

Buffalo River Area of Concern Cleanup Public Meeting

September 23, 2013 6:00 PM – 8:00 PM

Old First Ward Community Center

6:15 PM Opening Remarks

- Jill Jedlicka, Buffalo Niagara RIVERKEEPER
- John Morris, Honeywell
- Don Zelazny, NYSDEC
- Matt Burkett, USACE
- Marc Tuchman, U.S. EPA

6:35 PM Video: *Revitalizing Local Waterfront Economies*
(Caitie McCoy, IL-IN Sea Grant)

6:45 PM Technical Presentation (Mary Beth Giancarlo, U.S. EPA)

7:05 PM Questions & Answers

Great Lakes Restoration Initiative

BUFFALO RIVER REMEDIATION AND RESTORATION PROJECT

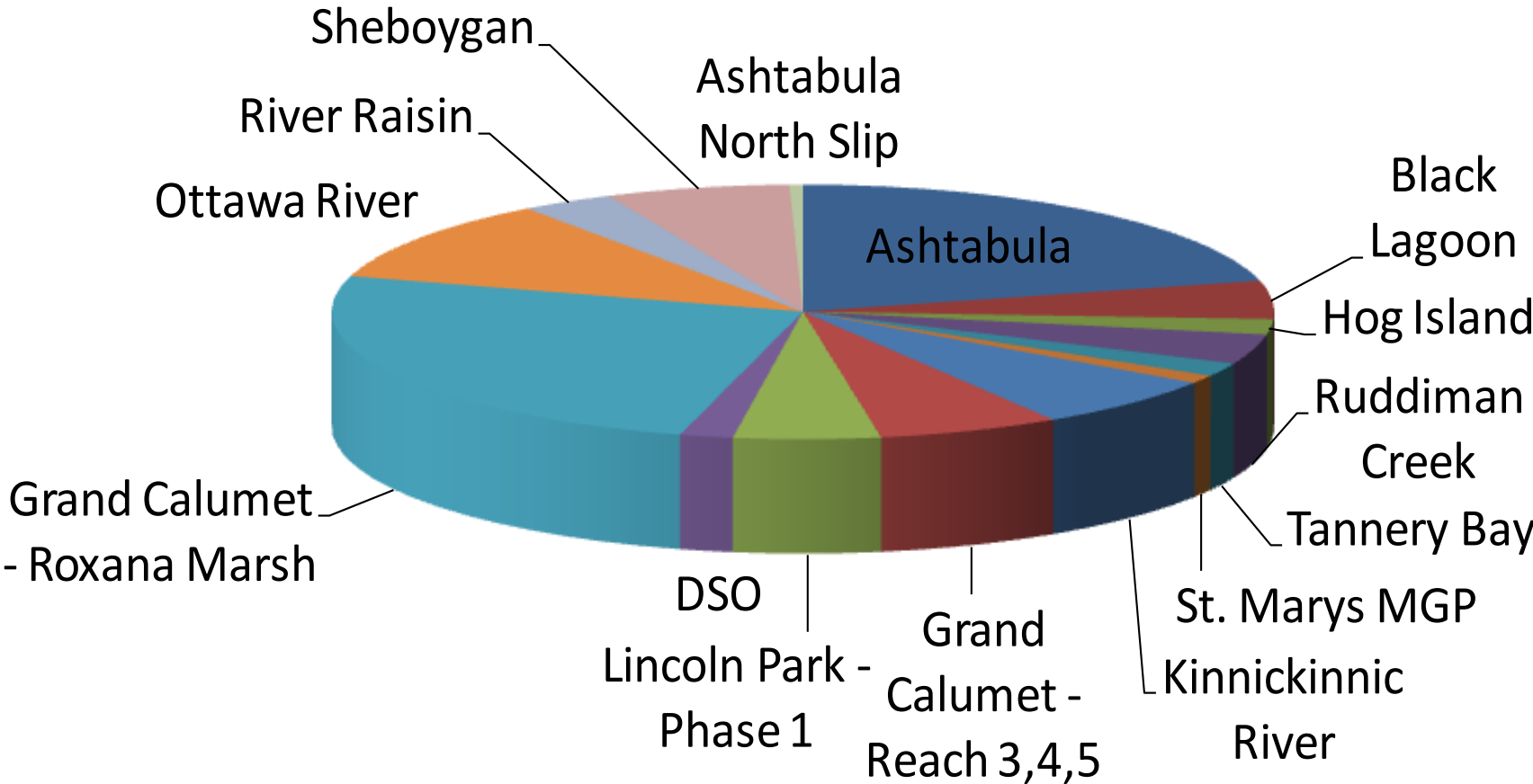
Marc Tuchman, Great Lakes Legacy Act Program Manager
Mary Beth Giancarlo, Project Manager

U.S. EPA Great Lakes National Program Office
Chicago, IL

Great Lakes Restoration Initiative (GLRI)

- Purpose is to address the most critical issues impacting the Great Lakes, such as:
 - Toxic contamination
 - Invasive species
 - Habitat degradation
- The Great Lakes Legacy Act (GLLA) program is part of the GLRI

