

Environmentally Sensible Remediation Concepts

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Where is EPA in the Decision Process?

- EPA is beginning its decision-making process for the Rest of River
- We are considering input from stakeholders, GE's CMS submittals, and other relevant information
- If an active remedy is selected by EPA, then we believe that it must be approached by applying environmentally sensible concepts or principles ...



What does EPA mean by Environmentally Sensible Remediation Concepts?

- Any cleanup of the river, banks, or floodplain should:
 - be done in a carefully planned and thoughtful manner considering:
 - PCB contamination and risk reduction
 - River processes
 - Species/habitats of concern and cultural resources
 - Downstream impacts
 - Quality of life
 - have a surgical mindset
 - ensure that restoration is an integral component of any action
 - provide the ability to improve and adapt as any cleanup progresses
 - take into consideration stakeholder input

PCB Contamination and Risk Reduction

- PCBs in the Housatonic River and floodplain are posing a real risk to humans and are harming many species of wildlife
- These risks and harm will continue as the PCBs are not going away or being buried in the foreseeable future (>250 yrs)



River Processes

- The river channel has not yet recovered from past alterations by man
 - Channel straightening
 - Channel relocation
 - Changing connection of river to floodplain
 - Clearing of the floodplain
 - Altering the sediment load
- Any cleanup should work with the river and floodplain, not against it



Species/Habitats of Concern and Cultural Resources

- There are species of both plants and animals of concern in the river and floodplain
- Any cleanup should look for opportunities to:
 - Avoid
 - Minimize
 - Mitigate
- Need to research and implement a program during any cleanup to document and/or preserve cultural resources



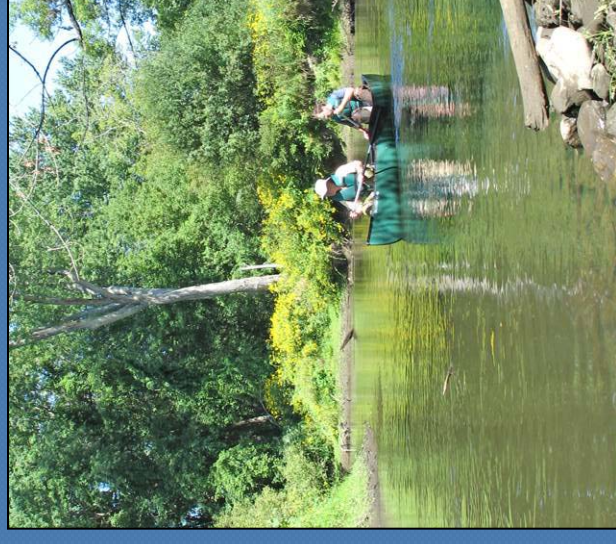
Downstream Impacts

- While PCB contamination is greatest in the first 30 miles below the Confluence, PCBs have had and will continue to have adverse impacts downstream, including -
 - Fish consumption advisories
 - Concerns regarding sediment management for activities in the river (e.g. dam maintenance/removal, bridge repair)
 - Degraded water quality (e.g. the river is on CT's impaired waters list for PCBs)
- Any cleanup should be conducted in a way that allows only short-term impacts downstream from resuspension

Quality of Life

Any cleanup should consider ways to:

- Minimize impacts to nearby homeowners, e.g. -
 - Hours of operation
 - Lighting
 - Sound
 - Dust Control
- Optimize routing of trucks for minimal impacts to residents/public roads/traffic
- Provide a mechanism for interaction with and input from potentially affected property owners and other stakeholders
- Provide ways to allow for continued recreational opportunities during cleanup



A Surgical Mindset

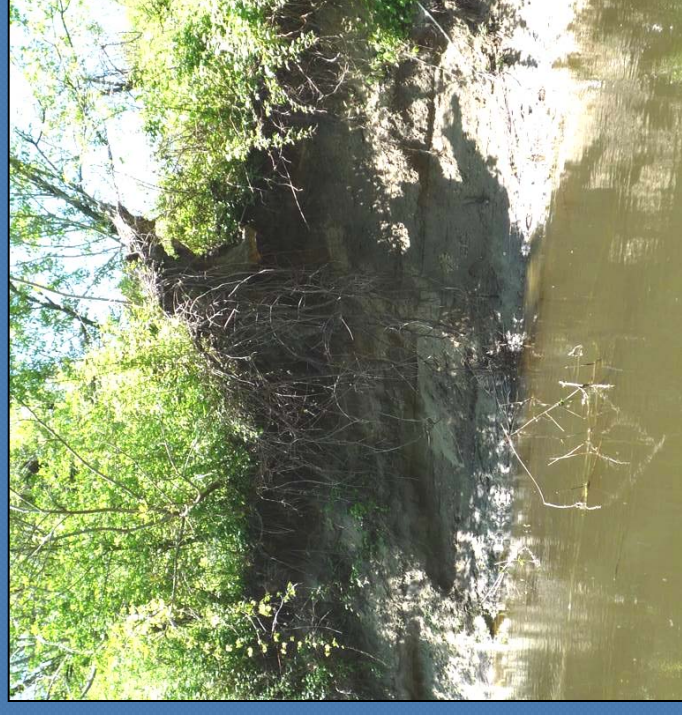
- Any river cleanup is like a surgery; it is necessary to address the disease, painful while occurring, yet heals with time
- Cleanup infrastructure and equipment should have the smallest possible footprint
- Consider leaving some contamination that requires a disproportionate impact to address, offset risks with cleanup of other, perhaps less contaminated, but easily accessible areas
- Minimize the time in which any given area is being affected (e.g. confine work to small areas proceeding from upstream to downstream)

Restoration

- **Restoration -**
 - must be considered upfront in designing any cleanup
 - goals should be established with input from stakeholders
 - must be overseen by professional restoration specialists
 - should take advantage of opportunities provided during cleanup
 - is not “one size fits all” but must be tailored to the habitat type and location in the landscape
- **Restoration goals and timeframes need to be clearly presented and understood**
- **Monitoring the success of the restoration is essential**

Adaptive Management

- Any cleanup will take place over a period of years
- Stage the design in a way that allows for critical review of previous work and incorporation of lessons learned
- Allow the opportunity to consider new technologies, equipment, and/or methods if they become available



Summary

EPA recognizes that if an active remedy is selected, with proper planning, management, and stakeholder involvement, it can be successfully implemented such that there will be:

- permanent reductions in risk to human health and the environment
- a permanent reduction in PCB transport downstream
- a river and floodplain that, over time, will regain its natural beauty and habitat quality, with an active restoration component that will put it on the right trajectory for recovery
- no long-term loss of, and improvement in health of, species of concern

