Community Discussion Series: United Heckathorn Superfund Site Update

July 29, 2025 6:30 to 8:00 pm PT

Reminders

- Join audio if you have not already.
- Live Spanish language translation is available.
- You are automatically muted.
- You will be able to ask questions verbally and in writing.
- Slides will be shared after the meeting.

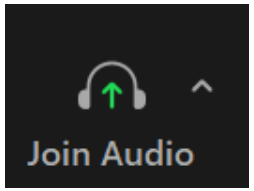
Welcome! The live event will start shortly

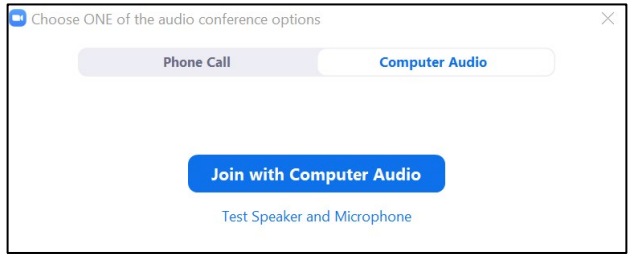
¡Bienvenido! El evento en vivo comenzará en breve.

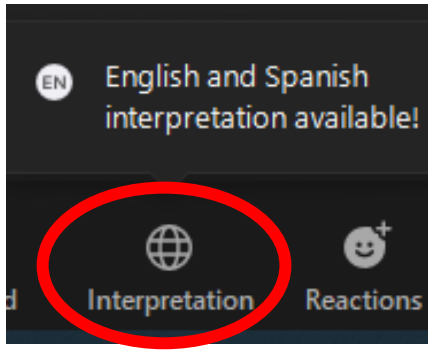
Audio and Interpretation Instructions

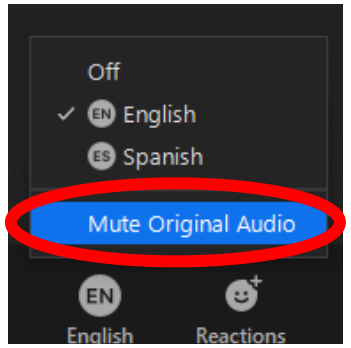
Please use controls to connect to audio as desired.

Utilice los controles para conectarse al audio como desee.









You MUST select your preferred language under “Interpretation.”

Spanish listeners, it is recommended to “Mute Original Audio.”

Debe seleccionar su idioma preferido en "Interpretación". Se recomienda "Silenciar audio original".

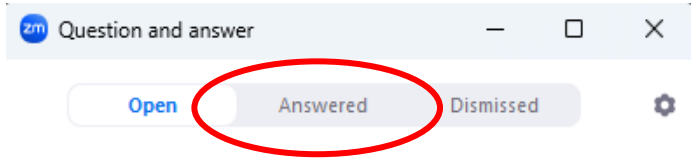
Participation Instructions

Audio is available online with your device or by telephone.

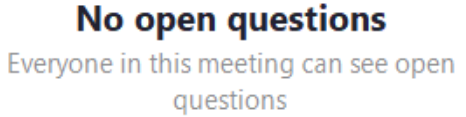
Optional dial in **669-254-5252** Meeting ID **160 303 2594**

Closed captioning/Live transcription is available.

Questions or technical problems?

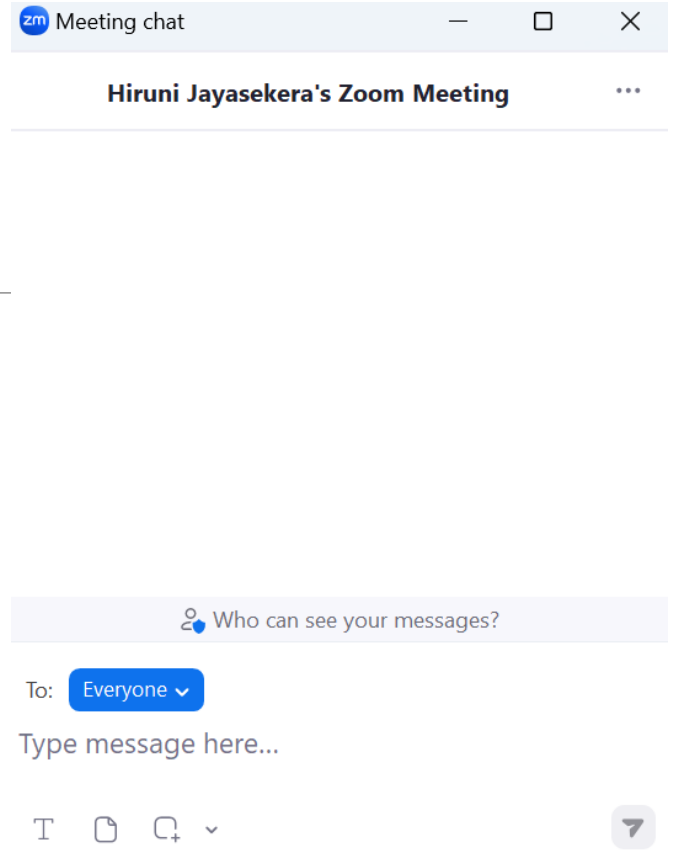


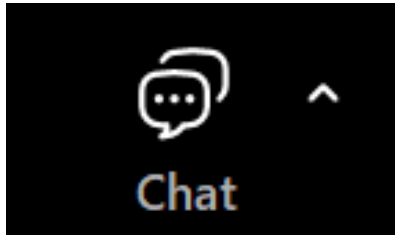
- Participants may enter questions in the Q&A box at any time.
- See answered questions in "Answered" tab.
- Questions in the *chat* may not be answered. Please put questions in the Q&A box.
- We will have a longer Q&A session where we will take raised hands after the presentation.



Chat function

- Questions in the *chat* may not be answered. Please put questions in the Q&A box.
- The chat function is available during the meeting for community discussion and resource sharing.





Meet EPA

- Grace Beery: Project Manager
- Karen Jurist: Project Manager
- Hiruni Jayasekera: Community Involvement Coordinator
- Omer Shalev: Superfund Section Supervisor
- David Yogi: Superfund Community Involvement Supervisor

Community facilitation support:
Janet Johnson, Richmond Shoreline Alliance

In the chat:

Please introduce yourself!
What brought you to tonight's meeting?

COMMUNITY DISCUSSION SERIES #4: UNITED HECKATHORN SUPERFUND SITE

JULY 29, 2025

Remedial Technologies

Agenda

- Site Contamination Review
- Overview of Cleanup Technologies
- Next Steps
- Q&A


N
Lauritzen Channel
United Heckathorn Site
San Francisco Bay
Richmond
United Heckathorn Co.
Superfund Site
Oakland
San Francisco
Santa Fe Channel
Richmond Inner Harbor
Channel

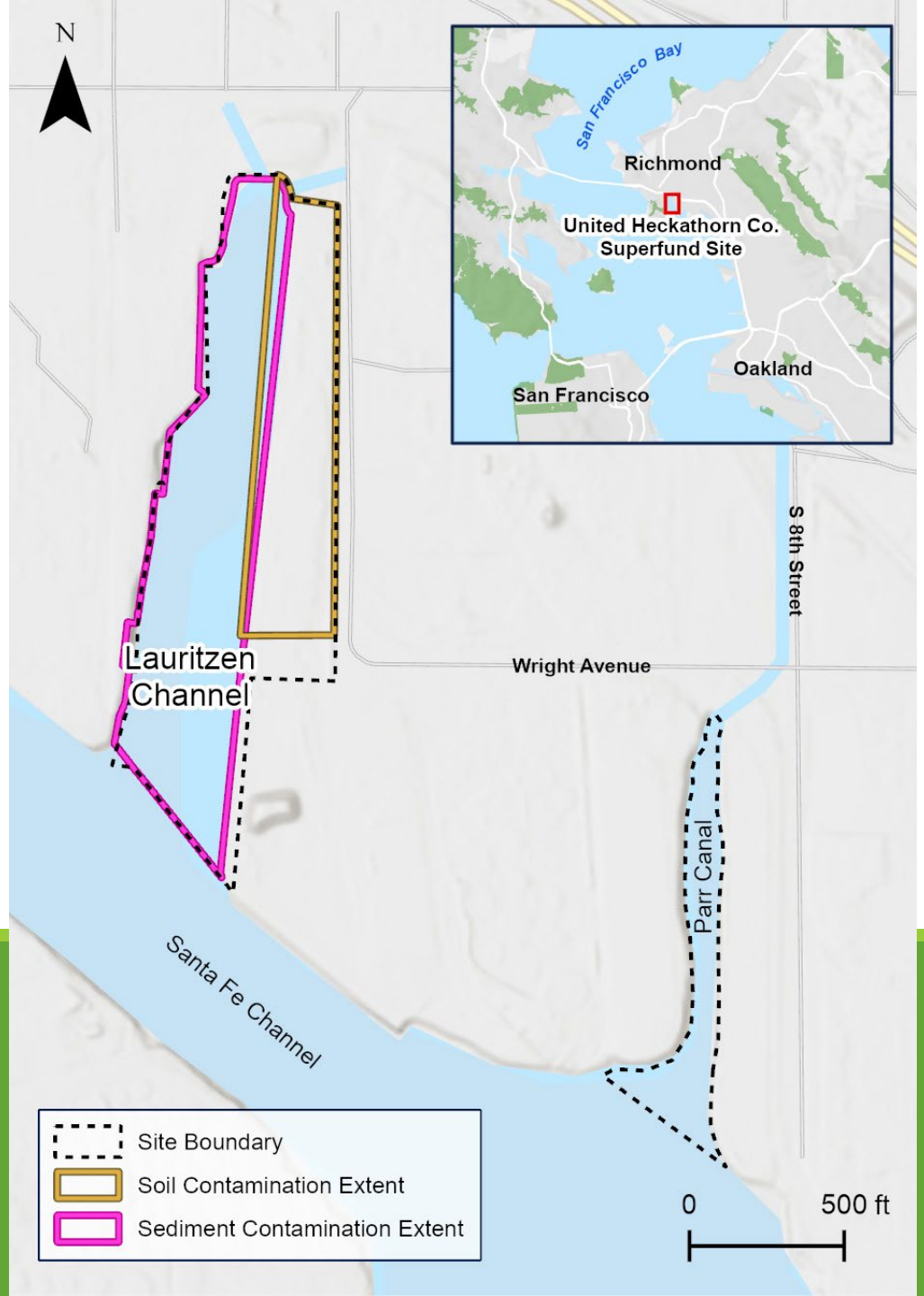
United Heckathorn site present day use

Photo: SF Baykeeper

- Historically a pesticide processing facility from 1940s-1960s
- Contaminants of concern are **DDT and dieldrin**
- Currently operates as dry bulk cargo shipping terminal