GLLA Remediation to Date



2,370,500 cubic yards; 15 sites completed

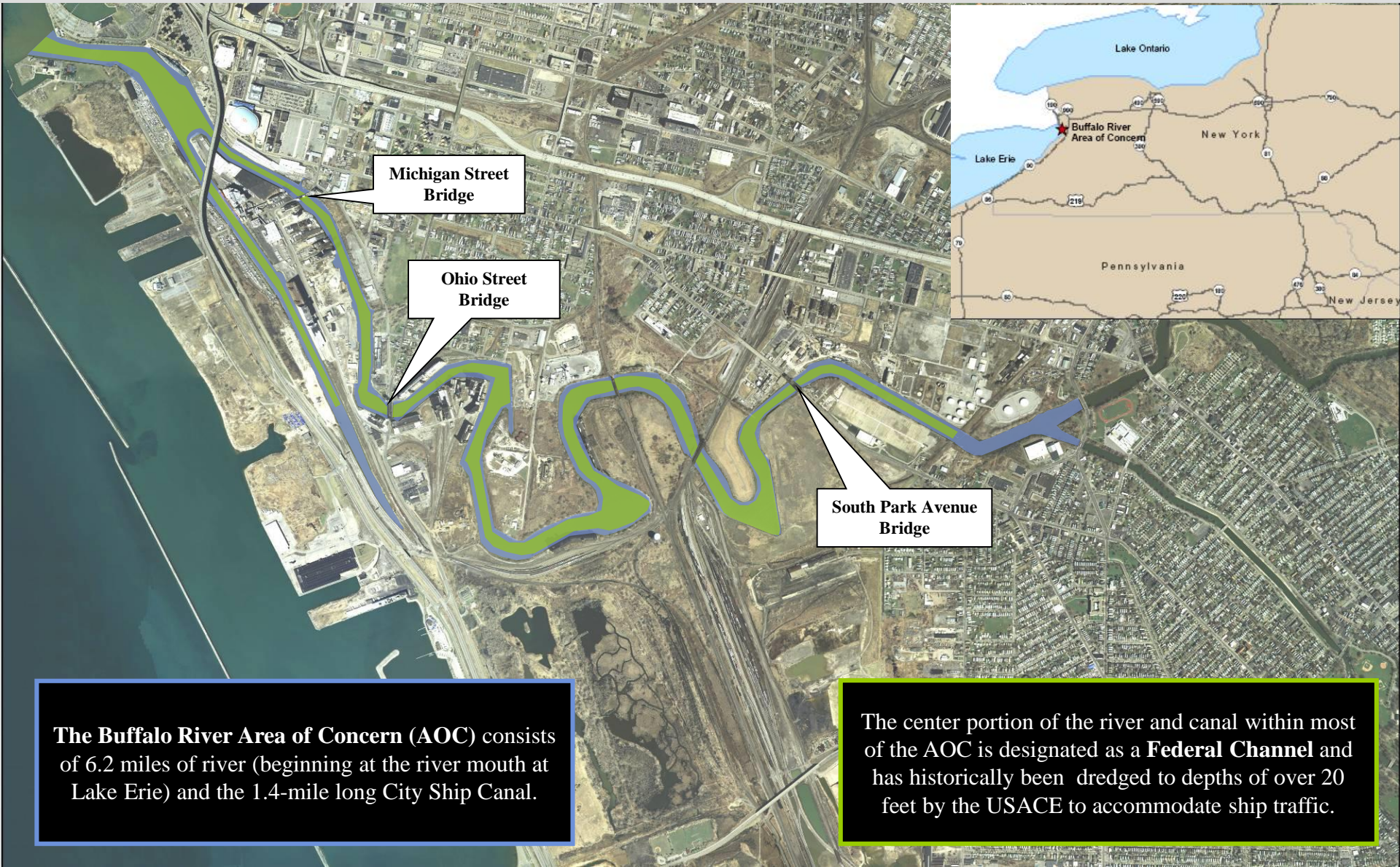
Key Project Partners

- Honeywell
- Buffalo Niagara Riverkeeper
- New York State Department of Environmental Conservation (NYSDEC)
- U.S. Army Corps of Engineers (USACE)

