

CHOCOLATE BAY TMDL MEETING

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May 11, 2022



Acknowledgements



- TCEQ Total Maximum Daily Load (TMDL) Program – Austin



What is H-GAC?

Today's Agenda

- 6:00 – 6:05 Welcome & Introductions
- 6:05 – 6:35 Project Update
- 6:35 – 7:10 Chocolate Bay
Imp. Plan Next Steps
- 7:10 – 7:25 Implementation
- 7:25 – 7:30 Closing Remarks



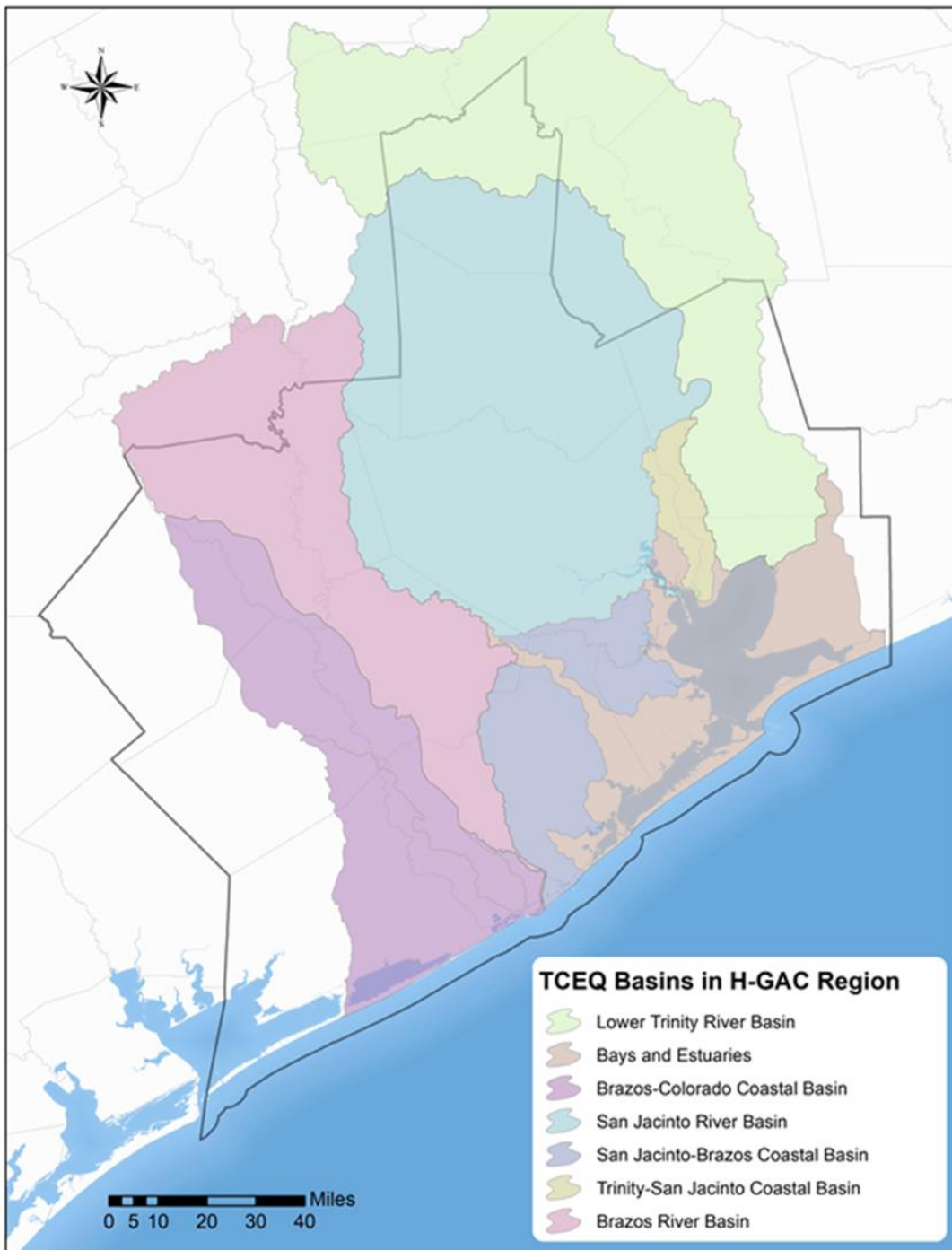
Water Quality Management

- Monitoring
- Assessment
- Address Impairments



