

The meeting will begin shortly



Please mute your microphone until called for questions.



Please disable your video unless you are speaking.



Please enter your name and title in the chat.



Please insert questions in chat or raise hand to speak.



This meeting is being recorded.



Houston-Galveston
Area Council

NATURAL RESOURCES ADVISORY COMMITTEE

AGENDA

Thursday, August 3, 2023, 1:30 PM

Hybrid In-Person/Zoom Meeting



NRAC Agenda

1. Call to Order/Welcome/Introductions

2. Certify Quorum

A quorum of 12 is required to conduct committee business.

NRAC Agenda (continued)

3. Approve Meeting Report

Request approval of May 4, 2023 meeting report. Copies shared via email and available on the NRAC Extranet website.

NRAC Agenda (continued)

4. Membership

H-GAC staff will provide a brief status update on membership.

NRAC Agenda (continued)

5. Environmental Committee Highlights

Coordinators for H-GAC environmental committees will provide information on activities and updates from the past quarter.

- Regional Flood Management Committee (Rachel Windham for Amanda Ashcroft)
- Solid Waste Management Committee (Erin Livingston)

Regional Flood Management Council

- Met on July 19, 2023
- Updates:
 - Harris County Flood Control District (HCFCD) - Cedar Bayou Bond Implementation Program & Crosby Eastgate Mitigation Bank
 - San Jacinto Regional Flood Planning Group - Regional Flood Plan
- Speaker Topics:
 - Texas Division of Emergency Management
 - hazard mitigation assistance programs
 - 2023 updates
 - Buffalo Bayou Community Plan
- Action:
 - Committee voted in favor of drafting a support letter to the Army Corps of Engineers for a Water Resources Development Act Sec. 7001 Proposal from HCFCD and other regional partners for a feasibility study of the Addicks and Barker Reservoirs regarding flood risk management improvements

NRAC Agenda (continued)

5. Environmental Committee Highlights

Coordinators for H-GAC environmental committees will provide information on activities and updates from the past quarter.

- Regional Flood Management Committee (Rachel Windham for Amanda Ashcroft)
- Solid Waste Management Committee (Erin Livingston)

NRAC Agenda (continued)

6. Environmental Program Highlights

H-GAC Staff will highlight Community & Environmental Planning projects to seek comment and feedback from Committee members.

- Watershed Protection Plan Projects Update (Rachel Windham)
- Parks and Natural Areas Roundtable Update (Andrea Tantillo)

Parks and Natural Areas Roundtable Recap

- Spring Field Trip to Timber Lane Utility District
- Combination Regional Conservation Initiative/Parks and Natural Areas Roundtable Peer Exchange
- Letter of support for Galveston Parks Board award application

Annual Awards Timeline

Activity	Timeline
Review Application and Select Judges	July and August
Advertise Awards/Solicit Applications	August
Accept Applications	September 1-28
Judging	Early October
PNA Roundtable Previews Award Recommendations Via Email	Mid October
National Resources Advisory Committee Reviews Award Recommendations	Early November
Notify Winners	Mid December/January
H-GAC Board recognizes winners	January
Advertise Recognition Event	January/early February
Host recognition event	Friday in mid-February



Parks and Natural Areas 2023 Awards

APPLY NOW!

Winning projects serve as models for the H-GAC region on how parks can improve water quality, habitat, and quality of life.

Apply at h-gac.com/parks
Applications Due 09/28/2023

A program of the Houston-Galveston Area Council h-gac.com

Parks and Natural Areas Roundtable Next Events

- Next roundtable will be September 11 at H-GAC
- Fall Field Trip on November 17 in Galveston

Find more at: h-gac.com/parks-and-natural-areas

NRAC Agenda (continued)

7. Subcommittees

Water Innovation Strategies of Excellence Subcommittee

Staff coordinator, Rachel Windham, will provide an update on the status of the Water Innovation Strategies of Excellence Awards and future action.

2023 AWARDS CEREMONY



NRAC Agenda (continued)

7. Subcommittees (continued)

Conservation Subcommittee

Staff coordinator, Rachel Windham, will present on updates to the proposed Priority Projects List. A copy of the list was provided digitally to members prior to the meeting.

Representatives will consider and take action on a recommendation to the H-GAC Board of Directors to accept the updated Regional Conservation Initiative Priority Projects List.

NRAC Agenda (continued)

Conservation Subcommittee (continued)

Summary of New Projects To Consider

Level 3

Project, Organizers	Summary	H-GAC's Role
Olivewood Cemetery Restoration , <i>Descendants of Olivewood</i>	Restore the original tree canopy at Olivewood Cemetery, an historic African-American cemetery established in 1877 and located on the banks of White Oak Bayou	H-GAC can provide support by funding matchmaking, and peer review of grant applications

NRAC Agenda (continued)

8. Topic of the Day

Rachel Windham, Senior Planner at H-GAC, will provide an overview of the Draft 2023 Water Quality Management Plan Update which involves the collection and analysis of water quality and locational data related to wastewater sources. A copy of the document was provided digitally to members prior to the meeting.

Representatives will consider and take action on a recommendation to the H-GAC Board of Directors to accept the Water Quality Management Plan Update.

