4 This Permit is only valid for access and use by those applicants listed in the Permit document who have also signed the Applicant waiver.

ARTICLE 8 – EXECUTION

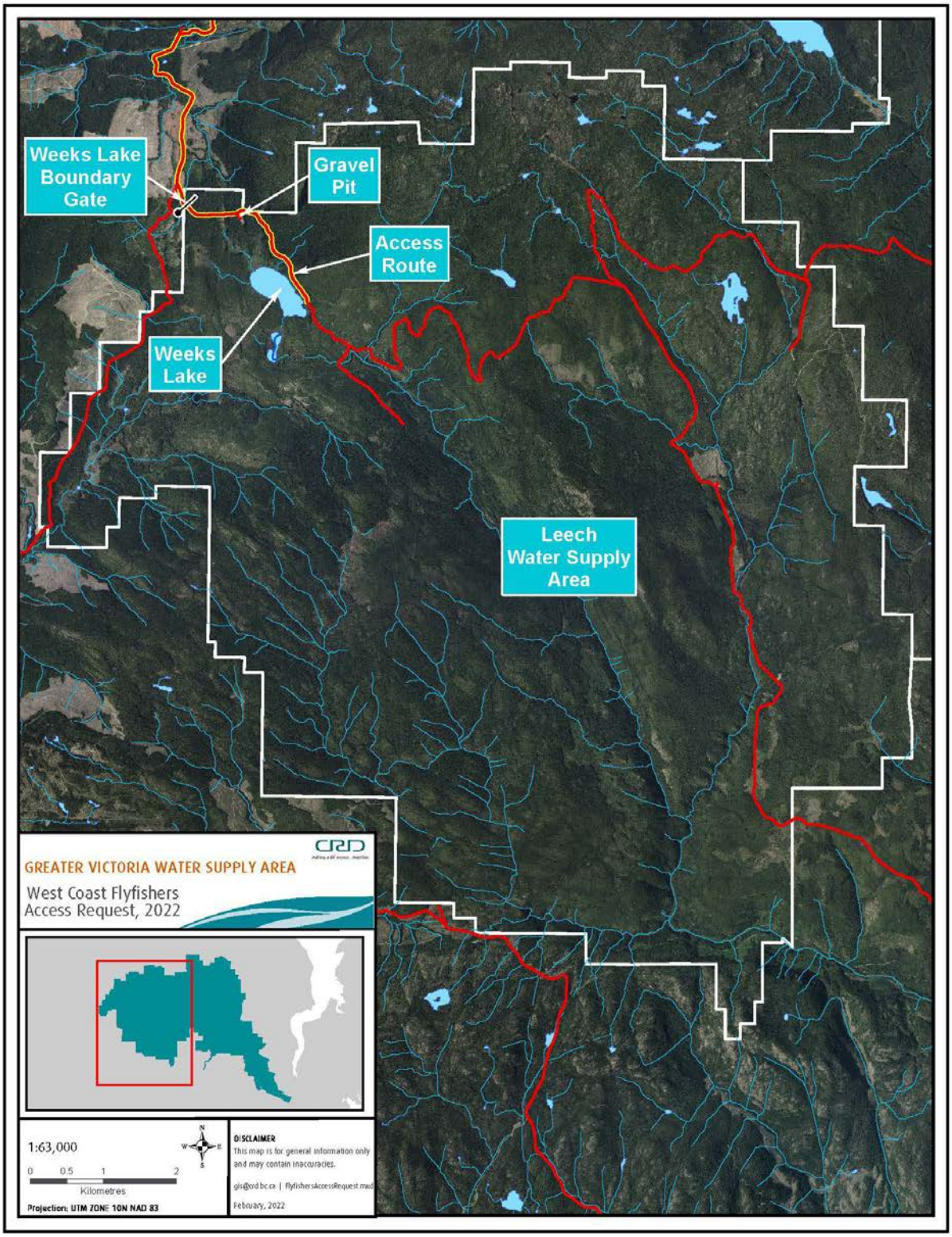
I have read the above and Schedules A, B and C and fully understand all of the Clauses and will comply with this Permit agreement.

Signed and Delivered by an authorized Signatory of the Permittee	Signed and Delivered by or on behalf of the Capital Regional District
Signature	Ted Robbins General Manager, Integrated Water Services
Date	Date

Attachments:
Schedule A – Permit Area
Schedule B – General Conditions
Schedule C – Special Conditions of Access

SCHEDULE A – PERMIT AREA

{Map or description of the Permit Area and route of access to the Permit Area}



SCHEDULE B – GENERAL CONDITIONS

ARTICLE 1 – CONDITIONS OF ACCESS

1.1 Where driving is permitted under Schedule C:

- drivers must carry a valid BC driver's licence and vehicle insurance;
- if issued, vehicles must display the issued dashboard advisory card identifying the vehicle at all times while parked, as belonging to the permitted group and access permit number;
- the CRD takes no responsibility for the security of parked vehicles;
- vehicles must not be leaking fluids, carrying hazardous materials or excessive dirt; and,
- vehicles may be barred entry for any other reason at the discretion of CRD Watershed Protection staff.

1.2 Gate keys if issued may not be duplicated, transferred or lent to others.

1.3 Gates must remain closed and locked at all times.

1.4 No access and special use Permittees are allowed entry to the Water Supply Areas during Extreme Fire Danger Rating. It is incumbent on the Permittee to inform themselves of the daily Wildfire Danger Rating prior to entry, available on the CRD website and from CRD Watershed Protection staff.

1.5 Smoking is only allowed in the Water Supply Areas during moderate and lower fire danger ratings. Smoking is only allowed on roads or at designated fire rings and butts must be picked up. No smoking is allowed in the Water Supply Areas during high and extreme fire danger rating. It is incumbent on the Permittee to be informed of the daily Wildfire Danger Rating available on the CRD website and from CRD Watershed Protection staff.

1.6 No alcohol is allowed to be brought in or consumed in the Water Supply Area.

1.7 There are no garbage or recycling facilities in the Water Supply Area; all garbage/recyclables and food waste must be taken out. Waste may not be burned.

1.8 Sanitation facilities provided by CRD must be used; or if CRD is not providing sanitation facilities, they must be provided by the Permittee, used and properly disposed of outside of the GVWSA.

1.9 No domestic animals may be brought into the Water Supply Area – dogs are not allowed.

1.10 No plant materials, soil, or building materials may be brought into the Water Supply Area. Vehicles are subject to CRD staff inspection for potential sources of contamination and invasive species and will be barred from entry if suspected to be contaminated.

1.11 To adhere to the CRD Greater Victoria Water Supply Area Protection Bylaw No. 2804 at all times while in the GVWSA.

1.12 No firearms, bows or crossbows will be brought onto the GVWSA. For the purposes of this section, 'firearm' has the meaning set out in the *Firearm Act* (British Columbia), and includes any gun using, as a propellant, compressed air, explosives or gas.

1.13 The Permittee is prohibited from erecting any temporary or permanent shelters within the Water Supply Areas and shall not overnight on Water Supply Area lands, except if expressly permitted by the CRD in Schedule C.

1.14 The Permittee is responsible for all damage incurred to the CRD's property or facilities.

ARTICLE 2 – ROAD USE

2.1 The Permittee will use roads in a manner that does not interfere with the CRD's use of the roads. No vehicles or cycles are allowed to be operated off the open and maintained CRD road network. The Permittee may only use those access roads specified in Schedule A.

2.2 The CRD reserves the right to fully close road access in the event of high or extreme fire danger, extreme weather conditions or any other operational reason.

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

2.4 The Permittee will under no circumstances alter, modify, repair, maintain, extend or construct roads in the Water Supply Areas.

2.5 The Permittee will compensate the CRD for any Permittee caused damaged to Water Supply Area roads or roaded infrastructure including culverts, bridges and signs. All damage must be immediately reported to the CRD.

2.6 Radio call procedures must be followed when using roads in the GVWSA.

ARTICLE 3 - REPORTING

3.1 All notification, reporting, questions, safety or environmental concerns are to be brought to the attention of the Watershed Patrol Crew available on channel 3 or 5; or if the patrol crew is unavailable, the Watershed Emergency Duty Officer (WEDO). Available 24/7/365:

Cell phone:	250-881-6393
Text message:	250-881-6393
Email:	wedo@crd.bc.ca
Paging service:	1-866-301-4075 (to leave a message and call back number)

3.2 The CRD appreciates reporting of trespassers, wildfire, environmental conditions of concern, sightings of species-at-risk, and any other items of note.

3.3 The CRD appreciates the Permittee working cooperatively to protect the environmental integrity of the Water Supply Areas.

SCHEDULE C – SPECIAL CONDITIONS

ARTICLE 1 – SPECIAL CONDITIONS OF ACCESS AND SPECIAL USE

1.1 This Permit agreement expressly permits access and activities in a specified Permit Area. Where an activity and access is not expressly included, that activity is not permitted under this Permit without the prior written consent of the CRD.

The access and activities permitted in this Permit includes only:
Driving directly to and from Weeks Lake Boundary Gate to Weeks Lake, and fishing in Weeks Lake.

1.2 The External Applicant Access and Special Use Request form submitted by the Permittee is considered attached hereto; and only those uses and activities described in the application are considered in this Permit.

1.3 The Permittee must contact the CRD Security Chargehand at least 2 weeks prior to the planned entry to arrange for the timing of entry and exit.

1.4 A sign-in of people, vehicles and vessels will be conducted at the entry gate. Vehicles and vessles will be inspected for leaks and obvious signs of invasive species. All entrants must sign a waiver, and insurance to a minimum of $2 million must be shown for each vehicle. Following sign-in, a mandatory briefing will be held prior to travelling in the Water Supply Area Lands. Alternatively, a briefing and signing of waivers may be arranged prior to entry at the Watershed Protection Field Operations Centre at 3051 Niagara Main Road.

1.5 Only non-motorized vessels and vessels that can be effectively decontaminated will be allowed in the water (e.g. canoes, rowboats). If there are any questions regarding the type of vessel or equipment allowed, please contact the Security Chargehand in advance.

1.6 All vessels and equipment that will be entering the lakes, including waders and nets, must be free of obvious soil, vegetation or other organic material. These items will be required to be decontaminated with a disinfectant approved by the CRD. Mild bleach solution and water will be provided by the CRD unless other arrangements are approved. Inspection and decontamination will be completed by or under supervision of CRD staff inside the gate in the Weeks Lake gravel pit, or in advance at the Field Operations Centre.

