



NORTH
TEXAS
MUNICIPAL
WATER
DISTRICT

Regional Service Through Unity... Meeting our Region's Needs Today and Tomorrow



Sister Grove Regional Water Resource Recovery Facility

WASTEWATER COMMITTEE MEETING

December 14, 2022 (Via Videoconference)



AGENDA

ACTION ITEMS

- A. Consider Approval of Wastewater Committee meeting minutes – October 26, 2022**
- B. Authorize Amendment No. 2 to the Construction Manager At-Risk agreement for the South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion project - Administrative Memorandum No. 5882**
- C. Adoption of Resolution No. 22-52 authorizing the execution of an Interlocal Agreement between NTMWD and the City of Lucas - Administrative Memorandum No. 5883**

DISCUSSION ITEMS

- A. Update on Plano Reuse Agreement**
- B. Opportunity for Committee members to provide feedback on Wastewater Committee meeting or request potential future agenda items**



AGENDA

Opening Remarks

- A. Chairman/Executive Director/Committee Champion Status Report concerning legislation and regulatory matters, budgets, current projects and ongoing Wastewater System programs of the District



AGENDA

Action Items

- A. Consider Approval of Wastewater Committee Meeting Minutes – October 26, 2022**

Recommend Approval of Wastewater Committee Meeting Minutes



AGENDA

Action Items

B. Authorize Amendment No. 2 to the Construction Manager At-Risk (CMAR) agreement for the South Mesquite Creek Regional Wastewater Treatment Plant (RWWTP) Peak Flow Management and Expansion project - Administrative Memorandum No. 5882

- Consider recommendation on authorizing the Executive Director to execute the second amendment to the CMAR agreement with Archer Western Construction, LLC in the amount of \$8,556,427.36 for partial Guaranteed Maximum Price No. 2 for construction of work packages including early peak relief construction for Project No. 301-0525-18, South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion

What: Authorize funding for Amendment No. 2 to the Construction Manager At-Risk (CMAR) Agreement for South Mesquite Creek Regional Wastewater Treatment Plant (RWWTP) Peak Flow Management and Expansion project.



