Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Regional Water Supply Commission

Wednesday, October 18, 2023 | **11:30 AM** | **6th Floor Boardroom, 625 Fisgard St., Victoria, BC V8W 1R7**

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

1. TERRITORIAL ACKNOWLEDGEMENT

2. APPROVAL OF THE AGENDA

3. ADOPTION OF MINUTES

23-787 Adoption of the Minutes of the July 19, 2023 Meeting

Recommendation: That the minutes of the July 19, 2023 Regional Water Supply Commission meeting be adopted.

Attachments: Draft Minutes July 19, 2023

4. CHAIR'S REMARKS

5. PRESENTATIONS/DELEGATIONS

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. No. 4 Watermain Leak, McTavish Road - Update

7. COMMISSION BUSINESS

7.1. 23-773 Service Planning 2024 - Water Community Need Summary

Recommendation: The Regional Water Supply Commission recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, Community Need Summary - Water, be approved as presented and form the basis of the 2024-2028 Financial Plan.
(NWA)

Attachments: Staff Report: Service Planning 2024 - WaterCommunity Need Summary

Appendix A: Community Need Summary - Water

7.2. 23-781 Regional Water Service 2024 Operating and Capital Budget

Recommendation: The Regional Water Supply Commission recommends that the Committee of the Whole recommend that the Capital Regional District Board:

1. Approve the 2024 Operating and Capital Budget and the Five Year Capital Plan;
2. Approve the 2024 wholesale water rate of $0.8094 per cubic metre;
3. Approve the 2024 agricultural water rate of $0.2105 per cubic metre;
4. Direct staff to balance the 2023 actual revenue and expense on the transfer to the water capital fund;
5. Direct staff to update carry forward balances in the 2024 Capital Budget for changes after year end; and
6. Direct staff to amend the Water Rates Bylaw accordingly.

(WA)

Attachments: Staff Report: Regional Water Service 2024 Operating and Capital Budget

Presentation: RWS 2024 Budget Review

Appendix A: Regional Water Supply 2024 Operating And Capital Budget.pdf

Appendix B: Long Term Debt Obligations Summary

Appendix C: Agricultural Water Volumes and Rate Payments for 2011 – 2022

Appendix D: Wholesale Water Rate History and Projection

7.3. 23-782 Greater Victoria Water Supply Area Land Acquisition Reserve Fund Update

Recommendation: 1. That a reserve fund for Greater Victoria Water Supply Area land acquisition be included when considering of a reserve fund for Regional Water Supply System Master Plan projects, and that, until reserves are established, land purchase opportunities continue to be addressed through adjustments to the existing capital program and/or debt financing;

2. That the decision whether to establish a Greater Victoria Water Supply Area land acquisition reserve fund be brought back either, when recommendation 1. above occurs, or when a specific need arises; and,

3. That a report on land acquisition opportunities and progress be provided, in closed meeting, only when Commission decision is required or significant progress is made. (NWA)

Attachments: Staff Report: GVWSA Land Acquisition Reserve Fund Update

Appendix A: RWSC 21-08 Staff Report, June 2021

Appendix B: RWSC 22-07 Staff Report, June 2022

7.4. 23-783 Summary of Recommendations from the Water Advisory Committee

Recommendation: There is no recommendation, this report is for information only.

Attachments: Summary Of Recommendations from the Water Advisory Committee

7.5. 23-784 Summary of Recommendations from Other Water Commissions

Recommendation: There is no recommendation, this report is for information only.

Attachments: Summary of Recommendations from other Water Commissions

7.6. 23-785 Water Watch Report

Recommendation: There is no recommendation, this report is for information only.

Attachments: Water Watch Report

8. MOTION(S) WITH NOTICE

8.1. 23-786 Motion with Notice: Commissioner Rogers: Placement of Post Disaster Water Supply Drop Kits in Relevant Fire Halls

Recommendation: That the Regional Water Supply Commission directs staff to explore cost-sharing with municipalities to get the Post Disaster Water Supply Drop Kits in relevant fire halls, for consideration in the next budget cycle.

Attachments: Motion with Notice - Placement of Post Disaster Water Supply Drop Kits in Rele

9. NEW BUSINESS

10. ADJOURNMENT

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

Next Meeting: November 15, 2023

To ensure quorum, please contact iwsadministration@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, July 19, 2023 **11:30 AM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

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

STAFF:
T. Robbins, CAO; I. Jesney, Acting General Manager, Integrated Water Services; A. Constabel, Senior Manager, Watershed Protection; G. Harris, Senior Manager, Environmental Protection; J. Marr, Acting Senior Manager, Infrastructure Engineering; S. Irg, Senior Manager, Water Infrastructure Operations; J. van Niekerk, Senior Manager, Customer & Technical Services; J. Zimmerman, Communications Coordinator, Integrated Water Services; D. Dionne, Administrative Coordinator; M. Risvold, Committee and Administrative Clerk

REGRETS: N. Chambers; C. Green

EP = Electronic Participation

The meeting was called to order at 11:34 am

1. TERRITORIAL ACKNOWLEDGEMENT

The Chair provided a Territorial Acknowledgement.

2. ELECTION OF VICE CHAIR

The Chair called for nominations for the position of Vice Chair of the Regional Water Supply Commission for the term ending December 31, 2023.

Commissioner Stock nominated Commissioner Green. Commissioner Green accepted the nomination.

The Chair called for nominations a second time.

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

The Chair called for nominations a third and final time.

Hearing no further nominations, the Chair invited each nominee to address the Commission. Commissioner Stock read remarks provided by Commissioner Green as she was absent from the meeting.

Ballots were distributed by M. Lagoa and M. Risvold, and collected by M. Lagoa.

The confidential online poll was opened by D. Dionne.

The ballots (including the online votes) were counted by D. Dionne and M. Lagoa, Deputy Corporate Officer.

The Chair declared Commissioner Harper Vice Chair of the Regional Water Supply Commission for the term ending December 31, 2023.

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

3. APPROVAL OF THE AGENDA

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

4. ADOPTION OF MINUTES

4.1. 23-469 Adoption of Minutes

Attachments: Draft Minutes May 17, 2023

MOVED by Commissioner Coleman and **SECONDED** by Commissioner Stock,
That the Minutes of the May 17, 2023 meeting be adopted.
CARRIED

5. CHAIR'S REMARKS

The Chair provided the following remarks:
-Thanked Commissioner Stock for her efforts to the commission
-Thanked staff for the watershed tour
-Thanked I. Jesney for his service

6. PRESENTATIONS/DELEGATIONS

There were no presentations or delegations.

7. GENERAL MANAGER'S REPORT

I Jesney thanked the Chair for his remarks and wished the commission all the best.

8. WATER ADVISORY COMMITTEE

8.1. 23-489 Committee Recommendation: Conservation Strategies (Water Advisory Committee Chair Katie Oppen)

Attachments: Recommendation from Water Advisory Committee

G. Baird introduced the Water Advisory Commission Chair, K. Oppen.

K. Oppen spoke to the following items:
-Water conservation
-Water capture
-Water storage
-Water rates
-Non-potable water use

MOVED by Commissioner Caradonna and **SECONDED** by Commissioner Rogers,
That the Regional Water Supply Commission consider:
1. Increasing water conservation efforts and messaging and creating a literacy program for sharing water conservation.
2. Storage discussions with member municipalities.
3. Increasing bulk water rates to encourage conservation and to fund increased storage in partnership with municipalities
CARRIED

MOVED by Commissioner Harper and **SECONDED** by Commissioner Phelps Bondaroff,
That the Water Advisory Committee recommendations be referred to staff for consideration in the new strategic planning process.
CARRIED

8.2. 23-470 Summary of Recommendations from the Water Advisory Committee

Attachments: Summary of Recommendations

9. COMMISSION BUSINESS

9.1. 23-465 Watershed Security Officer Designation

Attachments: Staff Report: Watershed Security Officer Designation

A. Constabel spoke to item 9.1

Staff responded to questions regarding:
-Removing an appointment
-Financial implications
-Fluctuating number of Watershed Security Officers

MOVED by Commissioner Stock and **SECONDED** by Commissioner Coleman,
That the Regional Water Supply Commission recommends that the Capital Regional District Board:
Appoint Jim Harradine and Derek Hall as Watershed Security Officers; and that Devon Barnes be removed from appointment; for the purpose of Section 233 of the Local Government Act and Section 28(3) of the Offence Act, and in accordance with Capital Regional District Bylaw No. 2681.
CARRIED

9.2. 23-476 Regional Water Supply Commission - Disaster Mitigation and Adaptation Fund Grant Application

Attachments: Staff Report: DMAF Grant Application

Appendix A: 2023 DMAF Grant Eligible Projects Map

J. Marr spoke to item 9.2.

Staff responded to the following questions:
-Ability for the Province to contribute funds
-Plan if the grant is unsuccessful
-Anticipated timeline for grant
-RFP's
-When the grant was applied for previously
-Ability to receive partial grant
-Feedback from unsuccessful grants

MOVED by Commissioner Stock and **SECONDED** by Commissioner Phelps Bondaroff,
That the Regional Water Supply Commission recommends to the Capital Regional District Board:
That staff be instructed to apply for, negotiate, and if successful, enter into an agreement, and do all such things necessary for accepting Disaster Mitigation and Adaptation grant funds and overseeing grant management for the proposed projects.
CARRIED

9.3. 23-472 Agricultural Water Rate Review Update

Attachments: Staff Report: Agricultural Water Rate Review Update
Appendix A: Agricultural Water Review - Final Statntec Report

S. Irg spoke to item 9.3

Discussion ensued regarding:
-Subsidy recipients
-Non-commercial operations receiving discount
-Global issues of drought and food supply
-Challenges for current and new farmers
-Affordable water
-Community farms
-Potential to subsidize farms outside the service boundaries
-Food security
-Farm land across the region
-Per acre rates
-Meeting agricultural needs
-The commission's ability to advocate to the province
-Social and cultural costs in the region
-Barriers for urban farms
-Local farms competing with international world

MOVED by Commissioner Caradonna and **SECONDED** by Commissioner Kim,
That staff be directed to proceed with the next phase of the Agricultural Water Rate Review.
CARRIED
OPPOSED: Graham

9.4. 23-471 Regional Water Supply Service Mid-Year Update

Attachments: Staff Report: Regional Water Supply Service Mid-Year Update
Appendix A: Regional Water Supply Service Capital Program – Current Status of Active Projects

J. Marr and S. Irg spoke to item 9.4

9.5. 23-473 Summary of Recommendations from Other Water Commissions

Attachments: Summary of Recommendations

Received for information.

9.6. 23-474 Water Watch Report

Attachments: Water Watch Report

I. Jesney spoke to item 9.6.

Staff responded to questions regarding:
-Drought concerns
-Support for fisheries

10. NOTICE(S) OF MOTION

10.1. 23-479 Motion with Notice: Placement of Post Disaster Water Supply Drop Kits in Relevant Fire Halls (Commissioner Rogers)

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

11. NEW BUSINESS

There was no new business.

12. ADJOURNMENT

MOVED by Commissioner Stock and **SECONDED** by Commissioner Kim,
That the meeting be adjourned at 1:01 pm.
CARRIED

_____
CHAIR

_____
SECRETARY

Making a difference...together

RWSC 23-11

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, OCTOBER 18, 2023

SUBJECT **Service Planning 2024 – Water Community Need Summary**

ISSUE SUMMARY

To provide strategic context and an overview of services, initiatives and performance data related to the Water Community Need.

BACKGROUND

The Capital Regional District (CRD) Board approved the 2023-2026 Board Priorities on March 8, 2023. Staff then developed the 2023-2026 Capital Regional District (CRD) Corporate Plan which was approved by the CRD Board on April 12, 2023.

The CRD Corporate Plan presents the work the organization needs to deliver over the four-year term, along with the critical regional, sub-regional and local services, to meet the region's most important needs (i.e., Community Needs) and advance the Board's Vision and Priorities. Board Priorities, Corporate Plan initiatives and core service delivery form the foundation of the five-year financial plan.

The 2024 planning cycle marks the first year of the implementation of the 2023-2026 CRD Corporate Plan. The CRD's annual service plans, known as Community Need Summaries, provide an overview of the operational and strategic context, services levels, initiatives, and performance data for each Community Need. They also provide details of the initiatives, associated staffing, timing and service levels required to advance the work in future years.

The Water Community Need Summary is attached as Appendix A. The desired outcome is safe drinking water and a resilient water supply.

The CRD reports on the progress of its initiatives and services on a regular basis. The Board receives updates about the Board Strategic Priorities through the Chief Administrative Officer Quarterly Progress Reports. The Board also receives an overview of progress made on delivering the Corporate Plan twice a year at the strategic check-in and provisional budget meetings, which take place in the spring and fall respectively. The next strategic check-in will take place in spring 2024. During the year, standing committees and commissions also fulfill an oversight and advisory role in relation to the work.

ALTERNATIVES

Alternative 1

The Regional Water Supply Commission recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, Community Need Summary – Water, be approved as presented and form the basis of the 2024-2028 Financial Plan.

Alternative 2

The Regional Water Supply Commission recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, Community Need Summary – Water, be approved as amended and form the basis of the 2024-2028 Financial Plan.

IMPLICATIONS

Governance Implications
In 2024, staff have prioritized programs and initiatives that:

- Advance 2023-2026 Board Priorities or Corporate Plan initiatives;
- Operationalize capital investments; and/or
- Are necessary to maintain a core service level following a regulatory change or where there is a safety risk to customers, communities, or staff.

The Executive Leadership Team (ELT) has reviewed and assessed all business cases and confirmed alignment with the criteria. ELT has determined that the consolidated package of work is appropriate and a proportional response to the CRD Board's and communities' expectations of the organization.

Financial Implications
To exercise constraint and cost containment, the CRD Board directed staff to keep the core inflationary adjustment to 3.5% through the 2024 Service and Financial Planning Guidelines. Staff and management have taken the necessary steps to mitigate the financial impact of proposed initiatives as well as cost escalation and high inflation rate experienced in 2022 through to 2023.

The 2024 operating costs include non-negotiable collective agreement increases that were effective for 2024, as well as retroactively capturing increases from 2023 which were finalized after the 2023 water rate approval. As a result, the 2024 core operating cost increase exceeds the 3.5% threshold.

Financial and staff impacts for initiatives will be summarized and included in the provisional budget which will be presented at the Committee of the Whole meeting scheduled for October 25, 2023. Starting this year, this will also include a five-year forecast of staffing level changes, which will be reviewed annually.

Service Delivery Implications
Appendix A includes information about existing service delivery, operational considerations and performance. Additional information has been provided below about the proposed changes for 2024/2025.

1. Proposed changes for 2024

Staff are proposing to advance four new initiatives for the Water Community Need that have financial implications for 2024, as shown in Table 1. The key drivers for the initiatives are:

1. advancing a Board or Corporate Plan Priority;
2. operationalizing capital investments; and
3. adjustments to core service levels to maintain safety.

Table 1. Water Community Need Initiatives (2024)

Initiative	Implementation year(s)	Staff impacts (2024)	Incremental cost (2024)	Funding source
2a-2.1 Contracts Coordinator	2024–ongoing	1 Auxiliary Converted	$92,000	Fee-for-service
2a-2.2 Purchaser	2024–ongoing	1 New Ongoing	$205,000	Fee-for-service & Requisition
2a-8.1 Water Quality Sampling Technician	2024-ongoing	Increase to daily hours	$38,000	Fee-for-service & Requisition
2b-1.1 Dam Safety Program – Integrated Water Services	2024–ongoing	2 New Ongoing	$375,000	Fee-for-service

The information in Table 1 reflects the business case costs which ELT reviewed as part of their annual assessment of initiatives. The financial impacts reflect full program costs, including cost of staffing.

2a-2.1 Contracts Coordinator
Timely contract assembly and completion is essential to reducing financial risks (e.g., from rapid increases in material costs) and schedule risks (e.g., from inability to start projects as planned). The Integrated Water Services Administration division has experienced an exponential increase in the volume of contract-related work due to the growth of the water and wastewater capital programs, the expanded core area wastewater service and the adoption of the 30-year Regional Water Supply 2022 Master Plan.

Initiative 2a-2.1 seeks to convert existing auxiliary hours to one regular ongoing Contracts Coordinator position to meet the increasing demand for contract management, coordination and related contracts and records management functions within the department.

2a-2.2 Purchaser
The Integrated Water Services purchasing division has operated with one purchaser for over a decade. Integrated Water Services' staff, budgets, and purchasing needs, both for operating and capital, have increased significantly over that period. With more buying comes more legal and financial risk, and trained purchasers provide critical first-stage advice to avoid later stage disputes or litigation matters.

Initiative 2a-2.2 seeks to create a new regular ongoing Purchaser position in the Legal & Risk Management division to increase support for the Integrated Water Services centralized purchasing function and increase organizational capacity by freeing up specialized staff to focus on service delivery and spend less time on procurement activities.

2a-8.1 Water Quality Sampling Technician (Regular)
The CRD is required to meet drinking water monitoring requirements to ensure compliance with provincial laws. Keeping monitoring and system oversight in step with regional growth in drinking water is part of its commitment to provide high-quality and safe drinking water to the region. The

Greater Victoria Drinking Water System is rapidly expanding to meet the region's growth. Regulatory requirements for drinking water monitoring are growing relative to population growth and additional water sampling staff resources are needed to keep up.

Initiative 2a-8.1 seeks to increase existing Environmental Protection staff hours from a 7 hour workday to an 8 hour workday to achieve this.

2b-1.1 Dam Safety Program - Integrated Water Services

Integrated Water Services manages 23 water supply dams, 15 of which are directly related to the Regional Water Supply System. The remaining eight dams are located within three other water services: Magic Lake Estates on North Pender Island (4), Lyall Harbour/Boot Cove on Saturna Island (1), and Wilderness Mountain near East Sooke (3).

Integrated Water Services is responsible for the operation, maintenance, and surveillance of the dams, as well as regulatory compliance activities and resolving safety issues through capital and operational safety improvements. Dams are essential for storing water for delivery to customers, but they are inherently risky. The failure of a dam can result in catastrophic consequences, including loss of life, economic impacts (e.g., property damage), and environmental and social impacts.

The Dam Safety program is currently led by the Infrastructure Engineering division, with support from various divisions in Integrated Water Services and other parts of the organization. In accordance with regulatory requirements, staff conduct regular safety reviews and studies to assess the state of the infrastructure and compare the CRD's dam management approaches against best management practices. This monitoring has highlighted that the number of safety issues has been trending up since 2017. It has now become clear that to successfully manage dam-related risks moving forward the department needs a proactive strategy and dedicated, experienced staff with a robust understanding of the complexities of dam safety projects.

Initiative 2b-1.1 seeks to consolidate resources and create a dedicated Dam Safety division with operational and engineering staff to operate, maintain and monitor dams in a 'safe condition', prioritize and resolve known deficiencies, identify and manage new risks, adapt to changing climatic conditions, and ensure compliance with the Dam Safety Regulation and Water Sustainability Act.

As a starting point, the division seeks to create two new regular ongoing positions in 2024 in the Infrastructure Engineering and the Water Infrastructure Operations divisions to start this process. Additional resources requests are expected to follow in 2025 and 2026 as the function becomes established.

Planned changes in 2025

There is one initiative planned for 2025, shown in Table 2. The CRD Board will consider approval next year.

Table 2. Forecast of Future Initiatives: Water Community Need

Initiative	Implementation year(s)	Staff impacts (2025)	Incremental cost (2025)	Funding source
2b-2.1 Utility Operator Team Lead – Water Operations	2025-ongoing	1 New Ongoing	$153,000	Fee-for-service & Requisition

The information in Table 2 also reflects the business case costs.

2b-2.1 Utility Operator - Water Operations

The Water Operations division maintains and operates the Juan de Fuca Water Distribution system for Colwood, Langford, Metchosin, View Royal, Sooke, Highlands and the Juan de Fuca Electoral Area (East Sooke), serving approximately 60,000 customers. The system continues to expand due to development and, as the system ages, additional maintenance and infrastructure renewal is required. The Water Operations division has identified several challenges related to the system's reliability, and efficiency including aging infrastructure, maintenance frequency, and increasing demand.

To address these challenges, initiative 2b-2.1 seeks to create one new regular ongoing Utility Operator position. This position will be responsible for ensuring operational activities are planned in a safe manner and compliant with regulatory requirements, while increasing the resilience of the drinking water systems.

CONCLUSION

Capital Regional District (CRD) staff are progressing initiatives identified in the 2023-2026 CRD Corporate Plan, including the Board Priorities. The CRD Board, and commissions with delegated authorities, determine resourcing through the annual review and approval of the provisional financial plan. To support decision-making, staff provide recommendations on funding, timing and service levels through the service and financial planning processes.

RECOMMENDATION

The Regional Water Supply Commission recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, Community Need Summary – Water, be approved as presented and form the basis of the 2024-2028 Financial Plan.

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

ATTACHMENT

Appendix A: Community Need Summary – Water

2 Water

Safe drinking water and a resilient water supply

01 Strategy

STRATEGIES & PLANS

- Regional Water Supply Strategic Plan
- Regional Water Supply Master Plan 2022-2050
- Regional Growth Strategy

CORPORATE PLAN GOALS

2a High quality, safe drinking water
2b Reliable & efficient drinking water transmission system

02 Contacts

Alicia Fraser, General Manager, Integrated Water Services	@ email	T. 250.360.3061
Annette Constabel, Senior Manager, Watershed Protection	@ email	T. 250.391.3556
Glenn Harris , Senior Manager, Environmental Protection	@ email	T. 250.360.3090
Jan Van Niekerk, Senior Manager, Customer & Technical Services	@ email	T. 250.474.9655
Joseph Marr , Senior Manager, Infrastructure Engineering	@ email	T. 250.474.9656
Shayne Irg, Senior Manager, Water Infrastructure Operations	@ email	T. 250.474.9661

03 Operating Context

ACHIEVEMENTS IN 2023

Infrastructure Engineering:

1. Started procurement of a design consultant for replacement of sections of Regional Supply Main No.3 and No.4. These projects will replace aging infrastructure and improve seismic resilience in the regional transmission system. High quality, safe drinking water.
2. Completed Phase 1 and started Phase 2 of the Regional Water Development Cost Charge Program. The need for such a program was identified in the CRD 2023-2026 Corporate Plan and will be used to fund future growth-related regional water supply system improvements.
3. Completed major projects in the Juan de Fuca Water distribution system including two new pump stations and three water storage tanks. These projects replaced aging infrastructure and provided additional capacity for growth within the Juan de Fuca Water Distribution system.

Watershed Protection:

1. Completion of two autogates to prevent recreation driven trespass into the Greater Victoria Water Supply Area and public safety around the Goldstream Water Treatment Facilities.
2. Completion of an upgraded Goldstream Entrance to the Greater Victoria Water Supply Area to provide more functional access control, security and visible security presence.
3. Implementation of an infrared wildfire detection camera on a tower on Mount Healy for more effective surveillance and monitoring of any wildfire starts in the Sooke Water Supply Area (WSA).

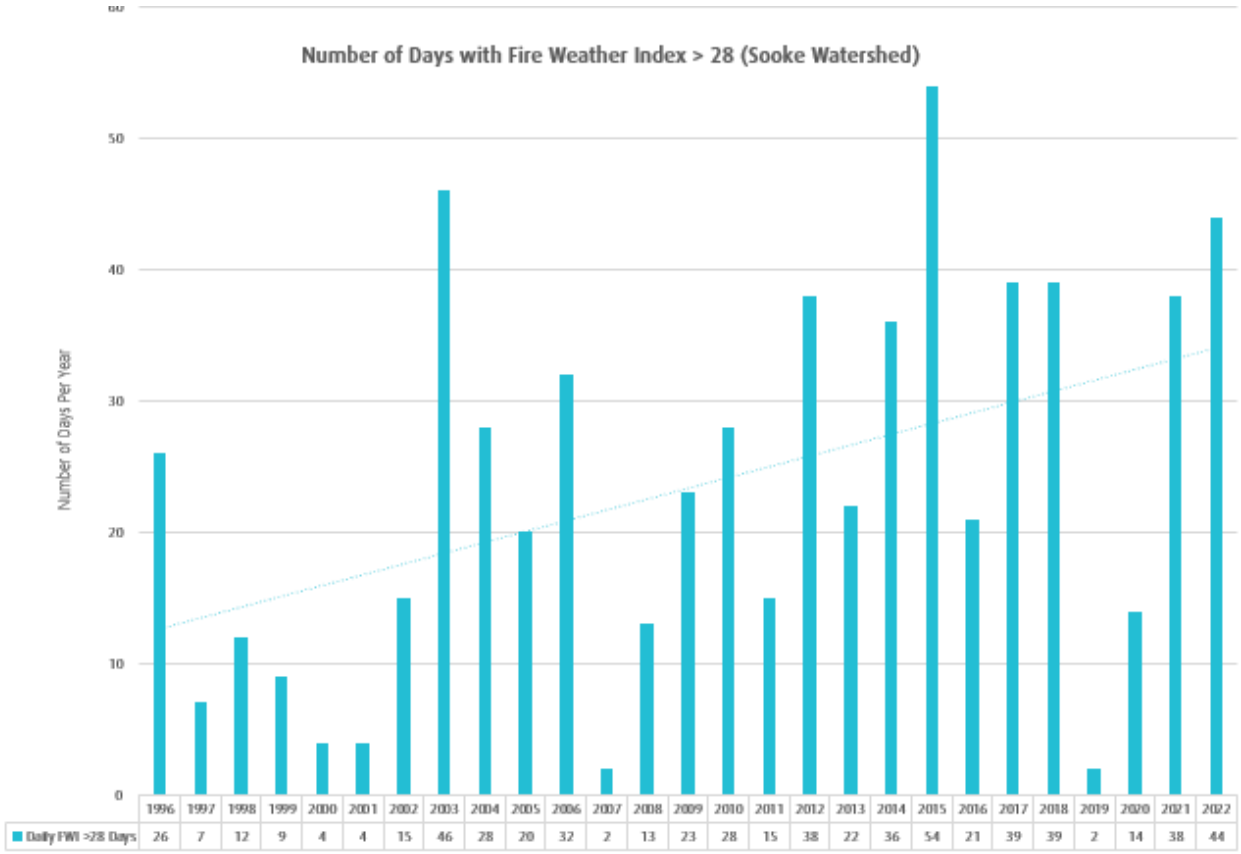
FACTORS THAT WILL AFFECT OUR OPERATIONS IN 2024 AND BEYOND

- Security and patrols: there is an ongoing need to monitor for and respond to recreational pressure into the Greater Victoria Water Supply Area from Sooke Hills Wilderness Regional Park and from the rapidly developing residential area around Langford and Goldstream. During Extreme Fire Danger Rating, this creates additional risk to the Greater Victoria Water Supply Area and additional pressure on the Watershed team.
- Climate Action: the most significant risks for water services relate to climate and environmental changes. Predicted trends of drier, hotter summers will impact the water services in several ways:
    - Demand for water, including for local agricultural activities – this is monitored closely and evaluated against historical trends. Model predictions are updated for areas exhibiting higher than predicted demands. This will inform future infrastructure upgrades to meet growing demands.
    - Water quality may be affected due to increased biological growth in the source water and distribution system. The 2022 Regional Water Supply Master Plan recommends implementing filtration as a step in the treatment process by 2037.
    - In the Greater Victoria Water Supply Area, increasing periods of elevated wildfire risk, peak flows from winter storms, drought stress on trees which could lead to increased mortality and forest pests/diseases.
    - Increased risk of power outages.

- Infrastructure Vulnerability, Resiliency, and Emergency Preparedness: there are increases in operational and system maintenance demands from a growing region combined with aging infrastructure. The 2022 Regional Water Supply Master Plan identified a strategy to address supply (quantity) and critical delivery infrastructure (redundancy) needs over the next 30 years. In addition to continuing to replace and refresh our existing assets to ensure they remain in a state of good repair, preliminary studies will also commence on the large elements identified in the Regional Water Supply Master Plan.
- Asset Management: the ongoing trend in reviewing, updating and completing asset management plans and the continuous upgrading, replacement and growth of assets in the water and wastewater systems rely on having an up-to-date asset registry, as well as an asset onboarding process. Both the Scottish Water Review in 2018 and the EMA Readiness Assessment of 2020 highlighted the need for a reliable asset registry for Water and Wastewater.
    - The risk of assets not being maintained, replaced in a timely manner and failing could impact the CRD's ability to provide the expected water and wastewater level of service and could even result in environmental and public health and safety risks.
    - The asset registry is an important step in ensuring that assets are captured in the Maintenance Management System and Preventative Maintenance Plans are developed. This information is also critical with regards to capital and financial planning for the utility services.
- Operational cost increases: the costs of essential water system operating supplies, such as disinfection chemicals, have been increasing 30-40% year over year which is impacting the cost-of-service delivery. This trend has been seen across North America.
- Regional Water Supply Strategic Plan (2017): Actions and initiatives to support the strategic priorities and commitments will be updated, starting in 2023. The revised plan, which will be published in 2024, will look to address future needs for the 2025-2029 period.
- Rate Structure Review: A new service delivery model for First Nations water servicing is being advanced with implementation expected in late 2023/early 2024. Through the agreement, the Regional Water Supply Service will become the service provider for participating First Nations governments.

OPERATIONAL STATISTICS

An example of the effect of climate change on the number of days of elevated wildfire risk for the Greater Victoria Water Supply Area:



04 Services

The services listed below rely on the support of several corporate and support divisions to operate effectively on a daily basis. More information about these services is available in the Corporate Services and Government Relations Community Need Summaries.

Water Supply & Distribution

Wholesale water supply to approximately 400,000 consumers in Greater Victoria and residents in three municipalities on the Saanich Peninsula, water distribution system within Langford, Sooke, View Royal, Colwood, East Sooke, Metchosin and Highlands and the small water systems in the Electoral Areas (EAs) supported through the following key service areas:

SERVICE BUDGET REFERENCES[1]

- 2.670 Regional Water Supply
- 2.680 Juan de Fuca Water Distribution
- 2.610 Saanich Peninsula Water
- Small water systems in the Electoral Areas

1. WATER SYSTEMS OPERATIONS AND MAINTENANCE

Description

Water treatment, supply and distribution system operation and monitoring. System and facility maintenance, consumables management and preventative maintenance. Respond to water main breaks and other system emergencies.

What you can expect from us

- 24/7 water treatment operations for two facilities for Greater Victoria
- Supply and distribution system operation
- System monitoring
- Customer service
- System and facility maintenance
- Consumables management
- Component preventative maintenance
- 24/7 emergency response to water main breaks and other system emergencies

Staffing Complement

Water Infrastructure Operations: 61 FTE (including 5 Managers and Administrative Support)

[1] Service budget(s) listed may fund other services

2. INFRASTRUCTURE PLANNING

Description

Strategic asset management for all services/systems including modeling and capacity analysis, vulnerability assessment, infrastructure renewal plans.

What you can expect from us

- Asset management and capital planning
- Adjust plans for 15 water services
- System expansion and growth planning
- Proactive capital planning for all 15 water services with a 15-year outlook
- Ongoing condition assessment to inform the capital program and ensure water systems assets remain in a state of good repair
- Incorporating growth and expansion demands into future plans

Staffing Complement

Water Supply Engineering and Planning: 4 FTE
Water Distribution Engineering and Planning: 6 FTE (including 1 Manager)

3. CAPITAL PROJECT DELIVERY

Description

Project design, procurement and delivery of capital projects annually on time/budget. Main installations, dam upgrades, equipment replacement and capital projects support.

What you can expect from us

- Infrastructure renewal and upgrades
- Capital Program for 15 water services (including Salt Spring Island)
- Engineering support of utility operations for the 15 water services.

Staffing Complement

Capital Projects 8 FTE (including 1 Manager)

Watershed Protection

Forest land management of the 20,611 hectares of the Greater Victoria Water Supply Area to ensure high-quality source drinking water for the Regional Water Supply System through following service areas:

SERVICE BUDGET REFERENCE[2]

› 2.670 Regional Water Supply

5. WILDFIRE, SECURITY & EMERGENCY RESPONSE

Description

Watershed security, wildfire and spill preparedness, prevention and response.

What you can expect from us

- 24/7 watershed emergency duty officer standby
- Security/wildfire patrols and standby (weekends and holidays; daily during elevated fire conditions)
- Wildfire detection air patrol during high and extreme fire hazard; infrared camera detection for the Sooke Water Supply Area.

Staffing Complement

Watershed Protection: 8 FTE (including 1 Manager and Administrative Support) + leadership support

6. WATERSHED OPERATIONS

Description

Silviculture, forest health and forest fuel management; invasive plant management; vegetation management and road maintenance, upgrades and rehabilitation

What you can expect from us

- Winter/summer road maintenance
- Culvert and bridge upgrades to accommodate higher peak flows to higher standards and changing climate
- Forest fuel and forest resilience treatments and fire smarting maintenance including brushing, thinning and chipping or burning of woody debris
- Brushing dam faces and around facilities, gates and fences
- Danger tree assessment and removal along roads and powerlines
- Invasive plants management

Staffing Complement

Watershed Protection: 10 FTE (including 1 Manager) + leadership support

[2] Service budget(s) listed may fund other services

7. RESOURCE PLANNING

Description

Wildlife management, ecological inventories and analyses, risk assessment and management, and GIS and data management.

What you can expect from us

- Development of a comprehensive watershed hydrology monitoring program
- Annual forest health survey
- Partnering in climate change and other research in the Greater Victoria Water Supply Area
- Management of beaver, Canada geese and bullfrogs
- School and public tours of the Water Supply Area and facilities

Staffing Complement

Watershed Protection: 8 FTE (including 1 Manager) + leadership support

ENVIRONMENTAL PROTECTION

Regulatory and non-regulatory services and a support role across the organization that focuses on enhanced integration of drinking water quality protection programs and integration of communication initiatives.

SERVICE BUDGET REFERENCES:[3]

- 1.531 Stormwater Quality Management - Sooke
- 1.576 Environmental Engineering Services
- 1.578 & 1.579 Environmental Protection
- 3.701 Millstream Remediation
- 3.707 On Site System Management Program
- 3.720 Saanich Peninsula Liquid Waste Management Plan - Implementation
- 3.755 Regional Source Control Program

8. WATER QUALITY 1.0

Description

Monitoring, data analysis, assessment, reporting and technical advice to meet water quality regulatory requirements.

What you can expect from us

- Source water and distribution system monitoring, assessment and reporting
- Physical, chemical and biological analytical services, assessment and reporting

Staffing Complement

Environmental Protection: 6 + lab staff FTE + leadership support

[3] Service budget(s) listed may fund other services

9. DEMAND MANAGEMENT

Description

Research and data to inform capital planning, water conservation, and communications and education.

What you can expect from us

- Accurate data
- Per capita targets (residential and Industrial, Commercial and Institutional)

Staffing Complement

Environmental Protection: 1.0 FTE + leadership support

10. CROSS CONNECTION CONTROL

Description

Identification, registration, tracking and reporting of potential cross connection contamination sources in the Greater Victoria Drinking Water System.

What you can expect from us

- Contamination prevention through facility inspections, testing and education for backflow prevention devices
- Monitor and track (>28,000) backflow prevention devices

Staffing Complement

Environmental Protection: 4.6 FTE

11. COMMUNICATIONS & ENVIRONMENTAL EDUCATION

Description

Public education and engagement in the region to promote sustainable behavior through campaigns, initiatives and services. Position is shared 80:20 with Wastewater communications support.

