



Hudson River PCB Superfund Site Project Update

Community Advisory Group Meeting
October 27, 2016



Project Update Overview



- Floodplains
- Operation, Monitoring and Maintenance
 - Fish
 - Sediment
 - Water data
- Facility decommissioning
- Habitat reconstruction
- Five-year review

Floodplain Update



2016 Soil Sampling Purpose



- Objective - refine our understanding of the nature and extent of PCBs in the floodplain (where and at what concentration PCBs are in the floodplain)
- Existing Data
 - 7,500 soil samples collected to date

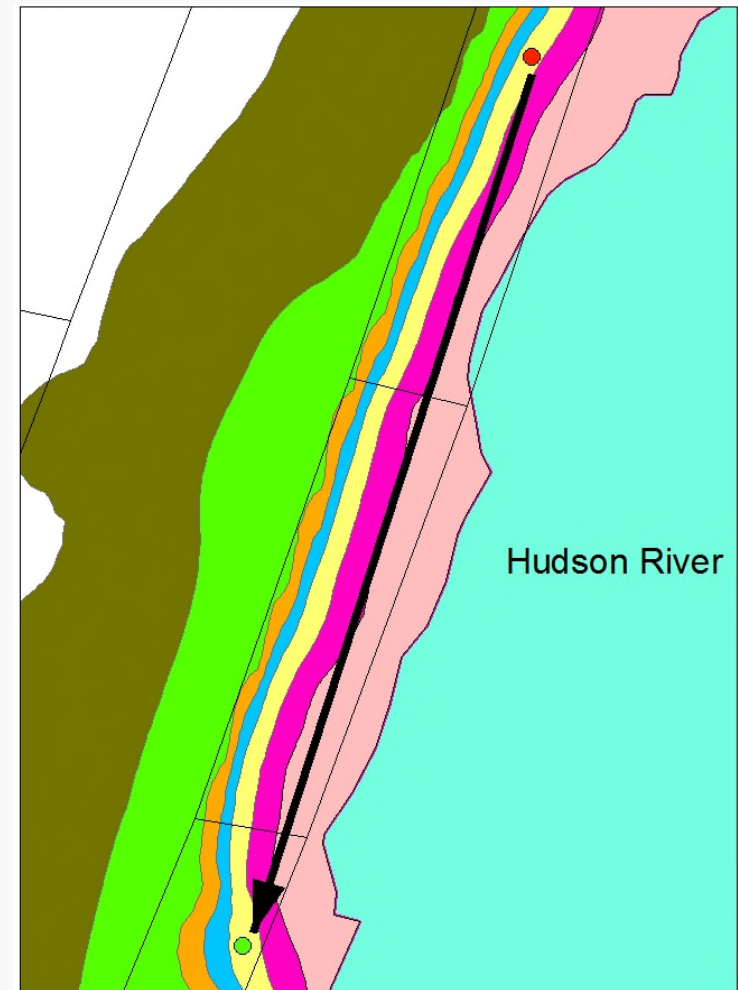


2016 Soil Sample Selection



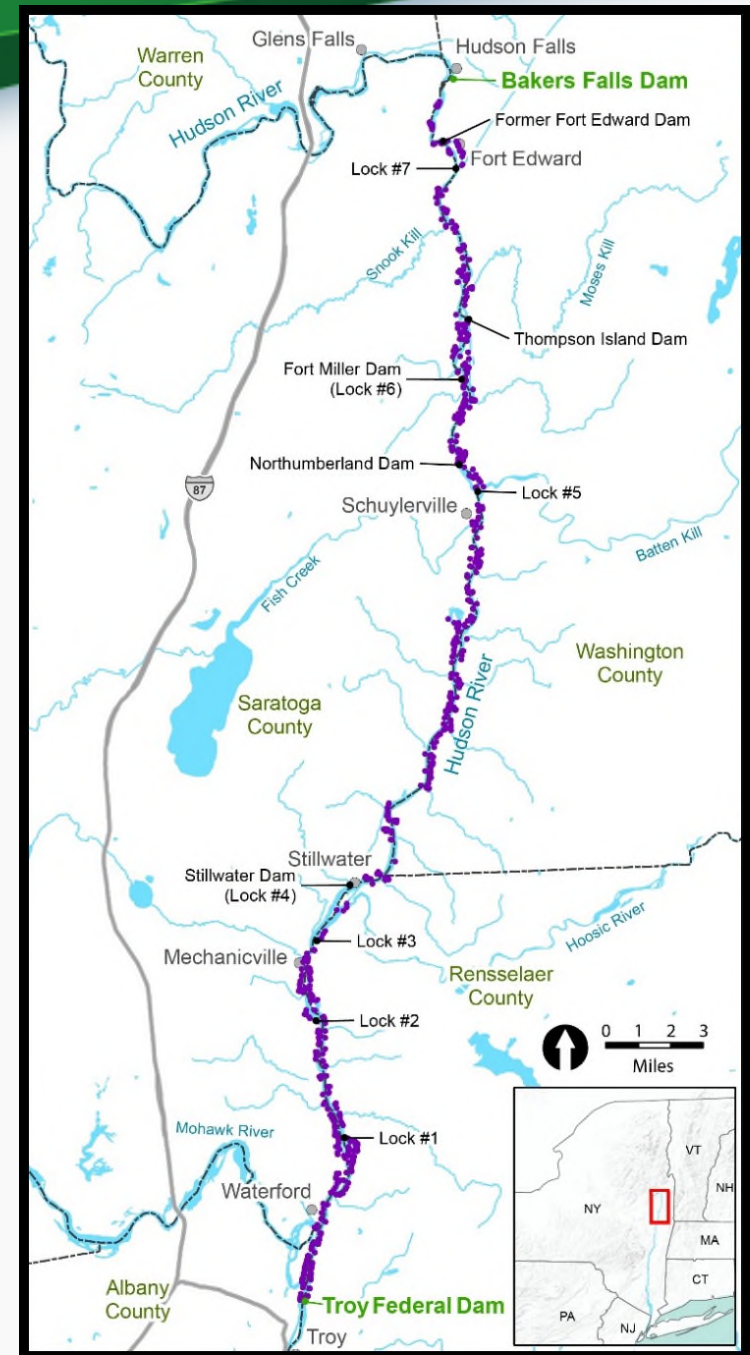
Overall Sampling Approach:

- Number of samples determined by statistical needs
- Specific locations selected based on: spatial distribution, land cover type and existing data
- Over 900 locations targeted
 - Work started this week
 - Expected duration 6 – 8 weeks
- Access ongoing to over 400 properties – \approx 250 granted
- Alternative sample selection ongoing



Other Field Activities

- Continue to identify:
