



## MEMORANDUM

**To:** Mayor and City Council

**From:** Ken Griffin, P.E., Director of Public Works

**Date:** March 27, 2018

**Reference:** Engineering Services Contract with Kimley-Horn and Associates, Inc. for professional engineering services related to the North Lake Raw Water Pumping System

**2030:** Sustainable City Government, Goal 3  
Excellent and Well-maintained City Infrastructure and Facilities

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### General Information:

- The City has a contractual obligation to operate North Lake within a specified water elevation of a 1 foot “operating pool depth”
- In 2017, the City completed a Northlake Water Supply Study with Brown & Gay Engineering (BGE) outlining three options for supplying water to meet the obligation.
- The three options included: using treated water; drilling wells; or pumping raw water.
- BGE recommended a raw water pumping solution via rehabilitation of the existing but inoperable intake pump station and existing 42” pipeline.
- In late 2017 Kimley-Horn and Associates (KHA) was engaged to investigate the current condition of the pump station and pipeline and the cost of the rehabilitation.
- KHA estimated that the rehabilitation cost for the pump station and pipeline was approximately \$7.2 million with a long construction schedule.
- KHA was asked to investigate alternative approaches to provide raw water to North Lake on a temporary, as-needed basis.
- KHA recommends an operational solution that requires a reduced capital investment and relies on on-call pumping contractors to deliver the raw water to North Lake.

### Introduction:

This agenda item is presented to award a professional engineering services agreement to Kimley-Horn and Associates, Inc., to design improvements for the North Lake Raw Water System. This system will be designed to provide raw water to North Lake on an as-needed basis by adding minimal new infrastructure, utilizing the existing pipeline and procuring “on call (construction) pumping” contracts. This approach provides value to the City because water pumping cost is only accrued as

raw water is needed to supply North Lake after the site has been made ready with the construction of the pump area.

**History:**

North Lake was built in 1957 by Dallas Power and Light (later known as Luminant) as a cooling pond for a steam electric generating plant. In 2010, the power plant was decommissioned and by 2012, ownership was transferred to the City of Coppell. Cypress Waters soon began to develop around the lake. In the agreement with Cypress Waters, the City was responsible for lowering the pool elevation by 25 feet, constructing a new spillway, and lowering the elevations of the main and saddle dam. Construction of these modifications by the City was complete in 2014. Currently, North Lake has a normal pool elevation of 485'. The City has a commitment to maintain North Lake within a specified water elevation of a 1 foot "operating pool depth" by summer 2018.

**Analysis:**

To assist the City in meeting the deadline for providing water to North Lake, KHA will design improvements to the pump station intake channel, as well as a temporary road and concrete pump pad. They will also design improvements to the existing pipeline to facilitate temporary connections for the mobile pump, with four access points to the existing 42" pipeline. The scope also includes plans for a remedial creek crossing stabilization at Grapevine Creek, and modifications to the outfall channel. The opinion of probable cost suggests an upfront construction cost of approximately \$1.5 million for the as-needed raw water scenario with the annual contracted pumping cost of around \$60,000. This solution provides a significant cost-savings over the long-term permanent solution with an estimated cost \$7.2 million plus ongoing operations and maintenance.

This contract is for design and contract development support. Construction of the interim improvements and contracting for pumping services will be under future and separate contracts.

**Legal Review:**

The Purchasing Department has reviewed the documents and determined that this is an appropriate method of contracting with this firm.

**Fiscal Impact:**

The fiscal impact of this agenda item is \$138,700.00 as provided in the Capital Improvement Program.

**Recommendation:**

The Public Works Department recommends approval of this contract.