

Partnering Success & Lessons Learned at the Former Zephyr Oil Refinery Project Site



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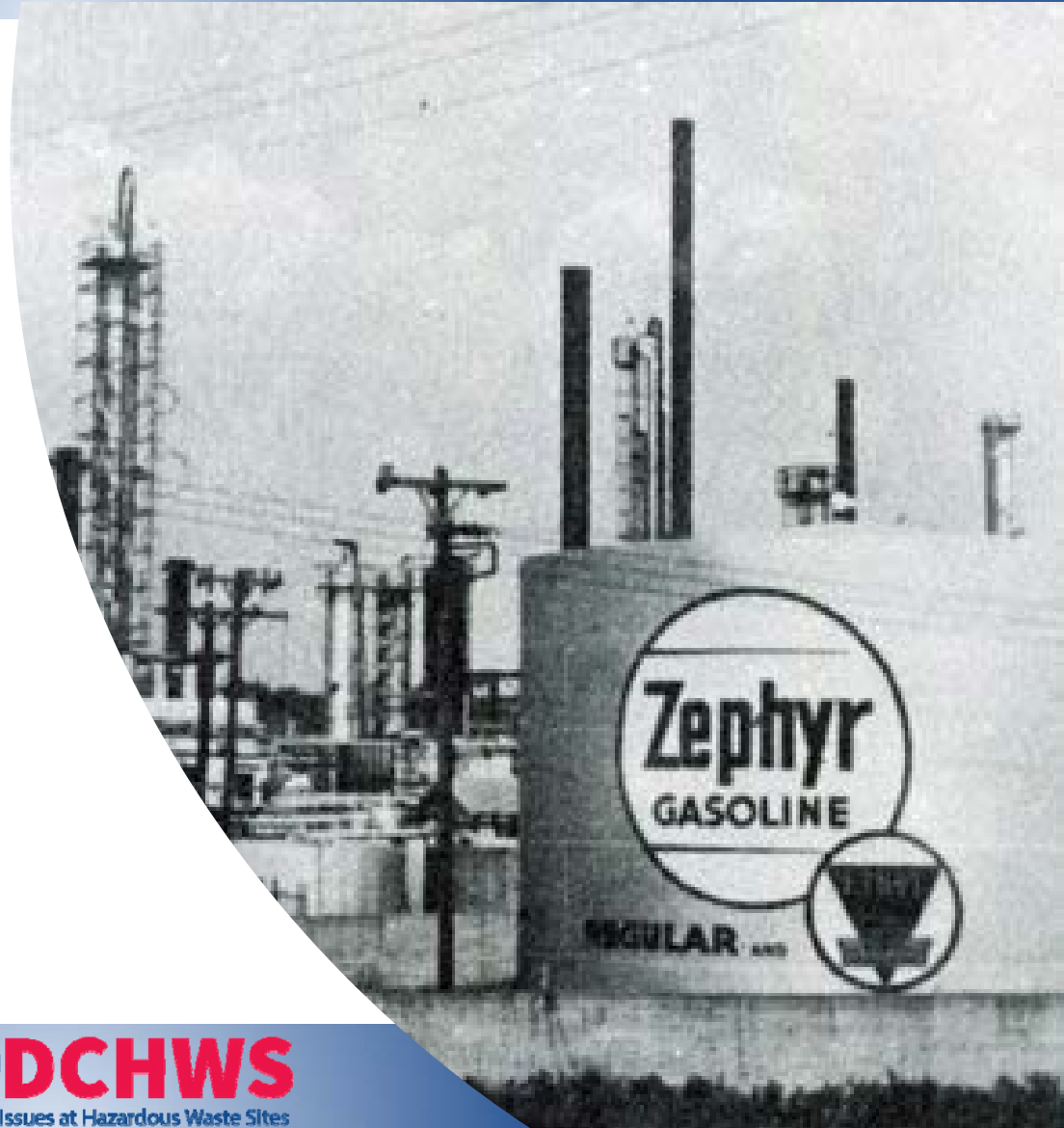
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OCTOBER 26-28, 2020

