

# Howards Bay Cleanup

Fraser Shipyards 1960's



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Harbor Technical Advisory Committee



# Project Overview



**Cleanup Riverfront**

- St Louis River, Howards Bay

**Support Local  
Business**

- Fraser Shipyards, Others

**Support Local  
Workers**

**New Recreational  
Area**

- Wisconsin Point Landfill

**Improve Cap at  
Closed Landfill**

# Howards Bay

- St Louis River Area of Concern
- Priority for cleanup due to contaminated sediment
- Shipyards, grain terminals, commercial fishing, and other industries for over 100 years
- Only U.S. Dry Dock on Lake Superior
- Federal Shipping Channel and Private Slips
- Dredging important for commerce
- Also provides habitat for fish and wildlife



Provides key support to Great Lakes shipping

# Fraser Shipyards

- Situated on east end of Howard's Bay
- Important local employer
- Ship repair and utility boat manufacturing
- State grants to update infrastructure



# Twin Ports' Largest Grain Terminal

## CHS

- Served by Howards Bay shipping channel
- Hughitt Slip in project area
- Important local employer
- Ocean Going Ships



# Howards Bay Project

- Collaborative Effort
- Great Lakes Restoration Initiative
- US Army Corps conducting strategic navigation dredging
- Great Lakes Legacy Act Project for sediment cleanup
- Project Partners include US EPA, Fraser Shipyards, City of Superior and DNR
- US Army Corps of Engineers also serves as EPA's contractor on the cleanup project
- Support for dredged material placement is vital to project

