

Overall Project Area



Alternative 1: No action

A “no action” alternative is required to establish a baseline for comparison. Under this alternative, no action would be taken to clean up the waterways.

Alternative 2: Removal of Contaminated Sediment

- Sediment would be dredged hydraulically
- Floating equipment would be used to remove and transport sediment through a pipeline to a drying area
- Sediment would then be transferred to an off-site landfill

Alternative 3: Containment

- Several types of capping materials would be used, depending on the conditions of the area, to capture and impede the movement of contaminants
- Containment cap
 - » Could include materials like clean sand and clay or an activated carbon layer covered by a protective layer of gravel
 - » Prevents erosion
- Multi-layer reactive cap
 - » A containment cap that also includes a layer of reactive material

Alternative 4: Removal with Containment

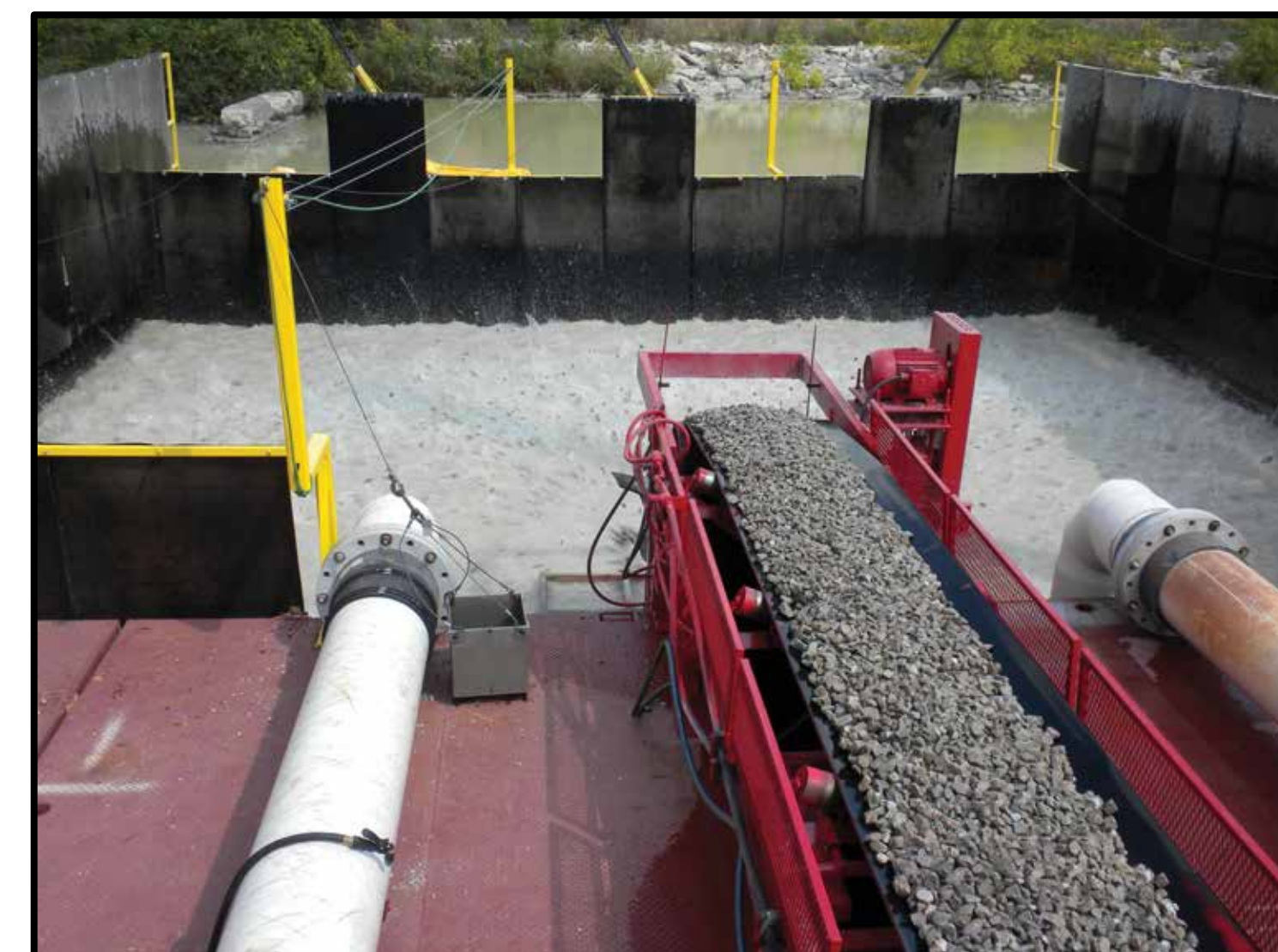
- A combination of dredging and disposal of impacted sediment and containment of the remaining sediment
 - » Removal as described in Alternative 2 would occur in areas where contaminant concentrations are too high or a steep slope would prevent a containment system to be installed
 - » A containment cap or multilayer reactive cap as described in Alternative 3



