Community Advisory Group (CAG) Meeting
Hudson River PCBs Superfund Site
Saratoga State Park Administration Building
Gideon Putnam Room
Thursday April 4, 2013
1:00 PM – 3:15 PM

Meeting Summary

Members and Alternates Attending: Rich Elder, Manna Jo Greene, Abigail Jones, Richard Kidwell, William Koebbeman, Roland Mann, David Mathis, Althea Mullarkey, Thomas Richardson, Lois Squire, Andrew Squire, Julie Stokes.

CAG Liaisons Attending: Danielle Adams (Ecology & Environment), John Davis (NYS Attorney General), Joan Gerhardt (Behan Communications), David King (USEPA), Gary Klawinski (USEPA), Timothy Kruppenbacher (General Electric), Joe Moloughney (NYS Canal Corps), Deanna Ripstein (NYS Department of Health), Larisa Romanowski (USEPA).

Others Attending: Jeremy Brettholtz (Clearwater Intern), Laura Bomyea (NYSOAG), Mike Cheplowitz (E&E – USEPA), Marc Greenberg (USEPA – OSWER/OSRTI), Andy Guglielmi (NYSDEC), Regina Keenan (NYSDOH), Maureen Leary (NYSOAG), Carmella Mantello (Barton & Loguidice), Denise Mayer (NYS Museum's Field Research Lab), Jamie Munks (Post Star), James Woods (NYSOAG), Kelly J Paslow (Glenn County Public Safety), Paul Post (Saratogian), William Shaw (NYSDEC), Mike Traynor (Louis Bergner Group - USEPA), Linda van der Heide (Rensselaer County Planning), Audrey Van Genechten (NYSDOH), Stephen Wilkins (Daily Gazette).

Facilitators: Ona Ferguson, Eric Roberts.

Members Absent: David Adams, Cecil Corbin-Mark, Darlene DeVoe, Mark Fitzsimmons, Richard Fuller, Brian Gilchrist, Robert Goldman, Robert Goldstein, Gil Hawkins, Christine Hoffer, Jeffrey Kellogg, Edward Kinowski, Aaron Mair, Merrilyn Pulver-Moulthrop, Sharon Ruggi.

Next Meeting: The next CAG meeting will be scheduled for sometime in the summer.

Action Items:

- Administrative team - plan the next CAG meeting.
- Joe Moloughney - let David King know when dredging was last completed below Lock 6 and how much material the NYSCC anticipates needing to dredge below Lock 6.
- Joan Gerhardt – provide updates with the CAG as available on the report GE is creating examining the 153 acres in River Section 2 and 3 outside of the Dredge Area Delineation.[1]

Welcome, Introductions, Review of December Meeting Summary

The facilitators welcomed everyone to the meeting and reviewed the agenda. The CAG approved the December Meeting summary without any revisions. All CAG handouts and presentation slides are available within one week of CAG meetings on the project website: http://www.hudsoncag.ene.com/documents.htm. Additional related websites:

[1] Note there appears to be some question about the number of acres asked about by the CAG and about the purpose of the report GE is developing.

EPA's Hudson River Website	http://www.epa.gov/hudson/
EPA's Dredging Data Website	http://www.hudsondredgingdata.com
GE's Hudson River Website	http://www.hudsondredging.com

NYSDOH Fish Advisory Outreach Project
www.health.ny.gov/environmental/outdoors/fish/hudson_river/advisory_outreach_project/

Project Update on 2013 Dredging Season

Tim Kruppenbacher, General Electric Company, provided an update on the 2013 dredging seasons. Key points from his presentation included:

2013 Dredging Season (Phase 2, Year 3)
GE submitted the 2013 Remedial Action Work Plan and the Final Design Report to the EPA and is revising the documents based on their feedback. The Community Health and Safety Plan and the Remedial Action Health and Safety Plan are finalized and will be submitted with the final Remedial Action Work Plan in coming weeks. The Remedial Action Monitoring Quality Assurance Project Plan has already been approved.

One hundred acres of dredge material will be targeted this season. Crews will first dredge 20,000 cubic yards of material from behind Griffin Island (See slide 2, the dark blue shaded regions of the river west of Griffin Island) and then continue into the main stem of the river and south to Thompson Island Dam. As crews move toward Thompson Island Dam, another dredge operation will be implemented simultaneously between Lock 6 and Lock 5.