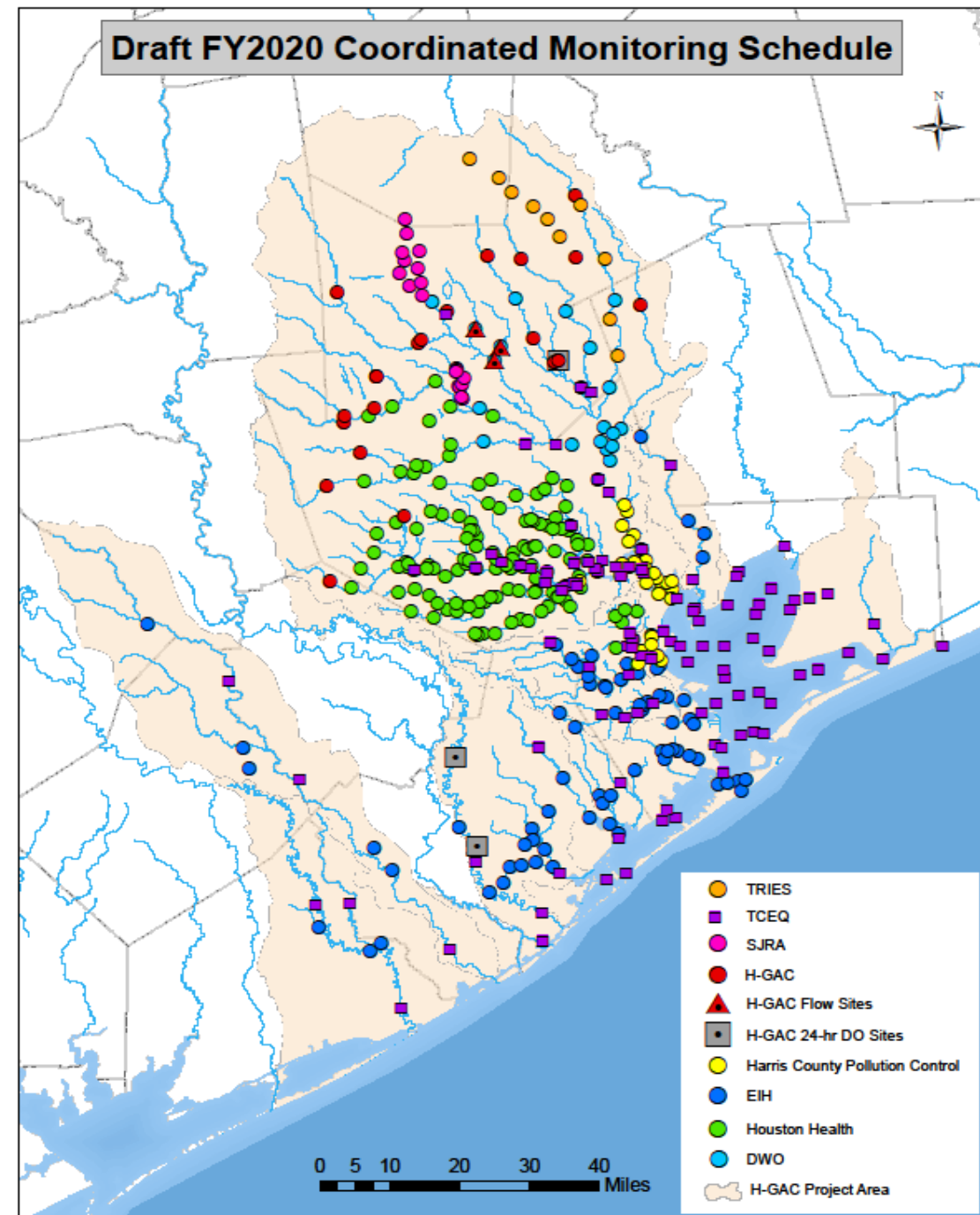
A Couple of Definitions

- What is a Basin?
- What is a Watershed?
- Focus is Basins 11 and 24.
- Focus is Chocolate, Halls and Mustang Bayou watersheds.

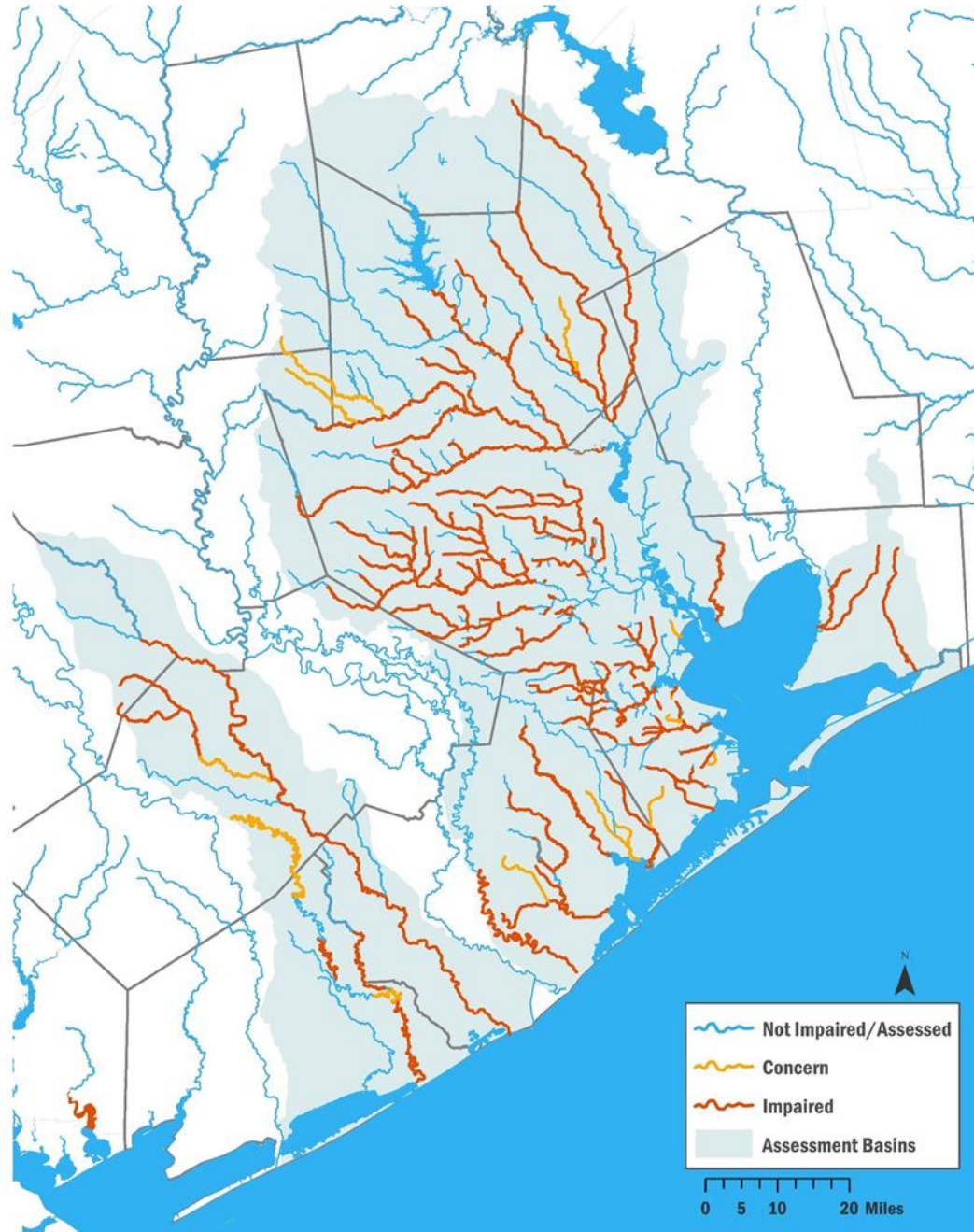


Clean Rivers Monitoring Program

- Basin 11 Partners
 - Texas Commission on Environmental Quality
 - Environmental Institute of Houston
- Numerous Parameters
 - Bacteria
 - Nutrients
 - Dissolved Oxygen
- H-GAC's Water Resources Information Map



