

# River Raisin

## Great Lakes Legacy Act Cleanup



- **Project Managers**
  - Mike Alexander, Michigan DEQ
  - Scott Cieniawski, USEPA-GLNPO

What's New

# Finally

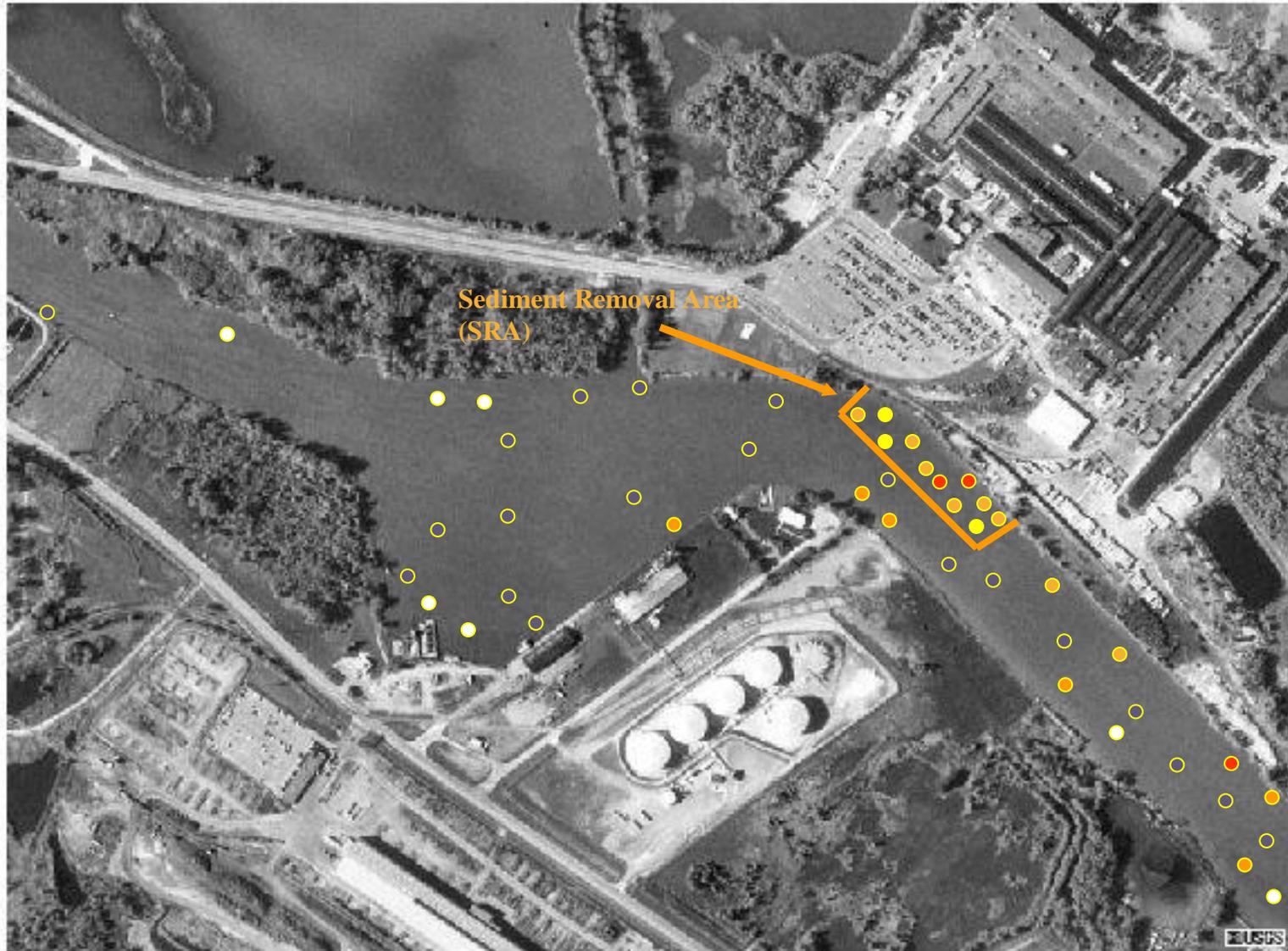
- Great Lakes Legacy Act Agreement Signed
  - Executed on April 3, 2012 by MDEQ and U.S. EPA
  - \$17.3M total cost (\$11.2M USEPA, \$6.1M MDEQ)
- Construction Contractor Under Contract
  - Environmental Restoration
  - Subcontractors: JF Brennan Company, Natural Resource Technology
- Two Components
  - CDF Excavation (Sterling State Park Confined Disposal Facility)
  - Sediment Remediation
- Mobilization Started May 7
- CDF Excavation Started June 4
- Dredge Mobilization on June 4
- Dredging Begins on July 9
- Remediation Complete on November 11

Why Are We Cleaning Up?

