Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Regional Water Supply Commission

Wednesday, July 20, 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. 22-456 Adoption of June 15, 2022 Minutes

Recommendation: That the minutes of the June 15, 2022 Regional Water Supply Commission meeting be adopted.

Attachments: Draft Minutes June 15, 2022

4. CHAIR'S REMARKS

5. PRESENTATIONS/DELEGATIONS

The public are welcome to attend Commission meetings in-person.

Delegations will have the option to participate electronically. Please complete the online application for "Addressing the Board" on our website located here https://www.crd.bc.ca/about/board-committees/addressing-the-board and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the Regional Water Supply Commission at iwsadministration@crd.bc.ca.

Delegation requests must be received no later than 4:30 p.m. two calendar days prior to the meeting.

6. GENERAL MANAGER'S REPORT

6.1. Water Supply Outlook [Verbal]

6.2. Next Meeting: September 28, 2022 (Budget Meeting)

7. COMMISSION BUSINESS

7.1. 22-457 Summary of Feedback - 2022 Regional Water Supply Master Plan

Recommendation: That the Regional Water Supply Commission:

1. Approve the Regional Water Supply 2022 Master Plan; and,
2. Recommend that the Capital Regional District Board approve the Regional Water Supply 2022 Master Plan.

Attachments:
- Staff Report: Summary of Feedback - 2022 RWS Master Plan
- Appendix A: Public Engagement Report
- Appendix B: Sample letter to First Nations Chief and Council
- Appendix C: WAC Response to the 2022 Water Master Plan
- Appendix D: WAC Additional Detailed Comments on the 2022 Water Master Pla

7.2. 22-468 Bylaw No. 4509, “Capital Regional District Greater Victoria Water Supply Area Protection Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022”

Recommendation: The Regional Water Supply Commission recommends to the Capital Regional District Board:

1. That Bylaw No. 4509, "Capital Regional District Greater Victoria Water Supply Area Protection Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022", be introduced and read a first, second, and a third time.

2. That Bylaw No. 4509 be adopted.

Attachments:
- Staff Report: Bylaw 4509 Amendment Bylaw to Bylaw No. 2804
- Appendix A: Bylaw 4509 Amendment Bylaw
- Appendix B: Bylaw 2804 Unofficial Redline Showing Changes

7.3. 22-469 Greater Victoria Water Supply Area 2022 Public and School Tours Summary

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

Attachments: Staff Report: GVWSA 2022 Public and School Tours Summary

7.4. 22-459 Summary of Recommendations from Other Water Commissions

Recommendation: There is no recommendation. The summary of recommendations is for information only.

Attachments: Summary of Recommendations from Other Water Commissions

7.5. 22-460 Water Watch Report

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

Attachments: Water Watch Report

8. NEW BUSINESS

9. ADJOURNMENT

Next Meeting: September 28, 2022

Note: The September meeting is scheduled one week out from the regular meeting schedule (the fourth Wednesday of the month) due to the CRD Board's special meeting being held on September 21 for provisional budget approvals.

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

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Regional Water Supply Commission

Wednesday, June 15, 2022 **11:30 AM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT:
L. Szpak (Chair); M. Alto for G. Young; Z. De Vries (EP); S. Duncan (EP); C. Graham (EP); K. Harper; M. Hicks (EP); B. Isitt (EP); K. Kahakauwila (EP); J. Loveday (EP); R. Mersereau (EP); T. Morrison (EP); J. Rogers (EP); N. Taylor; R. Wade (EP); E. Wood Zhelka

STAFF:
R. Lapham, CAO; T. Robbins, General Manager, Integrated Water Services; A. Constabel, Senior Manager, Watershed Protection; I. Jesney, Senior Manager, Infrastructure Engineering; S. Henderson, Senior Manager, Real Estate & SGI Administration; T. Duthie, Manager, Administration Services; D. Dionne, Administrative Coordinator; M. Risvold, Committee Clerk (Recorder)

REGRETS:
G. Baird (Vice Chair); N. Chambers; S. Dubow; G. Logan; C. Stock; T. St-Pierre; G. Young

EP = Electronic Participation

The meeting was called to order at 11:37 am

1. TERRITORIAL ACKNOWLEDGEMENT

Commissioner Loveday provided the Territorial Acknowledgement.

2. APPROVAL OF THE AGENDA

MOVED by Alternate Commissioner Alto and **SECONDED** by Commissioner Harper,
That the agenda be approved as circulated.
CARRIED

3. ADOPTION OF MINUTES

3.1. 22-374 Adoption of the May 18, 2022 Regional Water Supply Commission minutes

Attachments: Draft Minutes May 18, 2022

MOVED by Commissioner Harper and **SECONDED** by Alternate Commissioner Alto,
That the Minutes of the May 18, 2022 meeting be adopted.
CARRIED

4. CHAIR'S REMARKS

The chair acknowledged the cool weather pattern, recognized the hard work of commissioners and thanked staff.

5. PRESENTATIONS/DELEGATIONS

There were none.

6. GENERAL MANAGER'S REPORT

6.1. Water Supply Outlook

T. Robbins provided a water supply outlook advising the Sooke Lake reservoir is currently holding 98 percent of the full storage capacity due to the weather this spring. More rain was experienced compared to the historical monthly average for May resulting in reduced daily water demands across the region, and seeing a similar trend for June.

6.2. 22-403 2022 Master Plan Media Release and Engagement

Attachments: Media Release: RWS Master Plan

T. Robbins spoke to item 6.2.

Discussion ensued regarding:
-Public engagement concerns
-Improving outreach and feedback
-Engaging the Water Advisory Committee

7. COMMISSION BUSINESS

7.1. 22-376 Cost Recovery Fee and Delegation of Permit Issuance for Greater Victoria Water Supply Area Special Access Requests

Attachments: Staff Report: Cost Recovery Fee and Delegation of Permit Issuance for Special Access Requests
Appendix A: Policy - GVWSA Access and Special Use Request and Approval
Appendix B: Procedure - GVWSA Access and Special Use Request and Approval
Appendix C: CRD Regional Parks Permit Fees

A. Constable spoke to item 7.1.

Discussion ensued regarding:
-The cost and possibility for cost recovery
-Increased usage rates due to pandemic
-Streamlined and cost effective process for future access requests
-Rules and policies in the event of increased access requests

Staff advised a significant increase in requests may require a different approach and additional resources. Additional requests may streamline the process for staff and the commission.

MOVED by Commissioner Rogers and **SECONDED** by Commissioner Loveday,
That staff initiate a $500 administration fee for access to the Leech watershed.
CARRIED
OPPOSED: Hicks

MOVED by Commissioner Harper and **SECONDED** by Commissioner Rogers,
That staff be directed to amend the Water Supply Area Access and Special Use Request and Approval Procedure to include an additional prescribed situation considered "routine" for which the General Manager has delegated authority to approve access (Section 1, k):

"k. Mining access requests in the Leech Water Supply Area where the CRD is required to provide access under the BC Mineral Tenure Act, and the claim holder agrees to CRD's terms and conditions of access."
CARRIED
Opposed: Isitt, Taylor

7.2. 22-372 Greater Victoria Water Supply Area Land Acquisition Reserve Fund Options

Attachments: Staff Report: GVWSA Land Acquisition Reserve Fund Options

Appendix A: June 16, 2021 GVWSA Land Acquisition Staff Report

A. Constabel spoke to item 7.2.

Commissioner Morrison left the meeting.

Discussion ensued regarding:
-Funds from future sales
-Opportunities to sell land
-Reserve fund for future
-Capital plan and funding
-Investments in land acquisition
-Control over catchment lands
-Ongoing work for land acquisitions

MOVED by Commissioner Harper and **SECONDED** by Commissioner Mersereau,
That the establishment of a reserve fund for Greater Victoria Water Supply Area Land Acquisition not be pursued at this time, and that any immediate land purchase opportunities be addressed through adjustments to the existing capital program and existing capital funding and/or debt financing be utilized to fund the acquisition.
CARRIED
Opposed: Rogers, Taylor, Loveday, Hicks, Alto, Isitt

MOVED by Commissioner Loveday and **SECONDED** by Commissioner Harper,
That the issue of Greater Victoria Water Supply Area land acquisition reserve fund options be brought back to the Commission in one years' time to be revisited.
CARRIED
Opposed: Zhelka

7.3. 22-397 Grant Application for Regional Water Supply Main No.4 - Mt. Newton to Highway 17 Section Replacement

Attachments: Staff Report: Grant Application for RWS Main No. 4

Appendix A: Location Map

I. Jesney spoke to item 7.3.

MOVED by Commissioner Rogers and **SECONDED** by Alternate Commissioner Alto,
The Regional Water Supply Commission recommends to the Capital Regional District Board: That staff be directed to prepare and submit an application for a Canada Community-Building Fund in British Columbia, Strategic Priorities Fund Capital Infrastructure Stream and Capacity Building Stream grant for the replacement of the Regional Water Supply Main No. 4 from Mt. Newton to Highway 17.
CARRIED

7.4. 22-375 Post Disaster Emergency Planning Program Status Report

Attachments: Staff Report: Post Disaster Water Supply Program Status Report

Appendix A: Post Disaster Water Supply Photos

T. Robbins spoke to item 7.4.

Discussion ensued regarding:
-Equipment acquired for use in the event of an emergency
-Protocols and procedures to leverage equipment in localized events

7.5. 22-377 Water Watch Report

Attachments: Water Watch Report

T. Robbins spoke to item 7.5.

8. MOTION WITH NOTICE

8.1. 22-303 Delegation of Mining Access Requests (April 20, 2022) - Commissioner Graham

Attachments: Delegation of Mining Access Requests (April 20, 2022)

Commissioner Graham withdrew his motion.

9. NEW BUSINESS

There was no new business.

10. MOTION TO CLOSE THE MEETING

10.1. 22-378 Motion to Close the Meeting

MOVED by Commissioner Harper and **SECONDED** by Commissioner Loveday,
That the meeting be closed for land acquisition in accordance with Section 90 (1)(e) of the Community Charter.
CARRIED

The Regional Water Supply Commission moved into closed session at 12:54 pm.

11. RISE AND REPORT

The Commission rose from its closed session at 12:58 pm without report.

12. ADJOURNMENT

MOVED by Alternate Commissioner Alto and **SECONDED** by Commissioner Loveday,
That the meeting be adjourned at 12:58 pm.
CARRIED

_____
CHAIR

_____
SECRETARY

Making a difference...together

RWSC 22-12

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, JULY 20, 2022

SUBJECT **Summary of Feedback - 2022 Regional Water Supply Master Plan**

ISSUE SUMMARY

To present a summary of the public and stakeholder engagement activities conducted to gather feedback on the 2022 Regional Water Supply Master Plan for the Regional Water Supply Commission's consideration in endorsing the Plan.

BACKGROUND

The Regional Water Supply Commission (Commission) received the 2022 Regional Water Supply Master Plan (Master Plan) at its May 18, 2022 meeting and directed staff to seek public feedback on the Master Plan through the Capital Regional District (CRD) website public engagement portal and report back to the Commission. The CRD Board received the Master Plan at its June 8, 2022 meeting.

Public Engagement Summary

The CRD's digital engagement site (GetInvolved.crd.bc.ca) was used to share details of the Master Plan and invite feedback between June 9 and July 6, 2022. Comments were collected using an online form and through the water@crd.bc.ca email.

During the feedback period, the site was visited 753 times resulting in three levels of participation:

1. Aware: 383 participants visited at least one page
2. Informed: 157 participants downloaded documents such as the Master Plan executive summary, and visited multiple pages
3. Engaged: 22 participants shared comments or asked questions

The feedback is provided verbatim in the attached Public Engagement Report (Appendix A).

There were some general themes that emerged from the feedback:

1. There is general support for the Master Plan including adding filtration to the water treatment process.
2. There is a need to consider future water demand necessary to support agriculture and local food security.
3. There are some concerns about the financial implications of the Master Plan and water rate structures.
4. There are some local interests and concerns:
    a. environmental and social benefits of Smith Hill Reservoir
    b. construction related environmental and social impacts
    c. need to consider extending water service area/infrastructure to areas that are currently not serviced as ground water sources become less reliable
5. There is a need to consider how the Master Plan impacts First Nations and their water supply needs.

Social media was also used to raise awareness of the Master Plan, promote the engagement site, and invite the public to provide their feedback. In total, Facebook posts reached 12,352 users with 328 engagement site link clicks and Twitter posts resulted in 837 impressions, with 32 engagement site link clicks.

First Nations Engagement
The CRD Board has stated its commitment to engage First Nations communities respectfully and appropriately in regional plans, strategies, decision making and shared interests. Staff engaged directly with First Nations, by sending individual letters to 16 Nations across southern Vancouver Island, whose traditional territories overlap the CRD (sample letter included as Appendix B).

Nations were invited to advise the CRD of their interests in relation to the Master Plan. CRD staff also provided an on-line overview and information session on the Master Plan for First Nations in June. Although the CRD has not received written responses from First Nations to date, given the timeframe for engagement and acknowledging the other engagement and referral demands on First Nations communities, the CRD does not consider the response reflective of the interests and concerns of the Nations. The CRD will be conducting more and specific engagement with First Nations on a project-by-project basis as each project proceeds through further study and design phases.

