

Interim Facility Management

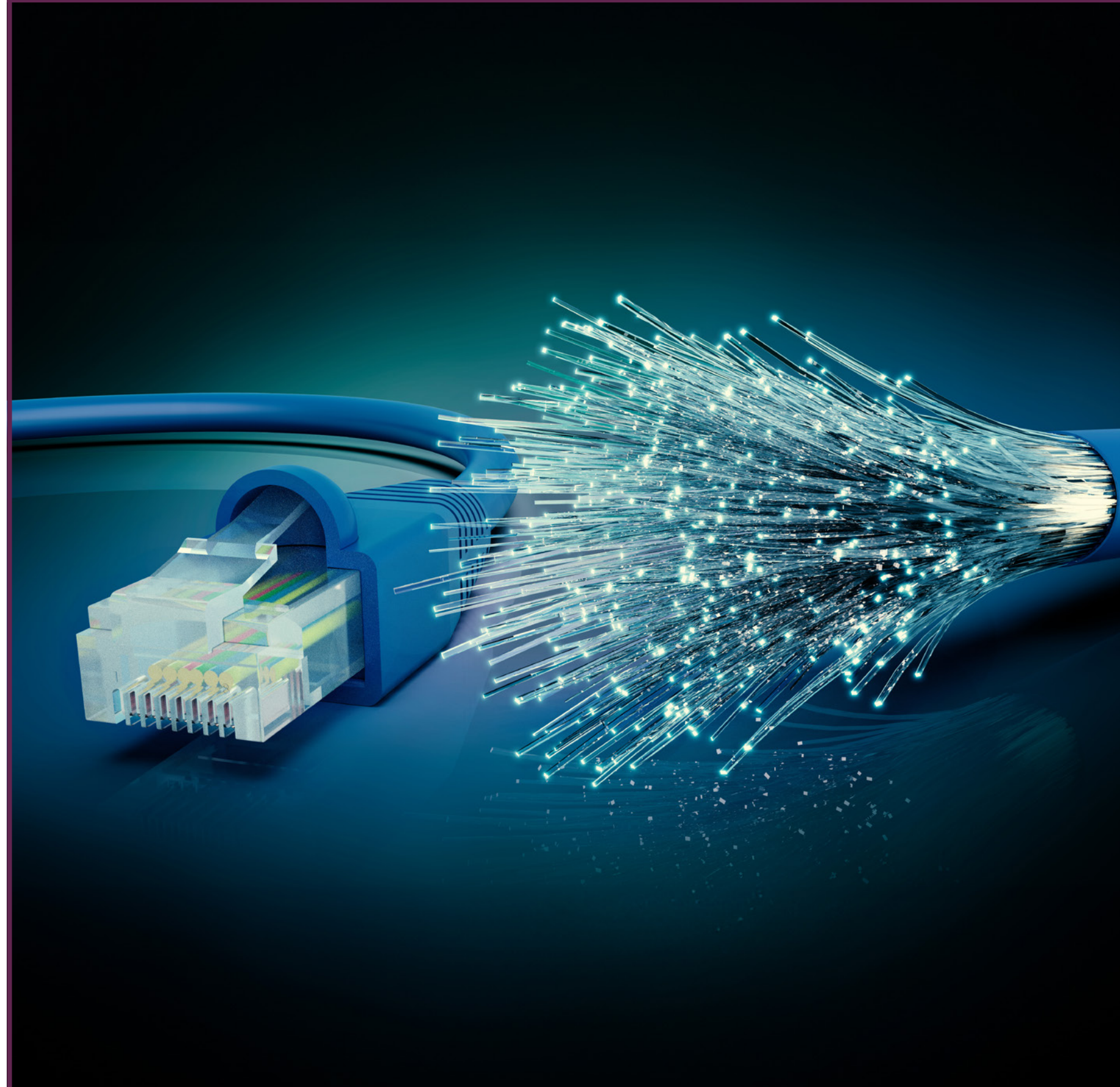
The Comox Valley Regional District completed interim upgrades in February 2024 at the Graham Lake Water System to ensure its successful remote operation.

New Equipment



Upgraded equipment, including a chlorine analyser, turbidimeter and UVT analyser were installed in early February along with new power back up equipment and other upgrades to keep the system operating, and able to be monitored remotely.

