

SMWG 10/22

Remedy Effectiveness and Paths to Closure

Amy Pelka

Section Supervisor

U.S. EPA - Great Lakes National
Program Office

www.epa.gov/great-lakes-aocs



Overview

- Land acknowledgement
- Perceptions of Sediment Remedy Effectiveness Work
- Sediment Remediation and Remedy Effectiveness in the Great Lakes National Program Office/Great Lake Legacy Act sites
 - Goals and mandates
 - Track record of investment
- REflections





Land Acknowledgement

Waawiyatanong or Detroit occupies the contemporary and ancestral homelands of three Anishinaabe nations of the Council of Three Fires: **the Ojibwe, Ottawa, and Potawatomi**. The 1907 Treaty of Detroit, the Ojibwe, Ottawa, Potawatomi, and Wyandot tribes ceded the land now occupied by the city.

IS THIS YOUR IMAGE OF REMEDY EFFECTIVENESS?

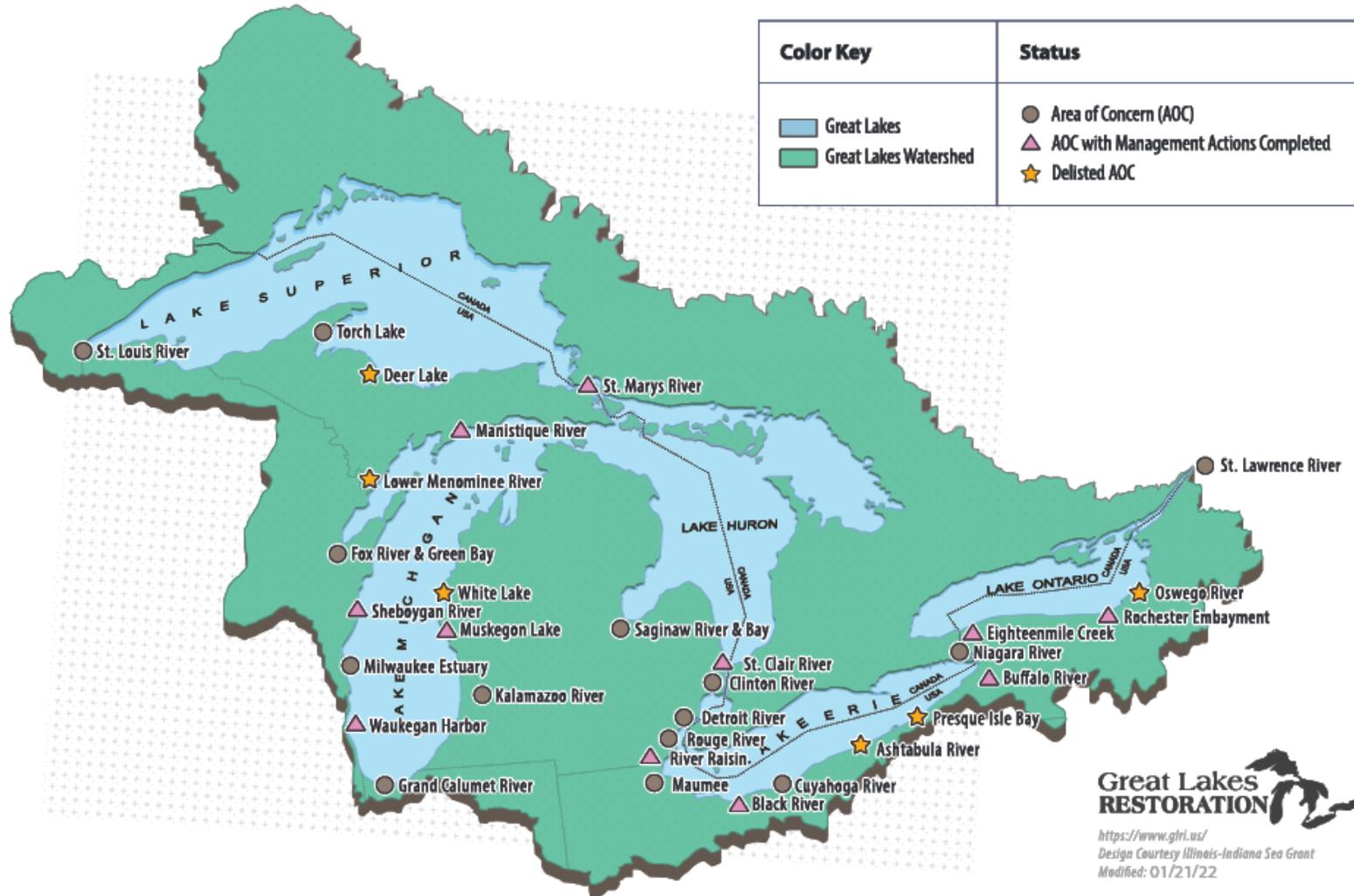




- ☞ The Great Lakes Legacy Act is a voluntary cost-shared sediment assessment and remediation program.
- ☞ The GLLA is the principal mechanism for doing sediment remediation.
- ☞ It can only be used at pre-designated Areas of Concern in the Great Lakes.
- ☞ Utilizes a restoration-based paradigm, instead of a risk-based one.
 - We do a clean-up based on ecologically-based targets and mass loading to the lakes.*



U.S. Great Lakes Areas of Concern



