

Peconic River Update and Cleanup Summary for BNL Community Advisory Council

September 8, 2011

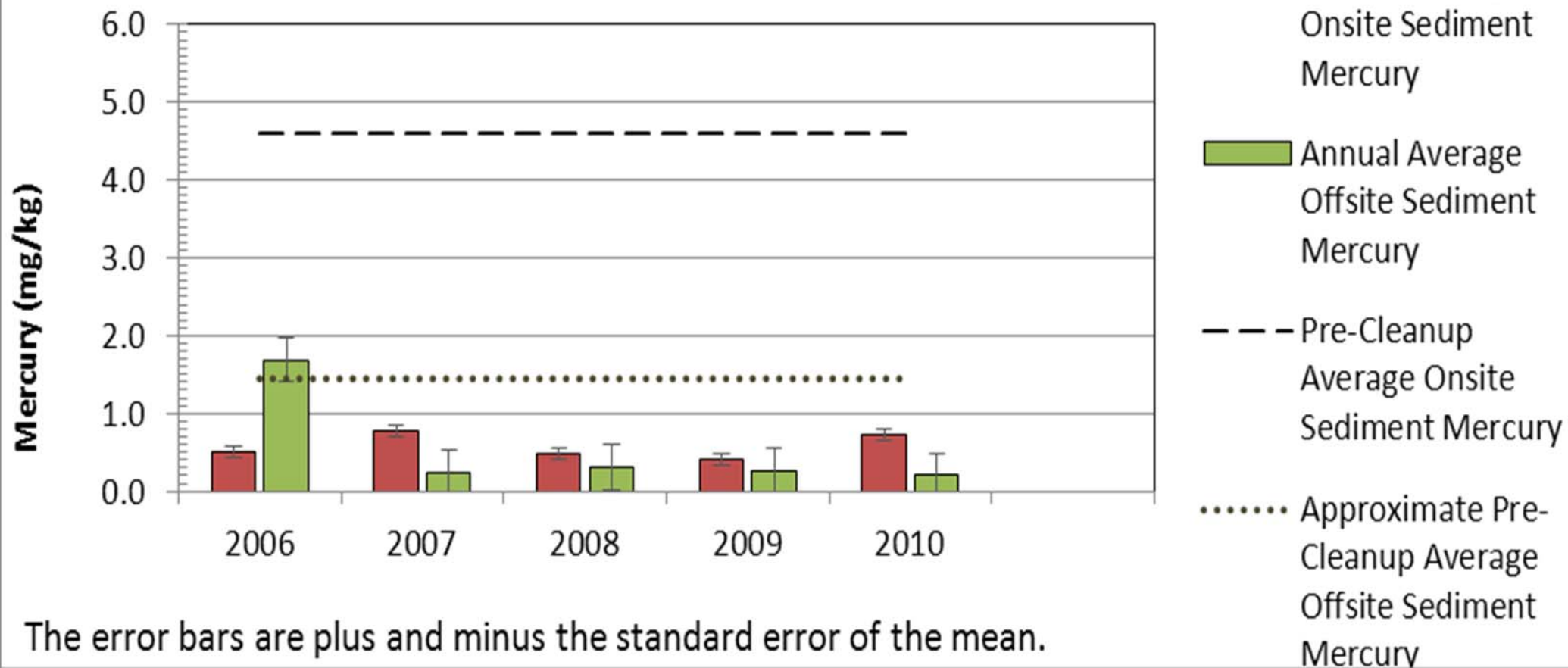
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Environmental Protection Division



Agenda

- **Sediment**
 - 2006-2010 Peconic River Monitoring Summary
 - 2010 Monitoring Results
 - Future Monitoring
- **Surface Water**
 - 2006-2010 Peconic River Monitoring Summary
 - 2010 Monitoring Results
 - Future Monitoring
- **Fish**
 - 2006-2010 Peconic River Monitoring Summary
 - 2010 Monitoring Results
 - Future Monitoring
- **2010/2011 Cleanup Summary**