Internet Connected



The new high-speed fibre optic internet service allows for remote monitoring of key water quality data, including water use, turbidity, distribution system pressure and the effectiveness of ultraviolet and chlorine disinfection.

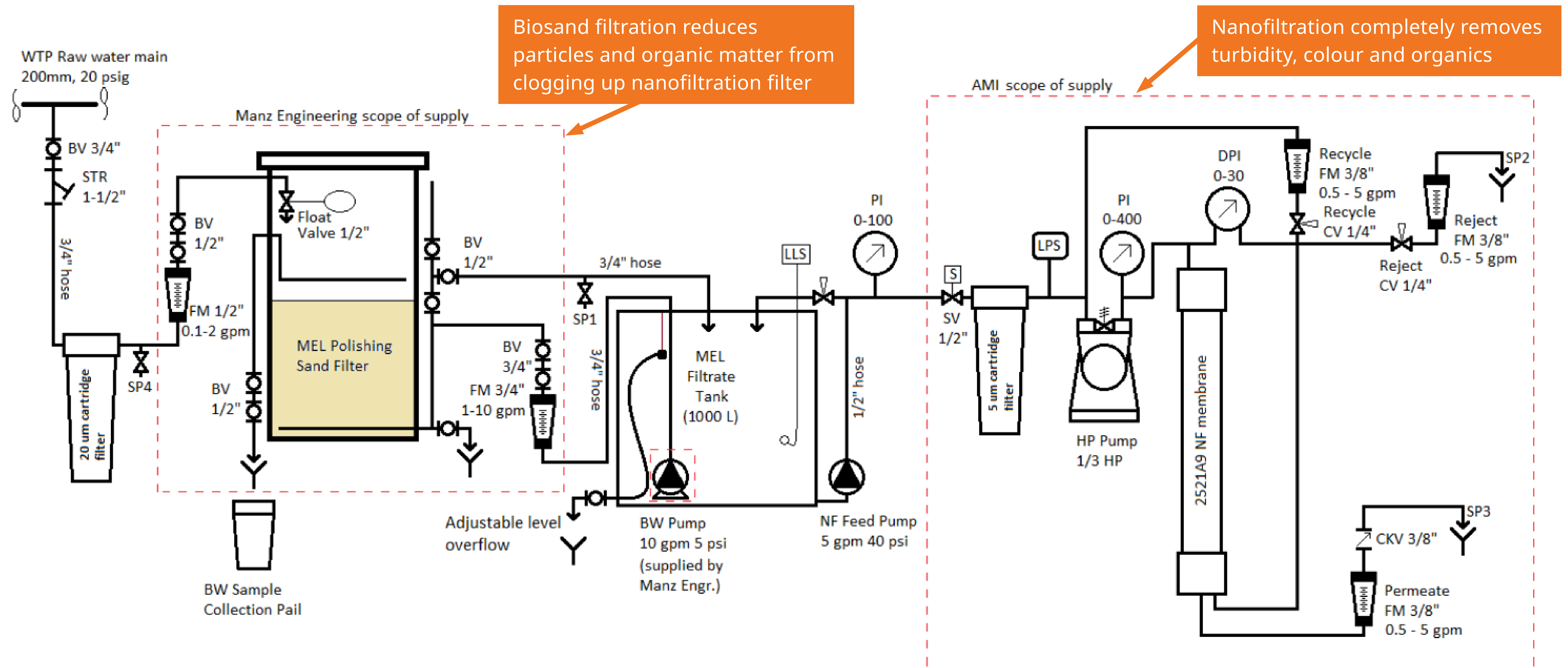
Remote Operation



The CVRD will use remote monitoring to manage the systems at all times, and CVRD operators will attend site one-two times/week, and as needed for emergencies.

Water Treatment Project

A two-year grant deadline extension has been granted for the completion of the new water treatment plant. With that confirmed, staff are now planning to restart the pilot project assessing the front running and lowest anticipated cost technology: Bio-sand filtration and Nanofiltration.



