

Community Advisory Group (CAG) Meeting

Hudson River PCBs Superfund Site

Meeting Summary

May 14, 2019 | 1:00 – 4:30pm

Saratoga Springs, New York

Action Items and Future Agenda Items

- Future CAG agenda items:
 - Fish and water data, including fish recovery in the lower river and work plans for OM&M
 - Scope of work/work plan for filling data gaps for RI/FS for lower river
 - PCB transport from upper to lower river
 - Annual redeposition of sediment from high flows
- EPA and NYSDEC to coordinate a broader discussion of potential impacts from invasive species on public use of the Upper Hudson River. EPA:
 - Discuss considerations related to possible presence of PCBs on private properties in the floodplain including the potential for accelerating sampling schedule and prioritizing actions.
 - Continue to coordinate closely with NYSDEC regarding habitat restoration comments..

Future CAG Meetings¹

The next CAG meeting will be held on June 25, 2019, venue to be confirmed.

Welcome, Introductions, Review of the November 2018 Meeting Summary

Ona Ferguson, CAG facilitator, welcomed participants. The group finalized the October 2018 summary, pending a few suggested edits. CAG meeting handouts and presentations are available on the project website: <http://www.hudsoncag.ene.com/documents.htm>. Meeting participants are listed at the end of this summary.

Remarks from Regional Administrator Pete Lopez on recent EPA decisions

Regional Administrator Pete Lopez (EPA Region 2) shared two recent project decisions EPA has made:

- 1. EPA has decided that there is not sufficient data at this time to make a five-year review protectiveness determination. After reviewing the available data, including fish data, EPA has also determined that as many as eight years of data is needed to establish statistically relevant trends needed make a determination.**

EPA received nearly 2,000 comments on the five-year review during the public comment period. EPA coordinated closely with New York State Department of Environmental Conservation (NYSDEC), which had taken in over 1,100 samples, to review the data before making a determination. Mr. Lopez praised the collaboration and expressed appreciation for the collegial relationship between the two agencies.

- 2. EPA has certified GE's completion of the remedial action.**

¹ A CAG member requested that meetings be held in Schuylerville when possible to allow student representatives to participate.

Mr. Lopez clarified that the issue of the certificate was a legal decision made as a function of what was permitted within the 2006 consent decree: EPA laid out a set of tasks for GE in the consent decree and the record of decision (ROD). EPA is required to consider if the scope of work was completed and issue the certificate of completion if so. Mr. Lopez emphasized that GE is still responsible for meeting project objectives for the Upper Hudson river and that GE is required to continue to conduct operations, maintenance and monitoring. EPA will continue to monitor whether the river is recovering as anticipated and reserves the right to require additional work if data trends show that the river is not recovering as expected. The ability to consume fish is the key measure for the health and recovery of the river.

Mr. Lopez emphasized that the Hudson cleanup is not focused only on the upper 40 miles of the river. Work is now occurring in the floodplains and will occur in-river for the 160 miles down to the Battery in NYC. EPA is coordinating with DEC on studies for the rest of the river. Other additional potentially responsible parties (PRPs) may be identified for the Lower Hudson River. Mr. Lopez encouraged members of the CAG and the public to reach out to EPA at any time and emphasized that dialogue does not need to be limited only to CAG meetings.

Mr. Lopez acknowledged discussion of potential legal action against EPA by New York State regarding the certificate of completion.

CAG member questions and comments - *Responses from EPA are in italics:*

- Regarding monitored natural attenuation (MNA) as a remedial strategy: *PCB primarily reduce in concentration through mixing and burial in the sediment. Some natural breakdown does occur with PCBs but it is limited. Data to date continue to show reduction in PCBs in sediment and water. It is too soon to determine recovery in fish.*
- The Saratoga Chamber is thankful for the focus on looking in earnest at the floodplains and Schuylerville Canal. EPA and NYSDEC working together is a positive thing.
- What are the long-term plans to prevent contamination at Fort Hardy beach, particularly from high water events? *Redeposition of sediments is being monitored. NYSDEC flood mud monitoring is now included in the EPA program.. EPA takes samples of flood mud and monitors water high flow events. EPA also takes scrape samples on surfaces where mud accumulated. EPA is measuring what is being deposited and will share results when DEC provides them.*

Update on Hudson River Project Activities

Gary Klawinski (EPA) provided a project update.

1. Operations, maintenance, and monitoring (OM&M)

The clean-up has two parts: dredging, which has been completed, and natural recovery. Long-term monitoring of water, sediment, and fish is very important to assess recovery and identify trends. Scopes of work and work plans for monitoring are being refined and adjusted. EPA also instituted adjustments to the quality assurance plans. Caps continue to be monitored. Habitat monitoring will continue until success criteria are met.