 - Standing water areas
 - Human use areas
 - Other areas of interest
 - Culverts
 - Old Champlain Canal
- 2016 soil cover repairs
 - Three properties
 - Repairs due to erosion
 - Work completed this week



Next Steps



- PCB results with map will be provided to property owners
- Sampling data will be incorporated into comprehensive study
- Additional sampling anticipated in 2017
- Finalize approach for screening level ecological risk assessment
- Begin screening level ecological risk and human health risk assessments





Questions?

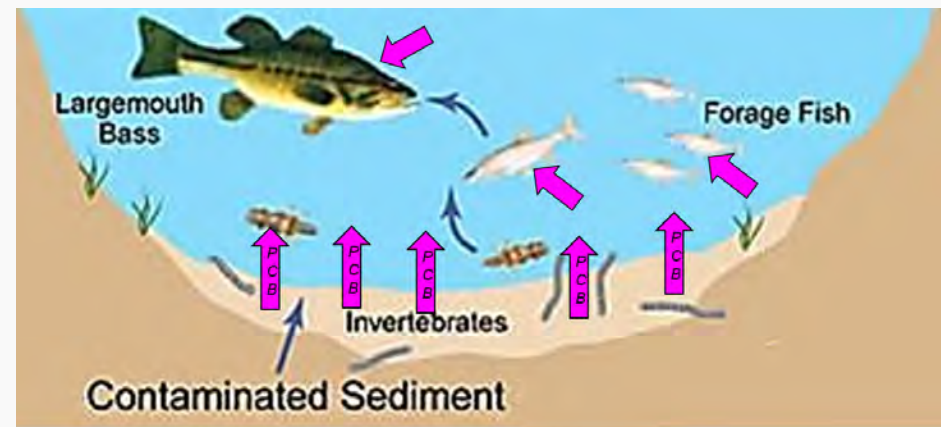


Operation, Maintenance and Monitoring (OM&M) Update

OM&M Update



- Purpose of OM&M: Monitor recovery of the river over time
- Scope for OM&M initially established in 2010
- Adjustments may be made as technically appropriate
- Fish, water and sediment data have been collected for many years and will continue for the foreseeable future
- Fish, sediment, and water interact and are closely linked
- Caps and habitat will be discussed separately
- Monitoring programs will transition to OM&M in 2017



