

**Community Advisory Group (CAG) Meeting**  
**Hudson River PCBs Superfund Site**  
**Meeting Summary**  
**Saratoga Town Hall, Schuylerville, NY**  
**Thursday October 30, 2014**  
**1:00 PM – 4:00 PM**

**CAG Members and Alternates Attending:** Manna Jo Greene, Timothy Holmes, Abigail Jones, Jeffrey Kellogg, Richard Kidwell, Ed Kinowski, William Koebbeman, Roland Mann, David Mathis, Althea Mullarkey, Lois Squire, Andrew Squire.

**CAG Liaisons Attending:** Danielle Adams (Ecology & Environment), Bridget Boyd (NYS Department of Health), John Callaghan (NYS Canal Corp), Kevin Farrar (NYS Department of Environmental Conservation), John Fazzolari (Ecology & Environment), Joe Finan (National Parks Service), Joan Gerhardt (Behan Communications), Gary Klawinski (USEPA - Region 2), Timothy Kruppenbacher (General Electric Company), Chris Martin (National Parks Service), Joe Moloughney (NYS Canal Corporation), Larisa Romanowski (USEPA – Region 2).

**Others Attending:** Margaret Byrne (Hudson River Natural Resource Trustees & USFWS), Darryl Dumas (Hudson Crossing Park), Rich Furlani (resident), Marc Greenberg (USEPA), Robert Guay (Alcove Marina), Kathryn Jahn (Hudson River Natural Resource Trustees & USFWS), Regina Keenan (NYS DOH), Sharon Leighton (NYSCC), George Lukert (Ecology & Environment), Max Martin (Ecology & Environment), Brian Nearing (Times Union), Craig Nolan (citizen), Daniel Raidel (NRDC), Larry Russom (citizen), Jake Salt (Scenic Hudson), Mike Traynor (Louis Berger), Audrey Van Genechten (NYS DOH), Stephen Williams (Daily Gazette), Thomas Wood (Town of Schuylerville), Lauren [illegible] (Saratogian).

**Facilitators:** Ona Ferguson, Eric Roberts.

**Members Absent:** David Adams, Cecil Corbin-Mark, Chris Debolt, Laura DeGaetano, Darlene DeVoe, Rich Elder, Richard Fuller, Brian Gilchrist, Robert Goldman, Robert Goldstein, Timothy Havens, Gil Hawkins, Aaron Mair, Merrilyn Pulver-Moulthrop, Thomas Richardson, Julie Stokes.

**Next Meeting:** The next CAG meeting will be held in December 2014.

**Action Items:**

- Admin team to plan next CAG meeting. Proposed topics include a discussion on the RI/FS workplan and a presentation from EPA's contractor Skeo about a CAG review.
- Admin team to discuss channels for the public to communicate with the CAG.
- CAG members requested an update on the Squires' intake concern

**Welcome, Introductions, Review June 2014 Meeting Summary**

The facilitators welcomed the group and reviewed the agenda. The CAG approved the draft June 2014 meeting summary. CAG handouts and presentations are available on the project website: <http://www.hudsoncag.ene.com/documents.htm>.

**Dredging Project Update**

Tim Kruppenbacher, GE, presented on the 2014 dredging project. His points are summarized below.

The 2014 dredging goal was 350,000 cubic yards (cy), and the approach was the same as in previous years with backfill placement and/or capping following the dredging. Crews continue to operate 24 hours per day, six days per week. Backfill and cap materials were initially staged at the Saratoga Barge Loading Area (SBLA) and were then staged at the Rensselaer Barge Loading Area (RBLA) in Schaghticoke as operations moved south. The RBLA will continue to be used next season. Capping percentages are below the specified limits with only 7.3% (of the 11% standard) capped on the project to date. Approximately 2.5 million cy have been dredged during the project to date and next year GE estimates that the project will dredge approximately 250,000 to 300,000 cy.

*Main stem dredging* – Dredging this season removed 487,000 cy, or approximately 73 acres, of sediment from 16 completed or active Certification Units (CUs) between CUs 80 and 99. Certification Units 94, 95, and 96 will be completed next year along with two small subunits in CU 99 and CU 60 near the Thompson Island Dam. GE expects to finish dredging this season in early November and backfill/capping in early December. As of October 23, approximately 47 acres were backfilled and/or capped this season. The current crew change location is at Alcove Marina.

*Landlocked area dredging* – Dredging in the landlocked area removed 84,000 cy (more than 19 acres) of sediment this season. There are six CUs in the landlocked area; half of them have been completed. Backfilling/capping operations in the landlocked area are forecast to be completed for the season in late November. As of October 23, approximately 10 acres have been backfilled and/or capped in the landlocked area. The landlocked area was supported by the Landlocked Barge Loading Area (Northumberland) and the Isthmus Transload Area (Fort Miller).