Water Advisory Committee Feedback
The Master Plan was presented to the Water Advisory Committee (Committee) on May 13, 2022, and staff responded to initial questions and comments regarding the Plan. The Committee then met without staff in June to discuss the Master Plan. The Committee provided a written submission (Appendix C) summarizing its comments and concerns. From the submission, the Committee states, *"Overall, the Plan is comprehensive and the data and analyses supporting the conclusions are well presented. The Committee supports the recommended approach and the Plan overall."*

The Committee did identify some concerns as follows:

Population growth projections – *"The Committee feels population growth in the region has been underrepresented and hence some items will need to come online sooner than later."* For the Master Plan planning horizon, a 1.25% annual population growth rate was used, resulting in a projected population in the service area of 569,000 by 2050. This population projection is in alignment with the Regional Growth Strategy (RGS) population projections. Although, the planning horizon for the RGS is 2038, at which time the population for the Region is estimated to be 478,500. Staff will continue to review actual population and future population growth rates every five years moving forward. If the population and water demand estimates vary from the Master Plan estimates, staff will re-evaluate the timing of projects required to meet the service area water demand and make recommendations to the Commission to adjust the capital plan accordingly.

First Nations engagement – *"The Plan was absent on any reference to engagement with First Nation communities and how this Plan will affect them."* This is addressed above. As the Commission is aware, a new approach to First Nations water servicing is in the early stages of implementation.

Degenerative water use vs. regenerative water use – *"The Committee recommends differentiating between 'degenerative water use vs. 'regenerative' water use; applying a one water approach where different departments (water, wastewater, stormwater) develop integrated policies and programs to better reuse water."* The primary purpose of the Master Plan was to determine the potable water supply needs for the Greater Victoria area to 2050. When there is more interest in using recycled water for non-potable purposes, (such as agriculture, and irrigation for landscape, parks and golf courses, or larger scale grey water re-use in the residential and commercial sectors), and there is a willingness to invest in the construction of non-potable water treatment, storage and distribution infrastructure, then staff can evaluate the potential reduction in 'potable' water demand for these types of uses. CRD staff continue to monitor guidelines and criteria for the beneficial use of recycled water established in other parts of North America and potential policy implications for the Region.

Filtration plant process water usage and treatment of process water – *"The Committee has concerns that process water usage in filtration is underestimated, as well, the wastewater from filtration was not addressed in the report."* This concern, along with other technical concerns form the majority of the comments are outlined in the Committee's detailed submission (Appendix D). Given the nature of the document, the Master Plan did not consider this level of design detail, which will result from further detailed study and design for each of the projects.

Agricultural water use – *"The Committee also recommends that agricultural water use in the Plan be highlighted given agricultural water usage occurs when water reserves are lowest and agricultural consumption may surpass population growth over time given the effects of climate change."* As noted in the Master Plan, agricultural water demand currently accounts for approximately 3% of the total annual water demand for the service. This has remained fairly constant for many years. Staff will continue to monitor actual and projected agricultural water demand and adjust the total annual water demand to reflect any demand shifts. The Agricultural Water Rate Study is currently underway, and depending on the outcomes of this study, agricultural water demand may change in the future due to rates and rate applicability.

Public engagement – *"The Committee feels that the in-person public engagement forums are useful and would also support additional public engagement tools such as video presentation."* As noted in the May staff report, the CRD is now using the CRD website's digital public engagement site as the primary engagement tool to share engagement materials and receive feedback on key initiatives. As noted above, the Master Plan engagement site received 753 visits. For comparison, when staff conducted the five in-person public open houses as part of the public engagement plan for the Regional Water Supply Strategic Plan in 2017, there were 45 attendees in total.

The Committee closed their submission by noting, *"In summary the Water Advisory Committee generally supports the 2022 Water Master Plan. After addressing the comments and concerns highlighted above, the Committee would recommend that the Regional Water Supply Commission support the Plan, and advise this of the CRD Board."*

Media

A media release highlighting the Master Plan purpose, timelines, planned projects and costs, and opportunity for public input, was issued on June 9, 2022. The Master Plan received local television, radio and print media coverage through the month of June. In most cases, the coverage included a reference to the public engagement site and opportunity for public input.

ALTERNATIVES

Alternative 1
That the Regional Water Supply Commission:

1. Approve the Regional Water Supply 2022 Master Plan; and,
2. Recommend that the Capital Regional District Board approve the Regional Water Supply 2022 Master Plan.

Alternative 2
That the 2022 Master Plan be referred back to staff for more information.

IMPLICATIONS

Intergovernmental Implications
The proposed projects in the 2022 Master Plan are located in traditional territories of local First Nations and some projects are likely located in areas of cultural significance to Nations. The CRD is committed to engaging with First Nations on the projects in the early phases of project development on a project-by-project basis.

The Regional Water Supply Service provides drinking water service to 13 municipalities and one Electoral Area across Greater Victoria, via the water distribution systems operated by the municipal and sub-regional service providers, who in turn provide drinking water to eight First Nations. All local and First Nations governments will be engaged as the plan is implemented over time. The plan will inform how municipal and sub-regional service providers plan for the future needs of their water distribution systems, particularly with respect to system capacity, infrastructure improvements and financial sustainability.

Financial Implications
The financial implications of implementing the Master Plan over the next 30 years were detailed in the May staff report to the Commission. Specific financial implications will be assessed by the Commission and CRD Board through the annual and five-year service planning and budget processes moving forward.

Future Plan Updates
As noted in the May report, the 2022 Master Plan recommendations and proposed infrastructure will continue to be reassessed, on a five-to-10-year cycle, to consider new information and latest trends in population growth and water demand, and evaluate risks to the service, including climate change and water quality. Current technology and construction costs will also be evaluated. As a result of this continuous and adaptive process, the 2022 Master Plan implementation will be adjusted moving forward, to reflect any changes in assumptions or conditions.

CONCLUSION

The Regional Water Supply Commission received the Regional Water Supply 2022 Master Plan in May and directed staff to seek public feedback on the Plan through the CRD website public engagement portal and report back to the Commission. The CRD Board received the Master Plan at its June meeting. The engagement period has now closed, and the public feedback has been provided for the Commission's consideration. The CRD provided information about the Master Plan to 16 First Nations and will be conducting more and specific engagement with First Nations

on a project-by-project basis as each project proceeds through further study and design phases. The Water Advisory Committee reviewed the Master Plan and has provided written feedback and indicated support for the recommended approach and Master Plan overall. Staff are now seeking the Commission's endorsement of the Master Plan.

RECOMMENDATION

That the Regional Water Supply Commission:

1. Approve the Regional Water Supply 2022 Master Plan; and,
2. Recommend that the Capital Regional District Board approve the Regional Water Supply 2022 Master Plan.

Submitted by:	Ted Robbins, BSc., CTech., General Manager, Integrated Water Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: 2022 Master Plan Public Engagement Report
Appendix B: Sample letter to First Nations Chief and Council
Appendix C: Water Advisory Committee: Response to the 2022 Water Master Plan
Appendix D: Water Advisory Committee: Additional Detailed Comments on the 2022 Water Master Plan

2022 RWS Master Plan

Public Engagement Report

This report provides a summary of public engagement activities conducted following the release of the 2022 Regional Water Supply Master Plan.

Integrated Water Services has developed the 2022 Regional Water Supply Master Plan that includes a proposed infrastructure program intended to improve the water supply and transmission system and add redundancy to critical components to address hazards and risks. The Plan recommends projects to be implemented over the next 30 years based on the projected population, the impacts of climate change, and water treatment needs resulting from changing raw water quality characteristics and regulatory requirements over time.

Residents were informed about the Master Plan and invited to provide feedback through various engagement methods.

Engagement Methods

"Get Involved" Website

The CRD's new digital engagement site **GetInvolved.crd.bc.ca** was used to share details of the Plan and invite feedback between June 9 and July 6. Comments were collected using an online form, and through the water@crd.bc.ca email. Regional Water Supply Master Plan information remains available online at: Regional Water Supply Master Plan | Get Involved CRD

During the feedback period, 753 visits resulted in three levels of participation:

- Aware (visited at least one page): 383 participants
- Informed (downloaded documents, visited multiple pages): 157 participants
- Engaged (shared comments or asked questions): 22 participants

The most popular documents viewed were the 2022 Regional Water Supply Master Plan Executive Summary (101 downloads), the Project Overview Map (43 downloads), and the 2022 Regional Water Supply Master Plan Presentation (35 downloads).

Media & Stakeholder Information

A media release was issued on June 9, 2022 (attached). The release highlighted the projects, why they are needed, the timeline, and the engagement platform.

2022 RWS Master Plan

Public Engagement Report

Agenda items from the May 18 Regional Water Supply Commission meeting included a Regional Water Supply 2022 Master Plan staff report recommending that 1) staff be directed to seek public feedback on the Plan to be reported back to the Commission as well as the Water Advisory Committee feedback, and that the Commission consider endorsing the Plan, and 2) that the 2022 Master Plan be forwarded to the CRD Board for information. The Board Vice-Chair also highlighted the Master Plan in the monthly CFAX update.

- CRD Board Highlights June 8, 2022
- CFAX Update June 8, 2022
- Regional Water Supply 2022 Master Plan Released (crd.bc.ca) June 9, 2022

Local media coverage:

- CTV June 21, 2022
- CBC June 21, 2022
- Sooke News June 22, 2022
- CFAX June 22, 2022

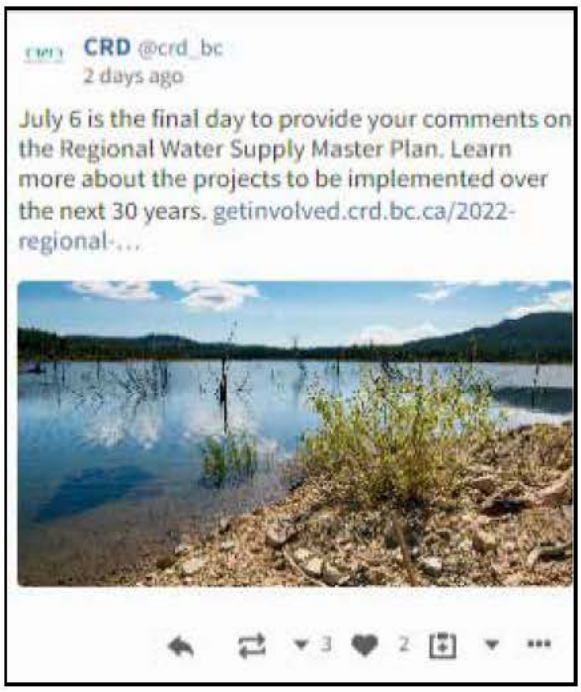
Social Media

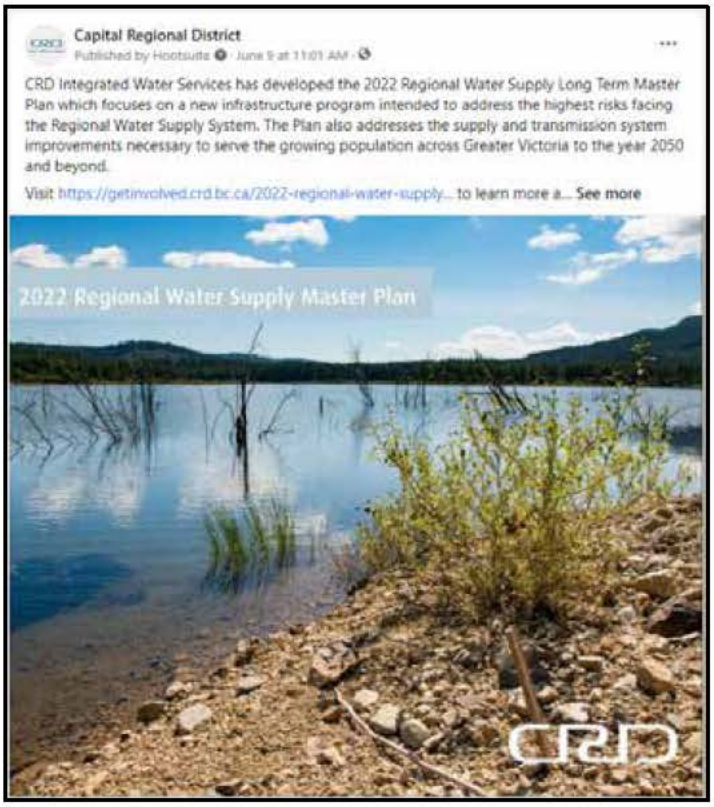
Staff scheduled social media posts to raise awareness of the Master Plan and to invite the public to provide their feedback via the engagement platform. In total, Facebook posts reached 12,352 users with 328 link clicks and Twitter posts resulted in 837 impressions (number of times a tweet was seen) with 32 link clicks.

2022 RWS Master Plan

Public Engagement Report

Making a difference...together





2022 RWS Master Plan

Public Engagement Report

Responses

Comments

The following comments were received by the CRD via an online comment form.

