

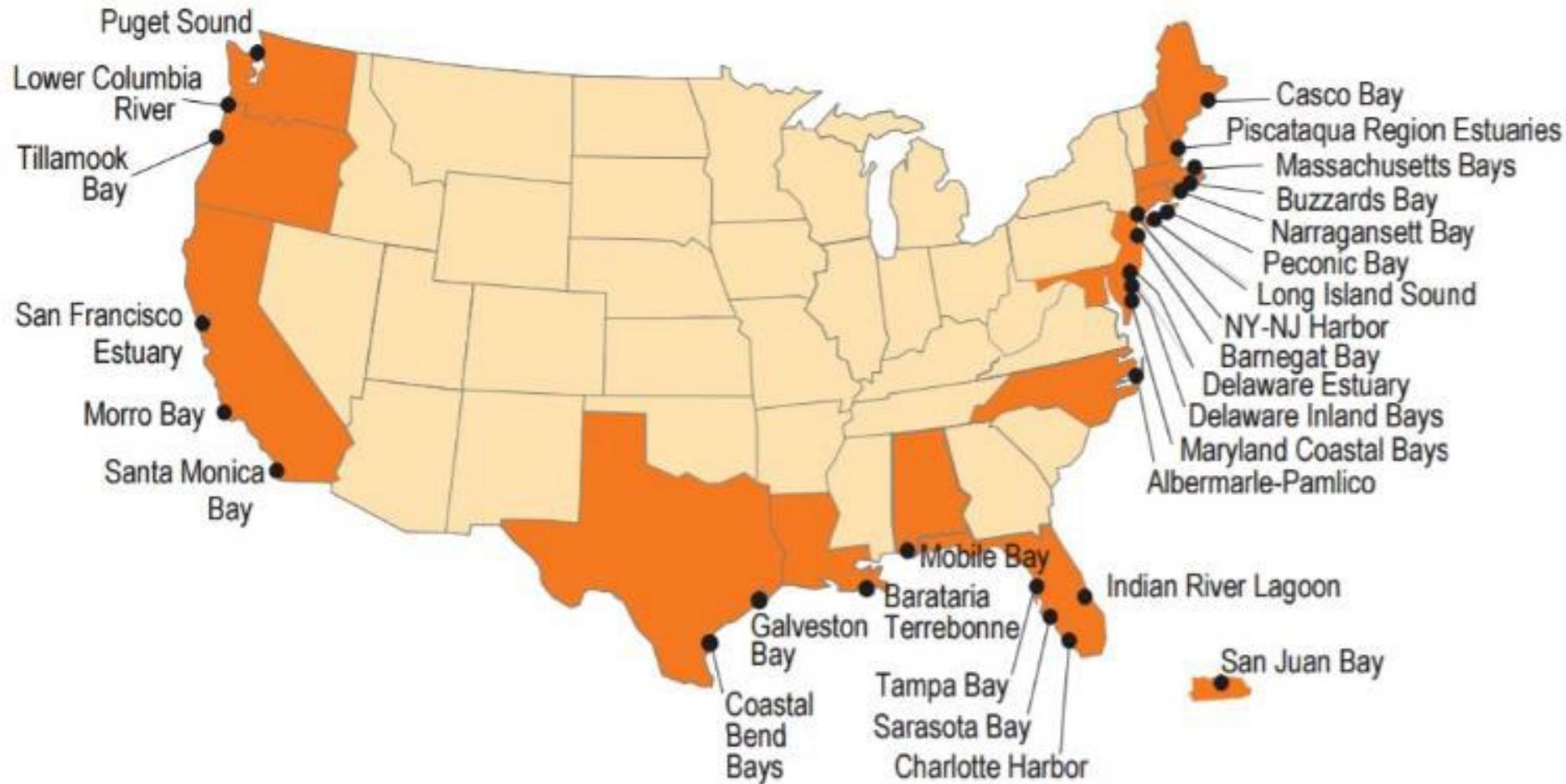
# Resources for Municipalities to Support Stewardship

Matthew Abernathy, Education and Outreach Coordinator  
Galveston Bay Estuary Program



# Galveston Bay Estuary Program (GBEP)

- ▶ GBEP was established in 1989.
- ▶ A non-regulatory program administered by the Texas Commission on Environmental Quality





## Our Mission

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To preserve Galveston Bay for generations to come.

