Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Cedar Lane Water Service Commission

Tuesday, January 13, 2026 | **1:00 PM** | **SIMS Boardroom, 124 Rainbow Road, Salt Spring Island BC**

Special Meeting

MS Teams Meeting Link

G.Holman, T. Boulter, M. Hobbs

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We Pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Special Meeting Matters

3.1. 26-0059 Capital Projects Requiring Funding - Cedar Lane Voter Approval for Borrowing

Recommendation: That the Cedar Lane Water Commission recommends to the Capital Regional District board:
1. That the petition process be selected to borrow up to $230,000 over 15 years debt term to complete the capital improvements project.
2. If the petition process is successful, then a loan authorization bylaw will be advanced to the Electoral Areas Committee and Capital Regional District Board for readings and adoption; and
3. That staff complete the remaining steps required to secure the funds and begin the project.

Attachments: Staff report: Capital Projects Requiring Funding - Cedar Lane Voter Approval fo

Appendix A: Presentation - Cedar Lane Manganese Removal Project Overview

4. Adjournment

Making a difference...together

REPORT TO CEDAR LANE WATER SERVICE COMMISSION
MEETING OF TUESDAY, JANUARY 13, 2026

SUBJECT **Capital Projects Funding - Cedar Lane Voter Approval for Borrowing**

ISSUE SUMMARY

To provide information to the Cedar Lane Water Service Commission outlining the options for Voter Approval for Borrowing for Phase 2 Construction of the Cedar Lane Manganese (Mn) Treatment Project, and for purchasing a spare pressure pump and drive unit.

BACKGROUND

Cedar Lane Water System was first developed in 1970. The Capital Regional District (CRD) took ownership of the system and then established the 'CRD Cedar Lane Water Service' in 2007, which services 37 properties**.**

The water supply source of the system is groundwater from two wells in the area. Water is pumped from the Mansell Wells #1 and #5 to the water treatment plant with a treatment process consisting of cartridge filtration, ultraviolet disinfection, and chlorination secondary disinfection. Water is then pumped to the Cedar Lane Reservoir which has a capacity of 136 m3 (30,000 IG).

Manganese Removal Treatment Upgrade

Manganese levels in the Cedar Lane Water System were flagged by Island Health Authority (IH) in late 2021 to be in excess of the newly established Maximum Acceptable Concentration (MAC) and Aesthetic Objective (AO) levels for manganese in drinking water. The levels were updated in 2019 to be MAC=0.120 mg/L and AO=0.02 mg/L. Cedar Lane water quality continues to regularly exceed the MAC. The Island Health Authority, as the regulator of drinking water systems on Vancouver Island and the Southern Gulf Islands, indicated at that time that this health concern must be addressed with a properly designed treatment system for Manganese (Mn) removal.

The CRD engaged in an assessment of options to ensure Cedar Lane could meet the new guidelines. As an alternative, additional wells were explored, but no viable well options were discovered. Other treatment options such as biofiltration, chorine oxidation and Greensand filtration were then explored. The Greensand filtration system (which also assists with reducing Iron levels) was recommended as the most effective solution to pursue.

The project design consists of two Greensand Plus filtration systems to be installed to remove the manganese. Backwash supply water tank, backwash wastewater tank and chlorine room HVAC are all also included in the project to support the safe, efficient operation of the system.

Spare Pressure Pump and Drive Unit

Within the current Cedar Lane Water Treatment Plant, a pressure pump and drive unit are utilized to maintain adequate distribution pressure for potable water. Historical maintenance records indicate that this pump typically requires replacement every four years and is currently approaching the end of its useful life. Furthermore, an asset management plan prepared by McElhanney identified the need for a spare pressure pump to ensure system reliability. Considering project and operational expenses, as well as inflation, the anticipated cost for the spare system is projected to be no more than $40,000 funded by debt when procurement occurs in 2027.

The project budgets and scopes are noted in Table 1 below.

Table 1: Capital Projects Requiring Debt Funding

Project #	Capital Project Description	Debt Budget	Scope
21-06	Cedar Lane WTP Manganese Treatment	$190,000	Install Greensand filtration, chlorine pump, HVAC and backwash system to reduce manganese levels in cedar lane water system
26-02	WTP Spare Pressure Pump & Sub-Drive Unit	$40,000*	Purchase of spare pressure pump and sub-drive unit to prevent future service outages.

** Debt borrowing will be in 2027. Combining the two projects for borrowing provides project efficiency and cost saving measures to rate payers.*

Detailed (2026) cost estimate budget for the Manganese Treatment project (21-06), and the overall project budget are outlined below in Table 2.