What you can expect from us

- Increased public awareness of CRD messages and subsequent behavior changes (declining trend in per capita and per sector water use)

Staffing Complement

Environmental Protection: 0.8 FTE + leadership support

05 Initiatives

Below are the initiatives listed in the Capital Regional District 2023-2026 Corporate Plan and the related initiative business cases (IBCs), including financial and staffing impacts, proposed for 2024. The financial impacts reflect full program costs, including cost of staffing.

Initiative	Implementation year(s)	Impacts in 2024	
2a-1 Update the Regional Water Supply Strategic Plan	2023	-	
2a-2 Implement the 2022-2050 Regional Water Supply Master Plan	Ongoing	-	
▸ **NEW IBC** 2a-2.1 Contracts Coordinator	2024–ongoing	$92K fee-for-service	1 Auxiliary Converted
▸ **NEW IBC** 2a-2.2 Purchaser	2024–ongoing	$205K fee-for-service + requisition	1 New Ongoing
2a-3 Review water rates in service agreements with First Nations	2024	Continued negotiation and implementation	
2a-4 Review and determine appropriate level of water subsidy used for agriculture	2024	Ongoing, no change in subsidy in 2024	
2a-5 Active forest/ecological management to enhance forest health and resilience in the Water Supply Areas	Planned for 2025	-	
2a-6 Collect and analyze information for climate adaptation, reservoir management and the siting of new major infrastructure	Ongoing	-	
2a-7 Implement a development cost charge program for the Regional Water Service	2024	-	
▸ **NEW IBC** 2a-8.1 Water Quality Sampling Technician*	2024-ongoing	$38K other	Increase from 7 to 8-hour shifts

Initiative	Implementation year(s)		Impacts in 2024
2b-1 Enhance safety of aging dams, meet increasing regulatory requirements and mitigate against the risk of failures	2024		
▸ **NEW IBC** 2b-1.1 Dam Safety Program – Integrated Water Services	2024–ongoing	$375K fee-for-service	2 New Ongoing
2b-2 Invest in and maintain capital assets, and undertake regulatory monitoring, to service current and future population and climate adaptation	2024		
▸ **FUTURE IBC** 2b-2.1 Utility Operator Team Lead – Water Operations	Planned for 2025	$153K fee-for-service + requisition	1 New Ongoing

**Not captured in the 2022-2026 Corporate Plan*

06 Performance

GOAL 2A: HIGH QUALITY, SAFE DRINKING WATER

Targets & Benchmarks

The performance measures link to the CRD's goals of safe, sustainable and resilient water resources for the Capital Region.

Measuring Progress

Performance Measure(s)	Service	Type	2022 Actual	2023 Forecast	2024 Target
1. Regulatory Compliance[1]	Regional Water Supply	Quantity	None	None	None
	Juan de Fuca Water Distribution	Quantity	None	None	None
	Saanich Peninsula Water Supply	Quantity	None	None	None
	Local Services	Quantity	8	3	None
2. Water Quality Sampling (raw)[2]	Regional Water Supply	Quantity	15,589	17,174	17,174
	Local Services	Quantity	3,670	4,218	4,218
3. Water Quality Sampling (treated)[3]	Regional Water Supply	Quality	1,787	1,888	1,888
	Juan de Fuca Water Distribution	Quality	7,531	7,378	7,762
	Saanich Peninsula Water Supply	Quality	2,102	3,701	3,701
	Local Services	Quality	24,904	17,893	17,893
4. Demand[4]	Regional Water Supply	Quantity	359	340	340
	Juan de Fuca Water Distribution	Quantity	314	300	300
	Saanich Peninsula Water Supply	Quantity	479	420	420
	Local Services	Quantity	227.8	216.5	215.8

[1] Non-compliance with Island Health, provincial and federal regulatory requirements and operational certificates that result in Boil Water Advisories or Do Not Consume Events

[2] Water quality samples analyzed annually from source reservoirs (raw water)

[3] Water quality samples analyzed annually from transmission/distribution systems (treated water)

[4] Average day per capita water use (litres per capita per day)

Discussion

Measure 4. Demand: average day per capita water use (litres per capita per day)

- Regional Water Supply: Demand is plateauing due to the replacement of inefficient appliances and a surge of new high-density buildings with built-in water efficiencies
- Saanich Peninsula Water Supply: Driven by agricultural demand and lack of residential densification
- Local Services: Values represent the average of twelve services

GOAL 2B: RELIABLE & EFFICIENT DRINKING WATER TRANSMISSION SYSTEM

Target & Benchmarks

The performance measures link to the CRD's goals of safe, sustainable and resilient water resources for the capital region.

Measuring Progress

Performance Measure(s)	Service	Type	2022 Actual	2023 Forecast	2024 Target
5. Operating cost[5]	Regional Water Supply	Quantity	$111	$112	$115
6. Energy usage[6]	Regional Water Supply	Quantity	62.5	66	66
7. Watershed water release[7]	Regional Water Supply	Quantity	11,229	11,500	12,000
8. Water-main leak repairs[8]	Juan de Fuca Water Distribution	Quantity	8.2	10	8
	Local Services	Quantity	1	1	1
9. Preventative maintenance[9]	Regional Water Supply	Quality	86%	96%	98%
	Juan de Fuca Water Distribution	Quality	84%	94%	96%
	Saanich Peninsula Water Supply	Quality	97%	98%	98%
	Local Services	Quality	91%	98%	98%

[5] Annual operating cost per megaliter of drinking water treated and supplied/distributed

[6] Annual energy use (kWh) per megaliter of drinking water treated and supplied/distributed

[7] Volume of raw water released annually from Regional Water Supply watersheds to rivers to support fish habitat (megaliters)

[8] Number of water-main leak repairs and service line leaks annually per 100 kilometers of pipe (distribution systems)

[9] Preventative maintenance completed (% of planned)

Discussion

- N/A

07 Business Model

Water Supply & Distribution, Watershed Protection

PARTICIPANTS

Regional Water Supply: All Municipalities, Juan de Fuca Electoral Area, First Nations (via Distribution Systems)

Saanich Peninsula Water Supply: Municipalities (Central Saanich, North Saanich, Sidney)

JDF Water Distribution: Langford, Colwood, View Royal, Metchosin, Highlands, Sooke, Juan de Fuca Electoral Area

Local Water Service Areas in the Electoral Areas

FUNDING SOURCES

Regional Water Supply: Bulk water sales revenue

Juan de Fuca Water Distribution System: Retail water sales revenue in West Shore Municipalities

Saanich Peninsula Water: Wholesale water sales revenue

GOVERNANCE

Regional Water Supply Commission
Water Advisory Committee
Saanich Peninsula Water Commission
Juan de Fuca Water Distribution Commission
Various Local Services Commissions

Environmental Protection

PARTICIPANTS

Water Quality Service: Allocation from Integrated Water Services and Local Service Areas (LSA) from the municipalities of Regional Water Supply area, Juan de Fuca and various local service areas, Sidney, North Saanich, Central Saanich and Peninsula First Nations

Demand Management, Cross Connection Control Services: water rate from all Municipalities and Electoral Areas

Communications and Environmental Education: all Municipalities and Electoral Areas

FUNDING SOURCES

Water rate and requisition

GOVERNANCE

Regional Water Supply Commission
Water Advisory Committee
Saanich Peninsula Water Commission
Juan de Fuca Water Distribution Commission
Various Local Services Commissions

Making a difference...together

RWSC 23-10

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, OCTOBER 18, 2023

SUBJECT **Regional Water Service 2024 Operating and Capital Budget**

ISSUE SUMMARY

To provide an overview of the draft 2024 Regional Water Supply Service budget, highlighting the 2023 budget variance and the proposed 2024 budget figures. The report generally follows the information provided in the attached draft budget document (Appendix A).

BACKGROUND

The draft 2024 Regional Water Supply Service budget has been prepared for the Regional Water Supply Commission's (Commission) consideration. The Commission will make budget recommendations to the Capital Regional District (CRD) Board through the Committee of the Whole in October. The budget recommendations are also necessary to establish the wholesale water rate and approve the rate by year end through adopting a rate bylaw. As in previous years, the draft 2024 Regional Water Supply Service budget has been prepared considering the CRD Board's 2024 service planning and financial expectations, which include identifying opportunities to realign or reallocate resources and seek potential efficiencies between departments and services, reviewing service levels and adjustments related to regulatory compliance, and undertaking infrastructure improvements and upgrades to maintain service levels within the Region. The following sets out the key components of the budget.

2023 Year End Financial Projections

Year-end revenue and expenditure projections have been established and estimated variances, including the proposed capital fund transfer, are summarized as follows:

Budget Item	Variance ($)	Variance (%)
Supply System operating expenditures	$581,600	3.46%
Agricultural water rate funding	$150,000	9%
Capital fund transfers	$1,434,000	12%
Debt servicing - principal and interest expenditures	-$168,224	-2.19%
Revenue	$1,915,463	4.8%

The higher than budgeted operating expenditures were primarily due to labour costs associated with collective agreement settlement and inflationary cost increases of chemical supplies. The additional revenue is a result of higher water demand than budgeted due to outdoor demand during the summer and is partially offset by increased Agriculture water rate funding related to the higher demand. It is proposed to transfer the net surplus to the capital fund and reduce the borrowing requirement in 2024.

2024 Budget

Rate Base

The rate base for 2024 has decreased by $3,353,700 from 2023. This net decrease relates to physical plant additions, including the final capitalization of the Lubbe Dam safety improvements and Goldstream Gate Upgrade, offset by current year depreciation and the change in prior year estimates of additions and disposals. The changes in physical plant and work in progress are listed on page 3 of the budget document (Appendix A) and are used to project the 2023 year-end total physical plant value and determine the 2024 rate base.

Revenue Requirement

As summarized on page 4 of Appendix A, the revenue requirement for 2024 increased by $3,829,876. This is resulting from an increase in operational expenses of $1,772,800 (explained further below), a decrease in depreciation expenses of $930,730 and an increase in the return on the rate base of $2,987,800.

Operating Budget

The 2024 operating budget reflects an inflationary increase in non-discretionary expenses such as negotiated wage/salary increases, corporate support service allocation increases, and other operating expense adjustments, chemical and electricity costs, and vehicle costs. The net core 2024 operating budget increase is $1,193,329. As detailed in the 2024 Community Needs Summary there are four approved Initiative Business Cases with four associated positions incorporated within the 2024 budget. The following new positions have been added to support growth in Capital Plan activity and increasing regulatory pressures related to the Dam Safety Program: Contracts Coordinator, Purchaser with auxiliary support, Utility Operator, and Manager Dam Safety. Further details of the rational for these additions and service level improvements are included in the 2024 Community Needs Summary. The new positions result in ongoing additional budget request of $430,600 and a one-time expenditure of $69,200.

There are several environmental programs that are critical for the successful operation of the Regional Water Supply, these programs are summarized below.

- **Water Quality Operations Program** – As the core component of the Water Quality portfolio, the Program designs and executes the water quality monitoring and reporting for the source water as well as the treated water in the transmission system and across the CRD-owned and municipal distribution systems. The program also provides technical and scientific support to operations, planning and engineering in the Greater Victoria Drinking Water System.
- **Cross Connection Control Program** – Also part of the overall Water Quality portfolio, this Program reduces the risk of drinking water contamination by identifying potential cross connections and enforcing national and provincial plumbing code requirements.
- **Laboratory Services Program** – Provides a wide range of laboratory services for the CRD drinking water and wastewater operations. Lab services for drinking water operations are integral to the Regional Water Supply.
- **Demand Management Program** – Researches and tracks the various water uses in the Greater Victoria Drinking Water System in order to design and execute targeted initiatives

and campaigns aimed at influencing residential, industrial, institutional or agricultural water demand.

Operating budget forecasts for 2025 to 2028 are presented for information but are projections which will need to be refined in future years.

As it is anticipated that the Regional Water Supply Service will become the service provider for some First Nations in 2023, the budget has been prepared to reflect 'conveyance fee' payments, in the amount of $900,000 for 2024, that will fund operating expenses for those water systems required to convey water from the Regional Water Supply system to First Nations Reserve boundaries across Greater Victoria. The conveyance fee payments are subject to the completion of water service agreements with the participating Nations and operating agreements with the 'conveyors' that could include the Juan de Fuca Water Distribution Service, the Saanich Peninsula Water Service, the District of Central Saanich and the District of North Saanich.

Capital Budget

There are a number of capital projects planned for 2024 with a total value of $56,210,000, including $32,523,000 in carry forward projects, most of which are in-stream, multi-year projects such as the dam safety upgrades, instrumentation integration and upgrades, the Transmission Mains No. 3 and No. 4 segment replacement project, the Goldstream Water Treatment Plant ultraviolet system replacement project, and the Watershed Field Office building project. There is also $2,378,000 in projects cost-shared with the Juan de Fuca Water Distribution Service (pages 10 to 45 of the budget document). The new projects in 2024, aside from the carry forward projects, include a dock for Sooke Lake Reservoir, seismic and flood vulnerability study of Mains 10 and 11, Agricultural Water Rate review, Sooke River Road Water Treatment Plant Uninterruptible Power Supply replacement, Head Tank valve replacement, reservoir log boom upgrade program, laboratory equipment replacements and laboratory renovations.

A five-year capital plan is presented for consideration. The value of the five-year (2024 to 2028) capital plan is currently $220,372,250, plus $4,756,000 in projects cost-shared with the Juan de Fuca Water Distribution Service. The CRD is continuing with Phase 2 of the Regional Water Development Cost Charge (DCC) Program with the goal of implementation in 2025. The need for such a program was identified in the CRD 2023-2026 Corporate Plan and the 2022 RWS Master Plan and will be used to fund growth-related regional water supply system improvements. In the 5-year capital plan approximately $40,000,000 dollars in growth related projects could be funded in part from the proposed DCC program.

Capital and Debt Expenditures

The 2024 capital expenditures will be partially funded through a transfer to the water capital fund budgeted at $17,450,000, with the balance funded from existing cash reserves and borrowed funds. See pages 10 and 11 of the budget document (Appendix A) for the funding source summary. The 2024 debt expenditures for existing debt servicing are budgeted to be $2,896,242. Debt servicing expenditures will decrease by $4,794,743 over 2023 due to reduced principal and interest payments on debt issues maturing in 2023. Additional projected water sales revenue and corresponding capital reserve fund transfer will reduce the borrowing needs in 2024. There is an existing loan authorization of $46,000,000 (approved 2021) of which $42,000,000 will be used to

fund the five-year capital plan. A new loan authorization will be required in 2026. The upcoming debt retirements on existing borrowings are summarized as follows:

Loan Number	Retirement Date	Loan Amount
LA3419-105	June 2024	$9,000,000
LA3419-106	October 2024	$1,000,000
LA3661-112	October 2025	$6,500,000
LA3661-116	April 2026	$1,500,000
LA3661-118	April 2027	$4,500,000
LA3661-124	April 2028	$1,700,000
LA3902-131	April 2030	$3,000,000
LA3902-137	April 2031	$1,500,000
LA3902-145	April 2033	$5,000,000
LA4382-159	June 2038	$4,000,000
LA4382-15X	April 2039 to 2040	$24,000,000

When assessing key financial health indicators, the service maintains an affordable level of debt over the next five years. While the debt funding for capital investment over the next five years does exceed the 40% benchmark for years 2025 and 2026, the percentage of revenue dedicated to debt costs is forecast to be between 7% and 14%, which is less than an annual benchmark rate of 25%. A summary indicator table is provided below:

Year	% Revenue for Debt	Capital Funded by Debt
2024	7.0%	12.7%
2025	7.6%	44.7%
2026	10.0%	55.8%
2027	13.2%	39.5%
2028	13.5%	14.3%

The Regional Water Supply five-year capital plan and 2022 Master Plan reflects a capital program developed to meet today's service requirements and growth needs while also ensuring the future resilience of the utility for generations to come. Through development of the DCC program and long term asset management plan completions, the future debt needs will be refined. Capital and debt funding decisions are made in alignment with the life span of the assets to address inter-generational equity, balancing the cost of infrastructure between past, current and future users. The current long-term debt obligations are summarized on the attached graphs (Appendix B).

A $479,755 transfer to the vehicle/equipment replacement fund is planned in 2024. The reserve fund balance is estimated at $ 2,326,323 at year-end 2023 (See reserve schedule – Page 45 of the budget document, Appendix A).

Agricultural Water Rate Funding

The total budget for the agricultural water rate funding has been increased by $50,000 to $1,800,000. The 2024 agricultural water rate has been maintained at the 2023 rate of $0.2105 per cubic metre. The Regional Water Supply agricultural water rate budget funds the difference between the municipal retail water rate and the CRD agricultural water rate. While the bulk water rate has increased annually, the agricultural rates has been held at $0.2105 per cubic metre since the rates was assessed in 2010. As directed by the Commission, Phase 1 of an agricultural water rate review and options study was conducted in undertaken in 2022/2023. A further study, Phase 2, is planned for 2024, which will consider options for the rates structure that best reflect the agricultural value. It is anticipated that any changes to the rate or rate methodology resulting from the study would take effect in 2025.

A summary of the agricultural water volumes and agricultural water rate payments for 2011 to 2022 is attached as Appendix C.

Water Demand

Total water demand across the Region has generally continued to increase year over year, recently due to the continued rate of development and growth. In 2023, the dry hot summer further increased demand beyond development and growth pressures. These factors are expected to result in actual demand exceeding budget demand in 2023; the 2023 year-end demand is projected to be 2,500,000 cubic metres over budget of 49,500,000 cubic metres.

The recommended 2024 water rate has been calculated using a budget demand of 51,000,000 cubic metres (Page 7 of the budget document, Appendix A), which is 1,500,000 cubic metres more than the volume used in the 2023 budget.

Proposed 2024 Wholesale Water Rate

The recommended wholesale water rate takes into consideration the revenue required to meet operating and capital expenditures, including debt obligations and the budget demand volume established for 2024. The proposed 2024 wholesale rate is $0.8094 per cubic metre, a 5.14% increase over the 2023 rate. The increase in annual bulk water cost for the average household using 235 cubic metres per year would be $9.31 (Page 8 of the budget document, Appendix A).

Wholesale Water Rate History and Projection

The wholesale water rate history and projection is attached as Appendix D. The rates may be adjusted in the future to reflect actual revenue and expenditure circumstances and water demand volumes.

ALTERNATIVES

The Regional Water Supply Commission recommends that the Committee of the Whole recommend that the Capital Regional District Board:

1. Approve the 2024 Operating and Capital Budget and the Five Year Capital Plan;
2. Approve the 2024 wholesale water rate of $0.8094 per cubic metre;

3. Approve the 2024 agricultural water rate of $0.2105 per cubic metre;
4. Direct staff to balance the 2023 actual revenue and expense on the transfer to the water capital fund;
5. Direct staff to update carry forward balances in the 2024 Capital Budget for changes after year end; and
6. Direct staff to amend the Water Rates Bylaw accordingly.

Alternative 2
The Regional Water Supply Commission recommends that the Committee of the Whole recommend that the Capital Regional District Board:

1. Approve the 2024 Operating and Capital Budget and the Five Year Capital Plan as amended;
2. Approve the 2024 wholesale water rate as amended (amended rate);
3. Approve the 2024 agricultural water rate of $0.2105 per cubic metre;
4. Direct staff to balance the 2023 actual revenue and expense on the transfer to the water capital fund;
5. Direct staff to update carry forward balances in the 2024 Capital Budget for changes after year end; and
6. Direct staff to amend the Water Rates Bylaw accordingly.

IMPLICATIONS

If the proposed budget is amended, the implications could vary depending on how the budget is amended and the impact on specific initiatives (i.e., new initiatives), on-going operations, or the capital work program. 'One-time' reductions in reserve fund contributions could be considered by the Commission to help mitigate the budget and rate increases, but additional capital financing could result in the longer term. Although staff have not recommended amending the agricultural water rate for 2024, the rate and rate methodology is under review this year and the Commission will consider the rate review recommendations in 2025.

Any changes in the recommended wholesale water rate would have to be incorporated in the Juan de Fuca Water Distribution Service and Saanich Peninsula Water Service budgets and rates.

CONCLUSION

The draft 2024 Regional Water Supply Service budget has been prepared for the Regional Water Supply Commission's consideration. The budget was prepared considering the Commission and CRD Board's 2024 service planning and financial expectations. A proposed increase in operating and capital funding combined with an adjusted revenue budget, is resulting in a recommended wholesale water rate of $0.8094 per cubic metre, a 5.14% increase over the 2023 rate.

RECOMMENDATIONS

The Regional Water Supply Commission recommends that the Committee of the Whole recommend that the Capital Regional District Board:

1. Approve the 2024 Operating and Capital Budget and the Five Year Capital Plan;
2. Approve the 2024 wholesale water rate of $0.8094 per cubic metre;

3. Approve the 2024 agricultural water rate of $0.2105 per cubic metre;
4. Direct staff to balance the 2023 actual revenue and expense on the transfer to the water capital fund;
5. Direct staff to update carry forward balances in the 2024 Capital Budget for changes after year end; and
6. Direct staff to amend the Water Rates Bylaw accordingly.

Submitted by:	Alicia Fraser, P.Eng., General Manager, Integrated Water Services
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Ted Robbins, B.Sc., C.Tech., Chief Administrative Officer

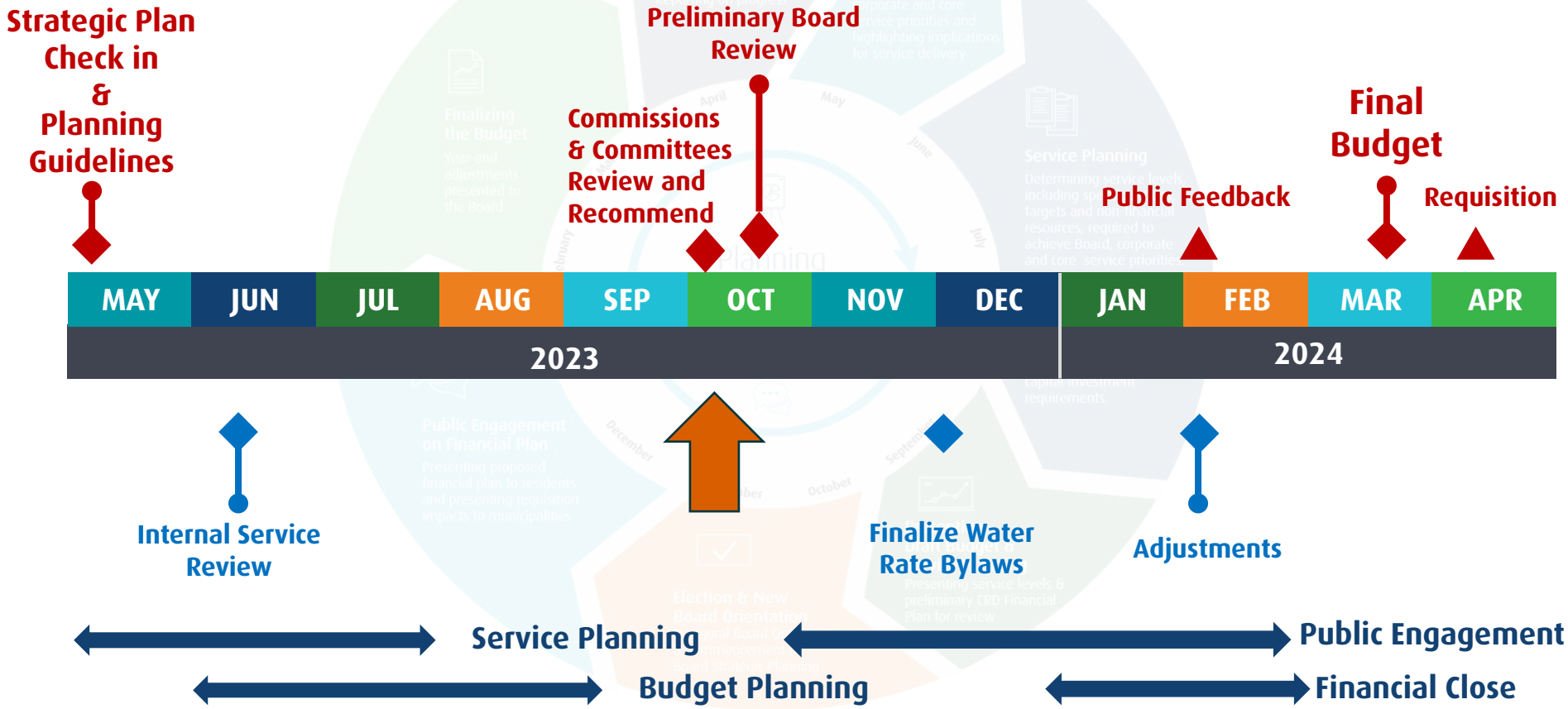
ATTACHMENTS

Presentation: Regional Water Service Budget Review
Appendix A: 2024 Regional Water Supply Service Budget
Appendix B: Long Term Debt Obligations Summary
Appendix C: Agricultural Water Volumes and Rate Payments for 2011 – 2022
Appendix D: Wholesale Water Rate History and Projection

Regional Water Supply 2024 Budget Review

Regional Water Supply Commission
October 18, 2023

Budget Process Overview



2024 Budget Considerations

- 2023 Budget – year end budget projections
- Community Needs Summary
- Existing Asset Condition, Infrastructure Growth and Resiliency Needs
- Operating budget adjustments
- Capital funding & debt servicing
- Water demand projection and trends

Current System Overview

Treat over 50,450 ML/yr

122.5 kilometers of Transmission Main

25 RWS Operations Staff

Manage 15 Dams

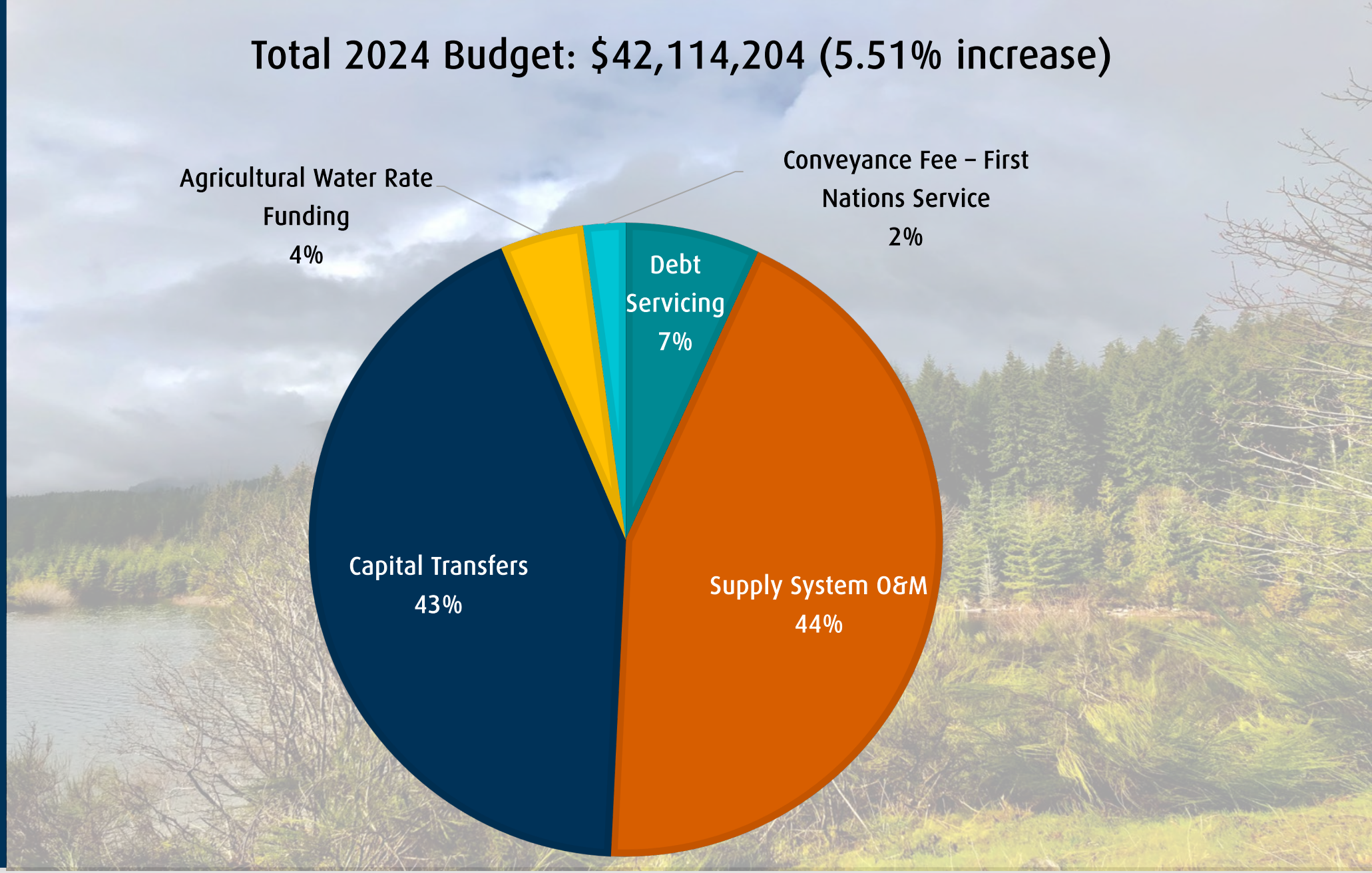
20,611 ha of Protected Watershed

2023 Year End Projections

Budget Item	Variance ($)	Variance (%)
Supply System operating expenditures	$581,600	3.46%
Agricultural water rate funding	$150,000	8.57%
Capital fund transfers	$1,434,000	11.65%
Debt servicing - principal and interest expenditures	-$168,224	-2.19%
Revenue	$1,915,463	4.80%

2024 Budget Overview

Breakdown of Expenditures



2024 Rate Base & Revenue Requirement

2024 Rate Base: $3,353,701 decrease	
2023 new assets capitalized (projected)	$12,336,888
2023 depreciation & asset value adjustments	-$15,687,588
Resulting 2023 change in physical plant	-$3,350,700
2023 construction work in progress (projected)	$11,685,562

2024 Revenue Requirement: $3,829,876 Increase	
2023 - 2024 O&M expense (change)	$1,772,806
2023 - 2024 depreciation (change)	-$930,730
Return on rate base (change)	$2,987,800

2024 Budget Overview

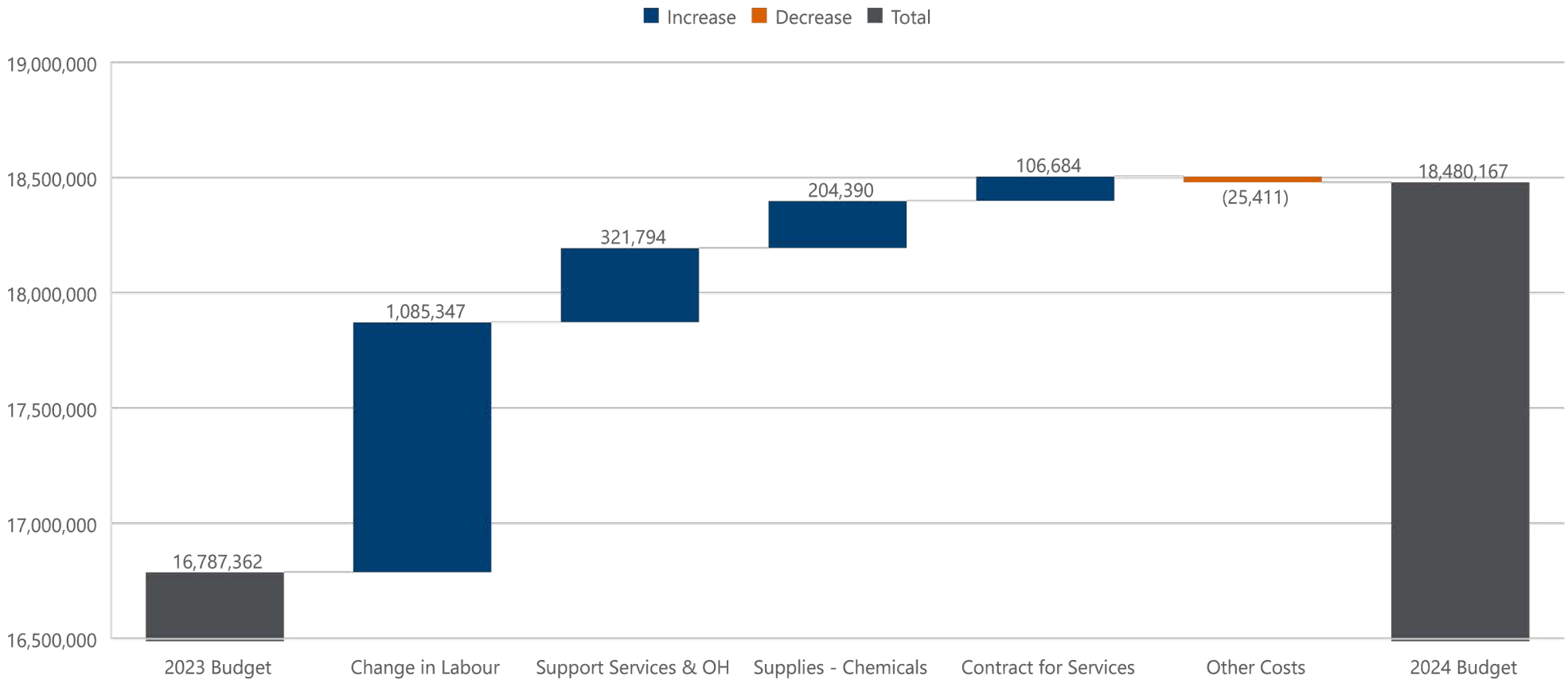
Operating Expenditures

Overview:

Core Operations: $18,480,167 (10.08%)

Highlights:

- Incorporates cost escalations in chemical identified in 2023
- Increases resulting from inflationary pressures and collective agreement obligations retroactive from 2023
- Includes four increased service level initiatives



2024 Budget Overview

Water Community Need Initiatives

Overview:

- Community Need Summary includes four Initiative Business Cases
- The new positions result in ongoing additional budget request of $430,600 and a one-time expenditure of $69,200.