Municipality	Please provide your feedback on the CRD's provisional financial plan.
Colwood	How do you think the public is going to pay for that the well is running dry so to speak .....
Victoria	I think this is a great idea and I fully support it. The price is completely reasonable for securing something so important. We are lucky to have the water system we currently have, but we should not put off planning and building for our future needs.
Colwood	Water filtration should be the highest priority. If there is a wildfire, the water supply will be contaminated. Don't wait until there is an emergency to build the filtration plant.
Esquimalt	On behalf of our family and extended family, we wish to register our objection to any plan calling for the filtration of the water.
Saanich	I can't believe the water restrictions that have been on here for decades now with all the development still going on, Gvrd and Saanich are completely scorched, Broadmead was the first neighbourhood that should have showed that, I would like to sit in to any panel or discussion that could possibly help, when I was 12 here you could water your yard here, grass/shrubs and gardens and they were good for at least a week, the ground is stripped and paved over and where it isn't rain water flows over rocks and dries up, could go on about this forever but there are too many people, glad I will be dead when I am in 30 years, seen so many area's die already around here

2022 RWS Master Plan

Public Engagement Report

Langford	This work is needed to safeguard our supply for future generations. Manage our risk by making the changes sooner than later.
Sooke	Lots of good work plans to add redundancy to the current infrastructure. Good to build on the accomplishments of the strategic plan now that the Wastewater Treatment Plant finally completed. The right-of-way from the old flow line should be seriously considered for use to run the pipeline from the filtration plant at Japan Gulch (once completed) to Sooke. Currently, even with existing population levels, interuptions to traffic flow on Sooke Road are challenging and highly unpopular, as well as potentially hazardous to construction crews. Costs of installation and maintenance of this pipeline would be increased significantly if traffic management had to be considered as well. The pipeline from the filtration plant to Sooke should double as a bike path/walking trail. Currently, the Galloping Goose meanders too far from the highway to allow for use as a commuter path or even an effective recreational path. With population pressures and climate change anticipated to create significant demands and increased rate of change, we need to get the most out of infrastructure, especially linear corridors. Should be a three-tier system for water rates: agriculture (cheapest), suburban food production (cheap), and home use (regular rate). At current water rates, people are already discouraged from food production. Healthy communities/ecosystems of the future will need to utilize yards for food production and pollinator etc. habitat rather than concrete and burnt grass. Need to ensure that the filtration plant does not filter out the body-replenishment minerals from our fantastic water supply. Lower Cragg Main and MacDonald Main useful parcels if Leech to be fully utilized for storage as well as topping up Sooke Lake Reservoir?
Sooke	With the exponential growth of population in the Sooke/Otter Point area and the monopolization of bulk water delivery in the region during the summer months when wells run dry, piped water is essential to many growing families to access a more affordable and dependable water source. [redacted] commented that there is no discernible sprawl in this area. Growth is inevitable. Please consider adding a water main extension of infrastructure service in this region for our future. Thank you.

2022 RWS Master Plan

Public Engagement Report

Nanaimo	How does this impact First Nations and their water supply needs?
Victoria	Yes please build it! I want our water supply to have better filtration. Sometimes the tap water tastes like lake, which is gross!I hope it will be built soon.
Langford	This seems like a no brainer. Credit to the Crd for the foresight to propose this and be ahead of the game to protect our most valuable resource.
Saanich	Clearly the water supply must be improved and protected going forward. The proposed projects seem reasonable, although I have not delved into the details. I didn't see anything about seismic stability, but presumably that is a significant consideration? The cost part requires clarity. Are we to expect up to a 20% cost increase per year for over a decade? That would be problematic to say the least. The wording on that part is particularly muddy and unclear; it was probably written by politicians or communications experts...
Victoria	For the construction of various sites, I assume there are going to be many trees removed. Will the CRD be planting equivalent trees in nearby areas to replace the lost ones? Will an environmental assessment be carried out by a third party prior to construction?
Esquimalt	I found the plan to be a very intensive engineering report. However The Sooke reservoir area has some 8900 hectares of forests and the leech some 9600 hectares of forest; with climate change the fire risk for these forest has been increased and I see nothing in the master plan for any fire mitigation program. The watershed forest should be fire-smart managed. One big conflagration would be a major disaster. Check with UBC Forestry Faculty Professor [redacted] and associate professor [redacted] for the latest on the science in fire proofing and the Logan Lake Fire Smart-Program in their surrounding forests that helped save their community in 2021 for an example that worked.. Their are ,also forestry consultants who are up to speed in this area., [redacted] and [redacted] being two I would recommend for a fire risk assessment. Looking forward to seeing a fire-smart program in Watershed Forests soon, [redacted].

2022 RWS Master Plan

Public Engagement Report

Juan de Fuca	Hello- Thank you for asking for public input. I am not an engineer nor an expert but have been reading and observing water, watersheds and human impact on both - sometimes with terrible consequences. In California the Central Valley aquifer has been so drained for agricultural irrigation and piped away for city use that the land is sinking as much as twenty feet due to the collapse of the aquifer. The same situation has been happening since the early 1930s with the Ogallala Aquifer under several Midwest states. Water behind several US dams is so low the potable water availability and the hydropower are both being severely rationed. We need to learn from the poor choices elsewhere before we see major irreversible problems here. Rather than taking the rain water from where it belongs on the land where it falls, we need to rethink our water sourcing and think of roof rainwater harvesting and cisterns instead of expensively piping in water and expensively (and wastefully) thinking of rain water as "waste water" and sending it down pipes to be treated (expensively) in plants before being released (wasted) into the sea. Educate people here to think like people in Australia and in Bermuda where there is no water supply except rainwater saved and treated in tanks with lime to keep it potable. Educate people to value and judiciously use only as much water as they need and understand that, as Aristotle noted, it is not rational to value diamonds highly but take water for granted. People in the Juan de Fuca area who are not on "piped" city water are quite good at harvesting and being frugal with water due to being on wells, stream water licenses or having it trucked in. We are not a special breed and would be happy to share in educating people. We have the healthiest watersheds where the rain stays where it falls.
Juan de Fuca	Ongoing, Water will be one of our most precious resources on the South Island. Development and commercial use of watersheds will seriously reduce the ability of watersheds to receive and store rainfall. Even a small percent of development can lead a natural 1% runoff into a 25% runoff. An increase that will lead to local flooding, land and stream bank erosion, and incursion into sensitive riparian ecosystems. Massive development, like leveling mountains to build housing, and commercial parking lots and wider roads can lead to a 75% runoff from the changes to the natural watershed's ability to manage the natural distribution of water. Humans cannot recreate the watershed once it is destroyed. No amount of money poured into "wastewater" infrastructure will handle this water resource as effectively as Nature.

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Public Engagement Report

	Trying to provide potable water for everyone is a laudable endeavour. The problem is that such undertakings will cost millions and ultimately we may still run out of water as climate and populations put pressure on our system. Worse yet - people don't think about where or how the water comes to their home. They will only be angry when it stops coming out of the tap. It is possible in our geographic location to become self-sufficient in water on a personal domestic and local level. Rainwater harvesting is a well established technology and any freestanding house unit with a roof is capable of storing three to six thousand gallons of water a year. This is sufficient for a family to use for some or all their needs. It will greatly reduce the need for costly budgets to secure piped water resources, to maintain and build the drainage system and to charge increasingly higher water rates to consumers. So - Harmonise the building codes (at least on this one thing) and require all new detached buildings to have rainwater storage on site which can be used and released back to the land. If developers say "No, that will be too expensive to require a $10,000 system for every house" what their really are saying is that the future costs of supplying water and managing "wastewater" will have to paid by the municipalities and the CRD.
Metchosin	No mention of farming. That should be our top priority. Food security is a real issue. CRd is a perfect place to grow food. We need to plan for more agriculture and farm water supply in droughts Also, so many developments are going in with high water use homes. Any water used for frivolous or hedonistic purposes needs to be billed out for big money whereas water going for community gardens, obviously farming and environmental restoration needs to be billed with a recognition of its value as an investment to the region.
Central Saanich	I was pleased to see that you have included future water demands from agricultural users as well as residential and commercial users. Access to water will be a key part of future food security and supporting farmers, especially those in the Agricultural Land Reserve that have access to CRD water. As a residential user, I wholeheartedly support farmers continuing to access CRD water at a special agricultural water rate.
Metchosin	I am very concerned about three areas not incorporated in the report. 1- no growth strategy for local food security with any growth in agriculture. Climate change and

2022 RWS Master Plan

Public Engagement Report

	global unrest are making growing local food critical. 2- no mention of holding all new development in the CRD to a higher water conservation standard with bathrooms, grey water recycling, etc. as well as a CRD wide retrofit campaign to bring up to date older homes and residences. 3- some kind of billing penalty for business and activities that are wasting water like car washing, lawn watering, etc. How unacceptable is it to have Royal Bay install lawns in a gravel pit? We have to be doing better as local city planners on items like this and the CRD can lead the way.
Victoria	The Smith Hill Reservoir is an important asset to birders, joggers and walkers from the Quadra and Hillside neighbourhood. Any changes to the reservoir should protect and enhance the current usage of these users. The reservoir is also an important stopover point for hundreds of migrating water fowl. Rare species have been found in recent years attracting birders far and wide. The City of Victoria in the past had discussed options with the CRD for the potential conversion of the reservoir space to park. Conversion could double the size of the existing Summit Park, extending the endangered Garry Oak ecosystem and introducing ponds for migrating water fowl. Please involve the neigbourhood stakeholders and the City in the design and implementation of the The Smith Hill tank and pump station project. Thank you.

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Media Release

For Immediate Release
June 9, 2022

Regional Water Supply 2022 Master Plan Released

Victoria, BC- The Capital Regional District (CRD) Regional Water Supply Commission has released the 2022 Master Plan that includes a proposed infrastructure program to improve the water supply and transition system and add redundancy to critical components to address hazards and risks. The Plan recommends projects to be implemented over the next 30 years based on the projected population, the impacts of climate change, water treatment requirements resulting from changing raw water quality characteristics and regulatory requirements.

"The 2022 Master Plan builds on previous system infrastructure investments, which have been largely focused on securing supply, and takes a forward-looking approach to create a resilient water supply system that will serve Greater Victoria for the next 30 years," says Lillian Szpak, Chair of the Regional Water Supply Commission and City of Langford Councillor.

The plan advances the commitments, strategic priorities and actions adopted in the 2017 Regional Water Supply Strategic Plan, recommending 21 major projects to meet anticipated water supply and treatment needs based on projected population for the year 2050. The recommendations also consider climate change impacts on water supply and demand, anticipated changes in raw water characteristics and regulatory requirements. Modeling indicates that by 2045 additional water will need to be sourced from the deep northern basin of Sooke Lake Reservoir and the Leech River water supply catchment area. The recommended projects will require significant investment over a 30-year period, approximately $2 billion, to be paid for through water rates with the potential for grant funding.

The plan is available for public review and comment until July 6, 2022 at getinvolved.crd.bc.ca/2022-regional-water-supply-master-plan.

Feedback collected will be presented to the Regional Water Supply Commission and will be used to guide how the plan is implemented over time, with further engagement carried out as each project is designed and implemented.

About the Regional Water Supply System

The CRD Regional Water Supply System delivers safe and sustainable drinking water to more than 400,000 people living in Greater Victoria. This work includes protecting the source, disinfecting the water

and monitoring water quality, operating and maintaining transmission and distribution systems and investing in infrastructure renewal. The Regional Water Supply Service delivers water to customers situated in 13 local municipalities, 8 First Nations and the Juan de Fuca Electoral Area through a mix of sub-regional and local distribution systems.

Learn more: Greater Victoria Water Supply System: An Overview (Video)

Proud to be recognized as one of BC's Top Employers and Canada's Greenest Employers, the CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

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For media inquiries, please contact:
Ted Robbins, General Manager
Integrated Water Services
Tel: 250.360.3061
Cell: 250.217.9084

APPENDIX B

June 10, 2022

File: 0400-60
First Nations Governments

Chief and Council
First Nation
Address
Address

By Email:

Dear Chief and Council:

RE: Regional Water Supply Master Plan

I am writing to invite your input into the Capital Regional District's (CRD) 2022 Regional Water Supply Master Plan (Plan), regarding the Lake Cowichan First Nation's interests. I'd also like to begin a conversation on how the Lake Cowichan First Nation would like to be involved in water supply infrastructure implementation in the Greater Victoria area and the CRD water supply landsover the next 30 years.

The CRD is committed to maintaining safe, reliable and sustainable drinking water service delivery for all residents in the region. Given this, it is critical that we proactively address the highest risks facing the Regional Water Supply system, including lack of redundancy of critical components, climate change impacts, seismic vulnerabilities and changing water treatment needs, as well as a growing population.

To this end, the CRD's Regional Water Supply Commission contracted the development of a Regional Water Supply Master Plan, which was received by the Commission in May 2022. The Plan focuses on a new water supply infrastructure program that will address these risks. In total, 21 projects are being proposed for implementation over the next 30 years. For the purpose of the Plan, each of the proposed projects have been conceptualized, but will require more engagement, planning and design prior to construction. Some of the projects are located in the watershed lands, while others are located in municipalities across the CRD's water transmission system. The Plan builds on the commitments and strategic priorities outlined in the 2017 CRD Regional Water Supply Strategic Plan.

Attached is a backgrounder outlining the infrastructure projects, a map showing proposed locations, and the Regional Water Supply Master Plan Executive Summary.

Please let us know your interests in relation to the Plan. **We would appreciate a response by July 6th** as the CRD Regional Water Supply Commission will consider endorsing the Plan in July. If more time is needed, please let us know.

Prior to implementation of the water supply infrastructure projects, the CRD will reach out to the Lake Cowichan First Nation on a project by project basis over the next 30 years, as the projects become more defined (such as specific projects sites, scope of work, site impacts).