Mr. Klawinski said all of the monitoring plans are undergoing review and are being built off of initial scopes of work outlined in Phase 2 documents (2010). EPA has worked on the sediment plan, including on year 0 data for sediment, and EPA plans to make adjustments to the sediment sampling program. Baseline monitoring is currently underway. Kevin Farrar NYSDEC, commented that NYSDEC had provided comments to EPA on operations and maintenance plans.

CAG member questions and comments - *Responses from EPA are in italics:*

- How does EPA determine what baseline data is needed without finalized plans? This data is important and data gaps need to be filled. *Sediment data is collected every five years. Adjustment can be made as needed to future sampling scopes of work.. Water and fish data are collected more frequently. Mr. Klawinski offered to discuss water and fish monitoring in more detail at a future meeting.*

2. Water Monitoring

A water monitoring work plan is under development. EPA is developing a plan, considering NYSDEC input, to share with GE. Baseline monitoring is underway; additional monitoring in lower river will continue. Safety is a consideration, as is the challenge of the river freezing in the winter. More detailed congener methods are now being used. To date, decreases in PCB loading in the lower river as a result of dredging in the upper river have been observed.

3. Surface Sediment

An initial scope of work for surface sediment monitoring was established in 2016. The program is designed to detect a change in concentration over a 10 year period (sampling every 5 years). It takes time to observe statistically significant changes.

4. Fish Monitoring

An OM&M workplan is under development, with ongoing conversations among EPA, NYSDEC, and GE. This includes working out the details of locations, species, and frequency of sampling. 2019 fish are being collected. Striped bass have already been collected from the Lower River. Additional collections will begin in June. NYSDEC is also doing fish collection.

5. Cap Monitoring

Caps were placed in areas where dredging could not meet the criteria for PCB removal because of, for example, physical difficulties like cobbles. In those cases, a mixture of sand and carbon was placed on top to isolate the PCBs, and then sand and rocks were placed on top of the isolation layer to armor the cap. A limited amount of capping was done as part of the dredging project..

The caps are evaluated following high flows to be sure the armoring and underlying caps have not been disturbed. Caps were surveyed last year. Caps from Phase 2 will again be surveyed in 2023, and then every 10 years thereafter. Phase 1 areas will be surveyed in 2028 and 2038. Monitoring is also required after significant flood events (see above). If there is a cap disturbance, evaluation is required and repairs are done as needed. So far, no significant disturbances to the caps have been observed, including after a 100-year flow event. Cap maps are

available. EPA and NYSDEC can email GIS shape files or print out maps as needed. Clickable layers in NYSDEC online mapping software will also be available in the future.

6. Habitat Monitoring

The remedy included reconstruction of habitat which was impacted during dredging. After checking that the plants were sound the year after reconstruction, habitat construction was approved through the certification of the remedial action. Currently, long-term operations and maintenance includes surveys, reviews, recovery, and response actions which are completed as needed on an ongoing basis. In the benchmark evaluation phase, criteria include: consideration of individual areas, observation of percent cover and species composition, and response actions identified as needed. The success criteria phase will be driven by consideration of larger areas and quantitative statistical evaluation. As requested, EPA could present details of habitat monitoring in more depth in a future meeting.

CAG member questions and comments - *Responses from EPA are in italics:*

- The CAG would like to understand significant differences between EPA and NYS understanding of habitat restoration.
- Are invasive species coming back? *Yes, in some limited areas. Removing everything from an area and rebuilding the ecosystem creates an opportunity for invasive species to come in.*
- Water chestnut has appeared where it was never previously present.
- Water chestnuts are our biggest complaint. They are spreading so quickly that they are choking off areas that were previously good for fishing or boating. *Project team members used nets to catch water chestnuts to prevent their movement during dredging. Water chestnuts also naturally move downstream. This invasive is a significant problem.. Water chestnut causes a number of challenges including access to the river and recreation. EPA is available to discuss the challenges associated with invasive species. (EPA and NYSDEC agree to discuss in more detail.*

7. Floodplain Comprehensive Study

Soil and standing water samples were collected to fill some of the 2018 floodplain data gaps. EPA is reviewing these results and will be sharing them with property owners. Discussions are underway with GE regarding the scope of sampling for 2019 and 2020. Near-shore in-river human use areas are also being evaluated.

