



We work for *your* water

# CIP Open House

*April 26, 2023*

# Agenda

- Overview of SJRA
  - Doing Business with SJRA
  - Review of Project Opportunities
    - Lake Conroe
    - Bear Branch
    - Highlands
    - Flood Management
    - Raw Water Enterprise
    - GRP
    - Woodlands
  - Questions
  - Wrap Up
- 



5<sup>th</sup> Largest River Authority in Texas

# SJRA

SAN JACINTO RIVER AUTHORITY

## OVERVIEW OF SJRA



420

The number of Astrodomes of water in Lake Conroe



179  
Employees



>\$5  
BILLION  
Total assets



\$145  
MILLION  
Annual budget



38  
Water wells in  
The Woodlands



55  
Miles of GRP water  
delivery lines



5  
Operating Divisions



3  
Regional wastewater  
treatment plants in  
The Woodlands



130  
Wholesale customers  
served

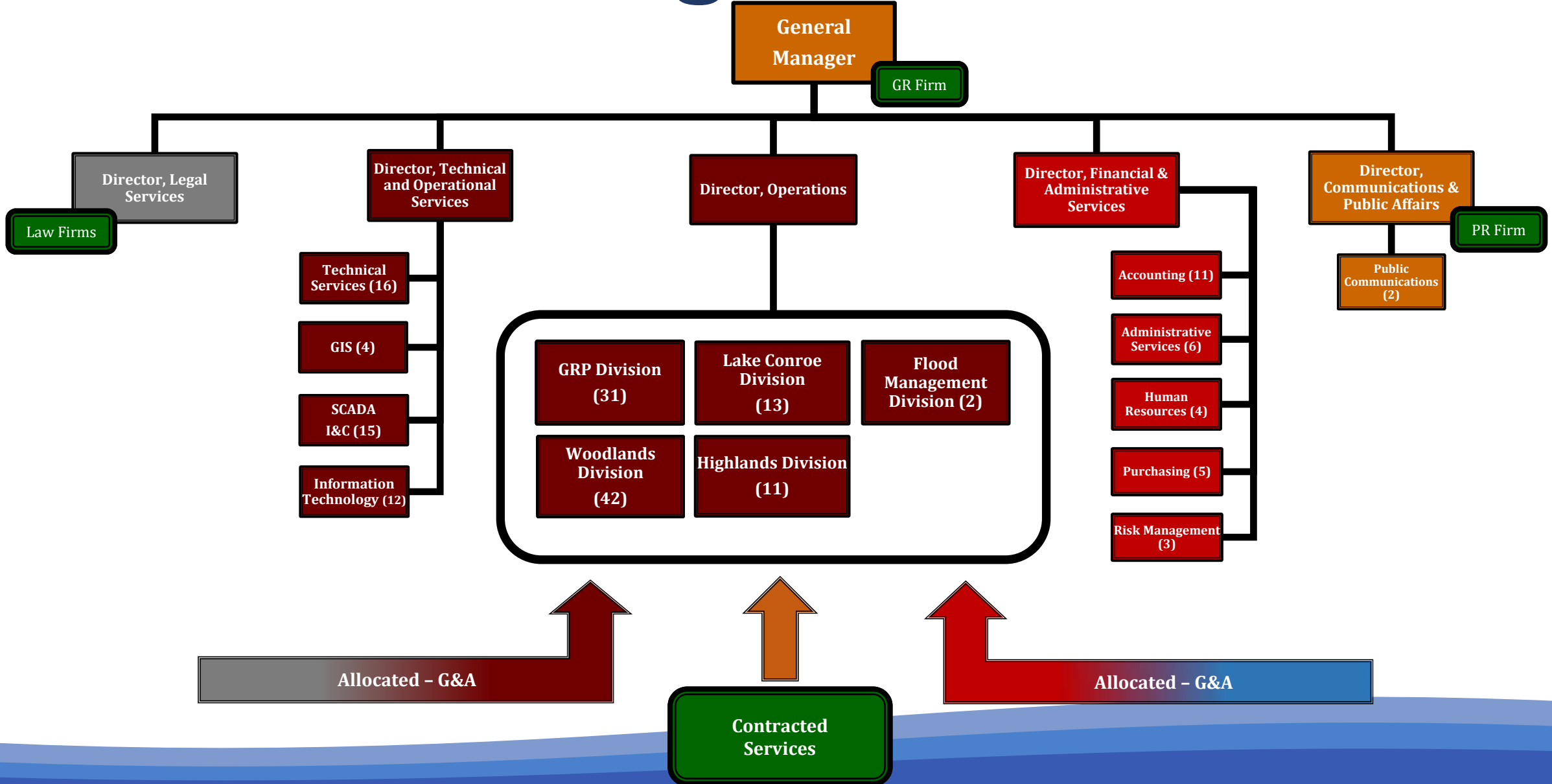


95  
Million Gallons per Day  
The amount of water  
our industrial  
customers use



27  
Miles of canal in the  
Highlands

# Org Chart

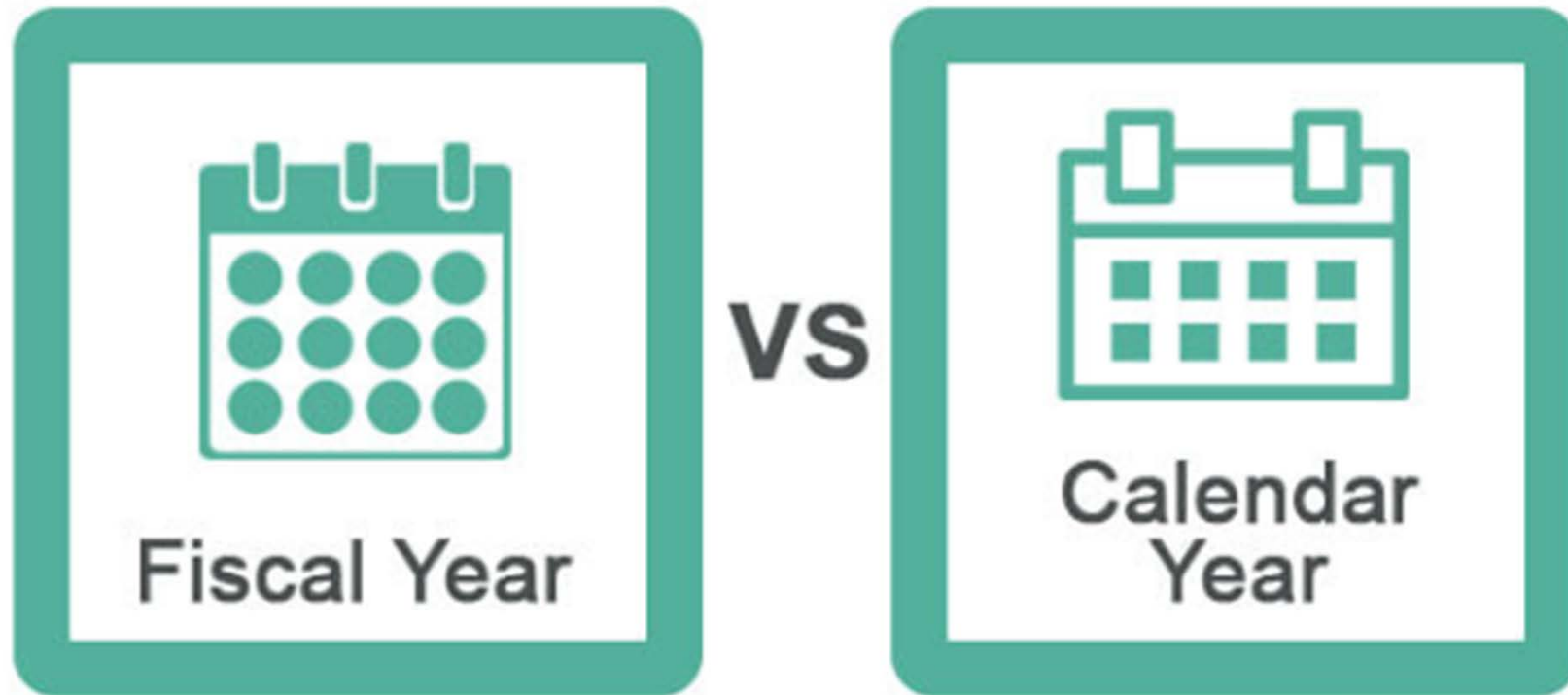






# Doing Business with SJRA

- SJRA's Fiscal Year: **September 1<sup>st</sup> – August 31<sup>st</sup>**



# Doing Business with SJRA

- 10-Year Project Plans - <https://www.sjra.net/about/financial/>



## Lake Conroe Project Summary

Lake Conroe Division  
FY 2023 - FY 2032 Projects

PAGE NO.	PROJECT ID	PROJECT NAME	ESTIMATED EXPENDITURES THROUGH END OF FY 2022	2023 ESTIMATE	2024 ESTIMATE	2025 ESTIMATE	2026 ESTIMATE	2027 ESTIMATE	2028 ESTIMATE	2029 ESTIMATE	2030 ESTIMATE	2031 ESTIMATE	2032 ESTIMATE	TOTAL
4	LCSVC	Service Outlet Sluice Gate Rehabilitation	\$ 107,500	\$ 203,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 311,000
5	LCWEF	West End Facility Improvements	\$ 74,303	\$ 310,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 384,303
6	LCMFI	Maintenance Facilities Improvements	\$ 650,419	\$ 3,150,000	\$ 1,070,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,870,419
7	LCMON	Lake Conroe Dam Survey Monumentation	\$ -	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,000
8	LCGHR	Lake Conroe Gate House Rehabilitation	\$ -	\$ 57,000	\$ 216,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 273,000
9	LCLWC	Low Water Crossing	\$ -	\$ 12,000	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 57,000
10	LCEAP	Lake Conroe Dam Emergency Action Plan	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ 110,000
11	LCCDC	Water Conservation and Drought Contingency Plans	\$ -	\$ -	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 50,000
12	LCPIZ	Piezometer Replacement	\$ -	\$ -	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ -	\$ 92,000	\$ -	\$ -	\$ 172,000
13	LCNBD	Lake Conroe Division Boat Dock	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000
14	LCEVL	Lake Conroe Dam Comprehensive Evaluation	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000
15	LWEDR	West End Dock Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 310,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 310,000
16	LCSGR	Main Spillway Gate Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 432,000	\$ 2,394,000	\$ 1,197,000	\$ -	\$ -	\$ -	\$ 4,023,000
17	LCDRR	Lake Conroe Dam Road Repair	\$ 90,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90,000	\$ 980,000	\$ -	\$ -	\$ -	\$ 1,160,000
18	LCSUR	Drainage System Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 170,000	\$ 1,320,000	\$ -	\$ -	\$ 1,490,000
19	LCWS2	Westside Diversion Channel Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 1,079,000	\$ 1,079,000	\$ 2,458,000
20	LCDMI	Lake Conroe Dam Inspection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000
21	LCVOS	Lake Conroe Volumetric Survey	\$ 76,100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 137,000	\$ -	\$ 213,100
	<b>TOTALS</b>		\$ 998,322	\$ 3,817,500	\$ 1,351,000	\$ 180,000	\$ 200,000	\$ 742,000	\$ 2,544,000	\$ 2,377,000	\$ 1,712,000	\$ 1,296,000	\$ 1,079,000	\$ 16,296,822

# Doing Business with SJRA

## Brazos Valley e-Marketplace

- Registration
- Use of CIVCAST

[Steps to Register](#)

The screenshot displays the homepage of the Brazos Valley e-Marketplace. At the top left, a white banner contains logos for the City of Bryan, BTU, and SJRA. Below the banner, the text reads "Welcome to the Brazos Valley e-Marketplace!". To the right, there is a login form with fields for "User Name" and "Password", a "Login" button, and a "Trouble Logging In?" link. Further right is a blue box with a user icon and a "Supplier Registration" button. At the bottom, four white boxes with icons represent "Current Bids", "Closed Bids", "Awarded Bids", and "San Jacinto River Authority". The footer features the text "Powered By IONWAVE technologies".

# Doing Business with SJRA





# Doing Business with SJRA



# Procurement of Professional Services

- Professional Services Agreement (PSA)
  - Project specific
- Master Professional Services Agreement (MPSA)
  - Specific to a certain type of services (survey, geotechnical, electrical, etc.)

## Professional Services Procurement Tiers

< \$25k	No formal or informal solicitation required
>\$25k and ≤ \$75k	Informal RFQ or use MPSA
>\$75k and construction estimated ≤ \$1M	Project Specific RFQ or MPSA
>\$75k and construction estimated > \$1M	Project Specific RFQ

# Procurement of Construction Services

## Construction Procurement Tiers

Construction Estimated $\leq$ \$75k	<ul style="list-style-type: none"><li>• Request for Quotes (solicited from minimum 3 contractors)</li><li>• Minor Construction Services Agreement</li></ul>
Construction $>$ \$75k	<ul style="list-style-type: none"><li>• Competitive Sealed Proposals</li><li>• Major Construction Services Agreement</li><li>• Minor Construction Services Agreement (<math>\leq</math>\$400k)</li></ul>



# Request for Qualifications (RFQ)

## (Professional Services)

RFQ Typical Evaluation Criteria	
	Firm Introduction
	Firm Experience
→	Project Manager
→	Lead Technical Professional(s)
	Support Staff
→	Approach
	Potential Interviews