Mobilization activities started during the first week of April including pre-dredge bathymetric surveys to test new dredge prisms against the historic prisms, tree trimming, setting up the support facilities and reestablishing vessel traffic services. Assembly, calibration, and testing of the dredging equipment and the air and water quality monitoring equipment will be completed by the end of April. Dredging behind Griffin Island will begin in early May. Dredging south of Lock 6 is anticipated to begin two weeks after dredging begins at Griffin Island and rail cars are expected to be loaded with material three weeks after dredging begins.

Crews will continue to utilize the Moreau Barge Loading Area and the Work Support Marina for staging, and the new Saratoga Backfill Loading and Staging Area and the Route 4 Crew Parking Area will be used as dredging moves further south. Moving the backfill area further down river allows the crews to reduce the amount of travel time the barges must transit between river operations and reduces conflicts with recreational boaters. The infrastructure utilized in these two new locations is temporary and will be moved and reused as the project moves further south. Shaw Environmental and Infrastructure will continue to operate the processing facility, much of which was rebuilt during routine maintenance over the winter, and Finger Lakes Railway will operate the rail yard. Dredged materials will be shipped to waste disposal facilities in Oklahoma, Ohio, and Michigan. GE is coordinating with NYS Canal Corporation to set-up 24-hour lock operations.

The discrete nature of the material to be dredged during the 2013 season will present some challenges. Previously, dredge areas were bank to bank, but the distinct dredging locations in 2013 will require more movement about the river and increase the set up time at each location. Additionally, as the crews move downstream working up to approximately 11 miles from the processing facility, the 17 transport barges

will spend more time passing through the locks. Barges are always loaded to the maximum amount that allows for safe operations. Other anticipated challenges include maneuvering the equipment in shallow areas along the shorelines and variations in sediment material (clay, silt, and potentially rock).

Habitat Planting
Nearly 265,000 plants and 60 pounds of seed have been planted through CU 19. This is approximately 8.4 acres of sub-aquatic vegetation (SAV) and 2.3 acres of riverine fringing wetland (RFW). Divers plant SAV plantings at 3-8 feet of depth. The species planted in RFWs are suited for shallow habitat with intermittent inundation and exposure to the air. In 2013, planting of approximately eight acres of SAV will occur mostly along the west shoreline between CU 20 and CU 26. No RFW plant units are planned for this year, but some RFW seeding is planned.

Cultural Resources Investigations
In 2012, the 2013 in-river dredge areas were investigated from Thompson Island down to CU 74. The 2013 cultural resource investigations will start in CU 75 and continue to CU 100. Ten areas were identified during the 2012 investigation for 'in-field' verification, two of which required additional investigation: an old pier below Lock 6, and an area of cribbing in CU 73 / CU 74. Terrestrial archeological investigations of the shoreline occurred in 12 locations. Two historical sites were identified: a prehistoric site at the mouth of the Moses Kill and a historic boatyard near the Route 4 bridge.

CAG members had few questions or comments. One asked about a report that GE will be conducting sampling of the 153 acres the Natural Resource Damage (NRD) Trustees identified in River Section 2 outside of the Dredge Area Delineation (DAD). Joan Gerhardt clarified that GE committed to preparing a report for the Controller's Office that would be a re-examination of existing data, not new sampling. She said that sharing the report at the next CAG meeting would depend on whether it had been completed by that time and that she would check on what could be provided.[2] Another CAG member requested a more in depth presentation on habitat plantings during the project.

Fish Data Results from Fall 2012

Marc Greenberg, US EPA, presented the Fall 2012 fish data results. Key points from his presentation included:

The fish-monitoring program is designed to identify fluctuations in tissue contamination levels in four fish communities before, during, and after dredging to track interim risk and help determine if remedial dredging is working. The four target species monitored in the program, commonly caught by anglers, are large mouth and small mouth bass, yellow perch, yellow and black bullheads, and one-year old Pumpkinseed. Forage fish are also collected for analysis each fall. Approximately 500 fish tissue samples are analyzed each year, which provides an adequate sample size for robust statistical analysis. Sampling locations are located throughout portions of the Hudson River.

