



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



Bois d'Arc Lake

NTMWD BOARD MEETING

October 27, 2022



The Pledge of Allegiance to the Flag of the United States of America

"I pledge allegiance to the Flag
of the United States of America,
and to the Republic for which it stands,
one Nation under God, indivisible,
with liberty and justice for all."



The Pledge of Allegiance to the Texas State Flag

"Honor the Texas flag;
I pledge allegiance to thee,
Texas, one state under God,
one and indivisible."



**NORTH
TEXAS
MUNICIPAL
WATER
DISTRICT**



DISCUSSION ITEMS

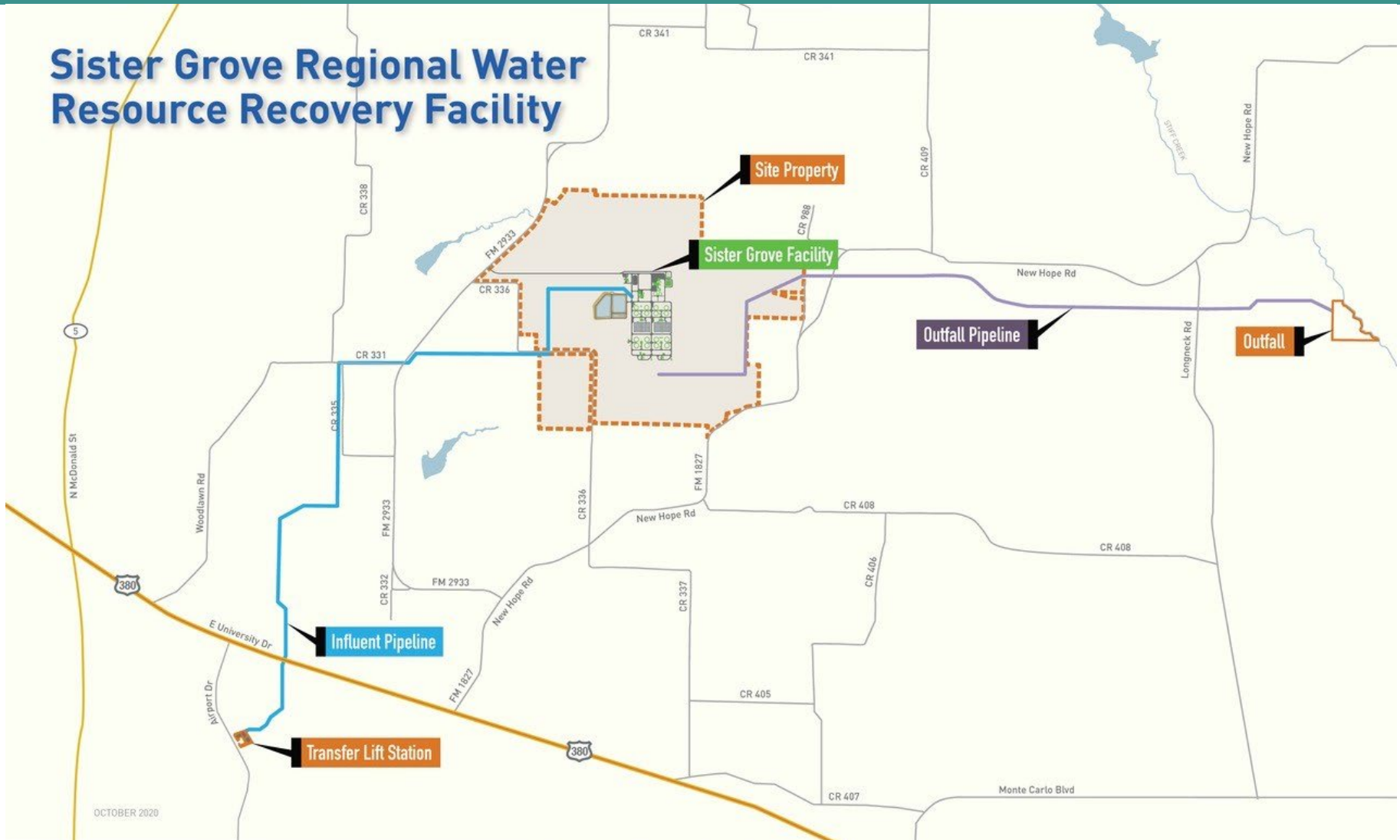
VIII. DISCUSSION ITEMS

- A. **Update on Sister Grove Regional Water Resource Recovery Facility**
- B. Review of the fiscal year 2022 Regional Water System Variable Costs
- C. Review current fiscal year Capital projects