Revitalizing Local Waterfront Economies

Video

Remediation & Restoration of the Buffalo River

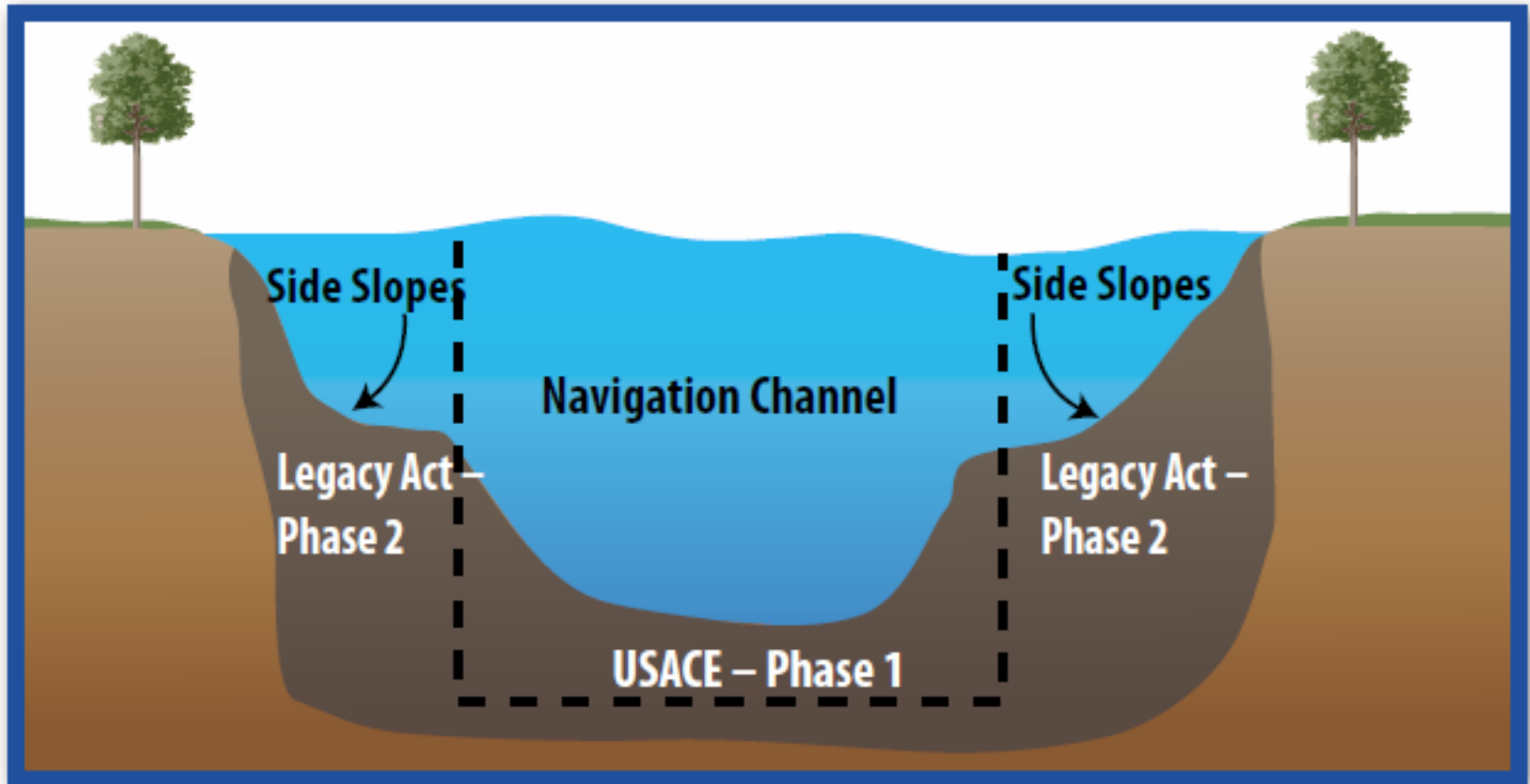


The **Buffalo River Area of Concern (AOC)** consists of 6.2 miles of river (beginning at the river mouth at Lake Erie) and the 1.4-mile long City Ship Canal.

The center portion of the river and canal within most of the AOC is designated as a **Federal Channel** and has historically been dredged to depths of over 20 feet by the USACE to accommodate ship traffic.

Project Phases

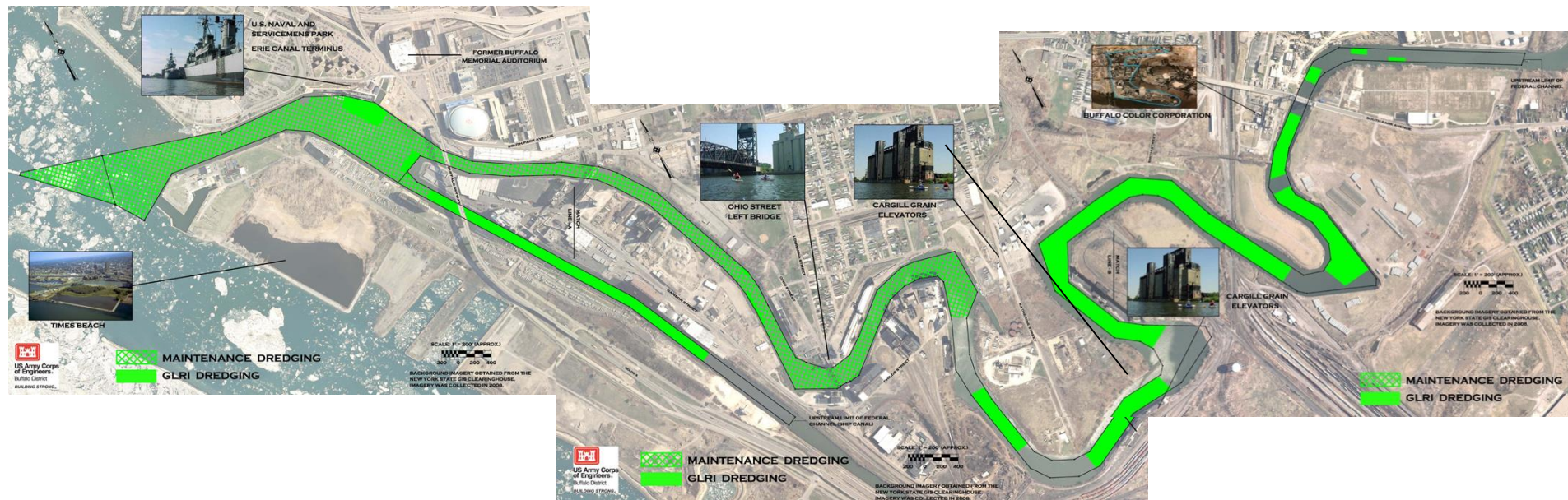
Cross-Section



Not to scale

Phase 1 – Navigational Dredging

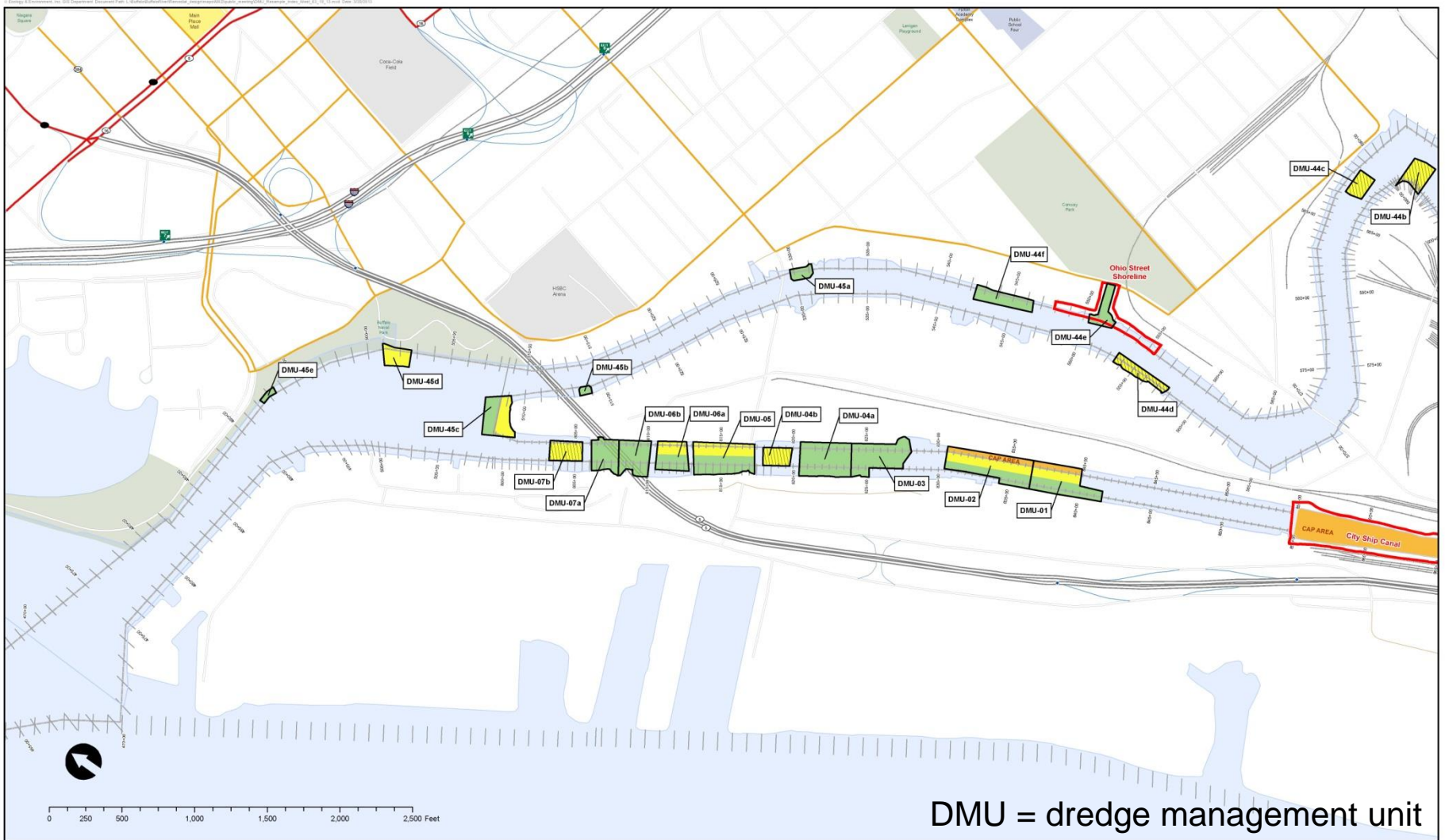
- U.S. Army Corps of Engineers lead – project completed
- Great Lakes Restoration Initiative and Energy & Water authorities (all federal funding) - \$4.6 million
- 550,000 cubic yards (cy) removed between Aug 2011 – Jan 2012