Great Lakes Legacy Act Progress 2004-2022

- 32 Sediment Remediation Projects Completed
 - Average of 2 Construction Projects per Year
 - 6 On-Going Sediment Remediation Projects
- >6M Cubic Yards Remediated
- Total Cost: \$1,100,000,000
 - Federal Share: \$650,000,000
 - Non-Federal Share: \$450,000,000
- 65 Different Non-Federal Partners

Industries (49) Involved in GLLA Projects

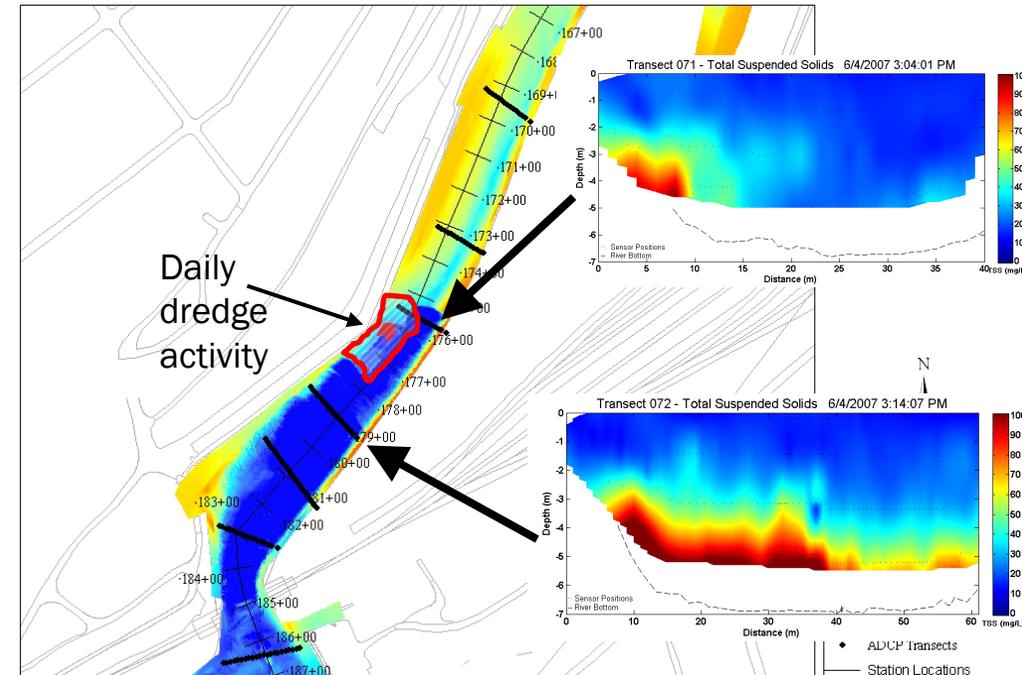
DuPont Co.	Wisconsin Public Service	U.S. Steel
GenCorp Inc.	Pollution Risk Services	Ford
Honeywell International Inc.	Cleveland Illuminating Co.	Tyco Fire Products
Illinois Tool Works, Inc.	Mallinckrodt Inc	Fraser Shipyard
United Technologies	Millennium Inorganic Chemicals	NIPSCO
Allied Waste Industries, Inc.	Ohio Power	We Energies
Phelps Dodge Corp. (Now Freeport-McMoRan)	Olin Corp	BP Products North America Inc.
Cabot Corp	Occidental Chemical	ArcelorMittal
Detrex Corp	RMI Titanium Co	Atlantic Richfield Co.
XIK Corp	Sherwin Williams	TDY Industries LLC.
Consumers Energy	Union Carbide	Superior Water Light and Power
Varta Microbattery, Inc.	CBS Operations (Viacom Intl)	Viacom/CBS
The Mosaic Co.	C. Reiss Company	DTE Gas Company
BP-Husky Refining	Elkem Metals	Marathon Petroleum
Wisconsin Public Service	Perstorp Polyols, Inc.	
BASF Corp.	Chevron USA	
Arkema Corp	Sunoco, Inc	
	Pilkington North America	