Table 2: Estimated Manganese Treatment Project Costs

Cost to Complete (2026) Budget Estimate	
Detailed Engineering	$15,050
Contingency (20%)	$3,000
Construction	
General (site prep/mobilization)	$38,900
Civil (ground works)	$47,600
Mechanical (equipment)	$90,450
Electrical and instrumentation	$43,580
Construction contingency (25%)	$55,100
Project Management and Ops	$28,600
Contingency (20%)	$5,720
TOTAL	**$328,000**

Table 3: Manganese Treatment Budget Funding Breakdown

Funding Source	Budget (2026)
Debt	$ 190,000
Grant (CWF)	$ 120,000
Capital Reserve Fund	$ 10,000
Capital Funds on Hand	$ 8,000
TOTAL	**$ 328,000**

A loan authorization bylaw is required to borrow up to the total of $230,000 ($190,000 for project 21-06 and $40,000 for project 26-02) funding required to complete the works. Under the Local Government Act, participating area approval is required prior to adopting a loan authorization. Approval may be obtained for a service in an electoral area in one of three methods: by petition, by alternative approval process (AAP), or assent voting (referendum).

ALTERNATIVES

Alternative 1
That the Cedar Lane Water Commission recommends
1. That the petition process be selected to borrow up to $230,000 over 15 years debt term to complete the capital improvements projects.
2. If the petition process is successful, then a loan authorization bylaw be advanced to the Electoral Areas Committee and Capital Regional District Board for readings and adoption; and
3. That staff complete the remaining steps required to secure the funds and begin the projects.

Alternative 2
That the Cedar Lane Water Commission recommends
1. That the alternate approval process (AAP) be selected as the method for obtaining participating area approval to borrow up to $230,000 over 15 years debt term to complete the capital improvement projects.
2. That a loan authorization bylaw be advanced to the Electoral Areas Committee and Capital Regional District Board for up to three readings and be referred to the Inspector of Municipalities for approval prior to conducting an AAP process.
3. If the AAP process is successful, that staff complete the remaining steps required to secure the funds and begin the projects.

Alternative 3
That the Cedar Lane Water Commission refers the report back to staff for additional information.

IMPLICATIONS

Elector Approval of Loan Authorization Bylaw

Elector approval may be secured through a petition if the owners representing at least 50% of the parcels in the service area, that in total must represent at least 50% of the assessed value of land and improvements, submit signed forms supporting the proposal to borrow funds.

The petition process is the least costly and most efficient approval process and typically takes up to 6 months to complete the process; however, if less than 50% support it, assent voting (referendum) will be required prior to borrowing the funds.

Elector approval is obtained from an AAP when less than 10% of estimated eligible electors in the participating area oppose the proposed borrowing unless an assent voting (referendum) is held. The estimate of eligible electors will include the count of non-resident property owners and tenants residing in the service area as provided from Elections BC voters list. If less than 10% respond in opposition, then no further assent is required. If 10% or more oppose, then an assent vote or referendum is required, which can cost upwards of $70,000 and must be held within 80 days of the AAP deadline date.

Overall, the petition process is the most efficient, cost-effective method to obtain voter approval, as it is simple, has the least risk of failure, and offers direct engagement between property owners and CRD project staff.

Implementation of Petition Process

The steps required to obtain elector approval via the petition are outlined below:

- Confirm commission approval for a petition process to obtain elector approval.
- Complete and send petition letter addressed to each owner(s) of the parcel/folio within the participating area.
- Advertise the petition within the Cedar Lane Water Service (direct mail, notice boards and website).
- Host a public open house to share information and gather signatures. (not required but recommended).
- The results of the petition will be determined after the close of the petition, which will be no sooner than 30 days after it has been issued to each owner.
- If a 50% approval threshold is exceeded, present the loan authorization bylaw to the Electoral Areas Committee and CRD Board with a recommendation to introduce and provide up to three readings.
- Send the loan authorization bylaw to the British Columbia Inspector of Municipalities.
- Following approval by the Inspector, return the loan authorization bylaw to the CRD Board for final approval.
- Following the one-month bylaw challenging period, complete process to draw upon loan and begin projects.

Financial Implications

Long-term debt must be arranged through the Municipal Finance Authority (MFA) which offers a maximum lending term of 30 years. MFA will set a fixed interest rate for an initial term, generally 10 years, and subsequently refinance the loan, typically in five-year increments. The loan authorization bylaw will define the maximum debt term; however, the length of the initial fixed term and the subsequent refinancing terms are at the sole discretion of the MFA.