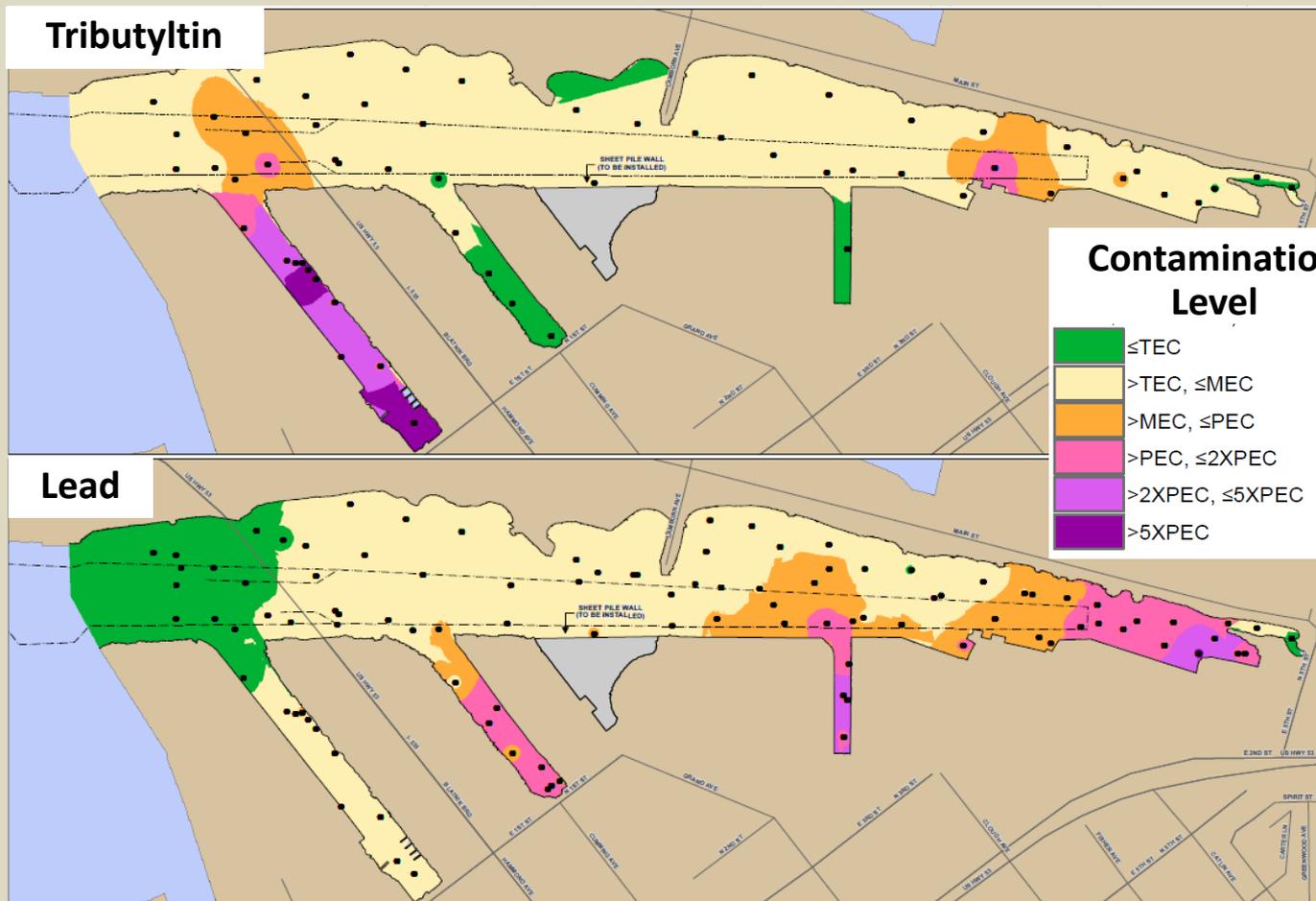


Public and private sector workers smiling in same photo!





# Pollution levels increase cost and restrict dredging projects



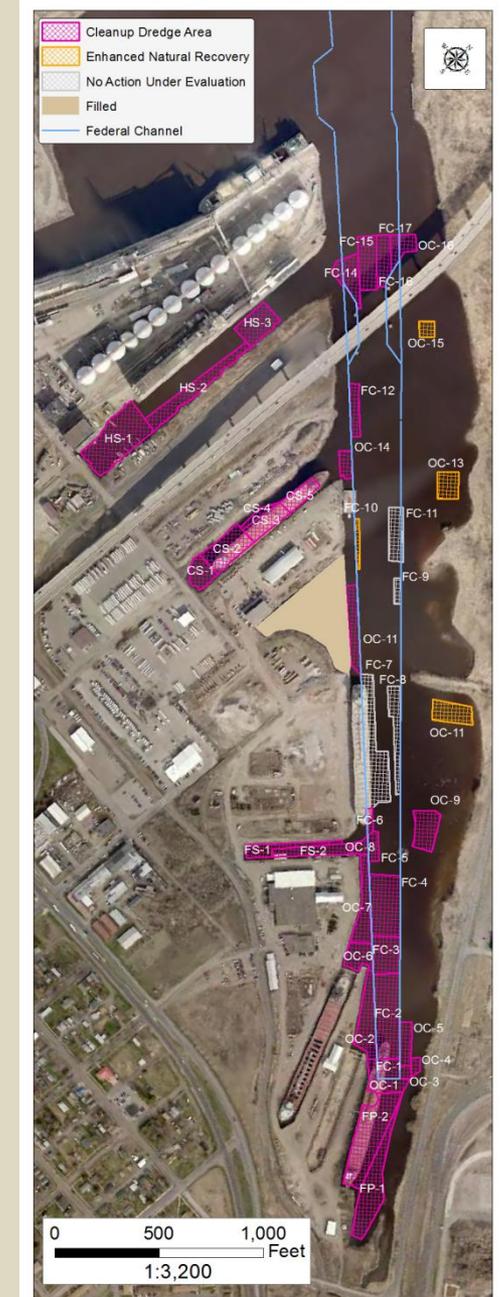
Contaminants: Lead, Tributyltin, Total PAHs, Mercury