2023

WATER QUALITY MANAGEMENT PLAN UPDATE

Natural Resources Advisory Committee
August 3, 2023

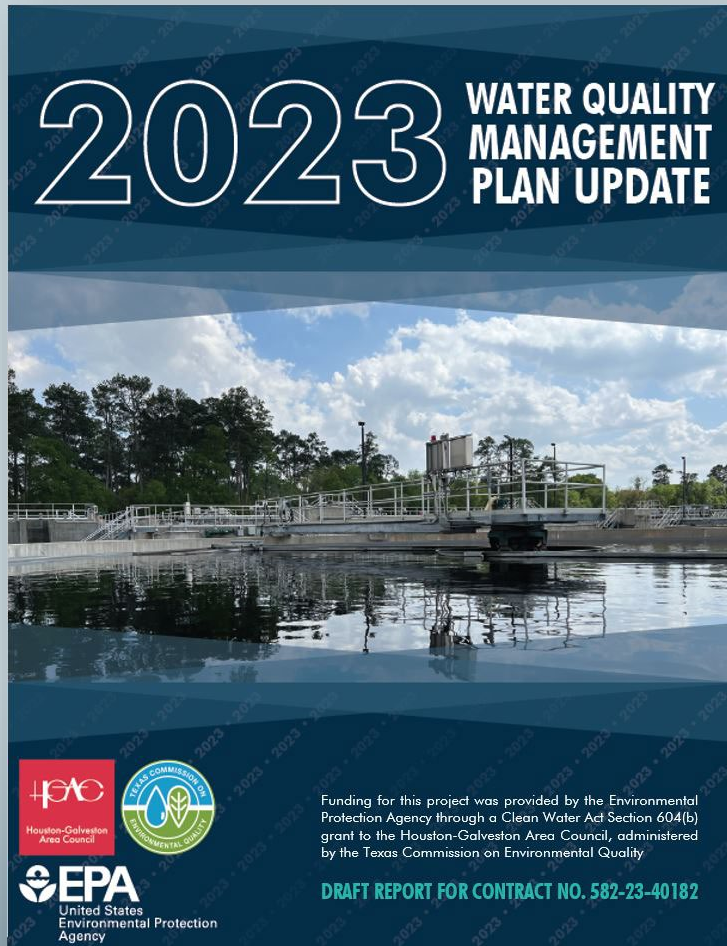
Acknowledgements

Funding for this project was provided by the United States Environmental Protection Agency (EPA) through a Clean Water Act Section 604(b) grant to the Houston-Galveston Area Council (H-GAC), administered by the Texas Commission on Environmental Quality (TCEQ).

TCEQ Contract Number 582-23-40182



FY 2023 Water Quality Management Plan Update



- Project involves acquiring, compiling, and evaluating regional wastewater infrastructure and effluent monitoring data
- Data compiled and combined with data from EPA and TCEQ to form an integrated data set
- Data used by various programs and projects to support current and future planning decisions
- Update becomes part of the State's Water Quality Management Plan (WQMP)

Primary Project Objectives

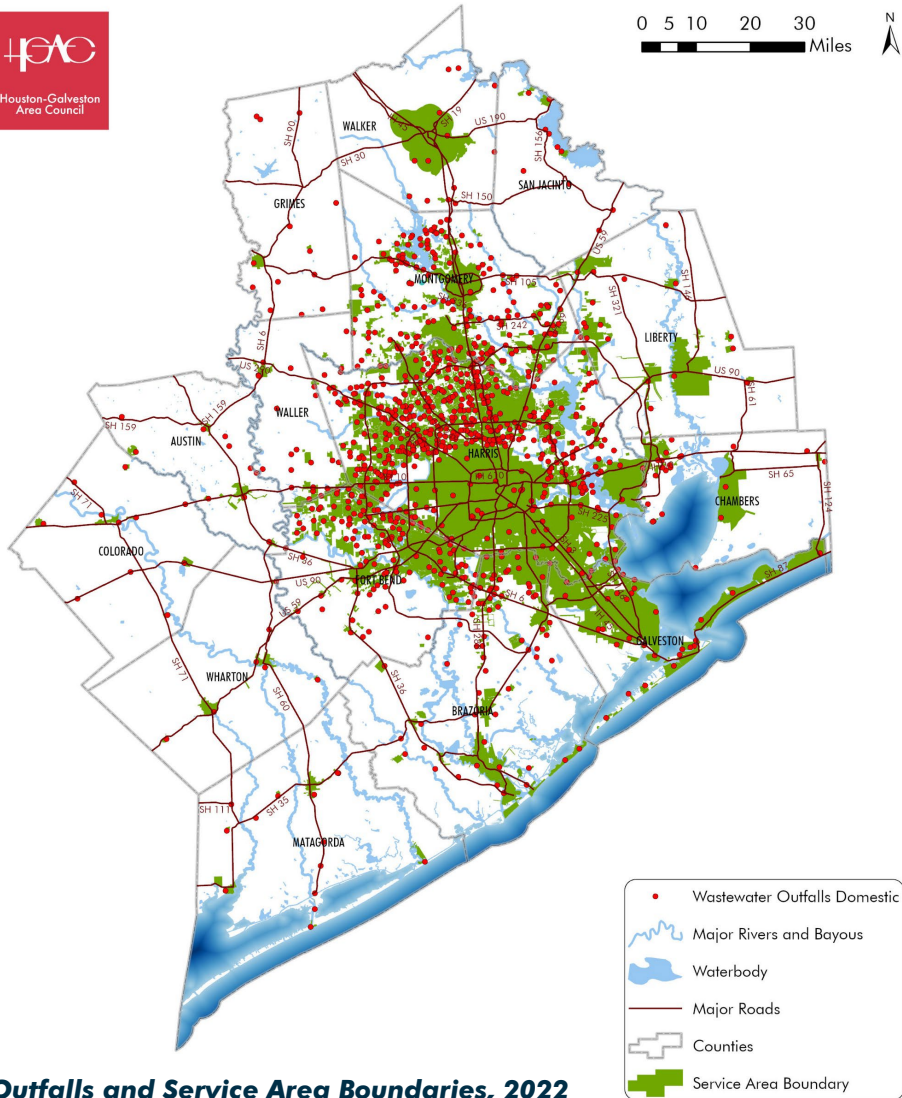
- Wastewater Data Update and Coordination
- Conformance Review for Clean Water State Revolving Fund (CWSRF) Projects
- Support Watershed Planning
- On-Site Sewage Facility (OSSF) Planning, Support, and Outreach
- OSSF Mapping Tool Expansion
- Water Quality Management Plan Update Report

Wastewater Data Update and Coordination



- Mapped wastewater treatment facility (WWTF) outfalls and service area boundaries
- Analyzed of wastewater effluent discharge monitoring report (DMR) and sanitary sewer overflow (SSO) data
- Conducted outreach related to employment in the wastewater industry

Wastewater Data Update and Coordination (cont.)



Wastewater Infrastructure Spatial Data

- Acquired and reviewed the domestic wastewater outfall location data for the 15-County region from TCEQ
 - 13-County H-GAC Region + San Jacinto and Grimes Counties
- Updated the Service Area Boundaries GIS layer for domestic outfalls with any new permittees
- Provided updated Outfall and Service Area Boundary GIS layers and maps to TCEQ

Outfalls and Service Area Boundaries, 2022



Wastewater Data Update and Coordination (cont.)



