



# The TCEQ Natural Resource Trustee Program, Natural Resource Damage Assessment, and Ecological Services Analysis under TRRP

**Mike Cave, TCEQ**

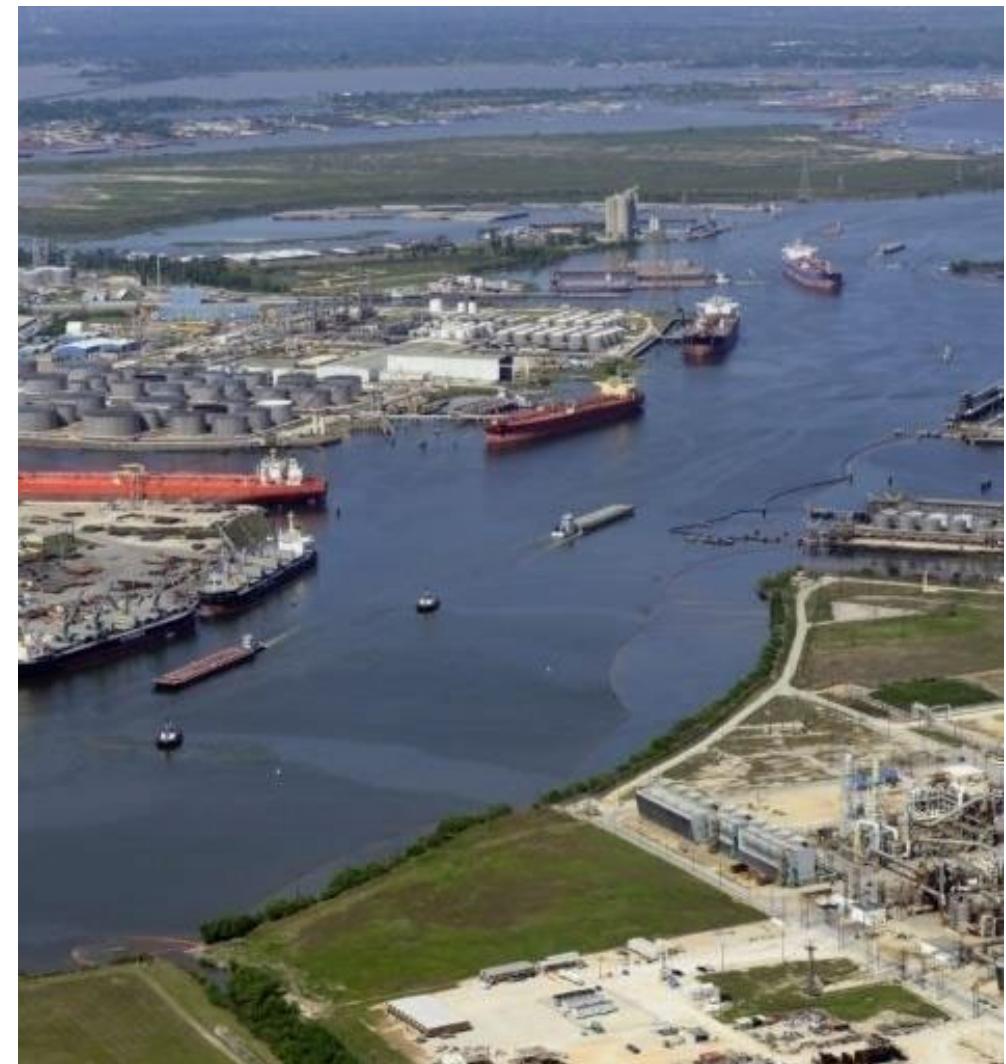
# Natural Resource Trustees and NRDA

The President and state governors designate Natural Resource Trustees to:

- Assess injuries to natural resources and seek compensation
- Restore, rehabilitate, replace, or acquire the equivalent of injured natural resources

Statutory authority:

- Clean Water Act
- CERCLA
- Oil Pollution Act
- Texas Oil Spill Prevention and Response Act



# Texas Natural Resource Trustee Agencies

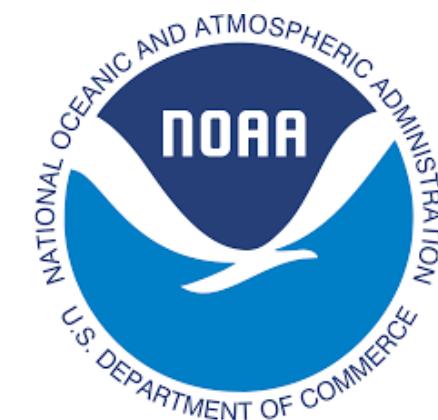
## State Trustees:

- Texas Commission on Environmental Quality
- Texas Parks and Wildlife Department
- Texas General Land Office



## Federal Trustees:

- National Oceanic and Atmospheric Administration (Department of Commerce)
- U.S. Fish and Wildlife Service (Department of the Interior)



# NRDA Restoration in Texas



# Deepwater Horizon Oil Spill Restoration

## GULF SPILL RESTORATION

Website maintained by NOAA on behalf of the Deepwater Horizon Natural Resource Damage Assessment Trustees



Home About Us ▾ How We Restore ▾ **Restoration Areas** ▾ Data Story Archive Google™ Custom Search

Restoration Areas / Texas

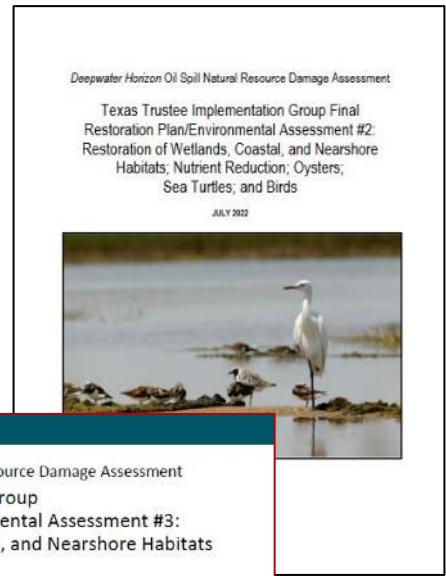
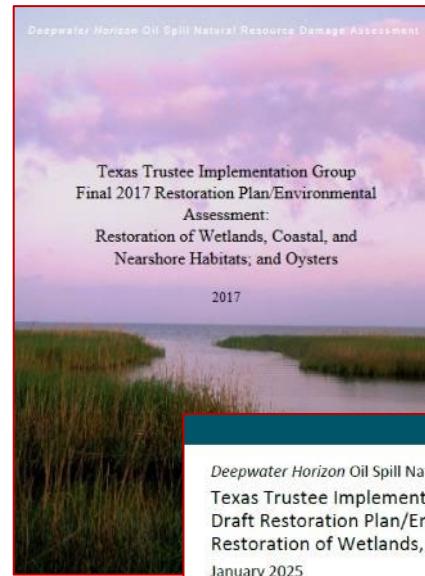
### Texas Restoration Area

Restoration work in the Texas Restoration Area focuses on restoring wetlands and other coastal habitats and reducing nonpoint source pollution. The Texas Trustees also restore resources injured by the spill, including oysters, birds, sea turtles, and recreational use.

