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June 16, 2017

File No. 5340-30-MLS/01

Dear Resident:

Re: Mesachie Lake Sewer System Grant and Capital Upgrades

Further to our letters of November 30, 2016 and April 4, 2017, the Cowichan Valley Regional District (CVRD) wishes to engage the residents of Mesachie Lake and Honeymoon Bay to discuss the South Shore Sewer Project and provide additional details on the Mesachie Lake Sewer System upgrades. CVRD Engineering staff are seeking to answer questions and address some of the possible concerns residents may have. The CVRD will host a public meeting regarding this topic on Friday June 23, 2017 at 7:00 pm in the Mesachie Lake Community Hall.

Financial Background

The CVRD is a regional district, which differs from other forms of government. Other forms of government, such as a municipality, have the flexibility to move money from one system to another for the funding of upgrades or repairs. In a regional district, the money to operate and maintain each water or sewer system is funded solely by the customers of that particular system. There is no flexibility to move money from one system to another. In a very small system, like Mesachie Lake Sewer System, necessary upgrades quickly become cost prohibitive with only 49 customers of the system. For this reason, the CVRD often has to rely on sources of other revenue such as Provincial and Federal grants to make costs affordable for customers. The CVRD has applied for grants for the Mesachie Lake Sewer System in the past and has been unsuccessful in securing funding until now. Earlier this year, the CVRD was awarded \$1.23 million in funding for Phase 1 upgrades to the system. This funding was the result of a successful grant application to the competitive Clean Water and Wastewater Fund (CWWF) program of the Provincial and Federal Governments.

Need for Upgrades

Mesachie Lake Sewer System was built in the 1940's by Hillcrest Logging Company to service houses built for its workers and their families. It was built with the material and technology commonly used for the time. The system pre-dates any permits or regulations and does not comply with any modern day standards. Over the years, residents' concerns about keeping Mesachie Lake Sewer System fees affordable has meant that the system has received very little investment in modernization and upgrades, apart from emergency work to repair failing components. This gravity system of clay pipes moves the sewage from individual homes to two septic fields. One field is located next to the park on Bear Lake, and the other is located on Forestry Road. Both disposal fields have had failures, such as sewage pooling on the surface of the ground and structural failures in the septic tanks themselves. The collection pipes are subject to root intrusion and blockages. This, combined with the flat lay of the land, is a major cause of sewer back-ups. These failures are both an environmental and public health concern. In addition, the community drinking water well is centrally located in the heart of the community, within the current sewer system boundaries. Further failure of the sewer system puts the drinking water well at risk.

Utility Review

An independent utility review and assessment of all CVRD water and sewer systems was completed earlier this year. The CVRD worked with INNOVA Strategy Group to review the operation, maintenance and long-term planning of the water and sewer systems within the regional district. The CVRD water and sewer utilities were rated on a scale of 1 to 10 for general condition. The rating assesses conditions such as the amount of required capital improvements, how the system meets established standards and risk to public health and the environment. Mesachie Lake Sewer System received a rating of 1, **the lowest possible rating**. The full report is available for viewing on the CVRD website at www.cvrld.bc.ca/utilities, or at the CVRD office.

Phase 1: Effluent Disposal, Resolving Health and Environmental Issues

The award from the CWWF provides \$1.23 million towards the first phase of upgrades for the Mesachie Lake Sewer System. Phase 1, the current proposed upgrade, includes the installation of two pump stations at the two existing septic tanks, the construction of a pressurized sewer pipe to transport the septic tank effluent from the pump stations to a new disposal field and the construction of a new disposal field at the proposed site south-east of Honeymoon Bay. This phase would resolve the current and pressing public health and environmental issues with the existing disposal fields located on Forestry Road and near Bear Lake.

The land for the disposal field, located south-east of Honeymoon Bay, is intended to be given to the CVRD by Couverdon (Timberwest), as a community amenity arising from their development proposal. At approximately 20 acres (or 8 hectares), the proposed site is large enough to provide adequate disposal capacity. Locating the disposal field between Mesachie Lake and Honeymoon Bay would be the first step towards a centrally located sewer system with the potential to serve more customers in and around Mesachie Lake and Honeymoon Bay. A larger system, with more customers, is more economical and efficient to operate and maintain, and **lowers the individual customer cost**.

The customers of Phase 1 are the 49 existing customers of the Mesachie Lake Sewer System. After construction is complete, new customers may join the sewer system. The cost for these new connections are not part of the project cost. New customers would be required to pay the necessary fees to join the sewer service area, as well as any costs associated with physically connecting and extending the sewer main. The connection fee has yet to be determined.

The total project cost for Phase 1 is \$1,477,793. Conditions of the grant requires that the customers of the system fund 17% of the total project cost, \$251,226. Gas tax funding may not be used to pay this portion due to limits to the total proportion of Federal funding allowed. The awarded amount from the grant covers the remainder of the project cost, \$1,226,567.

These upgrades have additional operational & maintenance and borrowing costs to the customers. Operational & maintenance costs include system monitoring to comply with regulations and power to supply the pump stations and electronics. Borrowing costs cover the debt payment for the necessary customer-funded 17% of the total project cost. The exact costs will be determined by the borrowing term, to be chosen by the customers of the system.