Remedy Effectiveness Investment in GLNPO

Baseline Assessments	Post-remediation Assessments	REAs
Ashtabula	Ashtabula	Ashtabula
Black Lagoon	Black Lagoon	
Buffalo	Buffalo	
Division Street Outfall	Division Street Outfall	
East Branch of the Grand Calumet	East Branch of the Grand Calumet	
Kinnickinnic River	Kinnickinnic River	
Manistique	Manistique	
Ottawa	Ottawa	<i>In progress</i>
Pickle Pond	Pickle Pond	
Ponds Behind Erie Pier		
River Raisin	River Raisin	
Scanlon Reservoir		
Spirit Lake		
West Branch of the Grand Calumet River		

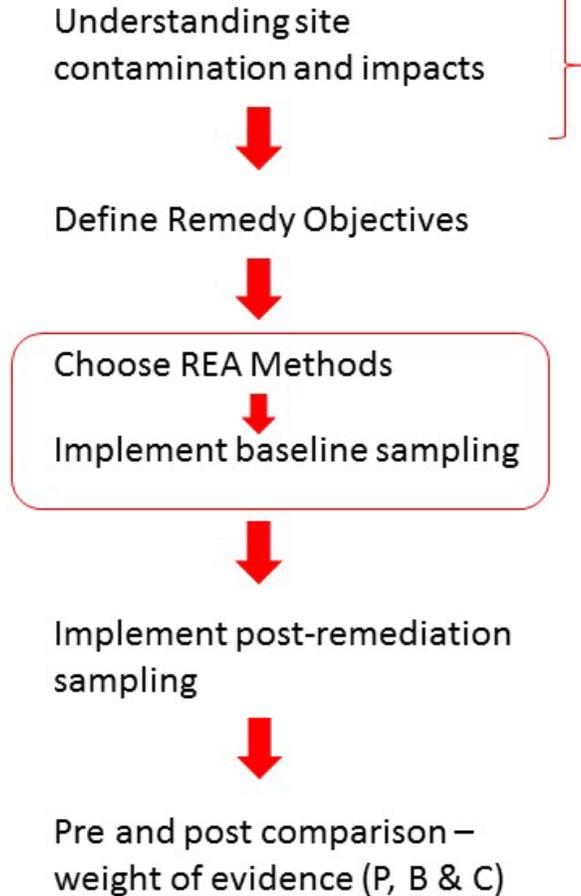
PARTNERSHIPS

- EPA's Office of Research and Development and other federal agencies including USGS & USACE
- Started as our office providing places for ORD's research
- Grew to a collaborative effort with partners and efforts

