FINAL
2010 PECONIC RIVER MONITORING REPORT

Prepared for:

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EXECUTIVE SUMMARY

2010 PECONIC RIVER MONITORING REPORT

This section summarizes the major findings and recommendations relating to the 2010 Peconic River sediment, surface water, and fish monitoring. Section 2 through Section 4 of the report discusses the details on which the recommendations are based. Figure 1-1 shows the location of the Peconic River relative to Brookhaven National Laboratory (BNL, Laboratory), the Long Island Expressway and Flanders Bay, into which the river flows.

This report includes recommendations for modifying the 2012-2014 sediment, surface water and fish monitoring based on two documents:

1. The 2010 Peconic River Monitoring Report. Each recommendation is abbreviated as **Monitoring Report Recommendation**. Supporting documentation for each Monitoring Report Recommendation precedes the recommendation in the main body of the text in chapters 2, 3 and 4.
2. The Five-Year Review Report[1]. Each recommendation is abbreviated as **Five-Year Review Recommendation**. Supporting documentation for each Five-Year Review Recommendation is included in Chapters 6 and 7 of the Five-Year Review and attached to this document as Attachment 1.

All recommendations are summarized in Table E-1 on page xi of this document.

Sediment:

The 2010 Peconic River sediment monitoring values are substantially lower than the pre-cleanup values (Tables 2-1 and 2-1a) and all mercury samples, except one sample (PR-SS-33, 4.7 mg/kg) were below the cleanup goal. Five supplemental samples collected within five feet of PR-SS-33 failed to confirm the elevated mercury concentration (average of 0.61 mg/kg). One sample, PR-SS-38, 2.0 mg/kg, equaled the cleanup goal and therefore no additional action is recommended.

[1] Five-Year Review Report for Brookhaven National Laboratory Superfund site, Town of Brookhaven, Hamlet of Upton, Suffolk County, New York, March 31, 2011.

The 2010 Peconic River sediment monitoring had an average mercury concentration of 0.74 mg/kg on Brookhaven National Laboratory/U.S. Department of Energy) (BNL/DOE) property, vs. a pre-cleanup average of 4.6 mg/kg. The average 2010 offsite mercury values were 0.19 mg/kg from the BNL boundary to Schultz Road, vs. a pre-cleanup 1.79 mg/kg average, and an average 2010 Manor Road mercury concentration of 0.27 mg/kg, vs. a pre-cleanup 1.08 mg/kg average.

All onsite and offsite sediment PCB values were non-detect for all seven PCB aroclors. The 2010 average cesium-137 activities both on (0.89 pCi/g) and outside laboratory property (0.36 pCi/g between the BNL boundary and Schultz Road and 0.24 pCi/g for Manor Road area) were substantially below the pre-cleanup averages (5.7 pCi/g, 5.4 pCi/g and 2.88 pCi/g, respectively).

The Sediment Trap removal and the PR-WC-06, PR-SS-15 and Sediment Trap sediment excavation and disposal were completed in February 2011. These activities have been described in detail in the June 2011 Draft Peconic River Supplemental Sediment Removal Completion Report.

Monitoring Report Recommendation: BSA[2]/DOE recommends no additional action at the PR-SS-33 sediment sample station based on the 2010 supplemental sampling results for this location.

Five-Year Review Recommendation: Sediment monitoring for 2012 to 2014 was evaluated in the 2010 Five-Year Review, and is summarized below:

- BSA/DOE recommends that the number of sampling stations be reduced from 30 to three stations (PR-WC-06, PR-SS-15, Sediment Trap cleanup areas) per year.

Details, tables and figures supporting all of the Five-Year Review recommendations are described in Section 6.4.5 and Section 7.5 of the 2010 Five-Year Review, and are included in Attachment 1 of this document.

Surface Water:

BNL has collected routine water column samples from approximately 20 water column stations, depending on water level, since 2003. The routine samples have been analyzed for total

[2] Brookhaven Science Associates (BSA) was established for the sole purpose of managing and operating Brookhaven National Laboratory. BSA was formed as a 50-50 partnership between Battelle and The Research Foundation of State University of New York (SUNY) on behalf of Stony Brook University (SBU). The United States Department of Energy (DOE) owns the BNL property and funds science and operations at BNL.

samples for water quality parameters (e.g. chlorophyll-a, nitrogen, TOC (Total Organic Carbon), etc.).

The values of the 2010 Sewage Treatment Plant (STP) effluent concentrations of total mercury were substantially lower than those measured in 2009. A general gradual downward total mercury trend with increasing downstream distance from the STP was observed in 2010 (Figure 3-1). The total mercury values for the furthest downstream monitoring stations are generally smaller, but occasionally slightly larger than the maximum historical Connetquot River reference station mercury concentration (4.52 ng/L). The 2010 sample results for methylmercury were also generally low (Table 3-2a and 3-2b, Figure 3-3).

Water column samples for total mercury, methylmercury and TSS were obtained four times in 2010 both upstream and downstream of elevated sediment mercury locations on transect PR-SS-15–U1 and station PR-SS-10 to evaluate potential downstream transport of mercury. The 2010 data did not confirm substantial downstream mercury transport from either the PR-SS-15-U1 transect or the PR-SS-10 area. Refer to the 2010 Five-Year Review, sections 6.4.5 and 7.5 or Attachment 1 for details concerning the following recommendations.

Monitoring Report Recommendation: BSA/DOE recommends that routine water column monitoring be discontinued for the PR-SS-15 and PR-SS-10 areas in 2011 and 2012, respectively, based on the 2010 surface water data described above, the 2008 and 2009 Peconic River Monitoring Report data and completion of the PR-SS-15 sediment removal in January 2011.

Five-Year Review Recommendation: The 2010 Five-Year Review water column recommendations for 2012 to 2014 are summarized below:

- BSA/DOE recommends that routine water-column monitoring for total mercury, methylmercury and TSS continue two times per year at the 15 stations between PR-WC-15 (upstream of STP-EFF-UVG) and PR-WC-02.
- BSA/DOE recommends that routine water-column monitoring at stations between and including PR-WC-01 and PR-WCS-07 be discontinued in 2012, with the exception of PR-WCS-04 (west of the Cranberry Bogs) and PR-WCS-06 (Donahue's Pond). PR-WCS-04 is near the downstream extent of the Manor Road cleanup area and will continue to be monitored through 2012 as part of the routine water column monitoring program. The need for continued monitoring at this location will then be evaluated. PR-WCS-06 is outside the cleanup area and will continue to be sampled as part of the routine

environmental surveillance program. BSA/DOE also recommends that analysis for water quality parameters (chlorophyll-a, N, P, TOC, and TSS) be discontinued in 2012.

Details, tables and figures supporting all of the Five-Year Review recommendations are described in Section 6.4.5 and Section 7.5 of the 2010 Five-Year Review, and are included in Attachment 1 of this document.

Fish:

Approximately 36 percent of the 164 fish caught were bottom feeders[3] (59 brown bullheads) and 64 percent of the catch (105 fish) were predators other than brown bullheads. Pumpkinseeds and bluegills composed 36 percent (59 fish) and 13 percent (21 fish), respectively, of the total catch. Chain pickerel (11 fish) and largemouth bass (14 fish) represented approximately seven and nine percent, respectively, of the catch[4].

Mercury, PCB and cesium-137 concentration values are substantially improved over pre-cleanup limits (Tables 4-10a, 4-10b and 4-10c, respectively). The average concentration of mercury for the 108 fish tissue samples (individual fish and composites) from fish which were collected between the BNL STP and Donahue's Pond was 0.28 mg/kg. PCB values were less than or close to the detection limits. The average cesium-137 activity for all 62 fish samples was 0.11 pCi/g.

Monitoring Report Recommendation: The only fish recommendations are from the Five-Year Review.

Five-Year Review Recommendations: The 2010 Five-Year Review recommends that fish monitoring be modified in the following ways:

- Frequency will be modified from one round annually to one round every other spring. Thus, between 2011 and 2016 fish will be collected in the spring of 2011, 2013 and 2015. Harvesting fish biennially will allow the fish population to grow in both number and individual size.

[3] Brown bullheads are the only bottom dwelling fish in the studied section of the Peconic River. Although brown bullheads represent bottom feeders they also are piscivorous (eat fish).
[4] Data based on Appendix H. Table 4-3 shows 80 fish analyzed as individuals and 84 fish analyzed as composites.

- Monitoring of fish from the Manor Road area should be discontinued after the 2011 collection, due to the typically low fish catch in that area. Every two years fish monitoring would occur in Area A[5] (downstream of the STP), Area D, Schultz Road, and Donahue's Pond, when water depths are favorable. Supplemental sampling in Area C would be discontinued unless the catch was low in the two adjacent collection areas (Areas A and D).
- Continuing fish age determination via scale and otolith interpretation through 2015.

Details, tables and figures supporting all of the Five-Year Review recommendations are described in Section 6.4.5 and Section 7.5 of the 2010 Five-Year Review, and are included in Attachment 1 of this document.

PR-WC-06, Sediment Trap and PR-SS-15 Sediment Removal and Sediment Trap Removal

During January 2011 the Peconic River Sediment Trap, located adjacent to Z path and upstream of stream gauging station HQ, was removed as required by the Peconic River ROD. During December 2010 and January 2011 supplemental sediment was also removed from the PR-WC-06, Sediment Trap and PR-SS-15 areas to optimize the remedy for these three areas. The waste was transported to a Subtitle D landfill (Allied Waste Niagara Falls Landfill in Niagara Falls, NY) in late February and early March 2011. These actions were recommended in Recommendation 5 of the Final 2009 Peconic River Monitoring Report[6]. These activities have been described in detail in the June 2011 Draft Peconic River Supplemental Sediment Removal Completion Report.

[5] Note that BSA/DOE expects to initiate discharge of treated STP effluent to the water table rather than to the Peconic River, in 2014. This may cause water levels in Area A (and possibly also Area D) to be too low for fish migration except during the spring. Fish collection locations may require revision following groundwater discharge of the STP effluent.

[6] **2009 Recommendation 5**: BNL/DOE recommends that the sediment trap be removed in coordination with the accelerated removal of sediment with elevated mercury concentrations. Both the sediment trap removal and the accelerated sediment removal are scheduled to be conducted in 2010.

Table E-1. Recommendations and Requests Summary	
Sediment:	
1	**Monitoring Report Recommendation**: BSA/DOE recommends no additional action at the PR-SS-33 sediment sample station based on the 2010 supplemental sampling results for this location.
2	**Five-Year Review Recommendation:** Sediment monitoring for 2012 to 2014 was evaluated in the 2010 Five-Year Review, and is summarized below: • BSA/DOE recommends that the number of sampling stations be reduced from 30 to three stations (PR-WC-06, PR-SS-15, Sediment Trap cleanup areas) per year. Details supporting all Five-Year Review recommendations in this table are discussed in Section 6.4.5 and Section 7.5 of the 2010 Five-Year Review, and are included in Attachment 1 of this document.
Surface Water:	
3	**Monitoring Report Recommendation:** BSA/DOE recommends that routine water column monitoring be discontinued for the PR-SS-15 and PR-SS-10 areas in 2011 and 2012, respectively, based on the 2010 surface water data described above, the 2008 and 2009 Peconic River Monitoring Report data and completion of the PR-SS-15 sediment removal in January 2011.
4	**Five-Year Review Recommendation:** The 2010 Five-Year Review water column recommendations for 2012 to 2014 are summarized below: • BSA/DOE recommends that routine water-column monitoring for total mercury, methylmercury and TSS continue two times per year at the 15 stations between PR-WC-15 (upstream of STP-EFF-UVG) and PR-WC-02. • BSA/DOE recommends that routine water-column monitoring at stations between and including PR-WC-01 and PR-WCS-07 be discontinued in 2012, with the exception of PR-WCS-04 (west of the Cranberry Bogs) and PR-WCS-06 (Donahue's Pond). PR-WCS-04 is near the downstream extent of the Manor Road cleanup area and will continue to be monitored through 2012 as part of the routine water column monitoring program. The need for continued monitoring at this location will then be evaluated. PR-WCS-06 is outside the cleanup area and will continue to be sampled as part of the routine environmental surveillance program. • BSA/DOE also recommends that analysis for water quality parameters (chlorophyll-a, N, P, TOC, and TSS) be discontinued in 2012.
Fish:	
5	**Five-Year Review Recommendation:** The 2010 Five-Year Review recommends that fish monitoring be modified in the following ways: ▪ Frequency will be modified from one round annually to one round every other spring. Thus, between 2011 and 2016 fish will be collected in the spring of 2011, 2013 and 2015. Harvesting fish biennially will allow the fish population to grow in both number and individual size. ▪ Monitoring of fish from the Manor Road area should be discontinued after the 2011 collection, due to the typically low fish catch in that area. Every two years fish monitoring would occur in Area A[7] (downstream of the STP), Area D, Schultz Road, and Donahue's Pond, when water depths are favorable. Supplemental sampling in Area C would be discontinued unless the catch was low in the two adjacent collection areas (Areas A and D). ▪ Continuing fish age determination via scale and otolith interpretation through 2015.

[7] Note that BSA/DOE expect to initiate discharge of treated STP effluent to the water table rather than to the Peconic River, in 2014. This may cause water levels in Area A (and possibly also Area D) to be too low for fish migration except during the spring. Fish collection locations may require revision following groundwater discharge of the STP effluent.

SECTION 1 – INTRODUCTION

1.1 Introduction

Brookhaven National Laboratory (BNL) is a multi-disciplinary research facility located in Suffolk County, New York. Wastewaters at BNL are directed to the Sewage Treatment Plant (STP), and are treated and discharged in accordance with State Pollutant Discharge Elimination System (SPDES) limits into the western branch of the Peconic River. Historical discharges from the STP have resulted in elevated concentrations of heavy metals, polychlorinated biphenyls (PCBs) and radionuclides in the Peconic River sediments. The Final Operable Unit V Record of Decision (ROD) for Area of Concern 30 (Peconic River) specifies the cleanup limits and long-term monitoring requirements. Remediation of river sediments occurred in 2004 and 2005, and consisted of two phases of sediment excavation and removal, and post-excavation sampling. The sections of the river that were remediated are shown in Figures 1-1, 1-2 and 1-3. Supplemental sediment removal for three small areas (PR-WC-06, PR-SS-15 and the sediment trap areas) was completed in January 2011 and is described in the June 2011 Draft Peconic River Supplemental Sediment Removal Completion Report.

The following three bullets excerpted from page iii of the ROD summarize the Peconic River cleanup goals which provide the basis for the annual monitoring program discussed in this report[8].

- The on-Laboratory cleanup areas are shown in Figure 1-2. On Laboratory property, this alternative would focus on sediment in designated depositional areas. For the sections of the river on Laboratory property, the average mercury concentration after remediation will be less than 1 ppm[9], with a goal that all mercury concentrations in the remediated areas are less than 2 ppm following the cleanup. The 1 ppm limit is expected to protect human health and the environment under current conditions.

- The outside Laboratory cleanup areas are shown in Figures 1-2 and 1-3. This remedy would focus on a more stringent cleanup target concentration outside BNL property. This alternative would also allow the greatest flexibility in the

[8] The cleanup goals are limited to the average and maximum sediment mercury concentrations specified for on and outside BNL property. The ROD does not include cleanup goals for the water column or fish.
[9] The ROD states the cleanup requirements in terms of ppm (parts per million). This report states all concentrations in terms of the units of contaminant per unit of environmental matrix in which the contaminant is found, for example milligrams per kilogram (mg/kg). For mercury in sediment the concentration is expressed as mg of mercury per kg of sediment. The terms mg/kg and ppm are equivalent, hence one mg/kg equals one ppm.

uses of the area as County parkland or any potential future development. Sediment would be removed from the ponded areas where methylation leading to bioaccumulation is most likely to occur, as well as other areas containing higher concentrations of contamination between the Laboratory property line and Connecticut Avenue. The average mercury concentration within the sediment outside Laboratory property will be less than 0.75 ppm, with a goal that all mercury concentrations in the remediated areas are less than 2 ppm following the cleanup.

- A monitoring program has been implemented to demonstrate the effectiveness of the cleanup. This includes near-term monitoring to establish the basis for the long-term monitoring program. As part of this program, the Department of Energy (DOE) will continue to evaluate all available data to determine if additional remediation is required to ensure the protection of human health and the environment. This program includes methylmercury water column sampling, sediment sampling, and fish sampling, and covers areas of interest both on and off BNL property.

In May 2004, BNL initiated a two-phased remediation effort to address contaminated sediments in the Peconic River. Phase 1, conducted between May and September 2004, removed approximately 13,000 cubic yards of river sediments from BNL property. Following the on-site cleanup, 788 post-excavation sediment monitoring points (located both within and outside the remediation areas) were sampled to evaluate the effectiveness of the Phase 1 activities. The Phase 1 activities resulted in a 96% reduction in average mercury concentration in river sediments on BNL property, from about 4.6 milligrams per kilogram (mg/kg) to 0.2 mg/kg (Envirocon, 2005). Phase 2, conducted between September 2004 and May 2005, removed approximately 8,200 cubic yards of river sediments situated outside of BNL property in Suffolk County parklands. Following the off-site cleanup, 1,442 and 149 post-excavation confirmation sediment sampling points were sampled (within and outside the cleanup areas) to evaluate the effectiveness of the Phase 2 activities in the section of the river from the BNL property line to Schultz Road, and within the Manor Road cleanup area, respectively. The Phase 2 activities resulted in a 95% reduction in average mercury concentration in river sediments downstream of the BNL property line, from 1.8 mg/kg to 0.09 mg/kg (excluding the Manor Road area). In the

Manor Road area, an 83% reduction in mercury sediment concentrations was realized (from 1.08 mg/kg to 0.19 mg/kg) (Envirocon, 2005).

The long-term effectiveness of the cleanup is monitored once annually for mercury, PCBs and cesium-137 in Peconic River sediment, and mercury and radionuclides in fish tissue. Fish collected on the laboratory property are additionally analyzed for PCBs. Fish are collected from sections of the river located on BNL property when samples can be collected without negatively impacting the well-being of the fish population. Surface water monitoring for total mercury and methylmercury is performed twice annually (June and July or August, depending on river-water depths at the water column monitoring stations). Details of the sampling plan are described in the Operable Unit I Soils and Operable Unit V Long-Term Monitoring and Maintenance Plan (LTMM Plan) (BNL 2006). The 2010 Peconic River sampling was conducted in accordance with the long-term sampling requirements stated in the Peconic River Record of Decision. This document summarizes the results of the 2010 Peconic River monitoring. Sampling locations are shown on Figures 1-4, 1-5 and 1-6.

Peconic River post-cleanup monitoring began in 2006. Consequently, 2010 was the fifth year of post-remediation sediment, surface water and fish monitoring.

Of the analytes for which the ROD requires monitoring (mercury, methylmercury, PCBs, cesium-137), there are only cleanup goals for mercury in sediment. Analytes without ROD-required cleanup goals (methylmercury, PCBs, and cesium-137) are compared to their respective pre-cleanup concentrations to demonstrate the concentration trends of these contaminants since the cleanup. Additional chemical parameters that are part of the water quality monitoring are provided in the appendices. These parameters are only discussed in the text when they are relevant as supporting data for the goals of the monitoring program. Examples in the 2010 report include, but are not limited to: 1) chlorophyll-a and total organic carbon (TOC) concentrations that may indicate biologically active sections of the river and may influence the rate of conversion of total mercury to methylmercury and/or contribute to elevated Total Suspended Solids (TSS) measurements; 2) TSS measurements that may indicate potential inclusion of suspended sediment in the water column and a potential contribution to the mercury concentration of specific surface water samples; and, 3) dissolved oxygen (DO) that may influence the distribution and abundance of fish in various sections of the river.

1.2 Report Organization

Sediment monitoring results are discussed in Section 2, water column monitoring results are discussed in Section 3, and fish monitoring results are discussed in Section 4. At the end of each section, recommendations are provided for that environmental medium (e.g. sediment, surface water, and fish).

The complete set of analytical data collected during the 2010 Peconic River Monitoring is provided in the Appendices.

SECTION 2 - 2010 SEDIMENT MONITORING RESULTS

2.1 Introduction

The Peconic River ROD requires that the long-term effectiveness of the cleanup be monitored once annually for mercury, PCBs and cesium-137 in sediment. The annual routine post-cleanup sediment sampling began in June 2006 and was repeated in 2007, 2008, 2009 and 2010 according to the procedures discussed in Section 3.0 of Appendix C of the LTMM Plan (BNL, 2006). The locations of the annual sediment and surface water stations, listed in order from upstream of the STP to downstream of Connecticut Avenue, are shown in Figures 1-4, 1-5, and 1-6. The station labels, e.g. PR-SS-38/0.36, indicate the station name (PR-SS-38) and the distance of the station in miles upstream (negative number) or downstream (positive number) from the STP (e.g., 0.36 miles downstream for PR-SS-38)[10].

Ten percent of the samples were also analyzed for silver and copper. These analytes do not have cleanup goals specified in the ROD, and are therefore compared to pre-cleanup sediment concentrations to assess cleanup effectiveness.

The 2010 sediment samples were collected to: 1) evaluate potential changes in the annual concentrations of mercury in the sediment at the 30 routine sediment monitoring stations sampled each year; and, 2) collect supplemental mercury distribution data for routine sediment station PR-SS-33, which had a slightly elevated sediment mercury concentration in the 2010 routine monitoring. The 2010 routine annual sediment sampling results are discussed in Section 2.2, and the 2010 supplemental sediment sampling results are discussed in Sections 2.3 and 2.4.

2.2 2010 Routine Sediment Monitoring Results

As part of the Peconic River annual long-term monitoring program, the 30 routine sediment monitoring stations shown on Figures 1-4, 1-5 and 1-6 were sampled in 2010. Routine sediment monitoring stations are monitored on an annual basis. Supplemental monitoring stations are sampled to gain additional information about a specific routine monitoring station

[10] Manor Road and Donahue's Pond sediment sampling stations are identified with an "MR" or "DP" rather than with an "SS: The water column sampling stations are also identified on these maps, with "WC" replacing the "SS" to identify locations where surface water samples are collected (see Chapter 3). PR-WC-01 identifies the first water column sampling station upstream of Schultz Road, and PR-WCS-01 identifies the first water column sampling station downstream of Schultz Road.

sample result, or the extent of contamination in the area in which the routine monitoring station is located.

The 2010 routine sediment monitoring results are summarized in Table 2-1 and plotted in Figure 2-1. Also plotted are the pre-cleanup average mercury concentrations and the 2010 average mercury concentrations for the routine onsite sediment monitoring stations, the routine offsite monitoring stations to Schultz Road and the routine offsite monitoring stations at Manor Road. All 30 routine sediment monitoring stations are located downstream of the BNL STP and therefore have positive distances. Each sediment sample was analyzed for mercury, PCBs and cesium-137. BNL also routinely analyzes 10% of the samples for silver and copper.

Two of the 2010 mercury samples were at (PR-SS-38) or greater than 2.0 mg/kg. The 2010 mercury concentration at station PR-SS-38 was 2.0 mg/kg and no supplemental samples were required or collected. The basis for the 2010 onsite average mercury concentration (0.74 mg/kg) being substantially higher than the 2009 average mercury onsite average concentration (0.40 mg/kg) is principally because of the 2010 mercury concentration of 4.7 mg/kg at PR-SS-33. Section 2.3 discusses the supplemental sediment samples collected at PR-SS-33.

Overall, in 2010 the 29 routine sediment monitoring stations within the cleanup area (all samples except Donahue's Pond) had an average mercury concentration of 0.477 mg/kg (Table 2-1). The 15 sediment sampling stations located on BNL property had a 2010 average mercury concentration in the sediment of 0.74 mg/kg, and the 12 sediment sampling stations located offsite between the BNL boundary and Schultz Road had a 2010 average of 0.19 mg/kg (Table 2-1). The 2010 average mercury concentration for the two stations at Manor Road was 0.27 mg/kg. The single routine station at Donahue's Pond (PR-DP-01) had a 0.24 mg/kg sediment mercury concentration, but was excluded from the averaging because it is located approximately two miles downstream of the most downstream cleanup area (Manor Road). Note that the Table 2-1 data also supports very considerable percent reductions (75 % to 99.96 %) in the 2010 concentrations of each analyte relative to the pre-cleanup average[11] concentrations for the onsite, offsite to Schultz Road, and Manor Road areas.

Silver, copper, PCBs and cesium-137 are co-located with mercury in depositional areas. These co-located contaminants do not have ROD-required cleanup goals, and were therefore compared with their pre-cleanup averages (Table 2-1). The 2010 silver, copper, PCB and

[11] The pre-cleanup averages were obtained from Tables 8, 10 and 12 of the Final Closeout Report, Peconic River Remediation, Phases 1 and 2, Brookhaven National Laboratory prepared for Brookhaven Science Associates by Envirocon, Inc. August 25, 2005.

cesium-137 concentrations were substantially lower than the pre-cleanup averages and most of the 2010 PCB results were smaller than or close to the detection limits (See Table 2-1 for pre-cleanup summary data.) Refer to Appendices A, B and C for detailed metal, PCB, and radionuclide analytical results, respectively.

2.3 2010 PR-SS-33 Supplemental Sediment Monitoring Results

All 2006–2010 routine and supplemental PR-SS-33 sediment mercury data are shown in Table 2-2. Comparison of the May 13, 2010 mercury sediment concentration at PR-SS-33 with all previous post-cleanup mercury concentrations (2006–2009) for this station indicates that nine of the 10 PR-SS-33 values have been substantially lower than 2.0 mg/kg and that the average mercury concentration for all 10 samples is 0.91 mg/kg.

Per the protocols established in the Data Quality Objectives (DQOs) of the Environmental Monitoring Plan Triennial Update, when the average mercury concentration of the supplemental sediment sample collected at the original sample location (PR-SS-33-O) and the four supplemental samples collected five feet upstream, downstream, to the left and to the right of the original location is less than the 2.0 mg/kg maximum individual sample goal, no additional action is required.

On July 22, 2010 BSA/DOE recommended and collected five (5) supplemental sediment samples within five (5) feet of the PR-SS-33 sediment sample station to confirm that the May 13, 2010 4.7 mg/kg mercury concentration represented an anomalously high mercury concentration within the 80-100 square foot area surrounding PR-SS-33. These July 22 samples had an average mercury concentration of 0.61 mg/kg and a maximum mercury concentration of 1.5 mg/kg. Because the 0.61 mg/kg average mercury concentration is substantially lower than the 2.0 mg/kg threshold for taking additional action, no additional action is recommended at PR-SS-33.

2.4 PR-WC-06, PR-SS-15 and Sediment Trap Removal and Remedy Optimization

Supplemental sediment sampling at station PR-WC-06 was recommended in the Final 2008 Peconic River Monitoring Report (2008 Recommendation 6[12]) to evaluate the sediment as a potential source of the elevated total mercury concentrations which were detected at water column sampling station PR-WC-06 in August 2006 and June 2008. Supplemental sediment samples were collected in 2009 and 2010 to define the extent of contamination. All data for PR-WC-06 area sediment samples collected through January 28, 2010 were reported in Section 2.4 of the Final 2009 Peconic River Monitoring Report. Additional supplemental sediment samples were collected on March 25, 2010 and April 22, 2010. These data are reported in Table 2-3 of this 2010 report. Figure 2-3 plots all PR-WC-06 sediment data and defines the two PR-WC-06 sub-areas (Area 1 and Area 2) that were identified for supplemental sediment removal to optimize the remedy.

Supplemental sediment removal at PR-WC-06, PR-SS-15 and the Sediment Trap areas was completed in January 2011. These activities will be described in detail in the closeout report which will be submitted in June 2011.

2.5 Sediment Summary and Recommendations

Table 2-1 shows the 2010 mercury, silver, copper, PCBs and cesium-137 values for each 2010 sampling station as well as the average 2010 and pre-cleanup concentrations for the onsite, offsite to Schultz Road and offsite Manor Road sections of the Peconic River. Table 2-1a shows the 2006-2010 mercury data for each individual sediment monitoring station. Mercury is the only contaminant with ROD required cleanup goals. Figure 2-1 plots the 2010 mercury concentration for each individual station relative to the pre-cleanup average and 2010 average mercury concentration. Figure 2-1a plots the 2006-2010 annual average onsite and offsite mercury concentrations relative to the pre-cleanup averages.

The 2010 Peconic River routine sediment monitoring values are substantially lower than the pre-cleanup values (Table 2-1) and all mercury samples, except one sample (PR-SS-33, 4.7 mg/kg) were below the cleanup goal. One sample (PR-SS-38, 2.0 mg/kg) was equivalent to the

[12] **2008 Recommendation 6 –** PR-WC-06 has shown markedly elevated total mercury and TSS concentrations on two occasions: June 2008 (876 ng/L total mercury, and 79.1 mg/L TSS) and August 2006 (1,360 ng/L total mercury and 116 mg/L TSS). These two sample results merit further investigation of a potential sediment source at the sample location. BNL/DOE recommends that a sediment sample be collected at water column sampling station PR-WC-06 as part of the June 2009 and July/August 2009 mercury, methylmercury and TSS water column monitoring rounds. The sediment sample at the PR-WC-06 station will be collected after the routine mercury, methylmercury and TSS water column and water quality samples and field data are collected.

cleanup goal and required no additional action. Five supplemental samples collected within five feet of the single PR-SS-33 value (4.7 mg/kg) failed to confirm the elevated mercury concentration, and had an average of 0.61 mg/kg and a maximum value of 1.5 mg/kg. No additional action is recommended in the PR-SS-33 area.

The 2010 Peconic River routine sediment monitoring had an average mercury concentration of 0.74 mg/kg on BNL/DOE property, vs. a pre-cleanup average of 4.6 mg/kg (Table 2-1). The average 2010 offsite mercury concentrations were 0.19 mg/kg from the BNL boundary to Schultz Road, vs. a pre-cleanup 1.79 mg/kg average, and an average 2010 Manor Road mercury concentration of 0.27 mg/kg, vs. a pre-cleanup 1.08 mg/kg average.

All onsite and offsite sediment PCB values were less than the reporting limit for all seven PCB aroclors. The 2010 average cesium-137 activity on laboratory property was 0.89 pCi/g, vs. a 5.7 pCi/g pre-cleanup average. The offsite areas from the BNL boundary to Schultz Road and within the Manor Road cleanup area had 2010 averages of 0.36 and 0.24 pCi/g, respectively, vs. pre-cleanup averages of 5.4 and 2.88 pCi/g, respectively (Table 2-1).

The PR-WC-06, PR-SS-15 and the Sediment Trap area sediment removals were completed in January 2011. The sediment trap was also removed in January, 2011. These activities will be described in detail in the closeout report which will be submitted to EPA, NYSDEC, NYSDOH and SCDHS[13].

Monitoring Report Recommendation: BSA/DOE recommends no additional action at the PR-SS-33 sediment sample station based on the 2010 supplemental sampling results for this location.

Five-Year Review Recommendation: Sediment monitoring for 2012 to 2014 was evaluated in the 2010 Five-Year Review, and is summarized below:

- BSA/DOE recommends that the number of sampling stations be reduced from 30 to three stations (PR-WC-06, PR-SS-15, Sediment Trap cleanup areas) per year.

[13] Frequently used acronyms: EPA (United States Environmental Protection Agency), NYSDEC (New York State Department of Environmental Conservation), NYSDOH New York State department of Health), SCDHS (Suffolk County department of Health services).

Details, tables and figures supporting all of the Five-Year Review recommendations are described in Section 6.4.5 and Section 7.5 of the 2010 Five-Year Review, and are included in Attachment 1 of this document.

SECTION 3 - 2010 WATER COLUMN MONITORING RESULTS

3.1 Introduction

The LTMM Plan indicates that twice each year, 22 water column monitoring stations in the Peconic River, including one reference station in the Connetquot River, are sampled for total mercury, methylmercury and TSS. The reference sample from the Connetquot River was collected to provide information on total mercury and methylmercury levels in a nearby system that is not impacted by a known mercury source. It serves as a basis for comparison to data collected from the Peconic River upstream of the STP, but because it is only a single sample location, the Connetquot River reference station should not be considered to be representative of "background".

Mercury methylation is enhanced by a combination of environmental conditions that include increased water temperatures, decreased dissolved oxygen and decreased pH, all of which occur during the late summer. Spring and winter collections are not optimal because of snow and ice cover, unsafe working conditions and during spring, dilution of the water column constituents from snow and ice melt and precipitation. For these reasons June and August were originally selected for water column sampling because they include the typical periods of highest mercury methylation (July-August/September). Being a water table controlled river the Peconic is at its lowest depths during the late summer and early fall and is sufficiently shallow to preclude water column sampling at several stations during August and occasionally in mid to late July.

During the collection of the June 2010 water column samples the field team noted the low river depths and advised that an August collection may not be possible due to low water. Collecting samples from stations with less than 12 inches of water is likely to suspend sediment from the river bed and cause elevated results, because sediment mercury concentrations are substantially higher (parts per million) than the concentration of water column mercury (parts per trillion). Therefore, water column samples are not collected at locations with less than 12 inches of water. Consequently the scheduled August water sampling was re-scheduled to the third week in July and still resulted in river conditions that prevented collecting four samples.

Table 3-1 describes the water column locations, schedules and sampling frequencies. Tables 3-2a and 3-2b provide the analytical results and the field data for the stations where conditions permitted sampling. For stations that could not be sampled because of low water levels, Table 3-2 provides only the river depth. Tables 3-3 and 3-4 provide historical data for the

post-cleanup period. Beginning with the 2009 Peconic River Monitoring Report, these two tables report data for the current year and the previous three years. Refer to the Final 2008 Peconic River Monitoring Report for historical monitoring data prior to 2006. Tables 3-3 and 3-4 in this report contain historic data for 2007–2009 in addition to the 2010 data.

3.2 Data Collection Summary

The Peconic River water column monitoring stations and the Connetquot River station are sampled twice annually for mercury, methylmercury and TSS. Peconic River water column sample locations are shown in Figures 1-4, 1-5 and 1-6 together with the sediment sample locations. Stations whose identification number begins with a "PR-WC-" are water column stations located upstream of Schultz Road. The "PR-WC" station numbers increase from PR-WC-01 with increasing distance upstream of Schultz Road. The water column stations that are downstream of Schultz Road begin with "PR-WCS-". The "PR-WCS-" station numbers increase from PR-WCS-01 with increasing distance downstream of Schultz Road.

In 2007, a minimum required water depth of one foot was established for the water sampling program to minimize potential re-suspension and sampling of river sediment during water column sampling. Sediment re-suspension may confound the interpretation of surface water analytical results. During 2007, 2008, 2009, and 2010 attempts were made to relocate a sampling point to deeper water within the general area scheduled for sampling, if the water depth at a sample station was less than one foot. The stations that most frequently cannot be sampled are located upstream of where the STP effluent enters the river. The STP effluent enters the river approximately 50 feet upstream of station PR-WC-11DS (Figure 1-4).

Two rounds of post-remediation water column sampling have been conducted in June and August of 2007 and June and July of 2008, 2009 and 2010. Field observations in 2008 and 2009 indicated that water levels in the river were decreasing sufficiently rapidly to jeopardize an August collection. In response to these observations, the second round of the 2008 through 2010 routine annual mercury, methylmercury and TSS water column monitoring was accelerated to begin in July.

Quality assurance and quality control (QA/QC) samples included collection of field blanks, field replicates and pairs of matrix spike/matrix spike duplicates (MS/MSD). Equipment blanks were not necessary, since disposable sampling equipment was used at each sampling location.

The standard method for collecting Peconic River water column samples for total mercury, methylmercury and TSS analysis consists of collecting a single, large (2-liter) volume water sample at each sampling location. The collected sample is then analyzed at the analytical laboratory for the three analytes. This methodology ensures that the analytical results for each water sampling location represent the same water mass. This aids the interpretation of potentially anomalous results.

In addition to the routine mercury, methylmercury and TSS sampling, routine water quality sampling was also conducted to assist in the interpretation of the mercury and methylmercury data. This program collects water quality samples from eight stations distributed throughout the remediated sections of the river approximately two to three weeks prior to, during, and after the June and July mercury, methylmercury and TSS sampling (Table 3-1). A total of five water quality rounds were conducted in 2010. Three of the five rounds (the "short" rounds) were stand-alone water quality surveys (i.e. mercury and methylmercury samples were not collected). Eight stations, water level permitting, are sampled during the short rounds. Two rounds (the "long" rounds) of water quality monitoring are performed concurrent with the mercury, methylmercury and TSS water column sampling. Twenty three river stations[14] and the STP effluent are sampled, water levels permitting, during the long rounds.

3.3 Monitoring Results

Analytical results and field data for each mercury, methylmercury and TSS water sample collected in June and July 2010 are summarized in Table 3-2a and 3-2b, and are detailed in Appendix D. Comparisons of the 2010 results to those obtained in previous post-cleanup sampling rounds (2007 through 2009) are presented on Table 3-3 (June) and Table 3-4 (July). The locations of the sampling stations are shown in Figure 1-4 (PR-WC-15 to PR-WC-02), Figure 1-5 (PR-WC-06 to PR-WCS-02) and Figure 1-6 (PR-WCS-03 to PR-WCS-07). Total mercury, TSS, methylmercury, and percent methylmercury concentrations are plotted on Figures 3-1, 3-2, 3-3, and 3-4, respectively. During the June and July 2010 long round, water column

[14] The 23 river stations include the 22 Peconic River stations and one Connetquot River station (Table 3-1). In addition to the river monitoring stations, a grab sample is also routinely collected from the STP effluent. This sample is collected from within the Ultra Violet (UV) chamber adjacent to the former chlorine house. The total number of routine water column stations thus equals 24.

samples were collected at 24 and 20[15], respectively of the 24 routine water column monitoring stations.

3.4 Total Mercury

Figure 3-1 shows the mercury concentrations at each sample station (Site ID) and the distance of the sample station upstream (negative distance) or downstream (positive distance) from the BNL STP. For the 20 stations that were sampled in both June and July, the June and July total mercury concentrations were generally very similar, as shown in Figure 3-1.

The two most upstream sample stations, other than PR-WC-12D7, with sufficient water depth to collect a sample in June and July were STP-EFF-UVG (June-75.1 ng/L, July-69.1 ng/L, 0.0 mi. downstream of the STP) and PR-WC-11-DS[16] (June-19.9 ng/L, July-33.4 ng/L, 0.04 mi.). The two 2010 total mercury concentrations for STP-EFF-UVG were substantially lower than the 2009 STP-EFF-UVG (June-127 ng/L, July-115 ng/L, 0.0 mi.) data. In the 2.2 mile section of the river between the 2010 June PR-WC-10 (22.5 ng/L, 0.3 mi) station and the PR-WC-02 station (20.7 ng/L, 2.52 mi) the total mercury concentration fluctuated between 23.4 ng/L and 35.3 ng/L. In the 1.79 mile section of the river between Schultz Road PR-WC-01 (river mile 2.98) and PR-WCS-04 (river mile 4.77), the June total mercury concentration stabilized between 13.8 ng/L and 16.5 ng/L. Finally, the June total mercury concentration dropped from 14.8 ng/L at PR-WCS-04 to 3.9 ng/L at PR-WCS-05 (6.04 mi.), 4.7 ng/L at PR-WCS-06 (6.75 mi.) and 4.2 ng/L at PR-WCS-07 (7.23 mi.).

The July 2010 total mercury concentrations downstream of PR-WC-10 followed a generally similar downward trend. Although the total mercury trend was generally downward, individual stations had values which fluctuated both upward and downward with increasing distance downstream of the STP. However, it is notable that the July total mercury concentration from PR-WC-04 (14 ng/L, 1.7 mi.) downstream to PR-WCS-07 (3.6 ng/L, 7.23 mi.) was generally lower to substantially lower than the corresponding June total mercury values (PR-

[15] Four (PR-WC-15, PR-WC-14, PR-WC-13, and PR-WC-02) of the 24 stations were not sampled in July due to water levels less than 12 inches.

[16] The STP EFF-UVG sample is collected from a vault in the Ultraviolet (UV) chamber through which the effluent passes for UV sterilization prior to being discharged to the river. The decrease in total mercury concentration at PR-WC-11DS relative to STP-EFF-UVG is most likely caused by dilution of the STP effluent by mixing with the lower mercury concentration flow from upstream (PR-WC-12-D7, June-15.3 ng/L, July-13.3 ng/L, -0.01mi.) of the STP.

WC-04 - 23.4 ng/L, 1.7 mi. and PR-WCS-07 - 4.2 ng/L, 7.23 mi.). Refer to Tables 3-2a and 3-2b and Figure 3-1.

A potential explanation of the lower water column total mercury concentrations in July than in June is an increased river water volume in July which could have caused dilution. However, review of corresponding river depth and flow rate data does not support the potential role of dilution in causing lower July mercury concentration[17].

3.5 Total Suspended Solids (TSS)

A total of 29 of the TSS samples collected with the 2010 total mercury and methylmercury water column samples were less than the reporting limit of 2 mg/L. The average TSS concentration for all mercury, methylmercury, TSS stations sampled in June and July 2010 was 3.97 mg/l[18].

The importance of the low 2010 TSS concentrations is related to the relationship between elevated mercury concentrations in the surface water and elevated TSS concentrations at stations with elevated concentrations of mercury in the sediment. Historically, the maximum total mercury concentrations in the water column have been associated with high TSS measurements, however, this historical association was not observed in the 2010 data.

3.6 Methylmercury and Percent Methylmercury

Methylmercury is the biologically toxic form of mercury that is created by conversion of inorganic mercury to methylmercury by bacteria.[19] The June and July 2010 methylmercury data are shown on Tables 3-2a and 3-2 b, respectively, and are plotted on Figure 3-3. Figure 3-3 shows that the June methylmercury trend had little variation and values generally fluctuated between 3.18 and 6.74 ng/L for the 20 stations located in the 4.94 mile section of the river between PR-WC-15 and PR-WCS-04. Two stations in this section of the river had substantially

[17] The average of the sample depth for all Peconic River stations that were sampled in both the June and the July sampling events was approximately 3.8 inches deeper in June than in July, suggesting that river volume was greater in June than in July. Also, flow rate in July was approximately 0.11 feet per second faster in June than in July. These two field measurement do not support dilution as an explanation for July total mercury concentrations being lower than the June measurements.

[18] The 2010 average TSS concentration was calculated using the reporting limit value of 2.0 mg/l as the value for samples that were reported as being non-detect, i.e. less than the reporting limit.

[19] Because methylmercury is in a dissolved form, the mass of mercury contained in methylmercury is included in the total mercury measurement.

lower methylmercury values than the trend, STP-EFF-UVG (non-detect at 0.02 ng/L) and PR-WC-01 (1.25 ng/L). The June methylmercury values for the three most downstream stations varied between 0.655 ng/L and 1.37 ng/L. Most of the July methylmercury values for all stations had similarly low variation between 0.5 ng/L and 4.3 ng/L with values relatively close to 2 ng/L. As in June, the methylmercury concentration for the Sewage Treatment Plant effluent was quite low (0.0573 ng/L). Both the June and the July STP effluent concentrations were lower than the Connetquot River reference station values (0.22 ng/l and 0.12 ng/L, respectively). These June and July 2010 methylmercury data do not support the occurrence of substantial net increases in the rate of mercury methylation between the stations upstream of the BNL STP and the stations downstream of the 2004/2005 Peconic River cleanup area (between stations PR-WC-11DS and PR-MR-02).

The percent methylmercury[20] is an indication of the suitability of the environment to convert inorganic mercury to methylmercury. Percent methylmercury was calculated by dividing the methylmercury concentration by the total mercury concentration, then multiplying the resulting ratio by 100. Percent methylmercury data are plotted on Figure 3-4.

3.7 Water Column Mercury Concentrations at Transect PR-SS-15-U1

In 2006 routine sediment sampling station PR-SS-15 had a mercury concentration of 14.2 mg/kg. Subsequent supplemental sampling in 2007-2009 indicated an area of elevated mercury in the sediment along transect PR-SS-15-U1 located 50 feet upstream of routine sediment sampling station PR-SS-15. In 2008 BNL/DOE started monitoring the water column to evaluate the potential for substantial downstream transport of mercury from the section of the PR-SS-15-U1 transect with elevated mercury in the sediment. To make the water column sampling more representative of annual flow conditions, Recommendation 5[21] of the Final 2008 Peconic River Monitoring Report increased the frequency of surface water monitoring upstream and

[20]. The magnitude of the percent methylmercury value represents the percent of the total mercury that is in the methyl form. Large percent methylmercury values indicate areas in which the conditions are more appropriate for converting inorganic mercury to methylmercury than locations with low percent methylmercury. Large percent methylmercury values do not necessarily represent large masses of methylmercury unless the total mercury concentrations are also large.

[21] **2008 Recommendation 5 –** 2008 Final Peconic River Monitoring Report , page 11**"**BNL/DOE recommends that monitoring the upstream and downstream concentration of total mercury, methylmercury and TSS at water column monitoring stations PR-SS-15-U1-WC-1, PR-SS-15-U1-WC-2, PR-SS-15-U1- WC-3, and PR-SS-15-U1-WC-4 occur four times annually, as flow permits, through 2010 to evaluate potential downstream transport of mercury and methylmercury from sediment in the PR-SS-15-U1 area."

downstream of the PR-SS-15-U1 transect from two times per year to four times per year through 2010, as water levels permitted. The 2008 and 2009 water column data did not substantiate substantial downstream transport.

Figures 3-5 to 3-7 and Table 3-5, show the spatial relationships of each of the four water column stations PR-SS-15-U1-WC-1, PR-SS-15-U1-WC-2, PR-SS-15-U1-WC-3 and PR-SS-15-U1-WC-4 and their data. For brevity these stations IDs are abbreviated as WC-1, WC-2, WC-3 and WC-4, respectively. Note that WC-4 and WC-3 are each 30 feet upstream of stations WC-1 and WC-2, respectively and that WC-1 and WC-2 are each 15 feet downstream of sediment sampling stations PR-SS-15-U1-L40 and PR-SS-15-U1-L65. The initial (2007) elevated mercury concentrations in the sediment at transect PR-SS-15-U1 were 9.8 mg/kg and 34.5 mg/kg, and are plotted on Figure 3-5.

The data in Figures 3-5, 3-6 and 3-7 do not support substantial downstream transport of mercury from the PR-SS-15-U1 transect area. BSA/DOE recommends that water column monitoring for total mercury, methylmercury and TSS be discontinued upstream and downstream of transect PR-SS-15-U1. This is based on two factors: 1) the 2008, 2009 and 2010 mercury, methylmercury and TSS data do not substantiate substantial downstream transport of contaminants from the PR-SS-15 area; and 2) the water column monitoring of the PR-SS-15 area was intended to be temporary until the remediation of the PR-SS-15 area was completed. The remediation was completed in January 2011.

3.8 Water Column Mercury Concentrations in PR-SS-10 Area

Recommendation 4[22] in the Final 2009 Peconic River Monitoring Report recommended monitoring of total mercury, methylmercury and TSS four times annually at stations located downstream of transect PR-SS-10-U1 and transect and PR-SS-10-D2. Re-evaluation of the distribution of mercury in the PR-SS-10 area indicated that positioning these water column monitoring stations upstream of transect PR-SS-10-U3 and on transect PR-SS-10-D3 would

[22] **2009 Recommendation 4:** BNL/DOE recommends that total mercury, methylmercury and TSS in the water column be monitored at two supplemental stations upstream and two supplemental stations downstream of transects PR-SS-10-U1 and PR-SS-10-D2 at the locations with mercury concentrations greater than 2.0 mg/kg. The stations will be monitored four times annually, as water levels permit, to evaluate the water column concentration of mercury and methylmercury in this area, to evaluate the potential exposure of fish in this area to potentially elevated methylmercury concentrations and to evaluate the potential downstream transport of total mercury and methylmercury from this area.

allow the monitoring of the potential impact of an additional slightly elevated mercury location on transect PR-SS-10-U3 (Figures 3-8, 3-9 and 3-10). Note that the river flows from the upstream stations at the bottom of the page to the downstream stations at the top of the page. Figures 3-8, 3-9 and 3-10 abbreviate the two downstream water column monitoring stations as D3-WC1 and D3-WC-2 and abbreviate the two upstream water column monitoring stations as U3-WC-3 and U3-WC-4. D3-WC-1 is downstream of U3-WC-4 and D3-WC-2 is downstream of U3-WC-3. These locations monitor the potential impacts of the entire PR-SS-10 area on downstream transport of mercury from the PR-SS-10 area.

Total mercury, methylmercury and TSS were collected four times during 2010 to evaluate the potential transport of mercury downstream from sample locations within the PR-SS-10 area with mercury concentrations greater than 2.0 mg/kg. The total mercury, methylmercury and TSS data in Table 3-6 and Figures 3-8, 3-9 and 3-10 do not support substantial downstream transport of mercury from the PR-SS-10 area.

3.9 Water Column Summary and Recommendations

The June and July 2010 STP effluent (STP-EFF-UVG) total mercury concentrations (75.1 ng/L and 69.1 ng/L, respectively, Tables 3-2a and 3-2b, Figure 3-1) were substantially lower than the corresponding 2009 concentrations at this station (127 and 115 ng/l, respectively) for June 2009 and July 2009. The 2010 June and July total mercury concentrations then dropped to 19.9 and 33.4 ng/L, respectively, at the next station (PR-WC-11DS) and then rose to 29.3 and 55.2 ng/L at PR-WC-09. The June and July total mercury concentrations then trended gradually downward (with fluctuations) to PR-WCS-04 (14.8 and 7.6 ng/L, respectively) before reaching mercury concentrations of 3.1 to 4.7 ng/L for the three most downstream monitoring stations. The total mercury concentrations for these three stations (PR-WCS-05, PR-WCS-06 and PT-WCS-07) are generally similar to the Connetquot River reference station historical maximum mercury concentration (4.52 ng/L).

The 2010 sample results for methylmercury were also generally low (Tables 3-2a and 3-2b, Figure3-3). The lowest methylmercury concentrations were a June non-detect at 0.02 ng/L and a July 0.0573 ng/L at the BNL STP effluent station (STP-EFF-UVG). The June methylmercury concentrations were slightly higher than the July concentrations. Other than the STP, the rest of the June Peconic River stations had a 2010 range of 0.655 at PR-WCS-07, the

most downstream station, to 6.74 ng/L (PR-WC-05). Other than the STP, the rest of the July Peconic River stations had a 2010 range of 0.5 (PR-WCS-05) to 4.3 ng/L (PR-WC-03) and a mean of 2.07 ng/L.

Water column monitoring stations were also sampled for total mercury, methylmercury and TSS four times annually both upstream and downstream of elevated sediment mercury locations on transect PR-SS-15–U1 and transects at PR-SS-10 to evaluate potential downstream transport of mercury from these locations. The 2010 data did not confirm substantial downstream mercury transport from either the PR-SS-15-U1 transect or the PR-SS-10 area.

Monitoring Report Recommendation: BSA/DOE recommends that routine water column monitoring be discontinued for the PR-SS-15 and PR-SS-10 areas in 2011 and 2012, respectively, based on the 2010 surface water data described above, the 2008 and 2009 Peconic River Monitoring Report data and completion of the PR-SS-15 sediment removal in January 2011.

Five-Year Review Recommendation: The 2010 Five-Year Review water column recommendations for 2012 to 2014 are summarized below:

- BSA/DOE recommends that routine water-column monitoring for total mercury, methylmercury and TSS continue two times per year at the 15 stations between PR-WC-15 (upstream of STP-EFF-UVG) and PR-WC-02.
- BSA/DOE recommends that routine water-column monitoring at stations between and including PR-WC-01 and PR-WCS-07 be discontinued in 2012, with the exception of PR-WCS-04 (west of the Cranberry Bogs) and PR-WCS-06 (Donahue's Pond). PR-WCS-04 is near the downstream extent of the Manor Road cleanup area and will continue to be monitored through 2012 as part of the routine water column monitoring program. The need for continued monitoring at this location will then be evaluated. PR-WCS-06 is outside the cleanup area and will continue to be sampled as part of the routine environmental surveillance program.
- BSA/DOE also recommends that analysis for water quality parameters (chlorophyll-a, N, P, TOC, and TSS) be discontinued in 2012.