For analytical purposes only, five different amortization term scenarios are simulated in Table 4. The cost of borrowing is the total of the estimated principal and interest payments over the borrowing term. The information in Table 4 is a high-level estimation only, based on the indicative interest rates published by MFA at the time of this staff report. The actual cost of borrowing will be dependent on the loan amount, actual interest rates at the time of borrowing and refinancing, and the amortization term selected.

Table 4: Debt Servicing Costs - Simulation

Borrowing Amount	$230,000				
Borrowing term (years)	10	15	20	25	30
Indicative Interest Rate*	3.89%	4.42%	4.64%	4.64%	4.64%
Cost of Borrowing $	286,888	332,610	375,267	413,447	452,726
Annual Debt Payment $	28,689	22,174	18,763	16,538	15,091
Annual Parcel Tax per taxable folio $ **	775	599	507	447	408

**MFA Indicative Market Rates used for analysis, taken from MFA Website, December 05, 2025.*
*** Calculated parcel tax assuming no change in total folios, set at 2025 level of 37 folios.*

CRD staff consider multiple guidelines with respect to amortization term, including estimated useful life of the infrastructure, the impact of the annual debt payment requirement, the total cost of borrowing over debt term, and the interest rate risk.

A longer amortization term will minimize the annual debt payments, but results in higher total cost of borrowing and higher interest rate risk exposure. Although a debt term of 10 years has the lowest total borrowing costs, a 15-year term is recommended in balancing the annual debt payment requirement for ratepayers, the interest rate risk and the useful life of the capital assets.

Staff will continue pursuing other funding opportunities and if any become available, debt borrowing will be reduced. Debt funds are only accessed on an as needed basis.

Regulatory Implications

Island Health is the regulatory body that oversees drinking water quality guidelines in this area, and they have mandated that the CRD upgrades the Cedar Lane Water Treatment Plant, so the water quality meets their current level of acceptable manganese in the water. Island Health has granted an extension to the CRD to December 31, 2027 to comply and upgrade the manganese water treatment system and have it fully operational by this date.

Service Delivery Implications

Completing the approval process and borrowing funds sooner will minimize service disruptions caused by pump failure. The likelihood of disruptions will increase until a solution is implemented.

CONCLUSION

Manganese exceedances and aging infrastructure in the Cedar Lane Water Service must be upgraded to meet IH's regulatory deadline. Staff have assessed treatment solutions, funding options and electoral approval processes to determine the most efficient and cost-effective path forward. Staff are recommending proceeding with a petition process to authorize borrowing up to $230,000 to complete the manganese treatment system and acquire the spare pressure pump. If supported staff will advance the loan authorization bylaw and complete the steps needed to secure the funding.

RECOMMENDATION

That the Cedar Lane Water Commission recommends

1. That the petition process be initiated to borrow up to $230,000 over 15 years debt term to complete the capital improvement projects.
2. If the petition process is successful, that a loan authorization bylaw be advanced to the Electoral Areas Committee and Capital Regional District Board for readings and adoption; and
3. That staff complete the remaining steps required to secure the funds and execute the projects.

Submitted by:	Carolyn Hopp, P. Eng., Engineering Manager, Salt Spring Island Administration
Concurrence:	Dan Ovington, BBA, Senior Manager, Salt Spring Island Administration
Concurrence:	Stephen Henderson, MBA, P.G.Dip.Eng, BSc, General Manager, Electoral Area Services