## Our Purpose

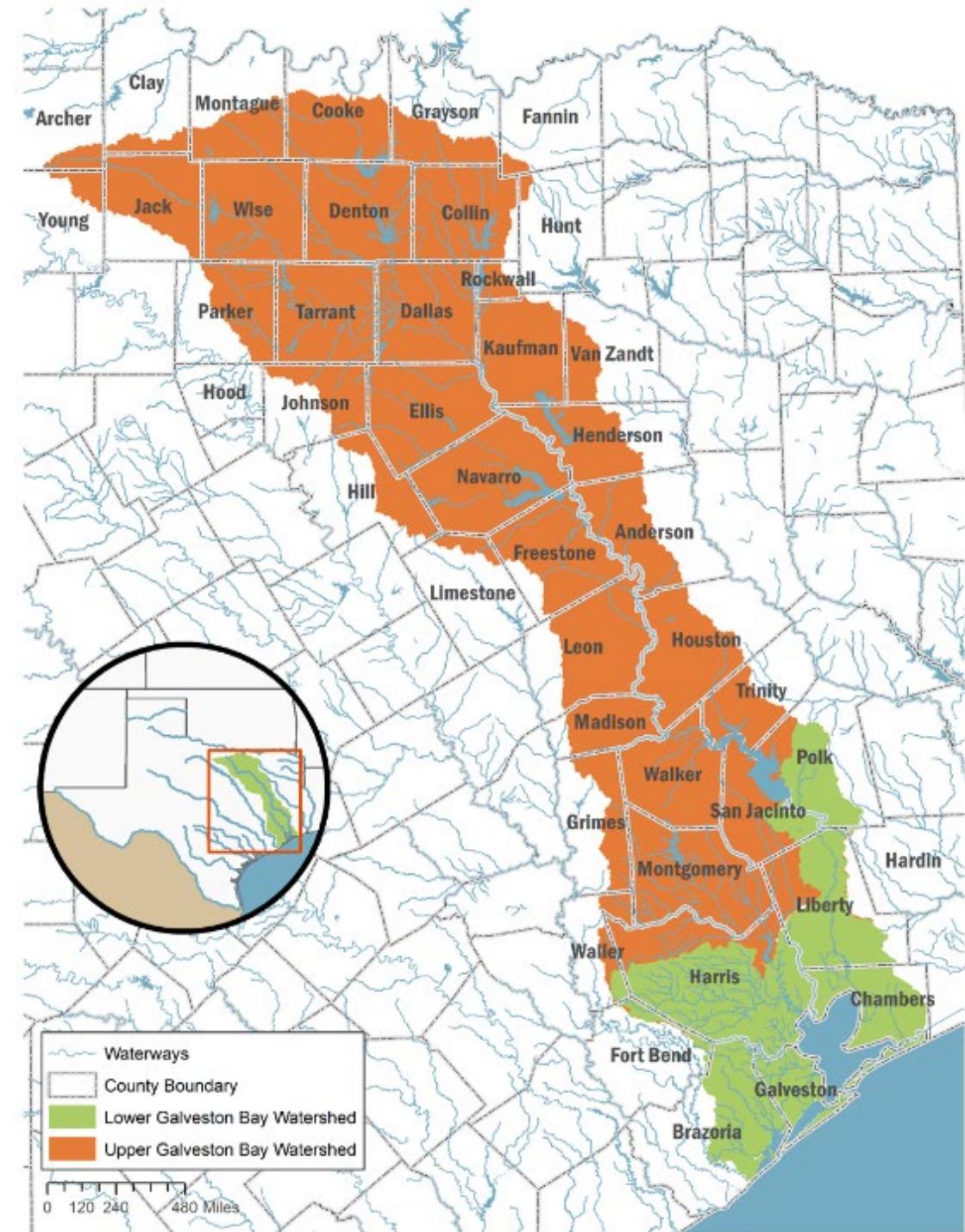
To provide comprehensive ecosystem management through collaborative partnerships and to ensure preservation of the bay's multiple uses.