Bacteria Impairments and Concerns



Water Quality Impairments

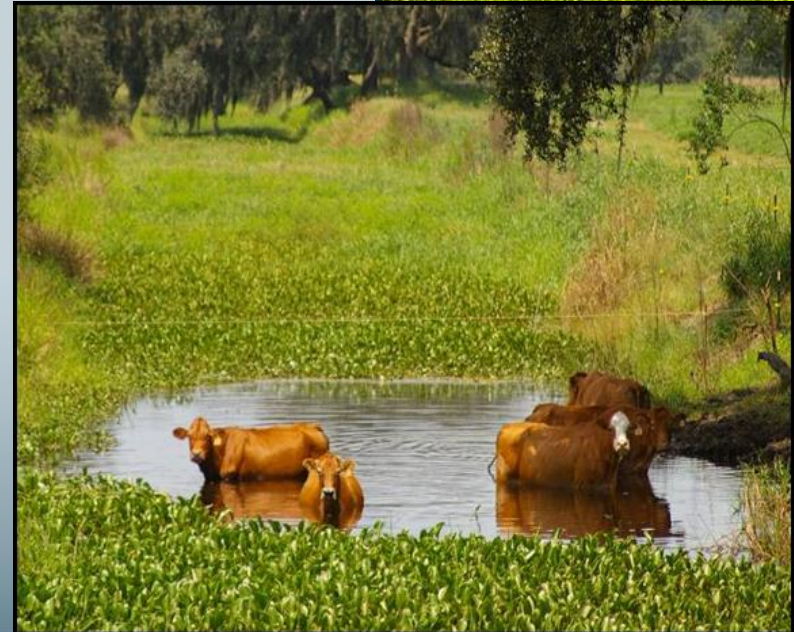
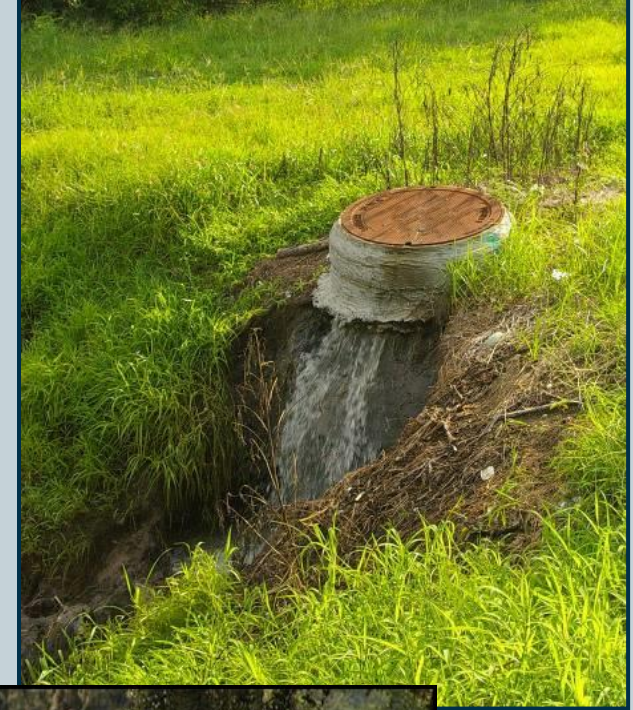
- TCEQ's 2020 Integrated Report for Surface Water Quality

www.tceq.texas.gov/waterquality/assessment/20twqi

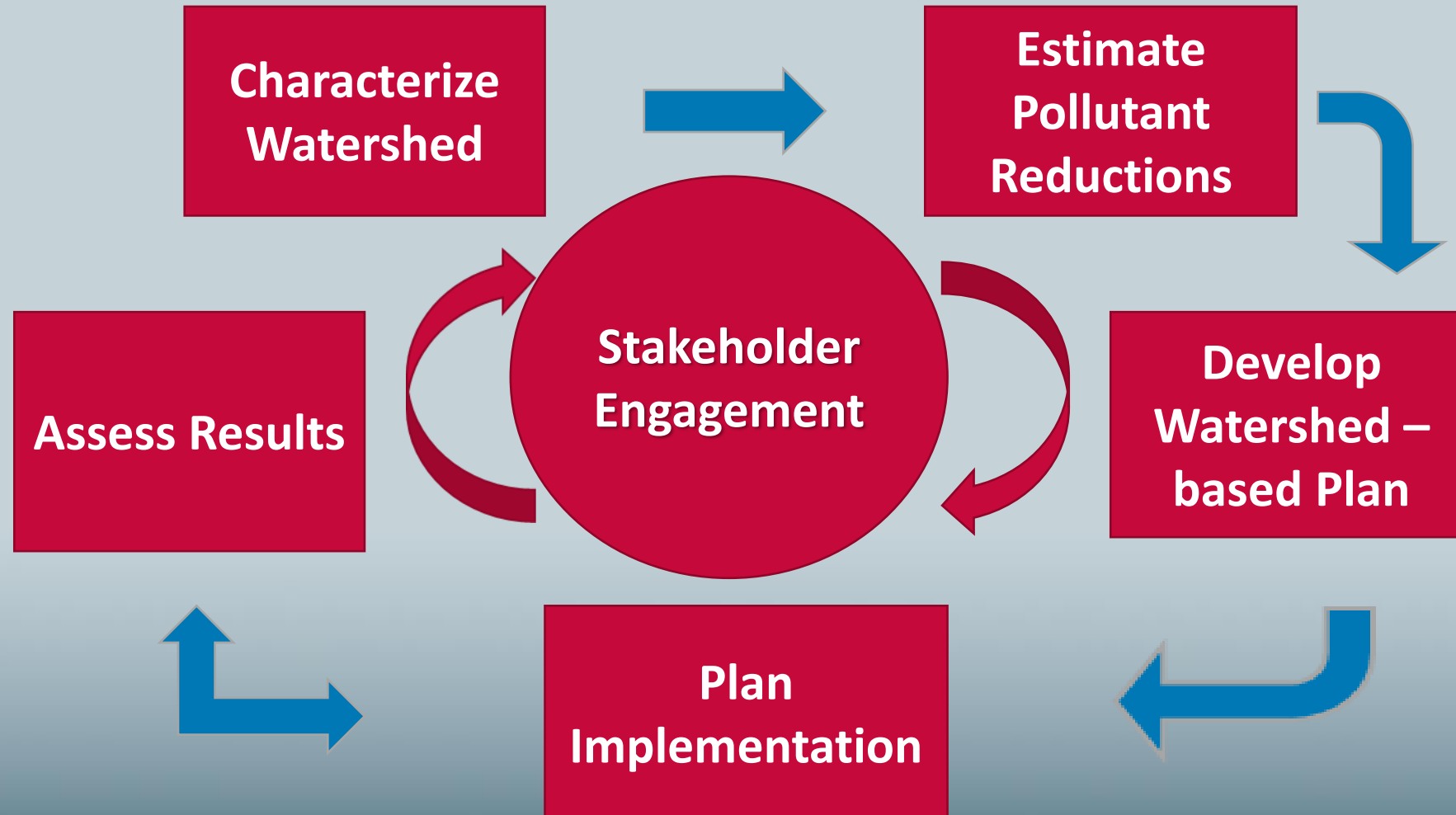
Watershed-based Planning

- Total Maximum Daily Load
 - $TMDL = WLA + LA + FG + MOS$
 - TMDL Implementation Plan (I-Plan)





