Details, tables and figures supporting all of the Five-Year Review recommendations are described in Section 6.4.5 and Section 7.5 of the 2010 Five-Year Review, and are included in Attachment 1 of this document.

SECTION 4 - 2010 FISH MONITORING RESULTS

4.1 Introduction

The purpose of the Peconic River fish sampling program is to monitor the effectiveness of the Peconic River cleanup and to ensure that contaminants related to BNL operations do not create a potential human health or environmental risk from fish consumption. Per the Peconic River ROD, fish must be monitored once annually for mercury and cesium-137. Fish caught on BNL property must also be monitored once annually for PCBs. Fish will be sampled in sections of the river on laboratory property when samples can be collected without negatively impacting the well-being of the fish population. The LTMM Plan states that to the extent possible, five individual fish of sufficient size to obtain an edible fillet will be collected from each of two feeding guilds within each of the five collection areas (Area A, Area D [North Street], Area P [Schultz Road], Manor Road, and Donahue's Pond) indicated on Table 4-1 and Figures 1-4, 1-5 and 1-6. The two feeding guilds are the top carnivore guild (e.g. chain pickerel and largemouth bass) and the bottom feeder (e.g. brown bullheads and creek chubsuckers). The LTMM Plan specifies alternate locations when conditions do not allow sampling the five indicated areas. Area C, an alternate location for Area D, was also sampled in 2007, 2008, 2009, and 2010 to supplement the on-site fish data. BNL also routinely samples fish at other locations as part of the BNL environmental surveillance monitoring program. The environmental surveillance monitoring data are reported each year in the BNL Site Environmental Report.

Fish Collection:

Fish were collected in the following areas between May 25 and August 13, 2010 (Table 4-2): Area A (downstream of the BNL STP), Area C, Area D at North Street, Manor Road, and Donahue's Pond. Fishery biologists from the Cold Spring Harbor Fish Hatchery collected fish samples from Schultz Road, Manor Road, and Donahue's Pond. The BNL field team collected fish from Area A, Area C and Area D, assisted the Cold Spring Harbor fishery biologists with their collections, and prepared all of the fish collected for off-site laboratory analysis.

The gear used and the water chemistry results are shown on Table 4-2. The 2010 water temperatures at all five fish collections stations were between 22.03 degrees Celsius (Area A)

and 25.68 degrees Celsius (Area C). The dissolved oxygen concentrations were between 2.09 mg/L at Area D and 9.1 mg/L at Donahue's Pond. The Area D (2.09 mg/L) and Manor Road (3.04 mg/L) dissolved oxygen concentrations are low for supporting robust fish populations.

Approximately 36 percent of the 164 fish caught were bottom feeders (59 brown bullheads) and 64 percent of the catch (105 fish) was predators other than brown bullheads. Pumpkinseeds and bluegills composed 36 percent (59 fish) and 13 percent (21 fish), respectively, of the total catch. Chain pickerel (11 fish) and largemouth bass (14 fish) represented approximately seven and nine percent, respectively, of the catch.

Overall, the number of fish collected was larger than the number of analytical fish samples due to the need to composite some of the fish in order to achieve the required fish tissue sample mass specified by the analytical laboratory (see below).

Fish Preparation:

The BNL sample team measured the total length and weight of each individual fish, filleted each fish and weighed the fillets of each fish, labeled and bagged each fillet and then froze the fillets. As necessary to meet the analytical laboratory's (GEL Inc.) mass requirements for the requested analyses, the sampling team then grouped appropriate fillets of the same species into composites and sent the frozen individual and composite samples via overnight delivery to the analytical laboratory for processing and analysis.

Fish Tissue Compositing:

The Peconic River ROD requires that mercury, PCBs and radionuclides be evaluated for fish collected on BNL property, and that mercury and radionuclides be evaluated for fish collected outside BNL property. All fish samples consist only of edible tissue that was removed from the fish (filleted) by the BNL field team. The required wet weight tissue mass for mercury, PCB and radionuclide analysis are 5 g, 120 g, and 50 g, respectively. Because the proportion of edible fish tissue to total body weight is highly variable depending on fish size and other factors, the filleted tissue from two or more fish may need to be composited together to obtain sufficient sample mass to obtain mercury, PCB and radionuclide analyses across the size range of Peconic River fish. Table 4-4 shows the composition of the 84 composites analyzed in 2010.

BNL/DOE followed EPA guidance[23] in limiting composites to fish of the same species, fish of similar lengths, and fish collected within a week of each other. To the extent practicable, the total length of the smallest fish was also generally equal to or greater than 75 percent of the total length of the largest fish in that composite.

For each area from which fish were collected, Table 4-4 identifies the Chain of Custody (COC) for each fish collected and each composite from that area. The Composite ID consists of the respective COC number (for example "30239") followed by a unique identifier (for example "–bc1") for each composite. Table 4-4, for example on page 3 of 5, also identifies the Fish ID (for example, 10-212) for each fish that was included in each of the 84 fish composites, as well as the species, the total length, and the age of each fish. The Fish ID consists of the collection year ("10") followed by a hyphen ("-") and the sequential order in which the fish was collected, e.g. "212"). Hence "10-212" represents the 212th fish collected in 2010[24], a 305 mm age 5+ brown bullhead collected from Area D. Finally, the average age of all fish within each composite is calculated as the average of the numeric ages of each fish within the composite. The two brown bullheads that were grouped into composite 30239-bc1 had total lengths of 283 and 305 mm and an average age of 4.5 years.

Fish Ageing:

BNL initiated the ageing of fish in 2008 to help explain potential age-related relationships between fish contaminant concentrations and the completion of the cleanup. In September 2004, the onsite river cleanup was completed, and in April 2005 the off-site river cleanup was completed. Fish of age five or younger could have been born in a cleaned up area. However, there are no year-round barriers to migration between the various sections of the river located upstream of Donahue's Pond (approximately river mile seven). None of the seasonal barriers to fish migration (e.g. the sediment trap, which was removed in January 2011) are sufficient to prevent fish migration during periods of high water. Therefore, it is safer to assume

[23] U.S. EPA 2000. Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories. Volume 1 Fish Sampling and Analysis, Third Edition, EPA-823-B-00-007, November 2007.

[24] The BNL Fish ID is a cumulative count of all fish collected by the BNL field team and includes fish collected for other purposes and bodies of water than the Peconic river post-cleanup monitoring program for which 164 fish were collected. Analytical results for these latter fish are routinely reported in the annual Environmental Monitoring Report.

that five-year-old fish were born during the year that remediation was completed, and six-year-old fish were born prior to remediation being completed.

As fish grow, growth rings (similar to tree growth rings) called "annuli" are left on the fish scales and otoliths. Counting the annuli provides an estimate of fish age, similarly to counting rings on a tree. Otoliths are calcified sensory organs that function in hearing and balance. Because otolith removal and preparation for ageing are very labor intensive, fish ageing is typically done on scales for scale-bearing fish (e.g. bass and sunfish). Otolith aging is typically done for fish that do not have scales, such as catfish. For the 2010 Peconic River fish, all species except brown bullheads (a type of catfish) were aged based on scale interpretation. Brown bullheads were aged by otolith interpretation.

Under contract to BNL, an independent experienced fish biologist performed the otolith removal. The brown bullheads were transferred to the fish biologist via COC. The contractor removed the otoliths and returned the otoliths and brown bullheads to BNL custody. The otoliths and the scales were then transferred to a second independent contractor (EcoLogic, LLC) under separate COCs to prepare the scales and otoliths and interpret the fish ages. Scales were first cleaned and then pressed into a clear cellulose acetate plastic slide material to make a lasting impression. The slides were then placed into scale envelopes labeled with the BNL Fish ID.

Otoliths were cleaned and embedded in epoxy, sectioned into thin slices, then fixed onto a glass slide with clear epoxy and labeled. The ageing was conducted using a double blind QA/QC process in which two Ecologic, LLC fishery biologists independently interpreted the ages of each of the fish scales and otoliths. After completing the ageing, the two biologists met to resolve any differences.

The protocol for age interpretation is described below[25]:

- For fish with no scale growth beyond the outermost annulus, ages were interpreted to be equal to the number of annuli. For example, if there were two annuli and no discernible scale growth between the outermost annulus and the outer margin of the scale, the assigned age would be two years.

[25] BNL/DOE thanks Charles Guthrie, NYSDEC Region 1 Regional Fishery Manager for explanation of the following age interpretation convention.

- For fish with discernible growth beyond the outermost annulus, the interpreted age was based on the number of annuli with a plus sign (+) to indicate growth beyond the outermost annulus, for example 2+.

- If the scale growth from the outermost annulus to the scale margin ("M") was roughly equivalent to the scale growth shown in the previous year between the two previous annuli, then the age was based on the number of annuli plus one year, followed by an "M." For example, the age of a fish whose scale had two discernible annuli plus scale growth beyond the second annulus that was roughly equal to the growth between annulus 1 and annulus 2, would be expressed as 3M. An example of this would be a fish that was born in the late spring and had completed three years of growth, but the formation of the third annulus had not yet been completed.

Appendix F shows the age interpretation data for each of the two fishery biologists, the notes they recorded for a given set of scales or otoliths, and the final agreed-upon age. The analytical data in Appendices G, H, and I, can be cross referenced with the age data in Appendix F by Fish ID or composite ID (Table 4-4). Whenever the assigned ages were used in calculations (such as when calculating the average age of the fish within a composite), the ages that had been assigned by the age interpreters were converted from the alpha numeric ageing code described above to a whole number. When the age of a composite sample was calculated, the result of the calculation was expressed with one decimal place. For example, if a composite consisted of fish with interpreted ages of 3M, 3, 3+ and 4M, the ages used in the calculation would be 3, 3, 3 and 4, respectively, and the average age of fish in the composite would be expressed as 3.3.

4.2 2010 Fish Monitoring Results

The detailed analytical results for each of the fish or composites in the 2010 collection are shown in Tables 4-.4 to 4-9c, and Appendix G (mercury), Appendix H (PCBs) and Appendix I (cesium-137 and potassium-40[26]). The analytical data are discussed in two formats.

In the first format, the analytical values for each fish sample collected between the BNL STP and Donahue's Pond are discussed without regard to species or age (Figures 4-1a, 4-1b) The mean concentration across the entire sampled population is indicative of the average for the entire population within this stretch of the river. The data are representative of the general population in the river between the BNL STP and Donahue's Pond, subject to the selectivity of the collection equipment and techniques. In a similar manner, but to a lesser extent, the average ages, sizes and contaminant concentrations of the fish in each of the areas represent the respective ages, sizes and contaminant concentrations for the subpopulations inhabiting those sections of the river at the times of the respective collections. Figure 4-2 shows the mean mercury concentrations for each section of the river from which fish were collected. However, because movement can occur between the various sections, depending on the water level in the river, it cannot be confidently inferred that the derived subpopulation statistics permanently apply to a given subsection of the river (for example, Area A, Area C, Area D, Schultz Road, etc.) at times other than during the collection period.

In the second format, concentration statistics and age and length data are compared on a species-specific basis for the entire sampled population. From these data, species-specific, age-specific and size-specific trends can be derived (Figures 4-3 through 4-9).

[26] BNL/DOE routinely reports radiological results for fauna (fish, deer, etc.) as pCi/g wet-weight. To confirm that the analytical laboratory has reported the radiological data for fish on a wet-weight basis, BNL/DOE also analyzes fish and select other fauna for potassium-40, a naturally occurring radionuclide. The potassium-40 activity in fish is typically in the 1 pCi/g to 4 pCi/g range. Potassium-40 analytical results greater than 10 pCi/g indicate that the results have been reported on a dry-weight basis.

4.3 Mercury

The 2010 mercury analyses (Appendix G) were performed on 108 fish samples. Table 4-4 details the fish included in each fish composite. These 108 fish samples included 28 composite samples composed of the fillets from 84 fish (Table 4-7a) and 80 individual single fish fillet samples (Table 4- 7d). Thus the 108 fish mercury samples represent 164 fish.

The mean mercury concentration for all individual and composite fish samples and species among the 108 mercury fish samples is 0.28 mg/kg. The 2010 mercury concentration is not substantially different from any of the other post-cleanup (2006-2010) fish mercury concentrations (Table 4-10a). However, the pre-cleanup (1996, 1997, 2001) mercury concentration of 0.52[27] mg/kg is higher than each year of the post-cleanup mercury concentrations, as indicated by the non-overlap of the pre-cleanup 95 percent confidence intervals with any of the post-cleanup confidence intervals (Figure 4-10a).

BNL/DOE does not have a specific cleanup goal associated with mercury concentrations in fish tissue, but for reference purposes BNL has included the EPA water quality criterion for mercury (0.3 mg of methylmercury per kg of fish tissue, U.S. EPA, 2001) on each of the species-specific fish mercury figures. The total body burden of mercury within fish tissue, for which BNL/DOE analyzes, is routinely assumed to be equal to the concentration of methylmercury in the tissue. All analyses are reported on a wet weight basis.

Population and Subpopulation Mercury Trends:

Figures 4-1a and 4-1b show the mercury concentrations in edible fish tissue for the entire 2010 set of 108 fish mercury samples, sorted by species-age-area and by species-area-age,

[27] The pre-cleanup mercury concentrations used in this report consist of fish samples reported in Appendices F3 (1996) and F4 (1997) of the 1998 Operable Unit V Remedial Investigation Report. The 1996 Appendix F3 fish were prepared as head and viscera removed samples. The 2001 fish samples were prepared as standard fillet samples. The data sources for the 2001 fish and for an additional ten 1996 fish was the NYSDEC HUD_MET electronic data base.. The 10 NYSDEC 1996 fish samples were prepared as standard fillet samples . The mean mercury concentration for the combined 1996 and 2001 fish was 0.58 mg/kg. These fish results were discussed extensively in the 2009 Peconic River Monitoring Report. The 1996 fish were collected on BNL/DOE property and the 1997, 2001 and 2006-2010 fish were collected between the BNL STP and Donahue's Pond.

The pre-cleanup mercury concentrations discussed in this report include the 1997 fish that were analyzed as whole body samples intended for ecological risk assessment. Whole body samples generally have slightly lower mercury concentration than fillet samples or head and viscera removed samples due to dilution of the mercury by the mass of the head, skin, scales and viscera that have not been removed. The average mercury concentration for the complete set of combined 1996, 1997 and 2001 fish is 0.52 mg/kg.

respectively. The average (or mean) mercury concentration for all 2010 mercury fish samples is 0.28 mg/kg. The figure shows much variation associated with the various species, ages, sizes and locations. Species-specific relationships are discussed in the next section, and are plotted in Figures 4-3 to 4-7.

Figure 4-2 summarizes the data shown in Figures 4-1a and 4-1b by plotting the mean mercury concentration for all fish within each of the six collection areas. The six mean concentrations are plotted as vertical blue bars in Figure 4-2. The six black error bars show the 95 percent confidence intervals for the mean mercury concentrations for each of the six collection areas. Note that the lower part of the black error bars for the mean fish mercury concentrations for all areas do not overlap the Donahue's Pond black upper part of the black error bar for the mean fish mercury concentration for Donahue's Pond. This indicates that the Donahue's Pond fish are statistically lower in mercury concentration than fish from the other areas, at p=0.05. This supports the appearance of a downward trend[28] in mercury concentration for fish collected from the stations downstream of Manor Road.

The white error bars show the 95 percent confidence interval for the mean of all 108 mercury samples. The 95 percent confidence interval for all six of the area-specific means overlaps the confidence interval for the all-fish mean mercury concentration, indicating that the area-specific fish mercury mean concentrations are not significantly different than the mean for the entire 2010 collection, at p=0.05.

Species-Specific Mercury Trends:

Tables 4-7a and 4-7d (mercury), 4-7b and 4-7e (PCBs) and 4-7c and 4-7f (cesium-137) for composites and individual fish samples, respectively, provide detailed summaries of the relationships between species, age and fish tissue contaminant concentrations. Total length is provided as an indicator of the overlap in size for fish of different ages. These data are plotted on a species-specific basis on Figures 4-3a and b through 4-7a and b (mercury), 4-8 (PCBs) and 4-9 (cesium-137). Table 4-8a groups the mercury analytical results for composite and individual samples by collection area and Table 4-9c lists the minimum, maximum and average mercury concentration for each species within each area.

[28] Note that the Schultz Road area has only one sample which is a composite of two brown bullheads and may not accurately represent the mean mercury concentration of the Schultz Road sub-population at the time of collection.

The mercury concentrations for each of the 2010 fish samples are also plotted in the species-specific Figure 4-3a to Figure 4-7a (sorted within species by age, area and length) and also in the species-specific Figures 4-3b to Figure4-7b (sorted within species by area, age and length)[29]. Each of these figures identifies the fish sample with the area from which it was collected, the total length (in millimeters (mm)), and the average age of the fish in the sample. All samples with fractional lengths (e.g., L=300.5) are composites. The fish samples are identified by a BNL Fish ID, e.g. 09-141 or a Composite ID in Tables 4-4, 4-7a – 4-7f and 4-8a – 4-8c. Composite samples are identified by a composite ID containing the COC number and a "-bc" followed by a unique number, e.g. 27022-bc1. Fifteen bluegill samples, consisting of 13 individual bluegill samples and two composite samples, were analyzed for mercury in 2010. Figures 4-3a and 4-3b plot the mercury concentrations for each of the bluegills. Bluegill average ages ranged between 1 year and 6 years. The average mercury concentration of bluegills was 0.21 mg/kg, and 14 of the 15 samples were less than the 0.3 mg/kg EPA mercury criterion.

Forty-eight brown bullhead samples were analyzed for mercury in 2010 (Figures 4-4a and 4-4b). The average mercury concentration of the 48 samples was 0.25 mg/kg. The samples consisted of 38 individual fish samples and 10 composite samples. The bullhead samples with the ten lowest mercury concentrations (0.0242 mg/kg – 0.109 mg/kg) were between two and eleven years old and from Area D (two samples) and Donahue's Pond (8 samples). In contrast the bullhead samples with the ten highest mercury concentrations (0.317 mg/kg – 1.2 mg/kg) were between one and four years old and from all collection areas except Donahue's Pond.

Figures 4-5a and 4-5b show the mercury concentrations of the 6 chain pickerel samples that were analyzed for mercury in 2010. The mean mercury concentration for the six samples was 0.37 mg/kg and the samples ranged between 0.131 mg/kg and 0.569 mg/kg. The fish ages range from less than a year old to three years old.

Figures 4-6a and 4-6b show the mercury concentrations for the 11 largemouth bass samples that were analyzed for mercury in 2010. Mercury concentrations ranged from 0.276 mg/kg for an age 1, Area A largemouth bass to 0.96 mg/kg for an age 8 Donahue's Pond fish. The average mercury concentration of the 2010 largemouth bass collection was 0.50 mg/kg.

[29] The mercury fish plots were sorted by both age-area- length and area-age-length to evaluate whether either age-specific or area-specific trends in mercury concentration were apparent. The plots do not support clear trends. This may be caused by mixing of population when fish can migrate through several of the sample areas during periods of high water, the true absence of an area-specific mercury trend, the absence of a trend in the 2010 fish samples, or a combination of each.

Figures 4-7a and 4-7b show the mercury concentrations for the 28 pumpkinseed samples that were analyzed for mercury in 2010. The average mercury concentration for all 28 pumpkinseeds was 0.27 mg/kg and the concentrations ranged between 0.0638 mg/kg and 0.709 mg/kg. The pumpkinseed samples with the ten lowest mercury concentrations ranged between 0.0638 and 0.163 mg/kg and were collected from Manor Road (2) and Donahue's Pond (8). The fish ranged in age from two to six years old. The pumpkinseed samples with the ten highest mercury concentrations ranged between 0.293 and 0.709 mg/kg and were collected from all areas except Donahue's Pond and Schultz Road. The fish ranged in age from one to three years old.

4.4 PCBs

The Peconic River ROD requires PCBs as an analyte for fish collected on BNL property. Fish PCB are plotted in Figure 4-8. The large mass (120 g) of tissue required for PCB analysis limits the number of samples that can be analyzed and mercury samples were given preferential treatment. Each sample was analyzed for the seven aroclors (Aroclor-1016, Aroclor-1021, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260); hence 28 PCB analyses were performed (4 samples times seven (7) aroclors). Table 4-7b and 4-7e show the detailed analytical results for the two composite and the two individual samples, respectively (see footnote 24).

Composite sample 30148-bc10 consisted of six Area A pumpkinseeds with an average length of 152 mm and an average age of 2.2 years. This sample had values of non-detect for six of the seven aroclors. Aroclor-1254 was detected in 30148-bc10 at an estimated value of 22.5 ug/kg (Table 4-7b[30]). All other aroclors had values less than the reporting limit. Composite sample 30239-bc1 consisted of two Area D brown bullheads with an average length of 294 mm and an average age of 4.5 years. Aroclor-1260 had an estimated value in 30239-bc1 of 5.22 ug/kg, with a reporting limit of 9.9 ug/kg. All other aroclors had values less than the reporting limit.

The two individual fish samples that were analyzed for PCBs had no detections for any of the seven aroclors (Table 4-7e). Individual Area D largemouth bass sample 10-217 collected from upstream of stream gauging station HQ was 320 mm long and 4.0 years in age. Individual Area C brown bullhead sample 10-125 was 341 mm long and 5 years in age.

[30] Note that the Method Detection Limit and Practical Quantification Limit are unusually high for this sample and that although the Matrix Spike met acceptance limits, the Matrix Spike Duplicate and Relative Percent Different did not meet acceptance limits, possibly due to matrix interference.

Of the two PCB estimated detections in 2010, Aroclor-1254 had the highest concentration at an estimated 22.5 ug/kg, with a reporting limit of 50 ug/kg, and was selected as the principal aroclor for historical analysis. The mean Aroclor-1254 concentration for the 4 2010 individual and composite fish samples was 13.09 ug/kg (Table 4-10b, Figure 4-10b1 and b2). This mean concentration is not substantially different from the other post-cleanup (2006-2010) fish Aroclor-1254 concentrations other than the 2006 and 2009 means. However, the pre-cleanup[31] (1996/1997) mean Aroclor-1254 concentration of 1205.21 ug/kg is substantially higher than each of the post-cleanup mercury concentrations, as indicated by the non-overlap of the pre-cleanup confidence intervals with any of the post-cleanup confidence intervals (Figures 4-10b1 and b2).

4.5 Cesium-137 Results

A total of 62 fish samples were analyzed for cesium-137 in 2010. Cesium-137 analytical results are provided on Table 4-7c and Table 4-7f for the 19 composite samples (consisting of 59 fish) and 43 individual fish samples. Table 4-4 details the fish included in each fish composite. Table 4-8c groups the cesium-137 analytical results for composite and individual samples by collection area and Table 4-9c lists the minimum, maximum and average cesium-137 activity for each species within each area. Figure 4-9 shows the distribution of the 2010 cesium-137 analytical results, sorted by species, area, and age. In 2010 the average cesium-137 activity for all fish was 0.11 pCi/g. Onsite fish (Areas A, C, D) had a 0.17 pCi/g average and offsite fish (Schultz Road, Manor Road, Donahue's Pond) had a 0.08 pCi/g average.

The mean cesium-137 activity for all individuals and species among the 62 fish analyzed in 2010 for cesium-137 is 0.11 pCi/g (Table 4-10c). The 2010 mean is substantially lower than the pre-cleanup mean (1.37 pCi/g) and also less than the 2006 (0.24 pCi/g) and 2009 cesium -137 values (0.17 pCi/g)). The pre-cleanup (1996 and 1997) mean cesium-137 activity is substantially higher than each of the post-cleanup means, as indicated by the non-overlap of the pre-cleanup confidence intervals with any of the post-cleanup confidence intervals (Figure 4-10c).

[31] To avoid confounding Aroclor-1254 and Aroclor-1260, the NYSDEC PCB data was not used. NYSDEC reports these two aroclors as a composite value consisting of both Aroclor-1254 and Aroclor-1260.

4.6 Fish Summary and Recommendation

Approximately 36 percent of the 164 fish caught were bottom feeders[32] (59 brown bullheads) and 64 percent were predators other than brown bullheads (Table 4-3). Among the carnivores (105 fish), pumpkinseeds and bluegills composed 36 percent (59 fish) and 13 percent (21 fish), respectively of the total catch. Chain pickerel (11 fish) and largemouth bass (14 fish) represented approximately seven and nine percent, respectively, of the catch

Mercury, PCB and cesium-137 concentrations are substantially improved over pre-cleanup limits (Tables 4-10 a, b and c and Figures 4-10 a, b, and c, respectively). The average concentration of mercury for the 108 mercury fish tissue samples (individual fish and composites) from fish collected between the BNL STP and Donahue's Pond was 0.28 mg/kg. PCB values were less than or close to the detection limits. The average cesium-137 concentration for all 62 cesium-137 fish samples was 0.11 pCi/g.

Monitoring Report Recommendation: The only fish recommendations are from the Five-Year Review.

Five-Year Review Recommendation: The 2010 Five-Year Review recommends that fish monitoring be modified in the following ways:

- Frequency will be modified from one round annually to one round every other spring. Thus, between 2011 and 2016 fish will be collected in the spring of 2011, 2013 and 2015. Harvesting fish biennially will allow the fish population to grow in both number and individual size.
- Monitoring of fish from the Manor Road area should be discontinued after the 2011 collection, due to the typically low fish catch in that area. Every two years fish monitoring would occur in Area A[33] (downstream of the STP), Area D, Schultz Road, and Donahue's Pond, when water depths are favorable. Supplemental sampling in Area C would be discontinued unless the catch was low in the two adjacent collection areas (Areas A and D).
- Continuing fish age determination via scale and otolith interpretation through 2015.

[32] Brown bullheads are the only bottom dwelling fish caught in the studied sections of the Peconic River. Although brown bullheads represent bottom feeders they also are piscivorous (eat fish).

[33] Note that BSA/DOE expect to initiate discharge of treated STP effluent to the water table rather than to the Peconic River, in 2014. This may cause water levels in Area A (and possibly also Area D) to be too low for fish migration except during the spring. Fish collection locations may require revision following groundwater discharge of the STP effluent.

Details, tables and figures supporting all of the Five-Year Review recommendations are described in Section 6.4.5 and Section 7.5 of the 2010 Five-Year Review, and are included in Attachment 1 of this document.

SECTION 5 - PR-WC-06, SEDIMENT TRAP AND PR-SS-15 REMEDY OPTIMIZATION AND SEDIMENT TRAP REMOVAL

During January 2011 the Peconic River Sediment Trap, located adjacent to Z path and upstream of stream gauging station HQ, was removed as required by the Peconic River ROD. During December 2010 and January 2011 supplemental sediment was also removed from the PR-WC-06, Sediment Trap, and PR-SS-15 areas to optimize the remedy for these three areas. The waste was transported to a Subtitle D landfill (Allied Waste Niagara Falls Landfill in Niagara Falls, NY) in late February and early March 2011. These actions were recommended in Recommendation 5 of the 2009 Peconic River Monitoring Report[34]. These activities have been described in detail in the June 2011 Draft Peconic River Supplemental Sediment Removal Completion Report.

[34] **2009 Recommendation 5**: BNL/DOE recommends that the sediment trap be removed in coordination with the accelerated removal of sediment with elevated mercury concentrations. Both the sediment trap removal and the accelerated sediment removal are scheduled to be conducted in 2010.

SECTION 6 - REFERENCES

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Table 2-1 2010 Peconic River Annual Sediment Sampling Data Summary

Sample ID	COC Site ID	Sample Date	Distance from STP (miles)	Mercury* (mg/kg)	Silver* (mg/kg)	Copper* (mg/kg)	PCBs* (ug/kg)	Cs-137* (pCi/g
On BNL Property (15 samples)								
28587-008	PR-SS-38	5/13/2010	0.36	2			ND 7 of 7	0.81
28587-007	PR-SS-37	5/13/2010	0.47	1			ND 7 of 7	1.79
28587-005	PR-SS-33	5/13/2010	0.49	4.7			ND 7 of 7	2.65
28587-006	PR-SS-35	5/13/2010	0.49	0.12			ND 7 of 7	0.71
28587-004	PR-SS-31	5/13/2010	0.67	0.16	0.96	12	ND 7 of 7	0.36
28587-002	PR-SS-29	5/13/2010	0.69	0.3			ND 7 of 7	0.58
28587-003	PR-SS-30	5/13/2010	0.69	0.14			ND 7 of 7	0.401
28587-001	PR-SS-26	5/13/2010	0.75	0.13			ND 7 of 7	0.222
28583-010	PR-SS-24	5/12/2010	0.8	0.13			ND 7 of 7	1.03
28583-009	PR-SS-23	5/12/2010	0.85	0.043			ND 7 of 7	0.59
28583-008	PR-SS-21	5/12/2010	0.91	0.35			ND 7 of 7	0.65
28583-007	PR-SS-19	5/12/2010	1.2	0.16			ND 7 of 7	0.72
28583-006	PR-SS-18	5/12/2010	1.27	0.089			ND 7 of 7	1.1
28583-005	PR-SS-17	5/12/2010	1.33	0.89			ND 7 of 7	1
28583-004	PR-SS-16	5/12/2010	1.4	0.83	7.4	25.3	ND 7 of 7	0.8
2010 average on BNL Property:				0.74	4.18	18.65	0.05	0.89
Pre-cleanup average:				*4.6*	*61.8*	*310.9*	*133*	*5.7*
Percent Reduction				83.91%	93.24%	94.00%	99.96%	84.39%
Outside BNL Property (15 samples)								
28583-003	PR-SS-15	5/12/2010	1.52	0.88			ND 7 of 7	0.67
28583-002	PR-SS-14	5/12/2010	1.56	0.41			ND 7 of 7	0.6
28583-001	PR-SS-12	5/12/2010	1.66	0.069			ND 7 of 7	0.366
28579-009	PR-SS-10	5/11/2010	1.84	0.054			ND 7 of 7	0.62
28579-008	PR-SS-09	5/11/2010	1.93	0.094			ND 7 of 7	0.249
28579-007	PR-SS-07	5/11/2010	2.02	0.091			ND 7 of 7	0.059
28579-006	PR-SS-06	5/11/2010	2.08	0.032			ND 7 of 7	0.08
28579-005	PR-SS-05	5/11/2010	2.32	0.11			ND 7 of 7	1.1
28579-004	PR-SS-04	5/11/2010	2.52	0.037			ND 7 of 7	0.066
28579-003	PR-SS-03	5/11/2010	2.65	0.34			ND 7 of 7	0.331
28579-002	PR-SS-02	5/11/2010	2.76	0.12			ND 7 of 7	0.19
28579-001	PR-SS-01	5/11/2010	2.9	0.023	2	5	ND 7 of 7	0.045
2010 average (BNL Border - Schultz Road				0.19	2	5	0.07	0.36
Pre-cleanup average (BNL Border - Schultz Road)				*1.79*	*35*	*142*	*48*	*5.4*
Percent Reduction				89.39%	94.29%	96.48%	99.85%	93.33%
28580-001	PR-MR-01	5/11/2010	4.28	0.47	1	11.2	ND 7 of 7	0.32
28580-002	PR-MR-02	5/11/2010	4.5	0.068			ND 7 of 7	0.169
28621-001	PR-DP-01	5/25/2010	6.75	0.239	1.02	14.5		0.518
2010 average (Manor Road Area)				0.27	1	11.2	0.09	0.24
Pre-cleanup average (Manor Road Area)				*1.08*	*9.48*	*44.95*	*Not Sampled*	*2.88*
Percent Reduction				75.00%	89.45%	75.08%		91.67%
2010 average all 29 routine stations within cleanup area (all except Donahue's Pond)				0.477	2.840	13.375		0.630

Note: mg/kg = milligrams/kilogram = parts per million, ug/kg = micrograms/kilogram = parts per billion, pCi/g = picocuries/gram.
'U' is a laboratory assigned qualifier indicating non-detection (ND).
* Silver and copper were analyzed for 10 percent of the onsite and offsite samples, 2 samples and 3 samples respectively.
* Averages do not include Donahue's Pond, which is located downstream of the remediated area.

Table 2-1a 2006-2010 Peconic River Annual Sediment Sampling Data Summary

Sample ID	COC Site ID	Distance from STP (miles)	2006 Mercury[1] (mg/kg)	2007 Mercury[1] (mg/kg)	2008 Mercury[1] (mg/kg)	2009 Mercury (mg/kg)	2010 Mercury[1] (mg/kg)
On BNL Property	**Collection Start**		6/26/2006	7/24/2007	6/17/2008	8/4/2009	5/11/2010
	Collection End		8/22/2006	9/13/2007	6/26/2008	8/6/2009	5/25/2010
29606-008	PR-SS-38	0.36	1.5	0.97	2.1	0.92	2
29606-007	PR-SS-37	0.47	0.8	0.41	0.092	0.38	1
29606-005	PR-SS-33	0.49	0.2	0.5	0.32	0.33	4.7
29606-006	PR-SS-35	0.49	0.23	0.33	0.5	0.15	0.12
29606-004	PR-SS-31	0.67	0.098	0.043	0.038	0.13	0.16
29606-002	PR-SS-29	0.69	0.3	0.13	0.16	0.55	0.3
29606-003	PR-SS-30	0.69	0.3	0.16	0.063	0.099	0.14
29606-001	PR-SS-26	0.75	0.29	0.21	0.87	0.21	0.13
29600-010	PR-SS-24	0.8	0.31	0.11	0.15	0.15	0.13
29600-009	PR-SS-23	0.85	0.26	0.46	0.18	0.076	0.043
29600-008	PR-SS-21	0.91	0.29	0.78	0.051	0.12	0.35
29600-007	PR-SS-19	1.2	1.9	1.6	0.87	0.43	0.16
29600-006	PR-SS-18	1.27	0.12	4.1	0.17	0.17	0.089
29600-005	PR-SS-17	1.33	0.027	0.12	1.2	0.45	0.89
29600-004	PR-SS-16	1.4	0.97	1.6	0.45	1.8	0.83
Annual Onsite Average			**0.51**	**0.77**	**0.48**	**0.40**	**0.74**
2006-2010 Onsite Average			**0.58**				
ROD-required Onsite Average			**1.0**				
Pre-2004/2005 Onsite Cleanup Average			**4.6**				
Offsite BNL Boundary to Schultz Road							
29600-003	PR-SS-15[2]	1.52	14.2	0.24	0.31	**0.31**	0.88
29600-002	PR-SS-14	1.56	0.27	0.25	0.16	0.26	0.41
29600-001	PR-SS-12	1.66	0.041	0.051	0.062	0.034	0.069
29592-009	PR-SS-10	1.84	7.1	1.6	1.8	1.7	0.054
29592-008	PR-SS-09	1.93	0.2	0.69	0.33	0.42	0.094
29592-007	PR-SS-07	2.02	0.081	0.045	0.058	0.016	0.091
29592-006	PR-SS-06	2.08	0.075	0.098	0.27	0.051	0.032
29592-005	PR-SS-05	2.32	0.35	0.13	0.85	0.059	0.11
29592-004	PR-SS-04	2.52	0.014	0.007	0.054	0.062	0.037
29592-003	PR-SS-03	2.65	0.81	0.072	0.079	0.16	0.34
29592-002	PR-SS-02	2.76	0.3	0.057	0.11	0.14	0.12
29592-001	PR-SS-01	2.9	0.037	0.058	0.11	0.18	0.023
Annual Offsite Average (BNL Boundary to Schultz Road)			**1.96**	**0.27**	**0.35**	**0.28**	**0.19**
2006-2010 Offsite Average (BNL Boundary to Schultz Road)			**0.61**				
Pre-2004/2005 Cleanup Average (BNL Border - Schultz Road)			**1.79**				
ROD Required Offsite Average			**0.75**				
Offsite Manor Road Area							
29590-001	PR-MR-01	4.28	0.11	0.082	0.038	0.18	0.47
29590-002	PR-MR-02	4.5	0.056	0.055	0.073	0.073	0.068
Donahue's Pond[1]	PR-DP-01	6.75	0.052	0.104	0.163		0.239
Annual Offsite Average			**0.08**	**0.07**	**0.06**	**0.13**	**0.27**
2006-2010 Offsite Average			**0.12**				
Pre-2004/2005 Cleanup Average			**1.08**				
ROD Required Offsite Average			**0.75**				
Annual Offsite Average BNL Boundary to Manor Road Area			**1.69**	**0.25**	**0.31**	**0.26**	**0.20**
2006-2010 Offsite Average BNL Boundary to Manor Road Area			**0.60**				

Notes :

mg/kg = milligrams/kilogram = parts per million, ug/kg = micrograms/kilogram = parts per billion, pCi/g = picocuries/gram.

'U' is a laboratory assigned qualifier indicating non-detection (ND).

[1] Averages do not include Donahue's Pond, which is located downstream of the remediated area.

[2] PR-SS-15 Area received supplemental remediation in December/January 2011.

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

Table 2-3 PR-WC-06 Supplemental Sediment Mercury Concentrations
March 25, 2010 and April 22, 2010

Sample ID	Site ID	Sample Date	Value (mg/kg)	Detlim (mg/kg)	Lab Qual*
28523-014	PR-WC-06-U6-L7	4/22/2010	0.86	0.06	
28523-015	PR-WC-06-U6-L32	4/22/2010	1.7	0.068	
28523-016	PR-WC-06-U6-L57	4/22/2010	5	0.23	
28523-017	PR-WC-06-U6-L82	4/22/2010	1	0.11	
28523-018	PR-WC-06-U6-L107	4/22/2010	0.029	0.054	B
28523-007	PR-WC-06-U5-L7	4/22/2010	0.62	0.12	
28523-008	PR-WC-06-U5-L32	4/22/2010	0.83	0.049	
28523-009	PR-WC-06-U5-L57	4/22/2010	4.4	0.16	
28523-010	PR-WC-06-U5-L82	4/22/2010	1.4	0.07	
28523-011	PR-WC-06-U5-L107	4/22/2010	0.11	0.065	
28434-013	PR-WC-06-U4-L2	3/25/2010	0.066	0.063	
28523-001	PR-WC-06-U4-L2	4/22/2010	0.038	0.05	B
28434-014	PR-WC-06-U4-L27	3/25/2010	2.7	0.079	
28523-002	PR-WC-06-U4-L27	4/22/2010	4.4	0.096	
28434-015	PR-WC-06-U4-L47	3/25/2010	0.98	0.063	
28523-003	PR-WC-06-U4-L47	4/22/2010	1.4	0.069	
28434-016	PR-WC-06-U4-L57	3/25/2010	7.3	0.25	
28523-004	PR-WC-06-U4-L57	4/22/2010	7.4	0.15	
28523-005	PR-WC-06-U4-L82	4/22/2010	3.1	0.12	
28523-006	PR-WC-06-U4-L107	4/22/2010	0.68	0.11	
28434-011	PR-WC-06-U3-L47	3/25/2010	0.72	0.057	
28434-012	PR-WC-06-U3-L57	3/25/2010	13.3	0.71	
28434-009	PR-WC-06-U2-L50	3/25/2010	0.26	0.061	
28434-010	PR-WC-06-U2-L60	3/25/2010	0.26	0.048	
28434-007	PR-WC-06-D1-L50	3/25/2010	22.3	0.84	
28434-008	PR-WC-06-D1-L60	3/25/2010	4	0.093	
28434-005	PR-WC-06-D3-L23	3/25/2010	1.9	0.074	
28434-006	PR-WC-06-D3-L33	3/25/2010	0.076	0.048	
28434-001	PR-WC-06-D4-L3	3/25/2010	0.086	0.054	J
28434-002	PR-WC-06-D4-L23	3/25/2010	0.12	0.05	J
28434-003	PR-WC-06-D4-L33	3/25/2010	1.7	0.054	
28434-004	PR-WC-06-D4-L53	3/25/2010	0.19	0.056	

*Notes

B Estimated result Result is less than Reporting Limit.

J Method blank contamination. The associated method blank contains the reported analyte at a reportable limit.

Table 3-1

2010 Peconic River Water Quality Sampling Stations and Scheduled Sampling Frequency

		Sampling Frequency of Water Quality Survey Relative to Methylmercury (MeHg) Water Quality Survey sampling				
Site ID	**Distance Downstream of STP (miles)**	**May 20 - 21= 2.5 weeks before**	**June 8 - 15 = MeHg[1] Sampling**	**June 23 = 1 week after and 3 weeks before**	**July 19 - 22 = MeHg[1] Sampling**	**August 4 - 5 = 2 weeks after**
PR-WC-15	-0.17		X		X	
PR-WC-14	-0.13		X		X	
PR-WC-13	-0.07		X		X	
PR-WC-12D7[2]	-0.04		X		X	
PR-WC-11DS	0.01		X		X	
PR-WC-10	0.30	X	X	X	X	X
PR-WC-09	0.56	X	X	X	X	X
PR-WC-08	0.78	X	X	X	X	X
PR-WC-07	0.96		X		X	
PR-WC-06	1.10	X	X	X	X	X
PR-WC-05	1.46		X		X	
PR-WC-04	1.70	X	X	X	X	X
PR-WC-03	2.10	X	X	X	X	X
PR-WC-02	2.52		X		X	
PR-WC-01	2.98	X	X	X	X	X
PR-WCS-01	3.42		X		X	
PR-WCS-02	3.99		X		X	
PR-WCS-03	4.44		X		X	
PR-WCS-04	4.77	X	X	X	X	X
PR-WCS-05	6.04		X		X	
PR-WCS-06	6.75		X		X	
PR-WCS-07	7.23		X		X	

[1] MeHg is an abbreviation for methylmercury. Total mercury and TSS were also analyzed.

[2] Due to low water conditions at PR-12-DS in 2007, the sample location was shifted seven feet downstream of the PR-WC-12-DS location and identified as PR-WC-12D7.

Table 3-2a: Results from 2010 Water Column Sampling												
6/1/2010 - 6/15/2010				Laboratory Results			Field Data					
Site ID	Date	Station Description	Dist from STP (miles)	Mercury (ng/L)	Methyl Mercury (ng/L)	TSS (mg/L)	River Depth at Sample (feet)	Flow (feet per second)	Water Temp (deg C)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)
CONNETQUOT	6/15/2010	Connetquot		1.4	0.222	2 U	2.6	0.24	18.62	10.03	6.6	0
PR-WC-15	6/10/2010	Upstream of Forest Path	-0.17	12.9	3.76	2 U	1.6	0.54	16.43	6.22	5.71	1.6
PR-WC-14	6/10/2010	Upstream of STP	-0.13	14.5	4.25	2 U	1.2	0.6	15.76	5.48	5.68	5.1
PR-WC-13	6/10/2010	Upstream of STP	-0.07	15.1	4.4	2 U	1.3	0.6	16.04	6.6	5.69	0.2
PR-WC-12-D7	6/10/2010	Downstream of Sump	-0.04	15.3	4.54	3	2.8	0.35	15.88	5.95	5.69	2.6
STP-EFF-UVG	6/10/2010	Grab Sample	0	75.1	0.02 U	2 U	N/S	N/S	19.8	8.6	9.6	1.9
PR-WC-11DS	6/10/2010	50' downstream of outfall	0.01	19.9	4.09	2 U	1.4	0.9	17.47	6.64	5.8	0.6
PR-WC-10	6/10/2010	West of HMN	0.3	22.5	4.4	2 U	1.7	0.25	16.5	7.39	6.01	7.7
PR-WC-09	6/10/2010	Downstream of HMN	0.56	29.3	4.28	2 U	1.5	0.4	16.29	7.6	6.13	0.8
PR-WC-08	6/10/2010	South of Area B	0.78	29	3.76	2 U	2.9	0	17.73	8.74	6.21	1.5
PR-WC-07	6/10/2010	South of Area C	0.96	23.6	5.25	2 U	1.7	0.54	17.15	7.2	6.23	7.8
PR-WC-06	6/10/2010	South of Area D	1.1	23.6	4.67	2 U	2.1	0.01	18.57	8.6	6.2	1.5
PR-WC-05	6/9/2010	Downstream of HQ	1.46	35.3	6.74	28	1.6	0.15	18.3	5.1	6.2	4.1
PR-WC-04	6/9/2010	2nd downstream of HQ	1.7	23.4	3.75	2 U	1.1	1.12	18.36	5.32	6.23	4.9
PR-WC-03	6/9/2010	3rd west of Schultz Rd.	2.1	25.3	3.9	2 U	2.7	0.09	19.78	6.87	6.28	6.5
PR-WC-02	6/9/2010	2nd west of Schultz Rd.	2.52	20.7	3.18	2	1.5	0.03	18.28	6.11	6.81	6.6
PR-WC-01	6/8/2010	Schultz Rd. (West)	2.98	15.9	1.25	2 U	2.4	0.65	20.18	2.2	5.1	10.9
PR-WCS-01	6/8/2010	East of Schultz Rd.	3.42	16.5	4.46	5	2.5	0.4	20.33	1.68	5.9	13.8
PR-WCS-02	6/8/2010	West of Manor Rd.	3.99	15.4	4.68	9	3.4	0.55	19.44	3.44	6.05	16.9
PR-WCS-03	6/8/2010	Manor Rd.	4.44	13.8	4.56	5	2.8	0.59	20.11	2.2	6.2	16.3
PR-WCS-04	6/8/2010	West of Cranberry Bogs	4.77	14.8	4.44	7	2.8	0.98	19.11	2.31	6.13	15
PR-WCS-05	6/15/2010	East of Cranberry Bogs	6.04	3.9	0.832	2	3	1.68	19.68	2.59	5.95	5.4
PR-WCS-06	6/15/2010	Middle of Donahue"s Pond	6.75	4.7	1.37	2 U	3.8	0.01	20.86	4.22	6.22	1.8
PR-WCS-07	6/15/2010	Downstream of Connecticut Ave.	7.23	4.2	0.655	2	1.5	1.37	20.59	6.28	6.33	1.7

Table 3-2b: Results from 2010 Water Column Sampling												
7/19/2010 - 7/23/2010				Laboratory Results			Field Data					
Site ID	Date	Station Description	Dist from STP (miles)	Mercury (ng/L)	Methyl Mercury (ng/L)	TSS (mg/L)	River Depth at Sample (feet)	Flow (feet per second)	Water Temp (deg C)	Dissolved Oxygen (mg/L)	Ph	Turbidity (NTU)
CONNETQUOT	7/20/2010	Connetquot		0.83	0.12	2 U	1.9	0.2	21.89	8.21	6.73	0.1
PR-WC-15		Upstream of Forest Path	-0.17	Not sampled due to depth < 1.0 feet			0.7	Not sampled due to depth < 1.0 foot				
PR-WC-14		Upstream of STP	-0.13	Not sampled due to depth < 1.0 feet			0.7	Not sampled due to depth < 1.0 foot				
PR-WC-13		Upstream of STP	-0.07	Not sampled due to depth < 1.0 feet			0.7	Not sampled due to depth < 1.0 foot				
PR-WC-12-D7	7/21/2010	Downstream of Sump	-0.04	13.3	4.27	6	2.5	0.01	22.39	5.53	6.27	7
STP-EFF-UVG	7/21/2010	Grab Sample	0	69.1	0.0573	2 U	N/S	N/S	25.81	7.76	6.85	0.1
PR-WC-11DS	7/21/2010	50" downstream of outfall	0.01	33.4	2.31	2 U	1.1	0.66	23.56	6.2	6.5	5.5
PR-WC-10	7/21/2010	West of HMN	0.3	36.8	1.92	2 U	1.4	0.21	23.23	6.51	6.61	8
PR-WC-09	7/20/2010	Downstream of HMN	0.56	55.2	1.95	2 U	1.2	0.5	25.99	1.18	6.79	3.1
PR-WC-08	7/20/2010	South of Area B	0.78	48	2.18	2 U	2.5	0.08	24.66	2.38	6.68	12.8
PR-WC-07	7/20/2010	South of Area C	0.96	20	2.28	2 U	1.8	0.3	25.75	2.93	6.72	1.5
PR-WC-06	7/20/2010	South of Area D	1.1	17.2	1.84	2 U	1.8	0.07	26.24	3.63	6.77	1.5
PR-WC-05	7/20/2010	Downstream of HQ	1.46	26.6	2.61	3	1.6	0.1	28.8	3.96	6.59	13
PR-WC-04	7/20/2010	2nd downstream of HQ	1.7	14	1.7	2 U	1	0.7	26.74	6.74	6.25	1.5
PR-WC-03	7/20/2010	3rd west of Schultz Rd.	2.1	12	4.3	2 U	2.3	0.01	28.69	5.88	6.5	1.1
PR-WC-02		2nd west of Schultz Rd.	2.52				0.5	Not sampled due to depth < 1.0 foot				
PR-WC-01	7/20/2010	Schultz Rd. (West)	2.98	4.6	0.829	2 U	2	0.25	25.96	3.05	6.22	4.4
PR-WCS-01	7/19/2010	East of Schultz Rd.	3.42	9	2.45	13	2	0.53	25.27	2.4	6.17	15.1
PR-WCS-02	7/19/2010	West of Manor Rd.	3.99	7.9	2.69	2	2.7	0.35	25.67	2.28	6.19	12.4
PR-WCS-03	7/19/2010	Manor Rd.	4.44	6.9	2.05	2 U	1.7	0.4	23.87	1.8	6.12	12.8
PR-WCS-04	7/19/2010	West of Cranberry Bogs	4.77	7.6	1.89	4	2.3	0.68	24.58	1.77	6.08	15
PR-WCS-05	7/22/2010	East of Cranberry Bogs	6.04	3.1	0.5	2 U	N/S	N/S	N/S	N/S	N/S	N/S
PR-WCS-06	7/22/2010	Middle of Donahue"s Pond	6.75	3.2	0.565	3	N/S	N/S	N/S	N/S	N/S	N/S
PR-WCS-07	7/22/2010	Downstream of Connecticut Ave.	7.23	3.6	0.687	2 U	1.9	1.75	25.34	5.79	6.5	31

Table 3-3 : Comparison of Pre-Remediation and Post-Remediation Water Column Sampling Results (June Survey)

			2007			2008			2009			2010		
Site ID	Station Description	Dist from STP (miles)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)
Connetquot	Reference Station		1.11	0.34	0.7	4.52	0.223	16.3	2.88	0.663	0.9	1.4	0.222	2
PR-WC-15	Upstream of Forest Path	-0.17	20.3	10.7	3.9	[d]	[d]	[d]	13.1	1.99	1.4	12.9	3.76	2
PR-WC-14	Upstream of STP[a]	-0.13	20.1	10.5	3.3	[d]	[d]	[d]	[d]	[d]	[d]	14.5	4.25	2
PR-WC-13	Upstream of STP[a]	-0.07	19.7	9.86	3.1	[d]	[d]	[d]	[d]	[d]	[d]	15.1	4.4	2
PR-WC-12-D7	Upstream of STP[a]	-0.04	[c]	[c]		[c]	[c]	[c]	11.8	2.71	4.3	15.3	4.54	3
PR-WC-12	Upstream of STP[a]	-0.04	20.1	11	3.1	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]
PR-WC-12DS	Downstream of Sump	-0.04	19.6	10.8	3.5	25.2	10.9	23.1	[c]	[c]	[c]	[c]	[c]	[c]
STP-EFF-UVC	24-hour composite	0	[c]	[c]	[c]	116	0.022	0.4	[c]	[c]	[c]	[c]	[c]	[c]
STP-EFF-UVG	Grab Sample	0	[c]	[c]	[c]	115	1.16	0.4	127	0.491	0.5	75.1	0.02	2
PR-WC-11	STP Outfall	0	23.9	9.89	2.3	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]
PR-WC-11DS	50 ft downstream of outfall	0.01	[c]	[c]	[c]	103	0.3	1.4	56	1.05	1.8	19.9	4.09	2
PR-WC-10	West of HMN	0.3	42.6	10.2	2.1	114	1.22	2.4	73.4	2.04	6.7	22.5	4.4	2
PR-WC-09	Downstream of HMN	0.56	36.9	9.06	2.8	[d]	[d]	[d]	98.7	1.71	6.84	29.3	4.28	2
PR-WC-08	South of Area B	0.78	35.8	8.33	2.6	111	2.79	14.3	50.6	1.88	4.48	29	3.76	2
PR-WC-07	South of Area C	0.96	29.4	6.87	1.9	[d]	[d]	[d]	38.2	1.29	4.97	23.6	5.25	2
PR-WC-06	South of Area D	1.1	50.7	7.08	3.5	876	4.67	79.1	43.7	2.44	5.34	23.6	4.67	2
PR-WC-05	Downstream of HQ	1.46	33.7	5.9	2.9	140	8.4	48	70.2	3.97	11.5	35.3	6.74	28
PR-WC-04	2nd downstream of HQ	1.7	28.8	4.42	4.8	[c]	[c]	[c]	[c]	[c]	[c]	23.4	3.75	2
PR-WC-03	3rd west of Schultz Rd.	2.1	38.8	4	5	17.2	2.7	2.9	19.8	2.33	1.3	25.3	3.9	2
PR-WC-02	2nd west of Schultz Rd.	2.52	32.8	2.44	2.2				19.9	2.47	1.8	20.7	3.18	2
PR-WC-01	Schultz Rd. (West)	2.98	13.3	3.35	1.4	16.7	3.2	7.5	8.37	1.21	1.73	15.9	1.25	2
PR-WCS-01	East of Schultz Rd.	3.44	16.6	2.6	4.1	17.6	2.71	10.5	9.08	1.13	3.57	16.5	4.46	5
PR-WCS-02	West of Manor Rd.	3.99	12.4	5.8	4.2	13.5	2.26	9.6	8.32	1.18	3.62	15.4	4.68	9
PR-WCS-03	Manor Rd.	4.44	9.75	2.64	5.4	11.6	2.23	8	8.78	1.09	12.4	13.8	4.56	5
PR-WCS-04	West of Cranberry Bogs	4.77	14.2	3.27	8.4	12.4	2.8	9.1	15.4	1.32	3.5	14.8	4.44	7
PR-WCS-05	East of Cranberry Bogs	6.04	[c]	[c]	[c]	4.06	1.22	4.4	3.56	0.884	2.64	3.9	0.832	2
PR-WCS-06	Middle of Donahue's Pond	6.75	[c]	[c]	[c]	4.11	1.31	1.9	3.55	0.786	1.73	4.7	1.37	2
PR-WCS-07	Downstream of Connecticut Ave	7.23	6.55	2.61	1.4	4.76	0.75	5.7	3.81	0.88	3.6	4.2	0.655	2

Notes:

a STP = Sewage Treatment Plant, ND = non-detect, detection limits: 0.1 ng/L for total mercury, 0.045ng/L for methylmercury, 1 mg/L for TSS.

b Units: mg/L = milligrams per liter, ng/L = nannograms per liter.

c Not measured or not applicable.

d Samples not collected, depth < 1.0 foot.