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# It's a big deal!

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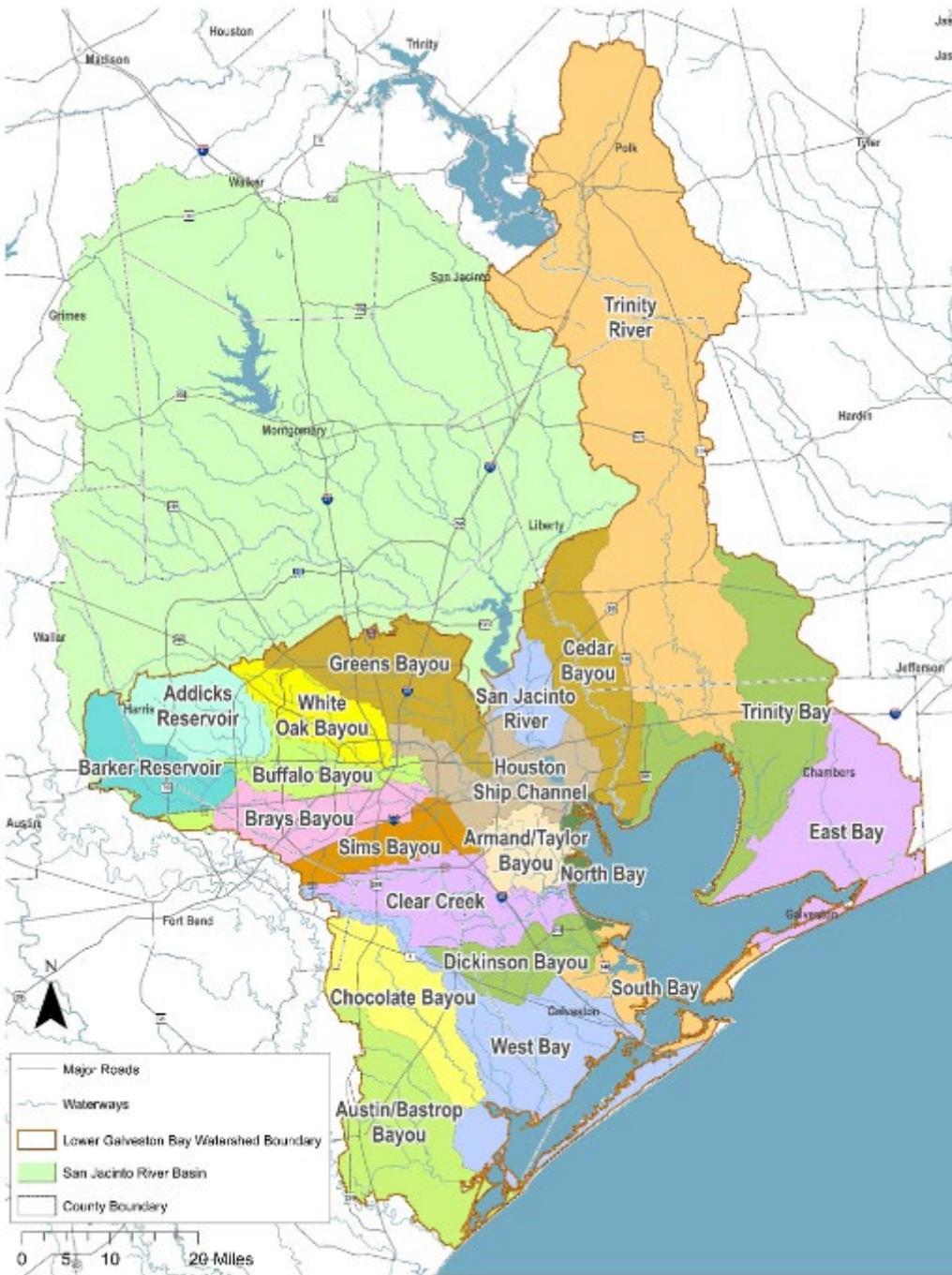
- ▶ Over half of Texans live in the Galveston Bay watershed.
- ▶ It drains to the Trinity and San Jacinto Rivers, which ultimately flow into Galveston Bay.
- ▶ The watershed is divided into two portions: upper and lower



