



# Hudson River PCB Superfund Site Project Update

Community Advisory Group Meeting

Thursday, March 29, 2018

1-4 pm

Saratoga Town Hall

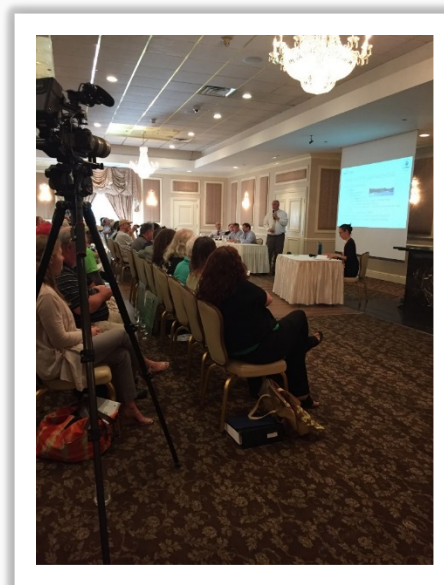


- 2<sup>nd</sup> Five-Year Review- finalize report/response to comments
- Remedial Action Completion – GE request for certification
- Operations, Maintenance and Monitoring (OM&M)
  - 2017 fish processing and PCB analysis
  - Surface sediment sampling data evaluation (EPA and DEC)
  - Water monitoring
- Ongoing data collection - 2018 work
- Other items

# Five-Year Review Report



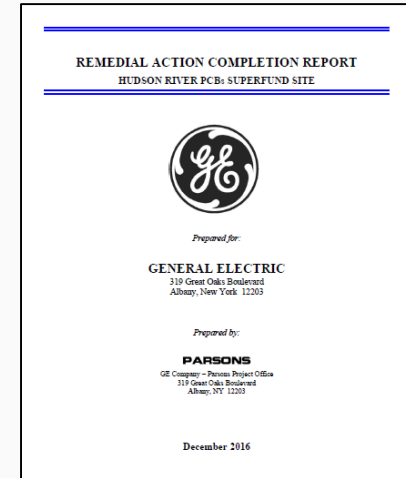
- Draft report released June 1, 2017
- Comprehensive report (covers 5-year period)
- Extensive public outreach
- Public comments – 3 months- until Sept 1
- Over 2,000 comments received
- Relies on data collected up to end 2016
- EPA taking the time necessary to carefully consider all comments
  - Developing response to comments
  - Revisions to report as appropriate
- Final decision on protectiveness (under consideration)



# Remedial Action Completion



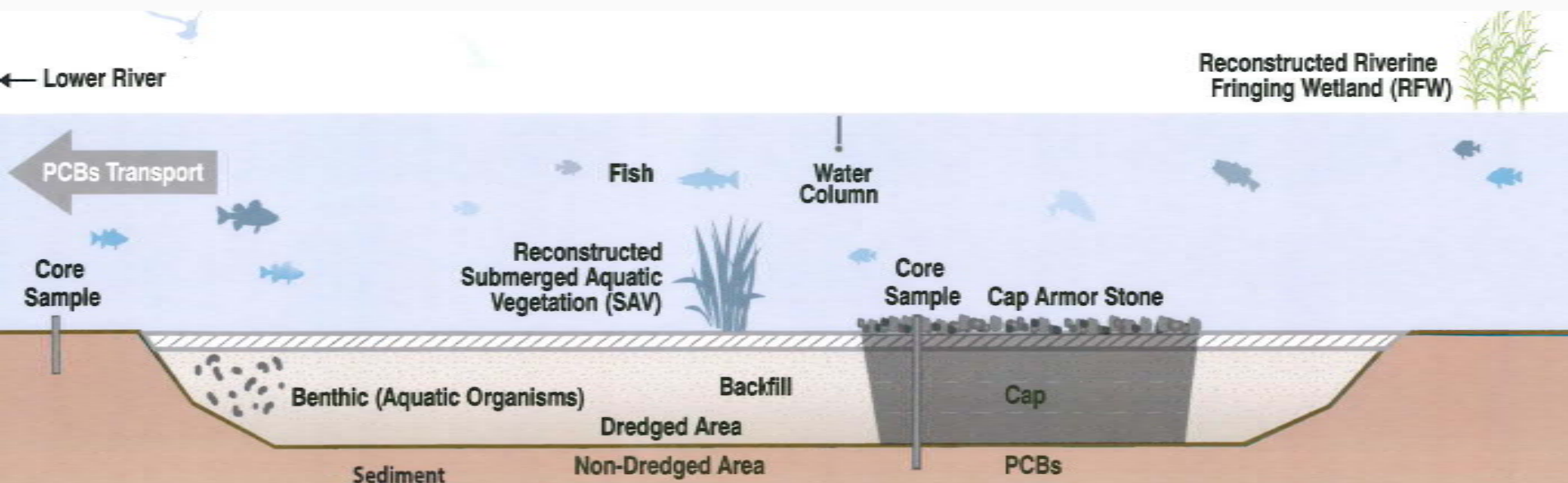
- Remedial Action Completion Report
  - GE's Report is dated Dec 23, 2016
  - Majority of the document includes previously approved items (with the exception of the facility demobilization/cleaning of facility portion of the report)
  - EPA oversight of work
- EPA responded to GE on January 2, 2018
  - EPA expects to complete the Second Five-Year Review prior to responding to GE's request for certification
- Next steps:
  - EPA Review is ongoing
  - Review Trustee comments
  - Provide GE comments on report