- Watershed Protection Plan

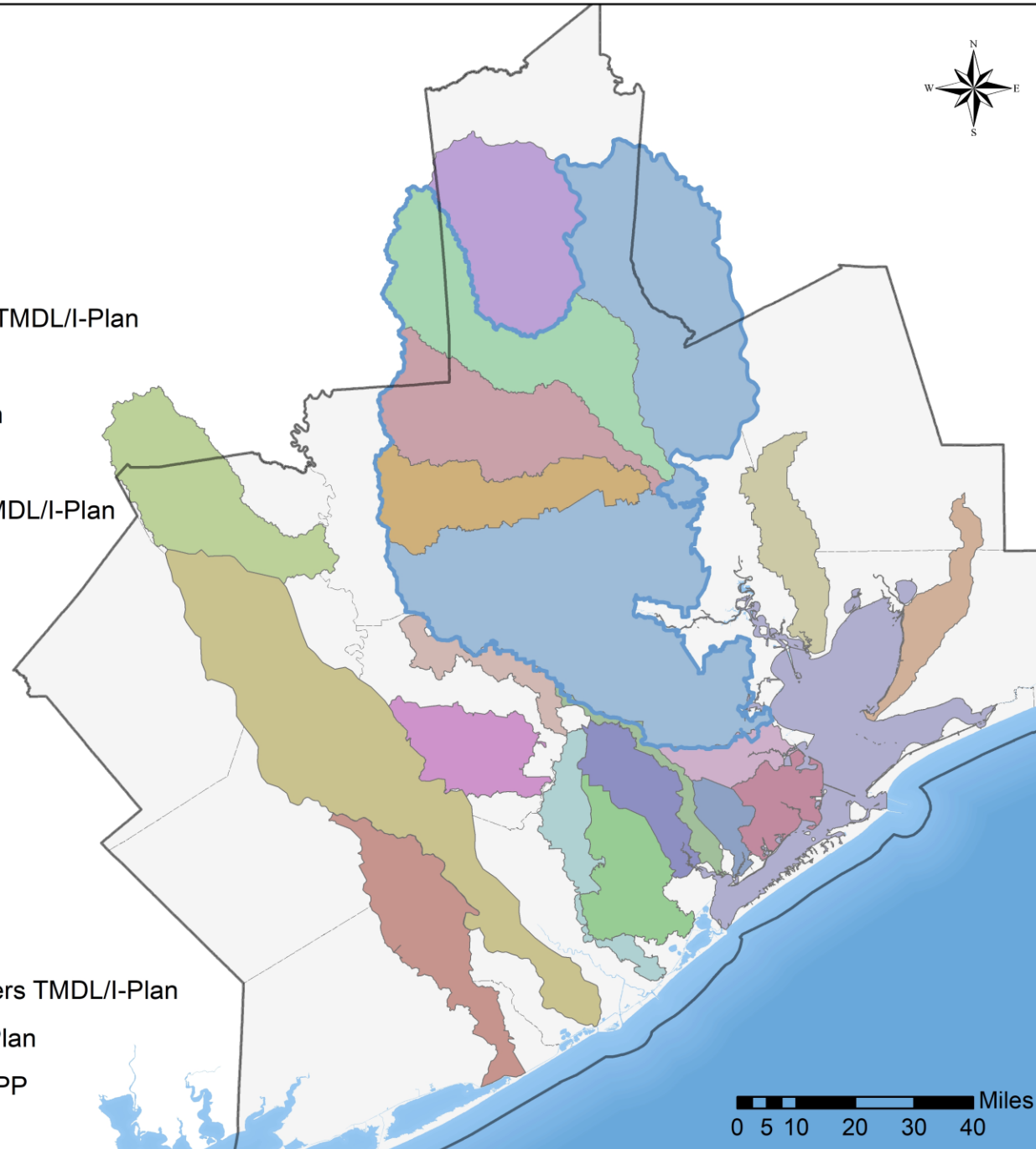


Steps in a Watershed-Based Plan

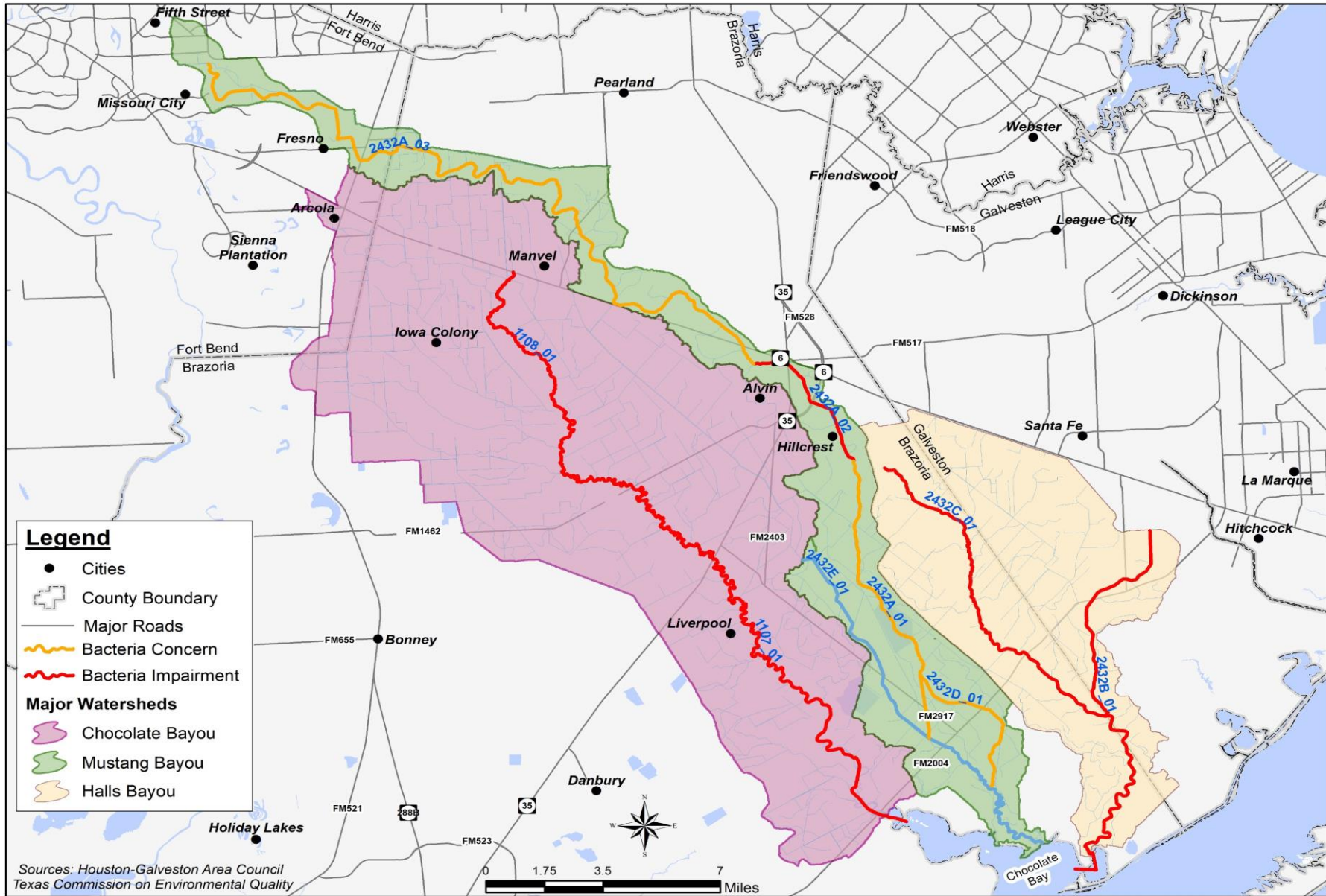


Watershed-Based Plans

-  BIG TMDL/I-Plan
-  Bastrop Bayou WPP
-  Big Creek TMDL
-  Caney Creek/Linnville Bayou TMDL/I-Plan
-  Cedar Bayou WPP
-  Chocolate Bayou TMDL/I-Plan
-  Cypress Creek WPP
-  Dickinson Bayou WPP and TMDL/I-Plan
-  Double Bayou WPP
-  Halls Bayou TMDL/I-Plan
-  Highland/Marchand WPP
-  Lake Conroe WPP
-  Mill Creek WPP
-  Mustang Bayou TMDL/I-Plan
-  Oyster Creek TMDL/I-Plan
-  San Bernard River WPP
-  Spring Creek WPP
-  Upper Gulf Coast Oyster Waters TMDL/I-Plan
-  Upper Oyster Creek TMDL/I-Plan
-  West Fork and Lake Creek WPP



Chocolate Bay Watersheds



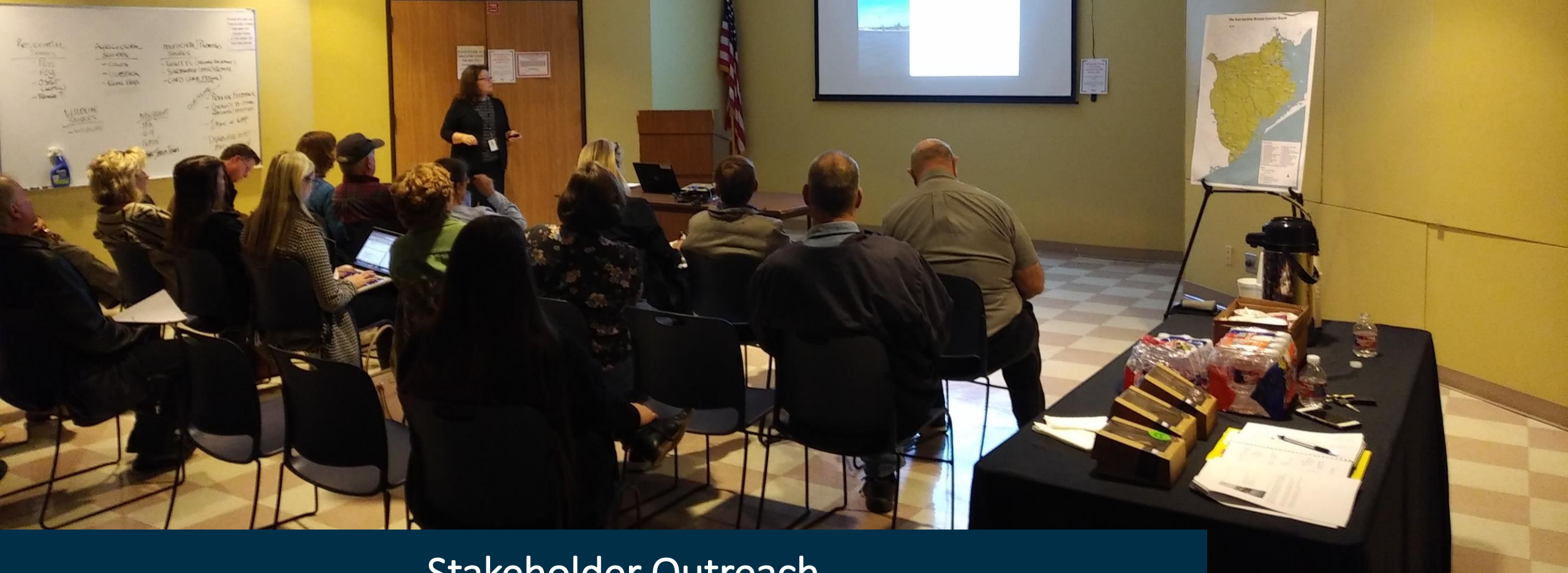
Legend

- Cities
- ⊕ County Boundary
- Major Roads
- ~~~~~ Bacteria Concern
- ~~~~~ Bacteria Impairment

Major Watersheds

- Chocolate Bayou
- Mustang Bayou
- Halls Bayou

Sources: Houston-Galveston Area Council
Texas Commission on Environmental Quality



