



TOWN OF SIDNEY

REPORT TO COUNCIL

TO: Mayor and Council
FROM: Jenn Clary, Director of Engineering
DATE: August 12, 2020 **FILE NO.:** 5240-20
SUBJECT: Reay Creek Dam Renovation Update

PURPOSE:

To provide an update on the Reay Creek Dam project.

BACKGROUND:

A report was presented to Council on July 20, 2020, requesting approval to enter into a time and materials unit rate contract with QM Environmental (QM). Based on the information available at the time of the report, staff were comfortable that the project could be constructed within budget. The construction cost estimates that the Town was relying on for this earlier recommendation were developed by the Town's consultant for this project, KWL. The estimates, which were based on similar work completed in 2017, provided a comfortable buffer for cost overages within the available budget. Since the July 20 report, QM has presented staff with their construction cost estimates, which are considerable higher than the consultant estimates. The majority of the cost overages are related to the cost of the sheet pile work, for which QM received three quotes from sub-contractors.

Due to these cost overage estimates, the Town has not yet entered into a contract with QM for the work, based on the fact that there is less of a comfort level that the project may be completed within the existing budget. However, we will need to enter into a contract during the week of August 17 if the work is to proceed this year.

DISCUSSION:

With the construction costs that QM is proposing, the consultant costs and sunk costs on the project, the current estimate for the dam renovation is approximately \$850,000. If a 10% contingency is applied to the *construction portion of the project*, which is typical for lump sum construction projects, the estimate increases to approximately \$915,000. Due to the uncertainty from the nature of the contract that we are looking to enter into, staff recommend allowing for a 30% construction contingency; this would increase the upper range of the project cost estimate to approximately \$1,050,000, exceeding the approved \$900,000 budget for the project.

At this time, there are three options that Council could consider:

- 1) Proceed with the dam project in 2020 by contracting QM;

- 2) Proceed with the earthworks portion of the dam in 2020 by contracting QM, and complete the sheet pile portion of the work in 2021 through a competitive bid process; or
- 3) Complete the entire dam renovation in 2021.

It should be noted that the dam does require renovation to bring it up to dam safety standards. This is not a project that can be cancelled or delayed indefinitely.

The following outlines some of the benefits and risks of each of the above options.

Option 1: Renovate Reay Creek Dam in 2020

QM is a reputable contractor that has extensive remediation and dewatering project experience. They have received quotes from reputable companies to perform the sheet pile work, which is the largest cost on the dam project. Although staff will work with QM to try to limit the Town's risk on the project, a time and materials unit rate contract has inherent risk for the project owner. As with any renovation project, there are several unknowns that create risk. Some of these unknowns include:

- the ground conditions downstream of the dam, and the amount of material that will require removal;
- the quality and quantity of material available to be reused on the future dam; and
- the risk of cost impacts for work done beyond the end of Transport Canada's project (e.g. a storm event, and the cost of managing such an event).
 - Note: If Transport Canada's project schedule is also extended due to the late start of this project, this risk may be mitigated.

There are several benefits of completing the project this year, regardless of the above risks. These benefits include:

- this option has the lowest environmental impact;
- the option has the lowest impact to the nearby residents;
- the pond will be dewatered for the pond remediation project at Transport Canada's cost;
- there will be efficiencies in overheads from having the two projects completed concurrently by the same contractor; and
- Transport Canada will have the ability to test and remediate the contaminated material that is encountered while performing the dam work because of the resources that they have on site for the pond project.

Due to the contract type, it is recommended that a 30% contingency be included in the budget. This will result in an overall budget of \$1,050,000, therefore requiring an additional \$150,000 over the existing budget of \$900,000. Despite this increase in the contingency, staff and our consultant will do everything in our power to keep the costs closer to the previous budget limit; this is not a blank cheque for QM.

Option 2: Split the Reay Creek Dam Renovation between 2020 and 2021

QM could complete the earthworks portion of the project in 2020, and then the Town could have a competitive tender process for the sheet pile portion of the project in 2021. This would reduce the cost of the work in 2020, but may result in a higher overall cost due to extra design and material required to make the partially renovated dam safe until the dam construction is complete. The risks of this option are similar to option 1; however, if the

sheet pile portion is tendered next year, we would be looking for a more certain (if not fixed) price. Another risk associated with option 2 is the cost of dewatering a portion of the pond a second time, although it will likely not be to the same degree as what will be occurring this year.

Option 2 would be the second best with respect to impact to environment and nearby residents. It may also reduce the costs if the sheet pile portion of the project is done through competitive tender - rather than three quotes obtained by QM – but that is uncertain at this time. The sheet pile work may actually increase in price if manufacturing is further impacted by COVID-19, or the construction market is busier in 2021, resulting in higher equipment and labour costs.

Option 3: Renovate Reay Creek Dam in 2021 through competitive bid process

Option 3 would involve the Town postponing the dam renovation until 2021, and completing the entire project through a competitive bid process. This would be the most impactful to the environment and surrounding residents because of the dewatering requirements in both years and the substantial construction activity over two summers instead of one. There is also no guarantee that Option 3 will be more economical for the Town.

Currently, the best estimate that the Town has, aside from the QM estimate, is the consultant estimate, which has proven to be low for the sheet pile work based on the bids received by QM for this component of the project. There are many factors that may make completing the project next year more expensive including:

- If the earthworks are completed this year, it will be relatively easy for Transport Canada to test and remediate the contaminated material that is encountered during the dam renovation; if these works were to proceed in 2021, this will be more challenging for Transport Canada to do so.
- Historically, when grant funding becomes available, it results in an influx in available construction work in the Province. With this increased demand, the cost of construction generally increases. It is highly likely that a large amount of grant funding will be available for 2021.
- Some of the unknowns relating to material quantities may inflate the contractor's cost estimates – and subsequent bids – due to the added risk. A firm bid will reduce the risk to the Town, but may result in a higher overall price.

Likewise, if there is an influx in grant funding in 2021, this project may be eligible for such funding. However, there is no guarantee that a grant will become available for this type of project, or that the Town will be successful in a grant application.

At the time of the writing of this report, the Town is still waiting to receive a letter of advice from DFO for the dam renovation project. All other regulatory approvals have now been received.

FINANCIAL IMPLICATIONS:

At this time, it is challenging to know the financial impacts of Option 2 and 3. It is highly likely that both of these options will require additional budget allocation in 2021. If Council wishes to proceed with Option 1, it is recommended that an additional \$150,000 be allocated to allow for sufficient contingency for the unit rate contract and unforeseen

events. This funding would be from the same source as the remainder of the project: the Land Sale Reserve.

Given the latest estimates, QM has been requested to provide a firm price for the work. While they have committed to considering it, the very short timeframe makes it highly unlikely that they would be prepared to submit a bid that would be lower than the Town's new contingency budget, due to the risks and unknowns associated with a project like this. If pressed to provide a firm price, their quote would likely include a very healthy contingency; that is why a time and materials unit rate contract was proposed in the first place. While it places the risk on the Town, it is expected to be lower than a firm price on short notice.

RECOMMENDATION:

That Council confirm the direction to enter into a time and materials unit rate contract with QM Environmental for the renovation of Reay Creek Dam in 2020, and allocate an additional \$150,000 in budget for the project, funded from the Land Sale Reserve.

Respectfully submitted:

I concur:

Jenn Clary
Director of Engineering

Andrew Hicik
Director of Corporate Services