

# Maliview Wastewater Treatment Plant

Community Update



Capital Regional District | December 2023

The Capital Regional District (CRD) is in the process of upgrading the Maliview Wastewater Treatment Plant (WWTP) on Salt Spring Island to comply with provincial requirements, federal wastewater regulations and the *Fisheries Act*. We have prepared answers to some questions you may have related to the project and next steps.

## Why is the upgrade needed?

Environment and Climate Change Canada (ECCC) informed the CRD in 2019 that effluent from the plant exceeded allowable limits for toxicity and were deemed harmful to the receiving environment. Should corrective action not be taken, penalties of up to \$2,000,000 for a first offence and \$4,000,000 for a second offence are possible. In response, the CRD outlined a three-phase corrective action plan.

## Why has this project taken so long to get to this point?

The CRD created a three-phase corrective action plan in 2019 in response to ECCC. The CRD has completed the first two phases and is now working on the final phase: to complete the design and construction of upgrades to the WWTP.

This phase includes several stages the CRD must follow such as equipment procurement, detailed design, final consultation with the Ministry of Environment and finally construction and commissioning.

The successful major equipment supplier has been selected and detailed design work is underway. An updated Class A construction estimate will be prepared based on the detailed designs, which will inform the amount of funds to be borrowed to complete the work. Details will be shared as part of the borrowing bylaw's required electoral approval process.

## Why is borrowing required given that a grant was received for the project?

The CRD received a grant for the funding of a major portion of the project through the federal government's "Investing in Canada Infrastructure Program" specifically the "Rural and Northern Communities – Environmental Quality" stream. This grant provides 90% of the funding for the project with the remaining 10% to be made by Maliview ratepayers.

The 2020 estimate for the project was \$2,210,000 resulting in a grant amount of \$1,989,000 with \$221,000 remaining to be contributed by Maliview ratepayers. The terms of the grant specify that any cost overruns beyond

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the total project estimate of \$2,210,000 shall be borne by the property owners. These costs were based on estimates in September 2020. The CRD expects that costs will be higher due to inflation, and increases in construction costs, supplies, and equipment. There are insufficient funds in reserve to contribute to this project.

## Has a referendum happened?

A referendum is one of the options available to approve a borrowing bylaw. This process has not taken place yet and will be scheduled as soon as the updated cost estimates are ready, near the end of the detailed design process.

## How will the project and its funding be approved by the residents of Maliview?

Any decision to borrow funds would require an electoral assent process. The CRD Board is responsible for receiving recommendations and selecting which of the following options is most suitable:

**Alternative Approval Process (AAP)** is most commonly used in relation to long-term borrowing bylaws as it is a less expensive option than using a referendum. Unless 10% of the affected electors sign a counter-petition opposing the bylaw, the bylaw to borrow will obtain approval to proceed. An AAP would take approximately six months and would cost approximately \$20,000.

**Referendum Process** is used to seek approval by assent of the electors, where a majority of the valid votes are counted in favour of the bylaw to fund a project. Typically, 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. A referendum would take approximately seven months and would cost approximately \$60,000.

## How has inflation affected the cost of the project?

Over the last few years, prices have increased for nearly all materials, products and services required for the project. This has been taken into consideration in estimating costs going forward. Contingency was included in the original estimate; however the accuracy of the estimate will only be definitively determined when competitive bids are received for site construction.

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## How does the equipment warranty work for this project?

Equipment warranties are in place to ensure that manufacturing defects are covered by the manufacturer. The warranty begins upon delivery to the site or when the CRD takes ownership of the equipment. This project uses equipment and machinery that are commonly used in similar projects. With appropriate maintenance by trained CRD operations staff, we expect equipment lifespan to well exceed the warranty term.

## What is the capacity of the new system and what level of treatment will be provided?

The upgraded WWTP will provide secondary treatment for up to 168 m<sup>3</sup>/d with volumes above this, up to 300 m<sup>3</sup>/day, receiving primary treatment. The treated effluent will meet all regulatory requirements.

Average wet weather flow is more than twice the average dry weather flow which means that the gathering and conveyance system has a high volume of infiltration and infiltration.

A program to investigate and fix the system conveyance piping is associated with the WWTP upgrades. This program will reduce inflow and infiltration, which will reduce treatment of storm and surface water that has made its way into the collection piping. Once the volume of inflow and infiltration is reduced, the WWTP capacity should be more than adequate.

## Can we see the design and equipment drawings and specifications for this project?

This type of information is not publicly available. Those interested can submit a Freedom of Information request: <https://www.crd.bc.ca/about/contact-us/freedom-of-information>.

## Will this project meet the federal regulation requirements?

The CRD will design and construct the project to conform with all applicable regulations, both Federal and Provincial.

## How will you ensure there is no odour?

Odour control and mitigation is being addressed during the detailed design stage and will likely entail new blowers to the revamped odour media enclosure currently in place. The two main process tanks will be enclosed, and air

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will be captured and treated prior to being released. The odour media is replaced periodically to ensure its effectiveness. Residents can expect odours to be reduced from what they are right now.

### How does the CRD currently measure the consumption rate for each household?

Consumption rates are based on potable water usage.

### How are you making sure that nothing goes wrong?

The CRD's local Salt Spring Island engineering and project management team is working closely with the engineering consultant and major equipment supplier to ensure efficient and effective project execution.