About the Pilot Project

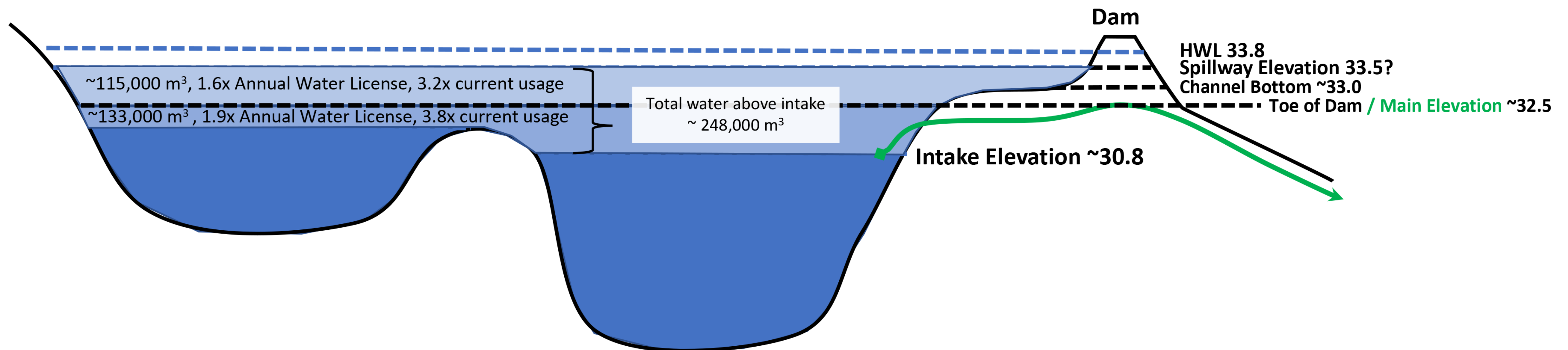
- Original pilot showed success in treating Graham Lake water to drinking water standards.
- Restart of pilot will collect additional data, address outstanding questions and build familiarity with the treatment technology.
- Restarted pilot project will begin in summer 2024, and run for one year.
- Once complete, a treatment option will be recommended to the Electoral Area Service Committee for consideration before going to an assent process to pay for required borrowing.

Graham Lake System Studies

Before committing the service to significant capital infrastructure upgrades, assessments were completed to confirm long term water availability and get a sense of the current infrastructure condition.

Hydrology Study

- In early 2024, a revised hydrology report was completed for Graham Lake
- The study indicates that there will be reduced inflow into Graham Lake in summers in future years.
- This will cause longer periods where the lake level is drawn down, but is expected to fill in typical years.
- However, Graham Lake storage is shown to have a much higher volume than the annual water license.
- Graham Lake is expected to have ample storage to buffer against even multiple-year droughts.