1.7 Vessels and equipment may only enter the designated waterbody.

1.8 No swimming is allowed.

1.9 Any issued spill kit and fire tools must accompany the vehicles and group to the lake. In case of a vehicle spill, fire start or other emergency, CRD staff are to be contacted immediately on VHF radio channel 3.

1.10 One CRD VHF radio will be issued to the Permittee at the gate and must be kept “on” in order to communicate and receive communication from CRD staff.

1.10 Four wheel drive vehicles are recommended. Carpooling as much as possible is requested due to limited parking and turn arounds, however, extra vehicles to allow distancing to avoid transmission of COVID-19 is also acknowledged. There is no guarantee of roaded access directly to the edge of the lake, participants must be prepared to carry boats to the water.

1.11 Care must be taken in parking, to not park on tall grass, or over a ditch or running water. Participants must adhere to CRD staff instructions regarding lakeside road use and parking.

1.12 The Permittee is required to provide and use a sanitation system for solid waste. Entry is pack in – pack out meaning there are no waste disposal facilities provided. The Permittee must confirm the sanitation system that will be used with CRD staff at least 2 weeks prior to the planned entry.

1.13 No smoking or fires are allowed while in the GVWSA.

1.14 BC Freshwater Fishing Regulations must be followed including the carrying of valid freshwater fishing licences as required by the Reguation.

1.15 CRD requests the Permittee's cooperation in providing information on species caught, observed and any other environmental information of note.

1.15 Contacts

	Permit contact for the CRD:	**Permit contact for the Permittee:**
Name	Patrick McCoubrey	Kym Hill
Title	Security Chargehand	Member
Organization	Watershed Protection	Westcoast Flyfishers Assoc.
Phone number	250.391.3551	250.388.5162
Phone number	250.216.7307 cell	250.532.9035 cell
Email	securitychargehand@crd.bc.ca	kymonstream@gmail.com

Tough catch: How anglers landed trip to watershed

Recreational group cleared a raft of new restrictions and got permission from Forest Company to pass through private lands

Times Colonist 6 Jul 2017 AMY SMART

Flyfisher Kym Hill at a gate along the road to the Leech water supply area.

Fourteen months, 245 emails, 152 phone calls, three Capital Regional District meetings, eight club meetings, $1,000 in deposits and $500 in direct expenses.

All for seven petite rainbow trout.

The West Coast Flyfishers Association completed a bureaucratic obstacle course to become the first recreational group to gain access to the Leech River watershed in late June.

“It’s a gate by a different name,” flyfisher Kym Hill said. “But we’re diehards.”

The CRD purchased 9,600 hectares in the Leech River watershed in 2007 and 2010 as a future water supply area for Greater Victoria. It won’t be needed for at least 25 years, but public access has been increasingly restricted since 2012 in an effort to prevent forest fires and contamination.

After multiple staff reports and debates, CRD directors in 2016 struck a balance between environmental security and recreation: There is a general prohibition, but individuals and groups can apply for special-use permits, to be evaluated on a case-by-case basis. First Nations are also allowed cultural use of the lands, in accordance with an access agreement.

“Our No. 1 concern is always wildfire,” said Annette Constabel, senior manager for watershed protection.

Each group will present different risks. In this case, the CRD was most concerned about pathogens, invasive plants and animals.

“We know in Shawnigan Lake, there’s milfoil and many of the recreational areas have those invasive species,” Constabel said. “We want to prevent those from spreading into the watershed area. That was our biggest concern, so we put measures in to make that a lower risk.”

The West Coast Flyfishers were the guinea pigs.

Other pre-trip preparations included getting permission from forestry company TimberWest to drive four to five kilometres on a logging road to reach the public lands, ensuring members had first-aid training, and negotiating

an insurance agreement to satisfy both TimberWest and the CRD.

Nine club members met at 5:15 a.m. on June 25 to hit Jarvis, Weeks and Worley lakes, to which they had been granted one-day access.

They drove in freshly cleaned trucks (in case of cross-contamination); it being a rainy day, the trucks were coated in mud by the time they arrived. En route, they passed through the TimberWest gate, which they had paid $100 in fees to gain access to (a special discount from the typical $500, because of the small club size). One member had driven up to Nanaimo to get the key. No need: The gate had been busted open long ago and was riddled with bullet holes, they found.

“These are some of the fun things we get to discover,” said TimberWest spokeswoman Monica Bailey.

The company manages entry to its properties for safety reasons — there’s active logging in some areas — and to limit vandalism, trespassing and illegal dumping. It recently removed 19,000 tonnes of garbage from its property near Strathcona Provincial Park, she said.

But it often learns of vandalism in underused areas from those like the anglers, who report it.
Upon arrival on CRD lands, the group pulled the trucks into a gravel yard for the final preparations.

CRD staff sprayed each boat with a decontamination spray made up of a virucide, bactericide and fungicide. They also distributed three sets of spill kits, shovels, VHF radios and fire-prevention kits (which proved unnecessary on the soggy day).

Because the boats could not be disinfected again, the fishers had to gamble on which of three lakes they visited.

One chose Weeks Lake, while the remainder bet on Jarvis. The lands weren’t always closed to the public, and it’s the memory of fishing in Jarvis Lake that drove Hill to persist in her goal of access.
Her journal — filled with records of every lake she’s fished and what she caught — notes that Jarvis, in 1989, had especially good fishing at dusk. It was so good, she went back again the next day — a rare thing for Hill, who prided herself on trying as many new fishing spots as possible, often squeezed into the same day.

“I think a big thing was the happy memories of what was up there before and the wish to revisit those [that drove us],” she said. Wrong choice. This time, there seemed to be little life in the lake. Only a handful of fish showed up on monitors and none was caught. There were no frogs singing and few birds passing through.

“It was sad,” Hill said. “[We were] trying to regain something that we thought had been preserved and maybe even improved by having no people up there. Well, that wasn’t the case.”

Luckily, the fishing was better on Weeks, as the lone fisher there reported over VHF radio.

The group flocked to Weeks and took turns in casting from shore and sharing the two boats that hadn’t touched Jarvis Lake.

The fishing was good. They took home seven rainbow trout and let plenty more go.
So, how did the guinea pigs do?

“It sounds like it was a success,” Constabel said.

“They were a good group and it sounds like the decontamination procedures didn’t take too long and could be done on site there at the Weeks Lake gravel pit. They were able to meet all the requirements.”

The information about ecological changes in Jarvis Lake is also helpful to the CRD, she said.
“That’s new information for us. We certainly know people have had fish in the past there and it was stocked at one point, so that will be interesting for us to follow.”

Overall, Hill said, she loved the experience.

“But I see it as an opportunity to get [Jarvis Lake] back to where it was before. It should be returned to its former glory,” she said. “It’s another pile of hoops to jump through, but it’s been a good cause.” Would they do it again? “Oh, I have a feeling, yes.”

APPENDIX E

Ms. Annette Constable
Senior Manager,
Watershed Protection, Capital Regional District
479 Island Highway, Victoria BC, V98 1H7.

On behalf on the Westcoast Fishers Association I would like to thank you for allowing us access the lakes within the CRD watershed. I realize it takes administrative time and effort for you and your staff to accommodate us and we appreciate it. CRD staff onsite were very accommodating and a pleasure to deal with.

The fishing was excellent at Weeks Lake and our members had a great day. We believe in responsible access and hope to co operate CRD in the future.

Thank you,

Dean Houston
President
Westcoast FlyFishers Association

Kym Hill
Member at Large

Making a difference...together

EEP 22-05

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, FEBRUARY 16, 2022

SUBJECT **Greater Victoria pH & Corrosion Study – Update**

ISSUE SUMMARY

To provide an update on the second tap sampling program that the Capital Regional District (CRD) conducted in the fall of 2021 to test for lead and copper at residential taps.

BACKGROUND

In response to new drinking water guidelines issued by the BC Ministry of Health in April 2019, the CRD conducted a residential tap sampling program in April of 2021 as part of the Greater Victoria pH & Corrosion Study. Staff collected 104 tap samples from selected areas in Saanich, Oak Bay, Victoria, Esquimalt, Sooke, and from several Westshore municipalities. The results, presented to the Regional Water Supply Commission at its June 16, 2021 meeting, indicated no community health concern from lead or copper at residential taps, and no immediate need for corrosion control treatment in the Greater Victoria Drinking Water System.

Given the scope of the first round of tap sampling, staff implemented a second tap sampling program to achieve full spatial coverage within Greater Victoria and to compile a larger, more representative data set. During September to October 2021, staff collected a total of 251 tap samples, of which 10 were repeat samples at locations previously sampled in March. Excluding the repeat samples, which were only done to verify the data and compare spring to fall results, samples from 203 single family residential, 15 commercial, 23 multi-family and 3 daycare buildings were collected. To complement the data from the first tap sampling program, focus of the second tap sampling round was on Saanich Peninsula municipalities and gaps within the Westshore municipalities. The following numbers of samples were collected: Central Saanich: 43, North Saanich: 31, Sidney: 23, Victoria/Esquimalt: 16, Oak Bay: 18, Saanich: 24, CRD-Westshore: 78, and CRD-Sooke: 6. All samples were analyzed for lead and copper following the "First Draw" and "30 minutes of stagnation" (30MS) sampling protocols, per BC Ministry of Health guidelines and the first tap sampling program.

Tap Sampling Results

Appendix A provides the summary for the various sample categories. The individual lab results were mailed to each respective study participant in January 2022. The few participants who had results indicating a lead source in the plumbing system have been supplied with information material on how to investigate potential lead sources and how to protect their health.

The tap sampling results are summarized as follows:

- Out of the 241 new tap samples, one sample exceeded the lead First Draw Action Limit of 15 µg/L. The critical 90 percentile of all First Draw samples was 2.7 µg/L and, therefore, well below the Action Limit that would indicate to the water supplier that corrosion control treatment is needed.