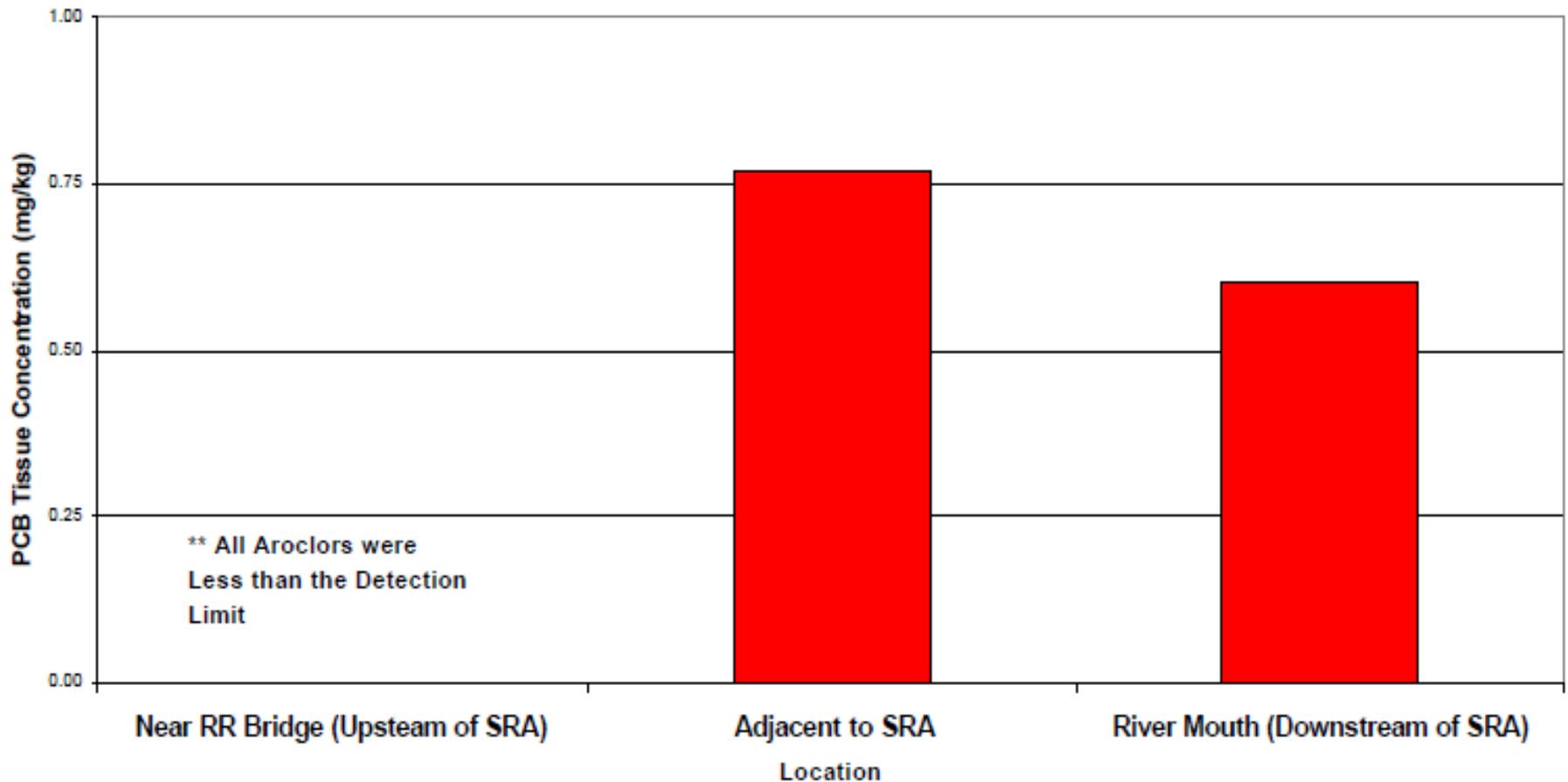
# Overview of Site History

- 1987: Raisin River designated a Great Lakes Area of Concern (AOC)
  - Nine (9) Beneficial Use Impacts (BUIs), including those directly related to contaminated sediments
  - PCBs are the primary chemicals of concern
- 1997: Ford Implements Sediment Removal Action Under USEPA Order
  - Approximately 20,000 cubic yards of the most contaminated sediments are removed
- 1998-2002: USEPA and Michigan DEQ conduct Post-Remediation Monitoring
  - Extensive moderate to high levels of PCB contamination remain
  - Biological sampling indicates significant uptake of PCBs in fish and sediment dwelling organisms