# Competitive Sealed Proposals (CSP)

## (Construction Services)

### CSP Typical Evaluation Criteria

Proposed Project Cost

Organization and Business Information

→ Experience/Past Performance w/ Similar Projects

→ Experience and Qualifications of Key Personnel

→ Project Approach

Safety Program

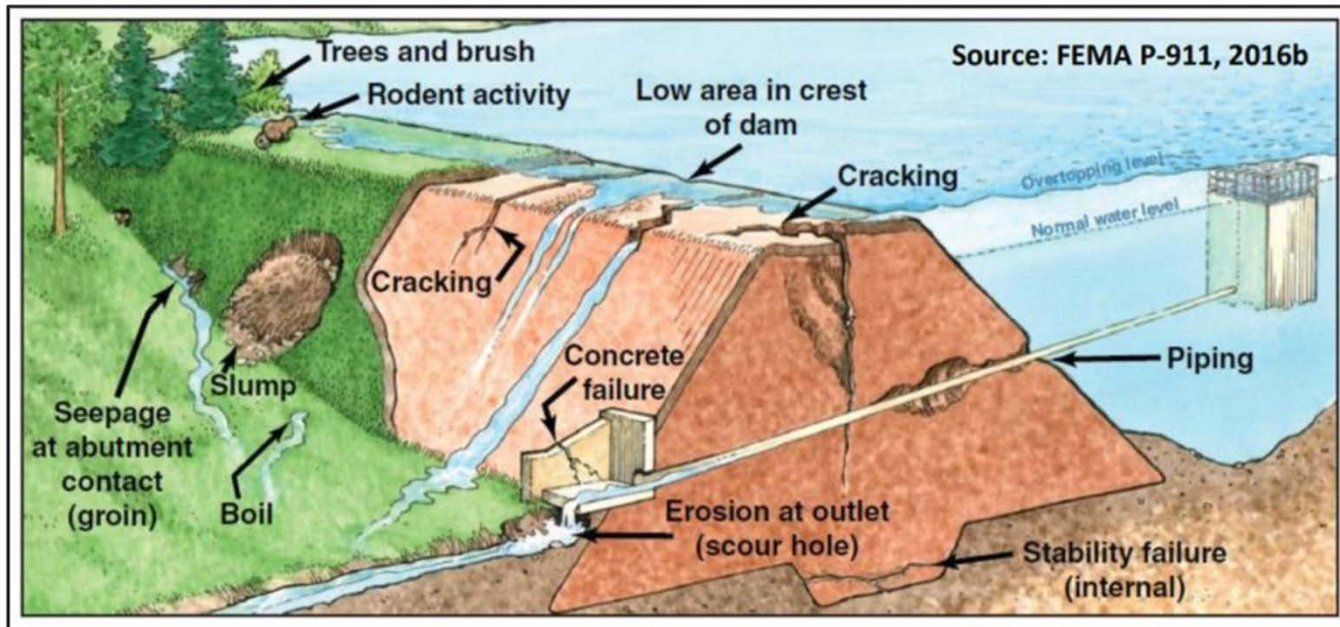
Litigation, Claims Compliance

Potential Interviews

# **MPSA Opportunities**

# MPSAs – Wave 1 (May 2023)

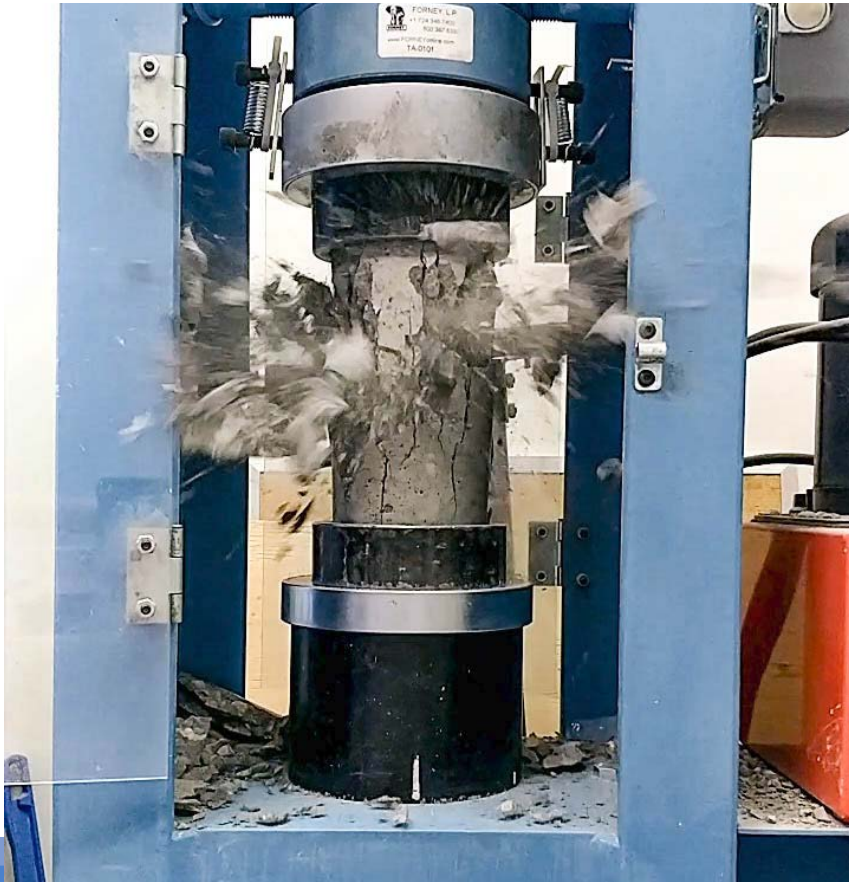
- Dam Safety



Texas Dam Safety Program

# MPSAs – Wave 1 (May 2023)

- Dam Safety
- **Materials Testing**





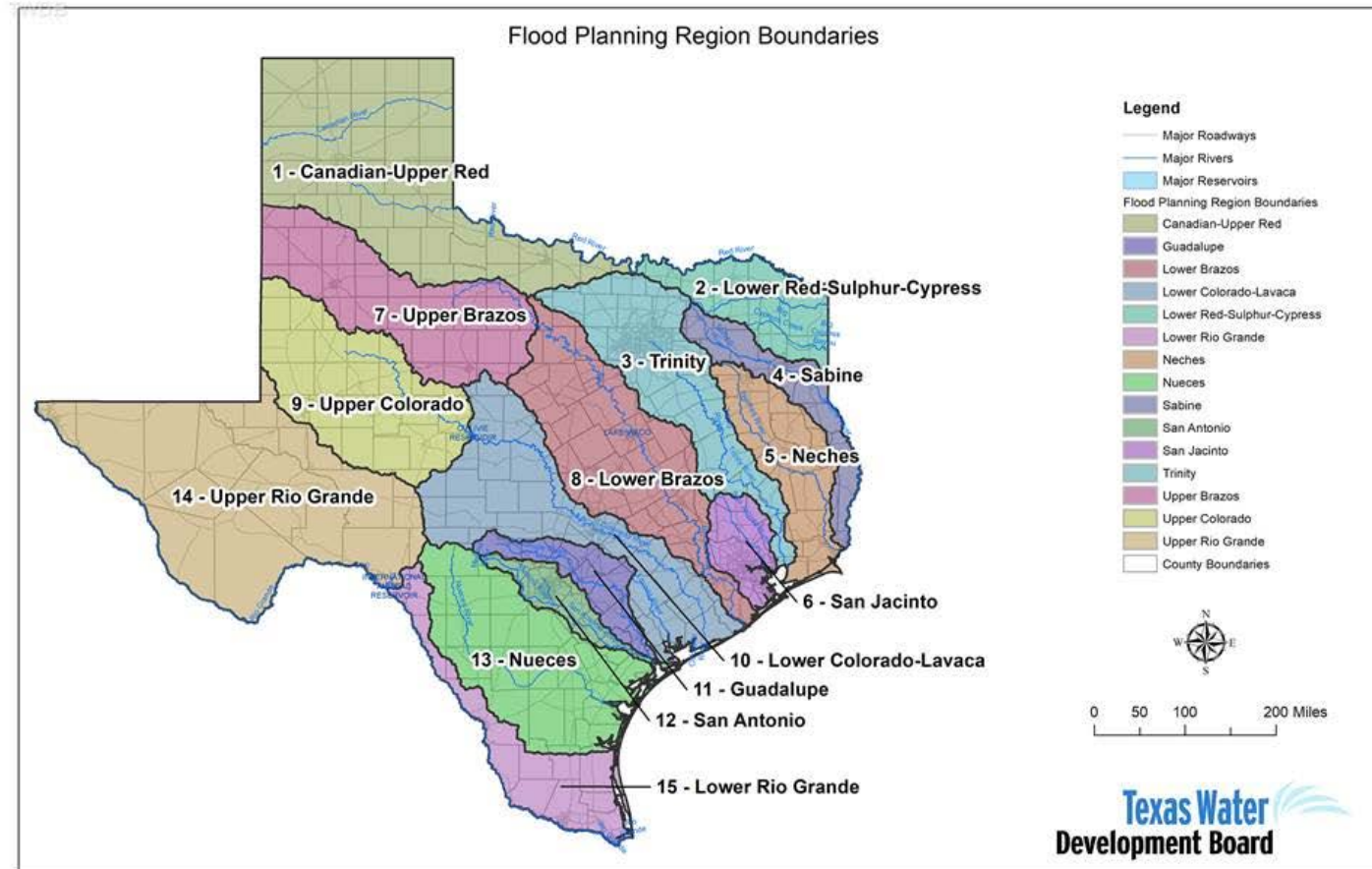
# MPSAs – Wave 1 (May 2023)

- Dam Safety
- Materials Testing
- **Water Strategy**



# MPSAs – Wave 1 (May 2023)

- Dam Safety
- Materials Testing
- Water Strategy
- **Flood Management Support Services**





# MPSAs – Wave 1 (May 2023)

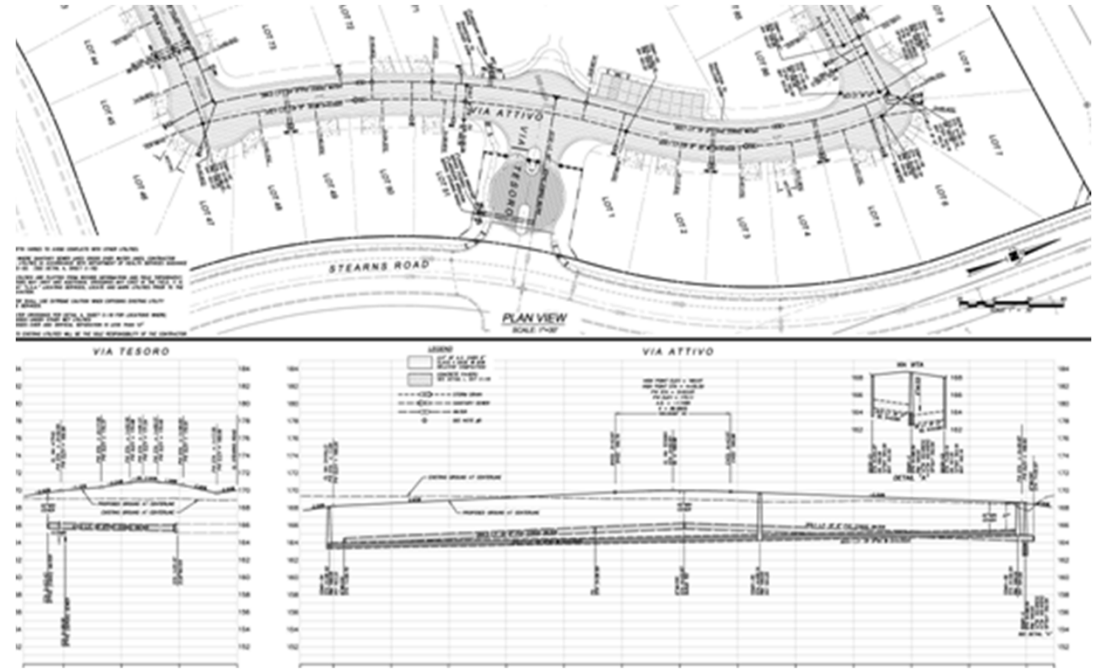
- Dam Safety
- Materials Testing
- Water Strategy
- Flood Management Support Services
- **Industrial Pretreatment**





# MPSAs – Wave 2 (June 2023)

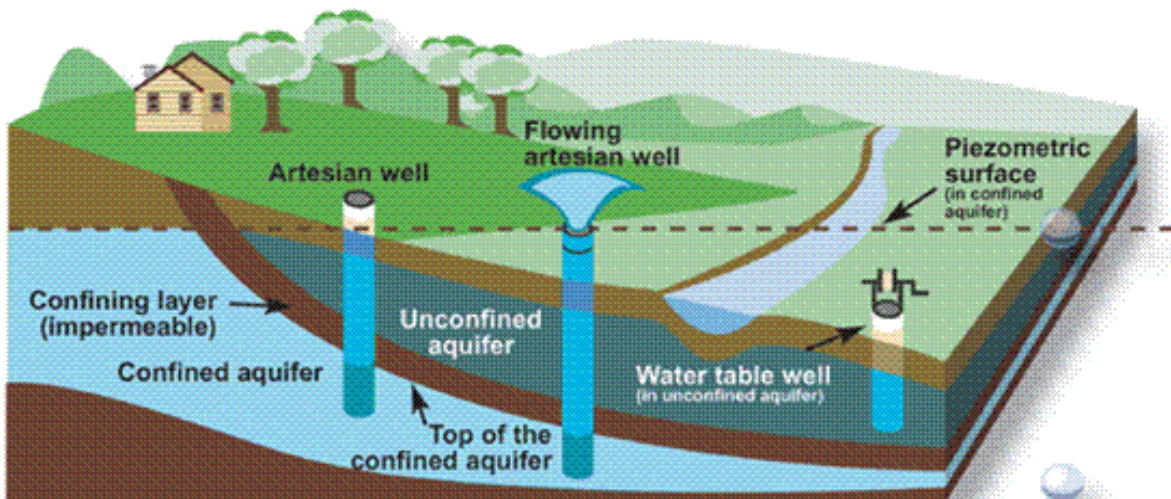
- Civil Engineering Support



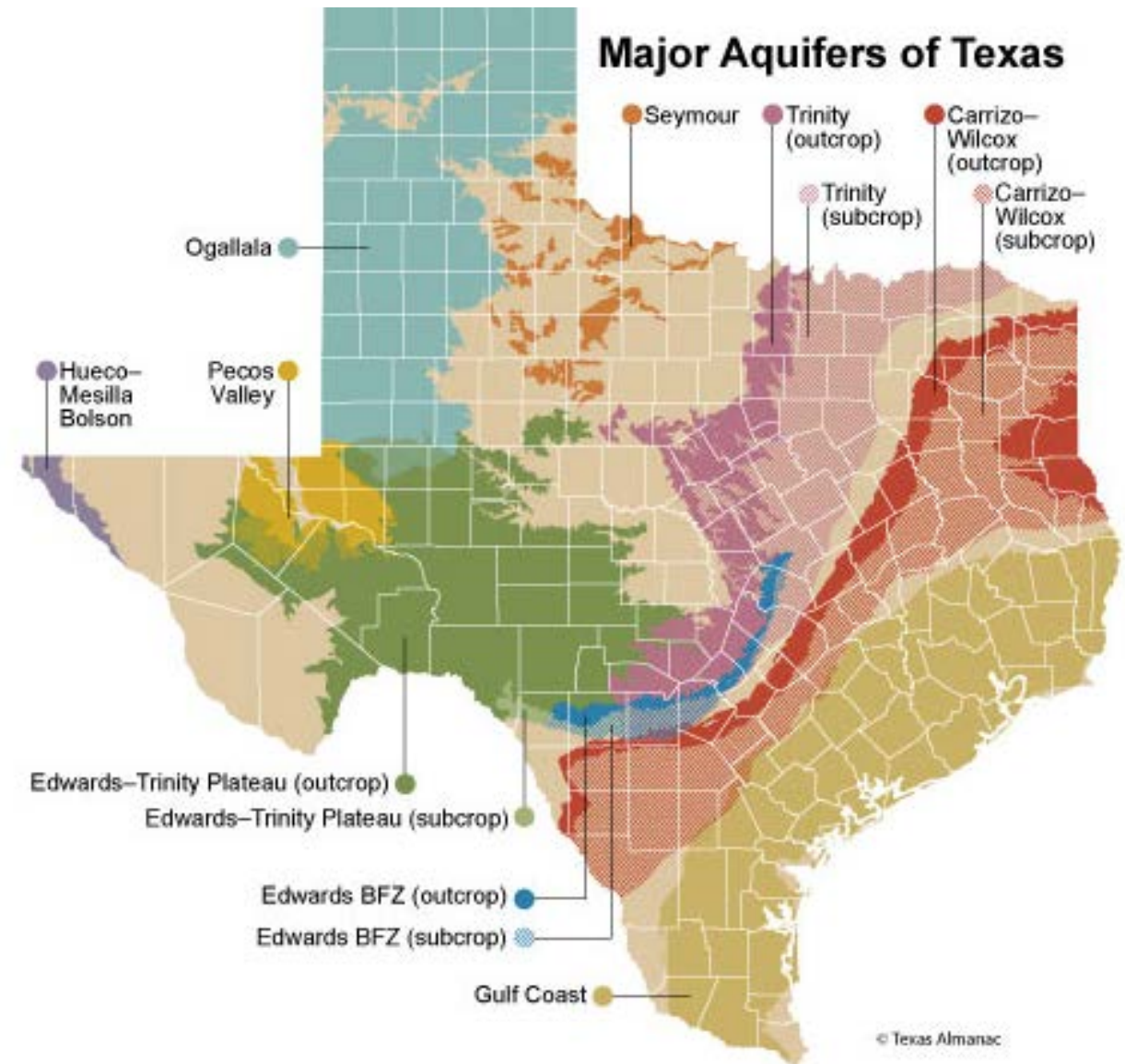
# MPSAs – Wave 2 (June 2023)

- Civil Engineering Support
- **Hydrogeology and Groundwater Management**

Aquifers and wells



Source: Environment Canada

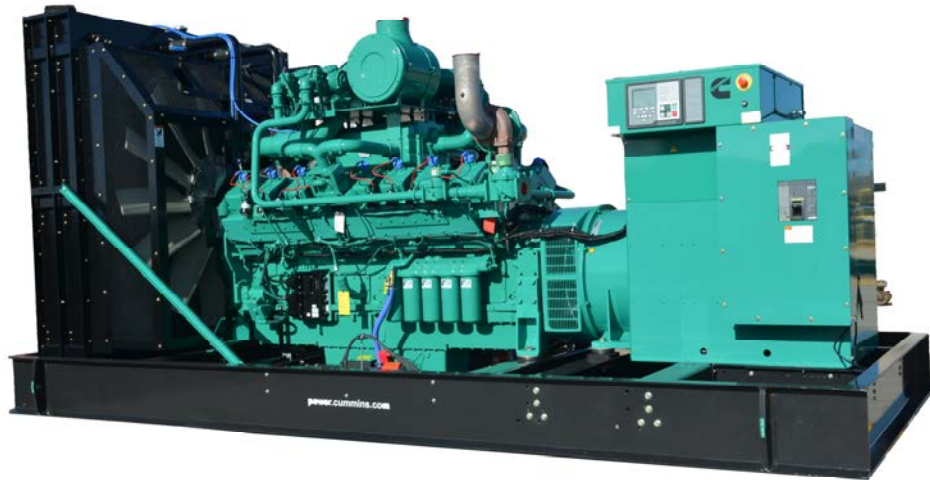


© Texas Almanac



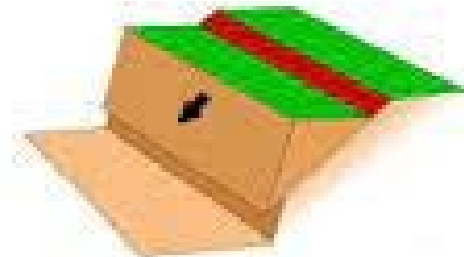
# MPSAs – Wave 3 (August 2023)

- **Electrical Engineering**

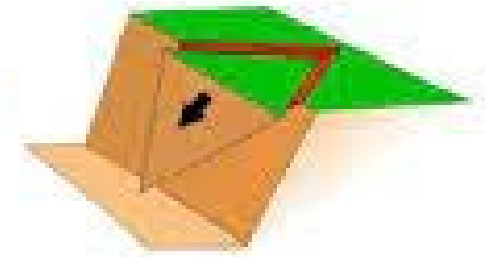


# MPSAs – Wave 4 (September 2023)

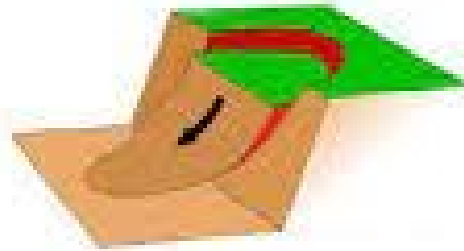
- Geotechnical Engineering



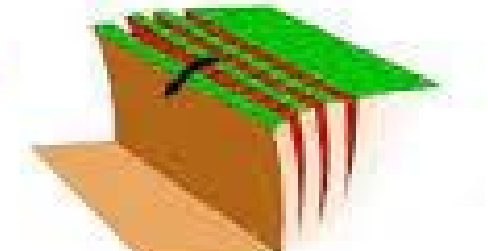
Plane failure



Wedge failure



Circular failure




Toppling failure

# MPSAs – Wave 4 (September 2023)

- Geotechnical Engineering
- **Regulatory Support Services**



# MPSAs – Future Waves (TBD 2024)

- MEP
  - Structural
  - CM&I
  - W/WW Planning
  - Staff Augmentation
- 

# MPSA RFQ Summary



★ - Issue RFQ

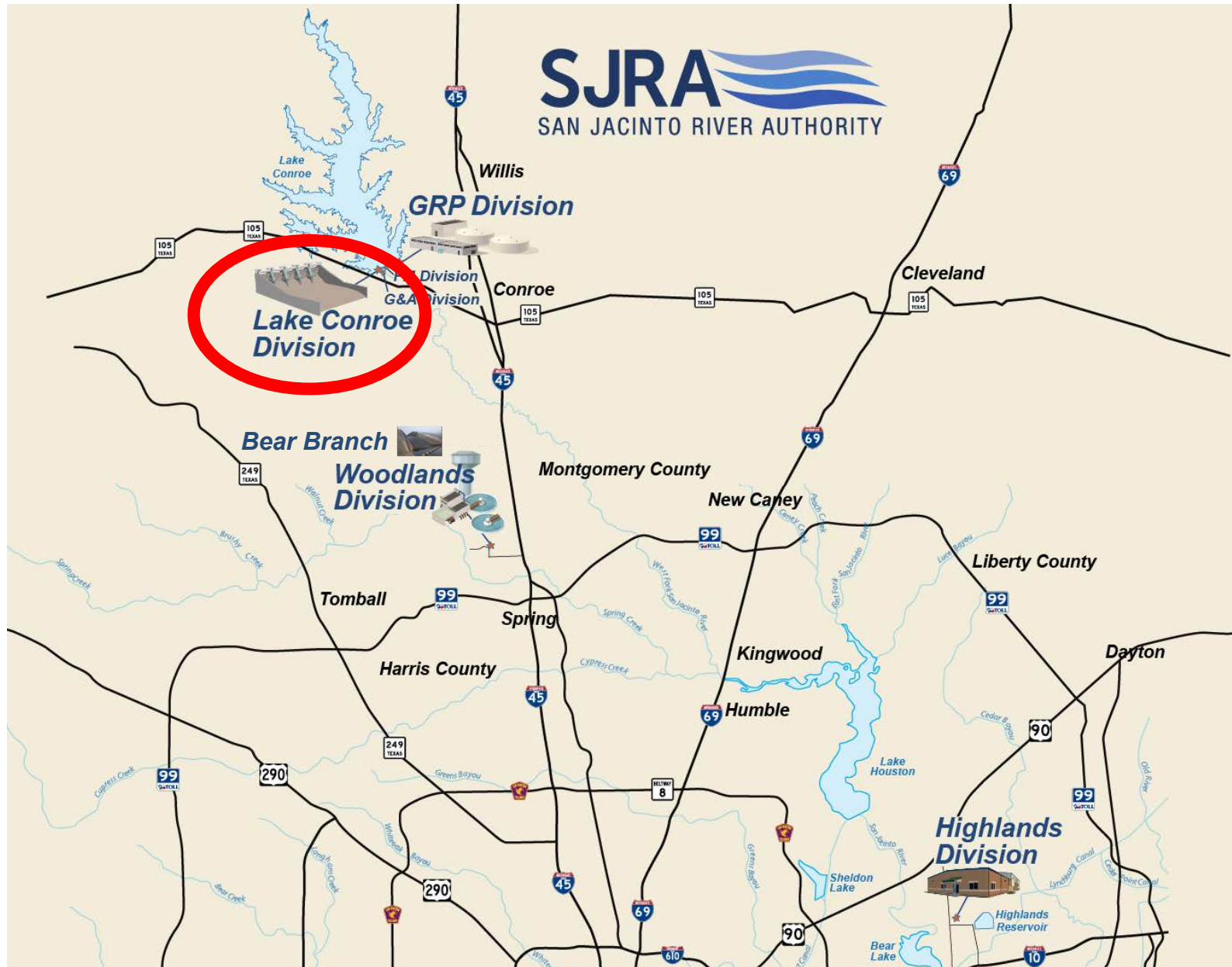
★ - Receive SOQs

★ - Award Contract(s)