- Out of the 241 new tap samples, two sampling locations exceeded the Health Limit of 5 µg/L in their 30MS samples. The mean of all 30MS samples collected was 0.56 µg/L and, therefore, well below the BC Ministry of Health 5 µg/L threshold for a community level health concern.
- No sample results that exceeded the health (2,000 µg/L) or aesthetic limit (1,000 µg/L) for copper concentrations were recorded.
- Results from single family residential, multi-family residential and commercial buildings were very similar and indicated no systemic differences.
- Repeat sampling results from residential buildings that were already sampled in March 2021 were consistent and confirmed previous results and the reliability of the results.
- Repeat samples from the only building with exceedances in both lead samples (First Draw and 30MS) during the March 2021 sampling program recorded similar or even higher lead concentrations this time. Bathroom tap samples also recorded elevated lead concentrations, confirming lead sources throughout this building. A positive finding was that the kitchen tap filter that the building owner had installed in March 2021 greatly reduced the lead concentrations to well below the health limit.
- Samples collected from three daycare facilities that were previously sampled by Island Health in January 2020, when the CRD operated the chlorine gas plant, showed significantly reduced lead concentrations at the kitchen taps. All results from the three daycare facilities were well below the action and health limits for lead.
- No individual municipal water system differed significantly in trends or differences in water quality with respect to lead or copper concentrations.

Next Steps

Upon receipt of this report by the Regional Water Supply Commission, CRD staff will submit the summary report to Island Health and facilitate the discussion for future compliance monitoring. Island Health will likely want to coordinate with other BC Health Authorities to implement a province-wide consistent strategy. CRD staff will work with Island Health to develop jointly signed educational information material. This material will inform concerned residents how they can test their tap water (if they wish to do so), where lead may be found in private plumbing systems, and how residents can protect themselves in the rare case of elevated lead in the tap water. This material will be presented on the CRD website, in conjunction with a simplified summary of the recent tap sampling programs and instructions on how residents can contact their respective water supplier and/or Island Health staff for further information.

CONCLUSION

The CRD conducted a second tap sampling program in the fall of 2021 to increase the confidence in the data from the first tap sampling program that was initiated in the spring of 2021. The work is part of the CRD's response to new lead monitoring requirements issued by the BC Ministry of Health to drinking water suppliers. The final results of this second tap sampling program confirm the previous findings that there is no community health concern associated with lead or copper in the Greater Victoria Drinking Water System. The results also indicate there is no need for corrosion control treatment at this time. Staff will continue to develop future monitoring requirements in consultation with Island Health.

RECOMMENDATION

That the Regional Water Supply Commission receive the Greater Victoria pH & Corrosion Study report for information.

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

ATTACHMENT

Appendix A: Water Quality Tap Sampling – Lead and Copper Results

APPENDIX A

WATER QUALITY TAP SAMPLING
LEAD AND COPPER

RESULTS

February 2022

Table 1: Water Quality Data Summary (all properties)

All Areas, All Samples (Except Repeats)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	241	241	241	241
Samples Above Limit	1	0	2	0
Maximum Value	24	650	6.1	540
90th Percentile	2.7	300	1.1	130
Median	0.84	130	0.35	50
Mean	1.34	144	0.56	64

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 2: Water Quality Data Summary (residential properties only)

All Areas, Residential	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	203	203	203	203
Samples Above Limit	1	0	2	0
Maximum Value	24	460	6.1	250
90th Percentile	2.7	268	1.1	120
Median	0.9	120	0.35	45
Mean	1.37	134	0.56	59

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 3: Water Quality Data Summary (commercial properties only)

All Areas, Commercial (Including Daycare)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	15	15	15	15
Samples Above Limit	0	0	0	0
Maximum Value	13	650	3.3	540
90th Percentile	2.68	428	0.894	326
Median	0.77	250	0.41	79
Mean	1.80	259	0.64	137

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 4: Water Quality Data Summary (multi-family properties only)

All Areas, Multifamily	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	23	23	23	23
Samples Above Limit	0	0	0	0
Maximum Value	3.9	380	4.2	180
90th Percentile	2.02	338	0.674	130
Median	0.42	98	0.2	54
Mean	0.83	153	0.50	65

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 5: Water Quality Data Summary (District of Central Saanich)

Central Saanich, All Samples (Except Repeats)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	43	43	43	43
Samples Above Limit	0	0	1	0
Maximum Value	8.7	410	5.2	320
90th Percentile	3.52	326	1.2	130
Median	1.2	190	0.47	70
Mean	1.72	195	0.71	82

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 6: Water Quality Data Summary (City of Victoria and Township of Esquimalt)

Victoria & Esquimalt, All Samples (Except Repeats)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	16	16	16	16
Samples Above Limit	0	0	0	0
Maximum Value	2.2	360	0.73	200
90th Percentile	2.05	275	0.615	130
Median	0.56	50.5	0.245	37
Mean	0.78	104	0.34	52

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 7: Water Quality Data Summary (CRD-JDF System (Westshore))

CRD - Juan de Fuca, All Samples (Except Repeats)"	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	78	78	78	78
Samples Above Limit	0	0	0	0
Maximum Value	4.6	410	2.4	210
90th Percentile	2.33	230	1.002	113
Median	0.835	54.5	0.32	28
Mean	1.06	98	0.50	47

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 8: Water Quality Data Summary (District of North Saanich)

North Saanich, All Samples (Except Repeats)"	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	31	31	31	31
Samples Above Limit	0	0	1	0
Maximum Value	3.2	460	6.1	250
90th Percentile	2.1	400	0.8	160
Median	0.74	120	0.33	40
Mean	1.04	170	0.59	73

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 9: Water Quality Data Summary (District of Oak Bay)

Oak Bay, All Samples (Except Repeats)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	18	18	18	18
Samples Above Limit	0	0	0	0
Maximum Value	3.5	270	1.1	150
90th Percentile	1.4	243	0.748	120
Median	0.75	210	0.285	67.5
Mean	0.92	159	0.39	68

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 10: Water Quality Data Summary (District of Saanich)

Saanich, All Samples (Except Repeats)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	24	24	24	24
Samples Above Limit	0	0	0	0
Maximum Value	11	330	4.2	330
90th Percentile	2.45	254	1.119	114
Median	0.92	77.5	0.415	39.5
Mean	1.45	119	0.71	62

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 11: Water Quality Data Summary (Town of Sidney)

Sidney, All Samples (Except Repeats)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	23	23	23	23
Samples Above Limit	1	0	0	0
Maximum Value	24	290	1.5	110
90th Percentile	2.7	278	1.178	106.8
Median	0.94	180	0.35	67
Mean	2.23	152	0.47	53

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

Table 12: Water Quality Data Summary (District of Sooke)

CRD - Sooke, All Samples (Except Repeats)	First Draw Total Lead (Pb) µg/L	First Draw Total Copper (Cu) µg/L	30MS Total Lead (Pb) µg/L	30MS Total Copper (Cu) µg/L
Action/Health Limit[1]	15	2000	5	2000
Number of Sample Locations	6	6	6	6
Samples Above Limit	0	0	0	0
Maximum Value	13	650	3.3	540
90th Percentile	8.1	545	2.125	335
Median	0.71	255	0.6	87.5
Mean	3.09	307	0.99	154

[1] Note that all copper concentrations were also below the Health Canada aesthetic limit of 1000 and below the USEPA action limit of 1300 ug/L

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EEP 22-06

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, FEBRUARY 16, 2022

SUBJECT **Water Quality Summary Report for Greater Victoria Drinking Water System – October to December 2021**

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 Island Health, 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.

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 an understanding of source waters, treatment process, distribution infrastructure operations and maintenance, and the delivery of water to customers. The program also ensures that potential risks or concerns are effectively managed to ensure a safe drinking water supply.

Appendix A 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 summer period from October to December 2021.

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.

During November, the region experienced extreme rainfall, which resulted in extraordinary runoff conditions in streams and rivers in the CRD Water Supply Areas. Sooke Lake Reservoir filled in record time by the end of November. These extreme weather conditions did not have any measurable adverse impact on water quality parameters in Sooke Lake Reservoir or in the drinking water distribution systems.

Intergovernmental Implications

The CRD provides compliance monitoring and reporting of the municipal systems, in addition to our 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 managing the regional drinking water supply effectively. 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 fall and winter 2021 indicate good water quality overall, and all critical parameters indicate stable general conditions.

RECOMMENDATION

That the Water Quality Summary Report for the Greater Victoria Drinking Water System – October to December 2021 be received for information.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services

ATTACHMENT

Appendix A: Water Quality Summary Report for the Greater Victoria Drinking Water System – October to December 2021