2006-2010 Annual Average Peconic River Sediment Mercury



2010 Peconic River Sediment Mercury Results Routine Sediment Monitoring Stations

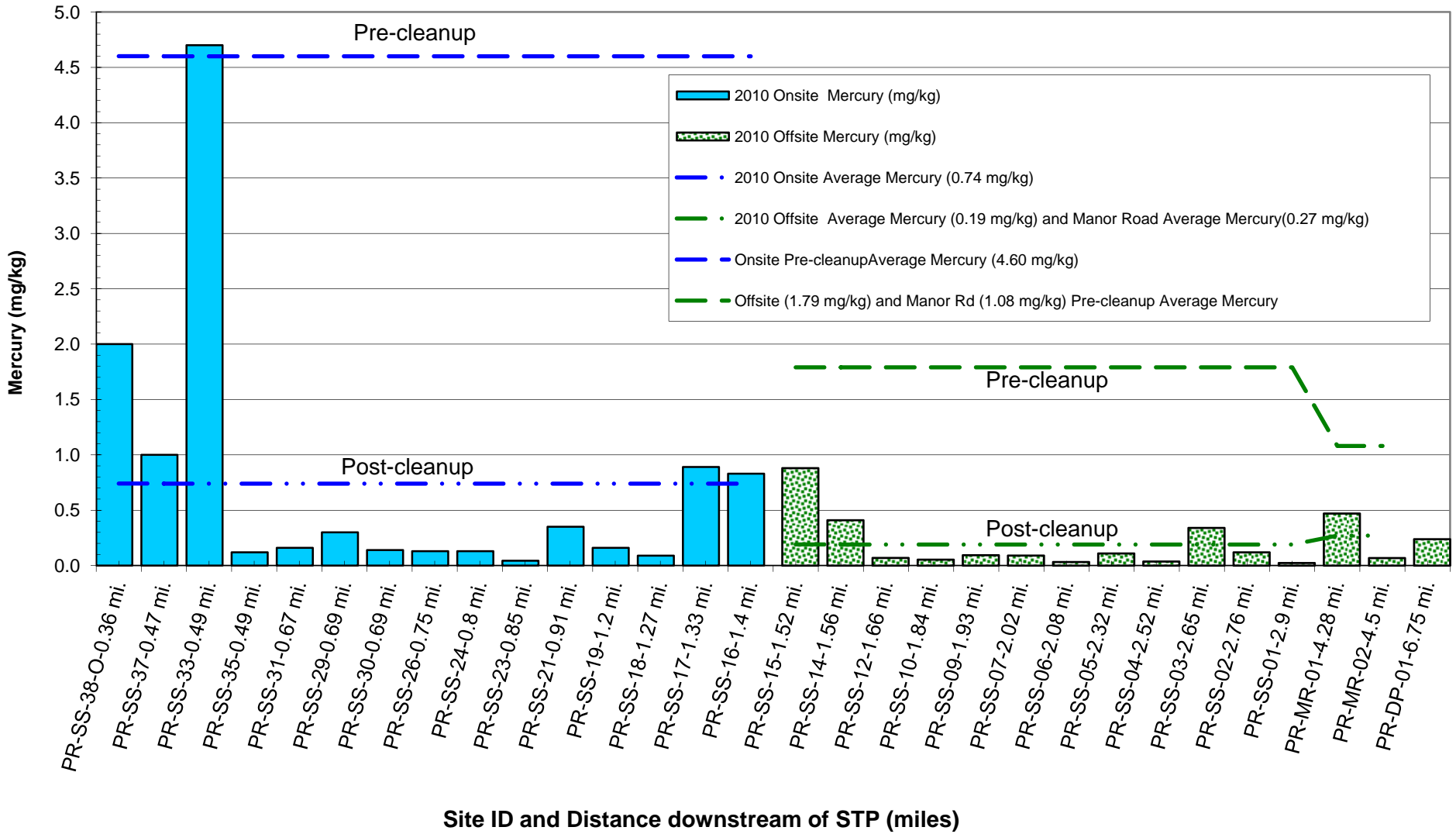


Table 2-2 2006 - 2010 PR-SS-33 Routine and Supplemental Sediment Mercury Results

Site ID	Sample Type	Sample Date	Mercury (mg/kg)	Detlim (mg/kg)	Lab Qual
PR-SS-33	Routine Annual	6/26/2006	0.23	0.052	
PR-SS-33	Routine Annual	7/26/2007	0.5	0.00159	N
PR-SS-33	Routine Annual	6/26/2008	0.32	0.00173	*
PR-SS-33	Routine Annual	8/6/2009	0.33	0.055	
