

# Tackling Climate Change in Texas

## Leveraging Nature, Policy, and Clean Energy





Founded in 1951, The Nature Conservancy (TNC) is a non-profit conservation organization partnering with communities in more than 70 countries to create a world where people and nature thrive.

Our mission is to protect the lands and waters on which all life depends.

**Tackling Climate Change is an organizational priority.**

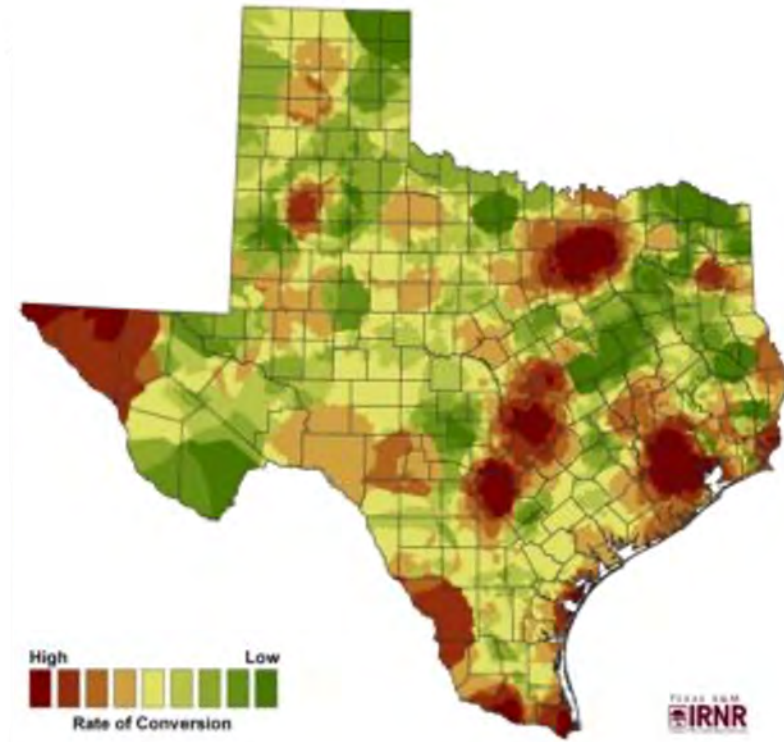
TNC recognizes that we have years, not decades, to address the interconnected climate and biodiversity crises.





# Snapshot: Texas

- **Texas leads the country in federally declared natural disasters.**<sup>1</sup>  
  
“Texas has seen its number of natural disasters increase by 244% over the past four decades.”<sup>2</sup>
- **Texas is the Number 1 producer of Greenhouse Gas Emissions in the U.S.**<sup>4</sup>
- **Texas has largest annual state population growth.**<sup>5</sup>



<sup>1</sup>Congressional Research Services,  
2017;

<sup>2</sup>U.S. Census Bureau, 2010-2020

<sup>4</sup>USEPA and WRI

<sup>5</sup>U.S. Census

OUR GOALS FOR 2030

# Tackling Climate Change

- Maximizing Nature's Ability to Store Carbon
- Promoting Smart Clean Energy Policies
- Bolstering Resilience for Habitats and Communities
- Cultivating a Shift to Planet-Friendly Food Systems

# THE DECADE TO DELIVER OUR 2030 GOALS



## CLIMATE

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**3 GT**

CO<sub>2</sub>E REMOVED  
OR SEQUESTERED

**THE TARGET:** Remove or sequester 3 billion metric tons of carbon dioxide emissions (CO<sub>2</sub>e) per year—the same as removing 650 million cars off the road.

**THE HOW:** Using the power of nature to store carbon, and the strength of policy to cut emissions equivalent to nearly a tenth of global emissions from fossil fuels.

**100M**

PEOPLE  
BENEFITED

**THE TARGET:** Help 100 million people who are most likely to be affected by climate-related emergencies such as floods, fires and drought.

**THE HOW:** Investing in nature to improve the health of habitats such as mangroves and reefs that absorb wave energy and equitably protect people in coastal communities.