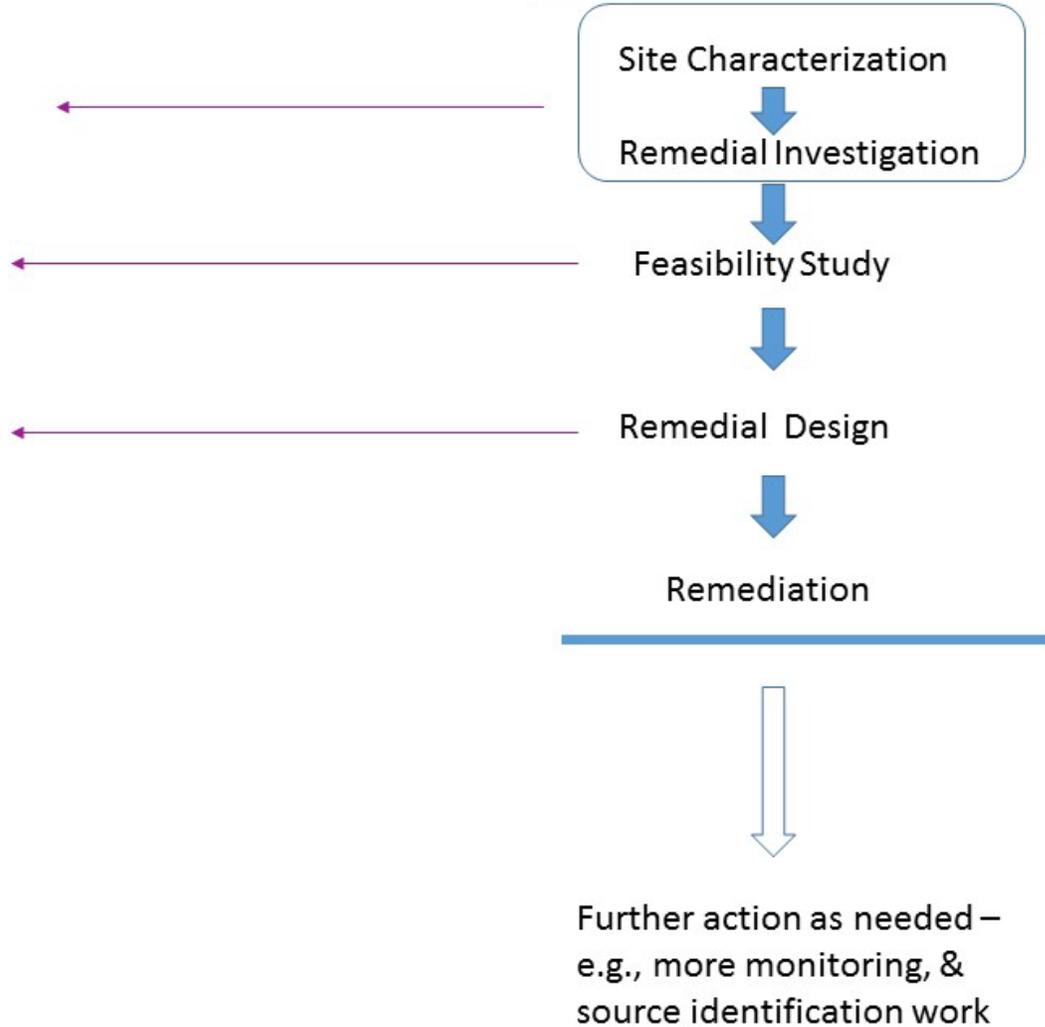


Resuspension Measurements
Upstream and downstream of the Dredge (NRMRL- Cinc)