ATTACHMENTS

Appendix A: Presentation - Cedar Lane Manganese Removal Project Overview

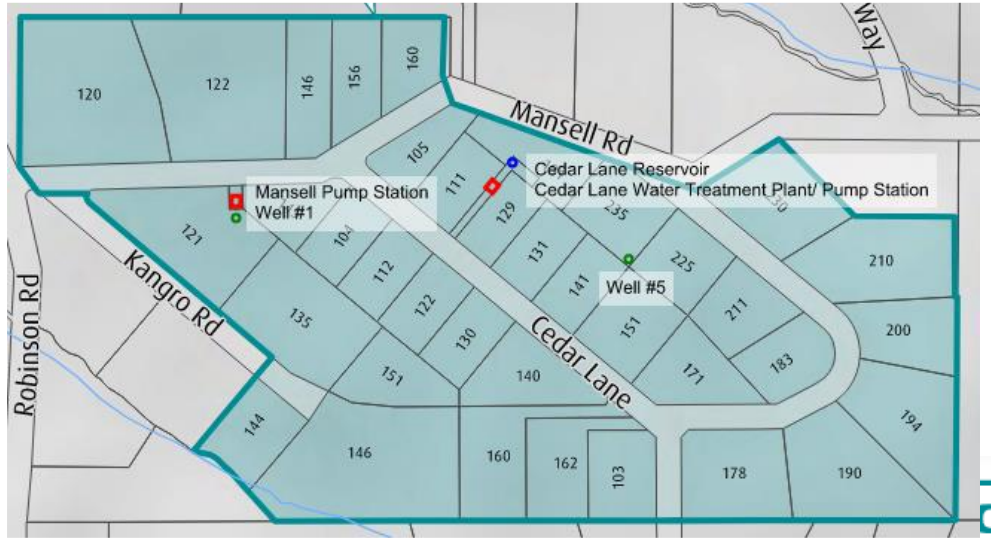
Cedar Lane Manganese Removal Upgrade Overview

Jan 13th, 2026

Cedar Lane Water Treatment Plant

Brief Overview

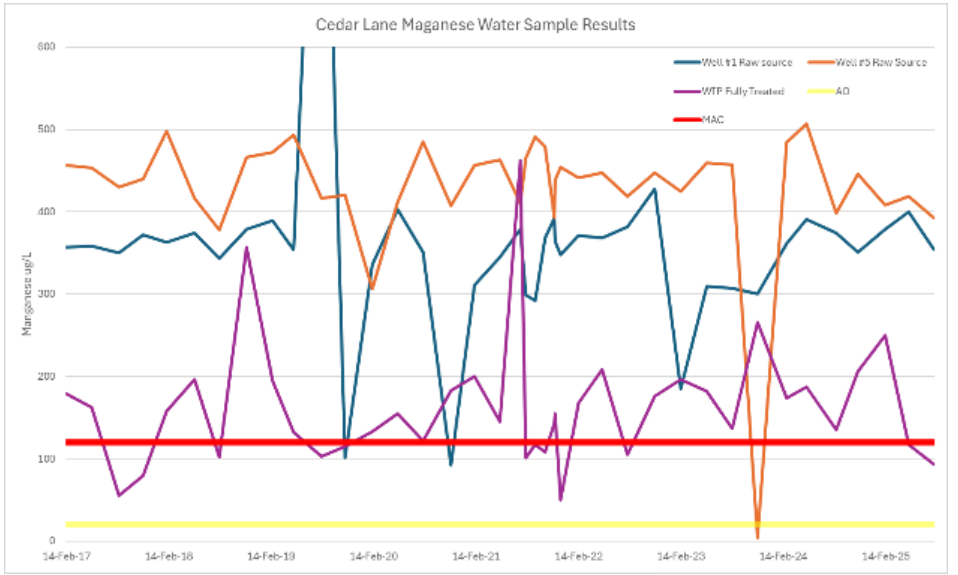
- The Cedar Lane Treatment Plant/Pump Station services 37 properties.
  - Water is pumped from the Mansell Wells #1 and #5 to the water treatment plant with a process consisting of cartridge filtration, ultraviolet disinfection, and chlorination secondary disinfection
  - The treated water is then pumped to the Cedar Lane Reservoir which has a capacity of 136 m3 (30,000 IG)
- The Cedar Lane Water System was first developed in 1970. The CRD took ownership of the system and then established the 'CRD Cedar Lane Water Service' in 2007.



Cedar Lane Water Treatment Plant

Manganese removal upgrade – Why we are upgrading

- Maximum Acceptable Concentration (MAC) and Aesthetic Objective (AO) levels for manganese in drinking water were updated by Health Canada and adopted by Island Health in 2019.
  - **MAC=0.120 mg/L and AO=0.02 mg/L**
- Manganese levels in Cedar Lane were flagged by Island Health in late 2021.
- CRD engaged in an **assessment of options** to ensure Cedar Lane can meet the new guidelines:
  - Additional wells were explored for source water, but **no viable options were uncovered**
  - Other treatment options were also explored (biofiltration, chlorine oxidation, etc.)
  - **Greensand filtration system** (which also assists with Iron levels)[1] was recommended as providing the most effective solution and was proven with successful bench scale testing