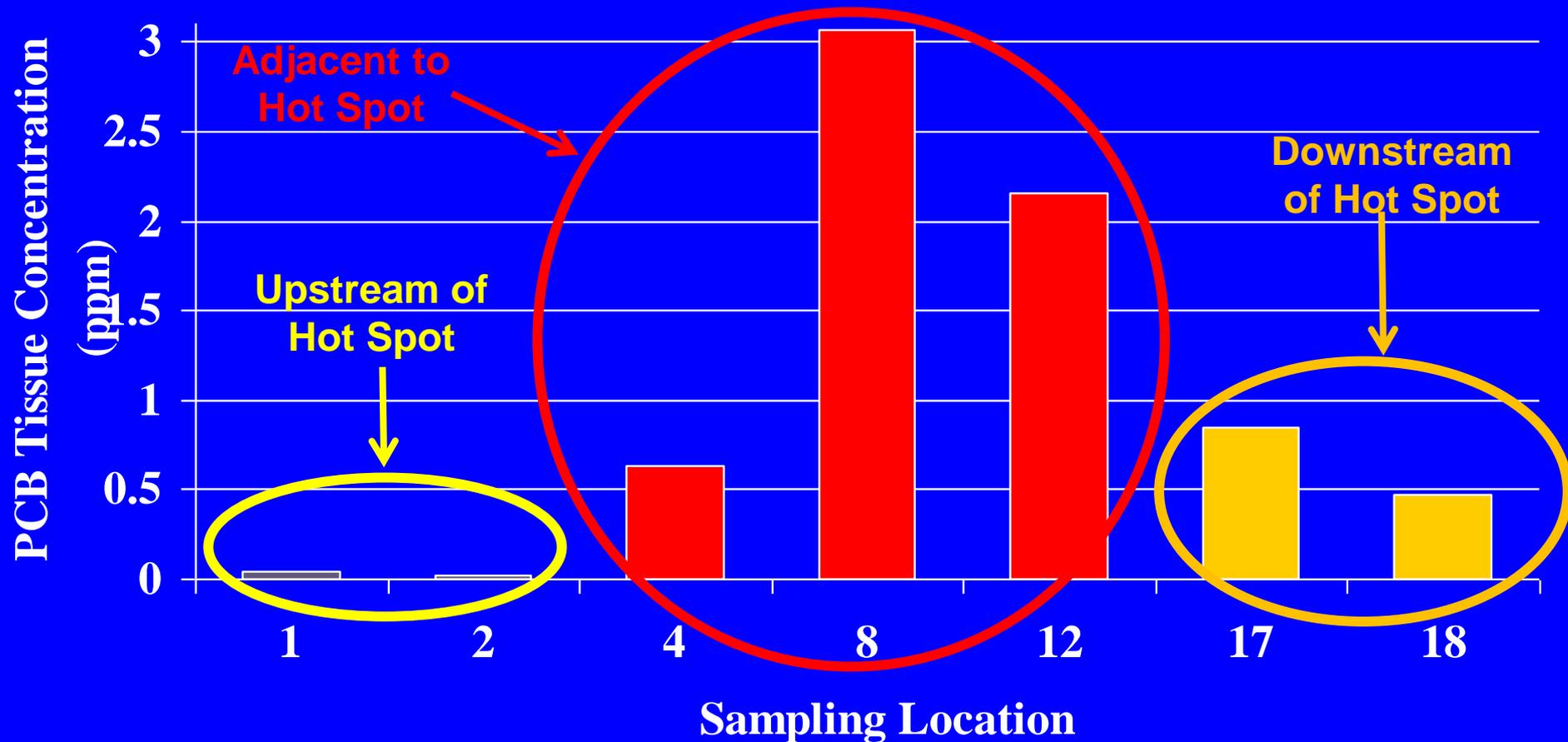
# Post-1997 PCB Concentrations



# PCB Uptake in Caged Fish 2001



# 28-Day Bioaccumulation Results using *L. variegatus* – October 2001



# Direct Impact of PCB