Stakeholder Outreach

- Basin 11 Stakeholder Involvement
 - Eight Public Meetings (12/6/16, 8/10/17, 11/14/17, 11/8/18, 01/30/20, 8/13/20, 05/18/21, 8/24/21)
 - Two Coordination Committee Meetings (1/10/2018 and 6/13/2019)
 - Three Source Work Group Meetings (3/28/18, 4/5/18, and 4/5/18)
 - One Basin Stakeholder Group (6/13/19)

Chocolate Bayou TMDL

- Draft Technical Support Document – Under Review by TCEQ
- Draft TMDL Document – Under Review by TCEQ
- Draft I-Plan Submitted

Two Total Maximum Daily Loads for Indicator Bacteria in the Chocolate Bayou Watershed

Segments: 1107 and 1108

Assessment Units: 1107_01 and 1108_01



December 2019

Chocolate Bayou TMDL

Water Body	AU	Parameter	Geometric Mean Criteria (cfu/100 mL)	Stations	No. of Samples	Data Date Range	Geometric Mean (cfu/100 mL)	Status
Chocolate Bayou Tidal	1107_01	Enterococcus	35	21178/11478	75	12/01/2011-11/30/2018	106.88	NS
Chocolate Bayou Above Tidal	1108_01	<i>E. coli</i>	126	11484	23	12/01/2011-11/30/2018	179.01	NS

