

A scenic view of a river with a forested bank under a clear blue sky. The text is overlaid on the image.

# Natural Resource Damage Assessment and Restoration (NRDAR)

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# Major Topics

- ▶ **NRDAR 101**
- ▶ **TR NRDAR**
- ▶ **Restoration**
- ▶ **Next steps**



# What is NRDAR?

- ▶ **Natural Resource Damage Assessment and Restoration**
- ▶ **Created by Congress in addition to the processes for cleanup of hazardous substances**
- ▶ **Government agencies act on behalf of the public to restore natural resources for public use and enjoyment**

# **NRDAR Authorities**

- ▶ **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**
  - Regulations at 43 CFR 11
- ▶ **Oil Pollution Act (OPA)**
  - Regulations at 15 CFR 990
- ▶ **Clean Water Act (CWA)**
- ▶ **State laws – Act 451 of 1994**

# What is NRDAR?

- ▶ Determine injury through time to natural resources due to a release of oil or hazardous substance
- ▶ Assesses damages for injuries to recover and restore trust resources and their services
- ▶ Recover damages as \$\$ or restoration projects via a negotiated settlement or litigation

# What is Injury?

- ▶ A measurable or observable adverse change in the quality, viability, or value of natural resources and the services that they provide.
  - Is defined in regulations
  - Not the same as risk
  - Is more than just dead stuff

# What Exactly Are Damages?

- ▶ **Strictly speaking, \$\$\$\$**
  - **Restoration**
  - **Costs of assessment**
- ▶ **Regulations focus on implementing restoration projects rather than collecting \$\$**

# What Are Services?

- ▶ **Services are the beneficial outcomes that result from natural resources & ecosystem functions**
  - **Healthy habitat for fish and wildlife**
  - **Provision of clean water**
  - **Harvesting animals or plants**
  - **Recreation and cultural practices**
  - **Scenic views**



# Goal of NRDAR

- ▶ Restore injured natural resources and the services they provide
- ▶ For NRDAR, restore means: restore, rehabilitate, replace, or acquire the equivalent of injured natural resources and services

# Goal of NRDAR

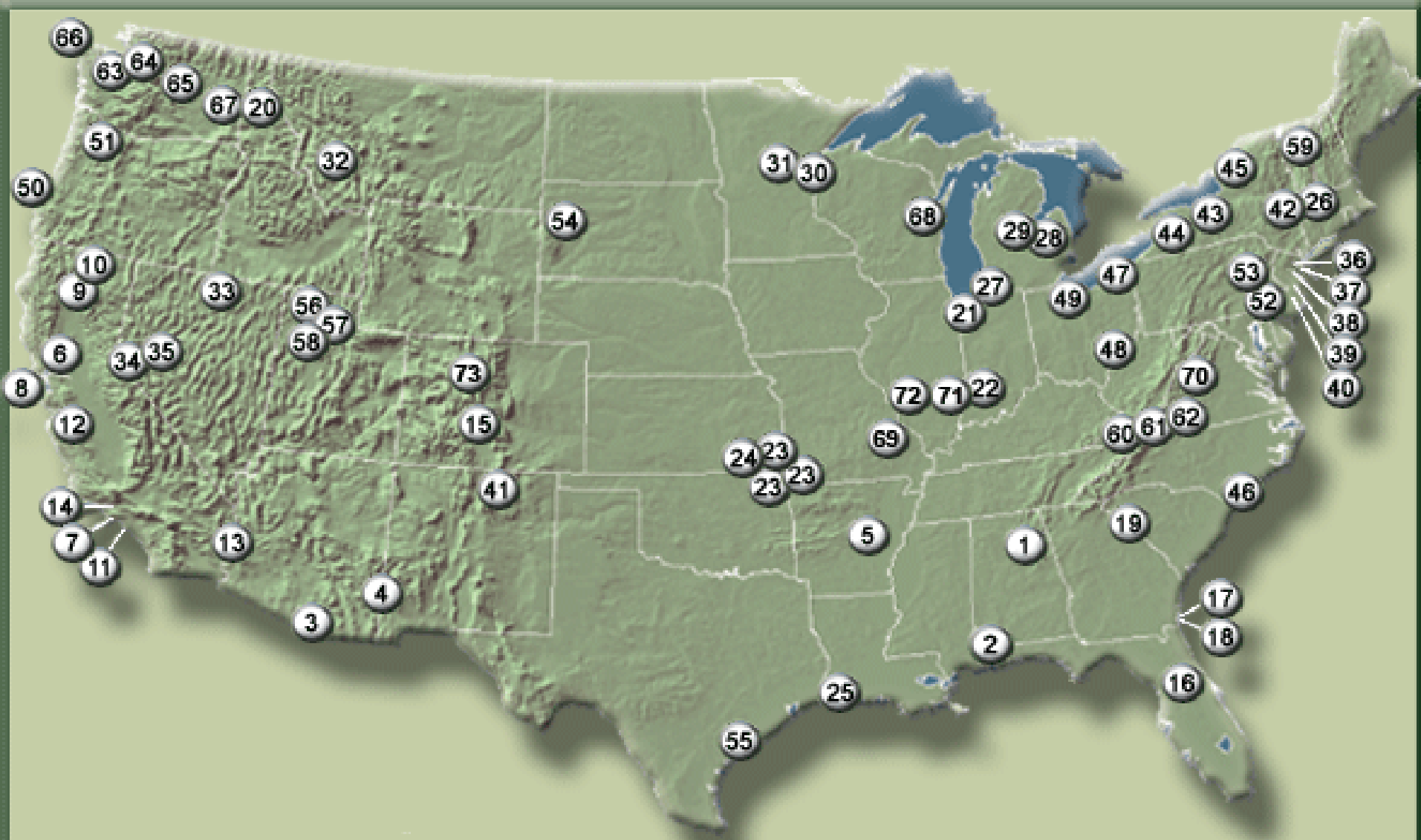
NRDAR focus is Restoration of Natural Resources