Phase 2 – Environmental Cleanup

- USEPA, Honeywell, Buffalo Niagara Riverkeeper
 - USACE, NYSDEC, City of Buffalo, Erie County
- GLRI and private funding under GLLA Program
 - Signed Project Agreement for \$43.2 million
 - Contract for approx. \$20 million for dredging component of project
- Remedy consists of:
 - Dredging of approx. 480,000 cy (Confined Disposal Facility [CDF] and landfill disposal)
 - Capping of approx. 7-9 acres of contaminated sediment in place
 - Restoration of 5 aquatic habitat sites (approx. 7 acres)
- Completion of project makes significant progress towards removal of BUIs and delisting of AOC

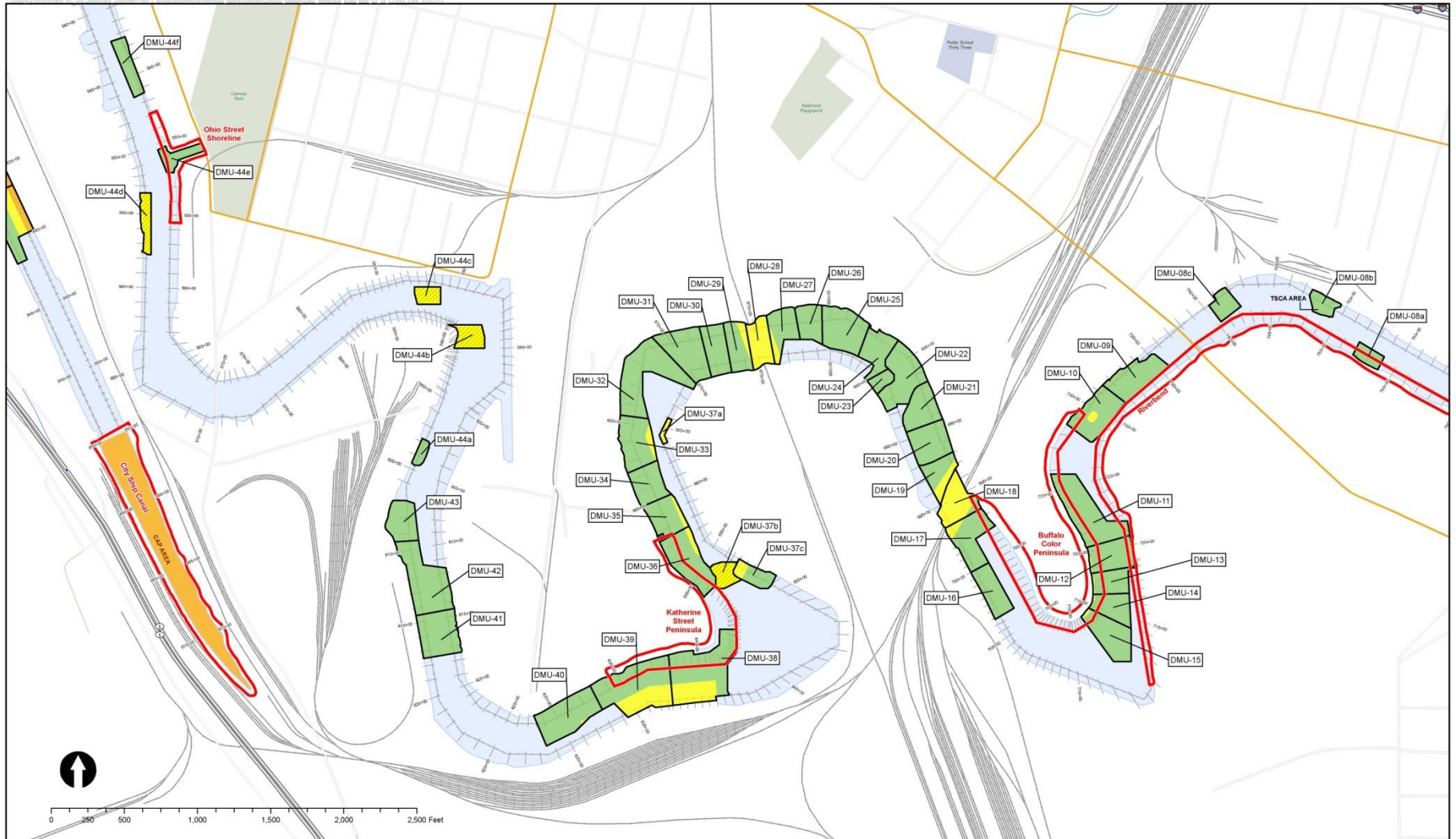
Phase 2 Remedy



- Navigation Channel
- ++ Stationing Line
- ▭ DMUs Not Dredged based on evaluation of resampling results
- ▭ Cap Area
- ▭ No Dredge Area
- ▭ Dredge Area
- ▭ Habitat Restoration Site

