

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, APRIL 08, 2020**

SUBJECT **Beddis Water Service – Level Control System Repair Capital Project Budget**

ISSUE

To seek the approval of a revised budget of \$42,500 for a 2020 capital project to repair the Upper Sky Valley Reservoir level control system.

BACKGROUND

The Upper Sky Valley Reservoir is located on Sky Valley Road with a storage volume of 45 m³ serving water to approximately 25 lots in the Beddis Water Service area.

The level control system currently employed at the Upper Sky Valley reservoir was installed a few years ago as a temporary solution when the original level controls inside the reservoir failed. Recently it was found by staff that the “temporary” level control system stopped working which leaves no functional automatic controls for the filling cycles of the Upper Sky Valley Reservoir. Automatic level control system detects the water level and automatically start/stop the pumps that fill the reservoir. The failure of this system has resulted in the Operations having to operate the reservoir manually to maintain service level.

CRD has investigated the problem and concluded that the temporary level control system cannot be restored or repaired. The problem with the temporary level control system lies with the underground telecommunication cables between the reservoir and the Lautman pump station and replacement/repair of these cables is cost-prohibitive. The recommended solution is to install a level measuring transducer inside the reservoir which communicates wirelessly with the Lautman pump station and water treatment plant. This solution requires accessing the reservoir safely from the top.

In the five year capital plan, there is an approved project of \$10,000 in 2020 to upgrade the temporary level control system. The budget of this planned project was an order-of-magnitude estimate during multi-year budgetary planning process which did not consider the costs associated with providing safe access to the top of the reservoir nor the fact that the current wired communication system is no longer employable. CRD has obtained quotes from various vendors/contractors and developed an upgrade budget. The estimated costs including project management and contingency for the project, are provided as follows:

Work Activity	Estimated Cost (\$)
Installation of level transducer and communications system (labour and materials)	20,500
Replacement of wooden mask and associated electrical repairs/replacement at Lautman Pump station (labour and materials)	10,000
Safe access to the top of the reservoir (using a man lift)	3,500

Project Administration (10%)	3,400
Contingency (15%)	5,100
Total	42,500

Currently the Capital Reserve Fund at the beginning 2020 has a balance of \$50,868. It is estimated that the Capital Reserve Fund at the end of 2020 will be \$6,508 if this project is approved.

ALTERNATIVES

Alternative 1

That the Capital Regional District Board amend the 2020 Beddis Water Five Year Capital Plan to include a revised project budget in the amount of \$42,500 for the Sky Valley Upper reservoir level control upgrade.

Alternative 2

That the Capital Regional District recommend that this report be referred back to staff for additional information.

IMPLICATIONS

Financial Implications

Without a reliable and functional level control system, the Upper Sky Valley Reservoir has to be manually monitored and operated which results in approximately \$1400 per week additional operating costs.

Environmental & Climate Implications

Without a reliable and functional level control system, a small amount of dechlorinated water has to be released from the reservoir which has triggered the Environmental Incident Reporting process and notifications to environmental regulators.

Service Delivery Implications

Failure to move forward with this project results in increased risks to the end users in the service area and reduces the ability of the CRD to deliver portable water reliably and effectively.

CONCLUSION

Repair work is urgently needed for the level control system of the Upper Sky Valley Reservoir to enable the CRD to monitor and control the system automatically. The lack of functional level control system creates risks to the environment as well as significant additional operating costs.

The recommended solution to address the problem involves accessing the top of the reservoir and installing a level measuring transducer inside the reservoir which communicates wirelessly with the Lautman pump station and water treatment plant.

RECOMMENDATION

That the Capital Regional District Board amend the 2020 Beddis Water Five Year Capital Plan to include a revised project budget in the amount of \$42,500 for the Sky Valley Upper reservoir level control upgrade.

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