# Selected Cleanup Option

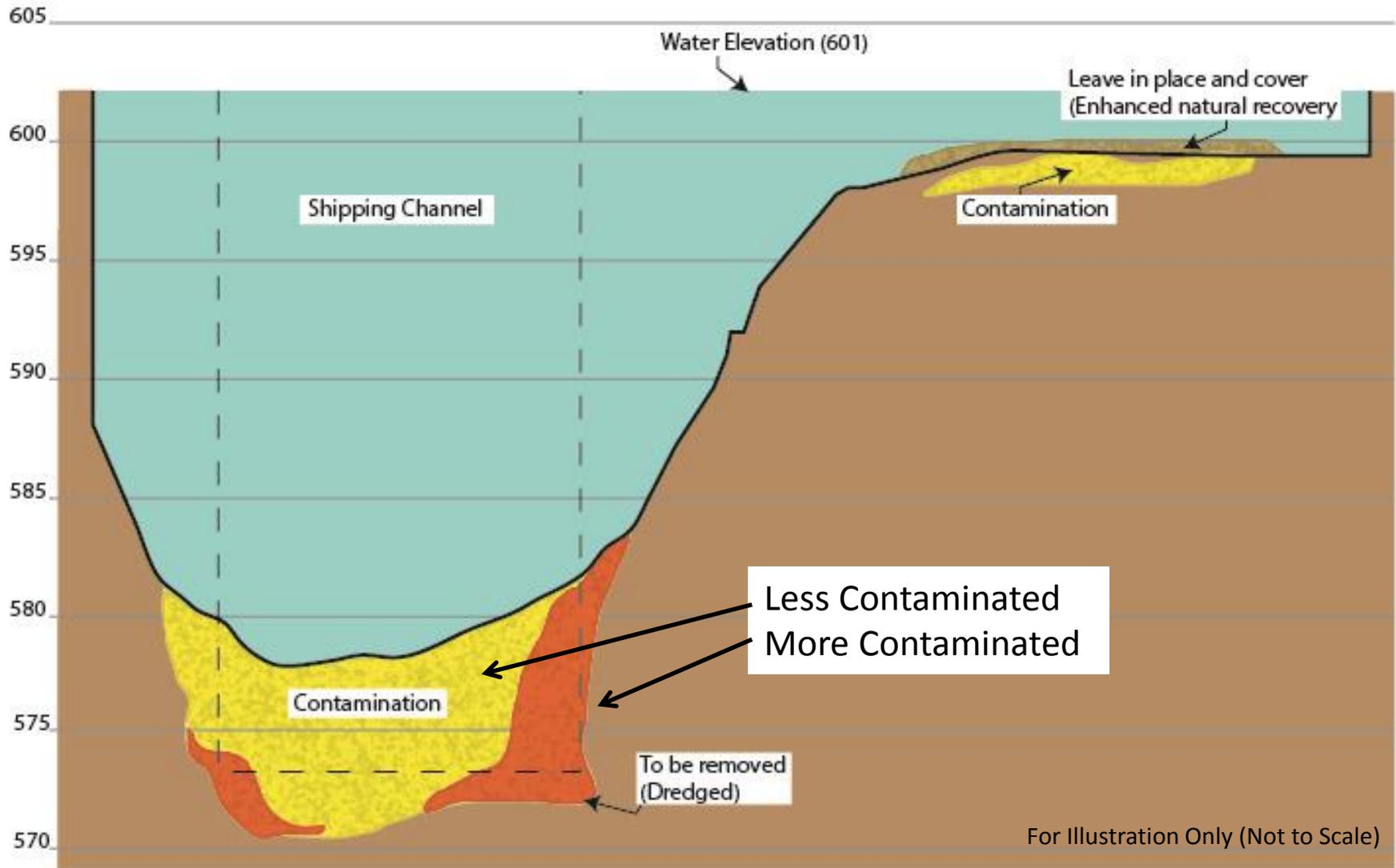
Action	Clean-up Area (Acres)	Approximate Volume (Cubic Yards)
Navigation Dredging (< 27')	6.7	40,000*
Clean-Up Dredging	17.0	83,000
Enhanced Natural Recovery	1.5	N/A

\* includes non clean-up material

- Combination of **enhanced natural recovery** and **dredging**
- Based on the evaluation criteria **dredging** and **enhanced natural recovery** is the best option for this project based on long-term effectiveness, costs, and ability to implement (e.g. **available sites for material**)



# Cleanup Alternative



# Dredged Material Management

## Options

1. Beneficial use - 4
2. Disposal - 5
3. Combinations of the two



## Comparing Options

- Physical and chemical quality
- Costs
- Capacity
- Ability to implement
- In-kind match to secure federal funds
- Identified the best options



# Options Evaluated for Cleanup Material

Category	Option	Cost	Capacity
<b>Beneficial Use</b> (Use for another purpose)	In-water Habitat Placement	Low	Low
	Wisconsin Point Landfill	Low	High
	Duluth Brownfield Sites	Low	None
	Landfill Daily Cover	Moderate	Very Low
<b>Disposal</b>	Fill Baxter Slip & Embayment	Moderate	None
	Cummings Slip CDF	Moderate	None
	Erie Pier CDF	Low to moderate	None
	Upland Placement at Fraser	Moderate	Low to Medium
	Landfill Disposal	High	High