WATER QUALITY SUMMARY REPORT
FOR THE GREATER VICTORIA DRINKING WATER SYSTEM
OCTOBER TO DECEMBER 2021

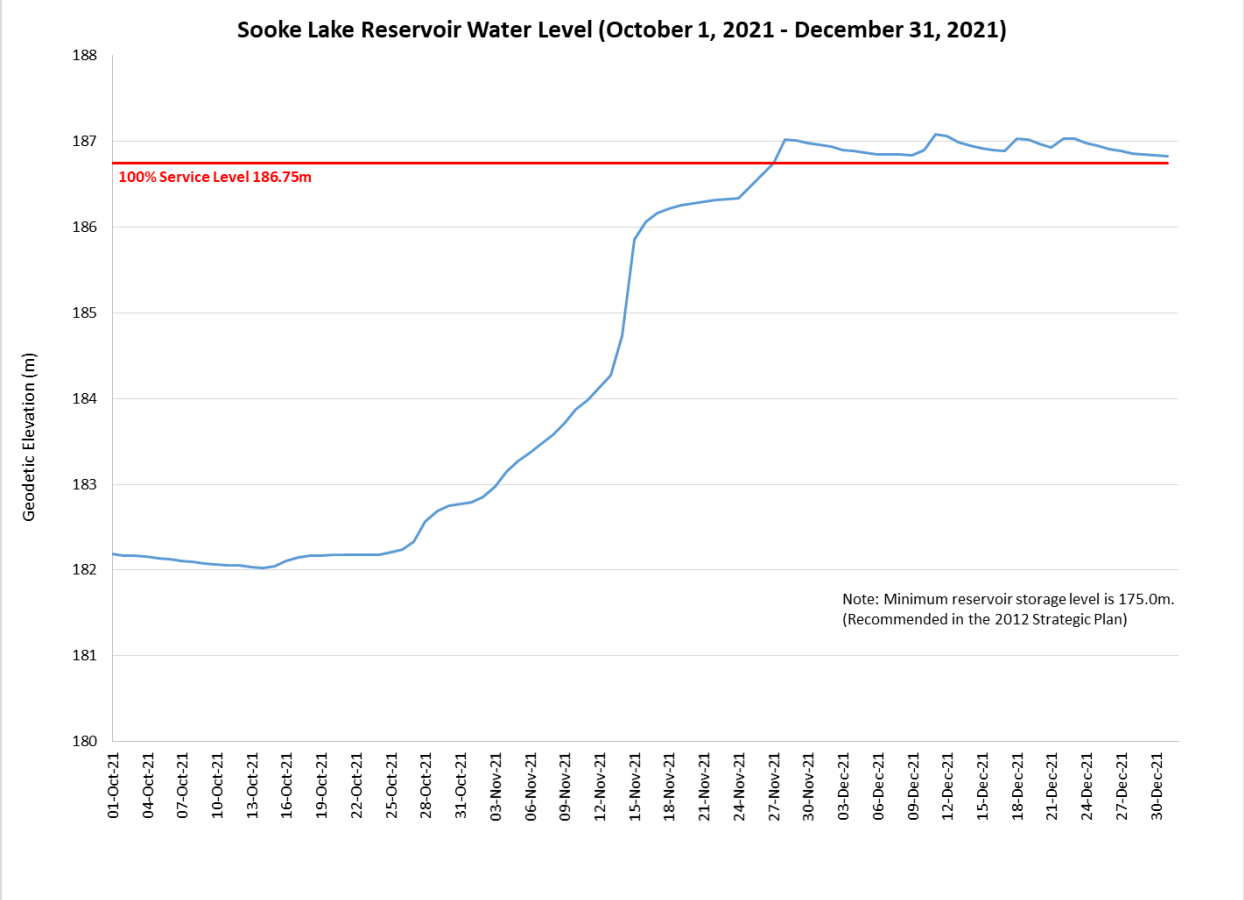
February 2022

SOURCE WATER – SOOKE LAKE RESERVOIR

Physical Parameters

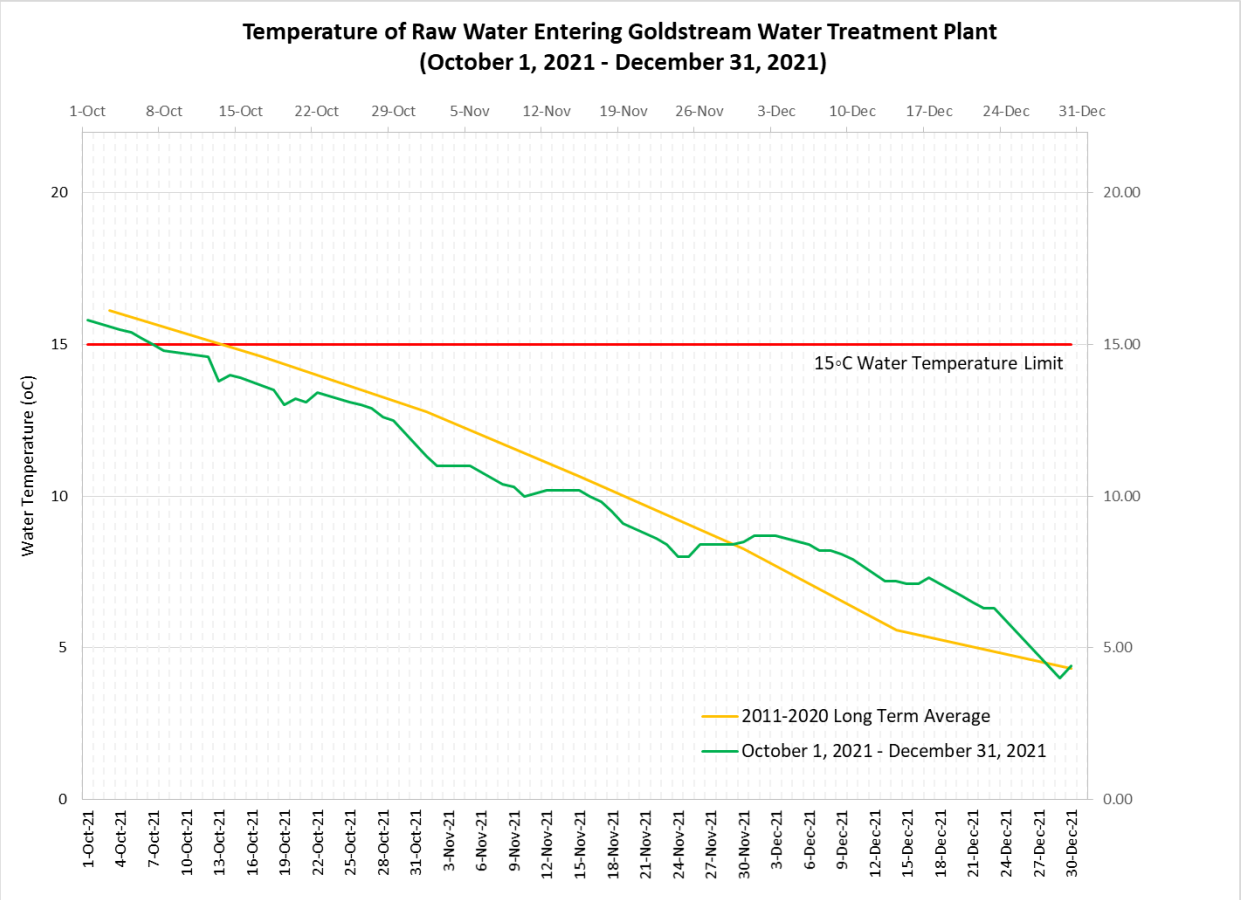
Water Levels. Sooke Lake Reservoir was at 65.9% of full capacity at the start of this reporting period on October 1, 2021 and reached its lowest level at 64.7% on October 14. This was the lowest reservoir level since the fall of 2018 and approximately 3% lower than the average low level of the previous 10 years. Significant and continuous reservoir recharge started at the end of October. Record rainstorm events in mid-November allowed for an unusually rapid filling of Sooke Lake Reservoir, which reached 100% storage capacity already on November 27. This was the earliest date that the reservoir reached full capacity since the raising of the Sooke Lake dam in 2004. Since that day the reservoir has been spilling.

Figure 1



Water Temperature. The raw water temperature measured at the Goldstream Water Treatment Plant tracked slightly below the long-term average trend until the end of November. From then, until the end of December, the water temperature entering the plant remained higher than the long-term trend (Figure 2). This warmer trend was likely the result of the extreme inflow from warmer runoff water after the record rainfall in mid-November. The aesthetic Health Canada temperature threshold of 15ºC was only exceeded until October 7 during this reporting period.

Figure 2



Turbidity. Turbidity in the lake near the intake tower remained well below the 1.0 Nephelometric Turbidity Unit (NTU) limit and fairly consistent for the entire reporting period (Table 1). The extreme rainfall and runoff event in November had no measurable impact on the raw water 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	6	NTU	0.25	0.50	0.3

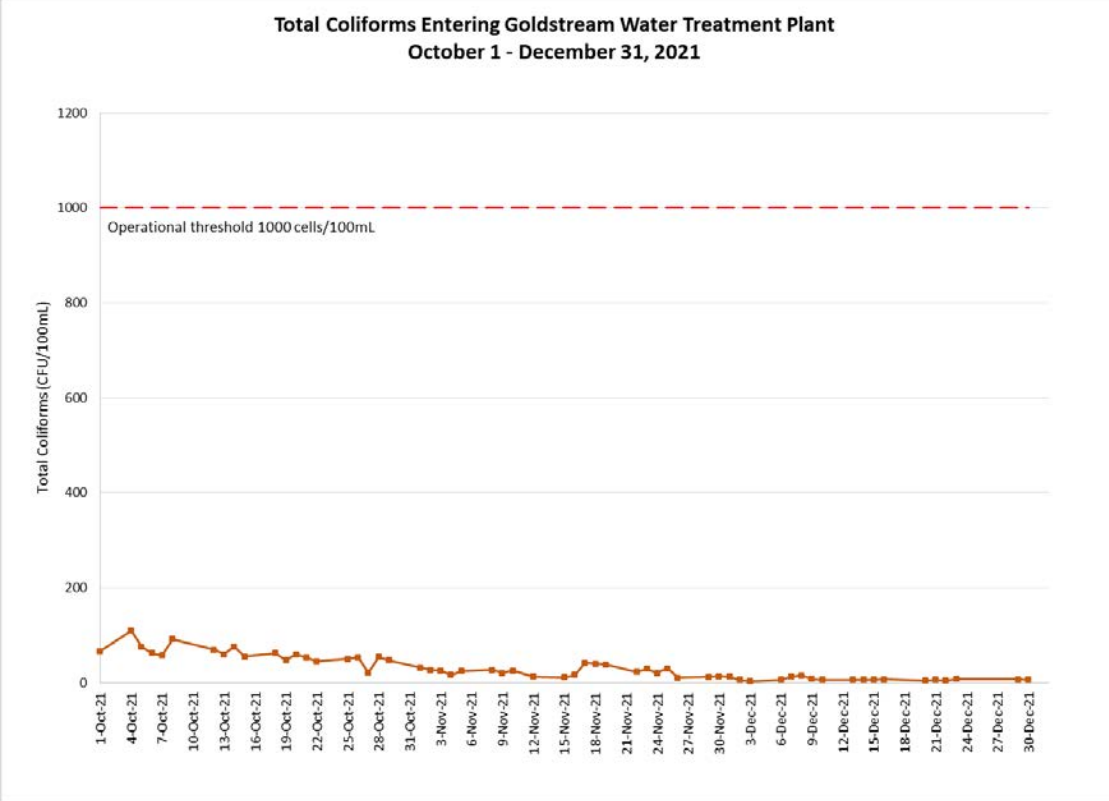
Water Transparency. The transparency of the lake water measured with the Secci Disc in the lake was high (between 6 and 8.0 m) and consistent with the long-term average. Seasonally increased algal abundance throughout the reporting period accounted for periods with slightly lower transparency but with no measurable impact on the treatability of the water.

Dissolved Oxygen. The dissolved oxygen concentrations at three lake sampling stations have been consistently between 8-10 mg/L from surface to bottom. This well-oxygenated state prevents internal nutrient loading or metal releases from lake sediments during summer lake stratification, and is another indicator of the oligotrophic status of Sooke Lake.