Fish Monitoring



- EPA is reviewing the preliminary 2015 fish data (just received)
- SOPs for fish processing and analyses carefully reviewed over the past several months and recently approved allowing for 2016 fish processing and analysis
- 2015 fish data will be included in the five-year review
- 2016 fish data are expected to be included in the five-year review
- Fish OM&M program will be discussed in more detail in 2017



Questions?

Sediment Sampling



- Objectives:
 - Determine post-remediation levels in sediment in non-dredge and dredge areas
 - Determine the sediment recovery rates
 - Support evaluations of fish, water and sediment TPCB concentrations during the post remedial monitoring time period
- Historic sediment data sets include pre-design, design and special study data (collected for other purposes)
- 2016 sediment sampling work plan approved
- GE is mobilizing this week and data collection expected to begin on Monday
 - 0 – 2" Surface grabs (Van Veen Sampler)
- Approximately 375 sediment samples expected in 2016
- Additional sampling events every 5 years



Sample Design

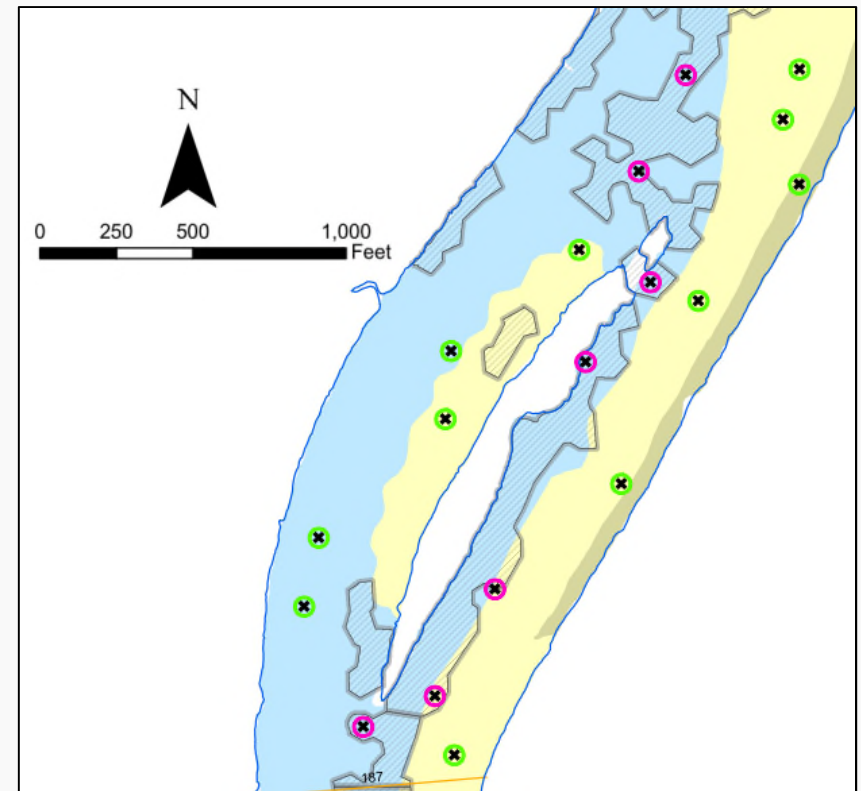
- Analysis conducted to assess whether a 5% per year change (decline) in surface sediment TPCB concentrations could be detected in a 10 year time period (spanning 3 sampling events: 0, 5 and 10 years)
- The sample design focuses statistical power in RS2 and RS3 as those areas were dredged less extensively
- Number of samples accounts for expected variability in each River Section

	Number of Samples		
River Section	Non-dredged areas	Dredged areas	Total
1	35	31	66
2	70	52	122
3	121	66	187
Grand Total	226	149	375

Sediment Sampling Locations

Unbiased sampling program developed

- River divided into 1-mile segments
- Locations selected randomly within each river mile between dredged and non-dredged areas
- Number of dredged vs non-dredged samples based on amount of dredging in each river mile
- Backup locations have been selected randomly in the event a sample cannot be recovered (obstructions, coarse-grained areas, etc.)





