

Lincoln Park & Estabrook Park Milwaukee River Channels Sediment Remediation Project Phase II

Parks, Energy and Environment Committee
May 13, 2014

Project Team

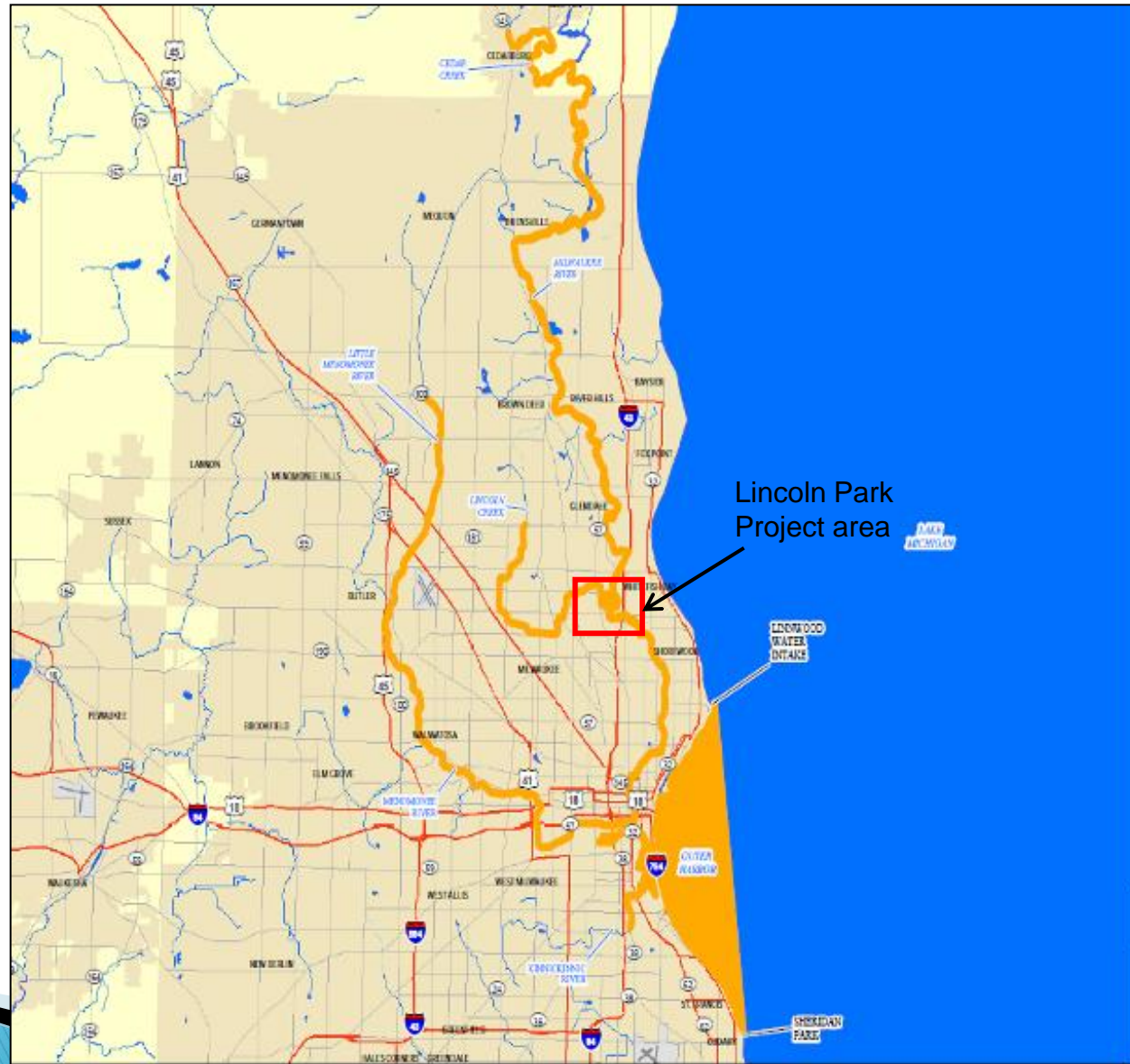
- ▶ US EPA GLNPO
- ▶ Wisconsin DNR
- ▶ Milwaukee County
- ▶ EA Engineering




Lincoln Park Project Area



Location Within Area of Concern



Beneficial Use Impairments Addressed

- ▶ Restrictions on Fish and Wildlife Consumption
 - ▶ Degradation of Benthos
 - ▶ Restrictions on Dredging Activities
 - ▶ Degradation of Fish and Wildlife Habitat
 - ▶ Degradation of Fish and Wildlife Populations
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Previous Clean up Actions

▶ Blatz Pavilion

- 4700 cubic yards sediment removed
- 300 lbs of PCB removed
- Completed 2008 (100% state funded)

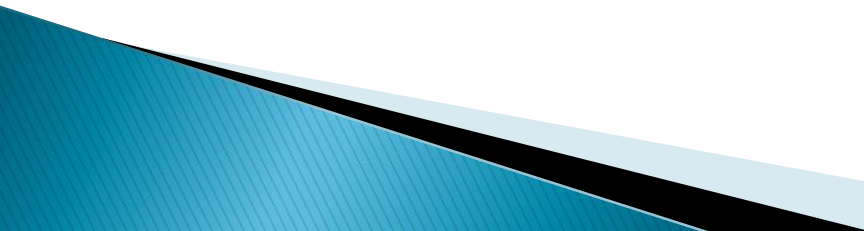


Previous Clean up Actions



- ▶ Lincoln Park Phase I
 - 120,000 cubic yards sediment excavated
 - >5,000 pounds PCBs removed
 - >4,000 pounds PAHs removed
 - Funded through Legacy Act (65%) and State (35%)