**Wisconsin Point Landfill is the only low cost implementable option with enough capacity that provides significant in-kind match**

# Proposed Dredged Material Management

## Erie Pier Processing & Reuse Facility

- Navigation Channel Material
  - Meets standards for MN reuse on land

## Wisconsin Point Landfill (inactive)\*

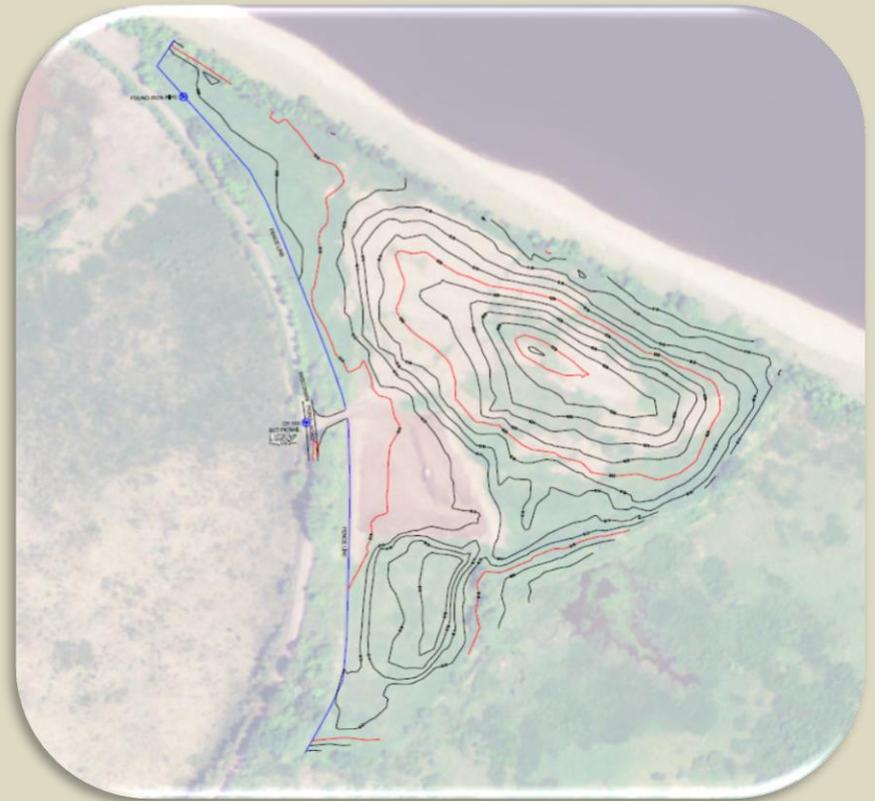
- Beneficial use to improve cap/cover
  - Meets Site Specific Protective Standards
  - Layers for Cover Material & Burial