Sediment Remediation and Habitat Restoration Project Areas Western Portion
 Buffalo River AOC Remedial Design
 Buffalo, New York

Phase 2 Remedy



— Navigation Channel
 + Stationing Line
 [Red Outline] Habitat Restoration Site
 [White Box] DMUs Not Dredged based on evaluation of resampling results
 [Yellow Box] No Dredge Area
 [Green Box] Dredge Area
 [Orange Box] Cap Area

Sediment Remediation and Habitat Restoration Project Areas Eastern Portion
Eastern Portion, Buffalo River AOC
Buffalo, New York

Barge Transport to Confined Disposal Facility (CDF)

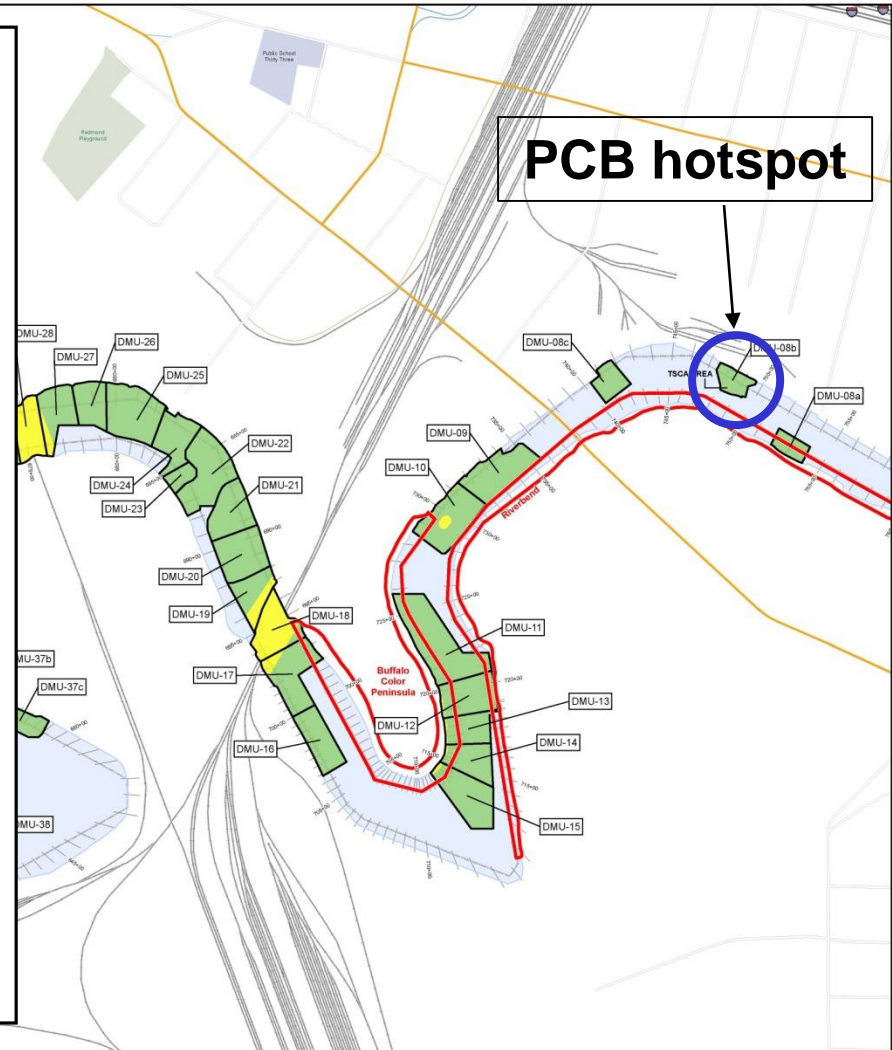


Confined Disposal Facility (CDF)



Dredging PCB Hotspot

- Material to be transported to upland handling area for dewatering, stabilization and transport to an offsite TSCA-permitted landfill
- Approximately 4,200 cy of contaminated sediment
- PCB concentrations range from 1.1 mg/kg to 1,200 mg/kg



