

COUNCIL ACTION FORM

SUBJECT: REALLOCATION OF CAPITAL IMPROVEMENTS PLAN FUNDS FROM NORTHWOOD LIFT STATION TO EAST 30 LIFT STATION

BACKGROUND:

East 30 Lift Station Force Main Project

During the construction of improvements to the East 30 lift station project, new factory tested pumps did not achieve the designed flow rates when they were installed in the field. The pumps discharge into an existing force main installed in the 1950s that ties the lift station back to the gravity sewer in the Youth Sports Complex. The engineering consultant for the project conducted some investigations and determined a possible blockage of the force main as the likely cause of the poor pump performance.

In 1994 when the Dayton Avenue overpass was installed, a portion of the force main was replaced. However, over 1,760 feet of original force main under the South Skunk River remains in place. The cost to televise the old portion of the force main was estimated at over \$45,000. Additionally, high hydrogen sulfide levels recorded in the manhole indicate that corrosion of the force main is likely occurring and staff has concerns that jetting the line could cause a rupture which would result in an emergency repair.

An engineering estimate to replace the force main is \$150,000. Staff investigated the possibility of utilizing the same State Revolving Fund (SRF) loan used for the East 30 Lift Station improvements as a source of funding; but this would exceed the authorized maximum dollar amount of the loan and would result in increased costs to modify the loan. While the pumps are not operating efficiently and are outside the recommended operating range, they are still functioning and the force main has remained in service.

Because of the inefficient pump performance and the likelihood for a deteriorating force main, staff prefers to address the issue proactively instead of waiting for an emergency failure of the force main. However, no funds have been appropriated for this project. One way to address this funding issue without impacting the Sewer fund balance is to reallocate the funds budgeted for the Northwood Lift Station Project to the East 30 Lift Station Force Main Project.

Northwood Lift Station Project

The FY 2015/16 Capital Improvements Plan included a project to perform a routine equipment replacement at the Northwood Lift Station. This lift station has functioned reliably for years with a single pump and the proposed equipment replacement retained

the same design. **Staff has attempted to obtain a construction permit from the Iowa Department of Natural Resources (IDNR) for the equipment replacement, but was told that a permit could not be issued. Current IDNR design standards require redundant pumps to provide a backup should one pump fail. The existing lift station cannot accommodate two pumps without substantial modification.**

Enlarging the existing wet well would require significant cost to the City due to the location of the wet well (in a sidewalk and along a steep embankment). The existing single pump design has dependably served 11 properties and staff has a backup pump in stock should there be an issue. **Because of the unanticipated cost, staff is recommending this project be tabled until the wet well has reached the end of its useful life or a more cost effective retrofit solution can be found that would be permitted by IDNR.**

ALTERNATIVES:

1. Authorize the reallocation of \$212,000 from the Northwood Lift Station CIP project for replacement of the East 30 Lift Station Force Main Project.
2. Do not reallocate CIP funds to this project at this time and thereby delay any improvements to the force main.

CITY MANAGER’S RECOMMENDED ACTION:

The Northwood Lift Station has been operating with one pump without issue since it started operation in the 1970s. The equipment replacement planned by staff would have triggered IDNR requirements for a more comprehensive rebuild of the station than was budgeted. Staff has determined that it isn’t cost effective to replace the wet well until it shows signs of deterioration and have tabled improvements of this lift station at this time.

The East 30 Lift Station force main serves a significant area near Dayton Avenue including many hotels and businesses. A number of factors are pointing to a deterioration of the force main serving that station. Utilizing funds from the Northwood Lift Station Project to replace the East 30 Lift Station force main would allow this unanticipated repair to proceed without impacting the Sewer Fund balance. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, as stated above.