- **Upland area:** contaminated soils on land

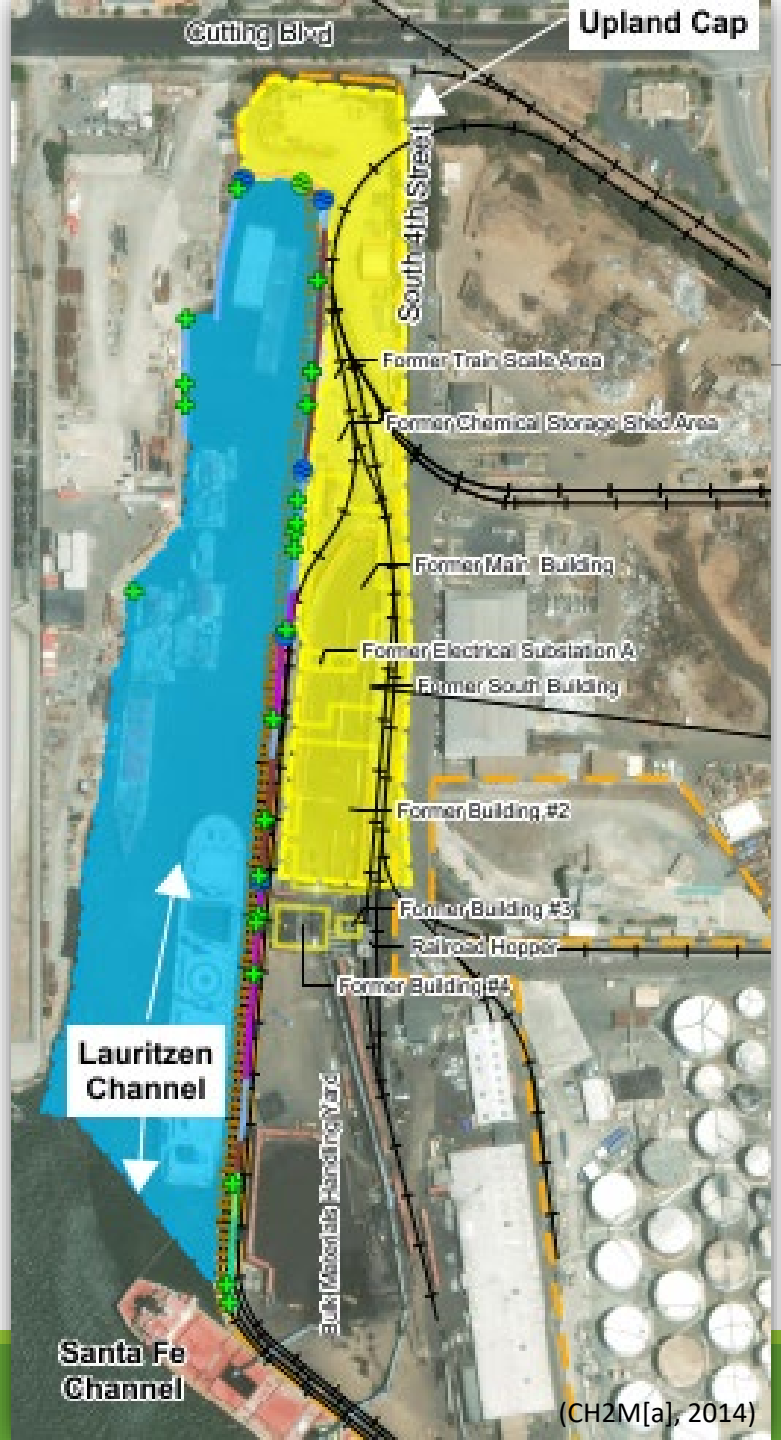
- **Marine area:** contaminated underwater sediments



Initial EPA Response – Upland Soil Removal

- 1990: 1500 yd^3 of soil and visible pesticide residue excavated and removed
- 1991: An additional 1800 yd^3 of contaminated soil removed
- 1993: Excavated soil stockpiles removed

Shoveling out contaminated soil from under the concrete retaining wall that was unreachable by the backhoe. 4/10/91



(CH2M[a], 2014)

1997-1999 Cleanup

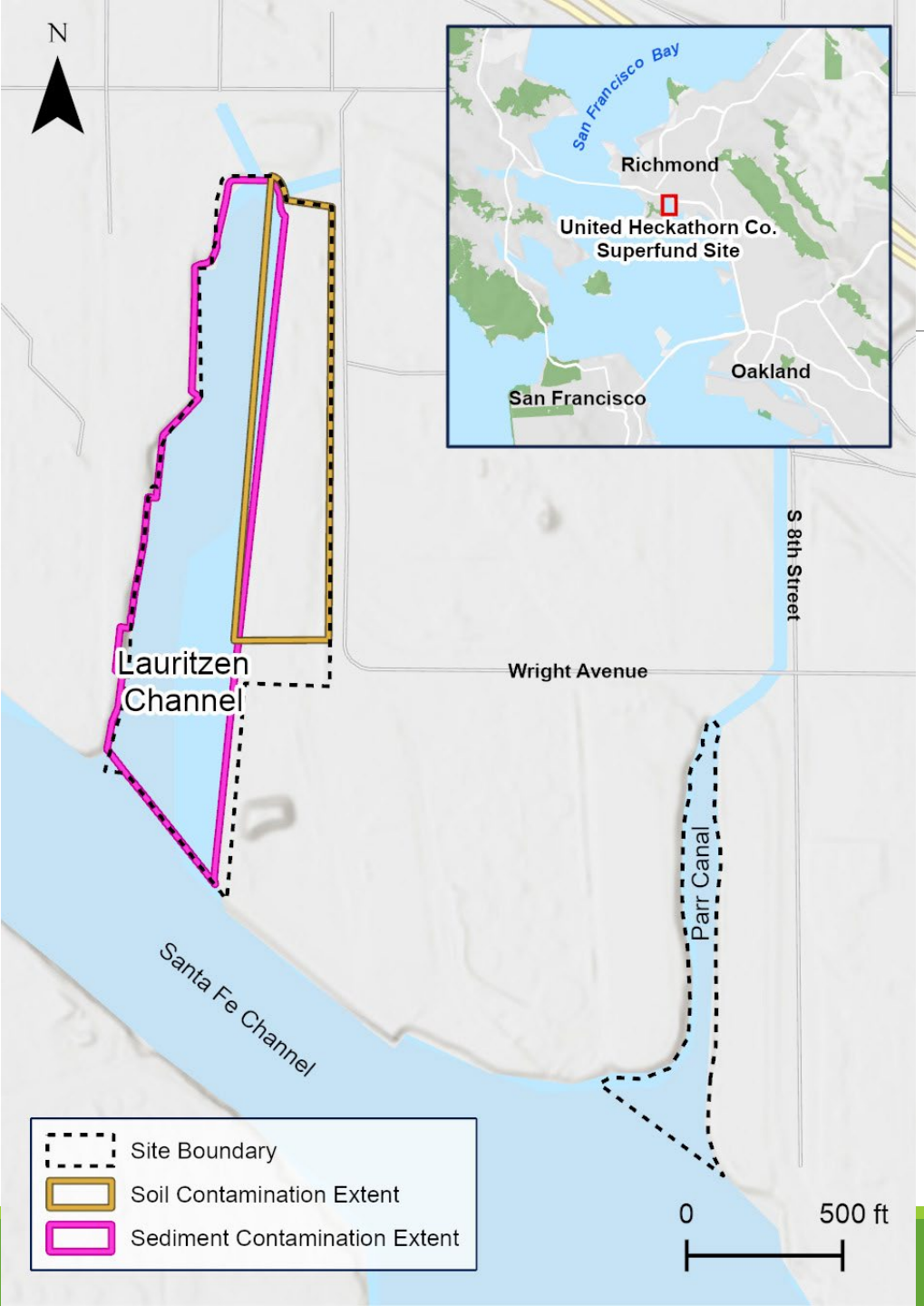
Upland Area:

Excavated and disposed contaminated soils offsite.

Capped former United Heckathorn plant site with concrete and asphalt.

Marine Area:

Sediments from Lauritzen Channel and Parr Canal dredged and transported offsite for disposal.



1997-1999 Cleanup: Marine Sediments

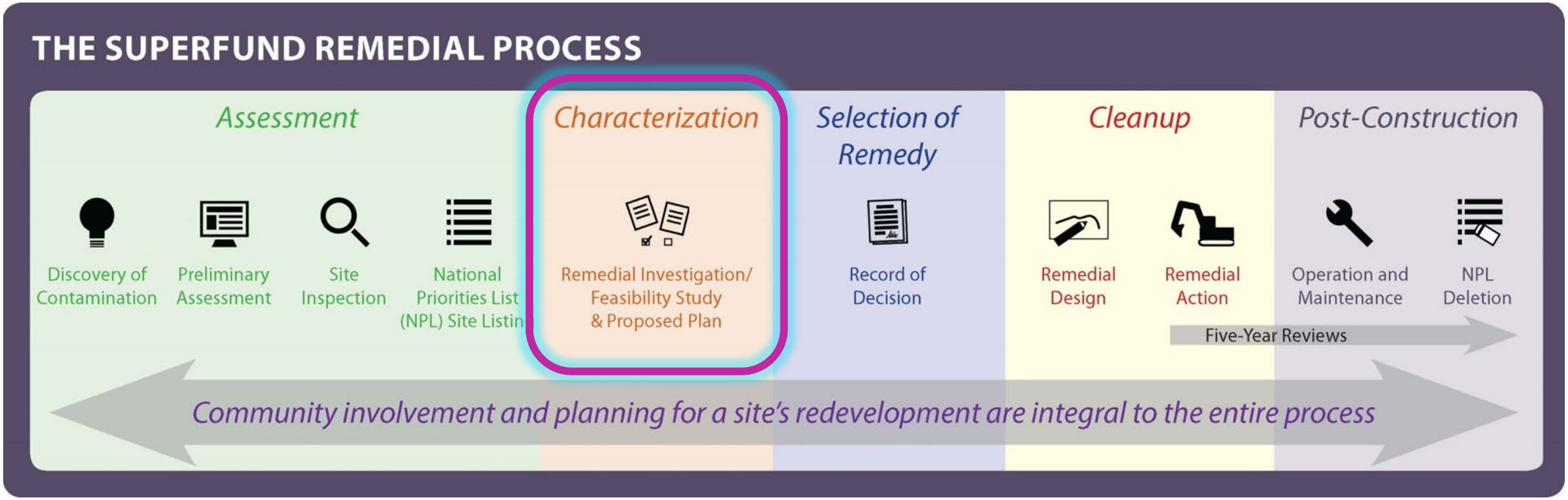
Parr Canal:

Dredging and removal of contaminated soils was successful. DDT and dieldrin levels remained below cleanup goals.

Lauritzen Channel:

DDT and dieldrin increased above cleanup goals after initial dredging and removal of contaminated soils. *Lauritzen Channel cleanup was not as effective as it was intended to be.*

Where is United Heckathorn in the Superfund process?



The United Heckathorn Proposed Plan will be released winter 2025-2026

Focused Feasibility Study

Feasibility Studies develop, screen, and evaluate cleanup technologies to create a cleanup plan

United Heckathorn's Focused Feasibility Study looks specifically at the remaining contamination in marine sediments of the Lauritzen Channel to address the ineffective initial remedy.

Proposed Plan

Uses Focused Feasibility Study evaluation to identify EPA's recommended cleanup plan to address the contamination.

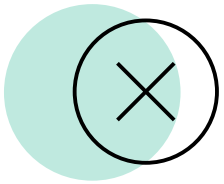
EPA presents the Proposed Plan to the public for your comment.

Why is EPA sharing all of this information?

- EPA plans to release a proposed cleanup strategy for the Lauritzen Channel portion of the site in Winter 2025-2026.
- A public comment period will open during this time – we want the public to provide meaningful comment.
- We hope that by sharing information about the site, relevant cleanup technologies, and how to navigate the Superfund process, the public will be prepared to digest the proposed cleanup plan and provide comment.

