

Type	Committee Recommendation		
Title	Infrastructure Projects Recommendation to Council for 2024 Budget Year.		
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Issued for	CotW Mtg January 09 and RCM January 23, 2024		

Recommendation:

THAT Council provide direction to staff with respect to the Infrastructure Committee Projects Recommendation to Council for 2024 Budget Year as follows:

1. The I.C. recommends, as the top priority, Council approve budget on bridge end repairs.
2. The major unfunded project within the Village is the replacement of the Highway Water Storage Tank at the entrance to the Village below Cross Creek bridge.
3. The reconstruction of the Magnesia Creek Intake (or full rebuild) is the third priority the I.C. feels must be addressed in 2024.
4. The fourth priority for 2024 is the need to significantly up-date, if not replace, the aging SCADA hardware and software.
5. The fifth project the I.C. feels should proceed in 2024 can be split into two separate sub projects; namely the replacement of the 90 m of water main on Creekview Place and the design for the replacement of the water main along Highview Place.
6. The final recommended project for 2024 is the requirement to provide pH adjustment to the finished water.

Attachments:

- (1) Draft minutes from Infrastructure Committee meeting of December 14, 2023

Key Information:

The Infrastructure Committee has been working with the Public Works Manager to review the extensive list of required infrastructure projects while attempting to determine the top priorities for 2024. We have based our priority weightings on safety, infrastructure life expectancy, need and budget criteria.



As a committee, we wish to submit the following six (6) recommendations to Council as it prepares the public works budgets for 2024. After a full and lengthy discussion during our 14 December meeting, the I.C. settled on the following projects as those it feels the Village should budget for and complete in 2024.

i. The I.C. recommends, as the top priority, Council approves a budget for bridge repairs. Bridge deck joints are critical components of a bridge structure as they provide essential functions such as accommodating thermal movements, allowing for vehicular traffic, and ensuring the safety and durability of the bridge. Properly designed and maintained bridge deck joints can help prevent premature deterioration and failure of the bridge, ensuring its long-term performance and safety.

The cost of these repairs increases each year with further deterioration and escalation. The recommendation is that the Cross Creek Bridge be the first bridge deck joints to be repaired and the real cost of these repairs be confirmed.

A previous budget request in 2022 of \$150k proved to be insufficient and a subsequent \$320K budget for 2023 was proposed. It has been suggested some, or all, of these funds have been reallocated to other bridge repairs and the amount of funding available from previous budgets needs to be confirmed.

Once the Cross Creek Bridge has been repaired, with the knowledge obtained, the PWM will be able to assess how many of the 8 bridges can be repaired within the available budget. The IC could weigh in with a further recommendation if necessary.

ii. The major unfunded project within the Village is the replacement of the Highway Water Storage Tank at the entrance to the Village below Cross Creek bridge. The current plan is to replace the tank with 2 PRV stations to supply the lower Village. It is believed the Highway Tank is the source of much of the water losses currently experienced, and its replacement was originally scheduled as a part of the project to replace the Harvey WTP reservoir. This is an immediate need and a “must do” for 2024. This project is expected to cost approximately \$1 mm, with only \$100,000 currently allocated and unspent.

iii. The reconstruction of the Magnesia Creek Intake (or full rebuild) is the third priority the I.C. feels must be addressed in 2024. This project is also currently unfunded. A budget figure of \$100,000 has been suggested, but an allotment of \$250,000 should be made.

The current proposal is to emulate/improve on Harvey Intake design and, as far as possible, replicate the same at Magnesia Creek. There is proof of concept with a full-scale application in place on Harvey Creek. The basic design work has been completed; however, it will need

to be modified for Magnesia Creek. This is essentially a “reinforced concrete and steel plate” project, but the expense will be due to the difficult access getting materials to site etc.

iv. The fourth priority for 2024 is the need to significantly up-date, if not replace, the aging SCADA hardware and software. The PWM reports he cannot find spare parts for the hardware when it fails. An initial review by the I.C. has shown much of the hardware is now over 35 years old, and no longer serviceable. The SCADA system needs to be rebuilt from the ground up to be far more robust and meet current Village needs and industry specifications. Currently, the I.C. is in the process of defining and clarifying the real concerns and therefore the real requirements. It is expected a “Requirements Document” report will be available at mid year that will outline exactly what needs to be done with some attached costing. Currently there is \$100,000 of allocated money not yet spent on this project.

v. The fifth project the I.C. feels should proceed in 2024 can be split into two separate previously funded sub projects; namely the replacement of the 90 m of water main on Creekview Place and the replacement of the water main along Highview Place. The previously requested budget is \$225,000 for the design & installation of the Creekview Place project and \$100,000 for the design only for Highview Place.

It is the opinion of the I.C. that the work on Creekview should proceed in 2024, after a responsible estimate has been secured, and that a responsible estimate for the Highview Place project be obtained in 2024, with a view to completing this work in 2025.

vi. The final recommended project for 2024 is the requirement to provide pH adjustment (elevation in pH and alkalinity concentration) to the finished water to bring our potable water quality into compliance with the GCDWQ and to alleviate any corrosion potential in the distribution system and in private households.

As a consequence of the Flint, Mi scandal, in 2015 Health Canada revised the guidelines for pH in potable water, classifying the Lions Bay water as corrosive and requiring chemical adjustment. This work needs to be completed as soon as possible.

A previous estimate, in 2021, indicated the costing for 2 dry soda ash feeders (one for each WTP) would total \$100,000. The best option is to pursue the dry soda ash (sodium carbonate) as carbonate alkalinity is critical for corrosion mitigation, however, a less expensive option is to provide hydroxide alkalinity using a small positive displacement pump to inject liquid sodium hydroxide (caustic soda).



We trust that Council will review these Committee recommendations in a positive light as all are necessary and are but a very small number drawn from the project list on hand. Should Council members require any technical background, please do not hesitate to contact us and the respective expert will be happy to answer any questions.

Options to Pursue Desired Result:

- (1) Finance Staff to confirm unspent budget available from previous budgeting cycles for these items.
- (2) WYM to incorporate these recommendations into his Supplemental Budget Requests for 2024.
- (3) Council to consider these requests during the CotW (budget session) on 09 January.
- (4) CotW recommendations to be presented to RCM on 23 January for approval on a case-by-case basis or in entirety.

Communication Plan: residents have statutory prescribed access to budgetary deliberations which will be complied with, no additional requirements are necessary as long as these are observed in best practice.