First Nation staff and representatives are invited to attend an online session where I will deliver **a summary of the CRD's Regional Water Supply Master Plan**. This online session for First Nations will be **Thursday June 16th, from 10-11:30 am**. Please email water@crd.bc.ca to register, by Tuesday June 14th. If you are unable to make this session, or would prefer a direct phone call instead, please don't hesitate to contact me for more information. I can be reached at trobbins@crd.bc.ca or 250-360-3061.

Sincerely,

Ted Robbins
General Manager, Integrated Water Services
Capital Regional District

Enclosures:
1. Backgrounder
2. Map
3. Stantec Master Plan Executive Summary

July 4th, 2022

To: Ted Robbins, General Manager of Integrated Water Services, CRD

From: Water Advisory Council

Re: Response to the 2022 CRD Water Master Plan

The Water Advisory Committee (the Committee) recognizes the privilege to review and comment on the 2022 Water Master Plan (the Plan), recognizing the last opportunity was 28 years earlier. Looking back on the 1994 plan it is clear the role these long-term plans play in the directions taken by the utility to support the strategic goals of the region, and continued supply of safe drinking water.

Overall, the Plan is comprehensive and the data and analyses supporting the conclusions are well presented. The Committee supports the recommended approach and the Plan overall. While extremely expensive, the Plan is reasonable due diligence to increase resiliency and redundancy in our regional water supply and is supported by the committee. As the Plan outlines, we recognize that more advanced science and better modelling tools at our disposal will provide us a more mature understanding of the various implications of climate change, population growth, seismic risks, and evolving health protection regulations and guidelines over the next 30 years.

The need for filtration in the future is inevitable and tying in the additional source waters of the Leech, collecting cooler water from a North Intake, and designing balancing storage on the treated distribution to avoid fluctuations in peak flow all work together. Following through on the 1994 recommendation for an east-west connector makes sense, though the Committee believes when that time comes that a close review of population growth of Sooke and the potential changes to the Regional Growth Strategy be considered. The resiliency that comes from the upgraded and redundant transmission lines from Goldstream, raw water, and treated water systems are also supported.

Regarding climate modeling predictions, the Committee recommends utilizing an adaptive management approach to the Plan, where additional climate data is evaluated on a regular basis to re-assess if the predicted conditions, including potential impacts on water demands and quality, hold true over the years and need to be adjusted. Further, if different watersheds need to be used concurrently to meet water demands, it is recommended that monitoring and modeling for this potential use be incorporated into an adaptive management plan. The Committee also supports the recommended watershed improvement measures and management practices that will help buffer and improve water quality over time.

There are a variety of concerns the Committee has identified with the Plan. Firstly, the Committee feels population growth in the region has been underrepresented and hence some items will need to come online sooner than later. Secondly, the Plan was absent on any reference to engagement with First Nation communities and how this Plan will affect them. Thirdly, the Committee recommends differentiating between 'de-generative' water use vs. 'regenerative' water use; applying a one water approach where different departments (Integrated Water Services, Wastewater, Stormwater) develop integrated policies and programs to better reuse water. With this significant investment in our regional water supply, we should consider how we want to invest that water back into our region.

Specifically, to the water treatment component of the Plan, the Committee has concerns that process water usage in filtration is underestimated, as well, the wastewater from filtration was not addressed in the report. The Committee also recommends that agricultural water use in the Plan be highlighted given agricultural water usage occurs when water reserves are lowest and agricultural consumption may surpass population growth over time given the effects of climate change.

Lastly, regarding the public engagement piece of the Plan, the Committee feels that the in-person public engagement forums are useful and would also support additional public engagement tools such as a video presentation. The committee also thinks it would be valuable for each distribution commission to have the opportunity to provide input. For further consideration, the Committee suggests including a water literacy component into the Plan, or supporting the Plan to help inform and encourage the public and all associated stakeholders to re-evaluate local water systems and water usage.

In summary the Water Advisory Committee generally supports the 2022 Water Master Plan. After addressing the comments and concerns highlighted above, the Committee would recommend that the Regional Water Supply Commission support the plan and advise this of the CRD board.

The WAC has prepared a second response document sent alongside this initial response highlighting various comments in further detail regarding the Water Master Plan.

June 30, 2022

To: Ted Robbins, General Manager of Integrated Water Services, CRD

From: Water Advisory Council

Re: Additional detailed comments on the 2022 CRD Water Master Plan

Wildlife

- What would be the impact on wildlife if any of the recommendations outlined in the Master Plan are implemented?

Water Use: Differentiating between 'de-generative' water use vs. 'regenerative' water use

- not all water use provides the same value to our region
- when it comes time to pay for this, we need to find creative ways of distributing the cost fairly between those who are using it for regenerative uses and those who are not
- some megaliters grow acres of crops for local consumption while others irrigate estate lawns for properties that sit dormant half the year
- it is important to maintain a significant subsidy rate for those engaged in agriculture & landscape restoration and find better ways to either tax poor water usage; or reward beneficial water use

Agriculture: Little Recognition of the Importance of Agricultural Water Use in the Master Plan

- there is a logical reason for this as it stands now; agriculture only represents 3% of annual demand (according to page 65)
- however, agricultural water usage occurs when water reserves are lowest (drought), so it should already be weighted more heavily weighted as a risk factor
- The plan states: "There is an assumption that water use segregation between residential, ICI and agricultural consumption will remain consistent with population growth." While this is logical for forecasting, it does not take into account any large-scale shocks to food/energy markets that might suddenly make agriculture in the CRD become several orders of magnitude more necessary and important

Treatment and Design (previously submitted to Ted by Wilf but included here for completeness)

- To me the most important upgrade that should be at the front of the line is to design and build a water treatment plant that can deal with the above issues and is also designed to quickly adapt in a modular fashion to new threats such as an outbreak of toxic blue green algae, forest fire ash and debris, changes to the aquatic environment and damage from invasive species such as the giant American bullfrog, large quantities of storm - flood debris, new nasties on the horizon such as rare but deadly parasitic brain eating amoeba which are now found as far north as Minnesota and Seattle (Balamuthia mandrillaris).

- Page 51 from the executive summary:

- I am in favor of the deep intake and Leech River future supply option. Also, yes to the floating pump station if gravity flow is deemed not a viable option.
- use gravity flow if possible.
- two treatment plants - at Sooke and Japan Gulch are my preference _ if possible and in the future allow backup treated water flow from each plant to the other, if an event occurs and the Sooke treatment plant is used for supplying the rest of the region the volume produced would be to supply emergency water volumes only. This would require an east west connector.
- filtration using T5 and T6. Plus have a plan in place to handle unexpected events like a bloom from blue green algae.

General Comments:

1) due to the sensitive environmental location for a new treatment plant the disposal of chemicals used in the treatment process needs to be carefully regulated and monitored to avoid discharge to fish bearing streams and the environment in general. All drainage sources from the plant need to be carefully engineered and be capable of containment in an emergency where they can be neutralized prior to discharge. Secure storage of chemicals on site with spill retention is required.

2) the plant will produce large quantities of backwash and rinse water that will need to be cleaned and disposed of. Part of the waste stream can be cleaned and recycled back to the plant inlet piping, but a large quantity of sludge will still be produced. The quantities shown in the plan seem very optimistic for a filter train that will most likely use DAF, multi media filters, carbon media filters, and membranes. Further engineering is required to confirm the percentage of waste water used and this could also result in larger gross water supply requirements than the plan shows. Also where will the waste line end up - piped to the Victoria sewage system?? I understand the new Victoria sewage plant is pretty close to capacity as it is. Don't see where it can be disposed of anywhere near the plant or reservoir.

3) use of centrifuges and/or filter presses can result in removal of as much as 80% of solids from backwash water. The solids are then compressed into filter cake bars that can be trucked to landfill. The volumes need to be established and a clear disposal plan presented to the landfill operator and sewage plants who will be receiving solid waste and liquid waste at their doorsteps. This issue can be included in the testing of selected filter systems for performance evaluation. Does the budget include provision for advanced disposal techniques?

4) the plan points out there is not much storage for flow balancing in Greater Victoria and additional reservoirs need to be built. More storage means large savings as the water treatment plant can be smaller and is not designed to handle peak flows which is a very inefficient and costly way to run a treatment plant. The CRD should work closely with munies to help them evaluate their storage needs for water usage as well as sufficient reserves for fire fighting and emergency use in case an earthquake knocks out the water supply. Proscrastination only means the price tag will soar. CRD water should not be subsidizing munies that have insufficient storage capacity and are relying on upsized water mains and filter systems. As the study shows there are some potentially enormous booster pumps required that will be very costly to purchase, maintain and operate. The system should be designed to be as efficient as possible and sized to complement a set of strategic storage facilities located in the CRD region. Some pain to taxpayers in areas that do not currently have sufficient storage will result.

5) I believe the water treatment system that includes membranes is the best choice even though it is the most expensive. Consideration should be given to include a treatment train but at a reduced rate for emergency supply levels should blue green algae emerge as a threat. This could include UV and hydrogen peroxide injection with specific NSF carbon filters rated for the application along with daily EPA limit testing for the microcipline limit of 0.3 ug/l and the cylindrospermopsis limit of 0.7 ug/l. Should blue green algae become established in the supply most water usage would have to stop without advanced treatment. This would have an immediate and very negative effect on hospitals and especially dialysis clinics. It might be time for hospitals to consider adding on site emergency water storage tanks that they could pull into service for hopefully short term emergencies.

Also pH and alkalinity needs to be boosted to prevent copper corrosion in piping systems as well as lead leeching. The allowable copper levels and lead levels could be lowered by Health Canada in the future which would be difficult for the system to meet. As well - water with low alkalinity, very low negative reading LSI (Langlier Saturation Index) low TDS (total dissolved solids) can cause issues with effective water treatment. It is possible to dose the water prior to the filtration plant. Contact time is required which would be the piping and head tank, in-line mixers would be helpful also.

6) Water draw from the deep north part of Sooke Lake should be pursued. I recommend a floating pump station with 2 or 3 floating HDPE supply pipes to the south end. Modular pump packages will be easier to pull for maintenance. Floating pipes would save big money over a tunnel or piping thru rock. Some innovative engineering is required to make this work. There is a good example serving Seattle.

7) Question- is it possible to use a siphon(s) system to draw water from the north end of the lake with large diameter floating HDPE piping and only a small pump station would then be required to fill and activate the siphons? Could save a large amount of money on construction and operation. also electrical costs will be greatly reduced. A new head tank may be required.

8) Look for opportunities for placement of power generating turbines to generate power from the system. Involve a third party to own the power generation system(s) install and maintain the equipment and pay CRD a fee for use of the water. It may take some time to make this feasible depending on future power rates. However adding tees and connections for future power generation at suitable locations will be inexpensive and would save money in the future.

9) The overall water plan should include some provisions for providing access to the public to obtain water in case of an earthquake knocking out the water supply long term. Educate the public on solutions - for example every hot water tank that is strapped to the wall could survive and hold 40 to 60 gallons of safe drinking water, all they need is a short washing machine hose to connect to the drain!!!! Let the public know where they can pick up water in containers. Set up an emergency supply protocol with hospitals. There are locations in Victoria which have private wells drilled for example in Fernwood, Vic West, Oak Bay, adjacent to Beacon Hill Park that can supply high quantities of well water. Perhaps an arrangement with the owners would be a good idea - they would need standby power to operate and should have some basic filtration installed.

10) more on emergency supply - encourage large condo and apartment buildings to install water storage tanks in their parkades sufficient for 2 weeks or more of emergency usage in case of earthquake induced water system shutdown.

11) ban using once thru water cooled condensers for refrigeration and air conditioning applications.

Many of the facilities like pubs who use water cooled condensers for their big walk in coolers could reclaim heat extracted by a closed loop cooling system and use it to provide free heat for their kitchen make up air units, space heating and high domestic hot water production.

12) the shaft horsepower shown for pumps for the new overland route, (13,302) - Goldstream connection (41,366) - overland highway (41,366) are extremely high requirements. What is the estimated cost for a sub station, wiring to the pumps, electrical costs, pump costs, etc. are pumps that large even feasible? Gravity flow should be used wherever possible. Huge locomotive sized generators for standby power will be required.

13) more work needs to be done with munies to verify how much actual water storage is required in areas of Greater Victoria to allow efficient and optimal sizing for supply mains and treatment plants, to satisfy fire loads and the Fire Underwriters of Canada, we need multiple emergency storage facilities in case of earthquakes. Not all reservoirs will survive a big shake.

14) detailed discussions with BC Hydro should be initiated now to determine the cost and technical requirements of supplying 3 phase power to the very large water booster pumps specified in the report. Also note that the pump motors will most likely be high voltage 1000 to 2000 volts to keep wire sizing to a reasonable level and require so special reduced voltage starter systems. High voltage pump starters and components require special maintenance and can be very hazardous to work on. Work safe BC (WCB) and Technical Safety BC should be consulted early on to determine their requirements so the regulatory requirements can be allowed for in the initial design.

15) a 5% contingency allowance per 8.1.3 is definitely too low, I think based on the complexity and size of this plan it could easily end up at 20% or more.

16) move up pilot plant studies on effectiveness of filter trains and membranes for application on Sooke Lake and Leech River supply water. Also carefully evaluate how suspended solids, silt, algae, organics, tannins, are collected over a year for a measured ratio of treated water. Also verification of backwash levels required to clear filters in the test stage are required as the stated 5% is very optimistic.

