Project Update

Gardom Pond Dam

Capital Regional District | July 2019

The CRD is aware of ongoing discussions and questions regarding the project to lower the water level and decommission the dam at Gardom Pond. In response to these questions, the FAQs on the Gardom Pond capital project website have been updated with the information below.

What is the current status of the project?

Water is flowing from the pond via a pipe and hose section and then into the newly prepared lower section of the outlet channel. The water is flowing well, it contains no visible sediment and the required flow control elements are all in place. This de-watering is expected to take up to 20 days to complete.

Some vegetation has been removed from the edge of the dam in preparation for the upcoming work and a silt fence has been installed to prevent silt from extending into the pond. The work on the lower outlet channel including trenching and fortification has been completed and a culvert across Razor Point road is planned to complete this section.

The new water line for Razor Point road that runs adjacent to the upper outlet channel has been constructed and pressure testing is underway. Upon completion of the waterline, work will commence on the upper outlet channel in a similar manner to the recently completed on the lower section.

When the lowering of the water level and construction of the entire outlet channel are complete, the final lowering of the dam embankment and construction of the outlet and headwall will begin. The final stage will involve modifications to the firefighting standpipe and finally revegetation of the shoreline, landscaping and clean-up.

Final completion of the project is expected by late August 2019.

How accurate are the construction cost estimates?

The construction cost estimate was developed based off an engineered design. The accuracy is directly linked to the completeness of design and on the assumption of certain ground conditions. A 'Class B' or Substantive Estimate was developed for this project based on preliminary design drawings, which include the designs of all major systems, as well as the result of all site investigations. This level of estimate is typically used for the establishment of realistic cost objectives and is the level of estimate used to obtain project approval. This level of estimate was used with the decommissioning effort and proved to be accurate.

For more information please visit www.crd.bc.ca/gardom

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The estimated construction cost forms the basis of the cost and other added costs, such as Engineering design, project management, regulatory requirements, contingencies and inflationary factors (I.e. for time delays from time of estimate to construction). The cost estimate for the work was assembled by a senior Engineer in 2013 with the total being $938,025 at that time. The same firm updated the analysis and estimate in 2015 to be $1,098,526. CRD Engineering staff then applied local inflation factors for 2016, 2017 and 2018 to arrive at the estimated range of $1.3-$1.5M.

The work required for this project can be divided into two components, the first being the work on the downstream outlet for the water leaving the pond and the second being the work on the dam itself. The first item would have to be performed regardless of the type of work selected for the dam (i.e. upgrade or decommission). This work is required as the existing outlet channel is not capable of handling a significant amount of flow and would be greatly overwhelmed during a heavy rain event, or in the event of a dam breach from a large storm or seismic event. Approximately half of the current project costs are related to the work downstream of the dam.

Why is the timing important?

To minimize financial impact to the legally responsible water license holders, the CRD secured a grant to cover the majority, if not all, of the total project cost to decommission the dam. The deadline associated with the funding program is March 2020. Timing of the lowering of the pond corresponds to the recommendation of the environmental impact assessment report which states the lowering occur in the dry period between July and September to eliminate risk of a flooding event occurring during construction.

Following a second environmental review, the environmental professional confirmed bird nesting clearance. The contractor's water lowering work plan has been reviewed by both the engineer of record, the owners Qualified Environmental Professional (QEP) and the site QEP. The outflow of the hose is being monitored daily for sediment. The contractor is using the existing piping infrastructure which minimizes the risk of interaction with amphibians. As the level is further reduced, the site will be continually monitored for any required fish salvage - as per the recommendations and requirements provided in the environmental impact assessment. The lowering is expected to take approximately 20 days.

Lowering of the water level and the work on the dam must be completed in July and August as per the original schedule. There has been no acceleration of the construction schedule to date.

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