



CITY COUNCIL CONSIDERATION ITEM

CITY OF FAIR OAKS RANCH, TEXAS

November 17, 2022

AGENDA TOPIC: Consideration and possible action approving a Wastewater Treatment Plant Site Feasibility Study capacity expansion option

DATE: November 17, 2022

DEPARTMENT: Public Works Department

PRESENTED BY: Grant Watanabe, P.E., Director of Public Works & Engineering Services

INTRODUCTION/BACKGROUND:

On November 3rd, a workshop was held to present the Wastewater Treatment Plant (WWTP) Site Feasibility Study's findings and to provide an opportunity for open discussion on any topic related to the study. The study performed a Master Plan validation, including revisions to future flow projections, and evaluated several options to expand treatment capacity to meet the city's revised build-out requirements. These options and the associated estimated programmed cost are summarized below:

- Option 1: Current WWTP expansion to meet 100% of build-out capacity requirements
- Option 2: Construction of a new greenfield facility on the proposed 5-acre City-owned property near the Arbors Preserve.
- Option 3: Current WWTP to remain at calculated capacity and construct a new facility near the Arbors Preserve to process the additional projected flows.
- Option 4: Construction of a scalping facility that would serve potential new growth areas. The scalping facility would focus on treating and reusing water in the vicinity of the scaling plant while sending solids through the collection system to be treated by the existing WWTP.
- Option 5: Current WWTP to remain at calculated capacity and construction of new infrastructure to connect to the San Antonio Wastewater System (SAWS) to manage the flows beyond the existing WWTP capacity.

	Option 1: Current Plant Expansion	Option 2: New Greenfield WWTP	Option 3: Combo of Option 1 & Option 2	Option 4: New Scalping Plant	Option 5: Connection to SAWS System**
Total Programmed Cost	\$13.4M	\$50.4 - \$52.5M	\$30.9 - \$37M	\$56 - \$57.8M	\$17.9M*

* Represents total cost to connect to the SAWS collection system, does not include estimated reoccurring annual cost (~\$324K)

**Requires SAWS Board approval

In order for the consultant to proceed with next steps, one of the options needs to be selected for further evaluation. Next steps include refining the site layout and cost estimate for proposed improvements, evaluating phasing of improvements, transition schedule and completing a desktop environmental review for the selected option. The consultant will provide a final comprehensive report and presentation once completed.

Staff recommends Option 1: Current WWTP Expansion be selected for further evaluation. From both an economic and non-economic standpoint, Option 1 presents the best way forward for meeting the city's future build-out capacity requirements. Option 1 minimizes the need to acquire additional utility easements, avoids major disruption due to new sewer main construction, and can be implemented while the existing WWTP remains in service. Although nuisance odors are a common concern for wastewater facilities, proposed expansion improvements include an aerated sludge holding tank which will reduce the formation of hydrogen sulfide, the primary odor culprit.

POLICY ANALYSIS/BENEFIT(S) TO CITIZENS:

- Supports Strategic Action Plan items for Responsible Growth Management and Reliable and Sustainable Infrastructure (CIP# 2.1S).
- Option 1 provides the most cost-effective alternative for meeting build-out treatment capacity requirements, including the potential for phasing of improvements.
- Option 1 minimizes the need to acquire additional utility easements and avoids major construction-related disruption across the city since all proposed improvements are located within the existing WWTP footprint.
- Option 1 presents the least risk in regards to TCEQ permitting or SAWS board approval. Risks which new treatment or discharge requirements, directed conservation measures or unilateral rate increases.

LONG-TERM FINANCIAL & BUDGETARY IMPACT:

Option 1 provides the most cost-effective alternative for meeting build-out treatment capacity requirements, including the potential for phasing of improvements. Financing options will be discussed at a future strategic planning session or budget workshop.

LEGAL ANALYSIS:

NA

RECOMMENDATION/PROPOSED MOTION:

I move to approve Option 1: Current Wastewater Treatment Plant Expansion for further evaluation as part of the Wastewater Treatment Plant Site Feasibility Study.