Sampling Efforts for Phase II Area

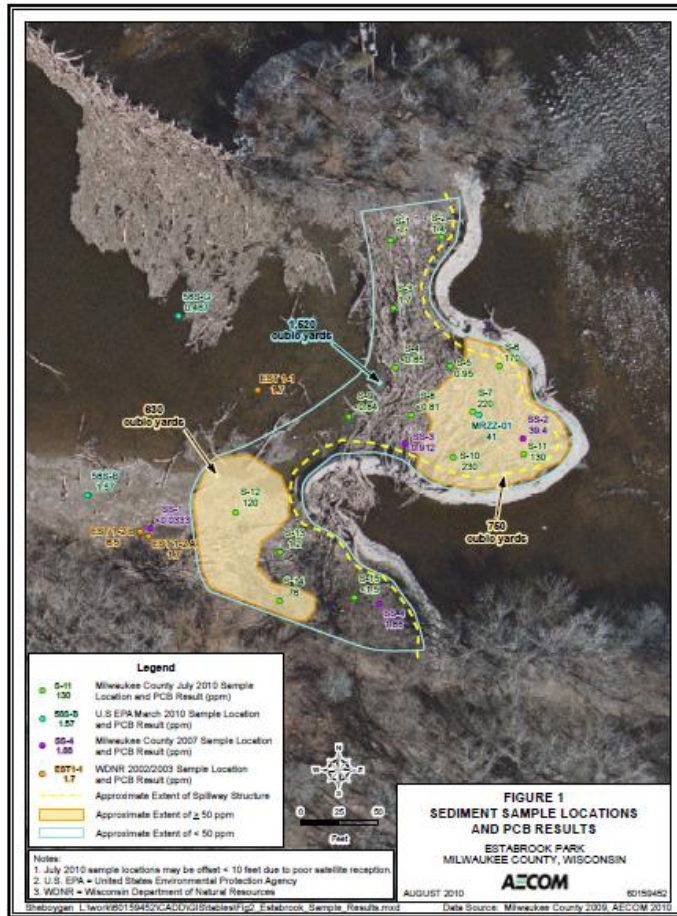
- ▶ 2007 and 2010 Sediment sampling behind Estabrook dam fixed crest spillway (Himalayan Consultants (2007) and AECOM (2010) for Milwaukee County Parks)
 - ▶ 2010 Remedial Investigation for Phase II area (CH2M Hill)
 - ▶ 2013 Additional Characterization for FS (EA Engineering)
- 

2007 Sampling (Himalayan)



- PCB range <1 – 39 ppm
 - Highest PCB concentration at 1-2 foot interval at SS-2
- Total PAH range 10 – 62 ppm
 - Highest PAH at SS-4 at 0-1 foot interval