SOUTH MESQUITE PEAK FLOW MANAGEMENT AND EXPANSION

OVERALL PROJECT PURPOSE AND APPROACH

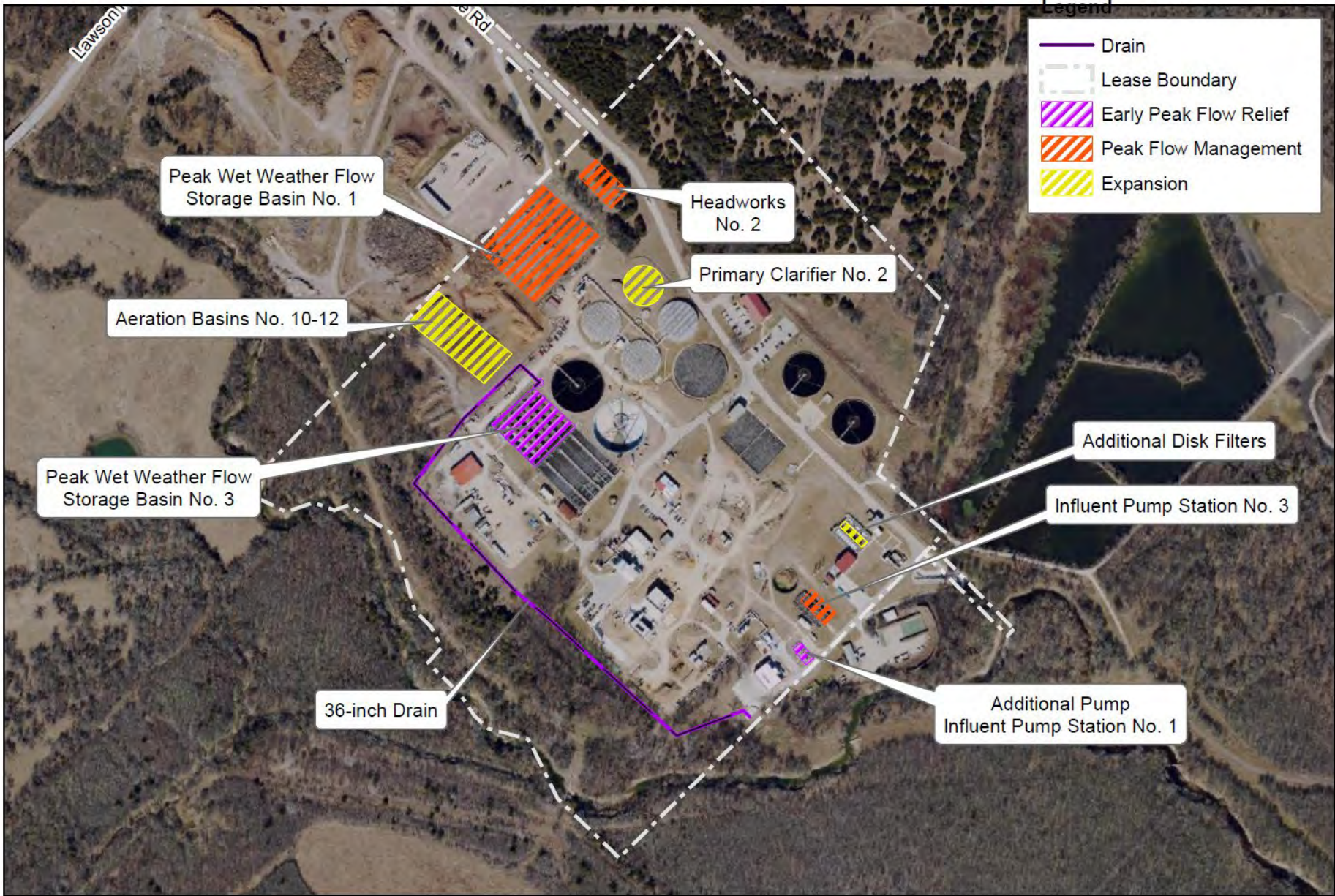
- **Early Peak Flow Relief: Utilize existing to facilities to manage wet weather influent flows that exceed the existing permitted wet weather capacity of 82.5 MGD. South Mesquite Creek RWWTP has experienced influent flows higher than its rated wet weather capacity of 82.5 MGD (million gallons per day).**
- **Capacity Assessment Study of the southern service area show the South Mesquite Creek RWWTP needs to expand from 33 MGD to 41 MGD average daily flow by 2026 to meet the growth projections through 2033.**
- **Increase future wet weather treatment capacity to 102.5 MGD.**



SOUTH MESQUITE PEAK FLOW MANAGEMENT AND EXPANSION

EARLY PEAK FLOW RELIEF – GMP AMENDMENT NO. 2

- **Convert an existing secondary clarifier that is not in service to a peak flow storage basin which will be labeled Peak Wet Weather Storage Basin No. 3**
- **Add pumping capacity to existing influent pump station No. 1 (IPS No. 1)**
- **Install new 36” inch drain line from peak wet weather storage Basin No. 3 to existing headworks for later treatment.**
- **Other site improvements and associated electrical and controls necessary to integrate into existing operation**



South Mesquite Creek RWWTP Peak Flow Management and Expansion
 Project No. 301-0525-20
 Administrative Memorandum No. 5882





SOUTH MESQUITE PEAK FLOW MANAGEMENT AND EXPANSION

PROJECT COST & SCHEDULE UPDATE

GMP Number	Description	Award Date	Cost
	Preconstruction and Procurement Services	Oct-21	\$1,250,000
1	Early Peak Flow Material and Influent Pump Station No. 3 Site Preparation	Jun-22	\$11,944,463
2	Early Peak Flow Relief Construction	Dec-22	\$8,556,427
3	Influent Pump Station No. 3 Construction	Spring 2023	\$71,000,000
4	Headworks No. 2 and Peak Flow Storage Basin No. 1 Construction	Summer 2023	\$63,400,000
5	Expansion to 41 MGD	2024	\$65,000,000