Bacteria

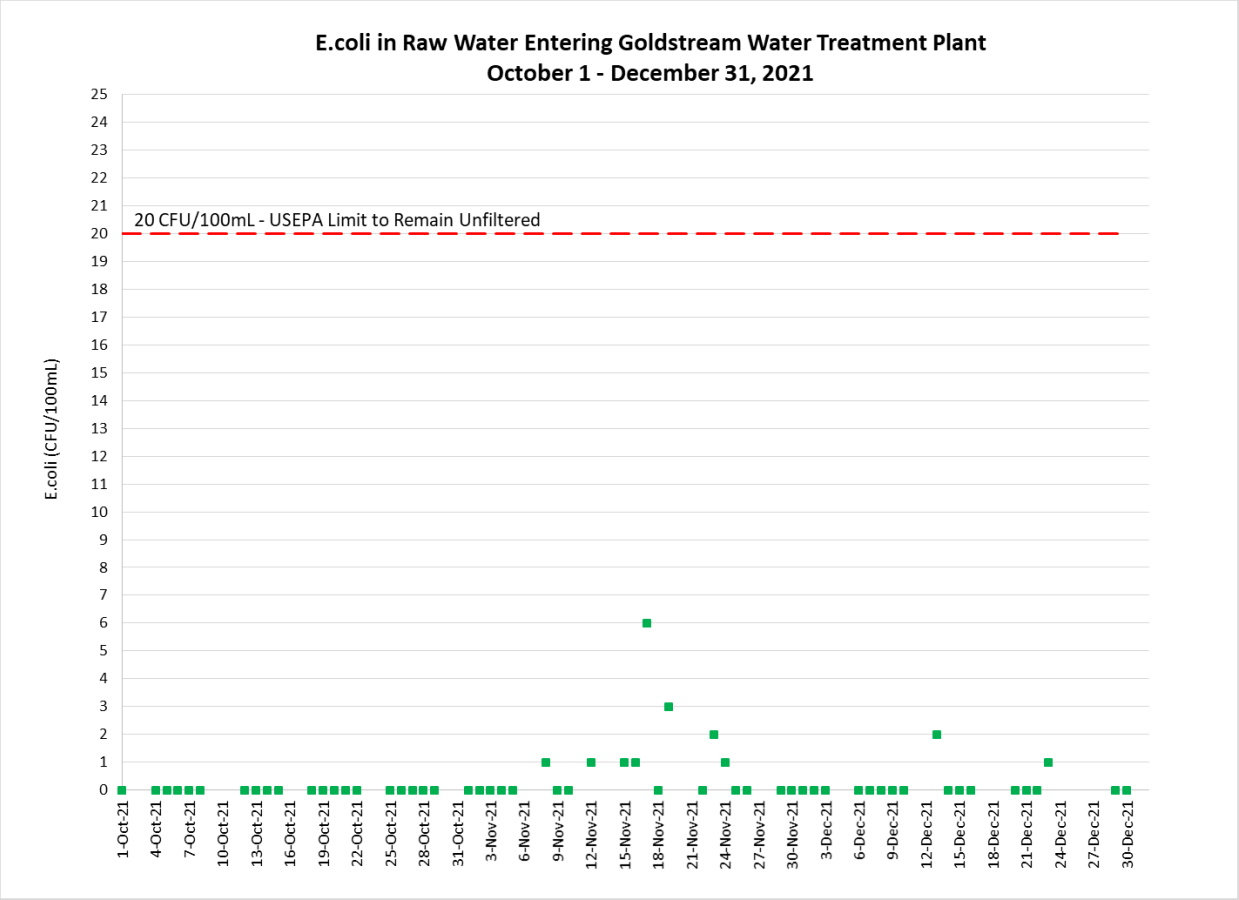
Total Coliform Bacteria and E. coli. The total coliform concentrations in the raw source water entering the Goldstream Water Treatment Plant tapered off at the beginning of the reporting period with the cooling of the raw water (Figure 3). This is a typical and natural pattern directly related to increased bioactivity during the warm water period. 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 July and December 2021 was 150 CFU/100 mL and was, therefore, in exceedance with this non-critical USEPA filtration exemption criterion. In context, while the total coliform concentrations were higher than in previous summers, most likely due to the higher than normal water temperatures, 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). While these results are typical for Sooke Lake Reservoir during the fall and winter season, a minor increase in raw water *E. coli* concentrations was recorded during the extreme rainfall and runoff event in mid-November. But even the highest spike of 6 CFU/100 mL was well below any compliance threshold.

Figure 4



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. These conditions allow only limited biological activity in the lake, thus ensuring a good quality source for unfiltered drinking water. In early fall, rain-induced runoff events (first flush events) usually provide the highest nutrient input to Sooke Lake Reservoir during the course of a year. The extreme rainfall and runoff event in mid-November did not result in an increase in nutrient concentrations but certainly contributed to a nutrient transfer

from every part of the catchment to the reservoir. These naturally-added 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	3	ug/L	103	240	115
Total Phosphorus	3	ug/L	1.3	1.40	1.37

Table 3

Sooke Reservoir, North Basin (1m) - SOL-04-01					
	Samples Collected	Unit of Measure	Minimum	Maximum	Mean
Total Nitrogen	3	ug/L	103	143	121
Total Phosphorus	3	ug/L	<1	1.30	1.1

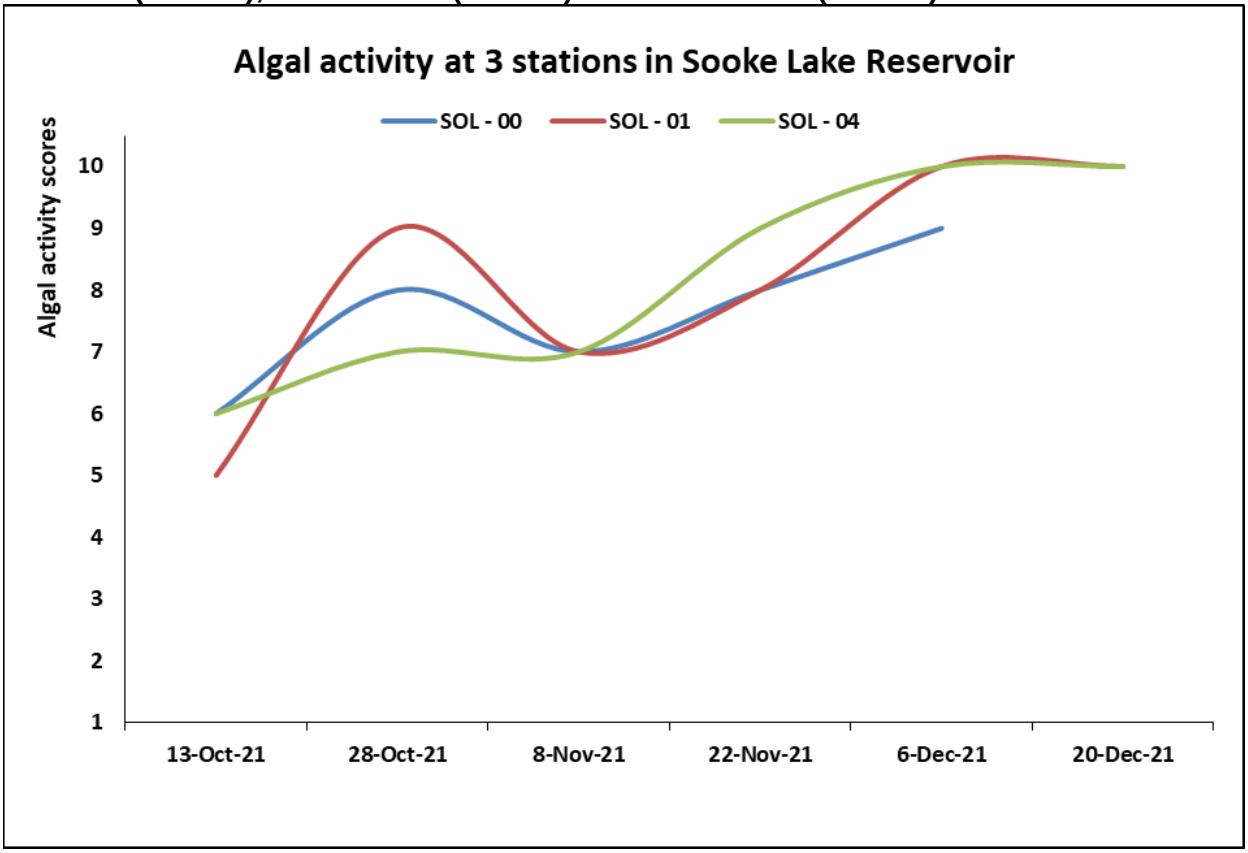
Protozoan Parasites

In three 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.

Algae

To provide a general picture of the algae activity in Sooke Lake Reservoir, algal activity scores were applied, ranging from 1 to 10, which are assessed via towed samples collected biweekly at three stations. The scores inclined from October to December due to the nutrient influx from rain-induced runoff events (Figure 5). Especially the extreme rainfall and runoff event in mid-November triggered a notable increase in algal activity, which started in the North Basin, the lake portion that receives tributary inflow first. Additional nutrients were made available by the seasonal lake turnover event, which often coincides with the autumn rains in October and November. The dominant taxon recorded in most samples collected throughout this reporting period was a common diatom, *Asterionella formosa,* which can cause taste and odour and filter clogging issues when in bloom. While dominant throughout most of the reporting period, this algae species never reached the bloom stage. Therefore, the algae-related water quality risk remained low and no adverse water quality impact was recorded.

Figure 5: Algal activity scores from October-December 2021, Sooke Lake Reservoir, Intake Location (SOL-00), South Basin (SOL-01) and North Basin (SOL-04)



WATER TREATMENT PLANTS

Goldstream Water Treatment Plant (formerly called Japan Gulch Disinfection Facility)

Turbidity. The raw water entering the Goldstream Water Treatment Plant was consistently well below 1 NTU during the reporting period (Table 4). The extreme rainfall and runoff event in mid-November, and the subsequently increased algal activity in Sooke Lake Reservoir, had no measurable impact on the raw water entering the plant.