SISTER GROVE AND NORTH MCKINNEY PROGRAM SUMMARY

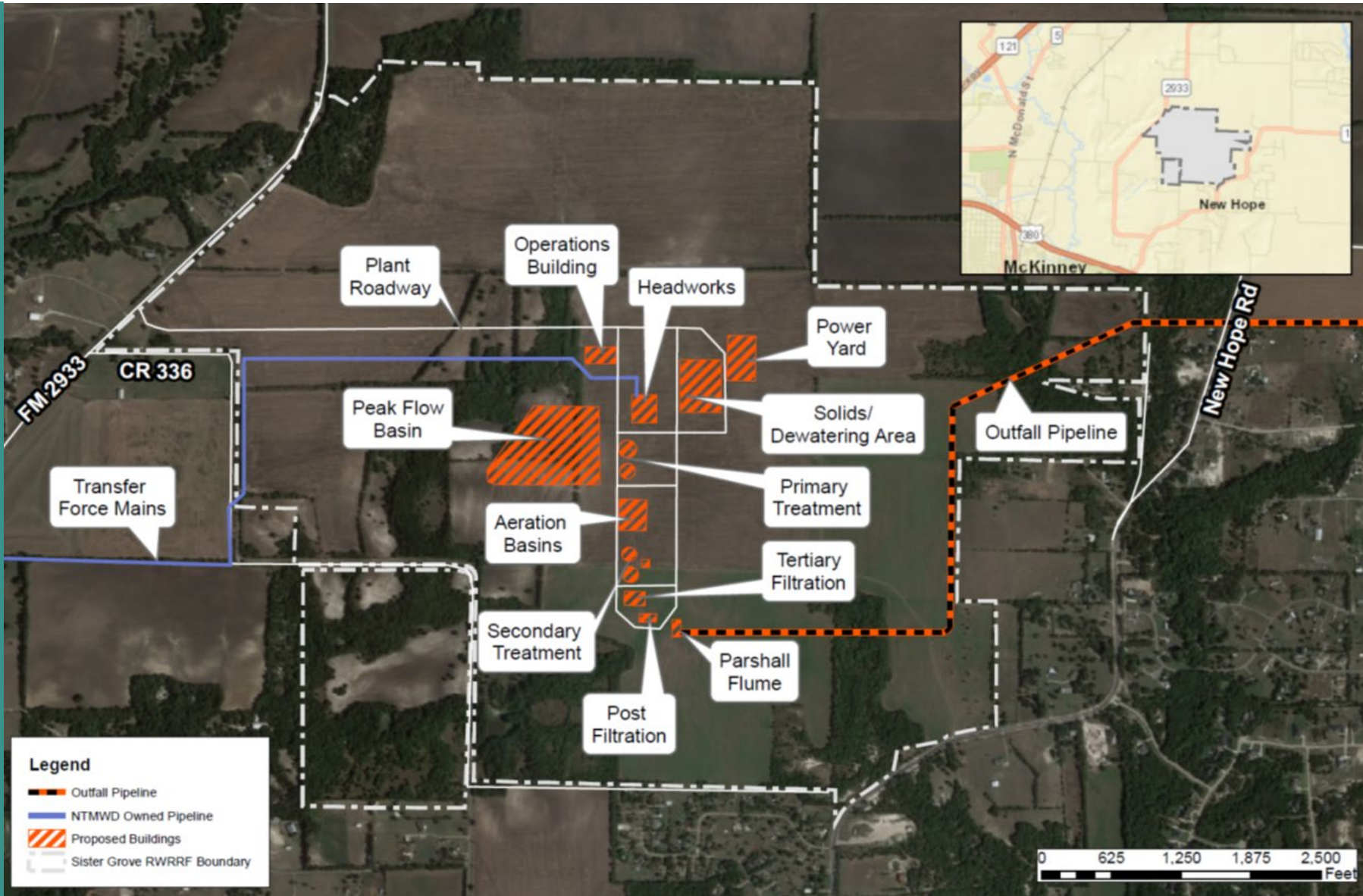
Sister Grove Regional Water Resource Recovery Facility





SISTER GROVE RWRRF PROGRAM SUMMARY

LOCATION MAP





SISTER GROVE AND NORTH MCKINNEY PROGRAM SUMMARY

Sister Grove & Outfall Pipeline Updates:

- Primary and Secondary Clarifier concrete walls constructed.
- Columns on the 2nd floor of Solids Handling and Dewatering Facility being poured.
- Concrete being poured at the Peak Flow Basins.
- Outfall pipe installation inside the tunnels is complete. Grouting of the annular space to begin in late October.
- Installation of the Outfall Pipeline in Eastridge Development on schedule.
- Rayburn Electric Substation Yard at Sister Grove is progressing.

North McKinney LF & FM Updates:

- Lift Station slab pours complete. Currently setting wall forms and placing concrete for walls.
- Masonry walls for Electrical Building are on-going.
- Junction Box backfilled and interior coatings being applied.
- Force Main tunneling complete.
- 95% of the Force Main pipeline deflection testing complete.