Total Estimated Construction Cost

\$221,150,890



SOUTH MESQUITE PEAK FLOW MANAGEMENT AND EXPANSION

BIDDING CHALLENGES

- **District and Engineer received only one bidder**
- **Bidder was CMAR self perform construction group**
- **Outreach prior to bid directly to 13 contractors who perform similar work on NTWMD projects**
- **No interest in project due to a number of factors**
 - **8 contractors indicated they could not take on a new project at this time**
 - **2 indicated challenges with facility made package not attractive for work**
 - **Size of package and nature of work not as attractive as other projects in area or planned for this site in future**
- **Bid was less than the 90% OPCC from Engineer and CMAR**



SOUTH MESQUITE PEAK FLOW MANAGEMENT AND EXPANSION

VALUE ADDED BY CONSTRUCTION MANAGER AT RISK (CMAR)

- **Provide Early Peak Flow Relief in the quickest manner possible**
- **Early procurement of equipment and site improvements for this package**
- **Value engineered 36” drain line to avoid having to construction additional drain pump station**
- **Coordinate work with future designs for other packages to limit conflicts**
- **Identified work that was moved from Buffalo Creek Tunnel to future IPS No. 3 bid package to avoid deep excavation conflicts in both projects**
- **Coordination with existing and future contractors**
 - Continuity of storm water pollution prevention plan



RECOMMENDATION

The Executive and NTMWD staff recommend the Board of Directors authorize the Executive Director to execute Amendment No. 2 to the Construction Manager At-Risk Agreement as follows:

CMAR: Archer Western Construction, LLC

Scope: Construction, Partial GMP No. 2

Project: No. 301-0525-18, South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion

Amount: \$8,556,427.36

Strategic Objective: 1.4 Reliable and Resilient Systems



AGENDA

Action Items

C. Adoption of Resolution No. 22-52 authorizing the execution of an Interlocal Agreement (ILA) between NTMWD and the City of Lucas - Administrative Memorandum No. 5883

- Consider recommendation on adoption of Resolution No. 22-52 authorizing an ILA with the City of Lucas to facilitate construction of a truck wash station at the Wilson Creek Regional Wastewater Treatment Plant

What: Interlocal Cooperation Agreement (ILA) between the City of Lucas and the North Texas Municipal Water District (NTMWD) to facilitate construction of a truck wash station at the Wilson Creek Regional Wastewater Treatment Plant (RWWTP).



WILSON CREEK WASTEWATER TREATMENT PLANT



1984 - 8 MGD Treatment Capacity

1988 - 24 MGD Treatment Capacity

1996 - 32 MGD Treatment Capacity



2005 – 48 MGD Treatment Capacity

2015 – 56 MGD Treatment Capacity plus 32 MGD Wet Weather Train Peak Flow Capacity