Once the construction phase starts, the CRD will continue to work closely with the engineering consultant to select and direct a qualified construction contractor.

The local CRD project team has over 70 years of related project experience and is committed to seeing this project through to its successful completion. This experience is further supplemented by the experience of the CRD team in Victoria as required. The team can effectively deal with unforeseen changes or circumstances to minimize schedule delays and cost overruns while maintaining quality standards.

### Who is working on this project and how much time are they allocating?

The CRD is ensuring that qualified consultants and qualified contractors are undertaking the necessary work. Both the Project Manager, Dean Olafson, P. Eng., MBA, and the Project Technician, Doug Weiing, C. Tech., NZCE, live and work on Salt Spring Island and are highly committed to the project.

The WWTP project is the largest and highest priority project being undertaken by the CRD on Salt Spring Island at this time. The time dedicated to the project varies from week to week in accordance with the phase of the project and the current work activity.

### What measures are in place to ensure the project comes in on budget?

The major equipment for the project was competitively tendered as a lump sum so the cost for this major expenditure is fixed and resulted in the best value for the money. Similarly, the field construction phase of the project will be competitively tendered lump sum thereby fixing its cost.

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Effective project management will prevent scope creep and ensure that any changes are necessary and add long-term value for the residents of Maliview.

## How will residents be updated as the project progresses?

Residents can review information provided to the Maliview Sewer Local Service Commission and subscribe to be notified when meeting agendas are published here: <https://www.crd.bc.ca/about/board-committees/board-committees-and-commissions/maliview-sewer-local-service-commission>.

More information can also be found on the CRD website: <https://www.crd.bc.ca/project/maliview-wastewater-infrastructure-upgrade>.

## What opportunity do Maliview residents have to provide input?

In March 2021, an information session was held for the residents of Maliview to explain the project and provide an update on its progress.

Maliview residents will have another opportunity to learn about the project and share feedback at a future information session being planned once the detailed designs are completed and a more accurate construction cost estimate is determined (Class A).

## What is the maximum borrowing period available?

Borrowing for this project will be provided through the Municipal Finance Authority (MFA) of British Columbia at rates below what is available commercially. Amortizations are selected in accordance with the type and life cycle of the asset and are typically in five-year increments up to a maximum of 30 years. CRD staff recommend a 25-year amortization for this facility.

## How will residents be charged for this project?

The project will be supported using an approach that incorporates multiple funding mechanisms that rely primarily on user charges. Residents with higher usage will pay more in accordance with their usage.

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## How much will my costs increase because of the system upgrades?

Cost increases will be dependent on the loan amount, MFA interest rate at the time of borrowing, and the amortization period. The MFA will lock in a rate for an initial term, generally 10 years, and refinance the loan at the end of the term. The commission will choose the loan's amortization period; however, the length of the locked-in term is at the discretion of the MFA.

The amount borrowed will not be finalized until the completion of a detailed design and Class A estimate. At that time the \$221,000 (10% of \$2,210,000) will be adjusted either up or down depending on the estimate for installation and construction.

As a condition of the grant, any cost overages are the responsibility of the residents so the loan amount would increase to cover them. Residents will be provided with further information during the electoral assent process.

The following table outlines the combined parcel tax and user charge increase based on the full amount contemplated in the original estimate of \$221,000 under various amortization options. An amortization period of 25 years is recommended.

	Amortizations			
	<i>15 Year</i>	<i>20 Year</i>	<i>25 Year</i>	<i>30 Year</i>
Loan Authorization \$221,000				
Estimated Interest Rate	4.20%	4.30%	4.40%	4.40%
Cost of Borrowing	\$ 88,766	\$ 122,171	\$ 160,216	\$ 194,981
Annual Debt Payment	\$ 20,651	\$ 17,159	\$ 15,249	\$ 13,866
Annual Parcel Tax per taxable folio	\$ 220	\$ 183	\$ 162	\$ 148

## Can I defer my tax increase?

If the property owner is at least 55-years old, the province may allow parcel taxes to be deferred. However, user charges cannot be deferred. Visit the Province of BC website for more information to see if you qualify: <https://www2.gov.bc.ca/gov/content/taxes/property-taxes/annual-property-tax/defer-taxes>.

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## Is it possible to see the data regarding the possibility of some gutters or stormwater systems being connected to the sewer system?

When flows are found to be significantly higher in volume than typical expected flows including a factor for infiltration and inflow (I&I) then cross-connection between stormwater and sewer is a possibility.

An investigation of this nature is planned for the Maliview system in 2024. Additional information regarding the condition of the existing conveyance/collection system may requested through the Commission to the Project Manager.

## What will the new facility look like?

The upgraded facility will look similar to the existing facility as the design incorporates and repurposes some of the existing equipment. The largest change will be four processing tanks located in the existing yard footprint. These tanks are no taller than the existing building so there will not be much visual difference seen from the road. One other new piece of equipment will be a “grinder” type machine in the yard. Other new equipment will be located inside the existing, or slightly expanded, building and there will be interconnecting piping and electrical lines, both above and below the ground.

## Will the new facility be any noisier than the existing plant?

Two electric drive air blowers that provide air for the treatment process will be in the existing or slightly expanded building. Only one blower will be operating at a time with the other on standby. They are equipped with an acoustic enclosure, intake silencer and discharge silencer. The noise they produce, **inside** the building, will be no more than a vacuum cleaner.

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