PR-SS-33	Routine Annual	5/13/2010	4.7	0.31	
PR-SS-33-D	Supplemental	7/22/2010	1.5	0.056	
PR-SS-33-L	Supplemental	7/22/2010	0.05	0.05	U
PR-SS-33-O	Supplemental	7/22/2010	0.75	0.056	
PR-SS-33-R	Supplemental	7/22/2010	0.62	0.048	
PR-SS-33-U	Supplemental	7/22/2010	0.13	0.05	

Analytical Laboratory Qualifiers:

N - Indicates that the spiked sample recovery was not within control limits.

* - Indicates that the duplicate analysis was not within control limits.

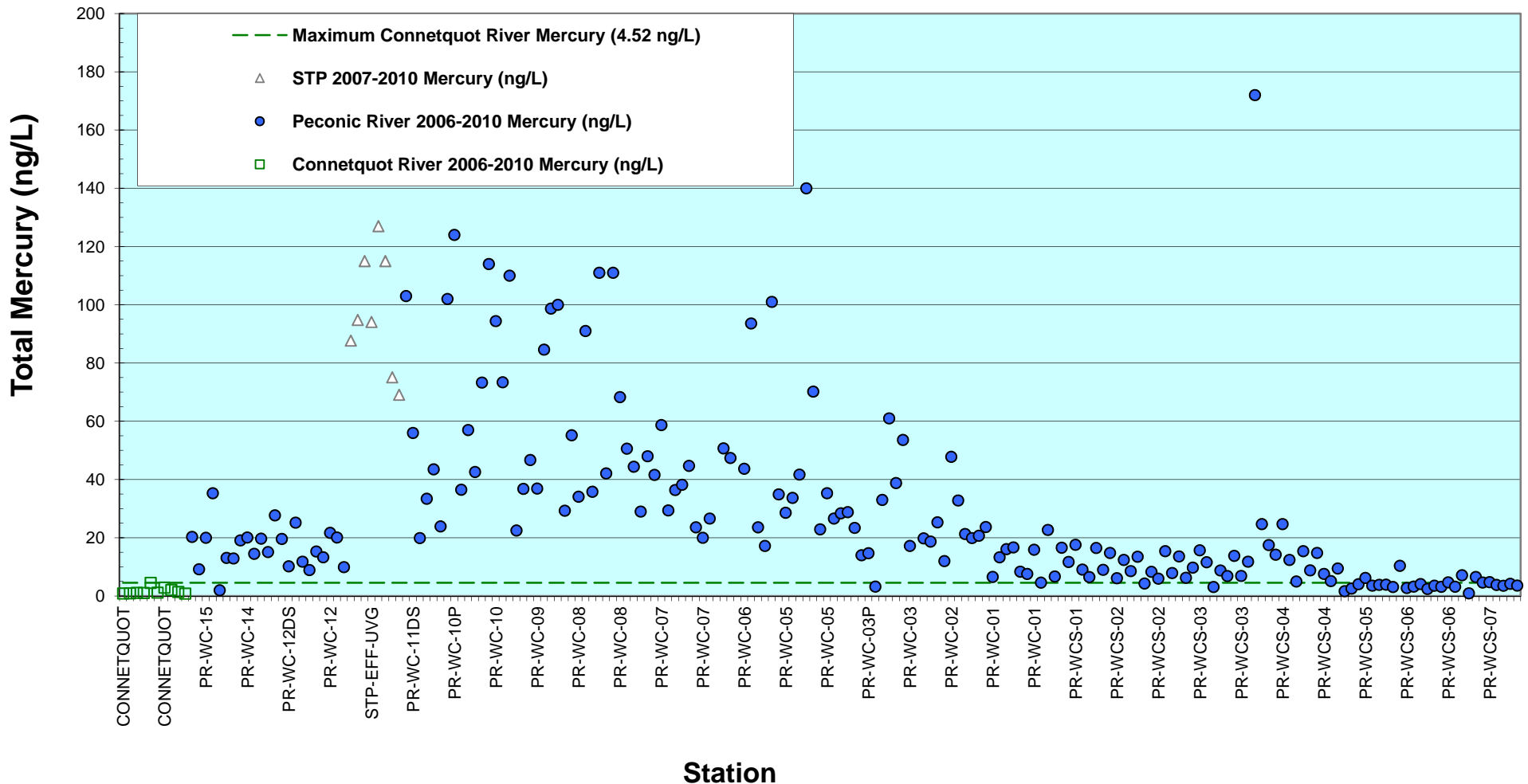
U - Mercury value was less than the detection reporting limit.

