



CITY OF CONCORD

New Hampshire's Main Street™

REPORT TO MAYOR AND THE CITY COUNCIL

FROM: Earle M. Chesley P.E., General Services Director

DATE: August 22, 2023

SUBJECT: Emergency Bypass Pumping Appropriation

Recommendation

Accept this report to appropriate the sum of \$680,000 for the installation and rental of emergency bypass pumping equipment at the Hall Street Wastewater Treatment Plant, and set the attached resolution for a public hearing on September 11, 2023.

Background

The Hall Street Wastewater Treatment Facility utilizes three large-diameter screw pumps to move wastewater from the plant's influent wet well to the treatment process. In February 2023, Screw Pump C experienced a critical failure and is currently out of service. The replacement of Screw Pump C is included in the CIP for FY 2023. A purchase order for the replacement screw pump has been processed, and the installation is expected to be completed in the spring/summer of 2024.

On July 18, 2023, during a routine preventive maintenance inspection of the lower bearing for Screw Pump A, the wastewater staff discovered a failure of the lip seals and significant wear to the lower bearing. Currently, the screw pump is operational however not considered reliable and is only being used during high flow events at the plant.

The combination of Screw Pump C being out of service and Screw Pump A having a compromised lower bearing places the Hall Street Wastewater Plant in a position of high risk for service interruptions. Currently, Screw Pump A is used during times of high flows at the plant. Should the screw pump experience a failure during these times, wastewater flow would surcharge the collection system, potentially causing sewer overflows within the system.

In order to minimize the risk of a sewer overflow in the city, the Department recommends installing an emergency bypass system. This system will be utilized on an as-needed basis to

provide wastewater pumping in the event of a failure of screw pump A. In addition, the bypass system will be used when Screw Pump A is taken out of service for repair this fall.

Discussion

The Department has identified an emergency need to provide bypass pumping at the Hall Street plant. The identified system is required to reduce the risk of a significant wastewater backup and potential overflow within the city. For the reasons stated above it is the Department recommends that the City Council accept this report and associated resolution.

Cc Daniel Driscoll, Wastewater Superintendent