# Project Opportunities







**Lake Conroe  
Division**

**Bear Branch  
Woodlands  
Division**

**Highlands  
Division**





# **Professional Services Projects**

## **(Lake Conroe)**

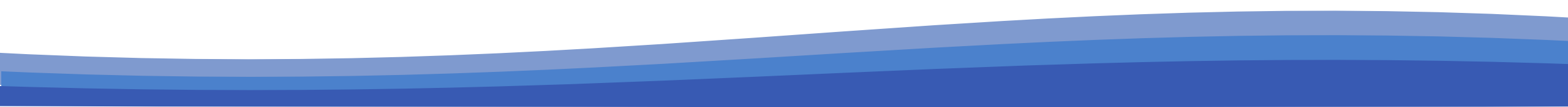


**STAY TUNED**



# **Construction Services Projects**

## **(Lake Conroe)**





# Service Outlet Electrical

## Classification:

- Electrical

Schedule: 3<sup>rd</sup> Quarter 2023



Construction Budget: \$250,000

# Maintenance Facility Improvements

## Classification:

- Building Construction
- Utilities
- Earthwork

Schedule: 1<sup>st</sup> Quarter 2024

Construction Budget: \$5,640,000



# Lake Conroe Summary

2 <sup>nd</sup> Q 2023	3 <sup>rd</sup> Q 2023	4 <sup>th</sup> Q 2023	1 <sup>st</sup> Q 2024	2 <sup>nd</sup> Q 2024	3 <sup>rd</sup> Q 2024
	★ Service Outlet Electrical				
			★ Maintenance Facility Improvements		

Engineering

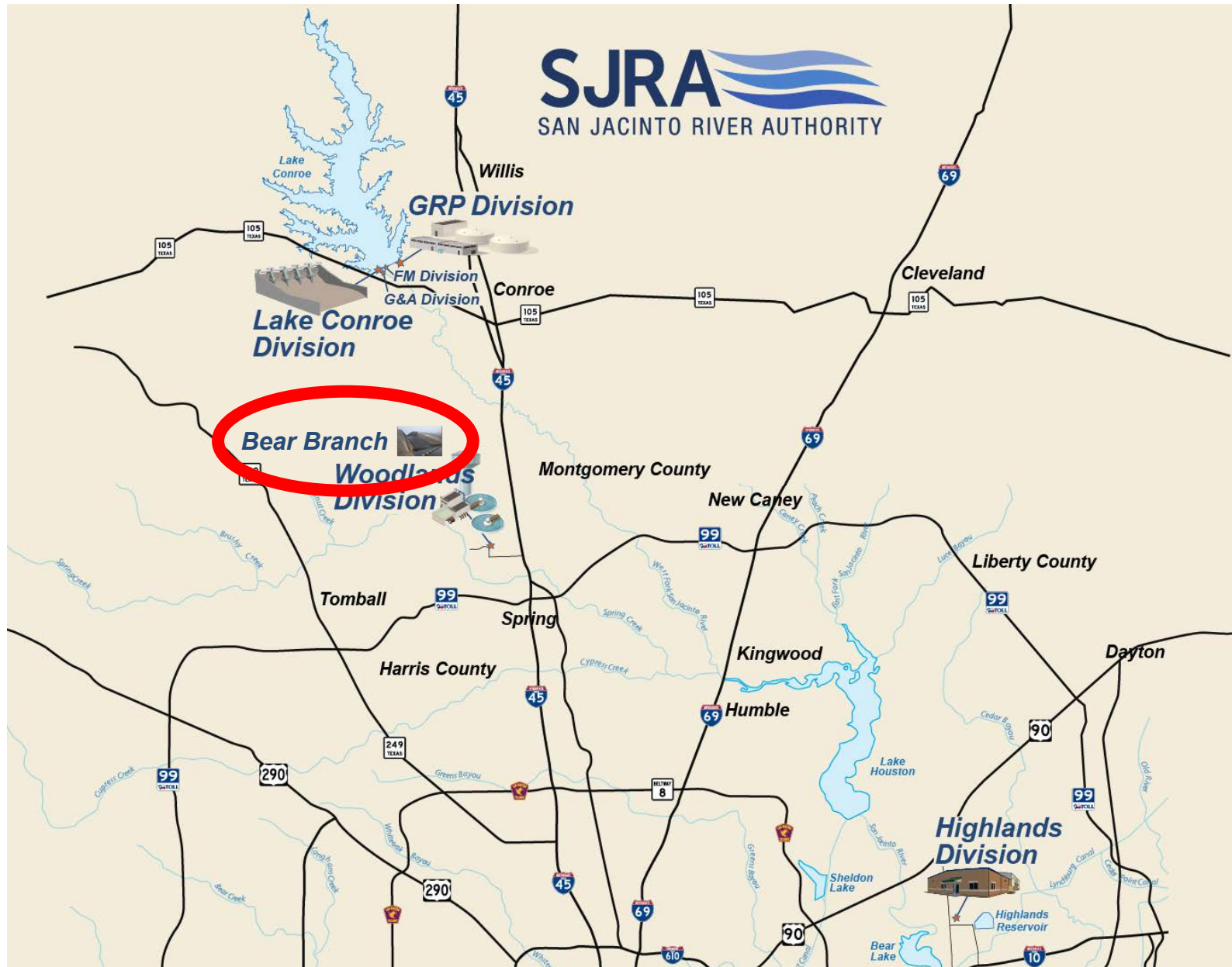
Construction

★ - Issue RFQ or CSP



# SJRA

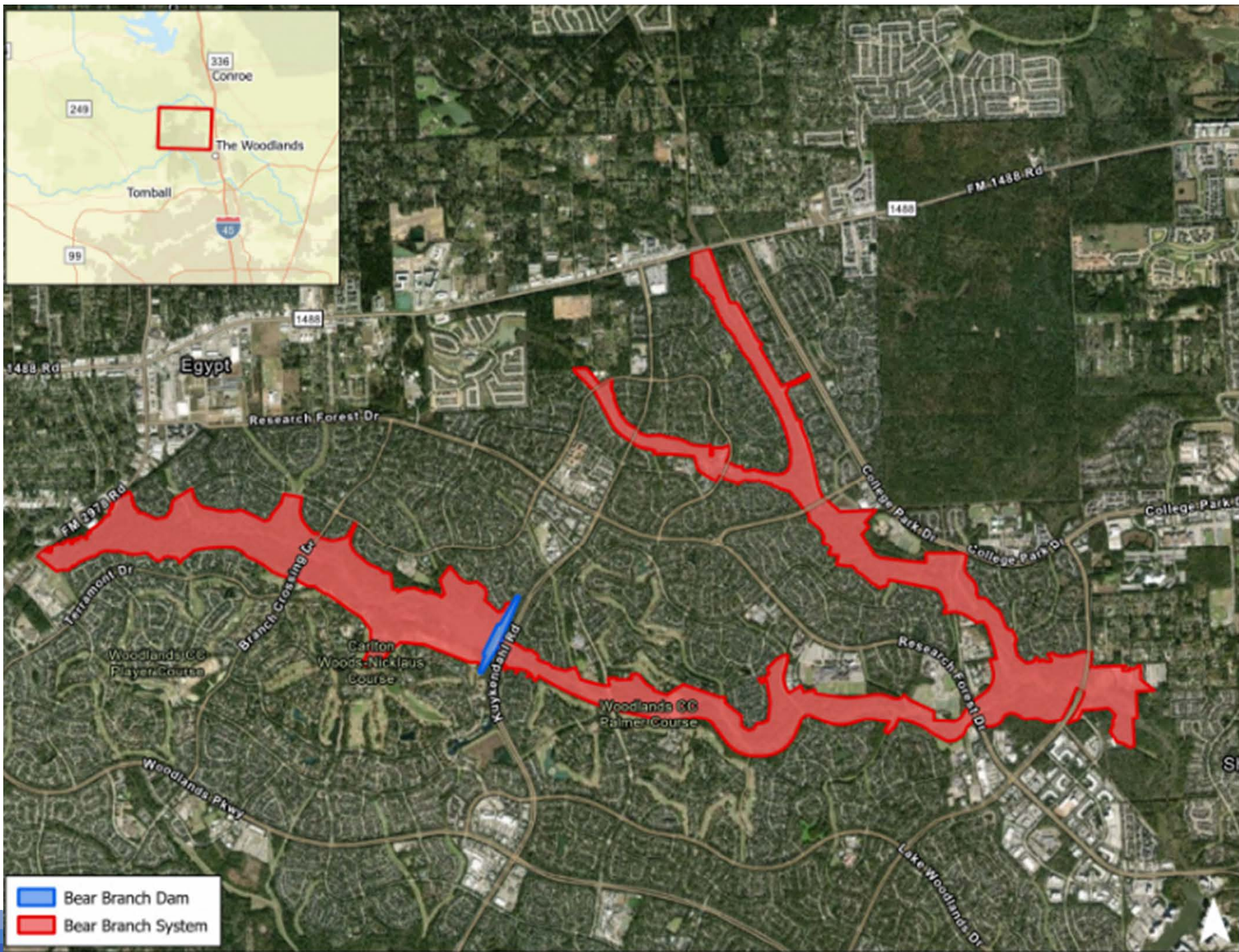
SAN JACINTO RIVER AUTHORITY



**Bear Branch**

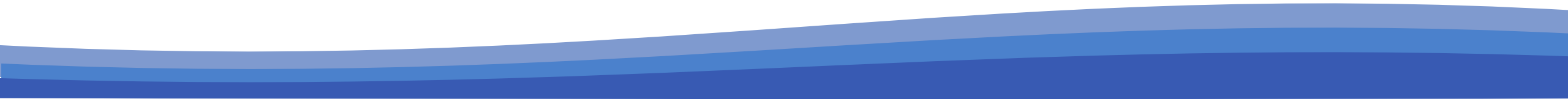






# **Professional Services Projects**

## **(Bear Branch)**





# Spillway and Soil Cement Replacement

## Classification:

- Dam Engineering
- Hydraulic Modeling
- USACE Experience

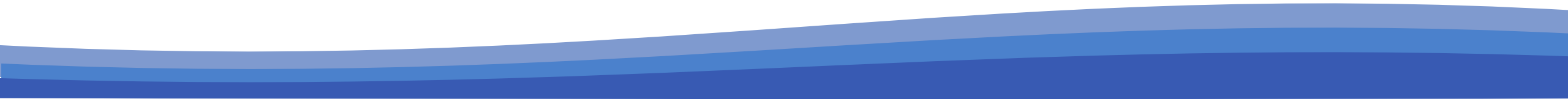
Schedule: 3rd Quarter 2023

Total Project Budget: \$5,050,000



# **Construction Services Projects**

## **(Bear Branch)**






**STAY TUNED**



# Bear Branch Summary

2 <sup>nd</sup> Q 2023	3 <sup>rd</sup> Q 2023	4 <sup>th</sup> Q 2023	1 <sup>st</sup> Q 2024	2 <sup>nd</sup> Q 2024	3 <sup>rd</sup> Q 2024
	 Spillway and Soil Cement Replacement				

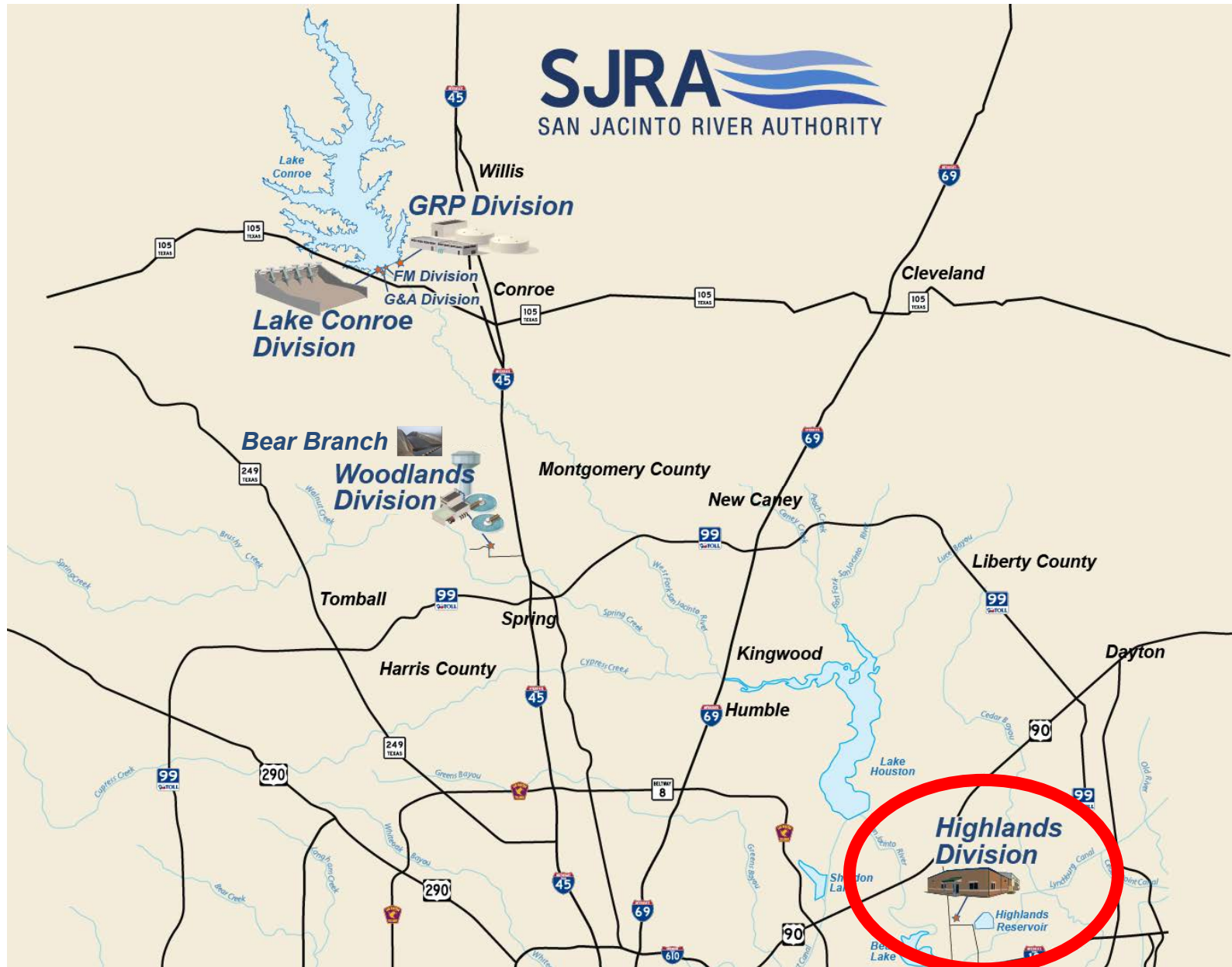
Engineering

Construction

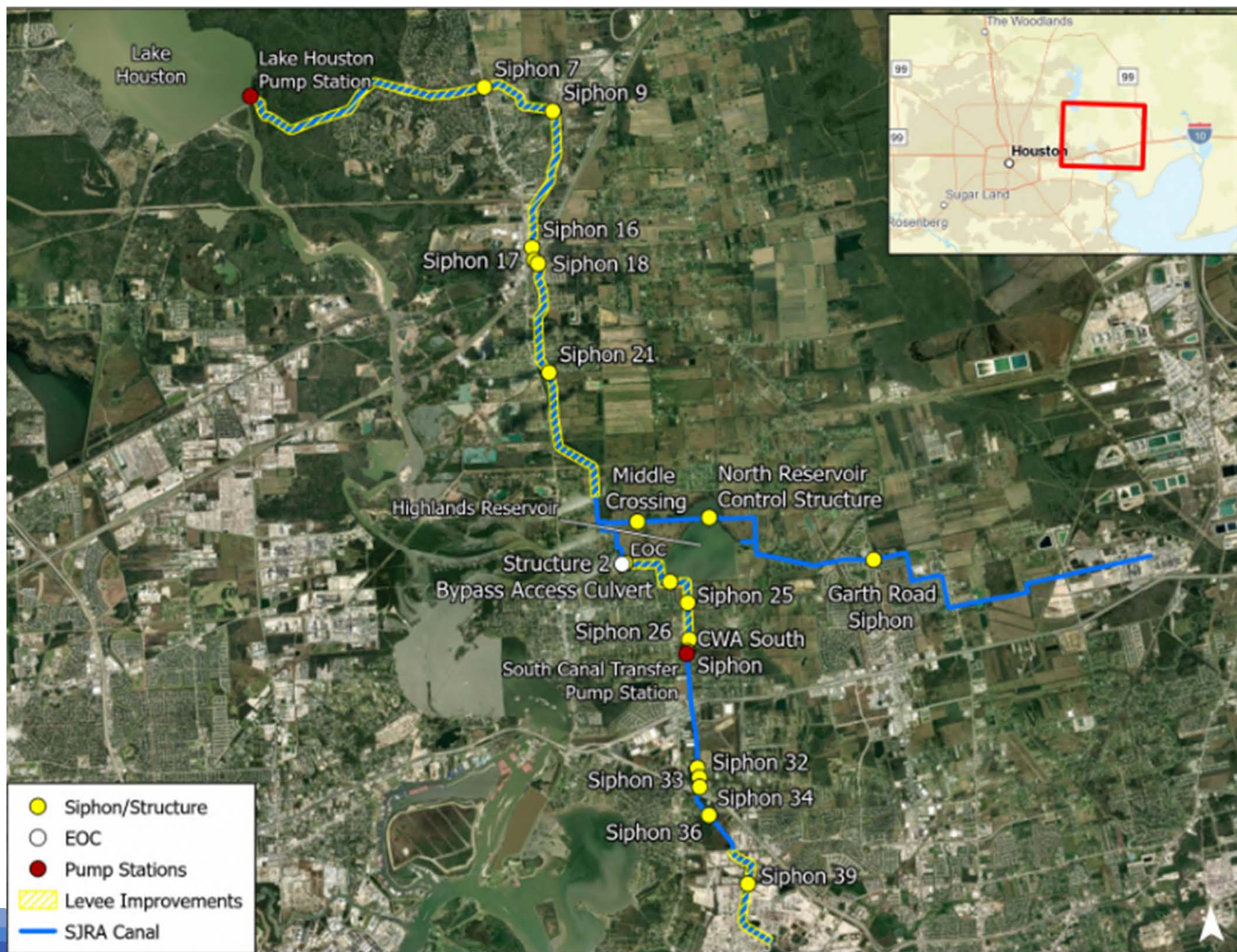
 - Issue RFQ or CSP

# SJRA

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# **Professional Services Projects (Highlands)**



