

**Community Advisory Group (CAG)**  
**Hudson River PCBs Superfund Site**  
**Meeting Summary**  
**Thursday December 9, 2010**  
**1:00 - 4:00PM**  
**Saratoga Springs, NY**

**Members and Alternates Attending:** Phil Dobie, Rich Elder, Rob Goldman, Charles Hamlen (for Aaron Mair), Manna Jo Greene, Richard Kidwell, Bill Koebbeman, Roland Mann, David Mathis, Althea Mullarkey, Sharon Ruggi, Lois Squire, Julie Stokes, Rebecca Troutman.

**CAG Liaisons Attending:** Mark Behan (Behan Communications for GE), Joan Gerhardt (Behan Communication for GE), John Haggard (General Electric), David King (USEPA), Gary Klawinski (USEPA), Joe Moloughney (NYSCC), Charles Sullivan (USNPS).

**Others Attending:** Danielle Adams (Ecology & Environment), David Adams (Saratoga County EMC), Chris Ballantyne (NYS DEC), Lee Coleman (Daily Gazette), John Fazzolari (Ecology & Environment), Ed Fitzgerald (SUNY School of Public Health), Robert Gibson (General Electric), Marc Greenberg (USEPA), Charlie Hanahan, Christine Hoffe (Washington County Tourism), Tim Kruppenbacher (General Electric), Tom Kryzak (Air and Earth, LLC), Bastiaan Lammers (Stuyvesant Environmental), Deepali McCloe (Ecology & Environment), Robert Meyers (Ecology & Environment), John Murray (Town of Stillwater), Patrick Palmer (NYSDOH), Deanna Ripstein (NYSDOH), Leonid Shmookler (Ecology & Environment), Mike Traynor (Louis Berger Group), Marion Trieste (Scenic Hudson), Charles Vandr  (NYS DEC), John Vetter (USEPA).

**Facilitators:** Ona Ferguson, Patrick Field.

**Members Absent:** Cecil Corbin-Mark, Mark Fitzsimmons, Richard Fuller, Robert Goldstein, Gil Hawkins, Preston Jenkins, John Lawler, Aaron Mair, Dan McGraw, Merrilyn Pulver-Mouthrop, Darlene DeVoe, Mindy Wormuth.

**Next meeting:** The next CAG meeting is scheduled for February 17, with a March 17 snow date.

**Action Items:**

- EPA will consult NYS Fish and Game about whether sample sizes for fish studies could affect overall river fish populations.
- EPA will present on floodplain work at the next meeting in response to a CAG request.
- Riverkeeper will share results from Peekskill anglers study when available.
- DOH will ask if the new DOH grant will include mid- or Lower Hudson communities.
- EPA will share results of 2010 Depth of Contamination data collection effort and estimated timeframe for project to CAG when the results are ready to share.
- CBI will follow up on invitations from CAG to agency heads.

**Welcome, Introductions, Review September Meeting Summary**

The facilitator welcomed everyone to the meeting. The draft September meeting summary was approved without any changes. All CAG meeting handouts and presentation slides are available within one week of CAG meetings at: <http://www.hudsoncag.ene.com/documents.htm>.

## TAG Grant Update

Continuing a conversation that began at the last meeting, Althea Mullarkey of Scenic Hudson briefly described past Technical Assistance Grant (TAG) grants received by Scenic Hudson. The grants focused on Record of Decision (ROD) and Engineering Performance Standards, and enabled Scenic Hudson to (a) hire consultants to work on these topics, (b) hold 12 workshops, mostly in Upper Hudson communities, a few located towards the Lower Hudson, and (c) submit three sets of comments (draft and final) on the engineering performance standards and design phase. Related documents are available on the Scenic Hudson website.

Manna Jo Greene of the Hudson River Sloop Clearwater reported that Clearwater just applied for and was awarded a \$46K, three year TAG to be used during Phase 2 of the dredging project. She hopes the TAG will help CAG members and the public understand both the information gathered and developed during the peer review period and the new technical performance standards that will go into effect shortly. Manna asked CAG members to recommend technical questions they'd like independent answers to that might fit within TAG parameters. She hopes to use the funding in a transparent and helpful way. Manna suggested a pre-meeting prior to the next CAG meeting to get input on ideas for TAG scope of work, topics and firms.