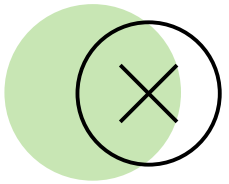
Cleanup Plan Selection Process

Evaluate full suite of cleanup technologies



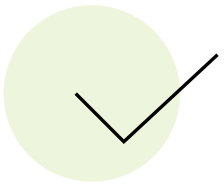
Eliminate inappropriate or unimplementable technologies

Combine remaining technologies to create cleanup alternatives (or cleanup strategies)



Eliminate impractical or ineffective cleanup alternatives

Take public comment

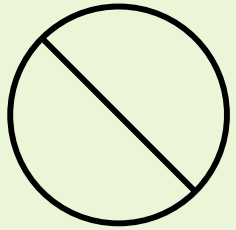


EPA selects a recommended cleanup alternative (cleanup strategy)

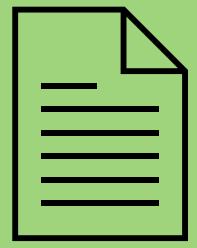
Conduct a detailed analysis on remaining alternatives using nine criteria

Categories of Cleanup Technologies:

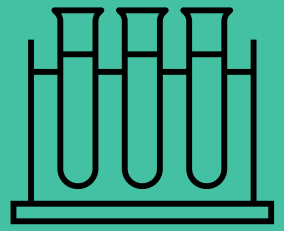
No Action



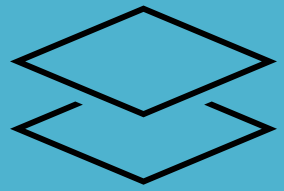
Institutional Controls



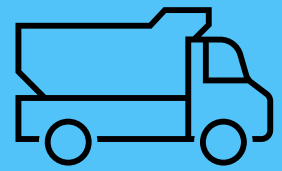
In-Situ Treatment



Containment



Removal, Dewatering, Ex-Situ Treatment, & Disposal



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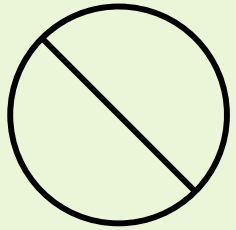

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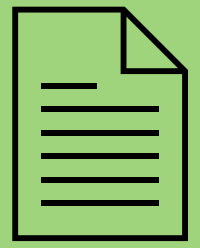

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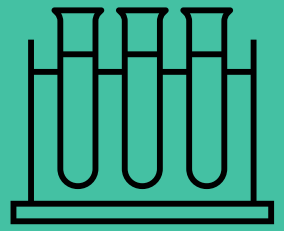

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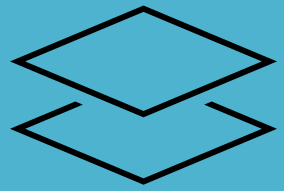

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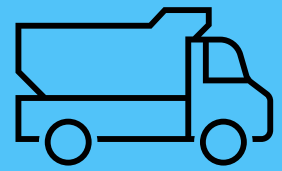
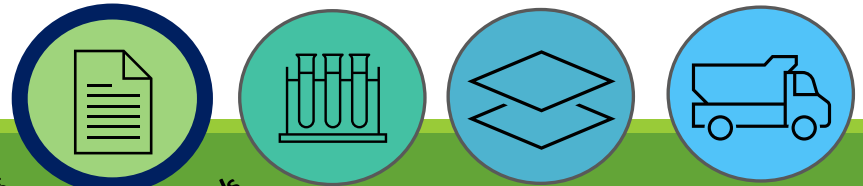


Remedial Technology Types:
Institutional Controls

What is it? Administrative or legal controls, typically used with engineered technologies.

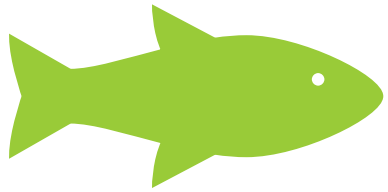
Examples: Fish consumption advisory, waterway use restrictions, site access restrictions, and environmental easements.



Remedial Technology Types:
Institutional Controls already in place at the site

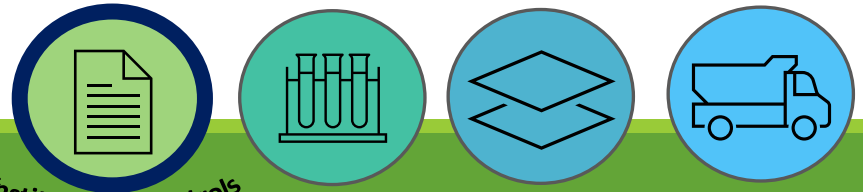
Deed restrictions

Limits the use of the property to non-residential uses.



Fish advisories

Do not eat any fish from the Lauritzen Channel



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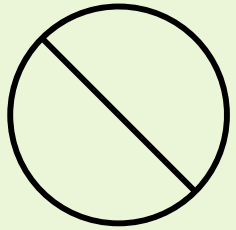

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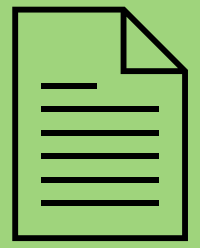

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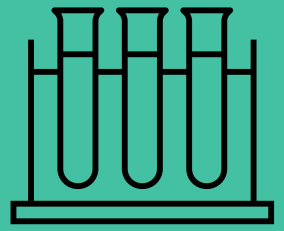

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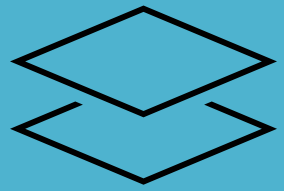
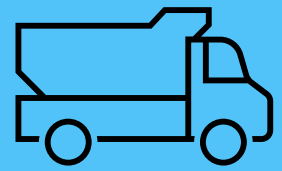
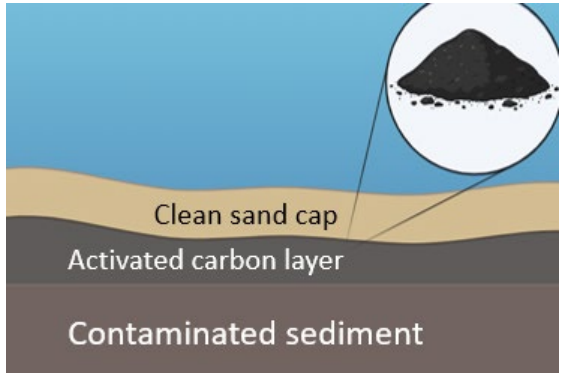
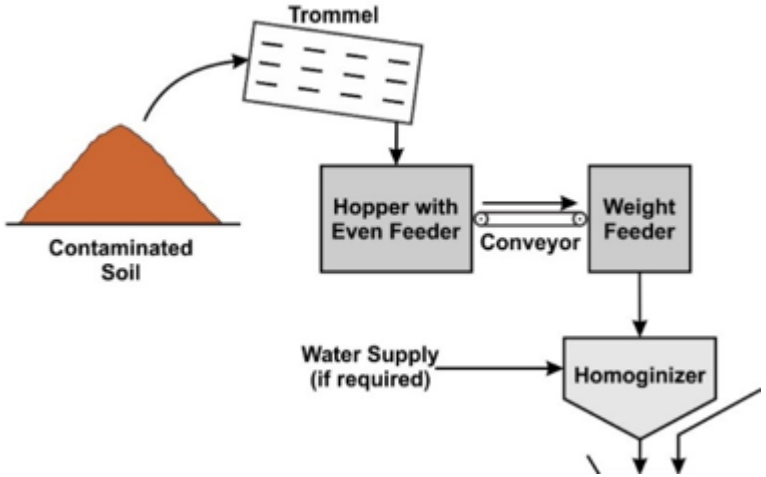


Removal, Dewatering, Ex-Situ Treatment, & Disposal



Remedial Technology Types: *In Situ vs Ex Situ Treatment*



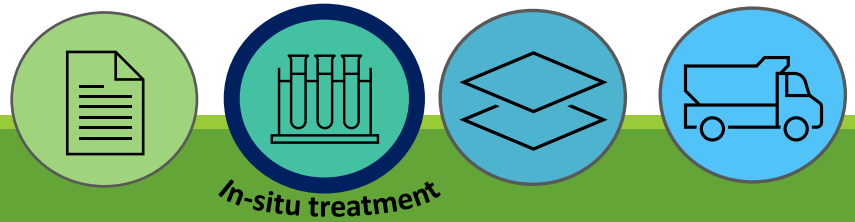


In-situ means "in place"

In-situ treatment is the treatment of contaminants in the sediment while the sediment remains in the channel.

Ex-situ means "outside of the natural location"

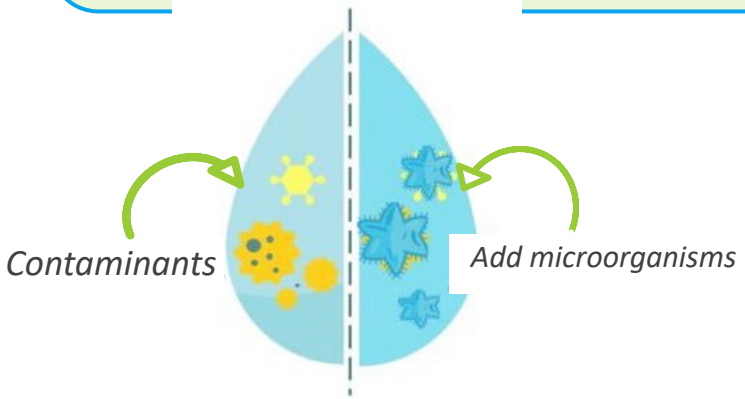
Ex-situ treatment is the treatment of contaminants in the sediment after the sediment has been removed from the channel.



Remedial Technology Types: In-Situ Remediation

Bioremediation – microorganisms eat up contamination

- Microorganisms consume and break down DDT and dieldrin.

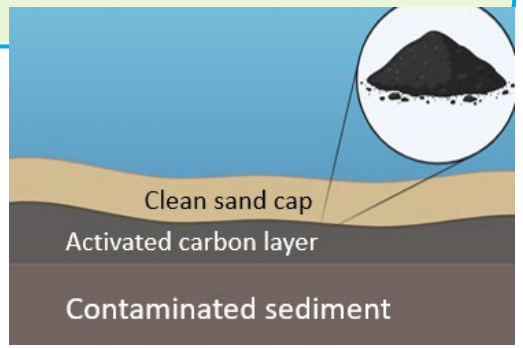


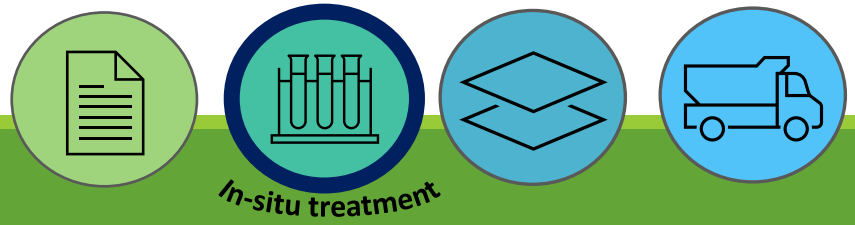
Stabilization – binding contaminants

- Adding binders like cement to bind DDT and dieldrin to prevent it from moving around, or adding chemicals to

Treatment – a chemical lockbox

- Applying things like activated carbon to the Lauritzen Channel to capture and hold ("lock up") the DDT and dieldrin.





Categories of Cleanup Technologies:

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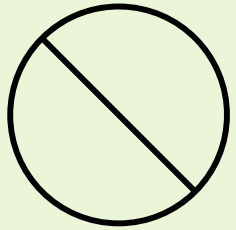
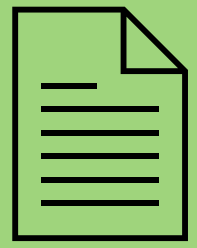
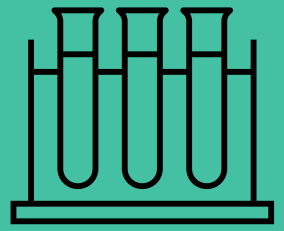


Institutional Controls



In-Situ Treatment



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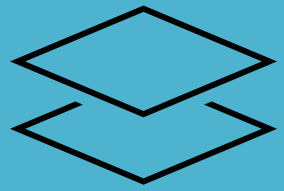
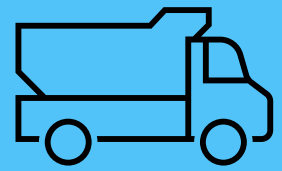


Removal, Dewatering, Ex-Situ Treatment, & Disposal



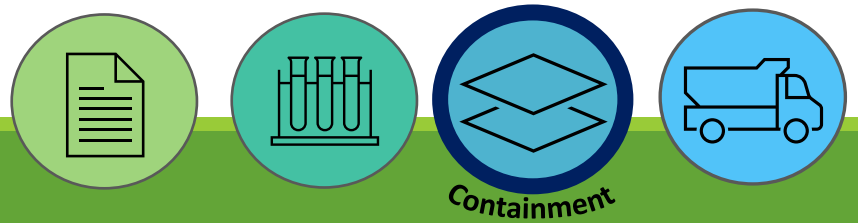
*Remedial Technology Types: **Containment (capping)***

What is it?