# Lake Houston Pump Station Pumps/Motors

## Classification:

- Pump Stations
- Electrical
- Mechanical



Schedule: 2<sup>nd</sup> Quarter 2023

Total Project Budget: \$5,022,000



# Structure 2 and Levee Improvements

## Classification:

- Siphons/Culverts
- Canal Levees

Schedule: 4<sup>th</sup> Quarter 2023

Total Project Budget: \$4,500,000





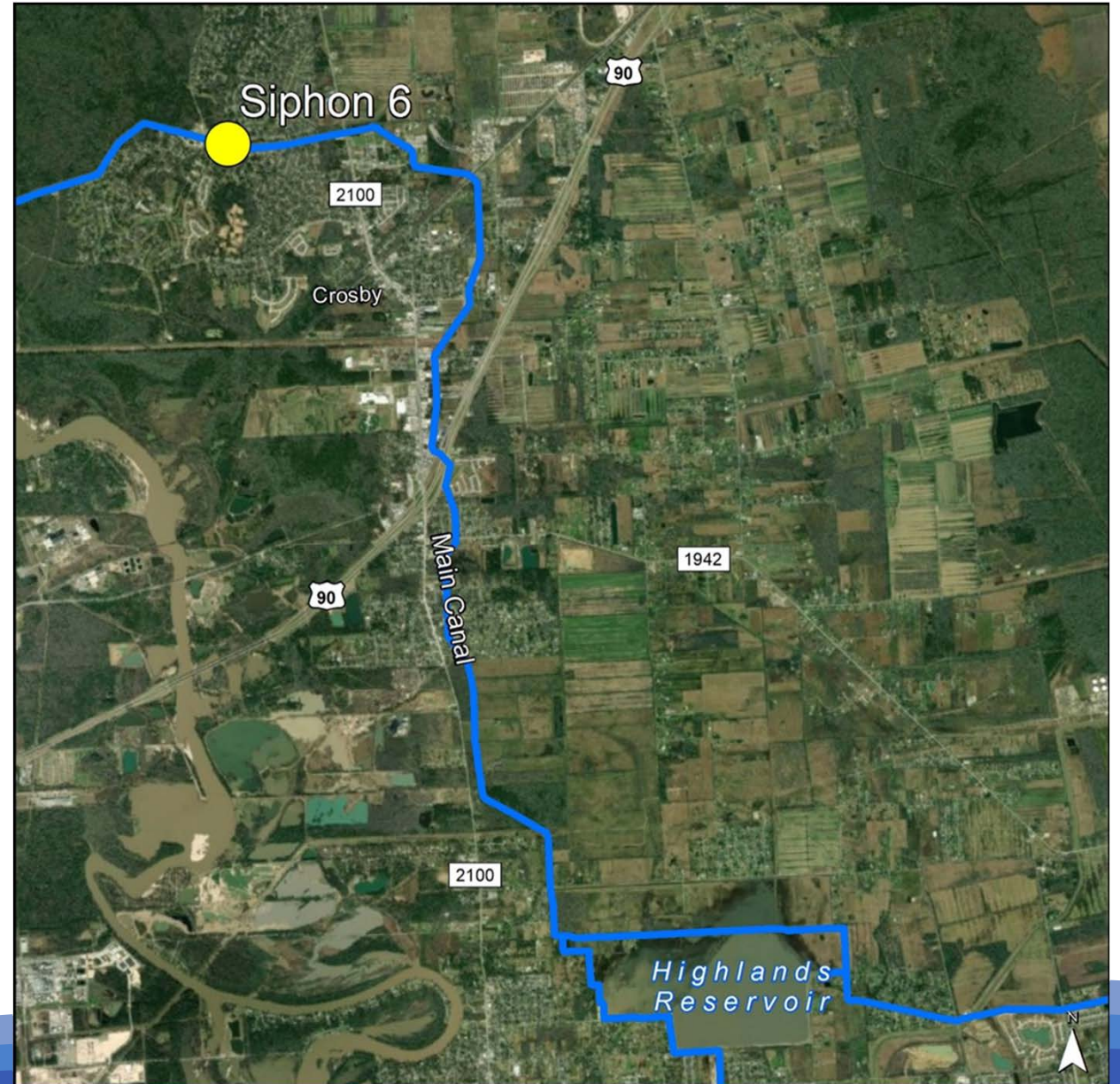
# Levee Improvements (S-6 to Reservoir)

## Classification:

- Canal Levees

Schedule: 1<sup>st</sup> Quarter 2024

Total Project Budget: \$1,060,000





# Garth Road Siphon Improvements

## Classification:

- Siphons/Culverts
- Canal Levees



Schedule: 2<sup>nd</sup> Quarter 2024

Total Project Budget: \$4,830,000

# **Construction Services Projects (Highlands)**





# Structure 5 Improvements

## Classification:

- Earthwork/Grading
- Culvert Installation
- SCADA
- Electrical



Schedule: 2<sup>nd</sup> Quarter 2023



Construction Budget: \$500,000

# Siphon 7 Improvements

## Classification:

- Earthwork/Grading
- Siphon Removal/Abandonment

Schedule: 3<sup>rd</sup> Quarter 2023

Construction Budget: \$718,000





# Siphon 16, 17, and 18 Erosion Repairs

## Classification:

- Earthwork/Grading

Schedule: 3<sup>rd</sup> Quarter 2023



Construction Budget: \$603,000

# Culvert Replacements

## Classification:

- Earthwork/Grading
- Concrete Structures

Schedule: 3<sup>rd</sup> Quarter 2023



Construction Budget: \$200,000



# Main Canal Levee Improvements

## Classification:

- Earthwork/Grading

Schedule: 2<sup>nd</sup> Quarter 2024

Construction Budget: \$6,211,000





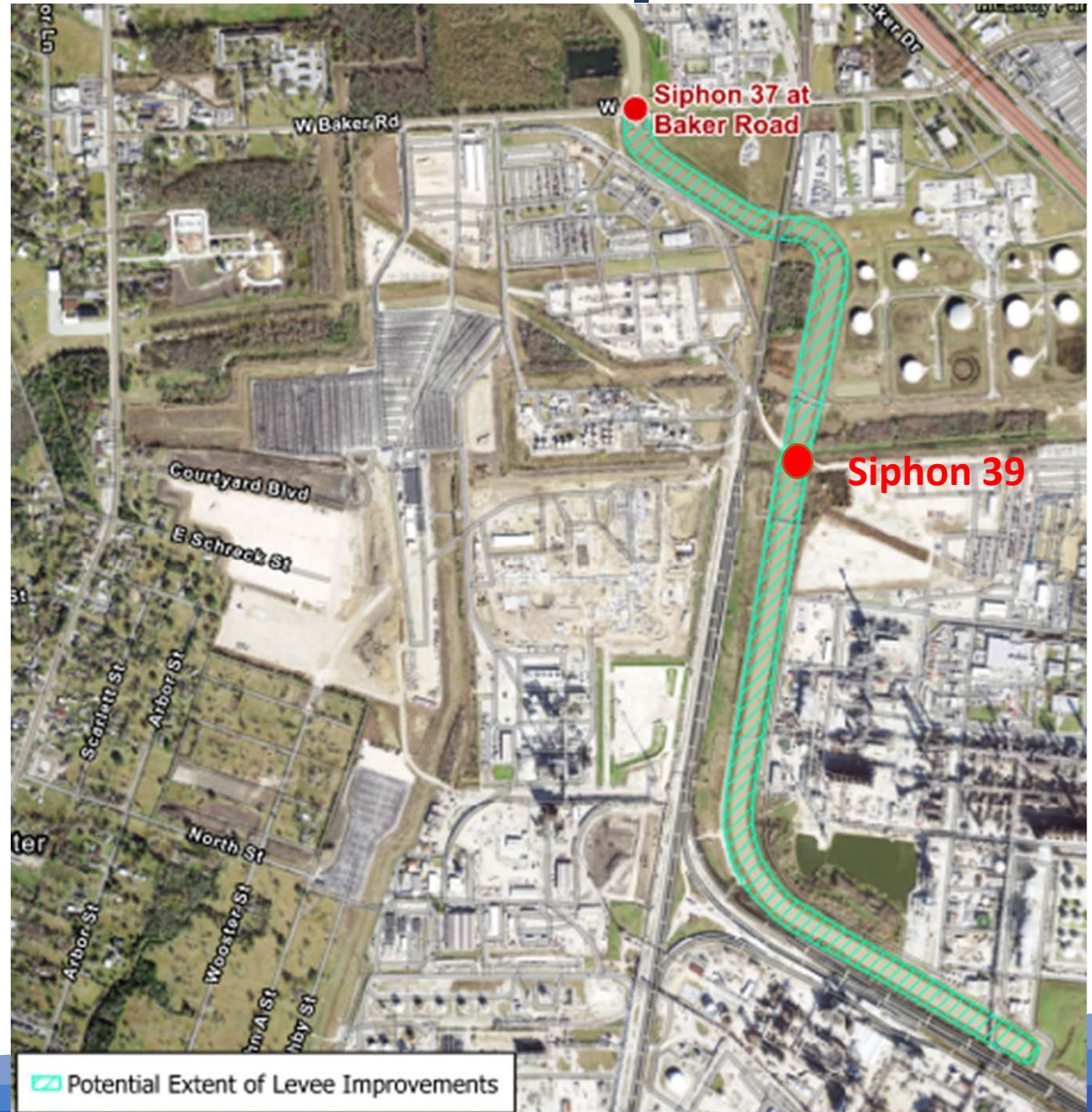
# Siphon 39/South Canal Levee Improvements

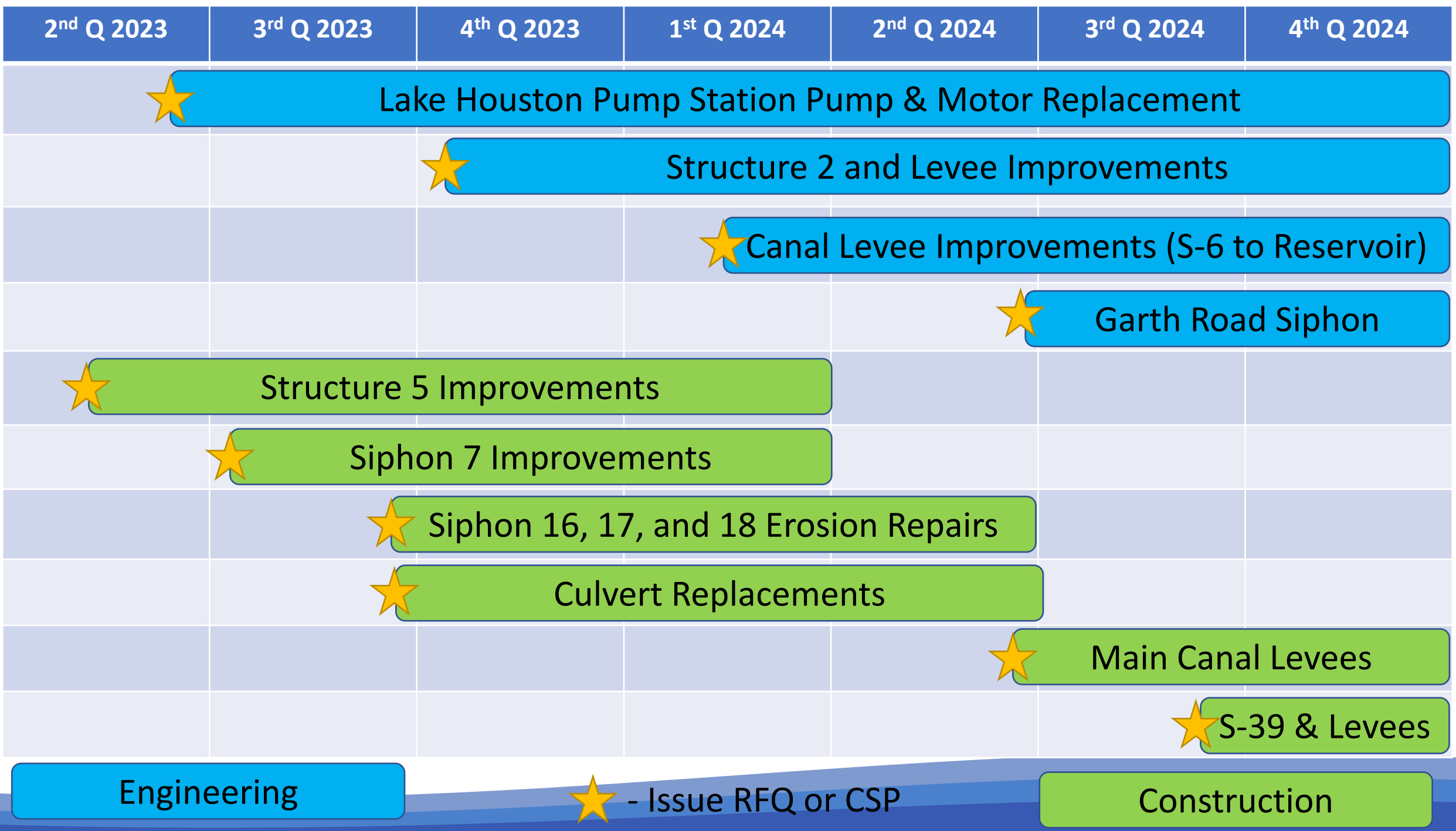
## Classification:

- Earthwork/Grading
- Siphons
- Concrete Structures
- Tunneling Construction

Schedule: 3<sup>rd</sup> Quarter 2024

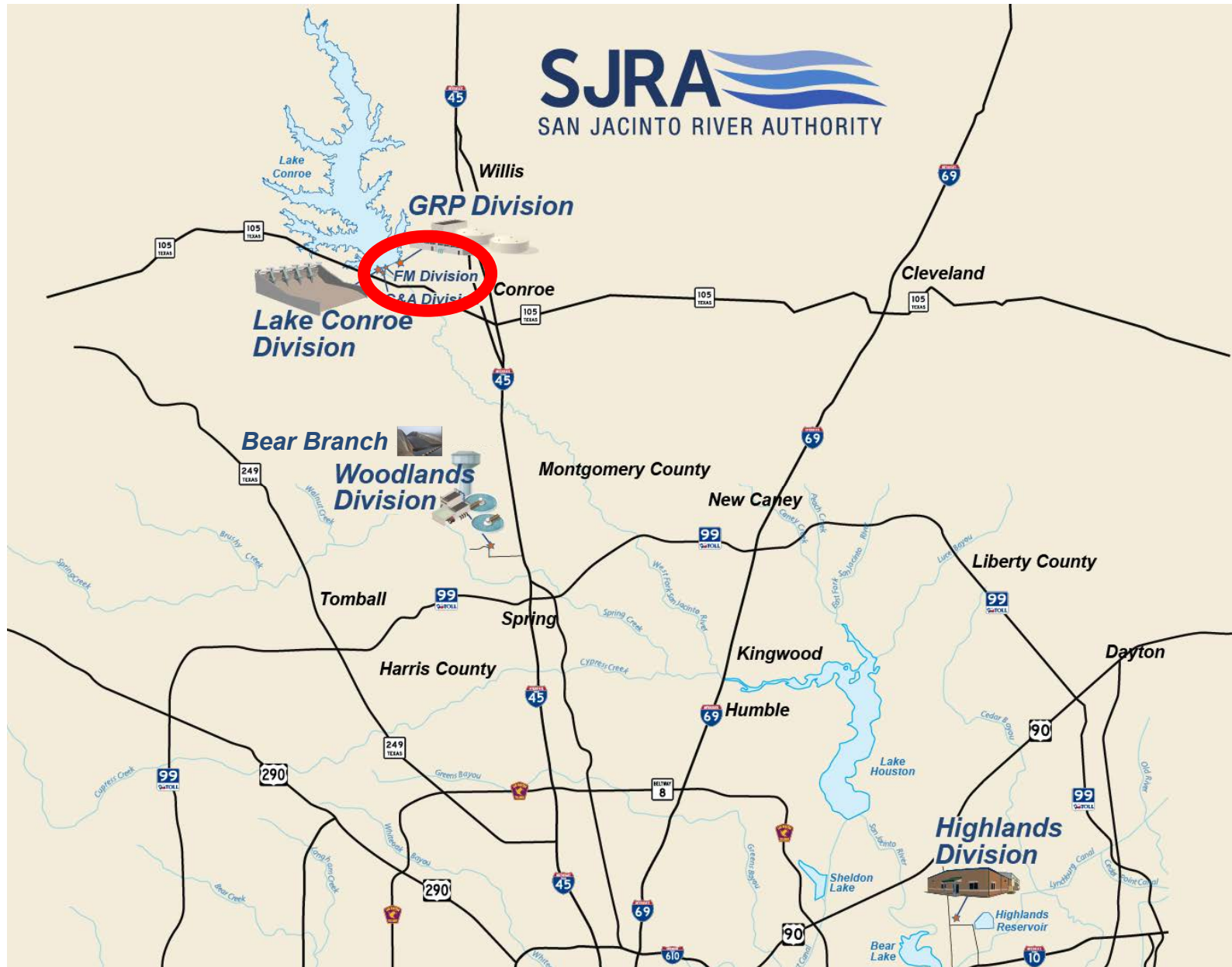
Construction Budget: \$6,003,000





# SJRA

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# Flood Management Division

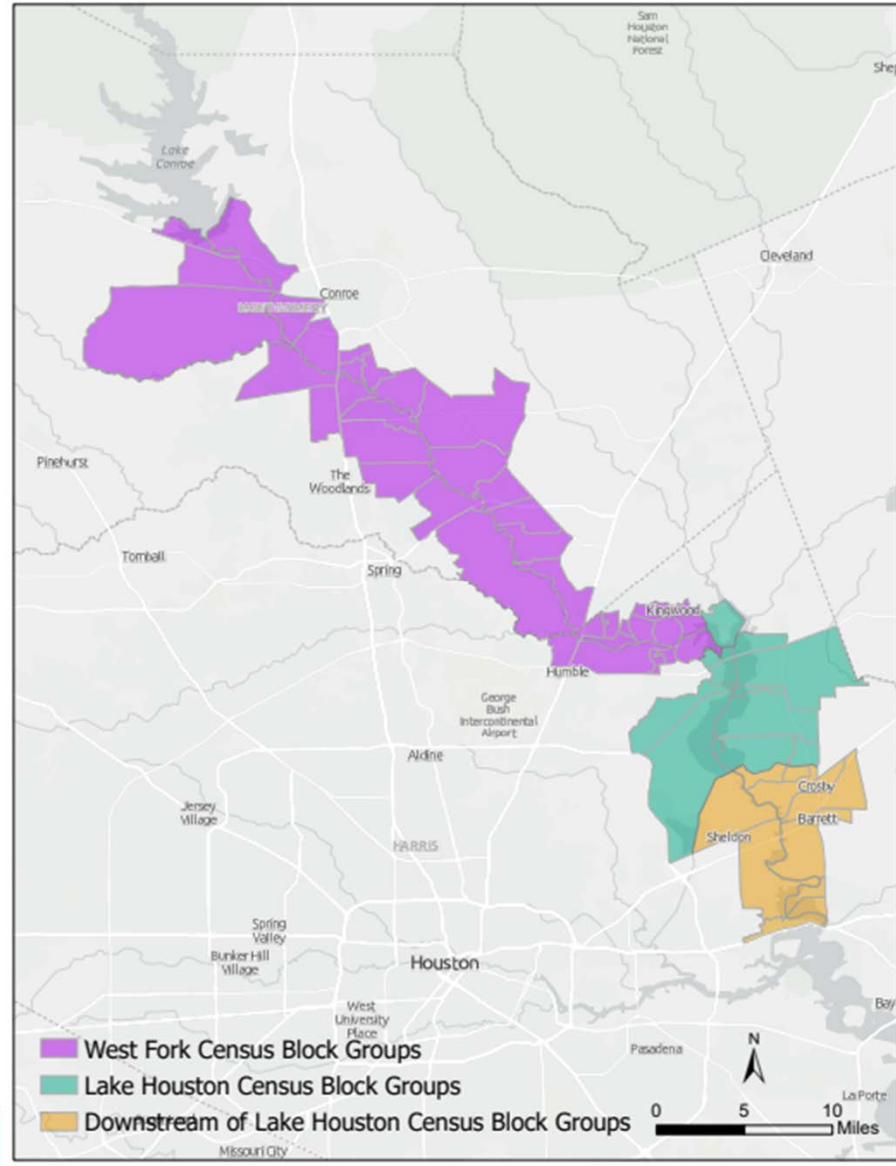
## STAY TUNED – SEDIMENT TRAPS

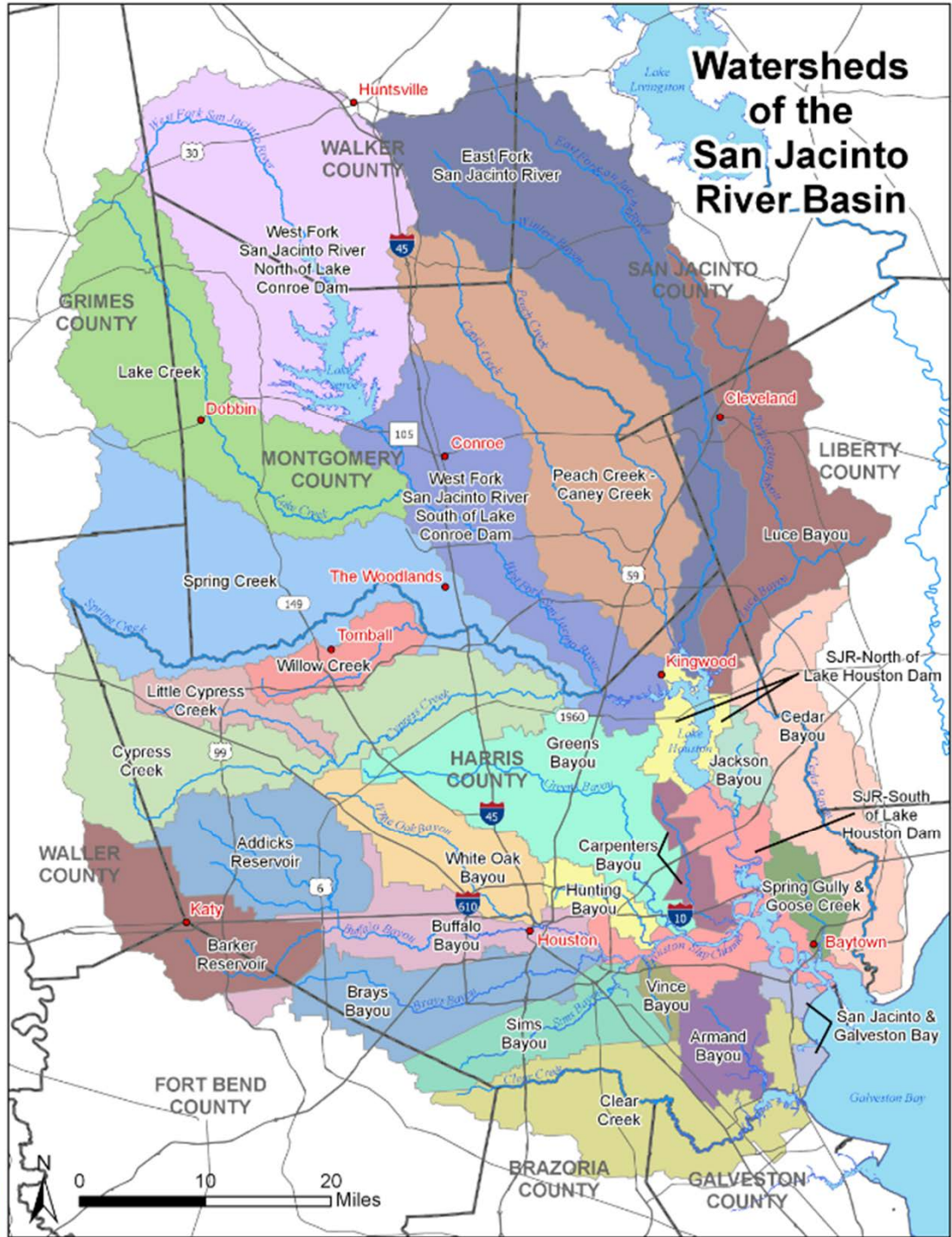




# Flood Management Division

**STAY TUNED –  
LAKE HOUSTON JOINT  
RESERVOIR OPERATION  
STUDY**



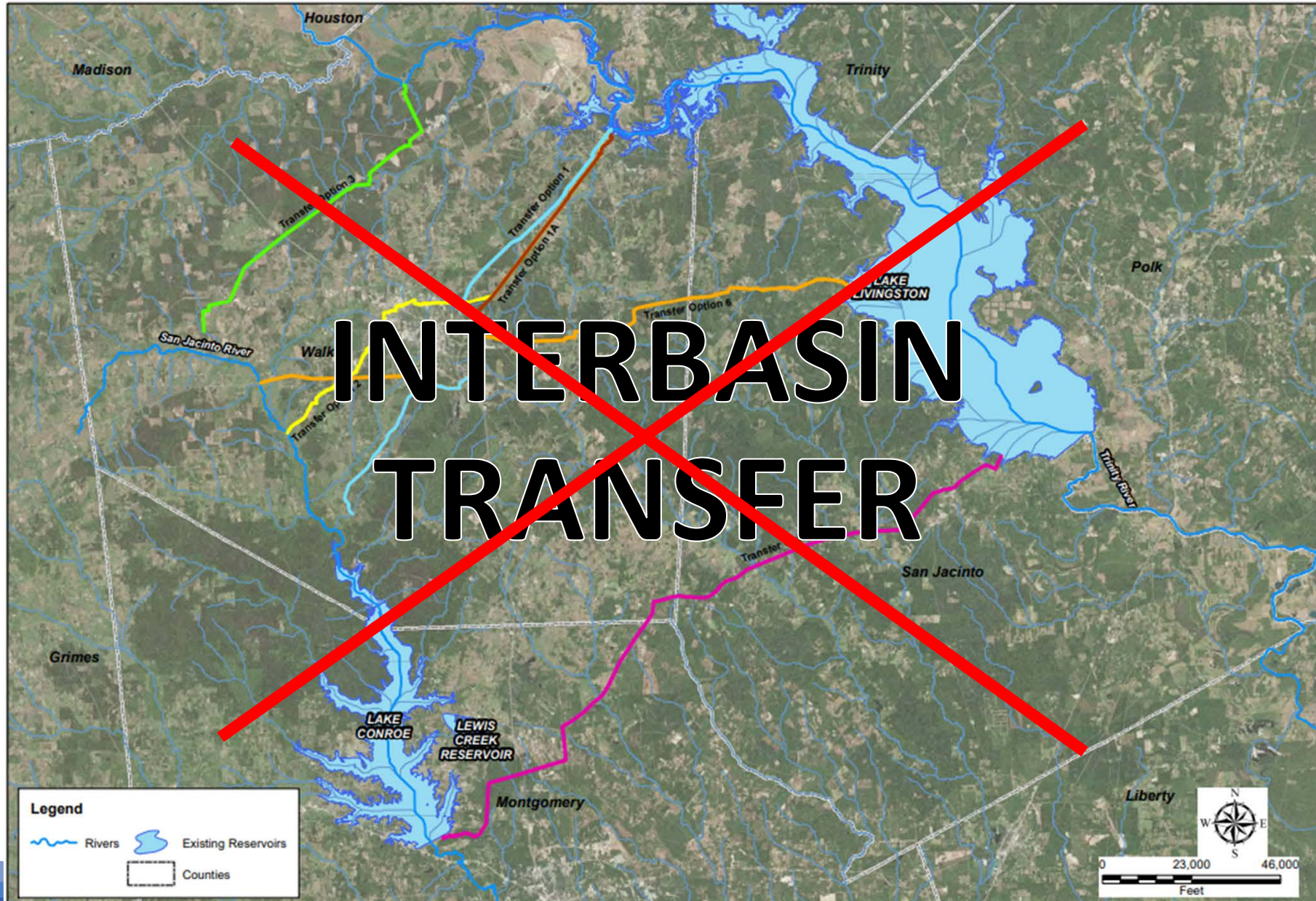


# Flood Management Division





# Raw Water Division





# SJRA

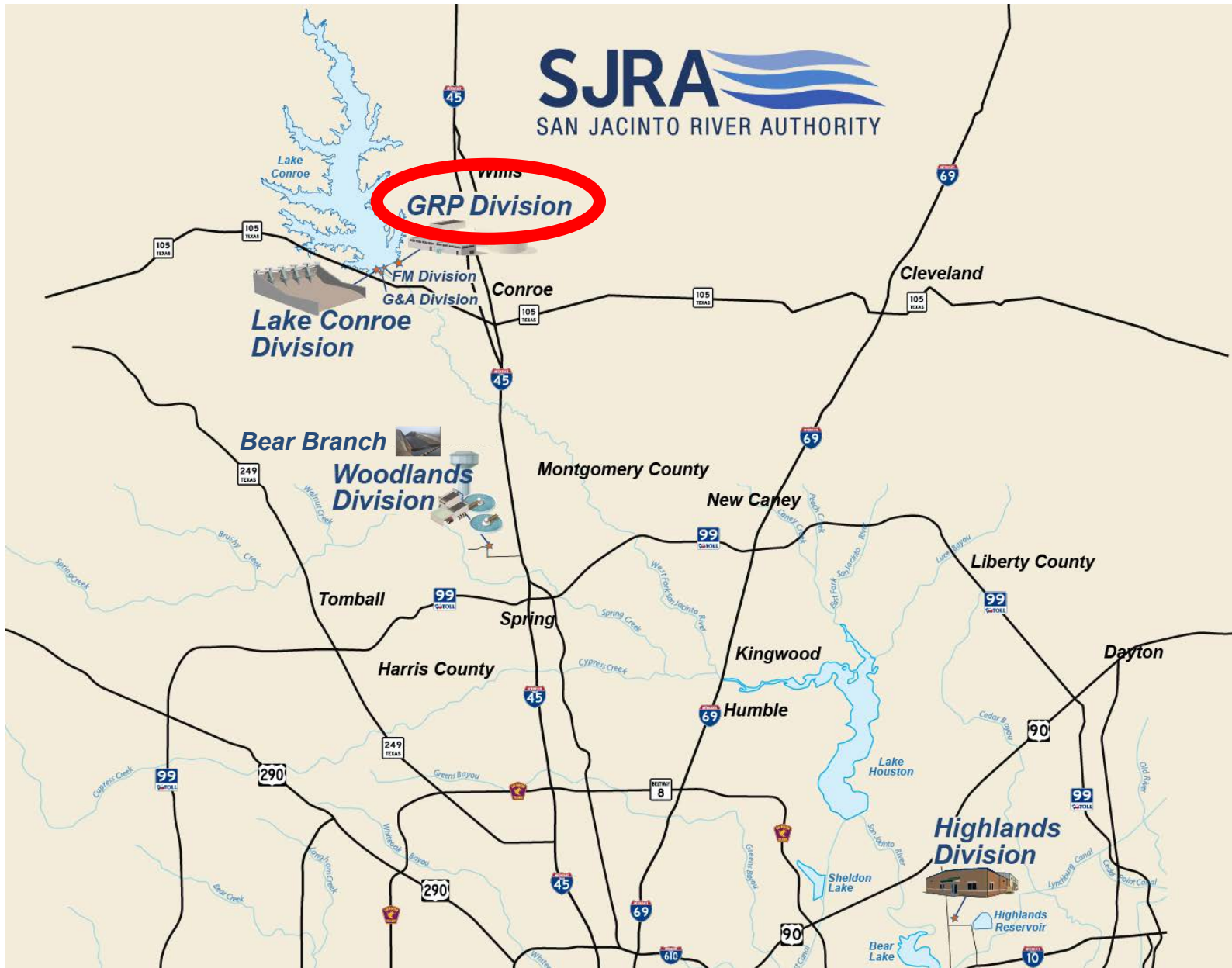
SAN JACINTO RIVER AUTHORITY

**GRP Division**

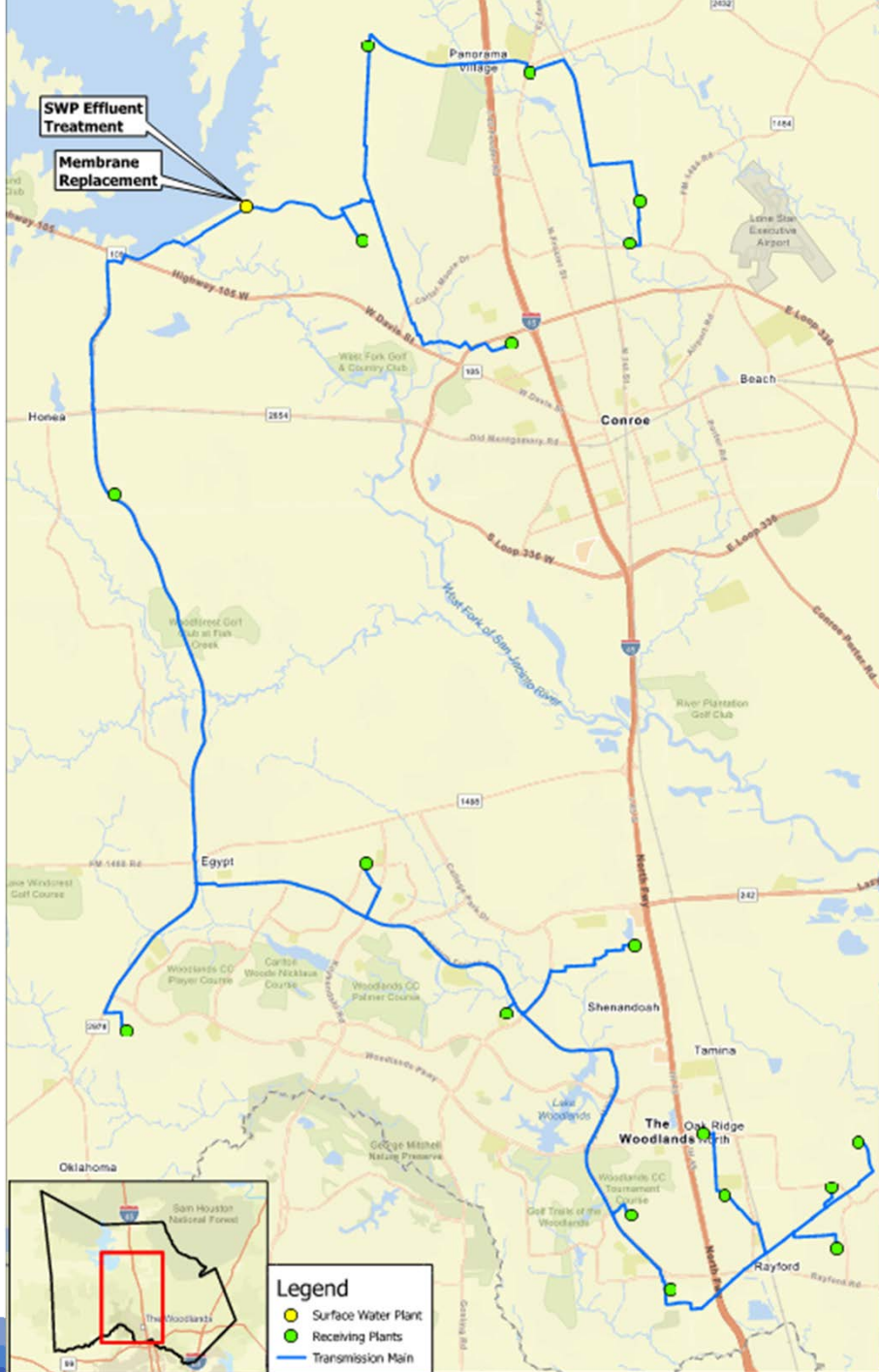
**Lake Conroe Division**

**Bear Branch Woodlands Division**

**Highlands Division**







# **Professional Services Projects (GRP)**



# Process Water Discharge Optimization

## Classification:

- Wastewater Planning
- Wastewater Treatment

Schedule: 1<sup>st</sup> Quarter 2024



Total Project Budget: \$2,929,000



# **Construction Services Projects (GRP)**



**STAY TUNED**



# GRP Summary

2 <sup>nd</sup> Q 2023	3 <sup>rd</sup> Q 2023	4 <sup>th</sup> Q 2023	1 <sup>st</sup> Q 2024	2 <sup>nd</sup> Q 2024	3 <sup>rd</sup> Q 2024
			★ Process Water Optimization		

