



## Staff Report

**TO:** City Council  
**FROM:** Thaxton Van Belle, Chief Plant Operator  
**DATE:** June 1, 2021  
**SUBJECT:** Brine Line Flow Improvements

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### Background and Analysis:

The Brine Disposal Pipeline Project conveys brine waste from the City of Beaumont's wastewater treatment plant located on Fourth Street in the City of Beaumont to a connection with the Santa Ana Watershed Project Authority (SAWPA) Inland Empire Brine Line north of the 'E' Street Bridge over the Santa Ana River in the City of San Bernardino. The 12-inch diameter pipe generally runs along San Timoteo Canyon and along Redlands Boulevard with a total elevation drop of over 1,500 feet over approximately 23 miles. The pipeline is generally designed as a gravity flow pipeline.

The original design minimized the number of manholes to allow air in and out of the pipeline for smooth gravity flow and to minimize the likelihood of unauthorized dumping, reduce inflow from storm events and limit where the pipeline could spill in case of a downstream blockage or restriction. Siphons were required to cross under creeks, storm channels, railroads, major intersections along Redlands Boulevard, and major utilities. The pipeline crosses under a freeway and over the Santa Ana River within two bridges. These points create pinch points causing the pipeline to flow full and cause slight pressure within the system.

Various monitoring points were incorporated into the design to report high water levels/alarms within manholes via a wireless network for quick City response to upset conditions. These monitoring points were minimized in the original design to keep overall construction and maintenance costs lower.

It now appears that the original design was too restrictive and the pipeline flow is backing up the system. Additional improvements are recommended to achieve smooth gravity flow in the system and eliminate the backups. The recommended improvements include removing blind flanges within existing manholes, installing air valves to release

air within the siphon or sealed areas and resolving some lingering issues with the alarm/communication system at the monitoring points.

The budget for the proposed improvements is a not to exceed estimate of \$35,000 from T.E. Roberts, Inc., the original contractor for Reach 2 of the project. This price includes labor, equipment, materials, traffic control and all installation costs for the proposed improvements. Albert A. Webb Associates will provide inspection support services at no cost to the City.

**Fiscal Impact:**

Not to exceed \$35,000 from Brine Line Project account 2017-006. City staff estimates it cost approximately \$250 to prepare this staff report.

<b>Brine Line</b>	<b>Budget Amount</b>	<b>Actual</b>	<b>Remaining</b>
Design	\$2,082,357.37	\$1,804,963.67	\$277,393.71
Construction Management	\$3,436,471.38	\$3,099,826.71	\$336,644.67
Permit	\$508,240.25	\$289,135.50	\$219,104.75
Construction	\$31,884,226.35	\$31,588,749.28	\$295,477.07
Contingency	\$2,600,000.00	\$1,402,754.79	\$1,197,245.21
<b>Total</b>	<b>\$40,511,295.35</b>	<b>\$38,185,429.95</b>	<b>\$2,325,865.41</b>

**Recommended Action:**

Authorize City staff to approve a purchase order in an amount not to exceed \$35,000 payable to T.E. Roberts, Inc. for the proposed system improvements.

**Attachments:**

- A. Brine Line Overview Map
- B. Brine Line Areas of Concern
- C. TE Roberts Proposal