

The G. Tim Lawrence Desalination Plant

Cinco MUD No. 1



Location
Katy, Texas

Capacity
2.0 MGD RO
3.8 MGD MF

Value
2.0 MGD RO (\$7.0 Million);
3.8 MGD Microfiltration (\$5.5 Million)

Constructed
2018

Feed Water Quality
3,800 mg/L TDS

NorrisLeal Role: design and
Construction Management of 2.0 MGD
Reverse Osmosis System

Design and Construction of 3.8 MGD
Microfiltration System
System Operations

Historical Perspective

In 2018 NorrisLeal completed the planning, design, and construction management of the 2.0 MGD brackish groundwater desalination facility for the Cinco Ranch MUD No.1, "Master MUD" that serves the community west of Houston. In 2019, upon final drilling, levels of arsenic and iron were detected that exceeded drinking water standards. This required the District to construct a microfiltration pretreatment facility within the existing footprint of the reverse osmosis building. NorrisLeal was contracted to design and build this 3.8 mgd facility in 5 months as to not delay the completion of the facility. NorrisLeal has been hired to provide full time operations of the facility.

The facility will reduce the dependency on a freshwater aquifer in the Houston area that had led to subsidence. Regulations from the subsidence district require an entity to reduce its pumping by 30-50%. This project not only reduces pumpage fees from the fresh water aquifer. By bidding the project in multiple bids, NorrisLeal saved the District saved over \$3M over a General Contractor led project



Sustainability Stars Award
West Houston Association,
December 2020



Texas Chapter of the
American Public Works
Association, Sustainability
Practices Award, November
2021