2010 Sampling (AECOM)

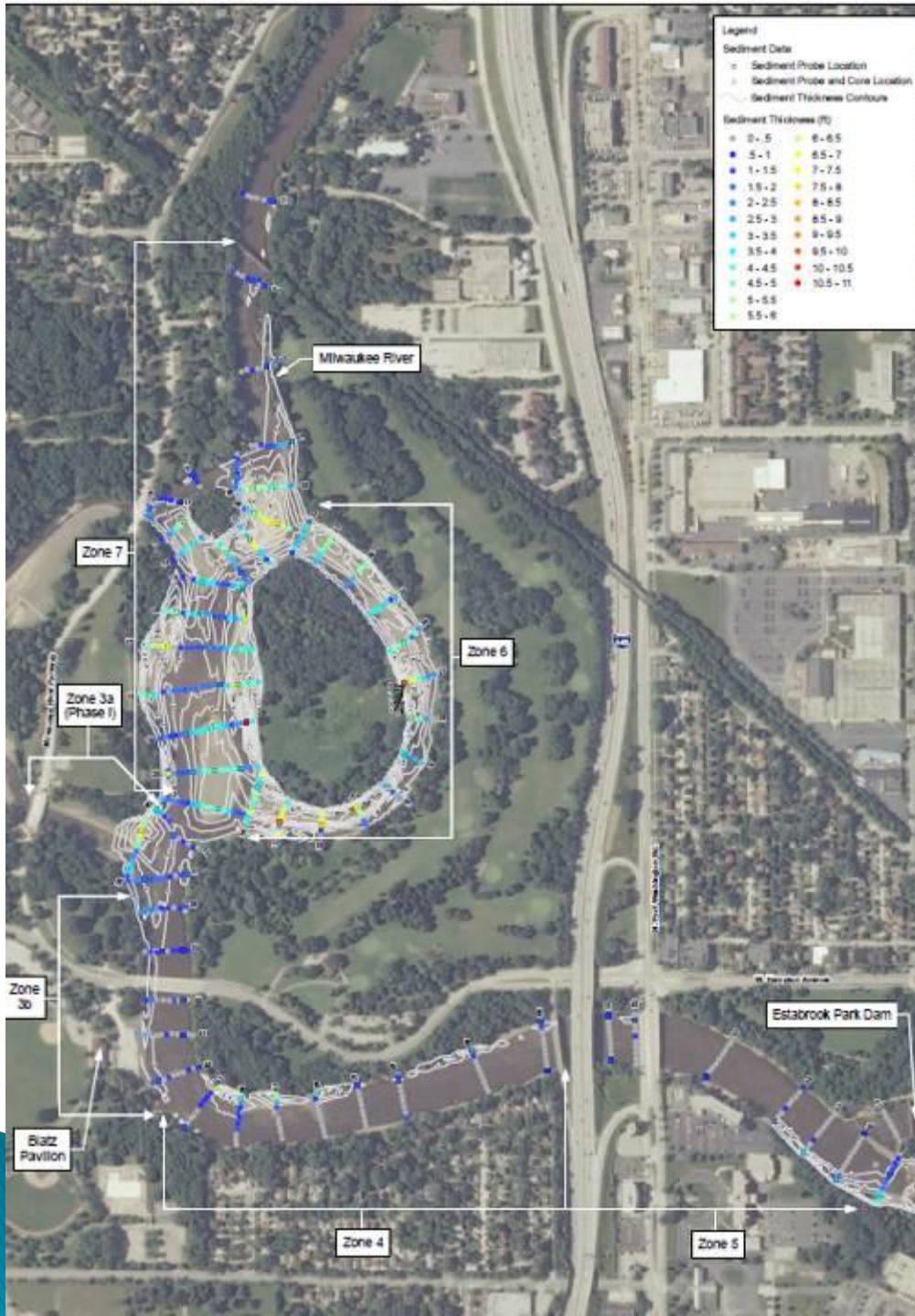


PCB Results

- 1 400 cubic yards
TSCA
- 1 800 cubic yards
 < 50 ppm
- Volumes do not
include overburden

2010 Sampling (CH2M Hill)





Sediment Thickness

- Transects spaced 200 ft where known deposits present
- Transects every 400 ft in low deposition areas
- Sediment thickness 0-10.6 feet



PCB Results

- 88 cores collected
- Concentrations range from <1 to 26 ppm
- 16 core locations with PCB > 1ppm



PAH Results

- ▶ Total PAH range from 0.02 – 139 ppm
- ▶ Most sample locations below 20 ppm PAH
- ▶ PAH contamination discovered during Phase I excavation examined further for Phase II by FS monitoring (EA)



PAH contamination found in Phase I area near north bridge cutoff wall

Sampling on upstream side of sheet pile showed contamination at depth

Cut sheetpile off at sediment grade after excavation to act as cutoff wall



2013 Sampling (EA Engineering)



- ▶ Bathymetry
- ▶ NAPL (North Bridge)
- ▶ Sediment Deposit sampling
- ▶ Habitat Evaluation