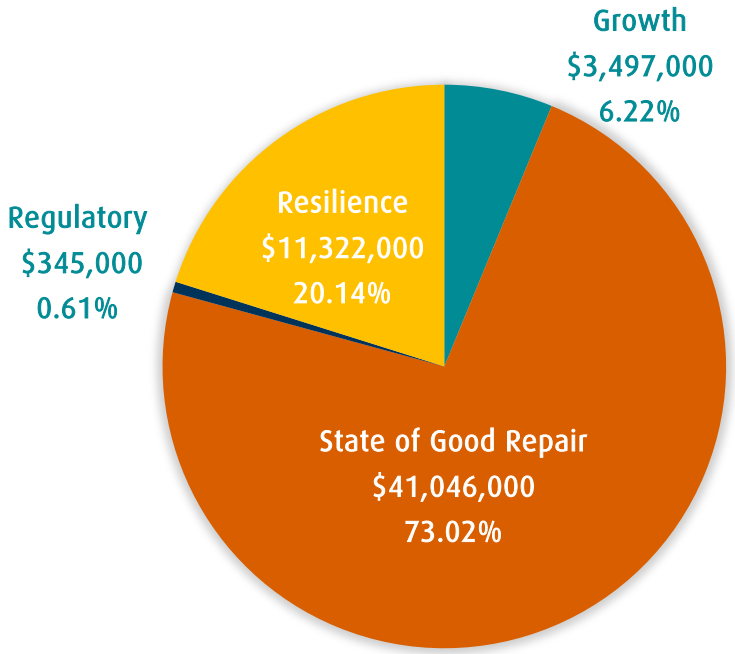
Initiative Reference	Program Area	Business Driver - Rational	Staff impacts (2024)	Funding source
2a-2.1	Contracts Coordinator	Increased capacity to support water and wastewater capital programs	1 Auxiliary Converted	Fee-for-service
2a-2.2	Purchaser	Increased capacity to support water and wastewater capital programs	1 New Ongoing	Fee-for-service & Requisition
2a-8.1	Water Quality Sampling Technician	Additional capacity to meet growing drinking water monitoring requirements	Increase to daily hours	Fee-for-service & Requisition
2b-1.1	Dam Safety Program	Creation of a dedicated Dam Safety Team responsible for managing the 23 water supply dams (15 RWS) to ensure compliance with the Dam Safety Regulation and Water Sustainability Act.	2 New Ongoing	Fee-for-service

2024 Budget Overview

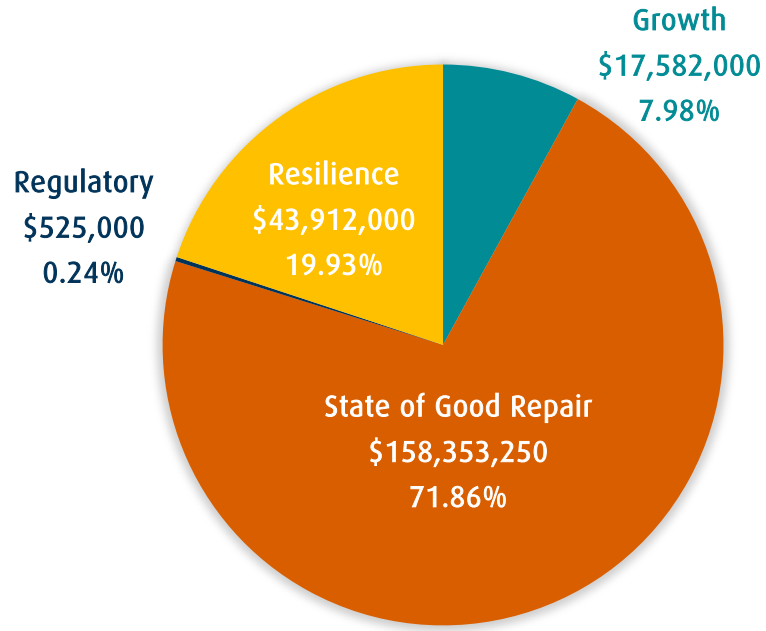
Capital Plan

Overview (millions)	RWS	50% of JDF/RWS Combo	Total
Projects in Progress	$ 32.523	$ 1.060	$ 33.583
2024 Capital Budget	$56.210	$ 1.455	$57.665
5-Year Capital Budget	$220.372	$ 2.378	$222.750

RWS 2024 TOTAL $56,210,000



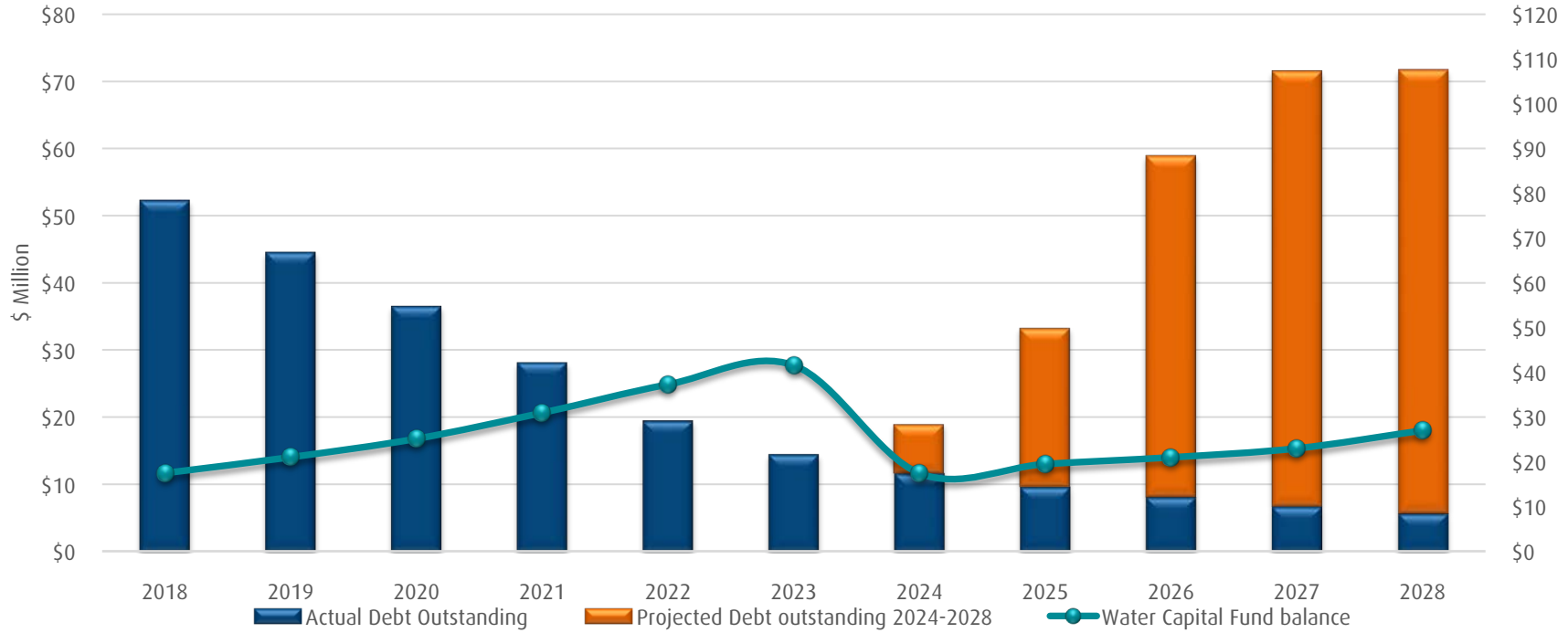
RWS 2024 -2028 TOTAL $220,372,250



2024 Budget Overview

Outstanding Debt & Capital Funding

2024 Transfer	2024 Budget	Budget change (over 2023)
Water Capital Fund	$17,450,000	$5,147,896
Debt Reserve Fund	$108,040	-$13,660
Equipment Replacement Fund	$479,755	$86,102
Total Capital Transfers	**$18,037,795**	**$5,220,338**
Debt Servicing	**$2,896,242**	**$(4,794,743)**



2024 Budget Overview

Water Rate Funding

First Nations Regional Water Service

2024 Conveyance Fee Budget

$900,000 (+3.4%)

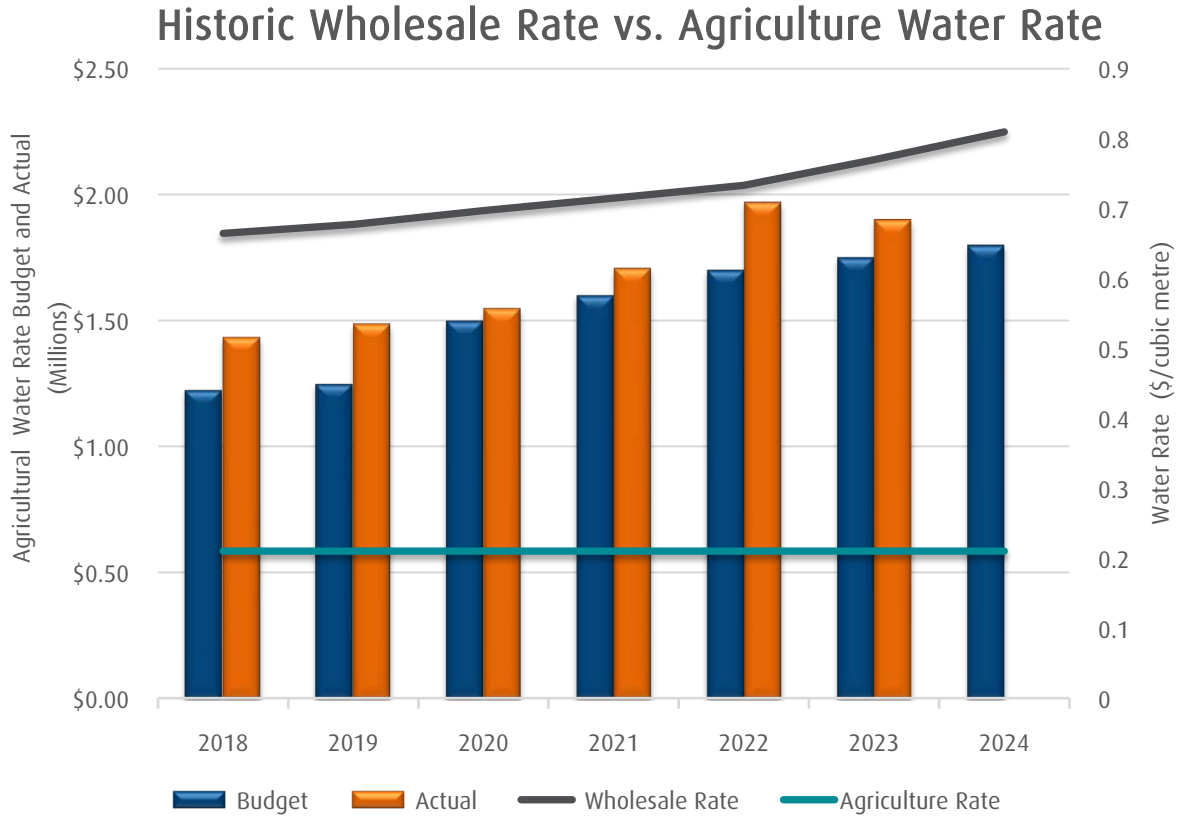
Agricultural Water Rate

2024 Agricultural Water Rate

$0.2105 / m³ (0%)

2024 Agricultural Water Rate Budget

$1,800,000 (+2.86%)



2024 Budget Overview

Wholesale Rate History & Projection

Overview:

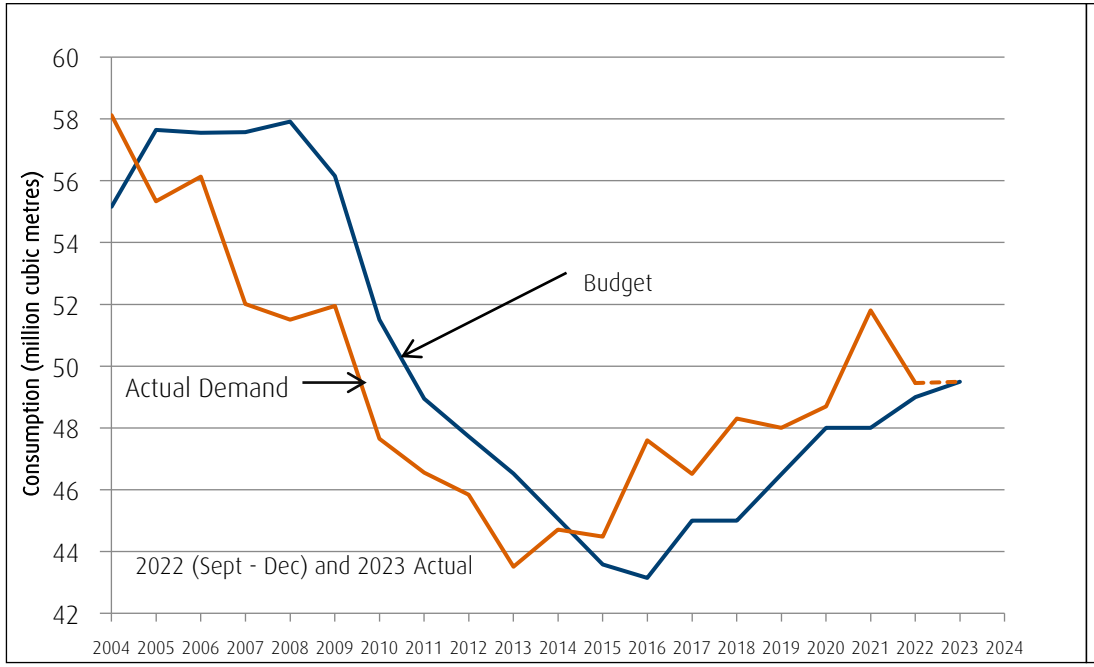
2023 Projected Actual Demand:
52,000,000 cubic metres

2024 Projected Water Demand:
51,000,000 cubic metres
(+ 1,500,000 cubic metres)

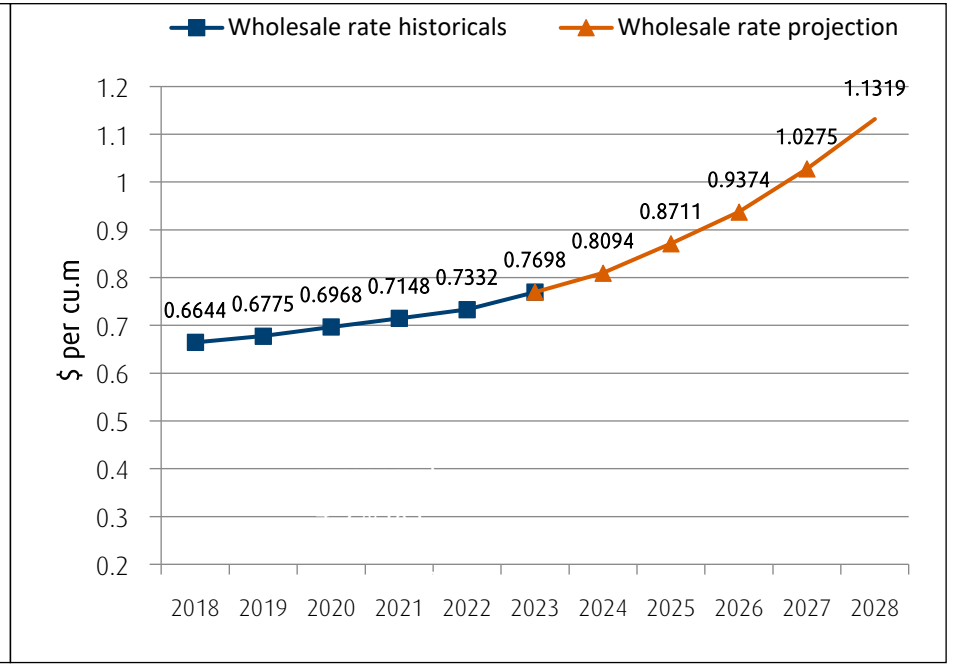
2023 Wholesale Rate: $0.7698
2024 Wholesale Rate: $0.8094 (+5.14%)

2024 rate is below rate indicated for 2024 in 2023 budget ($0.8228)

Regional Water Supply Annual Demand



Regional Water Supply Service (Greater Victoria)
Wholesale Water Rate Historicals & Projections



2024 Budget Overview

Water Demand and Rates

2024 Total Revenue Budget: $42,114,204

- **2024 Budget Water Demand:**
  51,000,000 cubic metres (+1,500,000 cubic metres)
- **2024 Regional Water Supply Wholesale Rate:**
  $0.8094 / cubic metre (+5.14%)
- **2024 Agricultural Rate:**
  $0.2105 / cubic metre (0%)
- **Annual cost increase to average residential consumption:**
  $9.31

Budget Overview

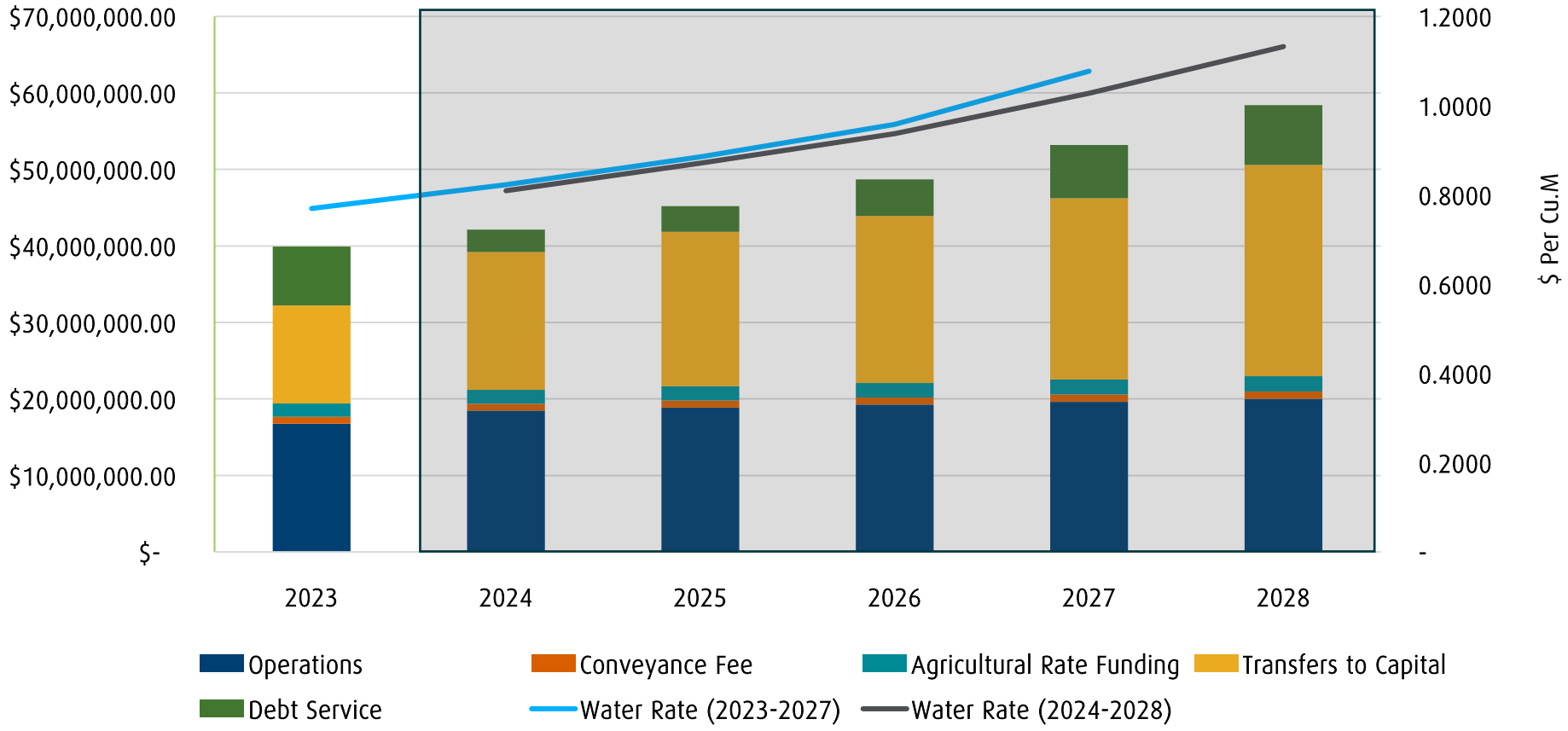
Multi-Year Projection

Overview:

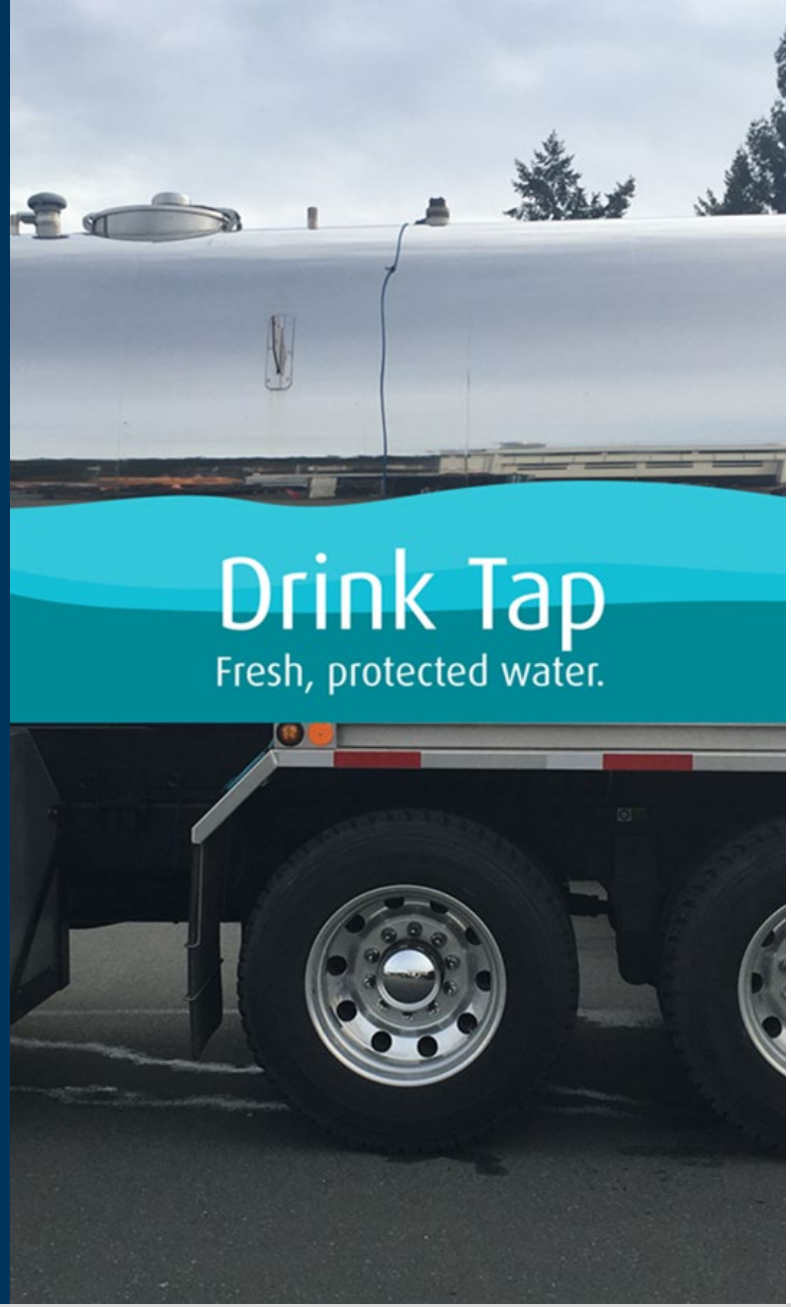
2023 RWS budget: $39,915,804
2024 RWS budget: $42,114,204 (+5.51%)
2024-2028 Average Water Rate Increase: 8%

Drivers:

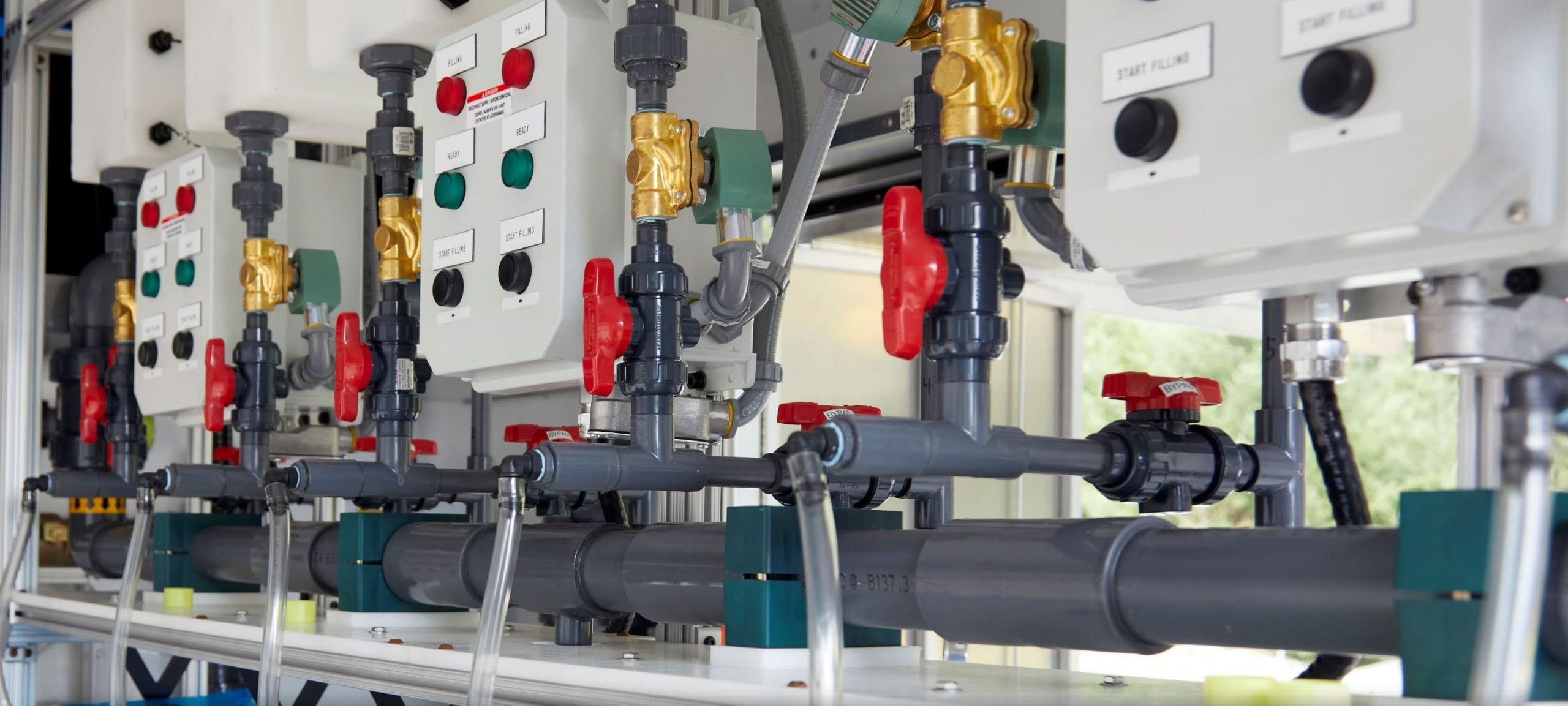
Growing Capital Program linked to development, Master Plan and aging infrastructure



Budget Recommendations



1. Approve the 2024 Operating & Capital Budget & Five Year Capital Plan;
2. Approve the 2024 wholesale water rate of $0.8094 per cubic metre;
3. Approve the 2024 agricultural water rate of $0.2105 per cubic metre;
4. Direct staff to balance the 2023 actual revenue and expense on the transfer to the water capital fund;
5. Direct staff to update carry forward balances in the 2024 Capital Budget for changes after year end; and
6. Direct staff to amend the water rates bylaw accordingly.



Thank You

@crdvictoria

Capital Regional District

CRDVictoria

Crd.bc.ca

CAPITAL REGIONAL DISTRICT

2024 BUDGET

Regional Water Supply

COMMISSION REVIEW

OCTOBER 2023

Service: 2.670 **Regional Water Supply** **Commission: Regional Water Supply**

DEFINITION:

To finance, install, operate and maintain a water supply local service in the Capital Regional District, as per the Water Supply Local Service Establishment Bylaw No. 2537.

The establishment and operation of a Regional Water Supply Commission is done by Bylaw No. 2539.

SERVICE DESCRIPTION:

Regional Water Supply is responsible for the water supply, treatment and transmission system for the Greater Victoria region, providing wholesale water to municipalities that operate municipal distribution systems. The service administration and operation is provided by the Integrated Water Services Department.

PARTICIPATION:

City of Victoria	Town of Sidney	District of Metchosin
District of Oak Bay	District of North Saanich	District of Sooke
District of Saanich	Town of View Royal	Juan de Fuca Electoral Area
Township of Esquimalt	City of Colwood	District of Highlands
District of Central Saanich	City of Langford	

MAXIMUM LEVY:

No stated limit in establishment bylaw and no ability to requisition.

MAXIMUM CAPITAL DEBT:

Authorized:	Pre Consolidated MFA Loan Authorizations - Regional Water Supply Water Works Facilities		$137,700,000
Borrowed:			$91,400,000
Remaining:	Expired		$46,300,000
Authorized:	LA Bylaw No. 3451 - Regional Water Supply Land Acquisition		$60,000,000
Borrowed:			$60,000,000
Remaining:			$0
Authorized:	LA Bylaw No. 3902 - Regional Water Supply Water Works Facilities	2014	$12,500,000
Borrowed:			$9,500,000
Remaining:	Expired		$3,000,000
Authorized:	LA Bylaw No. 4382 - Regional Water Supply Water Works Facilities	2021	$46,000,000
Borrowed:			$4,000,000
Remaining:	Active		$42,000,000

FUNDING:

Costs are recovered through the sale of bulk water.

Change in Budget 2023 to 2024 **Service: 2.670 Regional Water Supply**	**Total Expenditure**	**Comments**
2023 Budget	**39,915,803**	
Change in Labour:		
Salaries and benefits	694,136	Collective agreement changes
1.0 FTE Contracts Coordinator	86,176	IBC 2a-2.1 IWS Administrative Contracts Coordinator
1.0 FTE Purchaser + Auxiliary	168,300	IBC 2a-2.2 IWS Purchaser and Auxiliary support
1.0 FTE Utility Operator	122,300	IBC 2b-1.1 Water Operator - Dam Safety Program
1.0 FTE Manager Dam Safety	188,039	IBC 2b-1.1 Engineer - Dam Safety Program
	(173,604)	Existing operating budgets IBC 2b-1.1 Engineer - Dam Safety Program
Total Change in Labour	1,085,347	
Other Changes:		
Transfer to Capital	5,220,338	Increase in Capital Fund and Reserve transfers
Support Services and Overhead Costs	321,794	Includes Standard Overhead, HR, Insurance, Customer and Technical Services allocations
Supplies - Chemicals	204,390	
Contracts for Services	106,684	
Agriculture Water Rate Funding	50,000	
Principal & Interest Payments	(4,794,743)	Principal and interest savings for debt retirement of: LA3451-103 of $60m; LA3419-103 of $7m; LA3419-104 of $8m
Other Costs	4,590	
Total Other Changes	1,113,053	
2024 Budget	**42,114,204**	

Summary of % Expense Increase	
Change in labour costs	2.7%
Change between capital and debt funding	1.1%
Chemical Supplies	0.5%
Contracts for Services	0.3%
Balance of increase	0.9%
% expense increase from 2023:	***5.5%***

Overall 2023 Budget Performance
(expected variance to budget and surplus treatment)

Favourable water sales variance of $1.9m (5%) due to higher than budgeted water demand largely a result of dry summer weather. This additional revenue is partially offset by Agricultural Subsidy exceeding budget by $150k, and operational costs exceeding budget in the following areas: wages and benefits ($200k) and chemical supplies ($160k). The net surplus of $1.4m will be transferred to the service's Water Capital Fund.

Rate Base for 2024 Revenue Year

	2022 Application	2023 Application	End of 2023 for '24 Applic.	Change	
Wholesale System					
Physical Plant	$ 233,870,414	$ 235,712,793	$ 232,362,092	$ (3,350,700)	Note 1
Construction Work In Progress	9,949,386	11,671,851	11,685,562	13,711	Note 1
Cash Working Capital	2,188,278	2,627,965	2,611,253	(16,712)	
Inventory	225,000	225,000	225,000	-	
Total Wholesale Rate Base	$ 246,233,078	$ 250,237,609	**$ 246,883,907**	$ (3,353,701)	

Note 1: Refer to the Schedule of Change in Physical Plant & work in Progress for details.

Revenue Requirements for 2024 Year

	2022 Application	2023 Application	2024 Application	Change	
Wholesale					
Operations & maintenance	$ 17,749,367	$ 19,407,361	$ 21,180,167	$ 1,772,806	
Depreciation	7,591,503	8,090,249	7,159,519	$ (930,730)	
Return on rate base	11,166,400	10,532,300	13,520,100	$ 2,987,800	Note 1
Subtotal of above	$ 36,507,270	$ 38,029,910	$ 41,859,786	$ 3,829,876	
Non-rate revenue including unaccounted water revenue	(582,060)	(582,060)	(582,060)	$ -	
Total wholesale	$ 35,925,210	$ 37,447,850	$ 41,277,726	$ 3,829,876	

Note 1: Return on rate base is calculated with reference to the long term Canada bond rate & the average debt rate.

APPENDIX A

Schedule of Change in Physical Plant & Work In Progress

Wholesale

Projected Asset Additions	Projected Assets Capitalized
Lubbe Dam Safety Improvements	$ 2,899,427
Goldstream Gate Upgrade	2,319,860
Dam Breach Assessment	1,224,187
Dam Improvements	666,172
Post Disaster Emergency Water Supply	454,860
Sooke River Road Disinfection Facility Upgrade	396,607
Replace disinfection equipment	394,697
SCADA	387,218
Japan Gulch Treatment Plant Upgrades	359,740
Watershed Security Enhancements	332,869
Meter Replacement	311,412
Valve Chamber Uprgrades	280,114
Transmission System Component Replacement	280,000
PIPES	230,786
Watershed Culvert Replacement	150,000
WQ Main Lab Renovation	135,000
Hydraulic Capacity Assessment	131,602
Water Supply Eqpt Upgrades	115,000
Seismic Assessment	91,294
UV Plant Safety Audit	90,968
Swanson Creek Culvert	90,000
Cathodic Protection Program	85,493
Sooke and Goldstream Lakes Assessment	75,000
Goldstream WTP	72,802
ATV with Tracks	59,056
ELEC-Hydrology Equipment 2023	57,825
Saddle Dam Feasibility Study	54,629
Corrosion Protection	50,000
Other Projects (32 minor projects under $50k)	540,270
Total projected assets capitalized	$ 12,336,888
Less: current year's depreciation	(6,231,899)
Less: change in prior year forecast addition estimates, & disposals	(9,455,689)
Change in Physical Plant	$ (3,350,700)

Projected Construction Work In Progress (CWIP)	Projected Assets CWIP
Japan Gulch Treatment Plant Upgrades	$ 1,718,269
Goldstream Field Operations Centre	1,316,820
Dam Safety Review	1,183,024
Sooke Dam Safety Improvements	1,069,750
Major Main Repairs	936,110
Road Upgrades	551,500
Radio Upgrades	539,531
Supply System	455,375
SCADA	364,260
Sooke Lake Hydrodynamic Model	299,470
Assesments	279,004
Pump Stations	256,298
Reservior	223,543
Hydrology Stations	206,312
Lab Information Management System	200,000
Powerhouse Interpretive Signage	200,000
Strategic Asset Management Plan	197,465
SCADA Repairs and Equipment Replacement	168,217
GVWSA	165,252
Meter Replacement	162,798
Goldstream Treatment Plant Drainage Improvements	155,061
Dam Safety Improvements	103,816
Critical Equip Storage Building	97,691
Dam Decommissioning	92,665
Water Quality Database Upgrade	91,881
Post Disaster Emergency Water Supply	80,000
Sooke Lake Dam Spillway Hoist	62,738
Transmission system component upgrades	59,855
Treatment Plant Emergency Automation	57,626
GVWSA Road Rehabilitation	52,034
Cross Connection	52,022
Watershed Security Enhancements	50,000
Other Projects (21 minor projects under $50k)	237,175
Projected CWIP	$ 11,685,562
Less Prior year's projected CWIP	(11,671,851)
Change in CWIP	$ 13,711

Schedule A
Asset Useful Life Assignments - PSAB

Classes:	Code	Asset Categories	Useful Life, Years
Land	LAND	Land & Rights of Way * (Note 1)	N/A
Building	BLDG	Building, Permanent	50
	BLOT	Building, Temporary/ Portable	20
	BLFX	Building fixture (*sprinklers)*	20
Equipment	BOAT	Boats & Marine Equipment	10
	COMP	Computer Equipment (*includes software*)	5
	ELEC	Electronic Equipment(*hydromet, weather stn eqpt)*	5
	FIRE	Fire & Safety Equipment	10
	GENT	Generator	20
	HYDR	Hydrants and Standpipes	20
	HYDY	Hydrology	10
	MTRS	Meters	20
	OFFE	Office Equipment	5
	OFFF	Office Furniture	10
	SCDA	SCADA Equipment	10
	SCRN	Intake Screens/Membranes *(stop logs)*	20
	SHOP	Shop Equipment	10
	TELE	Telecommunication Eqpt (*radios, phone systems*)	10
	WEQP	Water Works Eqpt(*W.Quality lab, Wshed eqpt)*	10
	NEW GRP	Weather stn & communication tower	15
Vehicle	VEHC	Vehicles	8
Engineering Structure	BRDG	Bridge	50
	CANL	Canal	50
	DAMS	Dam Structures	100
	PIPE	Pipelines, includes Vaults, Kiosks, Valve chambers	75
	PIPF	Pipelines, fittings	20
	PLPV	Parking lot paved	40
	PSEQ	Pump Station Equipment	20
	PSHS	Pump Station Housing	50
	PRVS	Valves, Flushes & PRV's	20
	RDGR	Roads gravel	20
	RDPV	Roads paved	40
	RESS	Reservoirs (steel & concrete)	50
	REST	Reservoirs (tower/tank)	35
	TANK	Storage tank	40
	TELP	Telephone and Power Lines	50
	TUNN	Tunnel, Culvert and Diversions	50
	WATP	Water Treatment Plant	25
	WELL	Wet well/ Well	50
Other Assets	CSTU	Capital Management Studies	5
	FENC	Fences	15
	LIMP	Land & Yard Improvements	20

Note 1: Land is not depreciated so a useful life assignment is not applicable.

