



Upper Hudson River Floodplain

Hudson River PCBs
Superfund Site

CAG Meeting
August 20, 2015

The logo for the Hudson River PCBs Superfund Site is located at the bottom of the white text box. It features a stylized blue wave graphic above the text "Hudson River" in a serif font, with "PCBs SUPERFUND SITE" in a smaller, blue, sans-serif font below it.

Hudson River
PCBs SUPERFUND SITE



Purpose – follow up

- Questions from CAG regarding the Hudson River Floodplain Remedial Investigation and Feasibility (RI/FS) Study
- Update:
 - RI/FS Work plan (final)
 - Floodplain Characterization Report is under review by EPA
 - Field verification work planned for this Fall under review
 - Next sample event likely in Spring
 - Ongoing maintenance of removal actions (covers and signs)



Question 4: Permanent Actions

- a. Types of actions: What are the options for different types of actions that could be used in the interim remedial actions (IRMs) and as part of the final or permanent remedy?
- b. Actions and uses: How do those possible removal actions relate to the different types of properties (commercial, public, private, public access, etc.), use areas and long-term community plans?
- c. Limits to permanent actions: Does the workplan in any way limit the options for permanent actions, either explicitly or implicitly (based on what may be missing)?



Question 4: Permanent Actions (cont.)

- d) Legality: How is it legal for EPA or GE to do permanent removal actions when land owners legally own their property, with the many legal rights and privileges associated with that land ownership? Would deed restrictions be imposed? Is some form of government guidance needed to make this legal?
- e) Communication and notification: How would local communities or property owners be contacted regarding their land, and when (how far ahead of a proposed action)?
- f) Shoreline stability: If removal of contaminated mud in the floodplains prevent existing dock structures from functioning, will dock infrastructure be replaced by the project?

Potential Actions (CAG Q-4)

- **Type:** Temporary (covers and removals) and Permanent
- **Typical (examples):** excavation/disposal, capping, institutional controls and monitored natural attenuation
 - consideration may be given to innovative approaches
- **Actions and uses:** remedial actions are based on exposure and associated risk as it relates to land use and contaminant concentrations (PCBs)





Potential Actions (cont.)

- **Limits to permanent actions:** The work plan does not determine or limit the ultimate remedy. Remedial alternatives (options) are evaluated in the Feasibility Study against specific criteria.
- **Close coordination is key** - EPA and GE will be coordinating closely with property owners in consultation with New York State
 - Legality – details to be worked out
 - Communication and Notification – similar to previous sampling events (already have experience)
 - Community Involvement Plan is being prepared
 - Shoreline Stability – shoreline will be maintained and docks will be handled similar to dredging project with close coordination with property owners



Question 5: Confidentiality and Notification

- What are the legal requirements about making sampling information public or maintaining confidentiality, both real time during sampling and long-term? What has been done at other superfund sites to provide data and information about contamination to future private property owners?



Confidentiality and Notification (Q-5)

- EPA will be respectful of private property information (confidentiality). Once a final cleanup decision is made by EPA the information will become part of the project record
- EPA is reviewing approaches used at similar sites, similar size and complexity
- EPA plans to keep interested parties and elected officials informed while at the same time being respectful of private property information



Questions 6 & 7: Overview and Public Comment

- Please provide an easy-to-understand summary or fact sheet of the process and timeline of the floodplains remediation from the workplan to the implementation of the final remediation. Include a map or diagram of the floodplains area as defined and/or delineated by the Floodplains RI/FS Work Plan or prior documents.
- When will there be formal public comment periods or other opportunities to give input on the floodplains work?