Mustang Bayou TMDL

- Draft Characterization Report – TCEQ Review
- Draft Technical Support Document – TCEQ Review
- Future:
 - Draft TMDL Document
 - Draft I-Plan

Characterization Report for Indicator Bacteria in the Mustang Bayou Watershed

Segments: 2432A, 2432D, and 2432E
Assessment Units: 2432A_01, 2432A_02, 2432A_03, 2432D_01, and 2432E_01



December 2019

Mustang Bayou TMDL

Water Body	AU	Parameter	Geometric Mean Criteria (cfu/100 mL)	Station	No. of Samples	Data Date Range	Station Geometric Mean (cfu/100 mL)	Status
Mustang Bayou	2432A_01	<i>E. coli</i>	126	11423	20	12/01/11 - 11/30/18	344.54	NS
Mustang Bayou	2432A_02	<i>E. coli</i>	126	18554	27	12/01/11 - 11/30/18	1,389.33	NS
Mustang Bayou	2432A_03	<i>E. coli</i>	126	21416	19	12/01/11 - 11/30/18	257.12	CN
Persimmon Bayou	2432D_01	Enterococci	35	17913	28	12/01/11 - 11/30/18	187.58	NS
New Bayou	2432E_01	Enterococci	35	17911	35	12/01/11 - 11/30/18	153.09	NS

Halls Bayou TMDL

- Draft Technical Support Document Submitted – TCEQ Review
- Draft TMDL Document Submitted – TCEQ Review
- Future: Draft I-Plan

Two TMDLs for Indicator Bacteria in the Halls Bayou Watershed

Segments: 2432B and 2432C

Assessment Units: 2432B_01 and 2432C_01



January 2020

Halls Bayou TMDL

Water Body	AU	Parameter	Geometric Mean Criteria (cfu/100 mL)	Station	No. of Samples	Data Date Range	Station Geometric Mean (cfu/100 mL)	Status
Willow Bayou	2432B_01	<i>E. coli</i>	126	18668	20	12/01/2011 – 11/30/2018	316.92	NS
Halls Bayou Tidal	2432C_01	Enterococci	35	11422	46	12/01/2011 – 11/30/2018	128.64	NS

Implementation Plan Development

- Voluntary
- Stakeholder Developed
- Identifies Management Measures
- Implementation Road Map

Implementation Plan for Two Total Maximum Daily Loads for Indicator Bacteria in the Chocolate Bayou Watershed

Segments: 1107 and 1108

Assessment Units: 1107_01 and 1108_01



January 2020

I-Plan Draft Management Measures

1. *Support Rural Land Management Initiatives*
2. *Promote Safe OSSF Use and Maintenance*
3. *Improve Wastewater Treatment Facility and Collection System Function*
4. *Address Fecal Deposition of Feral Hog Populations*
5. *Address Fecal Deposition of Dog Waste*
6. *Support Urban Stormwater Management*



Next Steps

- Chocolate Bay Coordination Committee – August 2022
 - Review Chocolate, Mustang, and Halls Bayou project results;
 - Review the draft Chocolate Bayou I-Plan; and
 - Adapt and revise Chocolate Bayou I-Plan to address Chocolate Bay.
- Complete TMDLs documents FY22
- Complete the combined draft I-Plan FY23



Resource Links

- Clean Rivers Program
 - <http://h-gac.com/clean-rivers-program/default.aspx>
 - <http://h-gac.com/clean-rivers-program/data/default.aspx>
- Basin Highlights Report
 - <https://www.h-gac.com/clean-rivers-program/basin-highlights-summary-reports.aspx>
- TCEQ's 2020 Integrated Report for Surface Water Quality
 - <https://www.tceq.texas.gov/waterquality/assessment/20twqi/20txir>
- Watershed-based Plans –
 - <https://www.h-gac.com/watershed-based-plans/default.aspx>
 - <https://www.h-gac.com/watershed-based-plans/san-jacinto-brazos-coastal-basin-tmdl-and-implementation-plan.aspx>

Implementation

- Outreach

- TrashBash® Lake Jackson
- Olin Take Child To Work Fair
- Texas Stream Team Training
- OSSF Workshops
- Ag/Feral Hog Workshops
- Green Infrastructure Workshops

- Structural

- Pet Waste Stations
- Evaluating/Repairing OSSFs



Implementation

- Kendall Guidroz – H-GAC, Coastal Communities and Texas Stream Team





Coastal Communities

Water Quality Outreach & Education Project



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

Coastal Communities Project



- **What?**
 - Water Quality Outreach & Education resources
- **Who?**
 - Our smaller coastal communities
- **Why?**
 - To remove barriers for city staff
- **How?**
 - A One-Stop-Shop for resources