2024 Demand Estimate

Wholesale Demand

Years	Actual Demand cu.metre		Budgeted Demand cu.metre
2017	46,515,000		45,000,000
2018	48,300,036		45,000,000
2019	47,734,121		46,500,000
2020	48,730,475		48,000,000
2021	51,797,082		48,000,000
2022	50,297,409		49,000,000
2023	52,000,000	1	49,500,000
2024 Demand Estimate	**51,000,000**		

1. Projected consumption for 2023

APPENDIX A

Summary of Wholesale Water Rates

	2020	2021	2022	2023	2024	Change $ per cu.m.	Change %
Wholesale water rate							
Unit cost per cu.m.	$0.6968	$0.7148	$0.7332	$0.7698	$0.8094	$0.0396	5.14%

Wholesale Water Rate Increase
Impact on Residential Water Bill

Average Annual Consumption : 235.0 cubic metres

Charge for Twelve Months Consumption		Annual Charge	2024 Annual Change $
Average Consumption	2023 Year	$ 180.90	
	2024	$ 190.21	$ 9.31
Half Average Consumption	2023 Year	$ 90.45	
	2024	$ 95.10	$ 4.65
Twice Average Consumption	2023 Year	$ 361.81	
	2024	$ 380.42	$ 18.61

CAPITAL REGIONAL DISTRICT

Program Group: CRD-Regional Water Supply

SUMMARY	2023 BOARD BUDGET	2023 ESTIMATED ACTUAL	2024 BUDGET REQUEST: 2024 CORE BUDGET	2024 BUDGET REQUEST: 2024 ONGOING	2024 BUDGET REQUEST: 2024 ONE-TIME	2024 BUDGET REQUEST: TOTAL (COL 4, 5 & 6)	FUTURE PROJECTIONS: 2025	2026	2027	2028
1	2	3	4	5	6	7	8	9	10	11
GENERAL PROGRAM EXPENDITURES:										
WATERSHED PROTECTION	5,942,432	6,334,369	6,787,022	-	-	6,787,022	6,922,762	7,061,218	7,202,442	7,346,490
WATER OPERATIONS	6,683,286	6,902,405	7,212,805	172,500	-	7,385,305	7,590,398	7,742,209	7,897,051	8,054,965
WATER QUALITY	1,925,729	1,934,678	2,045,342	-	-	2,045,342	2,084,709	2,126,416	2,168,946	2,212,320
CROSS CONNECTION	770,923	760,773	800,530	-	-	800,530	816,651	833,088	849,858	866,949
DEMAND MANAGEMENT	726,084	734,722	761,302	-	-	761,302	776,648	792,297	786,596	802,431
INFRASTRUCTURE ENGINEERING	527,884	527,884	553,230	24,300	-	577,530	574,450	585,930	597,650	592,540
FLEET OPERATION & MAINTENANCE	(393,653)	(393,653)	(479,755)	-	-	(479,755)	(489,350)	(499,137)	(509,120)	(519,303)
CUSTOMER TECHNICAL SERVICES & GM SUPPORT *	604,677	567,820	299,891	233,800	69,200	602,891	609,342	623,005	636,956	651,221
TOTAL OPERATING EXPENDITURES	16,787,362	17,368,998	17,980,367	430,600	69,200	18,480,167	18,885,610	19,265,026	19,630,379	20,007,613
Percentage increase over prior year's board budget			7.11%			10.08%	2.19%	2.01%	1.90%	1.92%
CONVEYANCE FEE FOR SERVICE TO FIRST NATIONS	870,000	870,000	900,000	-	-	900,000	918,000	936,360	955,090	974,190
AGRICULTURAL WATER RATE FUNDING	1,750,000	1,900,000	1,800,000	-	-	1,800,000	1,850,000	1,900,000	1,950,000	2,000,000
			2.86%			2.86%	2.78%	2.70%	2.63%	2.56%
CAPITAL EXPENDITURES &TRANSFERS										
TRANSFER TO WATER CAPITAL FUND	12,302,104	13,735,852	17,450,000	-	-	17,450,000	19,500,000	21,000,000	23,000,000	27,000,000
TRANSFER TO EQUIPMENT REPLACEMENT FUND	393,653	393,653	479,755	-	-	479,755	489,350	499,137	509,120	519,302
TRANSFER TO DEBT RESERVE FUND	121,700	40,000	108,040	-	-	108,040	202,040	319,040	202,540	84,040
TOTAL CAPITAL EXPENDITURES & TRANSFERS	12,817,457	14,169,505	18,037,795	-	-	18,037,795	20,191,390	21,818,177	23,711,660	27,603,342
DEBT SERVICING										
DEBT - INTEREST & PRINCIPAL	7,690,985	7,522,761	2,896,242	-	-	2,896,242	3,363,371	4,790,195	6,940,171	7,809,608
TOTAL DEBT EXPENDITURES	7,690,985	7,522,761	2,896,242	-	-	2,896,242	3,363,371	4,790,195	6,940,171	7,809,608
DEFICIT TRANSFERRED TO FOLLOWING YR										
TRANSFER TO FOLLOWING YEAR DEFICIT CARRY FORWARD										
TOTAL EXPENDITURES	39,915,804	41,831,264	41,614,404	430,600	69,200	42,114,204	45,208,371	48,709,758	53,187,300	58,394,753
SOURCES OF FUNDING										
REVENUE - SALES	(38,107,540)	(40,029,600)	(40,924,304)	(430,600)	76,752	(41,278,152)	(44,424,271)	(47,808,658)	(52,402,700)	(57,728,653)
REVENUE - OTHER	(1,808,264)	(1,801,664)	(690,100)	-	(145,952)	(836,052)	(784,100)	(901,100)	(784,600)	(666,100)
TOTAL SOURCE OF FUNDING FROM OPERATIONS	(39,915,804)	(41,831,264)	(41,614,404)	(430,600)	(69,200)	(42,114,204)	(45,208,371)	(48,709,758)	(53,187,300)	(58,394,753)
TRANSFER FROM PRIOR YEAR	-	-	-	-	-	-	-	-	-	-
TRANSFER TO FOLLOWING YEAR SURPLUS CARRY FORWARD										
TOTAL SOURCES OF FUNDING	(39,915,804)	(41,831,264)	(41,614,404)	(430,600)	(69,200)	(42,114,204)	(45,208,371)	(48,709,758)	(53,187,300)	(58,394,753)
Percentage increase over prior year's board budget			4.26%			5.51%	7.35%	7.74%	9.19%	9.79%
Water Rate $ per cu. m.	$ 0.7698					$ 0.8094	$ 0.8711	$ 0.9374	$ 1.0275	$ 1.1319
Percentage increase over prior year	4.99%					5.14%	7.62%	7.61%	9.61%	10.16%

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2024 to 2028

Service No. 2.670 Regional Water Supply	Carry Forward from 2023	2024	2025	2026	2027	2028	TOTAL
EXPENDITURE							
Buildings	$3,120,000	$7,760,000	$3,350,000	$0	$0	$0	$11,110,000
Equipment	$11,169,000	$16,044,000	$2,080,000	$2,250,000	$1,430,000	$900,000	$22,704,000
Land	$2,288,000	$3,829,000	$807,000	$292,000	$220,000	$180,000	$5,328,000
Engineered Structures	$15,646,000	$26,776,000	$30,165,000	$47,375,000	$39,680,000	$32,625,000	$176,621,000
Vehicles	$300,000	$1,801,000	$685,250	$773,000	$855,000	$495,000	$4,609,250
	$32,523,000	**$56,210,000**	**$37,087,250**	**$50,690,000**	**$42,185,000**	**$34,200,000**	**$220,372,250**
SOURCE OF FUNDS							
Capital Funds on Hand	$29,523,000	$37,269,000	$17,202,000	$19,517,000	$20,980,000	$22,805,000	$117,773,000
Debenture Debt (New Debt Only)	$0	$7,300,000	$16,700,000	$28,400,000	$16,750,000	$4,900,000	$74,050,000
Equipment Replacement Fund	$0	$1,191,000	$685,250	$773,000	$855,000	$495,000	$3,999,250
Grants (Federal, Provincial)	$0	$6,000,000	$1,500,000	$2,000,000	$3,600,000	$6,000,000	$19,100,000
Donations / Third Party Funding	$3,000,000	$4,450,000	$1,000,000	$0	$0	$0	$5,450,000
Reserve Fund	$0	$0	$0	$0	$0	$0	$0
	$32,523,000	**$56,210,000**	**$37,087,250**	**$50,690,000**	**$42,185,000**	**$34,200,000**	**$220,372,250**

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2024 to 2028

Service No.	2.670/2.680 Regional Water Supply & JDF Water Distribution Combo	Carry Forward from 2023	2024	2025	2026	2027	2028	TOTAL
EXPENDITURE								
Buildings		$20,000	$160,000	$80,000	$80,000	$80,000	$80,000	$480,000
Equipment		$2,100,000	$2,730,000	$465,000	$350,000	$365,000	$266,000	$4,176,000
Land		$0	$0	$0	$0	$0	$0	$0
Engineered Structures		$0	$20,000	$20,000	$20,000	$20,000	$20,000	$100,000
Vehicles		$0	$0	$0	$0	$0	$0	$0
		$2,120,000	**$2,910,000**	**$565,000**	**$450,000**	**$465,000**	**$366,000**	**$4,756,000**
SOURCE OF FUNDS								
Capital Funds on Hand		$2,120,000	$2,910,000	$565,000	$450,000	$465,000	$366,000	$4,756,000
Debenture Debt (New Debt Only)		$0	$0	$0	$0	$0	$0	$0
Equipment Replacement Fund		$0	$0	$0	$0	$0	$0	$0
Grants (Federal, Provincial)		$0	$0	$0	$0	$0	$0	$0
Donations / Third Party Funding		$0	$0	$0	$0	$0	$0	$0
Reserve Fund		$0	$0	$0	$0	$0	$0	$0
		$2,120,000	**$2,910,000**	**$565,000**	**$450,000**	**$465,000**	**$366,000**	**$4,756,000**

CAPITAL REGIONAL DISTRICT

5 YEAR CAPITAL PLAN

2024 - 2028

Service #: 2.670

Service Name: Regional Water Supply

Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward	2024	2025	2026	2027	2028	5 - Year Total
WATERSHED PROTECTION													$ -
Planning													$ -
17-01	Renewal	Historic Goldstream Powerhouse Building	Repairs of historic Goldstream Powerhouse building and work toward making the site accessible to the public	$ 120,000	B	WU	$ 20,000	$ 20,000	$ 50,000	$ -	$ -		$ 70,000
17-01				$ 376,000	B	Grant		$ -	$ 300,000	$ -	$ -		$ 300,000
18-10	Study	Species-at-Risk Wildlife Habitat	Assessments (office and field) and planning for managing wildlife habitat, in particular species-at-risk habitat, in the GVWSA.	$ 185,000	L	WU	$ 40,000	$ 40,000	$ -	$ -	$ -		$ 40,000
19-30	Study	Leech WSA Lakes/Tributaries Assessment	An assessment of the physical, chemical and biological parameters of the lakes in the Leech WSA	$ 75,000	L	WU	$ 41,000	$ 41,000	$ -	$ -	$ -		$ 41,000
20-05	Renewal	Leech WSA Terrestrial Ecosystem Mapping & Wetland Classification/Mapping	Classification and mapping of terrestrial ecosystems and wetlands and integration with Sooke and Goldstream data.	$ 180,000	L	WU	$ 38,000	$ 38,000	$ -	$ -	$ -		$ 38,000
20-06	Study	Addressing mining in Leech WSA (impacts, agreements)	Funding to support work to reduce the impact of mining claims in the Leech WSA	$ 70,000	L	WU	$ -	$ 16,000	$ 12,000	$ 12,000	$ -		$ 40,000
20-27	Study	GVWSA Forest Resilience - wildfire/forest modelling and forest management field trials	Modelling forest and wildfire risk under climate change scenarios & forest/fuel management field trials.	$ 1,495,000	L	WU	-	$ 500,000	$ -	$ -	$ -		$ 500,000
20-27					L	Other	$ -	$ 450,000	$ -	$ -	$ -		$ 450,000
20-28	Study	GVWSA Forest Resilience - Assessments of forest health and resilience	Field assessments to better understand current forest health and resilience.	$ 230,000	L	WU	$ 65,000	$ 65,000	$ 60,000	$ -	$ -		$ 125,000
21-20	Study	West Leech Road	Plan followed by construction of a road to access the western portion of the Leech WSA.	$ 320,000	L	WU	$ 100,000	$ 100,000	$ 100,000	$ -	$ -		$ 200,000
23-02	Renewal	GVWSA LiDAR Mapping	Detailed contour mapping of ground, vegetation and tree cover (3D scanning)	$ 300,000	L	WU	$ 65,000	$ 165,000	$ -	$ -	$ -		$ 165,000
22-04	Renewal	GVWSA Orthophotography	Annual contribution to capture of regional digital orthophotography for baseline mapping and monitoring.	$ 95,000	L	WU		$ -	$ 35,000	$ -	$ 40,000		$ 75,000
22-09	Study	GVWSA Powerlines Wildfire Risk Mitigation Plan	A detailed assessment, options and plan to reduce the risk of wildfire start from tree fall onto CRD powerlines in the GVWSA.	$ 110,000	L	WU	$ 23,000	$ 43,000	$ 40,000	$ -	$ -		$ 83,000
22-10	New	GVWSA/RWS Educational Videos	Development of educational videos to address Regional Water Supply issues of interest to the public such as: wildfire risk and mitigation; climate change; water supply master plan update.	$ 60,000	L	WU	$ 27,000	$ 27,000	$ 30,000	$ -	$ -		$ 57,000
23-05	Study	Spill Management Plan and Implementation	Review, assessment and re-development of a spill management plan for the GVWSA along with potential procurement of additional equipment or supplies.	$ 70,000	L	WU	$ 50,000	$ 70,000	$ -	$ -	$ -		$ 70,000
24-03	Study	Biosecurity Risk Assessment & Procedures	Assess GVWSA biosecurity risks and develop mitigating protocols/procedures	$ 50,000	L	WU	$ -	-	$ 50,000	$ -	$ -		$ 50,000
													$ -
Capital													$ -
09-01	Renewal	Leech River Watershed Restoration	A 17 year project to restore the Leech WSA lands for water supply.	$ 5,756,000	L	WU	$ 180,000	$ 380,000	$ 200,000	$ -	$ -		$ 580,000
16-06	Renewal	Goldstream IWS Field Office	Renewal of Water Quality field office/lab and equipment storage and Watershed Protection office, yard, training space and equipment storage, replacing longstanding temporary facilities.	$ 12,000,000	B	WU	$ 100,000	$ 3,540,000	$ 2,000,000	$ -	$ -		$ 5,540,000
16-06					B	Other	$ 3,000,000	$ 4,000,000	$ 1,000,000	$ -	$ -		$ 5,000,000
17-02	New	Leech River HydroMet System	Installation of a network of hydrometeorological stations to collect water quantity and quality information for the Leech WSA.	$ 585,000	E	WU	$ 71,000	$ 116,000	$ -	$ -	$ -		$ 116,000
18-05	New	GVWSA Forest Fuel Management/FireSmart Activities	Implementation of forest fuel management and FireSmart actions in strategic locations for wildfire risk management in the GVWSA.	$ 1,200,000	L	WU	$ 51,000	$ 151,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 551,000
19-02	New	Whiskey Creek Bridge Replacement (Sooke WSA)	Replacement of the existing undersized bridge with a longer and higher concrete structure.	$ 330,000	S	WU	$ 10,000	$ 10,000	$ 300,000	$ -	$ -		$ 310,000
19-19	New	Hydromet Upgrades Sooke and Goldstream	Install additional hydrology monitoring sites on Sooke Lake Reservoir inflow streams and increase instrumentation on meteorological stations in Sooke and Goldstream watersheds.	$ 400,000	E	WU	$ 13,000	$ 183,000	$ -	$ -	$ -		$ 183,000
20-01	Replacement	Kapoor Main Mile 1 Bridge and Asphalt Upgrade	Replacement of the existing undersized culvert with a large bridge as well as subsequent 500 m road asphalt replacement.	$ 1,050,000	S	WU	$ 418,000	$ 868,000	$ 160,000	$ -	$ -		$ 1,028,000
20-29	Renewal	GVWSA Gravel Crushing	Production of gravel at existing quarries in Sooke and Goldstream WSAs.	$ 650,000	S	WU		$ 100,000	$ -	$ 200,000	$ -		$ 300,000
21-26	New	Road Deactivation/Rehabilitation in the GVWSA	Deactivate or rehabilitate unneeded roads in the Sooke and Goldstream WSAs.	$ 360,000	L	WU	$ 108,000	$ 108,000	$ 100,000	$ 100,000	$ -		$ 308,000
21-27	New	Autogate Installations on Primary Access Routes	Install autogates on the main access routes where the Sooke Hills Wilderness Trail and E&N rail line cross to improve security	$ 600,000	S	WU	$ -	$ 50,000	$ 300,000	$ -	$ -		$ 350,000
22-02	New	Muckpile Bridge Supply and Install (Deception)	Replacement of undersized culverts with bridge which will allow for fish and western toad migration.	$ 340,000	S	WU	$ -	$ -	$ -	$ 325,000	$ -		$ 325,000
23-04	Renewal	175/Sooke Main Bridge Replacement	Undersized bridge replacement	$ 315,000	S	WU	$ -	$ -	$ 15,000	-	$ 300,000		$ 315,000
22-11	New	Additional Boom Anchors for Sooke Lake Reservoir debris boom	The log boom protecting the Sooke Lake Reservoir Intake Tower from floating woody debris is inadequately anchored and requiring two additional anchors.	$ 60,000	E	WU	$ 60,000	$ 60,000	$ -	$ -	$ -		$ 60,000
23-10	New	Work platform for Sooke Lake Reservoir	A towable work platform for conducting stationary on-water work activities such as boom and intake tower maintenance and spill response.	$ 30,000	E	WU	$ 10,000	$ 10,000	$ -	$ -	$ -		$ 10,000
23-11	New	Purchase and Deployment of Second Wildfire Camera for Leech WSA, and Analytic software	A secondary wildfire camera to monitor for heat and smoke signatures in the Leech WSA during fire season.	$ 100,000	E	WU	$ -	$ 50,000	$ -	$ -	$ -		$ 50,000
23-23	Replacement	Brushcutting head for Excavator	The existing brushcutting head from the excavator used in roadside maintenance has reached end of life and requires replacement.	$ 30,000	V	WU	$ 10,000	$ 10,000	-	-	-		$ 10,000
24-05	New	Dock for Sooke Lake Reservoir	Sooke Lake Reservoir requires a dock for safe deployment of boats, gear and crew.	$ 100,000	S	WU	$ -	$ 10,000	$ 90,000				$ 100,000
25-05	New	Heli Fire Tank	A large water tank for helicopter bucketing to be deployed in Goldstream WSA.	$ 20,000	E	WU	-	$ -	$ 20,000				$ 20,000
22-13	New	Replace Storage Sheds with Containers	Covered sand storage between sea containers that have been procured.	$ 50,000	S	WU	$ -	$ 30,000					$ 30,000
24-06	Study	Post Wildfire Assessment Program	Acquiring access to existing software programs to model sediment and debris flows from burned areas.	$ 55,000	L	WU		$ 55,000					$ 55,000
24-07	Replacement	Field Operations Centre - IT Infrastructure Upgrades	The firewall, switches and telephony system are end of life and require replacement. The equipment will be transferred to the new building.	$ 40,000	E	WU		$ 40,000					$ 40,000
Watershed Protection Sub-Total				**$ 27,807,000**			**$ 4,500,000**	**$ 11,346,000**	**$ 4,962,000**	**$ 737,000**	**$ 440,000**	**$ 100,000**	**$ 17,585,000**
													$ -
INFRASTRUCTURE ENGINEERING AND OPERATIONS													$ -
Planning													$ -
16-10	New	Post Disaster Emergency Water Supply	Identify and procure emergency systems for post disaster preparedness.	$ 2,250,000	S	WU	$ 150,000	$ 350,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 1,150,000
17-13	New	Asset Management Plan	Development of a plan to inform future areas of study and highlight critical infrastructure improvements.	$ 400,000	S	WU	$ 200,000	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
19-15	New	Hydraulic Capacity Assessment and Transient Pressure Analysis	Determine the existing level-of-service for the RWSC transmission system and conduct a transient pressure analysis	$ 250,000	S	WU	$ 100,000	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000
20-08	Study	Regional Water DCC Program	Design of a Regional DCC Program	$ 450,000	S	WU	$ 250,000	$ 250,000	$ -	$ -	$ -	$ -	$ 250,000
20-10	Study	Condition & Vulnerability Assessment	Conduct a condition assessment of critical supply infrastructure and assess its possibility of risk.	$ 200,000	S	WU	$ 175,000	$ 175,000	$ -	$ -	$ -	$ -	$ 175,000
21-05	Study	Level of Service Agreement	From #19-15 & #20-11, develop level-of-service agreements for participating municipalities to address hydraulic capacity of infrastructure.	$ 150,000	S	WU	$ 140,000	$ 140,000	$ -	$ -	$ -	$ -	$ 140,000
22-14	Study	Sooke River Intake Feasibility	A feasibility study for an intake from Sooke River to replace the Main No. 15 salmon fishery contribution, for a variety of reasons.	$ 50,000	S	WU	$ 40,000	$ 40,000	$ -	$ -	$ -	$ -	$ 40,000
23-12	Study	Project Delivery Strategy	Develop a strategy to deliver the identified projects from the 2022 RWS Master Plan.	$ 200,000	S	WU	$ 100,000	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000
23-13	Study	Filtration Plant Planning & Design	Conduct a siting, conceptual design and detailed design for a filtration plant	$ 16,300,000	S	WU	$ 253,125	$ -	$ 400,000	$ 500,000	$ 5,400,000	$ 10,000,000	$ 16,300,000
23-14	Study	Council Creek Crossing Hydrology Review	Conduct a hydrology review of the Council Creek crossing of water mains to ensure pipe resilience during high rainfall events.	$100,000	S	WU	-	$100,000	-	-	-	-	$100,000
23-24	New	East-West Connector (Filtration Plant to District of Sooke)	Planning and Conceptual Design of the East- West Supply Main from the proposed filtration plant to the District of Sooke (identified in the 2022 Master Plan)	$ 400,000	S	WU	$ -	$ -	$ -	$ -	$ 200,000	$ 200,000	$ 400,000
23-25	New	Deep Northern Intake and Sooke Lake Pump Station	Planning and Design of the Deep Northern Intake and Sooke Lake Pump Station (identified in the 2022 Master Plan)	$ 12,200,000	S	WU	$ 506,250	$ -	$ 600,000	$ 3,600,000	$ 4,000,000	$ 4,000,000	$ 12,200,000
23-26	New	Transmission Main - Sooke Lake Pump Station to Head Tank	Planning and Design of the Transmission Main from the Sooke Lake Pump Station to Head Tank (identified in the 2022 Master Plan)	$ 3,400,000	S	WU	$ 168,750	$ -	$ 200,000	$ 1,000,000	$ 1,200,000	$ 1,000,000	$ 3,400,000

Service #: 2.670

Service Name: Regional Water Supply

Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward	2024	2025	2026	2027	2028	5 - Year Total
23-27	New	Gravity Main - Sooke Lake to Head Tank	Planning and Design of a Gravity Transmission Main (redundancy) from Sooke Lake to Head Tank (identified in the 2022 Master Plan)	$ 1,400,000	S	WU	$ 84,375	$ -	$ 300,000	$ 400,000	$ 700,000	$ -	$ 1,400,000
23-28	New	Goldstream Reservoir Connector	Planning and Design of the Goldstream Reservoir Connector transmission main	$ 4,600,000	S	WU	$ 84,375	$ -	$ 400,000	$ 2,000,000	$ 2,200,000	$ -	$ 4,600,000
24-08	Study	Seismic and Flood Vulnerability Assessment of Supply Main 10 and 11 Spillway Crossing	Engineering Seismic Assessment of the spanned crossing of of Supply Main No 10 and 11 over the Sooke Lake Spillway channel	$ 150,000	S	WU	$ -	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000
24-09	Study	Aggricultural Water Rate Review	Phase 2	$ 100,000	S	WU	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000
Capital													$ -
18-07	New	Replacement of UV System	Replacement of the UV system at the Goldstream Water Treatment Plant	$ 11,500,000	E	WU	$ 6,600,000	$ 9,370,000	$ -	$ -	$ -	$ -	$ 9,370,000
18-08	Replacement	Bulk Supply Meter Replacement Program	Planned replacement of aging bulk meter replacement based upon a condition assessment and water audit.	$ 2,050,000	E	WU	$ 950,000	$ 950,000	$ 200,000	$ 200,000	$ 150,000	$ -	$ 1,500,000
18-15	Renewal	Corrosion Protection Program	Study deficiencies in the current material protection and implement recommendations.	$ 1,150,000	S	WU	$ 300,000	$ 300,000	$ 150,000	$ 150,000	$ -	$ -	$ 600,000
18-18	Replacement	Main No.3 Segment Replacement	Replacement of segments of Main No. 3 based upon previous studies.	$ 15,600,000	S	WU	$ 500,000	$ 1,600,000	$ 10,000,000	$ 3,600,000	$ -	$ -	$ 15,200,000
19-05	Renewal	Repairs - Kapoor Shutdown	Repair items such as defects in the Kapoor tunnel, replacement of critical valves, intake exterior inspection and actuator	$ 700,000	S	WU	$ 105,000	$ 205,000	$ 100,000	$ -	$ -	$ -	$ 305,000
19-23	New	Critical Spare Equipment Storage & Pipe Yard	Plan, design and construct a critical equipment storage building.	$ 1,200,000	S	WU	$ 250,000	$ 250,000	$ 950,000	$ -	$ -	$ -	$ 1,200,000
20-16	Replacement	Cecelia Meter Replacement	Replacement of the Cecelia billing meter as well as its enclosure.	$ 1,000,000	S	WU	$ 450,000	$ 450,000	$ -	$ -	$ -	$ -	$ 450,000
20-17	Replacement	Decommission & Conceptual Design of the Smith Hill Site	Plan for decommission the conceptual design for the replacement of the Smith Hill reservoir site.	$ 1,300,000	S	WU	$ 253,125	$ 300,000	$ -	$ 1,000,000	$ -	$ -	$ 1,300,000
21-06	Replacement	Sooke Lake Dam Spillway Hoist and Stop Log Replacement	Replacement of the sluice gate spillway hoist and stop logs at Sooke Lake Dam.	$ 775,000	E	WU	$ 470,000	$ 470,000	$ 250,000	$ -	$ -	$ -	$ 720,000
21-09	New	Goldstream Water Chlorination Gas System Removal	Plan and construct provisions for removal of chlorination system	$ 200,000	S	WU	$ 170,000	$ 170,000	$ -	$ -	$ -	$ -	$ 170,000
21-10	Replacement	SCADA Masterplan and System Upgrades	Update the SCADA Master Plan in conjunction with the Juan de Fuca Water Distribution, Saanich Peninsula Water and Wastewater, and Core Area Wastewater Services.	$ 2,150,000	E	WU	$ 750,000	$ 300,000	$ 725,000	$ 600,000	$ 300,000	$ -	$ 1,925,000
21-11	Replacement	RWS Supply Main No. 4 Upgrade	Upgrade vulnerable sections of the RWS Supply Main No. 4 and Main No. 1 to a resilient system to better able to withstand a seismic event. Vulnerable sections are Concrete Cylinder pipe material which is susceptible to failure during a seismic event. This is part of project partnered with the Saanich Peninsula Water system.	$ 33,900,000	S	WU	$ 3,000,000	$ 3,000,000	$ 600,000	$ 20,000,000	$ 10,000,000	$ -	$ 33,600,000
21-11			DMAF Grant portion, grant submitted November 2021 and resubmitted in July 2023.	$ 14,800,000	S	Grant			$ 1,200,000	$ 2,000,000	$ 3,600,000	$ 6,000,000	$ 12,800,000
22-15	New	Microwave Radio Upgrades	To provide a high bandwidth communications backbone to the RWS system, a microwave communications system will be installed.	$ 1,100,000	S	WU	$ 240,000	$ 440,000	$ 200,000	$ 200,000	$ -	$ -	$ 840,000
22-16	Renewal	Goldstream WTP Drainage Improvements	Construct drainage improvements for the Goldstream Water Treatment Plant and assess	$ 200,000	S	WU	$ 120,000	$ 120,000	$ -	$ -	$ -	$ -	$ 120,000
22-17	New	Goldstream WTP Safety Improvements	Construct employee and public safety improvements such as a trail notification system if there was an ammonia spill.	$ 200,000	E	WU	$ 150,000	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000
23-16	Renewal	Humpback Channel Assessment and Upgrades	Hydraulically assess the Humpback Overflow channel and conduct a condition assessment of the culverts at the Gatehouse.	$ 200,000	S	WU	$ 200,000	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
23-17	Replacement	Main No. 4 - Mt Newton to Highway 17	Replacement of a approximately 1.9km of the Main No. 4 concrete pipe from Mt Newton and Central Saanich Road south to where it crosses Highway 17. A Strategic Priorities Fund grant has been applied to fund a portion of the works.	$ 3,800,000	S	WU	$ 2,600,000	$ 2,600,000	$ 1,000,000	$ -	$ -	$ -	$ 3,600,000
23-17				$ 6,000,000	S	Grant	$ -	$ 6,000,000	$ -	$ -	$ -	$ -	$ 6,000,000
25-03	Renewal	Transmission Main Upgrade Program	Identify, conceptually design, detail design and construct transmission main upgrades.	$ 40,000,000	S	WU	$ -	$ -	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 40,000,000
23-29	Renewal	Mt. Tolmie Control Valve Replacement	Supply and installation of the Mt. Tolmie Reservoir Control Valve	$ 800,000	E	WU	$ 250,000	$ 750,000	$ -	$ -	$ -	$ -	$ 750,000
24-10	Replacement	Sooke River Road WTP UPS Replacement	UPS at Sooke River Road WTP is 21 years old and in need of replacement.	$ 50,000	E	WU	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000
24-11	Replacement	IT Core Infrastructure Replacement	Replacement of Core IT infrastructure such as servers, network switches, UPS, etc for equipment end of life. Includes IT equipment located at tower sites within the RWS system.	$ 420,000	E	WU	$ -	$ 25,000	$ 15,000	$ -	$ 130,000	$ 250,000	$ 420,000
24-12	Renewal	Head Tank Valve Replacement	Supply and installation of Head Tank valves and actuators.	$ 450,000	E	WU	$ -	$ 450,000	$ -	$ -	$ -	$ -	$ 450,000
													$ -
Infrastructure Engineering and Operations Sub-Total				**$ 182,145,000**			**$ 19,610,000**	**$ 29,855,000**	**$ 27,490,000**	**$ 45,450,000**	**$ 38,080,000**	**$ 31,650,000**	**$ 172,525,000**
													$ -
DAM SAFETY PROGRAM			**Database)**										**$ -**
16-16	Renewal	Implications from Goldstream Dam Safety Review	Conduct dam improvements at the Goldstream dams that resulted for the Dam Safety Review and routine inspections (refer to the Dam Safety Database).	$ 825,000	S	WU	$ 418,000	$ 493,000	$ -	$ -	$ -	$ -	$ 493,000
17-25	Renewal	Implications from 2016 Sooke Lake Dam Safety Review	Conduct dam improvements at the Sookel Lake Dam that resulted from the 2016 Dam Safety Review and routine inspections (refer to the Dam Safety Database)	$ 1,210,000	S	WU	$ 637,000	$ 637,000	$ -	$ -	$ -	$ -	$ 637,000
18-19	New	Sooke Lake Dam - Instrumentation System Improvements	Complete dam performance instrumentation system/surveillance improvements for the Sooke Lake Dam.	$ 2,200,000	S	WU	$ 290,000	$ 1,290,000	$ -	$ -	$ -	$ -	$ 1,290,000
18-20	New	Sooke Lake Dam - Breach Risk Reduction Measures	Implement measures to reduce Sooke Lake Dam breach implications in the unlikely event of dam failure (refer to the NHC Consulting study).	$ 600,000	S	WU	$ 513,000	$ 513,000	$ -	$ -	$ -	$ -	$ 513,000
19-07	New	Integrate Dam Performance and Hydromet to SCADA	Integrate the dam safety instrumentation/surveillance (i.e. piezometers and weirs) and HydroMet stations to report to WIO through the existing SCADA system.	$ 1,300,000	E	WU	$ 600,000	$ 600,000	$ 200,000	$ 200,000	$ 200,000	$ -	$ 1,200,000
19-09	New	Cabin Pond Dams Decommissioning (PES)	The Cabin Pond Dams (x2) have been retired from drinking water service, plan to decommission.	$ 600,000	S	WU	$ 600,000	$ 600,000	$ -	$ -	$ -	$ -	$ 600,000
19-12	New	Goldstream Dams Instrumentation Improvements	Conduct dam safety instrumentation/surveillance improvements (refer to report from Thurber Engineering).	$ 700,000	S	WU	$ 665,000	$ 665,000	$ -	$ -	$ -	$ -	$ 665,000
19-13	New	Dam Safety Instrumentation	The existing dam safety instrumentation/surveillance equipment is getting older and will need to be replaced/rehabilitated (does not include pending SCADA effort).	$ 300,000	E	WU	$ 200,000	$ 250,000	$ -	$ -	$ -	$ -	$ 250,000
20-19	Replacement	Goldstream System High Level Outlet Valve Replacements	The Goldstream and Butchart high level outlet valves have been identified as requiring replacement.	$ 300,000	S	WU	$ 250,000	$ 250,000	$ -	$ -	$ -	$ -	$ 250,000
21-03	New	Deception Dam - Dam Safety Review 2021 & Improvements	Conduct a Dam Safety Review and improvements for the Deception Dam.	$ 1,800,000	S	WU	$ 350,000	$ 400,000	$ 400,000	$ 500,000	$ 500,000	$ -	$ 1,800,000
21-04	New	Saddle Dam - Dam Safety Review 2021 & Improvements	Conduct a Dam Safety Review and improvements for the Saddle Dam.	$ 800,000	S	WU	$ 165,000	$ 450,000	$ 200,000	$ 75,000	$ 75,000	$ -	$ 800,000
21-21	Replacement	Goldstream Dams - 4 Low Level Gate Improvements	Logistics planning in 2022, installation in 2023	$ 150,000	S	WU	$ 150,000	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000
22-08	New	Deception Dam Surveillance Improvements	Replace and supplement the Dam Safety Instrumentation at Deception Dam.	$ 450,000	S	WU	$ 150,000	$ 300,000	$ 150,000	$ -	$ -	$ -	$ 450,000
23-07	Study	Sooke Lake Dam Spillway and Gates Retrofit	Detailed design for seismic retrofits for the existing structures initially focusing on the spillway and gates structures. Construction to be budgetted subsequently.	$ 450,000	S	WU	$ 150,000	$ 450,000	$ -	$ -	$ -	$ -	$ 450,000
23-08	Study	Regional Watershed Dams – Flood Forecasting System	Update the existing flood forecasting system (WD4Cast) to a modern version including Standard Operating Procedures and training for staff.	$ 300,000	S	WU	$ 100,000	$ 200,000	$ 50,000	$ -	$ -	$ -	$ 250,000
23-09	Study	Sooke Lake Dam - Dam Safety Review 2023	Conduct a Dam Safety Review to meet regulatory requirement.	$ 200,000	S	WU	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -
23-18	Renewal	Sooke Lake Dam Spillway Channel Improvements	Construct bank protection for the Sooke Spillway Channel and clear the seepage weir blockage.	$ 700,000	S	WU	$ 200,000	$ 400,000	$ 300,000	$ -	$ -	$ -	$ 700,000
23-19	Renewal	Charters Dam - Implications from Dam Safety Review	Carry out recommendations from the 2022 Dam Safety Review for Charters Dam	$ 200,000	S	WU	$ 20,000	$ 120,000	$ -	$ -	$ -	$ -	$ 120,000
25-01	Study	Goldstream Dam - Dam Safety Review 2025 & Addressing Implications	Conduct a Dam Safety Review to meet regulatory requirement.	$ 200,000	S	WU	$ -	$ -	$ 200,000	$ 75,000	$ 75,000	$ 75,000	$ 425,000
25-02	Study	Probable Maximum Flood and Inflow Design Flood Updates	Update the previous edition from 2015 (recommended 10 year review cycle).	$ 150,000	S	WU	$ -	$ -	$ 150,000	$ -	$ -	$ -	$ 150,000
25-06	Replacement	Goldstream Dam Spillway Replacement	Replacement of Goldstream Dam Spillway due to deteriorated condition.	$ 500,000	S	WU	$ -	$ -	$ 100,000	$ 400,000	$ -	$ -	$ 500,000
24-13	Replacement	Reservoir Log Boom Upgrade Program	Review, analysis and upgrades to log booms, prioritizing Sooke Lake Reservoir.	$ 500,000	S	WU	$ -	$ 200,000	$ 300,000				$ 500,000
													$ -
Dam Safety Program Sub-Total				**$ 14,435,000**			**$ 5,508,000**	**$ 7,968,000**	**$ 2,050,000**	**$ 1,250,000**	**$ 850,000**	**$ 75,000**	**$ 12,193,000**
													$ -
WATER QUALITY													**$ -**
20-04	New	Sooke Lake HyDy Model Development	Critical data collection, model building+calibration, model utilization for 3 different scenarios	$ 520,000	E	WU	$ 100,000	$ 120,000	$ -	$ -	$ -	$ -	$ 120,000
22-06	Study	Sooke Lake Food Web Study	Assess the aquatic food web structure and create an inventory of fish and invertebrate species and distribution in Sooke Lake Reservoir - to be used as indicators of stream health	$ 100,000	S	WU	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -
23-06	Study	GVDWS Nitrification Study	Investigate nitrification occurrence and potential impacts on drinking water quality	$ 50,000	S	WU	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -
24-02	Replacement	Boat Motor Replacement with Electric Outboards (Sooke and Goldstream Boats)	50hp and 15hp motor replacement due to age and water quality concerns, large electric outboards are already available from Torqeedo for instance	$ 60,000	E	WU	$ 60,000	$ -	$ -	$ -	$ -	$ -	$ -