Engineering

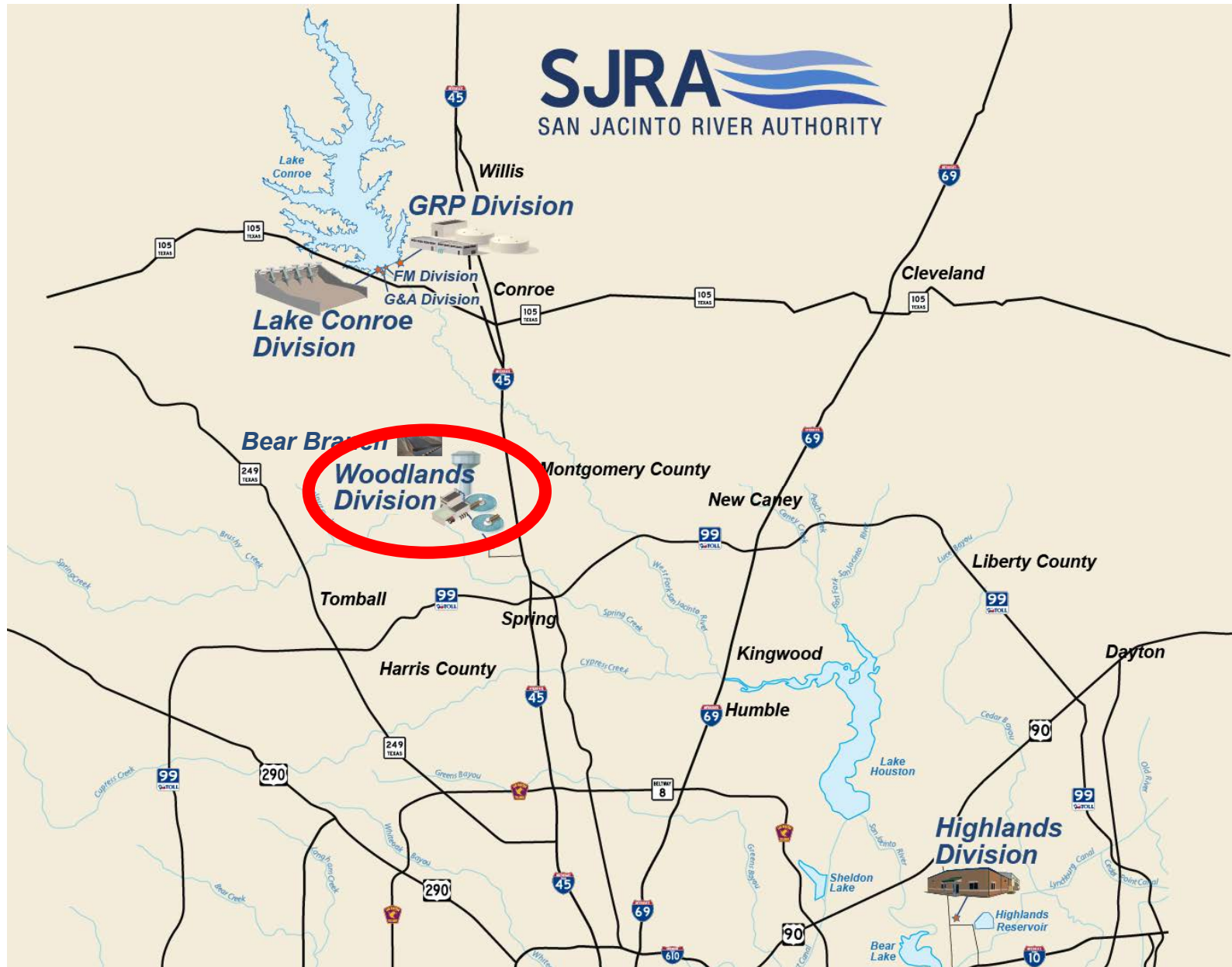
Construction

★ - Issue RFQ or CSP



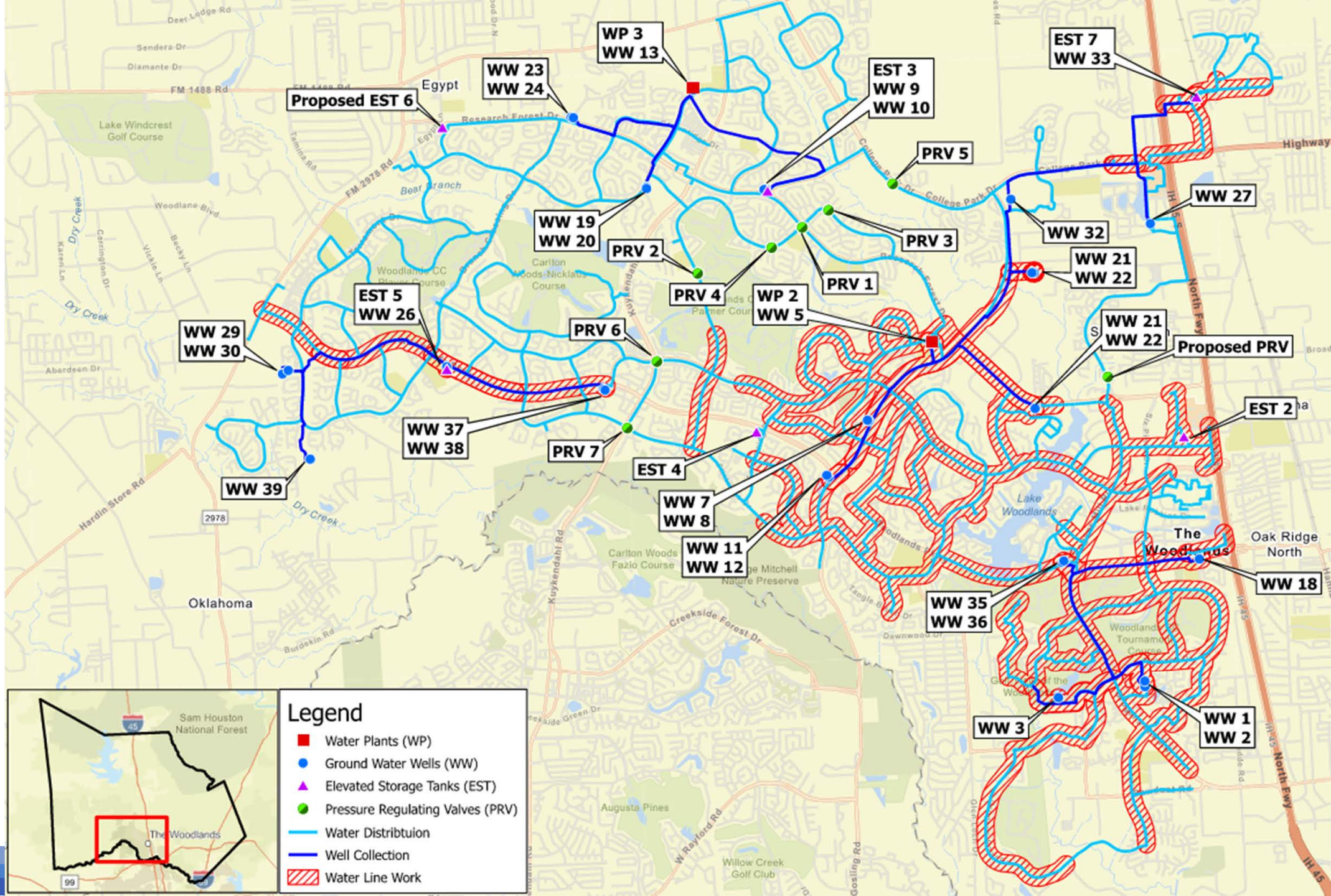
# SJRA

SAN JACINTO RIVER AUTHORITY



# **Woodlands Division Water**





### Legend

- Water Plants (WP)
- Ground Water Wells (WW)
- ▲ Elevated Storage Tanks (EST)
- Pressure Regulating Valves (PRV)
- Water Distribuion
- Well Collection
- ▨ Water Line Work



