

# Whycocomagh Lift Station #4

Village of Whycocomagh



CANADA'S  
**MUSICAL  
COAST**

Inverness County

# What is a Lift Station?

A wastewater lift station is a pumping station that moves wastewater from a lower elevation to a higher elevation.

The benefit of using a lift station in a sewage collection system is that it saves a substantial amount of money in excavation costs, which involves digging for sewer pipes. Sewer pipes are underground, and digging trenches is costly. Installing wastewater lift stations at certain points in a gravity pipeline system saves on front-end construction costs without sacrificing efficiency or functionality. Lift Stations play an integral role in moving sewage to the wastewater treatment plants.

Raw sewage travels underground in sloped pipelines that take advantage of gravity to keep costs down. In some situations, it's necessary for wastewater to enter the pipe system from a lower elevation. For the raw sewage to continue the travel towards the wastewater treatment plant, it needs to be efficiently transported to a higher elevation. This can't happen naturally— so the lift station pump will “lift” the sewage upwards using a pressurized sewer force main to elevate the wastewater to a higher elevation so that it can continue travel towards treatment.

Key elements of lift stations include a wastewater receiving well (wet-well), pumps and piping with associated valves; motors; a power supply system; an equipment control and alarm system; and an odor control system and ventilation system. Lift station equipment and systems are often installed in enclosed structures.

The panel at Lift Station #4 in Whycocomagh must be replaced immediately due to significant deterioration and safety concerns.

The scope of work will include:

The purchase of a new sewage pump control system, UHF Ethernet radio, submersible level transmitter, pump current transmitters, intrinsic safety barriers, phase protection, capacitor kits for single phase pumps, disconnect switch and all necessary motor starters, overloads, breakers etc., all necessary programming and start up and commissioning.

Installation will include:

- To install the new control panel.
- To supply and install explosion proof fittings, junction boxes, wiring and sealing compound to meet Canadian Standards Act requirements for Lift Station Electrical Installations.





LIFT STATION 2

LIFT STATION 1

Location

WATER  
TREATMENT  
PLANT

LIFT STATION 3

WASTEWATER  
TREATMENT PLANT

LIFT STATION 4

Whycomagh  
Bay

WHYCOCOMAGH

500 0 500  
SCALE 1:25,000 METRES

# Estimated Project Cost

<b>Description</b>	<b>Cost</b>
Lift Station Panel	\$24,717.00
Installation	\$6,190.00
<b>Subtotal</b>	<b>\$30,907.00</b>
<b>HST</b>	<b>\$4,636.05</b>
<b>Total</b>	<b>\$35,543.05</b>

# Recommendation

For Municipal Council to consider the immediate replacement of the lift station panel at Whycocomagh Lift Station #4 due to significant deterioration and safety concerns. The estimated project costs are \$35,543.05 and the project costs can be allocated to the annual lift station budget.