Aerial view of site looking SW



Primary Clarifiers looking NE



Primary Clarifiers





Aeration Basin and Secondary Clarifiers looking NE



UV Structure and Pipe to Parshall Flume



Dewatering Structure



Dewatering Structure Electrical



SISTER GROVE RWRRF PROGRAM SUMMARY

Outfall Pipeline Tunnel Shaft 6



Outfall Pipeline Eastridge Development

Rayburn Electric (New Hope) Substation



Lift Station Wall Forms



Electrical Building



CONSTRUCTION PROGRESS

48-inch FRP



CONSTRUCTION PROGRESS

48-inch FRP



Mar 17, 2022 at 8:10:47 AM
McKinney TX 75071
United States

CONSTRUCTION PROGRESS

48-inch FRP





48-inch FRP

Apr 19, 2022 at 2:35:14 PM
— McKinney TX 75071
United States



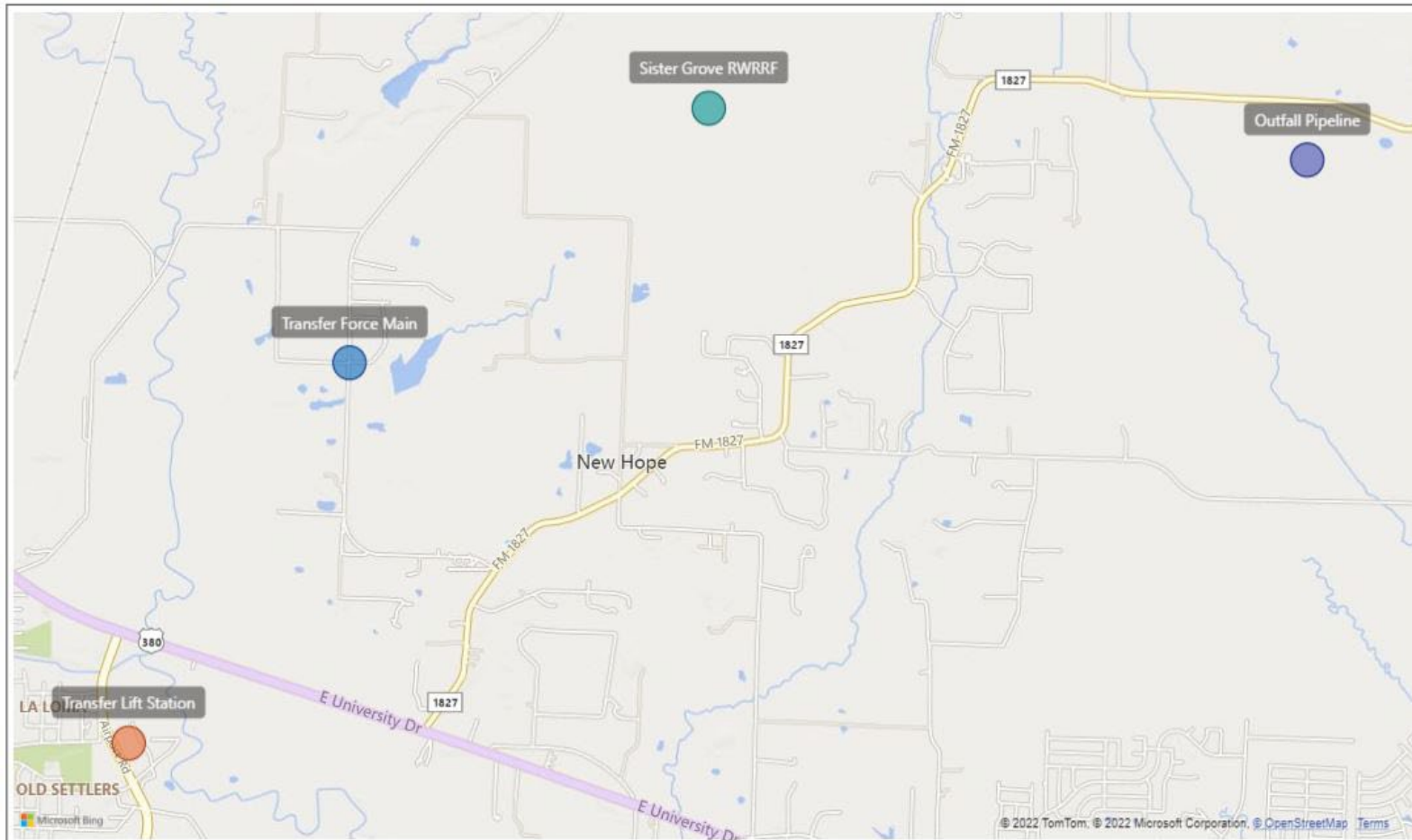


SISTER GROVE AND NORTH MCKINNEY PROGRAM SUMMARY

Program Map and Status Summary

October 2022

Wastewater
Projects



Sister Grove RWRFF

\$286,380,411
Baseline Estimate

\$287,827,667
Current Board Authorized

\$99,274,097
Current Expenditures

Outfall Pipeline

\$68,998,224
Baseline Estimate

\$78,157,627
Current Board Authorized

\$48,790,156
Current Expenditures

Transfer Lift Station

\$51,037,936
Baseline Estimate

\$51,037,936
Current Board Authorized

\$15,898,666
Current Expenditures

Transfer Force Main

\$35,067,213
Baseline Estimate

\$35,067,213
Current Board Authorized

\$28,116,713
Current Expenditures



SISTER GROVE AND NORTH MCKINNEY SCHEDULE UPDATE

ProjectID.NTM WD	Project/Subproject	Notice to Proceed	Contractual Substantial Completion	Contractual Final Completion	Original Substantial Completion	Original Final Completion	Forecasted Testing and Start Up	Forecasted Substantial Completion	Forecasted Final Completion
301-0426-16	01.Sister Grove RWRFF	1/11/2021	12/30/2023	3/4/2024	12/30/2023	3/4/2024	9/1/2023	6/17/2024	8/13/2024
301-0426-16.1	02.Sister Grove RWRFF Outfall Pipeline	1/11/2021	12/30/2023	3/4/2024	12/30/2023	3/4/2024	9/1/2023	3/29/2023	5/12/2023
501-0513-18	03.North McKinney Transfer Lift Station Phase I	9/8/2021	7/10/2023		5/31/2023		10/13/2023	11/9/2023	
501-0513-18.1	04.North McKinney Transfer Lift Station Phase II	9/8/2021	12/17/2023	2/15/2024	11/7/2023	1/6/2024	2/26/2024	4/2/2024	6/18/2024
501-0514-18	05.North McKinney Transfer Force Main	9/8/2021	5/31/2023	7/30/2023	5/31/2023	7/30/2023	4/25/2023	5/29/2023	7/30/2023

Overall Schedule:

- **Sister Grove RWRFF** is projecting 170 days behind the contractual Substantial Completion date due to delays with the electrical equipment.
 - FNI, Garney, CDM Smith and NTMWD continue to discuss the schedule and potential options for startup and testing.
- **North McKinney Transfer Lift Station** Phase 1 Substantial Completion is forecasting over 100 days behind in Crescent's latest schedule.
 - Dry Pit Solids Handling Pumps delivery delayed from December 2022 to March 2023 per pump manufacturer.
 - Lift Station and Force Main activities are not driving the critical path of the Program.



