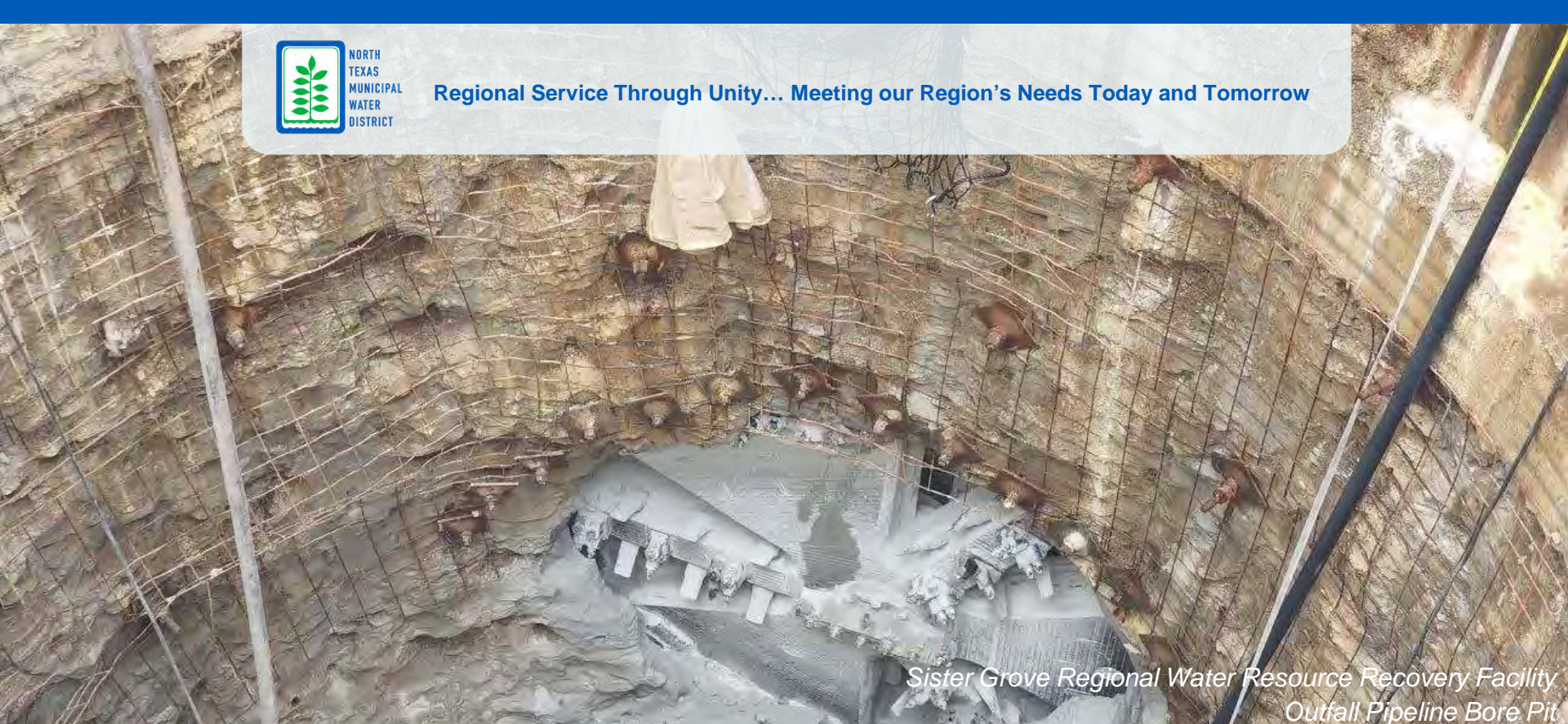




NORTH  
TEXAS  
MUNICIPAL  
WATER  
DISTRICT

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



*Sister Grove Regional Water Resource Recovery Facility  
Outfall Pipeline Bore Pit*

