Beddis SCADA Renewal Project Open House

March 10, 2026

Territorial Acknowledgement

The CRD conducts its business within the Territories of many First Nations, including but not limited to Quw'utsun (Cowichan) Tribes, Halalt First Nation, Lyackson First Nation, MÁLEXEȽ (Malahat) Nation, BOḰEĆEN (Pauquachin) First Nation, Penelakut Tribe, Semiahmoo First Nation, Snuneymuxw First Nation, Stz'uminus First Nation, WJOȽEȽP (Tsartlip) First Nation, SȾÁUTW̱ (Tsawout) First Nation, Tsawwassen First Nation, W̱SIḴEM (Tseycum) First Nation, and Tsu'uubaa-asatx (Lake Cowichan) First Nation, and all of whom have a long-standing relationship with the lands and waters of Salt Spring Island from time immemorial that continues to this day.

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Beddis Water Service Overview

- The Beddis Water Service was created in 1969 as the Beddis Waterworks District and became a CRD service in 2004. The service provides drinking water for 128 of the 137 properties in the Beddis Service area. The Water Treatment Plant (WTP) was built in 2010.

- The WTP is controlled locally at the WTP by a Programmable Logic Controller (PLC). The PLC uses inputs from the equipment and sends outputs to run the plant automatically.
  - Alarms and some limited operating conditions are visible to the operators at Ganges through the Ganges server.
  - Communications for alarms and data are via the SCADA equipment which is currently operating on a non-secure dial-up modem which is scanned every half hour.

- The SSI operations team operates and maintains the system for it to run 24/7 year-round.
  - Regular site visits to Beddis are three times per week for approximately 2 hours each.

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Background

SCADA is Supervisory Control and Data Acquisition and includes hardware components such as a server computer to host data, a PLC, RTU for remote or standalone equipment and an HMI for operator interface

A **PLC** is a Programmable Logic Controller which is hardware equipment that contains a logic program which accepts inputs and gives outputs (I/O) to control equipment. Inputs can be from sensors and timers, and outputs can be to valves, switches and alarms.

An **HMI** is a Human Machine Interface that allows the operator to monitor and interact with the process and equipment through the PLC. The HMI can be used for monitoring or can be for resetting or adjusting setpoints and operating parameters.

An **RTU** is a Remote Terminal Unit that has minor control logic and I/O terminals to feed into a PLC.

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Background
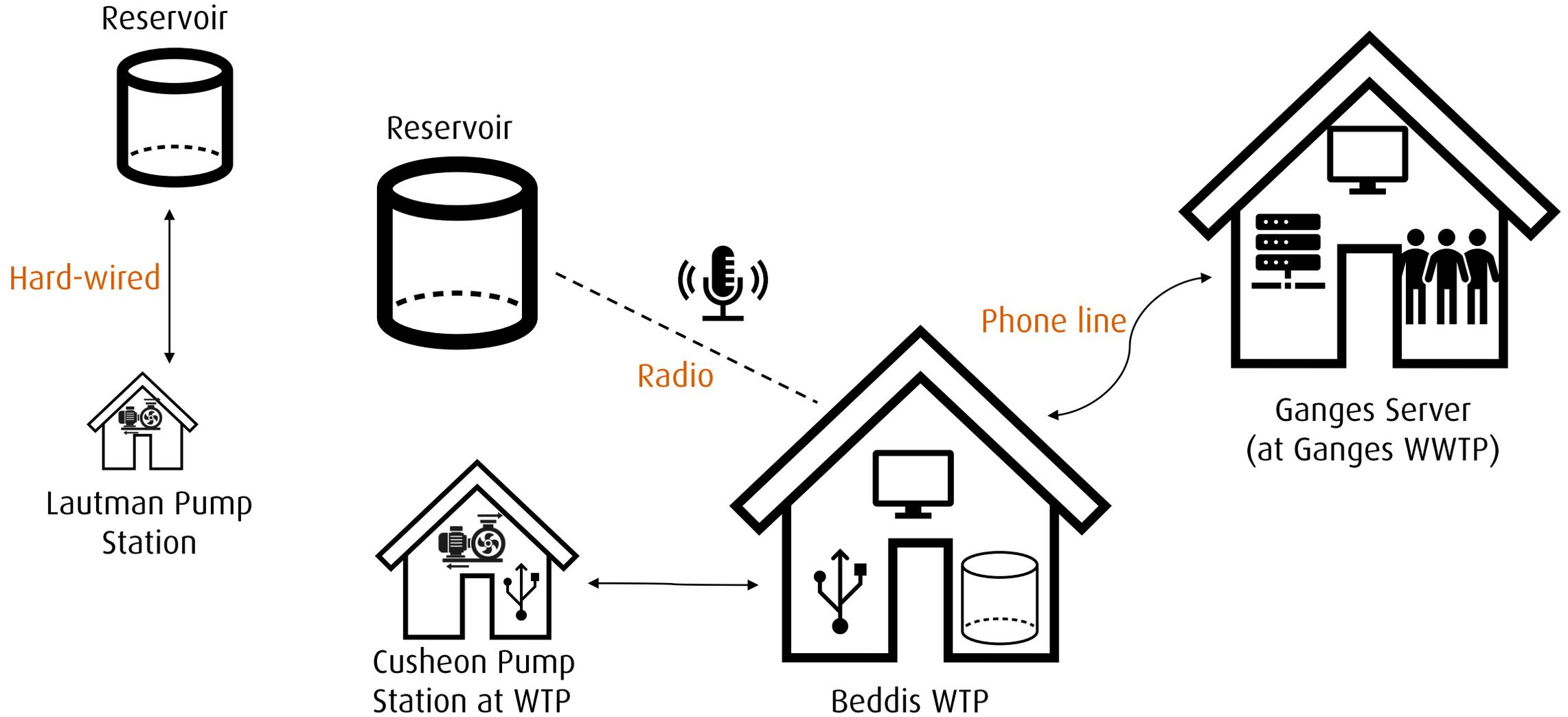
Upgrade Project