Agenda

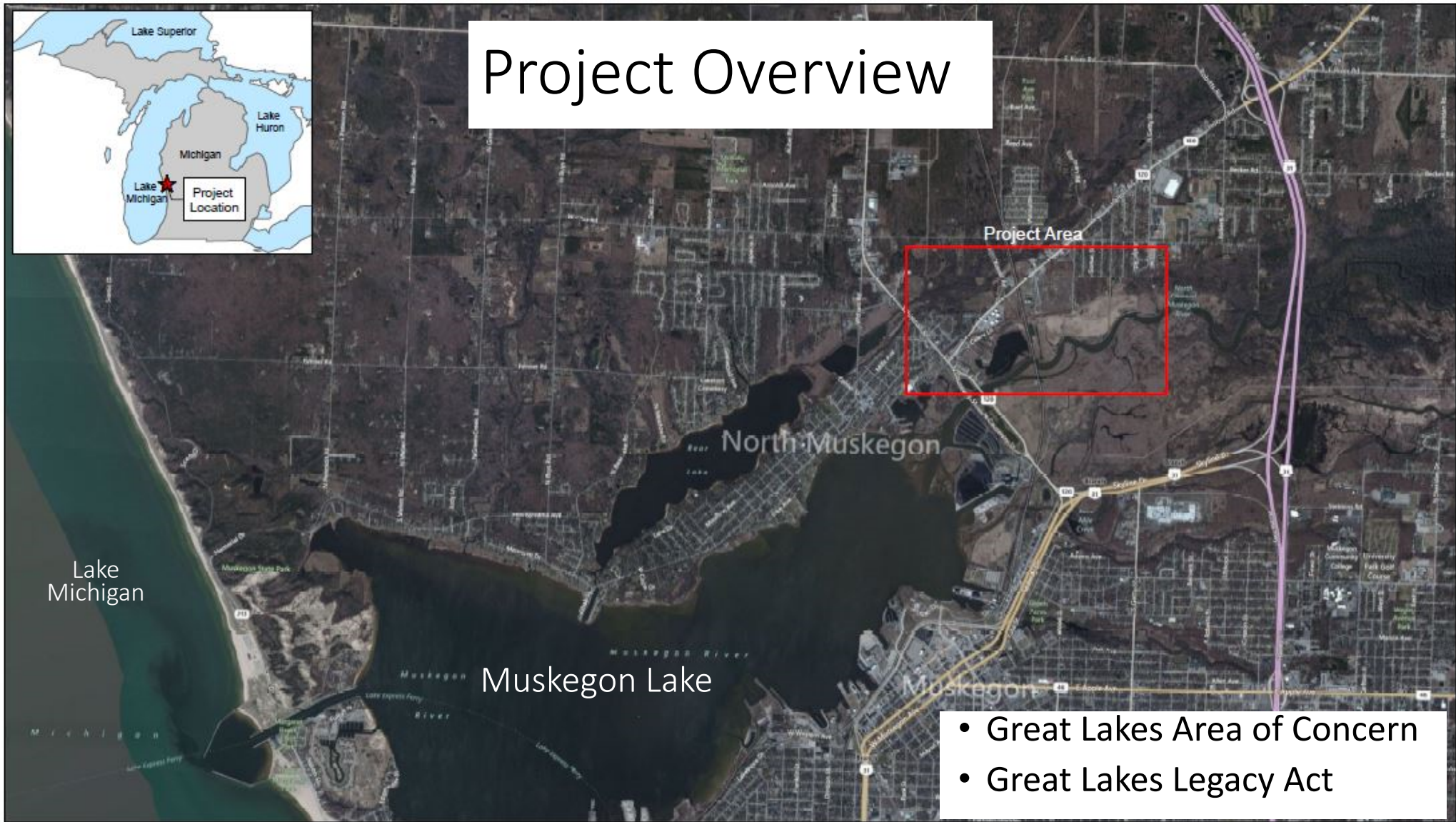
- 1. Introduction to Project Team
- 2. Project Overview/Site Background
- 3. Remedial Design
- 4. Remedial Action