## WASTEWATER COMMITTEE MEETING

June 22, 2022 (Via Videoconference)





## AGENDA

### ACTION ITEMS

- A. Consider Approval of Wastewater Committee meeting minutes – April 27, 2022**
- B. Authorize ratifying the execution of Agreed Order and Supplemental Environmental Project with the Texas Commission on Environmental Quality - Administrative Memorandum No. 5844**
- C. Authorize execution of an amendment to the Construction Manager At-Risk for the South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion project - Administrative Memorandum No. 5843**

### DISCUSSION ITEMS

- A. Review Third Party Construction Management Services for South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion project**
- B. Review Preston Road Lift Station Expansion, 121 Force Main Improvements and 121 Parallel Force Main Engineering Services Agreements**
- C. 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 – April 27, 2022**

**Recommend Approval of Wastewater Committee Meeting Minutes**



## AGENDA

### Action Items

#### **B. Authorize ratifying the execution of Agreed Order and Supplemental Environmental Project with the Texas Commission on Environmental Quality (TCEQ) - Administrative Memorandum No. 5844**

- Consider recommendation on authorizing the ratification of the Executive Director's execution of an Agreed Order and Supplemental Environmental Project with the TCEQ in the amount of \$136,350 relating to events at the Wilson Creek, Rowlett Creek and Floyd Branch Regional Wastewater Treatment Plants and the North Garland Pipeline under Crystal Mountain Drive in Richardson, Texas

*What: Ratify the Executive Director's execution of an Agreed Order and Supplemental Environmental Project with the Texas Commission on Environmental Quality related to unauthorized releases at Wilson Creek Regional Wastewater Treatment Plant (RWWTP), Rowlett Creek RWWTP, Floyd Branch RWWTP, and the North Garland Pipeline under Crystal Mountain Drive in Richardson, Texas.*



## TCEQ PROPOSED AGREED ORDER

### OVERVIEW

- **A TCEQ Agreed Order constitutes an enforcement action for violations of the Texas Water Code and Commission Rules**
- **Docket No. 2019-1212-MLM-E:**
  - **Authorized by the Executive Director**
  - **Recommended by both Legal and Staff**
  - **Combines multiple violations from Water and Wastewater infrastructure between April 2018 and January 2019**
  - **The total amount of the enforcement action is \$136,350 which is the sum of enforcement amounts for all four facilities including:**
    - a. **Wilson Creek RWWTP enforcement amount: \$ 71,400**
    - b. **Rowlett Creek RWWTP enforcement amount: \$ 27,300**
    - c. **Floyd Branch RWWTP enforcement amount: \$ 28,350**
    - d. **North Garland Pipeline enforcement amount: \$ 9,300**



## TCEQ PROPOSED AGREED ORDER

### IN LIEU OF ENFORCEMENT

**NTMWD Staff, in conjunction with Lloyd Gosselink legal assistance negotiated an “Agreed Order” with TCEQ in lieu of a fine.**

- **The Agreed Order requires NTMWD to complete an SEP with a total minimum dollar amount set to value of the fine: \$136,350**
- **NTMWD selected a polymer optimization project at the Floyd Branch RWWTP as our SEP**
- **Once the SEP is ratified by the Board of Directors, and the TCEQ Commission, NTMWD will have 190 days to complete the activity**
- **Additional time to complete the project will be requested**



## RECOMMENDATION

**The Executive Director, NTMWD staff and Lloyd Gosselink Rochelle & Townsend, P.C., recommend the Board of Directors ratify the actions of the Executive Director for the execution of the Agreed Order with the Texas Commission on Environmental Quality as follows:**

**Regulating Entity: Texas Commission on Environmental Quality**

**Scope: Agreed Order and Supplemental Environmental Project**

**Facility Affected: Floyd Branch**

**Amount: \$136,350**

**Strategic Objective: 1.4 Reliable and Resilient Systems and  
2.2 Conscientious Environmental Stewardship**





## AGENDA

### Action Items

#### **C. Authorize execution of an amendment to the Construction Manager At-Risk (CMAR) for the South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion project - Administrative Memorandum No. 5843**