CAG member questions and comments - *Responses from EPA are in italics:*

- *Financial impacts* - How many property owners are involved? Property values impacts mean substantial long-term impacts on property-owners along the river. Contamination means financial pain for land owners. People have had property value loss, cannot get loans, and are not being made whole. *Properties will be addressed as part of decisions for overall cleanup. It is difficult to predict a specific timeline. Interim actions are being done where short-term risks are identified..*
- *Protecting landowners* - Could EPA put in writing that contamination on a private property is a known issue and that GE is required to clean it up? Could this help

provide protection to a property owner seeking a loan, so the bank knows that responsibility for remediation will not fall to the property owner? *We communicate regarding sampling, sample results and next steps directly with land owners. Property owners could share this letter with financial institutions or others if they wish.*

- *Timing* - How long until this issue is addressed? For public areas, such as the old canal, kayak launch, and others, we urge you to move faster. The ROD process is a very long timeline.
- *Communication* - Private property owners may not understand what is being communicated to them or how to interact with the clean-up process. *EPA continues to closely coordinate directly with property owners*
- *Giving input* - Will the public have an opportunity to give input on the floodplain remediation design before it is complete? We would like the opportunity to comment as early as possible. *EPA will submit a proposed plan to the public for comment.*
- *Public access* - Kids want to wade and swim. The only places with beach access are areas with questionable contamination. Have access areas been tested? We need to know if it is safe where kids are swimming. *EPA agrees that the areas identified by the CAG member need to be considered for sampling. Any that have not yet been sampled will be done in 2019.* NYSDEC staff noted that the greater threat for PCB exposure is contact with floodplain soils, not swimming.

8. Lower Hudson River

EPA is available to discuss fish and water data in more detail at a future CAG meeting. In general, fish tissue recovery rates decline as you get further downstream. Some locations do not show a statistically significant recovery. EPA intends to move forward with data collection and supplemental studies in the lower river to evaluate next steps.

CAG member questions and comments - *Responses from EPA are in italics:*

- What is the timeline for a decision on the remedial investigation/feasibility study of the Lower Hudson (RI/FS)? *We are moving resources towards the lower river and determining the timeline. If we decide an RI/FS is necessary, we expect GE to be a responsible party. We will keep the CAG updated on the timeline and next steps.*
- What is EPA's process for identifying the data gaps that need to be filled to make a decision? Particularly, what is the scope of work? *We need to know where sediment has been moved. The Hudson River Foundation has provided a list of studies for the lower portion of the river. We met with NYSDEC staff, who shared with us data sets. We are putting that data into a GIS database. The EPA Superfund site extends to the Battery in NYC.*
- How are the fish in different parts of the river doing? *EPA will discuss this in more detail in a future CAG meeting. It is complex – some species have recovered in the lower river, others have not.* NYSDEC staff said for virtually every fish at every location, the best advice is for no one to eat any. In the upper river, fish regulations state that no one should possess or eat any fish. NYS Department of Health staff said that below the Catskills, some people can eat some fish once a month. DOH referred the group to publications that show more detail on that subject.

9. High Flow Monitoring

Samples are collected at Waterford and Schuylerville during high-flow events. High-flow sampling will be included in the OM&M work plans.

10. Flood Mud Sampling

Flood mud samples are collected after high-flow events. Not all locations have sediment during each event. Results of recent sampling are likely in June.

11. Old Champlain Canal Sampling

Surface sediment samples have been collected to evaluate the potential presence of PCBs. A second step will be to sample deeper cores where the town may remove sediment. EPA is coordinating with community groups and municipalities to minimize project delays due to the potential presence of PCBs in site soil and sediment.

Evaluation of 2016/2017 Data

Kevin Farrar (NYSDEC) and Ed Garvey (EPA consultant) presented evaluations of components of 2016/2017 fish data analysis.

1. NYSDEC overview of available sediment and fish data

NYSDEC completed surface sediment sampling as an element of the long-term monitoring program. Through this program, NYSDEC aimed to achieve greater spatial resolution at a pool-by-pool level, rather than by river-section ; and greater temporal resolution of five-year intervals. This analysis will help determine whether an 8% annual decline in PCB concentrations in five years will be achieved.

NYSDEC conducted sampling of forage fish and small sunfish in fall 2017 in each pool of the upper river. NYSDEC found that PCB concentrations in fish tissue varied by reach, reflecting the relative concentrations found in sediment in the reaches.

NYSDEC found that PCB concentrations in surface sediment and in fish tissue varied substantially among the reaches in the upper river. Analysis of river sections did not show this degree of variation in concentrations. NYSDEC found that surface sediment PCBs are representative of PCB levels in the water column. NYSDEC found that more data is needed to quantify the rate of change in surface sediment PCB concentrations to evaluate remedy performance.