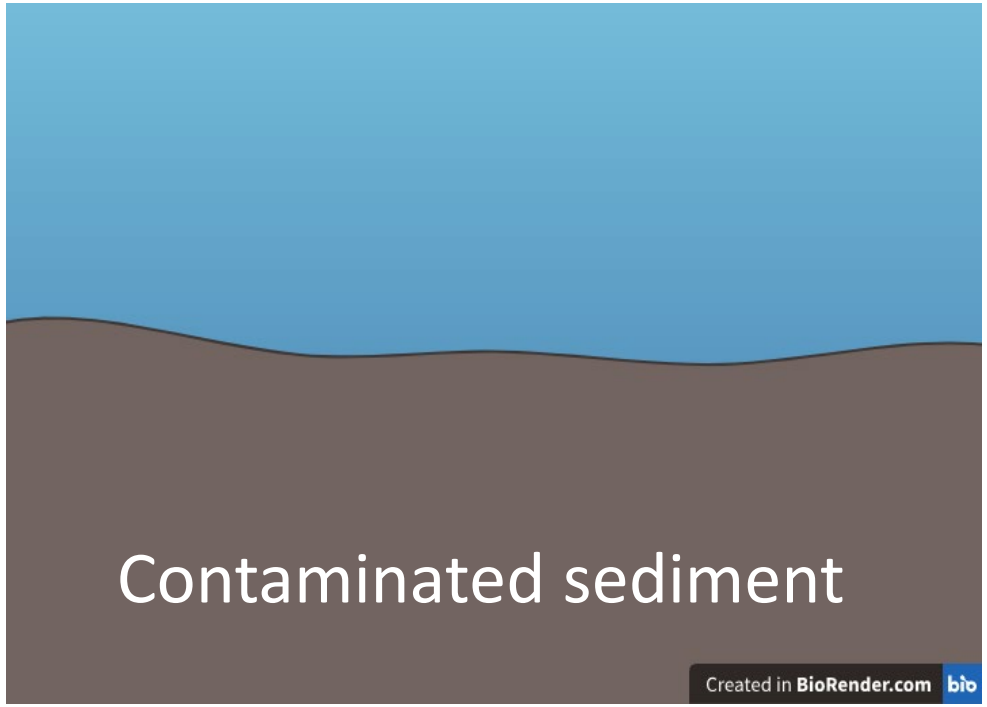
- Containment keeps contamination from spreading. Does not remove or destroy contaminants.
- Reduces human and ecological exposure to contaminants in sediment.
- At this site, containment would mean capping contaminated sediment.

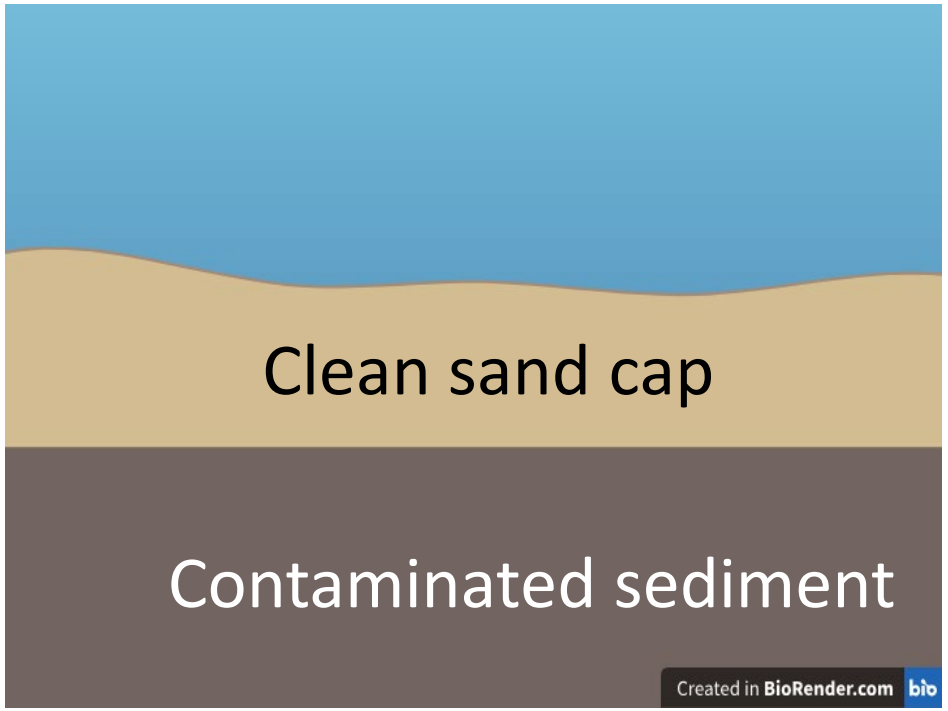
Types of Containment:

- Isolation Layer
- Active Layer
- Armor Layer
- Sheet Pile



Option 1: Isolation Layer: "Sand cap"





Containment

Option 2: Armor Layer: "Extra stability"

OR

Stone armor layer

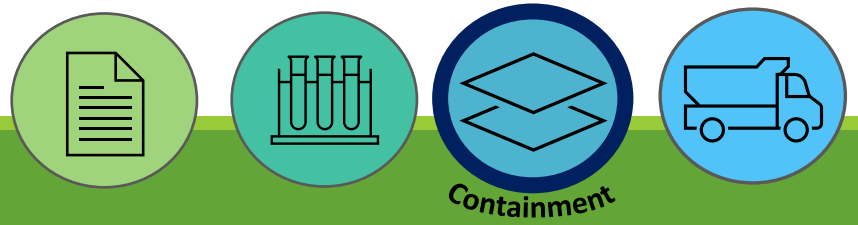
Clean sand cap

Contaminated sediment

Geotextile layer

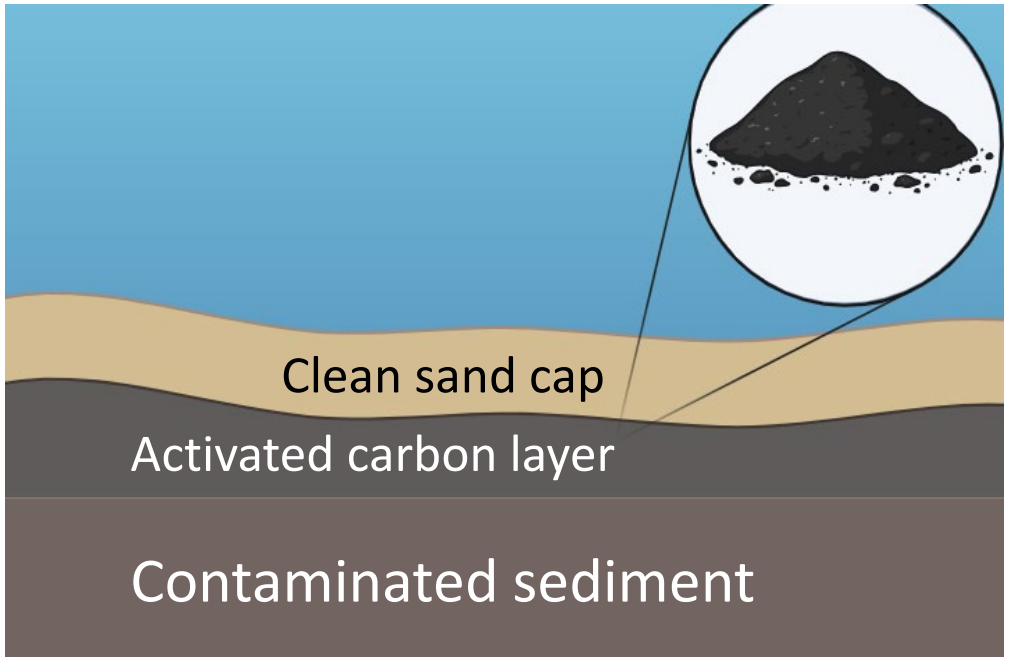
Clean sand cap

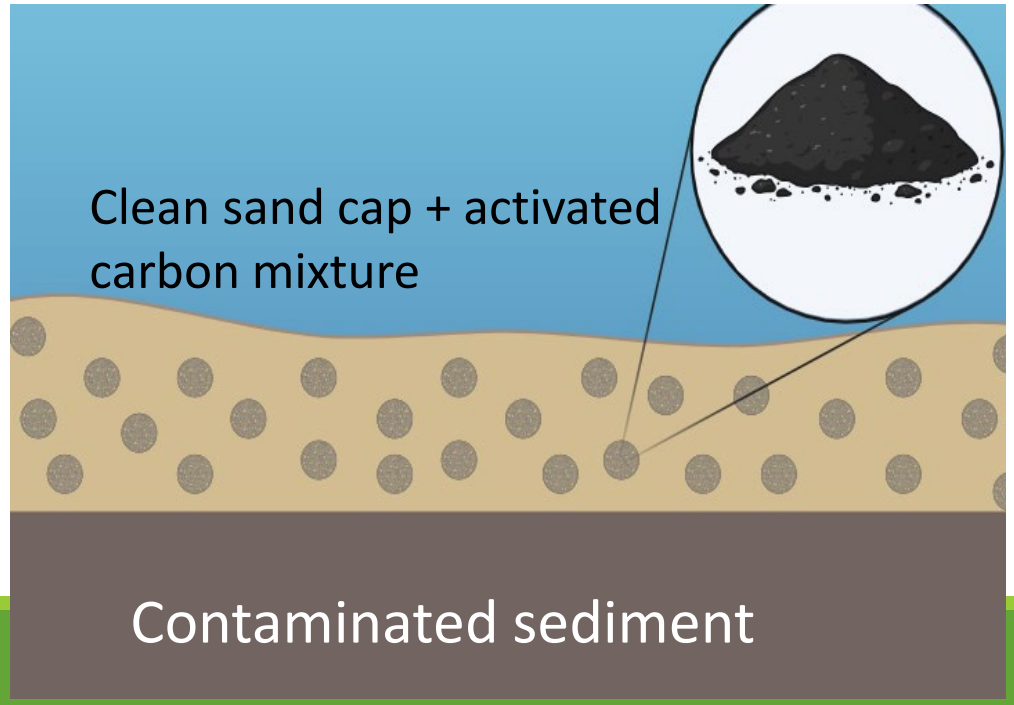
Contaminated sediment



Option 3: Active Layer: "In-situ treatment"