Now

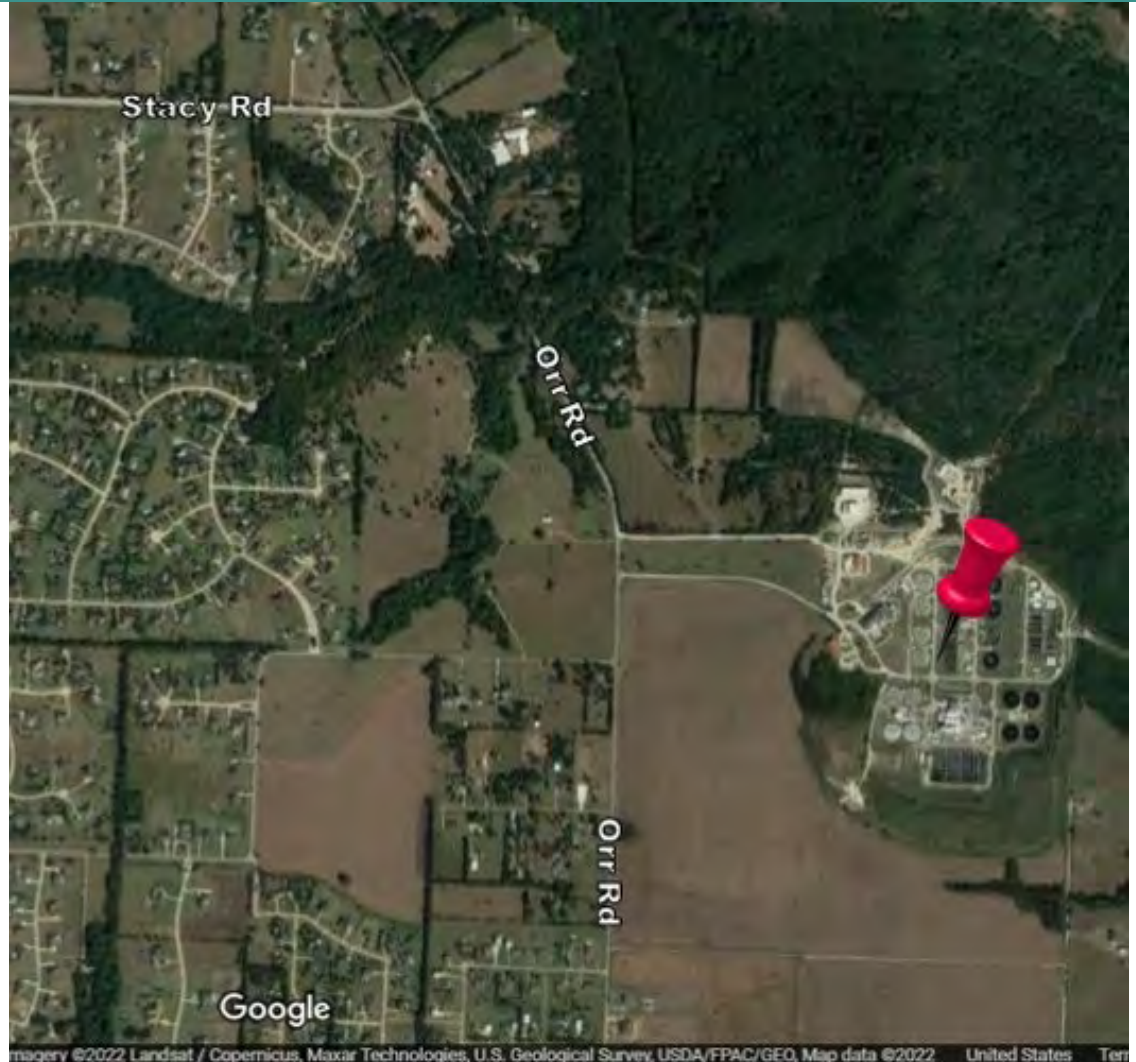
64 MGD Average / 160 MGD Peak Treatment Capacity (Plants 1 and 2)

64 MGD Wet Weather Train Peak Flow Capacity



WILSON CREEK WASTEWATER TREATMENT PLANT

- The plant is located at: 3020 Orr Rd, Lucas
- Serving cities of Frisco, Allen, Anna, Fairview, Lucas, Melissa, McKinney, Parker, Plano, Princeton, Prosper, and Richardson
- Treated plant effluent discharges to Lake Lavon
- Dewatered biosolids are disposed of at NTMWD landfill





WILSON CREEK OVERSIGHT COMMITTEE

- In November of 2000, NTMWD executed a settlement agreement with 30 Protestants of the TCEQ discharge permit to allow Wilson Creek RWWTP to be expanded to 64 MGD. The primary signer of the Settlement Agreement was the City of Lucas.
- One of the terms within the settlement agreement indicates NTMWD will not operate a truck wash station at the facility.
- The settlement agreement established the Wilson Creek Oversight Committee which operates to this day for the purpose of monitoring activities at the Wilson Creek RWWTP and to provide input on various matters.
- One activity that is discussed regularly at oversight committee meetings is the occurrence of odor complaints surrounding the RWWTP and NTMWD's actions taken in response to those complaints.