- Consider recommendation on authorizing the Executive Director to execute the first amendment to the CMAR agreement with Archer Western Construction, LLC in the amount of \$11,944,463.24 for partial Guaranteed Maximum Price No. 1 for construction of work packages including early peak flow material procurement and influent Pump Station No. 3 site preparation for Project No. 301-0525-18, South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion

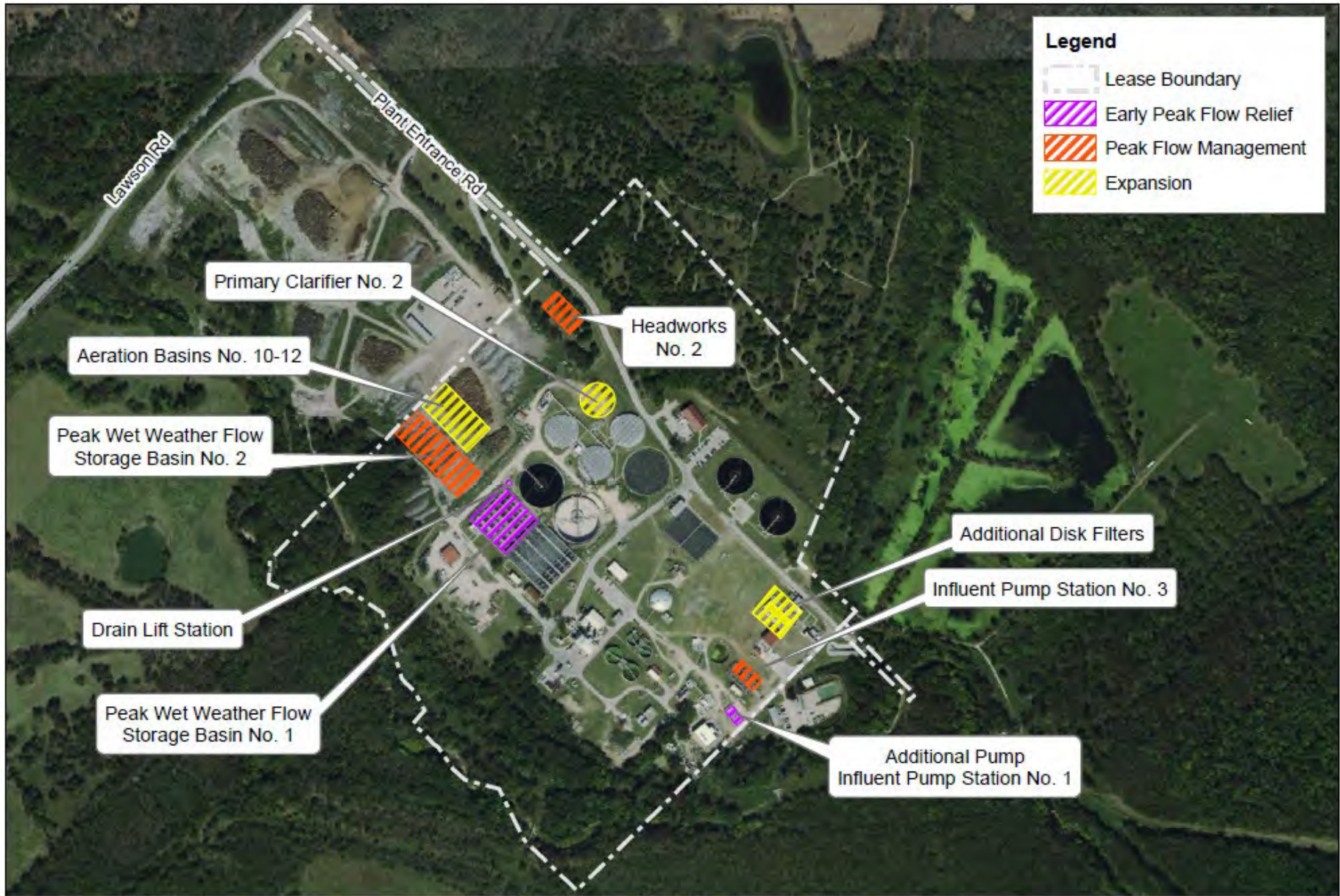
*What: Authorize funding for Amendment No. 1 to the Construction Manager At-Risk Agreement for South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion project.*