*Processing Operations/Transportation and Disposal* – More than 850 barges have been unloaded to date. There have been more than 9,500 filter press drops (22 cy each) this season, an increase over last year. Trains began shipping in mid-June to same facilities in Oklahoma, Michigan and Ohio as in years past. To date, 52 unit trains have shipped. Trains to OK and OH are typically 93 cars and trains to MI are typically 65 cars. Each car holds 106 tons of material. Shipment is anticipated to continue until mid-December. Approximately 15% of the sediment dredged this year is non-TSCA.

*Habitat Reconstruction* – 2014 was a big year for habitat reconstruction. The team undertook reconstruction of Riverine Fringing Wetland (RFW) and Submerged Aquatic Vegetation (SAV) in the Thompson Island, Northumberland and Stillwater pools. Crews placed more than 130,000 RFW plant units over 13 acres and seeded approximately two acres above the waterline. This summer more than 194,000 SAV plant units were placed over approximately 18 acres. Herbivory control netting was also installed. Approximately 11.5 acres are slated for seeding below the waterline once the average water temperature falls below 40 degrees, and more than 800 live stakes (tree/brush type woody plants) will be planted this fall permitting weather conditions.

*Monitoring* – More than 900 water samples have been taken to date this season. During that time, no total PCB standard level exceedances for water have occurred, and the PCB load at Waterford, the far-field station, remained below the 14-day average standard. There have been six exceedances of the Air Monitoring standard out of 2,629 samples to date this season (2.46%), a significant improvement over last year. Monitoring is completed at the processing facility and near dredging operations. Best management practices are in use.

*Next Steps* – The next steps for this season include: complete main stem dredging, capping, and filling, demobilize dredging/backfill equipment, winterize work support areas and processing facility, complete shipment of sediments off site, plan for 2015, and repair or rebuild processing equipment as necessary.

CAG member discussion covered the following topics:

*Issues near irrigation intake infrastructure* – A CAG member and an alternate expressed concern that dredging operations were causing siltation that could impact their ability to use irrigation infrastructure and provide frost protection to their primary cash crop in spring 2015. They said they had contacted GE and the EPA to address the issue and felt the issue was not well addressed. They said the GE representatives they worked with lacked the necessary expertise and that EPA had not responded to their efforts to get in touch. Gary Klawinski, EPA, said he was aware of the issue, had reviewed GE’s assessment of the situation, and would look into the issue more closely within the next week. A CAG member requested that EPA notify the CAG of when action is taken to address the issue and the result of the action. Another member asked for clarification about how this concern compares to other similar requests. A GE spokesperson said that GE coordinates with people who use river water for various purposes and they have identified about a dozen people who use the water for agricultural or household purposes. If these users are downstream of dredging operations, GE provides them with alternate water supplies. Additionally, EPA oversees the work coordinated with the water users. She said that GE will continue to work on the specific situation raised at this meeting.

*Backfill in cove area* – A CAG member and Mr. Rick Furlani, a landowner who lives on a cove, voiced concern about the amount of backfill placed in a particular cove that inhibits development of a marina and achievement of the goal of promoting economic development. They said the shallow depth of the new sand and pebble river bottom, which was previously soft (“like yogurt,”) caused some boats to damage propellers as they attempted to navigate through the area. They also noted the creation of two small rock mounds that present boating hazards. Additionally, Mr. Furlani said water chestnut had not been sufficiently eradicated in the cove and would likely overtake the cove someday. Mr. Klawinski, EPA, said he had talked with Mr. Furlani about his concerns with marina development, and reported that EPA, NYSDEC, and GE worked closely to design workable restoration plans for this cove to provide boat access while restoring the conditions necessary to reestablish wetland vegetation. He acknowledged and expressed regret that some people are still upset with the outcome.

*Floodplains and Wrapping Up the Dredging Project* – A CAG member said the CAG needs more assistance understanding the technical documents and the plans for the work in the floodplains. Another CAG member requested that EPA provide information about the process to certify the completion of Operable Unit 2 (OU2) (i.e., the completion of Phase 2 dredging as designated by the 2002 ROD). In particular, she requested information about the events that must happen, who the responsible parties are, and when the events must be completed. Additionally, she requested information about what the Unlimited Use/Unrestricted Exposure (UU/UE, which means that the selected remedy will place no restrictions on the potential use of land or other natural resources<sup>1</sup>) means for the OU2 certification of completion.

Finally, a CAG member noted that a statutory five-year review will be required in 2017. She requested a programmatic five-year review prior to GE dismantling the dewatering facility to make any additional work requested in the review possible. Another member noted the importance of clarifying expectations so GE ensures the dewatering facility machinery is up to its task. A GE spokesperson commented that GE and EPA recently reached an agreement on the floodplains and that GE will continue to work in the floodplain and in the river on habitat and monitoring.