TSCA = Toxic Substances Control Act
PCBs > 50 mg/kg

Dredging Equipment

24 hours/day
6 days/week



Dredging Equipment



Increased Traffic on River



Silt Curtains

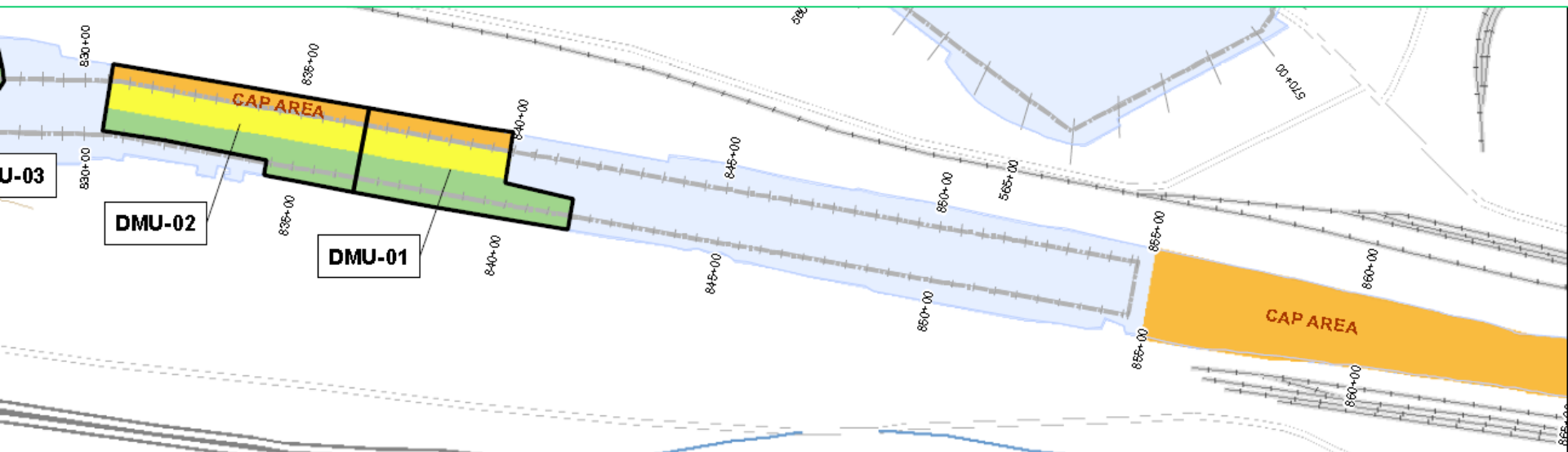


Monitoring Equipment



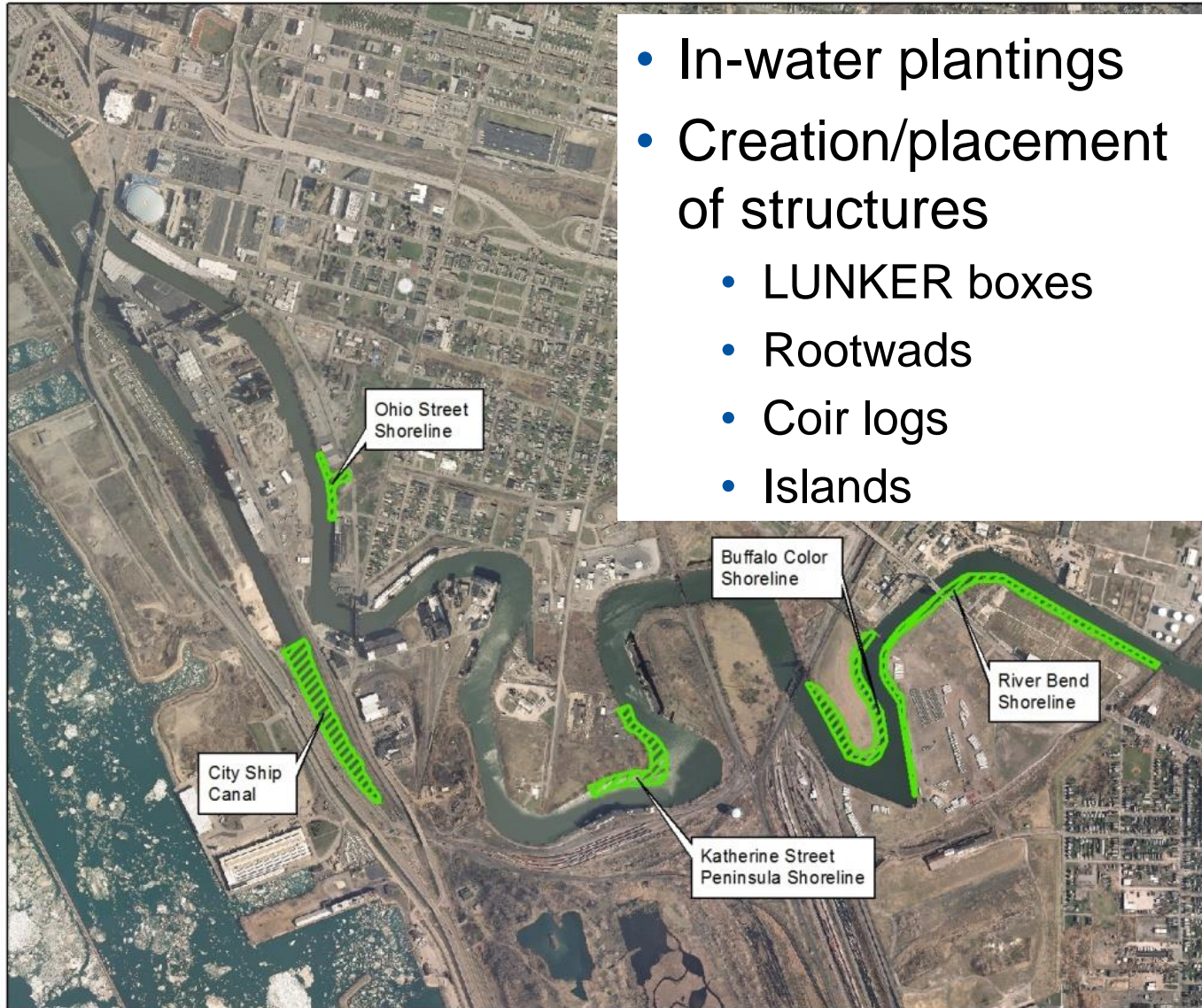
Capping

- Cap head of City Ship Canal and select areas where removal of sediment could compromise stability of shoreline structures
- Cap will be made up of sand, stone, and biological material
- Physically isolate chemical contamination and provide a clean substrate for habitat and small benthic organisms



Aquatic Habitat Restoration

- In-water plantings
- Creation/placement of structures
 - LUNKER boxes
 - Rootwads
 - Coir logs
 - Islands



Aquatic Habitat Restoration

TUSSOCK SEDGE



SOFT RUSH



**RIVER BULL-
RUSH**



WILD CELERY



Post-dredge Performance Monitoring

- Verify that project goals are met
 - Dredge target elevations
 - Cap thickness
 - Plant survival



