Community Advisory Group (CAG)
Hudson River PCBs Superfund Site
Ft. Edward, New York
Thursday June 28, 2012 – 1pm-4pm

Meeting Summary

Members and Alternates Attending: David Adams, Manna Jo Greene, Jeffrey Kellogg, Richard Kidwell, William Koebbeman, Roland Mann, Althea Mullarkey, Merrilyn Pulver-Mouthrop, Julie Stokes.

CAG Liaisons Attending: Danielle Adams (Ecology & Environment), John Davis (NYS Attorney General), Kevin Farrar (NYSDEC), Joan Gerhardt (Behan Communication for GE), Dave King (USEPA), Gary Klawinski (USEPA), David Kleusner (USEPA), Jeremy Magliaro (NYSAG), Joe Moloughney (NYSCC), Deanna Ripstein (NYSDOH), Larisa Romanowski (USEPA), Charles Sullivan (NPS), Mark Surette (Ecology & Environment).

Others Attending: Jeremy Brettholz (Green Mountain College), Todd Calongne (USEPA), Haley Carlock (Scenic Hudson), Paige Davis (NYSAG), Peter DeFur (Environmental Stewardship Concepts), Mark Foster (NYSAG), Marc Greenberg (USEPA), Maureen Leary (NYSAG), Denise Mayer (NYS Museum Field Research Laboratory), Jamie Munks (Post Star), Katheleen Presti (NYS Museum Field Research Laboratory), Nicole Shepherd (NYSAG), Lem Srolovic (NYSAG), David Strayer (via phone, Cary Institute of Ecosystem Studies), Audrey Van Genechten (NYSDOH).

Facilitators: Ona Ferguson, Patrick Field.

Members Absent: Cecil Corbin-Mark, Darlene DeVoe, Rich Elder, Mark Fitzsimmons, Richard Fuller, Paul Gallay, Brian Gilchrist, Robert Goldman, Robert Goldstein, Gil Hawkins, Christine Hoffer, Edward Kinowski, Aaron Mair, David Mathis, Tom Richardson, Sharon Ruggi, Lois Squire.

Next Meeting: The next CAG meeting will be scheduled for September.

Action Items:
- Admin Committee – Create next meeting agenda.
- EPA – Provide the CAG with maps of all three river sections showing coring locations (including those outside the Dredge Area Delineation) and the navigational channel to show adjustments being made to the dredge area.
- EPA – Consider documenting or assessing mussel beds in the dredge area and mussel beds being removed through dredging, in response to a CAG member request.
- Peter DeFur – Circulate handouts to CAG summarizing his feedback on the Five Year Review and his comments about habitat restoration.

Welcome, Introductions, Review March Meeting Summary

The facilitators welcomed everyone to the meeting and reviewed the agenda. The draft March meeting summary was approved with changes on page 3 from the initial draft. All CAG meeting handouts and presentation slides are available within one week of CAG meetings at: http://www.hudsoncag.ene.com/documents.htm.

Dredging Project Update

Gary Klawinski of EPA presented an update on the dredging project this season. CAG members asked some clarifying questions about coring, capping, storage and train timing, which are answered in the following bullet list of Gary's primary presentation points:

- The goal of dredging in 2012 is to remove 350,000 cubic yards of sediment from the river. Between May 9 (start date) and June 17, GE dredged 106,000 cubic yards. Dredging should wrap up in November. EPA expects that GE will dredge certification units (CUs) 26-49 this season. 200 barges have been unloaded to date.
- Capping to date has been low (under 3%), and the team is trying to avoid capping.
- Most dredging is happening from north to south in the river, except around the Three Sister Islands, which are very shallow.
- Regarding Quality of Life Standards, there haven't been any water exceedances. There have been a few air exceedances brought under control by applying best management practices (relocating dredges, covering sediment).
- Coring work is underway to fill in data gaps and define boundaries of the dredge prisms, and surface sediment sampling is underway in River Section 2. There was a request for EPA to share the results of the coring work on (paper) maps with the CAG, also depicting navigational channel.
- There have been some changes at the dewatering facility, including the addition of a second processing system for non-TSCA sediment, a second off-loading area, and expanded storage areas. The expanded storage area enables the over 50ppm and under 50ppm sediments to be kept separate. Last year the offloading process was a bottleneck, but in 2012 that has not been a problem. The project team has operated without need for Sundays given increased efficiencies.
- The rail car system seems to be working well. 61 cars have gone to Michigan and 93 to Oklahoma. The cars are prepared and then go off-site whenever CSX sends engines to pick them up. Sediment higher than 50ppm concentration goes to Michigan or Oklahoma. Sediment with lower concentration of PCBs goes to Ohio. The decision about whether sediment is over or under 50ppm is made in the river; the sediment is then tracked through the facility and is tested again. The 'burrito' format of wrapped sediments in the rail car is the same as last season's system.
- Habitat reconstruction is underway on areas dredged last year, and planting will continue through mid-July. This involves harvesting the plants from the feeder canal then replanting with divers and pontoon boats in the river.

Five-Year Review Presentation & Feedback

David King of EPA presented on EPA's recently completed Five Year Review. This review is required under CERCLA (Superfund) to check the remedy is still expected to be protective and to look at anything that should be changed. This internal EPA review looked at three Operational Units (OUs): remnant sites, in-river activity (through 2011), and acknowledged floodplains without yet evaluating them. The next Five Year Review will occur in 2017.

The review focused on three questions:

1. Is the remedy functioning as intended (are the exposure assumptions, cleanup levels and remedial objectives still valid)? EPA says yes, considering information from pre-dredging, Phase 1, the Peer Review, Phase 2 Decision, and Phase 2 action to date. They looked at River Section 1 sediments and the deposition study and impacts downstream.
2. Are exposure assumptions correct (looking at correlations between fish tissue concentrations and PCB surface sediment concentrations)? This is long-term. The system has to await removal over

time. Since higher concentrations of PCBs were found in River Section 2 during Phase 1 than expected in the Record of Decision (ROD), and it will take longer to attain the reduction in fish concentration sought through this project, but the concentration goal is still achievable. For River Sections 1 and 3, goals may be attained sooner than 70 years from dredging, for River Section 2, it could take a decade longer than expected.

3. Has new information come to light that would mean a need to change operations? Higher concentrations of PCBs were found during Phase 1, however there isn't enough different information to suggest reopening the ROD. EPA said they have learned more information, but the project is still being protective with the original remedy design.

CAG members discussed the following topics in response to the presentation; responses are in italics:

- Capping – Is soil under caps tested? For example, at the Fort Edward landfill the concentrated PCBs under the cap couldn't later be found. *Yes, there is testing under the caps.*
- Institutional Controls– Who manages the Institutional Controls for the sites that got capped in Moreau? *The responsibility lies with the owner of the site, though EPA may oversee the site.* Fish advisories are another institutional control, which are managed by DOH with DEC.
- Canal Corps Data – Shouldn't the new data from the Canal Corps on sediment concentrations be incorporated into the Five Year Review? *It will be folded into the ongoing project but was not available during the Five Year Review process.*
- Dredge Areas –
    - Where dredging is occurring, CAG members indicated that they believe the remedy is working.
    - Why are the dredging requirements for River Section 2 less stringent than those for River Section 1? CAG members are concerned about the parts of the river not being dredged that have relatively high levels of PCB contamination, specifically 136 acres described in 2011 by the Natural Resource Damage Trustees to the CAG (which still feels like new information to the community). *That 136 acres is not new information to those on the project team, and was generated by applying River Section 1 criteria to River Section 2. To meet the same overall goals of decreased fish concentration in each section of the river, people calculate an average of mass of PCBs per unit area that requires that dredging occur at different levels of intensity in each river section to achieve the same outcome.* A CAG member said the safest way to proceed given that there is no accurate model for how the river will respond to dredging is to dredge at the most protective level and apply the standard from River Section 1 to River Section 2.
    - Why isn't GE dredging more, if the current prediction is that it will take a decade longer than expected to meet project targets in fish PCB concentrations? These things make the project less protective. *The current project does take into account new data on sediments. EPA and GE are looking at the perimeter of the dredge areas to find the right edge and will do more dredging as needed beyond those areas detailed in the dredge area delineation plan. Likewise, people in the project are working on the floodplains, fish advisory outreach and adjusting dredge prisms.*
- Floodplains – What count as floodplains? Do GE and EPA have a shared answer to this question? Citizens are concerned about areas where kids play by the river when the water is low. *GE and EPA are working on answering this question together. They're looking at the level when the river is flowing at 5,000 cubic feet per second to the 100-year flood mark. There are wedges of the shore revealed when the river is low which are not being dredged that may be included.*

