



Wastewater Treatment Plant Study

Scope: Build-out conditions require 0.6 MGD wastewater treatment capacity, which could be accomplished through upgrade/expansion of existing WWTP, construction of new WWTP or a combination of both.

Budget: \$251,931 (FY2021-2022) – Study

Consulting Firm: Garver, LLC, San Antonio, TX



Aerial view of existing WWTP

Justification and Impact

- TCEQ requires WWTP permit holders to begin planning for expansion when 75% capacity reached (2023) and begin construction when 90% capacity reached (2026). City will exceed permitted capacity in 2028.
- Current site does not meet buffer zone requirements and frequent odor complaints from adjacent property owners.

Project Timeline (subject to change)

Mar 2022 – Contract awarded
Mar 2022 – Kickoff Meeting
Nov 2022 – 1st Presentation to Council
Feb 2023 – 2nd Presentation to Council

% Completed: 95

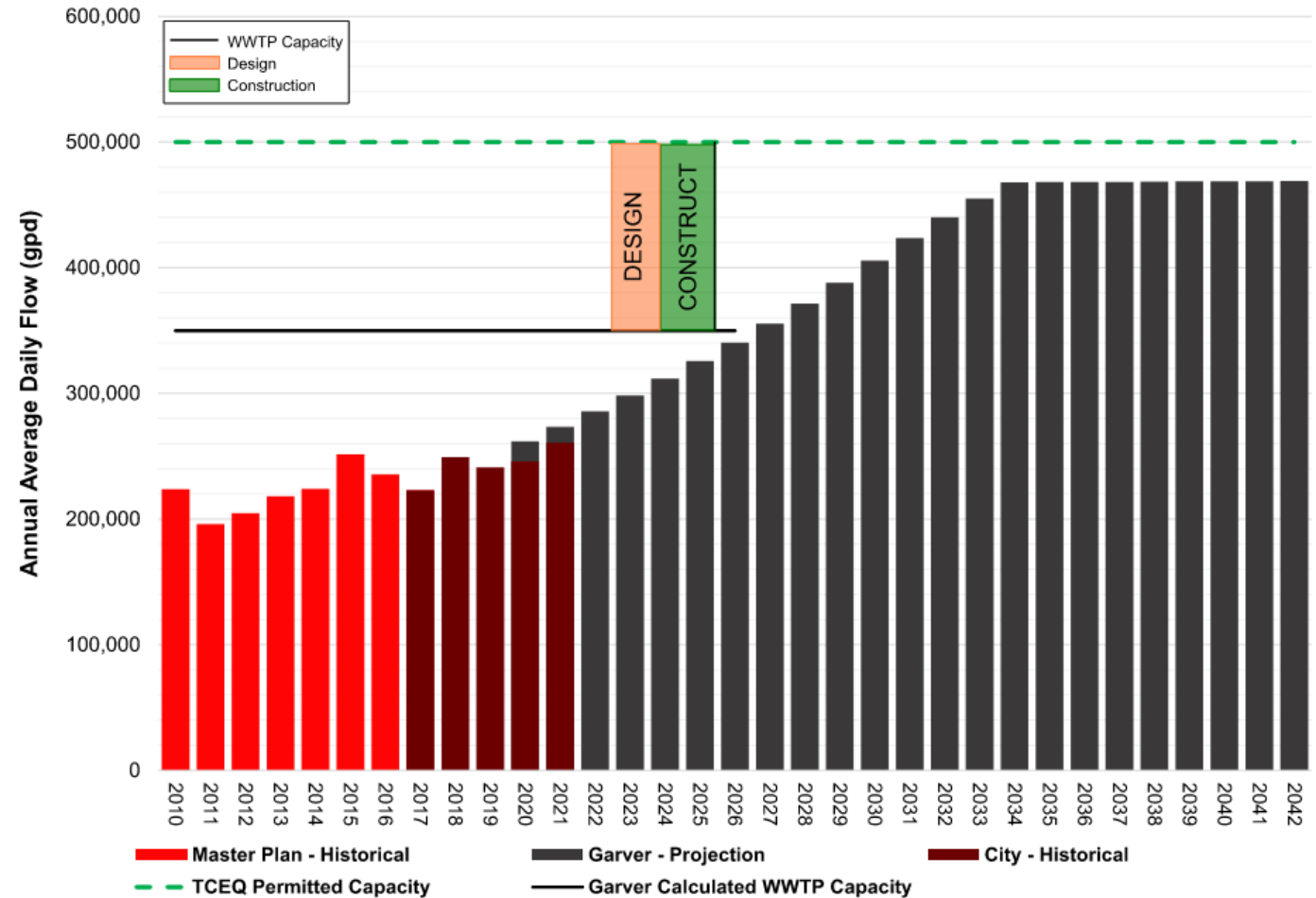
Status Update: Council approved Option 1: Existing WWTP Expansion. Phasing alternatives proposed.