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DISCUSSION ITEMS

VIII. DISCUSSION ITEMS

- A. Update on Sister Grove Regional Water Resource Recovery Facility
- B. Review of the fiscal year 2022 Regional Water System Variable Costs**
- C. Review current fiscal year Capital projects



FY22 REGIONAL WATER SYSTEM VARIABLE COSTS

Administration & Finance Policy Section 4. Water Variable Cost Rebate

- Board may consider a rebate of variable costs to Members and Customers who do not exceed their annual minimum for the Water Year.
- Rebate information to be reviewed at October Board Meeting and, if applicable, rebate payments placed on November Board meeting agenda.
- Total funds to be rebated calculated as the difference between the budgeted variable costs and the actual variable cost for the fiscal year. Should the variable cost budget be exceeded, then no rebate will be administered.
- Rebate funds are allocated to eligible Members and Customers based on the proportionate share of the underage on water minimums.
- Revised policy adopted by Board in August 2022.



FY22 REGIONAL WATER SYSTEM VARIABLE COSTS

Background

- Variable cost budget includes chemicals, power and certain water purchases
- Variable costs affected by 2 factors during FY22:
 - Extreme volatility in the chemical market required contract rebids; new contract price increases went into effect in June for several high usage chemicals
 - Extreme hot, dry early summer weather with unrestricted demands plus recent significant population growth significantly increased consumption in June and July
- Based on these factors, FY22 Amended Budget for chemical expense increased in July and August
- Communicated variable cost rebate would be unlikely due to chemical expense increase
- Significant drop in demand following call for conservation and rain, combined with additional chemical optimization efforts reduced actual chemical expense below levels anticipated in FY22 Amended Budget
- Total variable costs slightly underbudget resulting in funds to be considered for rebate

REGIONAL WATER SYSTEM VARIABLE COSTS

	\$ M
Total FY22 Original Variable Cost Budget	\$ 73.2
Preliminary Actual Expense*	<u>70.2</u>
Preliminary Rebate	\$ 3.0

* Includes actuals and EOY accrual estimate

REGIONAL WATER SYSTEM FY22 VARIABLE COSTS

	FY22 Original Budget	FY22 Amended Budget	FY22 Actual (Preliminary / Unaudited)	Variance FY22 Actual vs FY22 Original Budget	
Consumption (BG FY)	121.9	127.0	117.3	(4.6)	-3.8%
Variable Costs					
Chemicals	\$49.8	\$63.6	\$51.1	\$1.4	2.6%
Power	\$21.7	\$21.6	\$18.2	(\$3.5)	-16.1%
Purchased Water	\$1.8	\$1.2	\$0.9	(\$0.9)	-50.0%
Total Variable Costs (\$M)	\$73.2	\$86.3	\$70.3	(\$3.0)	-4.2%

REGIONAL WATER SYSTEM WATER CONSUMPTION

	FY21 Actual BG	FY22 Amended Budget BG	FY22 Actual BG	Variance FY22 Amended vs FY 22 Actual
Oct-June	68.4	74.5	74.7	0%
July	10.7	16.9	17.0	0%
August	13.0	18.4	14.9	-19%
September	12.5	17.2	11.2	-35%
Total	104.6	127.0	117.8	-7%

- FY22 consumption 21% or 13.2 BG higher than FY21
- FY22 Actual significantly less than anticipated in FY22 Amended Budget attributable to:
 - Heightened conservation efforts by Members and Customers
 - Rain in August and September
 - Chemical optimization
- Amended budget forecasts 3 months' consumption, approximately 40% of total volume, during timeframe where usage is most variable

VARIABLE COST REBATE ALLOCATION PER POLICY

City	Rebate Volume (1,000 gal)	% of Total Rebate Volume	Preliminary Rebate Amount (\$M)
Farmersville	23,959	0.213%	\$0.006
Garland	2,422,703	21.577%	0.639
Mesquite	1,741,308	15.508%	0.459
Plano	4,257,538	37.917%	1.123
Richardson	1,720,140	15.320%	0.454
Wylie	104,915	0.934%	0.027
Customers	957,863	8.531%	0.253
Total	11,228,426	100.00%	\$2.961

Each Member and Customer under their minimum allocated a proportionate share of total of the underage.

REGIONAL WATER SYSTEM ESTIMATED FY22 ENDING BALANCES

Fund	Estimated Ending Balance (\$ M)	Days of O&M Expense
Operating Fund	\$49.5	90
Contingency Fund	29.5	54
Total Combined Balance	\$79.0	144

- Payment of Variable Cost Rebate does not negatively impact the District's fund balance
- Estimated FY22 Reserves remain within the 130–150-day range established within the Fund Balance Policy with a target of 150 days cumulative fund balance within Operating and Contingency Funds



FY22 REGIONAL WATER SYSTEM VARIABLE COSTS

Next Steps

- Place the rebate payments on the November Board agenda for consideration
- Send notifications and rebate payments to applicable Members and Customers within 30 days of Board action



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NTMWD CAPITAL IMPROVEMENT PROGRAM (CIP) FY 23