17) see 5.4.1 large water mains can quickly become a home for invertebrates, biofilm, algae, etc. they can also become a reservoir for bacteria that attacks piping systems and causes pinholes. Tiny Invertebrates carry up to 4000 bacteria each which can be pathogenic to humans see paper by E. Wolmarans on pubmed.com. As well the masking of bacteria tests, odor and taste problems, production of regulated by products can be increased. An aggressive program of removing interior pipe coating and buildup is required - plan for cleaning the mains with pipe pigs, increased flushing and disinfection. The current municipal system in greater Victoria has a very heavy dirt buildup in piping especially on older lines. As well in buildings entry valves, PRV stations, control valves and backflow devices can be almost totally blocked by layers of debris buildup. Building operators need to be educated on cleaning their equipment to assure high water quality.

18) see 5.4.2 I believe the CRD has under estimated the amount of corrosion caused by The water supply. The water shows a negative Langlier Index, has very low TDS and alkalinity. By definition it is very corrosive. It is said that water is the greatest solvent in the world. With the change in plumbing code in 1992, pipe sizes were upsized substantially so where a small 42 unit condo previously was served by a 2 inch main with new code that changed to 4 inch and all the branch lines were also upsized. At the same time As the code water pipe sizing was increased flow rates were decreasing due to more efficient

fixtures and regulations reduced water closet flush volumes. Plumbing code does not consider diversity - and actual flow rates in residential buildings are far lower than that calculated for design. Many condo buildings in Victoria show blue green staining on shower walls and fixtures from copper deposition. A report on waste sitting on the ocean floor in 2016 from years of raw sewage dumping noted that the there were elevated levels of copper shown in chemical analysis of the waste material. I'm pretty sure that copper was dissolved from copper piping in local buildings. Condo Buildings are choosing to install expensive chemical injection systems to treat incoming water from the CRD supply to stop corrosion. Water treatment at source to raise alkalinity and pH should be enacted to correct this issue.

19) 5.5.2 power supply ~ as the natural gas main for Vancouver Island runs south of Shawnigan Lake under the right of way it will be easy to connect gas service to provide fuel for the standby generation plants that are required at pump stations and the treatment plant. Diesel fuel should not be considered as it is higher in cost and potential spills could be a big problem.

20) building a diesel fuel tank farm at the site of the treatment plant is not a great idea. With a damaging earthquake the diesel fuel spill could result in major environmental damage as the tanks rupture and raw fuel runs down the mountain. The island natural gas main is located very close to the site in the corridor between Shawnigan Lake and Sooke Lake. The standby generators should be gas fired instead. Also maintenance and operating costs will be far less. No tank farm required. Natural gas also runs cleaner. Tank farms need to be filled on a regular basis which means fuel trucks running up and down in a very delicate environment. Bound to be one roll over and have a potential nasty spill. Remember the one that flipped in Goldstream Park a few years ago plus there was another rolled right by the Salmon River by Sayward up island. Both were major incidents that could have easily polluted vast areas of pristine rivers and oceanfront.

21) with the unparalleled rise in material costs, inflation, material shortages, Surety Companies will be raising rates on bid bonds, performance bonds, and labour - material bonds from the current low rates that we have been used to for many years. I can see these rates easily doubling. Contractor insurance rates will also rise substantially over the next few years saddling larger projects with additional costs.

22) how accurate are the cost estimates in appendix B, how detailed was the information and design data that allowed the Stantec engineers to come up with the numbers and how confident are they that the construction budgets proposed are based on hard data. Did they estimate the numbers on actual quotes from suppliers. Did Stantec review the scope of the project and projected costs with any of the large experienced contractors who would be potential bidders for their opinion?? Any comment either way on this item from CRD engineering? Might be a tough call for CRD to confirm an accurate cost review as this project is far larger and more complex than anything they have done in the past.

23) borrowing costs are going up, up, up so the financing of the tiered water project will cost much more and this will come as a direct hit to the water customers in the Greater Victoria area and beyond. Hopefully Federal and Provincial funds can be secured to cover some of the costs.

24) as soon as CRD starts providing filtered treated water the value of the water rises significantly and its sell price will become much higher. Municipalities need to recognize due to lack of investment in upgrading old infrastructure, high leakage rates mean money down the drain. Old piping mostly blocked by accumulated dirt and buildup means the clean filtered water will, still come out of the tap with color as the water picks up dirt in the piping and appurtenances.

25) performance bonds and labour- material bonds both of which CRD requires from their contractors to protect them from defaults are good for one year, and as a lot of this work will take 2 or 3 years to complete (maybe longer) the budget allowance shown for bonds is only 50% or 33% of what the actual cost will be. Plus, there is also a strong possibility the net cost for bonding to contractors is going to rise as I mentioned in the previous submittal.

Insurance for contractors is also sold by the year, and contractors are required to provide and hold significant and costly liability insurance which names the CRD as a beneficiary on claims for the whole length of the project from day one thru the whole term of contract, plus the one year warranty period that starts after satisfactory job completion completion. These costs are significant on large complex projects.

26) The consultants should show an operating budget yearly for the booster pumps showing anticipated amperage draw converted to KWH and costed out. I imagine the BC Hydro rate will be based on a demand meter system which means the price of electricity is based on the highest draw in the billing period which then sets the rate to be charged. This will be quite costly and we know BC Hydro rates will continue to climb up.

Making a difference...together

RWSC 22-10

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, JULY 20, 2022

SUBJECT **Bylaw No. 4509, "Capital Regional District Greater Victoria Water Supply Area Protection Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022"**

ISSUE SUMMARY

To amend Capital Regional District (CRD) Bylaw 2804, "Capital Regional District Greater Victoria Water Supply Area Protection Bylaw No. 1, 2000", to include a $500 administration fee for recreational access requests in the Leech Water Supply Area (WSA); and to update the Bylaw's Schedule A map to add the new Grant Lake land parcel and remove the Integrated Water Services (IWS) gravel pit land parcel.

BACKGROUND

At its meeting of June 15, 2022, the Regional Water Supply Commission (Commission) resolved: "That staff initiate a $500 administration fee for access to the Leech watershed" in response to a staff report on options for Greater Victoria Water Supply Area (GVWSA) recreational permit issuance and cost recovery.

Given direction to amend the Bylaw, staff propose to also update the Bylaw's Schedule A map to bring the 2022 purchased land parcel near Grant Lake under the authority of the Bylaw and to remove the IWS gravel pit land parcel which is currently this disposition process. The Grant Lake parcel falls within the Cowichan Valley Regional District, thus the CRD Bylaw will not have authority until the regional district boundaries are changed; however it avoids another amendment to the bylaw for this purpose at a later date.

ALTERNATIVES

Alternative 1
The Regional Water Supply Commission recommends to the Capital Regional District Board:

1. That Bylaw No. 4509, "Capital Regional District Greater Victoria Water Supply Area Protection Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022", be introduced and read a first, second, and a third time.

2. That Bylaw No. 4509 be adopted.

Alternative 2
That the report be referred back to staff for additional information.

IMPLICATIONS

Governance
The current bylaw has been updated only once previously in 2016 to bring the Leech WSA under bylaw protection and to accommodate agreements with First Nations and special uses in the Leech WSA. At that time, the bylaw was updated in many sections, the Schedule A map updated,

and fines increased in CRD Ticket Authorization Bylaw No. 1857.

The addition of an administrative fee for special recreational use under the GVWSA Protection Bylaw and an update of the Schedule A map to add and remove lands are considered minor changes to the Bylaw.

The GVWSA Protection Bylaw does not currently have a schedule of fees, and it is appropriate to include the new administrative fee within the bylaw itself, which already includes a $500 refundable security deposit fee. The $500 administrative fee itself is higher than typically charged for user services within the CRD. However, it is not the mandate of the Regional Water Supply Service or the mandated use of the WSA lands to provide for recreational opportunities, which supports the higher fee more in line with cost recovery for staff effort.

First Nations Implications
The bylaw amendment does not affect any access and uses of the lands by First Nations. The definition of "recreational purpose" inserted into Bylaw No. 2804 does not include traditional or cultural uses.

CONCLUSION

Bylaw No. 4509 amends "Greater Victoria Water Supply Area Regulation Bylaw No. 1, 2000" to add a $500 administrative fee for recreational access in the Leech Water Supply Area and updates the Bylaw's Schedule A map to reflect lands the Bylaw applies to.

RECOMMENDATION

The Regional Water Supply Commission recommends to the Capital Regional District Board:

1. That Bylaw No. 4509, "Capital Regional District Greater Victoria Water Supply Area Protection Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022", be introduced and read a first, second, and a third time.

2. That Bylaw No. 4509 be adopted.

Submitted by:	Annette Constabel, MSc., RPF., Senior Manager, Watershed Protection
Concurrence:	Steven N. Carey, BSc., JD, Senior Manager, Legal Services & Risk Management
Concurrence:	Ted Robbins, BSc., CTech., General Manager, Integrated Water Services
Concurrence:	Kristen Morley, JD, General Manager, Corporate Services & Corporate Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Bylaw 4509, "Greater Victoria Water Supply Area Regulations Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022" (Including Schedule A, GVWSA Map)
Appendix B: Bylaw 2804, "Greater Victoria Water Supply Area Regulations Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022" unofficial redline showing changes.

APPENDIX A

CAPITAL REGIONAL DISTRICT
BYLAW NO. 4509

****

A BYLAW TO AMEND BYLAW 2804, "CAPITAL REGIONAL DISTRICT WATER SUPPLY AREA REGULATIONS BYLAW NO. 1, 2000"

****

WHEREAS:

A. Under Bylaw No. 2804, "Capital Regional District Water Supply Area Regulations Bylaw No. 1, 2000", the Regional Board set out regulations and fees applicable to the regional service's water supply area, including prohibiting general public access;

B. The Board wishes to amend Bylaw No. 2804 to institute a fee and process for recreational access requests;

NOW THEREFORE the Board of the Capital Regional District, in open meeting assembled, enacts as follows:

1. Bylaw No. 2804, "Capital Regional District Water Supply Area Regulations Bylaw No. 1, 2000" is amended as follows:

   a. By adding the following new definition in section 1 in correct alphabetical sequence:

      "recreational purpose" means access for the primary purpose of recreation (leisure and sport) by an organized club or association, not including traditional or cultural use access;"

   b. By amending the definition of "water supply area" in section 1 by replacing the words "Canada Trail" with "Great Trail";

   c. In Section 40:

      i. By adding subsection number "(1)" to the text in Section 40;

      ii. By adding subsection number "(2)" after subsection number "(1)" and inserting the following as Section 40(2):

         "(2) In determining approval of access and special use in 40 (1), the RWSC will consider whether the access and special use poses acceptable risk to water quality, water supply infrastructure, watershed management, and secondary natural land values (e.g. biodiversity, wildlife habitat)"

   d. After section 47 and before section 48, by inserting the heading "FEES".

   e. In Section 48:

      i. By adding subsection "(1)" to the text in Section 48.

      ii. By adding subsection number "(2)" after subsection number "(1)" and inserting the following:

         "(2) Where an applicant applies for a permit for access to the Leech Water Supply area for recreational purpose, the applicant must pay a non-refundable administration fee of $500.00."

f. By deleting the “Schedule A” map in its entirety and replacing it with the “Schedule A” map attached hereto and forming part of this bylaw.

2. This bylaw may be cited as "Capital Regional District Water Supply Area Regulations Bylaw No. 1, 2000, Amendment Bylaw No. 2, 2022”.