Table 3-4 : Comparison of Pre-Remediation and Post-Remediation Water Column Sampling Results (July Survey)

			2007			2008			2009			2010		
Site ID	Station Description	Dist from STP (miles)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)	Mercury (ng/L)	Methyl-mercury (ng/L)	TSS (mg/L)
Connetquot	Connetquot River Reference Station		1.06	0.1	1.2	1.16	0.152	5.3	2.09	0.104	1.8	0.83	0.12	2
PR-WC-15	Upstream of Forest Path - Unfiltered	-0.17	9.18	2.33	5.7	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]
PR-WC-15	Upstream of Forest Path - Filtered	-0.17	1.97	0.41	127	[d]	[d]	[d]	[d]	[d]	[d]	[c]	[c]	[c]
PR-WC-14	Upstream of STP[a]	-0.13	[c]	[c]	[c]	[d]	[d]	[d]	[d]	[d]	[d]	[c]	[c]	[c]
PR-WC-13	Upstream of STP[a]	-0.07	[c]	[c]	[c]	[c]	[c]	[c]	[d]	[d]	[d]	[c]	[c]	[c]
PR-WC-12-D7	Upstream of STP[a]	-0.04	[c]	[c]	[c]	[d]	[d]	[d]	8.92	2.63	2.7	13.3	4.27	6
PR-WC-12	Upstream of STP[a]	-0.04	9.92	2.42	3.7	[d]	[d]	[d]	[c]	[c]	[c]	[d]	[d]	[d]
PR-WC-12DS	Downstream of Sump	-0.04	10.2	2.52	5.5	[d]	[d]	[d]	[c]	[c]	[c]	[d]	[d]	[d]
STP-EFF-UVC	24-hour composite	0	96.4	0.02	0.9	86.7	0.02 U	0.3 U	[c]	[c]	[c]	[d]	[d]	[d]
STP-EFF-UVG	Grab Sample	0	94.8	0.02	0.3	94.1	0.02 U	0.6	115	0.024	0.4	69.1	0.0573	2
PR-WC-11	STP outfall[1]	0	102	1.41	10.6	[c]	[c]	[c]	[c]	[c]	[c]	[d]	[d]	[d]
PR-WC-11DS	50 ft. downstream of STP Outfall	0.01	[c]	[c]	[c]	[d]	[d]	[d]	[d]	[d]	[d]	33.4	2.31	2
PR-WC-10	West of HMN	0.3	73.3	1.23	2.8	94.4	0.61	1.4	110	0.965	1.2	36.8	1.92	2
PR-WC-09	Downstream of HMN	0.56	84.6	1.4	4.9	[d]	[d]	[d]	100	1.27	1.3	55.2	1.95	2
PR-WC-08	South of Area B	0.78	111	2.9	7.8	68.3	3.48	29	44.4	0.853	2.1	48	2.18	2
PR-WC-07	South of Area C	0.96	36.4	1.49	4	[d]	[d]	[d]	44.7	1.24	4.6	20	2.28	2
PR-WC-06	North of Area D	1.1	47.4	2.61	7.6	[d]	[d]	[d]	93.6	1.79	4	17.2	1.84	2
PR-WC-05	Downstream of HQ	1.46	41.7	6.03	19	[d]	[d]	[d]	22.9	8.08	3.4	26.6	2.61	3
PR-WC-04	2nd Downstream of HQ	1.7	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	[d]	14	1.7	2
PR-WC-03	3rd west of Schultz Rd.	2.1	53.6	3.41	24.9	374	4.18	165	18.7	1.66	3.5	12	4.3	2
PR-WC-02	2nd west of Schultz Rd.	2.52	21.3	3.73	10.3	[d]	[d]	[d]	[d]	[d]	[d]	[c]	[c]	[c]
PR-WC-01	Schultz Rd. (West)	2.98	16.1	6.62	16	[d]	[d]	[d]	7.59	1.31	2.6	4.6	0.829	2
PR-WCS-01	East of Schultz Rd.	3.44	11.7	2.39	7.5	[d]	[d]	[d]	6.51	1.2	5.3	9	2.45	13
PR-WCS-02	West of Manor Rd.	3.99	8.56	2.39	5.4	4.3	0.55	8	5.97	1.05	7.3	7.9	2.69	2
PR-WCS-03	Manor Rd.	4.44	15.7	3.81	30	3.1	0.57	4.4	6.87	1.04	5.6	6.9	2.05	2
PR-WCS-04	West of Cranberry Bogs	4.77	24.7	3.87	39	4.99	0.77	5.6	8.81	1.01	7.1	7.6	1.89	4
PR-WCS-05	East of Cranberry Bogs	6.04	2.57	0.23		6.22	0.39	9.7	3.84	0.778	5.5	3.1	0.5	2
PR-WCS-06	Middle of Donahue's Pond	6.75	3.23	0.5		2.43	0.4	3.3	3.17	0.663	4.7	3.2	0.565	3
PR-WCS-07	Downstream of Connecticut Ave	7.23	4.65	1.28	10.1	[c]	[c]	[c]	3.53	0.654	3.6	3.6	0.687	2

Notes:

a STP = Sewage Treatment Plant, ND = non-detect, detection limits: 0.1 ng/L for total mercury, 0.045ng/L for methylmercury, 1 mg/L for TSS.

b Units: mg/L = milligrams per liter, ng/L = nannograms per liter.

c Not measured or not applicable.

d Samples not collected, depth < 1.0 foot.

Table 3-5 : Results from PR-SS-15-U1-W1 through PR-SS-15-U1- W4 Sampling

Sample Date	Filtered / Unfiltered	Laboratory	Sample Station	Sample Time	Total Mercury (ng/L)	Methyl Mercury (ng/L)	TSS[1] (mg/L)	Sample Station	Sample Time	Total Mercury (ng/L)	Methyl Mercury (ng/L)	TSS[1] (mg/L)
3/9/2010	Unfiltered	BROOKS	U1-WC-4	1155	19.8	0.594	0.8U	U1-WC-3	1150	21.6	0.651	1.4
			U1-WC-1	1140	21.2	0.571	1.2	U1-WC-2	1145	21.3	0.64	0.9B
4/21/2010	Unfiltered	CAL	U1-WC-4	1105	17	0.959	2U	U1-WC-3	1100	21	1.01	2U
			U1-WC-1	1050	18	0.951	2U	U1-WC-2	1055	17	0.638	2U
6/9/2010	Unfiltered	CAL	U1-WC-4	1450	26.4	4.63	2U	U1-WC-3	1445	27.1	5.26	2U
			U1-WC-1	1435	26	4.94	2U	U1-WC-2	1440	28	5.86	7
7/21/2010	Unfiltered	CAL	U1-WC-4	1105	15.6	1.72	2U	U1-WC-3	1050	23.6	1.88	2U
			U1-WC-1	1030	9.9	1.47	2U	U1-WC-2	1040	9.9	1.46	2U

[1] Qualifiers

B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected at the indicated detection limit, e.g. 2U.

Table 3-6 Results from PR-SS-10-D3-WC-1 & WC-2 and PR-SS-10-U3-WC-3 & WC-4 Sampling												
Sample Date	**Filtered / Unfiltered**	**Laboratory**	**Sample Station**	**Sample Time**	**Total Mercury (ng/L)**	**Methyl Mercury (ng/L)**	**TSS[1] (mg/L)**	**Sample Station**	**Sample Time**	**Total Mercury (ng/L)**	**Methyl Mercury (ng/L)**	**TSS[1] (mg/L)**
3/9/2010	Unfiltered	BROOKS	U3-WC-4	1120	21.1	0.684	1.5	U3-WC-3	1110	20.7	0.636	0.9B
			D3-WC-1	1040	21.2	0.869	1.7	D3-WC-2	1050	21.3	0.85	1.3
4/21/2010	Unfiltered	CAL	U3-WC-4	1040	17	1.05	2U	U3-WC-3	1030	16	0.987	2U
			D3-WC-1	1000	16	0.692	2U	D3-WC-2	1015	15	0.228	2U
6/9/2010	Unfiltered	CAL	U3-WC-4	1235	32.8	4.62	2JB	U3-WC-3	1230	28.1	4.53	2U
			D3-WC-1	1220	26	3.92	2JB	D3-WC-2	1225	27.3	4.07	2U
7/21/2010	Unfiltered	CAL	U3-WC-4	1015	14	2.55	5	U3-WC-3	1000	16.9	2.15	3
			D3-WC-1	925	12.3	3.15	2U	D3-WC-2	935	12.2	2.96	2U

[1] Qualifiers

B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected at the indicated detection limit, e.g. 2U.

Table 4-1. Peconic River Fish Collection Locations

Remediation Area	Approximate Distance Downstream of BNL STP (miles)*	Location Description
Area A	0.3	Between stream gauging stations HE and HMN.
Area C	0.8	From approximately 260 feet downstream of PR-WC-07 to approximately 225 feet upstream of PR-SS-29. This is an alternate location for Area D that may be sampled when fish population size allows.
Area D (North Street)	1.6	Along North Street in the ponded sections of the river upstream and downstream of stream gauging station HQ. If water level or fish population size is not sufficient for fish collection the ponded section of the river in remediation Area C may be substituted.
Area P (Schultz Road.)	2.9	Upstream of Schultz Road. If water level or fish population size is not sufficient for fish collection Ice Pond, in remediation Area P may be substituted.
Manor Road	4.4	Within the section of the Peconic River between approximately 100 yards upstream and downstream of Manor Road.
Donahue's Pond	7.0	Donahue's Pond is an impounded section of the Peconic River at the Peconic River Sportsman's Club. Donahue's Pond is approximately 2 miles downstream of the Manor Road cleanup area.

* Distance is from BNL STP to the approximate mid-point of the respective fish collection area.

Table 4-2 : 2010 Fish Collection Summary Gear and Water Chemistry
Total Fish Catch

Date	Area A	Area C	Area D Upstream of North Street	Area D Downstream of North Street	Manor Road	Donahue's Pond
	7/15/2010	7/13/2010	8/11/2010	8/3/2010	8/13/2010	5/25/2010
Fish Collected By	BNL	BNL	BNL	BNL	Cold Spring Harbor Fish Hatchery & BNL	Cold Spring Harbor Fish Hatchery & BNL
Gear Used	electrofishing	electrofishing	hoop net	electrofishing	hoop nets	gill nets and hook & line
Time	0930 - 1500	930 - 1200	0100 - 1200	0900-1200	0100-1200	1000 - 1500
Water Temperature (degrees C)	22.03	25.68	25.51	23.22	23.07	23.7
pH	6.32	6.52	5.98	6.85	6.06	6.5
Turbidity	3.2	1.4	3.5	2.6	89.7	1.4
Conductivity (mmho/cm³)	83	224	92	216	91	70
Dissolved Oxygen (mg/L)	5.03	5.21	2.09	5.66	3.04	9.1

* mmho/cm³ - milli mhos per cubic centimeter.
nr = parameter not measured or not recorded.

Table 4-3 : 2010 Peconic River Fish Catch
Total Fish Catch

Species	DEC Species Code	Area A	Area C	Area D (North Street)	Area P (Schultz Rd.)	Manor Road	Donahue's Pond
Single Fish							
Bluegill	598	1				1	11
Brown Bullhead	444	1	5	14		8	10
Chain Pickerel	349	1					1
Largemouth Bass	601	1	2	3		1	3
Pumpkinseed	596		6	3		3	5
Total Catch Per Area		4	13	20		13	30
Total Catch (Single Fish)	80						
Composites							
Bluegill	598	4		4			
Brown Bullhead	444	4		4	2	11	
Chain Pickerel	349	3	6				
Largemouth Bass	601	4					
Pumpkinseed	596	24	4	6			8
Total Catch Per Area		39	10	14	2	11	8
Total Catch (Composites)	84						

Table 4-4 : Composition of the 2010 Fish Composites

Area	COC	SDG*	Composite ID	Individual Fish Age	Individual Fish species	Total Length (mm)	Fish ID	UIDs*
AREA A	30148	256637	30148-bc2		Brown Bullhead	225	10-153	30148-002
				2+	Brown Bullhead	186	10-154	30148-002
Average Age of fish : 1.0								
Average Length of fish : 206								
AREA A	30148	256637	30148-bc3	2M	Brown Bullhead	124	10-155	30148-003
				1+	Brown Bullhead	104	10-156	30148-003
Average Age of fish : 1.5								
Average Length of fish : 114								
AREA A	30148	256637	30148-bc5	1+	Chain Pickerel	292	10-158	30148-005
				1+	Chain Pickerel	276	10-159	30148-005
				1+	Chain Pickerel	265	10-160	30148-005
Average Age of fish : 1.0								
Average Length of fish : 278								
AREA A	30148	256637	30148-bc6	1+	Largemouth Bass	145	10-161	30148-006
				1+	Largemouth Bass	132	10-162	30148-006
				1+	Largemouth Bass	125	10-163	30148-006
					Largemouth Bass	122	10-164	30148-006
Average Age of fish : 0.8								
Average Length of fish : 131								
AREA A	30148	256637	30148-bc9	1+	Bluegill	95	10-167	30148-009
				1+	Bluegill	86	10-168	30148-009
				1+	Bluegill	85	10-169	30148-009
				1+	Bluegill	71	10-170	30148-009
Average Age of fish : 1.0								
Average Length of fish : 84								
AREA A	30148	256637	30148-bc10	3+	Pumpkinseed	168	10-171	30148-010
				2+	Pumpkinseed	158	10-172	30148-010
				2+	Pumpkinseed	153	10-173	30148-010
				2+	Pumpkinseed	147	10-174	30148-010
				2+	Pumpkinseed	139	10-175	30148-010
				2+	Pumpkinseed	149	10-176	30148-010
Average Age of fish : 2.2								
Average Length of fish : 152								

Table 4-4 : Composition of the 2010 Fish Composites

Area	COC	SDG*	Composite ID	Individual Fish Age	Individual Fish species	Total Length (mm)	Fish ID	UIDs*
AREA A	30148	256637	30148-bc11	2+	Pumpkinseed	136	10-177	30148-011
				2+	Pumpkinseed	136	10-178	30148-011
				2+	Pumpkinseed	131	10-179	30148-011
				2+	Pumpkinseed	130	10-180	30148-011
				2+	Pumpkinseed	130	10-181	30148-011
				2+	Pumpkinseed	128	10-182	30148-011
Average Age of fish : 2.0								
Average Length of fish : 132								
AREA A	30148	256637	30148-bc12	2+	Pumpkinseed	125	10-183	30148-012
				2+	Pumpkinseed	124	10-184	30148-012
				2+	Pumpkinseed	122	10-185	30148-012
				2+	Pumpkinseed	121	10-186	30148-012
				2+	Pumpkinseed	117	10-187	30148-012
				1+	Pumpkinseed	115	10-188	30148-012
Average Age of fish : 1.8								
Average Length of fish : 121								
AREA A	30148	256637	30148-bc13	1+	Pumpkinseed	109	10-189	30148-013
				1+	Pumpkinseed	107	10-190	30148-013
				1+	Pumpkinseed	102	10-191	30148-013
				1+	Pumpkinseed	100	10-192	30148-013
				1+	Pumpkinseed	91	10-193	30148-013
				1+	Pumpkinseed	89	10-194	30148-013
Average Age of fish : 1.0								
Average Length of fish : 100								
AREA C	28834	256552	28834-bc13	1+	Pumpkinseed	81	10-137	28834-013
				1+	Pumpkinseed	80	10-138	28834-013
Average Age of fish : 1.0								
Average Length of fish : 80								
AREA C	28834	256552	28834-bc14	1+	Pumpkinseed	79	10-139	28834-014
				1+	Pumpkinseed	75	10-141	28834-014
Average Age of fish : 1.0								
Average Length of fish : 77								

Table 4-4 : Composition of the 2010 Fish Composites

Area	COC	SDG*	Composite ID	Individual Fish Age	Individual Fish species	Total Length (mm)	Fish ID	UIDs*
AREA C	28834	256552	28834-bc20	0+	Chain Pickerel	115	10-146	28834-020
				0+	Chain Pickerel	110	10-147	28834-020
Average Age of fish : 1.0								
Average Length of fish : 112								
AREA C	28834	256552	28834-bc21	0+	Chain Pickerel	108	10-148	28834-021
				0+	Chain Pickerel	105	10-149	28834-021
Average Age of fish : 1.0								
Average Length of fish : 106								
AREA C	28834	256552	28834-bc22	0+	Chain Pickerel	100	10-150	28834-022
				0+	Chain Pickerel	97	10-151	28834-022
Average Age of fish : 1.0								
Average Length of fish : 98								
AREA D - Upstream of HQ	30239	258722	30239-bc1	5+	Brown Bullhead	305	10-212	30239-001
				4+	Brown Bullhead	283	10-213	30239-001
Average Age of fish : 4.5								
Average Length of fish : 294								
AREA D - Upstream of HQ	30239	258722	30239-bc2	4+	Brown Bullhead	281	10-214	30239-002
				3+	Brown Bullhead	265	10-215	30239-002
Average Age of fish : 3.5								
Average Length of fish : 273								
AREA D - Upstream of HQ	30239	258722	30239-bc6	2+	Bluegill	148	10-219	30239-006
				1+	Bluegill	144	10-220	30239-006
				1+	Bluegill	135	10-221	30239-006
				2+	Bluegill	124	10-222	30239-006
Average Age of fish : 1.5								
Average Length of fish : 138								
AREA D - Upstream of HQ	30239	258722	30239-bc7	3+	Pumpkinseed	145	10-223	30239-007
				3+	Pumpkinseed	144	10-224	30239-007
				3+	Pumpkinseed	144	10-225	30239-007
				3+	Pumpkinseed	133	10-226	30239-007

Table 4-4 : Composition of the 2010 Fish Composites

Area	COC	SDG*	Composite ID	Individual Fish Age	Individual Fish species	Total Length (mm)	Fish ID	UIDs*
				2+	Pumpkinseed	130	10-227	30239-007
				1+	Pumpkinseed	121	10-228	30239-007
Average Age of fish : 2.5								
Average Length of fish : 136								
SCHULTZ ROAD	30244	258848	30244-bc1	4+	Brown Bullhead	260	10-253	30244-001
				4+	Brown Bullhead	242	10-254	30244-001
Average Age of fish : 4.0								
Average Length of fish : 251								
MANOR ROAD	30236	258846	30236-bc4	4+	Brown Bullhead	261	10-232	30236-004
				4+	Brown Bullhead	251	10-233	30236-004
Average Age of fish : 4.0								
Average Length of fish : 256								
MANOR ROAD	30236	258846	30236-bc6	4+	Brown Bullhead	244	10-235	30236-006
				4+	Brown Bullhead	242	10-236	30236-006
Average Age of fish : 4.0								
Average Length of fish : 243								
MANOR ROAD	30236	258846	30236-bc7	4+	Brown Bullhead	237	10-237	30236-007
				4+	Brown Bullhead	236	10-238	30236-007
Average Age of fish : 4.0								
Average Length of fish : 236								
MANOR ROAD	30236	258846	30236-bc8	4+	Brown Bullhead	230	10-239	30236-008
				4+	Brown Bullhead	215	10-240	30236-008
Average Age of fish : 4.0								
Average Length of fish : 222								
MANOR ROAD	30236	258846	30236-bc9	2+	Brown Bullhead	195	10-241	30236-009
				2+	Brown Bullhead	190	10-242	30236-009
				2+	Brown Bullhead	171	10-243	30236-009
Average Age of fish : 2.0								
Average Length of fish : 185								

Table 4-4 : Composition of the 2010 Fish Composites

Area	COC	SDG*	Composite ID	Individual Fish Age	Individual Fish species	Total Length (mm)	Fish ID	UIDs*
DONAHUE'S POND	28623	253786	28623-bc1	5+	Pumpkinseed	175	10-021	28623-001
				3+	Pumpkinseed	175	10-022	28623-001
Average Age of fish : 4.0								
Average Length of fish : 175								
DONAHUE'S POND	28623	253786	28623-bc2	6+	Pumpkinseed	180	10-023	28623-002
				6+	Pumpkinseed	180	10-026	28623-002
Average Age of fish : 6.0								
Average Length of fish : 180								
DONAHUE'S POND	28623	253786	28623-bc5	5+	Pumpkinseed	170	10-027	28623-005
				5+	Pumpkinseed	180	10-028	28623-005
Average Age of fish : 5.0								
Average Length of fish : 175								
DONAHUE'S POND	28623	253786	28623-bc6	6+	Pumpkinseed	190	10-029	28623-006
				5+	Pumpkinseed	190	10-030	28623-006
Average Age of fish : 5.5								
Average Length of fish : 190								

Table 4-5 : Peconic River Fish Mercury Concentrations by Fish Location

Fish Collection Area *	Number of Mercury Samples	Average Mercury Concentration (mg/kg)	Minimum Mercury Concentration (mg/kg)	Maximum Mercury Concentration (mg/kg)
All Fish Samples (Area A to Donahue's Pond)	108	0.282	0.0242	1.2
AREA A	13	0.464	0.124	1.2
AREA C	18	0.396	0.163	0.839
AREA D - Downstream of HQ	17	0.317	0.0634	0.584
AREA D - Upstream of HQ	7	0.243	0.109	0.503
SCHULTZ ROAD	1	0.363	0.363	0.363
MANOR ROAD	18	0.25	0.107	0.348
DONAHUE'S POND	34	0.156	0.0242	0.96

* Distance is from BNL STP to the approximate mid-point of the respective fish collection area.

Table 4-6 : Peconic River Fish Average Length and Mercury by Species and Age (Individual Fish)

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Average Mercury Concentration (mg/kg)[2]	Minimum Mercury Concentration (mg/kg)[2]	Maximum Mercury Concentration (mg/kg)[2]
Bluegill	13	182	100	232	13	0.162	0.069	0.289
Age 6+	1	195	195	195	1	0.155	0.155	0.155
Age 5+	7	184	100	232	7	0.181	0.069	0.289
Age 4+	4	192	180	210	4	0.106	0.073	0.151
Age 1+	1	110	110	110	1	0.266	0.266	0.266
Brown Bullhead	38	241	130	341	38	0.225	0.024	0.648
Age 12M	2	300	299	300	2	0.149	0.146	0.151
Age 11M	1	315	315	315	1	0.065	0.065	0.065
Age 8M	1	305	305	305	1	0.107	0.107	0.107
Age 6M	2	317	300	334	2	0.063	0.04	0.087
Age 5+	1	281	281	281	1	0.289	0.289	0.289
Age 5M	5	317	300	341	5	0.09	0.042	0.163
Age 4+	8	262	245	295	8	0.286	0.235	0.331
Age 4M	3	299	296	302	3	0.159	0.024	0.237
Age 2+	6	191	162	245	6	0.228	0.063	0.348
Age 2M	2	153	146	160	2	0.517	0.385	0.648
Age 1+	7	144	130	175	7	0.293	0.118	0.473
Chain Pickerel	2	336	334	338	2	0.244	0.131	0.356
Age 3+	1	338	338	338	1	0.131	0.131	0.131
Age 1+	1	334	334	334	1	0.356	0.356	0.356
Largemouth Bass	10	233	107	455	10	0.524	0.278	0.96
Age 8+	1	455	455	455	1	0.96	0.96	0.96
Age 6+	1	262	262	262	1	0.452	0.452	0.452
Age 4+	3	282	242	320	3	0.413	0.348	0.503
Age 2+	1	203	203	203	1	0.278	0.278	0.278

Table 4-6 : Peconic River Fish Average Length and Mercury by Species and Age (Individual Fish)

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Average Mercury Concentration (mg/kg)[2]	Minimum Mercury Concentration (mg/kg)[2]	Maximum Mercury Concentration (mg/kg)[2]
Age 1+	4	142	107	201	4	0.577	0.362	0.839
Pumpkinseed	17	149	79	200	17	0.233	0.073	0.584
Age 6+	1	195	195	195	1	0.161	0.161	0.161
Age 5+	2	185	179	190	2	0.106	0.073	0.138
Age 4+	2	188	175	200	2	0.084	0.079	0.089
Age 3+	2	136	121	151	2	0.291	0.289	0.293
Age 2+	7	144	136	150	7	0.21	0.107	0.301
Age 1+	3	104	79	124	3	0.457	0.212	0.584

[1] Average length, minimum length and maximum length were calculated for all aged fish.

[2] The average, minimum and maximum concentrations and the average ages in this table represent only the fish that were analyzed for mercury.

Table 4-7a : Peconic River Composite Fish Mercury Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (mg/kg)	MDL (mg/kg)	Lab Qual
DONAHUE'S POND - Pumpkinseed								
Composite : 28623-bc1	2	175	175	175	1			
Mercury						0.129	0.0034	
Age of Fish : 4.0 years								
DONAHUE'S POND - Pumpkinseed								
Composite : 28623-bc2	2	180	180	180	1			
Mercury						0.163	0.0036	
Age of Fish : 6.0 years								
DONAHUE'S POND - Pumpkinseed								
Composite : 28623-bc5	2	175	170	180	1			
Mercury						0.0638	0.0041	
Age of Fish : 5.0 years								
DONAHUE'S POND - Pumpkinseed								
Composite : 28623-bc6	2	190	190	190	1			
Mercury						0.17	0.004	
Age of Fish : 5.5 years								
AREA C - Pumpkinseed								
Composite : 28834-bc13	2	81	80	81	1			
Mercury						0.709	0.0401	*EN
Age of Fish : 1.0 years								
AREA C - Pumpkinseed								

Table 4-7a : Peconic River Composite Fish Mercury Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (mg/kg)	MDL (mg/kg)	Lab Qual
Composite : 28834-bc14	2	77	75	79	1			
Mercury						0.323	0.0038	*EN
Age of Fish : 1.0 years								
AREA C - Chain Pickerel								
Composite : 28834-bc20	2	113	110	115	1			
Mercury						0.315	0.0038	*EN
Age of Fish : 0.0 years								
AREA C - Chain Pickerel								
Composite : 28834-bc21	2	107	105	108	1			
Mercury						0.503	0.0038	*EN
Age of Fish : 0.0 years								
AREA C - Chain Pickerel								
Composite : 28834-bc22	2	99	97	100	1			
Mercury						0.569	0.0041	*EN
Age of Fish : 0.0 years								
AREA A - Brown Bullhead								
Composite : 30148-bc2	2	186	186	186	1			
Mercury						0.383	0.0036	
Age of Fish : 2.0 years								
AREA A - Brown Bullhead								
Composite : 30148-bc3	2	114	104	124	1			

Table 4-7a : Peconic River Composite Fish Mercury Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (mg/kg)	MDL (mg/kg)	Lab Qual
Mercury						1.2	0.0348	
Age of Fish : 1.5 years								
AREA A - Chain Pickerel								
Composite : 30148-bc5	3	278	265	292	1			
Mercury						0.351	0.0035	
Age of Fish : 1.0 years								
AREA A - Largemouth Bass								
Composite : 30148-bc6	4	134	125	145	1			
Mercury						0.276	0.0038	
Age of Fish : 1.0 years								
AREA A - Bluegill								
Composite : 30148-bc9	4	84	71	95	1			
Mercury						0.854	0.0398	
Age of Fish : 1.0 years								
AREA A - Pumpkinseed								
Composite : 30148-bc10	6	152	139	168	1			
Mercury						0.427	0.0038	
Age of Fish : 2.2 years								
AREA A - Pumpkinseed								
Composite : 30148-bc11	6	132	128	136	1			
Mercury						0.489	0.0038	

Table 4-7a : Peconic River Composite Fish Mercury Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (mg/kg)	MDL (mg/kg)	Lab Qual
Age of Fish : 2.0 years								
AREA A - Pumpkinseed								
Composite : 30148-bc12	6	121	115	125	1			
Mercury						0.5	0.0036	
Age of Fish : 1.8 years								
AREA A - Pumpkinseed								
Composite : 30148-bc13	6	100	89	109	1			
Mercury						0.367	0.0038	
Age of Fish : 1.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 30236-bc4	2	256	251	261	1			
Mercury						0.241	0.0041	
Age of Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 30236-bc6	2	243	242	244	1			
Mercury						0.202	0.0034	
Age of Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 30236-bc7	2	237	236	237	1			
Mercury						0.317	0.004	
Age of Fish : 4.0 years								

Table 4-7a : Peconic River Composite Fish Mercury Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (mg/kg)	MDL (mg/kg)	Lab Qual
MANOR ROAD - Brown Bullhead								
Composite : 30236-bc8	2	223	215	230	1			
Mercury						0.235	0.0039	
Age of Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 30236-bc9	3	185	171	195	1			
Mercury						0.202	0.0041	
Age of Fish : 2.0 years								
AREA D - Upstream of HQ - Brown Bullhead								
Composite : 30239-bc1	2	294	283	305	1			
Mercury						0.156	0.0037	*EN
Age of Fish : 4.5 years								
AREA D - Upstream of HQ - Brown Bullhead								
Composite : 30239-bc2	2	273	265	281	1			
Mercury						0.109	0.0034	*EN
Age of Fish : 3.5 years								
AREA D - Upstream of HQ - Bluegill								
Composite : 30239-bc6	4	138	124	148	1			
Mercury						0.243	0.0039	*EN

Table 4-7a : Peconic River Composite Fish Mercury Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (mg/kg)	MDL (mg/kg)	Lab Qual
Age of Fish : 1.5 years								
AREA D - Upstream of HQ - Pumpkinseed								
Composite : 30239-bc7	6	136	121	145	1			
Mercury						0.209	0.0039	*EN
Age of Fish : 2.5 years								
SCHULTZ ROAD - Brown Bullhead								
Composite : 30244-bc1	2	251	242	260	1			
Mercury						0.363	0.0041	
Age of Fish : 4.0 years								
Total Number of Fish and Total Number of Composite Analytical Samples	84				28			

Note: [1] The average lengths, ages and analyte concentrations in the table represent only the fish in this table.

Table 4-7b : Peconic River Composite Fish PCB Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (mg/kg)	MDL (ug/kg)	Lab Qual
AREA A - Pumpkinseed								
Composite : 30148-bc10	6	152	139	168	1			
Aroclor 1016						50	50	U
Aroclor 1221						50	50	U
Aroclor 1232						50	50	U
Aroclor 1242						50	50	U
Aroclor 1248						50	50	U
Aroclor 1254						22.5	50	J
Aroclor 1260						50	50	U
Age of Fish : 2.2 years								
AREA D - Upstream of HQ - Brown Bullhead								
Composite : 30239-bc1	2	294	283	305	1			
Aroclor 1016						9.91	9.91	U
Aroclor 1221						9.91	9.91	U
Aroclor 1232						9.91	9.91	U
Aroclor 1242						9.91	9.91	U
Aroclor 1248						9.91	9.91	U
Aroclor 1254						9.91	9.91	U
Aroclor 1260						5.2	9.91	J
Age of Fish : 4.5 years								

Note: [1] The average lengths, ages and analyte concentrations in the table represent only the fish in this table.

Table 4-7c : Peconic River Composite Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
AREA A - Brown Bullhead									
Composite : 30148-bc2	2	186	186	186	1				
Cesium-137						0.241	0.0576	0.0411	
Average Age of Composited Fish : 2.0 years									
AREA A - Chain Pickerel									
Composite : 30148-bc5	3	278	265	292	1				
Cesium-137						0.119	0.0685	0.0407	
Average Age of Composited Fish : 1.0 years									
AREA A - Pumpkinseed									
Composite : 30148-bc10	6	152	139	168	1				
Cesium-137						0.235	0.0892	0.0782	
Average Age of Composited Fish : 2.2 years									
AREA A - Pumpkinseed									
Composite : 30148-bc11	6	132	128	136	1				
Cesium-137						0.237	0.0508	0.0376	
Average Age of Composited Fish : 2.0 years									
AREA A - Pumpkinseed									
Composite : 30148-bc12	6	121	115	125	1				
Cesium-137						0.223	0.0651	0.0555	

Table 4-7c : Peconic River Composite Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Average Age of Composited Fish : 1.8 years									
AREA D - Upstream of HQ - Brown Bullhead									
Composite : 30239-bc1	2	294	283	305	1				
Cesium-137						0.13	0.049	0.0427	
Average Age of Composited Fish : 4.5 years									
AREA D - Upstream of HQ - Brown Bullhead									
Composite : 30239-bc2	2	273	265	281	1				
Cesium-137						0.129	0.0427	0.0414	
Average Age of Composited Fish : 3.5 years									
AREA D - Upstream of HQ - Bluegill									
Composite : 30239-bc6	4	138	124	148	1				
Cesium-137						0.0877	0.0448	0.0467	
Average Age of Composited Fish : 1.5 years									
AREA D - Upstream of HQ - Pumpkinseed									
Composite : 30239-bc7	6	136	121	145	1				
Cesium-137						0.0862	0.0356	0.0378	

Table 4-7c : Peconic River Composite Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Average Age of Composited Fish : 2.5 years									
SCHULTZ ROAD - Brown Bullhead									
Composite : 30244-bc1	2	251	242	260	1				
Cesium-137						0.111	0.0438	0.0393	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Composite : 30236-bc4	2	256	251	261	1				
Cesium-137						0.11	0.0464	0.0529	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Composite : 30236-bc6	2	243	242	244	1				
Cesium-137						0.0757	0.0656	0.0417	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Composite : 30236-bc7	2	237	236	237	1				
Cesium-137						0.0324	0.0422	0.0824	DL
Average Age of Composited Fish : 4.0 years									

Table 4-7c : Peconic River Composite Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
MANOR ROAD - Brown Bullhead									
Composite : 30236-bc8	2	223	215	230	1				
Cesium-137						0.12	0.045	0.0407	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Composite : 30236-bc9	3	185	171	195	1				
Cesium-137						0.0709	0.0503	0.0518	
Average Age of Composited Fish : 2.0 years									
DONAHUE'S POND - Pumpkinseed									
Composite : 28623-bc1	2	175	175	175	1				
Cesium-137						0.0461	0.0377	0.0359	
Average Age of Composited Fish : 4.0 years									
DONAHUE'S POND - Pumpkinseed									
Composite : 28623-bc2	2	180	180	180	1				
Cesium-137						0.0311	0.029	0.0529	DL
Average Age of Composited Fish : 6.0 years									
DONAHUE'S POND - Pumpkinseed									
Composite : 28623-bc5	2	175	170	180	1				

Table 4-7c : Peconic River Composite Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Cesium-137						0.0758	0.046	0.0361	
Average Age of Composited Fish : 5.0 years									
DONAHUE'S POND - Pumpkinseed									
Composite : 28623-bc6	2	190	190	190	1				
Cesium-137						0.0618	0.0495	0.0922	DL
Average Age of Composited Fish : 5.5 years									

Note: [1] The average lenths, ages and analyte concentrations in the table represent only the fish in this table.

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
AREA A - Brown Bullhead								
Fish ID : '10-152	1	318	318	318	1			
Mercury						0.124	0.00342	
Age of Fish : 5.0 years								
AREA A - Chain Pickerel								
Fish ID : '10-157	1	334	334	334	1			
Mercury						0.356	0.00399	
Age of Fish : 1.0 years								
AREA A - Largemouth Bass								
Fish ID : '10-165	1	107	107	107	1			
Mercury						0.41	0.00381	
Age of Fish : 1.0 years								
AREA A - Bluegill								
Fish ID : '10-166	1	187	187	187	1			
Mercury						0.289	0.00386	
Age of Fish : 5.0 years								
AREA C - Brown Bullhead								
Fish ID : '10-125	1	341	341	341	1			
Mercury						0.163	0.00403	*EN
Age of Fish : 5.0 years								
AREA C - Brown Bullhead								
Fish ID : '10-126	1	302	302	302	1			
Mercury						0.237	0.0034	*EN
Age of Fish : 4.0 years								
AREA C - Brown Bullhead								
Fish ID : '10-127	1	296	296	296	1			
Mercury						0.215	0.00398	*EN
Age of Fish : 4.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
AREA C - Brown Bullhead								
Fish ID : '10-128	1	160	160	160	1			
Mercury						0.385	0.004	*EN
Age of Fish : 2.0 years								
AREA C - Brown Bullhead								
Fish ID : '10-129	1	146	146	146	1			
Mercury						0.648	0.034	*EN
Age of Fish : 2.0 years								
AREA C - Pumpkinseed								
Fish ID : '10-132	1	145	145	145	1			
Mercury						0.301	0.00361	*EN
Age of Fish : 2.0 years								
AREA C - Pumpkinseed								
Fish ID : '10-133	1	143	143	143	1			
Mercury						0.252	0.0034	*EN
Age of Fish : 2.0 years								
AREA C - Pumpkinseed								
Fish ID : '10-134	1	142	142	142	1			
Mercury						0.234	0.00393	*EN
Age of Fish : 2.0 years								
AREA C - Pumpkinseed								
Fish ID : '10-135	1	136	136	136	1			
Mercury						0.234	0.00389	*EN
Age of Fish : 2.0 years								
AREA C - Pumpkinseed								
Fish ID : '10-136	1	121	121	121	1			
Mercury						0.289	0.00366	*EN
Age of Fish : 3.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
AREA C - Pumpkinseed								
Fish ID : '10-140	1	79	79	79	1			
Mercury						0.212	0.00378	*EN
Age of Fish : 1.0 years								
AREA C - Largemouth Bass								
Fish ID : '10-142	1	145	145	145	1			
Mercury						0.696	0.034	*EN
Age of Fish : 1.0 years								
AREA C - Largemouth Bass								
Fish ID : '10-143	1	115	115	115	1			
Mercury						0.839	0.0347	*EN
Age of Fish : 1.0 years								
AREA D - Upstream of HQ - Brown Bullhead								
Fish ID : '10-216	1	175	175	175	1			
Mercury						0.118	0.00403	*EN
Age of Fish : 1.0 years								
AREA D - Upstream of HQ - Largemouth Bass								
Fish ID : '10-217	1	320	320	320	1			
Mercury						0.503	0.00391	*EN
Age of Fish : 4.0 years								
AREA D - Upstream of HQ - Largemouth Bass								
Fish ID : '10-218	1	201	201	201	1			
Mercury						0.362	0.0036	*EN
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-195	1	295	295	295	1			

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)								
Species	**Number of Fish**	**Average[1] Length (mm)**	**Minimum[2] Length (mm)**	**Maximum[3] Length (mm)**	**Number of Analytical Samples**	**Conc. (mg/kg)**	**MDL (mg/kg)**	**Lab Qual**
Mercury						0.312	0.00408	N
Age of Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-196	1	255	255	255	1			
Mercury						0.315	0.00343	N
Age of Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-197	1	252	252	252	1			
Mercury						0.283	0.00402	N
Age of Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-198	1	248	248	248	1			
Mercury						0.259	0.00368	N
Age of Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-199	1	245	245	245	1			
Mercury						0.331	0.00381	N
Age of Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-200	1	245	245	245	1			
Mercury						0.0634	0.0034	N
Age of Fish : 2.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-201	1	240	240	240	1			

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)								
Species	**Number of Fish**	**Average[1] Length (mm)**	**Minimum[2] Length (mm)**	**Maximum[3] Length (mm)**	**Number of Analytical Samples**	**Conc. (mg/kg)**	**MDL (mg/kg)**	**Lab Qual**
Mercury						0.168	0.00392	N
Age of Fish : 2.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-202	1	147	147	147	1			
Mercury						0.371	0.00361	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-203	1	146	146	146	1			
Mercury						0.242	0.00392	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-204	1	139	139	139	1			
Mercury						0.473	0.00378	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-205	1	134	134	134	1			
Mercury						0.296	0.00378	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-206	1	134	134	134	1			
Mercury						0.236	0.00384	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '10-207	1	130	130	130	1			

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Mercury						0.312	0.00392	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Fish ID : '10-208	1	150	150	150	1			
Mercury						0.182	0.00353	N
Age of Fish : 2.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Fish ID : '10-209	1	124	124	124	1			
Mercury						0.584	0.00788	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Fish ID : '10-210	1	110	110	110	1			
Mercury						0.574	0.0073	N
Age of Fish : 1.0 years								
AREA D - Downstream of HQ - Largemouth Bass								
Fish ID : '10-211	1	284	284	284	1			
Mercury						0.387	0.0034	N
Age of Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '10-229	1	290	290	290	1			
Mercury						0.235	0.00388	
Age of Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '10-230	1	281	281	281	1			
Mercury						0.289	0.004	
Age of Fish : 5.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
MANOR ROAD - Brown Bullhead								
Fish ID : '10-231	1	268	268	268	1			
Mercury						0.299	0.00343	
Age of Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '10-234	1	245	245	245	1			
Mercury						0.25	0.00351	
Age of Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '10-244	1	169	169	169	1			
Mercury						0.282	0.00386	
Age of Fish : 2.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '10-245	1	167	167	167	1			
Mercury						0.348	0.00386	
Age of Fish : 2.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '10-246	1	163	163	163	1			
Mercury						0.223	0.00376	
Age of Fish : 2.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '10-247	1	162	162	162	1			
Mercury						0.283	0.00384	
Age of Fish : 2.0 years								
MANOR ROAD - Largemouth Bass								
Fish ID : '10-248	1	203	203	203	1			
Mercury						0.278	0.00355	
Age of Fish : 2.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
MANOR ROAD - Pumpkinseed								
Fish ID : '10-249	1	151	151	151	1			
Mercury						0.293	0.00374	
Age of Fish : 3.0 years								
MANOR ROAD - Pumpkinseed								
Fish ID : '10-250	1	149	149	149	1			
Mercury						0.107	0.00391	
Age of Fish : 2.0 years								
MANOR ROAD - Pumpkinseed								
Fish ID : '10-251	1	145	145	145	1			
Mercury						0.158	0.00387	
Age of Fish : 2.0 years								
MANOR ROAD - Bluegill								
Fish ID : '10-252	1	110	110	110	1			
Mercury						0.266	0.0039	
Age of Fish : 1.0 years								
DONAHUE'S POND - Pumpkinseed								
Fish ID : '10-024	1	179	179	179	1			
Mercury						0.138	0.00358	
Age of Fish : 5.0 years								
DONAHUE'S POND - Pumpkinseed								
Fish ID : '10-025	1	175	175	175	1			
Mercury						0.0889	0.0034	
Age of Fish : 4.0 years								
DONAHUE'S POND - Pumpkinseed								
Fish ID : '10-031	1	190	190	190	1			
Mercury						0.0733	0.00408	
Age of Fish : 5.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
DONAHUE'S POND - Pumpkinseed								
Fish ID : '10-032	1	195	195	195	1			
Mercury						0.161	0.004	
Age of Fish : 6.0 years								
DONAHUE'S POND - Pumpkinseed								
Fish ID : '10-033	1	200	200	200	1			
Mercury						0.0788	0.00388	
Age of Fish : 4.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-034	1	181	181	181	1			
Mercury						0.0797	0.00393	
Age of Fish : 4.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-035	1	180	180	180	1			
Mercury						0.256	0.00402	
Age of Fish : 5.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-036	1	180	180	180	1			
Mercury						0.0728	0.0037	
Age of Fish : 4.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-037	1	195	195	195	1			
Mercury						0.155	0.00365	
Age of Fish : 6.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-038	1	195	195	195	1			
Mercury						0.151	0.00379	
Age of Fish : 4.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
DONAHUE'S POND - Bluegill								
Fish ID : '10-039	1	210	210	210	1			
Mercury						0.121	0.00352	
Age of Fish : 4.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-040	1	198	198	198	1			
Mercury						0.122	0.0035	
Age of Fish : 5.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-041	1	189	189	189	1			
Mercury						0.0686	0.00372	
Age of Fish : 5.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-042	1	100	100	100	1			
Mercury						0.188	0.00408	
Age of Fish : 5.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-043	1	203	203	203	1			
Mercury						0.149	0.00389	
Age of Fish : 5.0 years								
DONAHUE'S POND - Bluegill								
Fish ID : '10-044	1	232	232	232	1			
Mercury						0.192	0.00404	
Age of Fish : 5.0 years								
DONAHUE'S POND - Largemouth Bass								
Fish ID : '10-045	1	242	242	242	1			
Mercury						0.348	0.0034	
Age of Fish : 4.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
DONAHUE'S POND - Largemouth Bass								
Fish ID : '10-046	1	262	262	262	1			
Mercury						0.452	0.00394	
Age of Fish : 6.0 years								
DONAHUE'S POND - Largemouth Bass								
Fish ID : '10-047	1	455	455	455	1			
Mercury						0.96	0.0402	
Age of Fish : 8.0 years								
DONAHUE'S POND - Chain Pickerel								
Fish ID : '10-048	1	338	338	338	1			
Mercury						0.131	0.00392	
Age of Fish : 3.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-049	1	299	299	299	1			
Mercury						0.146	0.00408	
Age of Fish : 12.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-050	1	300	300	300	1			
Mercury						0.0865	0.00407	
Age of Fish : 6.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-051	1	300	300	300	1			
Mercury						0.0242	0.0034	
Age of Fish : 4.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-052	1	300	300	300	1			
Mercury						0.0724	0.0038	
Age of Fish : 5.0 years								

Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[2] Length (mm)	Maximum[3] Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-053	1	310	310	310	1			
Mercury						0.0478	0.00402	
Age of Fish : 5.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-054	1	300	300	300	1			
Mercury						0.151	0.00408	
Age of Fish : 12.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-055	1	317	317	317	1			
Mercury						0.0415	0.00372	
Age of Fish : 5.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-056	1	305	305	305	1			
Mercury						0.107	0.00355	
Age of Fish : 8.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-057	1	315	315	315	1			
Mercury						0.0646	0.00354	
Age of Fish : 11.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '10-058	1	334	334	334	1			
Mercury						0.0401	0.00349	
Age of Fish : 6.0 years								

Table 4-7e : Peconic River Fish PCB Concentrations by Species and Age (Individual)

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (ug/kg)	MDL (ug/kg)	Lab Qual
AREA C - Brown Bullhead								
Fish ID : '10-125	1	341	341	341	1			
Aroclor 1016						9.95	9.95	U
Aroclor 1221						9.95	9.95	U
Aroclor 1232						9.95	9.95	U
Aroclor 1242						9.95	9.95	U
Aroclor 1248						9.95	9.95	U
Aroclor 1254						9.95	9.95	U
Aroclor 1260						9.95	9.95	U
Age of Fish : 5.0 years								
AREA D - Upstream of HQ - Largemouth Bass								
Fish ID : '10-217	1	320	320	320	1			
Aroclor 1016						10	10	U
Aroclor 1221						10	10	U
Aroclor 1232						10	10	U
Aroclor 1242						10	10	U
Aroclor 1248						10	10	U
Aroclor 1254						10	10	U
Aroclor 1260						10	10	U
Age of Fish : 4.0 years								

Note: [1] The average lenths, ages and analyte concentrations in the table represent only the fish in this table.