# GBEP's Focus Area: Lower Galveston Bay Watershed

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- The lower watershed downstream of Lake Livingston and Lake Houston covers approximately 4,000 square miles
- The lower watershed influences the estuary through 1,295 miles of rivers, streams, and bayous.



# Challenges

Population Growth

Increased Impervious Surfaces

Stormwater and Wastewater Outfalls

OSSFs

Water Quality

Water Availability

Habitat Fragmentation

Lack of Funding

# Municipal Resources



Infrastructure Audits



Grants



Stormwater Management



Development and Implementation of Watershed-based Plans



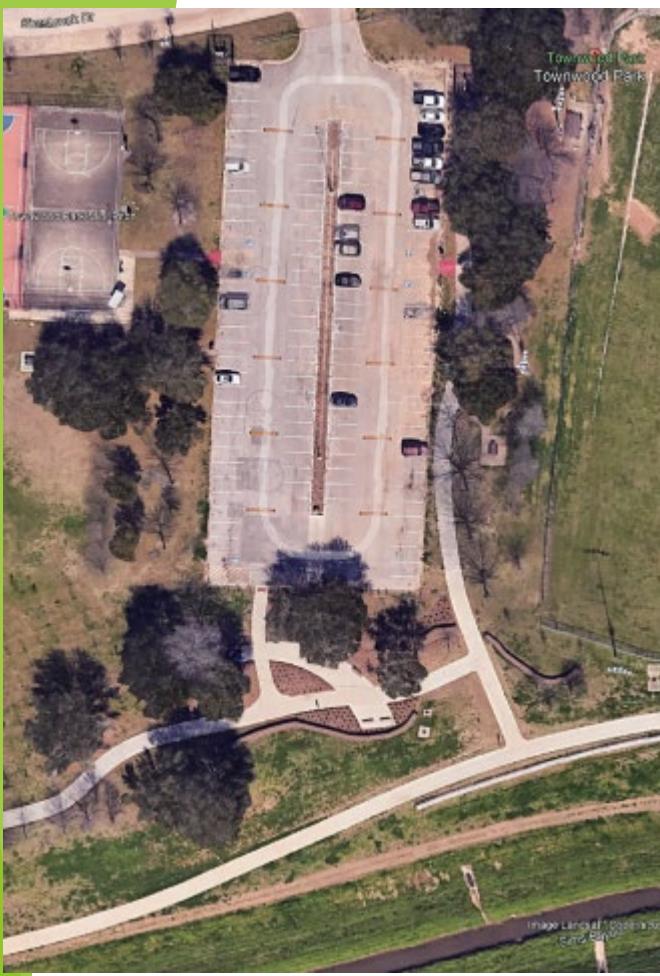
Habitat Restoration and Enhancement

# The Galveston Bay Plan

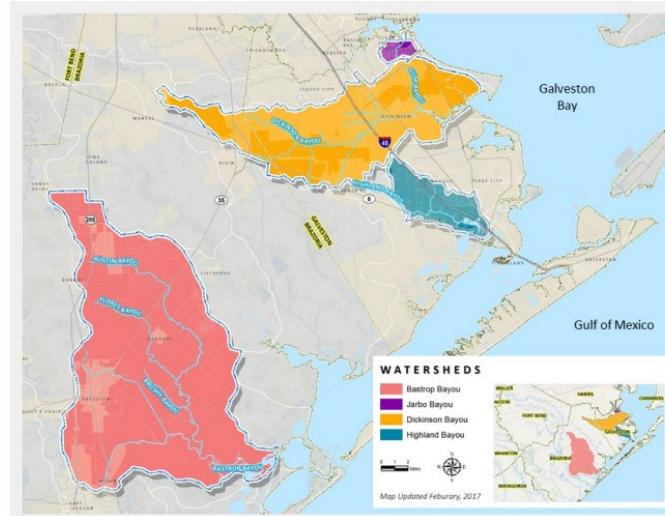


## **The Galveston Bay Plan, 2nd Edition**

*The Comprehensive Conservation and Management Plan for the Galveston Bay Ecosystem*