Agenda

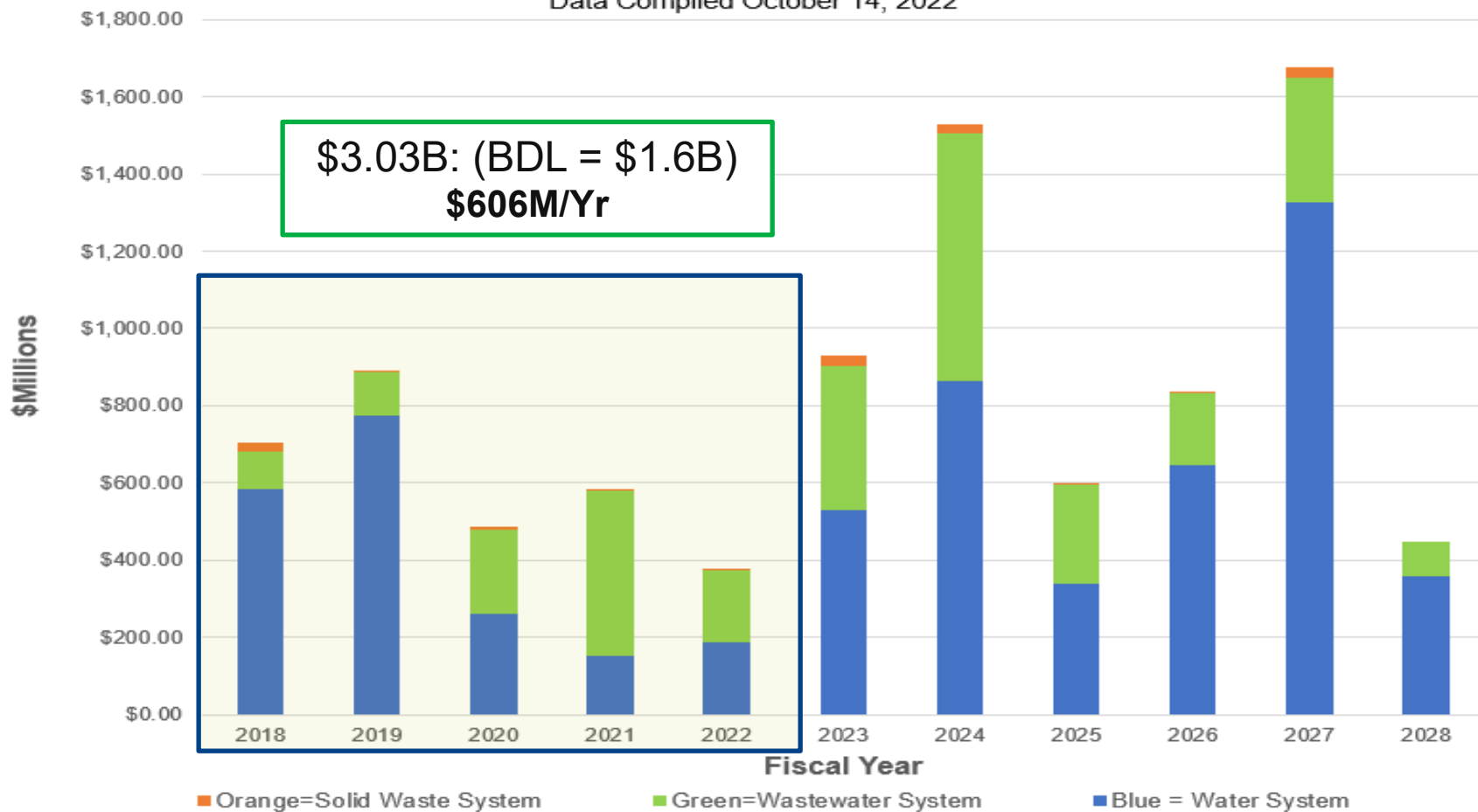
- CIP Overview (10-year look 2018-2028)
- FY 22 Accomplishments
- FY 23 Look ahead for Major Projects
- CIP Maps and Project descriptions



ALL SYSTEMS CIP 2018 - 2028

Fiscal Year 2018 - Fiscal Year 2028 All System CIP Projects

Data Compiled October 14, 2022





MAJOR CIP PROJECTS AWARDED IN FY 22

- **Regional Water System**

- Wylie WTP IV Filter - Complex Wall Repair: (M) \$11M
- **Wylie WTP Ammonia System Improvements - Construction (BAF CMAR): (M) \$15M**
- **Wylie WTP II, Structural and Mechanical Phase II - Construction (BAF CMAR): (M) \$32M**
- Water System Maintenance Facilities for Central Region Phase II - Construction: (G) \$15M

- **Regional Wastewater System**

- South Mesquite RWWTP Peak Flow & Expansion Phase I
 - Early Peak Flow Improvements – Construction (G): \$12M

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



MAJOR CIP PROJECTS AWARDED IN FY 22

- **Upper East Fork Interceptor System**
 - Relocation of 60" Rowlett Cottonwood Transfer Sewer Parallel - Construction: (G) \$11M
 - North McKinney Parallel Interceptor – Construction (G): \$10M
 - **Sloan Creek Lift Station – Construction (G): \$10M**
 - **Sloan Creek Force Main – Construction (G): \$12M**
- **Sewer Systems**
 - **Sabine Creek WWTP Expansion to 7 MGD – Construction (G): \$77M**