# Climate Mitigation



# Site Renewables Right

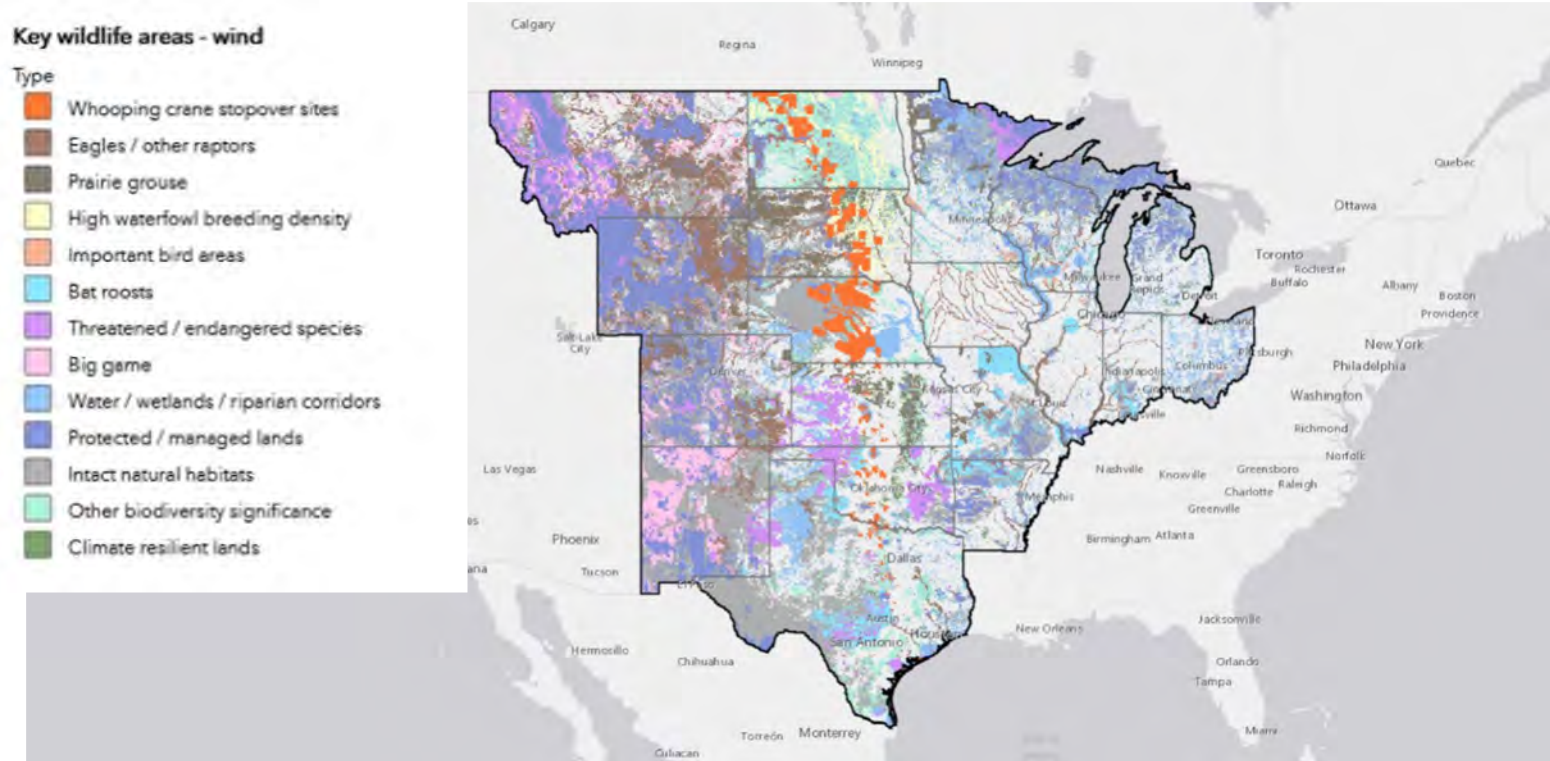


- The Nature Conservancy supports the rapid expansion of renewable energy, and to provide clean, low-impact power for people and wildlife.
- Achieving the clean energy build-out necessary to meet our climate goals will require **quadrupling our renewable energy capacity** in the United States by 2050.
- Up to **75%** of the nation's new large renewable energy projects will occur in the **central U.S.**, home to much of the nation's most promising wind and solar resources.
- The central U.S. also provides our best remaining **grassland habitat** in North America, **and unique wildlife** .