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
AREA A - Brown Bullhead									
Fish ID : 10-152	1	318	318	318	1				
Cesium-137						0.249	0.0702	0.045	
Age of Fish : 5.0 years									
AREA A - Chain Pickerel									
Fish ID : 10-157	1	334	334	334	1				
Cesium-137						0.172	0.0581	0.049	
Age of Fish : 1.0 years									
AREA A - Bluegill									
Fish ID : 10-166	1	187	187	187	1				
Cesium-137						0.132	0.0513	0.0375	
Age of Fish : 5.0 years									
AREA C - Brown Bullhead									
Fish ID : 10-125	1	341	341	341	1				
Cesium-137						0.219	0.0691	0.0379	
Age of Fish : 5.0 years									
AREA C - Brown Bullhead									
Fish ID : 10-126	1	302	302	302	1				
Cesium-137						0.324	0.0822	0.06	
Age of Fish : 4.0 years									
AREA C - Brown Bullhead									

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Fish ID : 10-127	1	296	296	296	1				
Cesium-137						0.178	0.0676	0.0441	
Age of Fish : 4.0 years									
AREA D - Upstream of HQ - Largemouth Bass									
Fish ID : 10-217	1	320	320	320	1				
Cesium-137						0.131	0.0806	0.0544	
Age of Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : 10-195	1	295	295	295	1				
Cesium-137						0.201	0.0479	0.0362	
Age of Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : 10-196	1	255	255	255	1				
Cesium-137						0.178	0.0554	0.0538	
Age of Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : 10-197	1	252	252	252	1				
Cesium-137						0.0745	0.0619	0.11	DL
Age of Fish : 4.0 years									

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : 10-198	1	248	248	248	1				
Cesium-137						0.146	0.048	0.0565	
Age of Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : 10-199	1	245	245	245	1				
Cesium-137						0.215	0.0693	0.0417	
Age of Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : 10-200	1	245	245	245	1				
Cesium-137						0.124	0.0419	0.0511	
Age of Fish : 2.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : 10-201	1	240	240	240	1				
Cesium-137						0.076	0.0543	0.052	
Age of Fish : 2.0 years									

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
AREA D - Downstream of HQ - Largemouth Bass									
Fish ID : 10-211	1	284	284	284	1				
Cesium-137						0.164	0.0485	0.0473	
Age of Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Fish ID : 10-229	1	290	290	290	1				
Cesium-137						0.135	0.0567	0.0499	
Age of Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Fish ID : 10-230	1	281	281	281	1				
Cesium-137						0.081	0.0523	0.045	
Age of Fish : 5.0 years									
MANOR ROAD - Brown Bullhead									
Fish ID : 10-231	1	268	268	268	1				
Cesium-137						0.103	0.0518	0.0405	
Age of Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Fish ID : 10-234	1	245	245	245	1				
Cesium-137						0.117	0.0586	0.0381	
Age of Fish : 4.0 years									

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
DONAHUES POND - Pumpkinseed									
Fish ID : 10-032	1	195	195	195	1				
Cesium-137						0.0398	0.0294	0.0333	
Age of Fish : 6.0 years									
DONAHUES POND - Pumpkinseed									
Fish ID : 10-033	1	200	200	200	1				
Cesium-137						0.0864	0.0409	0.0733	UI
Age of Fish : 4.0 years									
DONAHUES POND - Bluegill									
Fish ID : 10-034	1	181	181	181	1				
Cesium-137						0.103	0.0403	0.029	
Age of Fish : 4.0 years									
DONAHUES POND - Bluegill									
Fish ID : 10-038	1	195	195	195	1				
Cesium-137						0.0516	0.0402	0.0682	DL
Age of Fish : 4.0 years									
DONAHUES POND - Bluegill									
Fish ID : 10-039	1	210	210	210	1				
Cesium-137						0.0456	0.0266	0.0508	DL
Age of Fish : 4.0 years									
DONAHUES POND - Bluegill									

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Fish ID : 10-040	1	198	198	198	1				
Cesium-137						0.0501	0.0407	0.0682	DL
Age of Fish : 5.0 years									
DONAHUES POND - Bluegill									
Fish ID : 10-041	1	189	189	189	1				
Cesium-137						0.0177	0.0249	0.0442	DL
Age of Fish : 5.0 years									
DONAHUES POND - Bluegill									
Fish ID : 10-042	1	100	100	100	1				
Cesium-137						0.121	0.0503	0.0484	
Age of Fish : 5.0 years									
DONAHUES POND - Bluegill									
Fish ID : 10-043	1	203	203	203	1				
Cesium-137						0.0757	0.051	0.0365	
Age of Fish : 5.0 years									
DONAHUES POND - Bluegill									
Fish ID : 10-044	1	232	232	232	1				
Cesium-137						0.0645	0.0423	0.0356	
Age of Fish : 5.0 years									
DONAHUES POND - Largemouth Bass									
Fish ID : 10-045	1	242	242	242	1				

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Cesium-137						0.0402	0.0299	0.056	DL
Age of Fish : 4.0 years									
DONAHUES POND - Largemouth Bass									
Fish ID : 10-046	1	262	262	262	1				
Cesium-137						0.132	0.0497	0.0368	
Age of Fish : 6.0 years									
DONAHUES POND - Largemouth Bass									
Fish ID : 10-047	1	455	455	455	1				
Cesium-137						0.106	0.0417	0.0336	
Age of Fish : 8.0 years									
DONAHUES POND - Chain Pickerel									
Fish ID : 10-048	1	338	338	338	1				
Cesium-137						0.1	0.0352	0.0308	
Age of Fish : 3.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-049	1	299	299	299	1				
Cesium-137						0.0627	0.0406	0.0429	
Age of Fish : 12.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-050	1	300	300	300	1				
Cesium-137						0.0469	0.0353	0.0364	

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Age of Fish : 6.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-051	1	300	300	300	1				
Cesium-137						0.0647	0.0361	0.0389	
Age of Fish : 4.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-052	1	300	300	300	1				
Cesium-137						0.0606	0.0276	0.0275	
Age of Fish : 5.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-053	1	310	310	310	1				
Cesium-137						0.0772	0.0335	0.0317	
Age of Fish : 5.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-054	1	300	300	300	1				
Cesium-137						0.0986	0.0486	0.0338	
Age of Fish : 12.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-055	1	317	317	317	1				
Cesium-137						0.0561	0.0316	0.033	
Age of Fish : 5.0 years									

Table 4-7f : Peconic River Individual Fish Cs-137 Concentrations by Area

Species	Number of Fish	Average[1] Length (mm)	Minimum[1] Length (mm)	Maximum[1] Length (mm)	Number of Analytical Samples	Conc.[1] (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
DONAHUES POND - Brown Bullhead									
Fish ID : 10-056	1	305	305	305	1				
Cesium-137						0.0832	0.0379	0.0342	
Age of Fish : 8.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-057	1	315	315	315	1				
Cesium-137						0.0671	0.0476	0.0335	
Age of Fish : 11.0 years									
DONAHUES POND - Brown Bullhead									
Fish ID : 10-058	1	334	334	334	1				
Cesium-137						0.0688	0.0388	0.0378	
Age of Fish : 6.0 years									

Note: [1] The average lenths, ages and analyte concentrations in the table represent only the fish in this table.

Table 4-8a Peconic River Fish Samples - Mercury by area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (mg/kg)	MDL (mg/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
30148-001	A	10-152	Mercury	0.124	0.003			Brown Bullhead	318	426	123.3	5
30148-002	A	30148-bc2	Mercury	0.383	0.004			Brown Bullhead	205.5	148	45.4	2
30148-003	A	30148-bc3	Mercury	1.2	0.035			Brown Bullhead	114	23	5	1
30148-004	A	10-157	Mercury	0.356	0.004			Chain Pickerel	334	224	100.3	1
30148-005	A	30148-bc5	Mercury	0.351	0.003			Chain Pickerel	277.67	142	57.43	1
30148-006	A	30148-bc6	Mercury	0.276	0.004			Largemouth Bass	131	36.5	11.97	1
30148-007	A	10-165	Mercury	0.41	0.004			Largemouth Bass	107	20	7.3	1
30148-008	A	10-166	Mercury	0.289	0.004			Bluegill	187	154	54.1	5
30148-009	A	30148-bc9	Mercury	0.854	0.04			Bluegill	84.25	16	4.88	1
30148-010	A	30148-bc10	Mercury	0.427	0.004			Pumpkinseed	152.33	110.5	32.07	2
30148-011	A	30148-bc11	Mercury	0.489	0.004			Pumpkinseed	131.83	58.33	18.78	2
30148-012	A	30148-bc12	Mercury	0.5	0.004			Pumpkinseed	120.67	43.67	13.98	1
30148-013	A	30148-bc13	Mercury	0.367	0.004			Pumpkinseed	99.67	24.67	7.62	1
28834-001	C	10-125	Mercury	0.163	0.004	*EN		Brown Bullhead	341	616	192	5
28834-002	C	10-126	Mercury	0.237	0.003	*EN		Brown Bullhead	302	394	101	4
28834-003	C	10-127	Mercury	0.215	0.004	*EN		Brown Bullhead	296	386	110.1	4
28834-004	C	10-128	Mercury	0.385	0.004	*EN		Brown Bullhead	160	54	13.2	2
28834-005	C	10-129	Mercury	0.648	0.034	*EN		Brown Bullhead	146	42	12.6	2
28834-008	C	10-132	Mercury	0.301	0.004	*EN		Pumpkinseed	145	74	25	2
28834-009	C	10-133	Mercury	0.252	0.003	*EN		Pumpkinseed	143	68	27.3	2
28834-010	C	10-134	Mercury	0.234	0.004	*EN		Pumpkinseed	142	66	21.1	2
28834-011	C	10-135	Mercury	0.234	0.004	*EN		Pumpkinseed	136	58	22.3	2
28834-012	C	10-136	Mercury	0.289	0.004	*EN		Pumpkinseed	121	40	14.2	3
28834-013	C	28834-bc13	Mercury	0.709	0.04	*EN		Pumpkinseed	80.5	10	4.05	1
28834-014	C	28834-bc14	Mercury	0.323	0.004	*EN		Pumpkinseed	77	9	4.1	1
28834-015	C	10-140	Mercury	0.212	0.004	*EN		Pumpkinseed	79	10	5.8	1
28834-016	C	10-142	Mercury	0.696	0.034	*EN		Largemouth Bass	145	42	15.8	1
28834-017	C	10-143	Mercury	0.839	0.035	*EN		Largemouth Bass	115	26	11.1	1
28834-020	C	28834-bc20	Mercury	0.315	0.004	*EN		Chain Pickerel	112.5	8	4.1	0
28834-021	C	28834-bc21	Mercury	0.503	0.004	*EN		Chain Pickerel	106.5	7	3.5	0
28834-022	C	28834-bc22	Mercury	0.569	0.004	*EN		Chain Pickerel	98.5	6	3.4	0
30239-001	D	30239-bc1	Mercury	0.156	0.004	*EN		Brown Bullhead	294	353	116.05	4
30239-002	D	30239-bc2	Mercury	0.109	0.003	*EN		Brown Bullhead	273	265	79.65	3
30239-003	D	10-216	Mercury	0.118	0.004	*EN		Brown Bullhead	175	68	21.4	1

Table 4-8a Peconic River Fish Samples - Mercury by area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (mg/kg)	MDL (mg/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
30239-004	D	10-217	Mercury	0.503	0.004	*EN		Largemouth Bass	320	564	236.8	4
30239-005	D	10-218	Mercury	0.362	0.004	*EN		Largemouth Bass	201	130	46.9	1
30239-006	D	30239-bc6	Mercury	0.243	0.004	*EN		Bluegill	137.75	52	23.95	1
30239-007	D	30239-bc7	Mercury	0.209	0.004	*EN		Pumpkinseed	136.17	64	22.85	2
30203-001	D	10-195	Mercury	0.312	0.004	N		Brown Bullhead	295	332	86.1	4
30203-002	D	10-196	Mercury	0.315	0.003	N		Brown Bullhead	255	246	71	4
30203-003	D	10-197	Mercury	0.283	0.004	N		Brown Bullhead	252	200	59.8	4
30203-004	D	10-198	Mercury	0.259	0.004	N		Brown Bullhead	248	212	64.3	4
30203-005	D	10-199	Mercury	0.331	0.004	N		Brown Bullhead	245	212	72.4	4
30203-006	D	10-200	Mercury	0.063	0.003	N		Brown Bullhead	245	204	63.4	2
30203-007	D	10-201	Mercury	0.168	0.004	N		Brown Bullhead	240	192	60.7	2
30203-008	D	10-202	Mercury	0.371	0.004	N		Brown Bullhead	147	40	10.1	1
30203-009	D	10-203	Mercury	0.242	0.004	N		Brown Bullhead	146	42	11.8	1
30203-010	D	10-204	Mercury	0.473	0.004	N		Brown Bullhead	139	34	10.1	1
30203-011	D	10-205	Mercury	0.296	0.004	N		Brown Bullhead	134	32	9.3	1
30203-012	D	10-206	Mercury	0.236	0.004	N		Brown Bullhead	134	28	9.9	1
30203-013	D	10-207	Mercury	0.312	0.004	N		Brown Bullhead	130	28	9.7	1
30203-014	D	10-208	Mercury	0.182	0.004	N		Pumpkinseed	150	82	33.7	2
30203-015	D	10-209	Mercury	0.584	0.008	N		Pumpkinseed	124	40	14.9	1
30203-016	D	10-210	Mercury	0.574	0.007	N		Pumpkinseed	110	26	9.9	1
30203-017	D	10-211	Mercury	0.387	0.003	N		Largemouth Bass	284	332	123.9	4
30244-001	SR	30244-bc1	Mercury	0.363	0.004			Brown Bullhead	251	222	56.7	4
30236-001	MR	10-229	Mercury	0.235	0.004			Brown Bullhead	290	368	107.2	4
30236-002	MR	10-230	Mercury	0.289	0.004			Brown Bullhead	281	318	78.2	5
30236-003	MR	10-231	Mercury	0.299	0.003			Brown Bullhead	268	262	77.3	4
30236-004	MR	30236-bc4	Mercury	0.241	0.004			Brown Bullhead	256	253	71.75	4
30236-005	MR	10-234	Mercury	0.25	0.004			Brown Bullhead	245	222	73.3	4
30236-006	MR	30236-bc6	Mercury	0.202	0.003			Brown Bullhead	243	184	51.6	4
30236-007	MR	30236-bc7	Mercury	0.317	0.004			Brown Bullhead	236.5	177	56	4
30236-008	MR	30236-bc8	Mercury	0.235	0.004			Brown Bullhead	222.5	150	43.7	4
30236-009	MR	30236-bc9	Mercury	0.202	0.004			Brown Bullhead	185.33	78	23.6	2
30236-010	MR	10-244	Mercury	0.282	0.004			Brown Bullhead	169	58	15	2
30236-011	MR	10-245	Mercury	0.348	0.004			Brown Bullhead	167	62	14.8	2
30236-012	MR	10-246	Mercury	0.223	0.004			Brown Bullhead	163	48	12.9	2

Table 4-8a Peconic River Fish Samples - Mercury by area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (mg/kg)	MDL (mg/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
30236-013	MR	10-247	Mercury	0.283	0.004			Brown Bullhead	162	52	12.9	2
30236-014	MR	10-248	Mercury	0.278	0.004			Largemouth Bass	203	114	34.6	2
30236-015	MR	10-249	Mercury	0.293	0.004			Pumpkinseed	151	78	21.9	3
30236-016	MR	10-250	Mercury	0.107	0.004			Pumpkinseed	149	82	26	2
30236-017	MR	10-251	Mercury	0.158	0.004			Pumpkinseed	145	64	17.5	2
30236-018	MR	10-252	Mercury	0.266	0.004			Bluegill	110	28	8.8	1
28623-001	DP	28623-bc1	Mercury	0.129	0.003			Pumpkinseed	175	121	43.3	4
28623-002	DP	28623-bc2	Mercury	0.163	0.004			Pumpkinseed	180	141	48.95	6
28623-003	DP	10-024	Mercury	0.138	0.004			Pumpkinseed	179	138	55.6	5
28623-004	DP	10-025	Mercury	0.089	0.003			Pumpkinseed	175	148	56.6	4
28623-005	DP	28623-bc5	Mercury	0.064	0.004			Pumpkinseed	175	145	48.5	5
28623-006	DP	28623-bc6	Mercury	0.17	0.004			Pumpkinseed	190	163	46.7	5
28623-007	DP	10-031	Mercury	0.073	0.004			Pumpkinseed	190	168	53.6	5
28623-008	DP	10-032	Mercury	0.161	0.004			Pumpkinseed	195	192	62.3	6
28623-009	DP	10-033	Mercury	0.079	0.004			Pumpkinseed	200	212	63	4
28623-010	DP	10-034	Mercury	0.08	0.004			Bluegill	181	160	60.1	4
28623-011	DP	10-035	Mercury	0.256	0.004			Bluegill	180	162	49.2	5
28623-012	DP	10-036	Mercury	0.073	0.004			Bluegill	180	162	59.3	4
28623-013	DP	10-037	Mercury	0.155	0.004			Bluegill	195	168	55.1	6
28623-014	DP	10-038	Mercury	0.151	0.004			Bluegill	195	192	63.6	4
28623-015	DP	10-039	Mercury	0.121	0.004			Bluegill	210	192	62.8	4
28623-016	DP	10-040	Mercury	0.122	0.004			Bluegill	198	196	60.7	5
28623-017	DP	10-041	Mercury	0.069	0.004			Bluegill	189	196	61.9	5
28623-018	DP	10-042	Mercury	0.188	0.004			Bluegill	100	202	70.6	5
28623-019	DP	10-043	Mercury	0.149	0.004			Bluegill	203	220	78	5
28623-020	DP	10-044	Mercury	0.192	0.004			Bluegill	232	232	80	5
28624-001	DP	10-045	Mercury	0.348	0.003			Largemouth Bass	242	208	70.1	4
28624-002	DP	10-046	Mercury	0.452	0.004			Largemouth Bass	262	274	88.7	6
28624-003	DP	10-047	Mercury	0.96	0.04			Largemouth Bass	455	1304	340.2	8
28624-004	DP	10-048	Mercury	0.131	0.004			Chain Pickerel	338	212	78.7	3
28624-005	DP	10-049	Mercury	0.146	0.004			Brown Bullhead	299	424	112.9	1
28624-006	DP	10-050	Mercury	0.087	0.004			Brown Bullhead	300	482	134.5	6
28624-007	DP	10-051	Mercury	0.024	0.003			Brown Bullhead	300	488	135	4
28624-008	DP	10-052	Mercury	0.072	0.004			Brown Bullhead	300	492	144.2	5

Table 4-8a Peconic River Fish Samples - Mercury by area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (mg/kg)	MDL (mg/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
28624-009	DP	10-053	Mercury	0.048	0.004			Brown Bullhead	310	518	161.3	5
28624-010	DP	10-054	Mercury	0.151	0.004			Brown Bullhead	300	504	107.1	1
28624-011	DP	10-055	Mercury	0.042	0.004			Brown Bullhead	317	544	160.6	5
28624-012	DP	10-056	Mercury	0.107	0.004			Brown Bullhead	305	548	132.7	8
28624-013	DP	10-057	Mercury	0.065	0.004			Brown Bullhead	315	592	122.7	1
28624-014	DP	10-058	Mercury	0.04	0.003			Brown Bullhead	334	696	195.6	6

Table 4-8b Peconic River Fish Samples - PCBs by Area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
30148-010	A	30148-bc10	Aroclor 1016	50	50	U		Pumpkinseed	152.33	110.5	32.07	2
30148-010	A	30148-bc10	Aroclor 1221	50	50	U		Pumpkinseed	152.33	110.5	32.07	2
30148-010	A	30148-bc10	Aroclor 1232	50	50	U		Pumpkinseed	152.33	110.5	32.07	2
30148-010	A	30148-bc10	Aroclor 1242	50	50	U		Pumpkinseed	152.33	110.5	32.07	2
30148-010	A	30148-bc10	Aroclor 1248	50	50	U		Pumpkinseed	152.33	110.5	32.07	2
30148-010	A	30148-bc10	Aroclor 1254	22.5	50	J		Pumpkinseed	152.33	110.5	32.07	2
30148-010	A	30148-bc10	Aroclor 1260	50	50	U		Pumpkinseed	152.33	110.5	32.07	2
28834-001	C	'10-125	Aroclor 1016	9.95	9.95	U		Brown Bullhead	341	616	192	5
28834-001	C	'10-125	Aroclor 1221	9.95	9.95	U		Brown Bullhead	341	616	192	5
28834-001	C	'10-125	Aroclor 1232	9.95	9.95	U		Brown Bullhead	341	616	192	5
28834-001	C	'10-125	Aroclor 1242	9.95	9.95	U		Brown Bullhead	341	616	192	5
28834-001	C	'10-125	Aroclor 1248	9.95	9.95	U		Brown Bullhead	341	616	192	5
28834-001	C	'10-125	Aroclor 1254	9.95	9.95	U		Brown Bullhead	341	616	192	5
28834-001	C	'10-125	Aroclor 1260	9.95	9.95	U		Brown Bullhead	341	616	192	5
30239-001	D	30239-bc1	Aroclor 1016	9.91	9.91	U		Brown Bullhead	294	353	116.05	4
30239-001	D	30239-bc1	Aroclor 1221	9.91	9.91	U		Brown Bullhead	294	353	116.05	4
30239-001	D	30239-bc1	Aroclor 1232	9.91	9.91	U		Brown Bullhead	294	353	116.05	4
30239-001	D	30239-bc1	Aroclor 1242	9.91	9.91	U		Brown Bullhead	294	353	116.05	4
30239-001	D	30239-bc1	Aroclor 1248	9.91	9.91	U		Brown Bullhead	294	353	116.05	4
30239-001	D	30239-bc1	Aroclor 1254	9.91	9.91	U		Brown Bullhead	294	353	116.05	4
30239-001	D	30239-bc1	Aroclor 1260	5.2	9.91	J		Brown Bullhead	294	353	116.05	4
30239-004	D	'10-217	Aroclor 1016	10	10	U		Largemouth Bass	320	564	236.8	4
30239-004	D	'10-217	Aroclor 1221	10	10	U		Largemouth Bass	320	564	236.8	4
30239-004	D	'10-217	Aroclor 1232	10	10	U		Largemouth Bass	320	564	236.8	4
30239-004	D	'10-217	Aroclor 1242	10	10	U		Largemouth Bass	320	564	236.8	4
30239-004	D	'10-217	Aroclor 1248	10	10	U		Largemouth Bass	320	564	236.8	4
30239-004	D	'10-217	Aroclor 1254	10	10	U		Largemouth Bass	320	564	236.8	4
30239-004	D	'10-217	Aroclor 1260	10	10	U		Largemouth Bass	320	564	236.8	4

Table 4-8c Peconic River Fish Samples - Cesium-137 by Area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
30148-001	A	'10-152	Cesium-137	0.249	0.0702	0.045			Brown Bullhead	318	426	123.3	5
30148-002	A	30148-bc2	Cesium-137	0.241	0.0576	0.0411			Brown Bullhead	205.5	148	45.4	2
30148-004	A	'10-157	Cesium-137	0.172	0.0581	0.049			Chain Pickerel	334	224	100.3	1
30148-005	A	30148-bc5	Cesium-137	0.119	0.0685	0.0407			Chain Pickerel	277.67	142	57.43	1
30148-008	A	'10-166	Cesium-137	0.132	0.0513	0.0375			Bluegill	187	154	54.1	5
30148-010	A	30148-bc10	Cesium-137	0.235	0.0892	0.0782			Pumpkinseed	152.33	110.5	32.07	2
30148-011	A	30148-bc11	Cesium-137	0.237	0.0508	0.0376			Pumpkinseed	131.83	58.33	18.78	2
30148-012	A	30148-bc12	Cesium-137	0.223	0.0651	0.0555			Pumpkinseed	120.67	43.67	13.98	1
28834-001	C	'10-125	Cesium-137	0.219	0.0691	0.0379			Brown Bullhead	341	616	192	5
28834-002	C	'10-126	Cesium-137	0.324	0.0822	0.06			Brown Bullhead	302	394	101	4
28834-003	C	'10-127	Cesium-137	0.178	0.0676	0.0441			Brown Bullhead	296	386	110.1	4
30239-001	D	30239-bc1	Cesium-137	0.13	0.049	0.0427			Brown Bullhead	294	353	116.05	4
30239-002	D	30239-bc2	Cesium-137	0.129	0.0427	0.0414			Brown Bullhead	273	265	79.65	3
30239-004	D	'10-217	Cesium-137	0.131	0.0806	0.0544			Largemouth Bass	320	564	236.8	4
30239-006	D	30239-bc6	Cesium-137	0.0877	0.0448	0.0467			Bluegill	137.75	52	23.95	1
30239-007	D	30239-bc7	Cesium-137	0.0862	0.0356	0.0378			Pumpkinseed	136.17	64	22.85	2
30203-001	D	'10-195	Cesium-137	0.201	0.0479	0.0362			Brown Bullhead	295	332	86.1	4
30203-002	D	'10-196	Cesium-137	0.178	0.0554	0.0538			Brown Bullhead	255	246	71	4
30203-003	D	'10-197	Cesium-137	0.0745	0.0619	0.11	DL		Brown Bullhead	252	200	59.8	4
30203-004	D	'10-198	Cesium-137	0.146	0.048	0.0565			Brown Bullhead	248	212	64.3	4
30203-005	D	'10-199	Cesium-137	0.215	0.0693	0.0417			Brown Bullhead	245	212	72.4	4
30203-006	D	'10-200	Cesium-137	0.124	0.0419	0.0511			Brown Bullhead	245	204	63.4	2
30203-007	D	'10-201	Cesium-137	0.076	0.0543	0.052			Brown Bullhead	240	192	60.7	2
30203-017	D	'10-211	Cesium-137	0.164	0.0485	0.0473			Largemouth Bass	284	332	123.9	4
30244-001	SR	30244-bc1	Cesium-137	0.111	0.0438	0.0393			Brown Bullhead	251	222	56.7	4
30236-001	MR	'10-229	Cesium-137	0.135	0.0567	0.0499			Brown Bullhead	290	368	107.2	4
30236-002	MR	'10-230	Cesium-137	0.081	0.0523	0.045			Brown Bullhead	281	318	78.2	5
30236-003	MR	'10-231	Cesium-137	0.103	0.0518	0.0405			Brown Bullhead	268	262	77.3	4
30236-004	MR	30236-bc4	Cesium-137	0.11	0.0464	0.0529			Brown Bullhead	256	253	71.75	4
30236-005	MR	'10-234	Cesium-137	0.117	0.0586	0.0381			Brown Bullhead	245	222	73.3	4
30236-006	MR	30236-bc6	Cesium-137	0.0757	0.0656	0.0417			Brown Bullhead	243	184	51.6	4
30236-007	MR	30236-bc7	Cesium-137	0.0324	0.0422	0.0824	DL		Brown Bullhead	236.5	177	56	4
30236-008	MR	30236-bc8	Cesium-137	0.12	0.045	0.0407			Brown Bullhead	222.5	150	43.7	4
30236-009	MR	30236-bc9	Cesium-137	0.0709	0.0503	0.0518			Brown Bullhead	185.33	78	23.6	2
28623-001	DP	28623-bc1	Cesium-137	0.0461	0.0377	0.0359			Pumpkinseed	175	121	43.3	4

Table 4-8c Peconic River Fish Samples - Cesium-137 by Area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
28623-001	DP	28623-bc1	Potassium-40	2.86	0.835	0.4			Pumpkinseed	175	121	43.3	4
28623-002	DP	28623-bc2	Cesium-137	0.0311	0.029	0.0529	DL		Pumpkinseed	180	141	48.95	6
28623-002	DP	28623-bc2	Potassium-40	2.27	0.707	0.3			Pumpkinseed	180	141	48.95	6
28623-005	DP	28623-bc5	Cesium-137	0.0758	0.046	0.0361			Pumpkinseed	175	145	48.5	5
28623-005	DP	28623-bc5	Potassium-40	2.68	0.718	0.381			Pumpkinseed	175	145	48.5	5
28623-006	DP	28623-bc6	Cesium-137	0.0618	0.0495	0.0922	DL		Pumpkinseed	190	163	46.7	5
28623-006	DP	28623-bc6	Potassium-40	3.4	1.14	0.796			Pumpkinseed	190	163	46.7	5
28623-008	DP	'10-032	Cesium-137	0.0398	0.0294	0.0333			Pumpkinseed	195	192	62.3	6
28623-008	DP	'10-032	Potassium-40	3.08	0.663	0.348			Pumpkinseed	195	192	62.3	6
28623-009	DP	'10-033	Cesium-137	0.0864	0.0409	0.0733	UI		Pumpkinseed	200	212	63	4
28623-009	DP	'10-033	Potassium-40	3.46	1.07	0.699			Pumpkinseed	200	212	63	4
28623-010	DP	'10-034	Cesium-137	0.103	0.0403	0.029			Bluegill	181	160	60.1	4
28623-010	DP	'10-034	Potassium-40	2.74	0.69	0.32			Bluegill	181	160	60.1	4
28623-014	DP	'10-038	Cesium-137	0.0516	0.0402	0.0682	DL		Bluegill	195	192	63.6	4
28623-014	DP	'10-038	Potassium-40	3.23	0.875	0.55			Bluegill	195	192	63.6	4
28623-015	DP	'10-039	Cesium-137	0.0456	0.0266	0.0508	DL		Bluegill	210	192	62.8	4
28623-015	DP	'10-039	Potassium-40	2.65	0.658	0.54			Bluegill	210	192	62.8	4
28623-016	DP	'10-040	Cesium-137	0.0501	0.0407	0.0682	DL		Bluegill	198	196	60.7	5
28623-016	DP	'10-040	Potassium-40	3.43	1.04	0.546			Bluegill	198	196	60.7	5
28623-017	DP	'10-041	Cesium-137	0.0177	0.0249	0.0442	DL		Bluegill	189	196	61.9	5
28623-017	DP	'10-041	Potassium-40	2.99	0.76	0.403			Bluegill	189	196	61.9	5
28623-018	DP	'10-042	Cesium-137	0.121	0.0503	0.0484			Bluegill	100	202	70.6	5
28623-018	DP	'10-042	Potassium-40	2.62	0.819	0.45			Bluegill	100	202	70.6	5
28623-019	DP	'10-043	Cesium-137	0.0757	0.051	0.0365			Bluegill	203	220	78	5
28623-019	DP	'10-043	Potassium-40	2.78	0.723	0.511			Bluegill	203	220	78	5
28623-020	DP	'10-044	Cesium-137	0.0645	0.0423	0.0356			Bluegill	232	232	80	5
28623-020	DP	'10-044	Potassium-40	2.1	0.72	0.406			Bluegill	232	232	80	5
28624-001	DP	'10-045	Cesium-137	0.0402	0.0299	0.056	DL		Largemouth Bass	242	208	70.1	4
28624-001	DP	'10-045	Potassium-40	3.83	0.841	0.495			Largemouth Bass	242	208	70.1	4
28624-002	DP	'10-046	Cesium-137	0.132	0.0497	0.0368			Largemouth Bass	262	274	88.7	6
28624-002	DP	'10-046	Potassium-40	3.33	0.732	0.385			Largemouth Bass	262	274	88.7	6
28624-003	DP	'10-047	Cesium-137	0.106	0.0417	0.0336			Largemouth Bass	455	1304	340.2	8
28624-003	DP	'10-047	Potassium-40	2.89	0.756	0.527			Largemouth Bass	455	1304	340.2	8
28624-004	DP	'10-048	Cesium-137	0.1	0.0352	0.0308			Chain Pickerel	338	212	78.7	3
28624-004	DP	'10-048	Potassium-40	3.71	0.706	0.29			Chain Pickerel	338	212	78.7	3

Table 4-8c Peconic River Fish Samples - Cesium-137 by Area

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
28624-005	DP	'10-049	Cesium-137	0.0627	0.0406	0.0429			Brown Bullhead	299	424	112.9	1
28624-005	DP	'10-049	Potassium-40	3.56	0.852	0.555			Brown Bullhead	299	424	112.9	1
28624-006	DP	'10-050	Cesium-137	0.0469	0.0353	0.0364			Brown Bullhead	300	482	134.5	6
28624-006	DP	'10-050	Potassium-40	4.29	0.759	0.382			Brown Bullhead	300	482	134.5	6
28624-007	DP	'10-051	Cesium-137	0.0647	0.0361	0.0389			Brown Bullhead	300	488	135	4
28624-007	DP	'10-051	Potassium-40	3.96	0.762	0.389			Brown Bullhead	300	488	135	4
28624-008	DP	'10-052	Cesium-137	0.0606	0.0276	0.0275			Brown Bullhead	300	492	144.2	5
28624-008	DP	'10-052	Potassium-40	3.49	0.696	0.349			Brown Bullhead	300	492	144.2	5
28624-009	DP	'10-053	Cesium-137	0.0772	0.0335	0.0317			Brown Bullhead	310	518	161.3	5
28624-009	DP	'10-053	Potassium-40	4.1	0.712	0.375			Brown Bullhead	310	518	161.3	5
28624-010	DP	'10-054	Cesium-137	0.0986	0.0486	0.0338			Brown Bullhead	300	504	107.1	1
28624-010	DP	'10-054	Potassium-40	3.79	0.741	0.258			Brown Bullhead	300	504	107.1	1
28624-011	DP	'10-055	Cesium-137	0.0561	0.0316	0.033			Brown Bullhead	317	544	160.6	5
28624-011	DP	'10-055	Potassium-40	3.91	0.693	0.42			Brown Bullhead	317	544	160.6	5
28624-012	DP	'10-056	Cesium-137	0.0832	0.0379	0.0342			Brown Bullhead	305	548	132.7	8
28624-012	DP	'10-056	Potassium-40	3.35	0.787	0.351			Brown Bullhead	305	548	132.7	8
28624-013	DP	'10-057	Cesium-137	0.0671	0.0476	0.0335			Brown Bullhead	315	592	122.7	1
28624-013	DP	'10-057	Potassium-40	4.18	0.713	0.29			Brown Bullhead	315	592	122.7	1
28624-014	DP	'10-058	Cesium-137	0.0688	0.0388	0.0378			Brown Bullhead	334	696	195.6	6
28624-014	DP	'10-058	Potassium-40	4.89	0.742	0.387			Brown Bullhead	334	696	195.6	6

Table 4-9a : Minimum, Maximum and Average Mercury Concentrations in Fish (Individual & Composites)

Species	Number of Fish	Minimum Value (mg/kg)	Maximum Value (mg/kg)	Average Value (mg/kg)
AREA A				
Bluegill - Mercury	5	0.289	0.854	0.741
Brown Bullhead - Mercury	5	0.124	1.2	0.658
Chain Pickerel - Mercury	4	0.351	0.356	0.35225
Largemouth Bass - Mercury	5	0.276	0.41	0.3028
Pumpkinseed - Mercury	24	0.367	0.5	0.44575
AREA C				
Brown Bullhead - Mercury	5	0.163	0.648	0.3296
Chain Pickerel - Mercury	6	0.315	0.569	0.46233
Largemouth Bass - Mercury	2	0.696	0.839	0.7675
Pumpkinseed - Mercury	10	0.212	0.709	0.3586
AREA D - Upstream of HQ				
Bluegill - Mercury	4	0.243	0.243	0.243
Brown Bullhead - Mercury	5	0.109	0.156	0.1296
Largemouth Bass - Mercury	2	0.362	0.503	0.4325
Pumpkinseed - Mercury	6	0.209	0.209	0.209
AREA D - Downstream of HQ				
Brown Bullhead - Mercury	13	0.0634	0.473	0.28165
Largemouth Bass - Mercury	1	0.387	0.387	0.387
Pumpkinseed - Mercury	3	0.182	0.584	0.44667
SCHULTZ ROAD				
Brown Bullhead - Mercury	2	0.363	0.363	0.363
MANOR ROAD				
Bluegill - Mercury	1	0.266	0.266	0.266
Brown Bullhead - Mercury	19	0.202	0.348	0.25289
Largemouth Bass - Mercury	1	0.278	0.278	0.278
Pumpkinseed - Mercury	3	0.107	0.293	0.186
DONAHUE'S POND				
Bluegill - Mercury	11	0.0686	0.256	0.14137
Brown Bullhead - Mercury	10	0.0242	0.151	0.07811
Chain Pickerel - Mercury	1	0.131	0.131	0.131
Largemouth Bass - Mercury	3	0.348	0.96	0.58667
Pumpkinseed - Mercury	13	0.0638	0.17	0.12243

Table 4-9a : Minimum, Maximum and Average Mercury Concentrations in Fish (Individual & Composites)

Species	Number of Fish	Minimum Value (mg/kg)	Maximum Value (mg/kg)	Average Value (mg/kg)
SWAN POND				
Bluegill - Mercury	12	0.0493	0.0575	0.0535
Brown Bullhead - Mercury	8	0.0017	0.157	0.03224
Chain Pickerel - Mercury	1	0.0729	0.0729	0.0729
Largemouth Bass - Mercury	4	0.0794	0.544	0.22733
Pumpkinseed - Mercury	12	0.0072	0.04	0.0238
Yellow Perch - Mercury	5	0.0286	0.111	0.06962
FORGE POND				
Bluegill - Mercury	6	0.0428	0.0568	0.0498
Brown Bullhead - Mercury	1	0.0699	0.0699	0.0699
Chain Pickerel - Mercury	1	0.292	0.292	0.292
Largemouth Bass - Mercury	5	0.147	0.22	0.1674
Pumpkinseed - Mercury	7	0.116	0.133	0.12571
Yellow Perch - Mercury	4	0.0652	0.108	0.0797

Table 4-9b : Minimum, Maximum and Average PCB Concentrations in Fish (Individual & Composites)				
Species	**Number of Fish**	**Minimum Value (ug/kg)**	**Maximum Value (ug/kg)**	**Average Value (ug/kg)**
AREA A				
Pumpkinseed - Aroclor 1016	6	50	50	50
Pumpkinseed - Aroclor 1221	6	50	50	50
Pumpkinseed - Aroclor 1232	6	50	50	50
Pumpkinseed - Aroclor 1242	6	50	50	50
Pumpkinseed - Aroclor 1248	6	50	50	50
Pumpkinseed - Aroclor 1254	6	22.5	22.5	22.5
Pumpkinseed - Aroclor 1260	6	50	50	50
AREA C				
Brown Bullhead - Aroclor 1016	1	9.95	9.95	9.95
Brown Bullhead - Aroclor 1221	1	9.95	9.95	9.95
Brown Bullhead - Aroclor 1232	1	9.95	9.95	9.95
Brown Bullhead - Aroclor 1242	1	9.95	9.95	9.95
Brown Bullhead - Aroclor 1248	1	9.95	9.95	9.95
Brown Bullhead - Aroclor 1254	1	9.95	9.95	9.95
Brown Bullhead - Aroclor 1260	1	9.95	9.95	9.95
AREA D - Upstream of HQ				
Brown Bullhead - Aroclor 1016	2	9.91	9.91	9.91
Brown Bullhead - Aroclor 1221	2	9.91	9.91	9.91
Brown Bullhead - Aroclor 1232	2	9.91	9.91	9.91
Brown Bullhead - Aroclor 1242	2	9.91	9.91	9.91
Brown Bullhead - Aroclor 1248	2	9.91	9.91	9.91
Brown Bullhead - Aroclor 1254	2	9.91	9.91	9.91
Brown Bullhead - Aroclor 1260	2	5.2	5.2	5.2
Largemouth Bass - Aroclor 1016	1	10	10	10
Largemouth Bass - Aroclor 1221	1	10	10	10
Largemouth Bass - Aroclor 1232	1	10	10	10
Largemouth Bass - Aroclor 1242	1	10	10	10
Largemouth Bass - Aroclor 1248	1	10	10	10
Largemouth Bass - Aroclor 1254	1	10	10	10
Largemouth Bass - Aroclor 1260	1	10	10	10

Table 4-9c : Minimum, Maximum and Average Cs-137 Concentrations in Fish (Individual & Composites)

Species	Number of Fish	Minimum Value (pCi/g)	Maximum Value (pCi/g)	Average Value (pCi/g)	Average Error (pCi/g)
AREA A					
Bluegill - Cesium-137	1	0.132	0.132	0.132	0.0513
Brown Bullhead - Cesium-137	3	0.241	0.249	0.24367	0.0618
Chain Pickerel - Cesium-137	4	0.119	0.172	0.13225	0.0659
Pumpkinseed - Cesium-137	18	0.223	0.237	0.23167	0.0684
AREA C					
Brown Bullhead - Cesium-137	3	0.178	0.324	0.24033	0.073
AREA D - Upstream of HQ					
Bluegill - Cesium-137	4	0.0877	0.0877	0.0877	0.0448
Brown Bullhead - Cesium-137	4	0.129	0.13	0.1295	0.0459
Largemouth Bass - Cesium-137	1	0.131	0.131	0.131	0.0806
Pumpkinseed - Cesium-137	6	0.0862	0.0862	0.0862	0.0356
AREA D - Downstream of HQ					
Brown Bullhead - Cesium-137	7	0.0745	0.215	0.14493	0.0541
Largemouth Bass - Cesium-137	1	0.164	0.164	0.164	0.0485
SCHULTZ ROAD					
Brown Bullhead - Cesium-137	2	0.111	0.111	0.111	0.0438
MANOR ROAD					
Brown Bullhead - Cesium-137	15	0.0324	0.135	0.08833	0.0512
DONAHUE'S POND					
Bluegill - Cesium-137	8	0.0177	0.121	0.06615	0.0395
Brown Bullhead - Cesium-137	10	0.0469	0.0986	0.06859	0.0378
Chain Pickerel - Cesium-137	1	0.1	0.1	0.1	0.0352
Largemouth Bass - Cesium-137	3	0.0402	0.132	0.09273	0.0404
Pumpkinseed - Cesium-137	10	0.0311	0.0864	0.05558	0.0395

Table 4-10a Pre-Cleanup and Post-Cleanup Peconic River Fish Mercury Summary

	Pre-Cleanup	Post-Cleanup				
	1996, 1997 & 2001[1]	2006	2007	2008	2009	2010
Mercury Summary Statistics						
Mean (mg/kg)	0.52	0.30	0.31	0.26	0.27	0.28
Standard Error of Mean (mg/kg)	0.03	0.03	0.03	0.01	0.03	0.02
Standard Deviation (mg/kg)	0.28	0.18	0.22	0.17	0.25	0.20
Minimum (mg/kg)	0.05	0.06	0.02	0.03	0.02	0.0242
Maximum (mg/kg)	1.6	0.776	1.35	0.869	1.63	1.2
Number of Samples	103	29	71	181	93	108
95 % Confidence Level (upper and lower)	0.06	0.07	0.05	0.02	0.05	0.04
Mean Laboratory Reporting Limit (mg/kg)[2]	0.005 - 0.05	0.0130	0.0046	0.0019	0.0046	0.0060

[1] 1996 and 1997 data are from the 1998 Operable Unit V Remedial Investigation. The 2001 data set is fror a NYSDEC database. Species not present (common shiners and creek chubsuckers)in the 2006-2010 data were removed from the 1996, 1997 and 2001 data.

[2] Reporting limits were not available in the NYSDEC electronic database used to prepare this table.

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Table 4-10b Pre-Cleanup and Post-Cleanup Peconic River Fish PCB Summary[1]

		Pre-Cleanup	Post-Cleanup				
		1996 & 1997	2006	2007	2008	2009	2010
Aroclor-1254 Summary Statistics							
Mean (ug/kg)		1205.21	21.96	16.92	16.16	9.66	13.09
Standard Error of Mean (ug/kg)		173.97	1.26	2.71	6.24	0.28	3.14
Standard Deviation (ug/kg)		1476.15	6.79	25.87	8.83	2.01	6.27
Minimum (ug/kg)		100	20	3.33	9.91	3.5	9.91
Maximum (ug/kg)		6010	52.4	252	22.4	18.9	22.5
Number of Samples		72	29	91	2	52	4
95% Confidence Level (upper and lower)		346.88	2.58	5.39	79.35	0.56	9.98
Mean Laboratory Reporting Limit (ug/kg)		1996-200, 1997-100	20	14.3	9.94	9.81	9.98

[1] The majority of post-cleanup PCB analyses were less than the reporting limit. Aroclor-1254 was selected as the indicator Aroclor because the post-cleanup Aroclor-1254 concentrations were the highest among the seven Aroclors analyzed. Also, only Aroclor-1254 was analyzed for in the pre-cleanup Remedial Investigation. See the 2006-2009 Peconic River Monitoring Reports for detailed Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260 data.

Table 4-10c Pre-Cleanup and Post-Cleanup Peconic River Fish Cesium-137 Summary

		Pre-Cleanup	Post-Cleanup				
		1996, 1997[1]	2006	2007	2008	2009	2010
Cesium-137 Summary Statistics							
Mean (pCi/g)		1.37	0.24	0.14	0.11	0.17	0.11
Standard Error of Mean (pCi/g)		0.16	0.03	0.01	0.01	0.01	0.01
Standard Deviation (pCi/g)		0.45	0.10	0.05	0.06	0.09	0.06
Minimum (pCi/g)		0.49	0.121	0.0549	0.0328	0.0212	0.0177
Maximum (pCi/g)		1.88	0.381	0.243	0.287	0.511	0.324
Number of Samples		8	9	29	41	61	62
Mean Error (pCi/g)		0.265	0.076	0.030	0.031	0.029	0.048
Mean Reporting Limit (pCi/g)		0.202	0.059	0.021	0.025	0.020	0.047

[1] 1996 and 1997 data are from Appendices F3 and F4 of the 1998 Operable Unit V Remedial Investigation Report. Creek chubsuckers were not encountered during the 2006-2010 sampling so were removed from the 1996 and 1997 data to facilitate data comparability. 2006-2010 data are from the respective Peconic River Monitoring Reports.

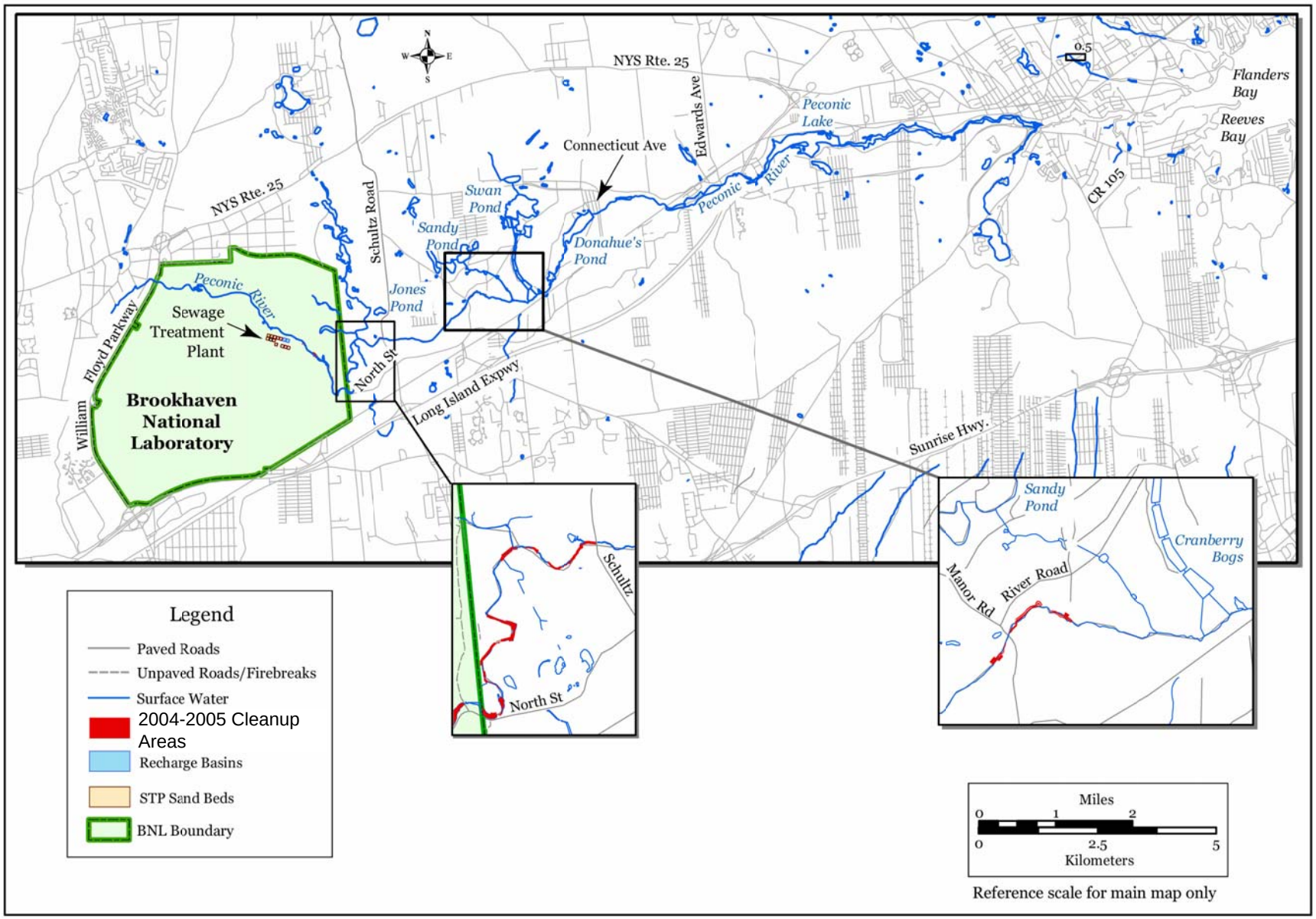


Figure 1-1. The Peconic River. The sections of the river that were remediated are indicated in the two call-out boxes, These two sections are shown in detail in Figures 1-2 and 1-3.

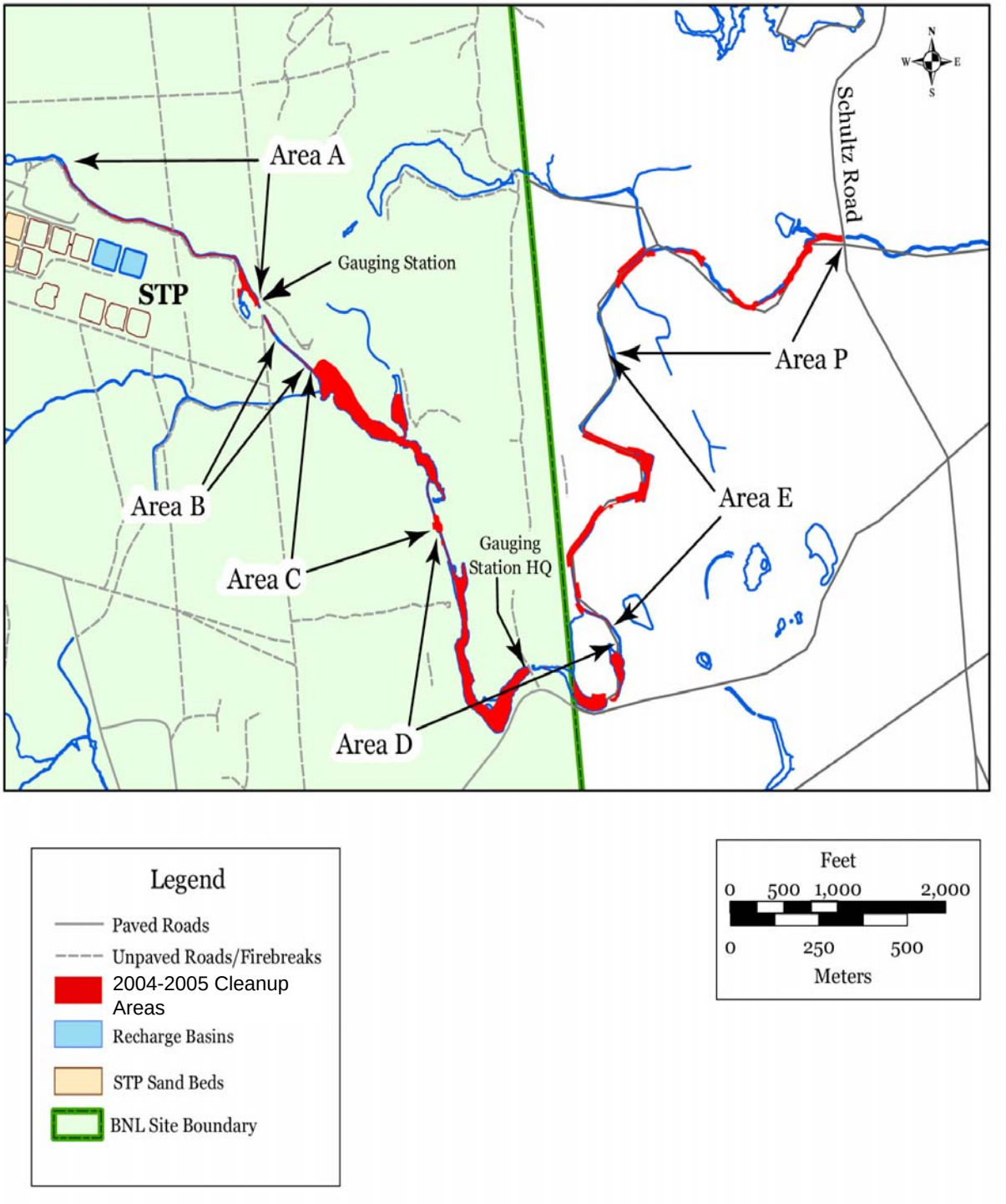


Figure 1-2. Peconic River Cleanup Areas between the BNL Sewage Treatment Plant and Schultz Road.