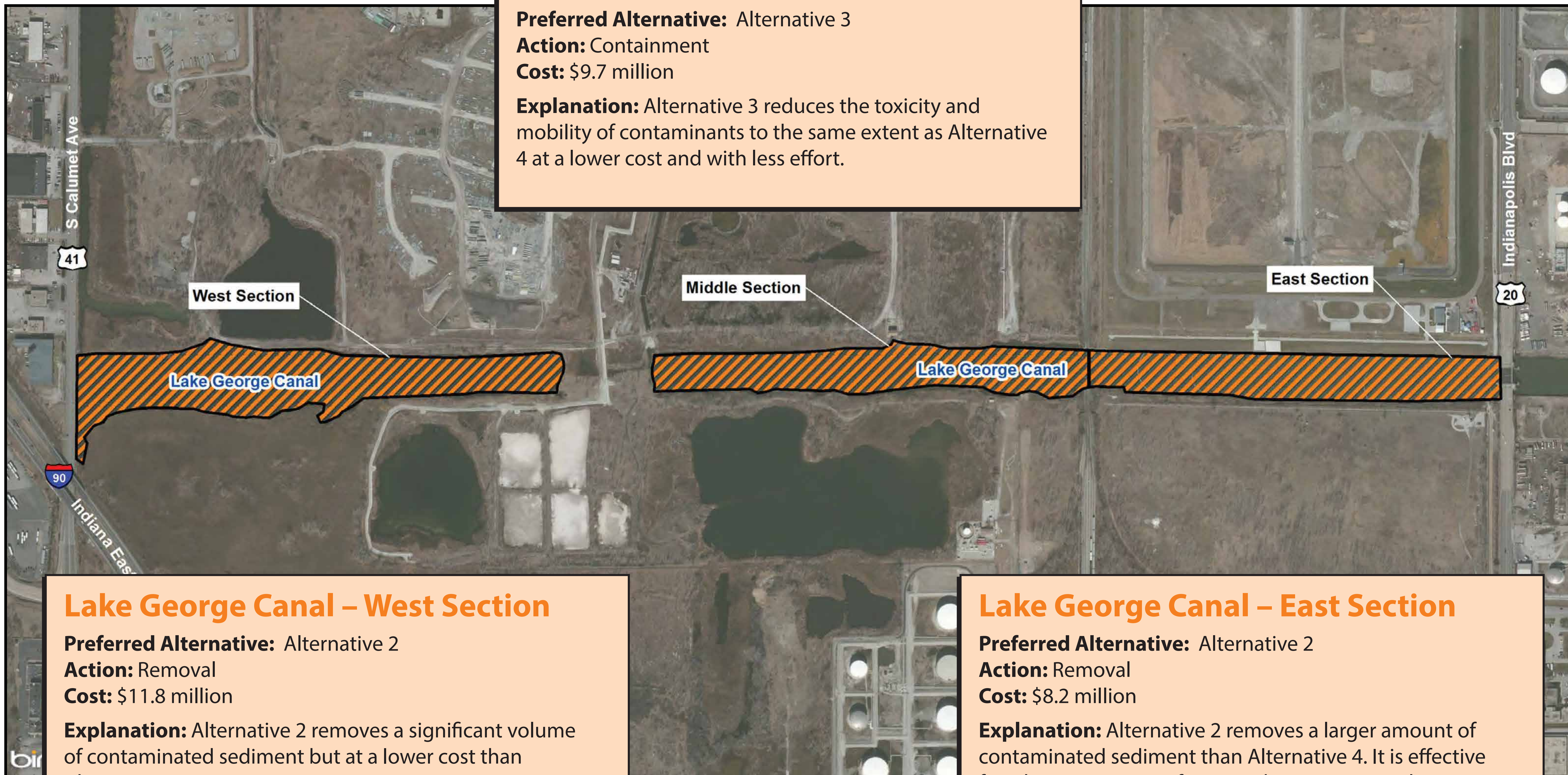
Hydraulic Dredging



Placing Sand Cap



Placing Sand Cap Detail



Lake George Canal – Middle Section

Preferred Alternative: Alternative 3

Action: Containment

Cost: \$9.7 million

Explanation: Alternative 3 reduces the toxicity and mobility of contaminants to the same extent as Alternative 4 at a lower cost and with less effort.

Lake George Canal – West Section

Preferred Alternative: Alternative 2

Action: Removal

Cost: \$11.8 million

Explanation: Alternative 2 removes a significant volume of contaminated sediment but at a lower cost than Alternative 4.

Lake George Canal – East Section

Preferred Alternative: Alternative 2

Action: Removal

Cost: \$8.2 million

Explanation: Alternative 2 removes a larger amount of contaminated sediment than Alternative 4. It is effective for a longer amount of time and is easier to implement.