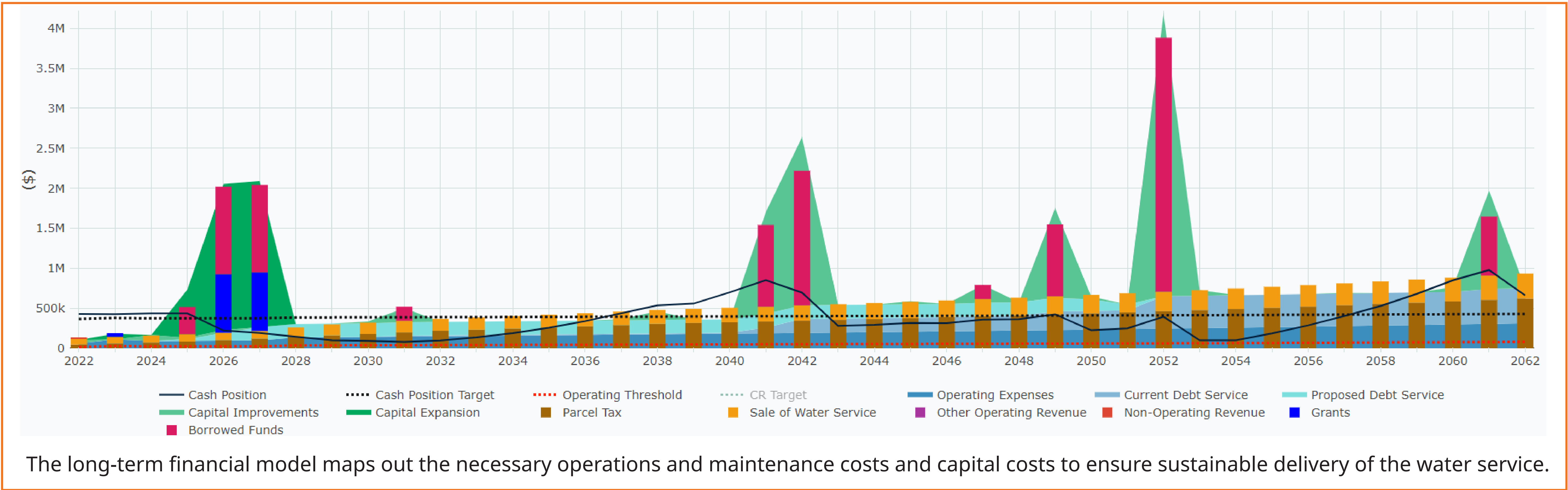


Dam Inspection

- In December 2023 a dam safety officer from the Province completed an audit of the Graham Lake Dam.
- The amount and nature of seepage recorded in that audit led the officer to require a professional review of the 'consequence classification' for the dam, by December 2024.
- Staff will work with consultants to complete the review and have implemented weekly inspections and seepage monitoring.
- A dam can be considered of high consequence if a permanent population at risk is located within the inundation area, or if water supply would be lost in the case of a dam breach.

Planning for Costs Ahead

To prepare for the long-term costs of operating and maintaining the Graham Lake Water Service, the CVRD completed a financial model, and has mapped out estimated water rates for the next 15 years.



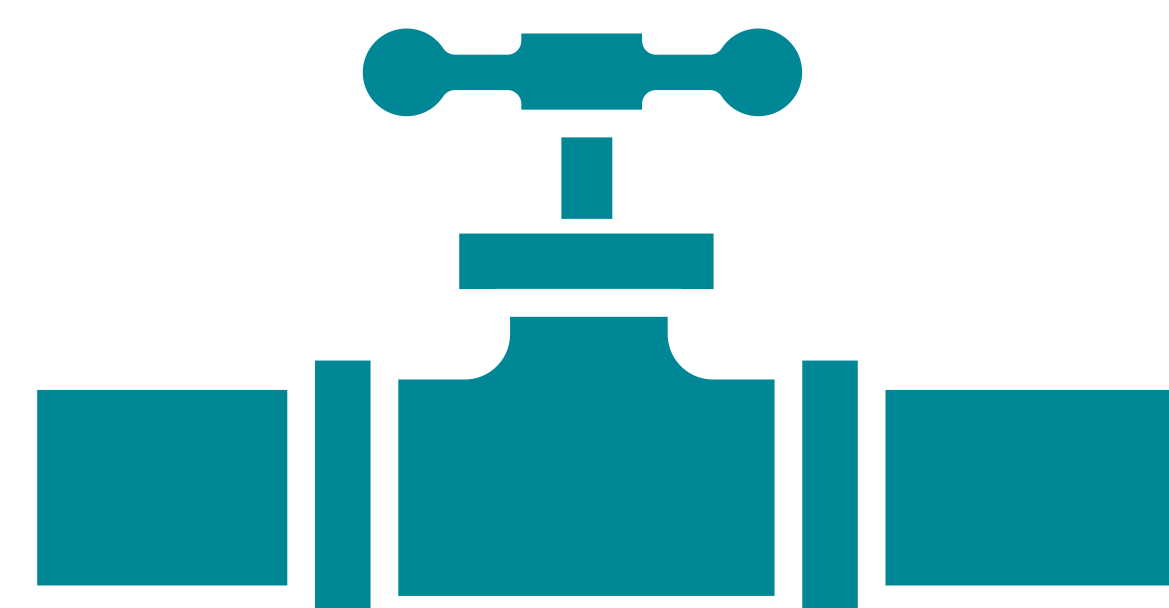
Financial Model Summary

The \$300,000 Community Works Fund Grant will reduce short term debt, resulting in an estimated future annual savings of \$324 per household. The rate review scheduled for 2025 will take the grant into consideration and future rates will be adjusted.