Project Team

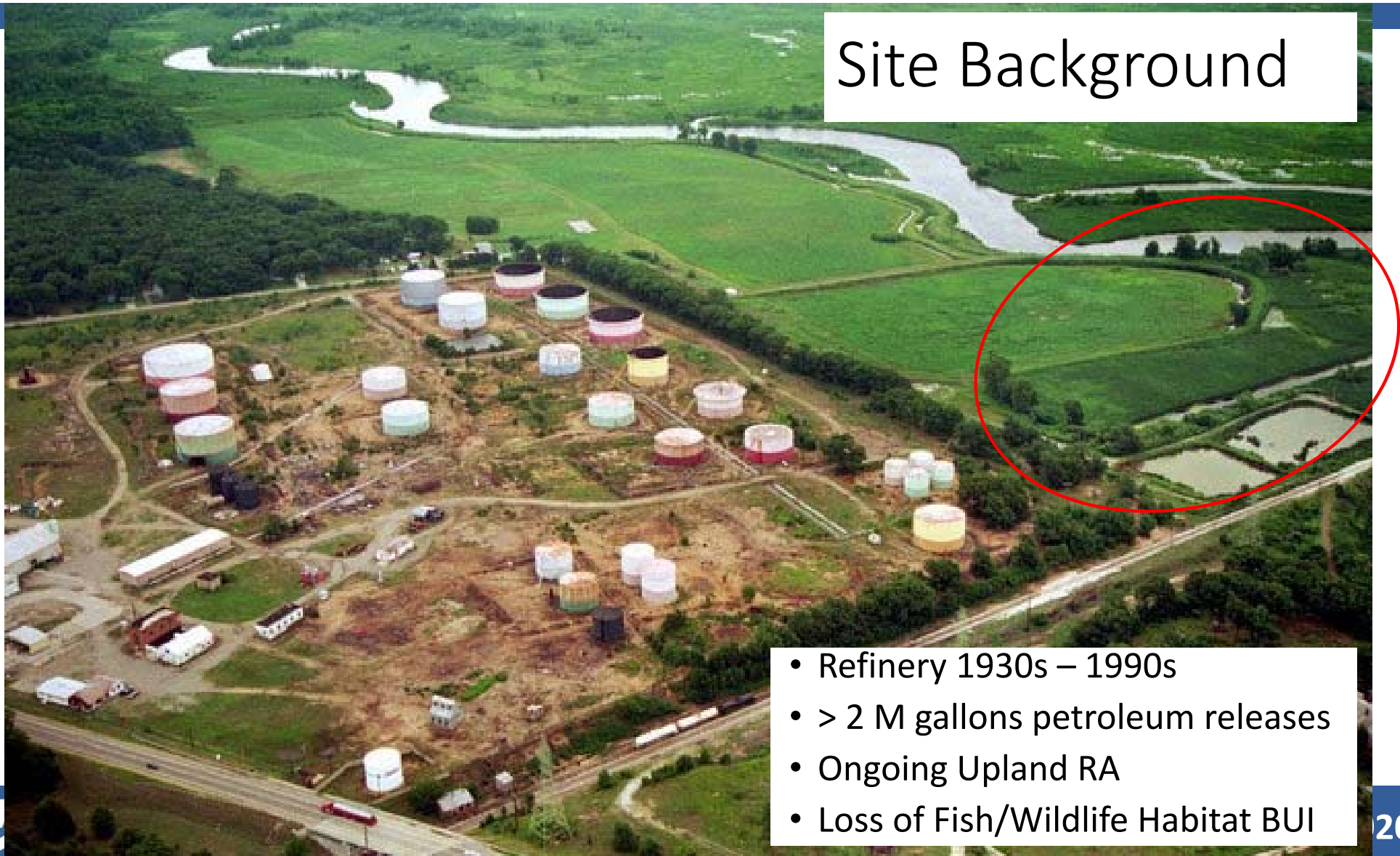


Project Overview



- Great Lakes Area of Concern
- Great Lakes Legacy Act

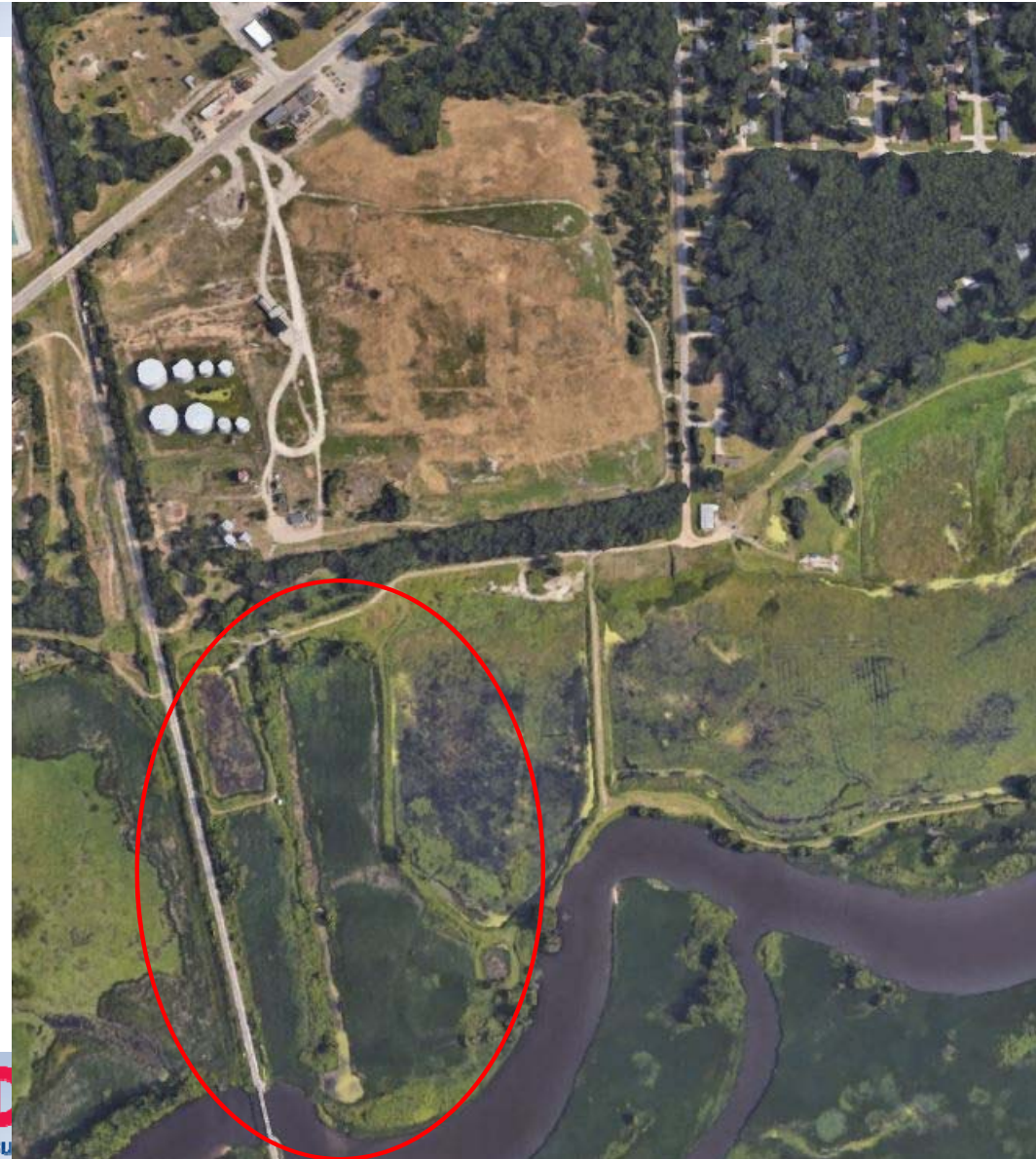
Site Background



- Refinery 1930s – 1990s
- > 2 M gallons petroleum releases
- Ongoing Upland RA
- Loss of Fish/Wildlife Habitat BUI

RD Technical Highlights

- ~50,000 CY dredged sediment with petroleum and lead impacts
- >1,300 CY Hazardous sediment (lead) treated in-situ
- Dewatering/solidification of sediments for off-site transport and disposal
- Water Treatment Requirements
- 13.6 acres of wetland restoration



Remedial Design Lessons Learned

- Actively engage all stakeholders early on
 - Identify Site Owner/Use Needs Early
 - Other RA activity coordination
 - Permits – Front end discussion
 - Access Agreements – Triple Check
 - Utilities Coordination – Details/Approvals
 - Performance Specifications – Allow for ingenuity and expertise
 - Future Land Use – Site and Adjacent, incorporate into design
 - Adjacent Properties/Safety – Get concerns early in design

Outline all site uses and activities and
identify potential issues in advance



Performance Specifications

- Allow for ingenuity and expertise to be utilized



Community Outreach:

Flyers/Public Meetings/Door-to-Door/Public Hotline



You're invited to a Muskegon Lake Watershed Partnership public meeting to learn about upcoming efforts to clean up the former Zephyr Oil Refinery.

**6:00 p.m., Thursday, September 7, 2017
Reeths-Puffer Intermediate Cafe
1500 N. Getty St.
Muskegon, Michigan**

The meeting will provide updates on a number of projects planned to take place this year and next year at the former Zephyr Oil Refinery on Holton Rd. This includes a cleanup of contaminated sediment under the Great Lakes Legacy Act. EPA and MDEQ will be available to answer questions.

For more information, contact Heather Williams, EPA Project Manager, at 312-886-5993 or williams.heather@epa.gov.

Partners: U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, Michigan Department of Environmental Quality, and Muskegon County.