# Site Renewables Right (SRR)

- [Site Renewables Right website](#)
- [Site Renewables Right video](#)
- [Site Renewables Right Mapping Tool](#)



**>120,000 mi<sup>2</sup> in Central US available for RE development, without impacting prime habitat**

# SRR & “3C” Principles Outreach in Action



SRR is a standard layer in industry-leading renewable energy development software, **reaching over 175 companies.**



Operate largest renewable energy marketplace (**over 4500 projects**). All new projects are screened against SRR through *Impact+*



**RIVIAN**



TNC helping Rivian meet entire energy demand (company + customers) through “3C” renewable energy deals.



# Climate Adaptation



# Nature- Based Solutions for Climate Resilience



Riverine



Coastal



Urban

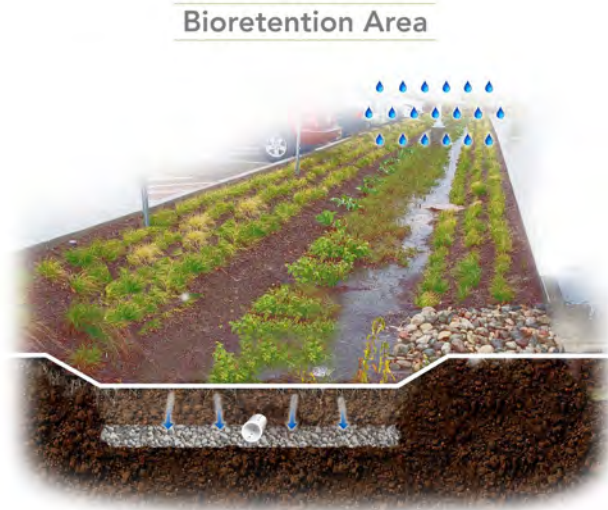
**TNC supports the use of nature-based solutions (NBS)—natural areas and engineered systems that borrow from nature— across landscapes and scales, to mitigate impacts of climate change and land conversion while achieving multiple co-benefits for people and nature.**

- Policy & Planning
- Science and tools
- On-the ground implementation
- Building capacity of others



# Urban NBS: Green Stormwater Infrastructure

Green stormwater infrastructure (GSI) such as raingardens, bioswales, and rainwater harvesting cisterns slow, treat, and infiltrate rainwater close to where it falls, improving water quality and reducing urban flooding and erosion.



# Green Stormwater Infrastructure for Urban Flood Resilience:

Opportunity Analysis for Dallas, Texas



TNC and Texas A&M Agrilife, with the City of Dallas and the Trust for Public land completed a study to identify where green stormwater infrastructure (GSI) could most effectively enhance urban flood management within Dallas, Texas, when considering capacity, cost, and future impacts of climate change?

[Nature.org/DallasGSI](https://www.nature.org/DallasGSI)