## **Habitat Reconstruction Overview**

Gary Klawinski, EPA, introduced the habitat reconstruction overview. The goal of the habitat reconstruction program is to mitigate impacts from the dredging remedy and may include reconstructing, replacing, or stabilizing Shoreline (SHO), Riverine Fringe Wetland (RFW), Submerged & Floating

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<sup>1</sup> See EPA’s Comprehensive Five-Year Review Guidance for more information:  
<http://www.epa.gov/superfund/accomp/5year/guidance.pdf>

Aquatic Vegetation (SAV/FAV), and Unconsolidated River Bottom (UCB). Mr. Klawinski noted that approximately 75% of the habitat construction is complete, then introduced Mike Traynor from the Louis Berger Group to give the full presentation.

Mr. Traynor reviewed maps of river sections highlighting when the section was backfilled and when planting occurred. Most areas were dredged and filled between 2009 and 2013 and planted between 2011 and 2014. Habitat reconstruction has been completed up to the Northumberland Dam area in river section two, and reconstruction will be completed in 2016 in river section three, which will be dredged next year.

Mr. Traynor briefly described the different habitats and the habitat reconstruction approach. SHO may or may not be vegetative. RFW is vegetation, typically on gently sloping bank. SAV grows underwater, and UCB, a mix of sand and gravel makes up three quarters of the river bottom between Fort Edward and Albany. The habitat reconstruction approach is planting/seeding with natural recolonization. Mr. Traynor compared the planting process to farming, noting that after plants are planted by hand or seed is sown, the reconstruction team does what they can to ensure the seeds sprout and the plants grow, but that factors outside of their control also influence success. Planting plans, which align bathymetry and the original locations of vegetation, are approved by EPA after review and consultation with federal and state agencies.

Approximately 19 acres of habitat were installed between 2011 and 2013. By comparison, approximately 31 acres have been installed in 2014, with additional work planned for fall. Approximately 95% of the RFW and 42% of the SAV installations to date took place in 2014. The increase in planting in 2014 is the result of improved planting techniques.

The team monitors habitat reconstruction to track success rates. Pre-dredge surveys were completed between 2005 and 2008, wetland delineations were completed in 2009, and RFW lines are re-verified every year. Celery bed reference sites are located south of Schuylerville. For RFW/wetland areas, quadrangle sampling is used to count and extrapolate how many plants grew in a given area. For SAV/underwater areas, underwater video is reviewed for plants reproducing via runners (mother/daughter plants). Benchmark monitoring results to date are positive, but it is still early in the monitoring phase and the 2014 data is pending. CU 8 is the only area performing poorly, although it is not yet clear that any intervention is needed.

CAG member discussion after the habitat reconstruction update covered the following topics:

*Invasive Species* – CAG members asked questions about and discussed invasive water chestnuts and native vegetation. The project has removed water chestnuts and replaced them with native vegetation in the cove area and near West Griffin Island and expects the probability of long-term survival is relatively good as they will remove invasive species identified during the first two years of monitoring post reconstruction. However, given that water chestnuts are growing alongside some of the areas receiving habitat reconstruction work, Mr. Klawinski said that if the reference areas are overtaken, it seems likely the reconstructed areas will also be taken over by it. Unfortunately there is no known solution to combat water chestnut.

*Monitoring* – A member asked how long monitoring will occur after planting and what standard will be used to define success. Mr. Traynor said there are two phases to monitoring. The first is benchmark monitoring for five years using a simple percent coverage method. Once the plants are established, the second, more robust monitoring occurs—this involves counting plants and completing statistical analysis on the data. Success criteria were developed during phases 1 and 2 and an adaptive management approach will be implemented after the benchmark monitoring is completed successfully, which they hope can be achieved within six years of planting a site. The benchmarks apply to individual reconstruction sites, and the success criteria apply to the entire river.

## **Fish Monitoring Update**

Mark Greenberg, EPA, presented an update on fish monitoring data from 2003-2013. Risk from fish consumption is the key driver for the remedy. Baseline, remedial action, and post-remedy monitoring has been completed since 2003; GE conducts monitoring every year under EPA oversight. Five hundred samples are collected annually from approximately 14 locations to provide an adequate sample size for robust statistical analysis. Filet samples are collected in the spring from Bass (top level predator), Perch (water column feeder), and Bullhead (bottom feeder). Whole body samples of yearling Pumpkinseed are collected annually in the fall.