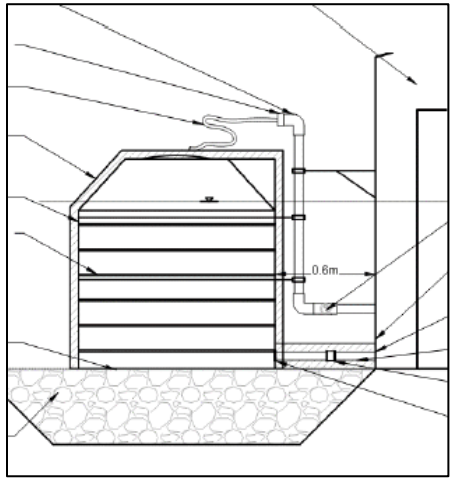


1 - Iron aesthetic objective lowered from 300 to 100 ug/L in Late 2024, Current treated water does not show exceedances, but raw water from both wells does.

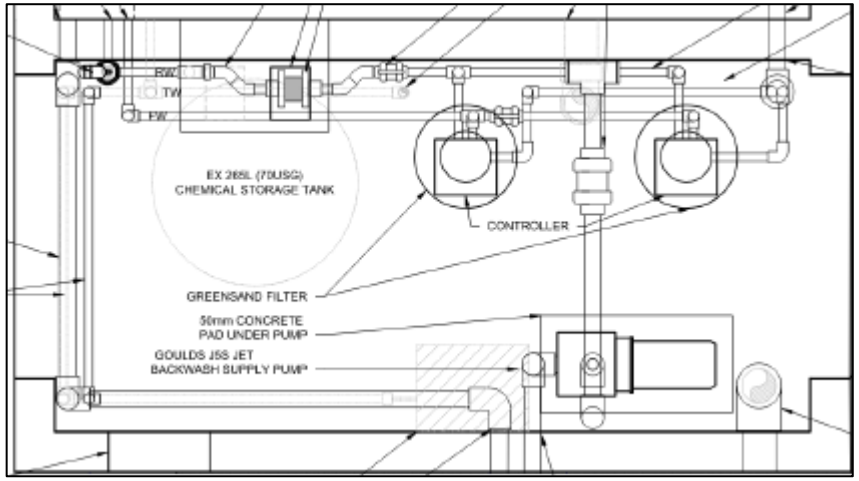
Cedar Lane Water Treatment Plant

Manganese removal upgrade – What we are upgrading

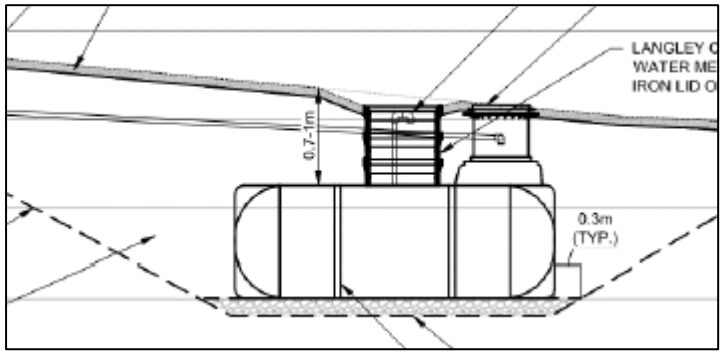
- Current filtration equipment includes, 20-micron cartridge filter, UV disinfection and hypochlorite injection, as a secondary disinfection.
- Upgrade consists of the addition of two 12-inch Greensand Plus media filters, chlorine pump, backwash supply pump, backwash water/wastewater tanks and HVAC for chlorine room ventilation.