## SOUTH MESQUITE RWWTP PEAK FLOW AND EXPANSION

### PROJECT PURPOSE AND APPROACH

- **Flow monitoring studies show the South Mesquite Creek RWWTP to have influent flows higher than its rated wet weather capacity of 82.5 MGD (million gallons per day).**
- **The 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**
- **The project is divided into three parts:**
  - **Early Peak Flow Relief to allow 3 million gallons of peak flow storage in abandoned secondary clarifiers. GMP Nos. 1 & 2 – Jul/Oct 2022**
  - **Peak Flow Improvements including additional influent lift station, headworks and new peak flow basins. GMP Nos. 3 & 4 – Mar/Jul 2023**
  - **Expansion to 41 MGD expansion will consist of a primary, secondary and tertiary treatment improvements. GMP No. 5 – Feb 2024**



South Mesquite Creek RWWTP Peak Flow Management and Expansion  
 Project No. 301-0525-20  
 Administrative Memorandum No. 5843





# SOUTH MESQUITE RWWTP PEAK FLOW AND EXPANSION

## PARTIAL GUARANTEED MAXIMUM PRICE (GMP) NO. 1

- **CMAR Estimate: \$12 million**
- **Scope:**
  - **Procurement of equipment such as gates, valves, flow meter and pump**
  - **Demolition of an abandoned filter complex including hazardous materials**
  - **Demolition of old storage tank and relocation of facilities**

Major Scope of Work Description – Partial GMP No. 1	Lump Sum Amount
Bid Package 1 – Early Peak Flow Material Procurement	\$452,261.00
Bid Package 2 – Influent Pump Station No. 3 Site Preparation	\$9,233,500.00
Allowance for additional pipe, fittings, and connections due to unknown existing utilities; permitting fees; and lawful removal and disposal of hazardous material	\$507,500.00
<b>Total Construction Cost</b>	<b>\$10,193,261.00</b>
<b>General Conditions (@8.5% of the Estimated Construction Cost)</b>	<b>\$866,427.19</b>
<b>Total Cost of Work</b>	<b>\$11,059,688.19</b>
<b>CMAR Fees (@6.5% of the Cost of Work)</b>	<b>\$718,879.73</b>
<b>CMAR Contingency (@1.5% of the Cost of Work)</b>	<b>\$165,895.32</b>
<b>Partial Guaranteed Maximum Price No. 1 (Sum of Total Cost of Work and CMAR Fees)</b>	<b>\$11,944,463.24</b>



## RECOMMENDATION

**The Executive Director and NTMWD staff recommend the Board of Directors authorize the Executive Director to execute Amendment No. 1 to the Construction Manager At-Risk Agreement as follows:**

- Consultant:** Archer Western Construction, LLC (Archer Western)
- Scope:** Construction, Partial GMP No. 1
- Project:** No. 301-0525-18, South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion
- Amount:** \$11,944,463.24
- Strategic Objective:** 1.4 Reliable and Resilient Systems



# AGENDA

## Discussion Items

- A. **Review Third Party Construction Management Services for South Mesquite Creek Regional Wastewater Treatment Plant Peak Flow Management and Expansion project**