# Townwood Park



## WATERSHED PLANNING AND IMPLEMENTATION IN GALVESTON AND BRAZORIA COUNTIES

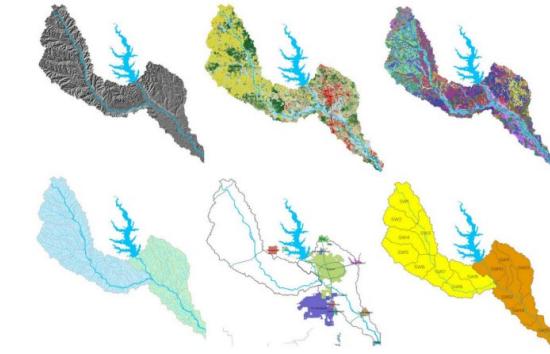
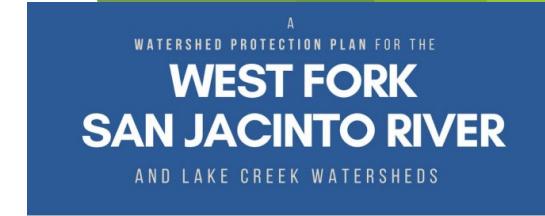


## Coordinating Implementation of a Watershed Protection Plan for Double Bayou

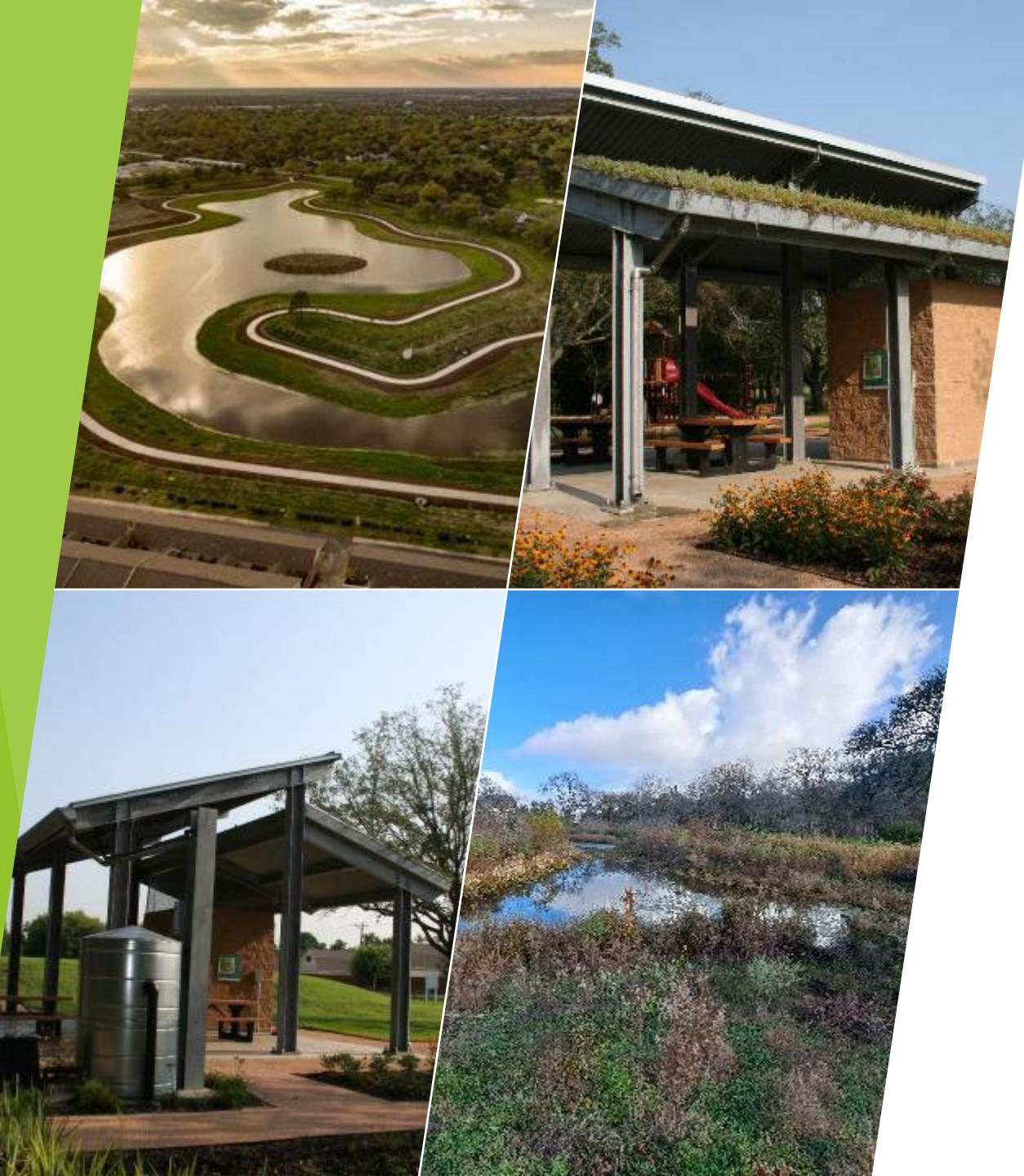
### Final Report



East Fork Double Bayou at Humphrey Road.



# Watershed Protection Plans



# Green Infrastructure



# Habitat Restoration

# Land Acquisition and Habitat Conservation

## Conservation Assistance Program

- ▶ Partnership between GBEP and the Galveston Bay Foundation
- ▶ Goals are to protect habitat & water quality, reduce storm impacts, provide recreational opportunities, and preserve natural heritage.
- ▶ Since 2011:
  - ▶ 27 projects
  - ▶ 14,000 acres conserved
  - ▶ Several projects in progress with the potential for an additional 10,000 acres



# GBEP Resources: Estuary Resilience Action Plan

- ▶ Stakeholder driven analysis of stressors impacting the Galveston Bay system
- ▶ Coordinated by the Houston Advanced Research Center; included representatives and subject matter experts from the region who were also familiar with the Galveston Bay Plan
- ▶ Identifies risks, potential adaptation/mitigation strategies, and examples of adaptation/mitigation actions.