# **Professional Services Projects**

## **(Woodlands Water)**



# Elevated Storage Tank No. 6

## Classification:

- 1.0 MG Elevated Storage Tank Design

Schedule: 2<sup>nd</sup> Quarter 2023

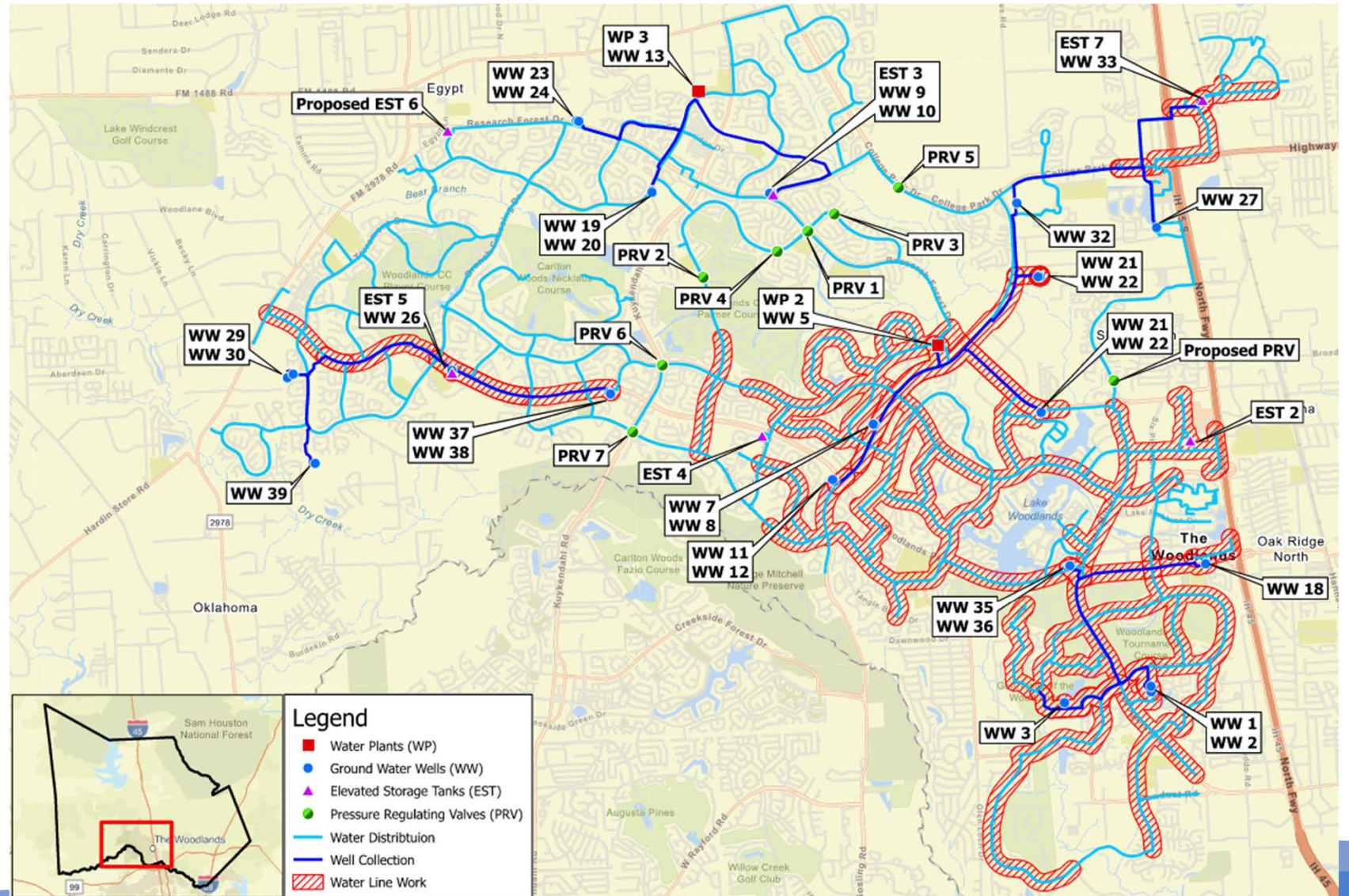
Total Project Budget: \$8,083,000



# AC Water Line Program

## Projects:

1. Program Management
2. North Town Center
3. Panther Creek





# AC Water Line Program Management

## Classification:

- Water Line Design
- Scheduling
- Program Management

Schedule: 3<sup>rd</sup> Quarter 2023

Total Project Budget: TBD



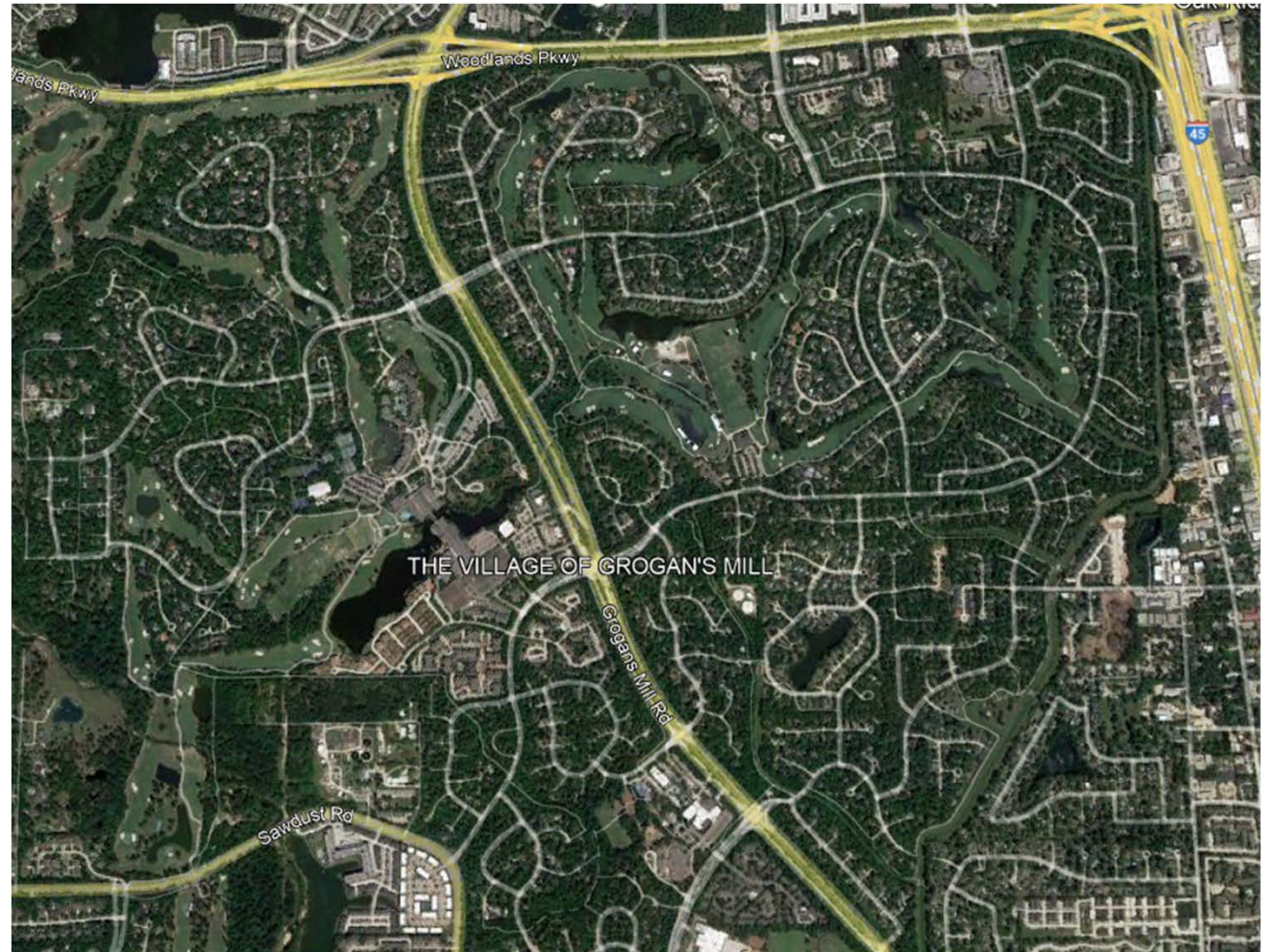
# North Town Center Water Line

## Classification:

- Water Line Design
- Trenchless Design

Schedule: 4<sup>th</sup> Quarter 2023

Total Project Budget: ~\$22,035,000



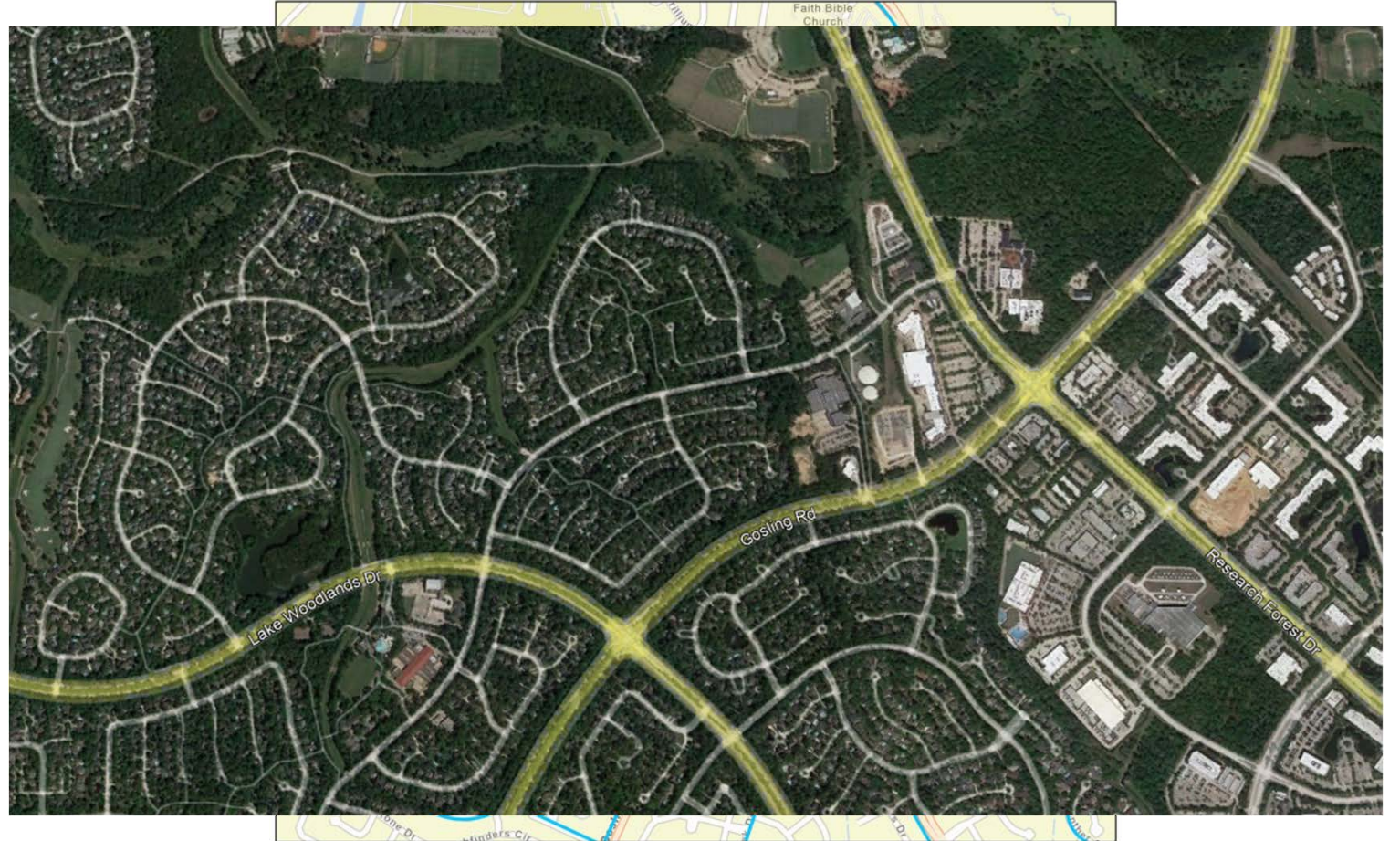


# Panther Creek Water Line

## Classification:

- Water Line Design
- Trenchless Design

Schedule: 1<sup>st</sup> Quarter 2024



Total Project Budget: ~\$28,809,000



# **Construction Services Projects**

## **(Woodlands Water)**

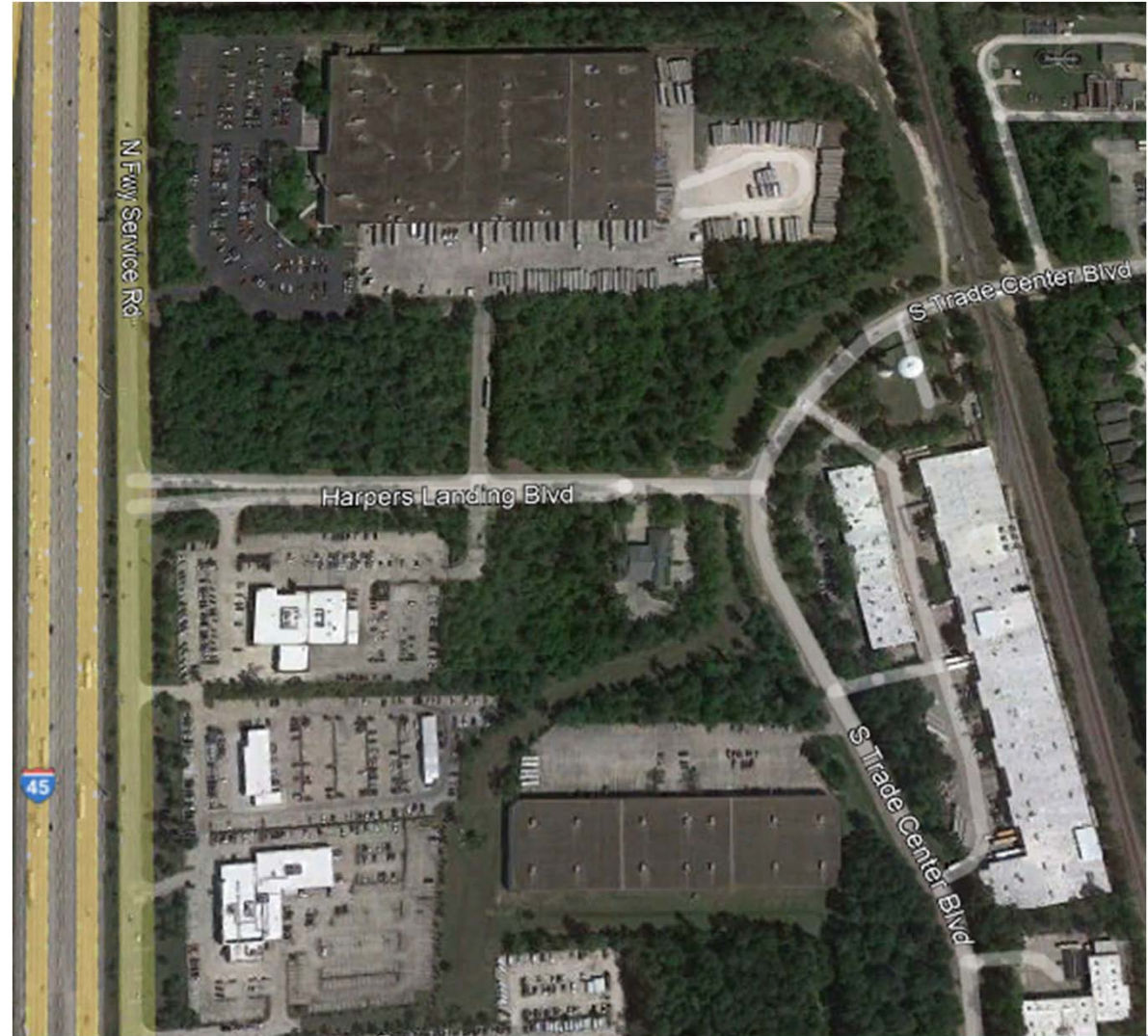
# Harper's Landing Water Line

## Classification:

- Water Line Construction

Schedule: 2<sup>nd</sup> Quarter 2023

Construction Budget: \$428,000



# Grogan's Mill PRV

## Classification:

- PRV between WP No. 5 and WP No. 1

Schedule: 3<sup>rd</sup> Quarter 2023

Construction Budget: \$80,000





# Water Plants 2 and 3 Generators

## Classification:

- Generator Replacement
- SJRA Pre-Purchase Generators and ATS

Schedule: 2<sup>nd</sup> Quarter 2024

Construction Budget: \$2,000,000



# Elevated Storage Tank No. 6

## Classification:

- 1.0 MG Elevated Storage Tank Construction

Schedule: 3<sup>rd</sup> Quarter 2024

Total Project Budget: \$8,083,000



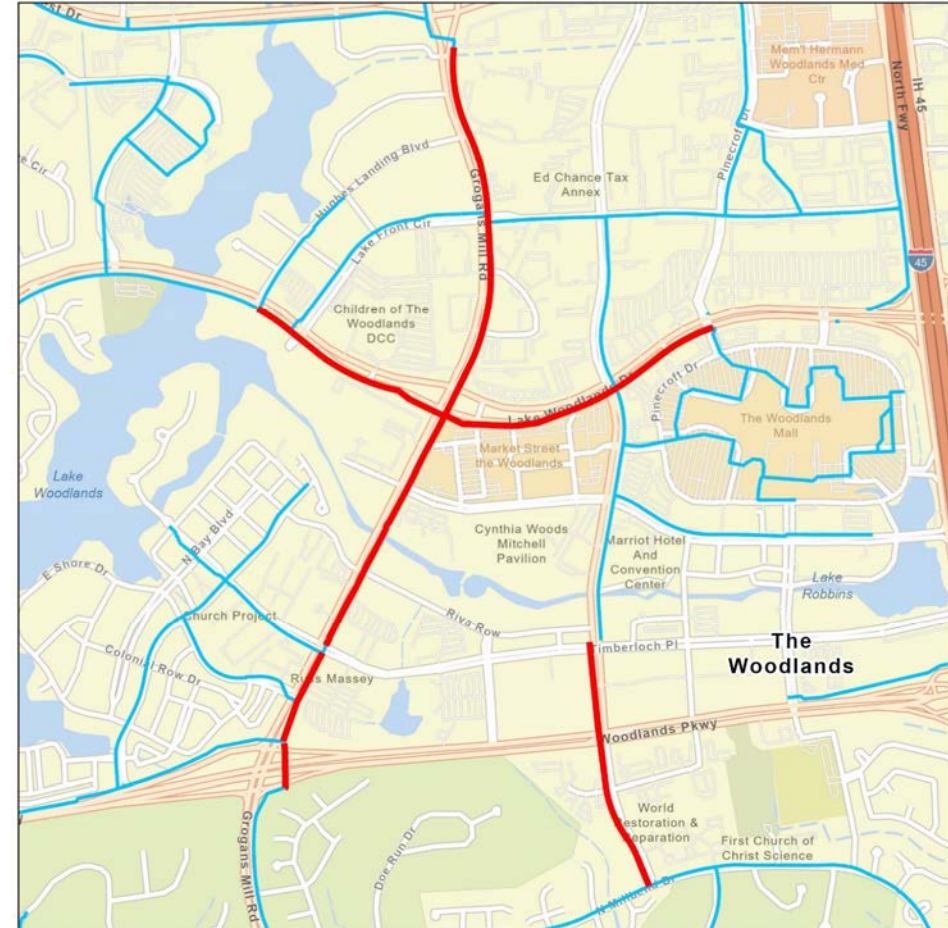
# Town Center Water Line

## Classification:

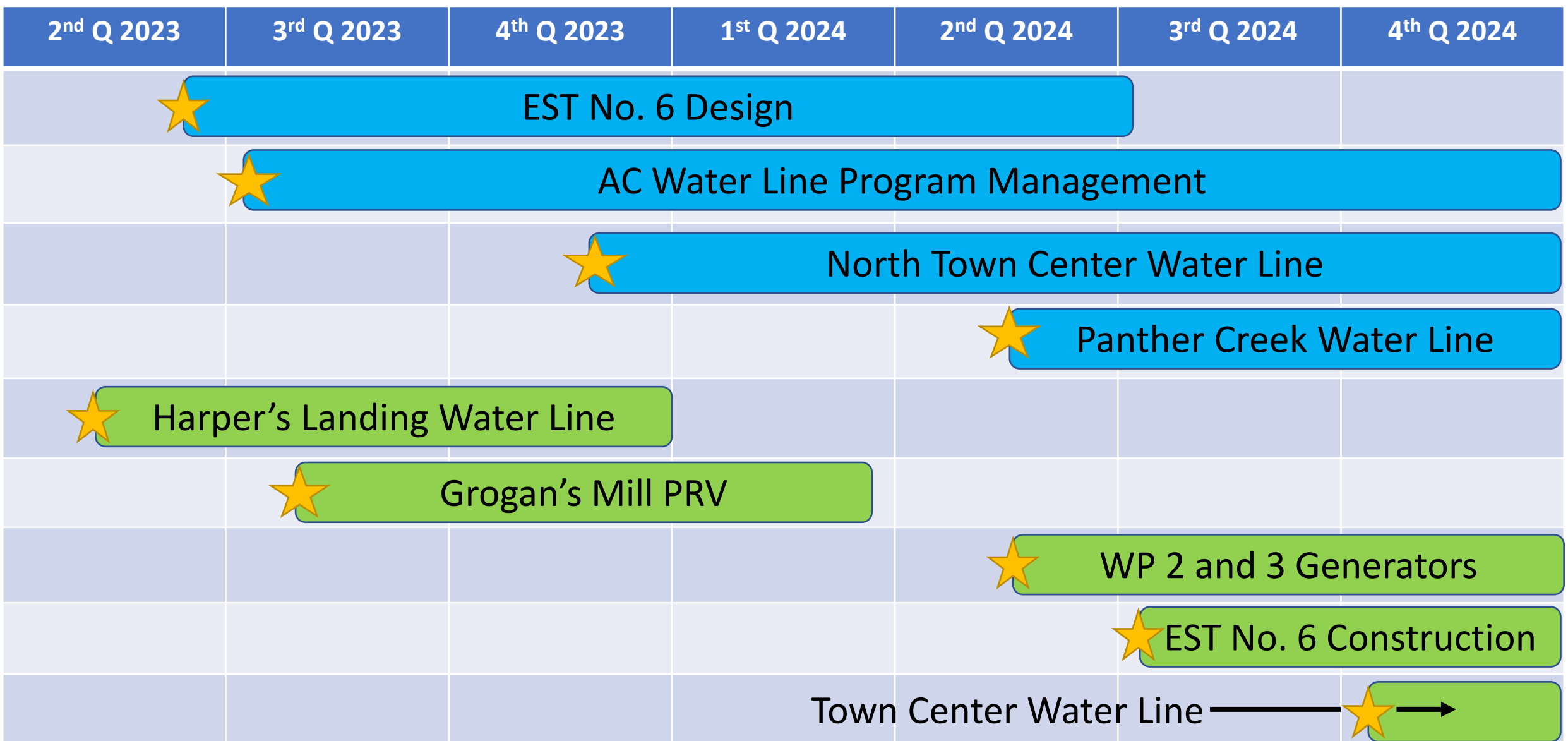
- 12-inch and 16-inch Water Line
- HDD
- Pipe Bursting
- Open Cut
- Boring

Schedule: 4<sup>th</sup> Quarter 2024

Construction Budget: \$10,944,000





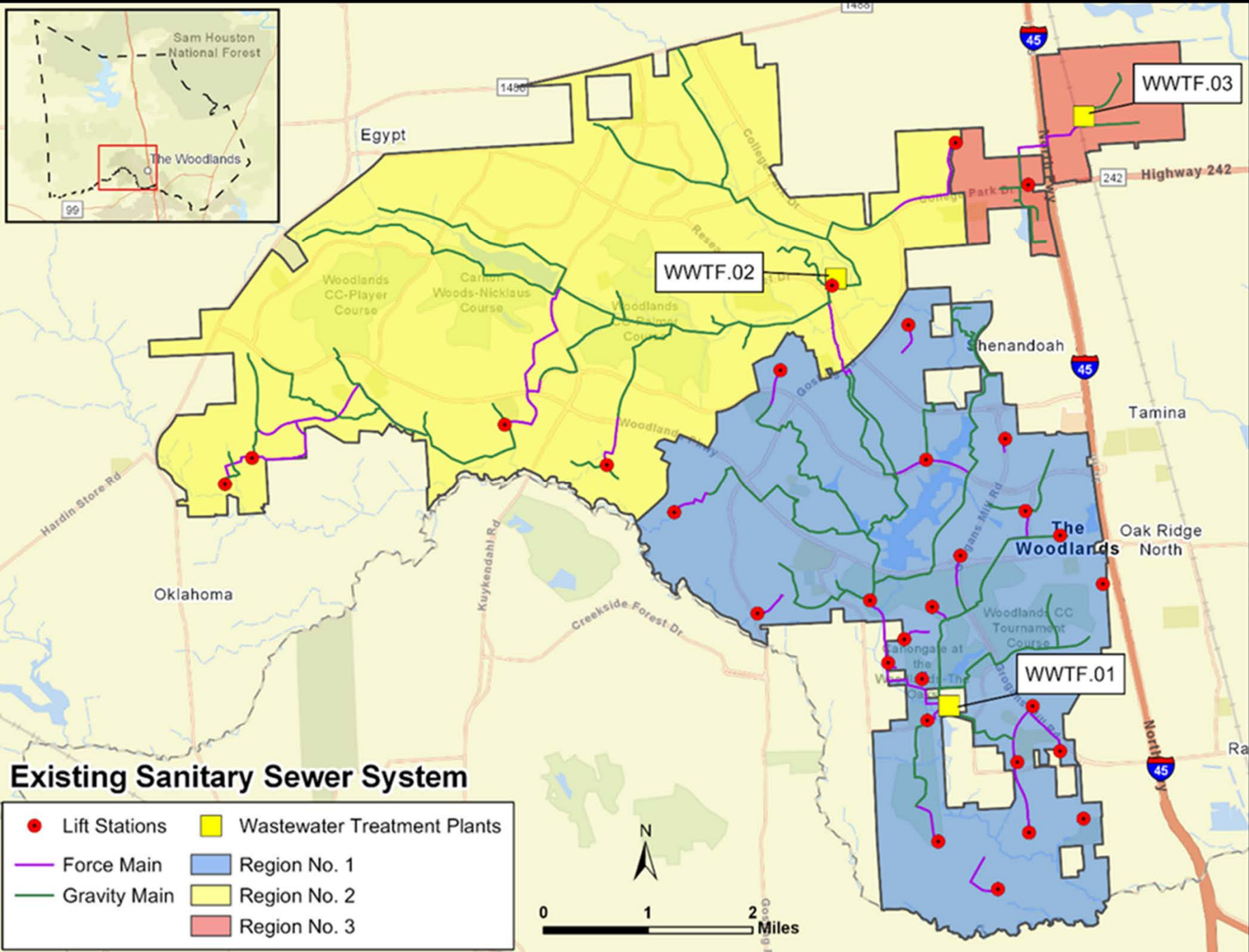


Engineering

★ - Issue RFQ or CSP

Construction

# **Woodlands Division Wastewater**



### Existing Sanitary Sewer System

- |   |  |
|---|--|
| <span style="color: red;">●</span> Lift Stations  | <span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> Wastewater Treatment Plants |
| <span style="color: purple;">—</span> Force Main  | <span style="background-color: lightblue; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> Region No. 1             |
| <span style="color: green;">—</span> Gravity Main | <span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> Region No. 2                |
|   | <span style="background-color: lightcoral; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> Region No. 3            |





# Wastewater Strategic Plan

## Outcome of Phase 1

- Proceed with Phase 2
  - Further refine selected alternative (New MBR Treatment Facility)
  - Consolidation deferred
- Land Acquisition
  - Proceed with land needed for selected alternative
- Conveyance Optimization
  - Proceed with preliminary design to remove up to 5 lift stations

## Ongoing Phase 2

- Refine selected alternative
- Right-size capacity of new treatment facility

# **Professional Services Projects**

## **(Woodlands Wastewater)**



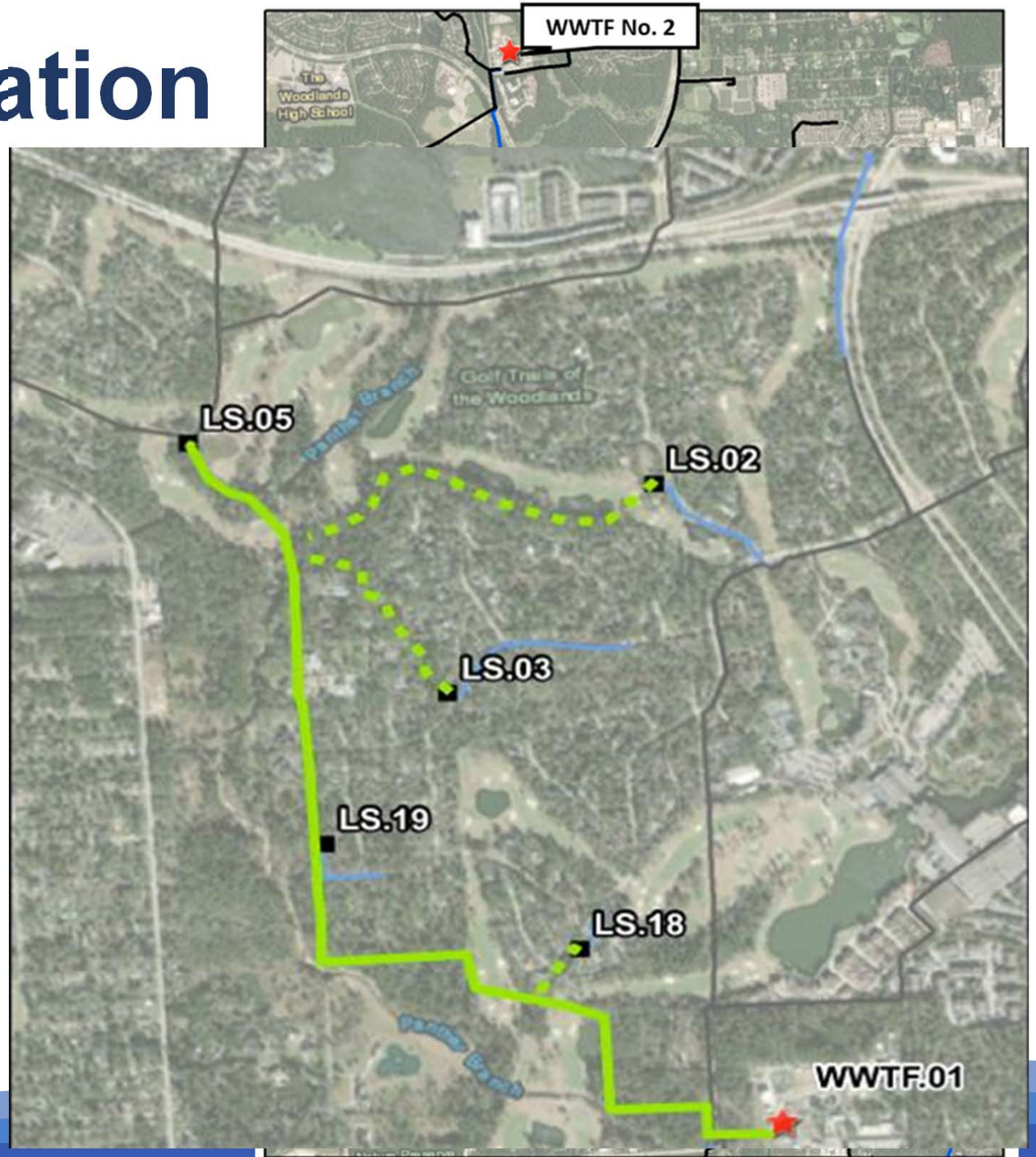
# Conveyance Optimization

## Classification:

- Wastewater Planning
- Route Study
- Lift Stations
- Gravity Lines

Schedule: 2<sup>nd</sup> Quarter 2023 (Study)  
1<sup>st</sup> Quarter 2024 (Design)