Contamination on Beneficial Use Impairments

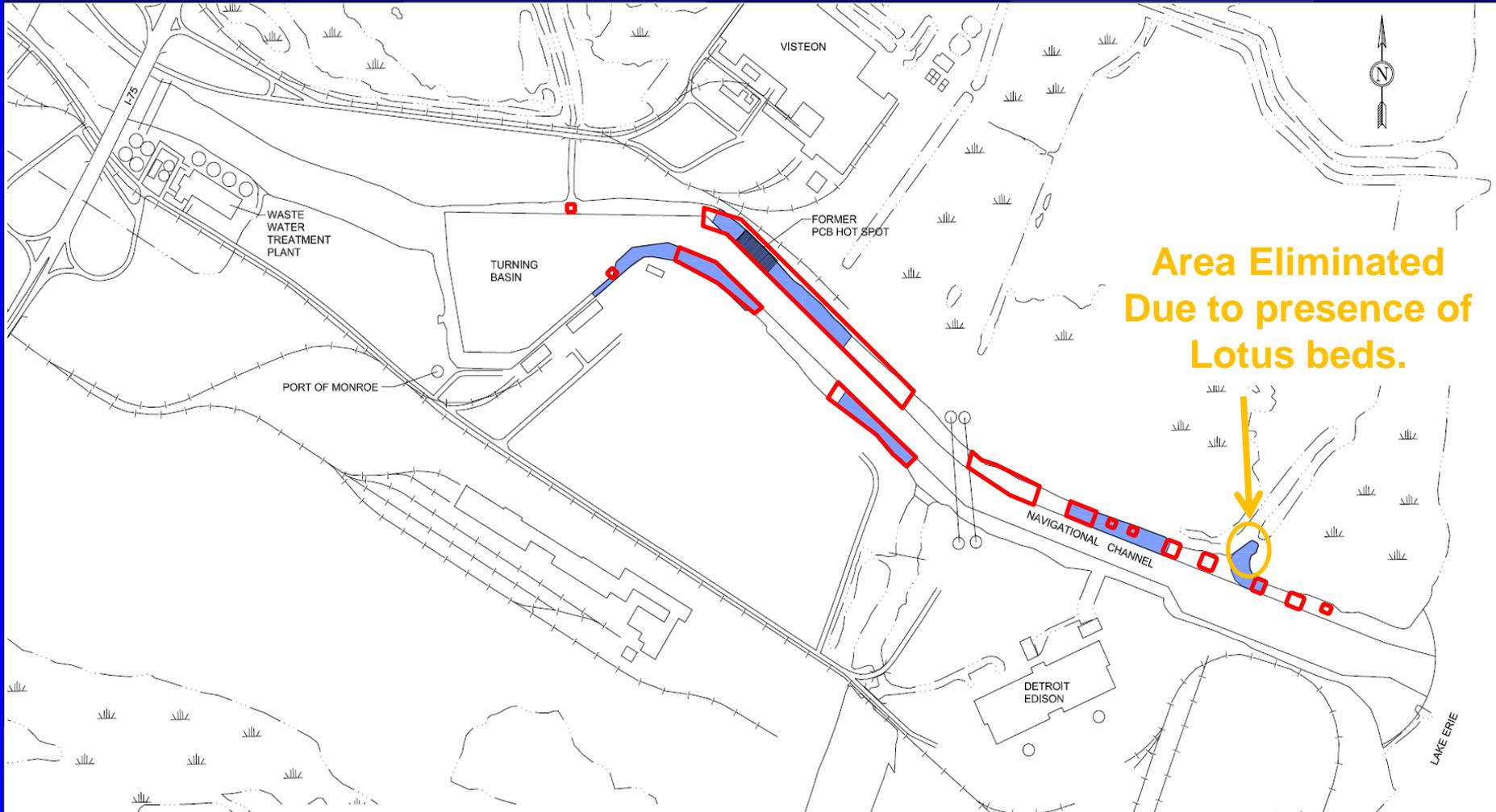
- Restrictions on Fish and Wildlife Consumption
- Bird or Animal Deformities or Reproduction Problems
- Restrictions on Dredging