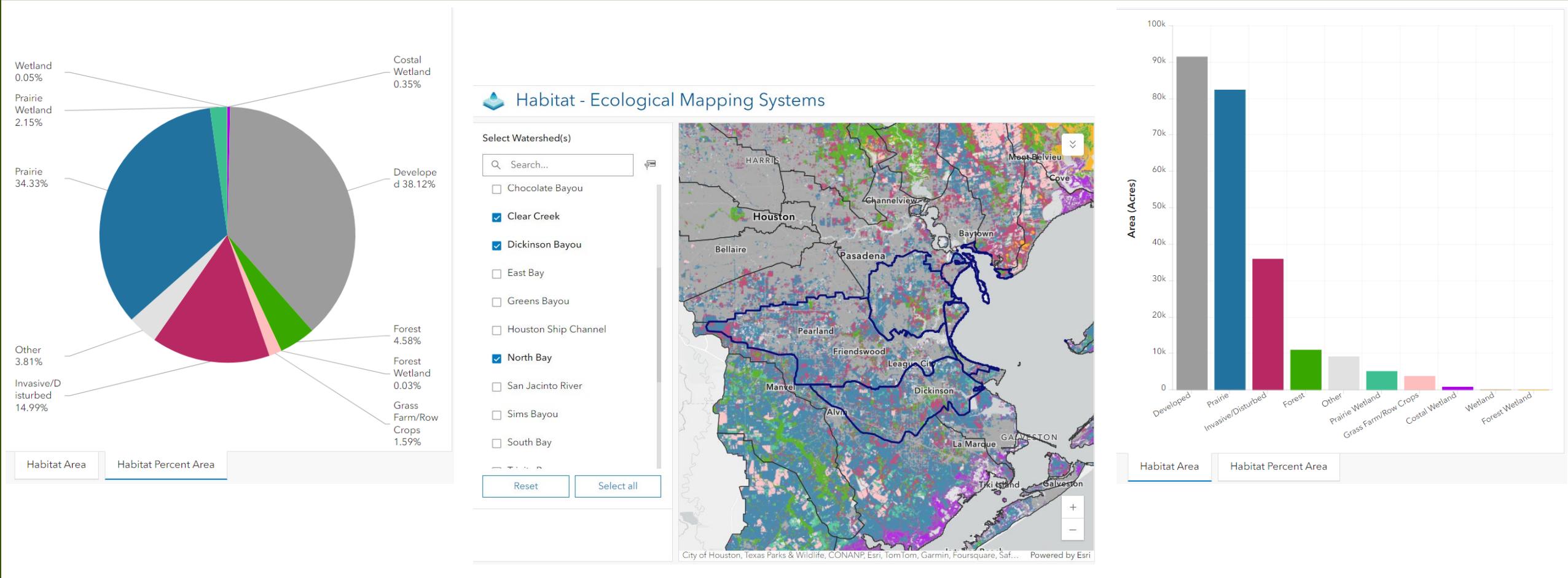


# GBEP Resources: Galveston Bay Report Card

- ▶ Mission: Every Bayou, Every Neighborhood, Everyone's Bay
- ▶ Evaluates environmental data for Galveston Bay and the watershed.
- ▶ Presents the data as a grade with supporting information.

2024 Report Card			
Water Quality	A		Coastal Change
	Galveston Bay	Rivers & Bayous	Freshwater Inflows - High Inflows
Nitrogen	A	A	Freshwater Inflows - Low Inflows
Phosphorus	A	B	Sea Level Rise
Dissolved Oxygen	A	A	Water Temperature
			Water pH
			A
Wildlife	C		Pollution Events & Sources
	Galveston Bay	Rivers & Bayous	
Shelfish	C		Toxic Metals in Sediment
Finfish	C		Toxic Organics in Sediment
Birds	C		Dioxin in Sediment
Invasive Species			Litter and Trash
Habitat	D		Total Spills Number
Saltwater Wetlands	C		Total Spills Volume
Freshwater Wetlands	D		
Human Health Risks			C
Underwater Grasses	C		
Oyster Reefs	I		Galveston Bay
			Rivers & Bayous
			Seafood Consumption Safety
			D
			Recreation Safety
			A
			B

<sup>1</sup> Estimated 2015 wetland grade is based on a combination of NOAA C-CAP 2010 wetland and H-GAC 2015 developed land cover. H-GAC's land cover data does not include part of the Galveston Bay Report Card study area, resulting in no grade (I) for the Trinity River watershed due to insufficient data.



# GBEP Resources: Regional Monitoring Database

# GBEP Resources

- ▶ GBEP websites
  - ▶ GBEP Website ([gbep.texas.gov](http://gbep.texas.gov))
  - ▶ GBEP Completed Projects webpage ([gbep.texas.gov/completed-projects](http://gbep.texas.gov/completed-projects)) - Reports available as PDFs
  - ▶ GBEPs Back the Bay website ([backthebay.org](http://backthebay.org)) - a community resource that aims to improve the environmental quality of Galveston Bay by increasing awareness and connection to our natural resources.
- ▶ Galveston Bay Report Card ([galvbaygrade.org](http://galvbaygrade.org))
- ▶ Regional Monitoring Database ([galvbaydata.org](http://galvbaydata.org))
- ▶ The State of Galveston Bay ([stateofgalvbay.org](http://stateofgalvbay.org))