Backwash supply tank



Chlorine room with filters and HVAC

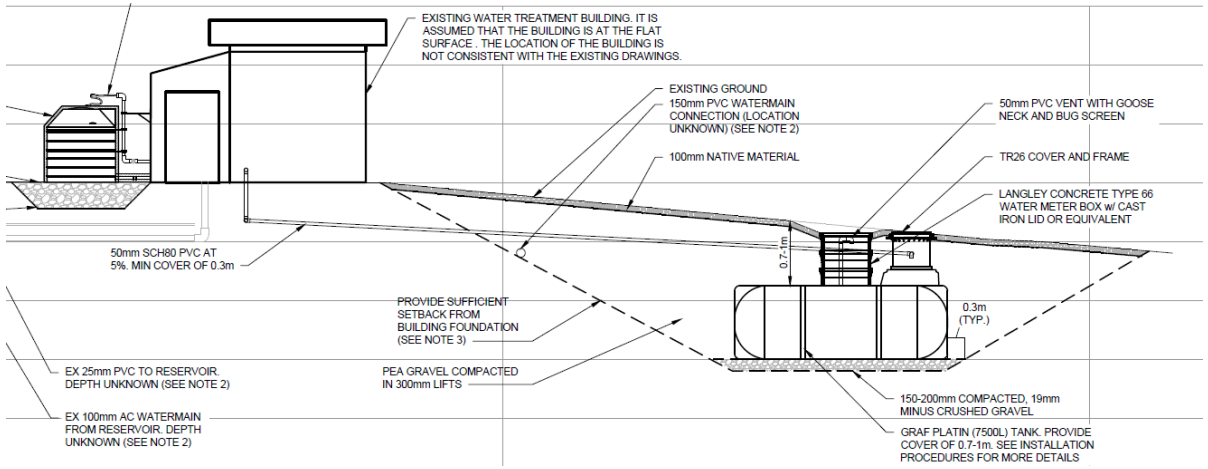


Backwash waste tank

Cedar Lane Water Treatment Plant

Manganese Removal Upgrade – How We Are Executing

- Project funding timeline
  - Community engagement – Jan/Feb 2026
  - Bylaw approval – May 2026
  - Funds approval – Jun/Jul 2026
- Execution timeline
  - Tender process – Aug 2026
  - Contractor onboarding – Sep 2026
  - Construction – Fall/Winter 2026
- Once in full operation
  - Backwash once per week (CRD water operations), currently on rounds for 2 times per week, no additional trips but additional time
  - Backwash pump-out ~ once every 2 months (pumper truck)



Cedar Lane Water Treatment Plant

Manganese Removal Upgrade – How We Are Funding

Cost to Complete (2026) Budget Estimate	
Detailed Engineering	$15,050
Contingency (20%)	$3,000
Construction	
General (site prep/mobilization)	$38,900
Civil (ground works)	$47,600
Mechanical (equipment)	$90,450
Electrical and instrumentation	$43,580
Construction contingency (25%)	$55,100
Project Management and Ops	$28,600
Contingency (20%)	$5,720
TOTAL	**$328,000**

- Funding is required in 2026 to complete tender of work, purchase equipment, install and commission the new filtration systems

Funding Source	Budget (2026)
Debt	$ 190,000
Grant (CWF)	$ 120,000
Capital Reserve Fund	$ 10,000
Capital Funds on Hand	$ 8,000
TOTAL	**$ 328,000**

Details on next page

- $190,000 is required to support the finances of this project plus $40,000 for the Pressure Pump project for a total of $230,000 of debt borrowing
- A loan authorization bylaw and **participating area approval** is required prior to adopting a loan
  - Participating area approval will be determined through **electoral assent** (petition, alternate approval or referendum)

Cedar Lane Water Treatment Plant

Manganese Removal Upgrade - How We Are Funding

Proposed option

To support the debt financing, there are multiple borrowing options to choose from:

Borrowing Amount	$230,000				
Borrowing term (years)	10	15	20	25	30
Indicative Interest Rate*	3.89%	4.42%	4.64%	4.64%	4.64%
Cost of Borrowing $	286,888	332,610	375,267	413,447	452,726
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Annual Parcel Tax per taxable folio $ **	775	599	507	447	408

**MFA Indicative Market Rates used for analysis, taken from MFA Website, December 05, 2025.*
*** Calculated parcel tax assuming no change in total folios, set at 2025 level of 37 folios.*

15 year term is recommended to optimize the potential to reduce payments, cost of borrowing and interest rate

Over the term of the debt, the annual repayment of the debt including principal and interest payments will be collected through annual Property Taxes

1 - The actual cost of borrowing will be dependent on the loan amount, actual interest rates at the time of borrowing and refinancing, and the amortization term selected.

Cedar Lane Water Treatment Plant

Manganese Removal Upgrade – Electoral Assent Options

Participating area approval will be determined through one of three electoral assent options, with the petition process being the proposed method

Petition

- Only property owners may participate (one vote per property).
- 50% approval threshold representing at least 50% of taxable value of land and improvements.
- Highest likelihood of approval success.
- Least expensive option.

Cost: $5,000 est.

Petition process is proposed to reduce expense on ratepayers and expedite issue resolution

Alternative Approval Process

- Commonly used in relation to long-term borrowing bylaws
- Borrowing initiative can be quashed if more than 10% of electors sign a counter-petition opposing the bylaw.
- A referendum must be held within 80 days if the need to proceed with the borrowing is still required.
- Less expensive than a referendum.

Cost: $20,000 est.