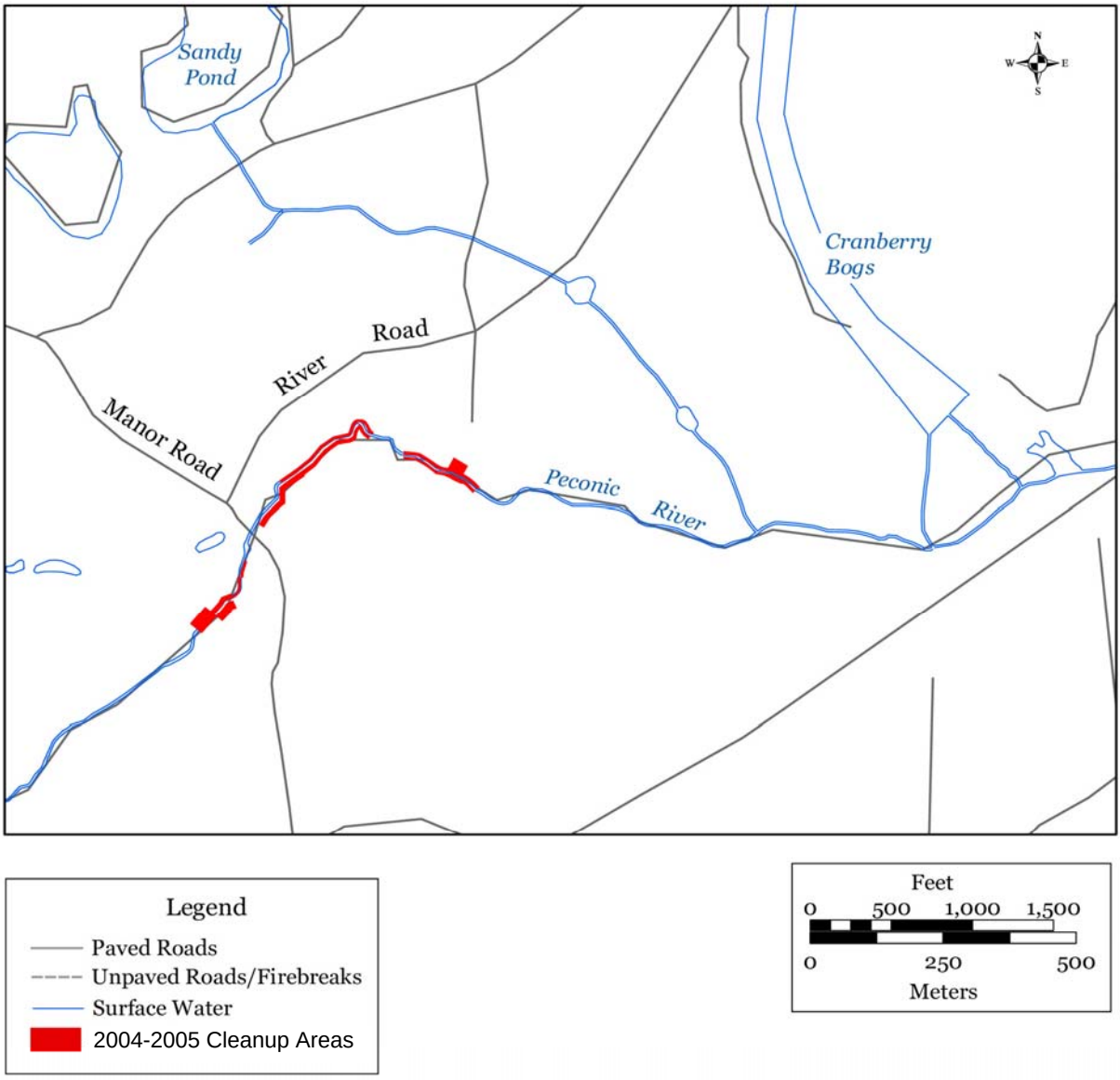
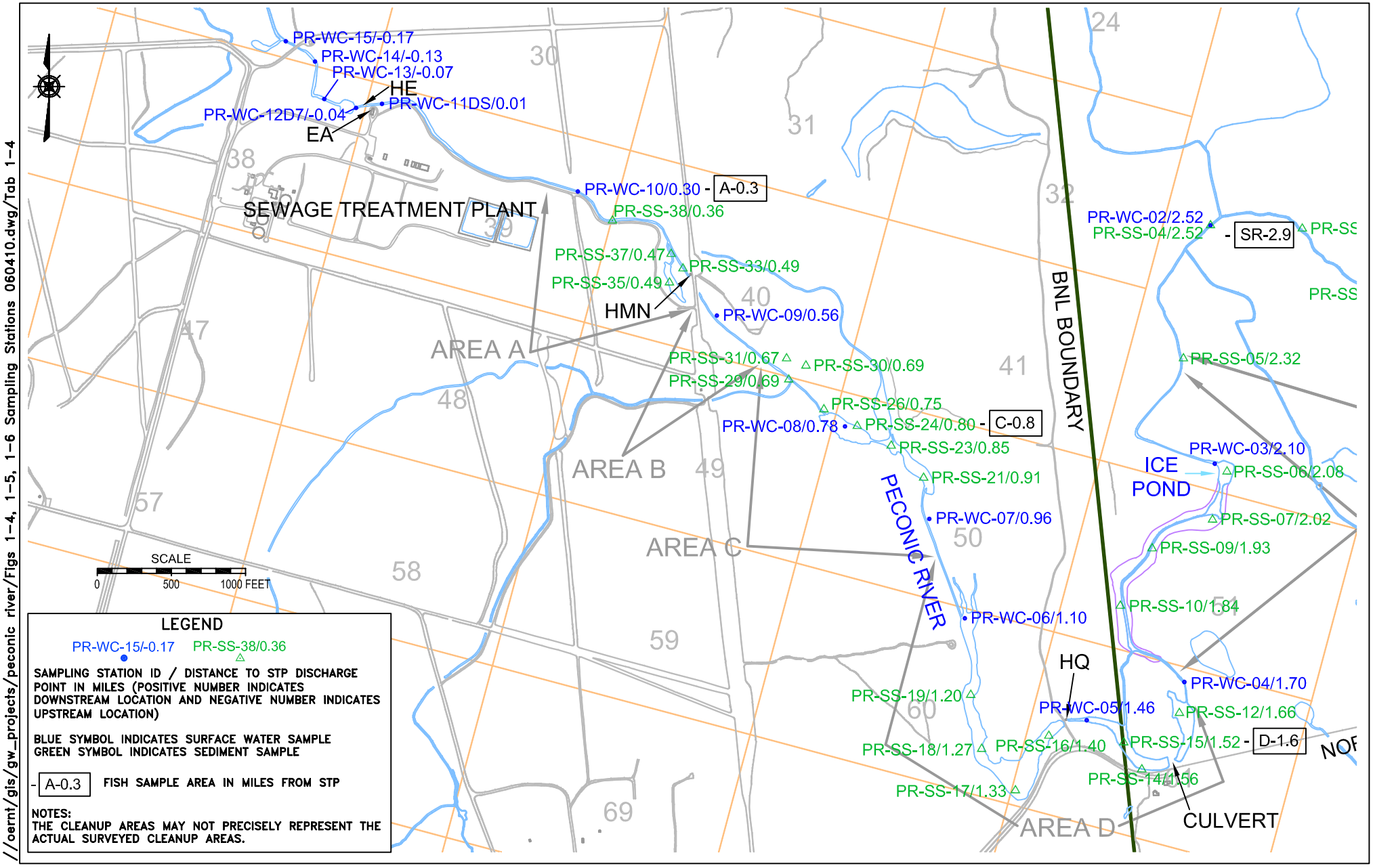


Figure 1-3. Peconic River Cleanup Areas Adjacent to Manor Road



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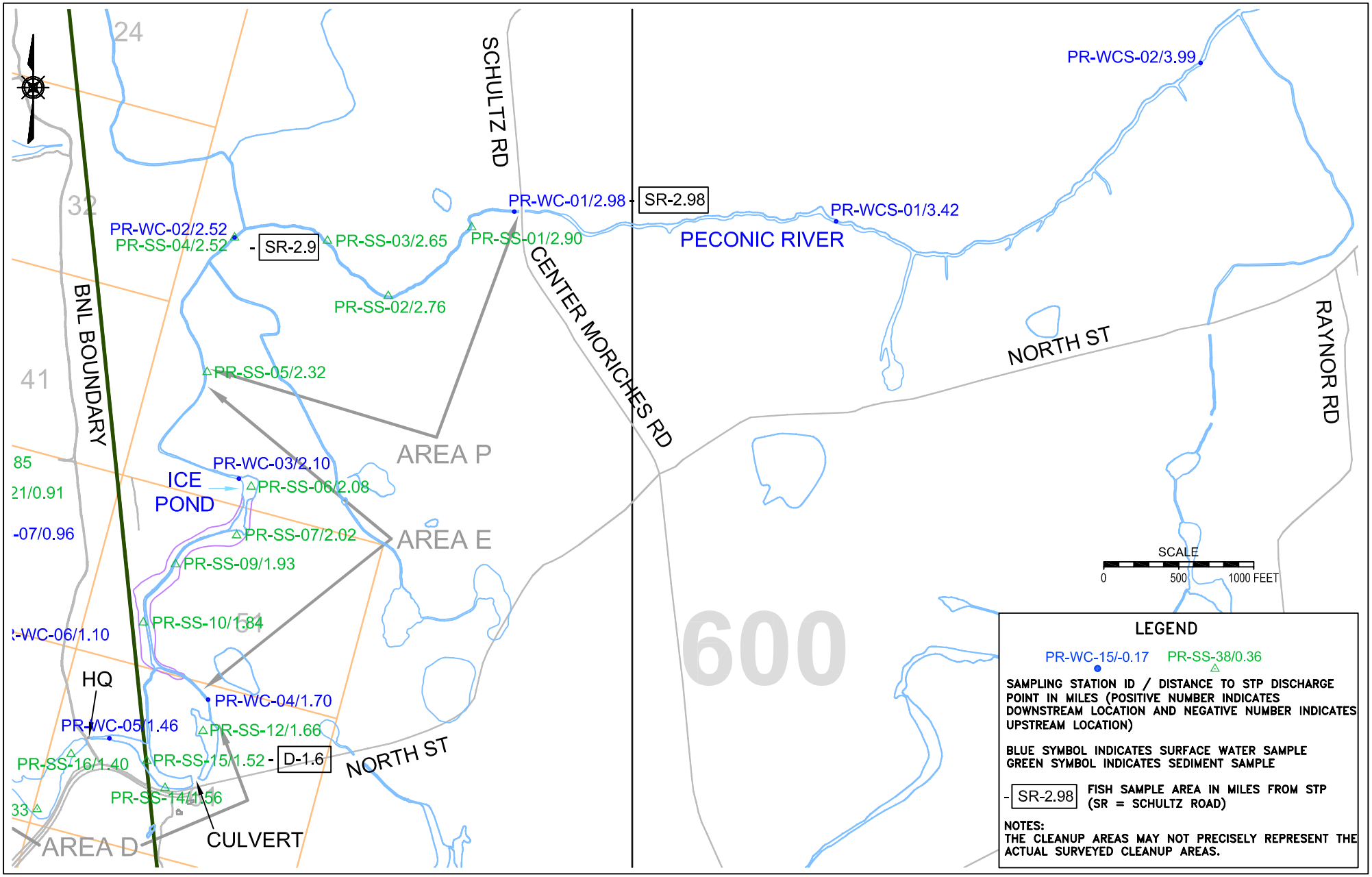
BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

TITLE:

FIGURE 1-4
WATER, SEDIMENT AND FISH SAMPLING STATIONS BETWEEN PR-WC-15 AND BNL BOUNDARY
MERCURY SAMPLING STATIONS
PECONIC RIVER STUDY

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	06/04/10	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–
MAP NO.:		1-4	



//oernt/gis/gw_projects/peconic river/Figs 1-4, 1-5, 1-6 Sampling Stations 060410.dwg/Tab 1-5

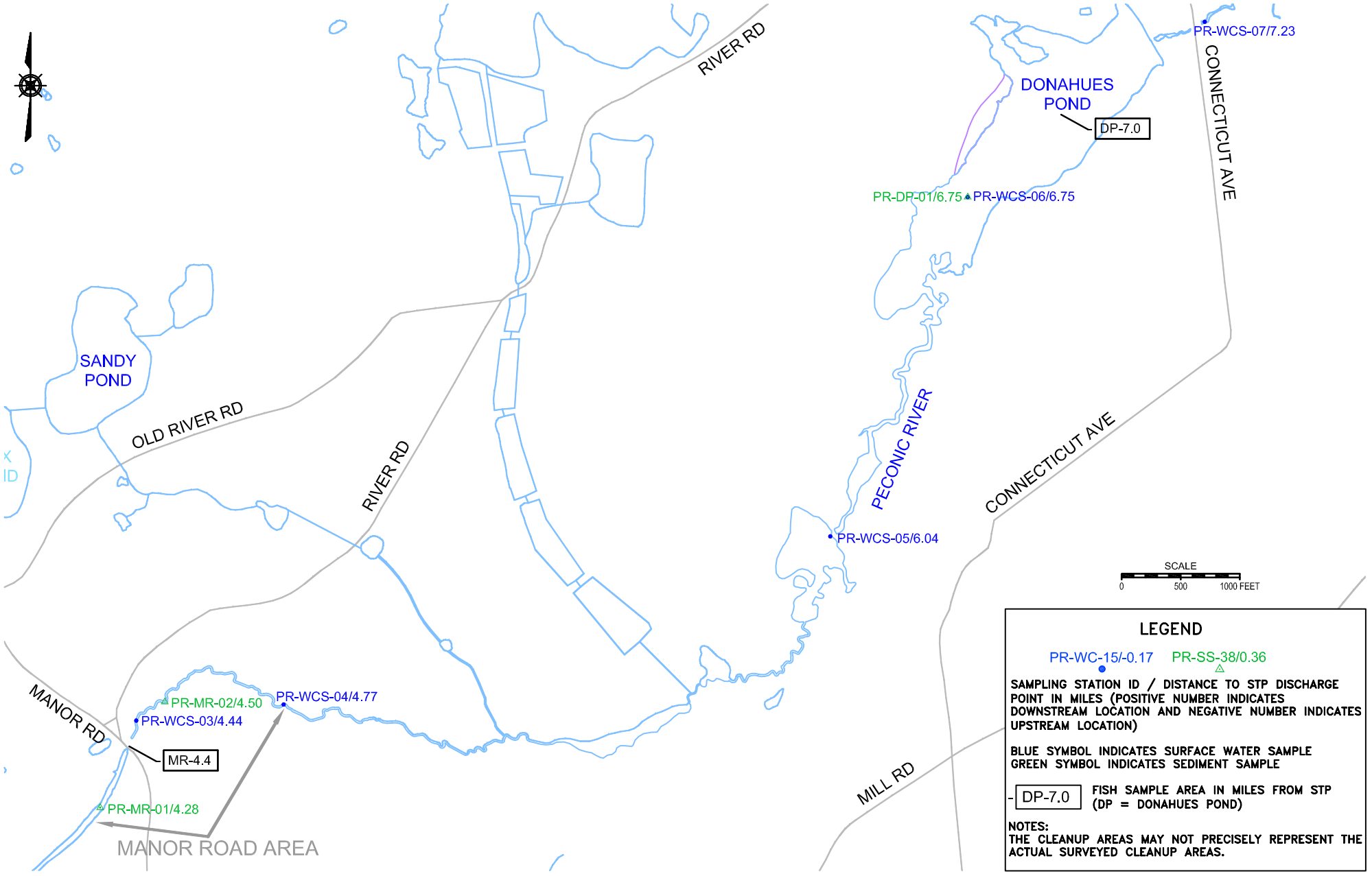
BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

TITLE:

FIGURE 1-5
WATER, SEDIMENT AND FISH SAMPLING STATIONS
BETWEEN BNL BOUNDARY AND SCHULTZ ROAD
MERCURY SAMPLING STATIONS
PECONIC RIVER STUDY

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	06/04/10	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–
MAP NO.:		1-5	



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BROOKHAVEN NATIONAL LABORATORY

ENVIRONMENTAL PROTECTION DIVISION

TITLE:

FIGURE 1-6
WATER, SEDIMENT AND FISH SAMPLING STATIONS
BETWEEN MANOR RD AND CONNECTICUT AVE
MERCURY SAMPLING STATIONS
PECONIC RIVER STUDY

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	06/04/10	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–

MAP NO.: 1-6

Figure 2-1 2010 Peconic River Sediment Mercury Results
Routine Sedment Monitoring Stations

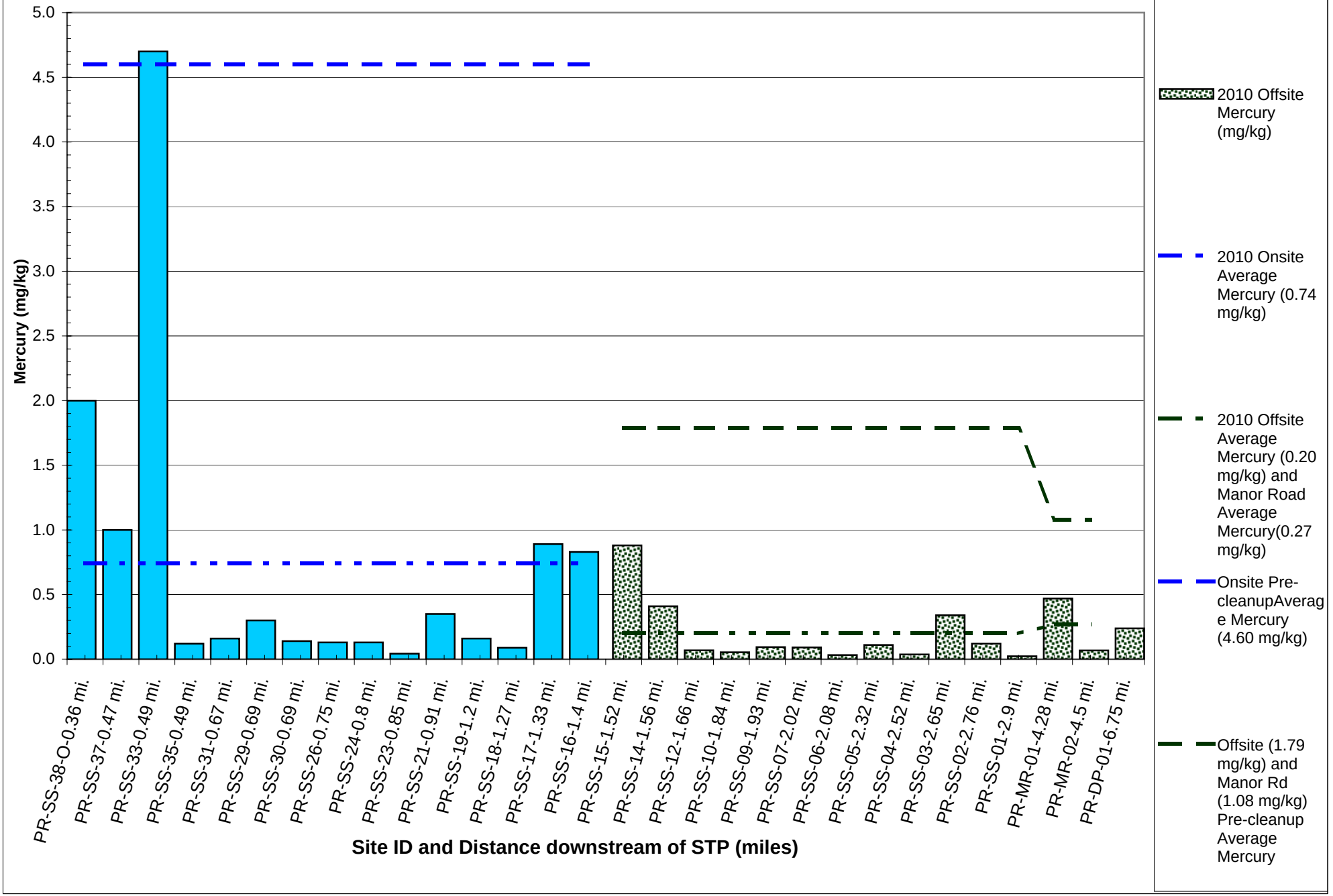
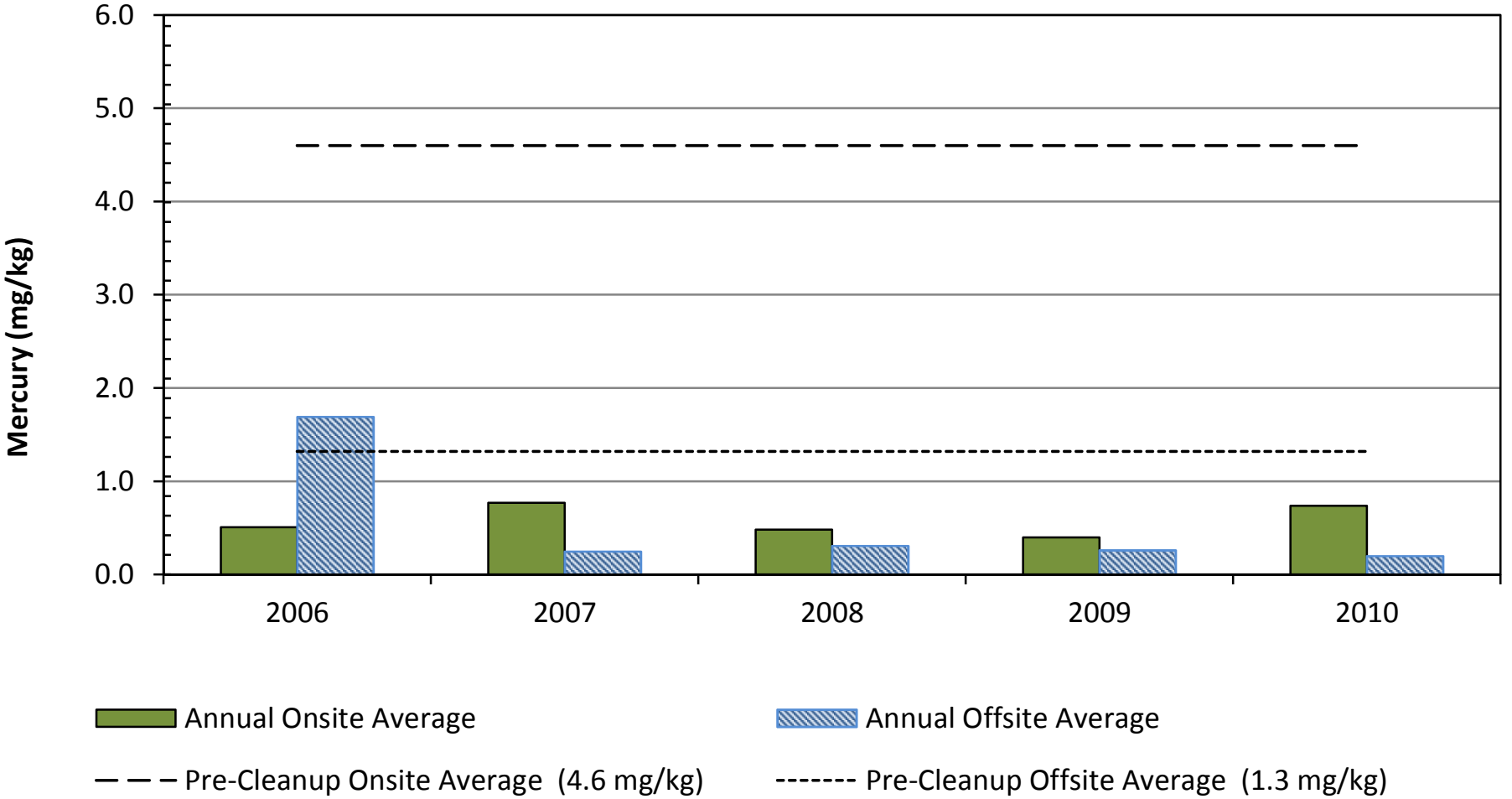
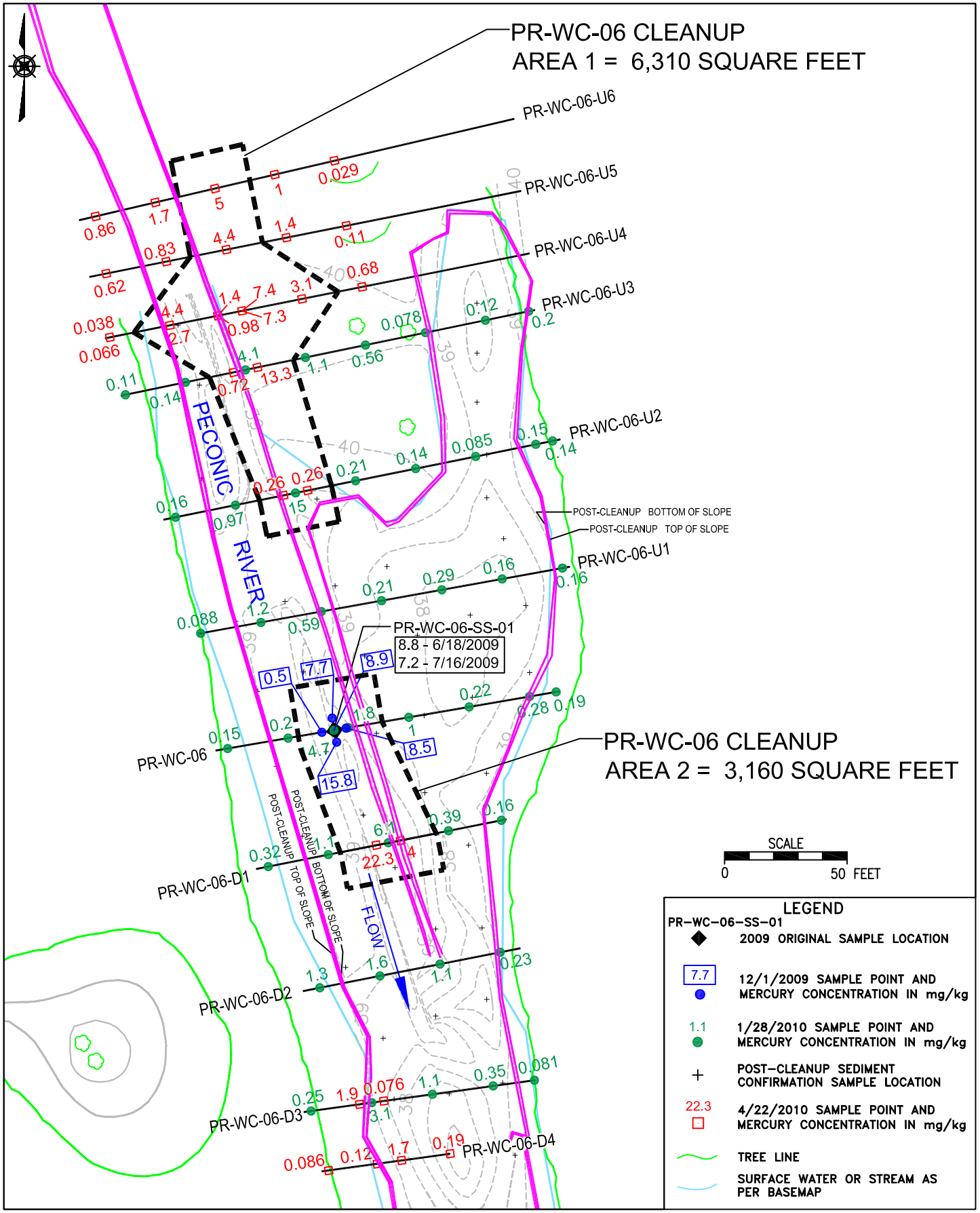


Figure 2-1a 2006-2010 Peconic River Annual Average Sediment Mercury





OERNT: \\Gw_projects\peconic river\Fig 2-2 PR_WC_06 040111.dwg

BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

PR-WC-06 CLEANUP AREA

MERCURY SAMPLING PECONIC RIVER

DWN:	VT:HZ.:	DATE:	PROJECT NO.:
AJZ	–	04/01/11	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–

FIGURE NO.: 2-2

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

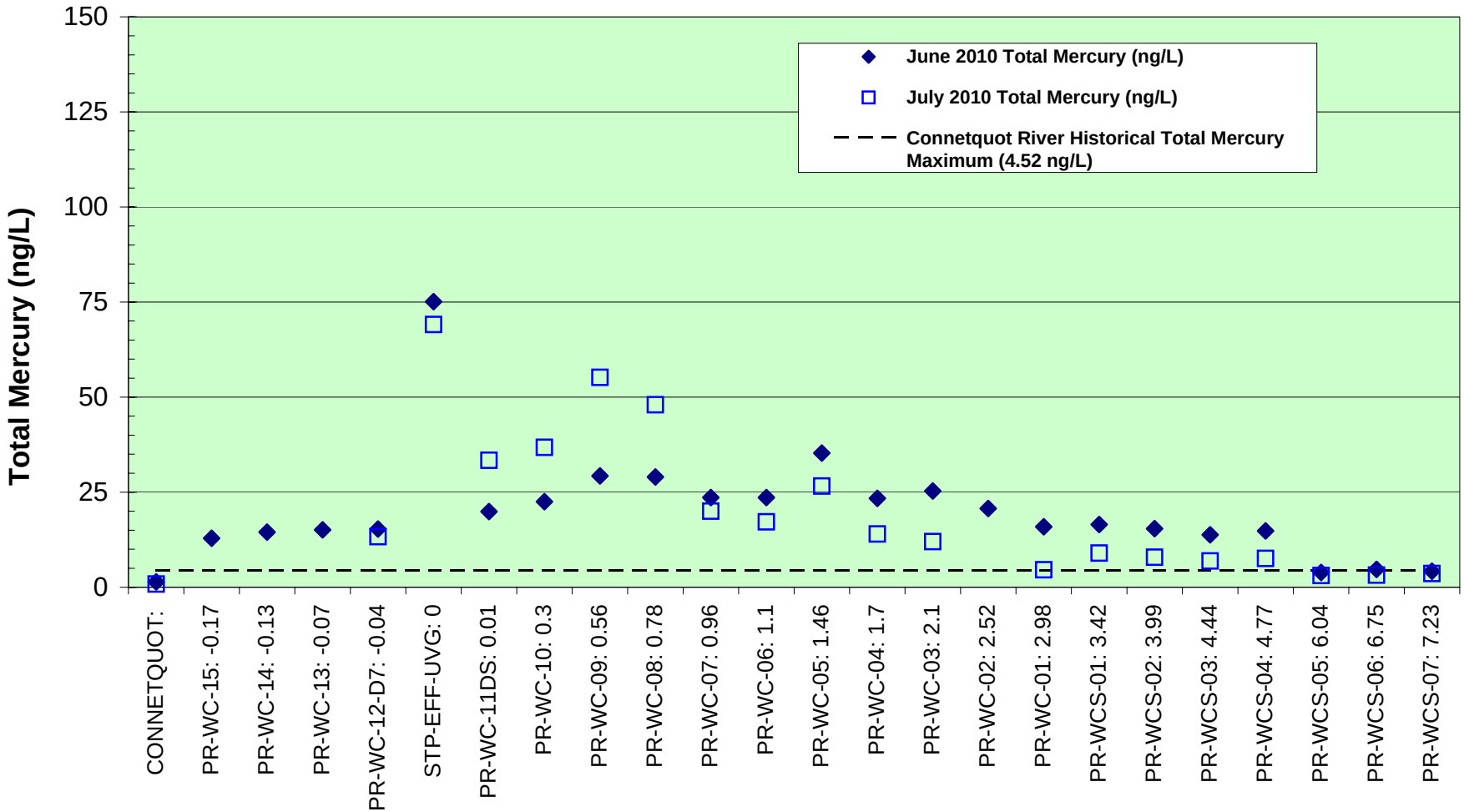
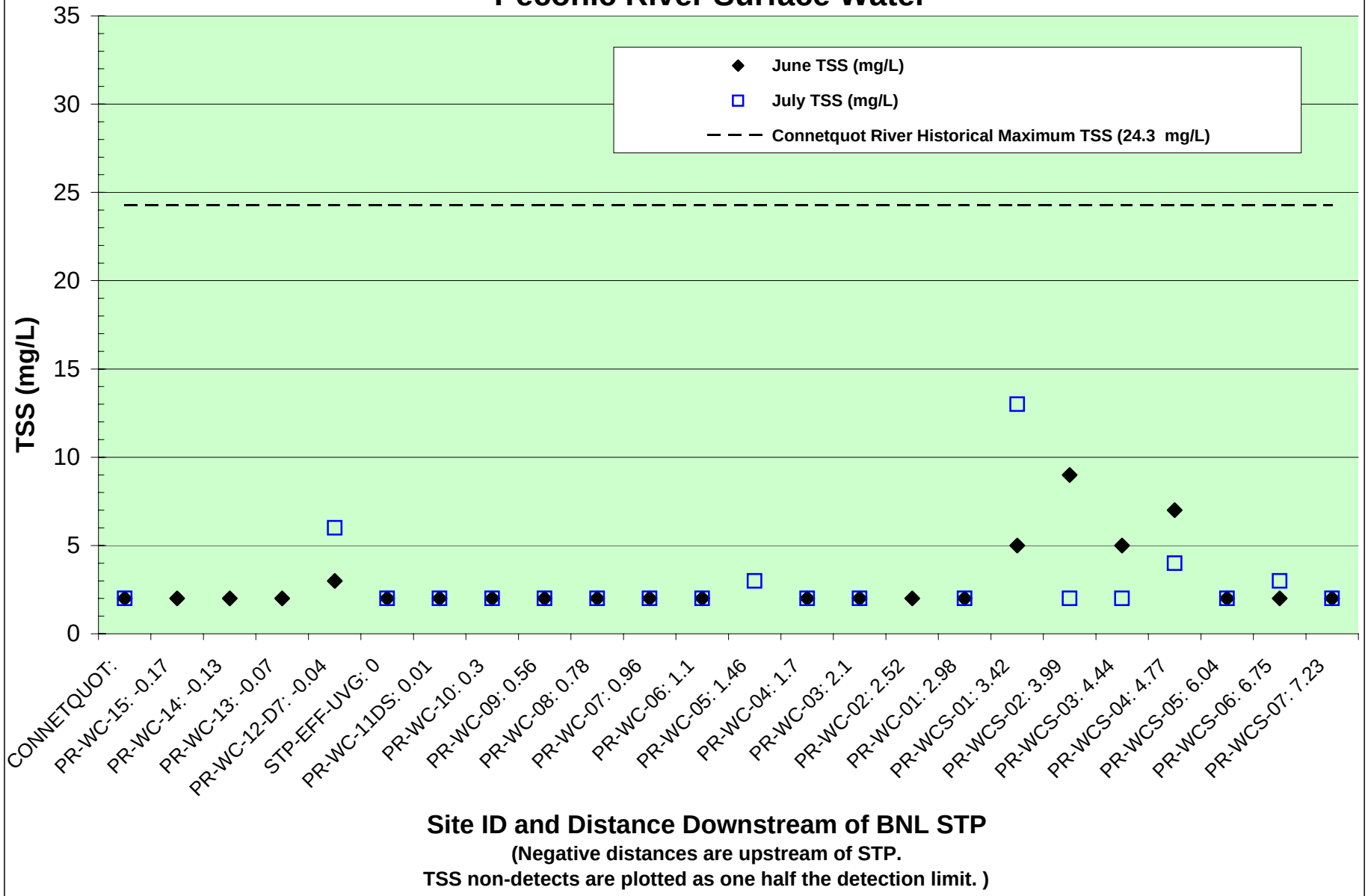


Figure 3-2 2010 Total Suspended Solids (TSS) in Peconic River Surface Water



Site ID and Distance Downstream of BNL STP

(Negative distances are upstream of STP.
TSS non-detects are plotted as one half the detection limit.)

Figure 3-3 2010 Methylmercury in Peconic River Surface Water

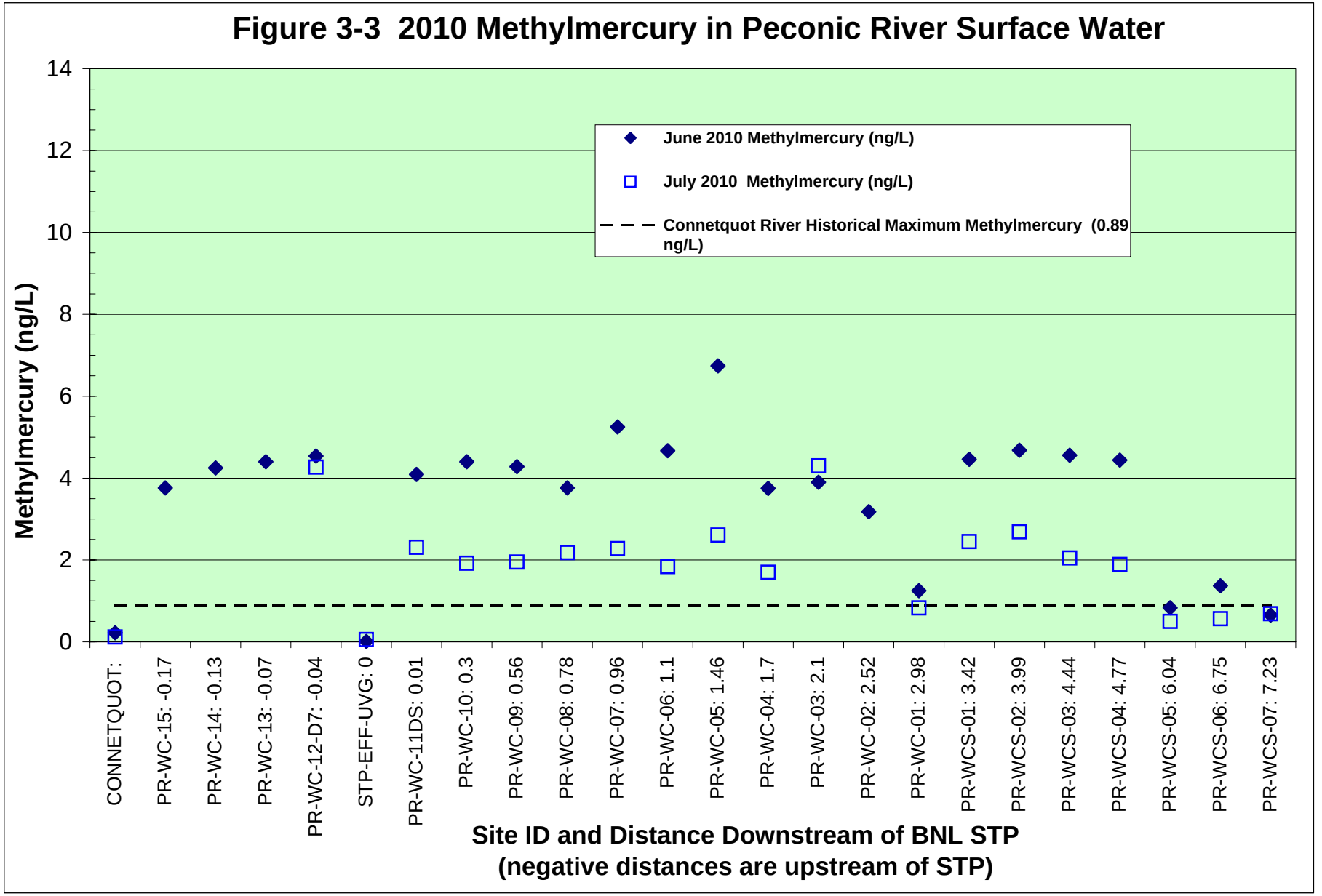
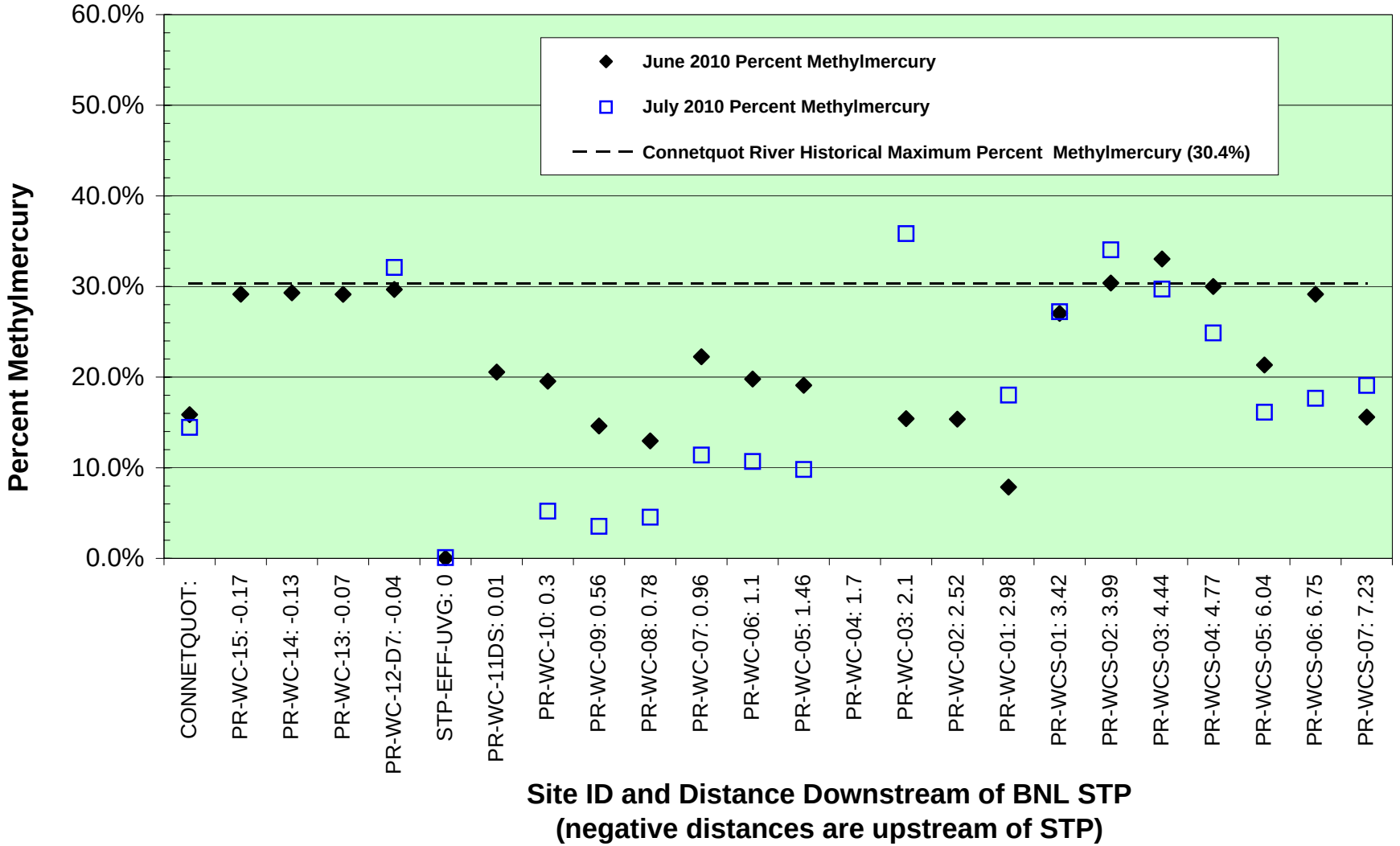
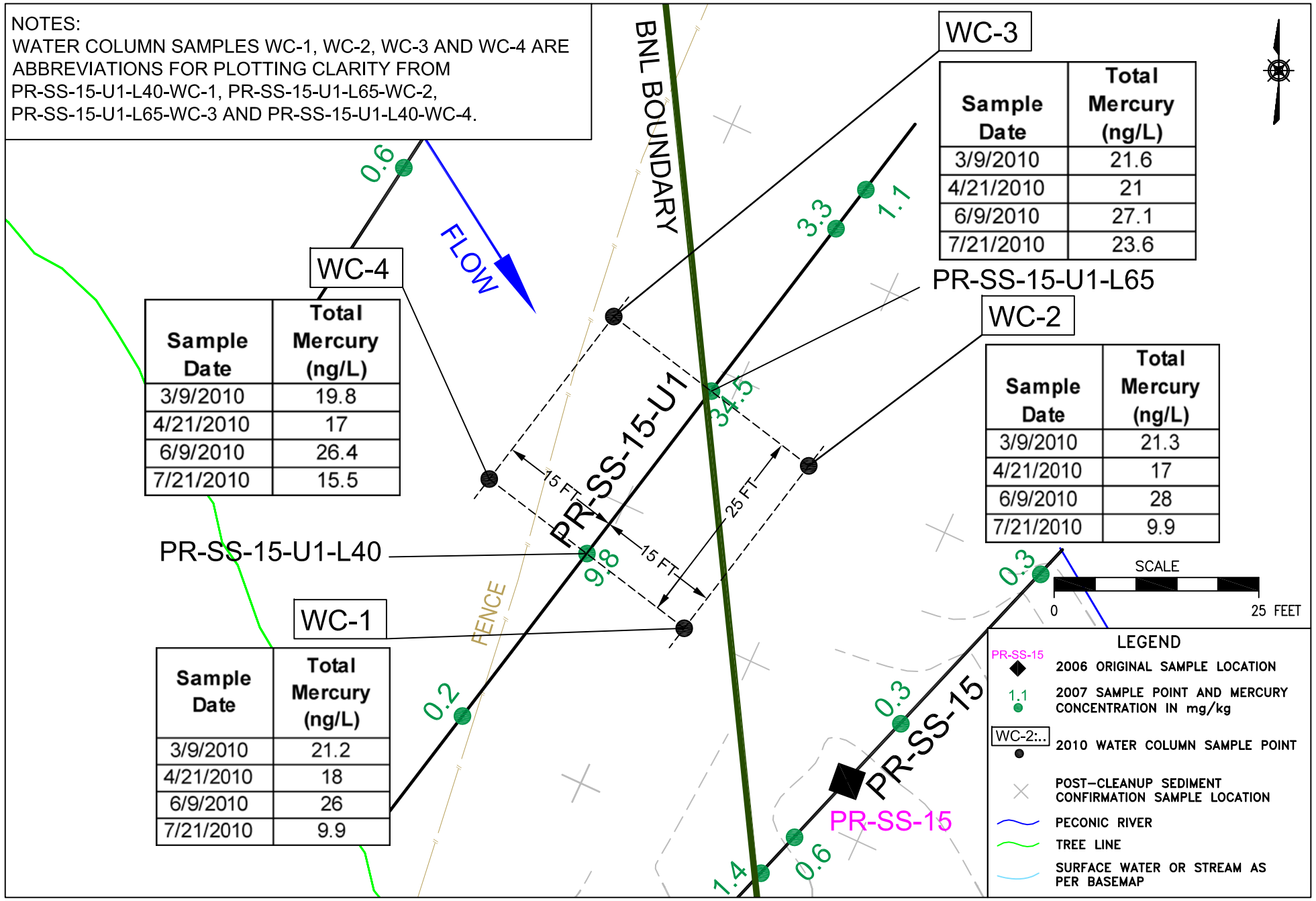


Figure 3-4 2010 Percent Methylmercury in Peconic River Surface Water



NOTES:
WATER COLUMN SAMPLES WC-1, WC-2, WC-3 AND WC-4 ARE ABBREVIATIONS FOR PLOTTING CLARITY FROM PR-SS-15-U1-L40-WC-1, PR-SS-15-U1-L65-WC-2, PR-SS-15-U1-L65-WC-3 AND PR-SS-15-U1-L40-WC-4.



Sample Date	Total Mercury (ng/L)
3/9/2010	21.6
4/21/2010	21
6/9/2010	27.1
7/21/2010	23.6

Sample Date	Total Mercury (ng/L)
3/9/2010	19.8
4/21/2010	17
6/9/2010	26.4
7/21/2010	15.5

Sample Date	Total Mercury (ng/L)
3/9/2010	21.3
4/21/2010	17
6/9/2010	28
7/21/2010	9.9

Sample Date	Total Mercury (ng/L)
3/9/2010	21.2
4/21/2010	18
6/9/2010	26
7/21/2010	9.9

//oernt/gis/gw_projects/peconic river/Fig 3-5 PR-SS-15-U1 022111.dwg

BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

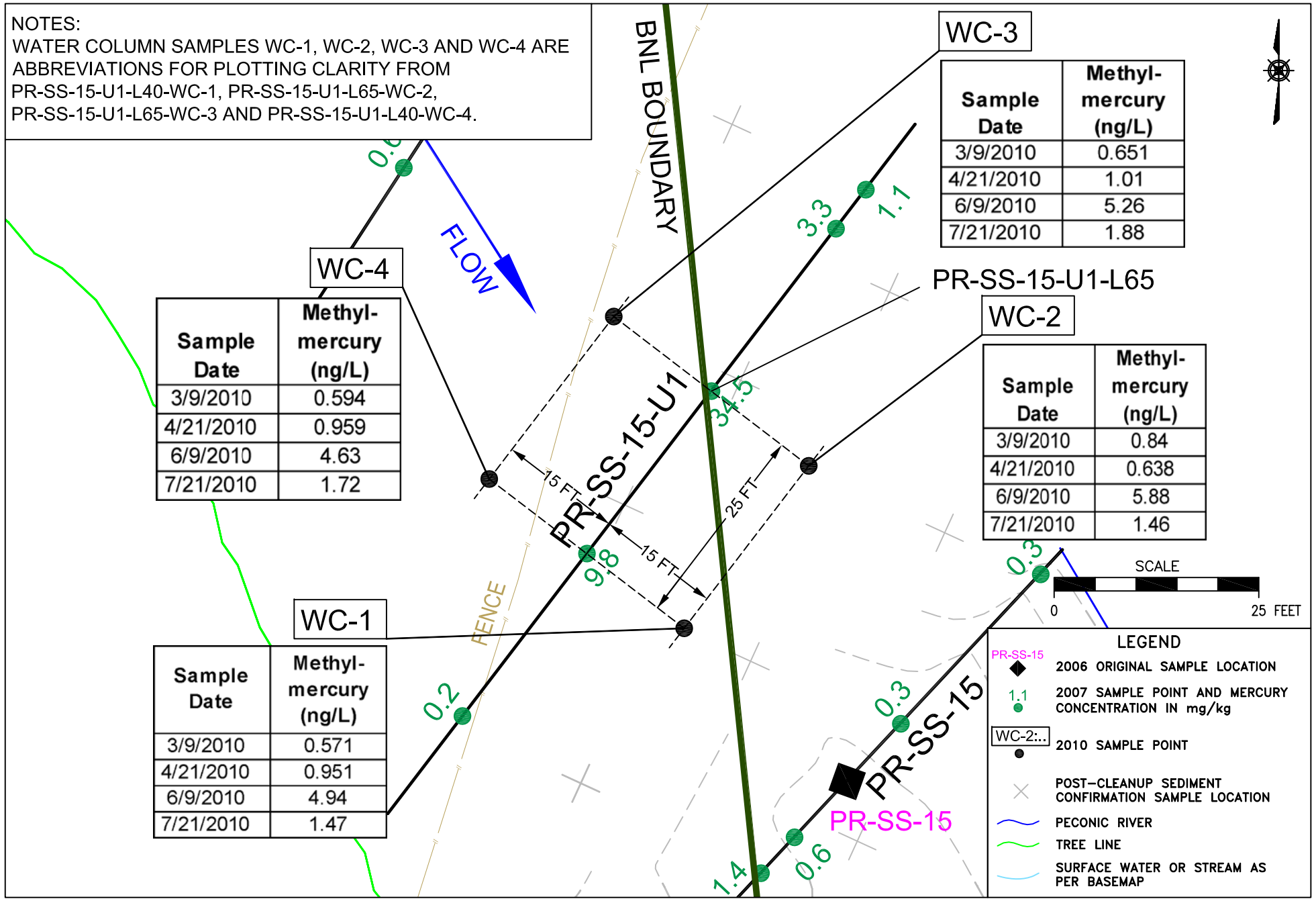
2010 WATER COLUMN TOTAL MERCURY RESULTS AT WC-1 THROUGH WC-4

MERCURY SAMPLING PECONIC RIVER

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/21/11	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–

FIGURE NO.: 3-5

NOTES:
WATER COLUMN SAMPLES WC-1, WC-2, WC-3 AND WC-4 ARE ABBREVIATIONS FOR PLOTTING CLARITY FROM PR-SS-15-U1-L40-WC-1, PR-SS-15-U1-L65-WC-2, PR-SS-15-U1-L65-WC-3 AND PR-SS-15-U1-L40-WC-4.