Table 4

Goldstream Water Treatment Plant Turbidity - Raw Water	
Samples Collected	59
Minimum	0.15 NTU
Maximum	0.40 NTU
Mean	0.25 NTU

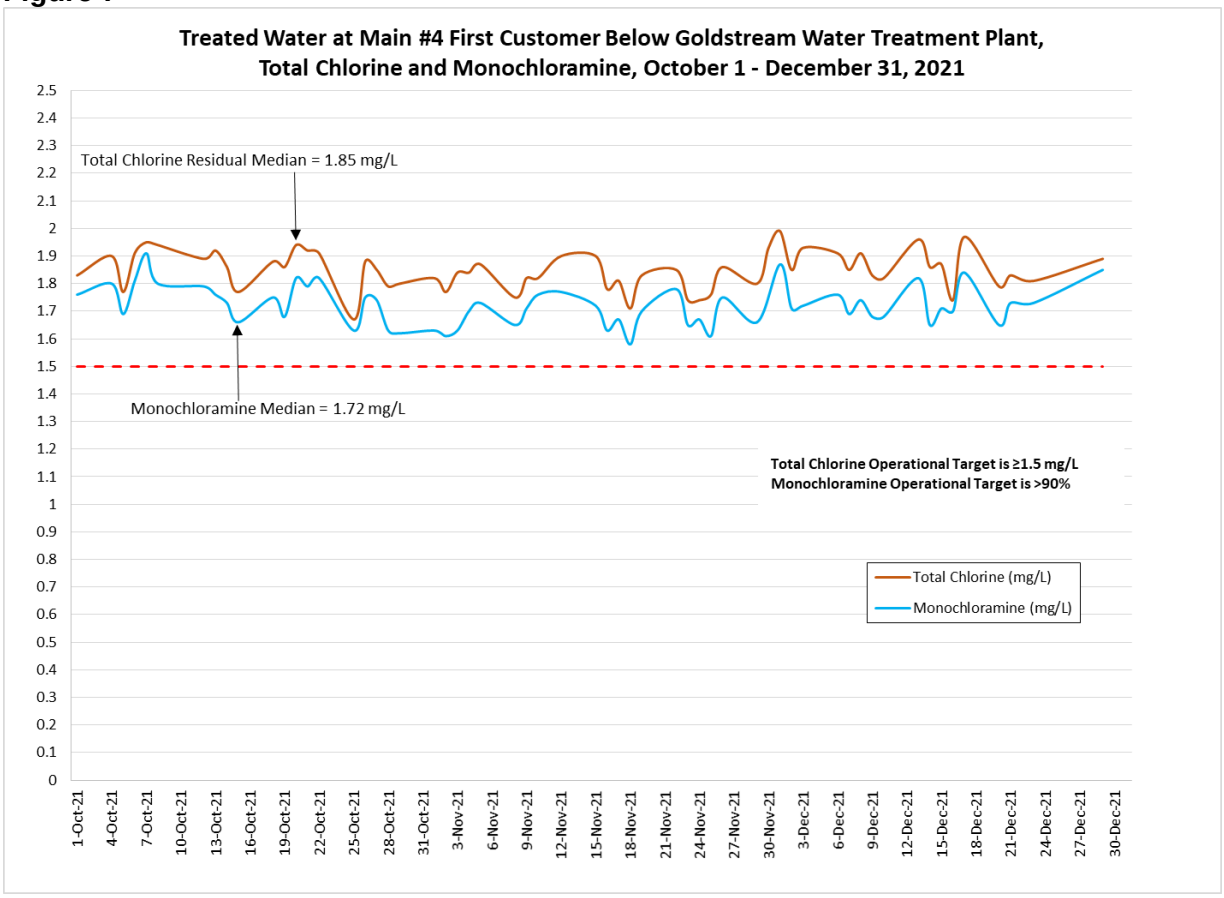
Main #4 First Customer Sampling Station Total Coliform Bacteria and E. Coli
The Main #4 First Customer Sampling Station immediately downstream of the Goldstream Water Treatment Plant is sampled daily to monitor the efficacy of the disinfection treatment process. No total coliform or *E. coli* bacteria 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. Only two samples (December 1 and 16) tested positive for total coliform bacteria (each at 1 CFU/100 mL) during the entire reporting period. Resamples did not confirm any water contamination or treatment breakthrough in either case.

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

Secondary Disinfection. Figure 7 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. This high rate of compliance was possible due to the newly commissioned hypochlorite chlorination equipment (online since March 2021). Adequate and effective secondary disinfection was provided across the entire system throughout the reporting period.

Figure 7



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).

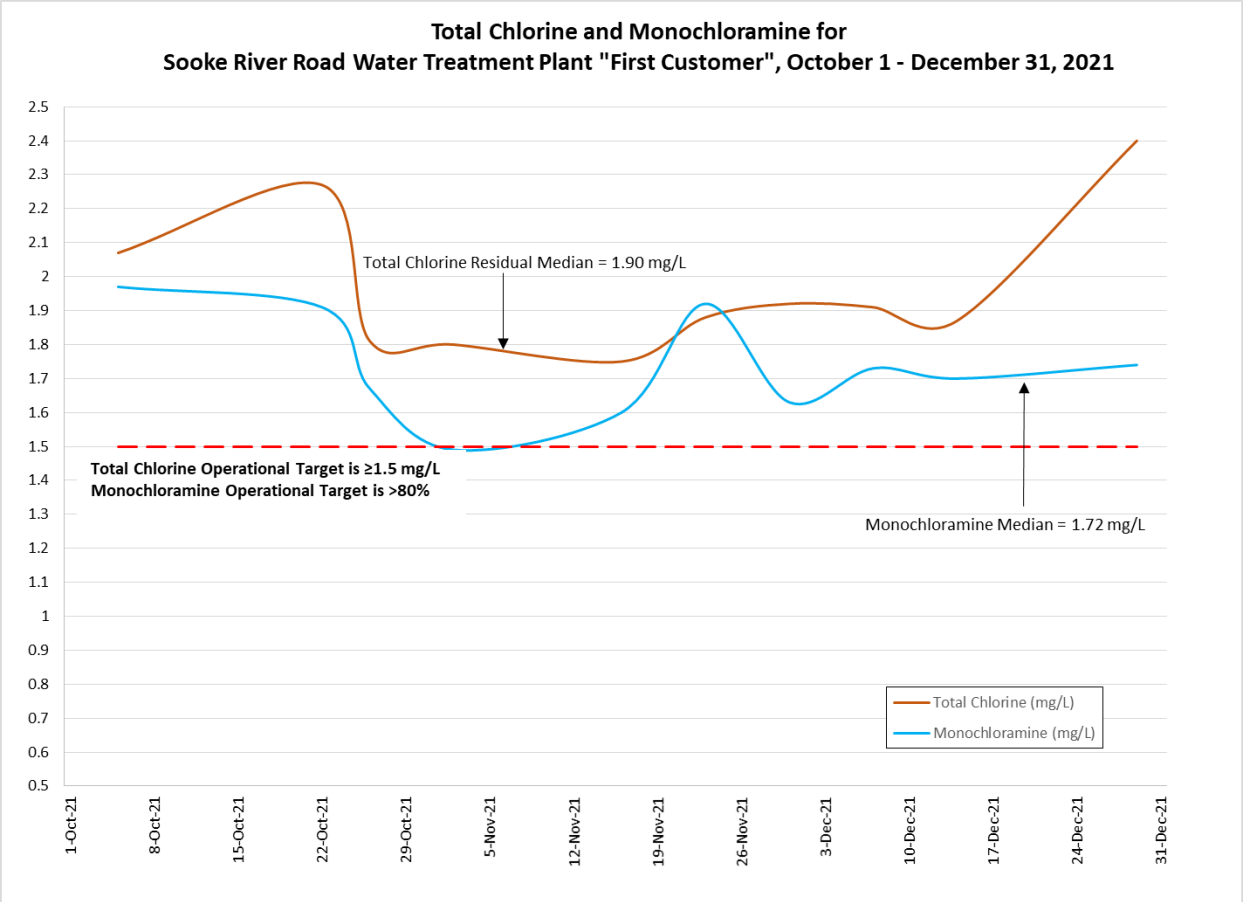
Table 5

Sooke River Road Water Treatment Plant Turbidity - Raw Water	
Samples Collected	9
Minimum	0.20 NTU
Maximum	0.30 NTU
Mean	0.23 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. These results demonstrate the efficacy of the disinfection process at the Sooke Water Treatment Plant.

Secondary Disinfection. Figure 8 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. While the chloramine concentrations were strong and sufficient throughout, the monochloramine/total chlorine ratio fluctuated greatly and was not as consistent as desired for achieving a stable drinking water chemistry. The slightly lower target ratio of 80% monochloramine for this facility was achieved throughout most of the reporting period, except for a period at the end of December when the total chlorine concentration suddenly rose sharply. A lower monochloramine/total chlorine ratio could result in adverse taste and odour in the drinking water. Despite these chemical fluctuations, the residual concentrations were adequate to provide effective secondary disinfection across this much smaller distribution system.

Figure 8



DISTRIBUTION SYSTEMS

Goldstream (Japan Gulch) 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
Oct-21	322	3	0.9	0	1	0	60	0	1.38	14.7
Nov-21	327	0	0.0	0	0	0	62	0	1.34	11.4
Dec-21	302	0	0.0	0	0	0	56	0	1.49	9.0
Total:	951	3	0.3	0	1	0	178	0	1.38	11.4

Total Coliform Bacteria and E. coli. Only three out of 951 distribution system samples, or 0.3% of all bacteriological samples during the reporting period, tested positive for total coliform bacteria. In all three cases, the resample was free of total coliform bacteria, indicating that no actual water contamination was the cause of these coliform hits. One sample from October 25 exceeded the regulatory criterion of 10 CFU/100 mL for total coliform concentration (34 CFU/100 mL). The resample on October 27 did not confirm the presence of total coliform bacteria. An investigation found that the sampling station was poorly maintained and filled with soil and dirt. This likely led to a contamination of the original sample. The condition of the sampling station was subsequently improved. No *E. coli* bacteria were found (Table 6).

Turbidity. None of the 178 turbidity samples registered higher than 1 NTU (Table 6). Overall, these results are an indication of good drinking water quality.

Total Chlorine Residual. A median total chlorine residual concentration of 1.38 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 below the aesthetic objective in the *Canadian Drinking Water Quality Guidelines,* except for a few individual days at the very beginning of the reporting period.

Water Chemistry. The average pH of the drinking water in the Goldstream Service Area was 7.6 during the reporting period. The pH ranged from 7.1 to 8.4, which is typical when operating the hypochlorite chlorination equipment. The average alkalinity was 17.5 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)	4	ug/L	<5	14.0	9.4	80
Trihalomethanes (THMs)	4	ug/L	17.0	18.0	17.5	100
NDMA	4	ng/L	<2.0	2.90	2.20	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, aluminium 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	4	ug/L	6.50	12.40	9.73		100	2900
Copper	4	ug/L	2.40	22.40	9.05	1000		2000
Iron	4	ug/L	31.20	35.80	33.18	300		
Lead	4	ug/L	<0.02	0.27	0.23			5
Manganese	4	ug/L	3.50	5.20	4.25	20		120

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**
Oct-21	24	0	0.0	0	0	0	6	0	0.40	13.7
Nov-21	35	2	5.7	0	1	0	5	0	0.72	10.6
Dec-21	28	0	0.0	0	0	0	5	0	0.92	8.8
Total:	87	2	2.3	0	1	0	16	0	0.72	10.6

Total Coliform Bacteria and E. coli. In all 87 bacteriological samples during the reporting period, only two samples tested positive for total coliform bacteria. In both cases, the resample was free of total coliform bacteria, indicating that no actual water contamination was the cause of these coliform hits. One sample from November 2 exceeded the regulatory criterion of 10 CFU/100 mL for total coliform concentration (11 CFU/100 mL). The resample on November 4 did not confirm the presence of total coliform bacteria. It was concluded that a sample contamination likely led to the original adverse test result. No sample contained *E. coli* bacteria (Table 9).