READ A FIRST TIME THIS	th	day of	20__
READ A SECOND TIME THIS	th	day of	20__
READ A THIRD TIME THIS	th	day of	20__
ADOPTED THIS	th	day of	20__
ADOPTED THIS	th	day of	20__

CHAIR

CORPORATE OFFICER

APPENDIX A

Making a difference...together

Greater Victoria Water Supply Area

CRD BYLAW 2804

Schedule "A"

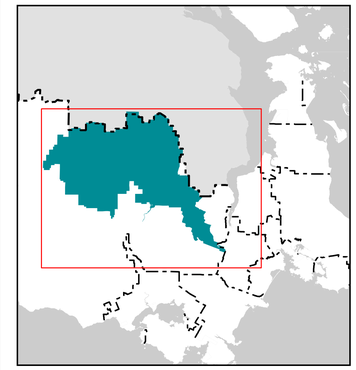
SCALE 1: 35 000

0 0.5 1 2 3 Kilometres

DISCLAIMER

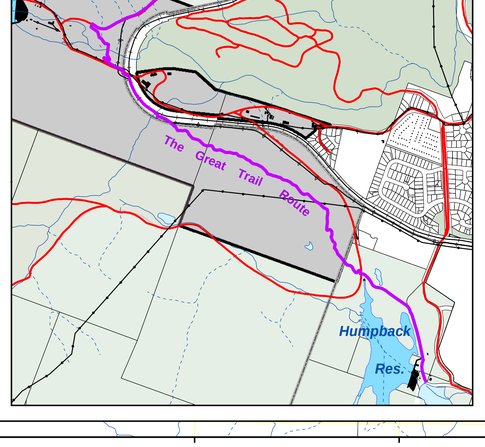
Important This map is for general information purposes only. The Capital Regional District (CRD) makes no representations or warranties regarding the accuracy or completeness of this map or the suitability of the map for any purpose. **This map is not for navigation.** The CRD **will not be liable** for any damage, loss or injury resulting from the use of the map or information on the map and the map may be changed by the CRD at any time.

gis@crd.bc.ca | ScheduleAUpdateGVWSA.mxd



- Water Supply Area
- Leech Water Supply Area
- River/ Stream
- Natural Gas Pipeline
- Electric Transmission Line
- Regional District Boundary
- Municipal Boundary
- Grid (Latitude/ Longitude)
- Road
- Railway
- Provincial Park
- Regional Park
- Cadastral Fabric
- Lake/ Reservoir
- Ocean

Inset 1 Trans-Canada Trail Route Through GVWSA (1:14 000)



APPROXIMATE MEAN DECLINATION FOR THE CRD WATER SUPPLY AREA IN 2022

Rounded to the closest half degree

True North

Grid North 0° 30'

16°00'

Magnetic North

123°54'0"W 123°52'0"W 123°50'0"W 123°48'0"W 123°46'0"W 123°44'0"W 123°42'0"W 123°40'0"W 123°38'0"W 123°36'0"W 123°34'0"W 123°32'0"W 123°30'0"W

48°36'0"N 48°34'0"N 48°32'0"N 48°30'0"N 48°28'0"N

CAPITAL REGIONAL DISTRICT BYLAW NO. 2804

Unofficial Consolidation (Bylaws 4050, 4509)

****

GREATER VICTORIA WATER SUPPLY AREA PROTECTION BYLAW

****

WHEREAS the Capital Regional District has established a water supply service and has the authority to regulate in relation to the service;

[BL 4050]

NOW THEREFORE, the Capital Regional District Board in open meeting assembled, enacts as follows:

1. DEFINITIONS IN THIS BYLAW

“aircraft” means any vehicle capable of deriving support in the atmosphere from reactions of the air, and includes helicopters, gliders, ultralights, rockets and unmanned aerial vehicles;

[BL 4050]

“alien species” means a species designated as a controlled alien species pursuant to the Controlled Alien Species Regulation;

[BL 4050]

“animal” means an organism other than a human;

“authorized designate” means an employee or an officer of the CRD provided with the written authority to act on another person’s behalf;

[BL 4050]

"authorized personnel" includes, peace officer, conservation officer, or person appointed or employed by the CRD as a park officer, animal control officer, bylaw enforcement officer, watershed security officer, or other authorized CRD employee;

"Board" means the Board of Directors of the Capital Regional District;

"business" means carrying on a commercial or industrial undertaking of any kind or nature or the providing of professional, personal or other services for the purpose of gain or profit;

"CRD" means the Capital Regional District;

"cycle" means a device having any number of wheels that is propelled by human power and on which a person may ride;

"emergency personnel" includes any person, group or organization responding to emergency situations in the water supply area;

[BL 4050]

“General Manager” means the General Manager of the CRD Integrated Water Services Department appointed by the Board and also any person lawfully acting in that capacity;

[BL 4050]

“Leech Water Supply Area” means the area identified as the Leech Water Supply Area on the map attached as Schedule “A” to this Bylaw;

[BL 4050]

"liquor" has the same meaning as in the Liquor Control and Licensing Act;

"motor vehicle" means a vehicle, not run on rails, that is designed to be self-propelled;

"natural feature" means any native or non-native tree, shrub, flower, grass or plant of any kind; soil, sand, gravel, rock, mineral, wood, fallen timber or other living or dead natural material;

“hunt” means to trap, chase, pursue, worry, follow after or on the trail of, search for, shoot at, stalk, lie in wait for, or to attempt, in any manner, to capture, kill or injure any wildlife whether or not the wildlife is captured, killed or injured;

[BL 4050]

“permit” means a water supply area access and use permit issued under this bylaw;

“recreational purpose” means access for the primary purpose of recreation (leisure and sport) by an organized club or association, not including traditional or cultural use access.

[BL 4509]

“Regional Water Supply Commission” means the standing committee appointed by the Board for regional water supply service purposes;

“special use” means an activity not included in the operations of the CRD, that is carried on in the water supply area by persons who are not employees or contractors of the CRD;

[BL 4050]

“traffic control device” means a sign, signal, line, meter, marking, space, barrier or device, not inconsistent with the Motor Vehicle Act, placed or erected by authority of the Board or the General Manager or a person authorized by either of them to exercise that authority;

“vehicle” means a device in, on or by which a person or thing is or may be transported or drawn on a highway, except a device designed to be moved by human power or used exclusively on stationary rails or tracks;

"vessel" means any ship or boat or any other description of vessel propelled by machinery, except a seaplane, used or designed to be used in navigation;

"water supply area" means any water catchment and non-catchment lands, including the water bodies within the boundaries, owned and managed by the Capital Regional District, as shown on the maps attached as Schedule "A", but does not include the area marked "Great Trail" shown on Schedule "A";

[BL 4050, 4509]

"watercraft" means any vessel that is not being propelled by machinery;

"weed species" means a species designated as a noxious weed pursuant to the Weed Control Regulation;

[BL 4050]

"wildlife" means any native or non-native mammal, bird, insect, reptile, fish or other indigenous creature.

ENFORCEMENT POWERS

2. All authorized personnel may enforce this bylaw in the course of their duties.

3. Any authorized personnel may order a person who does anything contrary to this bylaw to leave water supply area immediately, or within a period of time specified by the authorized personnel, and every person so ordered shall comply with the order and leave the water supply area immediately or within the specified time period.

4. The prohibitions in this bylaw do not apply to authorized personnel or agents of the CRD acting in the course of their authorized duties or employment.

[BL 4050]

FINES

5. A person who contravenes this bylaw commits an offence and is liable on conviction to a fine of not less than $100.00 and not more than the maximum prescribed by the *Offence Act*.

6. If a contravention of this bylaw is committed or continued on more than one day, it constitutes a separate offence for each day on which it is committed or continued.

7. A person who commits an offence under this bylaw and was previously convicted of the same offence is deemed to have committed a subsequent offence for purposes of establishing the appropriate fine.

8. The penalty imposed under section 5 shall be in addition to and not in substitution for any other penalty or remedy imposed by this bylaw or any other statute, law or regulation.

[BL 4050]

NO ENTRY

9. No person, except emergency or authorized personnel or persons with the authority of the General Manager, shall enter the water supply area.

PUBLIC CONDUCT

10. No person shall obstruct or interfere with any person or traffic lawfully using the water supply area.

11. No person shall behave in a disorderly, dangerous or abusive manner in the water supply area.

LIQUOR

12. No person shall consume or possess liquor in the water supply area except in compliance with a license issued under the *Liquor Control and Licensing Act* and authorized by permit.

[BL 4050]

SIGNS

13. The General Manager may cause to be erected signs or other devices specifying one or more areas in the water supply area where specific activities are permitted, prohibited or restricted under the authority of this bylaw.

14. Every person in the water supply area must observe and obey every prohibition and restriction announced by a sign or other device erected under section 13.

[BL 4050]

DAMAGE

15. No person shall remove, destroy or damage any natural feature, either organic or inorganic, or other CRD property of any kind, in the water supply area except as authorized by permit or with written permission of the General Manager.

16. No person shall in any way foul or pollute any land, body of water, wetland, or watercourse in the water supply area.

17. No person shall remove, destroy or damage any signs, notices, rules or regulations posted in the water supply area by and under the authority of the Regional Water Supply Commission or the General Manager.

18. No person shall molest, disturb, frighten, injure, kill, catch, trap or snare any animal in the water supply area except as permitted by provincial or federal authorities and with written permission of

the General Manager, or in the Leech Water Supply Area where authorized by the terms of a written agreement between a First Nation and the CRD.

19. No person shall deposit any garbage, refuse, or other waste material upon the water supply area.

20. No person shall introduce or cause to be introduced to the water supply area any alien species or weed species.

21. No person shall introduce any living or non-living organic material into the water supply area except as authorized by permit or with the written permission of the General Manager.

[BL 4050]

FIRE

22. No person shall light or keep lit any fire in the water supply area except authorized personnel, other persons authorized by permit or with the written permission of the General Manager, or persons authorized by the terms of a written agreement between a First Nation and the CRD.

23. No person shall throw or place upon the ground in the water supply area any lighted match, cigar, cigarette or other burning substance.

[BL 4050]

TREES

24. No person shall cut, deface, damage or cut down any tree or carry out any logging operation or facilitate such operation in the water supply area except as authorized by permit or written permission of the General Manager, or in the Leech Water Supply Area where authorized by the terms of a written agreement between a First Nation and the CRD.

[BL 4050]

CYCLES

25. No person shall bring or ride any cycle in the water supply area except authorized personnel.

[BL 4050]

CAMPING

26. No person shall camp or sleep overnight in the water supply area with or without a shelter of any kind, including, but not restricted to, a motor vehicle, recreational vehicle, tent, lean to, or other natural shelter, except as authorized by permit, with the written permission of the General Manager, or in the Leech Water Supply Area where authorized by the terms of a written agreement between a First Nation and the CRD.

[BL 4050]

STORAGE

27. No person, including an owner of property adjacent to the water supply area, shall use the water supply area for storage of any kind, except as authorized by permit or with the written permission of the General Manager.

[BL 4050]

ANIMALS IN THE WATER SUPPLY AREA

28. No person shall bring in, allow animals in their custody to enter or have custody of animals in the water supply area except emergency personnel or authorized personnel acting in the course of their duties.

[BL 4050]

FIREARMS AND HUNTING

29. No person shall hunt, carry or discharge any firearm, bow or crossbow in the water supply area except authorized personnel acting in the course of their duties, or in the Leech Water Supply Area where authorized by the terms of a written agreement between a First Nation and the CRD.

[BL 4050]

VESSELS, WATERCRAFT AND AIRCRAFT

30. No person shall land an aircraft within the water supply area except emergency or authorized personnel, as authorized by permit or with written permission of the General Manager.

31. No person shall operate a vessel or watercraft on or within the water supply area except emergency or authorized personnel, by written permission of the General Manager, or in the Leech Water Supply Area where authorized by the terms of a written agreement between a First Nation and the CRD.

[BL 4050]

FISHING

32. No person shall fish or take fish or attempt to take fish by any method in the water supply area, except by written permission of the General Manager, or in the Leech Water Supply Area where authorized by the terms of a written agreement between a First Nation and the CRD.

[BL 4050]

VEHICLES

33. (1) No person shall drive or propel any type of motor vehicle in the water supply area except on roadways intended and maintained for the passage of vehicles or parking lots.

(2) Emergency personnel, authorized personnel, and persons with the authority of the General Manager are exempt from this section.

(3) Vehicles parked in areas signed as “No Parking” or “No Parking Area Tow Away Zone” may be towed away immediately at the owner’s expense by order of authorized personnel. Vehicles left unattended for more than 48 hours may be towed away at the owner’s expense by order of authorized personnel.

[BL 4050]

34. (1) The General Manager may limit the maximum driving speed on any road within the water supply area by posting speed limits.

(2) No person shall operate a vehicle in the water supply area in excess of the posted speed limit.

35. (1) The General Manager or authorized personnel acting on his behalf may cause signs or other traffic control devices to be placed in the water supply area for the purposes of sections 13, 34, 43 and 44.

(2) No person shall operate a vehicle in the water supply area contrary to posted signs or traffic control devices.

COMMERCIAL SERVICES, ACTIVITIES OR DEMONSTRATIONS

36. No person shall post, paint, or distribute any advertisement, sign, placard or handbill of any kind in the water supply area.

37. No person shall operate or station in the water supply area any vehicle displaying advertising or equipped with a public address system for the purpose of advertising, demonstration or attracting attention except as authorized by permit or with the written permission of the General Manager.

[BL 4050]

CONSTRUCTION

38. No person shall build, or place any temporary structure or facilities in the water supply area except where authorized by permit or with the written permission of the General Manager.

39. No person shall build, or place any permanent structure or facilities in the water supply area except where authorized by permit.

WATER SUPPLY AREA ACCESS PERMITS

40. (1) No person shall conduct or carry on any special use or enter into or remain within the water supply area except where authorized by permit or written permission of the General Manager in accordance with this Bylaw, who will seek approval for access and special use from the Regional Water Supply Commission.

(2) In determining approval of access and special use in 40 (1), the RWSC will consider whether the access and special use poses acceptable risk to water quality, water supply infrastructure, watershed management, and secondary natural land values (e.g. biodiversity, wildlife habitat)

[BL 4509]

41. Persons who have the right under an enactment to enter into or remain within the water supply area are not excepted from the requirement in section 40 to obtain a permit.

42. Persons who have the right under an existing written agreement to carry on any special use or enter into or remain within the water supply area are excepted from the requirement in section 40 to obtain a permit unless the terms of the written agreement require the person to obtain a permit from the General Manager pursuant to this Bylaw.

43. The General Manager may close a road or roads, or a portion or all of the water supply area for reasons of safety, weather, operational concerns, road conditions and fire danger conditions by posting notices at water supply area entrances.

44. The General Manager may restrict specific activities of permit holders for reasons of safety, weather, operational concerns, road conditions and fire danger conditions by posting notices at water supply area entrances.

45. The General Manager or authorized designate may issue a permit for access and use (including special use) if all of the conditions established under Section 46 are met by the permit applicant.

46. The General Manager is hereby delegated the authority to establish the conditions respecting the issuance of permits.