Peter DeFur, the CAG's technical advisor, reflected on the Five Year Review verbally. He will share a handout with the CAG synthesizing his comments in coming weeks. He said that Five Year Reviews are done differently at every Superfund site. Peter's main comments on the Five Year Review were:

- *Contents* – Some descriptions in the Review were vague, and the report could have been very clear about why certain decisions were made so that in the future others can understand the reasoning the team followed. Some information was either missing or hard to find such as operation and maintenance plans and inspection reports.
- *Risk Assessment* – The human health risk assessment could have been updated but was not.
- *Project Improvements* – The substantial operational and procedural improvements GE has made over the past few years could have been highlighted in the report but were not.
- *Environmental Toxicity* – There is new information available about the impacts of toxicity on the ecosystem (for example the effects of PCBs on mussels). Peter suggested that for the next Five Year Review, EPA look at the recently updated federal protocols on toxicity of dioxin.
- *New Technologies* – EPA and GE should mention opportunities provided by new technologies and approaches, noting for example that there might soon be ways to treat sediments in place.
- *Institutional Controls* – Can EPA formalize the institutional controls for capped sites in OU1? If they aren't maintained, is it a problem, given that the institutional controls are not in the ROD?
- *Record of Decision* – What can be altered in the work without formally opening the ROD in legal/administrative proceedings?

CAG members discussed the following topics in response to the presentation; responses are in italics:

- Five Year Review Process – The Five Year Review process was rushed, which is unfortunate and atypical of the process up to now. EPA did not circulate drafts of the report for other agencies or the public to review before finalizing it. It would have been good if EPA had talked with CAG members, some of whom have a very long-term perspective on the project. There may be reasons EPA did not do this, but it undermines the confidence of some CAG members. EPA as a whole issued policy this year trying to make Five Year Review processes more standard. That policy noted that most five Year Reviews take 6-12 months, with an average of 9 months. The short timeframe (60 days) in which this review was completed created a missed opportunity for this project, and CAG members noted their appreciation of this active community advisory group in which they can share concerns. The timeframe of the review should have been at least equal to the magnitude of the project. A CAG member noted that GE is doing extremely well in the dredging itself with the continually upgraded processing facility and technology and being responsive to what they're finding in the river. It was noted that many sites follow the EPA recommendation to interview community members and agencies for input in the months leading up to the review.
- Five Year Review Contents – In 2009, there were significant PCBs found in the river that no one had known existed. This was new information that should affect the project. If we know how to speed up the remedy, because we have new information, EPA and GE should take action to be more protective. Instead, the message is that River Section 2 will need an extra decade to reach target levels. Some CAG members said the issue of navigational dredging should have been considered in the Five Year Review with recommended changes to the project, and that navigational dredging is the most serious issue identified by the CAG.
- Model – Is the project using a model to see if the remedy will attain its goals? *The project is using real data now, not models. The model provided enough certainty to be a line of evidence for the ROD, but there is now much more data from design and monitoring of actual remedial action. Data from the Thompson Island Pool that showed higher concentration levels was part of what*

drove the Peer Reviewers to recommend revisiting the model, and that data turned out to be flawed.

Update on Fish Data

Marc Greenberg of EPA gave an update on fish tissue monitoring. The risk from fish consumption was a major driver for the dredging project. There has been monitoring underway since the 1970s. A structured baseline for remedial action and to use post-remedy has been in place since 2003. The goal is to evaluate annual and long-term change while documenting interim risk reduction and demonstrating that the remedy is moving toward achieving its goals.