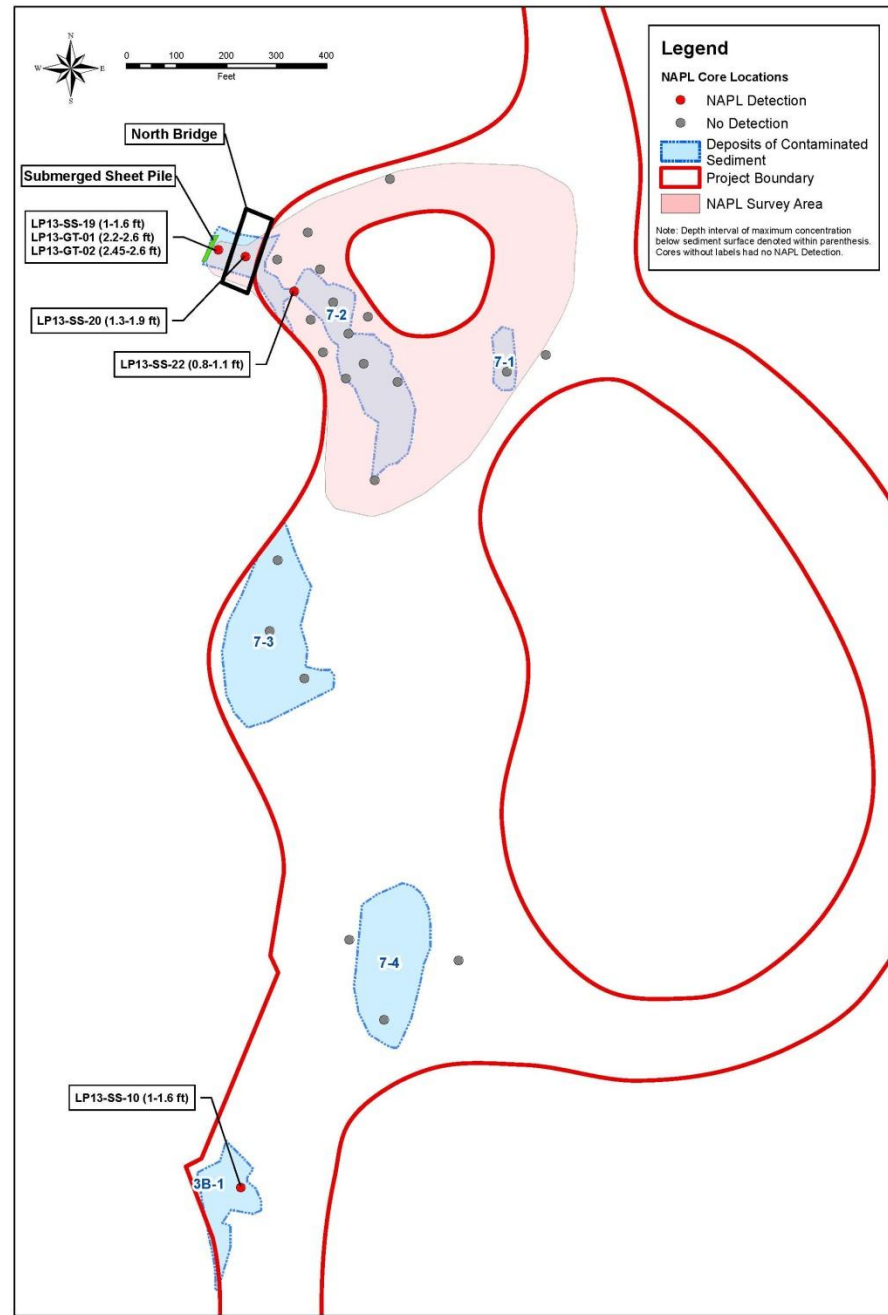


NAPL Survey



2013 Sampling Results

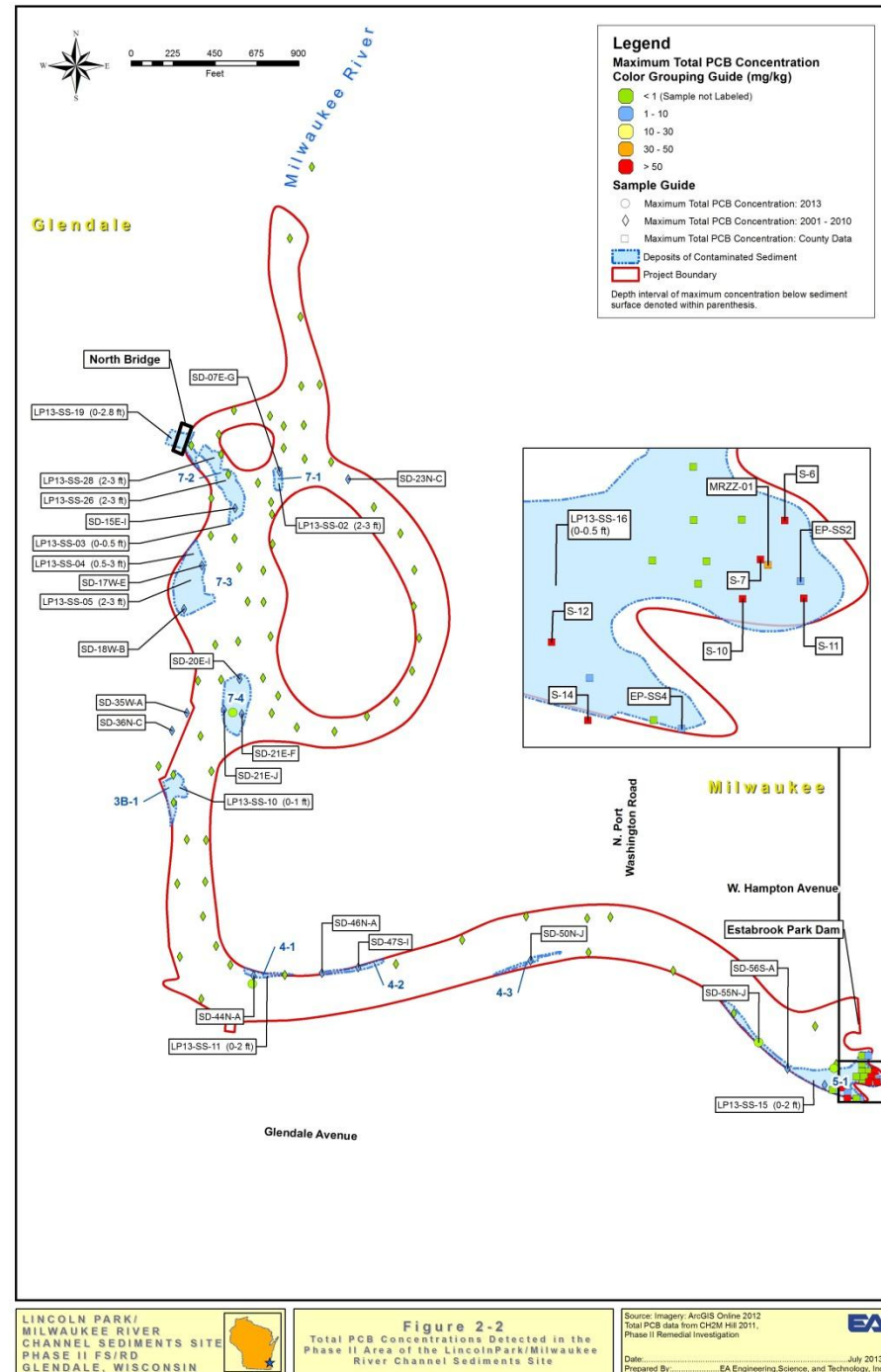
- ▶ NAPL Survey – 15 cores within NAPL area
 - 3 cores observed/confirmed NAPL
 - 1 additional cores tested positive for NAPL, not in NAPL survey area