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Master Plan Validation Highlights

- Ultimate build-out projected to occur in 2042 vice 2033
- Ultimate capacity projection decreased from 0.56MGD to 0.47 MGD
- Current capacity limited to 0.35 MGD due to treatment process components
- Design for expansion needs to start this FY
- Construction for expansion needs to start in the 2024 timeframe





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Expansion Options Evaluated:

	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

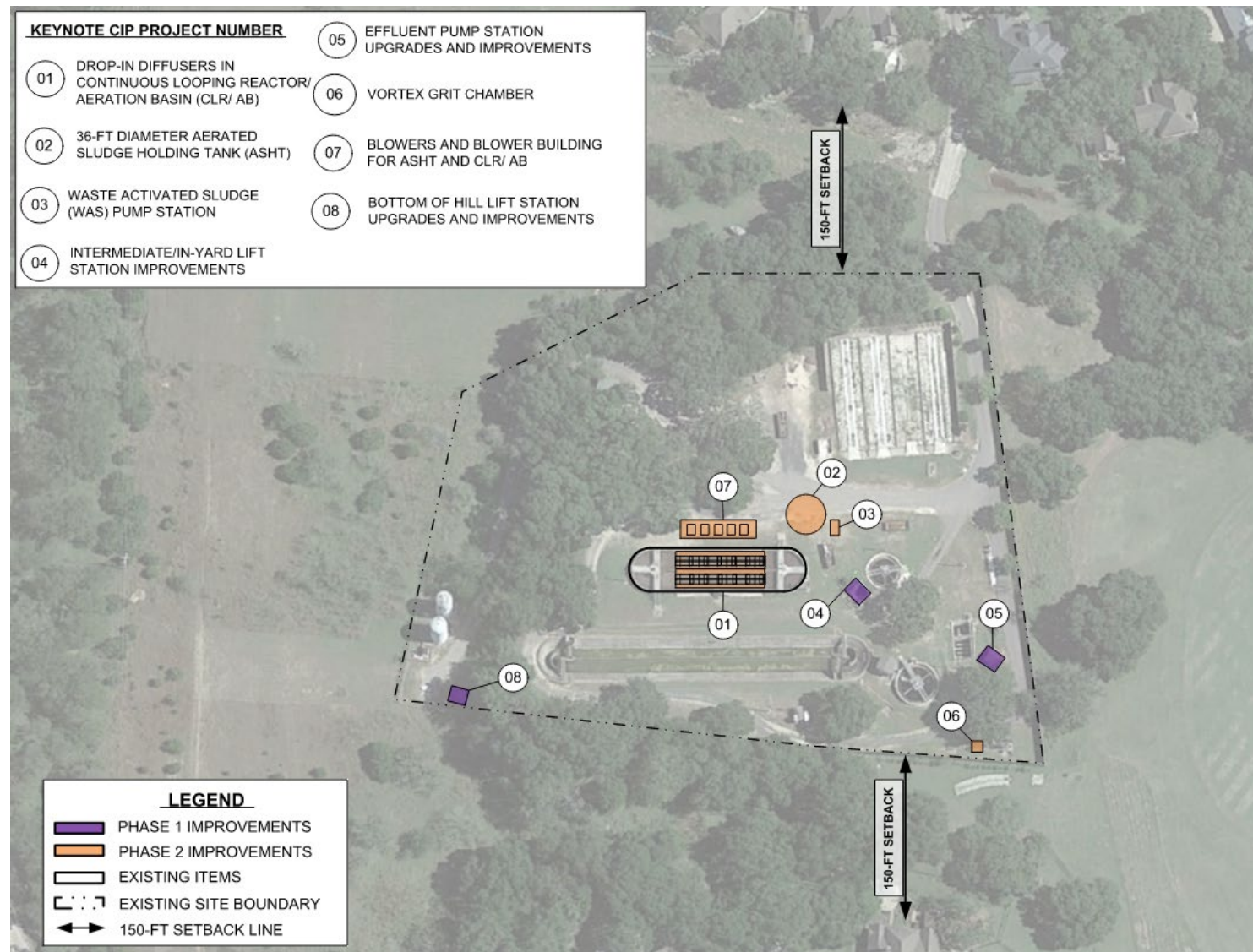
Council selected **Option 1** since it minimizes the need to acquire additional utility easements, avoids major disruption due to new sewer main construction, can be implemented while the existing WWTP remains in service, and is least costly to customers. The consultant verified all proposed improvements can be accommodated on the existing site.



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Proposed Improvements:

- Oxidation Ditch to Aeration Basin Retrofit
 - Diffuser installation
 - Blower installation
- Headworks Grit System
 - Classifier/Conveyor
 - Roll-off Bin
- Intermediate LS Improvements
- Bottom of the Hill LS Improvements
- Aerated Sludge Holding Tank
 - WAS Pump Station
 - Tank Blowers
- Effluent Pump Station and Conveyance Improvements
 - Effluent Pump Station Improvements
 - Pipeline conveyance improvements to the golf course
 - Golf Course Reuse Study (if necessary)





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Phasing Alternatives:

- **Single Phase Alternative**
 - Construction costs were escalated (8%) to the midpoint of construction (early 2025)
- **Multi Phase Alternative**
 - Phase 1 - Construction costs were escalated (8%) to the midpoint of construction (mid 2024)
 - Phase 2 – Construction costs were escalated (8%) to the midpoint of construction (early 2026)

When comparing the two alternatives the single-phase approach is more cost effective. However, if development plans or the number of future connections could change, a multi-phase approach should be considered.

Phase	Single-Phase Alternative	Multi- Phase Alternative
Phase 1 (Total Programmed Cost)	\$16.5 Million	\$6.0 Million
Phase 2 (Total Programmed Cost)	N/A	\$11.2 Million
Total	\$16.5 Million	\$17.2 million