The EPA hypothesized that short-term increases in PCB concentrations in fish tissues would occur during and after dredging and concentrations would decrease to levels equal to or lower than baseline conditions after remediation. Analysis of the 2009 to 2013 data sets of changes in fish tissue concentrations have confirmed this hypothesis so far. Similar trends have been observed in other PCB remediation projects (e.g. Cumberland Bay). Nevertheless, variation in the concentration data – which may be caused by flow conditions (flooding vs. low water conditions), fish-to-fish differences, river activities that resuspend sediments and PCBs, or other natural variance – is sometimes observed.

The data for black bass and pumpkinseed in River Section 1 tend to follow the general hypothesized trends noted above, however variability in the data is apparent at sampling site TD1. In TD1, concentrations in pumpkinseed spiked the year of dredging (2009) and then decreased the following year as anticipated, but also increased in 2011, 2012, and 2013. Similarly, concentrations in black bass spiked the year after dredging, then decreased in 2011 and increased in 2012. These results demonstrate that there are other impacts on the fish tissue concentrations besides the dredging.

If the anticipated trends continue, EPA expects to see a spike in tissue concentrations collected next spring in River Section 2. Fall samples in River Section 2 and 3 have been mostly at or near baseline, or spiking as expected (in the year of dredging in that area). Variance in River Section 2 data could be from dredging upstream that released PCBs downstream. For the most part, River Section 3 results are close to baseline for both spring and fall sampling events until a dredging event occurs.

Mr. Greenberg also noted that a study was initiated this year to examine the processing and fileting approaches of fish tissue samples (i.e. bone in vs. bone out fillets). The study will investigate whether or not different sampling approaches impart a difference on PCB concentrations.

CAG member discussion after the fish monitoring update covered the following topics.

*Lower Hudson:* In response to member questions about fish data in the lower Hudson, Mr. Greenberg said the data presented is only for the project area; however, samples are also taken in the lower Hudson and concentrations below the Troy Dam have been stable since the 1990s. CAG members asked that data from the lower river be included in future fish data presentations.

*Monitoring and Natural Attenuation:* CAG members asked if natural attenuation is included in achieving the Remedial Action Objectives (RAOs) and if it will be monitored. Mr. Greenburg said yes to both questions and indicated that long-term monitoring is scheduled for at least 30 years. Mr. Kevin Farrar, NYS DEC, said the NYS DEC and EPA could present monitoring in the lower river in the future.

*Variability in Concentration Data:* CAG members asked what the possible reasons might be for variability in fish concentration data and in particular for spikes in tissue at different times and locations. Mr. Klawinski said spikes could be due to related river activity such as large vessels moving through several times per day. He clarified that spikes would not be caused by the processing facility. Mr. Farrar

noted that there could be activity suspending sediments at the Moreau Barge Loading area, adjacent to sampling location TD1. Mr. Greenberg said that CUs that remained open for a relatively long time prior to capping in Phase 1 also could have contributed. Mr. Klawinski could not say at this time whether or not additional work would be required if spikes in elevated fish tissue contamination levels continue to be seen.

*Fish Consumption Risk:* CAG members asked about the risk of consuming fish from the upper Hudson River over time (though this is not currently allowed) and when people will be allowed to eat the fish again. Mr. Farrar said the ROD contains the estimated risk associated with fish consumption. Mr. Greenberg said that future fish tissue studies will indicate when fish become safe to consume at a particular rate over time (e.g. one fish per month) and that the team does not yet have a high degree of confidence about when fish concentrations will be low enough for consumption to be allowed

### **Brief Updates and CAG Business**

The following brief updates were provided:

- The CAG named David Roberts (Schuylerville Chamber of Commerce) as a member at a previous meeting. Instead, Tim Holmes will serve and David Roberts will be the alternate filling one of the Economic Development seats.
- Margaret Byrne (USFW) said that NRDA has two new factsheets available; please check their website. They are still soliciting project proposals and have proposal sheets available to fill out.
- CAG members requested a December meeting.
- Mr. Klawinski gave a brief update on the Floodplains Remedial Investigations/Feasibility Study (RI/FS): EPA and GE reached agreement on the Floodplain RI/FS and work is moving forward. With regard to the kayak launch discussed in September, GE completed the work there and the warning signs were removed.
- CAG members briefly discussed opportunities for the public to share their thoughts at CAG meetings, either via a public comment period or through representatives on the CAG. The CAG administrative team will discuss this.
- Manna Jo Greene offered an open invitation to a forum on the PCB cleanup of the Hudson on November 11, handed out the invitation and asked that CBI forward the invitation.
- CAG members expressed their need for assistance to review the floodplains RI/FS, in particular: how will areas be selected, what will be studied and why, and what types of data will be gathered. Larisa Romanowski, EPA, indicated that the CAG could use TAG or TASC support. She offered to invite someone from Skeo, EPA's TASC contractor, to see if someone would be available to attend the December meeting.