Comparison of the Black Bass baseline data to the 2009-2012 annual data shows that PCB concentration levels have generally remained constant, though they do increase when dredging occurs. This same pattern emerged with all target species. In that analysis, the PCB concentration levels of fish sampled in 2009 are lower than other years because dredging was ramping up and the dredging rates were not as high as in later years. This ramp-up limited the amount of time fish in the 2009 sample were exposed to increased levels of PCBs, resulting in lower PCB concentration levels in the fish tissue as compared with later years.

[2] Note there appears to be some question about the number of acres asked about by the CAG and about the purpose of the report GE is developing.

The EPA hypothesized that PCB concentration levels would increase with the onset of steady dredging operations. Although no dredging occurred in 2010, 2010 fish samples were elevated above 2009 concentration levels for most species as a result of dredging during the 2009 season. Other variables such as the rate of dredging and the flow of the river also influence concentration levels. Increased dredging rates during low flow conditions in 2012 elevated the PCB concentrations in the water column, and therefore may have increased the concentration levels found in the 2012 fish tissue samples.

Data from one-year old Pumpkinseed show elevated concentration levels in 2009 because they were likely hatched into conditions with elevated PCB concentration levels resulting from the commencement of dredging. In 2010, when no dredging occurred, the concentration levels dropped for one-year old Pumpkinseed. This is encouraging because it shows that Pumpkinseed appear to recover quickly once dredging stops. When reviewing the Pumpkinseed data for all river stretches, the data also shows a general decline in tissue concentrations as the distance from the PCB source to the sampling location increases.

Statistical regressions based on the baseline data indicates natural variability of approximately one order of magnitude within each year, within and among each sampling location, and within each river reach or section. Taking into account the natural variability of the data is important while evaluating the data for long-term trends. The EPA anticipates that short-term, dredging related increases in PCBs in Hudson River fish will rapidly return to baseline levels and continue to decline thereafter following remediation. Fish concentrations fluctuate in part because individual fish rid themselves of contaminants and in part because some die and new fish are born to an environment with lower exposure rates. This type of decline has been seen in a similar PCB dredging project in the Cumberland Bay in Plattsburgh, New York.

In addition to a clarifying question, a CAG member said she thought EPA expected a longer recovery than was originally anticipated in the Record of Decision (ROD). Marc Greenberg said that is possible, in part because the bioaccumulation model used in the ROD may have been over optimistic. When asked about rerunning the model, he said that the ongoing data collection and analysis is more representative of what is happening and what is likely to happen in the ecosystem than a model would be.

Navigational Dredging Update

Joe Moloughney, New York State Canal Corporation (NYSCC), presented an update on navigational dredging in their jurisdiction above the Federal Dam in Troy. Key points from his presentation included:

With the exception of the Hoosic River site that has clean sediment, the NYSCC has not dredged in the Hudson River portions of the Champlain Canal since 1980 due to the increased costs of dredging and disposing of PCB contaminated sediment. The cost of dredging contaminated material is estimated to be approximately $200-300 per cubic yard. Based on 2009 bathymetric data, the NYSCC estimates that over 600,000 cubic yards of contaminated sediment must be dredged from the navigation channel between Waterford and Fort Edward in addition to the environmental dredging being done by GE. Most navigational dredging needs in the Thompson Island pool will be met by GE's work; however, there is little to no overlap between GE's work and the navigational dredging needed between Lock 6 and Lock 5 or below Lock 5.

After the remediation project is completed, under the terms of its NYSDEC dredging permits the NYSCC must presume that all sediments, including those outside of the areas where GE is working, are contaminated with PCBs unless proven otherwise. NYSCC is now planning to take steps to begin to dredge the areas in the navigational channel for which they are responsible, even if it is expensive. They

will do this gradually over time by developing a plan and executing it step by step. The first step is to get permits and approval to do work. The NYSCC is working with the NYSDEC to fulfill certain requirements of its Section 401 Water Quality Certification (WQC), which requires (a) a sampling and characterization plan to protect water quality while dredging, (b) determination of disposal options, (c) a dredge operation plan describing in-river operations to protect water quality, and (d) a transportation and disposal plan for the contaminated sediment. No in-state disposal facilities are being considered. All of these plans must be approved by NYSDEC before action is taken. The plans will be applicable to the entire river (not site specific), but as the project progresses, DEC could require specific actions be taken based on contamination levels in specific locations. These plans will be available to the public after they have been approved by NYSDEC. The WQC is valid from 2012 to 2017. The NYSCC will not conduct fish tissue monitoring.