## SOUTH MESQUITE RWWTP PEAK FLOW AND EXPANSION CM

### CONSTRUCTION MANAGER SERVICES

- **Qualification based selection of construction professionals to expand the District's capabilities**
- **Provide day to day oversight of contractor using integrated team of construction manager, inspectors, and contract support personnel. Also provide quality assurance lab services.**
- **Augments existing NTMWD staff. Allows engineering PM and internal inspectors to focus on additional projects**
- **Used for multiphase or complex projects that require coordination of multiple contracts and construction projects**
  - **5 GMP amendments to be awarded between July 2022 and February 2024**
  - **Estimated cost near \$251M**
  - **Coordination with Buffalo Creek Interceptor Tunnel**



## SOUTH MESQUITE RWWTP PEAK FLOW AND EXPANSION CM

### EXISTING CONSTRUCTION MANAGEMENT SERVICES

- **BDL Program and Leonard WTP - \$1.6B**
  - **5 CMAR Contracts**
  - **Mitigation**
- **Sister Grove RWRRF Program - \$645M**
  - **Phase 1 of Sister Grove RWRRF**
  - **Outfall Pipeline**
  - **North McKinney Transfer LS**
  - **North McKinney Force Main**
- **Wylie WTP BAF - \$150M**
  - **3 Engineering contracts**
  - **Anticipate 5 GMP Amendments**
  - **Coordination with 14 other active projects**





# AGENDA

## Discussion Items

- B. Review Preston Road Lift Station Expansion, 121 Force Main Improvements and 121 Parallel Force Main Engineering Services Agreements**



# PRESTON ROAD LIFT STATION AND 121 FORCE MAIN PROJECTS

## BACKGROUND

- **Additional capacity needed to serve the Cities of Frisco and Plano due to growth per the UEFIS Evaluation Report**
- **February 2020, Board authorized preliminary engineering design. Original purpose was to expand capacity to 50 MGD**
- **June 2021, during preliminary design, City of Plano and NTMWD staff recommend increasing design capacity to 60 MGD by 2040 due to latest model projections**
- **Change in ultimate delivery from the Wilson Creek RWWTP to the Sister Grove RWRRF to provide adequate treatment capacity**



# PRESTON ROAD LIFT STATION AND 121 FORCE MAIN PROJECTS

## MULTI-PHASED APPROACH

### Preston Road Lift Station Expansion - \$43 million

- Maximize pumping capacity to 36.5 MGD using existing pipelines
- Improve existing lift station and dedicate it to the Preston Road FM
- Construct new lift station with wet well storage dedicated to the 121 FM system