2006-2009 PR-SS-33 Mercury Average	0.35 mg/kg
2006-5/13/2010 PR-SS-33 Mercury Average	1.22 mg/kg
7/22/10 PR-SS-33 Supplemental Mercury Average	0.61 mg/kg
All 2006-2010 PR-SS-33 Mercury Sample Average	0.91mg/kg

Five-Year Review Recommendation for Sediment Monitoring

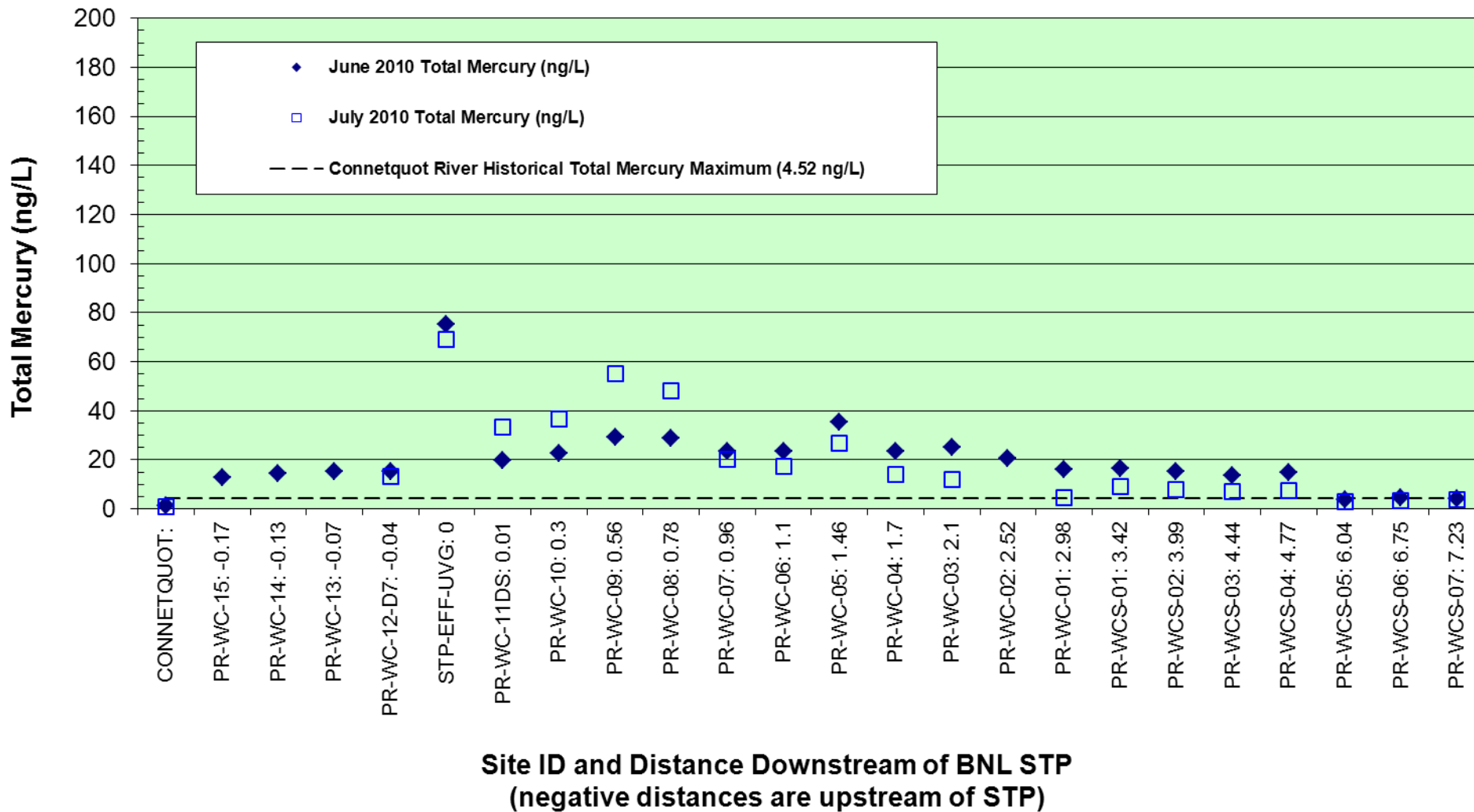
- Previously monitored 30 stations
- Based on 2006-2010 data, BSA/DOE recommends that 3 stations (WC-06, SS-15, and the former sediment trap), be monitored annually for mercury from 2012 – 2014

