

Pecan Creek Water Reclamation Plant Expansion to 30 MGD Design Contract Amendment



City Council ID 25-1343 – August 5, 2025

History

- Pecan Creek Water Reclamation Plant (PCWRP) was constructed 1961 and is the City's only reclamation plant
- Current plant capacity of 21 MGD (million gallons per day)
- PCWRP is currently at 85% of its capacity
- Texas Commission on Environmental Quality 75/90 rule requires treatment plant expansions begin design when capacity reaches 75% and in construction when capacity reaches 90%
- In 2023 Denton began treatment plant expansion design
- TCEQ approved a 2-stage updated permit to 26MGD then to 30MGD

Condition Assessment

- A Condition Assessment of PCWRP included developing an asset inventory, establishing scoring criteria, conducting in-person site assessments, analyzing the existing plant's treatment units for regulatory compliance, and providing recommendations
- Comparing the rehabilitation of the existing facility to building a new facility revealed that building a new facility was more cost-effective
- The cost saving to build a new facility in lieu of rehabilitation of the existing facility is approximately \$133M
- It was recommended the City construct a new 30 MGD Water Reclamation Facility

Cost Comparison of a 30-MGD New Plant to the Rehabilitation with a Phased Expansion of the Existing Plant

Activity	Existing Plant	New Plant	Cost Savings
Rehabilitation of existing plant	\$82.5 M	\$5.8 M	
Expansion 5MGD Membrane	\$389.5 M	--	
Connection (new 5MGD Membrane to existing 21MGD)	\$12.7 M	--	
Replace Existing 21MGD with Membrane (26MGD total)	\$152.0 M	--	
30 MGD (new plant)	--	\$498.0 M	
Total	\$636.7 M	\$503.8 M	\$132.9 M
Estimated Completion Dates	July 2034	December 2031	

Current Contract

- **Contract to design:**
 - **Sewer interceptor**
 - **Headworks & Bar Screen**
 - **5 MGD Membrane Bioreactor (MBR)**
 - **Solids Handling**
 - **Ultraviolet (UV) disinfection**
 - **30 MG Equalization Basin**
- **Existing Contract Amount**
\$14,952,000



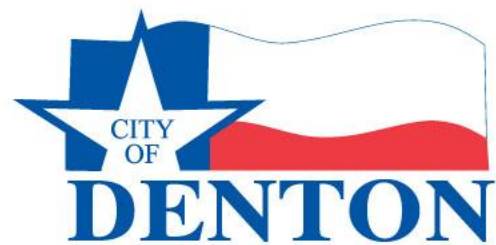
Recommended Amendment

- **Amendment to Design:**
 - **Additional 25 MGD MBR (for a total of 30 MGD)**
 - **Biological Nutrient Removal (BNR)**
 - **Anerobic Digester**
 - **Non-Potable Water System (reuse)**
 - **Chemical Feed System**
 - **Operations Building**
 - **Emergency backup generators**
- **Amendment also includes:**
 - **Construction Contract Administration**
 - **Resident Project Representative**
 - **Environmental Assessment Services**
- **Contract Amendment Amount \$18,840,500**
- **Total Contract Amount with Amendment \$33,792,500.00**





Questions?



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