



MEMORANDUM

To: Mayor and City Council

From: Kent Collins, P.E., Interim Director of Engineering and Public Works

Date: April 24, 2018

Reference: Update on Alternative Evaluation of Starleaf Pump Station

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

Introduction:

Staff will present an update on an ongoing analysis of alternatives to the Starleaf Pump Station project.

Analysis:

The City of Coppel is a wholesale water customer of Dallas Water Utilities (DWU). This means we purchase all of our water from Dallas, and it is delivered to us already treated and ready for distribution to our residents and business customers. Our distribution system includes two elevated storage tanks, 200 miles of water main, two ground storage tanks, and the Village Parkway Pump Station. Using these facilities, we purchase and pump more than 3 billion gallons of water annually. The Village Parkway Pump Station has a design capacity of 40 million gallons per day (MGD), however we are currently purchasing no more than 18.5 million gallons per day from DWU.

The Village Parkway Pump Station was constructed in 1990 with four pumps and a single ground storage tank. In 1995 the facility was expanded and two additional pumps and an additional ground storage tank were added. All the water purchased by the City of Coppel from DWU is delivered to the Village Parkway Pump Station and passes through these two ground storage tanks, then is pumped into our distribution system through this pump station. City staff and contract vendors perform annual preventative maintenance and periodic pump overhaul. However, we are unable to take Village Parkway Pump Station off-line and perform significant renovation due to the critical nature of the facility. As this station continues to age, there is a need to be able to take the station off-line for longer periods of time for major maintenance and renovation.

In 1999 the city began planning for the construction of an additional pump station and ground storage tank on city-owned land on Starleaf Drive. Preliminary design schematics for the Village Parkway project were started in late 2015 through a contract with BGE. This effort included site evaluation,

pumping and electrical needs assessment, and related facility evaluation. Based upon this initial effort, BGE developed a preliminary opinion of probable cost of approximately \$16 million. Given this estimate, staff felt that it would be prudent to pause the design and evaluate if other, less costly alternatives exist that would meet the project goals of providing emergency redundancy and allow for Starleaf to be taken off-line for major renovation.

The City is engaging with BGE to assist with alternatives evaluation. These include:

- Evaluate the feasibility of emergency interconnections for treated water with the Cities of Irving, Grapeview and Lewisville, to include facilitation and consultation of meetings, distribution system modeling, and opinions of probable cost for connection facilities.
- Evaluate and make recommendations for redundancy improvements at the existing pump station, including both yard piping and interior pump station gallery piping.
- Evaluate possible redundancy improvements involving the delivery pipelines from DWU and Irving Water Utilities, including potential parallel pipelines.
- Recommend emergency backup generator sizing and provide related opinion of probable cost.

Depending on the outcome of the alternatives analysis, the City could be able to satisfy the need for Village Parkway at a lower capital cost. At a minimum, the City will be confident that the lowest-cost solution is being designed and implemented.

Legal Review:

No legal review was required.

Fiscal Impact:

There is no fiscal impact related to this item.

Recommendation:

This is an update on the Starleaf Pump Station alternative analysis. Staff is not recommending any action.