Recommended rate increases	Total Cost of Water (with inflation)				
	2024	2025	2026	2027	2028
Parcel Tax	\$826	\$974	\$1,150	\$1,357	\$1,601
User Rate	\$977	\$1,060	\$1,086	\$1,113	\$1,336
Total Cost	\$1,803	\$2,034	\$2,236	\$2,470	\$2,937

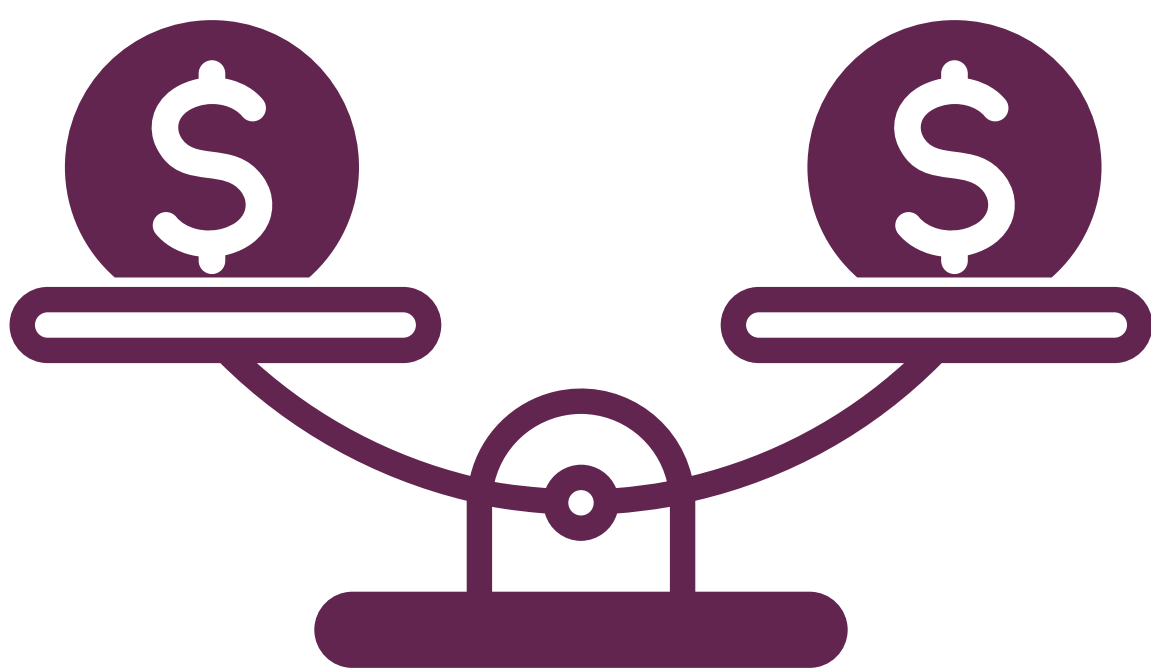
Amalgamating Local Service Areas

The CVRD is moving forward with amalgamating the Graham Lake and Denman Island water local service areas by early 2025.



Why Connect the Service Areas?

- The service areas are interconnected and have been operated as one system since 2018 when Denman Island users started paying the same annual user rate as Graham Lake users.
- The Community Works Fund grant offers opportunity to reconcile reserve inequity between the two services.
- Merging the services will make management of the system more efficient and effective.



Balancing Reserves

- Upon review, staff estimate a reserve inequity between the two services to be \$977.96 per parcel (\$23,471.02 total). This considers the equitable contributions to Graham Lake WLSA reserves since 2018 and installing water meters in Graham Lake Water Local Service Area.
- To resolve this inequity in a 5- year parcel tax would cost an additional \$195.59/ year – in addition to the other significant project increases in water costs.
- Instead of a parcel tax, the CVRD is intending to use a portion of the recently allocated \$300,000 of Community Works Funds to support amalgamation.

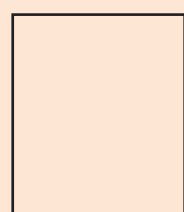
Timeline



EASC Support for fund allocation for amalgamation (confirmed)



We are here



Feedback from Community



Discussion with Ministry of Municipal Affairs



Amalgamation Bylaw by Director consent



Amalgamation Complete (by early 2025)