Turbidity. None of the 16 turbidity samples registered above 1 NTU (Table 8). This is an indication of good drinking water quality.

Total Chlorine Residual. A median total chlorine residual concentration of 0.72 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 consistently below the aesthetic objective in the *Canadian Drinking Water Quality Guidelines*.

Water Chemistry. The average pH of the drinking water in the Sooke Service Area was 7.4 during the reporting period. The pH ranged from 7.2 to 7.6 and is typically very stable and consistent across this system. The average alkalinity was 16.4 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)	1	ug/L	21.0	21.0	21.0	80
Trihalomethanes (THMs)	1	ug/L	25.0	25.0	25.0	100
NDMA	1	ng/L	<2.0	<2.0	<2.0	40

Metals. A comprehensive metals analysis was conducted every second month (in November only during this reporting period) 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, aluminium 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	1	ug/L	9.70	9.70	9.70		100	2900
Copper	1	ug/L	4.73	4.73	4.73	1000		2000
Iron	1	ug/L	64.40	64.40	64.40	300		
Lead	1	ug/L	<0.2	<0.2	<0.2			5
Manganese	1	ug/L	2.70	2.70	2.70	20		120

CONCLUSION

During this summer reporting period (October-December 2021), all parameters from source water to treated water indicate stable conditions and good water quality. Most trends are in line with historic data and confirm the adequacy of existing water treatment and performance of all major infrastructure components. The extreme rainfall and runoff event in mid-November resulted in record fast filling of Sooke Lake Reservoir but had no adverse impact on the raw or treated water quality. 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

SAANICH PENINSULA WATER COMMISSION
Thursday, January 20, 2022 at 9:30 AM

MEETING HOTSHEET (ACTION LIST)

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.

3. ELECTION OF CHAIR

David Kelbert elected as Chair by acclimation.

4. ELECTION OF VICE CHAIR

Mike Doehnel re-elected as Vice Chair by acclimation.

6. ADOPTION OF MINUTES

That the minutes of the October 21, 2021 meeting be adopted.

CARRIED

10. COMMISSION BUSINESS

10.1. Summary of Recommendations from Other Water Commissions

That the Summary of Recommendations from other Water Commissions be received for information.

CARRIED

10.2. Summary of Recommendations from Other Water Commissions

That the January 10, 2022 Water Watch Report be received for information.

CARRIED

10.3. Summary of Recommendations from Other Water Commissions

That the Saanich Peninsula Water Commission appoint its Vice Chair of the Commission to the Water Advisory Committee for a one year term ending December 31, 2022.

CARRIED

Making a difference...together

JUAN DE FUCA WATER DISTRIBUTION COMMISSION
Tuesday, February 1, 2022 at 12 PM

MEETING HOTSHEET (ACTION LIST)

The following is a quick snapshot of the FINAL **Juan de Fuca Water Distribution Commission** decisions made at the meeting. The minutes will represent the official record of the meeting.

3. ADOPTION OF MINUTES

That the minutes of the January 4, 2022 meeting be adopted.

CARRIED

7. COMMISSION BUSINESS

7.1. Grant Application for Anderson Cove (East Sooke) Water Service Extension

The Juan de Fuca Water Distribution Commission recommends to the Electoral Areas Committee and the Capital Regional District Board that:

Staff be directed to prepare and submit an application for an Investing in Canada Infrastructure Program - British Columbia - Green Infrastructure - Environmental Quality grant for the water service extension to the Anderson Cove area of the Juan de Fuca Water Distribution service area.

CARRIED

7.2. Summary of Recommendations from Other Water Commissions

That the Summary of Recommendations from other Water Commissions be received for information.

7.3. Water Watch Report

That the January 24, 2022 Water Watch Report be received for information.

CARRIED

10. MOTION TO CLOSE THE MEETING

That the meeting be closed for Intergovernmental Relations under Section 90 (2)(b) of the Community Charter, Part 4, Division 3.

CARRIED

11. RISE AND REPORT

The Commission rose from its closed session at 12:56 pm without report.

CAPITAL REGIONAL DISTRICT - INTEGRATED WATER SERVICES

Water Watch

Issued January 10, 2022

Water Supply System Summary:

1. Useable Volume in Storage:

Reservoir	January 31 5 Year Ave		January 31/21		January 9/22		% Existing Full Storage
	ML	MIG	ML	MIG	ML	MIG	
Sooke	92,727	20,400	92,727	20,400	92,727	20,400	100.0%
Goldstream	8,157	1,794	8,959	1,971	9,907	2,179	99.9%
Total	100,884	22,194	101,686	22,371	102,634	22,579	100.0%

2. Average Daily Demand:

For the month of January	115.0 MLD	25.31 MIGD
For week ending January 09, 2022	113.4 MLD	24.95 MIGD
Max. day January 2022, to date:	127.4 MLD	28.02 MIGD

3. Average 5 Year Daily Demand for January

Average (2017 - 2021)	99.2 MLD [1]	21.82 MIGD [2]

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

4. Rainfall January:

Average (1914 - 2021):	274.7 mm
Actual Rainfall to Date	114.9 mm (42% of monthly average)

5. Rainfall: Sep 1- Jan 9

Average (1914 - 2021):	868.4 mm
2021 - 2022	1,373.5 mm (158% 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:

Ted Robbins, B.Sc., C.Tech
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
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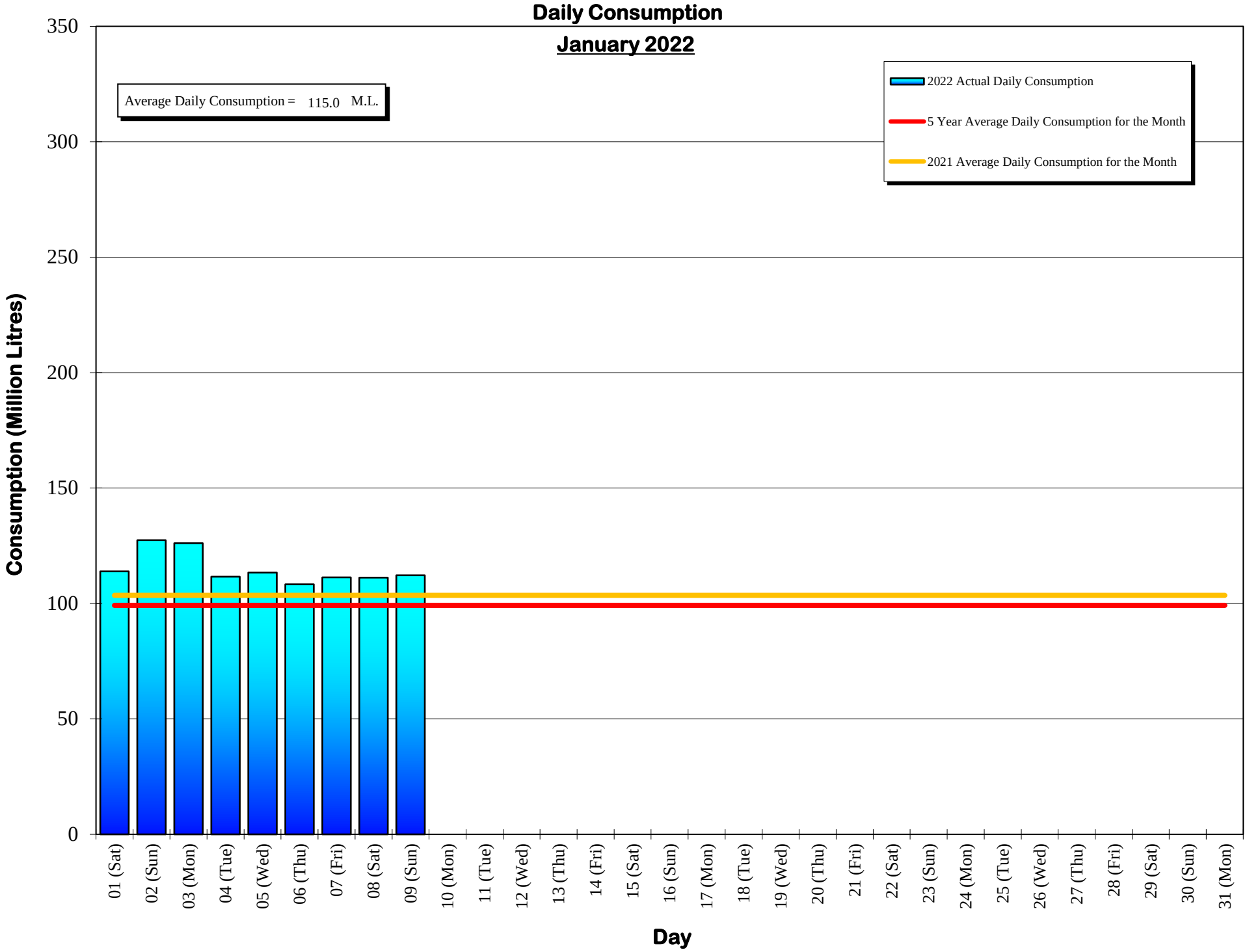

Daily Consumption
January 2022
Average Daily Consumption = 115.0 M.L.
2022 Actual Daily Consumption
5 Year Average Daily Consumption for the Month
2021 Average Daily Consumption for the Month
Consumption (Million Litres)
350
300
250
200
150
100
50
0
01 (Sat)
02 (Sun)
03 (Mon)
04 (Tue)
05 (Wed)
06 (Thu)
07 (Fri)
08 (Sat)
09 (Sun)
10 (Mon)
11 (Tue)
12 (Wed)
13 (Thu)
14 (Fri)
15 (Sat)
16 (Sun)
17 (Mon)
18 (Tue)
19 (Wed)
20 (Thu)
21 (Fri)
22 (Sat)
23 (Sun)
24 (Mon)
25 (Tue)
26 (Wed)
27 (Thu)
28 (Fri)
29 (Sat)
30 (Sun)
31 (Mon)
Day