- A PLC upgrade is required to expand communications. The current PLC, Pump station RTU and I/O cards are obsolete with no available replacement. There is also no expansion capacity for communications.

- The SCADA upgrades required at Beddis are the upgrade to cell modem communications at the WTP to allow stable and secure communications to the Ganges server.

- Design of the PLC/SCADA system is underway, funded by reserves. CRD experts in house are assisting in the design.

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Benefits

The improved real-time communications will allow for remote assessment and reset, potentially less site visits, including following power outages.
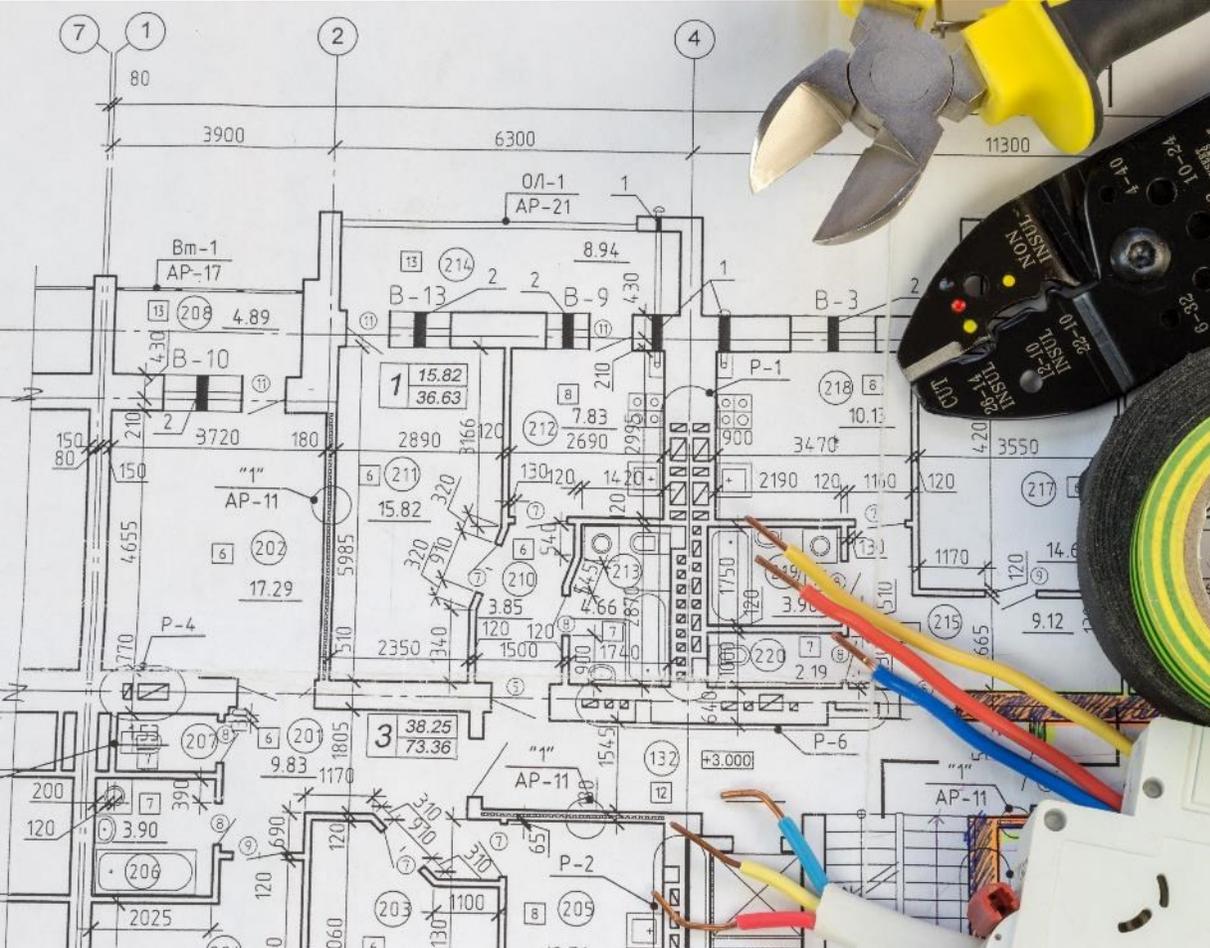
The improved hardware will provide reliability and prevent system failure due to I/O card and communications failure. This is a current risk for operations.