## Other Landfill

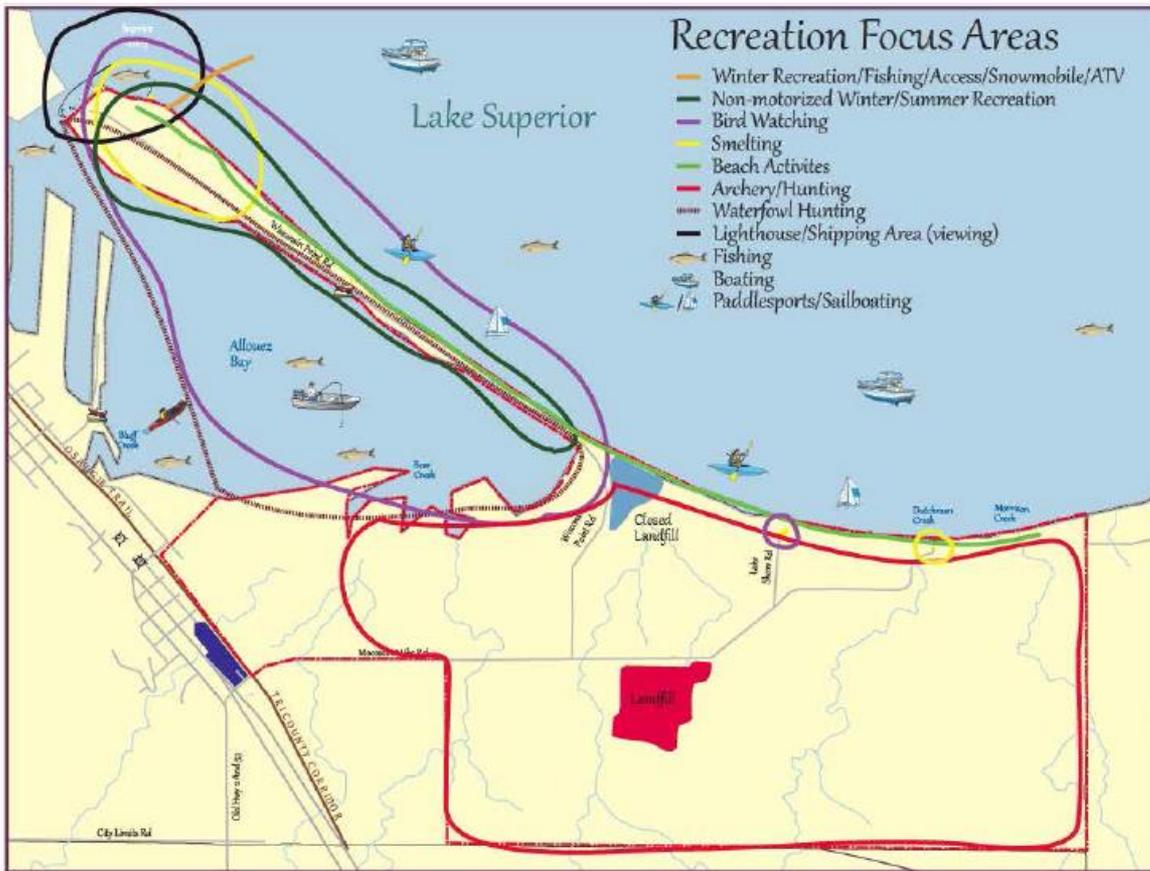
- Disposal of material not meeting site specific standards

# Wisconsin Point Landfill

- Operated 1950's to 1970's
- Closed in 1977
- Existing Cap Issues
  - Differential Settling
  - Drainage Problems
  - Will Eventually Need Repair
- Additional Cover Material would be Beneficial
  - Greater Thickness Over Waste
  - Improved Drainage
  - Reduce Leachate
  - Maintain Vegetated Cover
  - Minimize Future Maintenance
  - Improve for Recreational Uses



# Wisconsin Point Management Plan



- Wisconsin Point Landfill Desired Uses
  - Low-impact recreation
  - Compatible with landfill
  - Increased access for:
    - Unpaved **foot paths** or **trails**
    - Off-leash **dog park**
    - **Parking**

# SITE SPECIFIC PROTECTIVE STANDARDS FOR RECREATION ON WISCONSIN POINT LANDFILL

**Developed by DNR** based on recreational use proposed in Wisconsin Point Management Plan

**Protective of human health and the environment**

## **Limited Recreational Uses**

- Footpaths and/or dog park
- Limited soil exposure expected

## **Realistic Exposure Assumptions**

- Frequency and exposure times reduced in comparison to non-industrial/residential exposure



# SITE SPECIFIC PROTECTIVE STANDARDS

## Placement Criteria for Chemicals Present

- Lead Same as residential
- Mercury Same as residential
- Tributyltin Levels lower than residential
- PAH's Less stringent, but comparable to urban background

