



# 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:** Hall Street Wastewater Plant Screw Pump Lower Bearing Replacement  
Appropriation

### **Recommendation**

Accept this report to appropriate the sum of \$820,000 for the replacement of the failed screw pump lower bearing at the Hall Street Wastewater Treatment Plant and set the attached resolution for a public hearing on October 10, 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.

The lower bearing for Screw Pump A is scheduled for replacement as part of a concrete repair project included in the FY 2025 CIP budget for the Hall Street Plant. To minimize the risk of a sewer overflow in the city, the Department recommends the replacement of the Screw Pump A bearing immediately. It is anticipated that a review of the FY 2025 concrete project will provide some reduction in future project costs at the plant. The division has already located and ordered the necessary parts to make the repairs. This appropriation request will cover the costs for the equipment, materials, and labor to install the new bearing.

### **Discussion**

The Department has identified an emergency need to replace the lower bearing for Screw Pump A at the Hall Street plant. The identified work 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