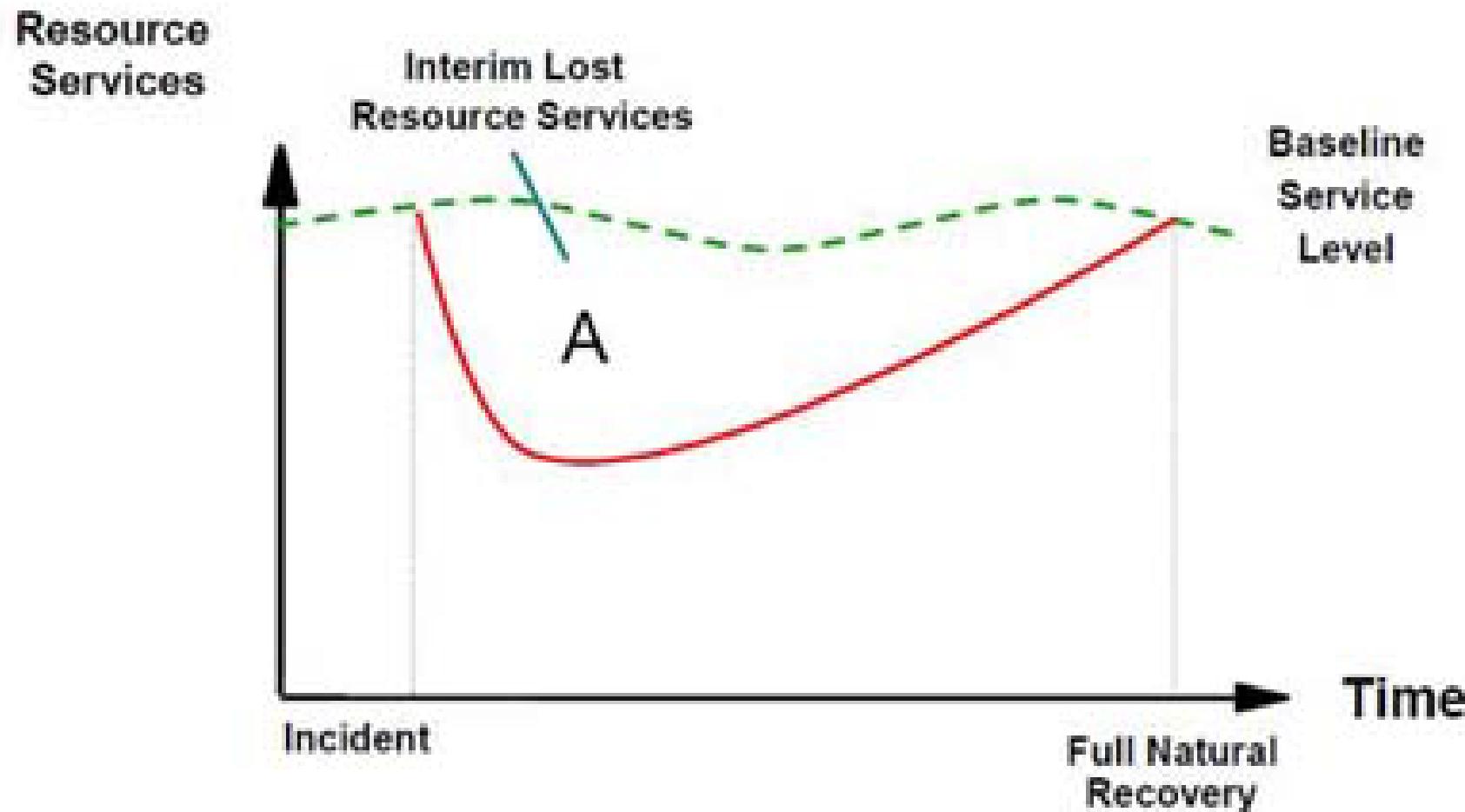
In 2017, the Trustees released their **first Restoration Plan** with 13 projects restoring oysters, and wetlands, coastal, and nearshore habitat. The Trustees are developing additional restoration plans for specific projects consistent with the **Programmatic Restoration Plan**. As part of the ongoing restoration planning process, the Trustees will solicit restoration project ideas from the public. When the Trustees release any proposed restoration plan for the Texas Restoration Area, the public has the opportunity to review and provide comments. Once a plan is finalized, the Trustees will implement and monitor the selected projects (see chart below).



NOAA Gulf Spill Restoration Website: Texas Restoration Area  
<https://www.gulfspillrestoration.noaa.gov/restoration-areas/texas>