2013 Sampling Results

▶ PCB Survey

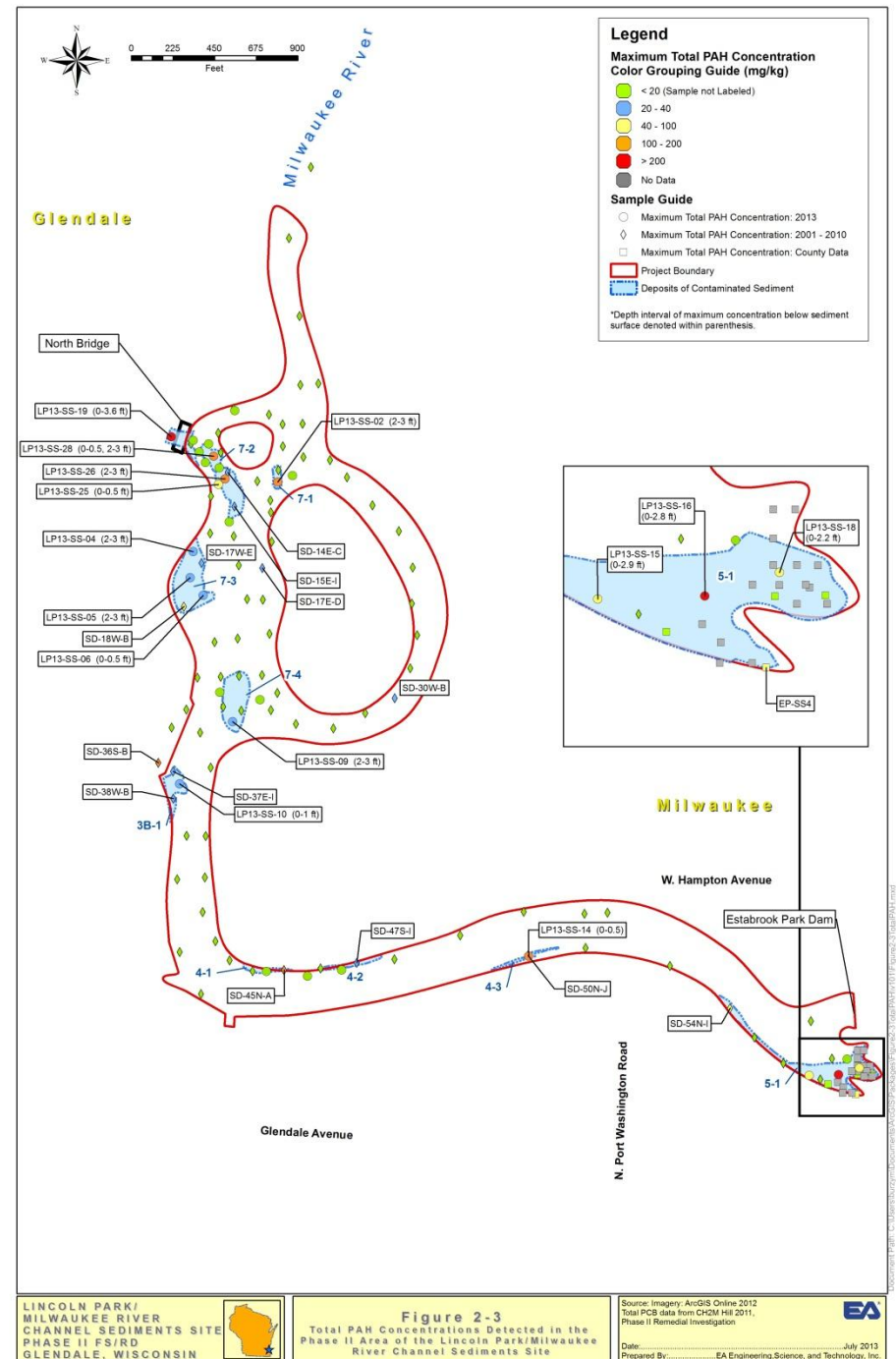
- 137 samples
- Non-TSCA range
1.17ppm – 33.1 ppm
- TSCA found in NAPL area
in 3 samples range 79.7
ppm – 162 ppm



2013 Sampling Results

▶ PAH Survey

- 131 samples
- Range 0.01 ppm–469 ppm



Phase II FS

▶ Feasibility Study

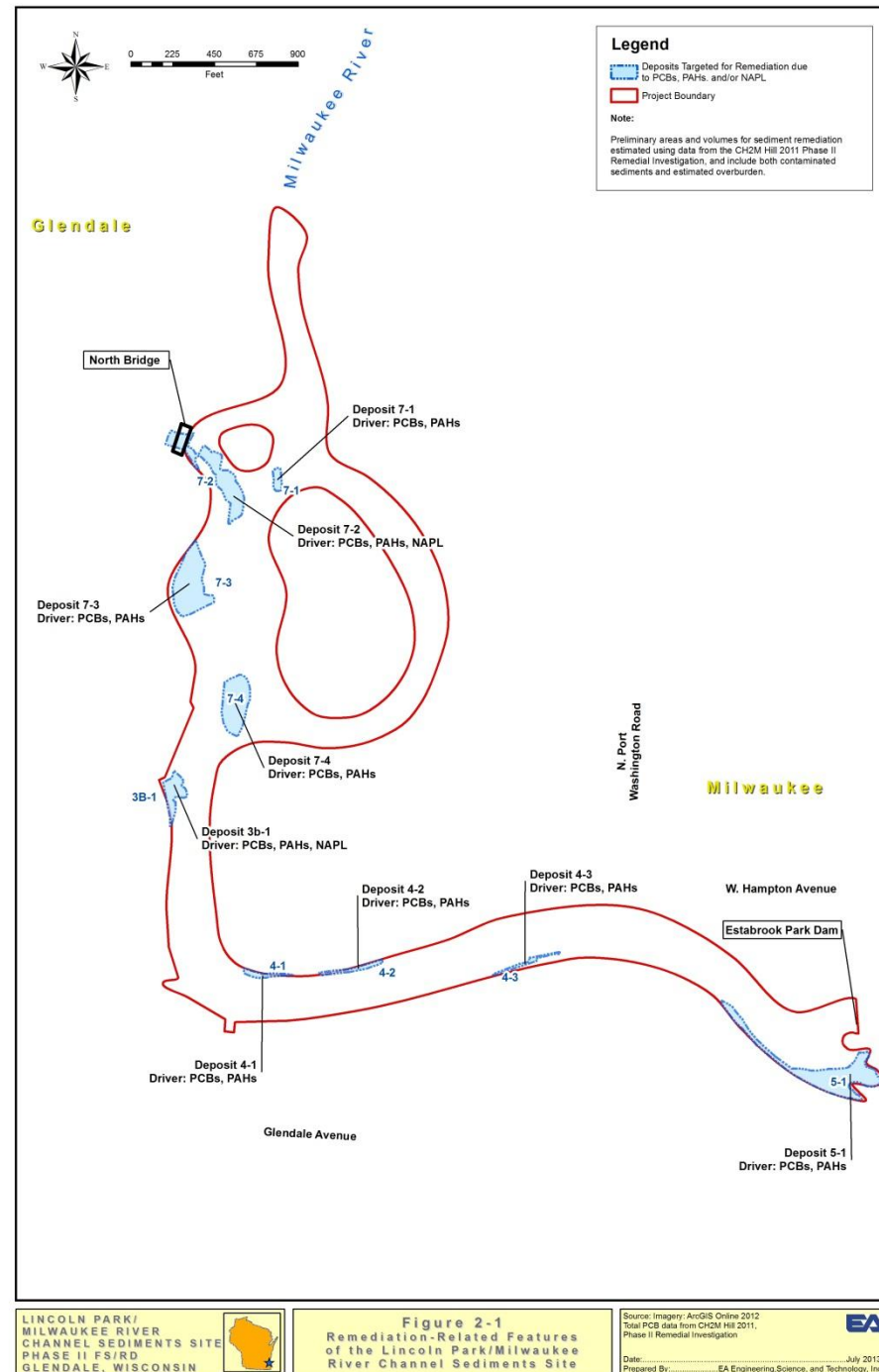
- Focused FS – Used Phase I FS to focus Phase II
- Remedial Action Options the same as for Phase I
- Selected remedial alternative in conjunction with stakeholder involvement