Dredging

# Dredging Details

- 109,000 Cubic Yard of Total Dredging
  - 3,000 CY of TSCA (>50 ppm PCBs)
  - 106,000 CY of non-TSCA (<50 ppm PCBs)
- TSCA Dredging
  - Mechanical Dredge with Silt Curtains
  - Processing at Ford Property
  - Disposal at EQ's Wayne County Landfill
- Non-TSCA Dredging
  - Hydraulic Dredge with Pipeline
  - Disposal at Sterling State Park CDF

# Proposed Remediation Areas (2003 vs. 2012)



**2003: 94,000 Cubic Yards**

**2012: 109,000 Cubic Yards**

## LEGEND

- AREAS SELECTED FOR REMOVAL
- PCB HOT SPOT



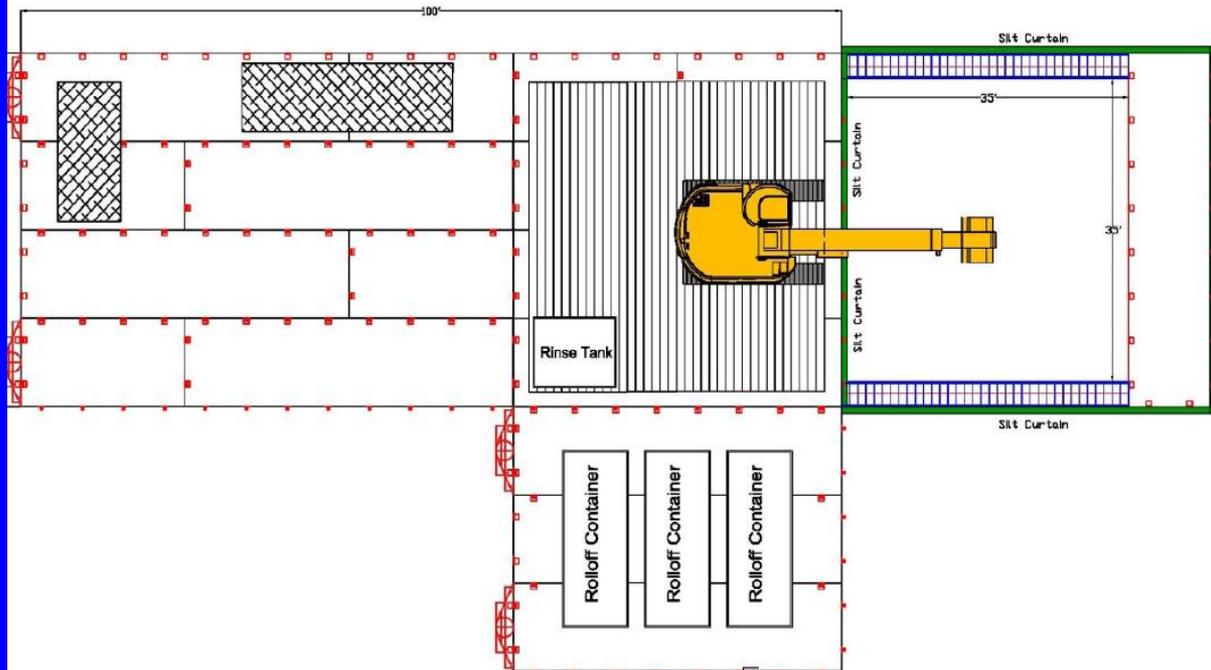
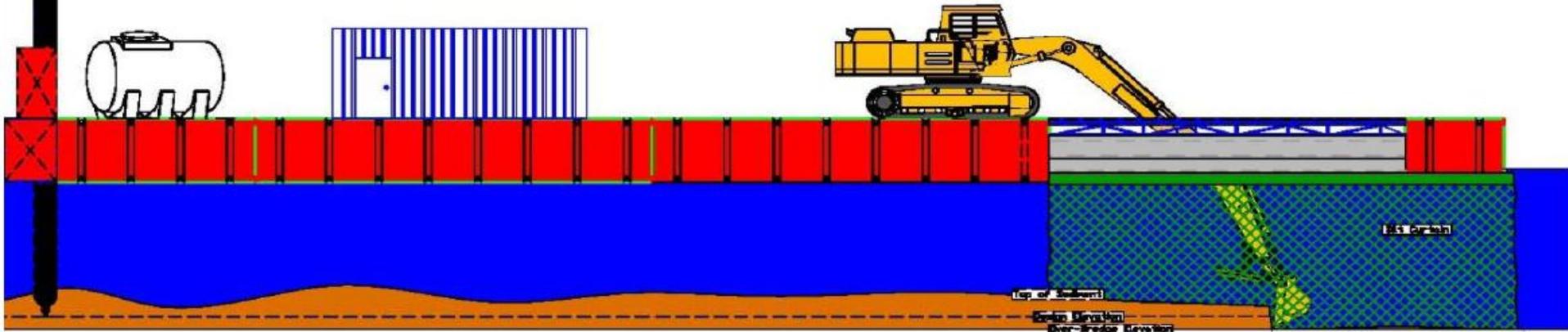
**MACTEC** 46850 Magellan Drive, Suite 190  
Novi, MI 48377  
248-926-4008