Wastewater Effluent Monitoring Data Analysis

- Acquired and analyzed data collected between 1/1/2018 and 12/31/2022 for:
 - DMR data from EPA and TCEQ with a focus on bacteria
 - Self-reported SSO data acquired from TCEQ
- These data are used by other programs and projects
 - Bacteria Implementation Group (BIG)
 - Total Maximum Daily Load (TMDL) development
 - Watershed Protection Plan (WPP) development
 - Clean Rivers Program (CRP)

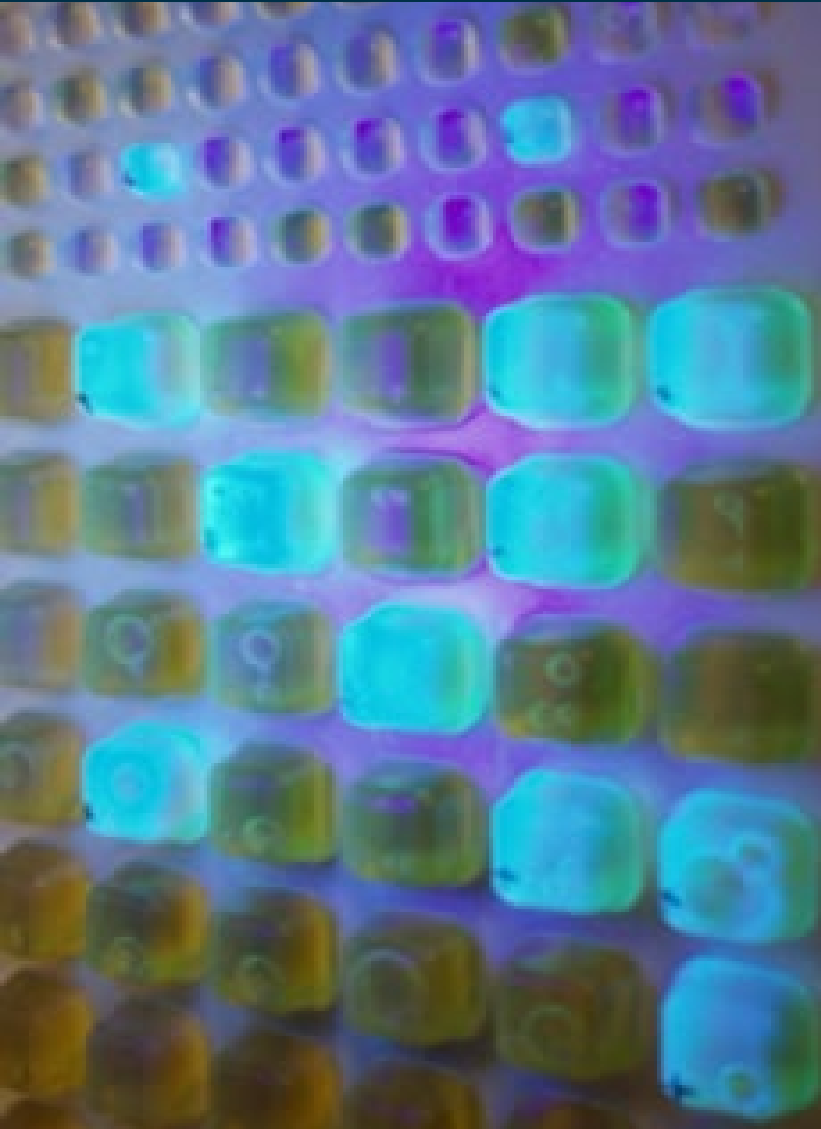
Wastewater Data Update and Coordination (cont.)



Key Findings

- 1,363 permitted wastewater outfalls in the region
- DMR data of any kind reported for 1,026 outfalls
- 899 facilities reported bacteria data in 2022
- The largest size category of WWTFs is <math><0.1</math> MGD (n=276, or 30% of total)
- 78% of WWTFs in the region (n=709) are less than 1 MGD

Wastewater Data Update and Coordination (cont.)



Key Findings (cont.)

- Bacteria permit compliance is high
 - 97% of Single Grab Sample results
 - 99% of Geometric Mean results
- The largest estimated *E. coli* load comes from facilities in the 1 to 5 MGD size category (n=149)
- The second largest estimated *E. coli* load comes from facilities in the greater than 10 MGD category (n=21)
- The lowest estimated *E. coli* load comes from facilities in the less than 0.1 MGD category (n=276)

Wastewater Data Update and Coordination (cont.)



Key Findings (cont.)

- 172 permitted dischargers (21%) reported SSOs in 2022
- 769 SSOs reported
- Reported combined SSO discharge volume of 82,350,988 gallons (1,650,988 gallons with outliers excluded)
- Line Blockages are the leading cause of SSO events (71% of all SSOs)
 - Fats/Oils/Grease (FOG)
 - Rags/Wipes
 - Other Causes
- FOG was the most common cause of line blockage in 2022
 - 70% of line blockages
 - 50% of all SSOs
- Line Blockages totaled the largest volume of discharge in 2022

Wastewater Data Update and Coordination (cont.)



Industry Outreach

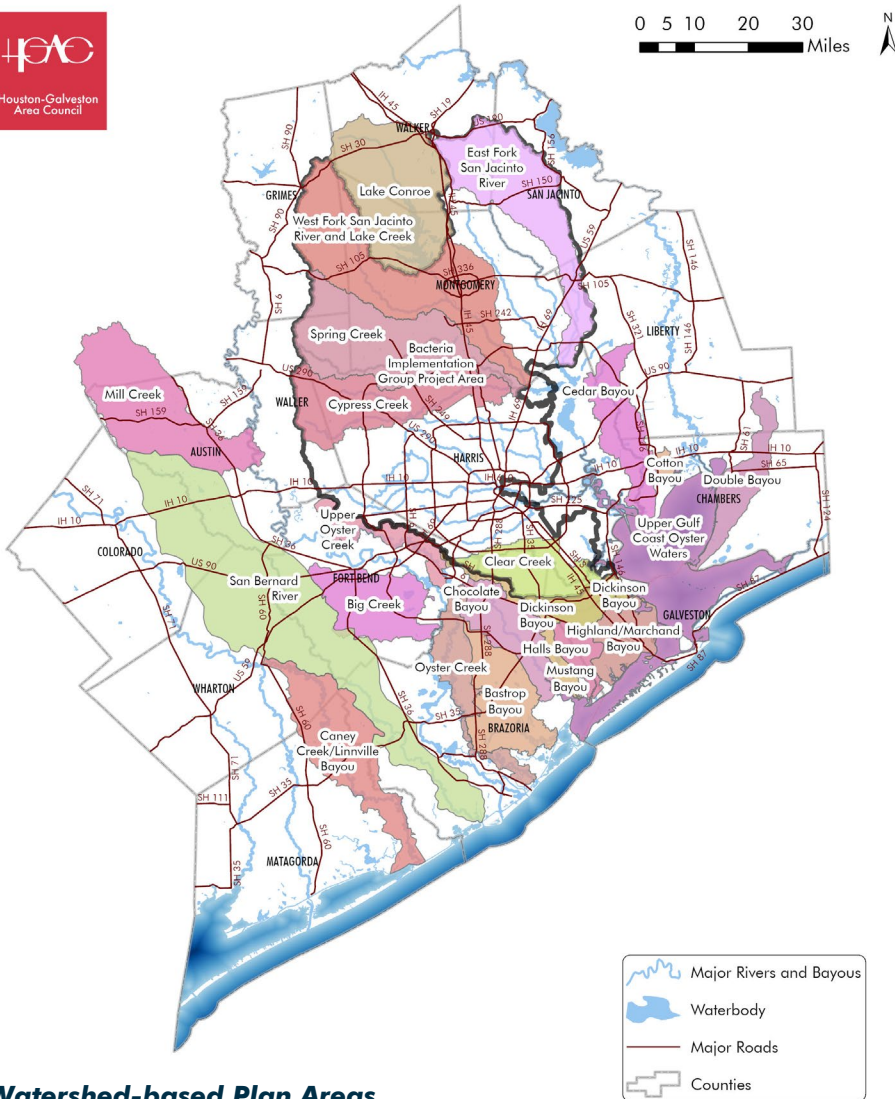
- On March 16, 2023, H-GAC hosted *Ensuring the Future of Texas' Water Workforce Roundtable*
- Attendees included:
 - HGACBuy
 - Workforce Solutions
 - TCEQ
 - Water Environment Association of Texas
 - United States Department of Labor
- Discussed the need for training and apprenticeships