Phase II Feasibility Study

- ▶ 7 alternatives evaluated, including no-action
- ▶ Recommended Alternative 4a:
 - Dry Excavation, targeted hydraulic dredging and offsite disposal
 - FS Cost estimate about \$15 million
- ▶ Public Information Open House held August 20, 2013
 - Received concurrence with recommended alternative

Excavation Targeted Deposits

- Approximately 35,000 cubic yards of non-TSCA sediment from 9 main deposits
- About 500 cubic yards TSCA
- No remediation needed in east oxbow, or north of the oxbows
- Mechanical (dry) excavation for all deposits except:
 - Southern portion of 7-4 and deposit 4-3



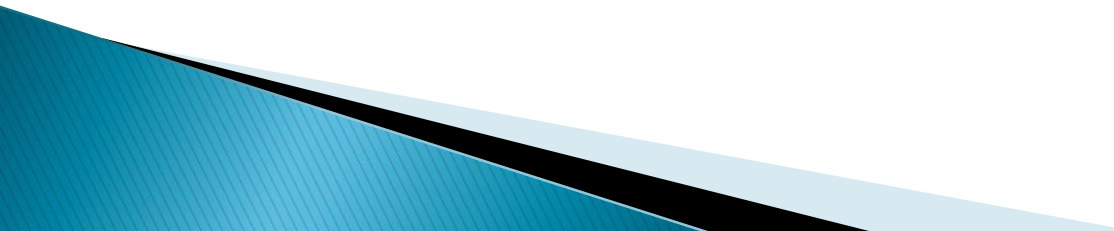
Water Treatment

- ▶ Use same water treatment flow chart/process as for Phase I for dewatering and PCBs
- ▶ Treatment addition for PAHs

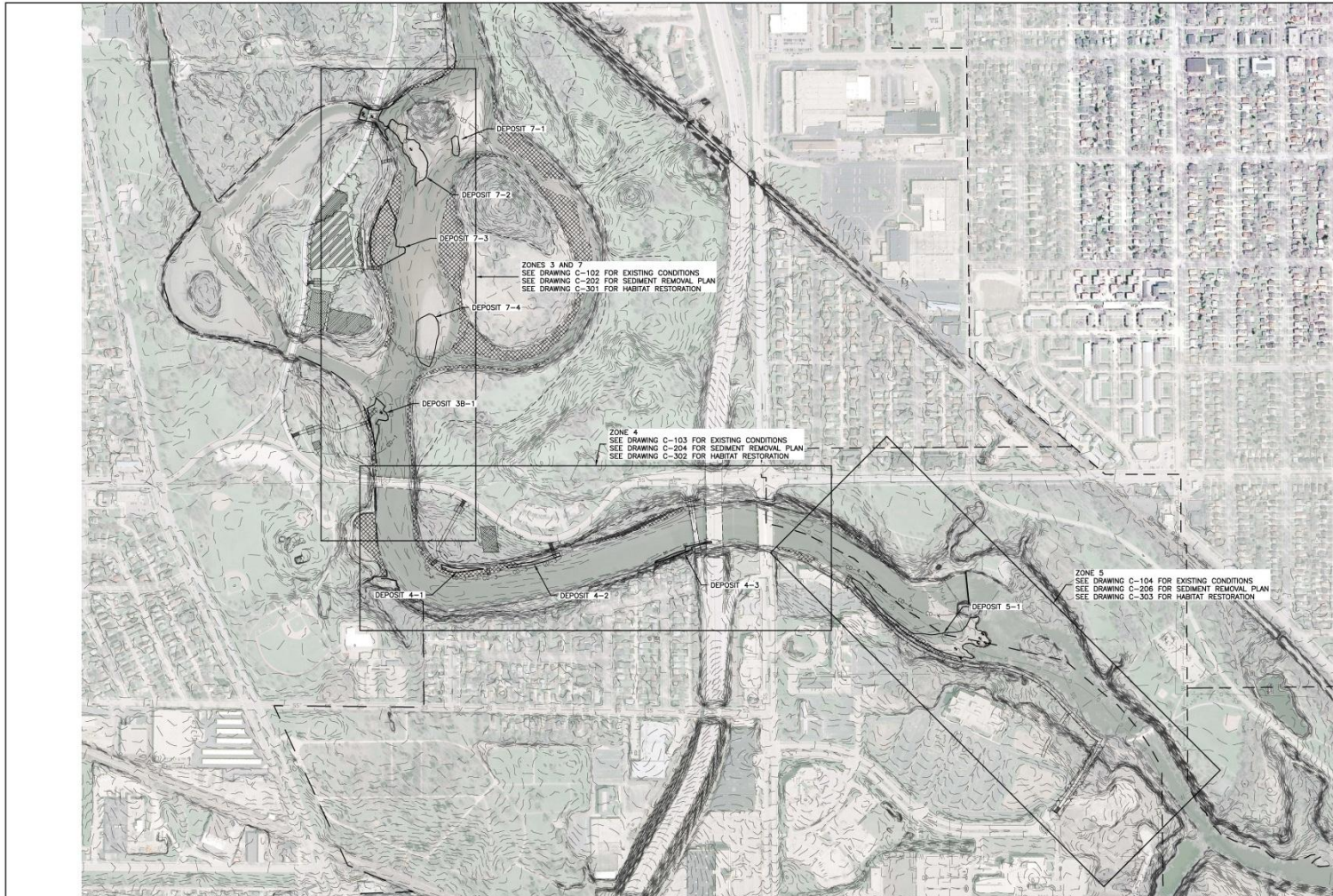
Off Site Disposal

- ▶ Non-TSCA sediments will be disposed in state-licensed landfill
 - Exploring possibility of using Milwaukee DMDF per recommendation
- ▶ TSCA sediments will be transported to out of state facility