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



CIP PROJECTS COMPLETED IN FY 22

- **Regional Water System (7)**
 - 0506 - Pipeline Relocations at FM 2478 (Custer Rd.) (G)
 - **0332 - Rockwall to Royse City Pipeline No. 2 & East System Ground Storage Tank (G)**
 - 0568 - Wylie WTP II Sedimentation Basin Troughs Improvements (M)
 - 0462 - Renner Road to Plano Delivery Point (DP) No. 2 Pipeline (G)
 - Several Bois d'Arc Lake Project Components (G)



East System
GST



Plano DP # 2
Pipeline



Plant II
Basin troughs



CIP PROJECTS COMPLETED IN FY 22

- **Regional Water System (continued:)**
 - **0368A - Wylie WTP Power System Improvements, Phase I (M)**
 - 0442 - North System Air Valve Improvements, Phase I (M)
 - 0467 - South System Air Valve Improvements Phase II (M)



North System
Air Valve



Wylie WTP
Power

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



CIP PROJECTS COMPLETED IN FY 22

- **Regional Wastewater System (2)**
 - 0346 - Wilson Creek Advanced Treatment and Headworks Improvements (G)
 - **0443 – South Mesquite Creek RWWTP Influent Flow Handling and Secondary Clarifier Improvements (M)**
- **Upper East Fork Interceptor System (1)**
 - 0319 - Lower Rowlett Creek and Lower Cottonwood Creek Lift Station Improvements (M)



South Mesquite
secondary
clarifier



Wilson Creek
headworks

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



CIP PROJECTS COMPLETED IN FY 22

- **Sewer Systems (1)**
 - **0252 - Stewart Creek West WWTP Expansion to 10 MGD (G)**
- **Solid Waste System (1)**
 - **0560 - 121 RDF Intermediate Cover Improvements (R)**



Stewart Creek
West WWTP
Expansion



121 RDF
Intermediate Cover

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



DESIGN PROJECTS PLANNED FOR FY 23 (24 TOTAL)

- **Regional Water System (15)**
 - **Trinity River Main Stem Pump Station - Lock and Dam Structure (G)***
 - Texoma Pipeline Improvements Phase III (M)
 - Raw Water Pump Station No. 1 Improvements (M)
 - Cooper Pipeline Extension (G)
 - Wetlands Phosphorous Removal (G)
 - **Water Treatment Plant Site Back-Up Power Improvements Phase I (G)***
 - Wylie Water Treatment Plants (WTPs) I, II, III, and IV (I-IV) Filter Media Improvements (M)
 - Wylie WTP Finished Water Storage and Equalization (G) *
 - **Wylie WTP II, Sedimentation Basins 1, 5, 6, and 8 (M)**
 - Wylie WTP II Control Valve and Interconnection (G)

* Projects currently under preliminary design

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



DESIGN PROJECTS PLANNED FOR FY 23 (24 TOTAL)

- **Regional Water System (continued:)**
 - SCADA System Upgrade 2023 (G)
 - Inspection Building (G)
 - Apollo and Shiloh Pump Stations and Wylie WTP Physical Security Improvements (R)
 - **Water Transmission Pipeline Relocations at US 380 (G)**
 - Wylie to McKinney 20-inch Waterline Relocation at FM 1378 (additional engineering to Project 585 FM 2514 Pipeline Relocations) (G)

* Projects currently under preliminary design

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



DESIGN PROJECTS PLANNED FOR FY 23 (24 TOTAL)

- **Regional Wastewater System (3)**
 - **Wilson Creek Regional WWTP Primary Clarifier, UV, and Centrifuge Improvements (M) ***
 - Rowlett Creek Regional WWTP Bridge Crane and Canopy (M)
 - South Mesquite Regional WWTP Peak Flow Management and Expansion (Additional Design) (G)
- **Upper East Fork Interceptor System (3)**
 - **US Highway 380 Lift Station and Force Main (G)**
 - Plano Spring Creek Lift Station No. 2 Pump Addition (G)
 - Beck Branch Lift Station, Prairie Creek Lift Station and Renner Road Lift Station Improvements (M)*

* Projects currently under preliminary design

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



DESIGN PROJECTS PLANNED FOR FY 23 (24 TOTAL)

- **Sewer Systems (2)**
 - **Stewart Creek West WWTP Expansion to 15 MGD – Preliminary Design (accelerated to FY 2023 per recent discussion with Frisco) (G)**
 - Panther Creek WWTP Expansion to 20 MGD – Preliminary Design (new project per recent discussion with Frisco) (G)
- **Regional Solid Waste System (1)**
 - North Transfer Station - Environmental Site Assessment (G)

* Projects currently under preliminary design

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



MAJOR WATER SYSTEM CONSTRUCTION PROJECTS IN FY 23

- **Regional Water System**

- | | |
|---|---------------|
| ○ Northeast McKinney Pump Station & McKinney 3 to 4 Pipeline (G) | \$155M |
| ○ Wylie WTP BAF Conversion (M) | \$82M |
| ○ Future Water Supply Project (G) | \$58M |
| ○ North Garland System and Shiloh System Ground Storage Tanks (R) | \$52M |
| ○ Waterline Relocations for TxDOT Road Improvements (G) | \$33M |
| ○ Meter Vault Standardization, Set Point Control Phase IV (M) | \$20M |
| ○ 36" Plano West Side Pipeline (M) | \$21M |