## Project Update, Including Anticipated Approaches for Phase 2

David King, USEPA, gave an update on the overall project. His slides can be seen at <http://www.hudsoncag.ene.com/documents.htm>. David noted that EPA is currently in negotiations with GE. EPA anticipates releasing the 15B document within the next week, which would set a deadline (assumed as January 10) for GE to decide whether to opt in or out of Phase 2. EPA has had over 25 meetings with GE since September and the parties likely will continue to meet until GE makes a decision.

David's presentation on current project efforts covered the following key topics:

- *EPA Decision* – The EPA decision, expected next week, will include the Engineering Performance Standards, Quality of Life Performance Standards, and Consent Decree Statement of Work Documents. GE will then elect whether to opt in or out.
- *Sediment Core Data Set* – As recommended by the peer review report, in order to gather better data, 475 cores have been collected by GE since September for a total of over 3,900 samples. The method used, sonic coring, is a different method than previously used and can drill through woody debris. The goal of this data collection effort is to more accurately determine the Depth of Contamination (DoC) so as to achieve removal of 95% of the footprint areas dredged. Results will be in by February, but show to date that complete cores had little variation when re-cored, and incomplete cores now have much more information. It appears so far that in some places there is more contamination than was previously known, in others less.
- *Number of Dredge Passes* – The peer review report recommended a single dredge pass system, but EPA believes it is likely that at times a second pass may be needed. An area will be dredged, then sampling will be done, and if there are still PCBs to be dredged there will be a second dredge pass. Upon completion of dredging, 3-6" of backfill will cover the river bottom to limit resuspension and a decision can be made to cap or not. The backfill will help close the certification units (CUs) quickly. John Haggard of GE noted that the average 3.5 dredge passes per CU in Phase 1 made it difficult to close areas quickly to prevent resuspension. The dredge design prism, being developed by GE with review by EPA, is becoming ever more accurate. The prism will be submitted with the final draft design.
- *Adaptive Management* – EPA is planning to implement adaptive management in order to improve practices over the course of the project.

- *Limit Capping* – EPA will set a lower capping metric for Phase 2 than the amount capped in Phase 1 (37%). Capping will be used for parts of the river bottom that cannot be dredged well (bedrock/clay areas and areas near structures like bridges, dams and cultural resources). These obstacles make it impossible to set a realistic goal of dredging 100% of the project area.
- *Productivity* – EPA will set a removal target of 350,000 cubic yards in the first year of Phase 2, which follows the guidance of the peer review report.
- *Model* – EPA continues to review the model GE developed, designed to be used for predicting resuspension and load.
- *Habitat Reconstruction* – Phase 1 habitat reconstruction is still underway. The best time for habitat reconstruction is in Spring the year after dredging.
- *Certification Units* – The plan calls for up to 19 CUs to be dredged next dredging season.
- *Ongoing Activities* – Baseline monitoring and fish sampling are ongoing. All dewatered sediments from Phase 1 have been shipped off-site. Floodplain sampling and removal actions are complete for 2010. Cultural resource investigations are ongoing for Phase 2 dredging areas.

CAG members discussed the following topics in response to EPA's project update presentation:

- *Depth of Contamination* – CAG members indicated their strong support for the effort to collect much more accurate Depth of Contamination (DoC) information for Phase 2 than was collected prior to Phase 1, as inaccurate DoC was the basis for many of the problems in Phase 1.
- *Comparisons with Phase 1* – CAG members noted their expectation that areas to be capped in Phase 2 should be significantly smaller than 37% given that the majority of capping occurred due to running out of time in the Phase 1 dredge season. EPA and GE acknowledged that there are lessons to be learned from Phase 1 in terms of what not to repeat.
- *Capping* – A CAG member asked about the percentage of dredge area expected to be capped in Phase 2 and estimated percentage of PCBs in the dredge area that would be left in the river. David said the intent is to get the mass of PCBs out of the river, not to cap. John Haggard noted that the GE's intent is to dredge the entire DoC in the 440-acre project area. GE expects to do two dredge passes, which should result in the removal of 97% of the areas dredged; and to cap only especially difficult areas. GE does not yet have an estimate of the surface area of the likely capping.
- *Redeposition* – A CAG member asked about metrics for monitoring resuspension and redeposition. David stated that EPA is doing a study to identify how far downstream the influence of resuspension and redeposition is seen.
- *Timing* – EPA and GE do not yet have formal estimates of how many seasons the dredging will take, but John Haggard noted that the dewatering facility needs to be upgraded for efficiency, and there may need to dredge in multiple areas of the river simultaneously.
- *Navigational Dredging* – A CAG member asked if there has been any movement toward including areas that need navigational dredging with this project's dredging scope. David replied that the scope has not expanded to include navigational dredging.
- *Monitoring* – A CAG member asked if there will be near field monitoring for resuspension and David King said there will be.
- *Input* – A CAG member asked if there will be time after the current EPA and GE decisions to discuss topics outside of the engineering performance standards and David said there would be.