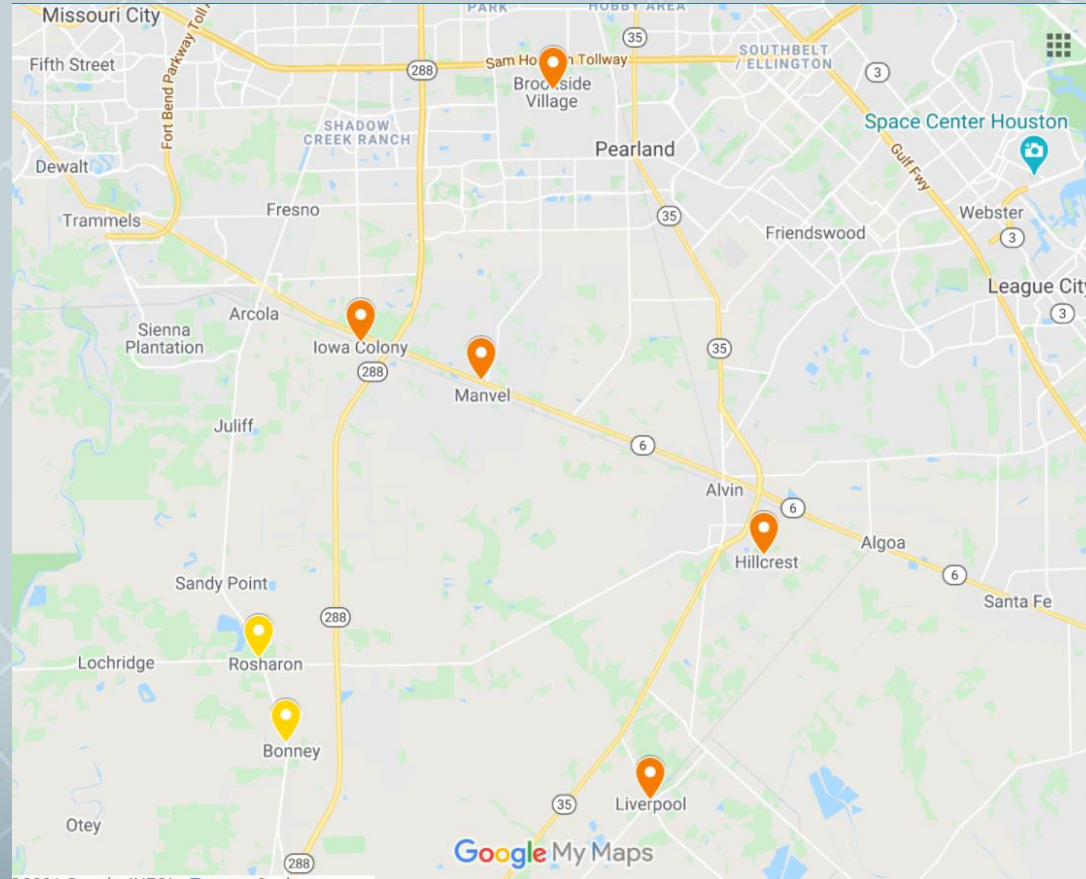
Project Communities

- 24 non-MS4 communities in Brazoria, Galveston, Chambers, & Matagorda Counties
- Resources available for all interested communities



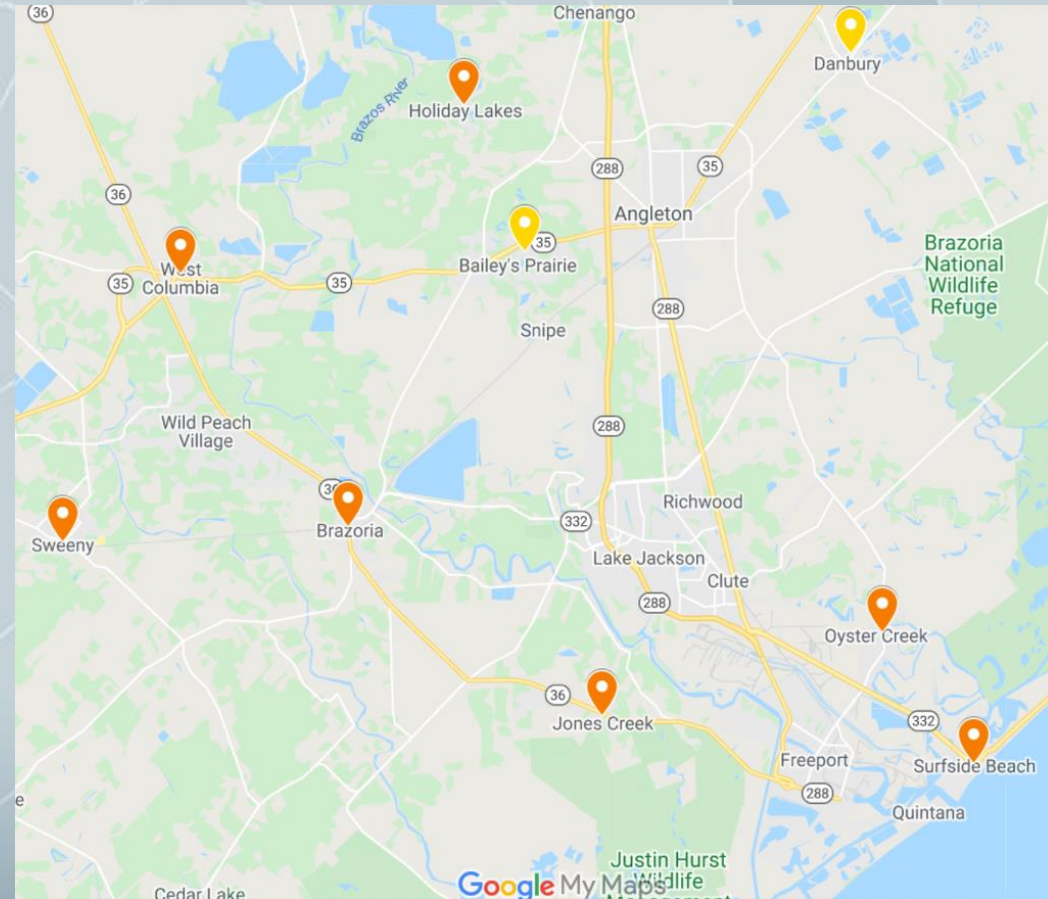
Project Communities

- Several project communities are in the Chocolate Bay watershed



Project Communities

- Several project communities are in the Oyster Creek watershed



Outreach Toolbox & Roadmap

- Project website
- Roadmap messaging
- H-GAC & partner resources
- Model ordinances
- Links to funding, training, and meeting opportunities



www.coastalcommunitiestx.com

FOG in Rental Properties

- Community-Based Social Marketing Pilot Project
- Workgroup developing Outreach Plan and Resources
- Piloting Resources over the summer

NEVER put Fats, Oils, & Grease down the drain! **ONLY WATER** goes down the drain

Dear Residents,

Fats, Oils, and Grease (FOG) damages and clogs pipes, which can cause sewer backups in your apartment - or your neighbor's. It can also cause overflows in our community that brings harmful bacteria into contact with people and waterways.

What can go down the drain?

- ✗ Grease or fat from meat
- ✗ Cooking oils, lard, shortening
- ✗ Butter & margarine
- ✗ Dairy products
- ✗ Mayo, salad dressings, sour cream
- ✓ Water



What can YOU do?

- Dispose of Fats, Oil & Grease in the trash not down the drain.
- Scrape food scraps into the trash not down the drain or garbage disposal.
- Wipe grease and oil off dishes before rinsing or placing in the dishwasher.

Thank you for helping keep our community clean!