Daily Consumptions: - January 2022

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 (Sat)	113.9		25.1	1	-7	Sunny / P. Cloudy	0.0	0.0	0.0
02 (Sun)	127.4	<=Max	28.0	2	-1	Cloudy / Rain	25.4	0.0	25.4
03 (Mon)	126.1		27.7	2	0	Cloudy / Rain / Flurries	16.8	12.6	18.1
04 (Tue)	111.6		24.6	1	0	Cloudy / Rain / Flurries	7.1	78.7	15.0
05 (Wed)	113.4		24.9	1	-1	Cloudy / Snow	0.0	45.6	4.6
06 (Thu)	108.3	<=Min	23.8	1	-1	Cloudy / Snow / Rain	35.1	142.0	49.3
07 (Fri)	111.3		24.5	4	-1	Cloudy / Showers / Flurries	0.5	2.5	0.8
08 (Sat)	111.2		24.5	2	-1	Cloudy / Flurries	0.8	10.2	1.8
09 (Sun)	112.2		24.7	2	0	Cloudy	0.0	0.0	0.0
10 (Mon)									
11 (Tue)									
12 (Wed)									
13 (Thu)									
14 (Fri)									
15 (Sat)									
16 (Sun)									
17 (Mon)									
18 (Tue)									
19 (Wed)									
20 (Thu)									
21 (Fri)									
22 (Sat)									
23 (Sun)									
24 (Mon)									
25 (Tue)									
26 (Wed)									
27 (Thu)									
28 (Fri)									
29 (Sat)									
30 (Sun)									
31 (Mon)									
TOTAL	1035.4 ML		227.77 MIG				85.7	292	114.9
MAX	127.4		28.02	4	0		35.1	142	49.3
AVG	**115.0**		25.31	1.8	-1.3		9.5	32	12.8
MIN	108.3		23.82	1	-7		0.0	0	0.0

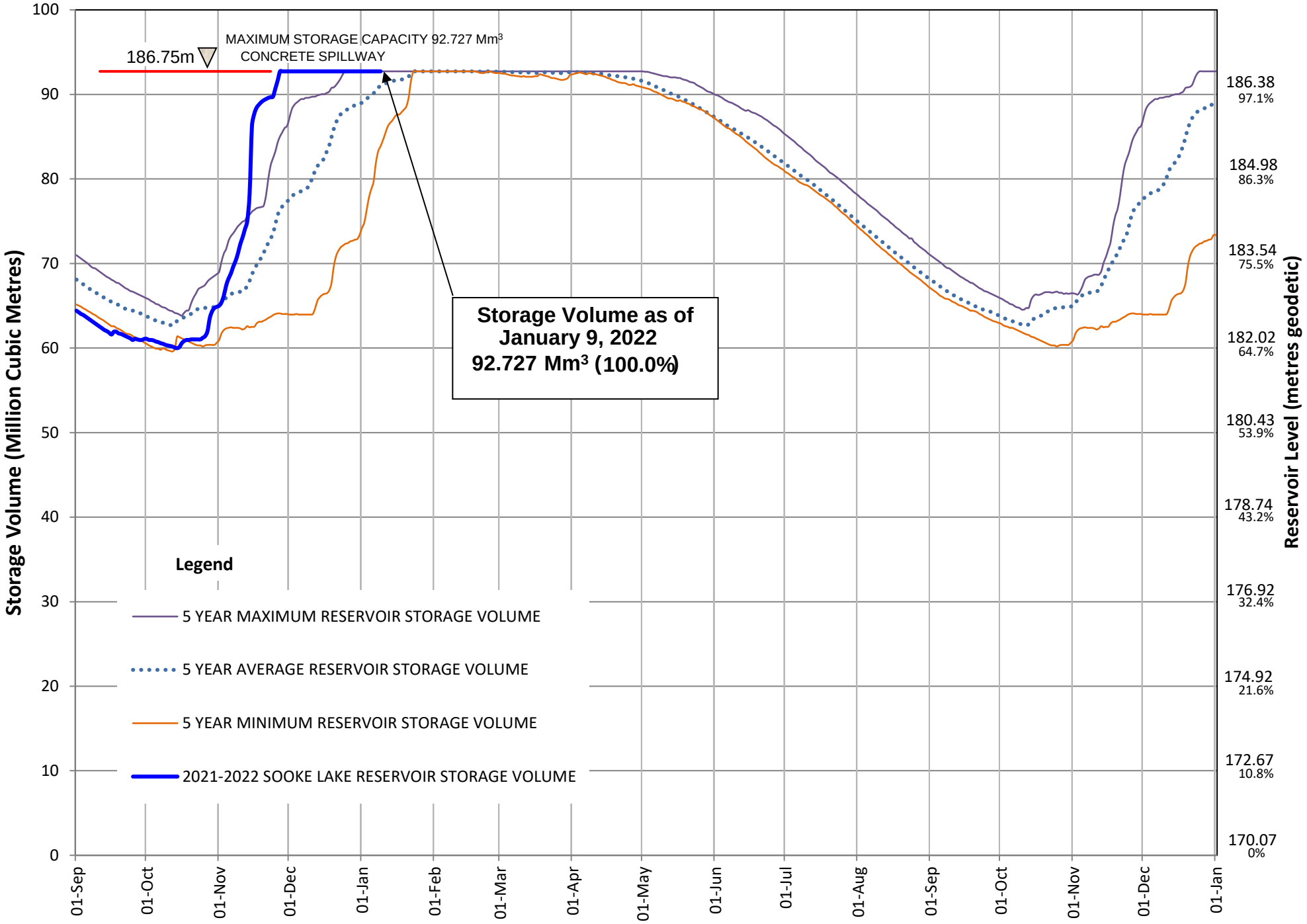
1. ML = Million Litres
2. MIG = Million Imperial Gallons
3. 10% of snow depth applied to rainfall figures for snow to water equivalent.

Average Rainfall for January (1914-2021)	274.7 mm
Actual Rainfall: January	114.9 mm
% of Average	42%
Average Rainfall (1914-2021): Sept 01 - Jan 09	868.4 mm
Actual Rainfall (2021): Sept 01 - Jan 09	1,373.5 mm
% of Average	158%

Number days with precip. 0.2 or more
7

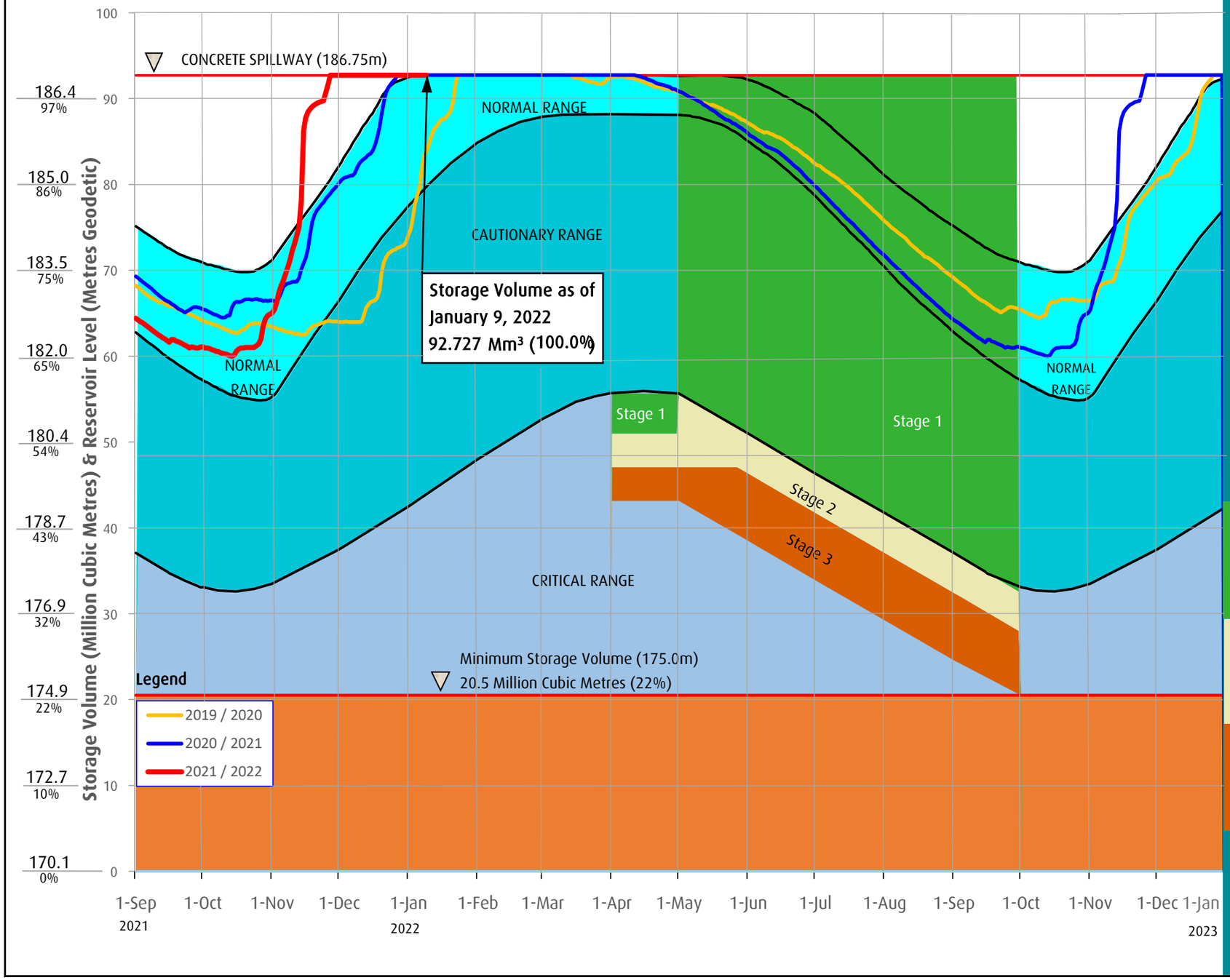
Water spilled at Sooke Reservoir to date (since Sept. 1) = 7.08 Billion Imperial Gallons
= 32.20 Billion Litres

SOOKE LAKE RESERVOIR STORAGE SUMMARY
2021 / 2022



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

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Useable Reservoir Volumes in Storage for January 09, 2022