Conformance Review for CWSRF Projects

- Upon TCEQ request, H-GAC reviewed three Clean Water State Revolving Fund (CWSRF) applications for compliance with regional goals and objectives

Requesting Entity	Project Summary	Findings
San Leon MUD	The project would rehabilitate the sanitary sewer collection system through trenchless technology using pipe-bursting and Cured-in-Place Pipe construction methods, service line reconnection, and manhole rehabilitation.	H-GAC staff finds that by mitigating inflow and infiltration and associated SSOs, this project is consistent with regional goals.
City of Magnolia	The proposed project is for the expansion of the existing Nichols Sawmill WWTP (City of Magnolia WWTP) from a design average daily flow 1.3 MGD to 2.0 MGD.	Though population estimates referenced in the proposal are high, H-GAC staff finds this project is consistent with regional goals.
Northgate Crossing MUD No. 2	The proposed project is for the construction of a regional wastewater treatment plant reclaimed water system to minimize the amount of groundwater used for irrigation.	H-GAC staff finds this project is consistent with regional goals. Reuse of treated effluent to for non-potable needs conserves groundwater for other uses.

Support Watershed Planning



Plan Facilitation and Coordination

- Served on Galveston Bay Estuary Program subcommittee memberships
- Coordinated with the Clean Rivers Program on the development of the Basin Highlights Report
- Promoted OSSF projects, including the Supplemental Environmental Project for the Homeowner Wastewater Assistance Program
- Prepared OSSF education and outreach programs and materials for the Coastal Communities project
- Participated in the Watershed Coordinator's Roundtable
- Coordinated with TMDLs, WPPs and other efforts

Watershed-based Plan Areas



Support Watershed Planning (cont.)



Urban Forestry

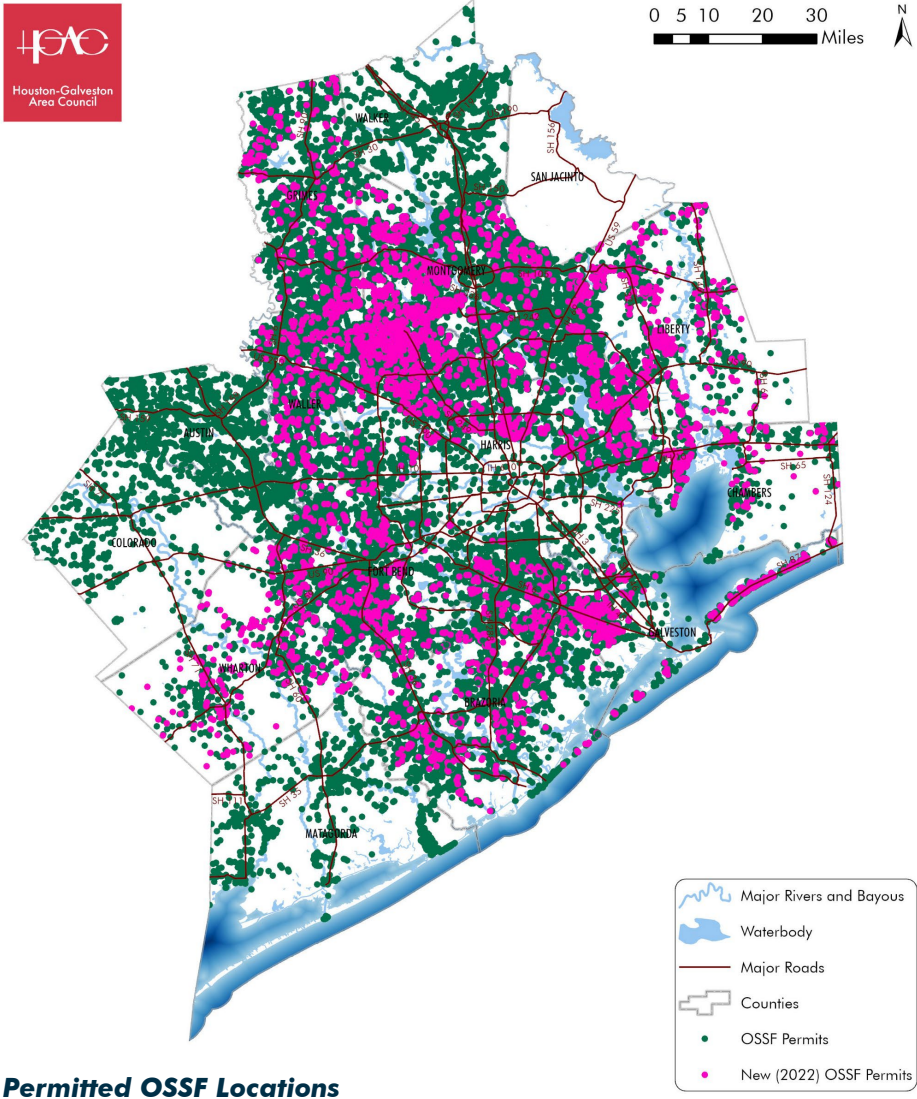
- Served on and/or coordinated with the regional and national forestry projects
 - Served in a leadership role on the Texas Forests and Drinking Water Partnership, Houston Area Urban Forestry Council, and the Forests in Cities Network
- Helped lead the continued development and implementation of the Green Futures corporate sustainability program with Texas A&M Forest Service
 - Participated in a planting at Kashmere Gardens
- Assisted the City of Bellaire with a comprehensive canopy assessment of all city parks and public facilities
- Assisted the Houston Area Urban Forestry Council in the planning for its annual tree planting competition planting event and urban forestry education events
- Assisted various entities with letters of support, funding research, program coordination, or other minor data projects to support forestry efforts
- Presented at various events, including as a featured speaker on forestry and conservation at a Cities in Forests national workshop