Sample Date	Methyl-mercury (ng/L)
3/9/2010	0.651
4/21/2010	1.01
6/9/2010	5.26
7/21/2010	1.88

Sample Date	Methyl-mercury (ng/L)
3/9/2010	0.594
4/21/2010	0.959
6/9/2010	4.63
7/21/2010	1.72

Sample Date	Methyl-mercury (ng/L)
3/9/2010	0.84
4/21/2010	0.638
6/9/2010	5.88
7/21/2010	1.46

Sample Date	Methyl-mercury (ng/L)
3/9/2010	0.571
4/21/2010	0.951
6/9/2010	4.94
7/21/2010	1.47

//oernt/gis/gw_projects/peconic river/Fig 3-6 PR-SS-15-U1 022111.dwg

BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

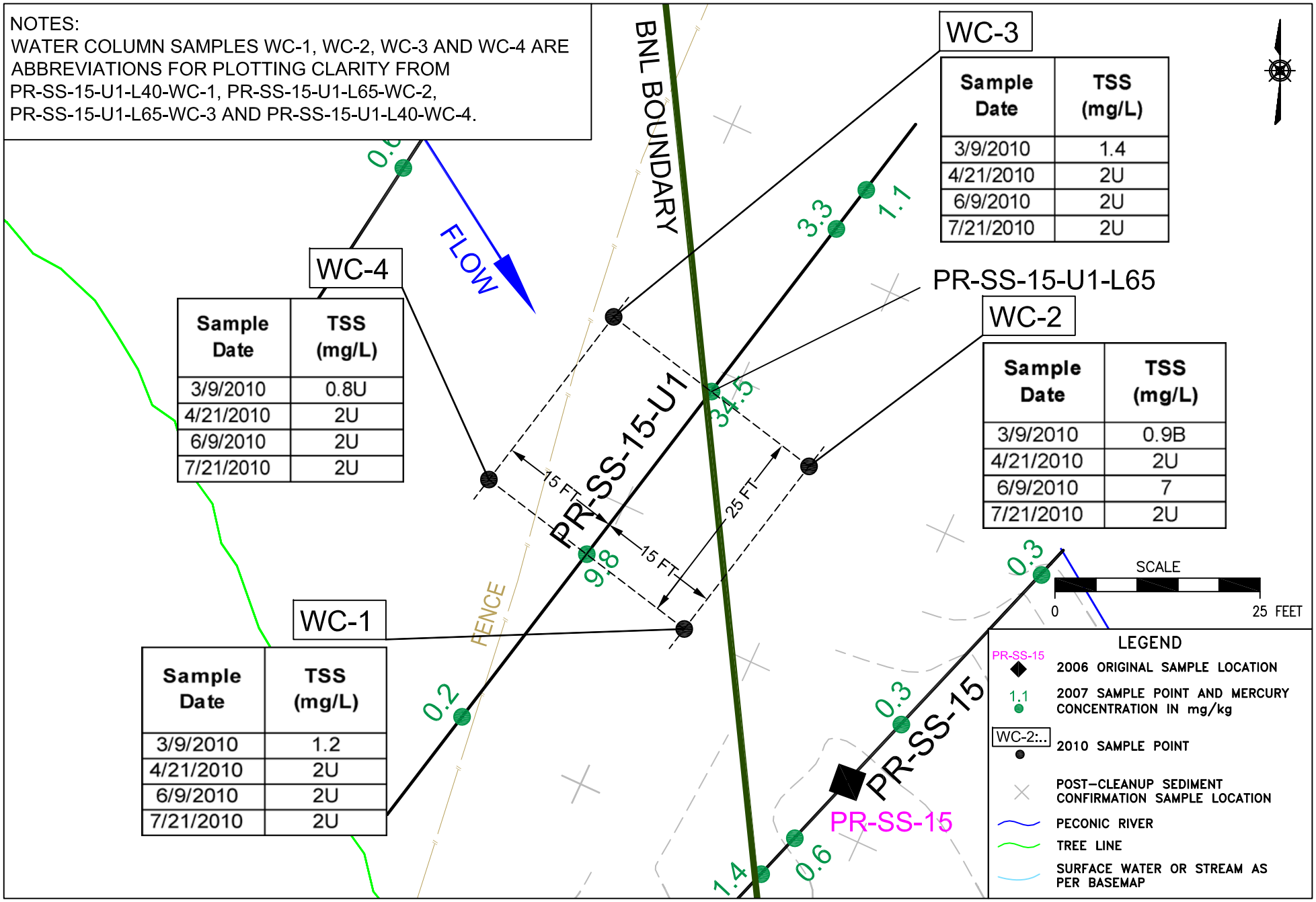
2010 WATER COLUMN METHYLMERCURY RESULTS AT WC-1 THROUGH WC-4

MERCURY SAMPLING PECONIC RIVER

DWN:	VT:HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/21/11	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–

FIGURE NO.: 3-6

NOTES:
WATER COLUMN SAMPLES WC-1, WC-2, WC-3 AND WC-4 ARE ABBREVIATIONS FOR PLOTTING CLARITY FROM PR-SS-15-U1-L40-WC-1, PR-SS-15-U1-L65-WC-2, PR-SS-15-U1-L65-WC-3 AND PR-SS-15-U1-L40-WC-4.



Sample Date	TSS (mg/L)
3/9/2010	1.4
4/21/2010	2U
6/9/2010	2U
7/21/2010	2U

Sample Date	TSS (mg/L)
3/9/2010	0.8U
4/21/2010	2U
6/9/2010	2U
7/21/2010	2U

Sample Date	TSS (mg/L)
3/9/2010	0.9B
4/21/2010	2U
6/9/2010	7
7/21/2010	2U

Sample Date	TSS (mg/L)
3/9/2010	1.2
4/21/2010	2U
6/9/2010	2U
7/21/2010	2U

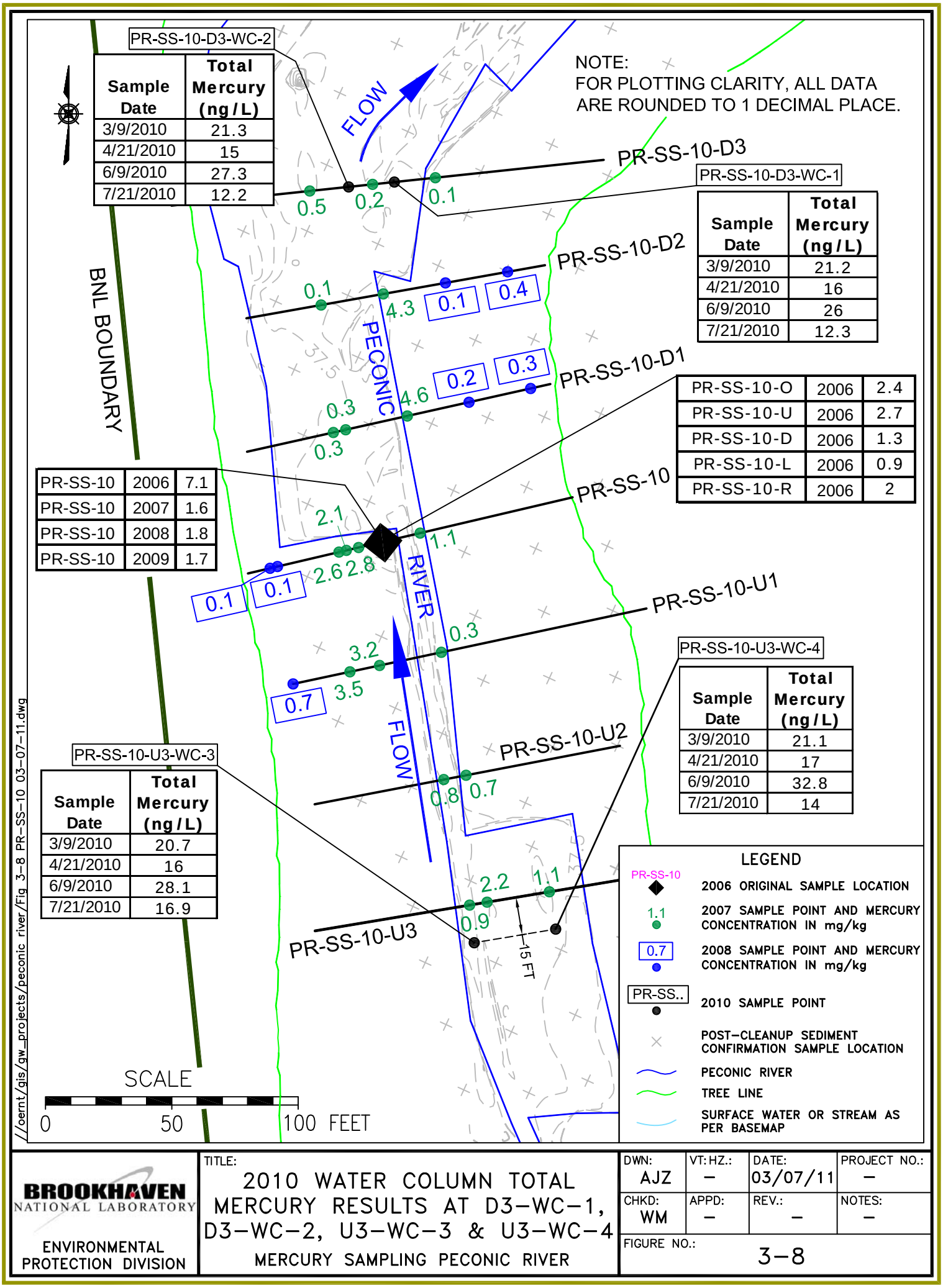
//oernt/gis/gw_projects/peconic river/Fig 3-7 PR-SS-15-U1 022111.dwg

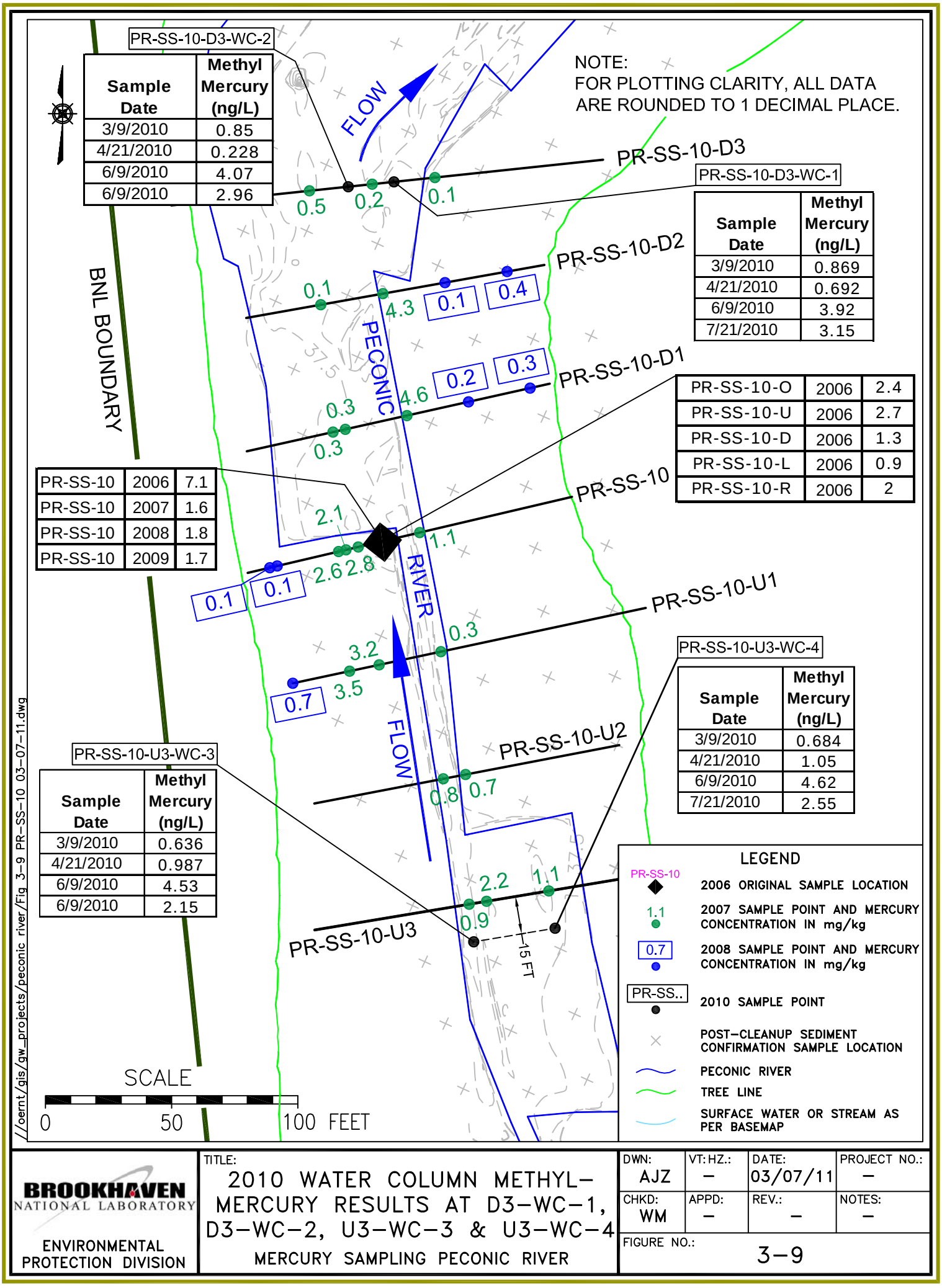
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

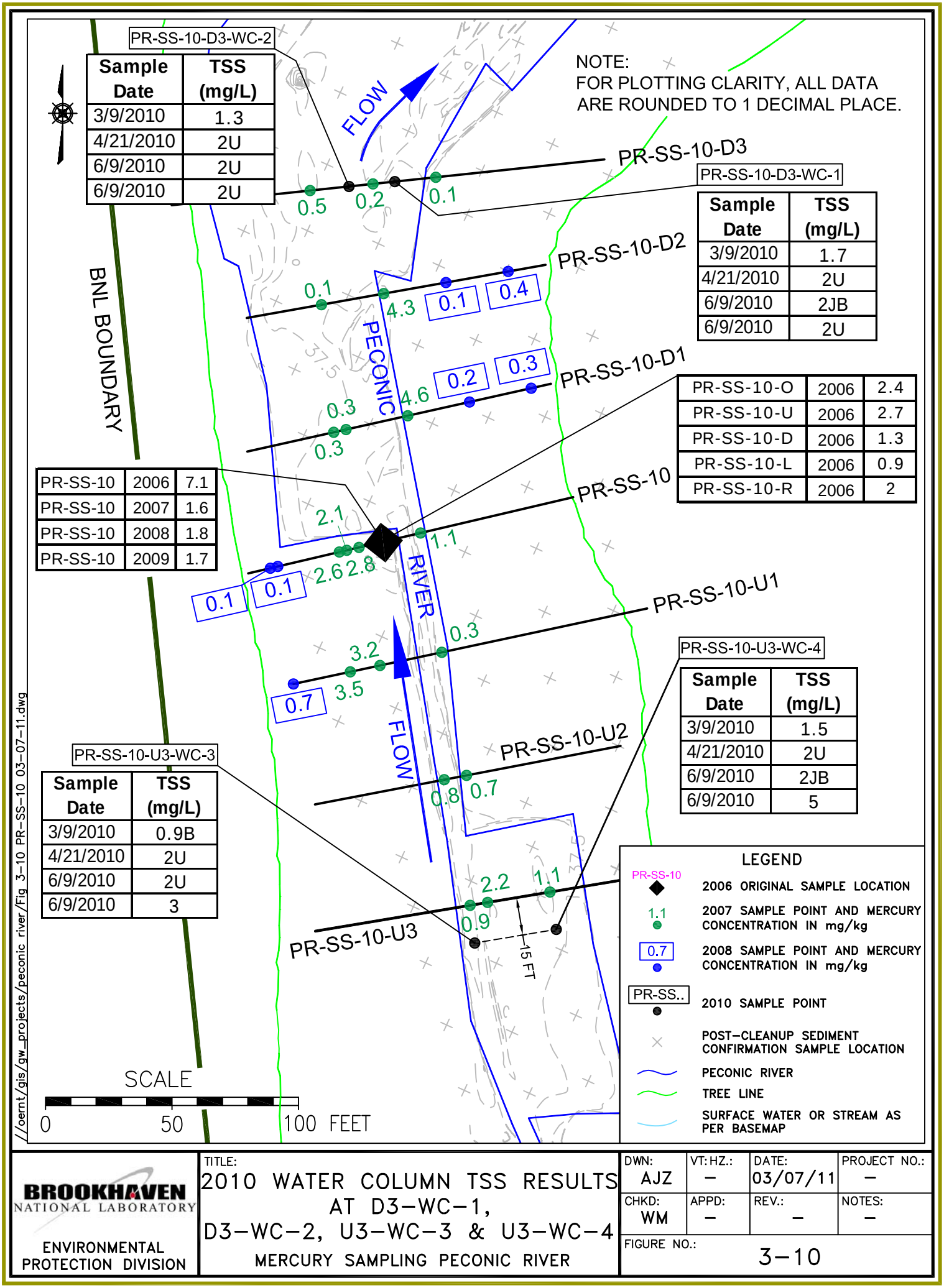
TITLE:
2010 WATER COLUMN SAMPLES TSS RESULTS AT WC-1 THROUGH WC-4
MERCURY SAMPLING PECONIC RIVER

DWN:	VT:HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/21/11	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–

FIGURE NO.: 3-7


PR-SS-10-D3-WC-2
Sample Date | Total Mercury (ng/L)
3/9/2010 | 21.3
4/21/2010 | 15
6/9/2010 | 27.3
7/21/2010 | 12.2
NOTE:
FOR PLOTTING CLARITY, ALL DATA ARE ROUNDED TO 1 DECIMAL PLACE.
FLOW
PR-SS-10-D3
PR-SS-10-D3-WC-1
Sample Date | Total Mercury (ng/L)
3/9/2010 | 21.2
4/21/2010 | 16
6/9/2010 | 26
7/21/2010 | 12.3
PR-SS-10-D2
PR-SS-10-D1
PR-SS-10-O | 2006 | 2.4
PR-SS-10-U | 2006 | 2.7
PR-SS-10-D | 2006 | 1.3
PR-SS-10-L | 2006 | 0.9
PR-SS-10-R | 2006 | 2
BNL BOUNDARY
PECONIC RIVER
PR-SS-10
PR-SS-10 | 2006 | 7.1
PR-SS-10 | 2007 | 1.6
PR-SS-10 | 2008 | 1.8
PR-SS-10 | 2009 | 1.7
PR-SS-10-U1
PR-SS-10-U3-WC-4
Sample Date | Total Mercury (ng/L)
3/9/2010 | 21.1
4/21/2010 | 17
6/9/2010 | 32.8
7/21/2010 | 14
PR-SS-10-U2
PR-SS-10-U3-WC-3
Sample Date | Total Mercury (ng/L)
3/9/2010 | 20.7
4/21/2010 | 16
6/9/2010 | 28.1
7/21/2010 | 16.9
PR-SS-10-U3
15 FT
LEGEND
PR-SS-10
2006 ORIGINAL SAMPLE LOCATION
1.1
2007 SAMPLE POINT AND MERCURY CONCENTRATION IN mg/kg
0.7
2008 SAMPLE POINT AND MERCURY CONCENTRATION IN mg/kg
PR-SS..
2010 SAMPLE POINT
POST-CLEANUP SEDIMENT CONFIRMATION SAMPLE LOCATION
PECONIC RIVER
TREE LINE
SURFACE WATER OR STREAM AS PER BASEMAP
SCALE
0
50
100 FEET
//oernt/gis/gw_projects/peconic river/Fig 3-8 PR-SS-10 03-07-11.dwg
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION
TITLE:
2010 WATER COLUMN TOTAL MERCURY RESULTS AT D3-WC-1, D3-WC-2, U3-WC-3 & U3-WC-4
MERCURY SAMPLING PECONIC RIVER
DWN: AJZ | VT:HZ.: - | DATE: 03/07/11 | PROJECT NO.: -
CHKD: WM | APPD: - | REV.: - | NOTES: -
FIGURE NO.: 3-8


PR-SS-10-D3-WC-2
Sample Date | Methyl Mercury (ng/L)
3/9/2010 | 0.85
4/21/2010 | 0.228
6/9/2010 | 4.07
6/9/2010 | 2.96
NOTE:
FOR PLOTTING CLARITY, ALL DATA ARE ROUNDED TO 1 DECIMAL PLACE.
FLOW
PR-SS-10-D3
PR-SS-10-D3-WC-1
Sample Date | Methyl Mercury (ng/L)
3/9/2010 | 0.869
4/21/2010 | 0.692
6/9/2010 | 3.92
7/21/2010 | 3.15
PR-SS-10-D2
PR-SS-10-D1
PR-SS-10-O | 2006 | 2.4
PR-SS-10-U | 2006 | 2.7
PR-SS-10-D | 2006 | 1.3
PR-SS-10-L | 2006 | 0.9
PR-SS-10-R | 2006 | 2
BNL BOUNDARY
PECONIC RIVER
PR-SS-10 | 2006 | 7.1
PR-SS-10 | 2007 | 1.6
PR-SS-10 | 2008 | 1.8
PR-SS-10 | 2009 | 1.7
PR-SS-10
PR-SS-10-U1
PR-SS-10-U3-WC-4
Sample Date | Methyl Mercury (ng/L)
3/9/2010 | 0.684
4/21/2010 | 1.05
6/9/2010 | 4.62
7/21/2010 | 2.55
PR-SS-10-U3-WC-3
Sample Date | Methyl Mercury (ng/L)
3/9/2010 | 0.636
4/21/2010 | 0.987
6/9/2010 | 4.53
6/9/2010 | 2.15
PR-SS-10-U2
PR-SS-10-U3
15 FT
LEGEND
PR-SS-10
2006 ORIGINAL SAMPLE LOCATION
1.1
2007 SAMPLE POINT AND MERCURY CONCENTRATION IN mg/kg
0.7
2008 SAMPLE POINT AND MERCURY CONCENTRATION IN mg/kg
PR-SS..
2010 SAMPLE POINT
POST-CLEANUP SEDIMENT CONFIRMATION SAMPLE LOCATION
PECONIC RIVER
TREE LINE
SURFACE WATER OR STREAM AS PER BASEMAP
SCALE
0
50
100 FEET
//oernt/gis/gw_projects/peconic river/Fig 3-9 PR-SS-10 03-07-11.dwg
BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION
TITLE:
2010 WATER COLUMN METHYL-MERCURY RESULTS AT D3-WC-1, D3-WC-2, U3-WC-3 & U3-WC-4
MERCURY SAMPLING PECONIC RIVER
DWN: AJZ
VT:HZ.: -
DATE: 03/07/11
PROJECT NO.: -
CHKD: WM
APPD: -
REV.: -
NOTES: -
FIGURE NO.: 3-9



BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:
2010 WATER COLUMN TSS RESULTS AT D3-WC-1, D3-WC-2, U3-WC-3 & U3-WC-4
MERCURY SAMPLING PECONIC RIVER

DWN:	VT:HZ.:	DATE:	PROJECT NO.:
AJZ	–	03/07/11	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–

FIGURE NO.: 3-10

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

(Sorted by Species - Age - Area)

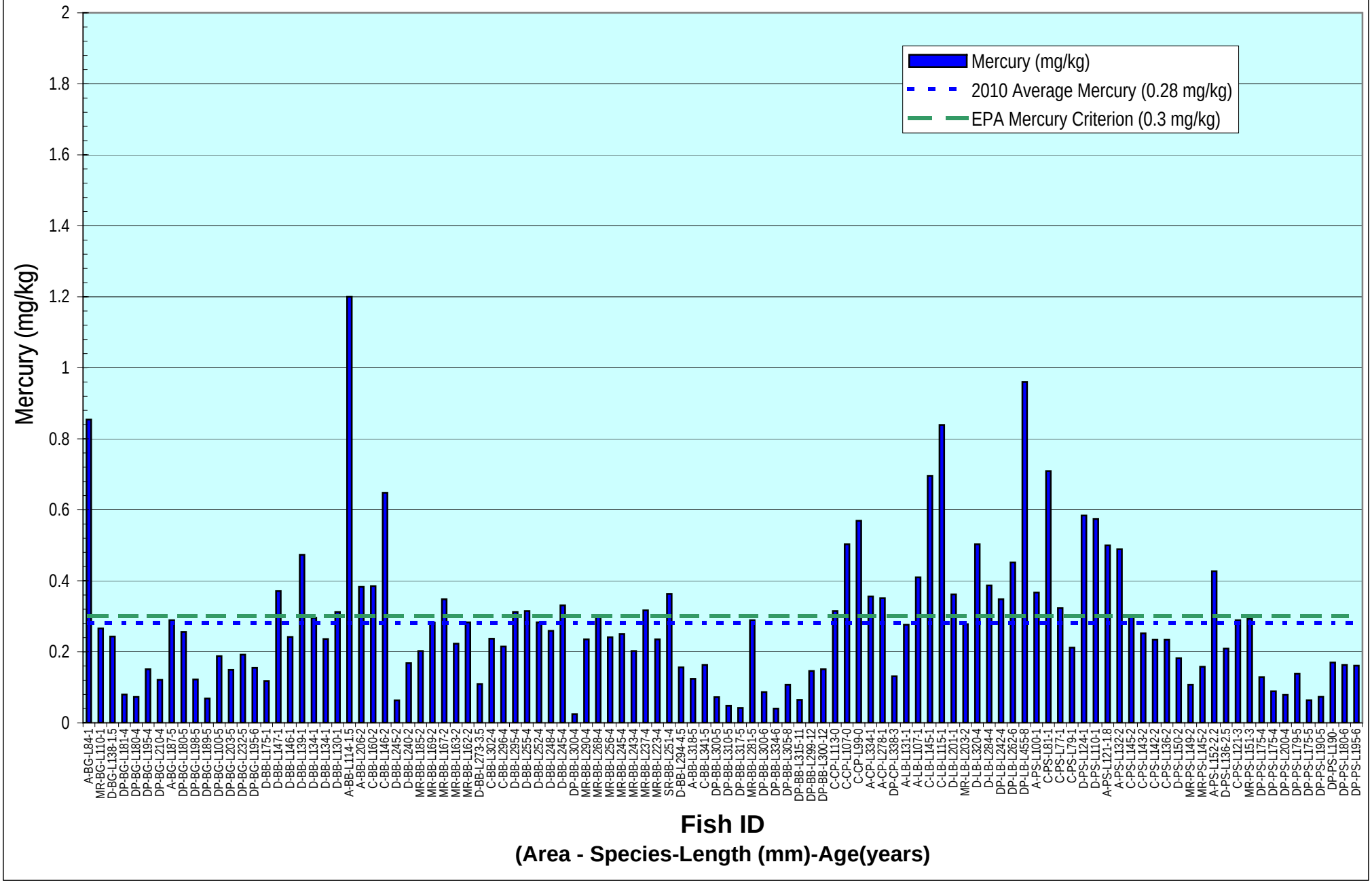


Figure 4-1b 2010 Peconic River Fish Fillet Mercury - All Fish

(Sorted by Species - Area - Age)

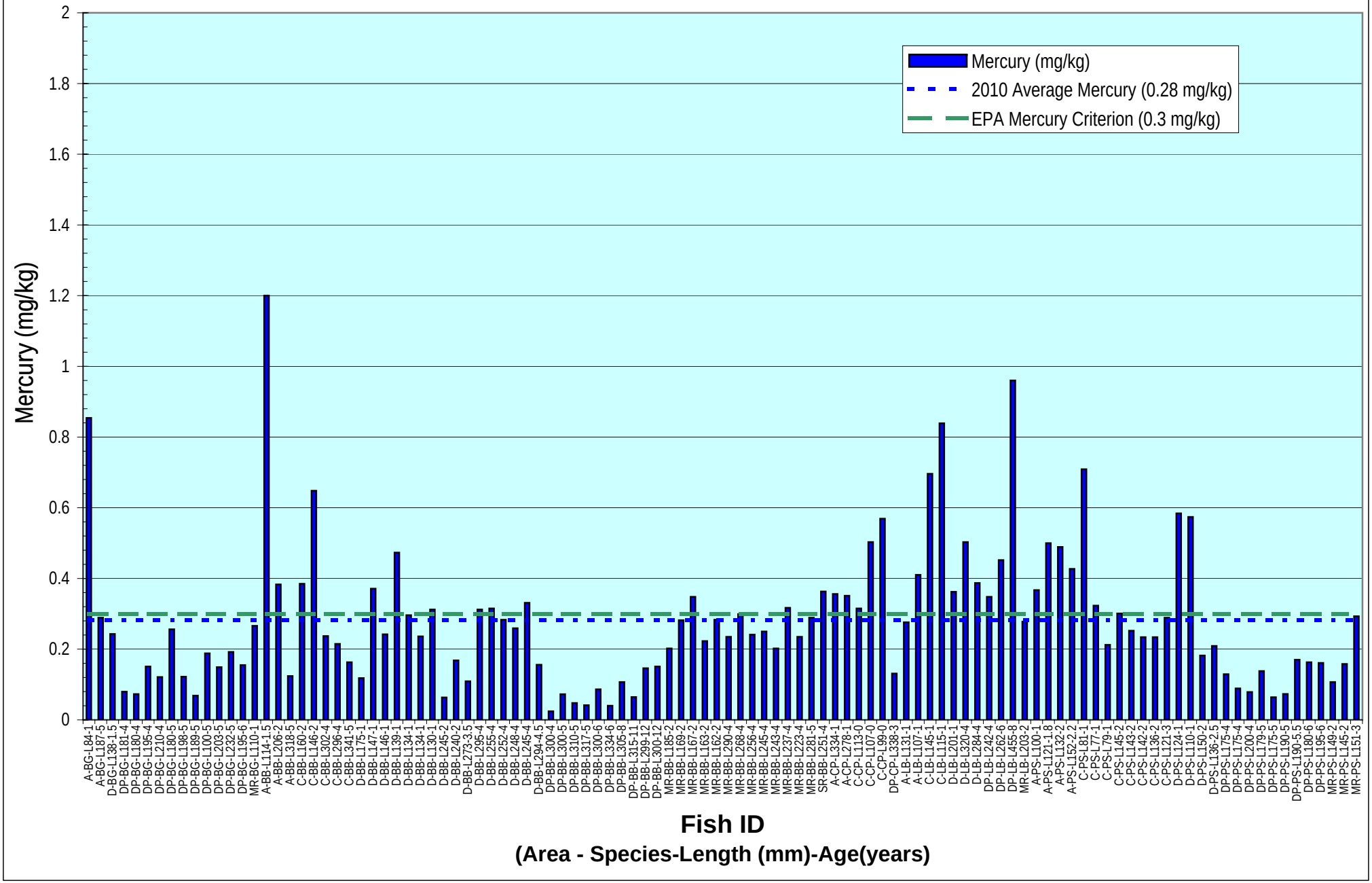
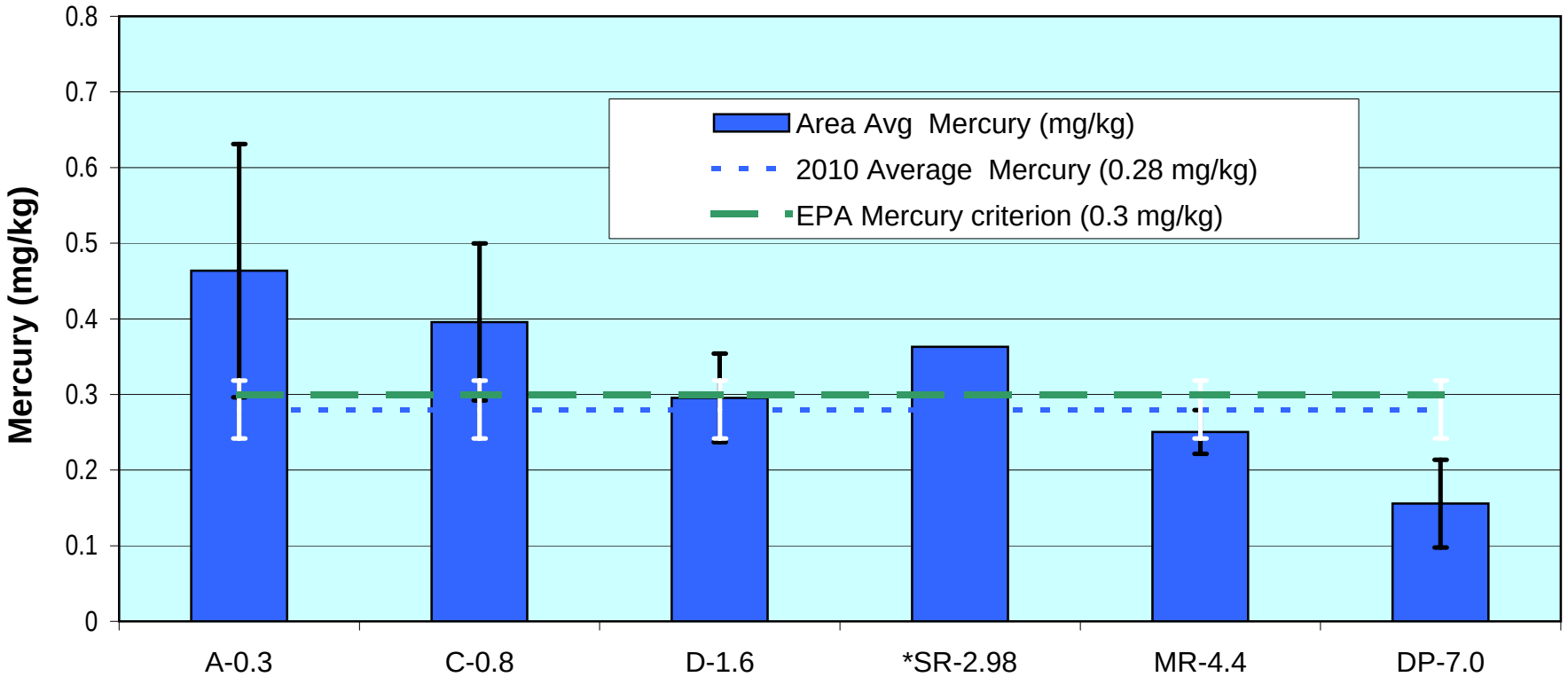


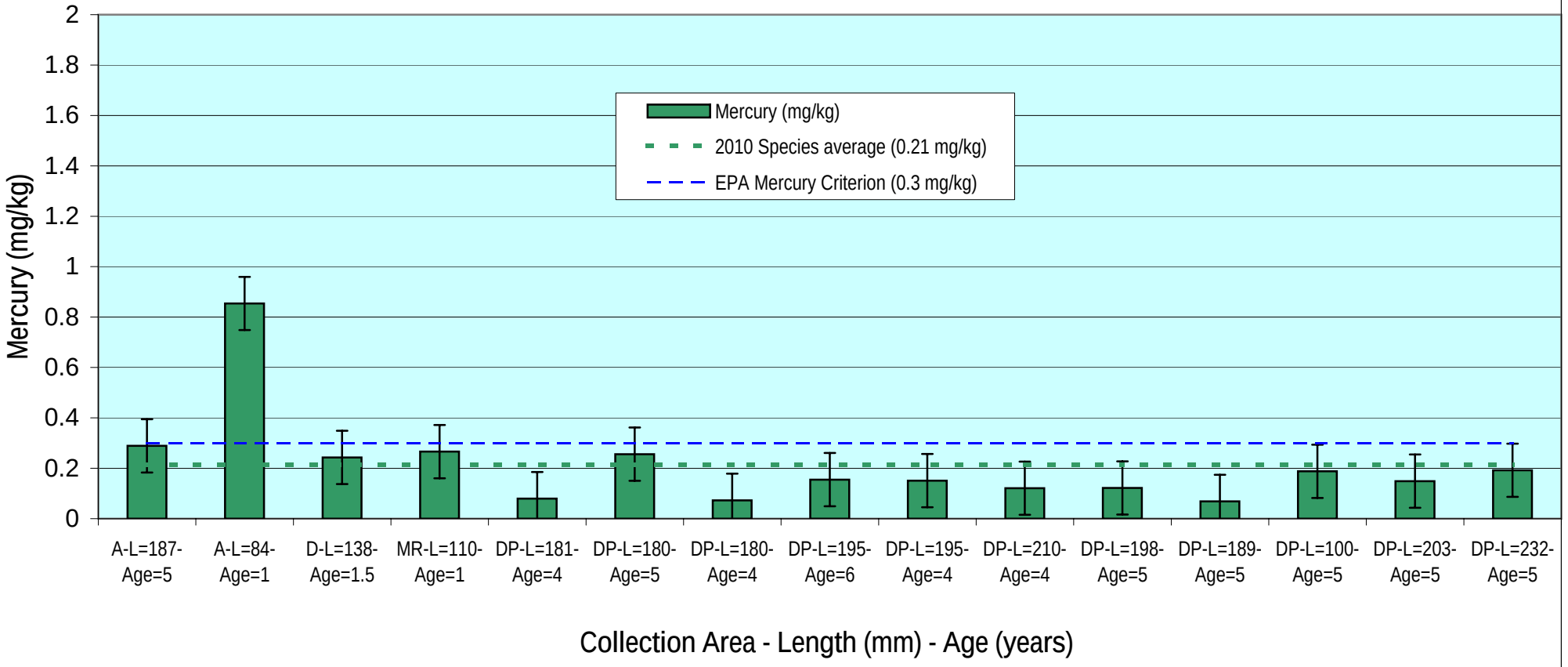
Figure 4-2 2010 Peconic River Mercury Average by Fish Collection Area



Fish Collection Area and Distance Downstream of STP (miles)

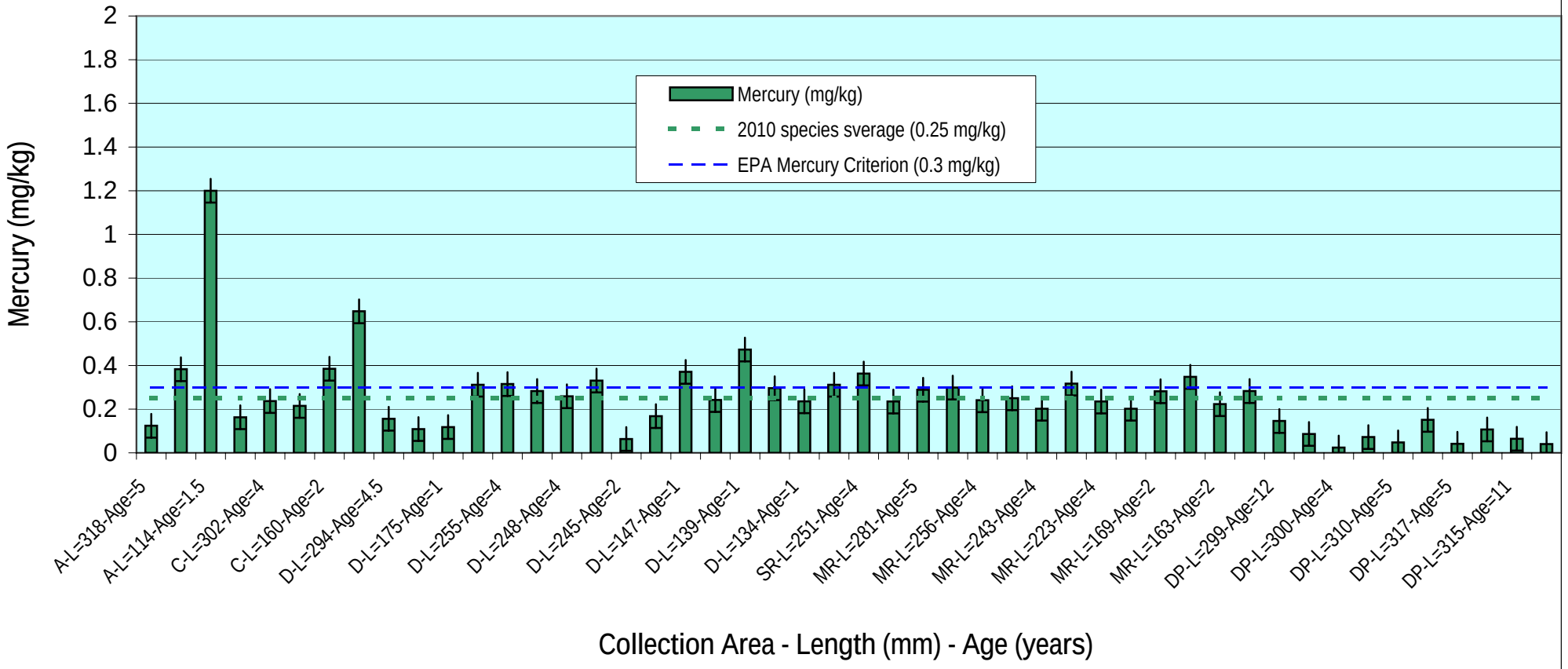
Black error bars for 95 percent confidence intervals of 2010 area mean. White for all 2010 fish. *Sample size: A-13, C-18, D-24, SR-1 (not representative), MR-18, DP-34.

Figure 4-3a Mercury in Peconic River Bluegill Fillets (Sorted by Age-Area-Length)



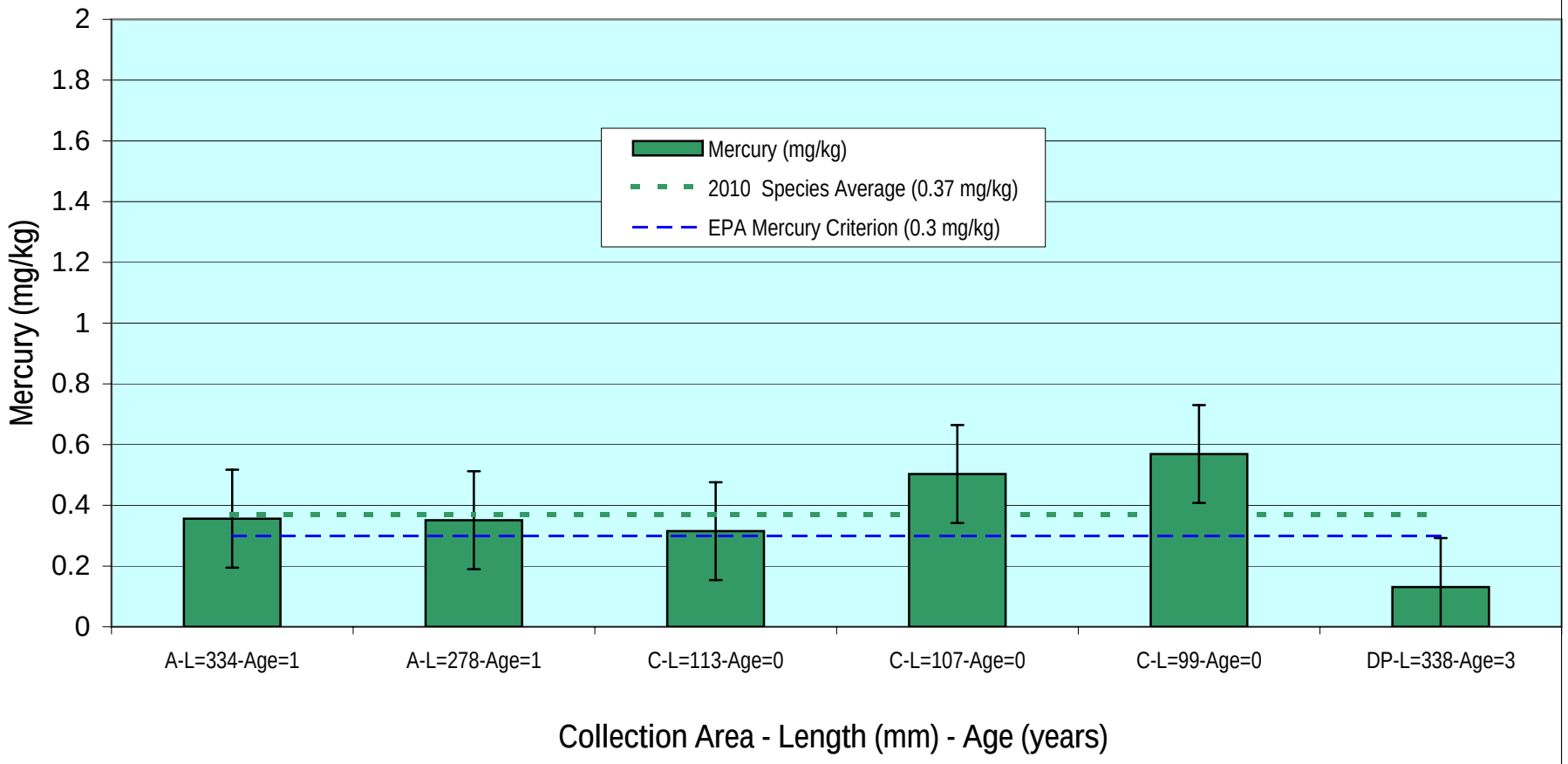
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 15.

Figure 4-4a Mercury in Peconic River Brown Bullhead Fillets (Sorted by Age-Area-Length)



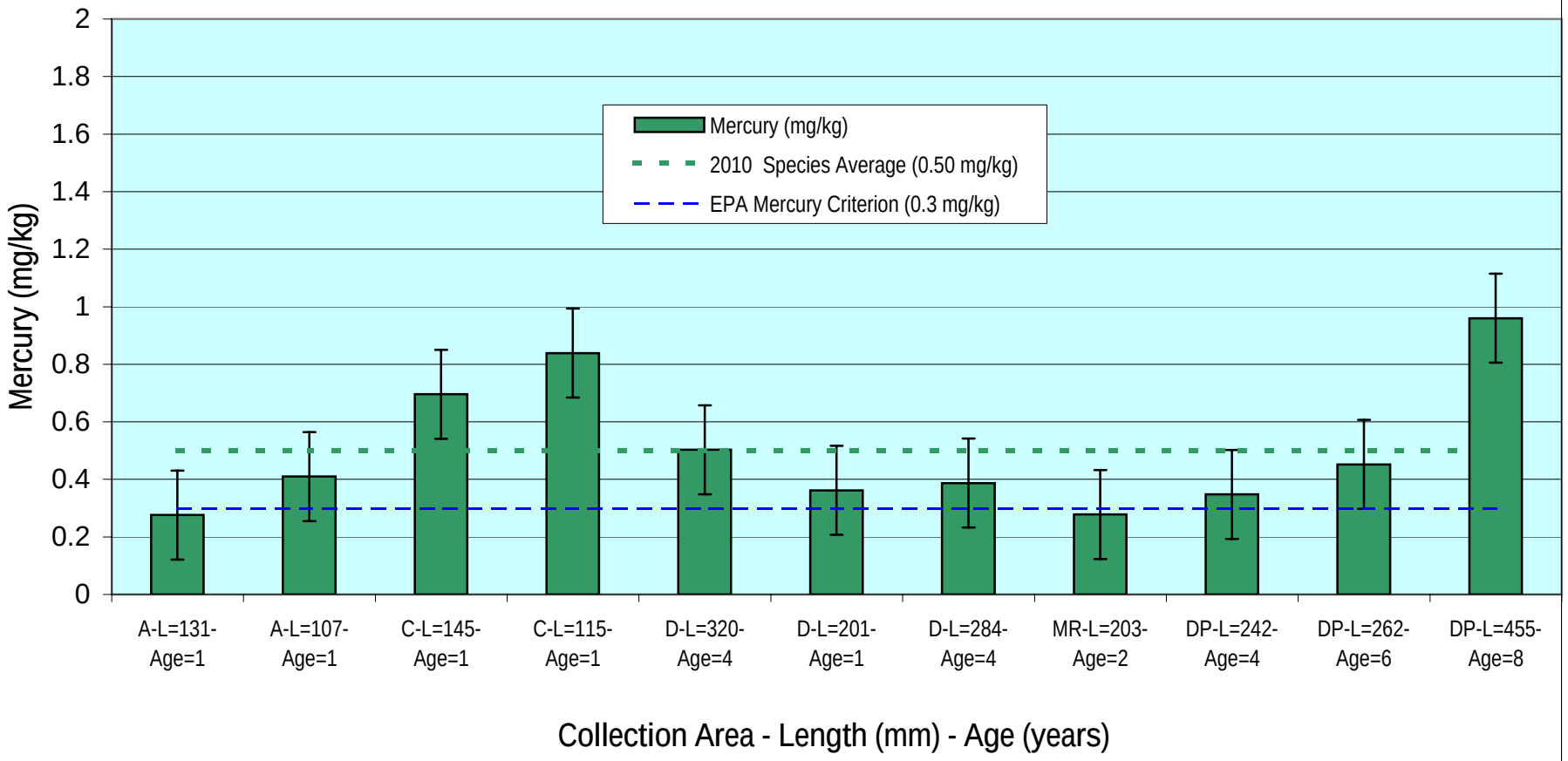
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 48.

Figure 4-5a Mercury in Peconic River Chain Pickerel Fillets (Sorted by Age-Area-Length)



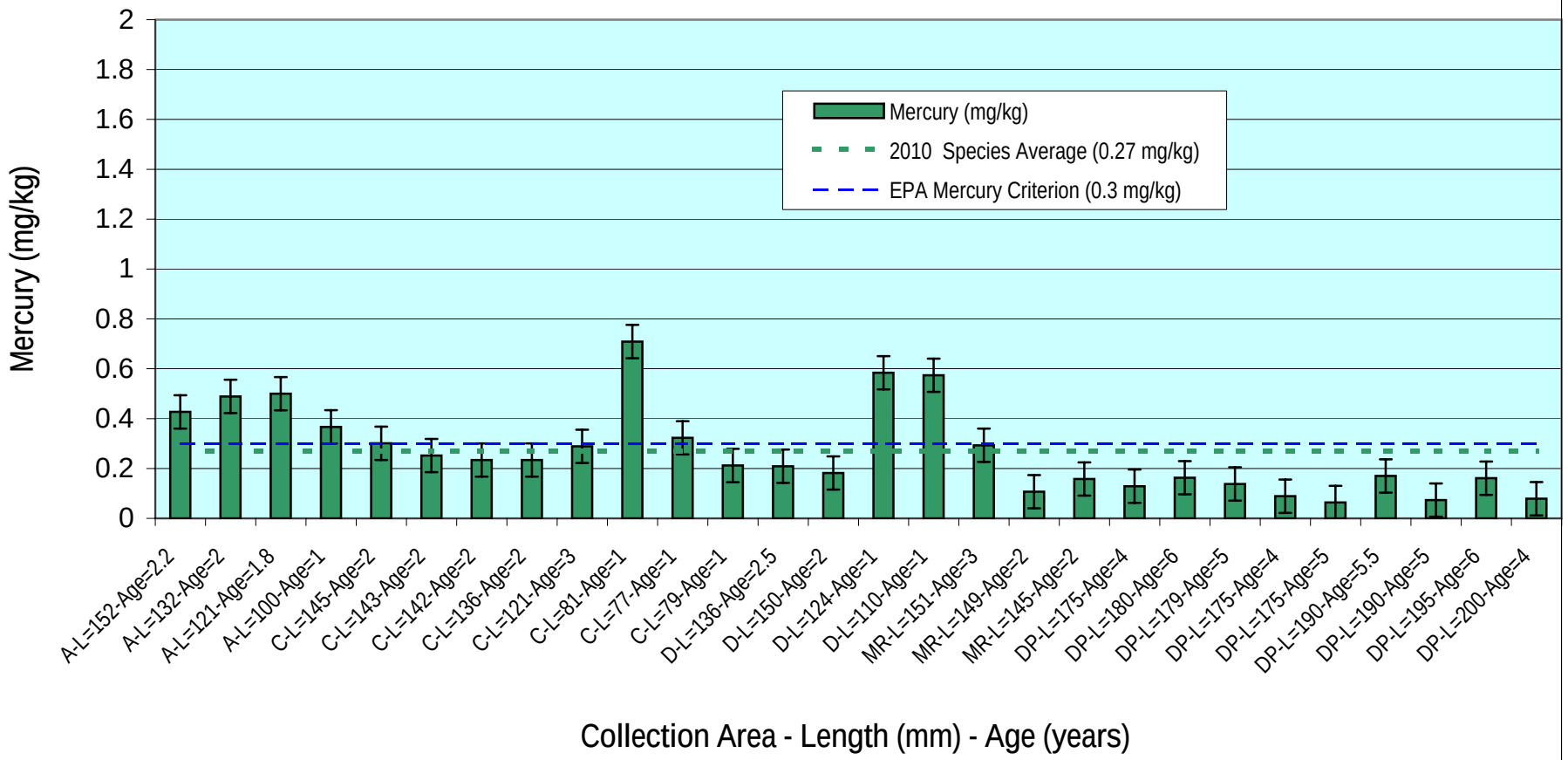
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 6.