# Operation, Maintenance, and Monitoring



- Remedy/Cleanup – two parts: dredging and natural recovery
- Long-term monitoring includes:
  - Fish, sediment and water
  - Caps – limited capping
  - Habitat – including restoration
- Extensive data analysis to track recovery





# Fish Monitoring



- Work plan - Under development (ongoing discussions with NYSDEC and GE)
  - Baseline and supplemental monitoring continues
- Ongoing activities:
  - Laboratory location change
    - Fish collected in 2017 (sport and small) being processed now
    - EPA oversight – confirm fish being filleted properly
    - Data anticipated summer of 2018
  - Supplemental fish sampling – additional locations (in certain reaches) being added species being added as appropriate
  - 2018 spring sampling planned for April/May/June
- NYS collects additional fish in upper and lower river



# Surface Sediment Monitoring

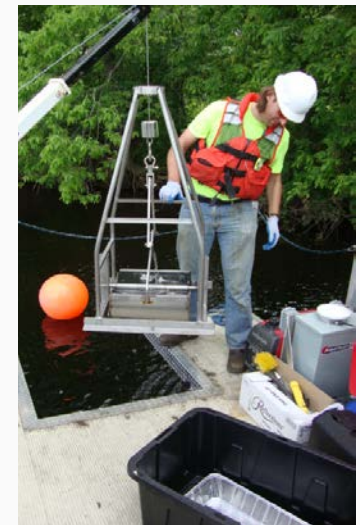


- Outside dredge areas sampled in fall 2016, inside dredge areas sampled fall 2017 (GE)
- NYSDEC collected ~1,800 samples summer 2017
- Data is being shared between EPA, DEC and GE
- Some commenters suggested that EPA should consider additional data collected by DEC
- EPA has initiated review of DEC data in collaboration with NYS
  - Goal – come to consensus regarding interpretation of data and conclusions
  - Process is ongoing - additional meetings and discussions scheduled
- Evaluation is separate from five-year review

# Surface Sediment Monitoring



- Evaluation includes consideration of:
  - PCB data
  - Aroclor and congener patterns (Tri+)
  - Grid and sample locations
  - River reach and River section (abandoned locations)
  - Average PCB concentrations – surface weighting
  - Recoverable sediment
  - Total organic carbon
  - River bottom conditions – sediment texture
- Sampling again in approximately five years





# Water Monitoring



- Work plan - under development (ongoing discussions with NYSDEC and GE) – baseline/off-season monitoring continues
- Three locations sampled weekly (Thompson Island, Schuylerville, Waterford)
- Other locations monthly (Bakers Falls, Lower Hudson River)
- High flow sampling (15,000 cubic feet per second at Fort Edward and 22,500 at Waterford) – multiple events sampled in 2018 so far
- Laboratory location change and method adjustment
- Most sampling now from bridges
- Samples analyzed for
  - Total suspended solids
  - PCBs using congener methods