OSSF Planning, Coordination, and Outreach



- Permitted OSSF Database Update
- Unpermitted OSSF Analysis
- Updates to Harris County OSSF Historical Permit Data
- Coordination with Authorized Agents
- Supplemental Environmental Program (SEP) Coordination and Outreach Activities
- OSSF Outreach and Education

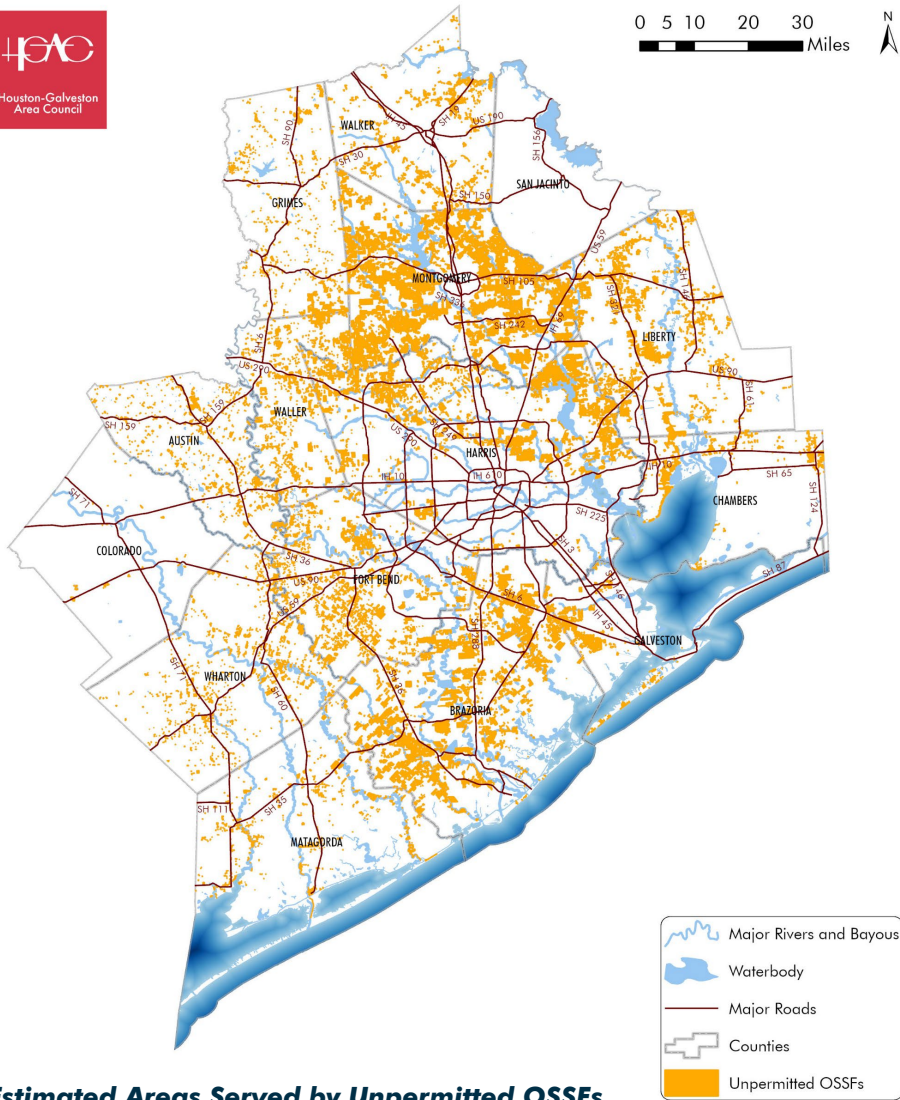
OSSF Planning, Coordination, and Outreach (cont.)



Permitted OSSF Database Update

- Added new permitted systems through 12/31/2022
- 5,442 new permitted OSSFs added in 2022
 - Includes 321 permitted systems in Grimes County
 - H-GAC was not able to acquire OSSF permit data from San Jacinto County
 - Austin, Colorado, Matagorda, and Walker counties did not report new data in 2022
- 125,422 permitted systems in the database

OSSF Planning, Coordination, and Outreach (cont.)



Unpermitted OSSF Analysis

- H-GAC used methodology developed in 2022 for estimating the number of potential unpermitted systems in the region
 - Rather than using parcels and census block data, new method uses 9-1-1 addresses to estimate the locations
- 229,481 unpermitted systems (estimated)
- 354,903 total OSSFs (permitted and unpermitted; estimated) in region

OSSF Planning, Coordination, and Outreach (cont.)

STRUCTURE	DATE	PERMIT
SEPTIC ONLY	901024	254255
SEPTIC ONLY	901024	254270
SEPTIC ONLY	901029	254396
RESIDENTIAL	821022	167910
RESIDENTIAL	830909	191647
RESIDENTIAL	820108	145350
REBUILT HOUSE	890424	240363
RESIDENTIAL	850528	214344
RESIDENTIAL	791011	105241
RESIDENTIAL	800603	114013
RESIDENTIAL	791219	107642
RESIDENTIAL	790501	096465
RESIDENTIAL	790501	096464
RESIDENTIAL	790723	101065
RESIDENTIAL	790323	094394
RESIDENTIAL	800710	115336
RESIDENTIAL	840316	201687
RESIDENTIAL	810406	129929
RESIDENTIAL	790524	097396
RESIDENTIAL	810218	126161
RESIDENTIAL	810226	127281
RESIDENTIAL	830415	181073
RESIDENTIAL	800701	115309
RESIDENTIAL	810602	134052
RESIDENTIAL	801114	122660
RESIDENTIAL	820823	163459
RESIDENTIAL	810420	130885
RESIDENTIAL	830318	178377

Updates to Harris County OSSF Historical Permit Data

- Based on discussions with Harris County Engineering, there are approximately 14,000 OSSF permit records from 1978 – 1992 that are not currently in electronic format
 - Because these records are not available electronically, these systems are currently represented in the unpermitted analysis
 - H-GAC has updated the Scope of Work for the FY 23 contract to digitize these records and incorporate them into the OSSF Permit Database and GIS layer

OSSF Planning, Coordination, and Outreach (cont.)