Service #: 2.670

Service Name: Regional Water Supply

Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward	2024	2025	2026	2027	2028	5 - Year Total
24-04	Study	Sooke Lake Drawdown Study	Investigate drawdown effects on Sooke Lake water quality and ecosystem impacts with max drawdown and determine a safe max drawdown level for SOL.	$ 100,000	S	WU	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000
25-04	Replacement	4 x multi-parameter field analyzers (SL1000)	Replace 4 multi-parameter (total/free/mono/ammonia) field analyzers	$ 20,000	E	WU	$ -	$ -	$ 20,000	$ -	$ -	$ -	$ 20,000
26-01	New	2 x Floating Water Quality Sensor Platforms	To support and confirm water quality data in SOL for Deep Norther Intake, install 2 floating sensor platforms	$ 200,000	E	WU	$ -	$ -	$ -	$ 200,000	$ -	$ -	$ 200,000
27-01	Study	Drinking Water Safety Plan Update	Review and update existing DWSP spreadsheet and risk registry. Consider planned system expansions/upgrades.	$ 80,000	S	WU	$ -	$ -	$ -	$ -	$ 80,000	$ -	$ 80,000
24-14	Replacement	Laboratory Equipment Replacements	Replacement of critical laboratory equipment.	$ 75,000	E	WU	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ 75,000
24-15	Replacement	Laboratory Renovations	Renovation for main lab cabinetry, floor, aquatic ecology lab and prep room.	$ 200,000	B	WU	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
24-16	Replacement	WQ Field Office IT Upgrades	The firewall, switches and telephony system are end of life and require replacement.	$ 10,000	E	WU	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000
													$ -
Water Quality Sub-Total				**$ 1,415,000**			**$ 230,000**	**$ 505,000**	**$ 20,000**	**$ 200,000**	**$ 80,000**	**$ -**	**$ 805,000**
													$ -
ANNUAL PROVISIONAL													$ -
17-27	Replacement	Watershed Bridge and Culvert Replacement	Replacement of small culverts and bridges throughout the GVWSA.	$ 1,000,000	S	WU	$ -	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 1,000,000
17-28	Replacement	Watershed Security Infrastructure Upgrade and Replacement	New, upgrade and replacement of security infrastructure in the GVWSA.	$ 600,000	E	WU	$ -	$ 200,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 600,000
17-29	Replacement	Water Supply Area Equipment Replacement	Hydrometeorological, fireweather and wildfire suppression equipment replacement.	$ 640,000	E	WU	$ -	$ 140,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 640,000
17-30	Replacement	Transmission Main Repairs	Emergency repairs to the transmission mains.	$ 1,000,000	S	WU	$ -	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 1,000,000
17-31	Replacement	Transmission System Components Replacement	Replacement and repair of transmission components.	$ 400,000	S	WU	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 400,000
17-33	Replacement	Disinfection Equipment Parts Replacement	Replacement of incidental equipment and parts associated with the disinfection system.	$ 1,000,000	E	WU	$ -	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 1,000,000
17-34	Renewal	Supply System Computer Model Update	Annual update of the regional hydraulic model.	$ 100,000	S	WU	$ -	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 100,000
19-16	Replacement	Dam Improvements	Items not covered by Dam Safety Reviews, but brought up in Dam Safety Inspections and Dam Safety Reviews and address itesm in the dam safety database/risk registry	$ 1,500,000	S	WU	$ -	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,500,000
19-22	Replacement	SCADA Repairs & Equipment Replacement	Items not covered by the SCADA Replacement and SCADA Master Plan, but integral in maintaining the SCADA System and revenue meter system.	$ 750,000	E	WU	$ -	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 750,000
21-15	Replacement	Corrosion Protection	Replace corrosion protection assets, such as coatings, for the transmission system when identified.	$ 250,000	S	WU	$ -	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
21-16	Replacement	Valve Chamber Upgrades	Replace failing valves and appurtenances along the RWS supply system.	$ 1,500,000	S	WU	$ -	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,500,000
21-17	Replacement	Water Quality Equipment Replacement	Replacement of water quality equipment for the water quality lab and water quality operations	$ 250,000	E	WU	$ -	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
21-18	Renewal	LIMS support	Support for LIMS database	$ 125,000	E	WU	$ -	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 125,000
23-20	Study	Land Exchange/Acquisition	Land surveys, appraisals to support decisions regarding land exchange to increase catchment area, buffer water supply areas and other possible land exchange and acquisition within the RWS system.	$ 400,000	L	WU	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 400,000
													$ -
Annual Provisional Sub-Total				**$ 9,515,000**			**$ -**	**$ 1,995,000**	**$ 1,880,000**	**$ 1,880,000**	**$ 1,880,000**	**$ 1,880,000**	**$ 9,515,000**
													$ -
CUSTOMER AND TECHNICAL SERVICES													$ -
17-35	Replacement	Vehicle & Equipment Replacement (Funding from Replacement Fund)	This is for replacement of vehicles and equipment used by CRD Water Services for the day-to-day operation and maintenance of the supply system.	$ 2,873,000	V	ERF	$ -	$ 1,191,000	$ 685,250	$ 773,000	$ 855,000	$ 495,000	$ 3,999,250
20-22	New	Vehicle for the Dam Safety Program	New Transit Van	$ 100,000	V	WU	$ 100,000	$ 120,000	$ -	$ -	$ -	$ -	$ 120,000
20-23	New	Vehicle for the CSE Support Program	New Transit Van	$ 100,000	V	WU	$ 100,000	$ 120,000	$ -	$ -	$ -	$ -	$ 120,000
21-30	New	Vehicle for Warehouse Operations	New pick up	$ 90,000	V	WU	$ 90,000	$ 90,000	$ -	$ -	$ -		$ 90,000
22-18	New	Electric Vehicle Charging Stations	7 Dual charging stations at 479 Island Hwy and 1 Dual charging station at the Watershed Protection FOC	$ 80,000	E	WU	$ -	$ -	$ -	$ -	$ -	$ -	$ -
22-18					E	Grant	$ -	$ -	$ -	$ -	$ -	$ -	$ -
23-21	New	EV Charging Stations Electrical Infrastructure	Electrical System upgrades at 479 Island Hwy to power up 44 charging stations	$ 855,000	E	WU	$ 650,000	$ 855,000	$ -	$ 400,000	$ -	$ -	$ 1,255,000
23-22	New	Fuel Truck	Fuel tender truck	$ 200,000	E	WU	$ 200,000	$ 325,000	$ -	$ -	$ -	$ -	$ 325,000
23-30	New	Fleet Shop Hoist	Heavy Capacity Hoist for fleet maintenance	$ 35,000	E	WU	$ 35,000	$ 70,000	$ -	$ -	$ -	$ -	$ 70,000
23-31	New	Purchase of land	Purchasing of land near 479 for future office space	$ 1,500,000	L	WU	$ 1,500,000	$ 1,500,000	$ -	$ -	$ -	$ -	$ 1,500,000
24-17	New	Pool Vehicles	2 new EV Pickups	$ 180,000	V	WU	$ -	$ 180,000					$ 180,000
24-18	New	Vehicle for Watershed Hydrology Program	New pickup truck for watershed hydrology program	$ 100,000	V	WU	$ -	$ 90,000	$ -	$ -	$ -	$ -	$ 90,000
													$ -
Customer and Technical Services Sub-Total				**$ 6,113,000**			**$ 2,675,000**	**$ 4,541,000**	**$ 685,250**	**$ 1,173,000**	**$ 855,000**	**$ 495,000**	**$ 7,749,250**
x			GRAND TOTAL	$ 241,430,000			$ 32,523,000	$ 56,210,000	$ 37,087,250	$ 50,690,000	$ 42,185,000	$ 34,200,000	$ 220,372,250
													$ -

Service:	2.670	Regional Water Supply

Project Number	17-01	Capital Project Title	Historic Goldstream Powerhouse Building	Capital Project Description	Repairs of historic Goldstream Powerhouse building and work toward making the site accessible to the public
Project Rationale	Located near the Goldstream Treatment Plant and the Sooke Hills Wilderness Trail (Trans Canada Trail), is an 1897 brick hydroelectric powerplant that served Victoria (notably the streetcars) for approx. 60 years. The Powerhouse has its own Wikipedia entry: http://en.wikipedia.org/wiki/Lubbe_Powerhouse and has captured public interest as a unique structure in BC history. An engineering condition assessment including engineered drawings, site plan and approximate cost of repairs was conducted in 2017. A major repair in the masonry on the north side of the building was completed in 2018. Further masonry and major crack repair was completed on the south side in 2019 ($10,000). A successful grant application ($76,000) was used in 2022 to replace the roof membrane/envelope. The approved 2023 funds are to implement basic public interpretation signage and in 2025 to plan and seek grant funding or sponsors for security gates and fencing working toward a goal to make the site available to the public from the nearby Sooke Hills Wilderness Trail.				

Project Number	18-10	Capital Project Title	Species-at-Risk Wildlife Habitat	Capital Project Description	Assessments (office and field) and planning for managing wildlife habitat, in particular species-at-risk habitat, in the GVWSA.
Project Rationale	An assessment (office and field) and conservation planning for management of wildlife habitat, in particular species-at-risk habitat, in the GVWSA. Funds in 2018 ($35,000) will be used for compilation of existing knowledge of species, distribution, habitat, research. Funds in 2019 and 2020 ($50,000 each) will be used to field verify species, critical habitat and movement corridors. Funds added in 2021 ($25,000) are to develop GVWSA specific conservation plans based on office and field investigations. Funds added in 2023 are in anticipation of future habitat mapping and planning required to address BC Species-at-Risk requirements.				

Project Number	19-30	Capital Project Title	Leech WSA Lakes/Tributaries Assessment	Capital Project Description	An assessment of the physical, chemical and biological parameters of the lakes in the Leech WSA
Project Rationale	To assess restoration of the Leech Water Supply Area and prepare for use of Leech River water to supplement Sooke Lake Reservoir, baseline monitoring of the hydrological, physical, chemical and biological parameters of the main Leech WSA source waterbodies will be conducted. The work will be undertaken in conjunction with the Water Quality division. (Action from the 2017 Strategic Plan for Regional Water Supply).				

Project Number	20-05	Capital Project Title	Leech WSA Terrestrial Ecosystem Mapping & Wetland Classification/Mapping	Capital Project Description	Classification and mapping of terrestrial ecosystems and wetlands and integration with Sooke and Goldstream data.
Project Rationale	The existing Leech WSA terrestrial ecosystem mapping received from the previous landowner is not consistent with that of Sooke and Goldstream WSAs. The project is to renew the ecosystem mapping to a standard that matches Sooke and Goldstream for consistent data and analysis. The project will also conduct detailed wetland mapping in the Leech WSA to a standard that matches Sooke and Goldstream for consistent data and analysis. The projects have been combined (ecosystem mapping (20-05) and wetland mapping (20-06) and moved forward from 2020 to 2021. The project has been further moved forward from 2021 to 2022. The project has been further moved forward from 2022 to 2023. It is advantageous to wait for advances in technology and partners (BC) which may improve the product and/or reduce costs.				

Service:	2.670	Regional Water Supply

Project Number	20-06	Capital Project Title	Addressing mining in Leech WSA (impacts, agreements)	Capital Project Description	Funding to support work to reduce the impact of mining claims in the Leech WSA
Project Rationale	Assessment and/or studies and/or funds to buy and cancel mining claims to mitigate impacts from mining activities and with the goal of reducing mining claims in the Leech Water Supply Area. 2024: A minor increase in funding is required to continue buying and cancelling mining claims.				

Project Number	20-27	Capital Project Title	GVWSA Forest Resilience - wildfire/forest modelling and forest management field trials	Capital Project Description	Modelling forest and wildfire risk under climate change scenarios & forest/fuel management field trials.
Project Rationale	Projects to: a). model impact of climate change on forests, forest fuel types, and associated wildfire behavior and probability and potential effects of management options; and b). trial forest and fuel management treatments that reduce wildfire risk and reduce inter tree moisture stress, such as prescribed fire and thinning. Increased funding is required in 2024 to conduct trial thinning treatments. Other income to the project is anticipated from disposal (sale) of thinned logs that are merchantable.				

Project Number	20-28	Capital Project Title	GVWSA Forest Resilience - Assessments of forest health and resilience	Capital Project Description	Field assessments to better understand current forest health and resilience.
Project Rationale	Field assessments to better understand current forest health and resilience including: increasing pine mortality, increase in bark beetle killed trees, existing advance regeneration in the understory, sedimentation sources from roads. The project funding for 2021 and 2022 is moved forward by one year to 2022 and 2023. Planned additional funding is being moved forward in the plan. 2025: Additional funds are required for forest health treatments.				

Project Number	21-20	Capital Project Title	West Leech Road	Capital Project Description	Plan followed by construction of a road to access the western portion of the Leech WSA.
Project Rationale	A large portion of the western Leech WSA currently has overgrown unassessed roads. Brushing, upgrade, re-surfacing and some new road construction is required to provide access to this area for wildfire response, security patrols and forest management. Funds to implement plans have been added for 2022-2024. 2024: The funds previously requested for 2024 have been moved forward to 2025. No change in overall budget.				

Service:	2.670	Regional Water Supply

Project Number	23-02	Capital Project Title	GVWSA LiDAR Mapping	Capital Project Description	Detailed contour mapping of ground, vegetation and tree cover (3D scanning)
Project Rationale	LiDAR (which stands for Light Detection and Ranging) uses light in the form of a pulsed laser to measure ranges (distances). LiDAR will be acquired when orthophotography or other data is collected from the air. LiDAR provides 3D information about the forest stand structure which can be used by GIS (Geographic Information Systems). LiDAR data will be used to quantify forest structure, canopy biomass, and the size and configuration of forest openings to improve understanding of forest fuel loadings and watershed disturbance processes. Initial scoping has refined a required budget of $250,000 rather than the previously planned $120,000. The results will be used to plan forest fuel treatments across the GVWSA. 2024: An additional $50,000 is required to complete fieldwork required to validate the LiDAR analyses.				

Project Number	22-04	Capital Project Title	GVWSA Orthophotography	Capital Project Description	Annual contribution to capture of regional digital orthophotography for baseline mapping and monitoring.
Project Rationale	Every two years CRD coordinates with municipalities and other levels of government to update aerial photography of the combined areas of interest in the region and develop an overall digital mosiac image. The images of the Greater Victoria Water Supply Area are used to monitor forest disturbances and adjacent land use activities and update spatial databases. To date these funds have come from Operating budgets, making it difficult to undertake other projects in the years when the photography is being flown. The funding plan has been adjusted to provide funds every second year when it is needed rather than annually.				

Project Number	22-09	Capital Project Title	GVWSA Powerlines Wildfire Risk Mitigation Plan	Capital Project Description	A detailed assessment, options and plan to reduce the risk of wildfire start from tree fall onto CRD powerlines in the GVWSA.
Project Rationale	A powerline that supplies Sooke Dam, the Head Tank, and associated infrastructure runs along the forested slopes on the east side of Sooke Lake Reservoir. Power interruption from tree fall is an ongoing concern. Tree fall on the powerline during the summer months could start a wildfire. While the forest along the line is actively managed to reduce tree fall hazard, concerns about fire starts has prompted a call to investigate the option of clearing a much wider area along the line. Funds will be used to carry out an assessment of the feasibility and impacts of this option. 2024: Funds to take treatment action in 2024 ($20,000) and 2025 ($40,00) are requested.				

Project Number	22-10	Capital Project Title	GVWSA/RWS Educational Videos	Capital Project Description	Development of educational videos to address Regional Water Supply issues of interest to the public such as: wildfire risk and mitigation; climate change; water supply master plan update.
Project Rationale	The Watershed Protection division provides educational tours of the GVWSA and Regional Water Supply infrastructure. During the COVID pandemic, operating funds dedicated to tours were instead used to develop educational videos to replace or supplement tours. Going forward, there is a desire to provide further educational material on specific topics of current public interest such as: climate change and regional water supply; GVWSA wildfire management; and the Master Plan update for regional water supply. The funding request is for development of one video per year for 2022 and 2023. Given development of a corporate wide media strategy in 2022, approved funding has been moved forward to ensure additional videos are designed to fit with the strategy and new video branding templates. 2024: Funds for 2024 ($30,000) are moved forward to 2025.				

Service:	2.670	Regional Water Supply

Project Number	23-05	Capital Project Title	Spill Management Plan and Implementation	Capital Project Description	Review, assessment and re-development of a spill management plan for the GVWSA along with potential procurement of additional equipment or supplies.
Project Rationale	The existing spill preparedness plan to protect water quality and other resources in the GVWSA is more than 15 years old. An external review, assessment and re-development of a more comprehensive spill management plan for the GVWSA that considers improved materials, technology and strategies is required. Funding may allow for procurement of recommended spill supplies, or a separate funding request may follow in a subsequent year. 2024: A request for proposal solicitation in late 2022 did not garner any bids. A revised RFP is planned with additional funding request ($20,000).				

Project Number	24-03	Capital Project Title	Biosecurity Risk Assessment & Procedures	Capital Project Description	Assess GVWSA biosecurity risks and develop mitigating protocols/procedures
Project Rationale	There has already been work done to identify and assess possible sources of biosecurity risk to the GVWSA in the forms of entry of pathogens, invasive plant and animal species, contaminated soils and materials. The project is intended to document the biosecurity assessment and prepare and work with staff to implement practical procedures to mitigate the highest risks. 2024: The project has been moved forward to 2025. No change in budget.				

Project Number	09-01	Capital Project Title	Leech River Watershed Restoration	Capital Project Description	A 17 year project to restore the Leech WSA lands for water supply.
Project Rationale	A 17 year project to 2025 to restore the Leech WSA lands for water supply. An update of projects completed and planned was provided in June 2019 (RWSC Report #19-13). Funding allocated by end of 2025 will be $5,517,000; however total capital expenditure in the Leech WSA is higher when separate projects to install major bridges and inventory and assess forests is considered.				

Project Number	16-06	Capital Project Title	Goldstream IWS Field Office	Capital Project Description	Renewal of Water Quality field office/lab and equipment storage and Watershed Protection office, yard, training space and equipment storage, replacing longstanding temporary facilities.
Project Rationale	Watershed Protection staff (27 FTE and 8 seasonal auxiliaries) are currently located in 2 trailers and a house at the Goldstream Gate entrance to the water supply area, and in office space at the Integrated Water Services office in View Royal. The trailers were considered temporary office space since their implementation over 15 years ago. The trailers are old, prone to leaks and a concern for mold. Water Quality field staff are located in another temporary facility, since their field office was on the gravel pit property that was sold to Langford. In addition, there are insufficient facilities for training, equipment storage, emergency management and public education. The separation of staff between various Goldstream facilities and the View Royal location causes inefficiencies and organizational difficulties. The IWS office is also above capacity and moving Watershed Protection staff out will extend the existing office space. 2024: A design build procurement process has been selected to deliver the project with a rough total project cost of $12 million. Funding of $ 5 million to the project is guaranteed through the completion of sale of the IWS gravel pit to Langford.				

Service:	2.670	Regional Water Supply

Project Number	17-02	Capital Project Title	Leech River HydroMet System	Capital Project Description	Installation of a network of hydrometeorological stations to collect water quantity and quality information for the Leech WSA.
Project Rationale	A 17 year $ 5.756 M capital plan is being carried out to restore the Leech Water Supply Area (Project #09-01) to prepare for future water needs. Historically only one hydrological measuring station was capturing flow and turbidity measurements 3.8 km downstream of the future water intake on the Leech River. In order to understand and predict the effect of precipitation, storm events and various restoration management measures on Leech River water quality and quantity, a network of hydrological measuring stations is needed further upstream in the Leech River watershed. This capital project first funded a design study of the most effective and efficient monitoring system that could be implemented ($10,000) prior to funding implementation beginning in 2018. 2024: Additional funding of $45,000 is requested to upgrade and enhance the system.				

Project Number	18-05	Capital Project Title	GVWSA Forest Fuel Management/FireSmart Activities	Capital Project Description	Implementation of forest fuel management and FireSmart actions in strategic locations for wildfire risk management in the GVWSA.
Project Rationale	Wildfire is the greatest threat to water quality in the GVWSA. In 2014 - 2018 CRD staff completed two new fuel reduction corridor projects. Funding to tender contract projects is required in order to complete priority fuel management projects over and above existing staff effort which will be focused on maintenance of existing fuel managed sites. A requested increase from $75,000 to $100,000 annually reflects costs experienced in the first year of tendering fuel management work. The need for fuel management to address priority areas will be ongoing and funding is required annually for the 5 year period.				

Project Number	19-02	Capital Project Title	Whiskey Creek Bridge Replacement (Sooke WSA)	Capital Project Description	Replacement of the existing undersized bridge with a longer and higher concrete structure.
Project Rationale	Whiskey Creek bridge is located on the Leechtown Main Road, one of the main access routes to Sooke Lake Dam and other critical IWS infrastructure. Whiskey Creek requires a larger bridge as it has been overtopped by storm events in the past and this poses water quality, environmental and safety risks. 2024: Project construction is moved forward from 2024 to 2025. No change in funding request.				

Project Number	19-19	Capital Project Title	Hydromet Upgrades Sooke and Goldstream	Capital Project Description	Install additional hydrology monitoring sites on Sooke Lake Reservoir inflow streams and increase instrumentation on meteorological stations in Sooke and Goldstream watersheds.
Project Rationale	Only the main tributary inflows into Sooke Lake Reservoir are monitored. To better understand the hydrology of the Sooke watershed, additional hydrology monitoring sites are required. The existing meteorological stations in Sooke and Goldstream watersheds have only basic instrumentation and would benefit from additional sensors and upgrades to improve the quality of the meteorological data. 2024: $170,000 additional funding is requested to continue to upgrade and enhance the system.				

Service:	2.670	Regional Water Supply

Project Number	20-01	Capital Project Title	Kapoor Main Mile 1 Bridge and Asphalt Upgrade	Capital Project Description	Replacement of the existing undersized culvert with a large bridge as well as subsequent 500 m road asphalt replacement.
Project Rationale	The existing culvert at Mile 1 on Kapoor Main (which is the primary access road to Sooke Lake Reservoir and Dam) is undersized, has evidence of buried organics in the fill material and has oversteepend, unstable banks. The culvert will be removed and a bridge installed to improve water carrying capacity at peak flows, fish passage and bank stability. The asphalt section uphill of the bridge will also be repaired or replaced as a component of the project. 2024: Consulting engineer design work indicates a total construction cost of $868,000 for the bridge. A cost driver is the significant amount of fill to remove. The 2024 budget has been increased to reflect the engineered cost estimate and to move the asphalt budget forward to 2025.				

Project Number	20-29	Capital Project Title	GVWSA Gravel Crushing	Capital Project Description	Production of gravel at existing quarries in Sooke and Goldstream WSAs.
Project Rationale	Production of 19 mm road surfacing gravel from GVWSA quarries are required every few years to maintain roads. Gravel production needs are anticipated in 2023 and 2026. The need for additional gravel crushing in 2023 has been pushed forward by one year to 2024.				

Project Number	21-26	Capital Project Title	Road Deactivation/Rehabilitation in the GVWSA	Capital Project Description	Deactivate or rehabilitate unneeded roads in the Sooke and Goldstream WSAs.
Project Rationale	A review was undertaken to identify roads in the Sooke and Goldstream WSAs that could be rehabilitated and removed from the road network without undue impact to operations, wildfire response and security. Funding is required over the 5 year period to make progress on the roads identified to be deactivated/rehabilitated. 2024: The budget for 2024 has been decreased to reflect the carryforward from 2023. The total project budget has been reduced by $160,000.				

Project Number	21-27	Capital Project Title	Autogate Installations on Primary Access Routes	Capital Project Description	Install autogates on the main access routes where the Sooke Hills Wilderness Trail and E&N rail line cross to improve security
Project Rationale	Continued residential growth and corresponding increasing recreational pressure bring the public close to critical works (Goldstream Treatment Plant, and Ammonia Injection building). Recreational use of the Sooke Hills Wilderness Trail and Park also generate tresspass into the GVWSA, and Drinking Water Protection Zone. Autogates improve security by 24 hour recorded keycard access operation and are located to increase security. Two autogates have been installed (2022 and 2023). 2024: The third and fourth autogate are being deferred by an additional year to 2025 to allow for additional design and provincial, Fortis Gas and Island Corridor Foundation approvals before the work can be tendered. $50,000 is maintained in 2024 to add cameras to the newly installed autogates. No budget change.				

Service:	2.670	Regional Water Supply

Project Number	22-02	Capital Project Title	Muckpile Bridge Supply and Install (Deception)	Capital Project Description	Replacement of undersized culverts with bridge which will allow for fish and western toad migration.
Project Rationale	Replacement of undersized culverts with a concrete deck L100 bridge which will also improve fish passage and western toad migration. Addition of funding for design work ahead of construction. 2024: Construction has been moved ahead by one year to 2025, no change in budget.				

Project Number	23-04	Capital Project Title	17S/Sooke Main Bridge Replacement	Capital Project Description	Undersized bridge replacement
Project Rationale	The current structure (3 concrete culverts side-by-side with a concrete deck) does not allow adequate room to pass potential storm debris. The most recent engineering inspection stated this recycled structure is in fair shape, with spalling of the concrete. The structure is planned to be replaced with a free span concrete bridge. 2024: The project is moved forward by one year, no change in budget.				

Project Number	22-11	Capital Project Title	Additional Boom Anchors for Sooke Lake Reservoir debris boom	Capital Project Description	The log boom protecting the Sooke Lake Reservoir Intake Tower from floating woody debris is inadequately anchored and requiring two additional anchors.
Project Rationale	The debris boom on Sooke Lake Reservoir with the existing anchors has the capacity to strike the Intake Tower if the boom breaks. It is recommended to add two additional anchors to ensure that if the boom breaks it will not damage the Intake Tower. An increased project budget (additional $20,000) is required to design and install the anchors.				

Project Number	23-10	Capital Project Title	Work platform for Sooke Lake Reservoir	Capital Project Description	A towable work platform for conducting stationary on-water work activities such as boom and intake tower maintenance and spill response.
Project Rationale	This request is for a non-powered towable dock or barge that can be moved to various project sites as required. It allows workers to easily access work on the water from a stable platform, and can allow small equipment (pumps or generators) to be operated on appropriate spill containment, and to be left in place for extended periods of time.				

Service:	2.670	Regional Water Supply

Project Number	23-11	Capital Project Title	Purchase and Deployment of Second Wildfire Camera for Leech WSA, and Analytic software	Capital Project Description	A secondary wildfire camera to monitor for heat and smoke signatures in the Leech WSA during fire season.
Project Rationale	Rapid detection is key to taking action when fires are still small and controllable. An infrared camera network, supported by software to identify potential ignitions, can be monitored by staff and an after hours service to rapidly provide an alert to new fire starts. This allows response staff to arrive before the fire has a chance to dig in and start to spread quickly. There is an existing camera at Mount Healy that "sees" large portions of the Sooke WSA. The Leech WSA is the most remote and least visible area (to the public and staff) and there is a strong benefit to early detection. The camera may need to be supported with a tower and communications upgrades. Funding in 2023 is earmarked for analytic software for both wildfire cameras and funding in 2024 is earmarked for purchase and deployment of the additional Leech camera.				

Project Number	23-23	Capital Project Title	Brushcutting head for Excavator	Capital Project Description	The existing brushcutting head from the excavator used in roadside maintenance has reached end of life and requires replacement.
Project Rationale	The existing brush cutting head for the excavator is past end of life and requires replacement. The old head will be disposed of and offset the cost of the new head.				

Project Number	24-05	Capital Project Title	Dock for Sooke Lake Reservoir	Capital Project Description	Sooke Lake Reservoir requires a dock for safe deployment of boats, gear and crew.
Project Rationale	Water Quality and Watershed Protection staff are required to go out on Sooke Lake Reservoir routinely, as well as in emergency situations. Sooke Lake Reservoir does not have a dock, beyond lockblocks that extend into the lake. It is unsafe and difficult to load and unload onto boats using the existing lockblocks. Funding of $10,000 in 2024 to design and plan a dock; with up to $90,000 to construct the dock in 2025 is requested.				

Project Number	25-05	Capital Project Title	Heli Fire Tank	Capital Project Description	A large water tank for helicopter bucketing to be deployed in Goldstream WSA.
Project Rationale	In order to avoid potential contamination of GVWSA reserservoirs from helicopter bucketing operations during wildfire suppression, a "Heli Fire" water tank is planned to be purchased and installed seasonally in the GVWSA. These tanks are of a size and volume that allow helicopters to fill their buckets out of them.				

Project Number	22-13	Capital Project Title	Replace Storage Sheds with Containers	Capital Project Description	Covered sand storage between sea containers that have been procured.
Project Rationale	The existing storage facility (sheds) in the Pipeyard used for Infrastructure Operations and Watershed Protection equipment and supplies is enclosed but not sealed from the elements or rodents, and is at end of life. Due to health and safety concerns, the sheds are to be replaced with basic seacan storage containers that can be sealed and readily moved as needs change. 2024: additional funds ($20,000) are requested for a cover between sea cans to store sand, for sanding the road and area around the Goldstream Water Treatment Plant and the Field Operations Centre.				

Service:	2.670	Regional Water Supply

Project Number	24-06	Capital Project Title	Post Wildfire Assessment Program	Capital Project Description	Acquiring access to existing software programs to model sediment and debris flows from burned areas.
Project Rationale	The amount and location of sediment and debris that would be generated from a large wildfire in the Sooke WSA has been modelled. New software is available that makes the existing modelling and results for the GVWSA more accessible, and compares results with post-wildfire events in the Pacific Northwest to help calibrate the results and make them more relevant to the GVWSA.				

Project Number	24-07	Capital Project Title	Field Operations Centre - IT Infrastructure Upgrades	Capital Project Description	The firewall, switches and telephony system are end of life and require replacement. The equipment will be transferred to the new building.
Project Rationale	The firewall, switches and telephony system at the Field Operations Centre are at end of life and require replacement. The replaced equipment can be transferred to a new building when ready.				

Project Number	16-10	Capital Project Title	Post Disaster Emergency Water Supply	Capital Project Description	Identify and procure emergency systems for post disaster preparedness.
Project Rationale	In the event of a disaster, it is proposed to have in place the ability to source, treat (if required) and distribute drinking water during the initial and sustained response and recovery phases to the public. This item will see the study of the issue in 2016 and 2017 with the anticipated purchase of one or more emergency distribution systems in 2017. Initial investigation has highlighted areas, such as having hardened hydrants/standpipes that the CRD should be investing in. Additional funds are required to continue implementing these additional works and equipment.				

Project Number	17-13	Capital Project Title	Asset Management Plan	Capital Project Description	Development of a plan to inform future areas of study and highlight critical infrastructure improvements.
Project Rationale	This plan will bring various components together from items 14-01, 16-07, 16-08, 16-09, 16-10 and 16-11 and form a strategic plan that will identify future study and construction requirements with capital replacement budgets and schedules.				

Project Number	19-15	Capital Project Title	Hydraulic Capacity Assessment and Transient Pressure Analysis	Capital Project Description	Determine the existing level-of-service for the RWSC transmission system and conduct a transient pressure analysis
Project Rationale	The RWSC transmission is complex with all the connection points to it. Funding is required to determine the available pressures and flows throughout the transmission system and whether it is susceptible to transient pressure waves.				

Service:	2.670	Regional Water Supply

Project Number	20-08	Capital Project Title	Regional Water DCC Program	Capital Project Description	Design of a Regional DCC Program
Project Rationale	The municipalities are developing and growing and may result in upgrades to maintain the level of service due to development. Funds are required to design a Regional Water Development Cost Charge program.				