Referendum

- Majority of the valid votes are counted in favour of the bylaw to fund a project.
- A referendum question is developed and then reviewed by the Inspector of Municipalities at the province, requesting the electors to approve the borrowing of a specified amount of funds for the project.
- Must wait at least six (6) months before seeking elector assent on another bylaw for the same purpose in a referendum.
- More expensive than an Alternative Approval Process

Cost: $60,000 est.

Cedar Lane Water Treatment Plant

Next Steps

- Choose assent option (Petition, Alternate Approval or Referendum)
- Public Engagement session for Cedar Lane Residents
- Initiate the chosen assent option process with ratepayers
- Proceed with the loan authorization process
  - Debt financing will be provided through the Union of BC Municipalities (UBCM) at favourable interest rates.
- Initiate construction tendering process and evaluation of execution bids
- Field construction, installation and commissioning of the project
- Key Performance Indicator (KPI) monitoring to ensure project success
  - Quarterly monitoring of water quality, supply and demand.

Cedar Lane Water Treatment Plant

Comments and Feedback

Thank you for attending this meeting on the Cedar Lane Manganese Removal project.

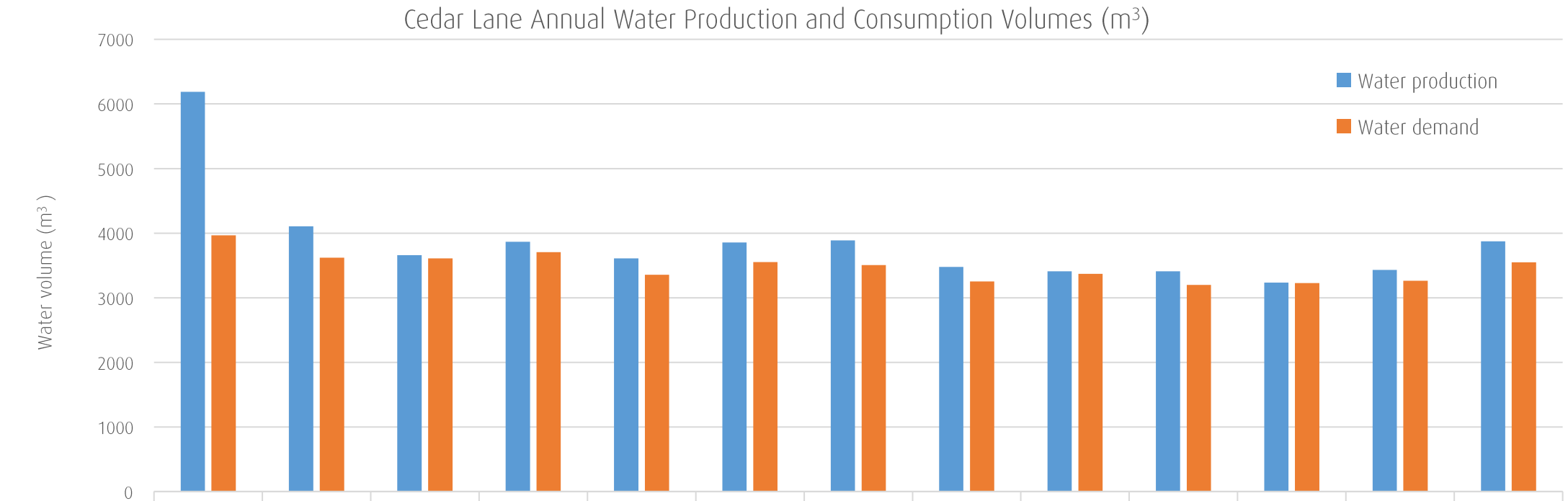
We look forward to receiving your questions and feedback.

Questions and/or comments may be submitted in person at the SSI CRD Administration Office, located at #8-121 McPhillips Avenue, or by email at saltspring@crd.bc.ca


Cedar Lane Water Treatment Plant
APPENDIX

Cedar Lane Water Treatment Plant

Appendix – Water supply



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Water production	6189	4106	3660	3865	3609	3856	3887	3478	3410	3411	3233	3430	3872
Water demand	3968	3619	3609	3705	3356	3552	3507	3251	3370	3197	3226	3264	3549

This graph depicts annual water production and consumption between 2012 and 2024. During these years, the treatment plant produced an average of 3,847 cubic meters per year, and the average water demand (water meter billing) was 3,475 cubic meters per year.