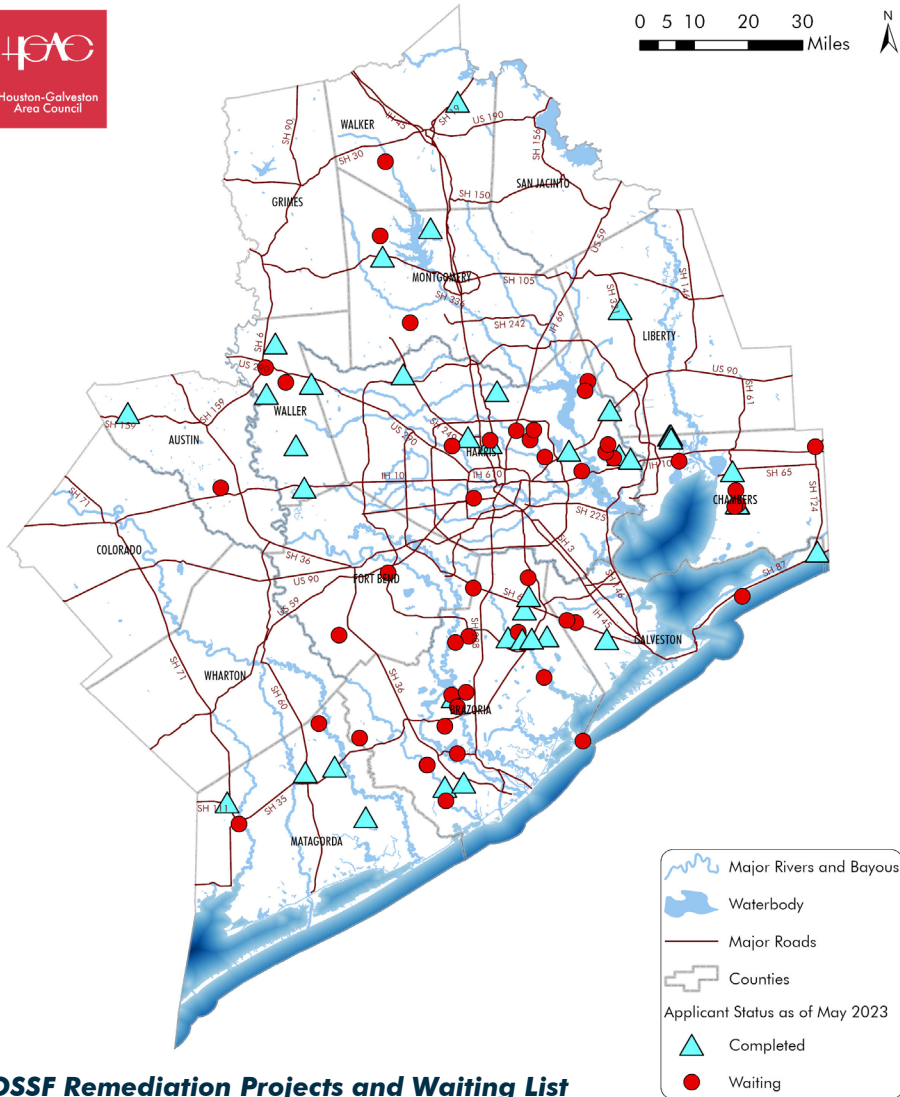
Coordination with Authorized Agents

- Coordinated with multiple entities to update the OSSF database

SEP Coordination and Outreach

- Program assists homeowners with OSSF repair or replacement
- The WQMP contract supports planning, coordination, and outreach activities for the program, but does NOT fund any of the repairs or replacements
- Funding provided through the TCEQ SEP Program, the Harris County District Attorney's Office, and industry partners

OSSF Planning, Coordination, and Outreach (cont.)



SEP Coordination and Outreach (cont.)

County	Replacement	Repair	Waiting
Austin	1	-	1
Brazoria	6	3	17
Chambers	6	-	5
Colorado	-	-	-
Fort Bend	-	-	2
Galveston	2	-	3
Grimes	-	-	-
Harris	5	3	13
Liberty	-	4	-
Matagorda	3	1	3
Montgomery	2	2	2
San Jacinto	-	-	-
Walker	-	1	1
Waller	5	-	3
Wharton	-	-	-
TOTAL	30	14	50

- 1 OSSF replacement in Brazoria County in 2022



OSSF Planning, Coordination, and Outreach (cont.)

ONE FAILING SEPTIC SYSTEM CAN RELEASE UP TO **75 BILLION** BACTERIA PER DAY INTO THE ENVIRONMENT

BACTERIA CAN MAKE YOU SICK OR GET IN NEARBY WATERWAYS. PROPER MAINTENANCE CAN HELP PREVENT SEPTIC SYSTEM FAILURES.

Learn more at epa.gov/septic/septicsmart-homeowners

This project is funded in part by the TCEQ through a grant from the United States Environmental Protection Agency

3 WAYS TO PROTECT YOUR SEPTIC SYSTEM (AND THE ENVIRONMENT)

- 01 INSPECT YOUR SYSTEM**
Inspect your system every 3 years and pump your tank as needed
- 02 ONLY WATER DOWN THE DRAIN**
Don't pour or flush household hazardous waste or sanitary items in sinks or toilets
- 03 SAVE THE DRAINFIELD**
Don't drive or park on the drainfield and only plant grass over it or nearby

Proper maintenance can help prevent septic system failures.

