

TOWNSHIP OF EDWARDSBURGH CARDINAL ACTION ITEM

Committee: Public Works, Environmental Services & Facilities

Date: June 21, 2021

Department: Operations

Topic: Adelaide Sewage Pumping Station Spare Pump

Purpose: To consider replacement options for the Adelaide spare 47hp pump

Background: The Adelaide pump station was commissioned in 1996 and receives all sewage from the Village of Cardinal north of the canal. Sewage enters the pump station wet well via Adelaide St. main. The wet well contains two (2), (one lead and one lag), 47 hp Flygt pumps that direct the sewage through a force main to a manhole located at the junction of Dundas and Joseph St. approximately 1 km away. Sewage is then gravity fed down and into the Waste Water Treatment Plant, (WWTP). The station has functioned well in its 25 years of services other than routine maintenance, minor upgrades and the replacement of the drywell components in 2019 as a Capital project.

After experiencing intermittent leak detection alarms from the west Flygt pump, the pump supplier, Xylem was contacted to troubleshoot the pumping station. On May 3rd, Xylem inspected the pump panel and system, determined that a seal was leaking in the west pump and that removal was necessary to assess the overall condition of the pump. ES and Xylem removed and replaced the pump with a spare.

Xylem assessed the pump in their shop and determined various mechanical components of the pump were showing wear and the seals are leaking causing the stator to ground. Xylem provided options to rebuild existing pump or replace with new.

Policy Implications: Council approval is required to proceed with any expenditure that is not part of the current approved budget or within approved estimates.

Financial Considerations: Replacement of a pump and components at the Adelaide station was not included in this year's Budget. However, maintaining a spare pump on critical infrastructure such as this is crucial, and action should not be delayed until 2022. The current budget projects a yearend transfer to reserves of \$53,089.00 and the current balance in the Cardinal Wastewater Reserve fund is \$225,886.94. Two options are presented below.

Option 1: Purchase new

The existing 47 hp pump model is now obsolete. Xylem has quoted \$49,942.00 plus non rebated HST for a replacement pump, including freight. A pump recycling credit for the old pump would be applied reducing the cost of a new pump to \$39,688.24 non-rebated HST. Lead time to receive a new pump is 9-12 weeks. The Flygt model NP-3202 replacement pump is 45 Horse Power, which is 2 hp less than the current pumps. The duty point of the existing pumps would need to be calculated by an Engineer in order to determine if the quoted pump is an adequate replacement for its current duty. Xylem could provide a quote for a 60 HP pump however this would potentially require upgrades or replacement of the existing pump panel to accommodate the larger hp pump. Both pumps would require replacement.

Option 2: Rebuild

Xylem has estimated and quoted \$ 27,009.10 plus non rebated HST to rebuild the existing pump. The estimated lead time is 6-8 weeks. There is an additional charge of \$3,387 for the initial service call and to deliver the rebuilt pump. Option 2 would avoid the costs of contracting an engineer to confirm the duty point of the current pumps, purchasing a more expensive and higher hp pump and potentially upgrading or replacing the control panel.

Recommendation: That Committee recommends that Council direct staff to contract Xylem to rebuild the damaged west pump at a cost of \$27,009.10 plus non-rebated HST, and cover the unbudgeted expense through the Cardinal Wastewater Reserve fund.



Director of Operations

Eric Wemerman

Chief Water/Sewer Operator



CAO