47. (1) The General Manager and/or the Regional Water Supply Commission may:

(a) refuse to issue a permit to any person or group who has previously contravened this bylaw;

(b) revoke a permit if the special use is conducted in a manner which contravenes this bylaw;

[BL 4050]

FEES

48. (1) Where an applicant applies for a permit for access to the water supply area, the applicant must pay a refundable security deposit of $500.00 which will be repaid upon return of keys and other equipment owned by the Capital Regional District issued as a condition of access.

(2) Where an applicant applies for a permit for access to the Leech Water Supply area for recreational purpose, the applicant must pay a non-refundable administration fee of $500.00.

[BL 4509]

CITATION

49. This bylaw may be cited as "Capital Regional District Water Supply Area Regulations Bylaw No. 1, 2000.

READ A FIRST TIME THIS	28th	day of	June	2000
READ A SECOND TIME THIS	28th	day of	June	2000
READ A THIRD TIME THIS	28th	day of	June	2000
ADOPTED THIS	12th	day of	July	2000

CHAIR

SECRETARY

Making a difference...together

RWSC 22-11

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, JULY 20, 2022

SUBJECT **Greater Victoria Water Supply Area 2022 Public and School Tours Summary**

ISSUE SUMMARY

To provide a summary of the 2022 public and school tours of the Greater Victoria Water Supply Area (GVWSA) and Water Supply Facilities.

BACKGROUND

For the past 30 years, Integrated Water Services (IWS) has provided bus tours of the Greater Victoria Water Supply Area and Water Supply Facilities. The public tours provide participants with an opportunity to gain a better understanding of:

- where Greater Victoria's drinking water comes from
- the high quality of water in source reservoirs
- the characteristics of the water supply area and drinking water infrastructure
- the care taken to safeguard the drinking water resource
- future plans for the water supply area with regards to climate change and population growth
- how source water is disinfected
- the value of water conservation
- water pricing

The tour programs for 2020 and 2021 were impacted by Public Health Orders due to COVID-19. The spring and summer tours that are usually offered to the schools and public were cancelled and technical tours were also suspended. Public Health Orders relaxed enough in the fall of 2021 that IWS was able to provide 18 school tours (grades 4 and 5) in the fall (September 23 – November 5).

With the easing of COVID public health orders in early 2022, school and public tours were again planned for the 2022 season.

2022 Public Tours

Public tours were offered four days per week (Thursday to Sunday) in June. The five-hour tour followed the path of water from source to tap, with stops at the North Basin Viewpoint, Rithet Creek, a forest walk, Sooke Dam and the Goldstream Water Disinfection Facility (viewing of the ultraviolet disinfection pipe gallery). The tours also offered a chance to inform the participants of the new Water Supply Master Plan and the opportunity to provide comment online.

The following table compares tour participation statistics from 2016 to 2022 (no tours offered in 2020 and only school tours in 2021). Participation in public tours decreased from an average of 37 participants per tour in 2019 to 29 participants per tour in 2022. Maximum available seating per tour was 42 on school buses. An online registration system was used for 2022 as in 2019, and this year there were no participants left on a waitlist.

Tour Type	2016		2017		2018		2019		2021		2022	
	Tours	Participants	Tours	Participants	Tours	Participants	Tours	Participants	Tours	Participants	Tours	Participants
School	4	129	13	390	18	426	26	770	18	467	23	641
Public	18	567	18	490	16	547	16	584	0	0	16	467
Total	**22**	**696**	**31**	**880**	**34**	**973**	**42**	**1,354**	**18**	**467**	**39**	**1,108**

The decrease in public tour participation is thought to be caused by general COVID precaution and no-shows due to COVID-19 and other illness (during this time there was higher than usual absenteeism in workplaces due to COVID and other colds and flus). In general the demographic on tours was younger and more participants were on a tour for the first time.

Another factor may have been a lack of community awareness of the tour opportunities. Advertising was conducted consistent with efforts in 2019 but much participation is still generated from word-of-mouth; and given a gap of two years, many may not have been aware that tours were again being offered.

2022 School Tours

There were 23 grade 4 and 5 school tours provided over a span of seven weeks with three to four tours per week depending on the school calendar. As in 2021, the tours focused on the same topics, but viewed Japan Gulch Reservoir rather than Sooke Lake Reservoir. This allows more time outside rather than long bus rides where it is difficult to keep the students' attention.

New this year was the Capital Regional District (CRD) Education Newsletter that went out in February advertising the spring school age programs offered by the CRD. Online registration information was sent to all schools (public and private) in the Greater Victoria area and bookings were made on a first come, first served basis. Two classes were left on a waitlist; it is not known how many others may have found the tours full and not left their name on the waitlist. There were 550 students that attended the tours with 91 accompanying adults, for a total of 641 individuals.

The elementary schools that participated in sending one or more classes in 2022 were: Marigold, Oaklands, Campus View, Sir James Douglas, Doncaster, Braefoot, Crystal View, View Royal, Keating, Deep Cove, Rogers, Eagle View, Lakeview, Torquay and a group of home learners.

The school program covered the following topics:

- water on a global scale & what is a watershed
- the water cycle
- learning about our forest and native plants
- the risk of a wildfire to our water supply
- where our drinking water comes from and how it's delivered to our homes
- how our drinking water is disinfected
- what we can do to conserve drinking water

2022 Technical Tours

Technical tours are offered throughout the year and vary in focus and length. In 2022 so far, three technical tours have been provided:

- Restoration of Natural Systems Program at the University of Victoria
- BC Institute of Agrology
- BC Water and Wastewater Association

A fun temporary sign for tour participants to gain a sense of scale of the Regional Water Supply System components:

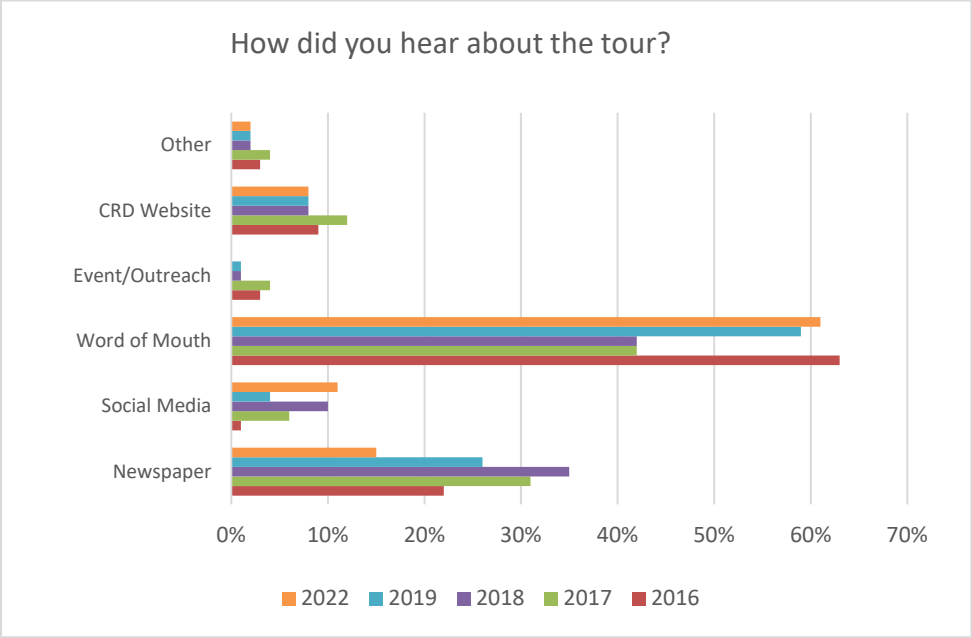
Budget

The cost to deliver the public and school tour programs in 2022 totaled $52,000 with approximately half the cost spent on buses and the rest on auxiliary staff time, advertising, a sanitation facility, display materials and an escort vehicle.

Advertising

The tours were initially advertised on the CRD website, social media and in the local papers owned by Black Press. To gain more participants, the tours were also advertised midstream in the Times Colonist and again on social media. Tour information postcards were distributed to recreation centres, public libraries and municipal offices in the Region.

As in previous years, word of mouth and newspaper advertisements are still the most successful methods to reach tour participants, followed by social media and the CRD website. The decline in the influence of newspapers in tour registration may be related to the limited advertising in the Times Colonist in 2022.



Feedback

A tour survey was completed by 316 individuals or 68% of the public tour participants. Of those who responded, 84% were on a tour for the first time. As in previous years, the tours were well

received with 85% of those surveyed rating the tour as "excellent". The aspects respondents enjoyed most were the forest walk, information presented during the tour, knowledge of tour leaders, seeing Sooke Lake Reservoir Dam, wildlife, and the opportunity to tour an otherwise restricted area.

Most respondents did not think there was any aspect of the tour that needed improving. However, some wished for more public tour dates and the opportunity for tours in the fall. A few respondents expressed a desire for a longer forest walk or other opportunities to do more walking. Several respondents expressed interest in a history focused tour and/or a more comprehensive tour of the Goldstream Water Disinfection Facility.

The only complaint was regarding transportation, some found the school bus uncomfortable and/or the dust from the gravel roads on the final drier days of the tours. In addition, there were several days when the contract bus did not have a working microphone/speaker, and respondents commented that it was difficult to hear the tour leader on the bus. This is being addressed with the bus provider.

To date, feedback has been received from seven teachers about the 2022 school tours. All were extremely positive.

Plans for 2023

The focus in 2023 will be a return to the level of tours provided in 2019, pending pandemic or other external conditions, and to increase awareness and participation in the public tours.

A goal moving forward is to develop permanent display structures for the Sooke Lake Dam lunch stop and to provide more local First Nations knowledge of the lands, animals and plants. An effort was made through the CRD First Nations Relations group in 2022 to gain information from local First Nations to include on the tours; but no results are yet available.

CONCLUSION

The 2022 "Get to Know Your H_2O Tours" of the Greater Victoria Water Supply Area were enthusiastically received by both schools and the public. A total of 1,108 public and grade 4 and 5 children participated in one of the 39 tours that were provided. A high percentage of public tour participants were on a tour for the first time.

The goal for 2023 will be to return to 2019 levels of public and school tours, to increase advertising effort and participation levels, and to improve the display materials at Sooke Lake Dam.

RECOMMENDATION

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

Submitted by:	Annette Constabel, MSc., RPF., Senior Manager, Watershed Protection
Concurrence:	Ted Robbins, BSc., CTech., General Manager, Integrated Water Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

Making a difference...together

JUAN DE FUCA WATER DISTRIBUTION COMMISSION
Tuesday, July 5, 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 March 1, 2022 meeting be adopted.

CARRIED

7. COMMISSION BUSINESS

7.1. Rocky Point Water Upgrades Budget Amendment

The Juan de Fuca Water Distribution Commission recommends to the Capital Regional District Board:

That the 2022 Juan de Fuca Water Distribution Service capital plan and Project 18-05, Rocky Point Water Upgrades, budget be amended to $9,725,000 to reflect an increase in Federal funding of $411,000 for the additional archeological and environmental monitoring costs.

CARRIED

7.2. Summary of Recommendations from Other Water Commissions

RECEIVED FOR INFORMATION

7.3. Water Watch Report

RECEIVED FOR INFORMATION

CAPITAL REGIONAL DISTRICT - INTEGRATED WATER SERVICES

Water Watch

Issued July 11, 2022

Water Supply System Summary:

1. Useable Volume in Storage:

Reservoir	July 31 5 Year Ave		July 31/21		July 10/22		% Existing Full Storage
	ML	MIG	ML	MIG	ML	MIG	
Sooke	75,224	16,549	72,138	15,870	87,050	19,151	93.9%
Goldstream	6,486	1,427	7,641	1,681	9,869	2,171	99.5%
Total	81,710	17,976	79,779	17,551	96,919	21,322	94.4%

2. Average Daily Demand:

For the month of July	171.5 MLD	37.73 MIGD
For week ending July 10, 2022	167.7 MLD	36.89 MIGD
Max. day July 2022, to date:	192.8 MLD	42.41 MIGD

3. Average 5 Year Daily Demand for July

Average (2017 - 2021)	204.3 MLD [1]	44.95 MIGD [2]

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

4. Rainfall July:

Average (1914 - 2021):	22.3 mm
Actual Rainfall to Date	18.2 mm (82% of monthly average)

5. Rainfall: Sep 1- Jul 10

Average (1914 - 2021):	1,592.0 mm
2021 - 2022	2,028.6 mm (127% of average)

6. Water Conservation Action Required:

CRD's Stage 1 Water Conservation Bylaw is now in effect through September 30, 2022.
Visit our website at www.crd.bc.ca/water for scheduling information.