# Lost Natural Resource Services Over Time

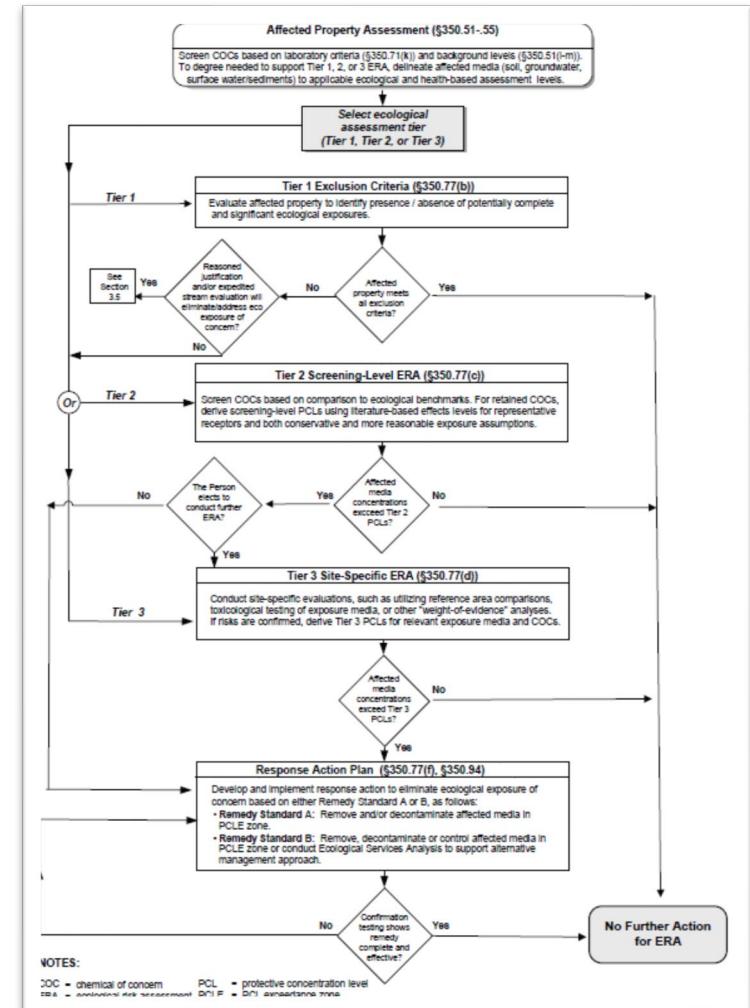


# Ecological Risk Assessment under the Texas Risk Reduction Program (TRRP)

## Affected Property Assessment (30 TAC Section 350.51-.55)

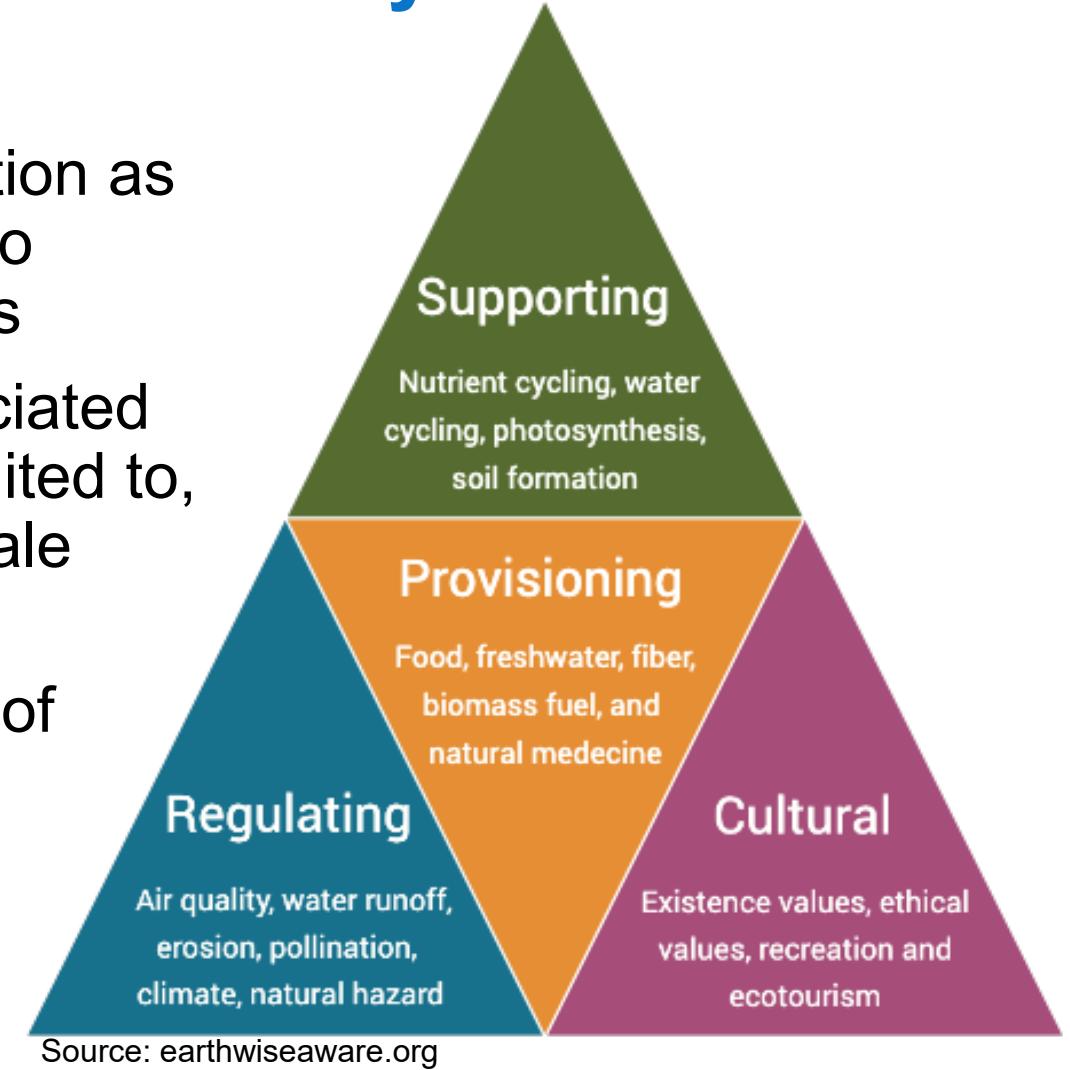
- Tier 1 Exclusion Criteria Checklist (Section 350.77(b))
- Tier 2 Screening Level Ecological Risk Assessment (Section 350.77(c)) or Tier 3 Site-Specific Ecological Risk Assessment (Section 350.77(d))
- Response Action Plan (Section 350.77(f), 350.94)