Figure 4-6a Mercury in Peconic River Largemouth Bass Fillets (Sorted by Age-Area-Length)



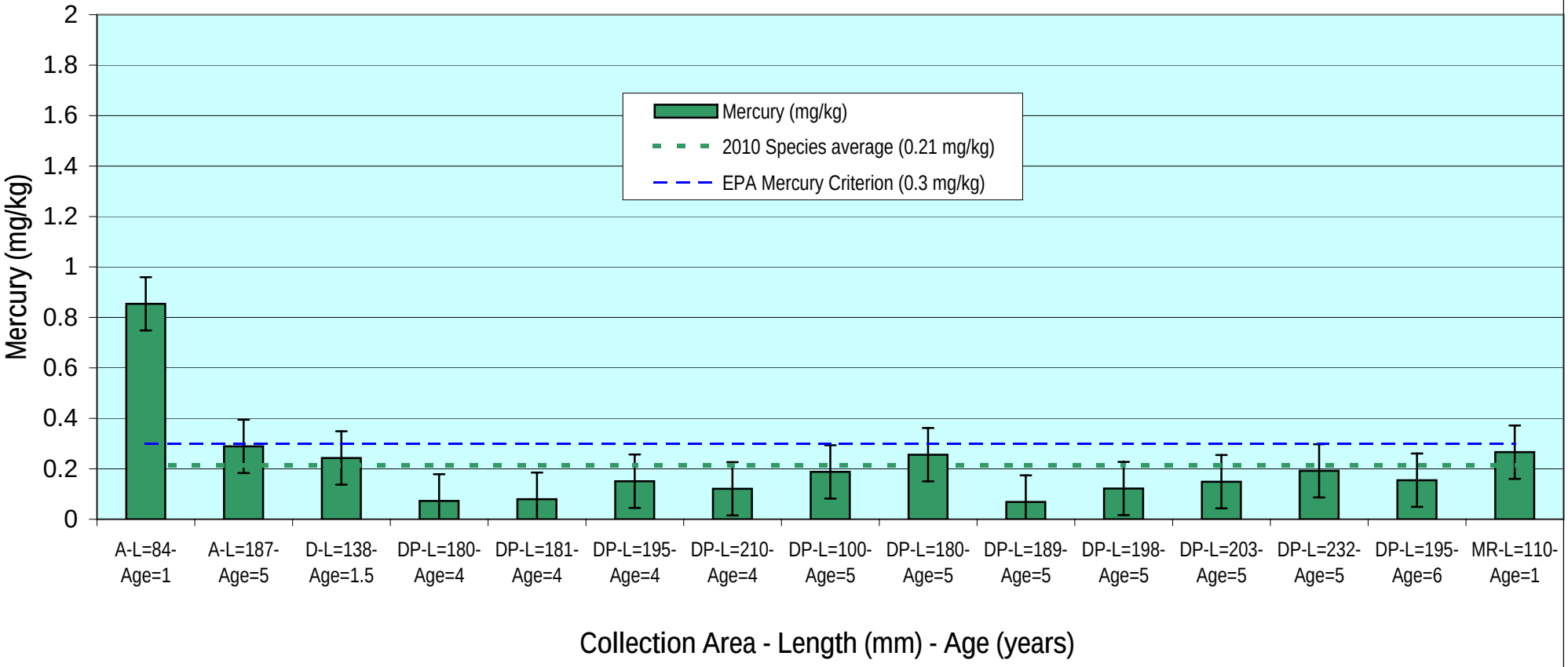
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 10.

Figure 4-7a Mercury in Peconic River Pumpkinseed Fillets (Sorted by Age-Area-Length)



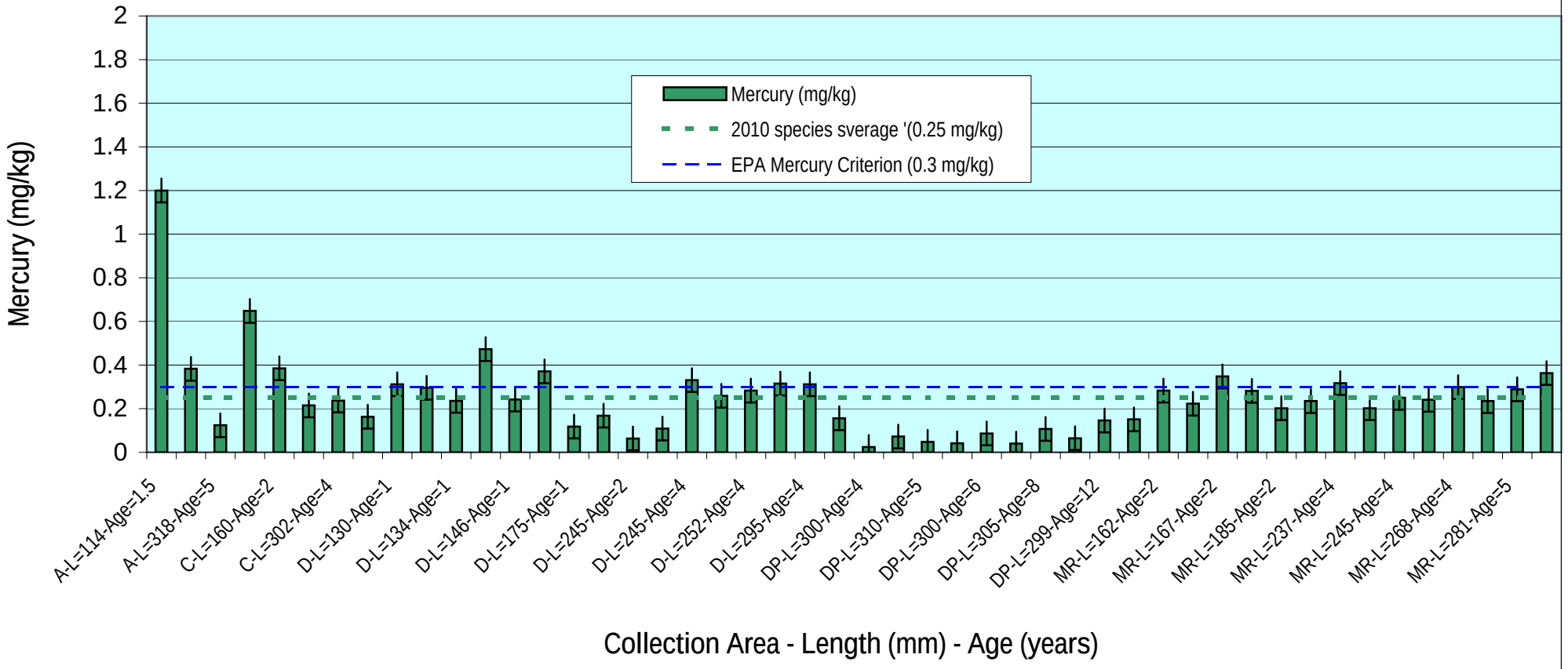
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 28.

Figure 4-3b Mercury in Peconic River Bluegill Fillets (Sorted by Area-Age-Length)



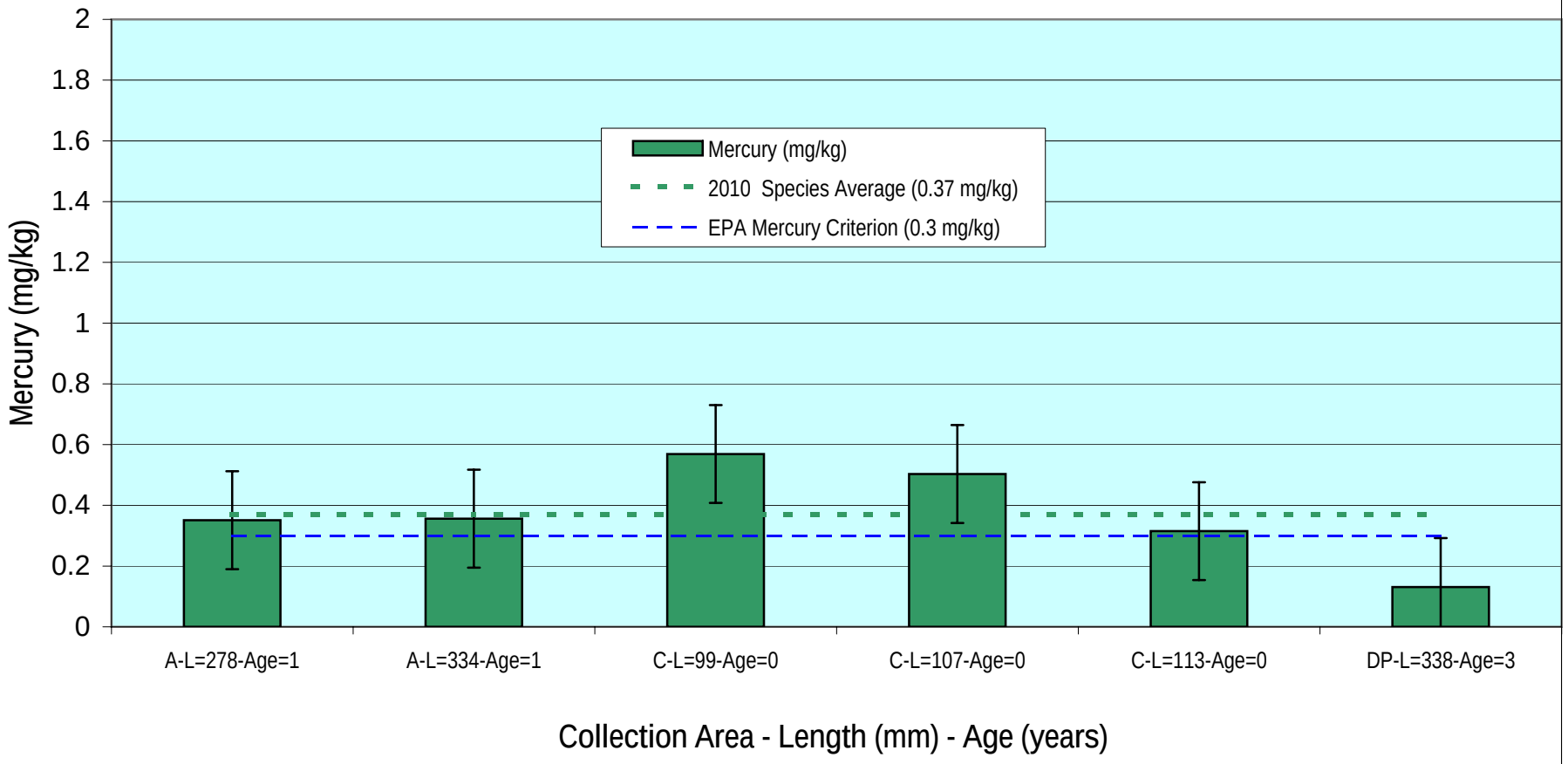
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 15.

Figure 4-4b Mercury in Peconic River Brown Bullhead Fillets (Sorted by Area-Age-Length)



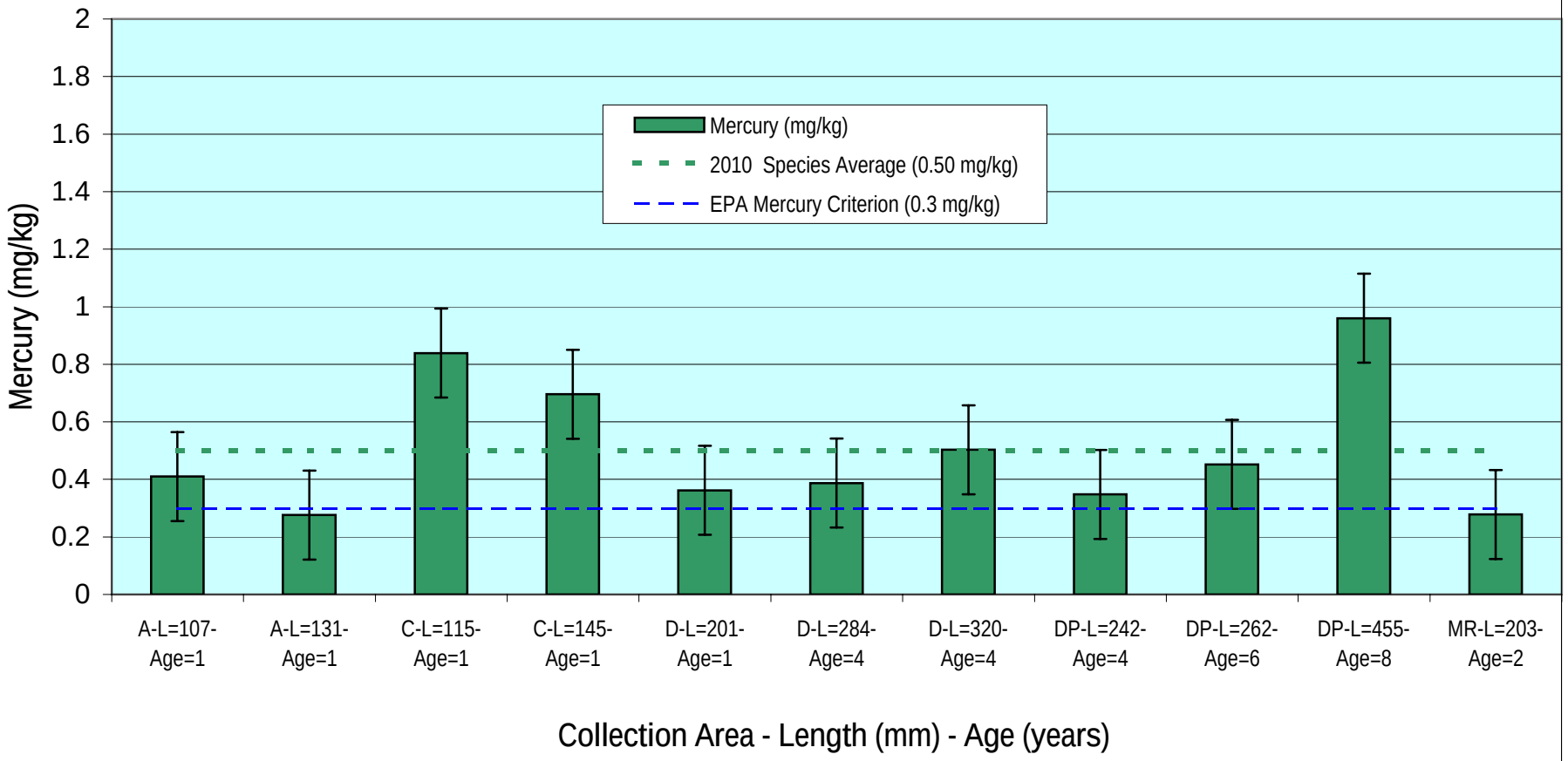
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 48.

Figure 4-5b Mercury in Peconic River Chain Pickerel Fillets (Sorted by Area-Age-Length)



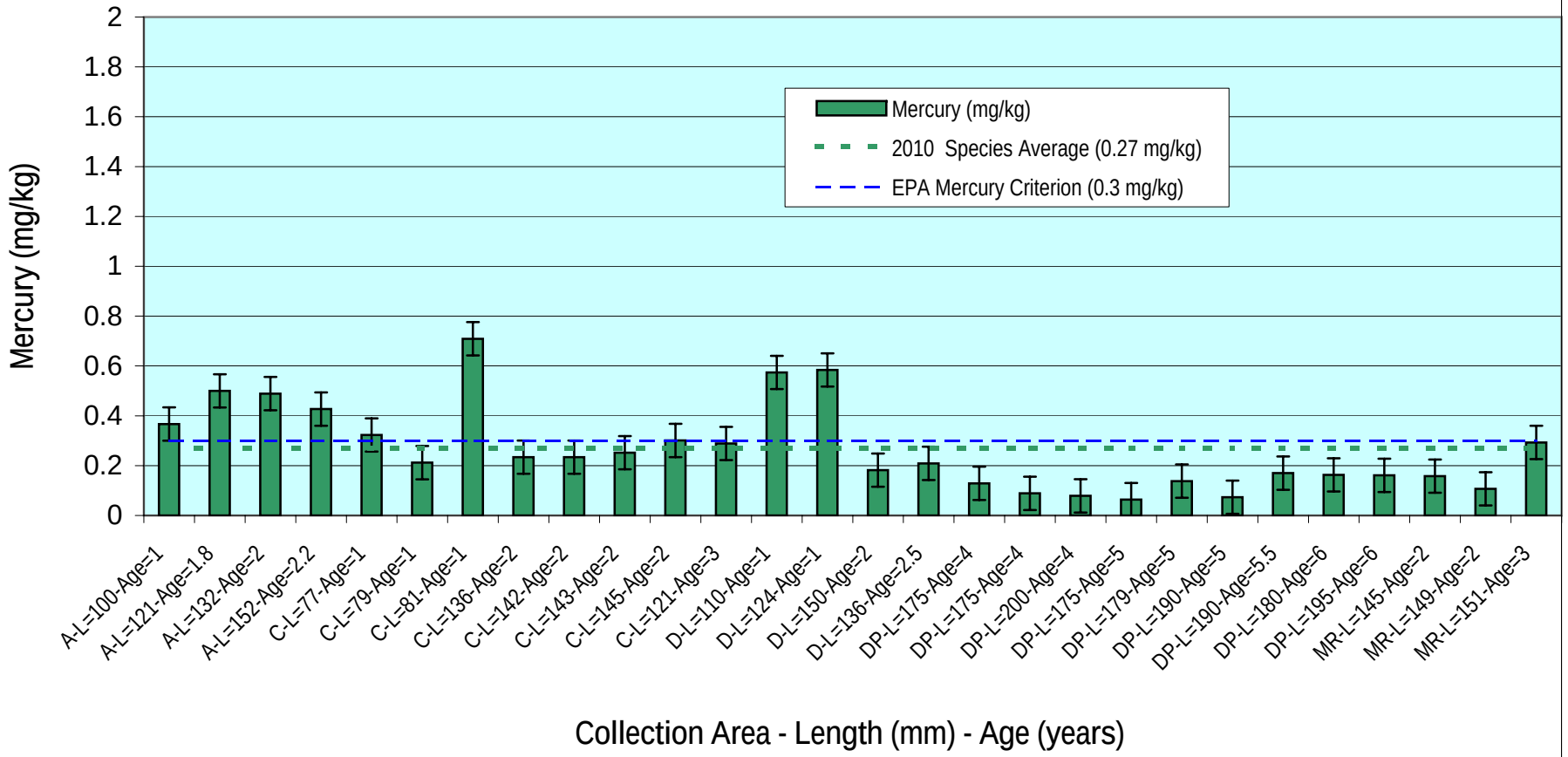
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 6.

Figure 4-6b Mercury in Peconic River Largemouth Bass Fillets (Sorted by Area-Age-Length)



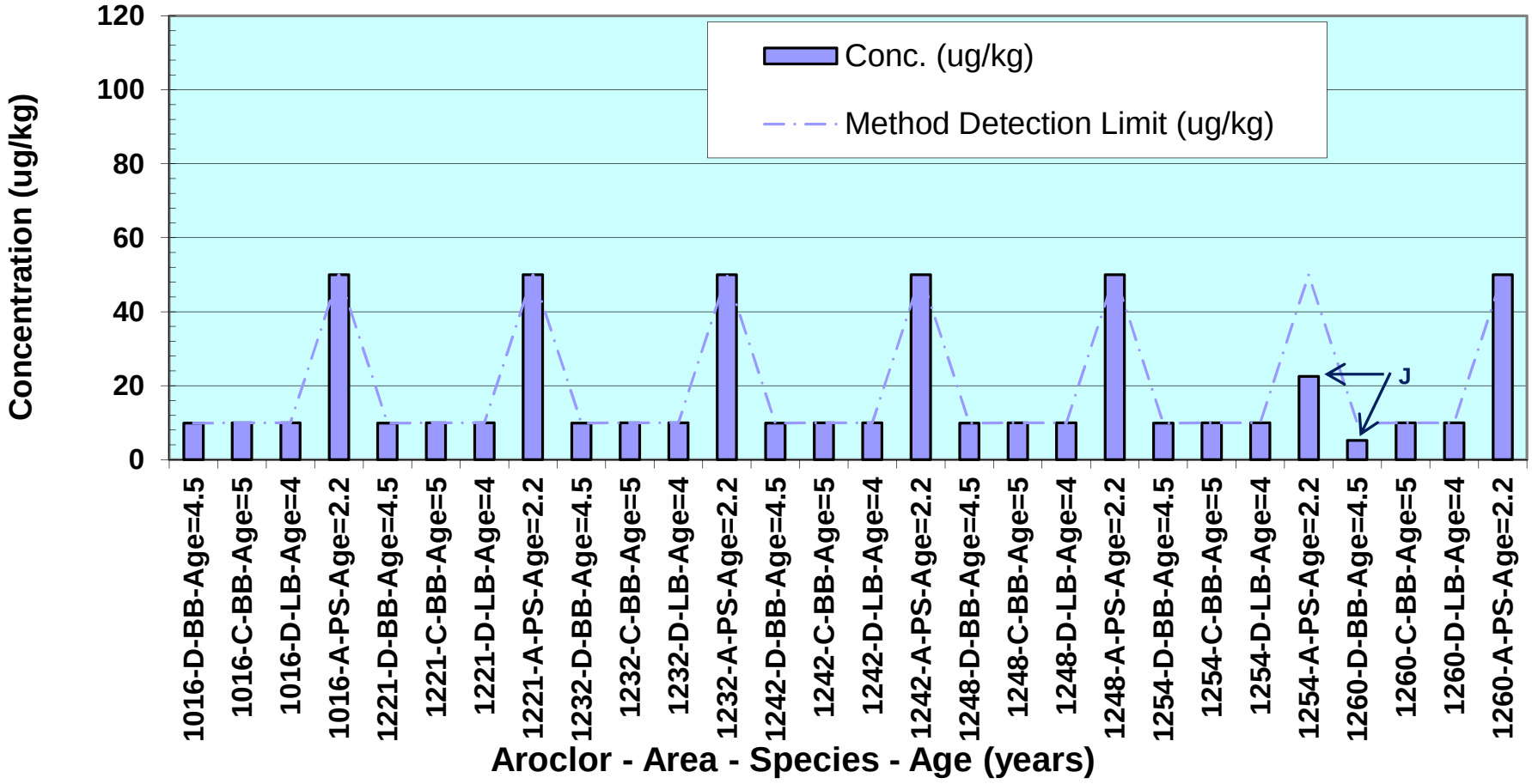
Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 10.

Figure 4-7b Mercury in Peconic River Pumpkinseed Fillets (Sorted by Area-Age-Length)



Error bars represent the average mercury concentrataion plus and minus the 95% confidence limit. Sample size = 28.

Figure 4-8 2010 PCBs in Fish
(Sorted by Aroclor-Species - Age)



(First four digits identify specific Aroclor Congener, eg 1016 =Aroclor 1016)
J indicates an estimated value less than the Method detection Limit (MDL).

Figure 4-9 Cesium-137 Activity in Fish
(Sorted by Species - Area - Age)

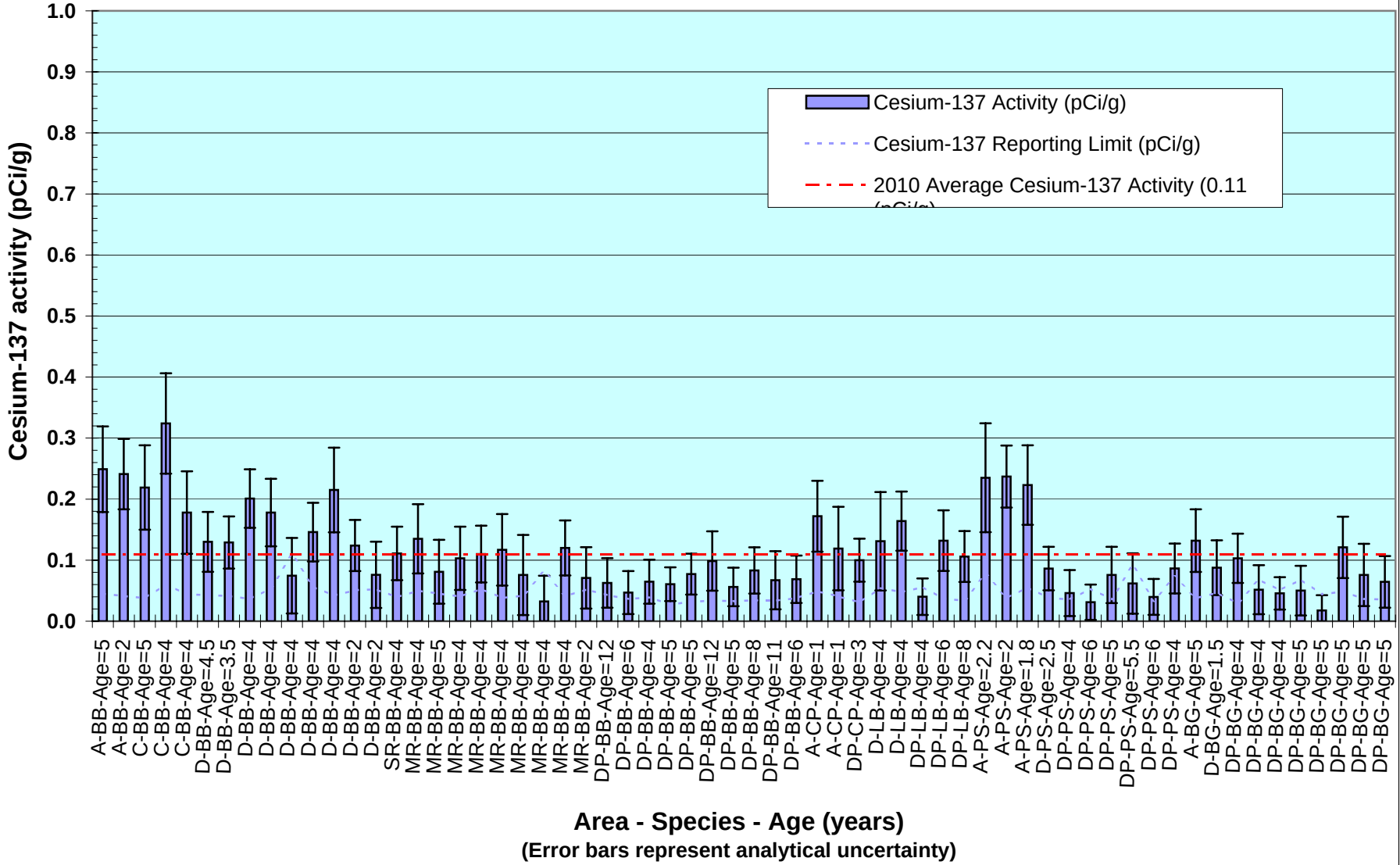
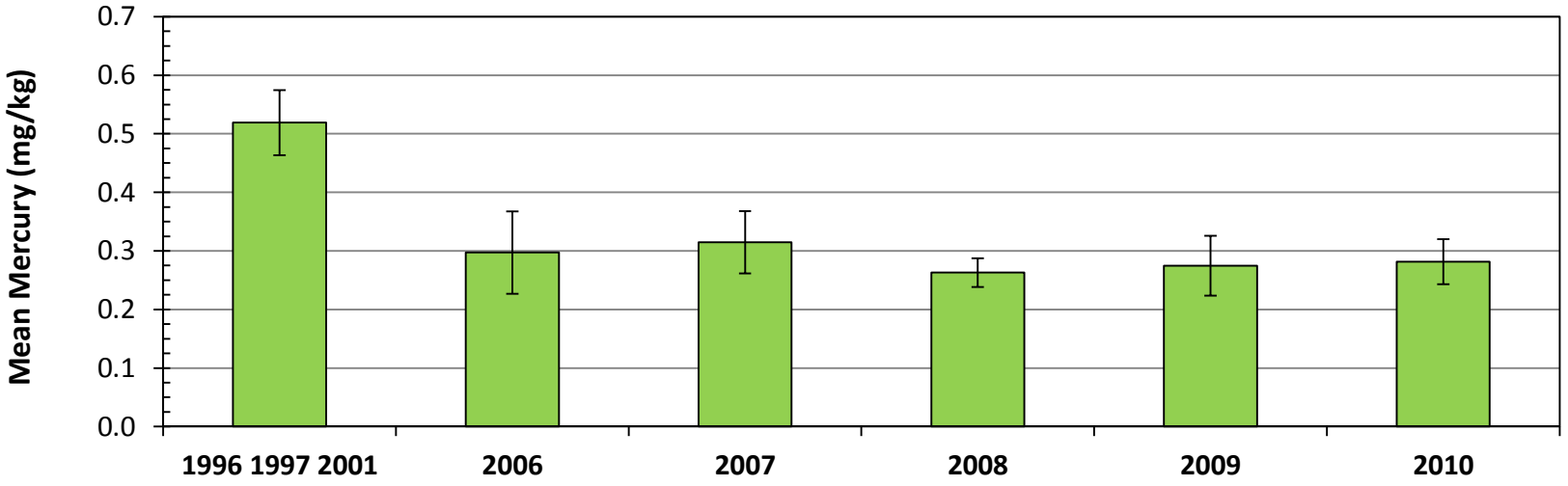


Figure 4-10a Pre-Cleanup and Post-Cleanup Fish Mercury (1996-2010)



Pre-Cleanup (1996, 1997, 2001) and Post -Cleanup (2006-2010) Mercury Concentration Means

Error bars represent the 95 percent confidence intervals

Figure 4-10b1 Pre-Cleanup and Post-Cleanup Fish Aroclor-1254 (1996-2010)

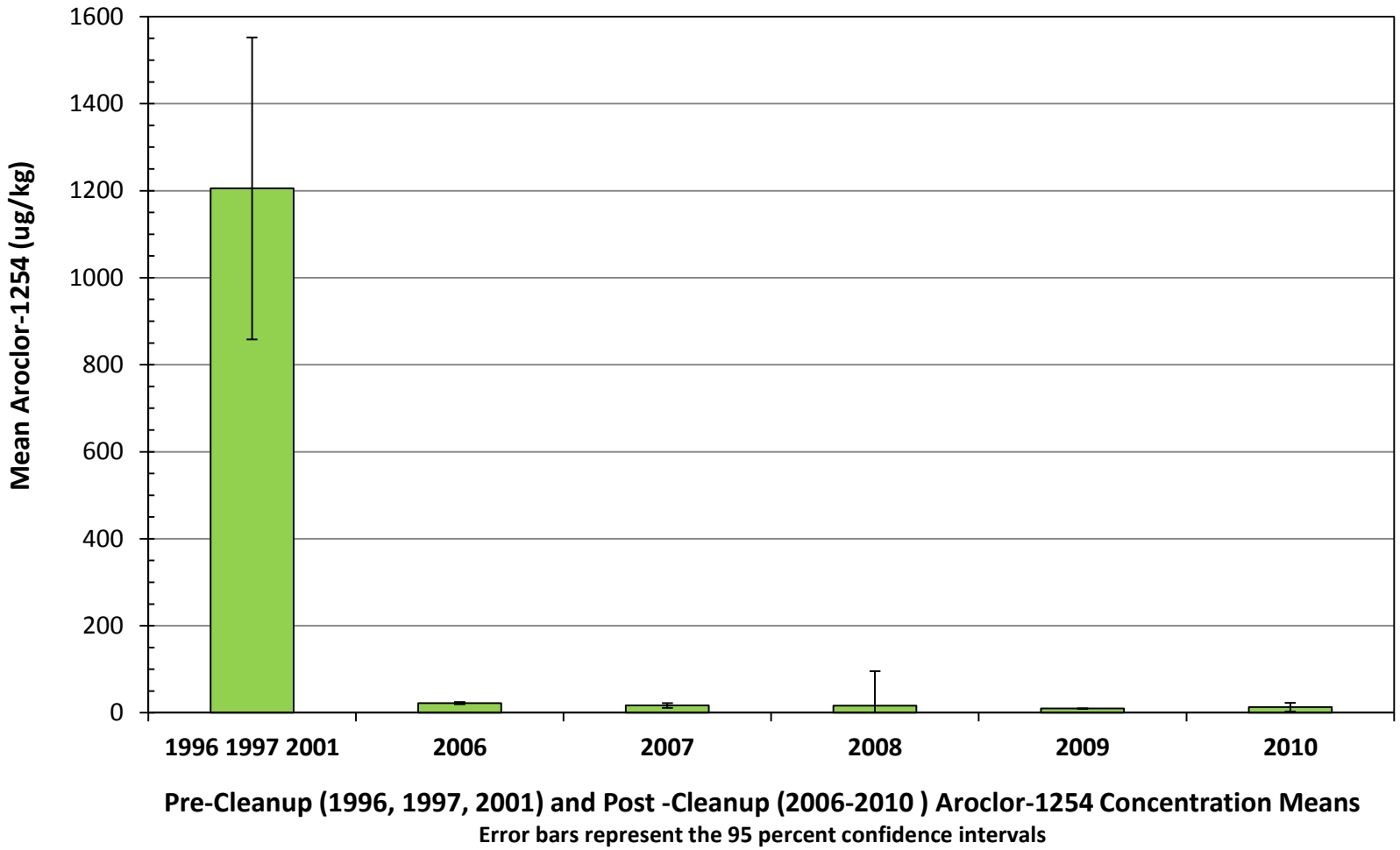
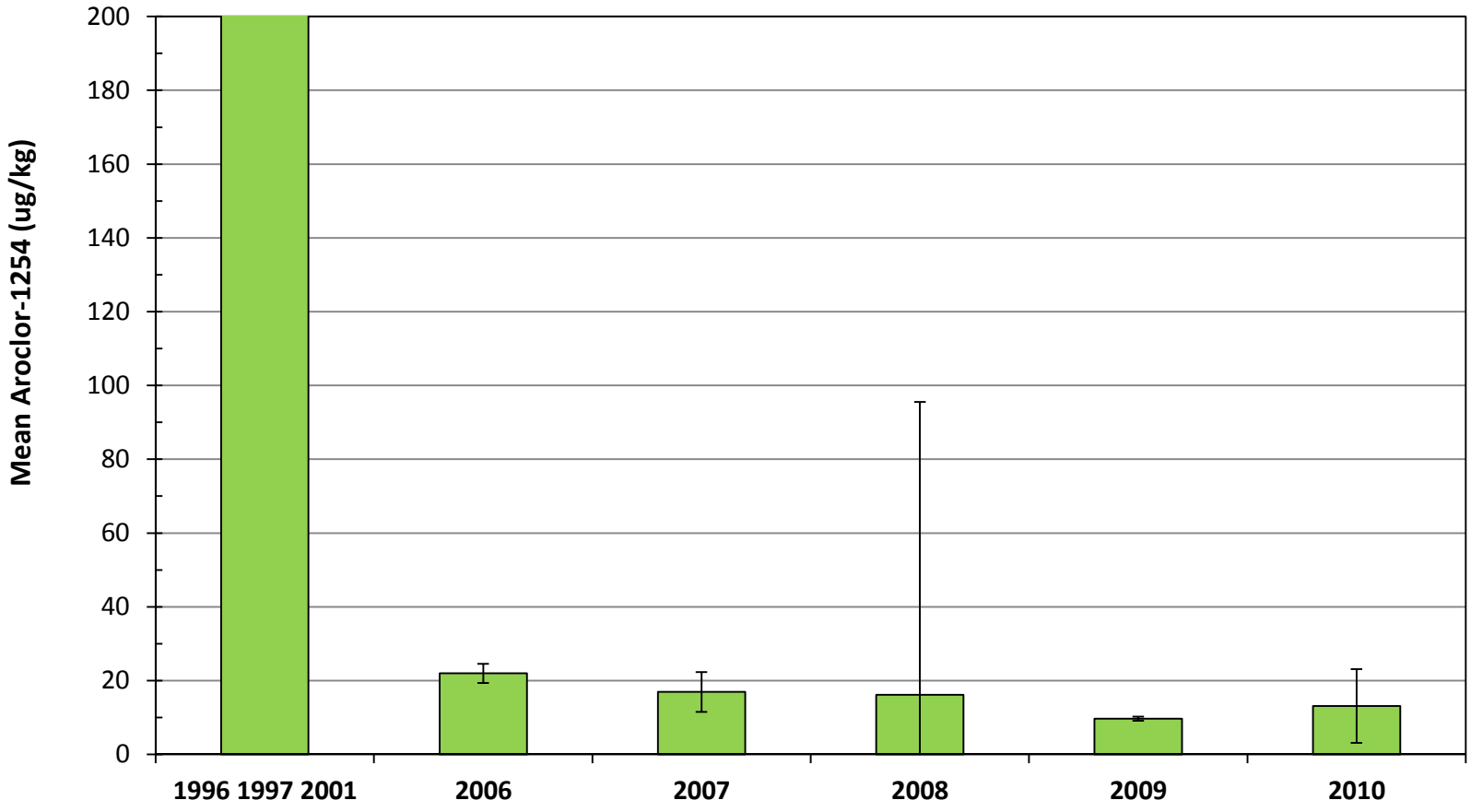


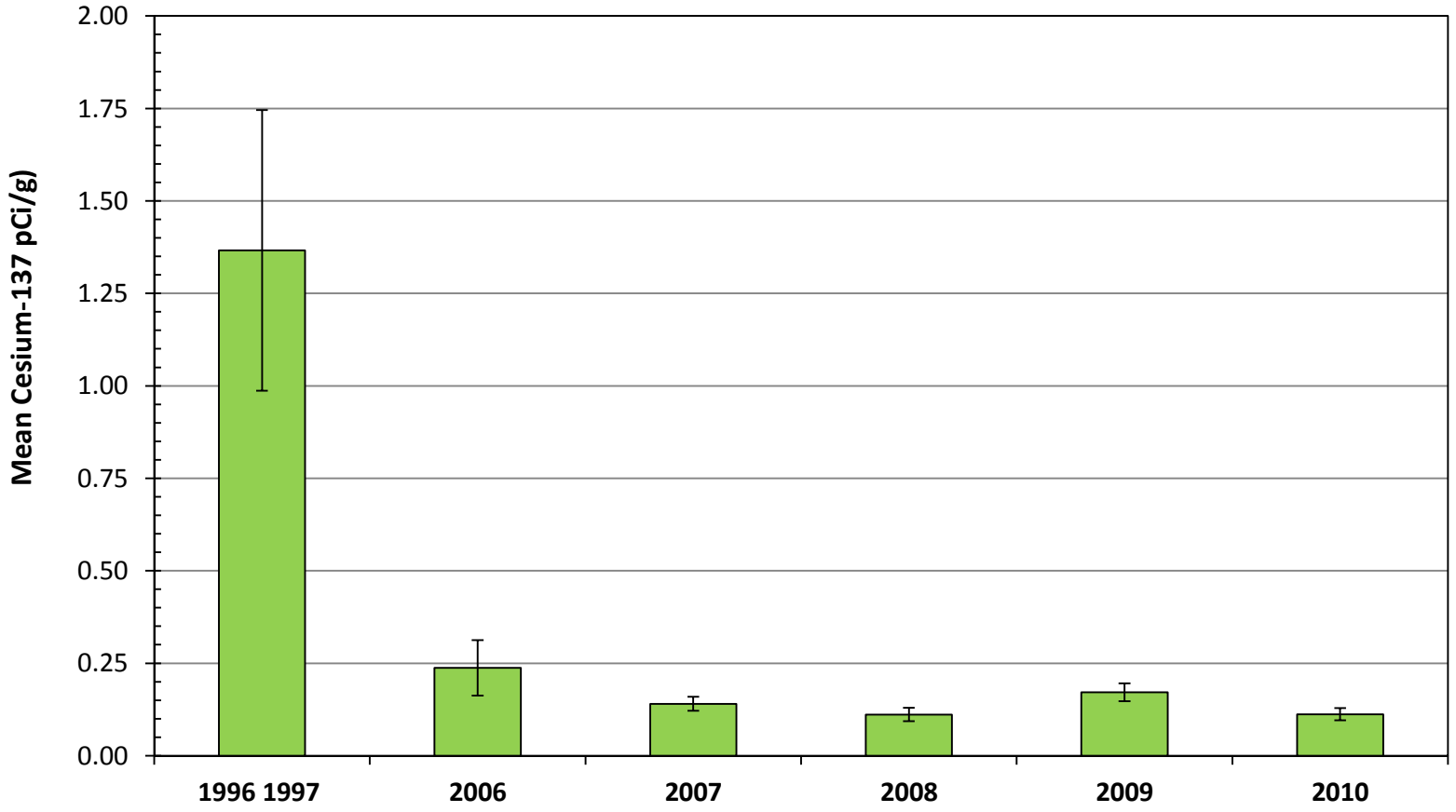
Figure 4-10b2 Pre-Cleanup and Post-Cleanup Fish Aroclor-1254
(0-200 ug/kg, 1996-2010)



Pre-Cleanup (1996, 1997, 2001) and Post -Cleanup (2006-2010) Aroclor-1254 Concentration Means

Error bars represent the 95 percent confidence intervals

Figure 4-10c Pre-Cleanup and Post-Cleanup Fish Cesium-137 (1996-2010)



Pre-Cleanup (1996, 1997, 2001) and Post -Cleanup (2006-2010) Cesium-137 Activity Means

Error bars represent the 95 percent confidence intervals

Attachment 1 contains the following excerpts from the *Five-Year Review Report for Brookhaven National Laboratory Superfund Site, Hamlet of Upton, Suffolk County, New York, March 31, 2011*.

- Excerpt from Section 6.4, Sub-Section 6.4.5 Operable Unit V, 2006-2010 Peconic River data summary, pages 44-46, including Table 6-3.
    - Figure 6-12, the locations of the PR-WC-06, Sediment Trap and PR-SS-15 sediment removal areas
    - Figure 6-13, 2006-2010 Peconic River and Connetquot River and 2007-2010 STP Mercury Concentrations (0-200ng/L)
    - Figure 6-14, 2006-2010 Peconic River Average Fish Mercury Concentrations

- Excerpt from Section 7.5 Operable Unit V Opportunities for Monitoring Optimization, pages 67-72, including Tables 7-1, 7-2 and 7-3.
    - Figure 7-1 2006-2010 Sediment Mercury Data at or Within Five Feet of PR-SS-10

6.4.5 Operable Unit V

Peconic River: Annual data for the 2006 – 2010 Peconic River sediment, surface water, and fish monitoring program are detailed in the annual Peconic River Monitoring Reports and have been routinely reviewed with the regulators. The 2006 to 2010 mercury concentration data for sediment, surface water and fish each indicate substantial improvements relative to pre-cleanup conditions and the sediment cleanup goals or other criteria (surface water and fish concentrations). Sediment is the only matrix with a ROD-specified cleanup goal: <2.0 mg/kg mercury. The EPA's mercury criterion[1] for fresh waters is 0.3 mg/kg mercury in fish tissue residue. Although this is not a ROD-required goal, Peconic River fish tissue mercury concentrations were measured and compared to the criterion as a reference, and as a benchmark for water quality improvement.

Peconic River Sediment: Mercury data for the 30 routine Peconic River sediment sampling stations, plus one water-column sampling location (PR-WC-06) and the Sediment Trap are summarized on **Table 6-3**. Sediment was collected from PR-WC-06 to determine the source(s) of elevated water-column total mercury concentrations.

Mercury was below the cleanup goal of 2.0 mg/kg at 24 of the 30 sediment monitoring stations. However, eight of the sediment sampling stations had at least one sample with mercury concentrations greater than or equal to the cleanup goal. In addition to the annual sampling, supplemental sampling was performed at these locations. For the sediment trap and sampling stations PR-SS-15 and PR-WC-06, the frequency and magnitude of mercury concentrations greater than 2.0 mg/kg merited remedy optimization via supplemental sediment removal. Sediment excavation and off-site disposal was conducted between November 2010 and January 2011 per the *Final Plan for the Optimization of the Peconic River Remedy* (BNL 2010g). Remedy optimization locations are shown on **Figure 6-12**.

Peconic River Water Column: Mercury concentrations in the Peconic River water samples were less than or equal to 200 nanograms per liter (ng/L; equivalent to parts of mercury per trillion parts of water) with the exception of three samples collected from two locations (PR-WC-06 and PR-WC-03). One sample point (PR-WC-06) had the two highest mercury concentrations: 1,360 and 876 ng/L (**Figure 6-13**). These two water column mercury concentrations were the basis for the extensive characterization of the PR-WC-06 area (**Table 6-3**) and its subsequent sediment removal in December 2010.

Mercury data for the water-column samples are plotted on **Figure 6-13**. Each station was sampled twice per year (water depth permitting), and therefore is represented by up to 10 sample points (circles). The Connetquot River, which is sampled as a reference station, had a maximum mercury concentration of 4.52 ng/L (plotted as a reference line). The triangles represent STP effluent samples collected from about 30 feet before the effluent enters the Peconic River. As shown on **Figure 6-13**, the mercury concentrations downstream of the STP (i.e., to the right of STP-EFF-UVG) are clearly elevated relative to the stations upstream of the STP (to the left of STP-EFF-UVG). A downward trend in mercury concentration between STP-EFF-UVG and PR-WC-01 (at Schultz Road) is evident. The two lowest STP mercury samples

[1] Final Water Quality Criterion for the Protection of Human Health: Methylmercury, Office of Science and Technology, Office of Water, U.S. Environmental Protection Agency, Washington, DC, 20460, EPA-823-R-01-001, January 2001. All mercury within a fish is assumed to be methylmercury.

plotted[2] were collected in 2010 after routine STP maintenance consisting of the removal and replacement of the top two feet of sand in the sand filter beds was completed in 2009[3]. Additional improvements in mercury concentrations are expected following the 2010-2011 sediment removal for the PR-WC-06, PR-SS-15 and Sediment Trap areas, and the planned rerouting (to be completed in 2014) of STP effluent to groundwater rather than to the Peconic River.

Between PR-WC-01 and PR-WCS-04 (between three to five miles downstream from the STP) mercury concentrations have ranged between approximately 5 and 24 ng/L. Downstream of PR-WCS-04 mercury concentrations are generally in the range of approximately 1 to 10 ng/L, which is slightly higher than the maximum mercury concentration (4.52 ng/L) at the Connetquot River station.

Peconic River Fish: As shown on **Figure 6-14**, fish tissue mercury concentrations have decreased substantially since completion of the 2004/2005 cleanup, and additional decreases are anticipated in response to the 2010 sediment removal summarized above. The annual average fish tissue mercury concentrations from 2006 through 2010 (0.28 mg/kg) are significantly lower than the 1997 and 2001 pre-cleanup concentration (0.58 mg/kg)[4]. Also, the average mercury concentrations for the 2006 through 2010 post-cleanup fish tissue samples are lower than the EPA mercury criterion of 0.3 mg/kg.

[2] The STP effluent data used in this report are limited to samples collected between the times of collection of samples upstream of the STP and samples that were collected downstream of the STP. These data were collected twice annually between 2007 and 2010.

[3] In order to minimize the mass of BNL STP sewage sludge, the sludge has routinely been digested by anaerobic microbes in the sludge digester, with the liquid effluent from the digestion process being mixed with the STP influent and treated within the STP system before being discharged to the Peconic River. This and historical elevated mercury concentrations in the STP influent could have been sources for mercury that were subsequently leached from the filter bed sand into the water passing through the filter beds. The treated effluent is discharged into the Peconic River. These two potential contamination sources were removed in 2007-2009 when the sludge from the digester was removed and dried for 18 months in Geo Tubes. The sludge was then homogenized within the top two feet of sand media from filter beds 1-4 and disposed of at permitted facilities off site. Between July and September 2009 approximately 4,934 tons (approximately 3,322 cubic yards) of mixed sludge and filter bed media were removed from the beds and disposed of at Allied Landfill (96 percent) in Niagara, NY, or at Energy Solutions (4 percent) in Clive, Utah, thus removing a source of contamination to the Peconic River.

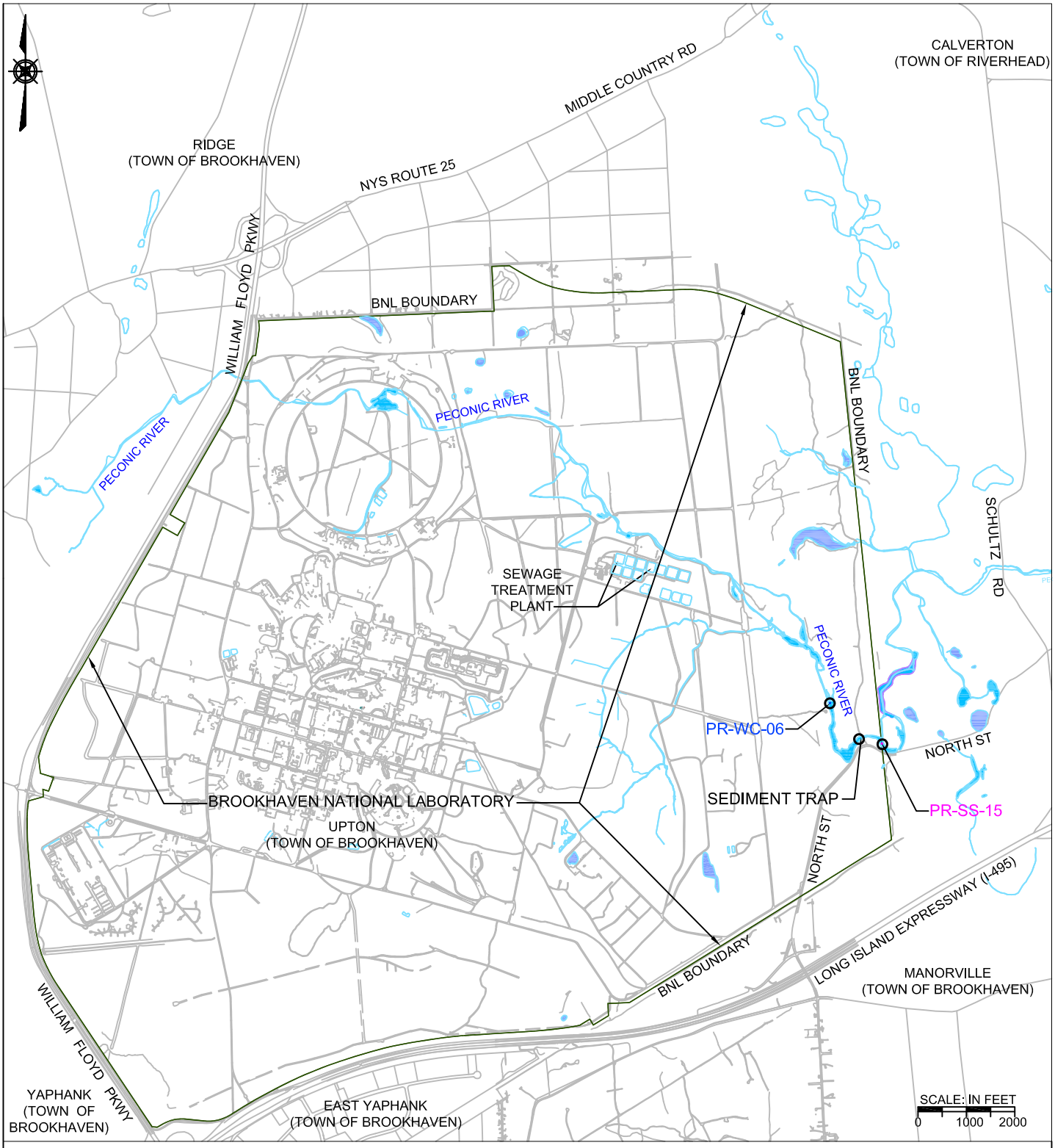
[4] The 1997 and 2001 Peconic River fish data set is shown in Table 4-10 and described on page 33 in the *Final 2009 Peconic River Monitoring Report*. The 2006-2010 fish data sets are described in each of the respective annual Peconic River Monitoring Reports.