EPA surveyed at stations in the upper and lower river. They surveyed adult fish and yearling pumpkinseed fish, which are rapid indicators for short term. Conclusions show that resuspension of PCBs by dredging affects fish locally but only within the immediate vicinity of dredging. The goal for the long-term is to establish statistical trends. Trends are showing decreases in some cases, but do show higher concentrations (though not of great magnitude) during dredging years for forage and pumpkinseed. There is delayed effect in sport fish. They expect an increase in short-term fish tissue body burden during dredging (short-term localized exposure) followed by a rapid return to baseline. Marc mentioned that this year in previously dredged areas people have seen fish coming back and utilizing the area, as evidenced in part by sightings of bass nests (circles formed in the sand by large mouth or small mouth bass in which they rear their young). No surveys were done of that particular sign of use of the habitat before dredging, but people were pleased to see it as a qualitative example of activity.

A CAG member asked whether the decrease in PCBs in fish tissue could be related to the Hudson Falls groundwater project. DEC staff do not think so, as the PCBs in the water column there dropped significantly in the mid 1990s. Another CAG member asked a question on behalf of a CAG member who could not be present about impacts on downriver fish and was told that the data on downriver fish should be available at the fall CAG meeting.

Habitat Restoration and Freshwater Mussels

David Strayer, an ecologist at the Cary Institute of Ecosystem Studies presented via webinar on pearly mussels of the Hudson between Corinth (north of the project area) and Troy. There are five known species of mussels in this region and may be as many as 14 others. Two of the five known species are NYS Species of Greatest Conservation Need.

Freshwater mussels filter water, provide food and shelter to sediment-dwelling organisms, and mix or stabilize sediments. Mussels filter water, which clarifies the water and influences other organisms, including submerged plants. Not enough is known about the numbers, species or location of the mussels in this part of the river to be sure about the ecological roles they play. They have not been surveyed. All mussels provide some similar functions such as filtering water, but other functions are performed differently by different species. It is possible that filtration and sediment mixing/stabilization could be important ecologically in the dredging area. A survey to determine the number of pearly mussels in this region of the river would require careful survey design and samples taken by divers, dredges or grabs. Per David, we do not know at this time how to actively restore mussels, though he indicated that mussels would likely naturally recolonize suitable habitat in a few decades if there were source populations nearby.

Peter DeFur presented on some additional components related to habitat restoration and mussels. He said that there is work underway in other states to cultivate freshwater mussels and figure out if it is possible to re-stock river ecosystems, including in rivers where remediation projects are underway. He said high

flows, heat spells and river dynamics would likely present difficulties to restock a river like the Hudson. The monitoring program for aquatic animals will be implemented in a few years.

Peter deFur noted that he had reviewed the habitat restoration plan and toured several of the restoration areas on the Hudson with EPA and others the previous day. He thought the plan was quite good and that as long as it is implemented properly, it should yield positive results. The plan to place the substrate one year and replant the next was both logistically necessary and biologically sensible. The problem will come when conditions such as flooding and scour threaten the viability of the plantings.

CAG members asked about any protection by state or federal regulations of species of greatest conservation need. David replied that if a disturbance were to occur in a known habitat, some consultation would be required with state or federal regulators. CAG members also asked about what habitat conditions are best for mussels. David said that sediment type, water depth and river flow are not good predictors of where mussel beds may be located, but that a stable substrate is important for mussel habitat. He said that a good hydrodynamic model could be used to help predict areas of mussel beds.

Other Topics

A CAG member requested an update on navigational dredging issues from the Attorney General's Office. No update was provided.

Larisa Romanowski pointed people towards an updated video about the project on the dredging website, "Returning a River to Health" at http://epa.gov/hudson/

CAG Business

Topics – CAG members asked for another discussion of the 136 acres and the Trustees' concerns.
Meeting Date – The next CAG meeting will likely be in September.

Adjourn

The meeting was adjourned at 4:05 pm.