Project Number	20-10	Capital Project Title	Condition & Vulnerability Assessment	Capital Project Description	Conduct a condition assessment of critical supply infrastructure and assess its possibility of risk.
Project Rationale	The RWSC is a large system with infrastructure of various ages and condition. Funding is required to conduct a condition assessment of critical infrastructure, such as Humpback PRV, and assess their risk of failure and provide a high level timeline for replacement/renewal.				

Project Number	21-05	Capital Project Title	Level of Service Agreement	Capital Project Description	From #19-15 & #20-11, develop level-of-service agreements for participating municipalities to address hydraulic capacity of infrastructure.
Project Rationale	The RWSC supplies water directly and indirectly to 12 municipalities. Based upon Capital Projects #19-15 and #20-11, level-of-service agreements for participating municipalities will be developed to address hydraulic capacity of infrastructure.				

Project Number	22-14	Capital Project Title	Sooke River Intake Feasibility	Capital Project Description	A feasibility study for an intake from Sooke River to replace the Main No. 15 salmon fishery contribution, for a variety of reasons.
Project Rationale	The feasibility to construct an intake from Sooke River to replace the Main No. 15 salmon fishery contribution.				

Project Number	23-12	Capital Project Title	Project Delivery Strategy	Capital Project Description	Develop a strategy to deliver the identified projects from the 2022 RWS Master Plan.
Project Rationale	Develop a strategy to deliver the identified projects from the 2022 RWS Master Plan. With over $2 billion in planned spending over the next 30 years, including individual projects up to $1 billion, a strategy is required on how to deliver the projects including project delivery models, assessment of consulting resources, contracting resources and internal staff resources.				

Service:	2.670	Regional Water Supply

Project Number	23-13	Capital Project Title	Filtration Plant Planning & Design	Capital Project Description	Conduct a siting, conceptual design and detailed design for a filtration plant
Project Rationale	Identified in the 2022 Master Plan, planning, design and future construction of a Filtration Plant is required. Initial steps will include confirming site requirements, overview of integration with other system components, review of current and future technologies and preliminary engineering studies such as geotechnical once a site is confirmed.				

Project Number	23-14	Capital Project Title	Council Creek Crossing Hydrology Review	Capital Project Description	Conduct a hydrology review of the Council Creek crossing of water mains to ensure pipe resilience during high rainfall events.
Project Rationale	Council Creek runs through currently undersized culverts that need hydraulic assessment as well as hydrological confirmation of what flows they are expected to carry. If these culverts failed in an extreme storm event then supply mains may be affected negatively.				

Project Number	23-24	Capital Project Title	East-West Connector (Filtration Plant to District of Sooke)	Capital Project Description	Planning and Conceptual Design of the East-West Supply Main from the proposed filtration plant to the District of Sooke (identified in the 2022 Master Plan)
Project Rationale	Identified in the 2022 Master Plan, planning and conceptual design of an East- West Supply Main from the proposed filtration plant to the District of Sooke to maintain level of service and to account for growth.				

Project Number	23-25	Capital Project Title	Deep Northern Intake and Sooke Lake Pump Station	Capital Project Description	Planning and Design of the Deep Northern Intake and Sooke Lake Pump Station (identified in the 2022 Master Plan)
Project Rationale	Identified in the 2022 Master Plan, planning and design of the Deep Northern Intake and Sooke Lake Pump Station is required to provide water supply and transmission capability from currently inaccessible parts of Sooke Lake into the water supply and treatment systems.				

Project Number	23-26	Capital Project Title	Transmission Main - Sooke Lake Pump Station to Head Tank	Capital Project Description	Planning and Design of the Transmission Main from the Sooke Lake Pump Station to Head Tank (identified in the 2022 Master Plan)
Project Rationale	Identified in the 2022 Master Plan, planning and design of a pumpled transmission main from the future Sooke Lake Pump Station to the existing Head Tank.				

Service:	2.670	Regional Water Supply

Project Number	23-27	Capital Project Title	Gravity Main - Sooke Lake to Head Tank	Capital Project Description	Planning and Design of a Gravity Transmission Main (redundancy) from Sooke Lake to Head Tank (identified in the 2022 Master Plan)
Project Rationale	Identified in the 2022 Master Plan, planning and design of a gravity transmission main from Sooke Lake to the Head Tank to provide redundant water supply to the system.				

Project Number	23-28	Capital Project Title	Goldstream Reservoir Connector	Capital Project Description	Planning and Design of the Goldstream Reservoir Connector transmission main
Project Rationale	Identified in the 2022 Master Plan, planning and design of a transmission main to connect the Goldstream Reservoir to the Sooke system to ensure transmission safety and reliability when using the Goldstream system to supplement flows to the Sooke system.				

Project Number	24-08	Capital Project Title	Seismic and Flood Vulnerability Assessment of Supply Main 10 and 11 Spillway Crossing	Capital Project Description	Engineering Seismic Assessment of the spanned crossing of of Supply Main No 10 and 11 over the Sooke Lake Spillway channel
Project Rationale					

Project Number	24-09	Capital Project Title	Aggricultural Water Rate Review	Capital Project Description	Phase 2
Project Rationale	Identified in the 2022 Master Plan, planning and design of a transmission main to connect the Goldstream Reservoir to the Sooke system to ensure transmission safety and reliability when using the Goldstream system to supplement flows to the Sooke system.				

Project Number	18-07	Capital Project Title	Replacement of UV System	Capital Project Description	Replacement of the UV system at the Goldstream Water Treatment Plant
Project Rationale	The UV trains and associated electrical equipment at Goldstream Water Treatment Plant require upgrade and replacement.				

Project Number	18-08	Capital Project Title	Bulk Supply Meter Replacement Program	Capital Project Description	Planned replacement of aging bulk meter replacement based upon a condition assessment and water audit.
Project Rationale	This item is to replace, upgrade and install new bulk water meters and related equipment that measure flow and volumes of water delivered to the wholesale customers. Many of the meter stations are in need of upgrading. Funding is required to replace the flow meter and appurtenances.Funding is required for Blue Ridge, Alderly, Holland and Maplewood replacements. Somerset Valve Chamber replacement will also be completed under this project which is also tied to backflow prevention.				

Service:	2.670	Regional Water Supply

Project Number	18-15	Capital Project Title	Corrosion Protection Program	Capital Project Description	Study deficiencies in the current material protection and implement recommendations.
Project Rationale	This item is to assess, design and implement cathodic protection for the various infrastructure, including steel pipes, that are susceptible to corrosion. The supply system has various implementations of cathodic protection ranging from interior/exterior coatings for pipe and passive anodes to impressed current systems with variable results and condition. Funding is required to retain a specialist to conduct a high level assessment of existing infrastructure with recommendations for additional investigation or areas that require immediate attention.				

Project Number	18-18	Capital Project Title	Main No.3 Segment Replacement	Capital Project Description	Replacement of segments of Main No. 3 based upon previous studies.
Project Rationale	The existing Main No. 3 is approximately 70 years old. Some section of the 22 km main are steel pipe in known potentially corrosive soils. It is proposed to eventually replace a segment or Main #3 on Wale Road, Island Hwy. and Adams Place in Colwood and View Royal. Conceptual design and options analysis will start in 2023 with detailed design and construction commencing in 2024 to 2027. Funding is required to retain a consultant to undertake design and to construct a replacement to Main No. 3.				

Project Number	19-05	Capital Project Title	Repairs - Kapoor Shutdown	Capital Project Description	Repair items such as defects in the Kapoor tunnel, replacement of critical valves, intake exterior inspection and actuator replacement while the Kapoor tunnel is shutdown.
Project Rationale	During the 2016 Kapoor Tunnel inspection numerous deficiencies were noted. Some of the repairs were made and inspected in 2017. Funds are required to complete remaining identified repairs as well as conduct other works, such as head tank valve maintenance, dive inspection of the Intake Tower, hydraulic actuator line replacement, that can only be conducted when the Kapoor Tunnel is offline.				

Project Number	19-23	Capital Project Title	Critical Spare Equipment Storage & Pipe Yard	Capital Project Description	Plan, design and construct a critical equipment storage building.
Project Rationale	Additional and accessible storage is required at the pipe yard for critical spare equipment such as repair bands and clamps. Funds are required to pland, design and construct an equipment storage building accessible by loading vehicles.				

Project Number	20-16	Capital Project Title	Cecelia Meter Replacement	Capital Project Description	Replacement of the Cecelia billing meter as well as its enclosure.
Project Rationale	The St Giles and Cecelia meters are aging and in hard to maintain locations. Funding is required to construct new meter sites and decommission and demolition the old sites.				

Project Number	20-17	Capital Project Title	Decommission & Conceptual Design of the Smith Hill Site	Capital Project Description	Plan for decommission the conceptual design for the replacement of the Smith Hill reservoir site.
Project Rationale	The Smith Hill reservoir has not been in operation for many years. Funds are required to plan for decommission the site in 2020 and then carry out decommissioning in 2023.				

Service:	2.670	Regional Water Supply

Project Number	21-06	Capital Project Title	Sooke Lake Dam Spillway Hoist and Stop Log Replacement	Capital Project Description	Replacement of the sluice gate spillway hoist and stop logs at Sooke Lake Dam.
Project Rationale	The Sooke Lake Dam Spillway Hoist is				

Project Number	21-09	Capital Project Title	Goldstream Water Chlorination Gas System Removal	Capital Project Description	Plan and construct provisions for removal of chlorination system
Project Rationale	The Goldstream Water Treatment Plant has undergone numerous upgrades and updates, both large and small since its initial construction. There are numerous vestigial mechanical and electrical assets that require planned removal. Funds are required to plan and remove unused assets that affect maintenance of the system.				

Project Number	21-10	Capital Project Title	SCADA Masterplan and System Upgrades	Capital Project Description	Update the SCADA Master Plan in conjunction with the Juan de Fuca Water Distribution, Saanich Peninsula Water and Wastewater, and Core Area Wastewater Services.
Project Rationale	The SCADA and radio system utilized by the RWS comprises of components ranging from 2-25 years in age. A planned replacement of assets, to be coordinated with the Juan de Fuca Water Distribution and Saanich Peninsula Water & Wastewater Systems is required to create a more resilient and cohesive communications system				

Project Number	21-11	Capital Project Title	RWS Supply Main No. 4 Upgrade	Capital Project Description	Upgrade vulnerable sections of the RWS Supply Main No. 4 and Main No. 1 to a resilient system to better able to withstand a seismic event. Vulnerable sections are Concrete Cylinder pipe material which is susceptible to failure during a seismic event. This is part of project partnered with the Saanich Peninsula Water system.
Project Rationale	Sections of RWS Supply Main No. 4 have been identified as being vulnerable due to age and material type during a seismic event and require replacement. To support replacement of the Goldstream section of Main No. 4, improvements to RWS Supply Main No. 1 are required, such as replacement of approximately 40 m of transmission Main #1 at Watkiss Way and upgrade of the Watkiss PRV, upgrade of the Millstream PRV, modifications to the Humpback PRV and construction of five new pressure control stations. This project is part of a project partnered with the Saanich Peninsula Water System to increase the resilience of the water system by replacing vulnerable sections of transmission mains.The budget breakdown of the works: Goldstream section of Main #4 $21,975,000; Watkiss Way section of Main #1 $950,000; Watkiss PRV $1,250,000; Millstream PRV $1,350,000; Humpback PRV improvements $825,000; Five new PRVs $9,050,000.				

Project Number	22-15	Capital Project Title	Microwave Radio Upgrades	Capital Project Description	To provide a high bandwidth communications backbone to the RWS system, a microwave communications system will be installed.
Project Rationale	To provide a high bandwidth communications backbone to the RWS system, a microwave communications system will be installed. Supports current and future fire detection cameras.				

Service:	2.670	Regional Water Supply

Project Number	22-16	Capital Project Title	Goldstream WTP Drainage Improvements	Capital Project Description	Construct drainage improvements for the Goldstream Water Treatment Plant and assess
Project Rationale	The Goldstream Water Treatment Plant is located near the Goldstream waterway, drainage improvements are required so that the Goldstream waterway is not impacted if there were to be a chlorine or ammonia spill.				

Project Number	22-17	Capital Project Title	Goldstream WTP Safety Improvements	Capital Project Description	Construct employee and public safety improvements such as a trail notification system if there was an ammonia spill.
Project Rationale	The Goldstream Water Treatment Plant is located near a public trail, safety improvements such as a notification system are required. Funds will be for design and construction.				

Project Number	23-16	Capital Project Title	Humpback Channel Assessment and Upgrades	Capital Project Description	Hydraulically assess the Humpback Overflow channel and conduct a condition assessment of the culverts at the Gatehouse.
Project Rationale	Hydraulically assess the Humpback Overflow channel and conduct a condition assessment of the culverts at the Gatehouse.				

Project Number	23-17	Capital Project Title	Main No. 4 - Mt Newton to Highway 17	Capital Project Description	Replacement of a approximately 1.9km of the Main No. 4 concrete pipe from Mt Newton and Central Saanich Road south to where it crosses Highway 17. A Strategic Priorities Fund grant has been applied to fund a portion of the works.
Project Rationale	Replacement of a approximately 1.9km of the Main No. 4 concrete pipe from Mt Newton and Central Saanich Road south to where it crosses Highway 17. A Strategic Priorities Fund grant has been applied to fund a portion of the works. Replacement of this pipe is required to improve the seismic resilience of the supply main.				

Project Number	25-03	Capital Project Title	Transmission Main Upgrade Program	Capital Project Description	Identify, conceptually design, detail design and construct transmission main upgrades.
Project Rationale	Transmission mains that are nearing end of life due to long service require condition assessments and then design and construction of replacement mains where needed. This will be the start of an ongoing replacement program as transmission mains near end of life.				

Project Number	23-29	Capital Project Title	Mt. Tolmie Control Valve Replacement	Capital Project Description	Supply and installation of the Mt. Tolmie Reservoir Control Valve
Project Rationale	The Mt. Tolmie Reservoir Control Valve chamber improvements				

Service:	2.670	Regional Water Supply

Project Number	24-10	Capital Project Title	Sooke River Road WTP UPS Replacement	Capital Project Description	UPS at Sooke River Road WTP is 21 years old and in need of replacement.
Project Rationale	Sooke River Road WTP UPS has been identified in need of prioritized replacement prior to failure.				

Project Number	24-11	Capital Project Title	IT Core Infrastructure Replacement	Capital Project Description	Replacement of Core IT infrastructure such as servers, network switches, UPS, etc for equipment end of life. Includes IT equipment located at tower sites within the RWS system.
Project Rationale	Replacement of Core IT infrastructure such as servers, network switches, UPS, etc for equipment end of life. Includes IT equipment located at tower sites within the RWS system.				

Project Number	24-12	Capital Project Title	Head Tank Valve Replacement	Capital Project Description	Supply and installation of Head Tank valves and actuators.
Project Rationale	Supply and installation of Head Tank valves and actuators.				

Project Number	16-16	Capital Project Title	Implications from Goldstream Dam Safety Review	Capital Project Description	Conduct dam improvements at the Goldstream dams that resulted for the Dam Safety Review and routine inspections (refer to the Dam Safety Database).
Project Rationale	The Goldstream Dams Dam Safety Review was initiated in 2015 and delivered in 2016 and the review provided recommendations for dam safety improvements for the 11 dams in the Goldstream Watershed. The dam deficiencies and related projects are identified in the Dam Safety Database.				

Project Number	16-17	Capital Project Title	#N/A	Capital Project Description	#N/A
Project Rationale	Butchart Dam #5 was observed to have a sinkhole on the downstream slope. The earthfill dam was founded on limestone in the about 1905 and seepage issues have occurred since that time. A geotechnical investigation was conducted in 2016, and remediation has been recommended by geotechnical consultant. It is proposed to complete detailed design of remediation in 2018 and construction of repairs in 2019. Phase 1 of the revised program is complete and the dam is now in the monitoring stage.				

Project Number	17-25	Capital Project Title	Implications from 2016 Sooke Lake Dam Safety Review	Capital Project Description	Conduct dam improvments at the Sookel Lake Dam that resulted from the 2016 Dam Safety Review and routine inspections (refer to the Dam Safety Database)
Project Rationale	The 2016 Dam Safety Review Audit was completed and provided a list of recommended improvements. Upcoming capital work to be completed is identified in the dam safety database.				

Service:	2.670	Regional Water Supply

Project Number	18-19	Capital Project Title	Sooke Lake Dam - Instrumentation System Improvements	Capital Project Description	Complete dam performance instrumentation system/surveillance improvements for the Sooke Lake Dam.
Project Rationale	The 2016 Dam Safety Review identified and recommended various dam safety surveillance instrumentation improvements including piezometers, weirs, seismometers, etc. An Instrumentation system plan was completed and includes a prioritized list of improvement projects.				

Project Number	18-20	Capital Project Title	Sooke Lake Dam - Breach Risk Reduction Measures	Capital Project Description	Implement measures to reduce Sooke Lake Dam breach implications in the unlikely event of dam failure (refer to the NHC Consulting study).
Project Rationale	A Dam Breach Assessment and Inundation Zone Mapping proecjt was completed in 2017 by an engineering consutlant and risk mitigation measures included structural and non-structural measures to lower risk should a dam breach occur. The measures are captured in the Dam Safety Database.				

Project Number	19-07	Capital Project Title	Integrate Dam Performance and Hydromet to SCADA	Capital Project Description	Integrate the dam safety instrumentation/surveillance (i.e. piezometers and weirs) and HydroMet stations to report to WIO through the existing SCADA system.
Project Rationale	Based on capital project 18-19, dam performance piezometers and weirs and Hydromet/Dam Safety Instrumentation stations will be integrated through the SCADA system.				

Project Number	19-09	Capital Project Title	Cabin Pond Dams Decommissioning (PES)	Capital Project Description	The Cabin Pond Dams (x2) have been retired from drinking water service, plan to decommission.
Project Rationale	The two Cabin Pond Dams have been retired from drinking water service with no other interested owners. Funds are required to plan and implement decommissioning of the dams.				

Project Number	19-12	Capital Project Title	Goldstream Dams Instrumentation Improvements	Capital Project Description	Conduct dam safety instrumentation/surveillance improvements (refer to report from Thurber Engineering).
Project Rationale	Thurber completed a study on the Goldstream Dam instrumentation and found numerous deficiencies with respect to dam safety. Funds are required to design and implement improvements to the Goldstream Dam instrumentation.				

Service:	2.670	Regional Water Supply

Project Number	19-13	Capital Project Title	Dam Safety Instrumentation	Capital Project Description	The existing dam safety instrumentation/surveillance equipment is getting older and will need to be replaced/rehabilitated (does not include pending SCADA effort).
Project Rationale	Aging Hydromet/Dam Safety Instrumentation stations maintained by Infrastructure Engineering require replacement so that ongoing monitoring within the watersheds can be maintained. Funds are required for upgrades and replacement of existing Hydromet Stations.				

Project Number	20-19	Capital Project Title	Goldstream System High Level Outlet Valve Replacements	Capital Project Description	The Goldstream and Butchart high level outlet valves have been identified as requiring replacement.
Project Rationale	Through dam safety inspections and routine operations, the Goldstream and Butchart high level outlet valves have been identified as requiring replacement. Funds are required to design and replace the valves.				

Project Number	21-03	Capital Project Title	Deception Dam - Dam Safety Review 2021 & Improvements	Capital Project Description	Conduct a Dam Safety Review and improvements for the Deception Dam.
Project Rationale	Deception Dam has a consequence classification of "very high" and a dam safety review is required to be completed every ten years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2011. The dam safety review is anticipcated to be an "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent year to complete recommended dam safety improvements.				

Project Number	21-04	Capital Project Title	Saddle Dam - Dam Safety Review 2021 & Improvements	Capital Project Description	Conduct a Dam Safety Review and improvements for the Saddle Dam.
Project Rationale	Saddle Dam has a consequence classification of "very high" and a dam safety review is required to be completed every ten years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2011. The dam safety review is anticipated to be and "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent year to complete recommended dam safety improvements.				

Project Number	21-21	Capital Project Title	Goldstream Dams - 4 Low Level Gate Improvements	Capital Project Description	Logistics planning in 2022, installation in 2023
Project Rationale	Several of the water control gates related to the Goldstream dams are in need of repair and possibly replacement.				

Project Number	22-08	Capital Project Title	Deception Dam Surveillance Improvements	Capital Project Description	Replace and supplement the Dam Safety Instrumentation at Deception Dam.
Project Rationale	The latest engineering data review identified deficiencies with the existing piezometers and seepage weir. It is proposed to prepare a system improvement plan and thereafter complete repairs, improvmetn and install supplementary dam performance instrumentation.				

Service:	2.670	Regional Water Supply

Project Number	23-07	Capital Project Title	Sooke Lake Dam Spillway and Gates Retrofit	Capital Project Description	Detailed design for seismic retrofits for the existing structures initially focusing on the spillway and gates structures. Construction to be budgetted subsequently.
Project Rationale	The siesmic assessment completed in 2017 included recommendations for siesmic retrofits for Sooke Lake Dam including siesmic anchoring of the spillway, gate structure and the intake tower bridge.				

Project Number	23-08	Capital Project Title	Regional Watershed Dams – Flood Forecasting System	Capital Project Description	Update the existing flood forecasting system (WD4Cast) to a modern version including Standard Operating Procedures and training for staff.
Project Rationale	The 2016 Dam Safety Review included a recommendation to improve the flood forecasting system, which is becoming more important with Climate Change. This item will update the existing flood forecasting system from WD4Cast to a modern version including Standard Operating Procedures and training for staff.				

Project Number	23-09	Capital Project Title	Sooke Lake Dam - Dam Safety Review 2023	Capital Project Description	Conduct a Dam Safety Review to meet regulatory requirement.
Project Rationale	Sooke Lake Dam has a consequence classification of "extreme" and a dam safety review is required to be completed every seven years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2016. The dam safety review is anticipated to be and "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent years to complete recommended dam safety improvements.				

Project Number	23-18	Capital Project Title	Sooke Lake Dam Spillway Channel Improvements	Capital Project Description	Construct bank protection for the Sooke Spillway Channel and clear the seepage weir blockage.
Project Rationale	The Sooke Lake Dam spillway channel requires upgrading to prevent erosion when the sluice gates are fully open. Concurrently, the seepage weir blockage will be removed.				

Project Number	23-19	Capital Project Title	Charters Dam - Implications from Dam Safety Review	Capital Project Description	Carry out recommendations from the 2022 Dam Safety Review for Charters Dam
Project Rationale	The Dam Safety Review for Charters Dam was completed in 2022. Funding is required to carry out recommendations from the review.				

Service:	2.670	Regional Water Supply

Project Number	25-01	Capital Project Title	Goldstream Dam - Dam Safety Review 2025 & Addressing Implications	Capital Project Description	Conduct a Dam Safety Review to meet regulatory requirement.
Project Rationale	The Goldstream Watershed Dams have a consequence classification of "low" to "high" and a dam safety review is required to be completed every ten years under the current B.C. Dam Safety Regulation. The last dam safety review was completed in 2015. The dam safety review is anticipated to be and "audit-style" assessment of the physical condition of the dam, operations, maintenance, surveillance, identification of dam safety deficiencies and recommendations for dam safety improvements. Project includes budget for subsequent years to complete recommended dam safety improvements.				

Project Number	25-02	Capital Project Title	Probable Maximum Flood and Inflow Design Flood Updates	Capital Project Description	Update the previous edition from 2015 (recommended 10 year review cycle).
Project Rationale	The various Dam Safety Reviews and Canadian Dam Safety Guideline recommend updating the reservoir inflow design flood and freeboard analysis every ten years.				

Project Number	25-06	Capital Project Title	Goldstream Dam Spillway Replacement	Capital Project Description	Replacement of Goldstream Dam Spillway due to deteriorated condition.
Project Rationale	Goldstream Dam Spillway replacement.				

Project Number	24-13	Capital Project Title	Reservoir Log Boom Upgrade Program	Capital Project Description	Review, analysis and upgrades to log booms, prioritizing Sooke Lake Reservoir.
Project Rationale	Sooke Lake Reservoir currently contains two log booms. The upstream saddle dam log boom is flaking plastics and has been identified for replacement. Hydrotechnical assessment of the log boom requirements on this reservoir and upgrades to follow this assessment.				

Project Number	20-04	Capital Project Title	Sooke Lake HyDy Model Development	Capital Project Description	Critical data collection, model building+calibration, model utilization for 3 different scenarios
Project Rationale	This project consists of the following different phases: 2020/2021 Procurement/Rental of monitoring equipment to fill critical data gaps; 2022 Consulting contract to build the hydrodynamic lake model and calibrate it against existing data; 2022 Consulting contract to run the model for a North Basin intake scenario; 2023 Consulting Contract to run the model for investigating impacts of a diversion of Leech River water into Sooke Lake; 2024 Consulting Contract for investigating impacts of wind induced seiches in Sooke Lake.				

Service:	2.670	Regional Water Supply

Project Number	22-06	Capital Project Title	Sooke Lake Food Web Study	Capital Project Description	Assess the aquatic food web structure and create an inventory of fish and invertebrate species and distribution in Sooke Lake Reservoir - to be used as indicators of stream health
Project Rationale	CRD has been using predominantly algal data as an indicator for stream health and condition assessment in the source waters. To gain a better understanding of the source water conditions and how they may change over time it is necessary to expand this indicator system for other trophic levels in the food web. Sooke Lake Reservoir is of particular interest as the primary and critical water source for the GVDWS and therefore a aquatic food web study will be commissioned on this lake.				

Project Number	23-06	Capital Project Title	GVDWS Nitrification Study	Capital Project Description	Investigate nitrification occurrence and potential impacts on drinking water quality
Project Rationale	With the operation of the upgraded Goldstream disinfection process (liquid NH3 and hypo) the volatility of the residual products and potential for nitrification in the distribution systems needs to be studied to assess any potential impacts to the drinking water quality.				

Project Number	24-02	Capital Project Title	Boat Motor Replacement with Electric Outboards (Sooke and Goldstream Boats)	Capital Project Description	50hp and 15hp motor replacement due to age and water quality concerns, large electric outboards are already available from Torqeedo for instance
Project Rationale	When the existing boat motors are due for replacement they shall be replaced with electric outboard motors to reduce emmissions and to provide clean propulsion of CRD boats on the drinking water source lakes. This will reduce the risk of fuels spills and eliminate combustion exhausts entering the water.				

Project Number	24-04	Capital Project Title	Sooke Lake Drawdown Study	Capital Project Description	Investigate drawdown effects on Sooke Lake water quality and ecosystem impacts with max drawdown and determine a safe max drawdown level for SOL.
Project Rationale	Investigate drawdown effects on Sooke Lake water quality and ecosystem impacts with max drawdown and determine a safe max drawdown level for SOL.				

Project Number	25-04	Capital Project Title	4 x multi-parameter field analyzers (SL1000)	Capital Project Description	Replace 4 multi-parameter (total/free/mono/ammonia) field analyzers
Project Rationale	Replace 4 multi-parameter (total/free/mono/ammonia) field analyzers				

Service:	2.670	Regional Water Supply

Project Number	26-01	Capital Project Title	2 x Floating Water Quality Sensor Platforms	Capital Project Description	To support and confirm water quality data in SOL for Deep Norther Intake, install 2 floating sensor platforms
Project Rationale	To support and confirm water quality data in SOL for Deep Norther Intake, install 2 floating sensor platforms				

Project Number	27-01	Capital Project Title	Drinking Water Safety Plan Update	Capital Project Description	Review and update existing DWSP spreadsheet and risk registry. Consider planned system expansions/upgrades.
Project Rationale	Review and update existing DWSP spreadsheet and risk registry. Consider planned system expansions/upgrades.				

Project Number	24-14	Capital Project Title	Laboratory Equipment Replacements	Capital Project Description	Replacement of critical laboratory equipment.
Project Rationale	Replacement of critical laboratory equipment.				

Project Number	24-15	Capital Project Title	Laboratory Renovations	Capital Project Description	Renovation for main lab cabinetry, floor, aquatic ecology lab and prep room.
Project Rationale	Renovation for main lab cabinetry, floor, aquatic ecology lab and prep room.				

Project Number	24-16	Capital Project Title	WQ Field Office IT Upgrades	Capital Project Description	The firewall, switches and telephony system are end of life and require replacement.
Project Rationale	The firewall, switches and telephony system are end of life and require replacement.				

Project Number	17-27	Capital Project Title	Watershed Bridge and Culvert Replacement	Capital Project Description	Replacement of small culverts and bridges throughout the GVWSA.
Project Rationale	This provides annual funding for the replacement of culverts and bridges that have reached end of life and/or are undersized given present knowledge of potential peak water flows and anticipated climate change effects. With the completion of peak flow modelling of all major structures in the Sooke and Goldstream WSAs in 2017, additional funds are required beginning in 2018 to upgrade identified structures to current standards. Costs of upgrades have increased significantly in the last 5 years.				

Service:	2.670	Regional Water Supply

Project Number	17-28	Capital Project Title	Watershed Security Infrastructure Upgrade and Replacement	Capital Project Description	New, upgrade and replacement of security infrastructure in the GVWSA.
Project Rationale	The outer boundary of the Leech, Sooke and Goldstream Water Supply Areas is approximately 119 kilometers in length. Main access roads are gated and there are 11 kilometers of existing security fencing. A constant effort is needed to maintain a Closed Watershed Policy. Through monitoring, high incident areas are identified, security plans are developed, and security infrastructure (fencing, gates and signage) is installed or upgraded where required. The uplift in provisional funding requested in 2017 has been reduced given full integration of the Weeks Lake area within the GVWSA, completion of fencing and gates related to the Sooke Hills Wilderness Trail and with seperate capital projects for autogates.				

Project Number	17-29	Capital Project Title	Water Supply Area Equipment Replacement	Capital Project Description	Hydrometeorological, fireweather and wildfire suppression equipment replacement.
Project Rationale	This provides annual funding for the replacement or upgrading of equipment for wildfire suppression and spill response, fire weather stations, hydro-meteorological monitoring and water quality sampling and monitoring equipment. Given an expansion of the hydrology and meteorology network of stations and sensors, an additional $50,000 per year is added in 2020 and going forward. In 2021 and going forward, funding is reduced by $20,000 as water quality equipment will be funded under a separate line item (21-17). A revised level of funding is requested beginning in 2023 that reflects forecasted needs.				

Project Number	17-30	Capital Project Title	Transmission Main Repairs	Capital Project Description	Emergency repairs to the transmission mains.
Project Rationale	Each year a visual inspection of this critical supply tunnel is carried out by CRD staff. This capital item allows for minor repairs that are discovered during these inspections. This also allows for annual funding for repair of emergency breaks on large diameter supply mains.				

Project Number	17-31	Capital Project Title	Transmission System Components Replacement	Capital Project Description	Replacement and repair of transmission components.
Project Rationale	This is an annual allowance for the capital costs for the replacement and repair of supply system components that fail under normal operation and maintenance during the year.				

Project Number	17-33	Capital Project Title	Disinfection Equipment Parts Replacement	Capital Project Description	Replacement of incidental equipment and parts associated with the disinfection system.
Project Rationale	The annual work includes the replacement of the plastic gas feed piping that has become very brittle, installing air valves on the ammonia solution lines, installing and replacing shut off valves on the booster pumps supply piping, installing indicator stems on UV cooling water valves, relocating the UV cooling water feed pipes, improving the landscaping around the UV building to reduce dust and other minor upgrades.				

Project Number	17-34	Capital Project Title	Supply System Computer Model Update	Capital Project Description	Annual update of the regional hydraulic model.
Project Rationale	This item is to allow for staff and consultant time each year to keep the hydraulic computer model current.				

Service:	2.670	Regional Water Supply

Project Number	19-16	Capital Project Title	Dam Improvements	Capital Project Description	Items not covered by Dam Safety Reviews, but brought up in Dam Safety Inspections and Dam Safety Reviews and address itesm in the dam safety database/risk registry
Project Rationale	Dam Safety Inspections are carried out throughout the year and result in minor improvements at each dam annually. These improvements are minor in nature and are typically not covered in the Dam Safety Review. Funds are required to carry out the dam safety improvements resulting from Dam Safety Inspections.				

Project Number	19-22	Capital Project Title	SCADA Repairs & Equipment Replacement	Capital Project Description	Items not covered by the SCADA Replacement and SCADA Master Plan, but integral in maintaining the SCADA System and revenue meter system.
Project Rationale	This item is to allow for unplanned SCADA repairs and equipment replacement not covered by the capital projects SCADA Replacement.				

Project Number	21-15	Capital Project Title	Corrosion Protection	Capital Project Description	Replace corrosion protection assets, such as coatings, for the transmission system when identified.
Project Rationale	There are numerous assets with varying levels of corrosion protection throughout the RWS system. Funds are required to ensure that corrosion protection assets are replaced or rehabilitated when identified.				

Project Number	21-16	Capital Project Title	Valve Chamber Upgrades	Capital Project Description	Replace failing valves and appurtenances along the RWS supply system.
Project Rationale	The RWS system has numerous isolation and air valves along the transmission system, usually in underground chambers. Funds are required for replacement of valves and chamber upgrades as they are identified.				

Project Number	21-17	Capital Project Title	Water Quality Equipment Replacement	Capital Project Description	Replacement of water quality equipment for the
Project Rationale	This provides annual funding for the replacement or upgrading of equipment for the water quality lab, sampling, and operations. Of this provisional budget, $20,000 was previously included in item 17-29 (Water Supply Area annual provisional budget)				

Project Number	21-18	Capital Project Title	LIMS support	Capital Project Description	Support for LIMS database
Project Rationale	Provides for support for the laboratory information management system				

Service:	2.670	Regional Water Supply

Project Number	23-20	Capital Project Title	Land Exchange/Acquisition	Capital Project Description	Land surveys, appraisals to support decisions regarding land exchange to increase catchment area, buffer water supply areas and other possible land exchange and acquisition within the RWS system.
Project Rationale	There are opportunities to increase the catchment and critical buffer areas of Sooke, Goldstream and the Leech WSA by purchase or land exchange with surrounding land owners. From time to time, the RWS System requires acquisition of lands for infrastructure purposes. Funds will be used when needed to undertake appraisals, legal surveys, and legal fees for work to develop agreements to purchase or exchange lands for the Regional Water Supply Area or System.				

Project Number	17-35	Capital Project Title	Vehicle & Equipment Replacement (Funding from Replacement Fund)	Capital Project Description	This is for replacement of vehicles and equipment used by CRD Water Services for the day-to-day operation and maintenance of the supply system.
Project Rationale	This is for replacement of vehicles and equipment used by CRD Water Services for the day-to-day operation and maintenance of the supply system. The Equipment Replacement Fund is used to fund the expenditure. The requests have been adjusted to align with the pricing for electric vehicles.				

Project Number	20-22	Capital Project Title	Vehicle for the Dam Safety Program	Capital Project Description	New Transit Van
Project Rationale	An additional pick up is required for the dam safety program. The request has been adjusted to align with the pricing for an electric Transit Van.				

Project Number	20-23	Capital Project Title	Vehicle for the CSE Support Program	Capital Project Description	New Transit Van
Project Rationale	A new Transit van is required to support the Confined Space Entry Support program. The request has been adjusted to align with the pricing for an electric Transit Van.				

Project Number	21-30	Capital Project Title	Vehicle for Warehouse Operations	Capital Project Description	New pick up
Project Rationale	For use of the warehouse worker to source supplies and materials in support of the remote sites.This warehouse worker will maintain wastewater stores and will travel and transport as required items between stores locations. A pickup truck will be required. The request has been aligned with the pricing for an electric Pick Up.				