# Priority Subwatersheds 100-yr (1% storm)

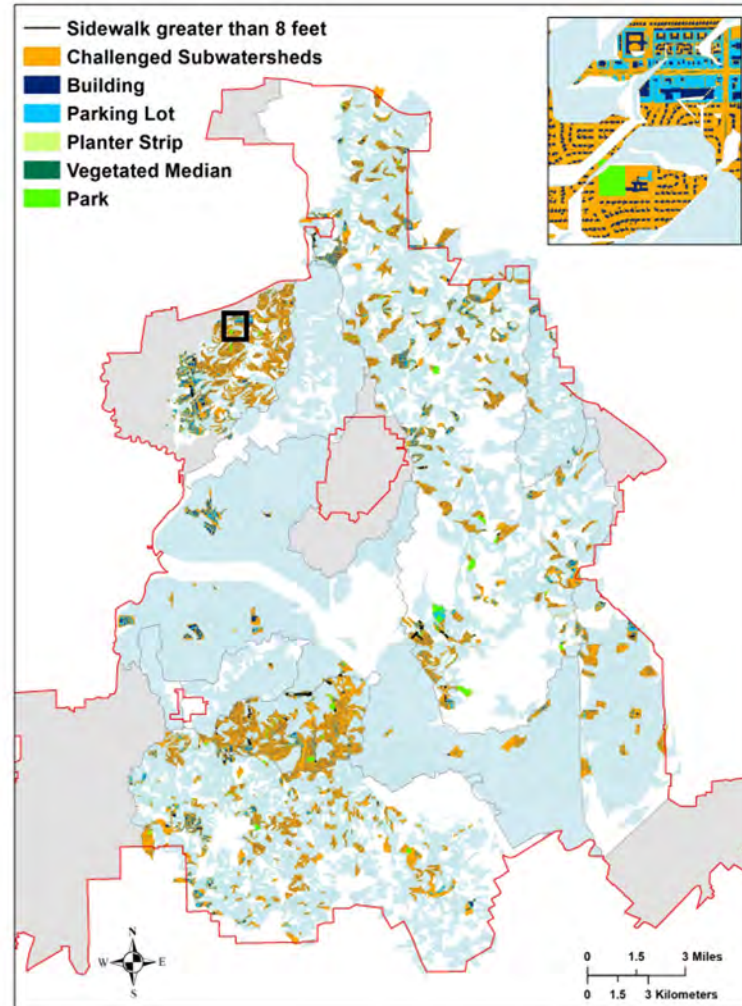


Figure 26. Spatial Opportunity Assessment for Select GSI, 100-Year (1%), 24-Hour Storm, Current Conditions

