



CITY OF CONCORD

New Hampshire's Main Street™

REPORT TO MAYOR AND CITY COUNCIL

DATE: March 18, 2019

To: Mayor and City Council

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

Subject: Repurpose funds from CIP 88 Water Plant Improvements, to CIP 114 Penacook Lake Dam and Spillway Rehabilitation, for spillway engineering analysis at the Hutchins Street Water Treatment Plant.

Recommendation

Accept this report and approve the attached consent resolution to transfer \$109,588 from CIP 88 Water Plant Improvements 2018 Pavement Rehabilitation to CIP 114 Penacook Lake Dam.

Background

The City owns and operates a high hazard dam, the Penacook Lake Dam that serves to impound the reservoir at the Hutchins Street Water Plant. The City holds a permit for the dam from the New Hampshire Department of Environment Services who performs regular periodic inspections.

This earthen dam has been in service from its original construction in 1872 when the City constructed it creating the larger Penacook Lake from the existing Long Lake and Forge Pond located within the Rattlesnake Brook watershed.

All high hazard dams are required to have an Inundation Map indicating those properties that would be in the direct path of a dam breach. This information is maintained in the City's Emergency Action Plan and kept on record at the New Hampshire Department of Environmental Services as part of our permit.

Discussion

The New Hampshire Department of Environmental Services has requested the City to update the Inundation Map, as well as, to perform an analysis of the capacity of the dam's spillway.

During the 2006 Mother's Day Flood, the lake level rose to within one foot of the dam's crest and the spillway was at full release. The study will determine if spillway improvements are needed for future 100 year flood events. Performing this engineering study is necessary to maintain the dam permit and to effectively manage the dam. The estimated cost of the analysis of the spillway, and updating the Inundation Map, is \$109,588.

CIP 88, 2018 Pavement Rehabilitation subproject, has been completed and funds remain that can be repurposed to this capital project. The life of the spillway engineering analysis and map are consistent with the 20 year bond issue.

Cc Chief Dan Andrus
Water Superintendent Marco Philippon