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



MAJOR WASTEWATER SYSTEM CONSTRUCTION PROJECTS IN FY 23

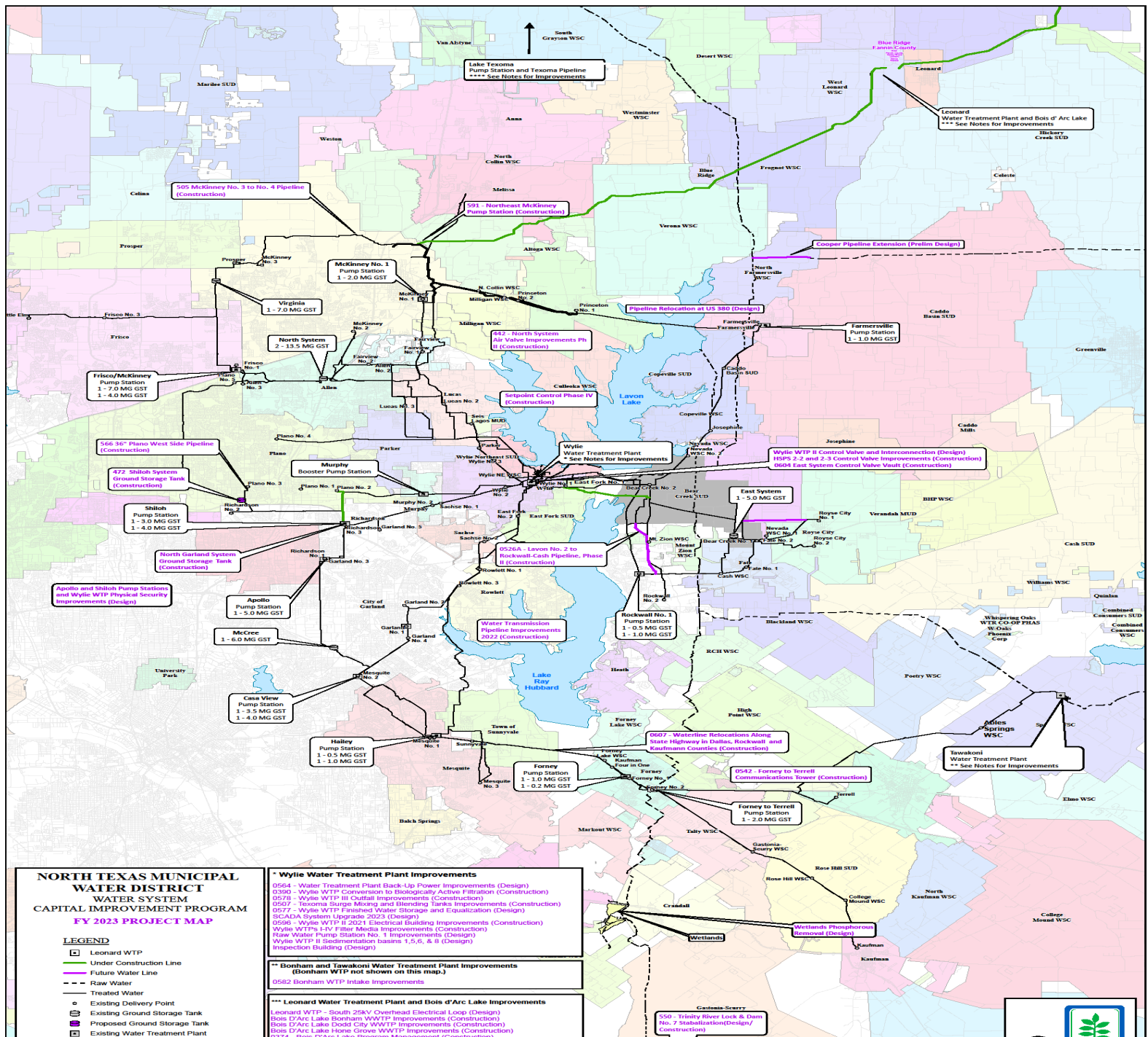
- **Regional Wastewater System**
 - **South Mesquite Regional WWTP Peak Flow Management and Expansion (G)** \$140M
 - Rowlett Creek Regional WWTP Peak Flow Management Phase IIA Solids (G) \$43M
- **Upper East Fork Interceptor System**
 - Wilson Creek Transfer Force Mains (G) \$29M
- **Sewer Systems**
 - **Buffalo Creek Interceptor Tunnel (G)** **\$37M**
 - Forney Mustang Creek Lift Station Phase II and Parallel Force Main (G) \$24M

Project Drivers: G = Growth, M = Maintaining aging infrastructure, R = Regulatory



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REGIONAL WATER SYSTEM FY 23 PROJECTS





Executive Session



Adjourn Executive Session



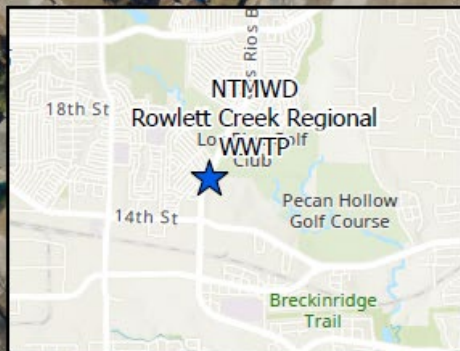


ADMINISTRATIVE MEMORANDUM NO. 5869


XII. AGENDA ITEMS FOR INDIVIDUAL CONSIDERATION

WASTEWATER AGENDA ITEMS

- A. **Authorize Change Order No. 37 and an engineering services agreement (ESA) for the Rowlett Creek Regional Wastewater Treatment Plant Peak Flow Management Improvements, Phase I project – Administrative Memorandum No. 5869**
- Consider authorizing Change Order No. 37 with Pepper Lawson Waterworks, LLC in the amount of \$ 765,000 to replace the 304 stainless steel permeate piping to 316 stainless steel; and an ESA fee reduction in the amount of (\$322,936) for Project No. 301-0328-13, Rowlett Creek Regional Wastewater Treatment Plant (RWWTP) Peak Flow Management Improvements, Phase I