CAG member questions and comments:

- Thanks to NYSDEC for conducting this analysis.
- Can you estimate the rate of change in concentrations now? Kevin said more data is needed to understand the rate of change and that this data collection must be repeated. EPA staff noted that they have more confidence as additional data is collected
- How does the rate of change in fish tissue look? Kevin said where the cleanup was, fish are doing better than for the average of the river. Generally, the data does not seem to be trending towards achieving EPA's target by five years and 16 years post-dredging. A more than 20% rate of decline would be needed to reach the five-year

target, and a 10-15% average rate of decline would be needed for the 2031 standard. DEC thinks it is likely that further remediation of contaminated sediments will be required.

2. EPA summary of technical memorandum on 2016/2017 surface sediment data

The scope of the surface sediment sampling program was established in 2016. Sediment samples are to be collected every five years starting in 2016. The program is designed to detect a 5% annual change in concentration after 10 years.

Of the more than 1,400 samples EPA reviewed, four were above ROD criteria, and eight were above River Section I ROD criteria. Some movement of sediment has occurred into dredged areas as expected. EPA found that substantial reductions of PCBs have occurred in surface sediment, though the rate of decline in concentrations cannot be accurately predicted yet. EPA has identified three “areas of interest” which had elevated levels compared to adjacent areas: Galusha Island, Upper Mechanicville, and Lower Mechanicville Dam. EPA found no evidence of substantive recontamination, and found that backfilled areas remain at low levels. EPA found that NYSDEC and GE/EPA data agree within the range of statistical uncertainty.

May 14, 2019 CAG Attendance

| Name | Affiliation (Seat/Role) |
|-------------------------------|---|
| <i>CAG Members</i> | |
| Erin Doran | Riverkeeper, Inc (Environmental Group – Lower Hudson) |
| Maureen Ferraro-Davis | Sierra Club (Environmental Group – Upper Hudson) |
| Peter Goutos | Saratoga County Chamber of Commerce (Economic Development, Tourism, and Recreation) |
| David Mathis | (Recreational Boating) |
| Althea Mullarkey | Scenic Hudson (Environmental Group – At Large) |
| Terry Middleton | Town of Fort Edward (Washington County) |
| Julie Stokes | Schuylerville Area Chamber of Commerce (Economic Development) |
| <i>CAG Alternates</i> | |
| Hayley Carlock | Scenic Hudson (Environmental Group – At Large) |
| Daniel Carpenter | Village of Schuylerville (Saratoga County) |
| Andrew Squire | Town of Easton Resident (Agriculture and Land Conservation) |
| Linda Von der Helde | Rensselaer County Economic Development and Planning (Rensselaer County) |
| <i>CAG Liaisons</i> | |
| Danielle Adams | Ecology and Environment (HRFO Liaison) |
| Elizabeth Cooper | Consensus Building Institute (CAG Facilitator) |
| John Davis | NYS Office of the Attorney General (NYSDOJ Liaison) |
| John Fazzolari | Ecology and Environment (HRFO Liaison) |
| Gary Klawinski | USEPA Region 2 (USEPA Liaison) |
| Tegan Kondak | Ecology and Environment (E&E Liaison) |
| Larisa Romanowski | USEPA Region 2 (USEPA Liaison) |
| <i>Other Attendees</i> | |
| Dan Lundquist | River resident |
| Mike Cavanaugh | Stillwater Central School District |
| Joe Battipaglia | USEPA |
| Ed Garvey | Louis Berger |
| Mike Cheplowitz | USEPA |
| David King | USEPA |
| Kevin Farrar | NYS Department of Environmental Conservation |
| Susan Edwards | NYS Department of Environmental Conservation |
| Jess LaClair | NYS Department of Environmental Conservation |
| John Armitage | NYS Department of Environmental Conservation |
| James Woods | NYS Office of the Attorney General |
| Brittany Haner | NYS Office of the Attorney General |
| Andy Guglielmi | NYS Department of Environmental Conservation |
| Bill Richmond | Behan Communications |
| Marie French | Politico |
| Kevin Farrar | NYS Department of Environmental Conservation |

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| Tara Gaston | Saratoga County Board of Supervisors |
| Slawomir Kopec | USEPA |
| Doug Niles | Resident – Town of Saratoga Lake |
| Regina Keenan | NYS Department of Health |
| Angela Martin | NYS Department of Health |
| Gwendolyn Craig | The Post Star |
| Paul Rest | ----- |
| George Lukert | Ecology and Environment |