Improved operation modes and real-time data collection will be possible with an upgraded PLC and I/O.

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Electrical Upgrade Project

- The electrical upgrades are necessary to support the new SCADA equipment, maintain Electrical Code compliance and for identified Occupational Health and Safety issues.

- Efficiency will be gained from scheduling this work in parallel with the SCADA upgrades.

- An updated line drawing will be developed for an as-built record.

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How are we funding

Project	Funding Source	Budget (2026)
WTP SCADA Upgrades	Debt	$ 220,000
	Grant (CWF)	$ 80,000
Electrical Upgrades	Debt	$ 100,000

- The two urgent projects that are included for the borrowing are the WTP SCADA Upgrades and the WTP Electrical Upgrades for a **total of $320,000 of debt borrowing**

- Community Works Funds (CWF) are available to supplement the SCADA Upgrades project ($80,000)

- A loan authorization bylaw and **participating area approval** is required prior to adopting a loan
  - Participating area approval will be determined through **electoral assent (petition)**

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How are we funding

- The Parcel Tax associated with the new borrowing will be added to each rate-payers annual property tax.
- The borrowing amount will be up to **$320,000**. If less is required to complete the project, less will be borrowed.
- Beddis commission has chosen a 10 year term.

Borrowing Amount ($320,000)	
Borrowing term (years)	10
Indicative Interest Rate*	4.02%
Cost of Borrowing $	403,309
Annual Debt Payment $	40,331
Annual Parcel Tax per taxable folio $ **	297

*MFA Indicative Market Rates used for analysis, taken from MFA Website, January 8, 2026.
** Calculated parcel tax assuming no change in total folios, set at 2025 level of 136 folios.

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Elector Assent Options

Petition

- Only property owners may participate (one vote per property).
- 50% approval threshold representing at least 50% of taxable value of land and improvements
- Highest likelihood of approval success

Cost $5,000 est.

Alternative Approval Process

- Commonly used in relation to long-term borrowing bylaws
- Borrowing initiative can be quashed if more than 10% of electors sign a counter-petition opposing the bylaw.
- A referendum must be held within 80 days if the need to proceed with the borrowing is still required.
- Less expensive than a referendum

Cost $20,000 est.

Referendum

- Majority of the valid votes are counted in favour of the bylaw to fund a project.
- A referendum question is developed and then reviewed by the inspector of Municipalities at the province, requesting the electors to approve the borrowing of a specified amount of funds for the project.
- Must wait at least six months before seeking elector assent on another bylaw for the same purpose in a referendum
- More expensive than an Alternative Approval Process

Cost $60,000 est.

Petition process has been selected to reduce expense on ratepayers and expedite issue resolution

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Next Steps

- Public Engagement session and petition launch for Beddis residents

- Proceed with the loan authorization process
  - CRD Board approval required
  - Debt financing will be provided through the Union of BC Municipalities (UBCM) at favourable interest rates.

- Initiate construction tendering process

- Field construction, installation and commissioning of the equipment

- Key Performance Indicator (KPI) monitoring to ensure project success

For additional information please check back at the Beddis Water Service webpage: www.crd.ca/beddis-ws

For questions, please contact saltspring@crd.bc.ca or 250-537-4448

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