- Work Plan - established
  - Year 1, year 5, and year 10 surveys after construction, then 10-year surveys into perpetuity
    - For example 2011 caps surveyed in 2012, 2016, and 2021
  - Surveys after flood events
  - If cap disturbance – evaluation required
    - Repair as needed
  - Phase 2 cap surveys to be done this year (2018)



# Habitat Monitoring



- Remedy includes monitoring the restoration of aquatic vegetation
- Currently in Benchmark Evaluation Phase
  - Typically five years, including year of planting (Phase 1 areas restored in 2010 likely to transition to success criteria in next few years)
  - Observation of percent cover and species composition
  - Purpose: to monitor progress of initial plantings and natural recolonization
  - Comparison of individual areas to reference areas
- Success Criteria Phase
  - Quantitative, statistically-based evaluation
  - Habitat-specific
  - Comparison by river reach to reference areas



# 2018 Data Collection



- Fish
  - April/June - sport fish collection
  - Fall - forage and pumpkinseed fish collection
- Water
  - Baseline/ off-season monitoring until OM&M work plan approved
- Caps and engineered shoreline
  - Phase 2 caps will be surveyed in 2018
  - Shorelines survey (as needed)
- Habitat
  - Surveys and restoration maintenance as needed



## Species Weighted Average Fish Tissue PCBs (2004-2016)

UHR Largemouth Bass, Brown Bullhead, and Yellow Perch Expressed as Species Weighted Average (mg/kg-wet weight, TPCB-Aroclors) 2004-2016

RS and Species	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*	2016*
RS1 Largemouth Bass	1.98	2.29	2.53	2.04	1.45	0.67	2.16	1.05	1.56	2.30	2.18	2.50	1.16
RS1 Brown Bullhead	6.33	4.02	3.99	4.30	2.11	3.07	6.14	3.41	6.63	4.03	3.93	1.81	1.66
RS1 Yellow Perch	2.39	0.96	1.81	0.94	0.61	0.84	0.84	1.12	2.00	1.11	1.37	1.07	0.51
RS2 Largemouth Bass	2.72	1.94	2.33	1.94	0.87	0.77	1.63	1.43	2.02	1.84	2.85	2.05	0.71
RS2 Brown Bullhead	5.63	5.90	4.14	3.15	5.19	3.98	2.70	3.98	5.85	4.89	5.00	1.98	2.02
RS2 Yellow Perch	1.66	0.61	1.29	0.43	0.45	0.50	0.76	0.75	1.27	1.02	1.81	1.23	0.61
RS3 Largemouth Bass	1.33	1.05	2.05	0.82	0.54	0.67	1.25	0.69	2.47	1.69	1.73	0.83	1.41
RS3 Brown Bullhead	2.42	3.53	3.93	3.15	1.66	2.00	1.81	2.46	2.14	2.12	3.81	1.75	1.21
RS3 Yellow Perch	1.31	0.37	0.66	0.42	0.28	0.26	0.26	0.30	0.55	0.44	2.53	0.62	0.34
ROD Species* Length UHR Weighted Average	2.53	2.66	3.01	2.03	1.33	1.44	1.78	1.67	2.52	2.10	2.87	1.42	1.25
RS1 Species Weighted Average	4.81	2.91	3.09	2.92	1.66	1.94	3.35	2.10	3.39	2.98	2.88	1.98	1.32
RS2 Species Weighted Average	3.90	3.52	3.03	2.20	2.14	2.19	2.02	2.49	3.55	3.07	3.70	1.94	1.28
RS3 Species Weighted Average	1.81	2.31	2.98	1.81	1.01	1.21	1.41	1.44	2.15	1.79	2.72	1.21	1.23

\* 2015 and 2016 data are preliminary (data validation is on-going)





- Remedial Action Consent Decree
  - Certification of Completion of the Remedial Action
    - Certifies that GE has done the required construction work
    - It does not indicate that the cleanup is over – monitored recovery continues
    - GE remains obligated – including long-term monitoring
    - Reopener provision
  - Certification of Completion of the Work
    - Once all the work is complete and the remedial objectives are met (such as the goals for reductions in PCB levels in fish tissue)
- Lower River – follow up
  - Surface sediment sampling Albany/Troy
  - Ongoing fish and water collection
  - Ongoing collection of data/information
    - Close coordination with NYS





# Questions