Figure 6-13 2006 - 2010 Peconic River and Connetquot River and 2007 - 2010 STP Mercury Concentrations (0 - 200 ng/L)



Two values at PR-WC-06 and one value at PR-WC-03 are beyond the scale of this figure, 876 ng/L, 1,360 ng/L and 374 ng/L, respectively.

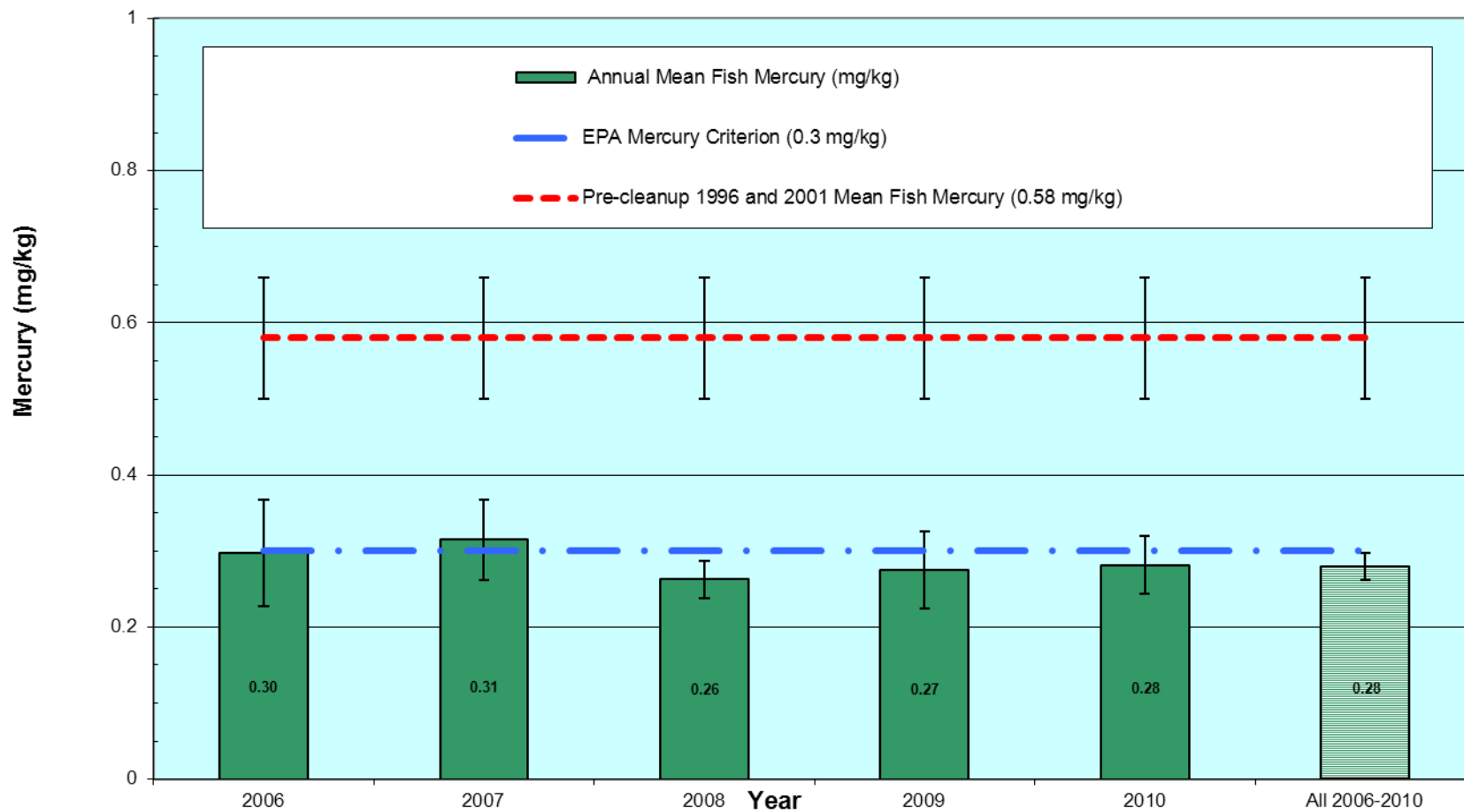
Figure 3-1 2010 Total Mercury in Peconic River Surface Water