If COCs exceed ecological PCLs (but not human health), Ecological Services Analysis can be considered as an alternative management approach to removal, decontamination, or control of affected media.



# Ecological Services Analysis

- Considers potential impacts of remediation as well as risks associated with exposure to COCs that exceed their ecological PCLs
- Analyzes ecological service flows associated with options that include, but are not limited to, natural attenuation and partial or full-scale remedial actions
- Ecological restoration or a combination of actions may be used to compensate for potential losses of ecological services associated with a selected remedy



# Strategies for ESA Success

- Download the Ecological Risk Assessment guidance documents RG-263 and RG-263c
- Engage with the Trustees early through the TCEQ site project manager and ecological risk assessor
- Consult technical staff familiar with ecological risk and Natural Resource Damage Assessment methodology



TCEQ Ecological Risk Assessment Program Website



August 2018  
RG-263c

**Case Study for the TCEQ's Ecological Risk Assessment Process**



August 2018  
RG-263

**Conducting Ecological Risk Assessments at Remediation Sites in Texas**

QUALITY

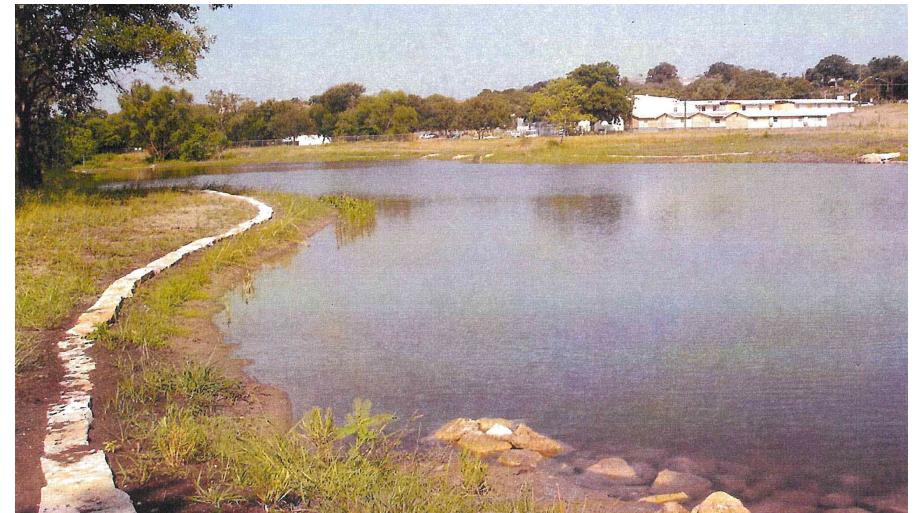
# Impacted Municipal Park (Central Texas)

- Former gravel quarry used as a municipal waste landfill in 1950s with subsequent illegal dumping, including pesticides and battery casings
- Opened as a park in 1970s after site remediation
- Erosion of former landfill area by a creek running through the park led to additional maintenance and cleanup
- Ecological PCL exceedance zones for lead and pesticides in an on-site pond and small terrestrial areas addressed through ESA



