

TOWN OF DARIEN
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To: RTM

December 23, 2014

Re: Sanitary Sewer Pump Replacements at Nearwater and Stony Brook Pump Stations

Attached please find the Evaluation Study for the proposed pump replacement project at the above listed locations. We recently obtained the report (dated 8/28/2014) authorized by the Sewer Commission from a consultant, Wright-Pierce, which concluded that these pumps have exceeded their useful life and should be replaced. Currently, the Sanitary Sewer Pump Stations at Nearwater and Stony Brook each have three (3) 75 HP pumps that are in excess of 25 years old. We have been funding repairs to these older units in excess of \$30,000 per year over the last three years, while having to unclog them on a regular basis. Pump failures at these two stations have occurred at least five times this year alone. The increase in electricity is a direct impact to maintaining a clogged free pump as we must run the pumps more regularly. Please note that these pumps are critical to moving raw sewerage from Darien to the Sewerage Treatment Plant in Stamford. These two pump station are the largest stations owned and operated by the Town of Darien and have the largest sized pumps to handle extremely large flows. We have obtained acceptable bids for the recommended replacement submersible pumps from a local vendor and are currently completing the drafting of the contract. The estimate to furnish and install the new pumps is \$85,000 per unit. A six year Capital Improvement Plan was submitted to the Sewer Commission that scheduled the pump replacements over an extended period of time. Due to the high cost per unit it is proposed to replace two units this fiscal year and one unit each of the next four years so not to impact the user fees if possible. This schedule may change due to unforeseen conditions or at the request of the commission.

Subsequently, the Sewer Commission authorized the transfer of funds to a Capital Account specifically created for the upgrades to the abovementioned pumps stations and approval from the Board of Selectmen and the Board of Finance were obtained in October of this year.

Attachments (1)

Memo: Nearwater Main and Stony Brook Pump Stations Evaluation Study
August 28, 2014

Summary of Recommendations

For both stations, Wright-Pierce recommends replacing all the existing pumps with Flygt dry-pit submersible pumps with N-impellers. This would eliminate the extended drive shafts and related maintenance, costs, risks and equipment, and the open non-clog impellers would be less affected by debris in the influent flow. Eliminating the extended driveshafts and reducing the clogging problems would reduce labor requirements and pump-related maintenance expenses. Replacing the existing pumps with new pumps would also eliminate the issues with age. Because the models will be newer, corrective maintenance will be reduced and seals, bearings and other spare parts and replacements will be much easier to obtain as required because these models are up-to-date and produced only by one manufacturer.

Although there are multiple manufacturers for dry-pit submersible pumps, we recommend the Town pursue installing Flygt pumps. The town has upgraded other pump stations within the system with Flygt technology with good results, and the operators have been satisfied with the service by Flygt. Flygt has proven to be prompt and effective for maintenance needs, which will eliminate the current 6 to 12 week time period to repair a pump. This will reduce the current risk experienced when a pump is sent for service and only two pumps remain in a station. Using the same technology at multiple locations also makes equipment more interchangeable, which simplifies maintenance procedures and operator knowledge. Multiple replacement parts can be ordered at one time, which saves time and cost.

The Town should pursue replacing all pumps at the Nearwater Main and Stony Brook Pump Stations to address immediate issues with pumping capacity and to ensure the continued successful operation of both stations. In order to mediate costs the Town may choose to replace one or two pumps at a time, but all have reached the end of their useful life and all should be replaced. This is further evidenced by the recent pump failures at both stations.