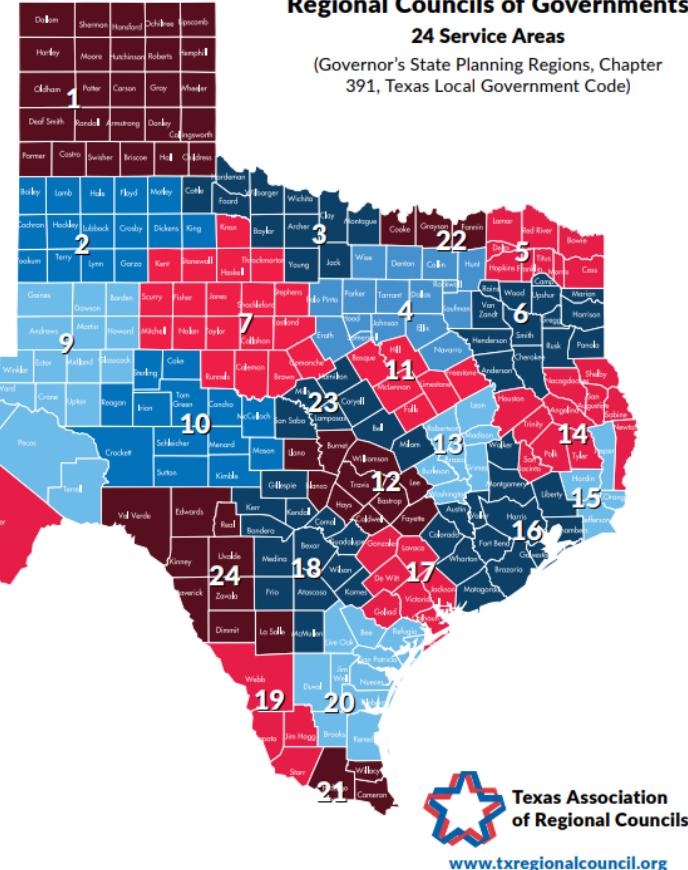
# Funding and Grant Opportunities

- ▶ GBEP and other NEPs grant funds to support projects that implement their CCMPs and are within their watershed areas.
- ▶ Other state agencies offer grants to support municipal programs and projects.
  - ▶ TPWD CO-OP grants: Community Outdoor Outreach Program. Support projects that are TPWD mission-oriented in outdoor recreation, conservation, and environmental education.
  - ▶ TCEQ and TSSWCB 319 grants: Managing nonpoint source pollution through watershed-based plans
  - ▶ TWDB provide various grants for planning, acquisition, design, and construction water-related infrastructure and improvements.

# Regional Councils

- Texas is divided into 24 regions, each served by a voluntary organization of local governmental entities that coordinate programs and services to address needs that cross jurisdictional boundaries.
- Easily accessible through the Texas Association of Regional Councils webpage.

1. Panhandle Regional Planning Commission
2. South Plains Association of Governments
3. Nortex Regional Planning Commission
4. North Central Texas Council of Governments
5. Ark-Tex Council of Governments
6. East Texas Council of Governments
7. West Central Texas Council of Governments
8. Rio Grande Council of Governments
9. Permian Basin Regional Planning Commission
10. Concho Valley Council of Governments
11. Heart of Texas Council of Governments
12. Capital Area Council of Governments
13. Brazos Valley Council of Governments
14. Deep East Texas Council of Governments
15. South East Texas Regional Planning Commission
16. Houston-Galveston Area Council
17. Golden Crescent Regional Planning Commission
18. Alamo Area Council of Governments
19. South Texas Development Council
20. Coastal Bend Council of Governments
21. Lower Rio Grande Valley Development Council
22. Texoma Council of Governments
23. Central Texas Council of Governments
24. Middle Rio Grande Development Council



# Houston- Galveston Area Council

- ▶ The primary goal of the Houston-Galveston Area Council is to promote regional cooperation and planning in areas such as transportation, air quality, economic development, workforce development, emergency preparedness, and environmental planning
- ▶ Provide a variety of resources including grants, best management plans, and community resources.



# Key Takeaways



Develop partnerships



Share resources



Look at the bigger picture



Think outside the box



Ask for assistance



Questions?

# Contact Info:

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U.S. Environmental Protection Agency

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