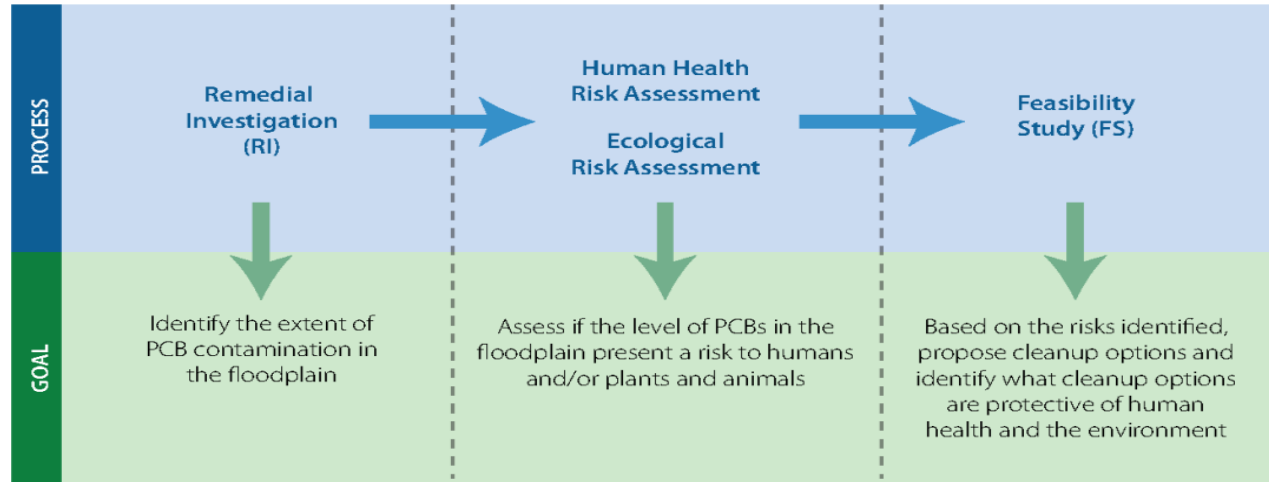


Overview and Public Comment (Q-6 and 7)

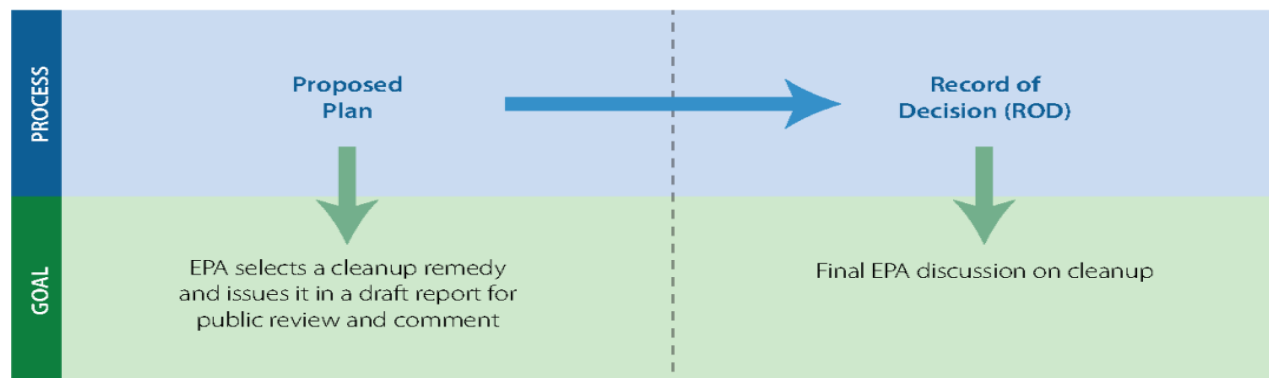
- The study area generally extends to the 100-year floodplain
- RI/FS process generally consists of an investigation/studies, Risk Assessment and Feasibility Study – anticipated duration
- EPA Fact Sheet under development
- Following the RI/FS, a Proposed Plan is developed based on the recommendations provided in the FS
- Public comment is solicited on the Proposed Plan
- A Record of Decision is then prepared followed by implementation of the selected remedy
- At this time - GE has agreed to complete the RI/FS
- Opportunities for public participation in the cleanup decision making process will be discussed in the Community Involvement Plan

Hudson River Floodplains RI/FS Process

Work to be completed under EPA's 2014 Administrative Order on Consent (AOC) with GE



Future Actions by EPA





Approximate Area

Hudson River Floodplain





Question 8: Site Specific Concerns

- a. What mechanisms will be used for factoring in site-specific concerns to decision making for each site?
- b. What is the relationship between parcel use (exposure?) contamination levels and remedial actions?
- c. Who will determine restrictions or time periods and how? Can they be revised? If so, by whom and with what restrictions at what level? Local, state or federal legislation? Courts?



Site Specific Concerns (Q-8)

- Each parcel will be carefully considered by EPA. For example, reasonably anticipated future use, unique features of properties, etc.
- Remedial actions are evaluated in terms of being protective of human health and the environment
- Property use restrictions will be carefully considered. Goal is to allow the property to be used as intended and to consider reasonably anticipated future use. EPA and GE will work closely with property owners and New York State



Question 9: Future Uses

- a. Who decides what future uses will be included? Who decides what future use will be included (communities and their comprehensive plans, individual property owners, advocacy groups, state or federal government agencies)?
- b. How will future uses of sites be forecasted? Does EPA need to check with communities for their comprehensive or other local laws, plans or restrictions? What is the process for determining future use?
- c. How can the public have input on future uses? Will it be possible to hold public meetings or provide opportunities for comments on future uses to ensure that all reasonably anticipated future uses are identified and included for consideration (in addition to using the information contained in local zoning and/or master plans)?



Question 9: Future Uses (cont.)