Project Number	22-18	Capital Project Title	Electric Vehicle Charging Stations	Capital Project Description	7 Dual charging stations at 479 Island Hwy and 1 Dual charging station at the Watershed Protection FOC
Project Rationale	EV Charging Stations Are required at 479 Island Hwy and the Watershed Protection FOC in order to charge the EV's being purchased during 2021, 2022 and future budget periods. The installation costs per charger is reduced when more than one is installed at a time. There are grants available that will cover approx. 50% of all costs.				

Service:	2.670	Regional Water Supply

Project Number	23-21	Capital Project Title	EV Charging Stations Electrical Infrastructure	Capital Project Description	Electrical System upgrades at 479 Island Hwy to power up 44 charging stations
Project Rationale	In support of the CRD's Climate Action Strategy to reduce the corporate GHG emissions. The CRD Fleet of vehicles is one of the larger contributors to the generation of GHG's. Integrated Water Services identified 44 of the approx. 100 vehicles that operate out of the 479 Island location for replacement with Electrical Vehicles by 2030. I preparation for providing the proper charging network at 479 an Electric Vehicle Fleet Conversion Study was completed in 2021.The results of the study was to upgrade the electrical infrastructure to accommodate the power needs of 44 charging points. It is proposed that phase 1 is started in 2023 to upgrade the electrical distribution system and provide 17 charging points. The larger portion of the costs will be to upgrade the electrical system. Phase 2 to allow for a further 27 charging points can be planned to accommodate the balance of EV vehicles pending their purchasing and delivery.				

Project Number	23-22	Capital Project Title	Fuel Truck	Capital Project Description	Fuel tender truck
Project Rationale	At present the fueling of stationary emergency generators and equipment is done using a tidy tank. This requires several trips to the gas station. During the period when fuel was difficult to source it became apparent that Corporate Fleet needs to find a solution to the possibility that during an emergency fuel is available. The fuel truck will also be used during a watershed emergency to fuel equipment and vehicles.				

Project Number	23-30	Capital Project Title	Fleet Shop Hoist	Capital Project Description	Heavy Capacity Hoist for fleet maintenance
Project Rationale	The new larger and heavier vehicles are proving to be a challenge for the two hoists presently used in the Fleet worksho at 479 Island Hwy. Currently our hoists are rated for 18,000 lbs. It is proposed to replace one of the hoists with a 24,000 lbs hoist in the centre bay.				

Project Number	23-31	Capital Project Title	Purchase of land	Capital Project Description	Purchasing of land near 479 for future office space
Project Rationale	Purchasing of land near 479 for future office space				

Project Number	24-17	Capital Project Title	Pool Vehicles	Capital Project Description	2 new EV Pickups
Project Rationale	2 new EV Pickups				

Project Number	24-18	Capital Project Title	Vehicle for Watershed Hydrology Program	Capital Project Description	New pickup truck for watershed hydrology program
Project Rationale	New pickup truck required for watershed hydrology program.				

CAPITAL REGIONAL DISTRICT

5 YEAR CAPITAL PLAN

2024 - 2028

Service #: 2.670/2.680

Service Name: Regional Water Supply & JDF Water Distribution Combo

				PROJECT BUDGET & SCHEDULE									
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward	2024	2025	2026	2027	2028	5 - Year Total
SYSTEM REPLACEMENT AND UPGRADES THAT BENEFIT REGIONAL WATER SUPPLY AND JUAN DE FUCA DISTRIBUTION													
16-01	Renewal	Upgrades to Buildings at 479 Island Highway	Maintenance and changes to buildings and office layouts.	$ 320,000	B	WU	$ 20,000	$ 160,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 480,000
17-01	Renewal	Voice Radio Upgrade	Replacement of end of life voice radio system repeaters, office, vehicle and handheld radios.	$ 2,395,000	E	WU	$ 2,100,000	$ 2,300,000	$ -	$ -	$ -		$ 2,300,000
20-01	New	Portable Pump Station	Portable pump station and generator to provide backup when a pump station is offline, in construction or to bypass a section of pipe.	$ 750,000	E	WU	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24-01	**Replacement**	**IT Core Infrastructure Replacement**	**Replacement of Core IT infrastructure such as servers, network switches, UPS, etc for equipment end of life**	**$ 250,000**	**E**	**WU**	**$ -**	**$ 80,000**	**$ 125,000**	**$ 10,000**	**$ 25,000**	**$ 6,000**	$ 246,000
Sub-Total System Replacement and Upgrades That Benefit Regional Water Supply and Juan de Fuca Distribution				**$ 3,195,000**			**$ 2,120,000**	**$ 2,540,000**	**$ 205,000**	**$ 90,000**	**$ 105,000**	**$ 86,000**	**$ 3,026,000**
ANNUAL PROVISIONAL CAPITAL ITEMS													
17-03	Replacement	Office Equipment, Upgrades and Replacements	Upgrade and replacement of office equipment as required.	$ 225,000	E	WU	$ -	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 225,000
17-04	Replacement	Computer Upgrades	Annual upgrade and replacement program for computers, copiers, printers, network equipment as required.	$ 850,000	E	WU	$ -	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 850,000
17-05	New	Development of the Maintenance Management Systems	Develop maintenance management system.	$ 150,000	E	WU	$ -	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 150,000
17-06	Replacement	Small Equipment & Tool Replacement (Water Operations)	Replacement of tools and small equipment for Water Operations as required.	$ 400,000	E	WU	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000		$ 320,000
17-07	Replacement	Small Equipment & Tool Replacement (Corporate Fleet)	Replacement of tools and small equipment for Fleet as required.	$ 85,000	E	WU	$ -	$ 25,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 85,000
24-02	**Study**	**Capital Projects Delivery Optimization**	**Ongoing internal improvement of templates, tools and processes used in the delivery of capital projects.**	**$ 100,000**	**S**	**WU**	**$ -**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ 100,000**
Sub-Total for Annual Provisional Capital Items				**$ 1,650,000**			**$ -**	**$ 370,000**	**$ 360,000**	**$ 360,000**	**$ 360,000**	**$ 280,000**	**$ 1,730,000**
x			**GRAND TOTAL**	**$ 4,845,000**			**$ 2,120,000**	**$ 2,910,000**	**$ 565,000**	**$ 450,000**	**$ 465,000**	**$ 366,000**	**$ 4,756,000**

Service:	2.670/2.680	Regional Water Supply & JDF Water Distribution Combo

Project Number	16-01	**Capital Project Title**	Upgrades to Buildings at 479 Island Highway	**Capital Project Description**	Maintenance and changes to buildings and office layouts.

Project Rationale The budget includes the following funds to upgrade and renew the buildings at 479 Island Highway:
- Improvements,Repairs, upgrades and changes to the buildings (provisional $45,000)
- Painting of the buildings. (provisional $20,000 annually)
- Repair and replacement of carpets, floors and walls. (provisional $40,000 annually)
- Climate Action initiatives and feasibility studies ($55,000)

Project Number	17-01	**Capital Project Title**	Voice Radio Upgrade	**Capital Project Description**	Replacement of end of life voice radio system repeaters, office, vehicle and handheld radios.

Project Rationale Service Life and projected replacement:
- The service life of the mobile and portable units was forecast as 10 years at minimum, 15 years at maximum in 2005.
- The present radio models used in the system have just been taken out of production by the manufacturer, there will be no new units available for purchase as of July 1, 2015.
- Support for repairs and maintenance of the present radio will continue for the next 3 years at least.
- There are no pressing issues with equipment maintenance or repairs, present repair rates suggest we can maintain the system for the next few years, and perhaps reach a 12-15 year lifespan on the present equipment.

Project Number	20-01	**Capital Project Title**	Portable Pump Station	**Capital Project Description**	Portable pump station and generator to provide backup when a pump station is offline, in construction or to bypass a section of pipe.

Project Rationale The RWS and JdF operation numerous water mains and pump stations. There are situations, when a pump station fails, construction of a pump station or bypassing a section of pipe, where a portable pump station with a generator is required to maintain the level of service. Portable PS was delivered in 2023 but some deficiencies, including the associated generator remain and may carry into 2024 to fully address.

Project Number	17-03	**Capital Project Title**	Office Equipment, Upgrades and Replacements	**Capital Project Description**	Upgrade and replacement of office equipment as required.

Project Rationale Funds will be used for the replacement and upgrading of office equipment and furniture, as required.

Service:	2.670/2.680	Regional Water Supply & JDF Water Distribution Combo

Project Number	17-04	**Capital Project Title**	Computer Upgrades	**Capital Project Description**	Annual upgrade and replacement program for computers, copiers, printers, network equipment as required.

Project Rationale

This is an annual upgrading and replacement program of computers, photocopiers, network, monitoring and associated equipment, as required. This item has been increased from $160,000 to $170,000 annually to reflect actual costs.

Capital Budget
Network Switch Maintenance $10,000
Additional Wireless Access Points and Maintenance $15,000
Photocopier Replacement $20,000
Additional Data Storage $15,000
Replacement Computers $75,000
Equipment Maintenance (contingency) $23,000
Replace Access Control System - Gates/ Video Cameras $12,000
Total Capital $170,000

Project Number	17-05	**Capital Project Title**	Development of the Maintenance Management Systems	**Capital Project Description**	Develop maintenance management system.

Project Rationale

The maintenance management system needs further development to meet user needs and to facilitate reporting. It is proposed that funds be approved for the following projects:- Develop and Asset onboarding process and a fault code reporting process for the CMMS.

Project Number	17-06	**Capital Project Title**	Small Equipment & Tool Replacement (Water Operations)	**Capital Project Description**	Replacement of tools and small equipment for Water Operations as required.

Project Rationale

Funds will be used for replacement of a variety of Operations and Welding equipment such as cutting saws, portable generators, gas detectors, Hilti drills,plasma cutter, wire welder, etc.

2.670 Regional Water Supply
Asset/ Reserve Schedule
2024 - 2028 Financial Plan

Asset Profile

Regional Water Supply

System assets include the lands, dams and source water reservoirs within the water supply areas, intake and source conduits, two water treatment plants, pressure regulating facilities, nine supply mains, three balancing reservoirs and revenue water meters in the water transmission system.

Equipment Replacement Reserve Schedule

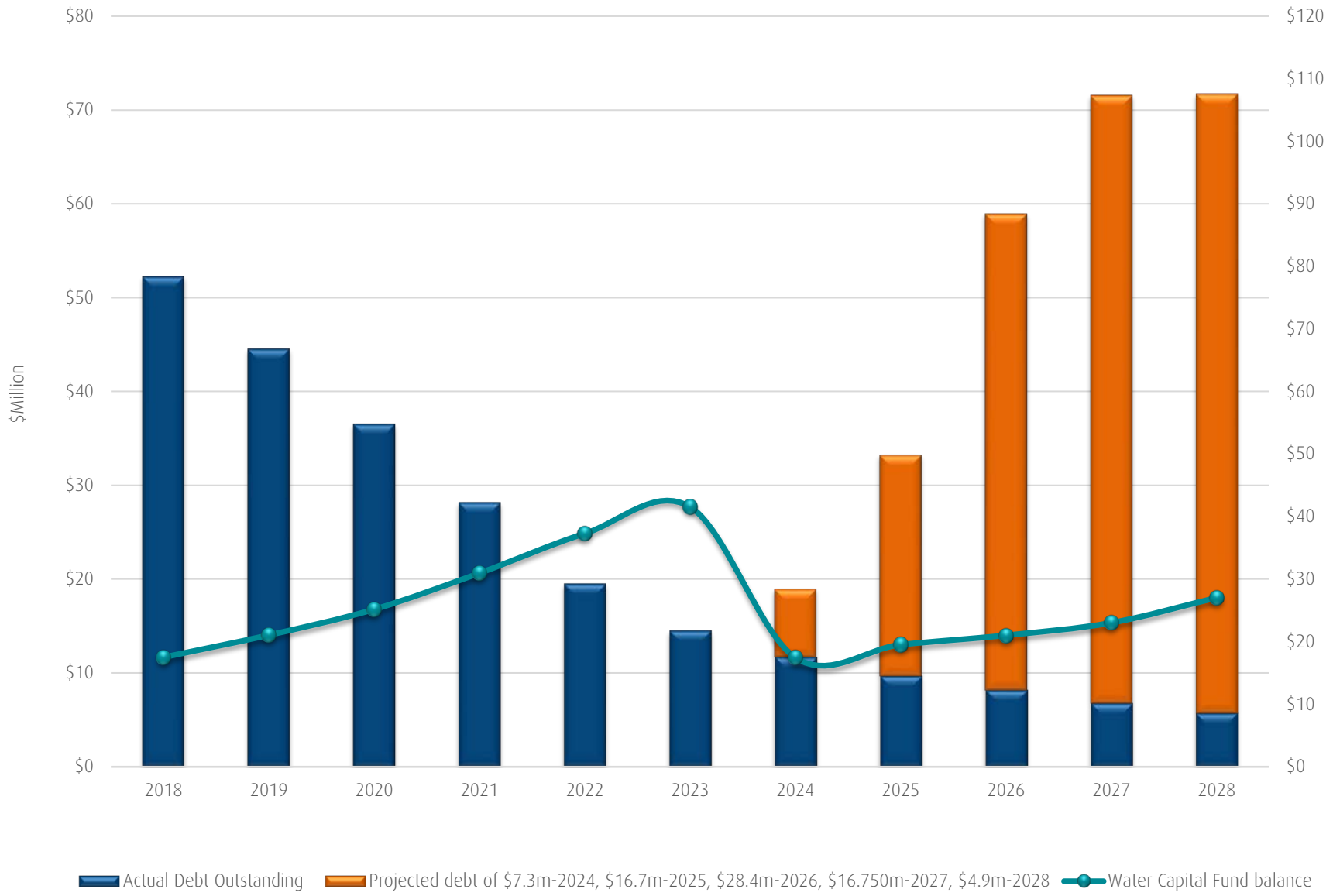
Reserve Fund: 2.670 Regional Water Supply Equipment Replacement Reserve (covered by CRD-ERF Bylaw)

Fund: 1022 Fund Center: 101454	**Estimated**	**Budget**				
	2023	**2024**	**2025**	**2026**	**2027**	**2028**
Beginning Balance	2,762,670	2,326,323	1,793,728	1,700,616	1,542,703	1,325,073
Equipment purchases (Based on Capital Plan)	(995,000)	(1,191,000)	(685,250)	(773,000)	(855,000)	(495,000)
Transfer of assets intracompany	-					
Transfer from Operating Budget	393,653	479,755	489,350	499,137	509,120	519,302
Proceeds on disposals	150,000	178,650	102,788	115,950	128,250	74,250
Interest Income*	15,000					
Ending Balance $	**2,326,323**	**1,793,728**	**1,700,616**	**1,542,703**	**1,325,073**	**1,423,625**

General Comments:
Reserve Fund is used for the purpose of replacing fleet vehicles including heavy equipment and associated mobile components, as outlined in the capital plan. Proceeds from disposals are estimated at 15% of replacement equipment purchases. Note not all vehicles are sold within the year in which they are replaced.

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

Regional Water Supply Services (Greater Victoria)
Debt Outstanding vs. Water Capital Fund Balance



APPENDIX C

REGIONAL WATER SUPPLY COMMISSION
Agricultural Water Rate Funding Comparisons 2011 - 2022

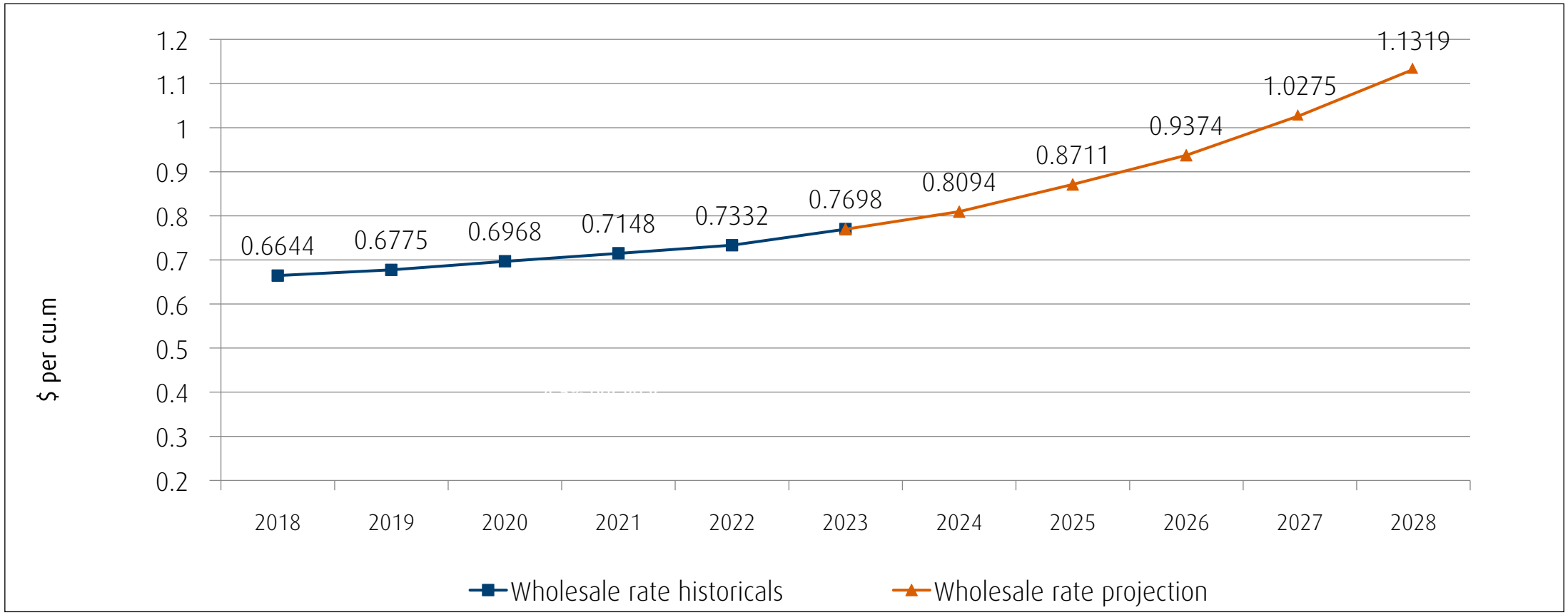
		No. of AR Accounts	No. of AG Accounts	AR Volume m3	AG Volume m3	Avg AR Volume m3 (Vol/Accts)	Avg AG Volume m3	Agri Rate Consumption Costs	Agri Fixed Charge Costs	Total Agri Subsidy Paid out (Cons + Fixed)	Avg Agri Cost $ (Paid/Accts)	%age of Total Paid out	Rate Differential: Municipal Rate m3	Rate Differential: Agri Rate m3	Rate Differential: Muni-CRD Diff m3
													A	B	A - B
Western Communities & Sooke *															
	2022	85	17	45,564	37,292	536	2,194	$ 181,612	$ -	$ 181,612	$ 1,781	10.6%	$ 2.4024	$ 0.2105	$ 2.1919
	2021	84	16	53,773	63,222	640	3,951	$ 245,409	$ -	$ 245,409	$ 2,454	12.3%	$ 2.3081	$ 0.2105	$ 2.0976
	2020	84	15	42,432	51,118	505	3,408	$ 187,605	$ -	$ 187,605	$ 1,895	11.9%	$ 2.2159	$ 0.2105	$ 2.0054
	2019	86	14	36,598	50,277	426	3,591	$ 165,297	$ -	$ 165,297	$ 1,653	11.1%	$ 2.1132	$ 0.2105	$ 1.9027
	2018	95	18	40,657	19,669	428	1,093	$ 112,411	$ -	$ 112,411	$ 995	7.9%	$ 2.0739	$ 0.2105	$ 1.8634
	2017	81	11	33,458	11,628	413	1,057	$ 76,754	$ -	$ 76,754	$ 834	5.6%	$ 1.9129	$ 0.2105	$ 1.7024
	2016	80	11	41,248	8,652	516	787	$ 84,950	$ -	$ 84,950	$ 934	5.9%	$ 1.9129	$ 0.2105	$ 1.7024
	2015	79	11	33,537	7,078	425	643	$ 64,968	$ -	$ 64,968	$ 722	5.1%	$ 1.8101	$ 0.2105	$ 1.5996
	2014	79	11	29,419	9,074	372	825	$ 60,769	$ -	$ 60,769	$ 675	5.6%	$ 1.7892	$ 0.2105	$ 1.5787
	2013	80	11	25,532	5,578	319	507	$ 46,438	$ -	$ 46,438	$ 510	4.7%	$ 1.7032	$ 0.2105	$ 1.4927
	2012	79	13	23,617	5,932	299	456	$ 40,828	$ -	$ 40,828	$ 444	4.3%	$ 1.5922	$ 0.2105	$ 1.3817
	2011	75	11	27,910	4,893	372	445	$ 43,641	$ -	$ 43,641	$ 507	5.2%	$ 1.5409	$ 0.2126	$ 1.3283
Central Saanich															
	2022	277	50	398,069	279,385	1,437	5,588	$ 1,005,694	$ 7,050	$ 1,012,744	$ 3,097	59.3%	$ 1.8600	$ 0.2105	$ 1.6495
	2021	277	50	466,809	307,970	1,685	6,159	$ 1,150,198	$ 7,050	$ 1,157,248	$ 3,539	57.9%	$ 1.8600	$ 0.2105	$ 1.6495
	2020	278	49	375,646	233,214	1,351	4,759	$ 873,579	$ 6,768	$ 880,347	$ 2,692	56.0%	$ 1.8047	$ 0.2105	$ 1.5942
	2019	276	47	421,804	210,499	1,528	4,479	$ 862,430	$ 2,162	$ 864,592	$ 2,677	58.0%	$ 1.7260	$ 0.2105	$ 1.5155
	2018	278	49	378,593	297,433	1,362	6,070	$ 866,699	$ 7,003	$ 873,702	$ 2,672	61.3%	$ 1.6350	$ 0.2105	$ 1.4245
	2017	296	49	398,087	298,522	1,345	6,092	$ 792,125	$ 7,003	$ 799,128	$ 2,316	58.7%	$ 1.5575	$ 0.2105	$ 1.3470
	2016	297	51	446,241	303,419	1,502	5,949	$ 879,396	$ 7,191	$ 886,587	$ 2,548	61.1%	$ 1.5139	$ 0.2105	$ 1.3034
	2015	294	51	412,060	246,292	1,402	4,829	$ 739,282	$ 7,144	$ 746,426	$ 2,164	58.4%	$ 1.4582	$ 0.2105	$ 1.2477
	2014	294	49	361,801	190,895	1,231	3,896	$ 596,515	$ 6,808	$ 603,323	$ 1,759	55.7%	$ 1.4033	$ 0.2105	$ 1.1928
	2013	296	45	321,518	194,848	1,086	4,330	$ 542,837	$ 4,186	$ 547,023	$ 1,604	55.7%	$ 1.3799	$ 0.2105	$ 1.0525
	2012	280	41	325,663	210,906	1,163	5,144	$ 518,454	$ 5,658	$ 524,112	$ 1,633	55.6%	$ 1.2841	$ 0.2105	$ 0.9662
	2011	210	38	312,702	169,206	1,489	4,453	$ 462,183	$ 5,244	$ 467,427	$ 1,885	56.1%	$ 1.2867	$ 0.2126	$ 0.9667
North Saanich **															
	2022	107	19	52,167	107,838	488	5,676	$ 235,367	$ -	$ 235,367	$ 1,868	13.8%	$ 1.6815	$ 0.2105	$ 1.4710
	2021	105	18	62,904	126,579	599	7,032	$ 265,276	$ -	$ 265,276	$ 2,157	13.3%	$ 1.6105	$ 0.2105	$ 1.4000
	2020	102	16	57,433	108,453	563	6,778	$ 223,532	$ -	$ 223,532	$ 1,894	14.2%	$ 1.5580	$ 0.2105	$ 1.3475
	2019	94	15	58,278	95,030	620	6,335	$ 201,370	$ -	$ 201,370	$ 1,847	13.5%	$ 1.5240	$ 0.2105	$ 1.3135
	2018	100	16	97,574	70,726	976	4,420	$ 220,982	$ -	$ 220,982	$ 1,905	15.5%	$ 1.5240	$ 0.2105	$ 1.3135
	2017	100	13	151,773	53,551	1,518	4,119	$ 245,456	$ -	$ 245,456	$ 2,172	18.0%	$ 1.4643	$ 0.2105	$ 1.2538
	2016	100	12	148,450	36,774	1,485	3,065	$ 230,697	$ -	$ 230,697	$ 2,060	15.9%	$ 1.4560	$ 0.2105	$ 1.2455
	2015	106	14	151,656	38,066	1,431	2,719	$ 230,948	$ -	$ 230,948	$ 1,925	18.1%	$ 1.4278	$ 0.2105	$ 1.2173
	2014	98	14	133,853	30,372	1,366	2,169	$ 194,919	$ -	$ 194,919	$ 1,740	18.0%	$ 1.3974	$ 0.2105	$ 1.1869
	2013	102	13	141,845	30,647	1,391	2,357	$ 200,004	$ -	$ 200,004	$ 1,739	20.4%	$ 1.3700	$ 0.2105	$ 1.1595
	2012	99	13	117,497	45,227	1,187	3,479	$ 188,679	$ -	$ 188,679	$ 1,685	20.0%	$ 1.3700	$ 0.2105	$ 1.1595
	2011	101	13	106,393	34,921	1,053	2,686	$ 163,558	$ -	$ 163,558	$ 1,435	19.6%	$ 1.3700	$ 0.2126	$ 1.1574
Saanich															
	2022	66	56	36,146	129,467	548	2,312	$ 267,879	$ 11,330	$ 279,209	$ 2,289	16.3%	$ 1.8280	$ 0.2105	$ 1.6175
	2021	74	55	49,933	158,309	675	2,878	$ 318,923	$ 11,050	$ 329,973	$ 2,558	16.5%	$ 1.7420	$ 0.2105	$ 1.5315
	2020	68	53	40,416	144,443	594	2,725	$ 268,877	$ 10,867	$ 279,745	$ 2,312	17.8%	$ 1.6650	$ 0.2105	$ 1.4545
	2019	68	51	37,086	140,512	545	2,755	$ 249,436	$ 10,278	$ 259,714	$ 2,182	17.4%	$ 1.6150	$ 0.2105	$ 1.4045
	2018	70	49	37,503	111,896	536	2,284	$ 208,786	$ 9,996	$ 218,782	$ 1,839	15.3%	$ 1.5910	$ 0.2105	$ 1.3805
	2017	80	50	38,201	132,092	478	2,642	$ 229,604	$ 9,719	$ 239,324	$ 1,841	17.6%	$ 1.5600	$ 0.2105	$ 1.3495
	2016	71	53	36,409	139,764	513	2,637	$ 237,745	$ 10,056	$ 247,802	$ 1,998	17.1%	$ 1.5600	$ 0.2105	$ 1.3495
	2015	75	51	74,841	129,225	998	2,534	$ 226,276	$ 9,727	$ 236,003	$ 1,873	18.5%	$ 1.5420	$ 0.2105	$ 1.3315
	2014	72	53	46,230	177,633	642	3,352	$ 213,981	$ 9,883	$ 223,863	$ 1,791	20.7%	$ 1.4560	$ 0.2105	$ 1.2455
	2013	65	50	35,745	122,456	550	2,449	$ 179,004	$ 9,655	$ 188,659	$ 1,641	19.2%	$ 1.3420	$ 0.2105	$ 1.1315
	2012	68	47	38,212	138,455	562	2,946	$ 180,466	$ 9,235	$ 189,701	$ 1,650	20.1%	$ 1.2320	$ 0.2105	$ 1.0215
	2011	71	46	101,235	121,896	1,426	2,650	$ 149,584	$ 9,118	$ 158,703	$ 1,356	19.0%	$ 1.1530	$ 0.2126	$ 0.9404
Totals															
	2022	535	142	531,946	553,982	994	3,901	$ 1,690,553	$ 18,380	$ 1,708,933	$ 2,524	100%			
	2021	540	139	633,419	656,080	1,173	4,720	$ 1,979,806	$ 18,100	$ 1,997,906	$ 2,942	100%			
	2020	532	133	515,927	537,228	970	4,039	$ 1,553,594	$ 17,635	$ 1,571,229	$ 2,363	100%			
	2019	524	127	553,766	496,318	1,057	3,908	$ 1,478,533	$ 12,440	$ 1,490,973	$ 2,290	100%			
	2018	543	132	554,327	499,724	1,021	3,786	$ 1,408,879	$ 16,999	$ 1,425,878	$ 2,112	100%			
	2017	557	123	621,519	495,793	1,116	4,031	$ 1,343,940	$ 16,722	$ 1,360,663	$ 2,001	100%			
	2016	548	127	672,348	488,609	1,227	3,847	$ 1,432,788	$ 17,247	$ 1,450,036	$ 2,148	100%			
	2015	554	127	672,094	420,661	1,213	3,312	$ 1,261,474	$ 16,871	$ 1,278,344	$ 1,877	100%			
	2014	543	127	571,304	407,973	1,052	3,212	$ 1,066,184	$ 16,691	$ 1,082,874	$ 1,616	100%			
	2013	543	119	524,640	353,529	966	2,971	$ 968,283	$ 13,841	$ 982,124	$ 1,484	100%			
	2012	526	114	504,989	400,520	960	3,513	$ 928,426	$ 14,893	$ 943,320	$ 1,474	100%			
	2011	457	108	548,240	330,916	1,200	3,064	$ 818,967	$ 14,362	$ 833,329	$ 1,475	100%			

* **Western Communities do not charge a fixed charge**

** **North Saanich charges the fixed charge on property taxes**

*** **AR - Agriculture/Residential customers receive a rebate on consumption over 455 cubic meters annual as the meter feeds both premise and land.**
AG - Agriculture customers receive a rebate on the entire consumption annually as the meter is dedicated only for land.

Regional Water Supply Services (Greater Victoria) Wholesale Water Rate Projections



Making a difference...together

RWSC 23-12

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, OCTOBER 18, 2023

SUBJECT **Greater Victoria Water Supply Area Land Acquisition Reserve Fund Update**

ISSUE SUMMARY

To bring forward the June 15, 2022 Greater Victoria Water Supply Area Land Acquisition Reserve Fund Options staff report for further consideration as directed by the Regional Water Supply Commission.

BACKGROUND

In 2020, the Regional Water Supply Commission (Commission) adopted the Greater Victoria Water Supply Area (GVWSA) Land Acquisition Priorities and further directed staff to report on options and implications of developing a reserve fund to support the land acquisition goals.

A report on the matter of establishing a reserve fund was brought to the Commission in June 2021 (Appendix A) and in June 2022 (Appendix B). At both meetings, the Commission resolved not to establish a land acquisition reserve fund at that time, but to re-visit the matter in a year's time.

The background, implications, basic alternatives and staff recommendation remain the same in 2023 as they did in 2021 and 2022.

There have been no implications from the decision to not establish a reserve fund, nor do staff anticipate future barriers to acquiring land as a result of not carrying a land acquisition reserve fund. The Grant Lake property acquisition (58.7 hectares) for the GVWSA closed as planned in February 2021 using funds ($652,729) allocated in the Regional Water Supply Capital Plan, without the need for capital plan amendments or additional borrowing. During the last 24 months no further land acquisition opportunities have developed to the point of requiring funding.

ALTERNATIVES

Alternative 1

1. That a reserve fund for Greater Victoria Water Supply Area land acquisition be included when considering of a reserve fund for Regional Water Supply System Master Plan projects, and that, until reserves are established, land purchase opportunities continue to be addressed through adjustments to the existing capital program and/or debt financing;

2. That the decision whether to establish a Greater Victoria Water Supply Area land acquisition reserve fund be brought back either, when recommendation 1. above occurs, or when a specific need arises; and,

3. That a report on land acquisition opportunities and progress be provided, in closed meeting, only when Commission decision is required or significant progress is made.

Alternative 2
That staff be directed to pursue the establishment of a reserve fund for Greater Victoria Water Supply Area Land Acquisition, starting in the 2025 budget year, and contribute annually to the reserve through the wholesale water rate, with the Regional Water Supply Commission reviewing and approving the contribution amount each year.

IMPLICATIONS

Please refer to the Implications section of the 2021 staff report on the matter attached as Appendix A, assuming references to 2022 now refer to 2025.

CONCLUSION

In June of 2021 and 2022 the Regional Water Supply Commission resolved not to establish a Greater Victoria Water Supply Area Land Acquisition reserve fund; but to re-visit the decision in one years' time. In the last two years, one land acquisition opportunity was realized (58.7 hectares for $652,729) using allocated Regional Water Supply Capital funds. The lack of a reserve funds did not hamper efforts to pursue priority acquisition lands during the period; however, there were no other willing sellers that tested the need for readily available funds in a reserve. Given no changes to the financial implications or outlook for land acquisition, the conclusion from 2021 remains the same.

RECOMMENDATION

1. That a reserve fund for Greater Victoria Water Supply Area land acquisition be included when considering of a reserve fund for Regional Water Supply System Master Plan projects, and that, until reserves are established, land purchase opportunities continue to be addressed through adjustments to the existing capital program and/or debt financing;

2. That the decision whether to establish a Greater Victoria Water Supply Area land acquisition reserve fund be brought back either, when recommendation 1. above occurs, or when a specific need arises; and,

3. That a report on land acquisition opportunities and progress be provided, in closed meeting, only when Commission decision is required or significant progress is made.

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

ATTACHMENT(S)

Appendix A: RWSC 21-08 Options & Implications of Developing a Reserve Fund for Greater Victoria Water Supply Area Land Acquisition
Appendix B: RWSC 22-07 Greater Victoria Water Supply Area Land Acquisition Reserve Fund Options

APPENDIX A

Making a difference...together

RWSC 21-08

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, JUNE 16, 2021

SUBJECT **Options & Implications of Developing a Reserve Fund for Greater Victoria Water Supply Area Land Acquisition**

ISSUE SUMMARY

To report on the options and implications of developing a reserve fund to support future Greater Victoria Water Supply Area (GVWSA) land acquisitions.

BACKGROUND

The Regional Water Supply Commission (Commission) approved GVWSA land acquisition priorities in March 2020 as follows:

Priority 1: Sooke Lake Reservoir catchment lands
Priority 2: Sooke Lake Reservoir buffer lands
Priority 3: Goldstream Water System catchment lands
Priority 4: Buffer lands providing primary access to the Sooke WSA and the Kapoor Tunnel
Priority 5: Goldstream Water System buffer lands
Priority 6: Leech River catchment lands
Priority 7: Buffer lands containing primary access to the Leech WSA

The Commission also directed staff to take a more active approach in pursuing land acquisition.

Along with approval of the priorities, the Commission passed a motion directing staff to: "*prepare a report on options and implications of developing a reserve fund for land acquisition priorities for the Greater Victoria Water Supply Area*".

The approved land acquisition priorities total 2,753 hectares (ha), with disposition opportunity of 963 ha, yielding a net land acquisition goal of an additional 1,790 ha.

A recent acquisition of a small GVWSA land parcel settled at $4,500 per acre ($11,115 per ha). Using the same selling price as an estimate to achieve all of the land acquisition priorities would cost roughly $20 million.

Some Commission members expressed a desire to set aside reserve funds in order to pursue land acquisition goals and for the Commission to be agile in acquiring priority land parcels when opportunities arise. A review of the priorities and rough estimates of possible timing and cost are shown in Table 1 below. The costs are based on the most recent selling price but should be considered at the low end of actual future costs.