Cedar Lane Water Treatment Plant

Appendix – Letter to residents

Frequently Asked Questions

How does Health Canada determine the Maximum Acceptable Concentration (MAC) for manganese?
The MAC is based on animal studies and includes safety factors to ensure even sensitive individuals are protected. Concentrations approaching, but remaining less than, the MAC are not associated with increased health risks in individuals. Health Canada calculated the MAC assuming that people would be constantly exposed to elevated levels of manganese for long periods of time. Occasionally consuming water with manganese concentrations slightly greater than the MAC is unlikely to cause any health issues. Health Canada has adopted a precautionary approach due to the limitations on the available information. Manganese concentrations greater than the guideline are only representative of a potential risk to health, but do not represent measureable health impacts.

What are the health effects of manganese?
People who are exposed to high levels of manganese can develop manganese toxicity. The primary target of manganese toxicity is the central nervous system, followed by the reproductive system. There is no evidence to conclude that detectable differences in health will be present at concentrations less than the MAC, the available evidence does suggest that measureable neurological impacts may be possible when infants and children are chronically exposed to manganese concentrations greater than the MAC. New evidence has shown that consuming drinking water with high levels of manganese may impact the memory, attention, motor function, and the overall intellectual development of infants and young children. The high degree of uncertainty and limitations of available information, the guideline of 120 ppb should be interpreted as being protective of ongoing exposure to all infants relying solely on formula made with tap water. Health impacts in other human groups with decreased exposure or sensitivity might not be significant until drinking water concentrations are much higher.

Can I be exposed to manganese through skin contact?
No. Exposure through skin contact is not harmful. Exposure through hand washing, showering, or bathing from water with manganese is unlikely to be significant. Inhalation of manganese aerosols during showering has not been directly evaluated but it is not expected to pose any risk to human health.

Can I boil the water to remove the manganese?
No. Boiling water is not an effective form of treatment of manganese reduction. Boiling water can increase the concentration of dissolved, and therefore absorbable, manganese in drinking water.

What can I do to reduce my exposure to manganese?
There are several ways you can lower the manganese in the drinking water at home:

- Infants need to be supplied an alternate drinking water source such as bottled water.
- Switching your drinking water to an alternate source such as bottled water.
- Tap filters suitable for manganese removal.
- Point of Entry treatment for the home.

RE: WATER QUALITY ADVISORY FOR CEDAR LANE WATER SYSTEM

Dear Resident:

You are receiving this notice because your property is served by the Cedar Lane drinking water service. The Cedar Lane drinking water service is experiencing elevated concentrations of manganese. Manganese is a naturally occurring element that is present throughout the environment and can normally be found in many water sources and in particular in groundwater from certain geological formations. Manganese is an essential nutrient and consuming a small of amount of manganese is necessary to maintain your overall health. Until recently, elevated levels of manganese in drinking water were not considered a health risk but rather only an aesthetic concern. The latest science now associates high manganese concentrations in drinking water with health issues in infants. High levels of manganese can make water appear brown, purple or black at concentrations less than what Health Canada considers the Maximum Acceptable Concentration (MAC) in drinking water.

Health Canada has set a MAC for manganese at 120 parts per billion (ppb) and an aesthetic objective of 20 ppb. The current levels in the Cedar Lane water distribution system range from 23.6 - 200 ppb. Therefore, infants should not consume the tap water and formula made with tap water. As a precaution, it is recommended that you avoid drinking discoloured water, or using it to prepare food or infant formula. Children and adults are less sensitive to manganese than infants, and Health Canada suggests that the health risk from manganese concentrations of less than 300 ppb is insignificant to these parts of the population. A list of Frequently Asked Questions regarding manganese is included with this letter.

Manganese can be reduced to acceptable levels through specific water treatment. The Capital Regional District (CRD) is working on strategies to reduce the concentration of manganese that enters the distribution system following treatment of the well water. A short-term strategy includes cleaning the storage tank to remove manganese accumulation. Monthly manganese sampling will be occurring for a minimum of six months. Longer term strategies are being developed in consultation with Island Health. The CRD anticipates that additional water treatment to address the manganese issue will be in place by the end of 2023. The CRD will continue to provide information directly to residents as the issue is addressed, and updated information will be available on the CRD website at www.crd.bc.ca/service/drinking-water/systems/cedar-lane-water-system.

If you have any immediate concerns or questions, please contact the CRD (Matt McCrank, 250.940.7402 or mmccrank@crd.bc.ca) or Island Health at gateway_office@viha.ca.

Sincerely,
Ted Robbins
General Manager, Integrated Water Services