**ZEPHYR GLLA
RESTORATION**



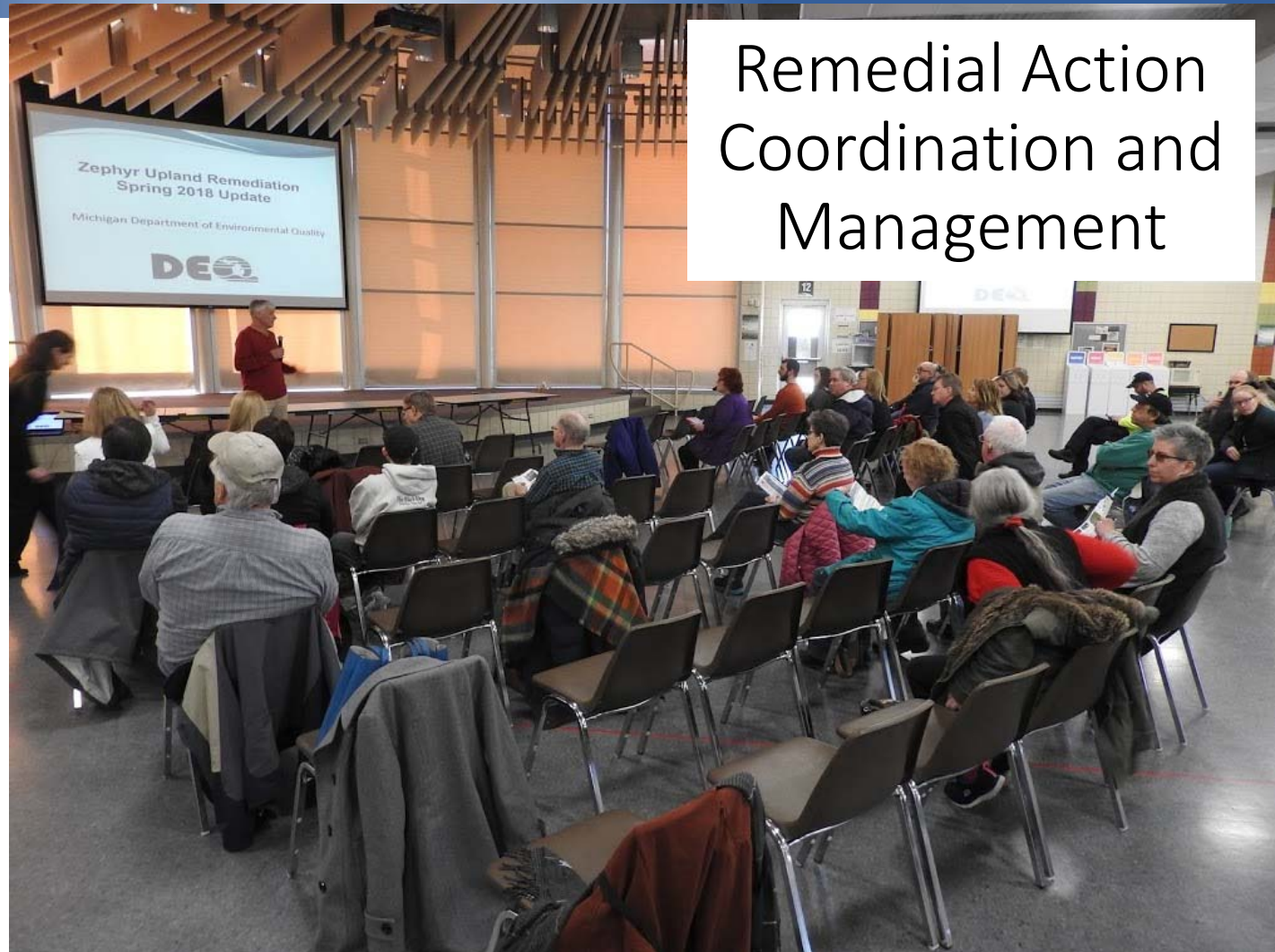
SAME

**DCHWS**
Design and Construction Issues at Hazardous Waste Sites

OCTOBER 26-28, 2020

Remedial Action Coordination and Management

- Communication – Maximize it
 - 3rd Party Facilitated Kick Off Meeting
 - 3 construction status calls per week
 - Additional Weekly Stakeholder Call
- Benefits
 - Quick Response
 - Limit Impacts to Schedule
 - Coordination with Permit Agencies
 - Buy-in on decisions/changes
 - Coordinate multiple RAs and Industrial Operations on site



Remedial Action Lessons Learn

- Trust Historical Information
- Expect the Unexpected
- Roll with the Changes
- Be Ready to Adapt and React
- Be Mindful of Re-use

We struck oil – yay! Wait...



...who do we call now?

Asbestos?...



...no one said
anything about
Asbestos.



Roll with the
changes



Sometimes Nature Wins



How quick are your reflexes?

- Thorough planning in RD and communication in RA
- How quickly can you react with the correct resources to manage issues as they pop up?
- What helps you to react quickly and efficiently?
- Maintain Schedule & Budget and reach RA Objectives



Photo source: still from Jeep Commercial