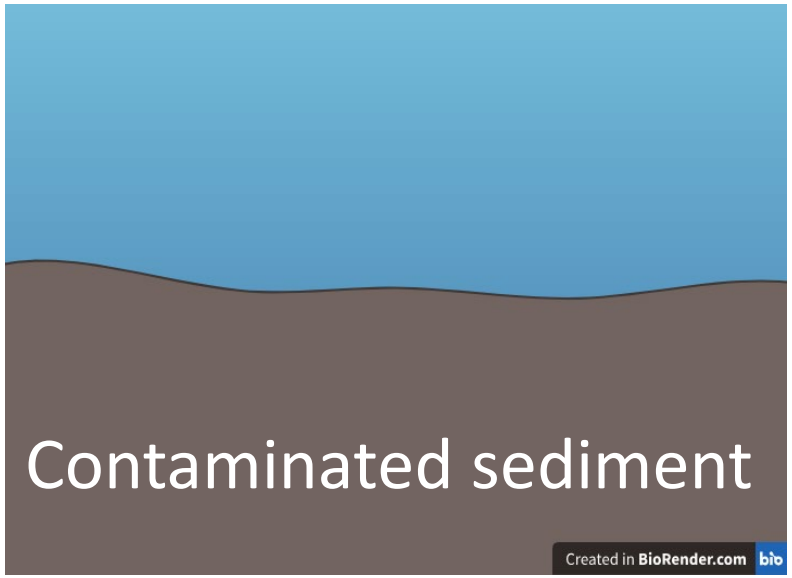
OR



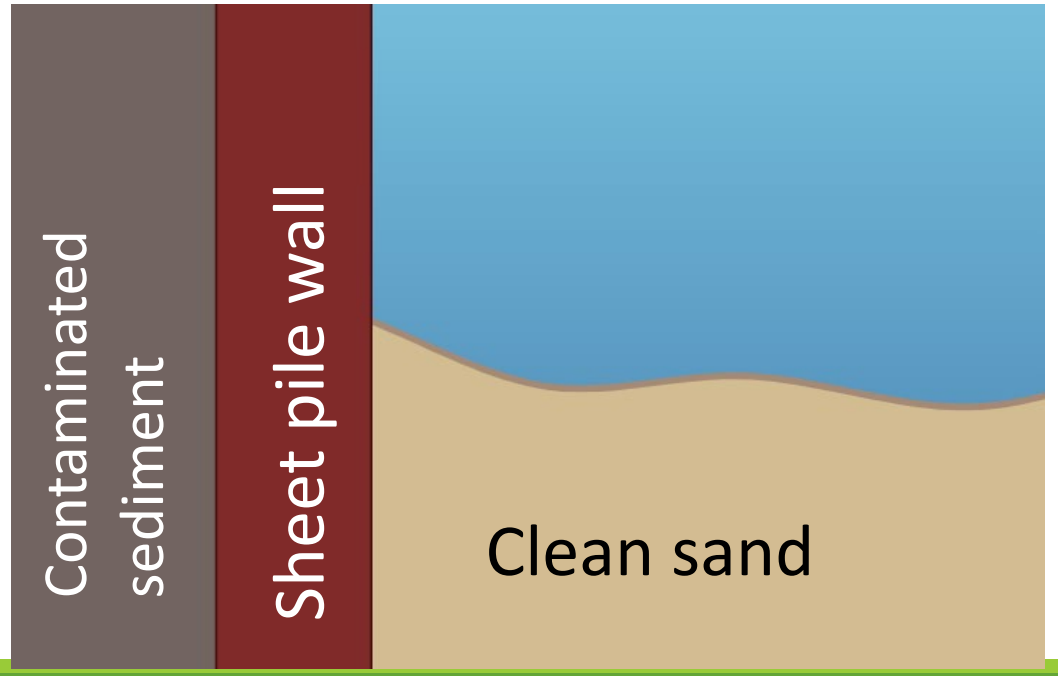


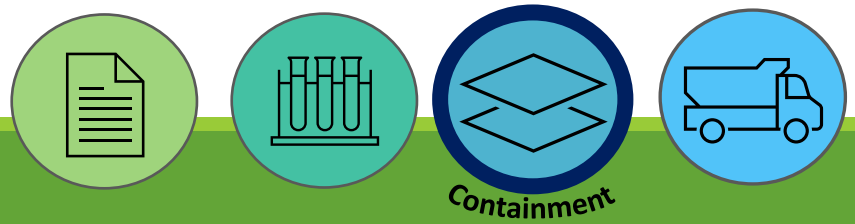
Containment

Option 4: Sheet Pile: "Embankment barrier"

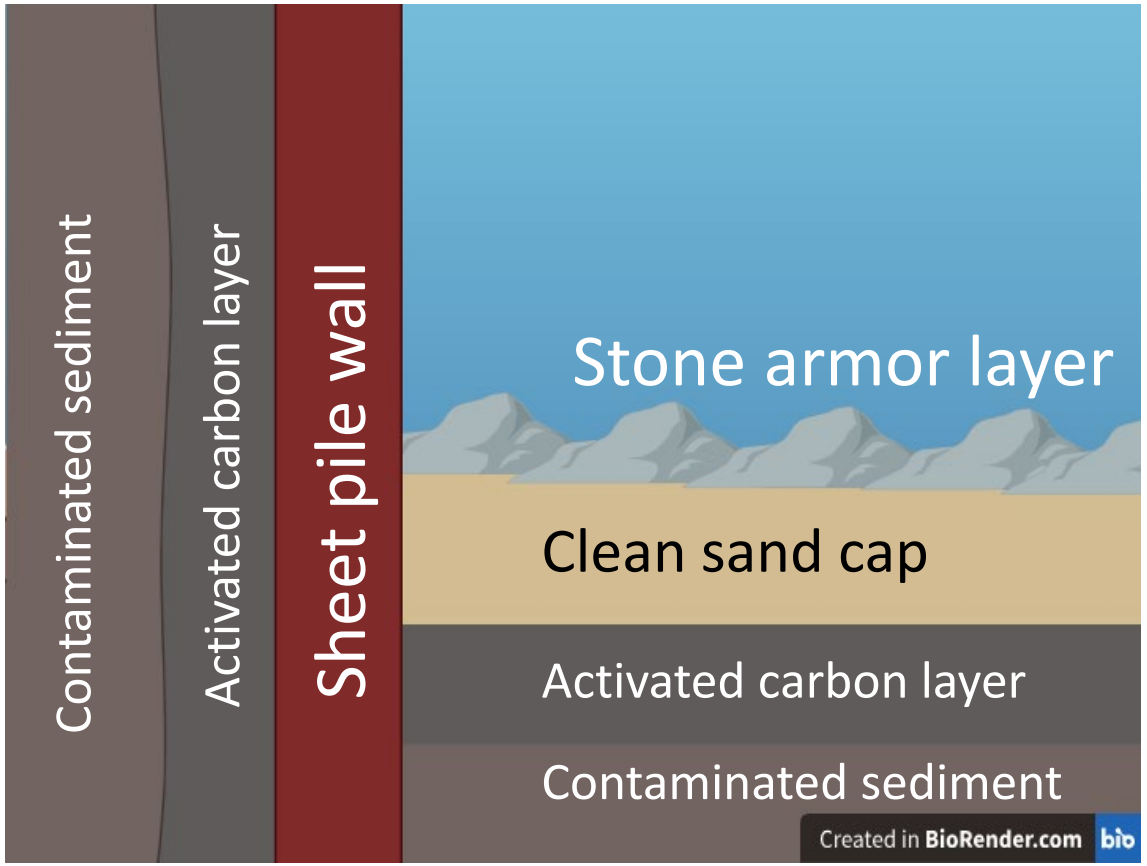


U.S. Army Corps of Engineers sheet pile wall at the Wyckoff/Eagle Harbor Superfund site





Any combination of the 4



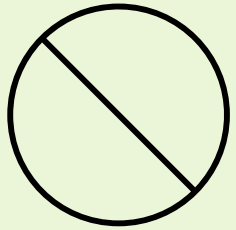
(theoretical example)

Containment

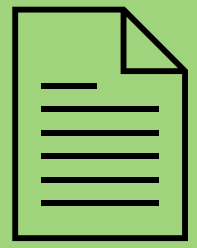
Question break

Categories of Cleanup Technologies:

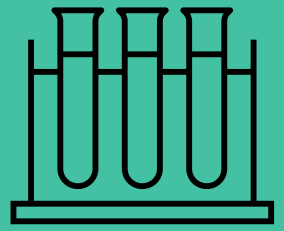
No Action



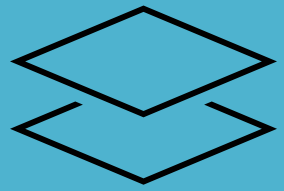
Institutional Controls



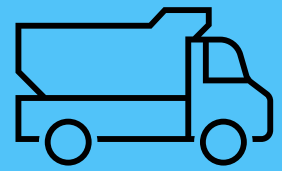
In-Situ Treatment



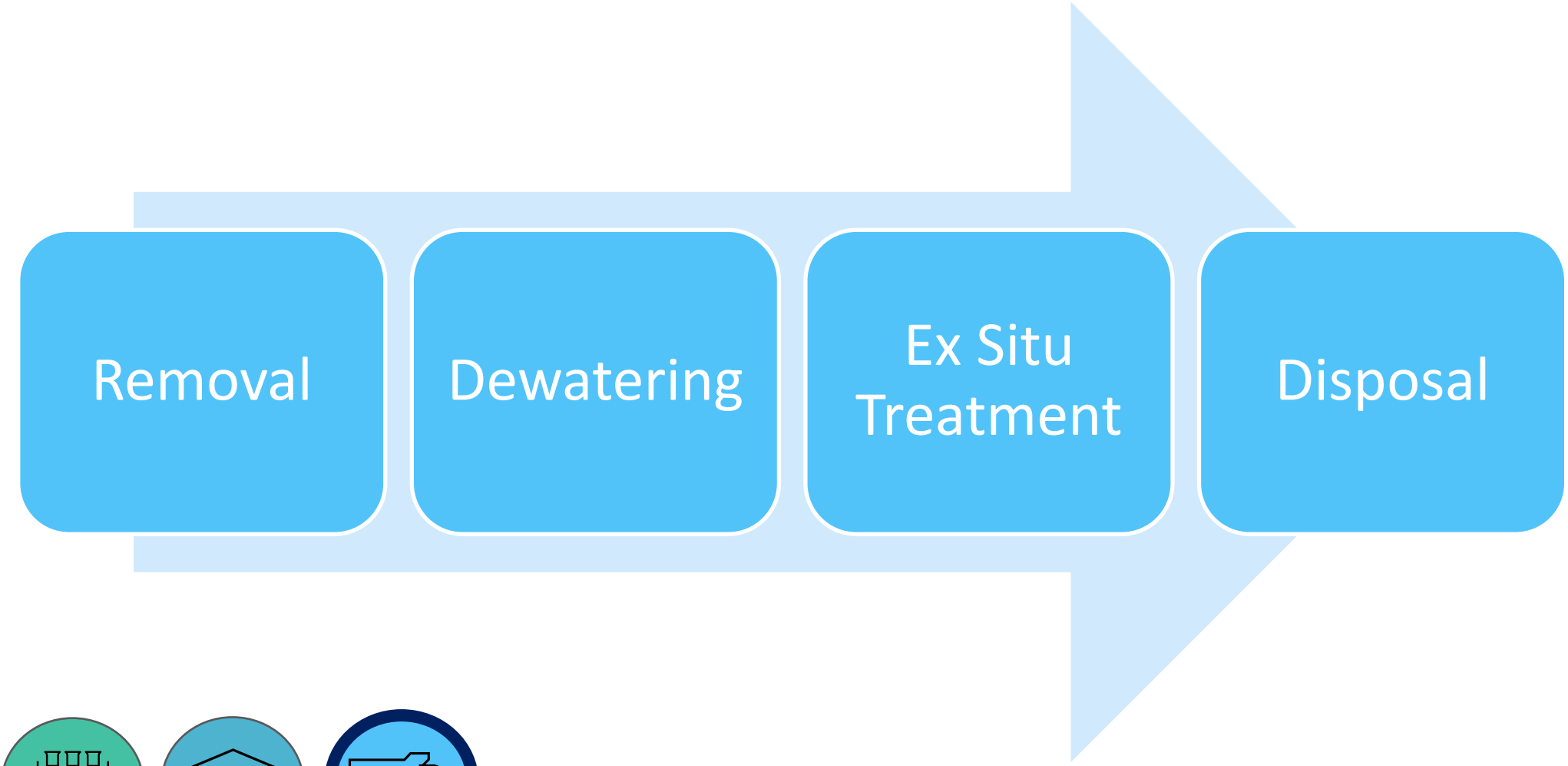
Containment

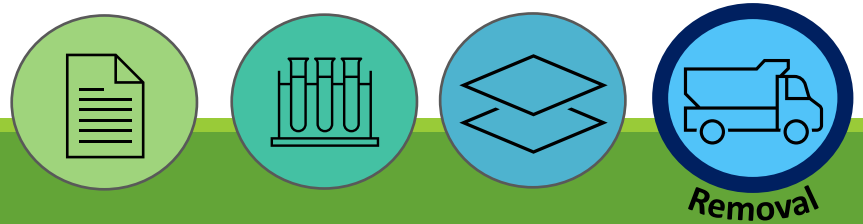


Removal, Dewatering, Ex-Situ Treatment, & Disposal



Remedial Technology Types: *Removal, Dewatering, Treatment, & Disposal*





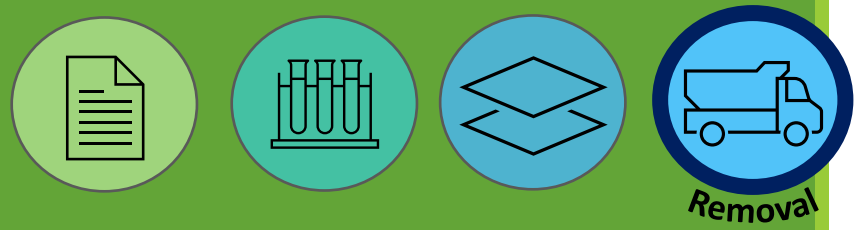
Remedial Technology Types: *Removal*

Hydraulic Dredging

- Kind of like a giant vacuum cleaner to remove sediment

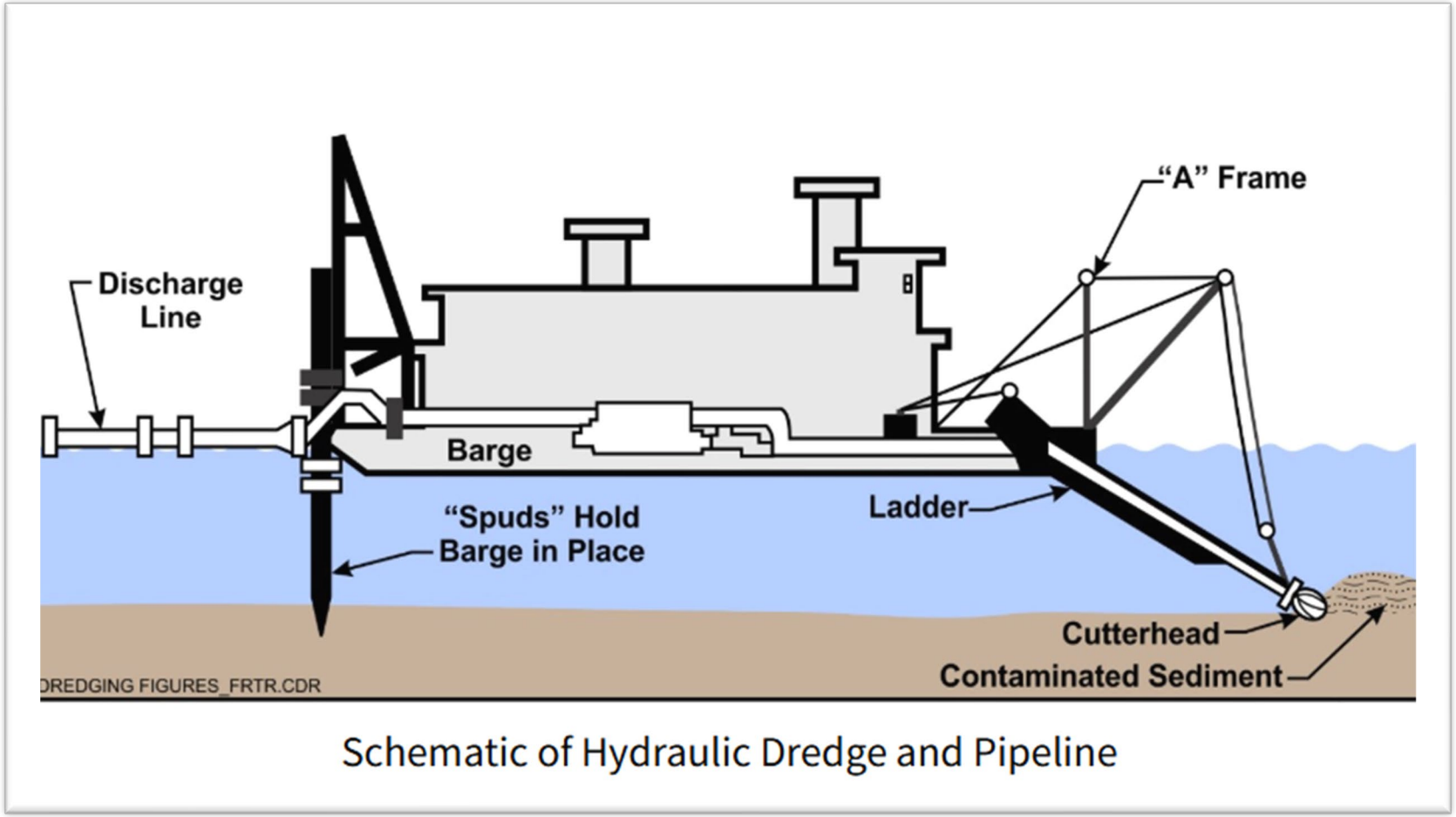
Mechanical Dredging

- What it sounds like – using machinery to dig up and remove sediment



Remedial Technology Types: *Removal*

Hydraulic Dredging



Schematic of Hydraulic Dredge and Pipeline

Figure Source: Federal Remediation Technologies Roundtable. (n.d.). *Environmental Dredging*. FRTR Remediation Technologies Screening Matrix and Reference Guide. Retrieved June 23, 2025, from https://frtr.gov/matrix/Environmental-Dredging/.

Removal

Remedial Technology Types: *Removal*

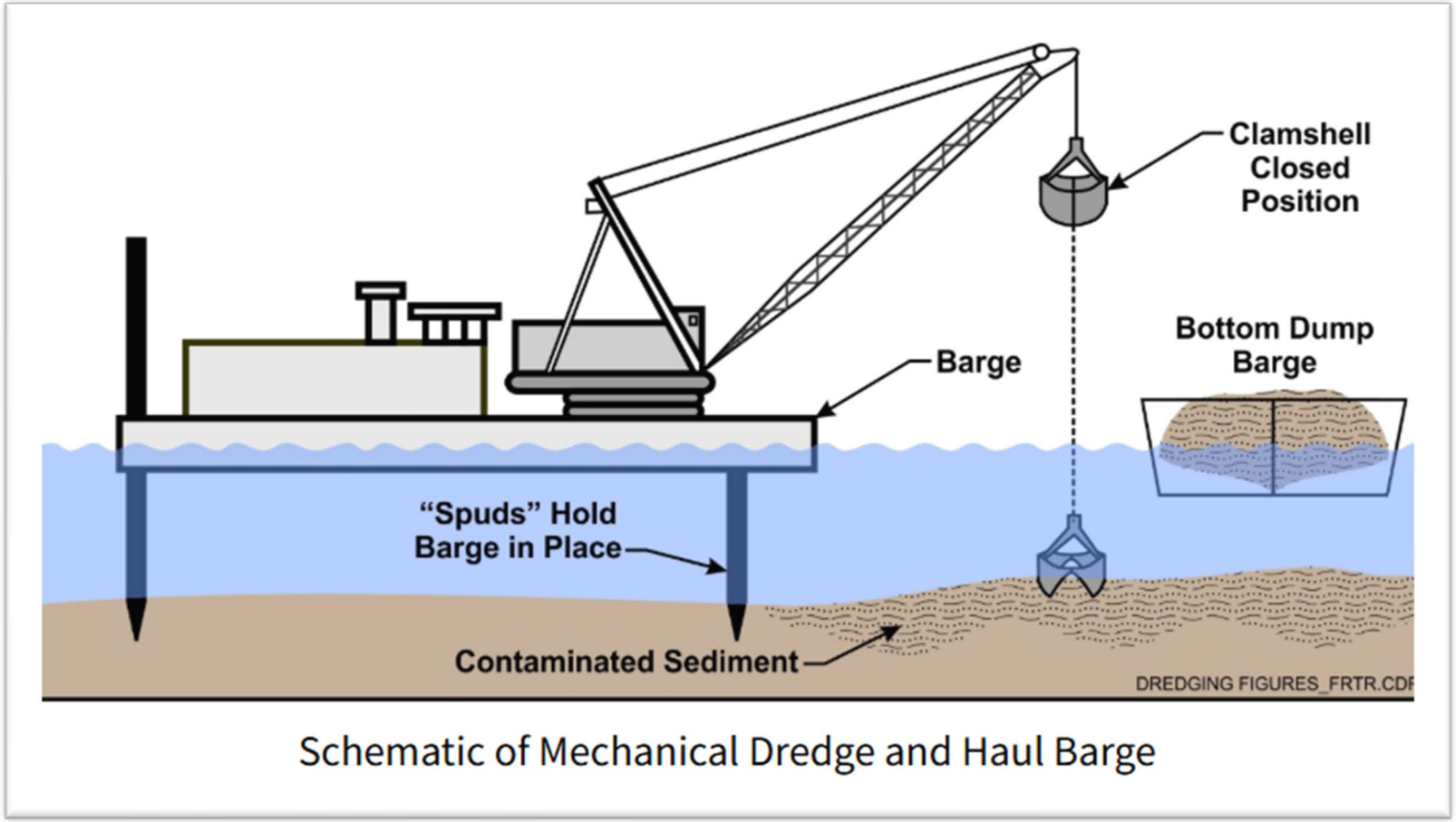
Hydraulic Dredging

https://youtu.be/xV0K4q0nuCM?t=48

Removal

Remedial Technology Types: *Removal*

Mechanical Dredging



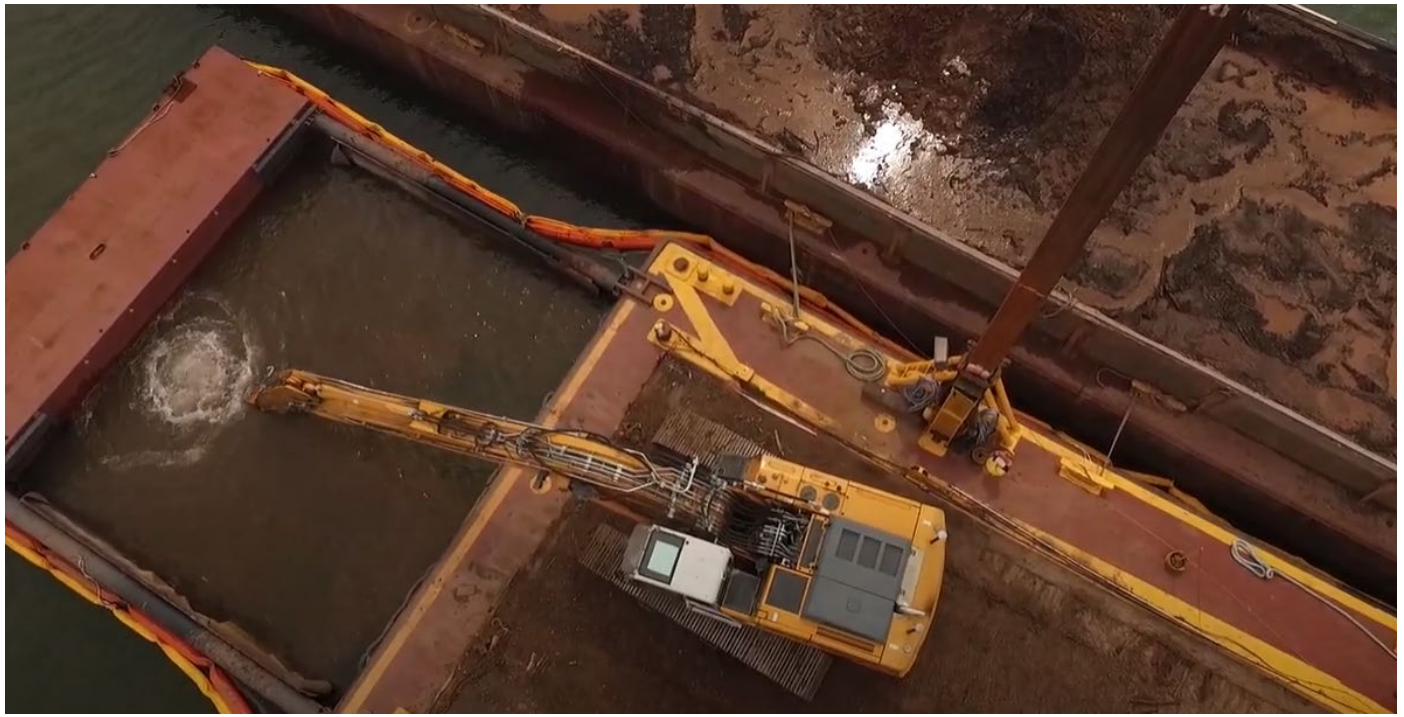
Schematic of Mechanical Dredge and Haul Barge