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## BIORETENTION AREAS

© Fouad Jaber/Texas A&M AgriLife

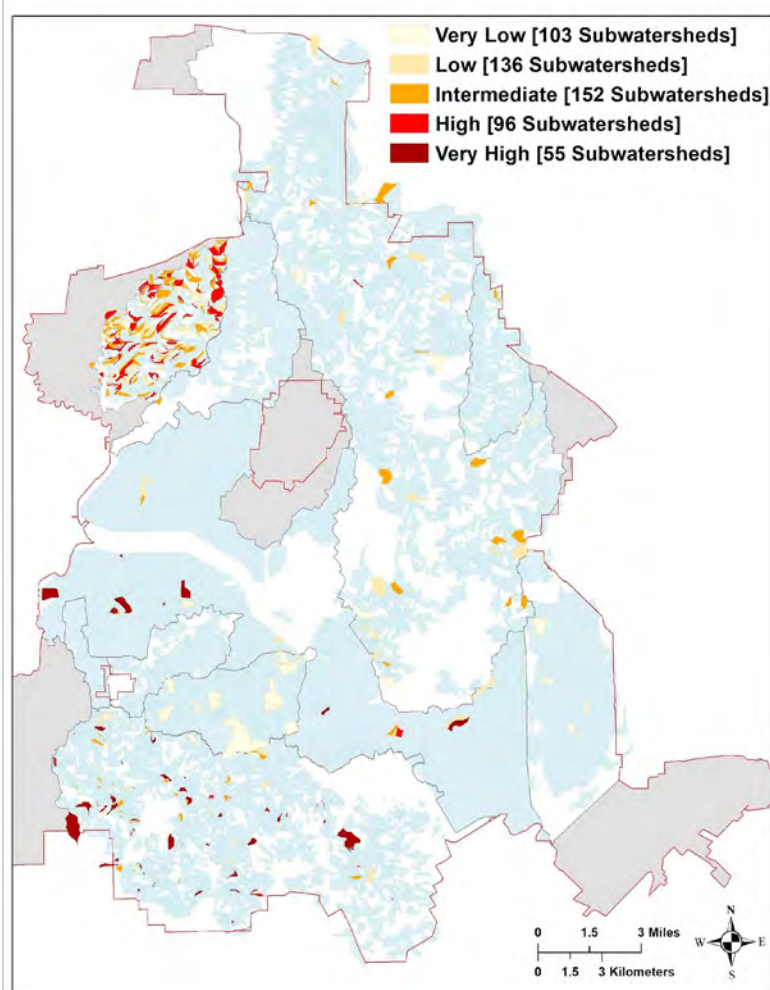


## RAIN GARDEN

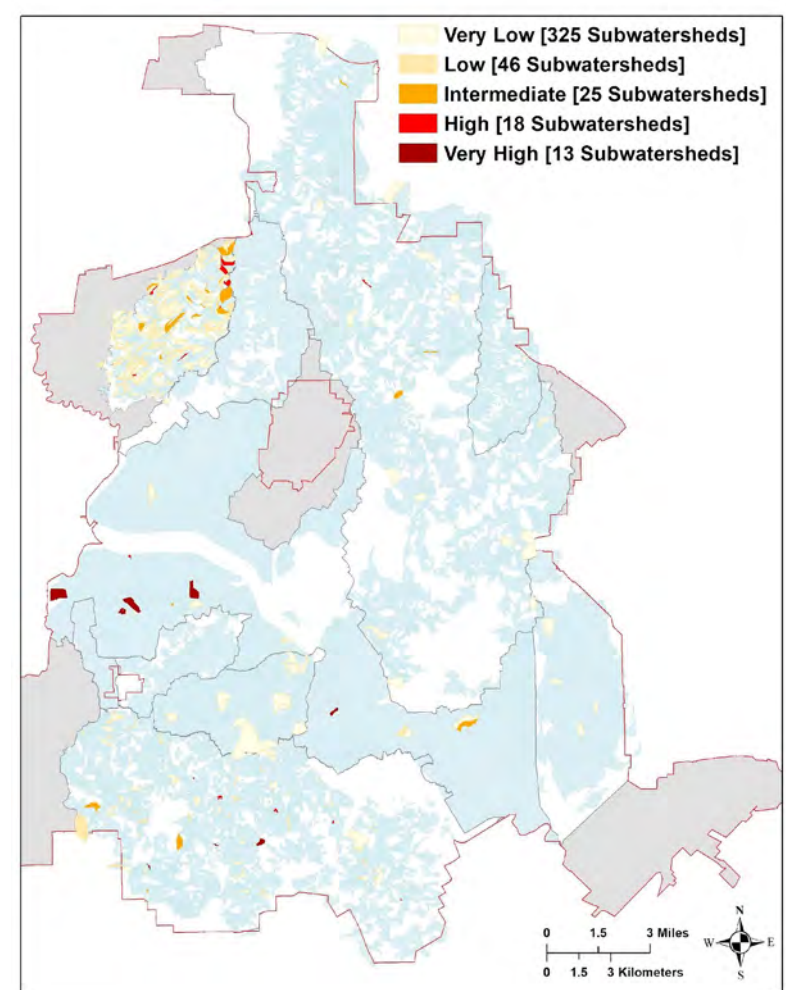
© Gabriel Saldana/Texas A&M AgriLife



## RAINWATER HARVESTING CISTERN

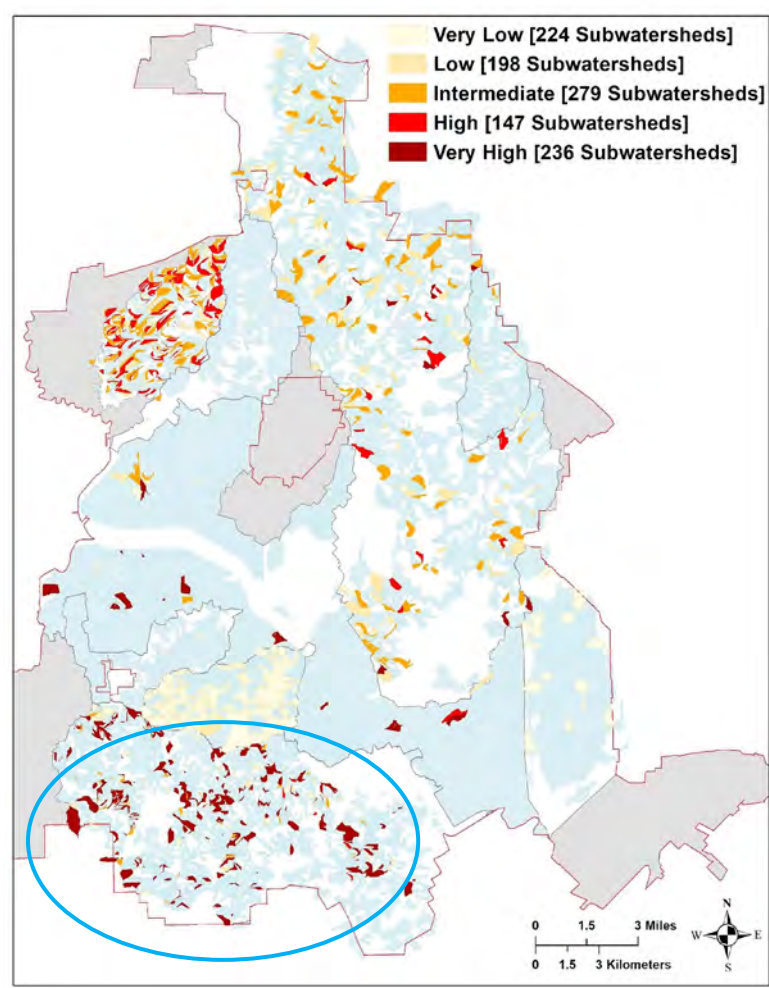


**2-yr (50%) storm Pre GSI**

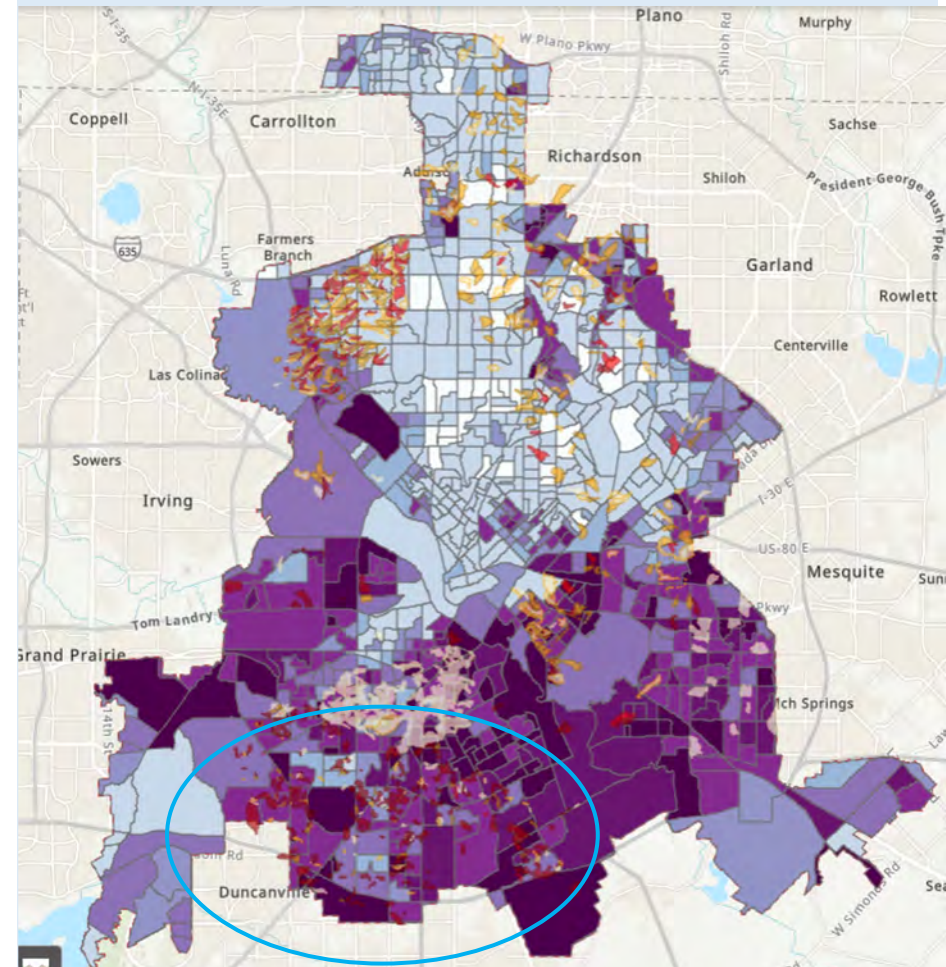


**2-yr (50%) storm Post GSI**





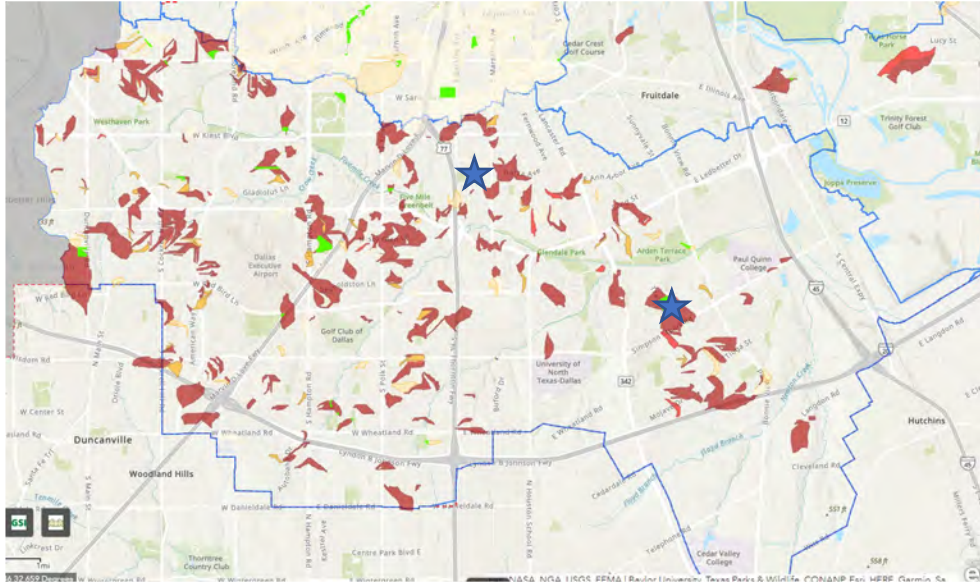