Learn more at www.epa.gov/septic/septicsmart-homeowners

This project is funded in part by the TCEQ through a grant from the United States Environmental Protection Agency

OSSF Outreach and Education

- Staff intend to host a homeowner education course later in 2023 and explore opportunities to make the course available online
- Several outreach tools have been created including flyers, bill inserts, and web banners that can be utilized by communities through the Coastal Communities Tool Kit

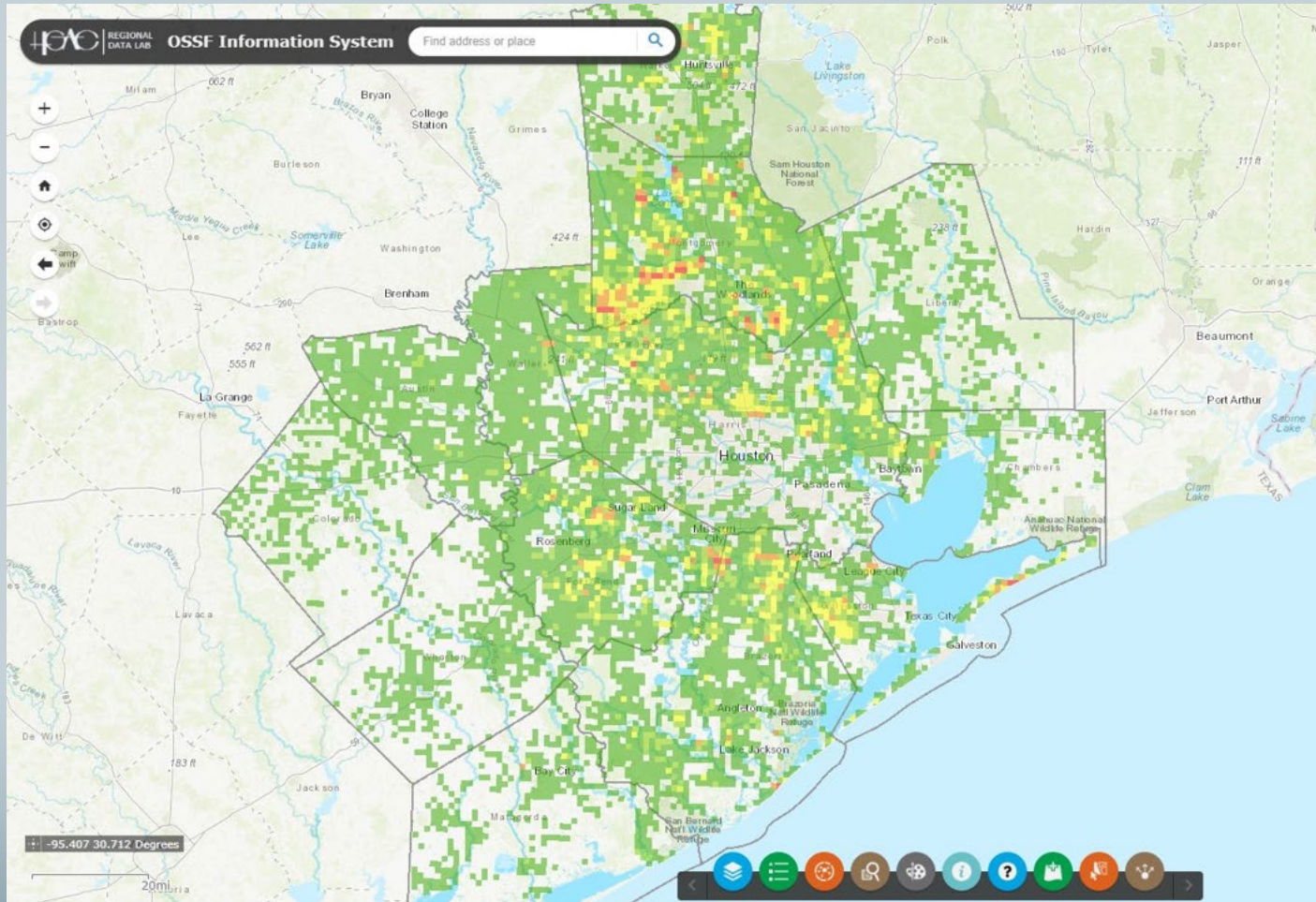
4 signs of a failing septic system

- Strong odor from septic tank
- Wastewater visible in drainfield
- Slow draining sinks and tubs
- Sewage backups in the home

Learn more at www.epa.gov/septic/septicsmart-homeowners

*Proper maintenance can help prevent septic system failures.

OSSF Mapping Tool Expansion

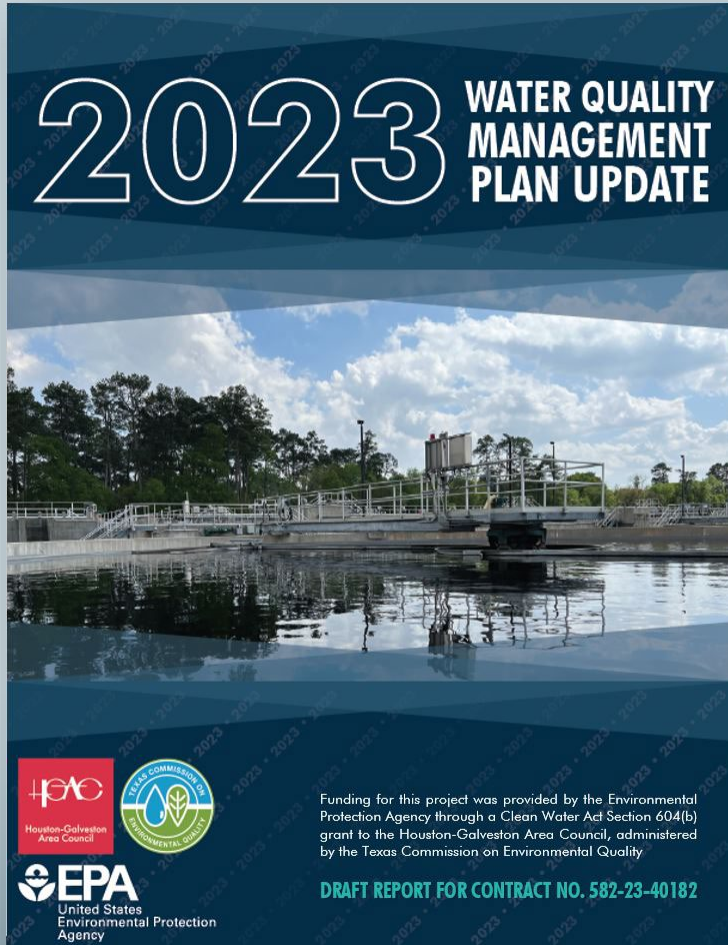


Feasibility Study

- Project staff are coordinating with H-GAC's Data Analytics and Research department to determine the feasibility of integrating OSSF data from the North Central Texas Council of Governments into the H-GAC OSSF database
- Success with this project could lead to more partnerships over time

<https://datalab.h-gac.com/OSSF/>

WQMP Update/Final Report



The goal of this task is to provide TCEQ with a comprehensive report on water quality management activities in the Region and includes the following deliverables:

- Draft WQMP Update
 - 30-day comment period (Texas Water Code § 26.037)
 - Comments from NRAC members will be accepted through today
 - Response to Comments
 - Included in the Appendices of the final report

- Final WQMP Update

WQMP Update/Final Report (cont.)