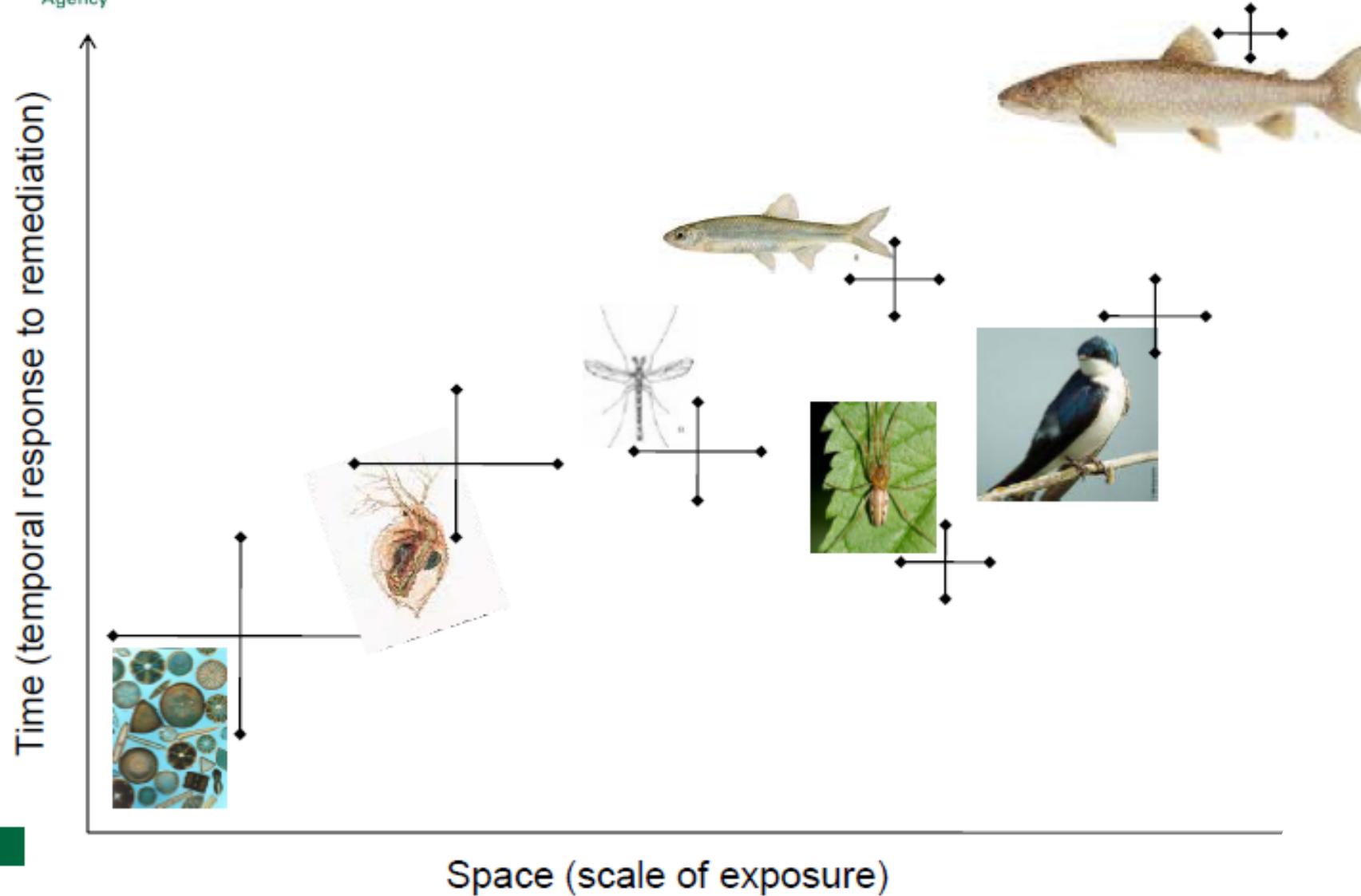
REA PROCESS



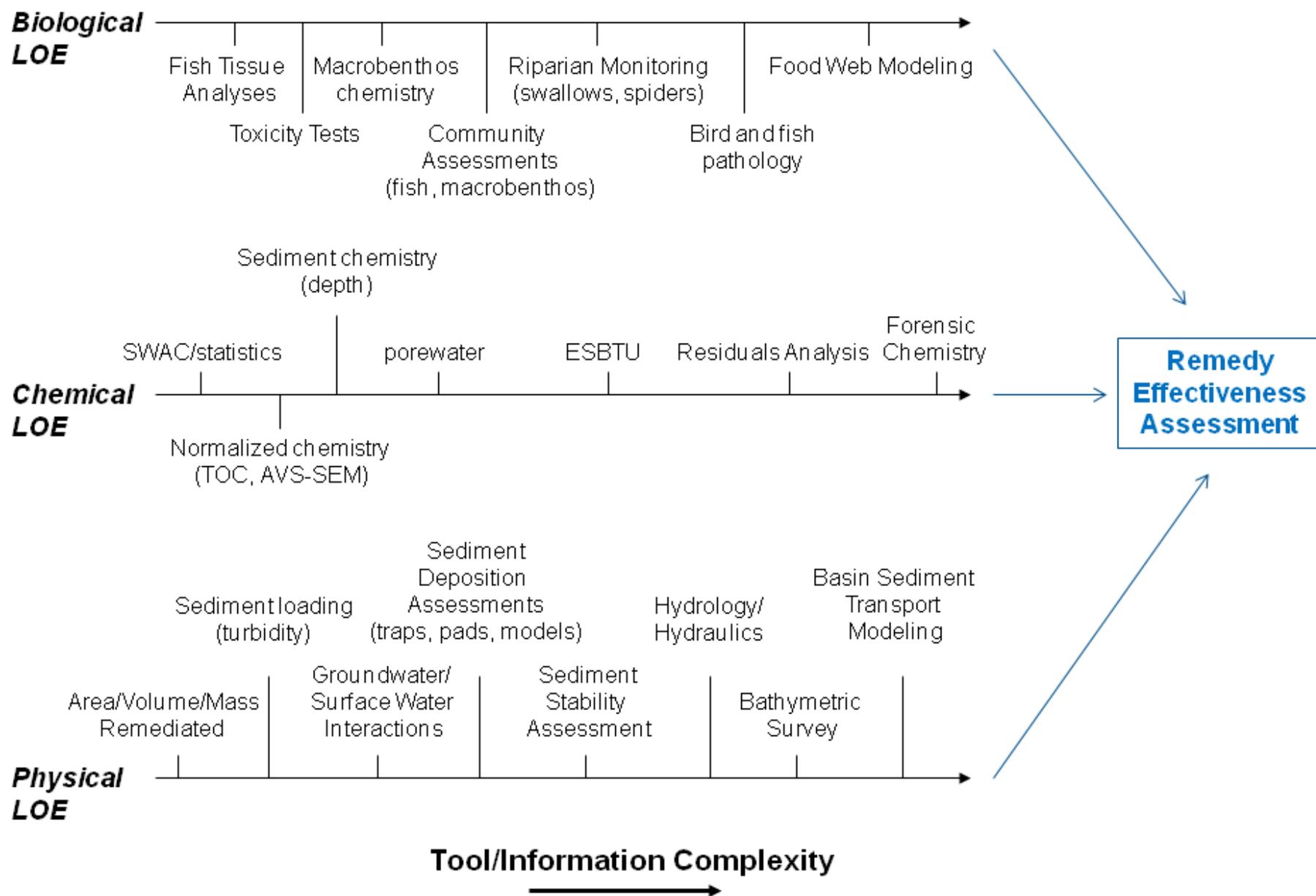
PROJECT REMEDIATION PROCESS



Biological indicators



Remedy Effectiveness Assessment Continuum





RE flections

- RE is helpful and worth doing
- Know what your goals are
- Use multiple lines of evidence in setting remediation goals and in assessing them
 - *physical, chemical AND biological*
- Work with multiple partners
 - Adds expertise and value
 - RE Assessments can often meet multiple goals