Table 1. 20 Year Plan to Achieve All GVWSA Land Acquisition Priorities

Land Acquisition Time Frame	Approx. Area to Acquire	Land Priorities Acquired	Cost ($ million)	Number of land parcels involved
0 - 5 year goal	700 ha	Priorities 1-3 (Sooke and Goldstream watersheds)	7.8	11
5 - 10 year goal	700 ha	Priority 4 (Buffer lands to main infrastructure/access)	7.8	3
10 – 15 year goal	200 ha	Priority 5 and 6 (Goldstream buffer, Leech catchment)	2.1	12
15 - 20 year goal	200 ha	Priority 7 (Leech buffer)	2.1	6
20 years	**1,800 ha**	**All Priorities**	**$ 20 million**	**32**

**Acquisition could only occur with a willing land seller, which may not be the case within the proposed acquisition time frames.*

Currently, any land acquisition outlined in the existing 5 year capital plan is planned to be funded by contributions through the wholesale water rate, which includes a mix of water capital fund contributions and debt financing. If an opportunity arises to acquire land that has not been budgeted for in the current capital plan, there may not be the capital funding in place to make the purchase. However, options for purchasing land parcels when opportunities arise can include:

- Amend the capital plan to defer other current year projects, to allow for the purchase of new parcels of land within the existing capital budget;
- Amend the existing capital plan to allow the purchase of new parcels of land, and borrow funds via the existing or new loan authorization (dependent on funding authorization specifications) to fund the acquisition; or,
- Establish a reserve for land acquisition, to enable future land purchases as and when they arise, without impacting funding for other capital priorities. A capital plan amendment would still be required.

<u>Examples of Past GVWSA Land Acquisitions</u>

The larger portion (8,791 hectares) of the purchase of the Leech WSA lands from a private forest land holder occurred in 2007. Sixty million dollars were financed in April 2008 for a 15 year term at 4.65% interest for the first 10 years with a rate of 2.60% for the final 5 year term which ends April 2023. In the first 10 years, payments of $5.8 million were made annually and in the last 5 years $4.6 million per annum. An approximation of the impact on the wholesale water rate when the financing ends in 2023 is $0.0956 per cubic metre of water.

The recent acquisition of a 58.7 ha land parcel for $652,500 included sufficient time to allow for the purchase to be added to the capital plan as part of the regular capital budget planning, approval and financing process, and no amendments or extra financing was required.

Water Advisory Committee Input

A similar report on the options and implications of a reserve fund for GVWSA land acquisition was brought to the Water Advisory Committee on June 3, 2021. The Committee elected to receive the report for information and to provide the Commission with the Q&A and feedback on the report:

- Q: Was the Leech WSA purchase financed? Are there barriers to obtaining financing for $20 million going forward?

  A: Yes, the $64 million Leech land acquisition was financed. No, financing of $20 million is not expected to be a barrier now or in future.

- Q: Does Capital Regional District (CRD) have right of first refusal on any of the priority lands? A reserve fund could be established for any right of first refusal lands.

  A: Only on one parcel owned by Kapoor Lumber Company. [*The parcel is 155 ha and the right of first refusal was negotiated as part of the 1998 land exchange between the CRD/Province/Kapoor Lumber.]*

- Q: Does the CRD invest reserve funds, or do the funds sit without earning any interest? Funds invested now would be subject to inflation.

  A: Yes. [*Collectively across the CRD, all positive balances receive a small amount of internal interest based on investments (typically GICs).]*

- Q: Do the current low interest rates influence the decisions on whether to finance or not?

  A: Yes, staff consider the interest rate in making recommendations and decision making.

- Q: There is a discrepancy if Regional Parks has a land acquisition reserve fund but the GVWSA does not. Shouldn't the need/strategy be the same?

  A: Some differences include: Parks raises funds through requisitions; the GVWSA lands of interest are specific and fixed.

- Members of the public would support a reserve fund given the value and management of undeveloped private forest land in the region.

- The CRD could undertake multi criteria analysis or intangibles analysis, to try to bring together direct/tangible and indirect/intangible aspects to valuing land parcels to the CRD.

- The purchase of the Leech WSA should be included as a reference or example in the report to the Commission.

ALTERNATIVES

Alternative 1

That the Regional Water Supply Commission:

Not pursue the establishment of a reserve fund for Greater Victoria Water Supply Area Land Acquisition at this time, and address any land purchase opportunities through adjustments to the existing capital program and utilize existing capital funding and/or debt financing to fund the acquisition.

Alternative 2

That the Regional Water Supply Commission:

Direct staff to pursue the establishment of a reserve fund for Greater Victoria Water Supply Area Land Acquisition, starting in the 2022 budget year, and contribute annually to the reserve through the wholesale water rate. The Commission will be able to review and approve the contribution amount each year.

Alternative 3

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

IMPLICATIONS

Financial Implications

The establishment and annual contribution of funds from the Regional Water Supply Service to a reserve fund for GVWSA land acquisition would impact the wholesale water rate (which distributes the annual cost of the contribution amongst participants based on water consumption, like all other costs of the service) as shown in Table 2. The annual contribution is not required to stay the same but could change from year to year depending on the pressures on the water rate and current land acquisition opportunities. Where land acquisition purchases cannot be fully funded from the reserve, the remainder could be funded from existing capital and/or debt financing.

Table 2. Wholesale Water Rate Impacts from Annual Contributions to a Reserve Fund

Annual Contribution	Number of Years Required to Achieve a $ 20 million Reserve	Wholesale Water Rate Increase ($/m^3)	Wholesale Water Rate Increase (%)
$0.5 million	40 years	$0.0104	1.5%
$1.0 million	20 years	$0.0208	3 %
$1.4 million	14 years	$0.0292	4%
$1.6 million	12.5 years	$0.0333	5%

To achieve all land acquisition priorities over 20 years to the schedule suggested in Table 1, a contribution schedule of $1.6 million annually for the first ten years followed by annual contributions of $0.5 million for the second decade would be needed. The timing and funds necessary should be considered conceptual given uncertainty regarding purchase opportunities, prices and feasibility of parcel subdivisions to limit acquisition of excess land.

To begin contributions in 2022, a reserve bylaw would first need to be enacted for the Regional Water Supply Service, for the specific purpose of establishing a reserve fund for (GVWSA) land acquisition.

Advantages of a Reserve Fund

The advantages of the establishment of a reserve fund for GVWSA land acquisition are:

- the slow accumulation of funds on hand so that larger land purchases do not have a sudden impact on the water rate, capital funding or debt servicing;
- the ability to respond quickly to land sale opportunities as they arise; and,
- demonstration of a commitment and ability to pursue and acquire priority lands as per the GVWSA Land Acquisition Priorities for the protection of the GVWSA and regional water supply.

Disadvantages of a Reserve Fund

The disadvantage of establishment of a GVWSA land acquisition reserve fund are:

- there would be an increase in the water rate specific to establishing an annual contribution to a land acquisition reserve fund;
- funds may be tied up for years without spending;
- funds are restricted from being used for any other capital spending priorities (other than land acquisition) that the Regional Water Supply Service may have or develop; and,
- today's water consumers pay into a fund that may not benefit them for many years.

Purchasing Land without a Reserve Fund

Under the existing water rate model the Regional Water Supply Service is funded by a mixture of water rate income and debt to fund capital projects. There is already the ability and flexibility to fund large capital projects under this model with opportunities to borrow funds under the existing loan authorization for long term debt with the Municipal Finance Authority (MFA).

In order to make an unanticipated land purchase, the capital plan would need to be amended. The decision would need to be made whether to reprioritize the existing capital plan (approximately $25 million each year) to accommodate the land acquisition within the existing budget (defer or cancel projects), or add the land acquisition to the capital plan and increase the capital budget to accommodate it, or a combination of both. If the capital budget is increased, the debt financing that supports the capital plan would be reviewed and further borrowing would be initiated as necessary. As an example, if debt financing were to be considered for a new land acquisition of $8 million, the current annual principal and interest payment would be approximately $580,000 per year for 15 years. The existing loan authorization with the MFA allows for borrowing twice annually.

Alignment with Existing Plans & Strategies

The 2017 Regional Water Supply Strategic Plan calls for the CRD to "seek ownership and control of the remaining catchment lands and critical adjacent lands to act as a buffer". The Commission adopted land acquisition priorities for the GVWSA to guide the acquisition of lands. In principle, establishment of a land acquisition reserve fund provides further commitment to acquire GVWSA

lands, but lack of a reserve fund is likely not a barrier given the ability to acquire financing relatively quickly and easily through existing processes. Long term financing rates available to the Regional Water Supply Service through the MFA are currently 2.9%.

CONCLUSION

The Regional Water Supply Commission adopted Greater Victoria Water Supply Area (GVWSA) Land Acquisition Priorities in 2020 and directed staff to report on options and implications of developing a reserve fund to support the land acquisition goals.

There is a great deal of uncertainty and lack of control over when priority land parcels may become available for purchase, and the price of any land parcels. If established, reserve funds may be wholly insufficient or sit idle for many years, and may charge consumers for service they do not receive.

The current wholesale water rate model, with access to financing for capital projects, provides ability and flexibility to accommodate land purchases as they arise without significantly burdening the wholesale water rate and/or customers of today.

RECOMMENDATION

That the Regional Water Supply Commission:

Not pursue the establishment of a reserve fund for Greater Victoria Water Supply Area Land Acquisition at this time, and address any land purchase opportunities through adjustments to the existing capital program and utilize existing capital funding and/or debt financing to fund the acquisition.

Submitted by:	Annette Constabel, MSc., RPF, Senior Manager, Watershed Protection
Concurrence:	Ted Robbins, B.Sc., CTech., General Manager, Integrated Water Services
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

APPENDIX B

Making a difference...together

RWSC 22-07

REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, JUNE 15, 2022

SUBJECT **Greater Victoria Water Supply Area Land Acquisition Reserve Fund Options**

ISSUE SUMMARY

To bring forward the June 16, 2021 *Greater Victoria Water Supply Area Land Acquisition Reserve Fund Options* staff report for further consideration as directed by the Regional Water Supply Commission.

BACKGROUND

The Regional Water Supply Commission (Commission) adopted the Greater Victoria Water Supply Area (GVWSA) Land Acquisition Priorities in 2020 and further directed staff to report on options and implications of developing a reserve fund to support the land acquisition goals.

A report on the matter of establishing a reserve fund was brought to the Commission June 16, 2021. The Commission decided not to establish a land acquisition reserve fund at that time, but with the resolution below, directed staff to report any implications of the decision and consider the creation of a land acquisition reserve fund a year later.

"That the Regional Water Supply Commission direct staff to bring this report back in one year's time to consider the creation of a land acquisition reserve fund."

The 2021 report "*Greater Victoria Water Supply Area Land Acquisition Reserve Fund Options*" is included as Appendix A. The background, implications, basic alternatives and staff recommendation remain the same now, as they did in 2021.

Since the report was considered a year ago, there have been no implications from the decision, nor do staff anticipate future barriers to acquiring land as a result of not carrying a land acquisition reserve fund. The Grant Lake property acquisition (58.7 hectares) for the GVWSA closed as planned in February 2021 using funds ($652,729) allocated in the Regional Water Supply Capital Plan, without the need for capital plan amendments or additional borrowing. During the last 12 months there have been no further land acquisition opportunities.

ALTERNATIVES

Alternative 1
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.

Alternative 2
That staff be directed to pursue the establishment of a reserve fund for Greater Victoria Water Supply Area Land Acquisition, starting in the 2023 budget year, and contribute annually to the reserve through the wholesale water rate. The Regional Water Supply Commission will be able to review and approve the contribution amount each year.

IMPLICATIONS

Please refer to the Implications section of the 2021 report on the matter attached as Appendix A, assuming references to 2022 now refer to 2023.

CONCLUSION

In June of 2021 the Regional Water Supply Commission decided not to establish a Greater Victoria Water Supply Area Land Acquisition reserve fund; but to re-visit the decision in one year's time. During the last 12 months one land acquisition opportunity was realized (58.7 hectares for $652,729) using allocated Regional Water Supply Capital funds. The lack of a reserve fund did not hamper efforts to pursue priority lands during the period; however, there were no other willing sellers that tested the need for readily available funds in a reserve. Given no changes to the financial implications or outlook for land acquisition, the conclusion from 2021 remains the same.

RECOMMENDATION

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.

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

ATTACHMENT

Appendix A: RWSC 21-08 *Options & Implications of Developing a Reserve Fund for Greater Victoria Water Supply Area Land Acquisition*

Capital Regional District

HOTSHEET AND ACTION LIST

Water Advisory Committee

Tuesday, September 26, 2023 **12 PM** **6th Floor Boardroom**
625 Fisgard Streeet
Victoria, BC

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

3. ADOPTION OF MINUTES

That the minutes of the June 27, 2023 meeting be adopted.

CARRIED

7. COMMITTEE BUSINESS

THE FOLLOWING ITEMS WERE RECEIVED FOR INFORMATION

7.1. Presentation: Regional Planning: Foodlands Access Program - Status Update (Fall 2023)
7.2. Presentation: Application of Demand Management in the Region
7.3. Summary of Recommendations from Regional Water Supply Commission
7.4. Water Watch Report

Actions:

- Water Advisory Committee to formulate a more specific request to staff, with regard to accessing agricultural water use data, identifying what the information would be used for so that staff can better understand the options or specifics of interest.
- Staff to investigate whether compost would be used to amend/rejuvenate farmland soil at the Bear Hill project for growing purposes.

Emily Sinclair

- Staff to determine how much percentage of potential organics at Hartland is ending up as compost, and whether that is something that is accessible to be used on farmland.

Emily Sinclair

- The Water Advisory Committee would be interested in any additional details related to agricultural water use based on the future study highlighted in the Demand Management presentation.

Kristi Wilson

- The Water Advisory Committee would be interested in knowing details related to water use data pertaining to the construction sector.

Kristi Wilson

Capital Regional District

HOTSHEET AND ACTION LIST

Juan de Fuca Water Distribution Commission

Tuesday, October 3, 2023 **12 PM** **Goldstream Meeting Room**
479 Island Highway
Victoria, BC

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. A name has been identified beside each item for further action and follow-up.

3. ADOPTION OF MINUTES

That the minutes of the July 4, 2023 meeting be adopted.

CARRIED

7. COMMISSION BUSINESS

7.1 2024 Service Planning – Water

Recommendation: The Juan de Fuca Water Distribution Commission recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, Community Need Summary – Water, be approved as presented and form the basis of the 2024-2028 Financial Plan.

CARRIED

7.2 Juan de Fuca Water Distribution Service 2024 Operating and Capital Budget

Recommendation: The Juan de Fuca Water Distribution Commission recommends the Committee of the Whole recommend that the Capital Regional District Board:

1. Approve the 2024 Operating and Capital Budget and the Five Year Capital Plan;
2. Approve the 2024 Juan de Fuca Water Distribution Service retail water rate of $2.6927 per cubic metre, adjusted if necessary, by any change in the Regional Water Supply wholesale water rate;
3. Approve the increase of Equipment Replacement Fund expenditure for 2023 to $1,287,000;
4. Direct staff to balance the 2023 actual operating deficit or surplus on the 2023 capital fund transfer;
5. Direct staff to update carry forward balances in the 2024 Capital Budget for changes after year end; and
6. Direct staff to amend the Water Distribution Local Service Conditions, Fees and Charges Bylaw accordingly.

CARRIED

Capital Regional District

HOTSHEET AND ACTION LIST

Saanich Peninsula Water Commission

Thursday, September 28, 2023 **9:30 AM** **Sidney Community Safety Building**
2245 Oakville Ave
Sidney BC

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

3. ADOPTION OF MINUTES

That the minutes of the July 20, 2023 meeting be adopted.

CARRIED

7. COMMISSION BUSINESS

The following reports were received for information:

7.1 Recommendations from Other Water Commissions

7.2 Water Watch Report

8. NOTICE(S) OF MOTION

8.1. Speaker Series: Commissioners King, Doehnel and Chair Kelbert

Whereas, there is a need for the commission to engage with citizens about water and wastewater trends, technologies and ideas, and

Whereas, the benefits of engaging with the community before tackling pressing issues will move the relationship with the public beyond a transactional exchange and toward increased trust, and

Whereas hearing from outside experts on topics of public interest will benefit staff, leaders and the community.

Therefore, be it resolved that the Saanich Peninsula Water Commission direct staff to organize an annual speaker series for the peninsula, dedicated to presentations by researchers and public interest groups that are focused on emerging topics concerning water and wastewater.

CAPITAL REGIONAL DISTRICT - INTEGRATED WATER SERVICES

Water Watch

Issued October 10, 2023

Water Supply System Summary:

1. Useable Volume in Storage:

Reservoir	October 31 5 Year Ave		October 31/22		October 8/23		% Existing Full Storage
	ML	MIG	ML	MIG	ML	MIG	
Sooke	63,852	14,047	64,026	14,086	60,310	13,268	65.0%
Goldstream	6,113	1,345	7,971	1,754	7,469	1,643	75.3%
Total	69,964	15,392	71,997	15,839	67,779	14,911	66.0%

2. Average Daily Demand:

For the month of October	129.1 MLD	28.39 MIGD
For week ending October 08, 2023	127.7 MLD	28.09 MIGD
Max. day October 2023, to date:	138.6 MLD	30.48 MIGD

3. Average 5 Year Daily Demand for October

Average (2018 - 2022) 117.7 MLD [1] 25.90 MIGD [2]

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

4. Rainfall October:

Average (1914 - 2022): 169.9 mm

Actual Rainfall to Date 11.2 mm (7% of monthly average)

5. Rainfall: Sep 1- Oct 8

Average (1914 - 2022): 91.8 mm

2022/2023 40.9 mm (45% of average)

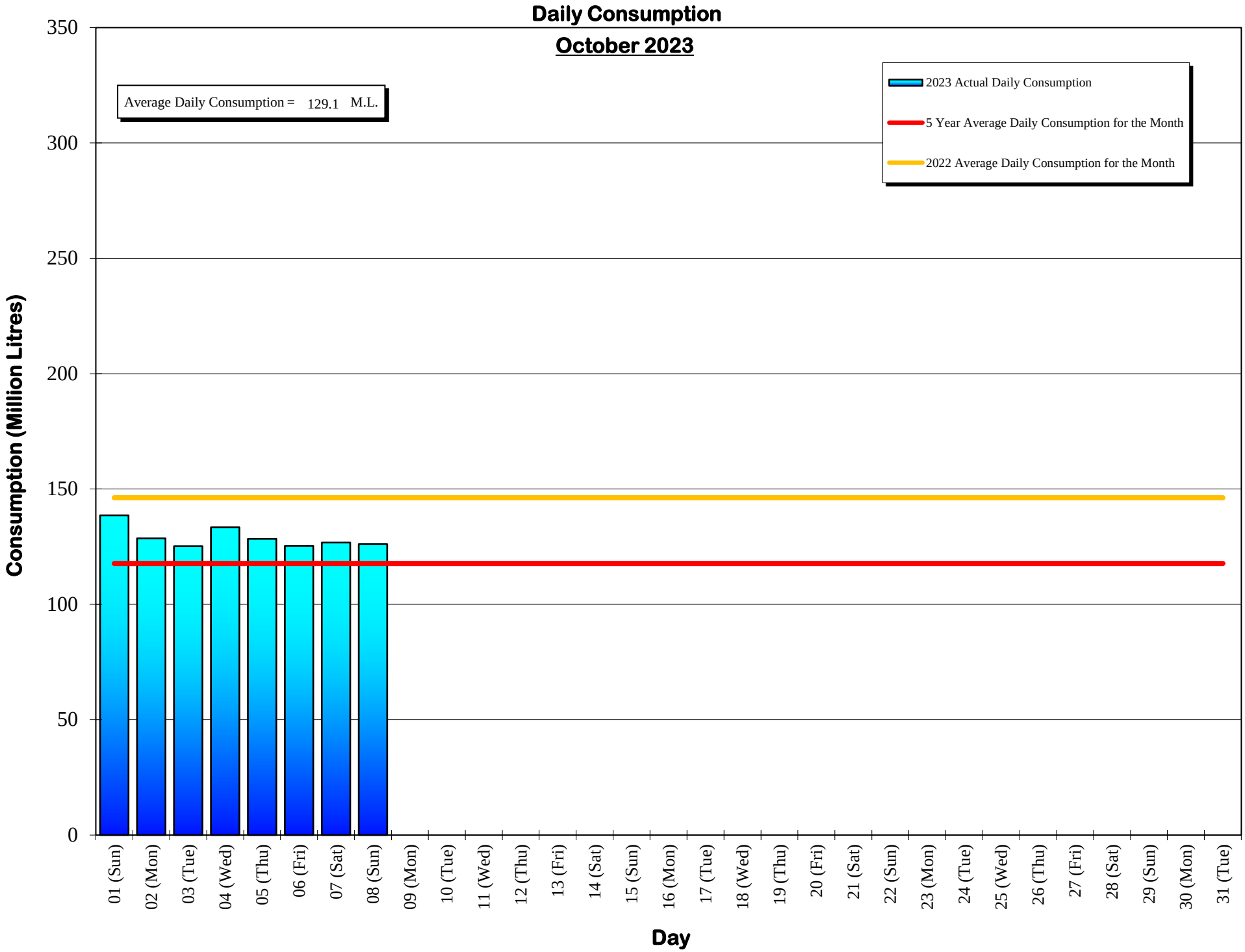
6. Water Conservation Action Required:

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

If you require further information, please contact:

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

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



J:\WATERENG\HYDROLGY\AMRIT\MONTHEND.23\H2o watch 2023Cons. Chart

Daily Consumptions: - October 2023

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 (Sun)	138.6	<=Max	30.5	18	6	Sunny	0.0	0.0	0.0
02 (Mon)	128.6		28.3	12	10	Cloudy / Showers	11.2	0.0	11.2
03 (Tue)	125.2	<=Min	27.5	16	8	Sunny / P. Cloudy	0.0	0.0	0.0
04 (Wed)	133.4		29.3	18	9	Sunny / P. Cloudy	0.0	0.0	0.0
05 (Thu)	128.4		28.3	17	9	Cloudy / P. Sunny	0.0	0.0	0.0
06 (Fri)	125.3		27.6	22	10	Sunny	0.0	0.0	0.0
07 (Sat)	126.8		27.9	22	11	Sunny	0.0	0.0	0.0
08 (Sun)	126.1		27.7	17	11	Cloudy / P. Sunny	0.0	0.0	0.0
09 (Mon)									
10 (Tue)									
11 (Wed)									
12 (Thu)									
13 (Fri)									
14 (Sat)									
15 (Sun)									
16 (Mon)									
17 (Tue)									
18 (Wed)									
19 (Thu)									
20 (Fri)									
21 (Sat)									
22 (Sun)									
23 (Mon)									
24 (Tue)									
25 (Wed)									
26 (Thu)									
27 (Fri)									
28 (Sat)									
29 (Sun)									
30 (Mon)									
31 (Tue)									
TOTAL	1032.4 ML		227.1 MIG				11.2	0	11.2
MAX	138.6		30.48	22	11		11.2	0	11.2
AVG	**129.1**		28.39	17.8	9.3		1.4	0	1.4
MIN	125.2		27.53	12	6		0.0	0	0.0

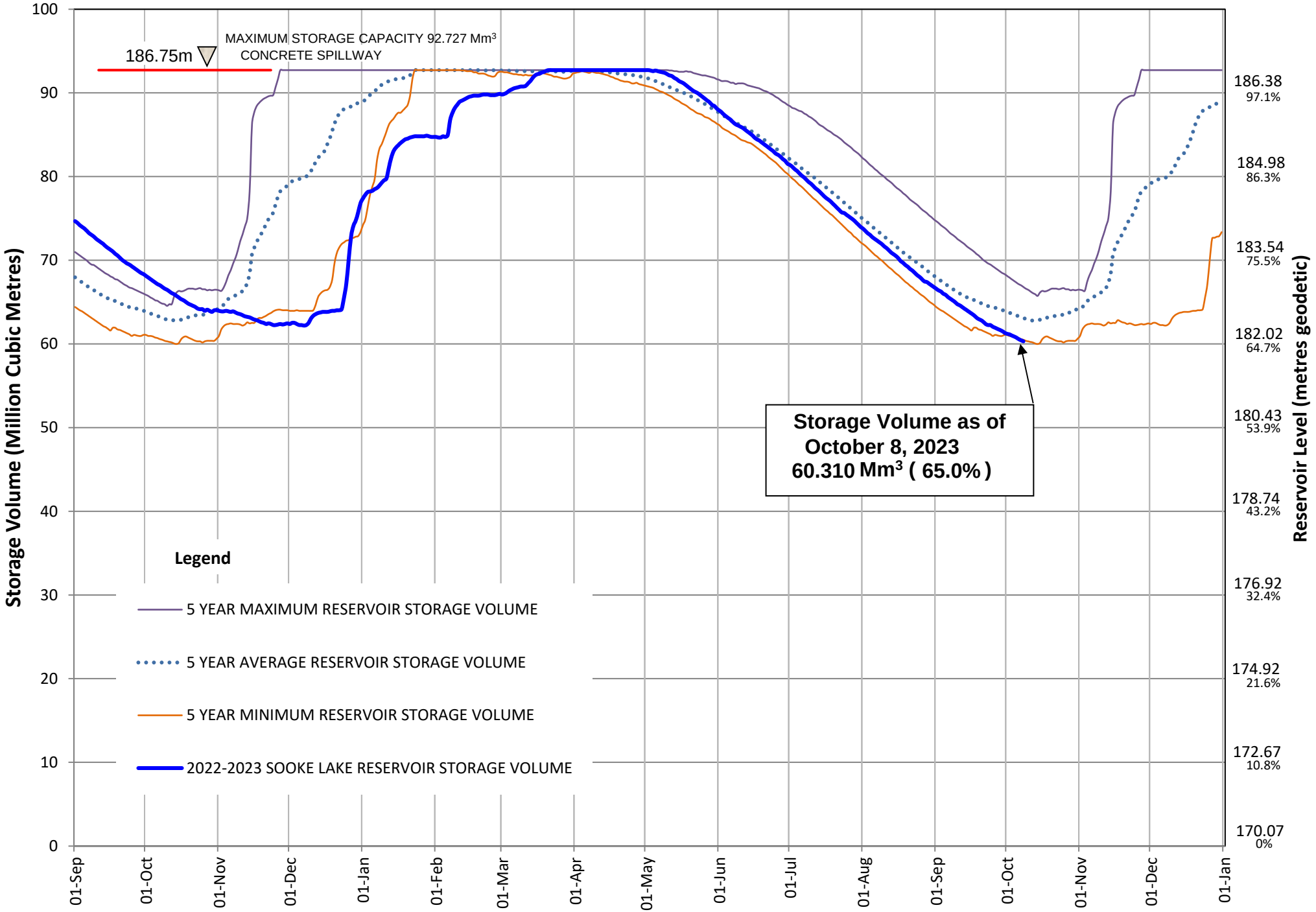
1. ML = Million Litres 2. MIG = Million Imperial Gallons 3. 10% of snow depth applied to rainfall figures for snow to water equivalent.

Average Rainfall for October (1914-2022)	169.9 mm
Actual Rainfall: October	11.2 mm
% of Average	7%
Average Rainfall (1914-2022): Sept 01 - Oct 08	91.8 mm
Actual Rainfall (2022/23): Sept 01 - Oct 08	40.9 mm
% of Average	45%

Number days with precip. 0.2 or more
1

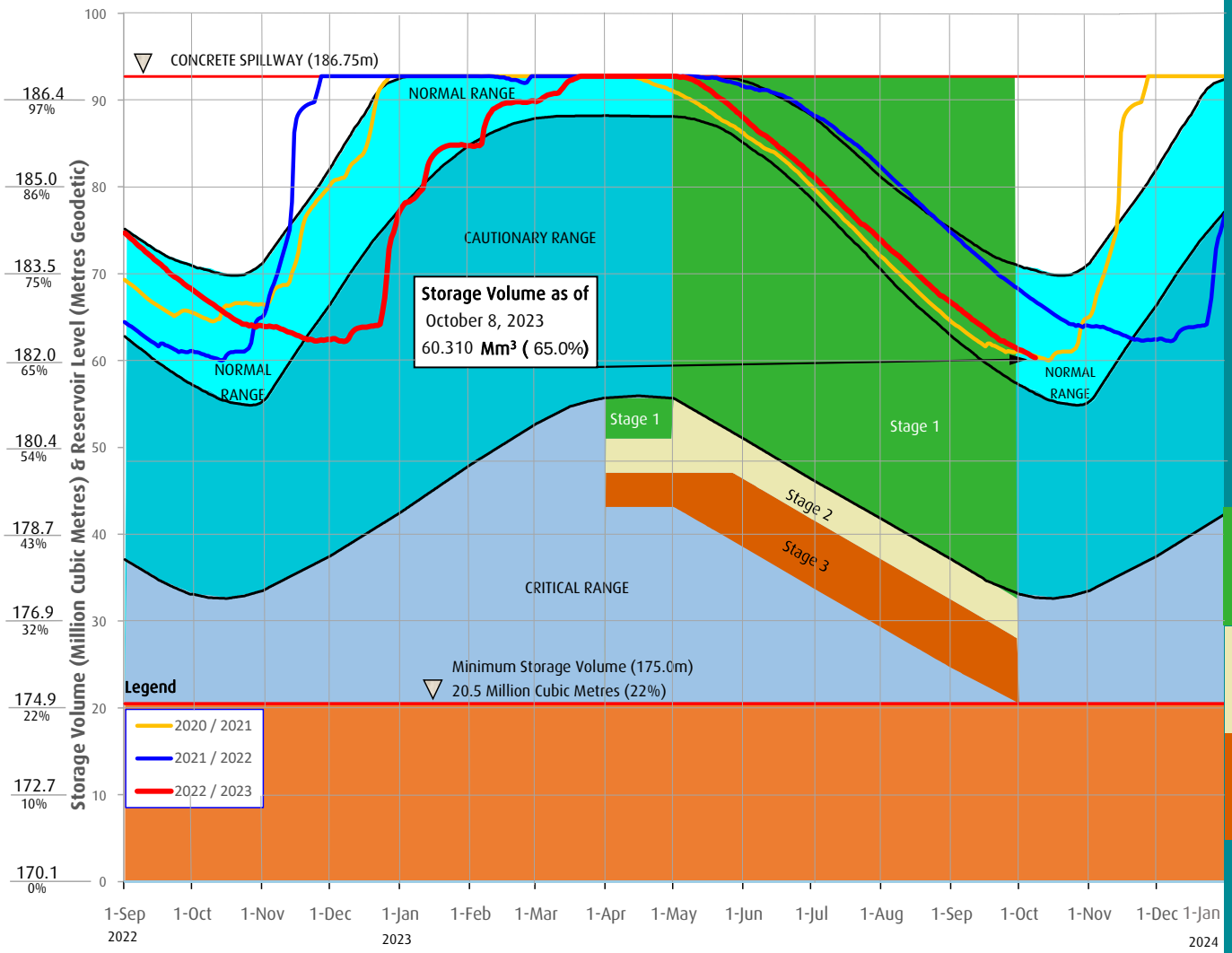
Water spilled at Sooke Reservoir to date (since Sept. 1) = 0.00 Billion Imperial Gallons
= 0.00 Billion Litres

SOOKE LAKE RESERVOIR STORAGE SUMMARY
2022 / 2023



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.

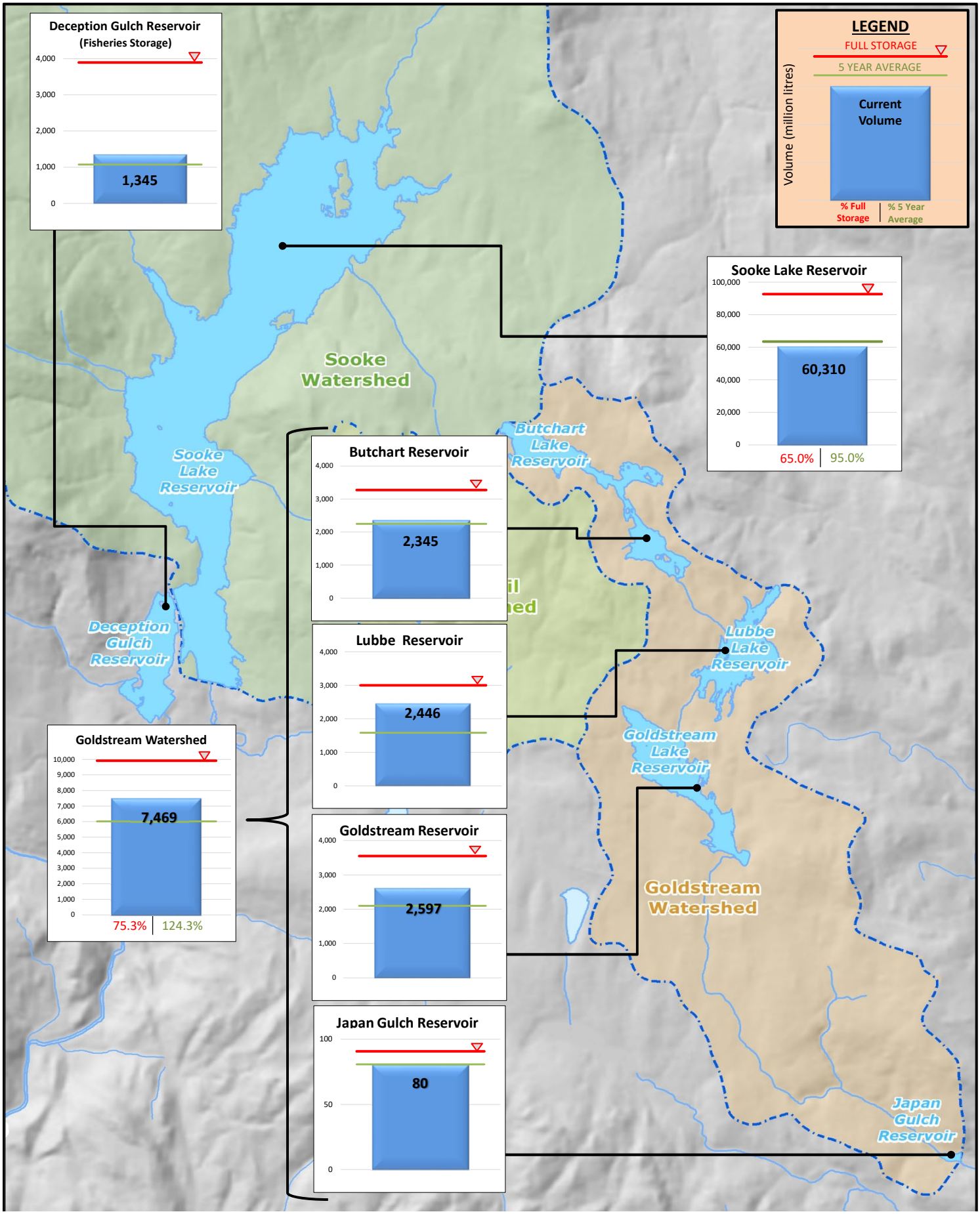
Stage 3 Is initiated when it is determined that there is a severe water supply shortage. During this time, lawn watering is not permitted. Other outdoor water use activities are restricted as well.

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

CRD

Making a difference...together

Useable Reservoir Volumes in Storage for October 08, 2023



Motion with Notice Regional Water Supply Commission

Wednesday, October 18, 2023

SUBJECT **Placement of Post Disaster Water Supply Drop Kits in Relevant Fire Halls**

BACKGROUND

Motion was introduced at the July 19, 2023 Regional Water Supply Commission meeting and is presented today for consideration.

RECOMMENDATION

That the Regional Water Supply Commission directs staff to explore cost-sharing with municipalities to get the Post Disaster Water Supply Drop Kits in relevant fire halls, for consideration in the next budget cycle.

SUBMITTED BY:

Commissioner Rogers