



STAFF REPORT
Public Hearing 3-1-22

AGENDA ITEM #: 22-20
COUNCIL MTG OF: February 15, 2022
FROM: M. Fowler, Public Works Director; T. Carrier, Deputy Public Works Director
OFFERED BY: M. Fowler, Public Works Director; T. Carrier, Deputy Public Works Director
PREPARED BY: M. Fowler, Public Works Director; T. Carrier, Deputy Public Works Director
SUBJECT: Manchester Rd Booster Pumping Station Pressure-Based Modifications

PURPOSE

The purpose of this document is to request Council consideration and approval of a NHDES grant to make modifications to the Town's Manchester Road Water Booster Pumping Station (BPS) which will permit its operation based on pressure.

TOWN ADMINISTRATOR COMMENTS:

This project will address potential water quality and delivery issues to be funded from a NHDES MtBE grant.

BACKGROUND

Derry owns and operates a water booster pumping station on Manchester Road (Rte.28) in Derry at the point of entry to the Town's water system from Manchester Water Works (MWW). This station was built in 2019 as part of the Phase 1 Southern NH Regional Water Project. The Derry water distribution system has a single 4 million gallon (MG) atmospheric water storage tank. Because the system currently lacks redundant storage, water pressure in the core system cannot be reliably maintained if the storage tank is taken out of service. Currently, the Manchester Road Booster Pumping Station (MHT BPS) is designed to fill the tank at a fixed flowrate and turn on and off based on the water level in the tank.

Over the summer of 2020 the Derry system (along with MWW, Salem and HAWCo) experienced system wide nitrification which resulted in low disinfection levels. This caused issues for Derry as well as the downstream systems. One of the primary responses to a nitrification event is to drain and clean the tank. This is currently not possible. Maintaining system pressure while taking a tank out of service is typically achieved by providing a redundant storage tank. Adding a new tank, however, is very costly and added storage may, in fact, exacerbate nitrification.

DISCUSSION

To allow for Derry's tank to be taken out of service while maintaining consistent pressures, modifications to the Manchester Road booster pump station are needed. Work would include new piping configuration and the installation of pressure reducing valves, check valves and isolation valves as well as system control reprogramming. This will allow the Derry system to "float" off the Londonderry system while limiting the pressure at lower flow rates.

Our intention is to complete this work prior to the summer to allow cleaning of the tank if needed prior to summer demands.

FISCAL IMPACT

This work would be added as a change order to our existing Regional Water Project contract with Hampstead Area Water Services Co. (HAWSCo) who constructed the pump station. The estimated cost of this work is \$81,992.64 (\$67,992.64 for construction and \$14,000 for construction engineering). NH DES has approved 100% grant funding for the project.

RECOMMENDED ACTION BY COUNCIL

It is recommended that the Council authorize the Town Administrator to apply for, accept and expend a grant from NHDES to implement the recommended work in the amount of \$81,992.94

SUGGESTED MOTION: Please see Resolution #2022-015.