**100-yr (1%) storm Pre GSI**



**With USEPA Social Vulnerability Index**



# GSI in Five Mile Creek Parks System



Five Mile Creek Watershed



Bioretention rain gardens at South Oak Cliff Renaissance Park

# COMPREHENSIVE ENVIRONMENTAL AND CLIMATE ACTION PLAN (CECAP)

Adopted May 27, 2020

*FORWARD* DALLAS



City of Dallas

<http://www.Dallasclimateaction.com>

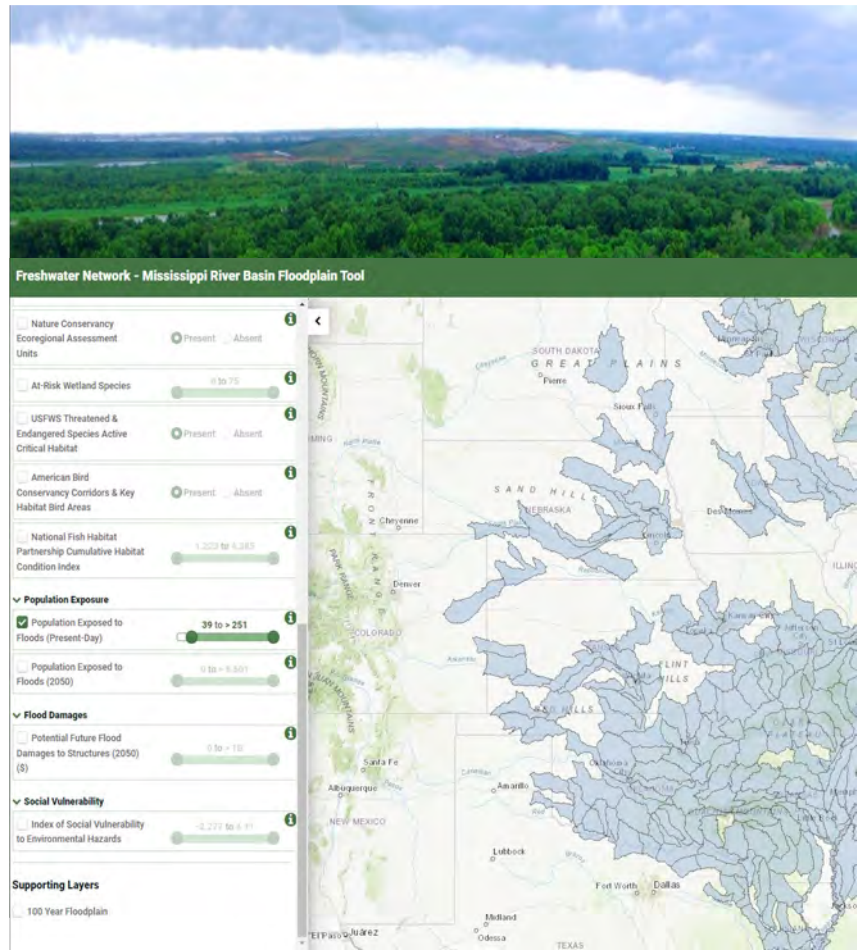
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# Riverine NBS: Trinity Floodplain Planning & Prioritization

- TNC is Collaborating with the USACE Silver Jackets and stakeholders to support the **protection and restoration of floodplain area in the Trinity Basin.**
- Mitigate flood impacts, reduce risk to communities, improve water quality and ecosystem function and provide additional community and conservation benefits.
- TNC's Floodplain Prioritization Tool (FPPT) will help prioritize critical opportunities for floodplain conservation and restoration within the Trinity Basin.