Indiana Harbor Canal

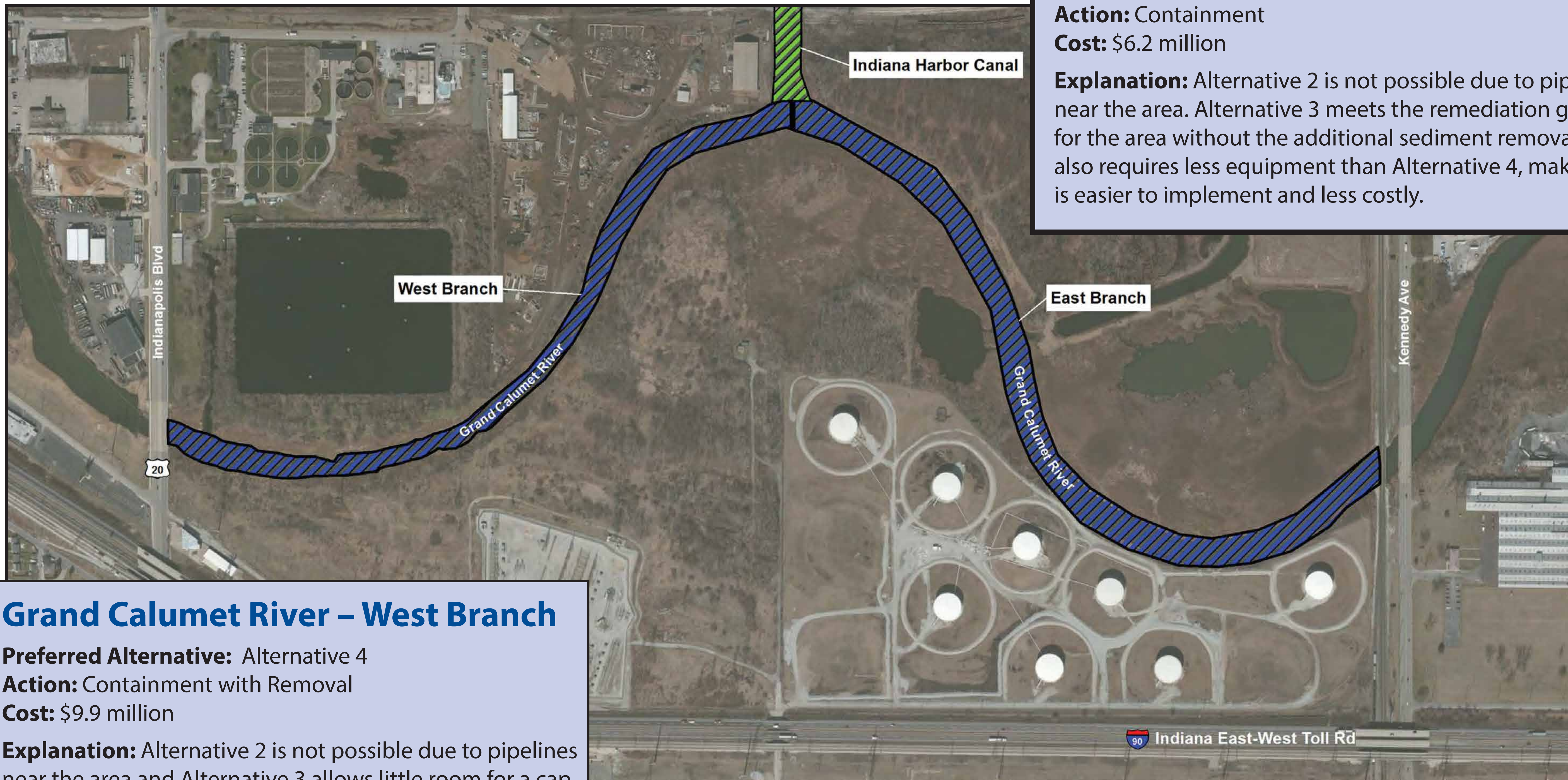
Preferred Alternative: Alternative 4

Action: Containment with Removal

Cost: \$15 million

Explanation: Alternative 2 would be difficult because the bridges and pipelines complicate sediment removal. Alternative 3 would raise water levels and possibly cause flooding. Alternative 4 meets the cleanup goals for this area.





Grand Calumet River – East Branch

Preferred Alternative: Alternative 3

Action: Containment

Cost: \$6.2 million

Explanation: Alternative 2 is not possible due to pipelines near the area. Alternative 3 meets the remediation goals for the area without the additional sediment removal. It also requires less equipment than Alternative 4, making it easier to implement and less costly.

Grand Calumet River – West Branch

Preferred Alternative: Alternative 4

Action: Containment with Removal

Cost: \$9.9 million

Explanation: Alternative 2 is not possible due to pipelines near the area and Alternative 3 allows little room for a cap and could cause flooding in the surrounding area. Alternative 4 meets the cleanup goals for this area.