If you require further information, please contact:

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

Capital Regional District Integrated Water Services
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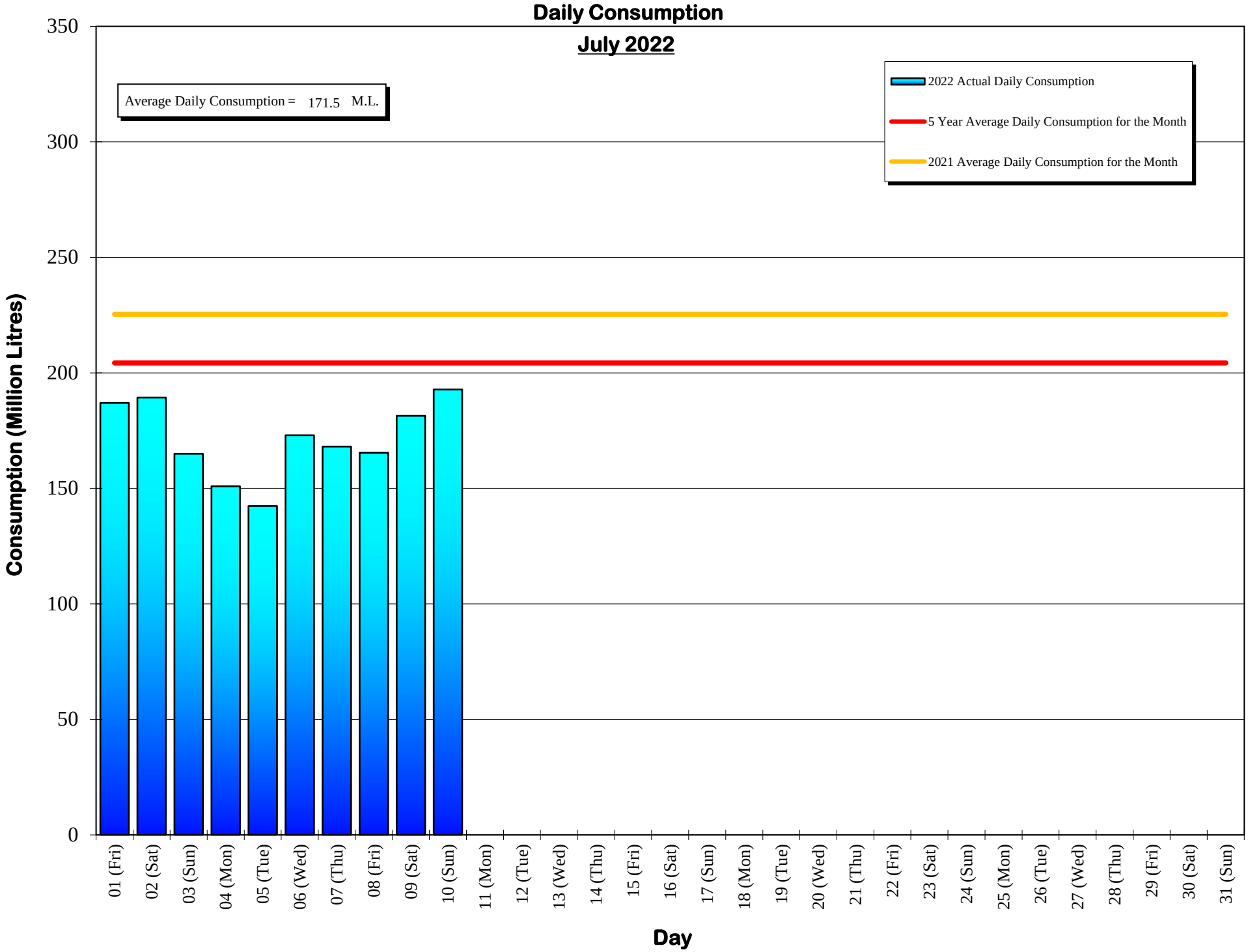


J:\WATERENG\HYDROLGY\AMRIT\MONTHEND.22\H2o watch 2022.xlsxCons. Chart

Daily Consumptions: - July 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 (Fri)	187.0		41.1	24	12	Sunny	0.0	0.0	0.0
02 (Sat)	189.3		41.6	24	11	Sunny	0.0	0.0	0.0
03 (Sun)	165.0		36.3	14	12	Cloudy / Showers	11.7	0.0	11.7
04 (Mon)	150.9		33.2	17	12	Cloudy / Showers	4.0	0.0	4.0
05 (Tue)	142.4	<=Min	31.3	22	11	Cloudy / P. Sunny	0.0	0.0	0.0
06 (Wed)	173.0		38.1	23	14	Sunny / P. Cloudy / Showers	2.5	0.0	2.5
07 (Thu)	168.1		37.0	22	14	Sunny / P. Cloudy	0.0	0.0	0.0
08 (Fri)	165.4		36.4	23	13	Sunny / P. Cloudy	0.0	0.0	0.0
09 (Sat)	181.4		39.9	23	13	Sunny / P. Cloudy	0.0	0.0	0.0
10 (Sun)	192.8	<=Max	42.4	25	13	Sunny / P. Cloudy	0.0	0.0	0.0
11 (Mon)									
12 (Tue)									
13 (Wed)									
14 (Thu)									
15 (Fri)									
16 (Sat)									
17 (Sun)									
18 (Mon)									
19 (Tue)									
20 (Wed)									
21 (Thu)									
22 (Fri)									
23 (Sat)									
24 (Sun)									
25 (Mon)									
26 (Tue)									
27 (Wed)									
28 (Thu)									
29 (Fri)									
30 (Sat)									
31 (Sun)									
TOTAL	1715.3 ML		377.33 MIG				18.2	0	18.2
MAX	192.8		42.41	25	14		11.7	0	11.7
AVG	**171.5**		37.73	21.7	12.5		1.8	0	1.8
MIN	142.4		31.32	14	11		0.0	0	0.0

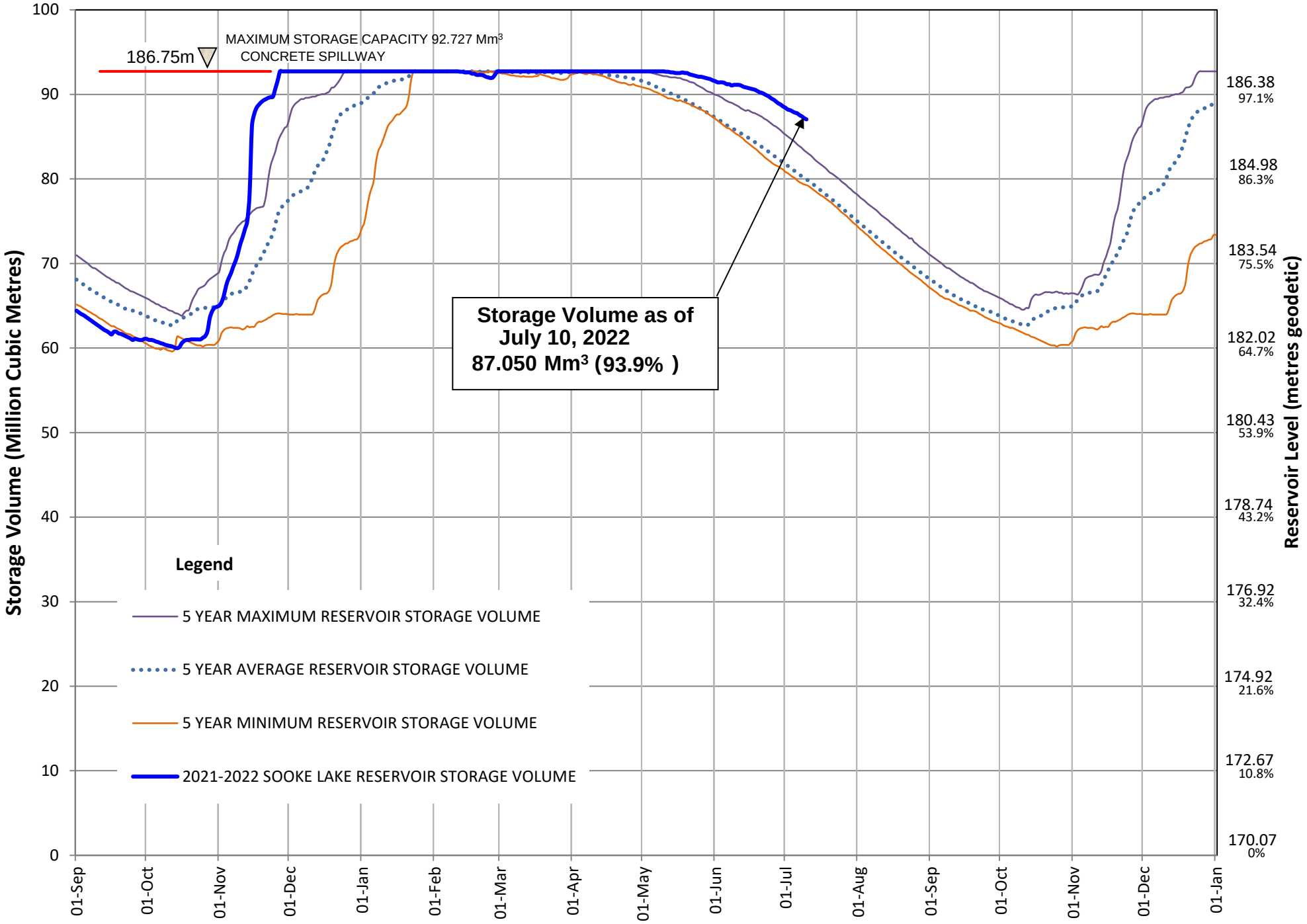
1. ML = Million Litres 2. MIG = Million Imperial Gallons 3. 10% of snow depth applied to rainfall figures for snow to water equivalent.

Average Rainfall for July (1914-2021)	22.3 mm
Actual Rainfall: July	18.2 mm
% of Average	82%
Average Rainfall (1914-2021): Sept 01 - Jul 10	1,592.0 mm
Actual Rainfall (2021): Sept 01 - Jul 10	2,028.6 mm
% of Average	127%

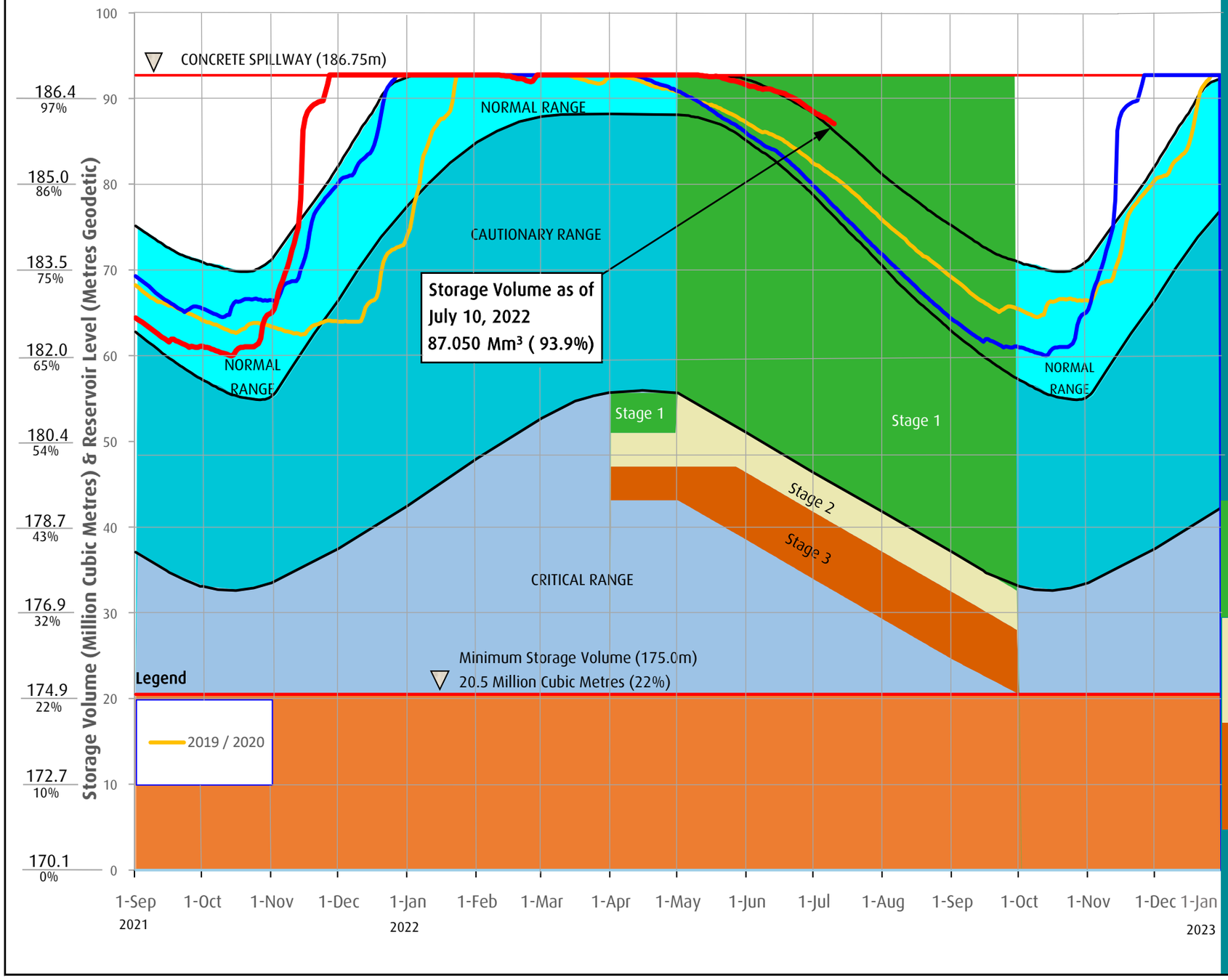
Number days with precip. 0.2 or more
3

Water spilled at Sooke Reservoir to date (since Sept. 1) = 12.54 Billion Imperial Gallons
= 57.00 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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Capital Regional District Integrated Water Services

Making a difference...together

Useable Reservoir Volumes in Storage for July 10, 2022