Water Quality Management Plan Update Report Timeline

Task	Date
Draft WQMP Update Report distributed to NRAC and posted to H-GAC website	6/30/2023
30-Day Public Comment Period opens	6/30/2023
Public Comment Period closes	8/3/2023
→ Present Draft WQMP Update Report to NRAC for recommendation to Board of Directors	8/3/2023
Revise Draft WQMP Update Report to address public and NRAC comments	8/3/2023 – 8/15/2023
H-GAC Board of Directors meeting	8/15/2023
Submit Final WQMP Update Report and documentation of public comment period to TCEQ	8/31/2023
Upload Final WQMP Update Report to H-GAC website	8/31/2023

- The Final WQMP Update Report will be submitted to TCEQ for approval and incorporation into the state's Water Quality Management Plan

Final Comments



Action Requested

H-GAC staff requests that the NRAC recommend to the H-GAC Board of Directors that the Board accept the Final Report for the FY 2023 *Water Quality Management Plan Update* as amended based upon comments received from NRAC and the public during the public comment period.

Comments or Questions?



Funding for this project was provided by the United States Environmental Protection Agency through a Clean Water Act Section 604(b) grant to the Houston-Galveston Area Council, administered by the Texas Commission on Environmental Quality.

TCEQ Contract Number 582-23-40182

Rachel Windham

Senior Planner

Houston-Galveston Area Council

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Houston, TX 77027

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Email: rachel.windham@h-gac.com



NRAC Agenda (continued)

9. Roundtable Discussion

NRAC members can bring up issues of import and/or interest for edification and/or discussion at this time. Please take advantage of this agenda item.

Three Items for the NRAC Roundtable Discussion

August 3, 2023

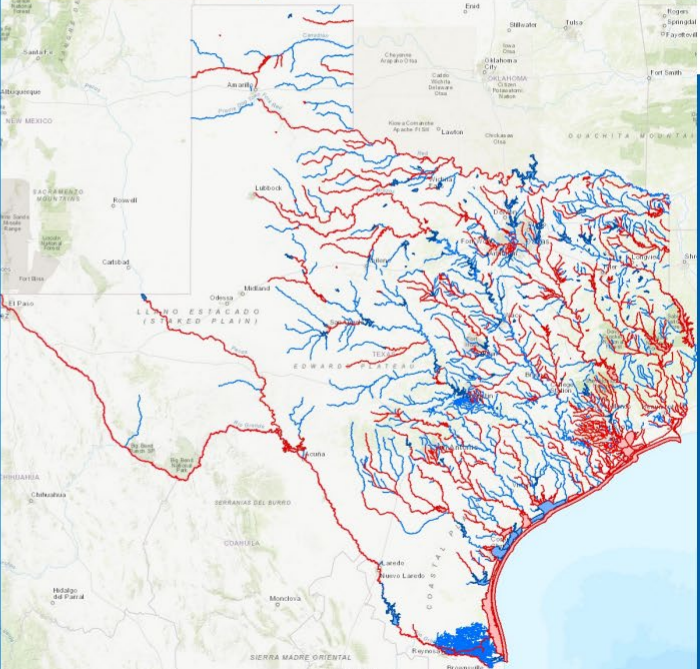
Tom Douglas

New Webinar is Now Available on YouTube

Texas Water Resources Institute

**Lessons Learned
Addressing Coastal
Water Quality Concerns**

Lucas Gregory, Ph.D.
Associate Director



The image shows a map of Texas with a network of red and blue lines representing watershed boundaries. The red lines form a dense network across the eastern and southern parts of the state, while blue lines are more sparse. The map is overlaid on a light-colored background with some geographical labels. In the top right corner of the map area, there is a logo for the Texas Water Resources Institute, which includes a blue water drop icon and the text 'Texas Water Resources Institute' with the tagline 'make every drop count' below it.

Texas General Land Office

Learn about how Watershed Planning works, with specific examples from Arroyo Colorado and Baffin Bay (Petronila and San Fernando Creeks). Originally presented live on July 20, it is now available on YouTube at <https://www.youtube.com/watch?v=qj4x7bitlwU> .



2023 Coastal Watershed Symposium : Balancing Growth, Preservation, and Conservation

Bayou Preservation Association

What: As our region experiences ongoing growth and development, we must remain dedicated to our goals of resilience, sustainability, and preserving our water resources and watersheds. Join an outstanding panel of speakers who will explore strategies being implemented to address and overcome these challenges, both in our region and in other areas facing similar issues. Discover successful approaches and identify areas where our collective efforts can be strengthened to mitigate adverse impacts in the future.

When: Wednesday, September 20 and Thursday, September 21 from 8:00 AM to 12:00 PM

Field Trip to Milby Park on Sims Bayou Tuesday, September 19 (registration required)

Where: Virtual, by Zoom on 9/20 and 9/21; In Person on 9/19.

Contact Info: Phone: (713) 529-6443 Email: info@BayouPreservation.org

Organizing Partners: AECOM, City of Houston, EHRA Engineering, Harris County Engineering Dept., Houston-Galveston Area Council, Talley Landscape Architects.

Learn More and Register: at <https://www.bayoupreservation.org/symposium>

“Walk for the Wild” at Champion Lake – October 7



Tom Douglas



What: “Walk for the Wild” will include a 5K hike, a short paddle, informational tables, and a chance to look around the [Trinity River National Wildlife Refuge](#) Champion Lake Area.

Where: Champion Lake in Liberty County. Map and Directions at https://www.fws.gov/sites/default/files/documents/TrinityRiver_ChampionLake_Hunt_2021-2022.pdf

When: Saturday October 7, 2023.

Sponsored by: Public Lands Alliance <https://www.publiclandsalliance.org/>

Registration: will open on September 1.

****Please observe speed limits on County Road 417, which leads into the refuge.****

NRAC Agenda (continued)

10. Public Comment

Members of the public can sign up to public comment. Three minutes allotted for each public comment.

NRAC Agenda (continued)

11. Next Meeting Date

Unless otherwise notified, the next scheduled meeting is:

Thursday, November 2, 2023 from **1:30** to **3:30 p.m.**

This meeting will be held as a hybrid in-person/online event.

12. Adjourn