



## Staff Report

**TO:** City Council  
**FROM:** Thaxton Van Belle, Chief Plant Operator  
**DATE:** June 1, 2021  
**SUBJECT:** Ratification of Emergency Repair Costs to the Beaumont Mesa Lift Station

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### Background and Analysis:

The Beaumont Mesa Lift Station acts as a regional lift station (LS), conveying flows from Fairway Canyon LS, Lower Oak Valley LS, Upper Oak Valley LS, and Olivewood LS to Beaumont's Wastewater Treatment Plant (see map).

As constructed in 2006, the Beaumont Mesa LS was supplied with two (2) 10" 250 HP shaft-drive pumps rated at 1500gpm each and two (2) 14" 450 hp shaft drive pumps rated at 3500gpm each in a drywell (10,000gpm total). Prior to the current administration's tenure, catastrophic events effectively destroyed the original pumps and a retrofit project replacing two of the four pumps was engineered and executed. The retrofit project consisted of removing the two smaller vertical shaft pumps, converting the piping and pedestals, and installing two (2) 6x10" 160 hp pumps with submersible rated motors at 1800gpm each (3600gpm total).

In 2019, the City began the process of developing a wastewater master plan. Though the master plan is being finalized, preliminary capacity calculation have been completed. These calculations show that the Beaumont Mesa LS current pumping capacity is inadequate. In the event that one of the two existing pumps fail, an overflow could occur in less than 20 minutes. This condition also means the City fails to meet recommended redundancy protocols.

Upon learning of the deficiency, City staff immediately investigated pump options and contingency plans. Exposure to monetary fines and civil liabilities are a great concern with the volume of wastewater treated, the short overflow time, and the proximity to San Timoteo Creek. Considering fines for an overflow start at a base rate of \$10 per gallon and that approximately two million gallons a day flow through the Beaumont Mesa LS, emergency actions were initiated by City staff to address the situation.

Installation of a third 6x10" 160 hp pump rated at 1800gpm will provide redundancy and increase maximum flow output (5400gpm total). In the event future upgrades call for a larger pump, this third pump could be retained as a rotational spare for the first two bays. The current lead time for a new pump is 12-16 weeks.

In order to incorporate a third pump into the Beaumont Mesa LS, a retrofit construction project had to be executed to demo the remaining two non-functional pumps, motors, and cable, modify the existing concrete pedestals, furnish and convert piping and fittings to align with the new pump, install and wire up the new pump. SCW Contracting was contracted to perform the work due to their familiarity with the site and experience with the complexity of the work.

**Fiscal Impact:**

The cost for a Flygt NT 3315 submersible pump with stand kit, mounting hardware and thermal/leak detection unit is \$119,242. Demolition, retrofit and installation construction project is quoted to be \$97,500. City staff estimates it cost approximately \$1,250 to prepare this staff report.

**Recommended Action:**

Ratify the cost of emergency repairs to the Beaumont Lift Station, totaling \$216,742.

**Attachments:**

- A. Lift Station Map
- B. Master Plan Excerpt
- C. Flygt Quote
- D. SCW Quote