



Indiana Harbor Dredging

- Navigational or Environmental Dredging?
 - Difference only in primary goal
 - Not mutually contradictory
- It IS possible to conduct navigational dredging and improve sediment and water quality in the harbor
 - Remove sediment and leave cleaner surficial sediment
 - Can be accomplished with either mechanical or hydraulic dredging
 - Different areas of concern with each but overall impact not substantially different
 - Decision as to dredging approach often controlled by onshore handling
- If goal is environmental dredging it is often difficult to achieve targets with dredging alone

How to achieve goal of removing sediment and leaving cleaner harbor

- During dredging - Seek to avoid negative consequences of dredging
 - Monitor resuspension of sediment
 - Monitor quality of returned water from dewatering areas
 - Monitor air quality in vicinity of dredge and other operations
- Post dredging – Leave cleaner bottom
 - Survey surficial sediment and ensure it has not significantly increased in concentration
- Compare results to risk-based standards
 - Is exposure and risk unacceptable?

Responses to Identified Problems During Dredging

- Unacceptable water column impacts
 - Important primarily to fish and wildlife
 - Responses
 - Improve operational controls
 - Contain with silt curtains or other devices
 - Unlikely to be as significant as current storm event
- Unacceptable air impacts
 - Potentially of greater concern to the community
 - Responses
 - Improve operational controls
 - Active control at key emission points
 - Decrease rate or size of operation

Responses to Identified Problems

Post-Dredging

- Unacceptable post-dredging residual
 - Examine rate of clean deposition and burial
 - Currently harbor appears to be in “equilibrium”
 - Deposition and burial will begin to occur again after dredging
 - Additional dredging beyond goals of navigation?
 - To avoid exposure of previously buried high concentrations
 - Active control?
 - Additional dredging (overdredging) and clean fill

Conclusions

- Harbor currently poses a risk
- Goal of removing sediment and leaving a cleaner harbor can be achieved
- Need to monitor and manage risks during implementation
 - Assess and Plan! But adapt to problems!
 - Community should gain confidence that monitoring during operations can identify problems