Habitat Restoration

- ▶ Areas disturbed as a result of remedial action will be restored
 - ▶ Restoration will directly follow each excavation area
 - ▶ Menu of techniques developed that will be tailored to each area
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Phase II Design in Progress



OVERALL SEDIMENT REMOVAL SITE PLAN



REVISIONS	
NO.	DATE BY DESCRIPTION

REMEDIAL DESIGN LINCOLN PARK/MILWAUKEE RIVER CHANNEL SEDIMENTS SITE PHASE II MILWAUKEE COUNTY, WISCONSIN	OVERALL SEDIMENT REMOVAL SITE PLAN
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PREPARED FOR:
EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC. 444 LAKE COOK ROAD SUITE #8 DEERFIELD, IL 60015 (847) 945-8010
DATE: SEPTEMBER 2013
DESIGNED BY: JRB
DRAWN BY: JRM
CHECKED BY: JMT
PROJECT NUMBER: MC
PROJECT NUMBER: 0256105
SCALE: AS SHOWN
FILE NAME: SEE FILE PATH
DRAWING NUMBER: C-101
SHEET NUMBER: 3 OF 20

**PRELIMINARY
NOT FOR
CONSTRUCTION**

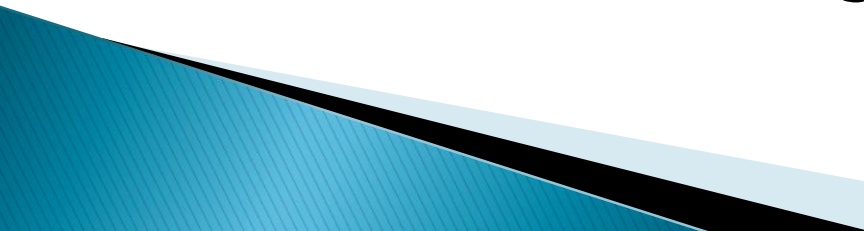
Regulatory Requirements

- ▶ Approved work plan for handling TSCA sediments
 - US EPA TSCA
- ▶ Permits for dredging and shoreline stabilization
 - WDNR and ACOE
 - EA required with 30 day public comment period
- ▶ Wetland Mitigation
 - ACOE
- ▶ Water Treatment Permits
 - WDNR
- ▶ County and municipal stormwater and erosion control notifications and permits
- ▶ Authorization from two communities to work 24 hr/day – 7 days/week
- ▶ County right of entry agreement
- ▶ Private owner access agreement(s) – dam area
- ▶ Floodplain impacts concurrence (City of Milwaukee)

Project Status and Timeline

- ▶ 30% Design Completed November 2013
- ▶ Value Engineering Study by ACOE Completed November 2013
- ▶ Design given to GLNPOC contractors December 2013
- ▶ Phase II Remedial Action Application Submitted to GLNPO December 2013
 - TRC scheduled January 10, 2014