Figure Source: Federal Remediation Technologies Roundtable. (n.d.). *Environmental Dredging*. FRTR Remediation Technologies Screening Matrix and Reference Guide. Retrieved June 23, 2025, from https://frtr.gov/matrix/Environmental-Dredging/.

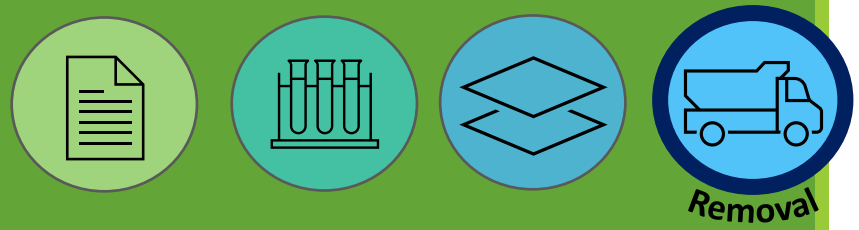
Removal

Remedial Technology Types: *Removal*

Mechanical Dredging



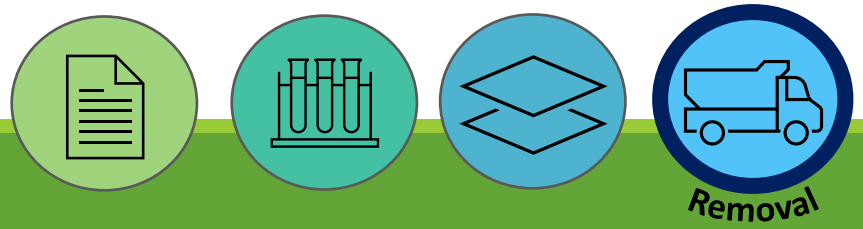
https://youtu.be/Ncqa8fyVPZc?t=52



Remedial Technology Types: *Dewatering sediment after dredging*

Once sediment is dredged, the water needs to be removed before the sediment can be transported and disposed of.

The water that is removed may also have contaminants in it, so it must be treated before being discharged back into the bay.

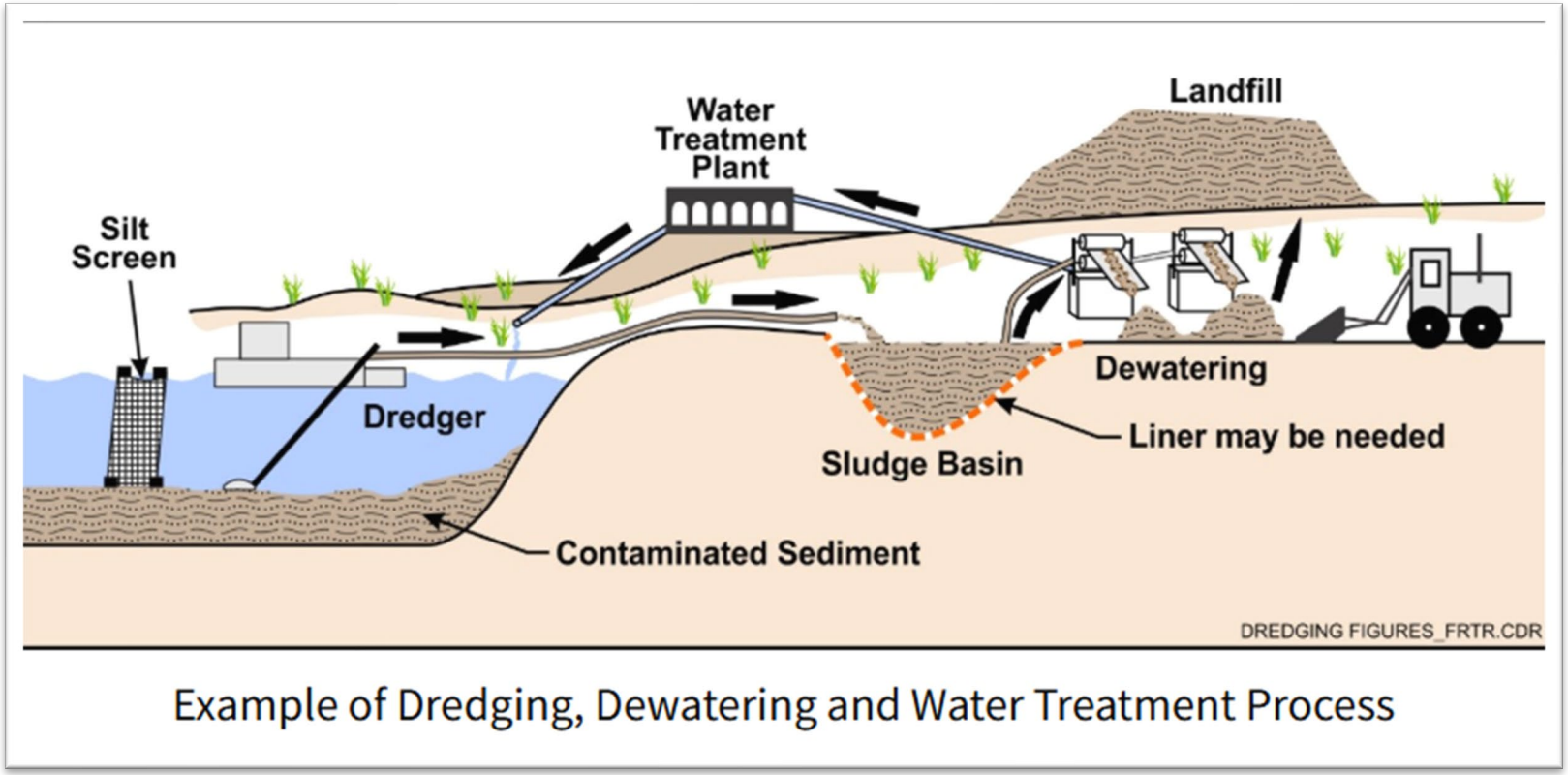


Remedial Technology Types: *Dewatering sediment after dredging*

Passive dewatering: Uses drainage and evaporation to dry removed/dredged sediments.

Mechanical dewatering: Uses different types of presses to accelerate the dewatering process.

- Suited for hydraulic dredging

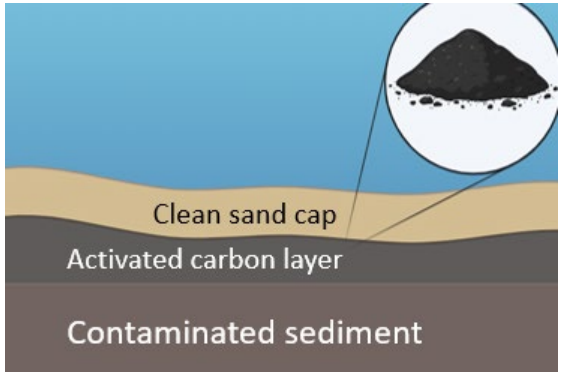


Example of Dredging, Dewatering and Water Treatment Process

Figure Source: Federal Remediation Technologies Roundtable. (n.d.). *Environmental Dredging*. FRTR Remediation Technologies Screening Matrix and Reference Guide. Retrieved June 23, 2025, from https://frtr.gov/matrix/Environmental-Dredging/.

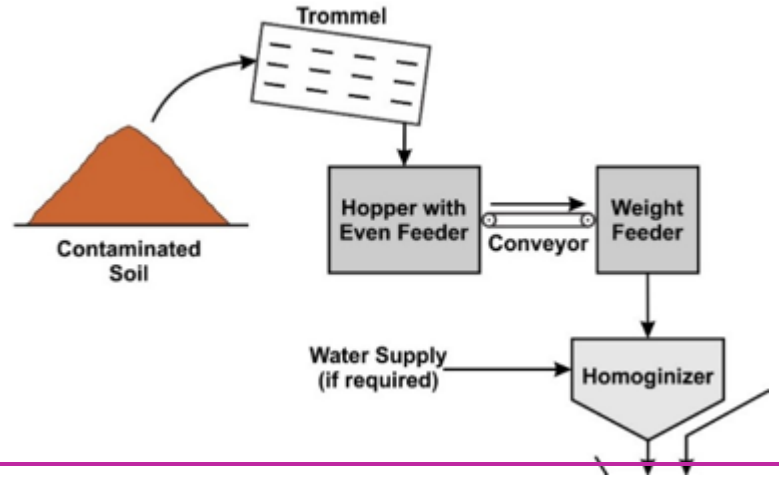
Removal

Remedial Technology Types: *In Situ vs Ex Situ Treatment*



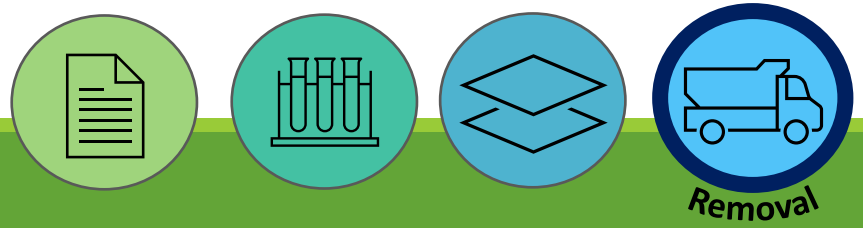
In-situ means "in place"

In-situ treatment is the treatment of contaminants in the sediment while the sediment remains in the channel.



Ex-situ means "outside of the natural location"

Ex-situ treatment is the treatment of contaminants in the sediment after the sediment has been removed from the channel.