FIGURE 1

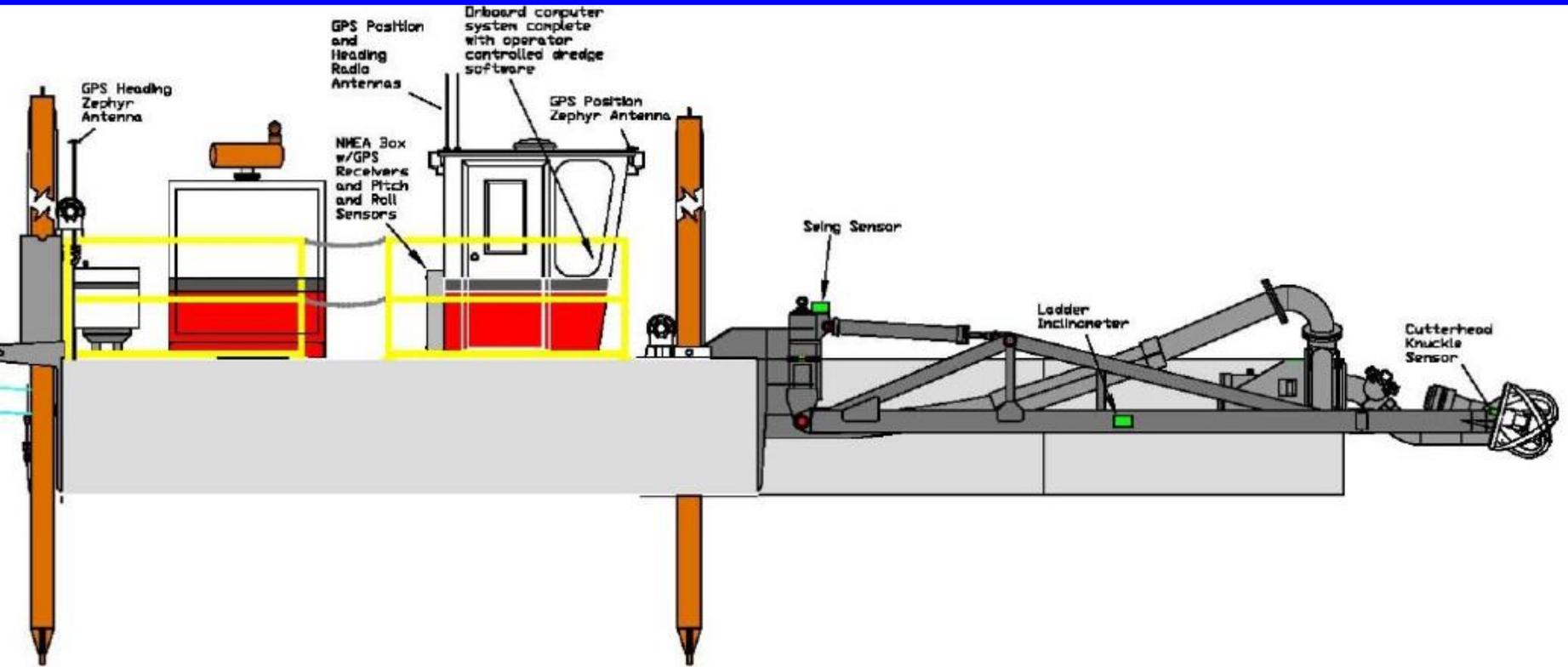
PROPOSED DREDGE AREAS

RIVER RAISIN 307 SITE  
MONROE, MICHIGAN

# Mechanical Dredge



# Hydraulic Dredge



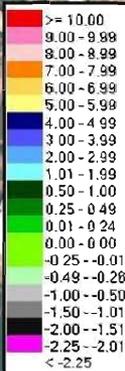


Dredging Operations  
12" Hydraulic Cutterhead Dredge





8" Dredge for  
Cleanup Operations



# River Raisin Monroe, MI

Plan View of Pipeline  
Layout DWG: Q1

J.F. Brennan Co. Inc.  
820 Bainbridge St  
LaCrosse, WI 54603

Date: April 16th, 2012

Scale: 1 inch = 1,000 feet



N5 N6 N7

N8 N9

N10

N2

N1

N3

N4

N13

N11

N12

N16

N17

N14

N15

N18

N19

N20

N21

N22

Dredge Palm Beach

Dredge Michael

Semi Bouyant Pipeline

Booster 1

Booster 2

CDF

Submerged Pipeline

The submerged pipeline in Lake Erie will be weighted and marked as shown in the submerged pipeline cross section drawing O2

The semi-buoyant pipeline in the Raisin River will be anchored directly to the shore other than approximately 2,000' of pipeline which will be positioned behind the dredge with semi-buoyant pipeline markers and danger pipeline signs attached directly to it.

# CDF Excavation

# CDF Excavation Overview

- Use of CDF requires EPA and MDEQ to remove an equal volume (106,000 CY)
  - Preserves capacity at CDF for future maintenance of the navigation channel
- Extensive chemical testing has identified 112,000 CY of material identified as “inert” by MDEQ
- Material to be excavated, dewatered, and stockpiled on Ford property for future use at the site.