- ▶ **Primary restoration**
  - Return injured resources to baseline
- ▶ **Compensatory Restoration**
  - Replace lost services through time
- ▶ **Assessment costs recovery**
  - Reimburse trustees for time and resources used to develop a claim

# **NRDAR is NOT About...**

- ▶ **Habitat losses due to housing developments**
- ▶ **Localized increases in human cancer cases**
- ▶ **Returning Resources to Pristine Conditions**

# Significant NRDAR cases are being conducted across the country



# Examples of Damage Assessment Cases

- ▶ **Lower Fox River/Green Bay, Wisconsin**
  - Injuries caused by polychlorinated biphenyls (PCBs) from historic discharges of papermill waste.
  - Parallel clean up and restoration
- ▶ **Saginaw River/Bay**
  - Settlement with General Motors in 1998
  - Dredging, wetland restoration, habitat protection, public use opportunities
  - Decreasing PCBs in fish!



# **Natural Resource Damage Assessment for the Tittabawassee River System**

# Tittabawassee River NRDAR Trustee Council

- ▶ Trustee Council formed in 2006 with a Memorandum of Understanding (MOU)
  - Director of MDNRE and the Michigan Attorney General
  - Saginaw Chippewa Indian Tribe of Michigan
  - Regional Director of the U.S. Fish and Wildlife Service on behalf of USFWS and the Bureau of Indian Affairs (BIA)

# Tittabawasse River NRDAR Damage Assessment Plan

Trustees plan published in April 2008

- ▶ Describes Trustees' approach for conducting a NRDAR
- ▶ Addresses losses caused by natural resource injuries resulting from Dow's releases of hazardous substances
- ▶ Describes methods to determine and quantify natural resource restoration work necessary to make the public whole