PLANT HAS ODOR CONTROL EQUIPMENT AT MULTIPLE LOCATIONS TO CAPTURE AND TREAT AIR

Bio-trickling filters

- Headworks
- Primary Clarifiers
- Solids Handling

Carbon Polish

- Headworks
- Solids Handling
- North & South Aeration Distribution
- Influent Structure (FM and Gravity feeds)



Monitoring locations



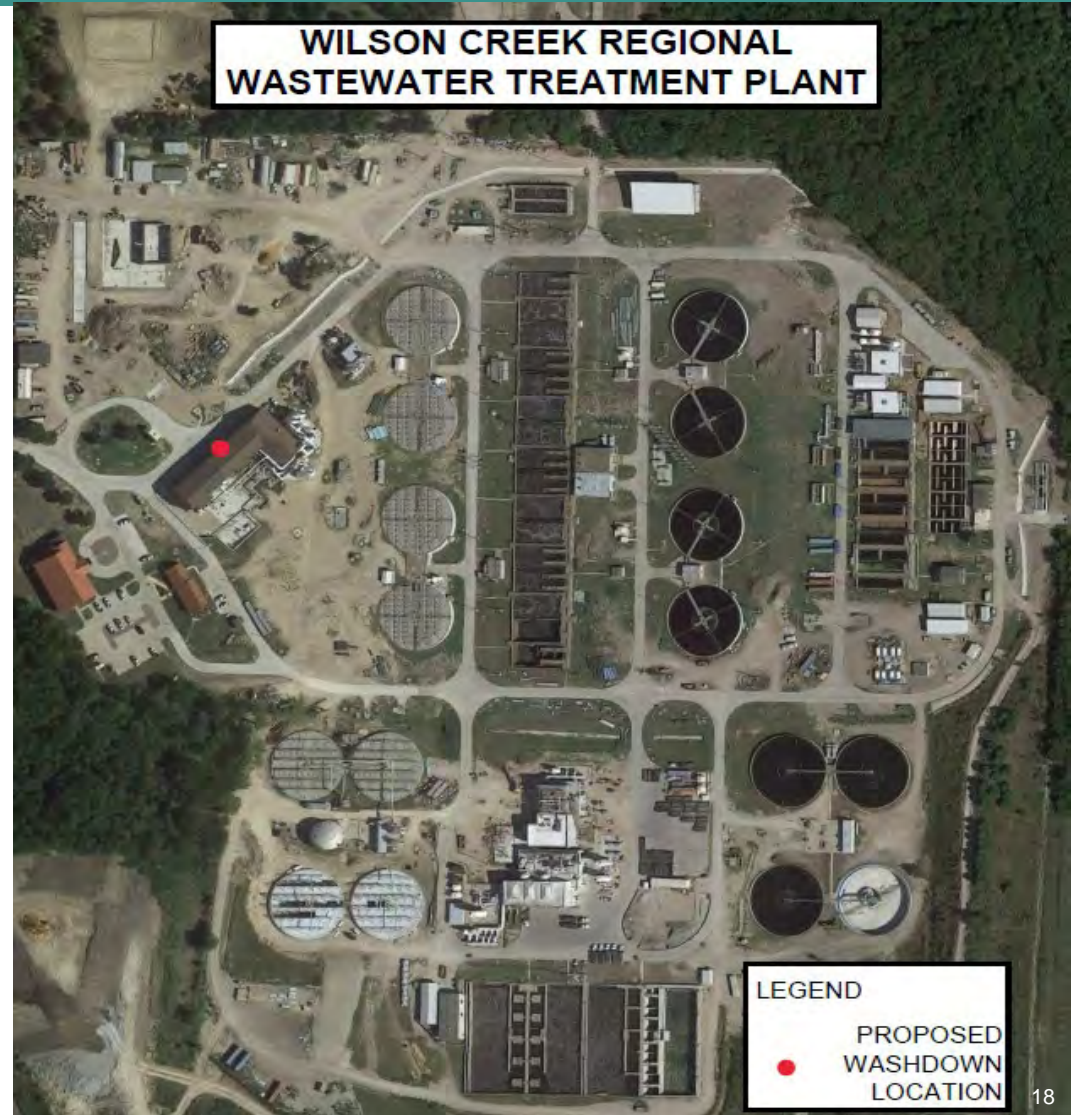
Odor Control Sites





PROPOSED TRUCK WASH LOCATION

- Currently there are no facilities for cleaning sludge trucks or containers onsite
- Proposed location is in front of the headworks building
- Proposed facility will utilize manual washdown hose to clean out sludge containers
- All wash water and material to be captured and drain directly to plant influent for treatment





INTERLOCAL AGREEMENT

Upon approval to move forward, an Interlocal Agreement (ILA) will be executed and includes the following:

- An agreement between the City of Lucas and NTMWD to allow the construction of a washdown station at Wilson Creek WWTP
- NTMWD will monitor air quality and either modify or cease use of the washdown station if an increase in community odor is observed (through fence line monitoring equipment)



RECOMMENDATION

The Executive Director and NTMWD staff recommend the Board of Directors adopt Resolution No. 22-52, “A Resolution Authorizing an Interlocal Cooperation Agreement for a Truck Wash Station at the Wilson Creek Regional Wastewater Treatment Plant.”

Contracting

Parties: City of Lucas, Texas and the North Texas Municipal Water District

Purpose: Enter into Interlocal Cooperation Agreement

Project: Wilson Creek RWWTP Truck Wash Station

Amount: \$0