Five-Year Review Recommendation for Surface Water Monitoring

- Currently monitoring 22 stations twice annually for total mercury/methylmercury and total suspended solids (TSS)
- BSA/DOE recommends discontinuing sampling stations downstream of Schultz Road (PR-WC-01), and continuing to sample 15 stations between and including PR-WC-02 and PR-WC-15 as well as the Connetquot River and STP for 2012-2014
- Currently monitoring water quality at eight additional stations 4 times annually for chlorophyll-a, N, P, TOC, TSS, and monitoring mercury/methylmercury and TSS 4 times annually at PR-WC-10
- BSA/DOE recommends discontinuing sampling the water quality stations and the PR-SS-10 surface water station

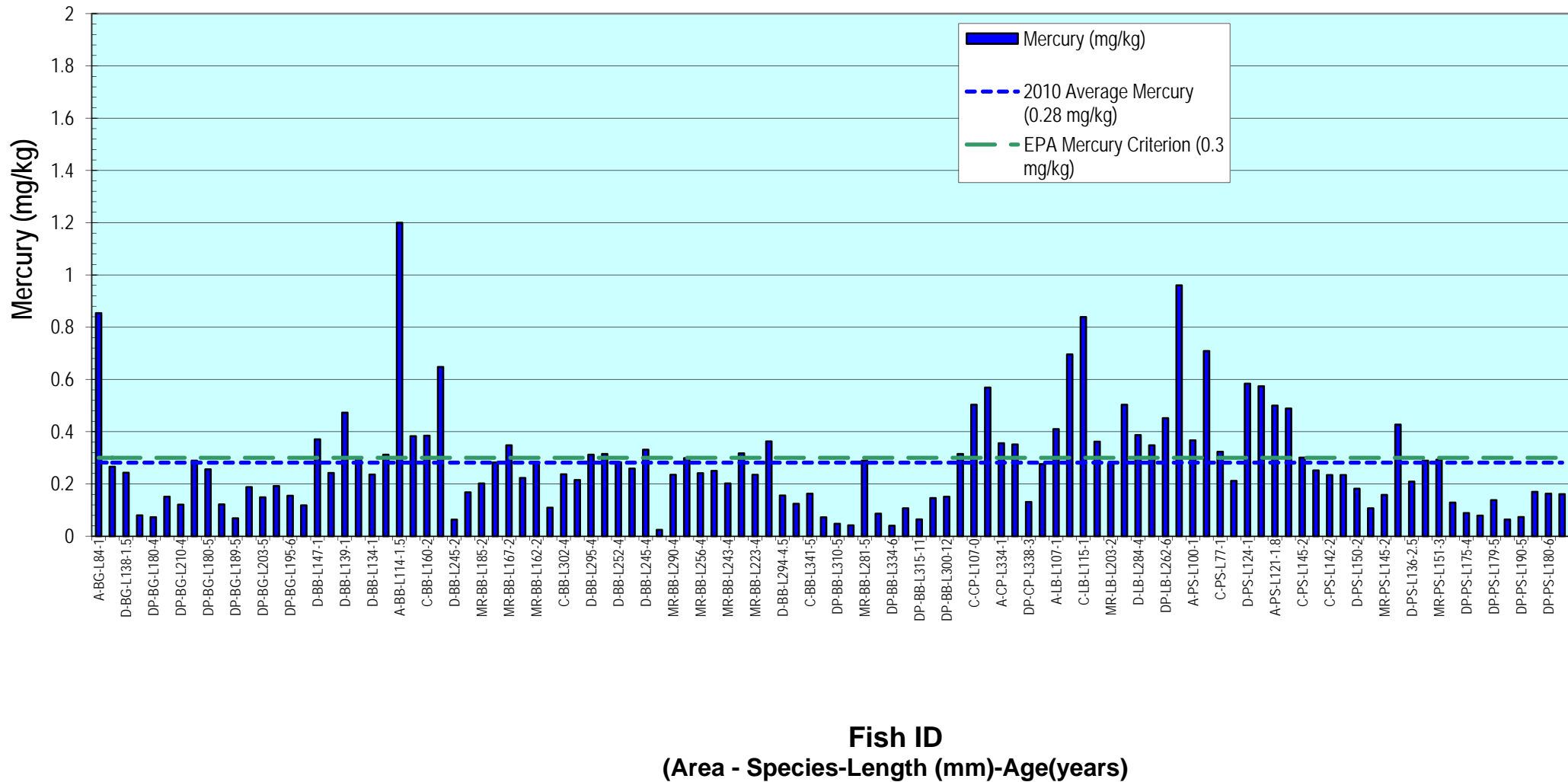
**Figure 6.4.1 2006 - 2010 Peconic River
Average Fish Mercury Concentrations**



Error bars represent the mean plus and minus the 95 percent confidence limits.