### 121 Force Main Improvements - \$40 million

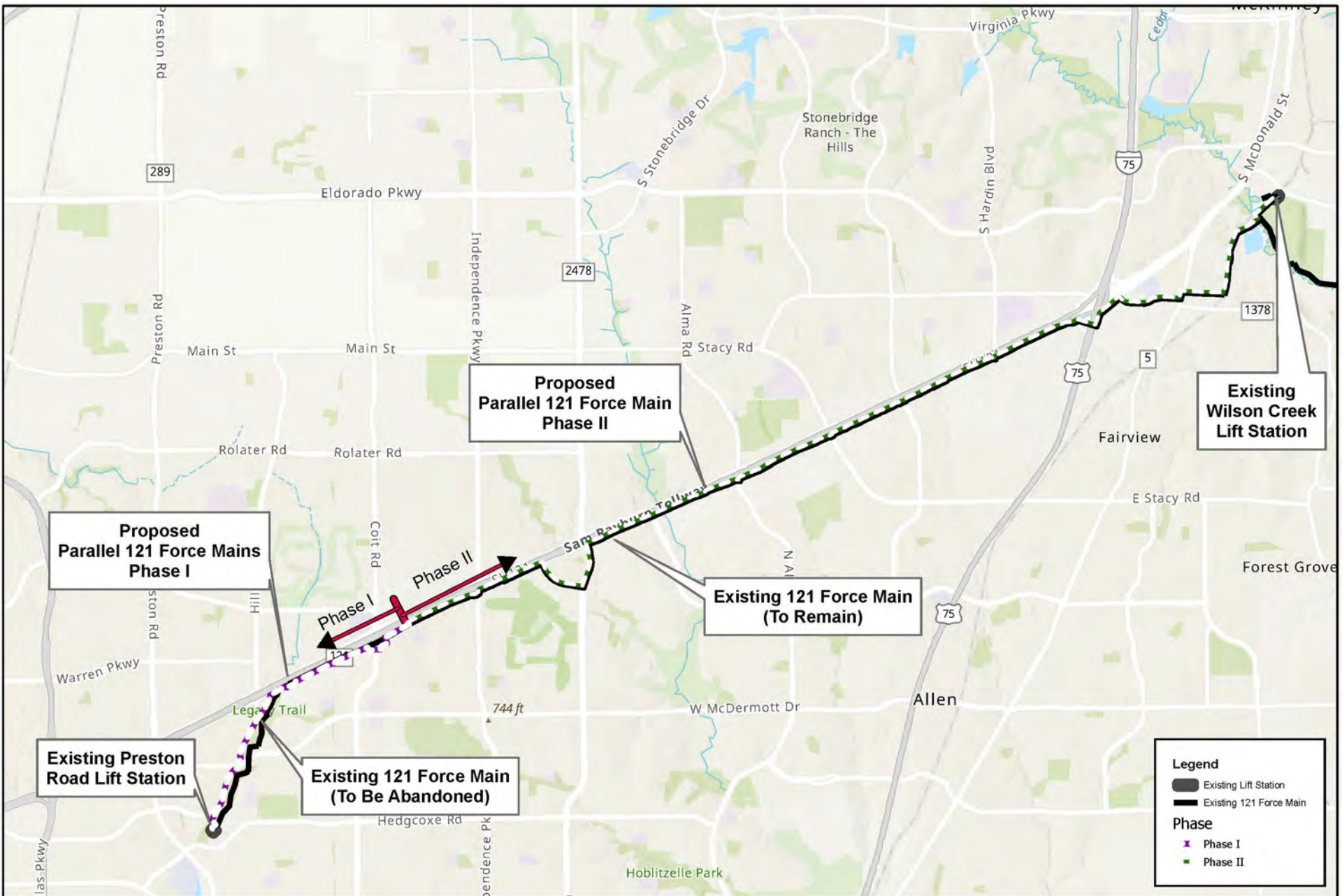
- Replace portion of existing 121 FM that has experienced multiple failures
- Add a parallel 121 FM to accommodate growth
- Approx. 3.2 miles of parallel 36-inch pipelines from Preston Road Lift Station to east of Coit Road high point

### 121 Parallel Force Main - \$85 million

- Parallel the existing 121 FM to accommodate growth
- Combined pipeline capacity up to 60 MGD
- Approximately 11 miles of 36-inch diameter pipeline to Wilson Creek LS

### Preston Road Lift Station Pump Addition - \$4.5 million (future project)

- Add pumps to increase Preston Road Lift Station capacity to 60 MGD





# PRESTON ROAD LIFT STATION AND 121 FORCE MAIN PROJECTS

## ENGINEERING SERVICES AGREEMENTS

### Preston Road Lift Station Expansion

- **July 2022 for final design with HDR, Inc.**
  - Update preliminary design report with results from property acquisition work
  - Final design for lift station expansion including transient/surge analysis
  - Stakeholder coordination, bid phase, and construction phase services
- **Approximately \$4.0 million design fee**

### 121 Force Main Improvements & 121 Parallel Force Main

- **July 2022 for final design with Kimley Horn & Associates, Inc.**
  - Preliminary design for the 121 Parallel Force Main
  - Final design for both construction projects, construction phase services excluded
  - Real estate acquisition support including easement documents and management
  - Special services for surveys, investigations, and public relations assistance
- **Approximately \$9.0 million design fee**



# AGENDA

## Discussion Items

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

## Adjournment