Remedial Technology Types: *Ex Situ Treatment*

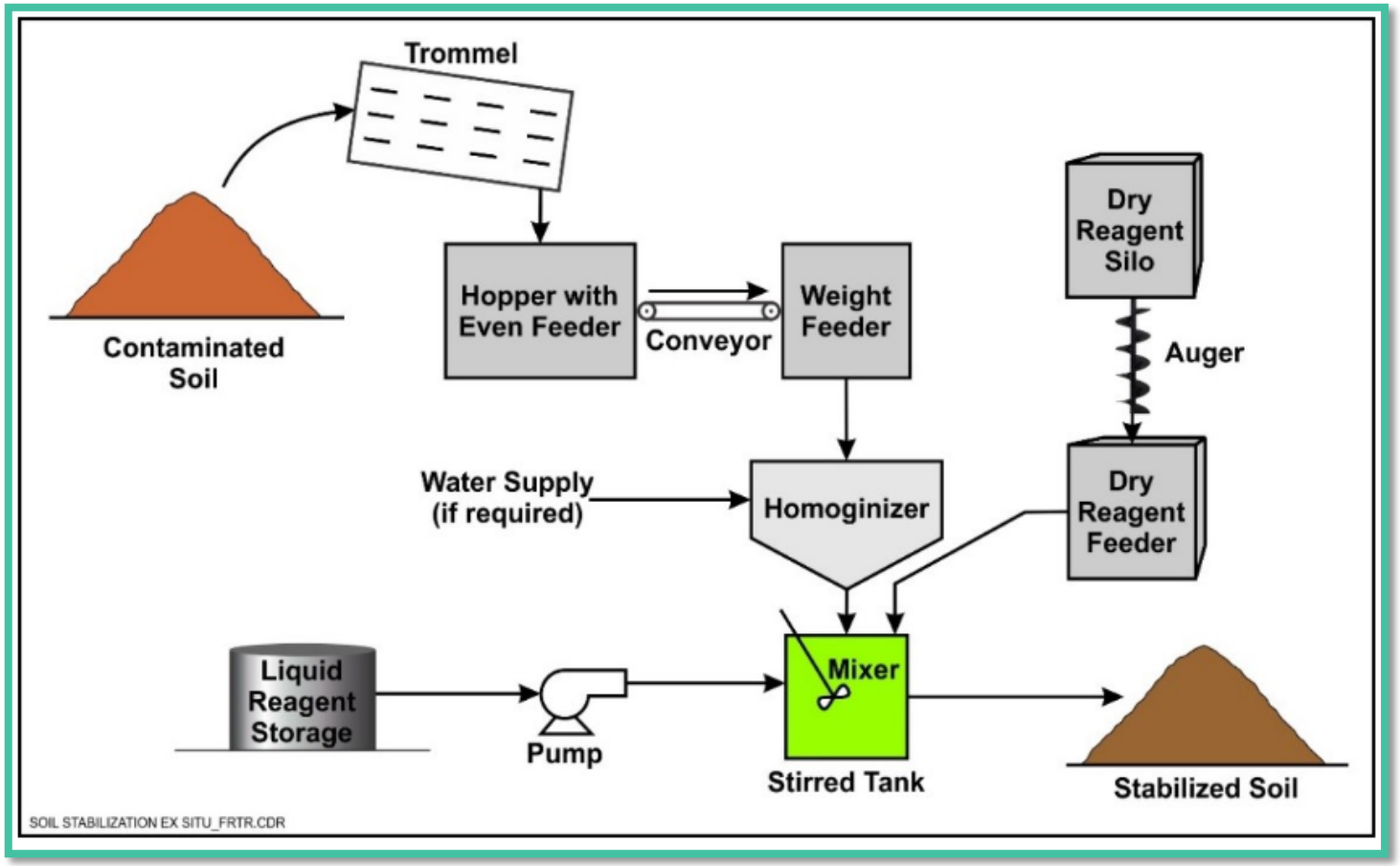


Figure Source: Federal Remediation Technologies Roundtable. (n.d.). *Solidification and Stabilization*. FRTR Remediation Technologies Screening Matrix and Reference Guide. Retrieved June 23, 2025, from https://frtr.gov/matrix/Solidification-and-Stabilization/#Schematic.

Ex-Situ Solidification & Stabilization

- Mixes the contaminated soil with stabilizing agents to create a non-hazardous material for disposal.

- Stabilizing Agents = Binders such as Portland cement, limestone, asphalt, and polymers, which are selected based on site conditions.

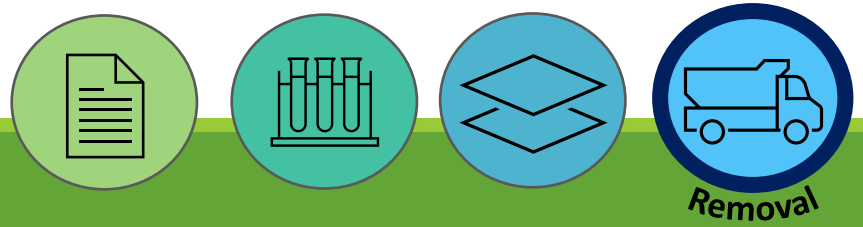
Remedial Technology Types: *Disposal*

On-Site Disposal

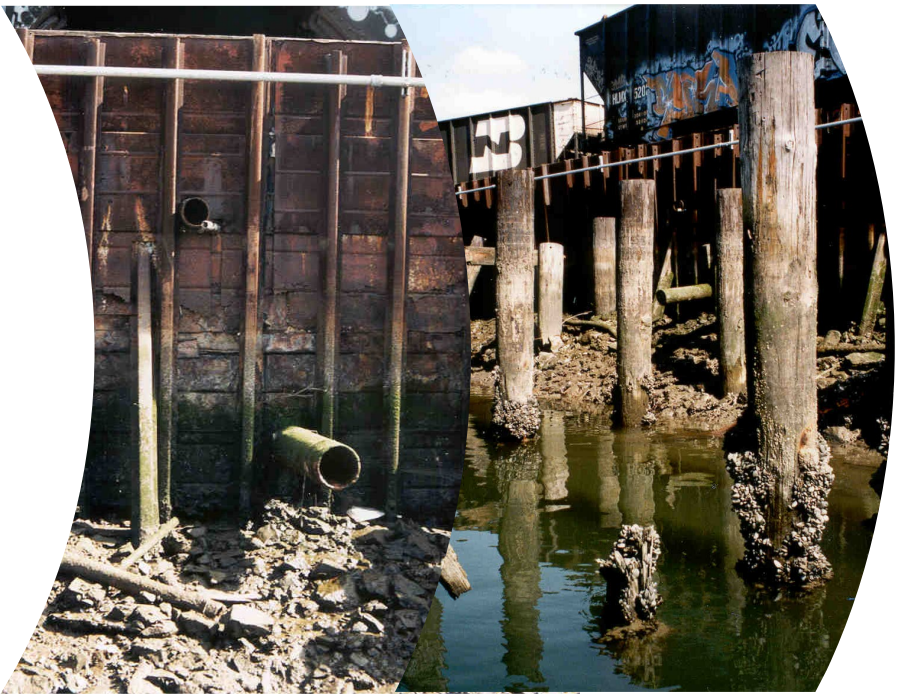
- Confined Disposal Facility (CDF)
- Constructed at or near the site

Off-Site Disposal

- Contaminated material, once stabilized, can be transported and disposed off-site at EPA-approved landfills.



Remedial Technology Types: *Source Control*



- Groundwater Seepage
- Wood Pilings
- Stormwater Outfalls
- Source Material Outside of the Lauritzen Channel

Next Steps

Focused Feasibility Study (FFS)

Gathers information to identify and evaluate remedial alternatives.

Proposed Plan

Presents EPA's preferred alternative to address marine area contamination.

Public meeting and 60-day **public** comment period.

Record of Decision

Certifies the remedy complies with CERCLA, outlines technical goals, summarizes alternatives, and explains remedy selection rationale.

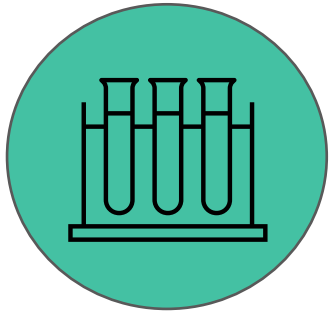
Remedial Design/Remedial Action

Design and implement the selected remedy.

Summary of technologies we talked about today

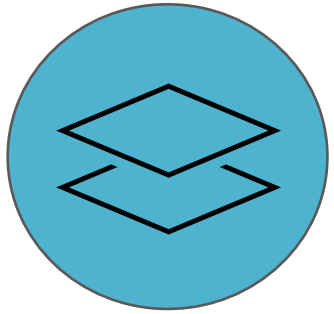
Institutional controls

- Fish advisories, deed restrictions at the site



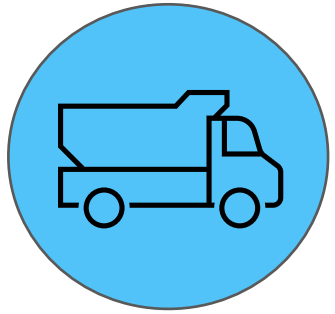
In-situ treatment

- Bioremediation, activated carbon on sediments while they remain in the Lauritzen Channel



Containment

- Capping the Lauritzen Channel with combinations of sand, stone, geotextiles, and activated carbon



Removal

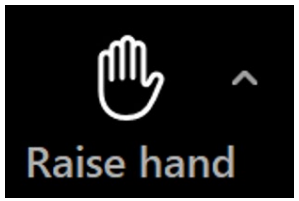
- Dredging sediment from Lauritzen Channel, removing water from sediment, and treating contaminated sediment

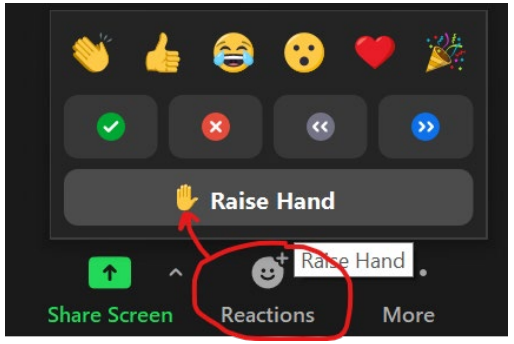
Why is this all important?

- EPA plans to release a proposed cleanup strategy for the Lauritzen Channel portion of the site in Winter 2025-2026.
- A public comment period will open during this time – we want the public to provide meaningful comment.
- We hope that by sharing information about the site, relevant cleanup technologies, and how to navigate the Superfund process, the public will be prepared to digest the proposed cleanup plan and provide comment.

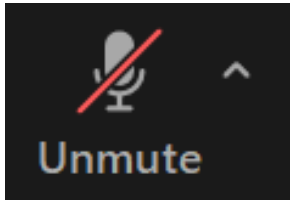
Questions and Discussion

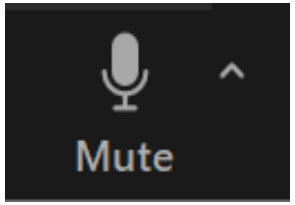
- Participants may enter questions in the Q&A box at any time.
- Participants may raise hands via Zoom to ask questions verbally.
- Speak slowly and clearly to assist with interpretation.
- Questions will be read out loud to speakers.





Press *9 on telephone keypad





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Upcoming meetings

- **Wednesday, August 27:** Understanding the Superfund Process
- **Wednesday, September 24**: Long Term Effectiveness of Cleanup Plans

All meetings will be on zoom and start at 6:30pm

Contact Us

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415-947-4307

References

Federal Remediation Technologies Roundtable. (n.d.)*Environmental Dredging*. FRTR Remediation Technologies Screening Matrix and Reference Guide. Retrieved June 23, 2025, from https://frtr.gov/matrix/Environmental-Dredging/.

Federal Remediation Technologies Roundtable. (n.d.)*Dredged Material Processing Technologies: Dewatering, Separation, Solidification and Ex Situ Treatment.* FRTF Remediation Technologies Screening Matrix and Reference Guide. Retrieved June 23, 2025, from https://frtr.gov/matrix/Dredged-Material-Processing-Technologies.

Federal Remediation Technologies Roundtable. (n.d.)*Dredged Material Processing Technologies: Solidification and Stabilization.* FRTF Remediation Technologies Screening Matrix and Reference Guide. Retrieved June 23, 2025, from https://frtr.gov/matrix/Solidification-and-Stabilization/.