Figure 4-1a 2010 Peconic River Fish Fillet Mercury - All Fish

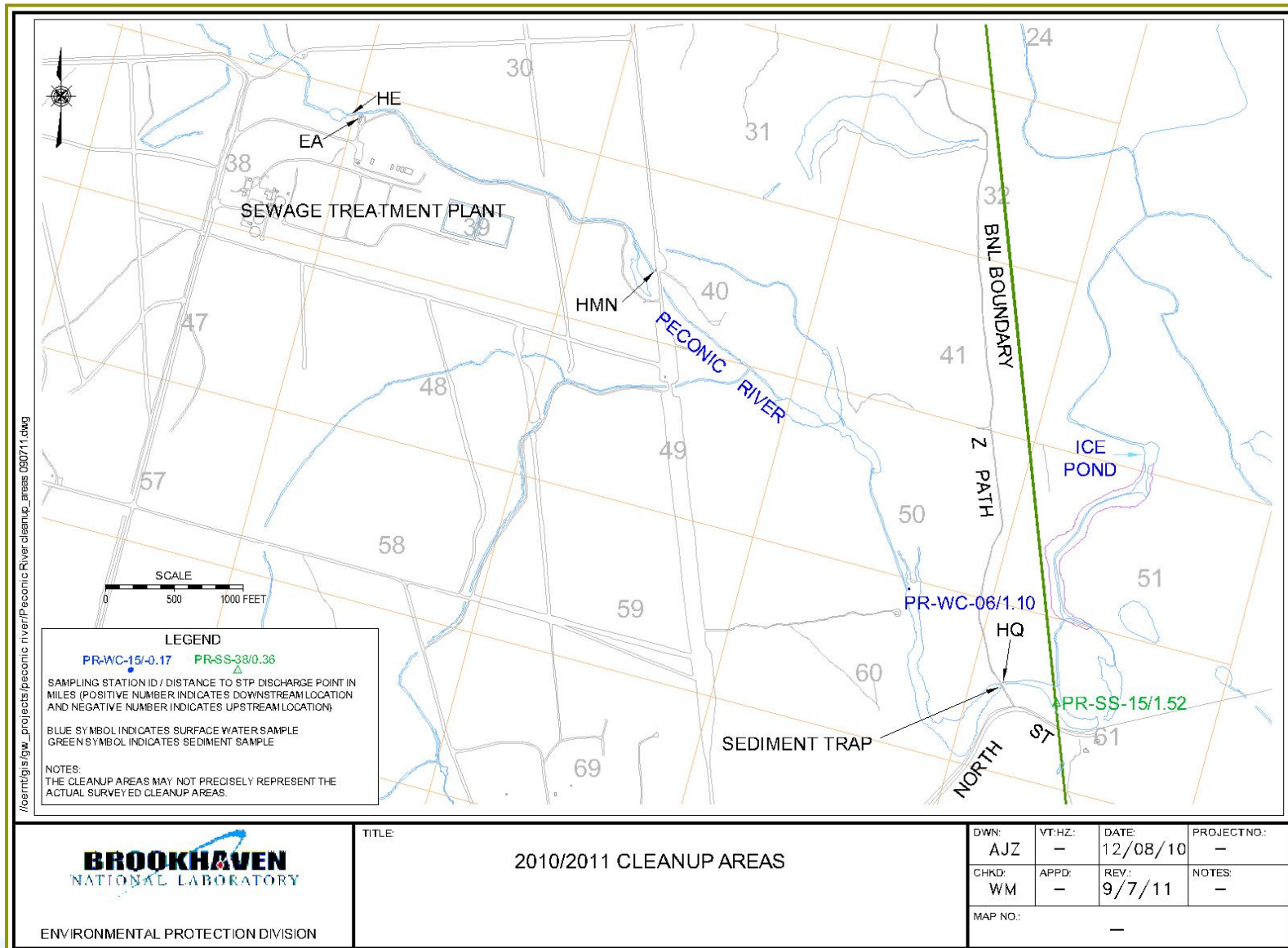
(Sorted by Species - Age - Area)



Five-Year Review Recommendation for Fish Monitoring

- Currently monitoring fish at six locations
- BSA/DOE recommends monitoring fish at four locations every other year (next sample in 2013), re-evaluate in 2014
- Discontinue fish monitoring at Manor Road and Area C
- BSA/DOE recommends that age determination be continued for all monitored fish

2010/2011 Cleanup Areas



2010/2011 Cleanup Summary

- Total Cleanup Area: approximately 0.39 acres (PR-WC-06, Sediment Trap and PR-SS-15)
 - 11 railcars (1,134 tons) of sediment and sediment trap stone removed and disposed at Allied Waste Niagara Falls Landfill
 - 37 post-cleanup confirmation samples

Pre- and Post-cleanup Mean Sediment Mercury Concentrations

	2010/2011 Cleanup	
	Pre-Cleanup Mean Mercury (mg/kg)	Post- Cleanup Mean Mercury (mg/kg)
PR-WC-06	2.48	0.33
Sediment Trap	1.1	0.17
PR-SS-15	4.02	0.14

Area 6 Bio-mats, Pelletized Seeds, Seeding, and Anchoring Mats (7/19/11)



Area 6 Selecting and heeling in transplants, planting oversight (7/19/11)



Area 15 (7/20/11)



Area 6 Haul Path Recovery, Seed and Transplant Growth and water level (8/11/11)



Sediment Trap Area and Area 15 Seed and transplant growth and water level (8/11/11)