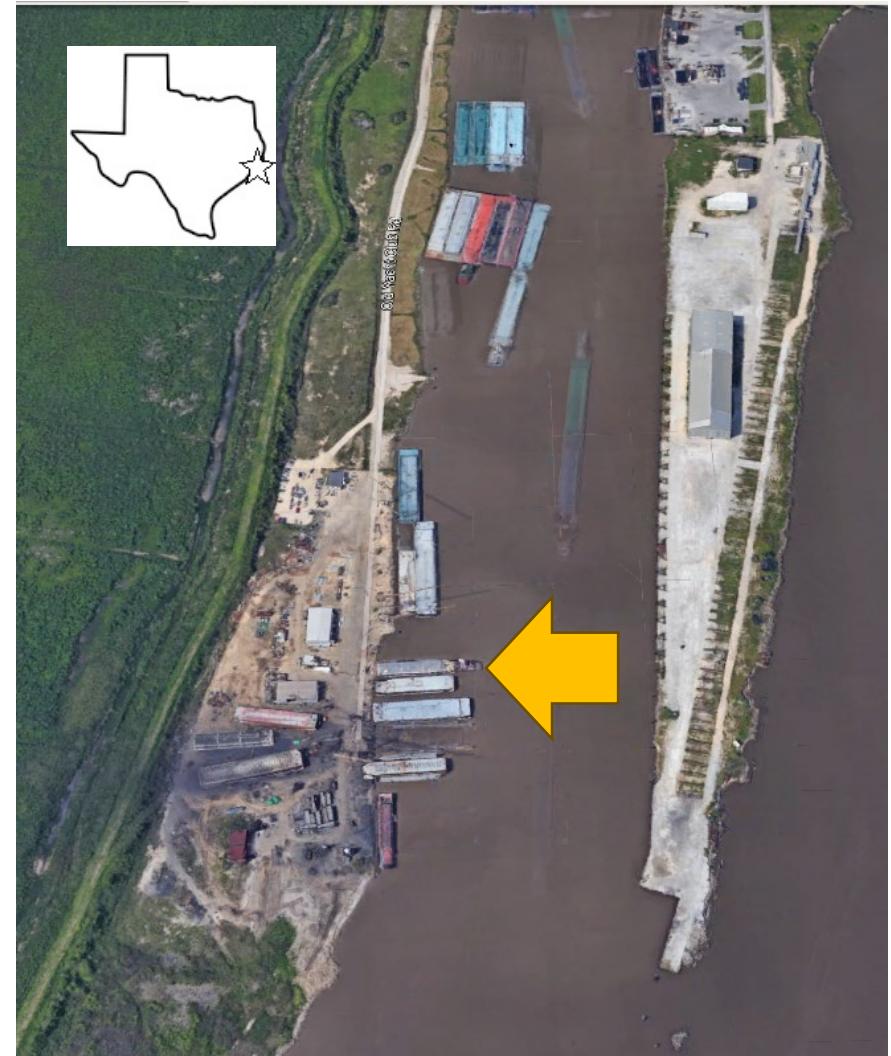
# Impacted Municipal Park (Central Texas) – cont.

- Owner and Trustees evaluated the ecological impacts of the historical contamination and different remedies, including pond and soil removal, remediation of soils and sediments, and natural recovery with compensatory restoration
- Preferred option: Natural recovery and compensate lost services through construction and planting of a 1.9-acre off-site pond and seeding 19.7 acres of the remediation area with native grasses and wildflowers



# Former Marine Vessel Repair Facility (Upper Texas Coast)

- Marine vessel fabrication and repair facility near an abandoned channel
- Historical surface coating and blast cleaning contributed to contamination of site soils and abandoned channel sediments and risk to benthic community to be addressed before site closure
- Ecological PCL exceedance zones for arsenic, cadmium, and lead in marine sediments addressed through ESA



# Former Marine Vessel Repair Facility - cont.

- Owner and Trustees evaluated the ecological impacts of the historical contamination and different remedies, including monitored natural recovery, sediment removal, and natural recovery with compensatory restoration
- Preferred option: Natural recovery and compensate lost services through habitat improvement activities at J.D. Murphree Wildlife Management Area





TCEQ TRRP Website

Thank you!  
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TCEQ Natural Resource  
Trustee Program Website