The NYSCC has also applied for Section 10 and Section 404 permits from the U.S. Army Corps of Engineers (ACOE) to resume dredging in the Hudson River once funds are secured. If approved as requested, these permits would be valid for ten years. ACOE posted a public notice of these permits on their website on March 11, open for public comment until April 10.

Once the NYDEC and ACOE permits are in place and funding is secured, NYSCC will prioritize dredging areas based on navigational importance then begin annual sediment sampling in the navigational channel. Dredging is expected to occur over a decade, and the NYSCC anticipates completing the work independently, possibly with outside contractors. NYSCC is exploring all options with regard to processing the dredged sediments, including setting up their own dewatering process, possibly on a portion of the existing facility site. The NYSCC's long-term goal is to incorporate the Hudson River portion of the Champlain Canal into a normal maintenance and dredging schedule.

CAG members had the following questions and comments after this update, responses from Joe Moloughney are in italics:

- Dave King asked when dredging last occurred below Lock 6 because this would help GE better understand volumetrically what they are looking at depth wise. Mr. Moloughney will search for this information and supply the CAG with the findings.
- Funding and Costs - A CAG member asked about the constitutional mandate that the canal be maintained. *The Constitution requires that the Canal shall not be abandoned and that funds be provided to ensure its continued operation.* Another CAG member asked if there is a method for passing the additional cost of dredging contaminated materials back to the party responsible for the contamination? A representative from the Attorney General's Office said it is something they are interested in exploring and she would talk with the CAG member who asked this outside of the meeting.
- Differing Clean Up Standards - The standards used by DEC and by EPA are different, with the DEC standard being more stringent at 1 ppm total PCBs, so contaminated sediment remaining in the river after GE completes the remediation project may be above the DEC standards. Given this and the movement of sediment within the river system, a CAG member expressed concern that this creates a long-term problem as the region moves toward the return of commercial traffic and larger recreational vessels to the river.
- Remedial Dredging in the Navigational Channel – What happens when GE dredges in the navigational channel? EPA said design and work plans are set up so that dredging in the navigational channel occurs to a depth of at least 14 feet if residual sediments are above EPA's standards. Caps may be placed on the remaining sediment, if needed, so that if new sediment covers the caps within the navigational channel and the NYSCC must dredge, they will not disturb the cap or the underlying residual materials. There is no plan for GE to re-dredge the

navigational channel if the NYSCC finds high concentration levels in navigational channel sediment after remedial dredging has been completed.

- Deep Waters – What happens in deep areas of the navigational channel (e.g. 25' or deeper)? Dave King said NYSCC is only required to dredge sediment shallower than 12' for navigation. However, if the sediment meets the GE criteria for removal, it will be removed under the current remedial work at any depth.
- Economic Development - Since the last CAG meeting, several Hudson Hoosic Partnership communities have hired an engineering firm to conduct studies for a possible future barge terminal. A CAG member indicated that she believes that ensuring that navigational dredging occurs regularly is essential for the long-term economic development of the towns along the Upper Hudson.

CAG Business

CBI Associate Eric Roberts has called CAG members who have not attended recent CAG meetings to check in with them and inquire if they are still interested in participating. He may try contact a few others in the coming weeks. Most people he has spoken with have indicated their interest in the ongoing work of the CAG and the project, and said they would attend if topics arose that they felt they needed to weigh in on. They also noted that it is hard to find time to attend and travel to meetings these days given workloads and travel limitations.

Suggested topics for the next CAG meeting include:

- Review the habitat replacement over the course of the project, ideally with photos of before and after for the different habitat types
- Presentation and discussion on freshwater mussels repopulation, habitat planning, and encroachment of invasive species with the NRDA
- Discuss benthic studies
- Update on GE report on the 153 acres in River Section 2 and 3 outside the DAD
- Community outreach and engagement update from EPA
- Health Advisory activity updates from DOH

Final Comments

- Updated dredging overview factsheets are available from EPA and on their website.
- A CAG member thanked David King and EPA for their work in securing the easement for a trail in Saratoga County.
- NYS DOH liaisons announced there are updated fish consumption advisories for Saratoga, Warren, and Washington Counties available on the DOH websites and that DOH's upper river water supply and swimming fact sheets will be updated and circulated to the CAG once completed.

Adjourn

The meeting adjourned at approximately 3:15 pm.