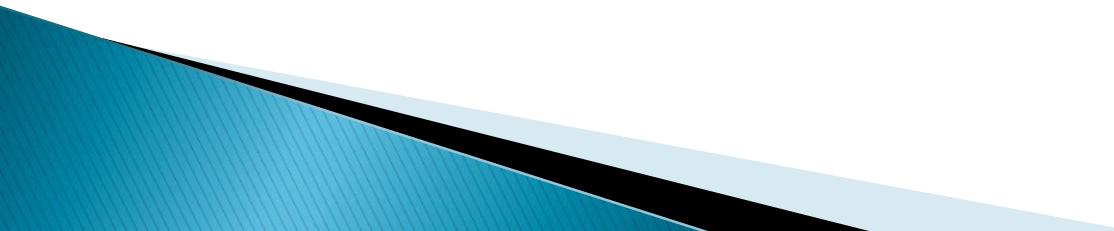
Project Status and Timeline

- ▶ TRC L♥VES the project and agrees to accept
 - Project Agreement signed by end of May 2014
 - ▶ Pre-final design due January 9, 2014
 - ▶ Pre-final design included in bid to construction contractors due March 2014
 - ▶ Contractor response & selection (possibly with alternate designs) June 2014
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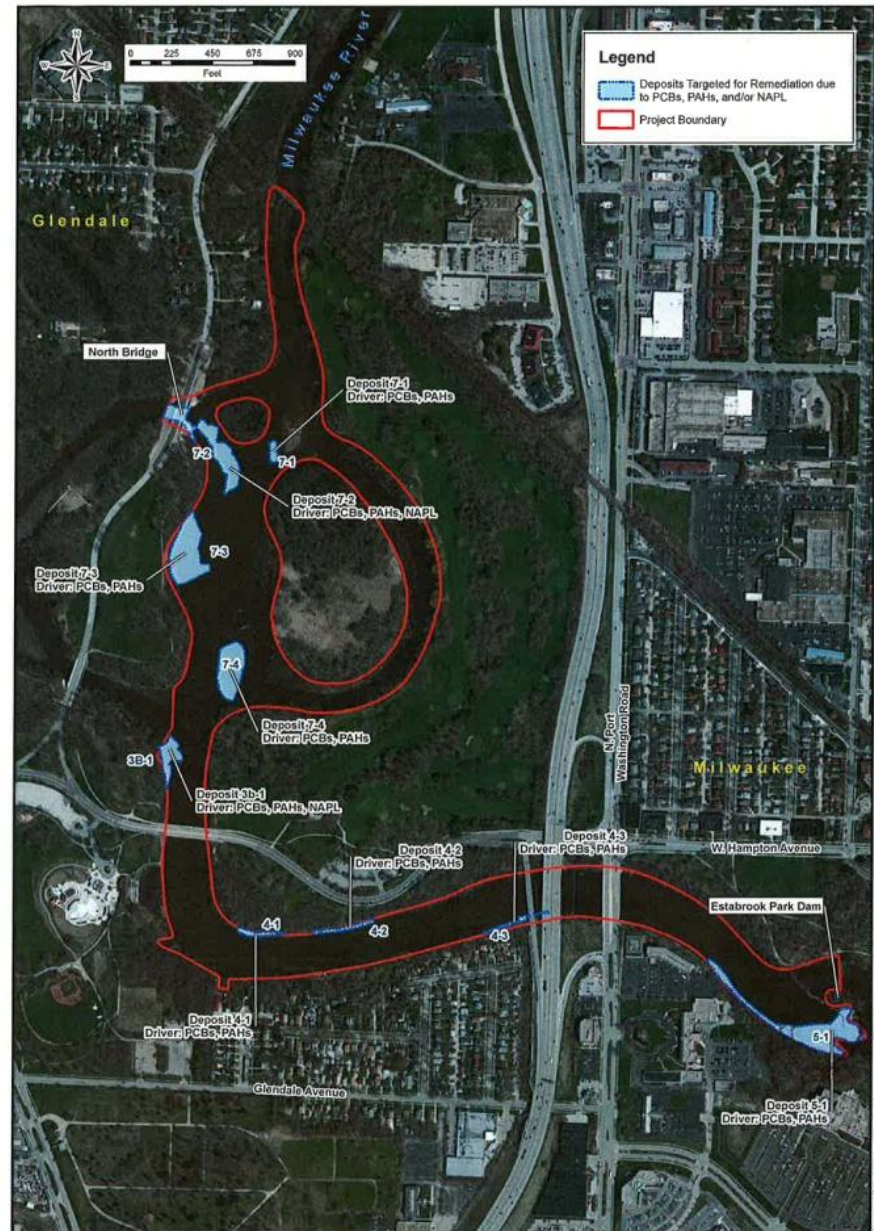
Project Status and Timeline Goals

- ▶ Permits issued May 2014
 - ▶ Design is finalized May–June 2014
 - ▶ Begin mobilization July 2014
 - ▶ Remediation Complete December 2014
 - ▶ Habitat Restoration Complete Summer 2015
 - ▶ Habitat establishment & maintenance 2015–2016
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Project Budget

- ▶ Total Estimated Costs – \$18 million
 - ▶ Legacy Act/USEPA (65%) – \$11.7 million
 - ▶ Non Federal Share (35%) – \$6.3 million
 - Milwaukee County – \$4.2 million
 - WDNR – \$2.1 million
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Milwaukee River Phase 2 Sediment Deposit Locations



Source: ArcGIS Online Map Service 2012. Total PCB data from CH2M HILL 2011. Phase II Remedial Investigation.

		LINCOLN PARK / MILWAUKEE RIVER CHANNEL SEDIMENTS SITE PHASE II FS / RD GLENDALE, MILWAUKEE COUNTY, WISCONSIN			CONTAMINATED ZONES AND DEPOSITS				
PROJECT MGR. MC	DESIGNED BY RF	DRAWN BY RF	CHECKED BY JB	DATE JAN 2014	SCALE AS SHOWN	PROJECT NO. 6256105	FILE NAME -	DRAWING NO. -	POUR 2

Estabrook Dam



Construction Access to Dam

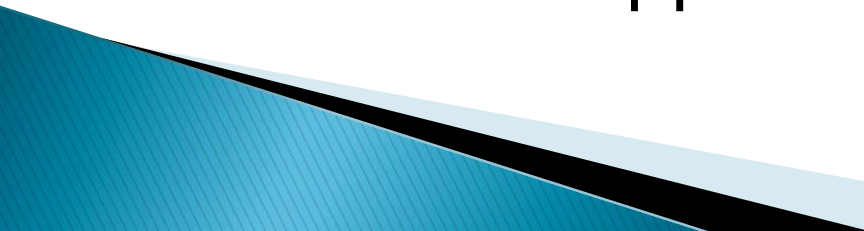
WDNR requires Milwaukee County to obtain permanent access to all parts of the Dam

- ▶ Milwaukee County owns the entire east bank—Estabrook Park
- ▶ West bank is entirely privately owned
- ▶ The three impacted private properties have committed to provide permanent access easements
- ▶ Easements would provide access for both the Sediment and Dam projects
- ▶ The island located between the gated and fixed-crest segments of the dam is owned by the US Bureau of Land Management – BLM
- ▶ BLM requires that an EA – Environmental Analysis be performed to comply with the National Environmental Policy Act – NEPA prior to approval of access to island
- ▶ EA process includes an Alternatives Analysis

Estabrook Dam Private Lands Access Routes



Environmental Analysis Schedule

- **Technical Advisory Team Meeting May 16**
 - Team provides big picture comments on EA Draft No. 1
 - Agencies will have additional time to review EA for technical content
 - **Issue Public Information Meeting Invitation on May 22 with date draft EA will be available**
 - **Draft EA posted on County web site starting on May 28**
 - **Public Information Meeting on June 5**
 - **Draft EA Public comment period ends June 12**
 - Public comments will be integrated into the final EA
 - **Final EA to approving Agencies June 30**
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Questions?