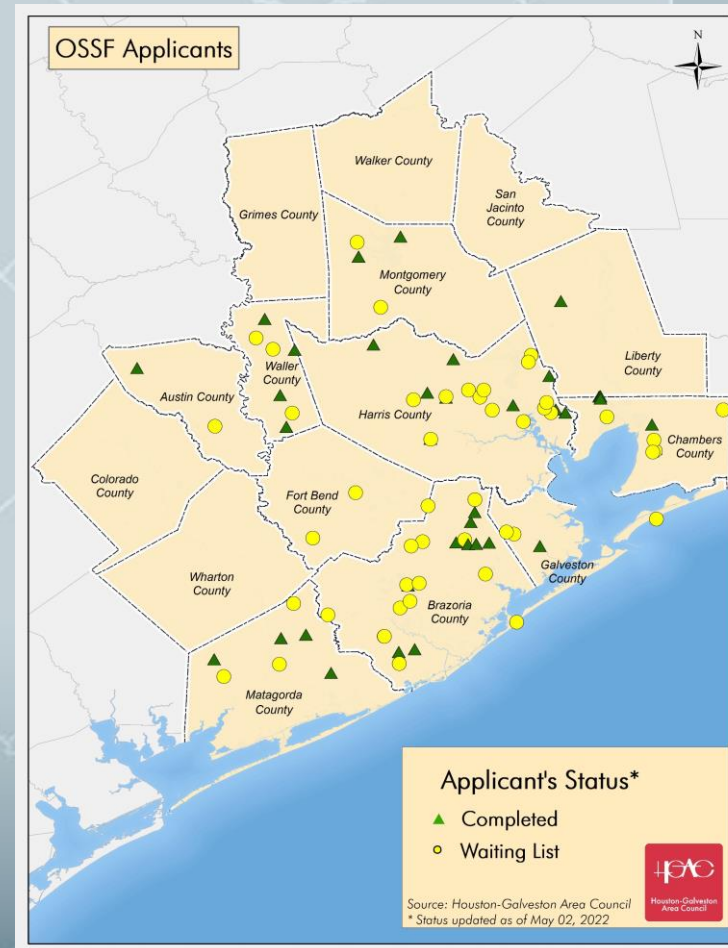
Apartment
logo

Learn more about Fats, Oils, and Grease (FOG) and proper disposal methods at ceasethegrease.net

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

On-Site Sewage Facility (OSSF) Resources

- Homeowner Education Workshops
- Homeowner Wastewater Assistance Program
- More information:
 - ossf@h-gac.com
 - [H-gac.com/on-site-sewage-facilities](https://h-gac.com/on-site-sewage-facilities)



Trash Free Texas

- A Trash Free Waters project
- Key Resources:
 - Adopt-A-Spot Map
 - Community Cleanup Challenge Toolkit
 - Local Government Outreach and Education Toolkit
 - Recreational Cleanup Toolkit

TRASH
FREE
TEXAS

www.trashfreetexas.org

www.h-gac.com/trash-free-texas

Texas Stream Team

- Citizen Science volunteer water quality monitoring
- 3 Phases of Training
- Part of a state-wide program
- Trainings resume this summer
 - Contact:
stream.team@h-gac.com



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT

TEXAS STATE UNIVERSITY

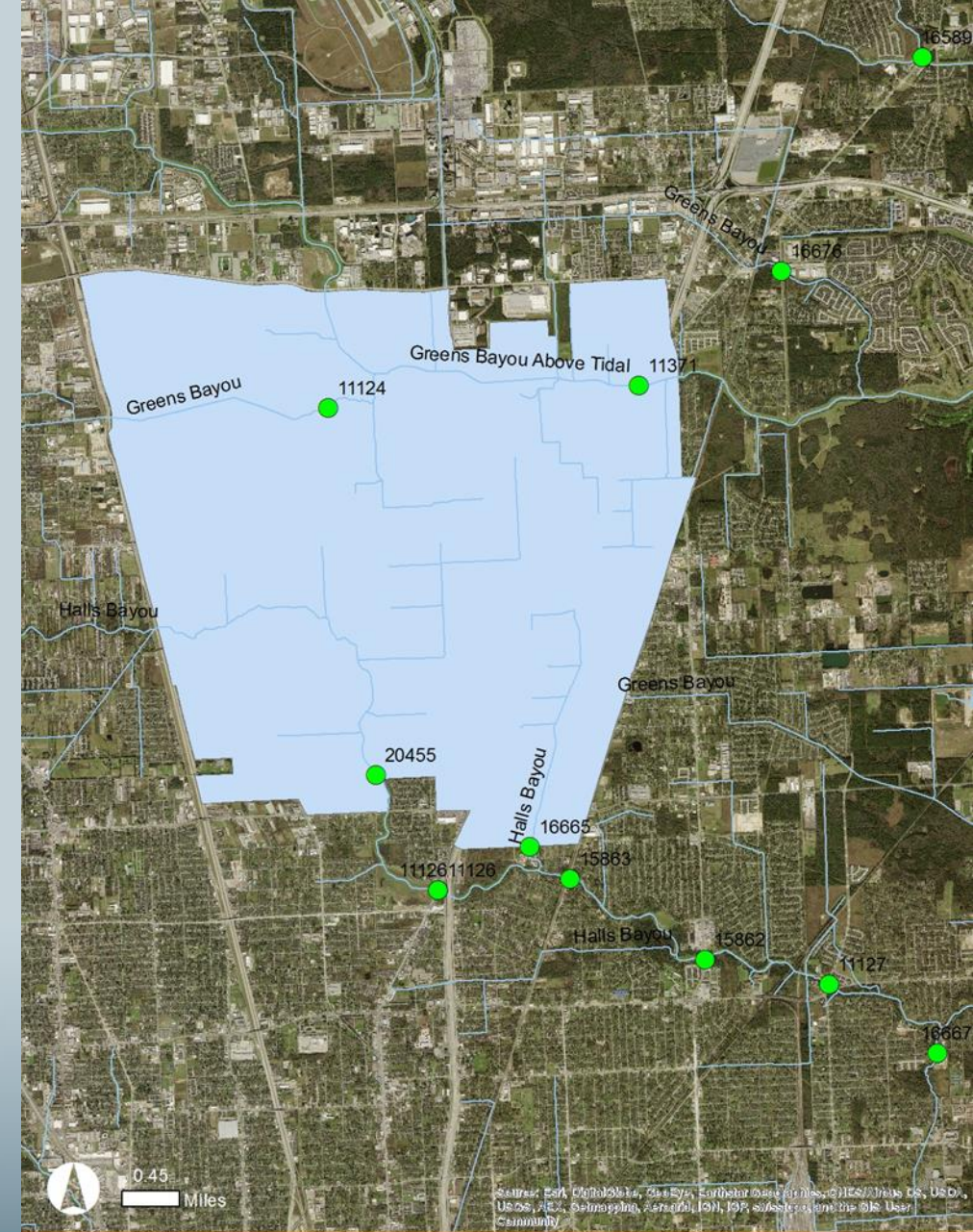
TEXAS STREAM TEAM

h-gac.com/Texas-stream-team

Success Story

ALDINE WESTFIELD: CASE STUDY

- Coordinated Partner Effort
 - Harris County
 - East Aldine Management District
- Monitoring Sites
 - Halls Bayou
 - Greens Bayou



THANK YOU!

- **Steven Johnston**
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