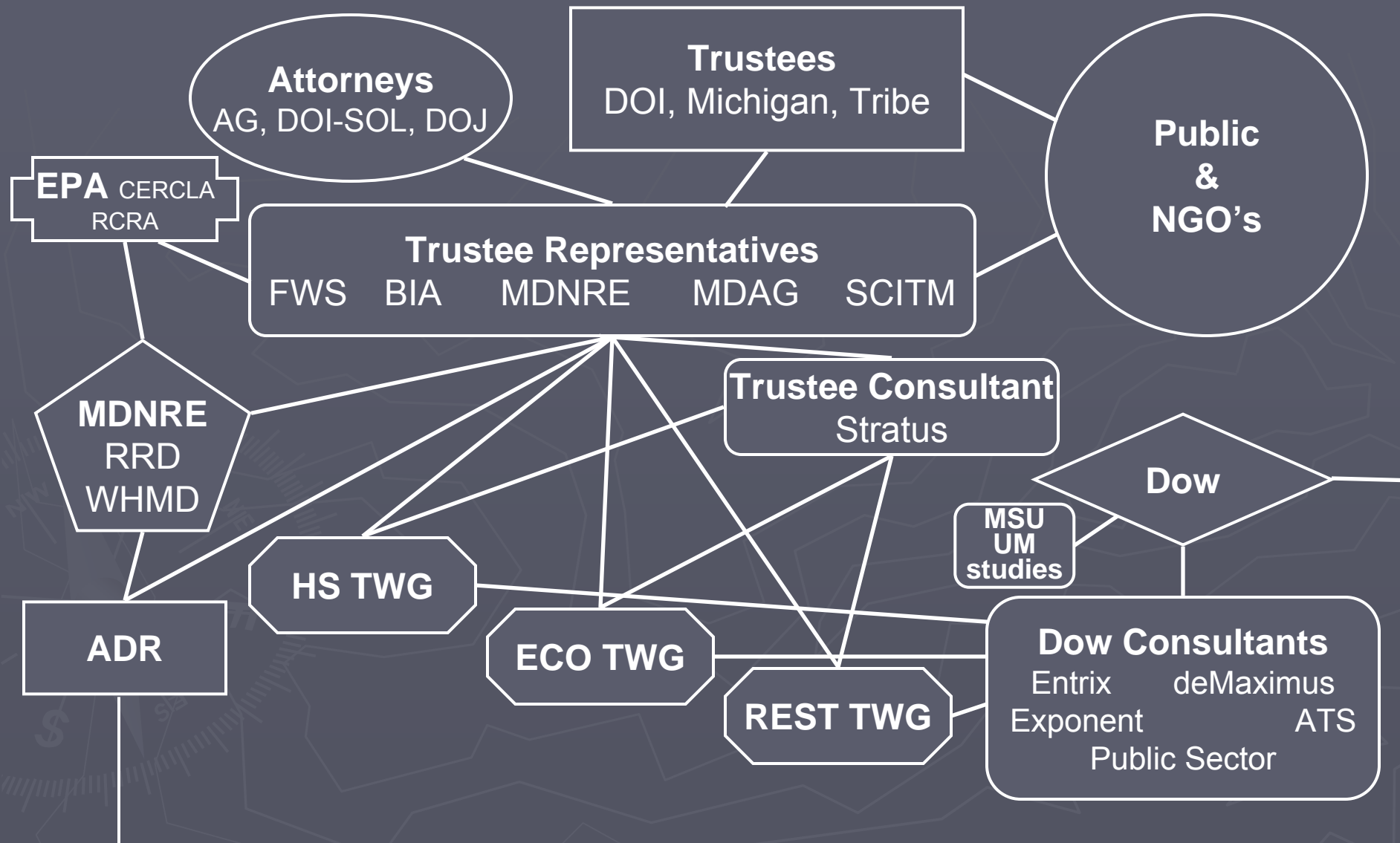
# Memorandum Of Agreement (MOA) between Dow and Trustees

- ▶ Budget - Payments, Accounting
- ▶ Cooperative Studies
- ▶ Independent Studies
- ▶ Cooperative Technical Work Groups
  - Charge – Mission, general approach and expected actions
- ▶ Trustee Coordinator
- ▶ Confidentiality

# Cooperative Technical Workgroups - TWGs

- ▶ **Human Services TWG** – ID and quantify impacts to hunting, fishing and outdoor recreation and potential non-use services
- ▶ **Ecological TWG** – ID and quantify ecological injuries and associated ecological service losses
- ▶ **Restoration TWG** – ID and describe restoration opportunities and quantify benefits they provide

# Tittabawassee NRDAR



# Restoration

- ▶ **Criteria developed by Trustees**
  - **Based on federal regulations at 43 C.F.R. § 11.82**
  - **Available in Assessment Plan**
- ▶ **Input from public, Dow, LUGs**
- ▶ **Workshop with resource experts**

# Restoration Idea Sources

- ▶ Saginaw Bay Watershed Initiative Network (WIN)
- ▶ Saginaw Bay Coastal Initiative
- ▶ Saginaw River/Bay RAP Update
- ▶ Ducks Unlimited
- ▶ The Nature Conservancy
- ▶ Saginaw Basin Land Conservancy
- ▶ Township Supervisors
- ▶ MDNRE and USFWS plans
- ▶ Saginaw Chippewa Indian Tribe
- ▶ Individuals

# Restoration Database

- ▶ Trustees and Dow have compiled:
  - Restoration concepts
    - ▶ e.g. coastal wetland restoration, fish passage, habitat continuity
  - Specific projects
    - ▶ e.g. fish passage at Dow dam, purchase of property adjacent to public land
- ▶ Trustees evaluating projects with criteria

# How do EPA's actions affect NRDAR?

- ▶ The Trustees' authorities and responsibilities do not change
- ▶ Trustees coordinating efforts with EPA
- ▶ Trustees assess how removal actions impact natural resources
  - Reduce exposure
  - Physical alterations to habitat

# Next Steps?

- ▶ **Coordinate with response activities, as practical**
- ▶ **Assessing injuries**
- ▶ **Continue to develop ideas for potential restoration projects**



# Summary

- ▶ **NRDAR is a complementary, parallel, yet distinct process from the cleanup.**
- ▶ **The goal of NRDAR is to restore: return to baseline and compensate for losses over time.**
- ▶ **NRDA restoration must...**
  - **address injuries that resulted from the release of contaminants**
  - **focus on natural resources**

# Trustee Contact Information

## Trustee Coordinator

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<http://www.fws.gov/midwest/TittabawasseRiverNRDA/>