# Excavation Location and Transport Route



# CDF Excavation Details

- Hours of Operation: Typically 6AM to 6PM
- Approximately 7,000 truck loads
  - 40 to 50 trucks per day
- Avoid Major Event Days at State Park
  - Fireworks
  - Walk/Race Events
  - Harvest Festival
- Excavation Activities: June through January
- Truck wash and Street Wash to prevent soil and mud on roadway

Schedule

# Current Construction Schedule

- May 7: Mobilize CDF Excavation Equipment
- June 4: Mobilize Dredging Equipment
- June 4: Begin CDF Excavation
- July 9: Begin Dredging
- October 7: Complete Dredging
- October 23: Complete Sand Cover Placement
- November 3: Demobilize Dredge Equipment
- January 14: Complete CDF Excavation
- January 31: Site Restoration and Demobilization

# Public Outreach

# Outreach

- May 9: Public Notice of MDEQ Dredging Permit
- May 10: Presentation to Commission on the Environment and Water Quality
- June 14: Public Information Session
- July 1: Flyers available for State Park Visitors and Marina Users

# Coordinating Agencies

- U.S. EPA
- Michigan DEQ
- U.S. Army Corps of Engineers
- Port of Monroe
- City of Monroe – Committee on the Environment and Water Quality

# Contact Information

- USEPA
  - Scott Cieniawski, [cieniawski.scott@epa.gov](mailto:cieniawski.scott@epa.gov), 312-353-9184)
- Michigan DEQ
  - Mike Alexander, [alexanderm2@deq.gov](mailto:alexanderm2@deq.gov), 517-335-4189.
  - Bill Keiper, [KeiperW@michigan.gov](mailto:KeiperW@michigan.gov), 517-241-3247.