## Fish Sampling Update

Marc Greenberg of USEPA's Office of Solid Waste Emergency Response presented EPA's fish sampling efforts in the Hudson River. The slides can be seen at <http://www.hudsoncag.ene.com/documents.htm>. EPA reported to the Peer Reviewers that in fall 2009 they identified some impact in pumpkinseed and forage fish tissue PCB levels compared to the 2004-2008 baseline. EPA concluded that resuspension of PCBs from sediments during dredging affected fish locally with greatest impact in the immediate vicinity of the dredging activity in Thompson Island Pool, but not more than three miles downstream from that area.

EPA's conclusions from 2010 observations are that (a) in adult sportfish there were no appreciable increases in the spring 2010 tissue concentrations of PCBs relative to the five-year baseline (2004-2008) period, (b) in Pumpkinseed, Fall 2010 data indicate that the tissue concentrations have already nearly recovered from the apparent dredging impacts that were reported in 2009, (c) short-term, localized increases in fish PCB levels were expected to occur during Phase 1 and these apparent dredging impacts were clearly observed within or immediately below the Phase 1 dredging areas, and (d) throughout the remainder of the project, any dredging-related, localized body burden increases of PCBs in fish observed in the short-term are expected to rapidly return to baseline levels, and should continue to decline thereafter following remediation.

CAG members discussed the following topics in response to EPA's fish presentation:

- *Sample Size* – Sport fishermen have identified a decrease in fish available for catch and release fishing in past years. A CAG member asked if the 500 fish caught for these studies could contribute to this decrease and indicated that he would like to see fewer fish sacrificed. Marc noted that EPA designed the sampling program carefully and that the number of fish taken from the river is unlikely to affect the overall river population. Marc indicated that he will check with NYS Fish and Game to confirm this. He said that at this time it is not possible to obtain the necessary level of data without sacrificing the fish, but EPA will stay abreast of new sampling methods during the process.
- *Plant Bioaccumulation* – A CAG member asked if anyone has tested plants along the Hudson for bioaccumulation. Marc said this has not been done because science to date (in non-Hudson settings) says that plants do not readily take up the types of compounds like PCBs. The current understanding is that biological effects of PCBs primarily are based on fish consumption. Deanna Ripstein of DOH agreed that she does not know of any Hudson-specific studies about plants and PCB uptake.

## PCB Health Studies

Deanna Ripstein, New York State Department of Health, introduced Ed Fitzgerald from SUNY Albany School of Public Health to present on the Hudson River Communities public health study. The slides can be seen at <http://www.hudsoncag.ene.com/documents.htm>. She also redistributed four fact sheets (previously distributed to the CAG).

The study was funded by the National Institute of Health and the Center for Disease Control, and all results except those on indoor air have been published in peer reviewed scientific journals. Ed is the Principal Investigator on the study. The goals of the study were to evaluate environmental exposure to PCBs and their potential effects on the nervous system of long-term residents between the ages of 55 and 74 in the study area (Hudson Falls and Fort Edward, with Glens Falls as a comparison area). The study evaluated the relationship between PCBs in blood and performance of the nervous system. Ed noted that PCB concentrations in blood may have been higher in the past, and that associations between PCBs in blood serum and nervous system function does not prove cause and effect.

Conclusions on exposure are that consumption of Hudson River Fish has decreased over time consistent with bans and advisories, and that past consumers of these fish had 30% higher serum PCB levels than those who did not eat the fish. Outdoor air PCB levels near peoples' homes are higher at properties closer to the Hudson River, but the differences are small and are not related to serum PCB concentrations. Indoor air PCB levels are 20 times higher than outdoor levels and are positively related to serum PCB levels for those who have lived in their homes for 39 years or more or if they were sampled in the cool season. A 50% increase in indoor air PCBs associated with a 10% increase in serum PCB.

Conclusions on nervous system function are that serum PCB concentrations are associated with deficits in verbal memory and more frequent symptoms of depression. Other studies of PCBs and of lead report cognitive and other nervous system effects in older people. There is a suggestion that older people may be a sensitive subgroup.