Phase 2: Collection System, Resolving System Failures

Phase 2 is a future phase that would connect the individual properties of the existing 49 customers of the Mesachie Lake Sewer System to the pressurized sewer pipe installed in Phase 1.

This phase would resolve the issues with the existing collection system, such as blockages and resulting sewage back-ups. Your Electoral Area Director, Ian Morrison, has recommended the Board allocate \$200,000 (100% remaining Area F Gas tax funding) to help pay for Phase 2.

Future Phases

Future phases include the possibility of a treatment plant and further expansion of the sewer service area. If approved by the community, developments like Pebblewest and Couverdon would require sewer servicing. The developments could potentially provide a treatment plant for the sewer system and some collection infrastructure in Honeymoon Bay. Further collection infrastructure could be provided by existing properties joining the sewer system. Future phases could be funded by developers, new customers joining the sewer system, or possibly a new Honeymoon Bay sewer service area. **Additional customers improve financial stability and sustainability.**

Moving Forward

The customer-funded 17% share (\$251,226) may only be obtained from the 49 customers of the system. In order for the CVRD to borrow this share on behalf of customers, official consent of the customers is required. It is recommended that consent is obtained from the customers through a petition process, where greater than 50% of the property owners, representing greater than 50% of the taxable value of all land and improvements, must sign a petition in favor of borrowing the necessary customer-funded portion. The CVRD proposes the borrowing of \$251,226, 17% of the total project cost. The \$40,600 in reserve funds would be held for contingency and possibly used later to help fund Phase 2, provided it is not required for additional blockages, back-ups, or other unexpected emergency repairs.

There are two options for borrowing terms: 20-year and 25-year. Based on a 4% interest rate, the additional annual cost per customer for borrowing would be:

- 20-year term: \$405.00
- 25-year term: \$353.00

The first installment would be collected on customer parcel taxes in 2018.

Approval to borrow the funds must be received before the project can go ahead. If approval is not received, the project will not proceed and the grant funding will be returned to the provincial and federal governments.

Alternative Options

Alternative options for the customers of the Mesachie Lake Sewer System for Phase 1 have been considered:

1. Locate the new disposal field at the Mesachie Lake Park ball field.
The ball field is not large enough to provide adequate capacity for the disposal of septic tank effluent. In order to dispose to this site, a treatment plant would be required. The field's proximity to the lake and the community drinking water well would likely limit disposal to the highest class of effluent, Class A. Effluent of this quality requires the most expensive type of treatment. Overall costs for this option would be prohibitive.
2. Locate the new disposal field at an alternate property closer to Mesachie Lake:
The land for the new disposal field must be large enough to provide adequate capacity and suitable for the disposal of septic tank effluent. An alternate site with these qualities would have to be found and the land would have to be purchased. The cost to purchase land would have to be funded from the customers of the system, **as funding from the grant cannot be used to purchase land.** This option would be more expensive, as both

the land purchase and the remaining share of the project would have to be paid by the customers of the system.

3. Do nothing:

The public health and environmental risks are considerable and accumulating. These risks amount to significant financial liability. Eventually, the Ministry of Environment or Island Health will mandate the necessary upgrades to bring the system into compliance, and the customers would be responsible for the entire cost. If this grant is returned, it is unlikely that Mesachie Lake Sewer System would receive any grants from the provincial or federal government in the future.

It is important to note that options #1 and #2 may require amendment to the grant terms, as proximity to Honeymoon Bay and the potential servicing of additional customers was a factor in the approved grant request. These options may negate the awarded \$1.23 million from the CCWF.

Public Meeting

CVRD staff and Electoral Area F Director, Ian Morrison, will host a public meeting to share more sewer project and Phase 1 upgrade details and provide residents a forum to express concerns, ask questions and discuss next steps.

Mesachie Lake & Honeymoon Bay Residents Public Meeting

Friday June 23rd 2017

7:00 pm – 9:00 pm

Mesachie Lake Community Hall

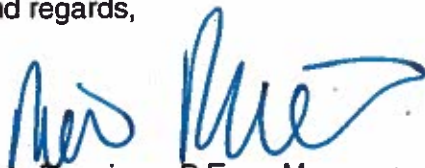
9315 South Shore Road, Mesachie Lake

Petitions for consent to borrow will be available at the meeting. They will also be distributed to eligible property owners not in attendance. The petitions must be signed by a majority of listed owners for each property and returned to the CVRD by Friday July 28, 2017. In the meantime, you may find additional information on the CVRD's website at www.cvrld.bc.ca/utilities. A summary of questions from a group of residents, and staff responses, will be posted to the website on Monday June 19.

Access up-to-date information on the project and upgrades by signing up to 'Notify Me' and receive e-mail notifications as updates become available.

We hope to see you at the public meeting. Please call Vanessa Thomson, EIT or myself if you have any questions about the above at 250.746.2530.

Kind regards,



Brian Dennison, P.Eng., Manager
Water Management Division
Engineering Services

VT:dm

pc: Director Morrison, Electoral Area F
Hamid Hatami, PhD., P.Eng., General Manager, Engineering Services
CVRD Engineering Technologist

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