**Replacement of
Permeate Pipes in
MBR Building**

 Proposed Wastewater Building



**Rowlett Creek Regional Wastewater
Treatment Plant Peak Flow Management Improvements, Phase I
Project No. 301-0328-13
Administrative Memo No. 5869**

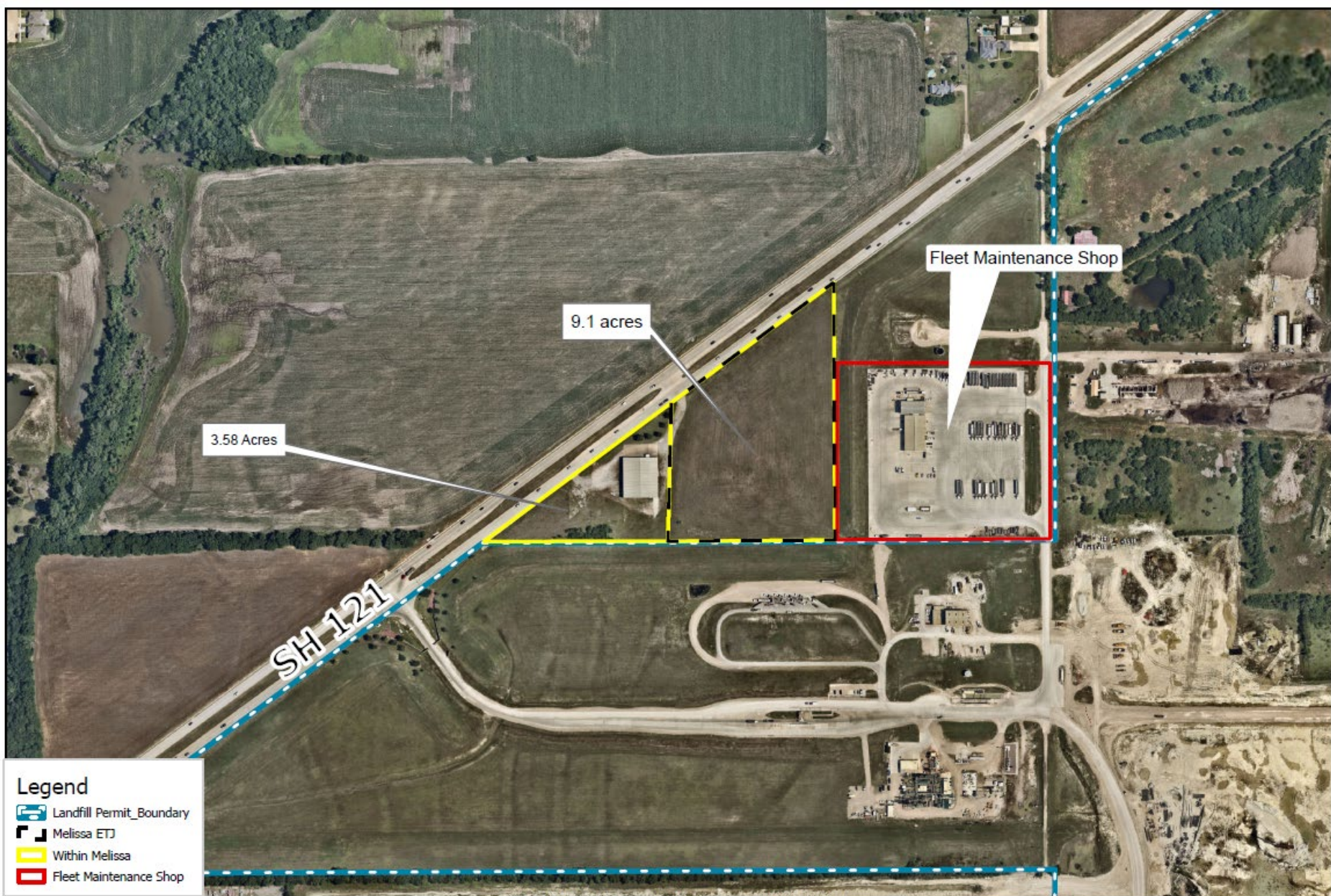




ADMINISTRATIVE MEMORANDUM NO. 5870 – RESOLUTION NO. 22-47

SOLID WASTE AGENDA ITEMS

- B. **Adoption of Resolution No. 22-47 authorizing annexation and zoning processes with the City of Melissa - Administrative Memorandum No. 5870**
- Consider adopting Resolution No. 22-47 authorizing the Executive Director to proceed with annexation and zoning processes with the City of Melissa for the 12.677-acre Fleet Maintenance Annex Facility property adjacent to the 121 Regional Disposal Facility for Project No. 401-0569-20, 121 Regional Disposal Facility Fleet Maintenance Facility and Fleet Maintenance Annex Facility Improvements



**121 Regional Disposal Facility
Annexation and Rezoning of 12.677 Acre
Fleet Maintenance Annex Facility Property to City of Melissa
Project No. 401-0569-20
Administrative Memorandum No. 5870**





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CLOSING ITEMS AND ADJOURNMENT

XIII. CLOSING ITEMS

- A. Opportunity for Board members to provide feedback or request potential future agenda items.

XIV. ADJOURNMENT



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