

CASE STUDY

Reuse in McKinney Roughs Nature Park

Location: Cedar Creek, Texas

HIGHLIGHTS

High-quality effluent met strict standards for reuse or direct discharge, protecting drinking water and aquatic life.

Project completed ahead of schedule and under budget with higher GPD capability.

First-ever membrane bioreactor (MBR) system utilizing CROM's (an IWS partner) proprietary CROM² tank.

ENVIROMENTALLY RESPONSIBLE WATER REUSE OPPORTUNITY

The McKinney Roughs Nature Park, situated in a rapidly developing region just outside Austin, Texas, faced a critical challenge; its existing 0.25 MGD wastewater treatment plant (WWTP) was insufficient to meet the demands of planned residential growth and a new school. Corix Utilities (Nexus Water), the plant's owner and operator, needed to significantly expand capacity to 0.75 MGD while adhering to stringent effluent limits due to direct discharge into the Lower Colorado River, a vital source of drinking water and aquifer replenishment.

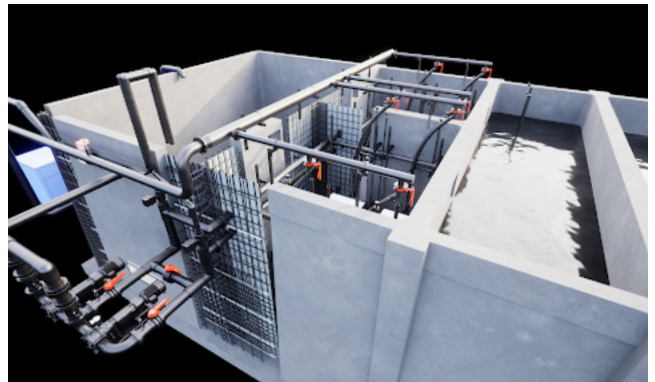
CHALLENGES FACED

- **Capacity Expansion:** The immediate need to triple the WWTP's capacity from 0.25 MGD to 0.75 MGD to support local development.
- **Strict Effluent Limits:** The paramount requirement to meet rigorous environmental standards for wastewater discharged into the Lower Colorado River, safeguarding aquatic life and downstream drinking water supplies.
- **Project Timelines and Budget:** Demanding schedule and financial limits.



SOLUTIONS IMPLEMENTED

- **Integrated Service Delivery:** IWS managed the entire project lifecycle, from permitting and design to the provision of MBR technology, construction, and start-up of the initial 0.25 MGD expansion.
- **Innovative Tank Technology:** A strategic partnership with CROM enabled the integration of the first-ever MBR system utilizing CROM's proprietary CROM² tank. This innovative approach offered a significant advantage over traditional cast-in-place concrete systems.



OUTCOME AND IMPACT

- **Accelerated Delivery & Cost Savings:** The use of CROM² tank technology allowed IWS to deliver the plant faster and more cost-effectively than conventional methods.
- **Timely Completion & Customer Satisfaction:** The project was completed ahead of schedule and under budget. Corix was very satisfied with the outcome and has become a returning customer.
- **Environmental Compliance & Sustainability:** The upgraded plant consistently produced high-quality effluent that met all necessary standards. This enables the treated water to be reused for irrigation within the nature park or safely discharged into the Lower Colorado River, without negative impacts on local aquatic life or downstream drinking water.

Through an integrated approach and innovative technology, the McKinney Roughs Nature Park wastewater treatment plant successfully expanded its capacity while setting a new standard for efficient, environmentally responsible water management in a rapidly growing region.



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