[Floodplain Prioritization Tool- Overview](#)





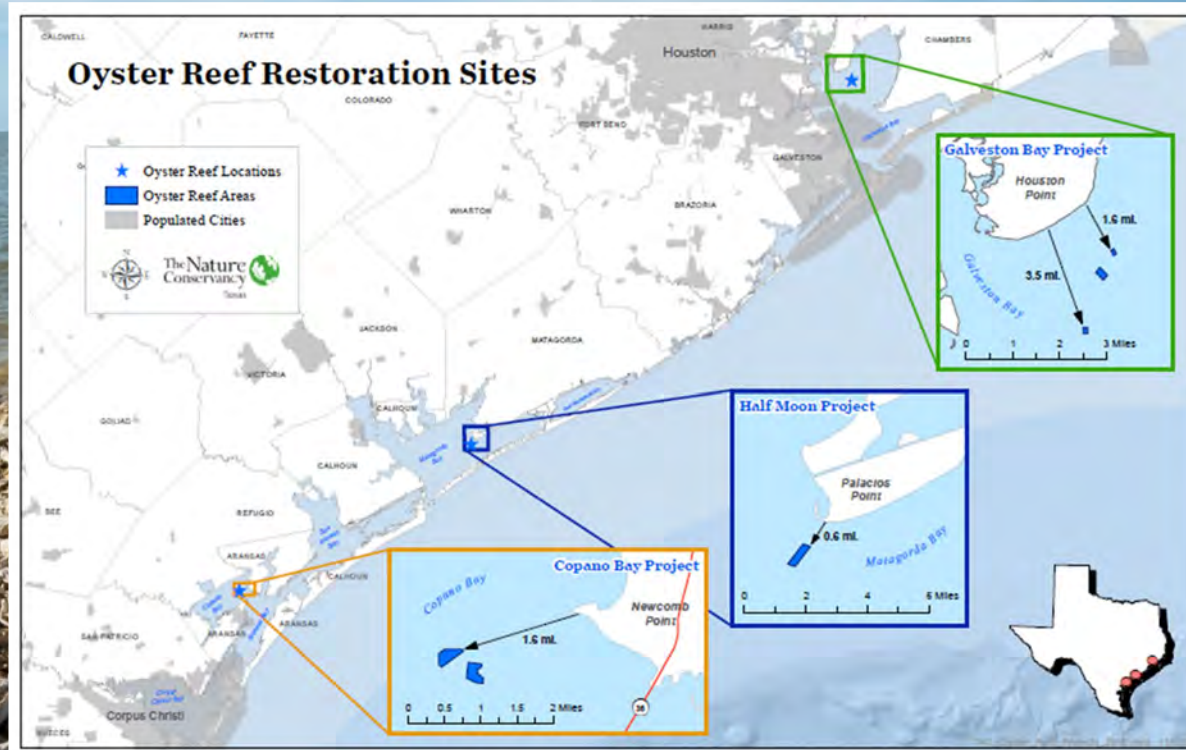
# Coastal NBS: Natural Shoreline Restoration

- Mad Island Marsh Preserve
- Texas City Prairie Preserve
- Shamrock Island +



# Coastal NBS: Whole Systems Oyster Reef Restoration

- One adult oyster filters 50 gallons of water a day.
- The Gulf Coast region produces nearly half of all oysters consumed in the U.S. each year.
- Oysters protect our shorelines in the face of climate change



# Nature-Based Solutions in State Policy



## State Flooding Planning Process

- TNC staff serving as voting members on Regional Flood Planning Groups
  - Advocate for inclusion of nature-based solutions



## State Hazard Mitigation Plan

- TNC worked with group of NGOs to get environmental NGO representation at decision-making table
  - Advocate for inclusion of nature-based solutions



## Coastal Resiliency Master Plan

- Implementation of coastal projects
- Participate on the Technical Advisory Committee + the Ecosystem Services Technical Working Group



## Coastal Texas Study

- Support for environmental restoration and non-structural components of the project



A photograph of a lush green wetland landscape. In the foreground, there are tall, green grasses and a small stream of water. The middle ground features more grasses and some water lilies. The background is filled with a dense forest of green trees. The text "Thank You" is centered in the middle of the image.

Thank You