CAG members discussed the following topics in response to DOH's presentation:

- *Studies Downriver* – A CAG member asked if DOH has studied communities further downriver, especially subsistence fishing communities. Ed said they have not but will find out if a new DOH biomonitoring grant will include review of mid-Hudson or lower Hudson communities.
- *Anglers Study* – Riverkeeper just redid a 1990 Peekskill anglers study on fish consumption after years of education and will share results with the CAG.
- *Serum Blood vs. In Tissue* – A CAG member asked about the relationship of PCBs in blood vs. stored in fatty tissue, where concentrations tend to be higher. Ed said he believes that the levels in the blood and fatty tissue within single bodies are very highly correlated, so regardless of which you sample, exposed people will be at equilibrium through their systems.
- *Volatilization* – A CAG member noted reassurance from this study that outdoor air concentrations are small and don't seem to have much impact on blood serum levels, so it is possible the community could tolerate outdoor air quality exceedances without it showing up in the blood and causing symptoms.

### **Archaeology Studies Update**

John Vetter, USEPA, gave a cultural resources update on activities performed in 2010 and 2011. The slides can be seen at <http://www.hudsoncag.ene.com/documents.htm>. John reviewed the steps to finding and protecting cultural resources that have been undertaken to date, including decisions about avoidance versus mitigation and consultation with many other parties, especially SHPO, DEC, NPS and the NYS Museum. Major activities from 2003-2008 included surveys along the shoreline of Rogers Island, remote sensing of the Hudson River sediments, an underwater (diving) investigation to explore and learn about previous use, and review of the waterline location from Troy to Halfmoon and Waterford (which resulted in discoveries such as a Native American stone quarry and a hearth site).

Work performed in 2009-2010 includes the investigation of timbers from the Fort in Fort Edward, curation of important artifacts, and a terrestrial investigation. Protocols for discoveries were in place in Phase 1 and worked well. When timbers were found from the Fort, dredging was halted, an archaeological investigation of the Fort Edward site was carried out, and the timbers were removed. The timbers currently are being preserved at the Lake Champlain Maritime Museum, with the goal of making them available to exhibit. Next steps are terrestrial investigations of the Hudson river shorelines, especially low unprotected shores. Native American stone tools and metal buttons have been found, among other artifacts. There will be additional remote sensing work of the river bottom, with divers examining anomalies. GE will propose plans for underwater investigations for Phase 2 dredging following completion of current bathymetric surveys. NPS will perform additional underwater studies

near NPS parklands in portions of the Phase 2 project area, and EPA will coordinate efforts with Phase 2 designs.

A CAG member asked if the cultural resource work is impacted by the rising level of the river and John said EPA is very conscious of that and of having to do both underwater and terrestrial examinations.

### **CAG Business**

*CAG Membership Update* – Facilitators noted the following changes in CAG membership:

- Rich Elder, Environmental Director for Rensselaer County will now serve as Rensselaer County's CAG member.
- Darlene Devoe, Town of Fort Edward Grant Coordinator and Village Trustee for the Village of Fort Edward will now serve as Fort Edward's CAG member.
- The Saratoga County Board of Supervisors are working on updating Saratoga's member seats and should have that finalized prior to the next meeting.
- The Village of Stillwater intends to fill its seat prior to the next meeting.
- Christine Hoffer from Washington County Tourism will assist the facilitators to find someone appropriate to fill the vacant Tourism and Economic Development seat.
- The facilitators continue to seek suggestions for how to fill the agriculture CAG seat, and several CAG members suggested some leads.

*2011 Draft Meeting Schedule* – Facilitators reviewed the 2011 draft meeting schedule, which shows the CAG meeting approximately every quarter. CAG members noted their desire to meet several times during the dredge season so they can give timely feedback on the project.

*Meeting Date* – The next CAG meeting is scheduled for February 17, with a March 17 snow date.

*Invitations to Agency Heads* – CAG members asked the facilitators to follow up on the invitations sent from the CAG to agency heads to attend upcoming CAG meetings, as none but the head of the Canal Corps have yet attended.

*CAG Meeting Topics* – CAG members requested presentations at future CAG meetings when available on floodplains, the computer model (inputs, outputs, and assumptions), anticipated dredge duration and update on Depth of Contamination data collection results.

### **Adjourn**

The meeting was adjourned at 4:00pm.