Schedule

Planned for
2013

- Mobilization/site preparation
- Begin dredging

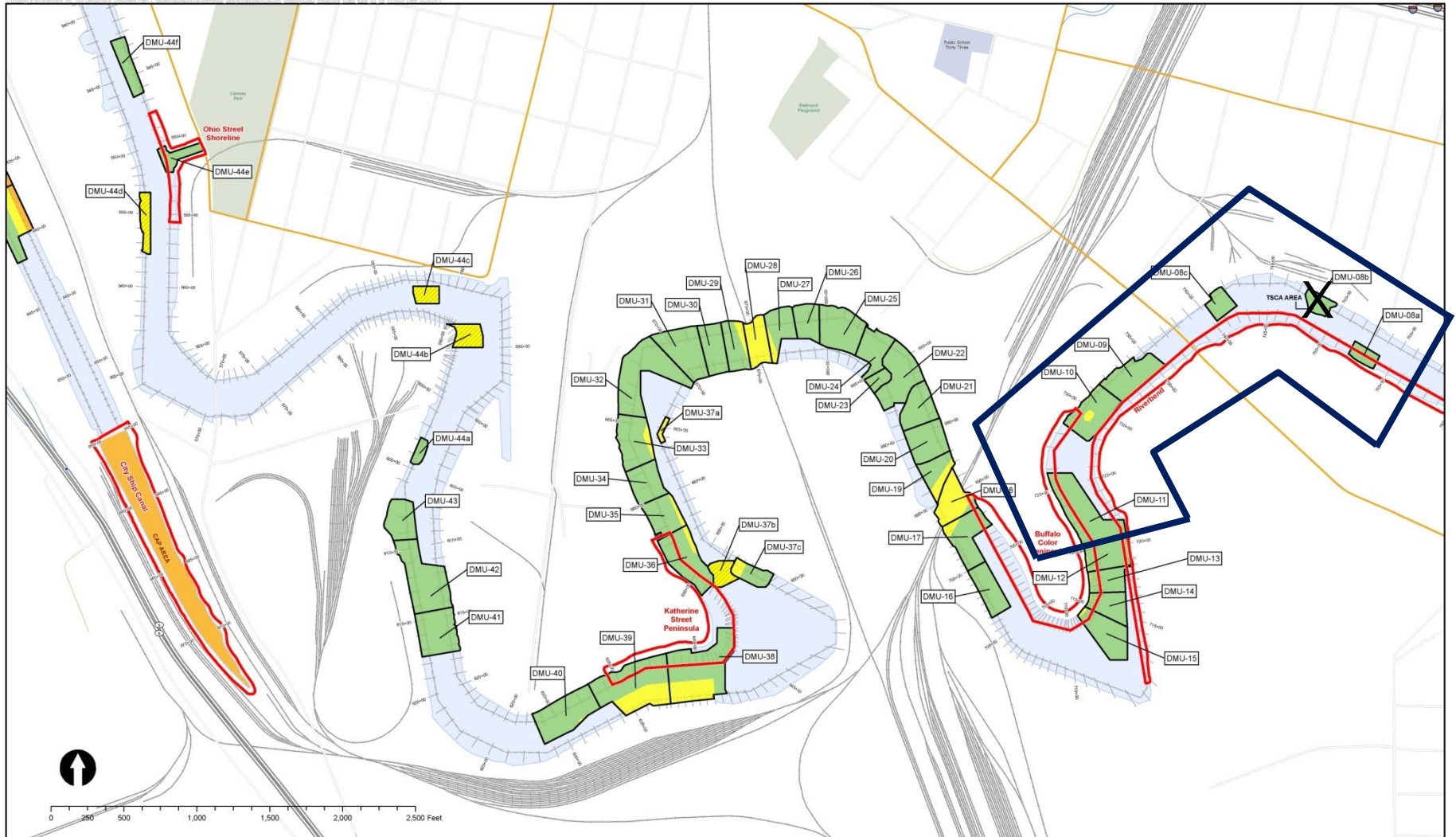
Planned for
2014

- Complete dredging
- Cap placement
- PCB hotspot dredging

Planned for
2015

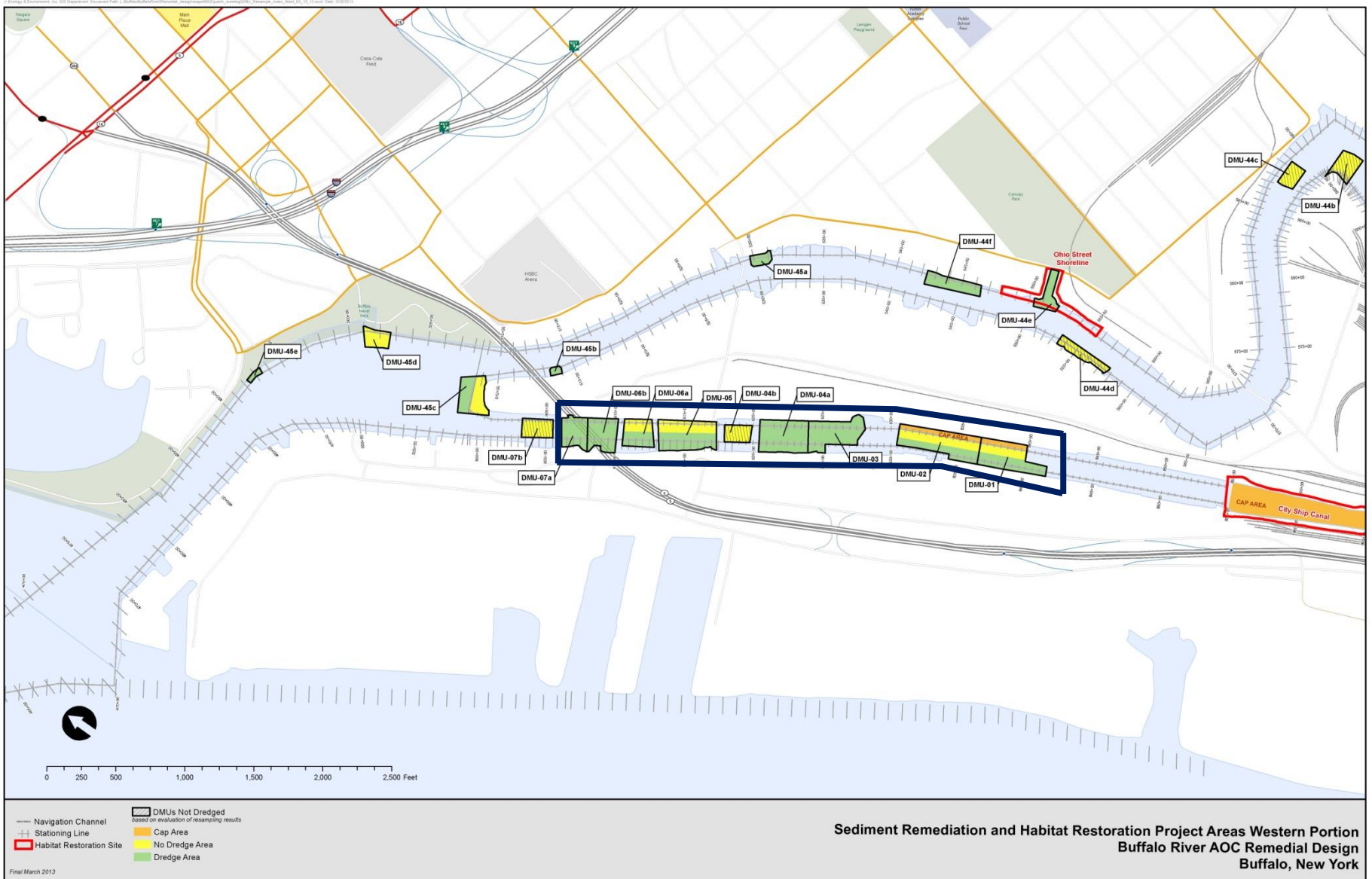
- Aquatic habitat restoration

October 7 – 31, 2013

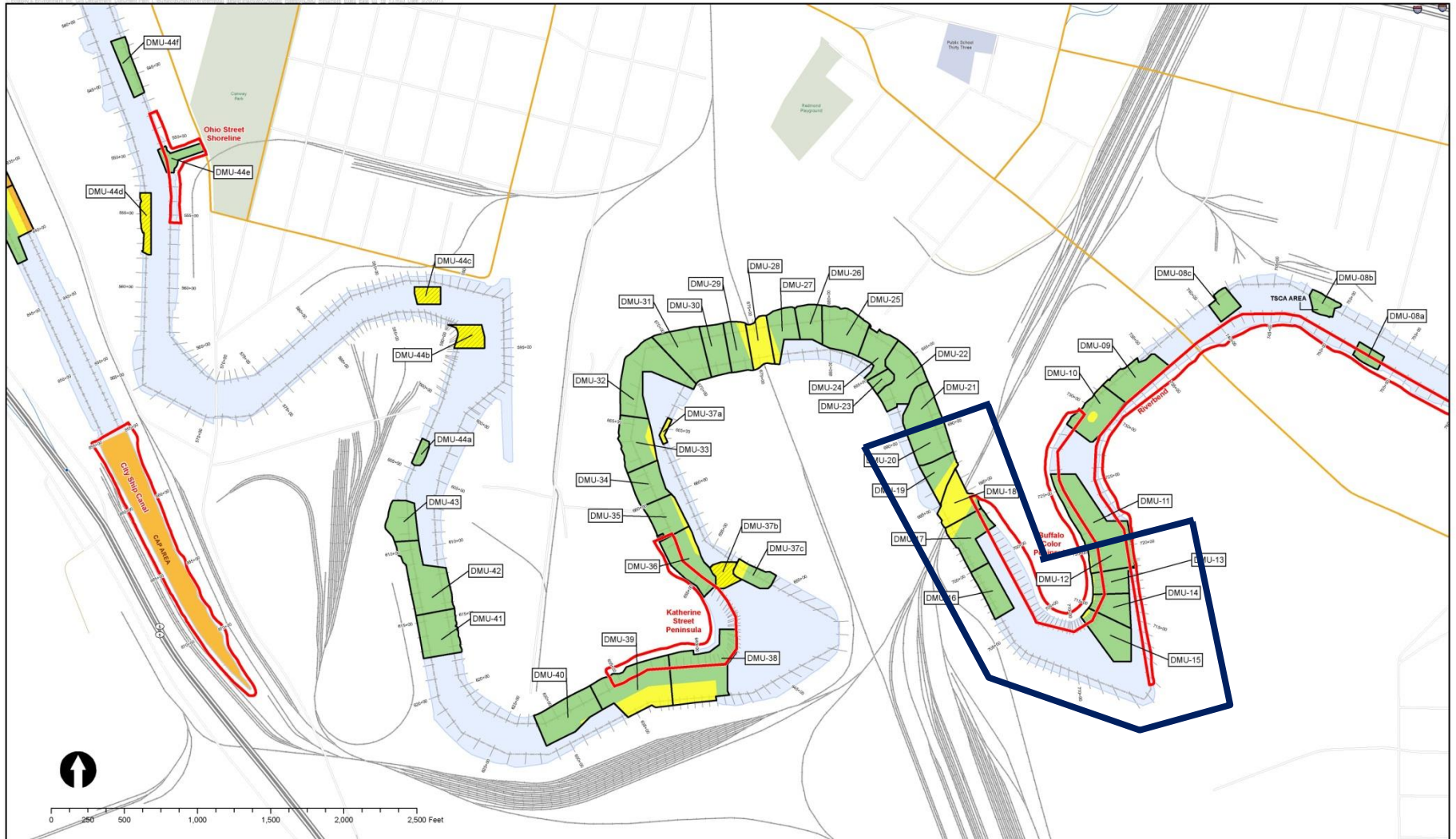


Sediment Remediation and Habitat Restoration Project Areas Eastern Portion
 Eastern Portion, Buffalo River AOC
 Buffalo, New York

November 1 – 19, 2013



November 19 – December 13, 2013



— Navigation Channel
 + Stationing Line
 ■ Habitat Restoration Site
 ■ DMUs Not Dredged based on evaluation of resampling results
 ■ No Dredge Area
 ■ Dredge Area
 ■ Cap Area

Sediment Remediation and Habitat Restoration Project Areas Eastern Portion
Eastern Portion, Buffalo River AOC
Buffalo, New York

Dredging Contractors

U.S. EPA Great Lakes National Program Office Cleanup Services Contract

- Environmental Quality Management, Inc. (EQM)
 - AECOM
 - Severson Environmental Services, Inc.
 - Luedtke



For More Information:

www.buffaloriverrestoration.org