## Recreational Uses Allowed at Similar Sites

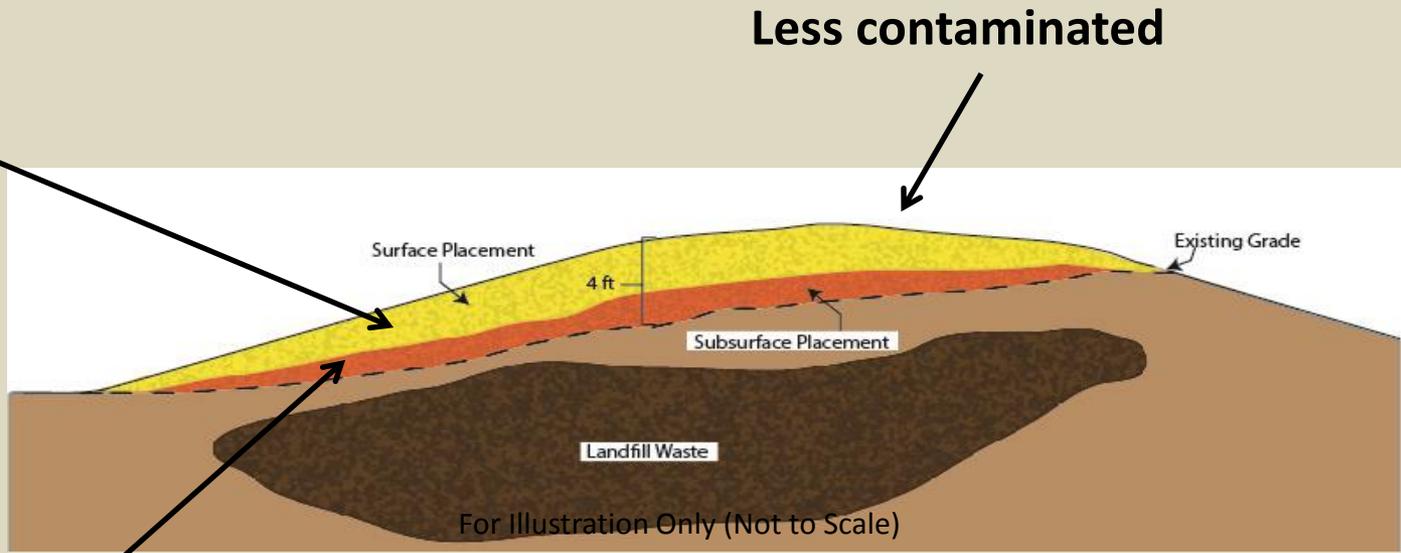
- “Rails to Trails”  
Recreation trails along former railroad corridors (similar contaminants)
- Dog parks at closed landfills

## Standards for Recreation Higher than Cleanup Targets

- Aquatic organisms trend to be more sensitive to contamination than people or organisms that live on land, standards to protect aquatic life are often much lower than safe levels for people on land .



# Placement for Landfill Cover



Lead and mercury levels at surface would be ok for a residential site

# Why Not Remove Landfill Instead of Putting More Stuff Out There?

- Very expensive (\$50 million per 1995 cost estimate)
- No landfills with capacity nearby
- Level of landfill impacts does not justify removal
- Disturbing the waste to remove it may result in unanticipated and unexpected risks where they do not currently exist
- Managing leachate generation is most effective control

# Environmental Benefits Wisconsin Point Landfill Site

Cleans up the river

Uses an existing degraded site

Does not impact a new site or take up space at another landfill

Improves cap/cover on the old landfill

Increased physical buffer between surface and garbage in landfill

Better slopes and drainage means less liquid in the landfill

Less transport of landfill contaminants into surrounding waters



# Benefits of Howards Bay Project

- Maintains Navigation Depths
- Addresses use impairments
- Beneficial Use of Dredge Material
- Public-Private Partnership
- Makes use of available federal funds
- Improves condition of the cap/cover at the closed Wisconsin Point landfill
- Improvement of Wisconsin Point Landfill for the recreational uses identified in Wisconsin Point Management Plan



# Benefits to City of Superior

Cleanup  
Riverfront

Support Local  
Business

Support Local  
Workers

New Recreational  
Area

Improve Cap at  
Closed Landfill



\$14,000,000 to  
Cleanup Riverfront

Value of over \$50,000  
improvements for  
recreational area

Saves taxpayers  
\$1,200,000 for future  
landfill repairs

**Economic and environmental benefits through public-private partnership**

# NEXT STEPS

Continue Public Outreach	• Gather Public Input
Decision on Landfill Cover	• Superior City Council
Landfill Plan Modification	• City Proposes Criteria
DNR Public Meeting	• Decision on Plan & Criteria
Project Agreements	• City, DNR, Fraser, U.S. EPA
Complete Design	• Army Corps
Army Corps Issue Contracts	
Construction in 2018	



# Questions

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