Questions?

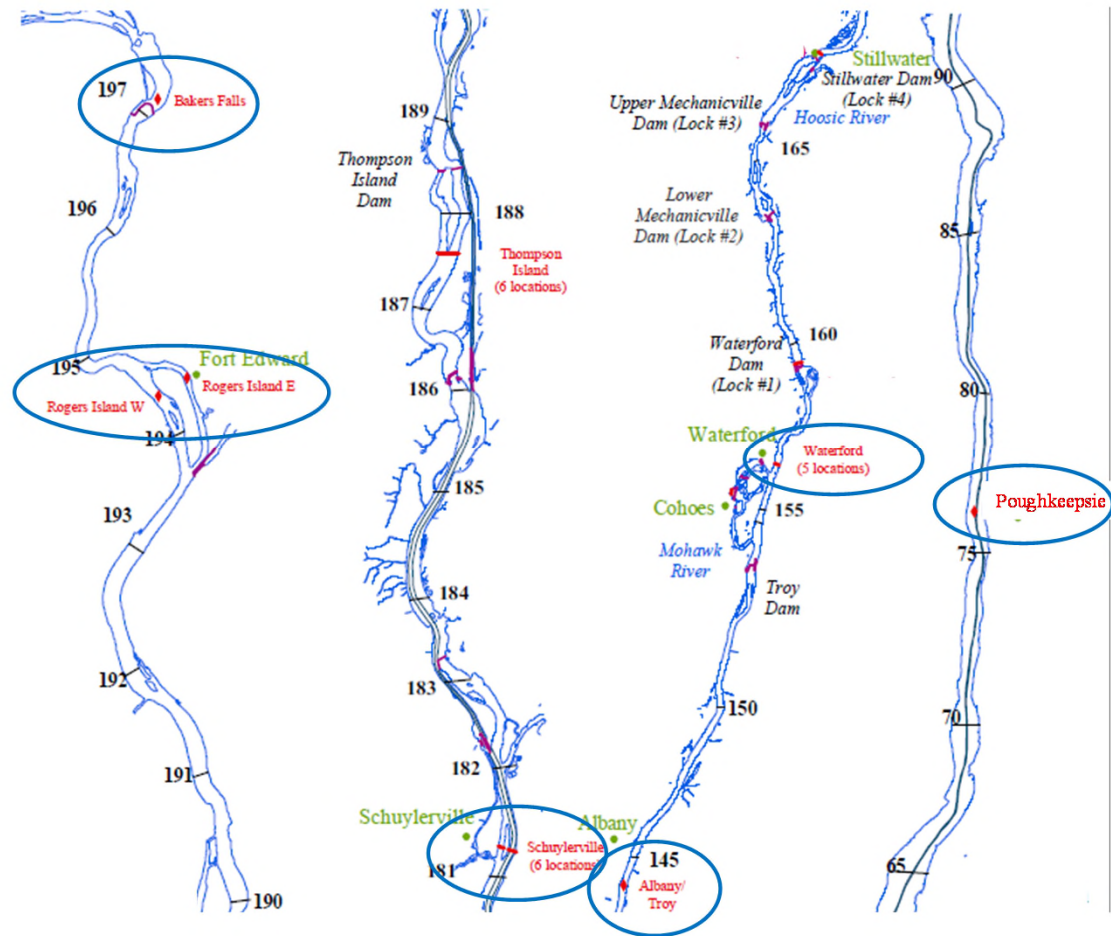
OM&M Update



Water data collection

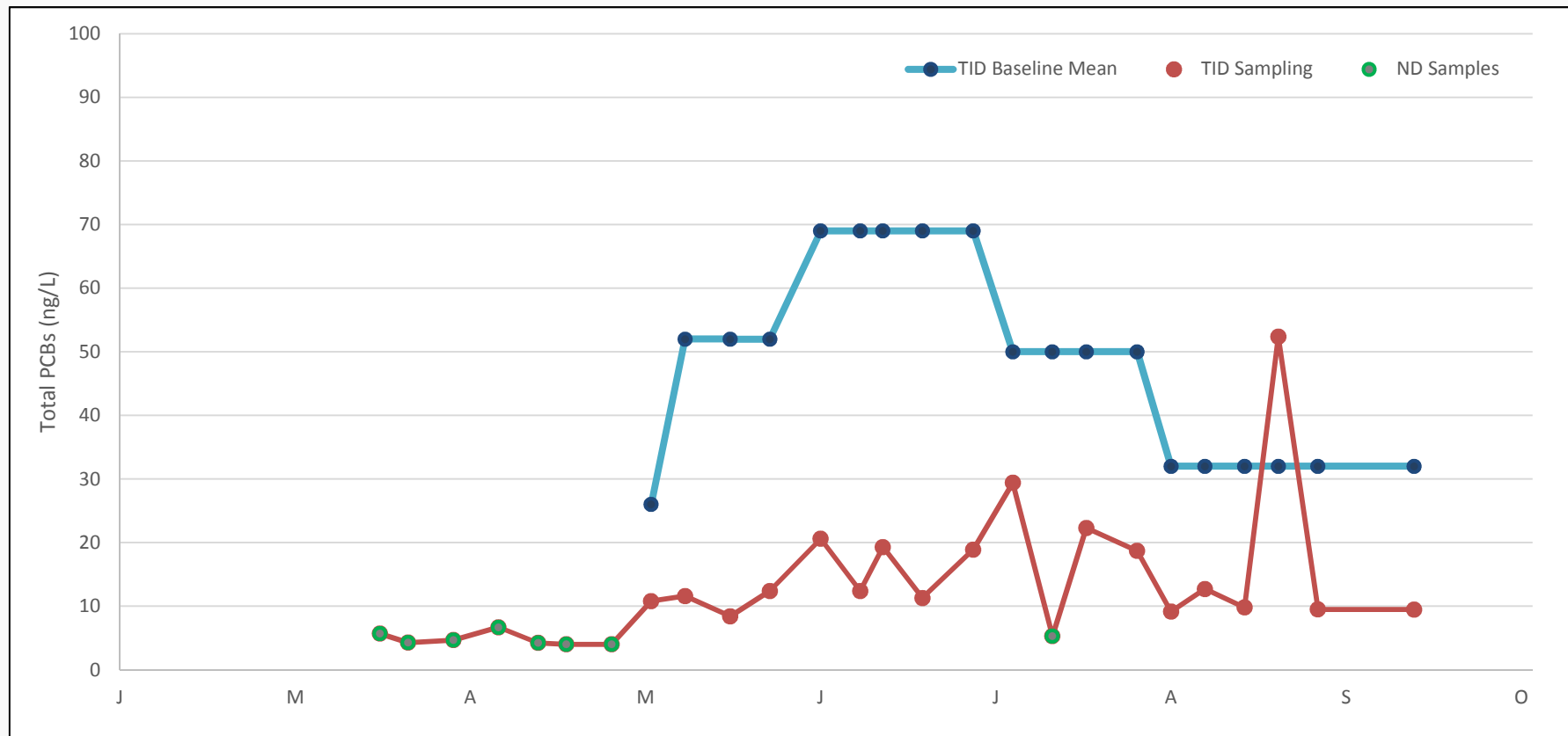
- Extensive historic water dataset dating back to 1970s
- PCB concentrations and flow provide load data
 - Load is a consideration in the RAOs
- Baseline monitoring continuing (weekly/monthly)
- Baseline will transition to long-term monitoring in 2017
- Recent water data encouraging