- d. How will changes in use be forecast? A lot of land along the Hudson is undeveloped, and many towns do not have comprehensive development plans. How will EPA forecast development 25, 50, 75 years into the future to determine the requisite level of sampling needed now so that vacant properties are investigated and can be developed with ease in the future?
- e. What will changes in use in use mean in terms of future remedial action? Are there anticipated thresholds associated with change in use of a parcel such as converting cornfield to residential use that would trigger a parcel to require a more aggressive remedial action post-RI/FS?
- f. How are “vacant properties” defined? What is meant by vacant properties? A vacant building? No building on a property? Farm fields, pastures, woodlands or similar acreage? Parks or recreation areas? Who would make this designation?

Future Uses (Q-9)

- Sometimes challenging to determine
- Reasonably anticipated future land use considerations:
 - planning documents
 - zoning
 - property information
 - other
- Communicating with property owners, municipalities and elected officials is key (process underway)
- Period of time: varies based on circumstances



Future Uses (cont.)

- Parcel designations include Residential, Agricultural, Commercial/Industrial, Recreational and School
- Vacant land is considered based on how it is zoned and used
- Trespasser scenario may be considered in a pathway analysis





Question 10: “Legacy” Contamination

- a. How will EPA enforce further dredging needs due to leaching of PCBs from the floodplain?
- b. How will EPA enforce the restoration of the fish and resources of the river?
- c. What provisions are being made for long-term monitoring of the floodplain relating to continued deposition of silt from routine flooding and high water events? Will this be periodic assessment of the indicator species used in human and ecological assessment?



“Legacy?” Contamination (Q-10)

- Existing Contamination
 - Residual contamination that is difficult to remediate. For example, a wooded wetland area
- Future Contamination
 - EPA conducts annual “flood mud” sampling
- PCBs leaving the floodplain and entering the river
 - Low potential / minimal impact to river
- Ongoing river monitoring includes fish, sediment and water



Question 11: PCB Concentrations and Sampling

- a. What approach is used to estimate PCB concentrations in the risk assessments?
- b. What type of sampling will be completed where? Specifically, what types of sampling will be completed in the Old Champlain Canal?
- c. Will there be an opportunity for the CAG to review the sampling plan?
- d. How are concentrated PCB spoil sites being identified in the floodplain and above it, for example the old dredging deposits at Lock 5 Island



Question 11: PCB Concentrations and Sampling (cont.)

- e. Will the old dredge spoil sites be remediated?
- f. What is the relationship between parcel use and sampling regimes?
- g. Are there parts of old Champlain Canal that are higher than the floodplain? If so, does floodplains PCB contamination affect them?



PCB Concentrations and Sampling (Q-11)

- A statistical approach will be used to estimate and determine PCB concentrations as part of risk assessment (flood frequency)
- Soil sampling locations will be determined based on data gap needs - actual locations will be included in the Field Sampling Plan
- Sampling is expected to include at least two more rounds of floodplain soil sampling
- Biotic sampling is anticipated

PCB Concentrations and Sampling (cont.)

- Sampling is planned within the Old Champlain Canal where it is located in the floodplain project area. Sampling will include deeper sampling to account for deposition in select areas.
- Some portions of the Champlain Canal are not within the boundaries of the floodplain





PCB Concentrations and Sampling (cont.)

- Upland dredge disposal areas being investigated under other regulatory programs will not be included in the Remedial Investigations – important to determine the difference between relocated sediments from flooding vs mechanical processes
- Upland dredge disposal sites that pre-date PCB release in the river; those areas will be included in the floodplain investigation
- NYSDEC is very familiar with upland sites
- EPA is in working in close consultation with NYSDEC

PCB Concentrations and Sampling (cont.)

- Sampling locations will be based on data gaps, exposure potential and land use
- Number of samples collected is based on statistical criteria





Question 12: Modeling

- a. What role will modeling play in the ecological and human health risk assessment?
- b. To what extent is "modeling" being deployed to determine the extent, depth, and level of PBC concentrations in the flood plain?
- c. *Stormwater*: How will stormwater management be taken into consideration in the risk assessments and potential remediation work?



Modeling (Q-12)

- Related to Risk Assessment
 - In general, modeling is not being performed; however, statistical calculations and other analyses are being performed for ecological and human health risk assessments
 - Stormwater is being considered



Question 13: Ecological Risk Assessment

- a. What research will be required to perform the ecological risk assessment?
- b. How will modeling be used in the ecological risk assessment?



Ecological Risk Assessment (Q-13)

- In general we are not modeling; however statistical calculations and other analyses are being performed for ecological risk assessment
- Research will be performed related to ecological risk assessment:
 - Additional sample analyses
 - Analyses of terrestrial and aquatic biota
 - Toxicity evaluation
 - Literature search
- EPA will take into consideration approaches used at other sites



Questions



Contact Information

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