Strategic Objective: 2.2 Conscientious Environmental Stewardship
3.2 Engaged Members, Customers and Stakeholders



AGENDA

Discussion Items

A. Update on Plano Reuse Agreement



RECLAIMED WATER USE AGREEMENT: CITY OF PLANO

Plano allowed to take Reclaimed Water from Rowlett Creek WWTP per Member city contract (Section 6.04b). Member cities get first right to use effluent for municipal purposes

- **Original Reuse Agreement signed July 2010**
 - Up to 1,200 gallons per day
- **NTMWD received TCEQ authorization to produce reclaim water from Rowlett WWTP specifically for Pecan Hollow Golf Course in 2008**
 - (Texas Administrative Code 30, Chapter 210 Authority)
- **Plano constructed facilities to transport and deliver reclaimed water to Pecan Hollow Golf Course (City-owned) in 2010**



RECLAIMED WATER USE AGREEMENT: CITY OF PLANO

- **Original intent to extend City of Plano agreement for an additional 10-year period per original agreement**
- **Agreement expired, Plano requires a new agreement**
- **Agreement (ILA) language similar to original agreement**
- **Elements of the Agreement**
 - Quantity used by Plano based on metered usage
 - Quality assurance by NTMWD to meet TCEQ Type II Reclaimed water
 - Ability for NTMWD to halt production for O&M at Rowlett RWWTP
 - Plano to operate and maintain the pipeline, facilities and meter located downstream of point of delivery
- **Expect Agreement for Board approval at January Board**

ROWLETT CREEK RWWTP AND PLANO'S POINT OF DELIVERY





AGENDA

Discussion Items

- B. Opportunity for Committee members to provide feedback on Wastewater Committee meeting or to request potential future agenda items**

Adjournment