Total Project Budget: \$47,160,000





# Proposed Wastewater Treatment Facility

## Classification:

- Treatment Facility Design
- Membranes
- Electrical
- Mechanical

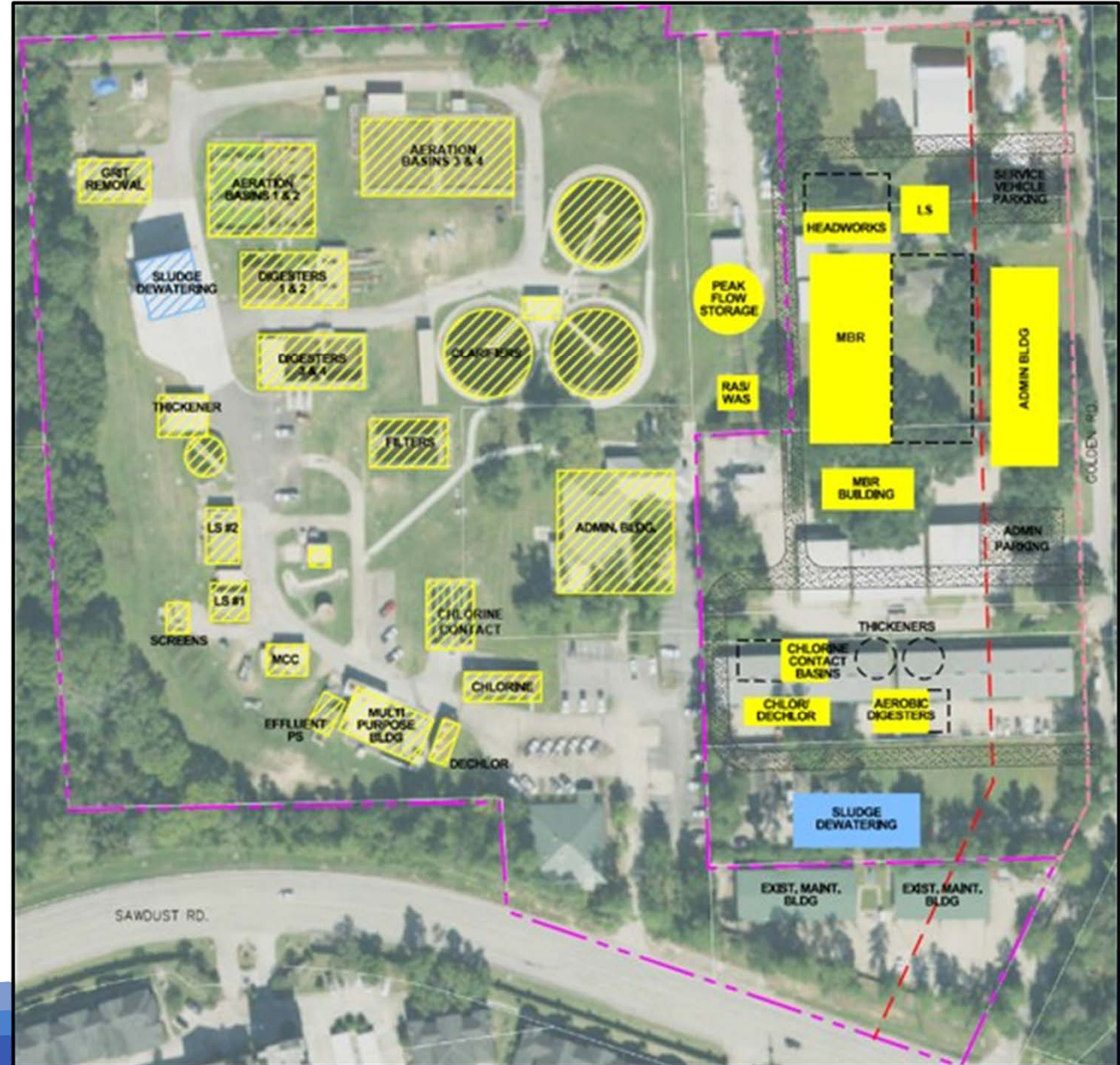
## Schedule:

4<sup>th</sup> Quarter 2023 (Owner's Advisor)

1<sup>st</sup> Quarter 2024 (Design)

1<sup>st</sup> Quarter 2027 Construction

**Total Project Budget: \$226,170,000**



# Lift Station No. 1

## Classification:

- Gravity Line
- Lift Station Abandonment

Schedule: 3<sup>rd</sup> Quarter 2023



Total Project Budget: \$1,000,000



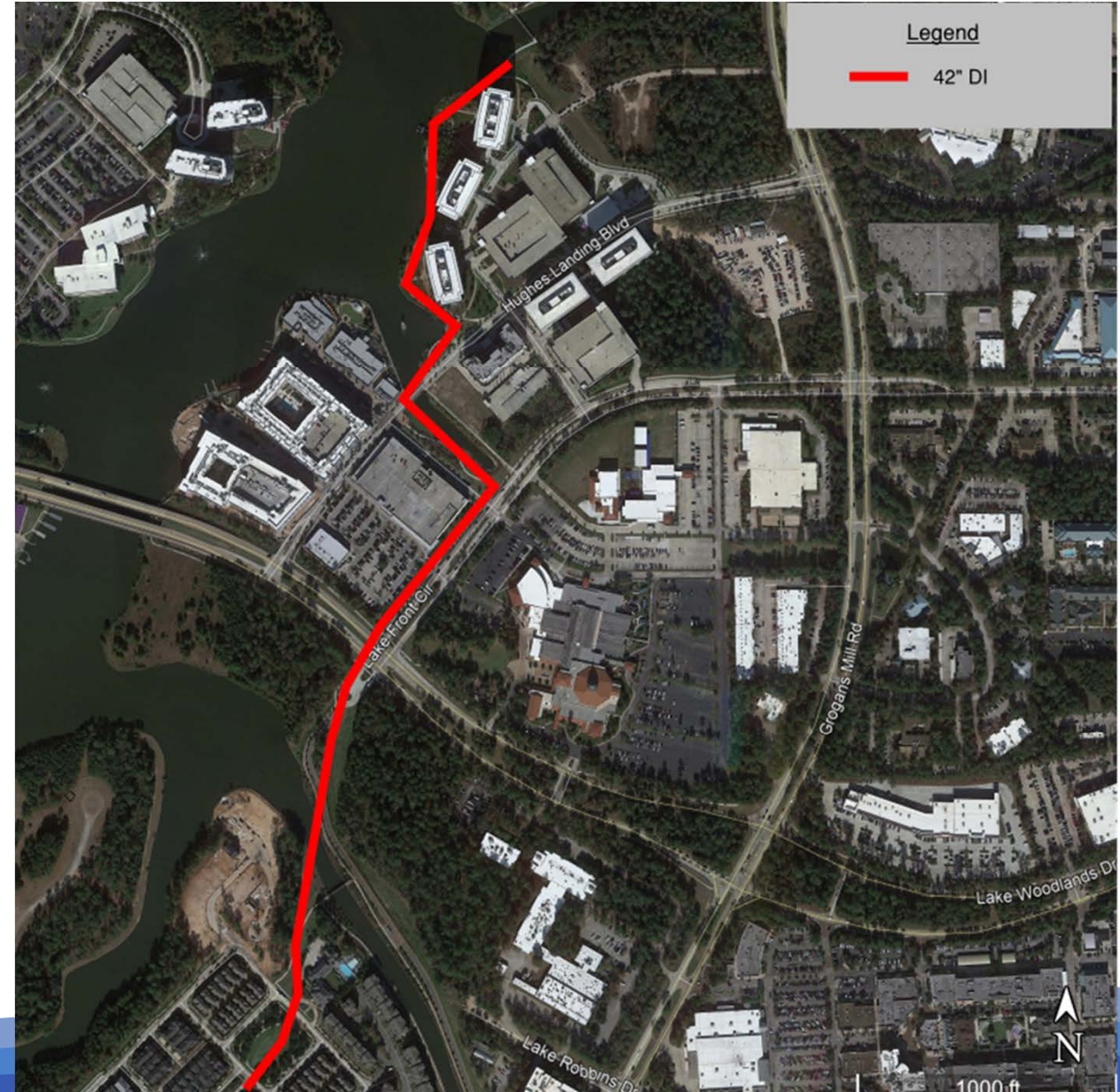
# Hughes Landing Gravity Main Rehabilitation

## Classification:

- Gravity Line Rehab
- Cured-in-place-pipe (CIPP)

Schedule: 3<sup>rd</sup> Quarter 2024

Total Project Budget: \$7,662,000





# **Construction Services Projects**

## **(Woodlands Wastewater)**



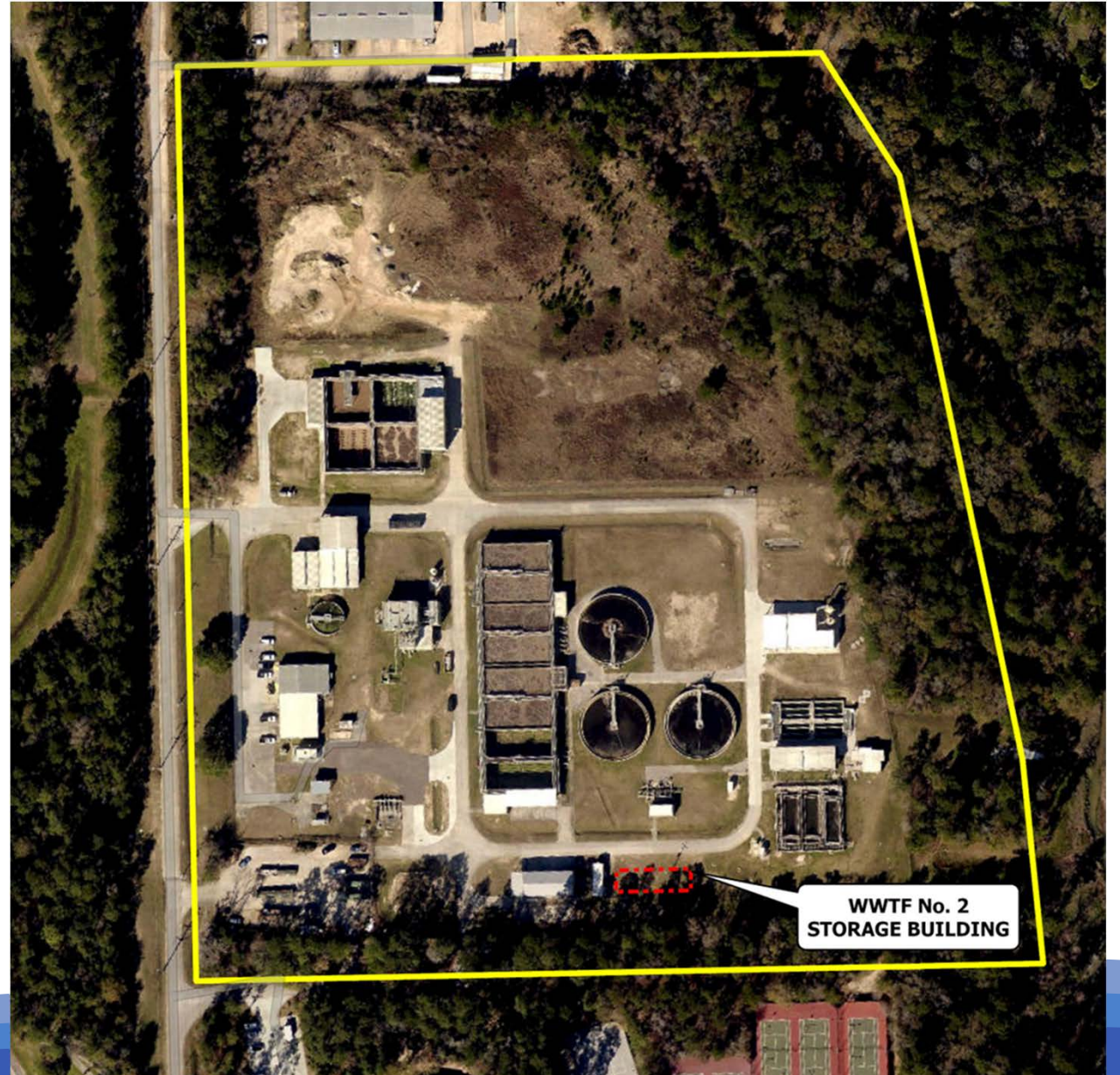
# WWTF No. 2 Storage Facility

## Classification:

- Metal Building Construction

Schedule: 3<sup>rd</sup> Quarter 2023

Construction Budget: \$410,000





# WWTF No. 2 Tertiary Filter Replacement

## Classification:

- Wastewater Facilities
- Filters

Schedule: 4<sup>th</sup> Quarter 2023

Construction Budget: \$5,203,000





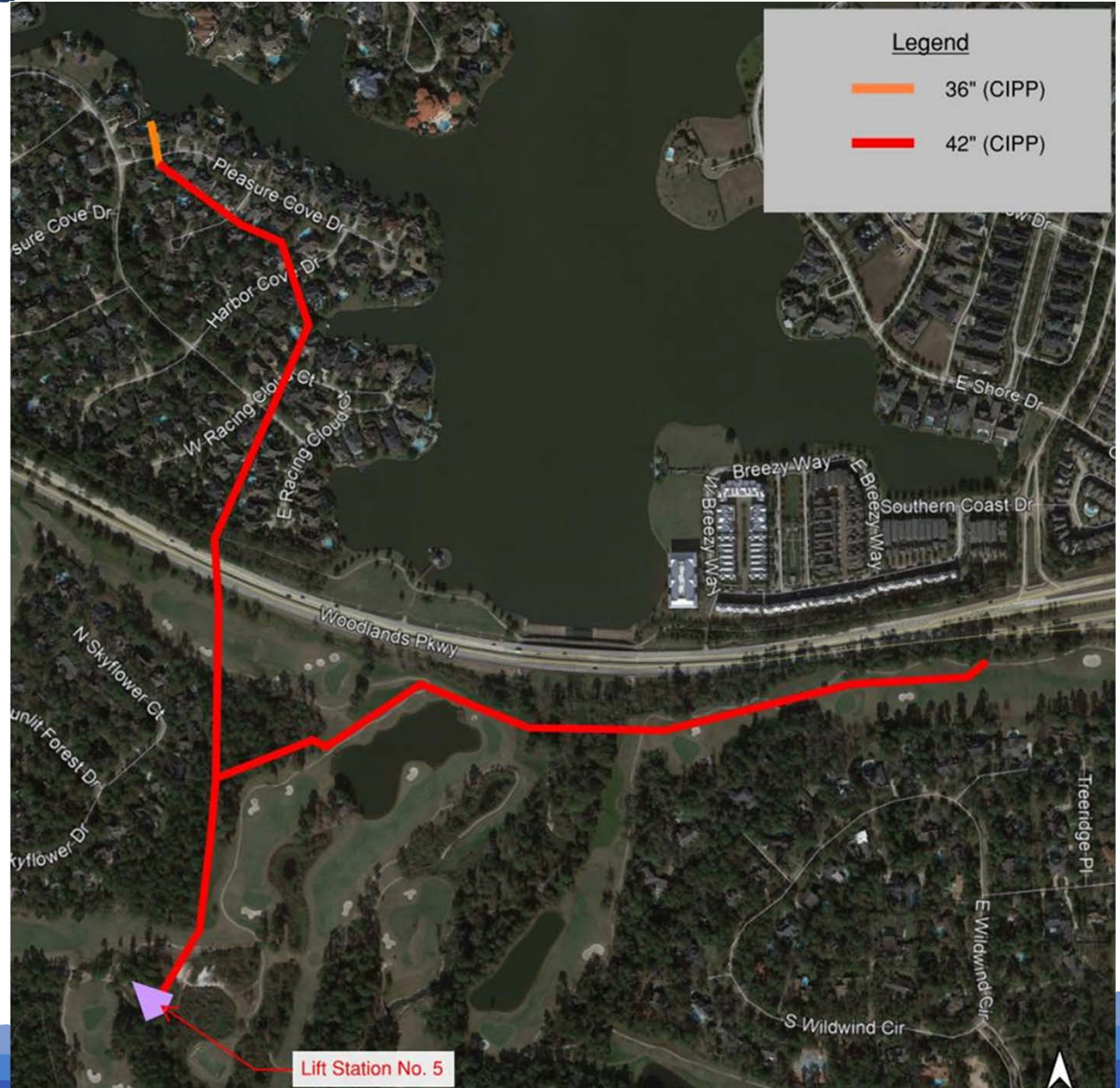
# Southshore Gravity Main Rehabilitation

## Classification:

- Gravity Main Rehab
- Cured-in-place-pipe (CIPP)
- Bypass Systems

Schedule: 2<sup>nd</sup> Quarter 2024

Construction Budget: \$9,533,500



# Woodlands Wastewater Summary



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Construction

# Questions





# Thank You

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