Monitoring Locations



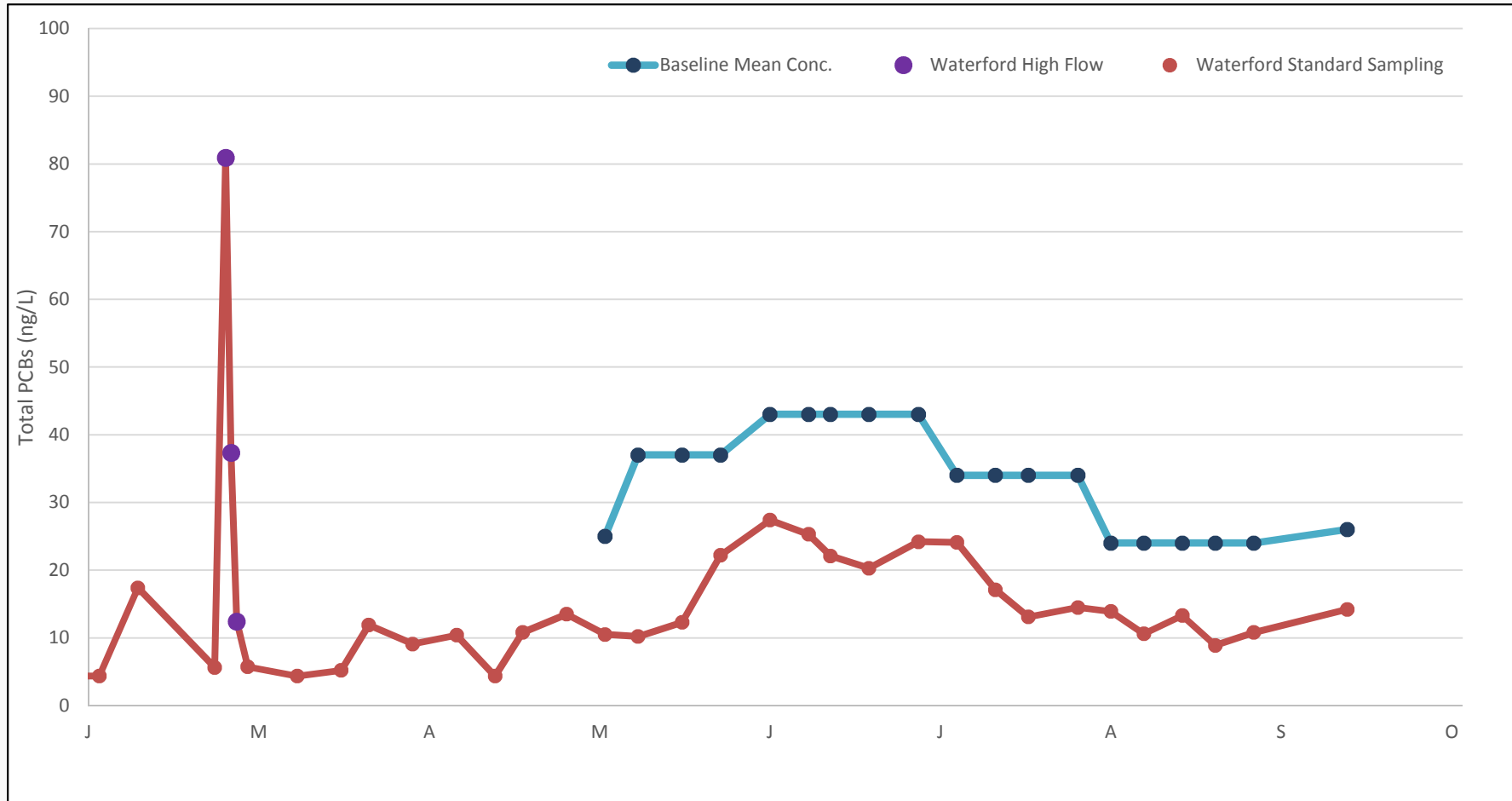
Thompson Island Dam

2016 Water Column Data vs BMP Baseline



Waterford

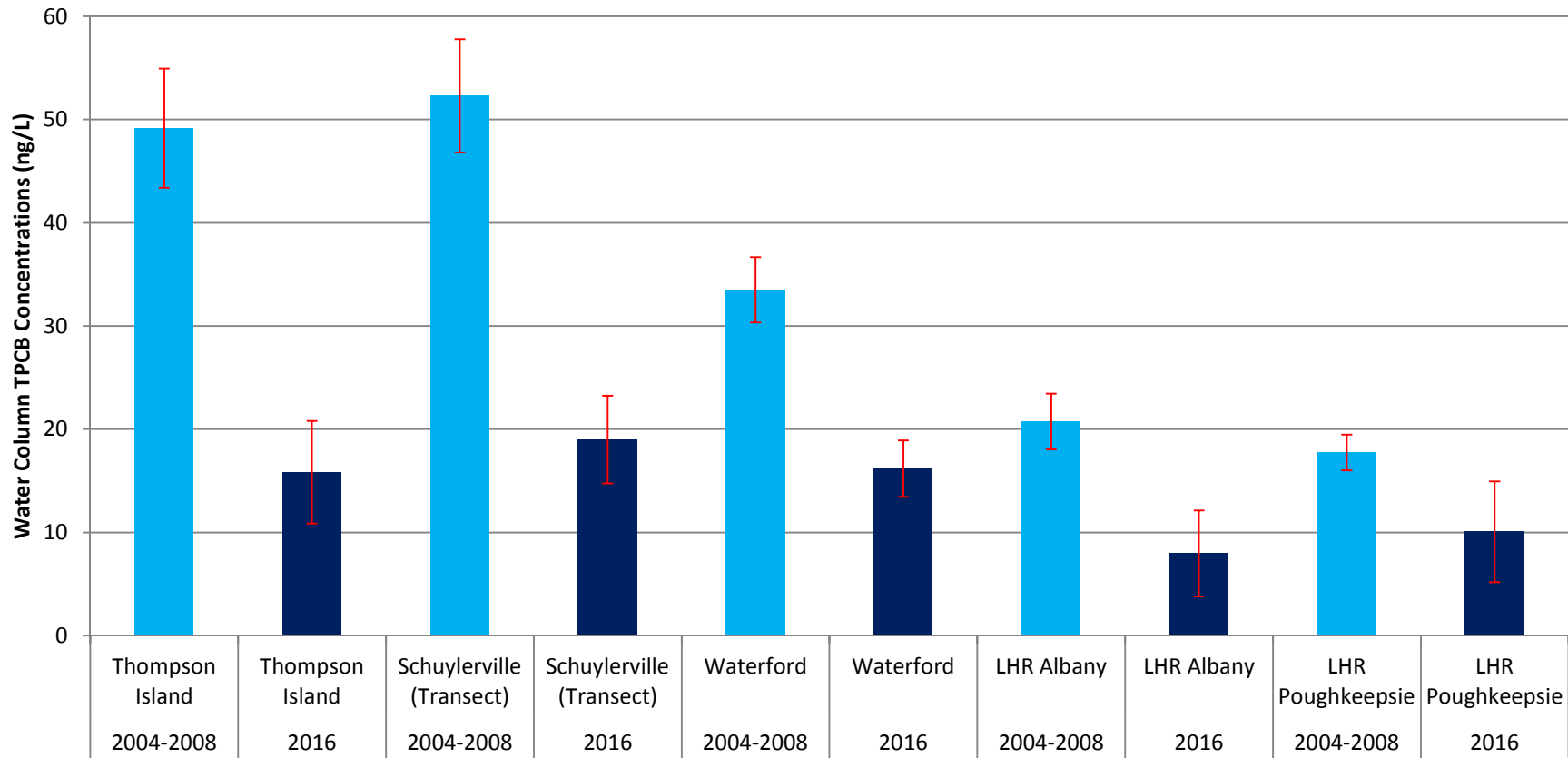
2016 Water Column Data vs BMP Baseline



Summary



Mean Total PCBs (ng/L)



- TID, Schuylerville, Waterford BMP results from May-Aug at <5000 CFS flow at Fort Edward.
- Lower River station BMP results from May-Aug at all flows.
- Error bars represent +/- 2 standard errors.

Data Considerations



- Less than one year of data post-dredging
- 2016 is a low-flow year, minimal variability in flow
- Evaluation of load is underway – will be discussed with five-year review team
- Recovery is more apparent in northern monitoring stations



Questions?

Facility Demobilization/Restoration



Facility Demobilization/Restoration (continued)



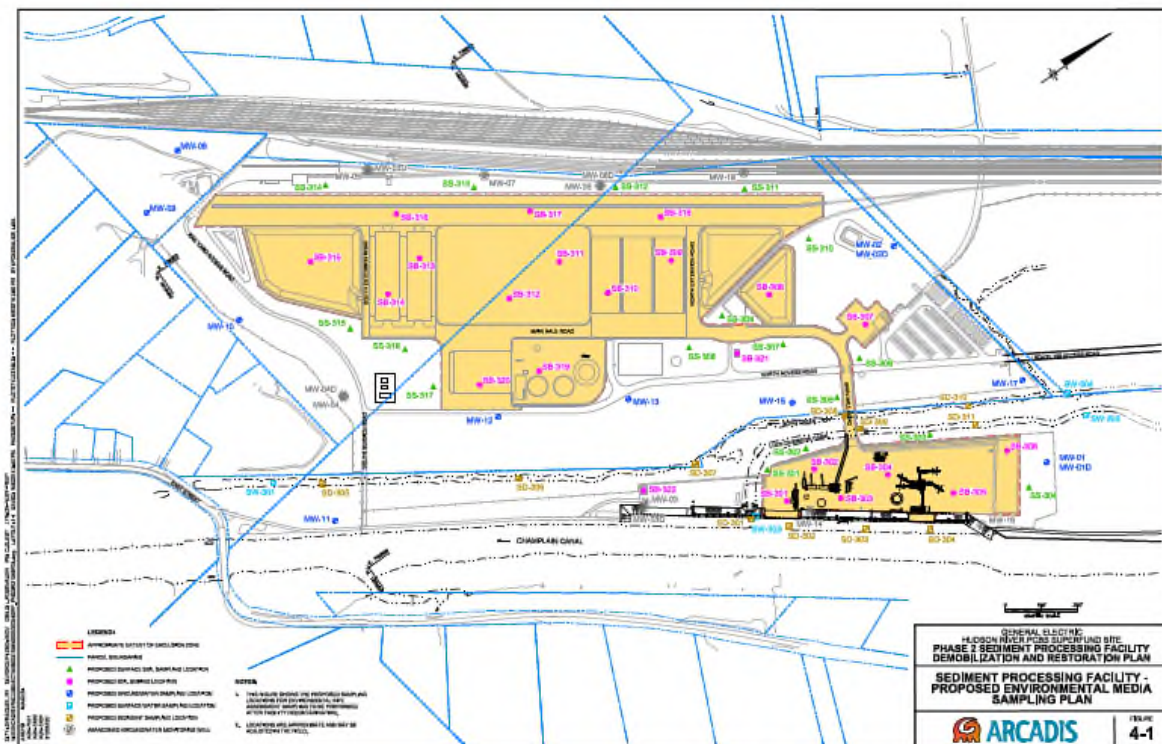
- On-River Facilities – substantially complete
 - Early inspections by EPA and NYS planned in next few weeks
- Processing Facility – ongoing activities:
 - Stormwater basin removal/reconfiguration
 - Cleaning, removal of buildings
 - Moving/removal of equipment
 - Property transfer
 - Access road
 - Wharf
 - Main property
 - Projected to be complete by end of 2016
 - EPA anticipates receiving the Remedial Action Completion Report in mid- to late December (note that the Remedial Action Completion Report and the Five-Year Review Report are on separate schedules)



Environmental Sampling



- Environmental sampling including various EPA confirmation sampling
 - Soil
 - Water (groundwater, stormwater, underdrain)
 - Sediment
 - Wipe sampling
 - Pavement





Questions?

Habitat Reconstruction



Habitat Reconstruction (continued)



- Approximately 1.5 million Submerged Aquatic Vegetation (SAV) and Riverine Fringing Wetland (RFW) plants installed
- Habitat construction areas completed in 2016:
 - CU 60 (Thompson Island Dam Area) – RFW
 - CUs 94, 95, and 96 (Mechanicville Pool) – RFW and SAV
 - CUs 99 and 100 (Troy Pool) – RFW and SAV
- Planting/seeding anticipated to be completed in October
- Monitoring will continue as part of OM&M into the future (including vegetation surveys in fall 2016)
- Final documentation (Form 3s) currently under review



Questions?



Five-Year Review (FYR) Update

Summary of Meetings



- In-person team meetings and teleconference/web conferences to discuss technical aspects of the five-year review and the data to be considered
- Technical topics covered:
 - Water, sediment, and fish data to be considered in the review
 - Review of air data
 - Sediment sampling scope of work
 - Current understanding of data already collected
 - Review of guidance on FYR and technical assessments
- Five-year review team has been providing EPA input
- Public workshops held on May 5 and October 13 to present on status to public
- More technical discussions planned for November

Potential Topics Proposed for Future Meetings



- Institutional controls
- Modeling projections made during the development of the ROD
- Discussion of protectiveness statements
- PCB Load data
- Sediment and fish data as it is received



Schedule



- Report is on schedule to be completed by April 2017
- Technical meetings expected to continue through November
- Report to be drafted in November/December
- Internal EPA review January 2016
- Public report released late January/February 2016
- Public input to be received
- EPA to make revisions and finalize report
- Report finalized by April 23, 2017



Questions?