Table 6-3. 2006 - 2010 Summary for All Routine and Supplemental Sediment Mercury Monitoring Stations

Site ID[1]	Number of Samples	Mean Mercury (mg/kg)	Minimum Mercury (mg/kg)	Maximum Mercury (mg/kg)	Standard Deviation
PR-SS-38	9	1.493	0.35	3.1	0.812
PR-SS-37	5	0.536	0.092	1	0.361
PR-SS-35	5	0.260	0.12	0.5	0.156
PR-SS-33	10	0.913	0.05	4.7	1.394
PR-SS-31	5	0.094	0.038	0.16	0.053
PR-SS-30	5	0.152	0.063	0.3	0.091
PR-SS-29	5	0.288	0.13	0.55	0.166
PR-SS-26	5	0.342	0.13	0.87	0.301
PR-SS-24	5	0.170	0.11	0.31	0.080
PR-SS-23	5	0.204	0.043	0.46	0.167
PR-SS-21	5	0.318	0.051	0.78	0.285
PR-WC-06 - Supplemental	84	2.476	0.029	22.3	4.243
PR-SS-19	41	1.116	0.13	4.4	0.958
PR-SS-18	10	0.900	0.089	4.1	1.192
PR-SS-17	5	0.537	0.027	1.2	0.501
PR-SS-16	5	1.130	0.45	1.8	0.559
Sediment Trap[2] Supplemental	25	1.14	0.057	11.1	2.366
PR-SS-15	58	4.022	0.043	36.8	8.091
PR-SS-14	5	0.270	0.16	0.41	0.090
PR-SS-12	5	0.051	0.034	0.069	0.014
PR-SS-10	37	1.487	0.052	7.1	1.568
PR-SS-09	5	0.347	0.094	0.69	0.229
PR-SS-07	5	0.058	0.016	0.091	0.030
PR-SS-06	5	0.105	0.032	0.27	0.095
PR-SS-05	5	0.300	0.059	0.85	0.327
PR-SS-04	5	0.035	0.0066	0.062	0.024
PR-SS-03	5	0.292	0.072	0.81	0.309
PR-SS-02	5	0.145	0.057	0.3	0.092
PR-SS-01	5	0.082	0.023	0.18	0.064
PR-MR-01	5	0.176	0.038	0.47	0.172
PR-MR-02	5	0.065	0.055	0.073	0.009
PR-DP-01	5	0.103	0.005	0.239	0.101

[1] Site IDs are arranged from upstream to downstream

[2] The Sediment Trap data set includes characterization samples collected 01/04/2011



LEGEND

- PECONIC RIVER
- ISOLATED POND
- MARSH AREAS
- PR-WC-06 — SURFACE WATER SAMPLING STATION ID
- PR-SS-15 — SEDIMENT SAMPLING STATION ID

\\OERNT\GIS\GW_PROJECTS\FIVE YEAR REVIEW\Fig_06-12 022311.dwg

BROOKHAVEN NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION DIVISION

TITLE:

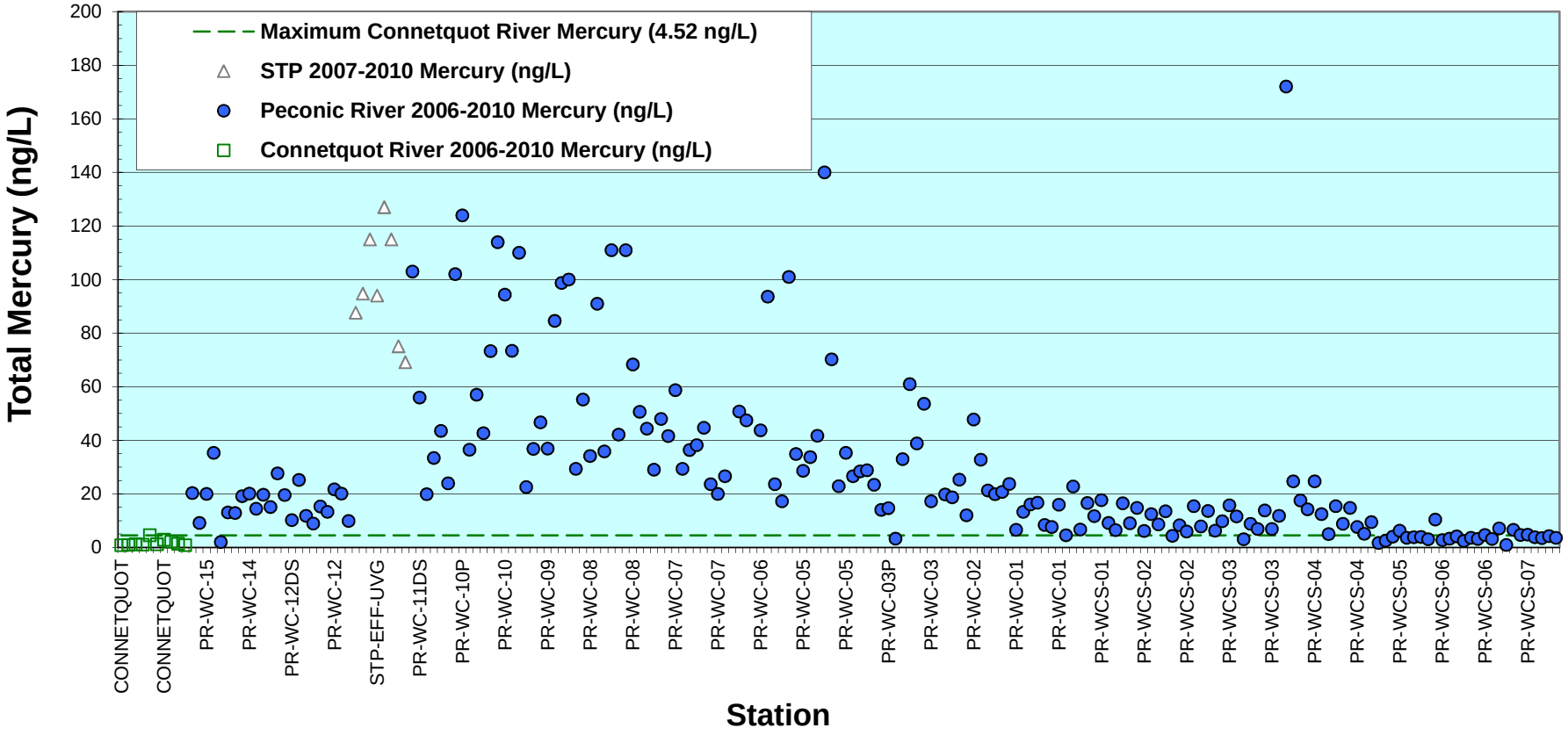
PECONIC RIVER SEDIMENT TRAP AND SUPPLEMENTAL REMOVAL LOCATIONS

2010 BNL FIVE-YEAR REVIEW

DWN:	VT: HZ.:	DATE:	PROJECT NO.:
AJZ	–	02/23/11	–
CHKD:	APPD:	REV.:	NOTES:
WM	–	–	–

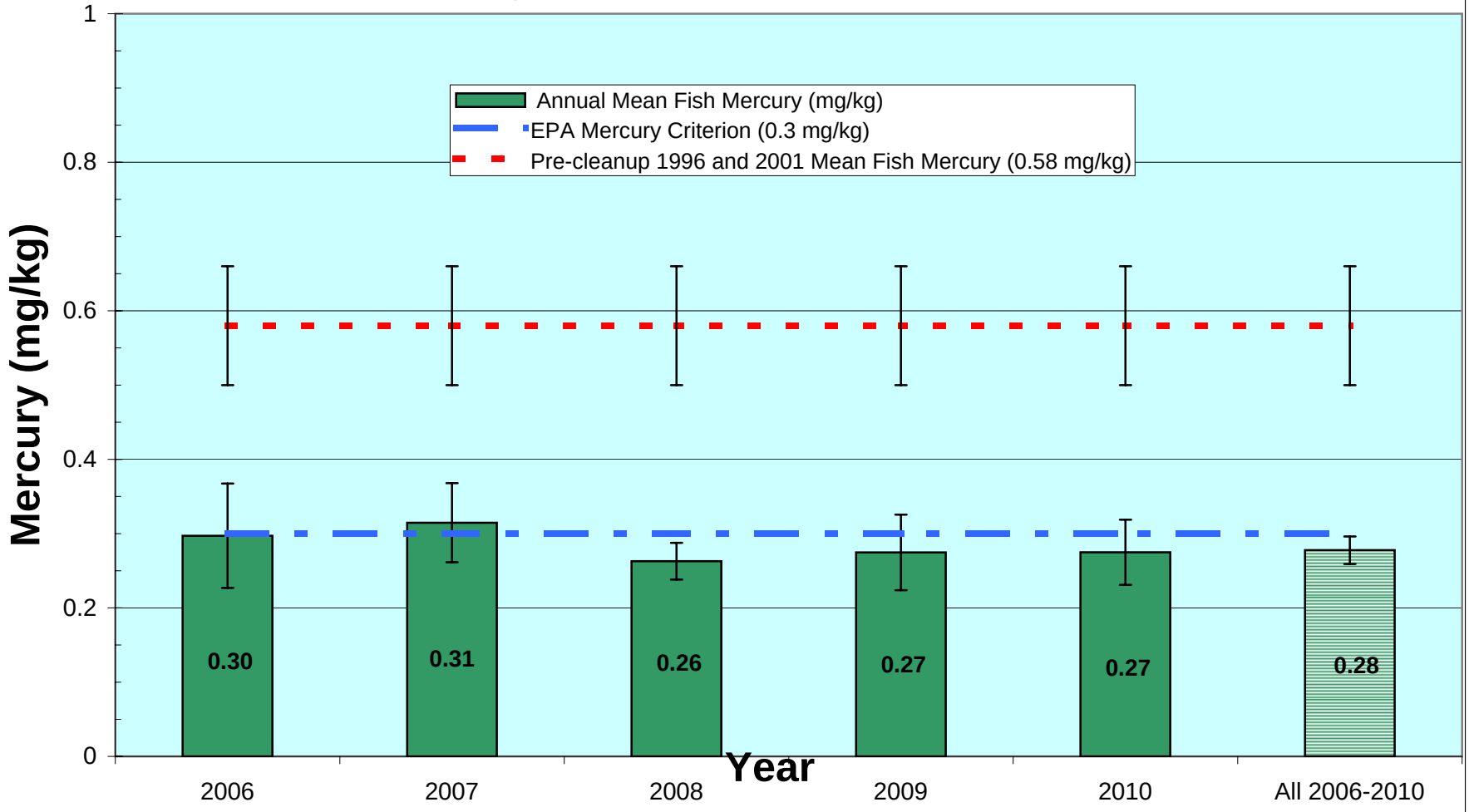
FIGURE NO.: 6-12

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 6-14 2006 - 2010 Peconic River Average Fish Mercury Concentrations



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

OU V Opportunities for Monitoring Optimization

- The *2009 BNL Groundwater Status Report* recommended that if individual VOC concentrations in groundwater remained below MCLs during 2010, a petition would be prepared and submitted to the regulatory agencies to conclude the monitoring program. Also as per this report, sampling for perchlorate will be discontinued if there are no detections above the action level in 2011 (detections have been less than the action level since 2008).
- One year prior to this 2010 Five-Year Review, DOE recognized an opportunity to optimize the Peconic River remedy and proposed a supplemental sediment removal in two small areas: PR-WC-06 (0.217 acres) and PR-SS-15 (0.121 acres). In addition, the Sediment Trap and adjacent contaminated sediment were also removed. The supplemental sediment removal began in November 2010 and was completed in January 2011. Wetland re-planting will be completed in the summer of 2011, or as soon as river water levels allow.
- The Peconic River ROD states that after the first five years of monitoring are completed (2006 - 2010) and the data reviewed with EPA, NYSDEC and SCDHS, appropriate modifications will be made as necessary for subsequent sampling.[7] These modifications discussed below are based on the approximately 2,380 confirmation samples collected during the 2004 to 2005 20-acre cleanup,

[5] Page iii, last paragraph of Final Operable Unit V Record of Decision for Area of Concern 30 (Peconic River), November 3, 2004.
[6] 2007 Peconic River Monitoring Report, Attachment B.
[7] Final Operable Unit V Record of Decision for Area of Concern 30 (Peconic River), page 38, paragraph 2.

approximately 1,700 sediment, surface water and fish post-cleanup monitoring samples collected between 2006 and 2010, and the 37 sediment confirmation samples collected in December 2010 and January 2011 at the PR-WC-06, Sediment Trap, and PR-SS-15 areas. The recommendations are summarized in **Table 7-1**.

- All monitoring data has been documented in the 2006 through 2010 *Peconic River Monitoring Reports*. These data have been reviewed by and with the DOE, EPA, NYSDEC, NYSDOH, and the SCDHS. DOE recognizes that modifications to the monitoring represent additional opportunities to optimize the post-cleanup monitoring aspect of the remedy. Modifications to sediment, water column and fish monitoring are discussed below.

Table 7-1. Recommendations for Peconic River Optimization

	2011 Requirements	2012-2014	Comments
Surface Water	22 samples 2x/yr - Hg, MeHg, TSS	15 samples 2x/yr	Sample WCS-06 under S&M Program starting in 2012
	8 samples 4x/yr - water quality	Discontinue	Chlorophyll-a, N, P, TOC, TKN, TSS. Data historically provided in Appendix to Annual Peconic Report.
	4 samples 4x/yr - PR-SS-10	Discontinue	
Sediment	30 samples annually	3 samples annually	3 samples include WC-06, SS-15 and former sediment trap cleanup areas.
Fish	6 locations annually	4 locations every other year, 2013	Discontinue Manor Road and Area C in 2012
	Age determination on all fish	Age determination on all fish	
Vegetation	NYSDEC - Monitor for 2 full growing seasons for plant survival and invasive species control (4/2011 - 9/2012) EPA - 3 to 5 years for invasive species control	No change	

Sediment Monitoring Modifications

- The 2006 through 2010 sediment summary data (**Table 6-3**) indicate that 24 of the 30 routine sediment monitoring stations never exceeded the ROD cleanup goal that all mercury samples in the remediated areas would be less than 2.0 mg/kg[8]. **BSA/DOE recommend that sediment monitoring at these 24 stations is no longer necessary and can be discontinued in 2012 without jeopardizing the Peconic River risk assessment objectives** (See **Table 7-2** for those 24 stations recommended for discontinued sampling).
- **Table 7-3** summarizes the remaining six routine monitoring stations that have had at least one sediment sample exceed the 2.0 mg/kg mercury goal, and the post-cleanup data for the three areas (PR-WC-06, Sediment Trap, PR-SS-15) for which sediment was removed in 2010 and 2011. Whenever a routine sediment monitoring result equals or exceeds 2.0 mg/kg, BNL/DOE follows the data quality objectives detailed in the *Environmental Monitoring Plan*[9]. All data have been reported in the respective annual reports and reviewed with the regulators.
  - Sediment monitoring stations PR-SS-33 and PR-SS-18 each had one out of ten total samples contain greater than 2.0 mg/kg mercury. PR-SS-38 had three of nine samples

[8] Final Operable Unit V Record of Decision for Area of Concern 30 (Peconic River), page 28, paragraph 4.
[9] Brookhaven National Laboratory, Environmental Monitoring Plan, 2010 Update, January 1, 2010, BNL 52676-2010, page 8.2-4, third paragraph from bottom.

equal to or greater than 2.0 mg/kg., but all were less than or equal to 3.1 mg/kg. PR-SS-19 had a similar range of concentrations greater than or equal to 2.0 mg/kg and a similar mean and individual concentrations to PR-SS-18, PR-SS-33 and PR-SS-38. The average mercury concentration for each of these stations is between 0.90 and 1.49 mg/kg.

- Review of these data with DOE, EPA, NYSDEC, NYSDOH, and the SCDHS led to agreement that no additional action would be required for PR-SS-18, PR-SS-19, PR-SS-33 and PR-SS-38 because of their low frequencies of exceeding the ROD goal and their low individual and mean mercury concentrations. **BSA/DOE recommend that future sediment monitoring at these four stations can be discontinued without jeopardizing the Peconic River risk assessment objectives** (**Table 7-3**).

- Of the remaining two routine monitoring locations (PR-SS-10 and PR-SS-15), PR-SS-10 (relative to PR-SS-18, PR-SS-19, PR-SS-33 and PR-SS-38) has one markedly elevated mercury concentration (7.1 mg/kg), the first sample collected at PR-SS-10 in 2006. Otherwise the mercury concentrations are similar to PR-SS-18, PR-SS-19, PR-SS-33, and PR-SS-38 (**Table 7-3**).
- Eleven of the 12 highest mercury concentrations in the PR-SS-10 area are less than or close to the maximum mercury concentrations at PR-SS-18, PR-SS-19, PR-SS-33, and PR-SS-38 (**Table 7-3**).
- The mean mercury concentration for all PR-SS-10 area samples was 1.49 mg/kg, which equals the mean mercury concentration for PR-SS-38.
- None of the nine additional samples collected within five feet of the original 7.1 mg/kg mercury detection at PR-SS-10 had a mercury concentration approaching the concentration of the original sample. **Figure 7-1** shows the mercury concentrations of all sediment samples collected within five feet of PR-SS-10 between 2006 and 2010. **BSA/DOE recommend that PR-SS-10 sediment monitoring be discontinued and replaced by quarterly water-column sampling for total mercury, methylmercury and total suspended solids (TSS) in 2011 to evaluate potential downstream transport of mercury and methylmercury from PR-SS-10.** These data will be shared with and reviewed with and by the regulators.
- The remaining routine sediment monitoring location at PR-SS-15, as well as supplemental sampling locations at PR-WC-06 and the Sediment Trap areas, were each remediated between December 2010 and January 2011. Post-cleanup monitoring at these three sites will consist of collecting annual sediment mercury samples at the locations of the 2006-2010 samples. For each of these three areas the respective sample locations and former maximum mercury concentrations are:
  - PR-WC-06 area (PR-WC-06-D1-L50, 22.3 mg/kg);
  - PR-SS-15 area (PR-SS-15-U1-L65-O, 36.8 mg/kg);
  - Sediment Trap area (ST1-80-U20, 11.1 mg/kg).

Table 7-2. Areas Recommended for Discontinued Mercury Sediment Sampling (Stations <2.0 mg/kg)

Site ID	Number of Samples	Mean Mercury (mg/kg)	Minimum Mercury (mg/kg)	Maximum Mercury (mg/kg)	Standard Deviation
PR-SS-37	5	0.536	0.092	1	0.361
PR-SS-35	5	0.260	0.12	0.5	0.156
PR-SS-31	5	0.094	0.038	0.16	0.053
PR-SS-30	5	0.152	0.063	0.3	0.091
PR-SS-29	5	0.288	0.13	0.55	0.166
PR-SS-26	5	0.342	0.13	0.87	0.301
PR-SS-24	5	0.170	0.11	0.31	0.080
PR-SS-23	5	0.204	0.043	0.46	0.167
PR-SS-21	5	0.318	0.051	0.78	0.285
PR-SS-17	5	0.537	0.027	1.2	0.501
PR-SS-16	5	1.130	0.45	1.8	0.559
PR-SS-14	5	0.270	0.16	0.41	0.090
PR-SS-12	5	0.051	0.034	0.069	0.014
PR-SS-09	5	0.347	0.094	0.69	0.229
PR-SS-07	5	0.058	0.016	0.091	0.030
PR-SS-06	5	0.105	0.032	0.27	0.095
PR-SS-05	5	0.300	0.059	0.85	0.327
PR-SS-04	5	0.035	0.0066	0.062	0.024
PR-SS-03	5	0.292	0.072	0.81	0.309
PR-SS-02	5	0.145	0.057	0.3	0.092
PR-SS-01	5	0.082	0.023	0.18	0.064
PR-MR-01	5	0.176	0.038	0.47	0.172
PR-MR-02	5	0.065	0.055	0.073	0.009
PR-DP-01	5	0.103	0.005	0.239	0.101

Table 7-3. Recommendations for Sediment Monitoring Stations With Mercury Concentrations ≥ 2.0 mg/kg

Site ID	No. of Samples	No. ≥ 2.0 mg/kg	Values ≥ 2.0 mg/kg	Mean Mercury (mg/kg)	Minimum Mercury (mg/kg)	Maximum Mercury (mg/kg)	Standard Deviation (mg/kg)	Recommendation
PR-SS-18	10	1	4.1	0.90	0.089	4.1	1.192	Discontinue PR-SS-18 sediment sampling
PR-SS-33	10	1	4.7	0.91	0.05	4.7	1.394	Discontinue PR-SS-33 sampling
PR-SS-38	9	3	2, 2.1, 3.1	1.49	0.35	3.1	0.812	Discontinue SS-38 sampling
PR-SS-19	41	6	2, 2, 2.1 3.2, 3.4, 4.4	1.12	0.13	4.4	0.958	Discontinue PR-SS-19 sediment sampling
PR-SS-10	37	12	2, 2.1, 2.2, 2.4, 2.6, 2.7, 2.8, 3.2, 3.5, 4.3, 4.6, 7.1	1.49	0.052	7.1	1.568	Discontinue PR-SS-10 sediment sampling. Continue supplemental water column sampling in 2011 for mercury, methylmercury, TSS (four times annually).
PR-WC-06	84	21	21 samples 2.7 to 22.3	2.48	0.029	22.3	4.243	Sediment removed in 2010. Discontinue supplemental water column sampling. Collect future annual sediment samples in the PR-WC-06 area as described below.
Post-remedy Excavation PR-WC-06	19	0	Not Applicable	0.34	0.044	1.2	0.324	Initiate annual sediment mercury sampling at pre-remedy sediment removal location with previous maximum pre-cleanup sediment mercury concentration in the PR-WC-06 area (PR-WC-06-D1-L50, 22.3 mg/kg).
Sediment Trap Area	25	5	2, 2.2, 2.2, 5, 11.1	1.14	0.057	11.1	2.366	Trap and sediment removed in 2011. Collect future annual sediment samples in the PR-WC-06 area as described below.
Post-remedy Excavation Sediment Trap Area	5	0	Not Applicable	0.17	0.11	0.26	0.055	Initiate annual sediment mercury sampling at pre-remedy sediment removal station with maximum pre-cleanup mercury concentration in the sediment trap area (ST1-80-U20., 11.1 mg/kg).
PR-SS-15	58	17	17 samples 2.1 to 36.8	4.02	0.043	36.8	8.091	Sediment removed in 2011. Discontinue supplemental water column sampling. Collect future annual sediment samples as described below.
Post-remedy Excavation PR-SS-15	11	0	Not Applicable	0.13	0.029	0.67	0.191	Replace annual sediment mercury sampling at station PR-SS-15 with the sediment sampling station with the maximum mercury concentration in the PR-SS-15 area (PR-SS-15-U1-L65-O, 36.8 mg/kg).

These data will be reported in the annual *BNL Site Environmental Report* and will be evaluated with and by DOE, EPA, NYSDEC, NYSDOH, and the SCDHS. The need to continue to collect and/or to modify annual sediment samples at PR-WC-06, Sediment Trap, and PR-SS-15 will be evaluated annually with the regulators and as part of the 2015 Five-Year Review.

Surface Water Monitoring Optimization

- As shown on **Figure 6-13**, the 2006-2010 Peconic River water column total mercury concentrations are substantially higher between station STP-EFF-UVG and PR-WC-02 than at the stations located upstream and downstream of this section of the river. Future decreases in Peconic River total mercury concentrations are expected as a result of the recent remediation of the sludge digester, sand filter beds, and the PR-WC-06, Sediment Trap and PR-SS-15 areas.
- Between PR-WC-01 and PR-WCS-04 (between three to five miles downstream from the STP) the concentrations range between approximately 5 and 24 ng/L. Total mercury concentrations in the downstream section of the river between PR-WCS-04 and PR-WCS-07 are generally in the range of approximately 1 to 10 ng/L.
- **BNL recommends that routine water-column monitoring for total mercury, methylmercury and TSS continue two times per year at the 15 stations between PR-WC-15 (upstream of STP-EFF-UVG) and PR-WC-02.** This will include the anticipated reductions in surface water total mercury concentrations associated with the sediment removal and the scheduled and NYSDEC-approved initiation of discharge of the STP effluent directly to ground outside the area of recharge to the Peconic River.
- **BNL recommends that routine water-column monitoring at stations between and including PR-WC-02 and PR-WCS-07 be discontinued in 2012, with the exception of PR-WCS-06 (Donahue's Pond). PR-WCS-06 will continue to be sampled as part of the routine environmental surveillance program. BNL also recommends that analysis for water quality parameters be discontinued in 2012.** Sufficient water quality data has been collected over the previous five years to assist in the analysis of methylmercury data. These results will be published each year in the annual *Site Environmental Report.*

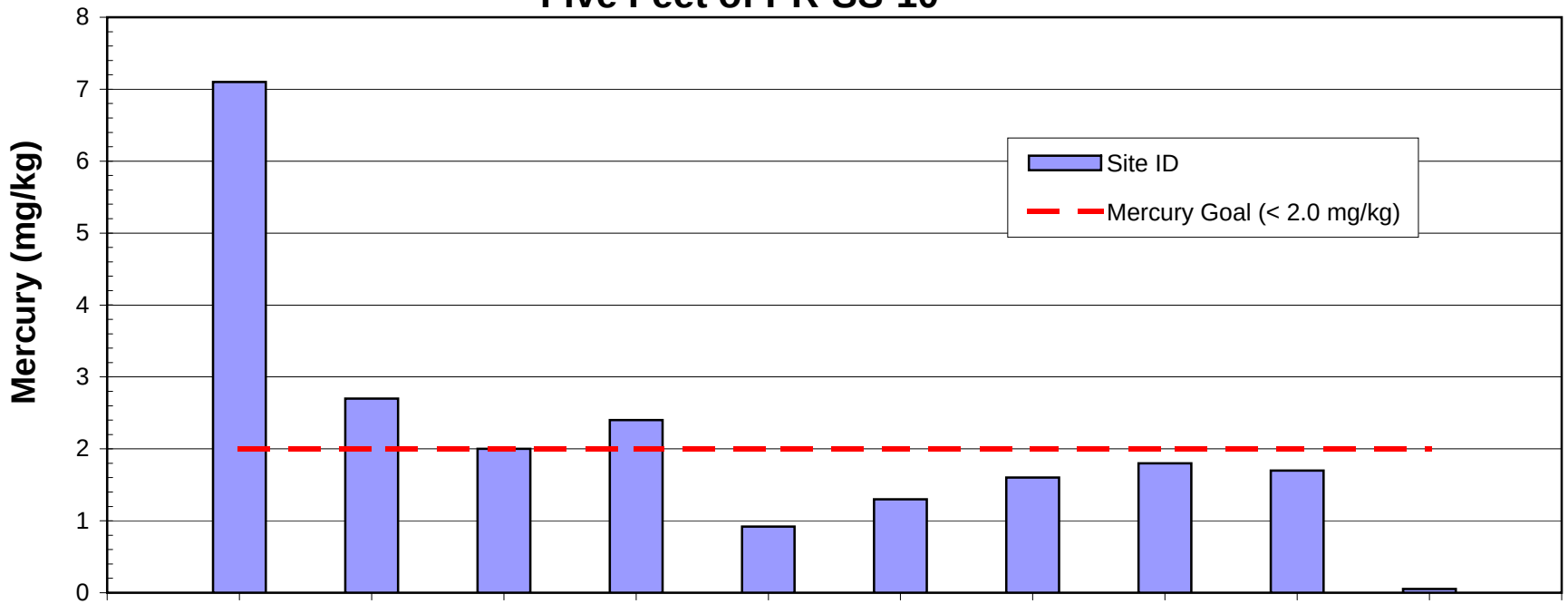
Fish Monitoring Optimization

Figure 6-14 shows a substantial reduction in post-cleanup (2006-2010) fish tissue mercury concentrations relative to pre-cleanup (1997 and 2001) concentrations. The figure also shows that the average mercury concentration for all fish caught between 2006 and 2010 (0.28 mg/kg) is lower than the EPA mercury criterion (0.3 mg/kg). **BNL recommends that fish monitoring be modified in the following ways:**

- Frequency will be modified from one round annually to one round every other spring. Thus, between 2011 and 2016 fish will be collected in the spring of 2011, 2013 and 2015. Harvesting fish biennially will allow the fish population to grow in both number and individual size.
- Monitoring of fish from the Manor Road area should be discontinued after the 2011 collection, due to the typically low fish catch in that area. Every two years fish monitoring would occur in Area A[10] (downstream of the STP), Area D, Schultz Road, and Donahue's Pond, when water depths are favorable. Supplemental sampling in Area C would be discontinued unless the yield was low in the two adjacent collection areas (Area A and Area D).
- Continuing fish age determination via scale and otolith interpretation through 2015.

[10] Note that BSA/DOE expect to initiate discharge of treated STP effluent to the water table rather than to the Peconic River, in 2014. This may cause water levels in Area A (and possibly also Area D) to be too low for fish migration except during the spring. Fish collection locations may require revision following groundwater discharge of the STP effluent.

Figure 7-1 2006 - 2010 Sediment Mercury Data at or Within Five Feet of PR-SS-10



Appendix A - 2010 Peconic River Sediment Samples

Metals

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28587-008	PR-SS-38	5/13/2010	1130	7471A	Mercury	2	0.058	MG/KG			0.36
28587-007	PR-SS-37	5/13/2010	1110	7471A	Mercury	1	0.046	MG/KG			0.47
28587-006	PR-SS-35	5/13/2010	1105	7471A	Mercury	0.12	0.047	MG/KG			0.49
28587-005	PR-SS-33	5/13/2010	1100	7471A	Mercury	4.7	0.31	MG/KG			0.49
28587-004	PR-SS-31	5/13/2010	1040	6010B	Copper	12	3.5	MG/KG			0.67
28587-004	PR-SS-31	5/13/2010	1040	7471A	Mercury	0.16	0.046	MG/KG			0.67
28587-004	PR-SS-31	5/13/2010	1040	6010B	Silver	0.96	1.4	MG/KG	B		0.67
28587-003	PR-SS-30	5/13/2010	1035	7471A	Mercury	0.14	0.051	MG/KG			0.69
28587-002	PR-SS-29	5/13/2010	1030	7471A	Mercury	0.3	0.045	MG/KG			0.69
28587-001	PR-SS-26	5/13/2010	1020	7471A	Mercury	0.13	0.041	MG/KG			0.75
28583-010	PR-SS-24	5/12/2010	1240	7471A	Mercury	0.13	0.05	MG/KG	J		0.8
28583-009	PR-SS-23	5/12/2010	1230	7471A	Mercury	0.043	0.044	MG/KG	B J		0.85
28583-008	PR-SS-21	5/12/2010	1220	7471A	Mercury	0.35	0.053	MG/KG	J		0.91
28583-007	PR-SS-19	5/12/2010	1210	7471A	Mercury	0.16	0.047	MG/KG	J		1.2
28583-006	PR-SS-18	5/12/2010	1200	7471A	Mercury	0.089	0.051	MG/KG	J		1.27
28583-005	PR-SS-17	5/12/2010	1140	7471A	Mercury	0.89	0.062	MG/KG	J		1.33
28583-004	PR-SS-16	5/12/2010	1120	6010B	Copper	25.3	3.8	MG/KG			1.4
28583-004	PR-SS-16	5/12/2010	1120	7471A	Mercury	0.83	0.051	MG/KG	J		1.4
28583-004	PR-SS-16	5/12/2010	1120	6010B	Silver	7.4	1.5	MG/KG			1.4
28583-003	PR-SS-15	5/12/2010	1115	7471A	Mercury	0.88	0.061	MG/KG	J		1.52
28583-002	PR-SS-14	5/12/2010	1110	7471A	Mercury	0.41	0.062	MG/KG	J		1.56
28583-001	PR-SS-12	5/12/2010	1100	7471A	Mercury	0.069	0.042	MG/KG	J		1.66
28579-009	PR-SS-10	5/11/2010	1350	7471A	Mercury	0.054	0.054	MG/KG			1.84
28579-008	PR-SS-09	5/11/2010	1340	7471A	Mercury	0.094	0.045	MG/KG			1.93
28579-007	PR-SS-07	5/11/2010	1330	7471A	Mercury	0.091	0.047	MG/KG			2.02
28579-006	PR-SS-06	5/11/2010	1320	7471A	Mercury	0.032	0.047	MG/KG	B		2.08
28579-005	PR-SS-05	5/11/2010	1300	7471A	Mercury	0.11	0.078	MG/KG			2.32
28579-004	PR-SS-04	5/11/2010	1240	7471A	Mercury	0.037	0.062	MG/KG	B		2.52
28579-003	PR-SS-03	5/11/2010	1230	7471A	Mercury	0.34	0.062	MG/KG			2.65
28579-002	PR-SS-02	5/11/2010	1220	7471A	Mercury	0.12	0.22	MG/KG	B		2.76
28579-001	PR-SS-01	5/11/2010	1200	6010B	Copper	5	5	MG/KG	U		2.9
28579-001	PR-SS-01	5/11/2010	1200	7471A	Mercury	0.023	0.067	MG/KG	B		2.9
28579-001	PR-SS-01	5/11/2010	1200	6010B	Silver	2	2	MG/KG	U		2.9
28580-002	PR-MR-02	5/11/2010	1050	7471A	Mercury	0.068	0.056	MG/KG			4.5
28580-001	PR-MR-01	5/11/2010	1100	6010B	Copper	11.2	9.9	MG/KG			4.28
28580-001	PR-MR-01	5/11/2010	1100	7471A	Mercury	0.47	0.13	MG/KG			4.28

Appendix A - 2010 Peconic River Sediment Samples

Metals

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28580-001	PR-MR-01	5/11/2010	1100	6010B	Silver	1	4	MG/KG	B		4.28
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Aluminum	3250	53.8	MG/KG	*		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Antimony	2.61	2.61	MG/KG	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6020	Arsenic	7.48	1.67	MG/KG	B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Barium	57.7	0.792	MG/KG	*		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Beryllium	0.816	0.792	MG/KG	B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Cadmium	1.27	0.792	MG/KG	B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Calcium	2090	63.3	MG/KG	*B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Chromium	10.3	1.19	MG/KG			6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Cobalt	7.06	1.19	MG/KG			6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Copper	14.5	2.38	MG/KG			6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Iron	8460	63.3	MG/KG	*N		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6020	Lead	35.6	0.835	MG/KG	*N		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Magnesium	394	67.3	MG/KG			6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Manganese	153	1.58	MG/KG	*		6.75
28621-001	PR-DP-01	5/25/2010	1030	EPA 7471A	Mercury	0.239	0.0349	MG/KG	B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Nickel	6.68	1.19	MG/KG			6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Potassium	63.3	50.7	MG/KG	B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6020	Selenium	4.18	4.18	MG/KG	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Silver	1.02	0.792	MG/KG	B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Sodium	215	55.4	MG/KG	B		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6020	Thallium	0.501	0.501	MG/KG	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Vanadium	30.3	0.792	MG/KG			6.75
28621-001	PR-DP-01	5/25/2010	1030	3050B/6010B	Zinc	120	2.61	MG/KG	*		6.75

[1] Qualifiers

* -

B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit

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

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected.

Appendix B - 2010 Peconic River Sediment Samples

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28587-008	PR-SS-38	5/13/2010	1130	8082	Aroclor 1016	58	58	UG/KG	U		0.36
28587-008	PR-SS-38	5/13/2010	1130	8082	Aroclor 1221	58	58	UG/KG	U		0.36
28587-008	PR-SS-38	5/13/2010	1130	8082	Aroclor 1232	58	58	UG/KG	U		0.36
28587-008	PR-SS-38	5/13/2010	1130	8082	Aroclor 1242	58	58	UG/KG	U		0.36
28587-008	PR-SS-38	5/13/2010	1130	8082	Aroclor 1248	58	58	UG/KG	U		0.36
28587-008	PR-SS-38	5/13/2010	1130	8082	Aroclor 1254	58	58	UG/KG	U		0.36
28587-008	PR-SS-38	5/13/2010	1130	8082	Aroclor 1260	58	58	UG/KG	U		0.36
28587-007	PR-SS-37	5/13/2010	1110	8082	Aroclor 1016	46	46	UG/KG	U		0.47
28587-007	PR-SS-37	5/13/2010	1110	8082	Aroclor 1221	46	46	UG/KG	U		0.47
28587-007	PR-SS-37	5/13/2010	1110	8082	Aroclor 1232	46	46	UG/KG	U		0.47
28587-007	PR-SS-37	5/13/2010	1110	8082	Aroclor 1242	46	46	UG/KG	U		0.47
28587-007	PR-SS-37	5/13/2010	1110	8082	Aroclor 1248	46	46	UG/KG	U		0.47
28587-007	PR-SS-37	5/13/2010	1110	8082	Aroclor 1254	46	46	UG/KG	U		0.47
28587-007	PR-SS-37	5/13/2010	1110	8082	Aroclor 1260	46	46	UG/KG	U		0.47
28587-006	PR-SS-35	5/13/2010	1105	8082	Aroclor 1016	46	46	UG/KG	U		0.49
28587-006	PR-SS-35	5/13/2010	1105	8082	Aroclor 1221	46	46	UG/KG	U		0.49
28587-006	PR-SS-35	5/13/2010	1105	8082	Aroclor 1232	46	46	UG/KG	U		0.49
28587-006	PR-SS-35	5/13/2010	1105	8082	Aroclor 1242	46	46	UG/KG	U		0.49
28587-006	PR-SS-35	5/13/2010	1105	8082	Aroclor 1248	46	46	UG/KG	U		0.49
28587-006	PR-SS-35	5/13/2010	1105	8082	Aroclor 1254	46	46	UG/KG	U		0.49
28587-006	PR-SS-35	5/13/2010	1105	8082	Aroclor 1260	46	46	UG/KG	U		0.49
28587-005	PR-SS-33	5/13/2010	1100	8082	Aroclor 1016	61	61	UG/KG	U		0.49
28587-005	PR-SS-33	5/13/2010	1100	8082	Aroclor 1221	61	61	UG/KG	U		0.49
28587-005	PR-SS-33	5/13/2010	1100	8082	Aroclor 1232	61	61	UG/KG	U		0.49
28587-005	PR-SS-33	5/13/2010	1100	8082	Aroclor 1242	61	61	UG/KG	U		0.49
28587-005	PR-SS-33	5/13/2010	1100	8082	Aroclor 1248	61	61	UG/KG	U		0.49
28587-005	PR-SS-33	5/13/2010	1100	8082	Aroclor 1254	61	61	UG/KG	U		0.49
28587-005	PR-SS-33	5/13/2010	1100	8082	Aroclor 1260	61	61	UG/KG	U		0.49
28587-004	PR-SS-31	5/13/2010	1040	8082	Aroclor 1016	46	46	UG/KG	U		0.67
28587-004	PR-SS-31	5/13/2010	1040	8082	Aroclor 1221	46	46	UG/KG	U		0.67
28587-004	PR-SS-31	5/13/2010	1040	8082	Aroclor 1232	46	46	UG/KG	U		0.67
28587-004	PR-SS-31	5/13/2010	1040	8082	Aroclor 1242	46	46	UG/KG	U		0.67
28587-004	PR-SS-31	5/13/2010	1040	8082	Aroclor 1248	46	46	UG/KG	U		0.67
28587-004	PR-SS-31	5/13/2010	1040	8082	Aroclor 1254	46	46	UG/KG	U		0.67
28587-004	PR-SS-31	5/13/2010	1040	8082	Aroclor 1260	46	46	UG/KG	U		0.67
28587-003	PR-SS-30	5/13/2010	1035	8082	Aroclor 1016	50	50	UG/KG	U		0.69

Appendix B - 2010 Peconic River Sediment Samples

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28587-003	PR-SS-30	5/13/2010	1035	8082	Aroclor 1221	50	50	UG/KG	U		0.69
28587-003	PR-SS-30	5/13/2010	1035	8082	Aroclor 1232	50	50	UG/KG	U		0.69
28587-003	PR-SS-30	5/13/2010	1035	8082	Aroclor 1242	50	50	UG/KG	U		0.69
28587-003	PR-SS-30	5/13/2010	1035	8082	Aroclor 1248	50	50	UG/KG	U		0.69
28587-003	PR-SS-30	5/13/2010	1035	8082	Aroclor 1254	50	50	UG/KG	U		0.69
28587-003	PR-SS-30	5/13/2010	1035	8082	Aroclor 1260	50	50	UG/KG	U		0.69
28587-002	PR-SS-29	5/13/2010	1030	8082	Aroclor 1016	44	44	UG/KG	U		0.69
28587-002	PR-SS-29	5/13/2010	1030	8082	Aroclor 1221	44	44	UG/KG	U		0.69
28587-002	PR-SS-29	5/13/2010	1030	8082	Aroclor 1232	44	44	UG/KG	U		0.69
28587-002	PR-SS-29	5/13/2010	1030	8082	Aroclor 1242	44	44	UG/KG	U		0.69
28587-002	PR-SS-29	5/13/2010	1030	8082	Aroclor 1248	44	44	UG/KG	U		0.69
28587-002	PR-SS-29	5/13/2010	1030	8082	Aroclor 1254	44	44	UG/KG	U		0.69
28587-002	PR-SS-29	5/13/2010	1030	8082	Aroclor 1260	44	44	UG/KG	U		0.69
28587-001	PR-SS-26	5/13/2010	1020	8082	Aroclor 1016	40	40	UG/KG	U		0.75
28587-001	PR-SS-26	5/13/2010	1020	8082	Aroclor 1221	40	40	UG/KG	U		0.75
28587-001	PR-SS-26	5/13/2010	1020	8082	Aroclor 1232	40	40	UG/KG	U		0.75
28587-001	PR-SS-26	5/13/2010	1020	8082	Aroclor 1242	40	40	UG/KG	U		0.75
28587-001	PR-SS-26	5/13/2010	1020	8082	Aroclor 1248	40	40	UG/KG	U		0.75
28587-001	PR-SS-26	5/13/2010	1020	8082	Aroclor 1254	40	40	UG/KG	U		0.75
28587-001	PR-SS-26	5/13/2010	1020	8082	Aroclor 1260	40	40	UG/KG	U		0.75
28583-010	PR-SS-24	5/12/2010	1240	8082	Aroclor 1016	49	49	UG/KG	U		0.8
28583-010	PR-SS-24	5/12/2010	1240	8082	Aroclor 1221	49	49	UG/KG	U		0.8
28583-010	PR-SS-24	5/12/2010	1240	8082	Aroclor 1232	49	49	UG/KG	U		0.8
28583-010	PR-SS-24	5/12/2010	1240	8082	Aroclor 1242	49	49	UG/KG	U		0.8
28583-010	PR-SS-24	5/12/2010	1240	8082	Aroclor 1248	49	49	UG/KG	U		0.8
28583-010	PR-SS-24	5/12/2010	1240	8082	Aroclor 1254	49	49	UG/KG	U		0.8
28583-010	PR-SS-24	5/12/2010	1240	8082	Aroclor 1260	49	49	UG/KG	U		0.8
28583-009	PR-SS-23	5/12/2010	1230	8082	Aroclor 1016	44	44	UG/KG	U		0.85
28583-009	PR-SS-23	5/12/2010	1230	8082	Aroclor 1221	44	44	UG/KG	U		0.85
28583-009	PR-SS-23	5/12/2010	1230	8082	Aroclor 1232	44	44	UG/KG	U		0.85
28583-009	PR-SS-23	5/12/2010	1230	8082	Aroclor 1242	44	44	UG/KG	U		0.85
28583-009	PR-SS-23	5/12/2010	1230	8082	Aroclor 1248	44	44	UG/KG	U		0.85
28583-009	PR-SS-23	5/12/2010	1230	8082	Aroclor 1254	44	44	UG/KG	U		0.85
28583-009	PR-SS-23	5/12/2010	1230	8082	Aroclor 1260	44	44	UG/KG	U		0.85
28583-008	PR-SS-21	5/12/2010	1220	8082	Aroclor 1016	53	53	UG/KG	U		0.91
28583-008	PR-SS-21	5/12/2010	1220	8082	Aroclor 1221	53	53	UG/KG	U		0.91

Appendix B - 2010 Peconic River Sediment Samples

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28583-008	PR-SS-21	5/12/2010	1220	8082	Aroclor 1232	53	53	UG/KG	U		0.91
28583-008	PR-SS-21	5/12/2010	1220	8082	Aroclor 1242	53	53	UG/KG	U		0.91
28583-008	PR-SS-21	5/12/2010	1220	8082	Aroclor 1248	53	53	UG/KG	U		0.91
28583-008	PR-SS-21	5/12/2010	1220	8082	Aroclor 1254	53	53	UG/KG	U		0.91
28583-008	PR-SS-21	5/12/2010	1220	8082	Aroclor 1260	53	53	UG/KG	U		0.91
28583-007	PR-SS-19	5/12/2010	1210	8082	Aroclor 1016	47	47	UG/KG	U		1.2
28583-007	PR-SS-19	5/12/2010	1210	8082	Aroclor 1221	47	47	UG/KG	U		1.2
28583-007	PR-SS-19	5/12/2010	1210	8082	Aroclor 1232	47	47	UG/KG	U		1.2
28583-007	PR-SS-19	5/12/2010	1210	8082	Aroclor 1242	47	47	UG/KG	U		1.2
28583-007	PR-SS-19	5/12/2010	1210	8082	Aroclor 1248	47	47	UG/KG	U		1.2
28583-007	PR-SS-19	5/12/2010	1210	8082	Aroclor 1254	47	47	UG/KG	U		1.2
28583-007	PR-SS-19	5/12/2010	1210	8082	Aroclor 1260	47	47	UG/KG	U		1.2
28583-006	PR-SS-18	5/12/2010	1200	8082	Aroclor 1016	51	51	UG/KG	U		1.27
28583-006	PR-SS-18	5/12/2010	1200	8082	Aroclor 1221	51	51	UG/KG	U		1.27
28583-006	PR-SS-18	5/12/2010	1200	8082	Aroclor 1232	51	51	UG/KG	U		1.27
28583-006	PR-SS-18	5/12/2010	1200	8082	Aroclor 1242	51	51	UG/KG	U		1.27
28583-006	PR-SS-18	5/12/2010	1200	8082	Aroclor 1248	51	51	UG/KG	U		1.27
28583-006	PR-SS-18	5/12/2010	1200	8082	Aroclor 1254	51	51	UG/KG	U		1.27
28583-006	PR-SS-18	5/12/2010	1200	8082	Aroclor 1260	51	51	UG/KG	U		1.27
28583-005	PR-SS-17	5/12/2010	1140	8082	Aroclor 1016	62	62	UG/KG	U		1.33
28583-005	PR-SS-17	5/12/2010	1140	8082	Aroclor 1221	62	62	UG/KG	U		1.33
28583-005	PR-SS-17	5/12/2010	1140	8082	Aroclor 1232	62	62	UG/KG	U		1.33
28583-005	PR-SS-17	5/12/2010	1140	8082	Aroclor 1242	62	62	UG/KG	U		1.33
28583-005	PR-SS-17	5/12/2010	1140	8082	Aroclor 1248	62	62	UG/KG	U		1.33
28583-005	PR-SS-17	5/12/2010	1140	8082	Aroclor 1254	62	62	UG/KG	U		1.33
28583-005	PR-SS-17	5/12/2010	1140	8082	Aroclor 1260	62	62	UG/KG	U		1.33
28583-004	PR-SS-16	5/12/2010	1120	8082	Aroclor 1016	51	51	UG/KG	U		1.4
28583-004	PR-SS-16	5/12/2010	1120	8082	Aroclor 1221	51	51	UG/KG	U		1.4
28583-004	PR-SS-16	5/12/2010	1120	8082	Aroclor 1232	51	51	UG/KG	U		1.4
28583-004	PR-SS-16	5/12/2010	1120	8082	Aroclor 1242	51	51	UG/KG	U		1.4
28583-004	PR-SS-16	5/12/2010	1120	8082	Aroclor 1248	51	51	UG/KG	U		1.4
28583-004	PR-SS-16	5/12/2010	1120	8082	Aroclor 1254	51	51	UG/KG	U		1.4
28583-004	PR-SS-16	5/12/2010	1120	8082	Aroclor 1260	51	51	UG/KG	U		1.4
28583-003	PR-SS-15	5/12/2010	1115	8082	Aroclor 1016	61	61	UG/KG	U		1.52
28583-003	PR-SS-15	5/12/2010	1115	8082	Aroclor 1221	61	61	UG/KG	U		1.52
28583-003	PR-SS-15	5/12/2010	1115	8082	Aroclor 1232	61	61	UG/KG	U		1.52

Appendix B - 2010 Peconic River Sediment Samples

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28583-003	PR-SS-15	5/12/2010	1115	8082	Aroclor 1242	61	61	UG/KG	U		1.52
28583-003	PR-SS-15	5/12/2010	1115	8082	Aroclor 1248	61	61	UG/KG	U		1.52
28583-003	PR-SS-15	5/12/2010	1115	8082	Aroclor 1254	61	61	UG/KG	U		1.52
28583-003	PR-SS-15	5/12/2010	1115	8082	Aroclor 1260	61	61	UG/KG	U		1.52
28583-002	PR-SS-14	5/12/2010	1110	8082	Aroclor 1016	61	61	UG/KG	U		1.56
28583-002	PR-SS-14	5/12/2010	1110	8082	Aroclor 1221	61	61	UG/KG	U		1.56
28583-002	PR-SS-14	5/12/2010	1110	8082	Aroclor 1232	61	61	UG/KG	U		1.56
28583-002	PR-SS-14	5/12/2010	1110	8082	Aroclor 1242	61	61	UG/KG	U		1.56
28583-002	PR-SS-14	5/12/2010	1110	8082	Aroclor 1248	61	61	UG/KG	U		1.56
28583-002	PR-SS-14	5/12/2010	1110	8082	Aroclor 1254	61	61	UG/KG	U		1.56
28583-002	PR-SS-14	5/12/2010	1110	8082	Aroclor 1260	61	61	UG/KG	U		1.56
28583-001	PR-SS-12	5/12/2010	1100	8082	Aroclor 1016	42	42	UG/KG	U		1.66
28583-001	PR-SS-12	5/12/2010	1100	8082	Aroclor 1221	42	42	UG/KG	U		1.66
28583-001	PR-SS-12	5/12/2010	1100	8082	Aroclor 1232	42	42	UG/KG	U		1.66
28583-001	PR-SS-12	5/12/2010	1100	8082	Aroclor 1242	42	42	UG/KG	U		1.66
28583-001	PR-SS-12	5/12/2010	1100	8082	Aroclor 1248	42	42	UG/KG	U		1.66
28583-001	PR-SS-12	5/12/2010	1100	8082	Aroclor 1254	42	42	UG/KG	U		1.66
28583-001	PR-SS-12	5/12/2010	1100	8082	Aroclor 1260	42	42	UG/KG	U		1.66
28579-009	PR-SS-10	5/11/2010	1350	8082	Aroclor 1016	54	54	UG/KG	U		1.84
28579-009	PR-SS-10	5/11/2010	1350	8082	Aroclor 1221	54	54	UG/KG	U		1.84
28579-009	PR-SS-10	5/11/2010	1350	8082	Aroclor 1232	54	54	UG/KG	U		1.84
28579-009	PR-SS-10	5/11/2010	1350	8082	Aroclor 1242	54	54	UG/KG	U		1.84
28579-009	PR-SS-10	5/11/2010	1350	8082	Aroclor 1248	54	54	UG/KG	U		1.84
28579-009	PR-SS-10	5/11/2010	1350	8082	Aroclor 1254	54	54	UG/KG	U		1.84
28579-009	PR-SS-10	5/11/2010	1350	8082	Aroclor 1260	54	54	UG/KG	U		1.84
28579-008	PR-SS-09	5/11/2010	1340	8082	Aroclor 1016	45	45	UG/KG	U		1.93
28579-008	PR-SS-09	5/11/2010	1340	8082	Aroclor 1221	45	45	UG/KG	U		1.93
28579-008	PR-SS-09	5/11/2010	1340	8082	Aroclor 1232	45	45	UG/KG	U		1.93
28579-008	PR-SS-09	5/11/2010	1340	8082	Aroclor 1242	45	45	UG/KG	U		1.93
28579-008	PR-SS-09	5/11/2010	1340	8082	Aroclor 1248	45	45	UG/KG	U		1.93
28579-008	PR-SS-09	5/11/2010	1340	8082	Aroclor 1254	45	45	UG/KG	U		1.93
28579-008	PR-SS-09	5/11/2010	1340	8082	Aroclor 1260	45	45	UG/KG	U		1.93
28579-007	PR-SS-07	5/11/2010	1330	8082	Aroclor 1016	46	46	UG/KG	U		2.02
28579-007	PR-SS-07	5/11/2010	1330	8082	Aroclor 1221	46	46	UG/KG	U		2.02
28579-007	PR-SS-07	5/11/2010	1330	8082	Aroclor 1232	46	46	UG/KG	U		2.02
28579-007	PR-SS-07	5/11/2010	1330	8082	Aroclor 1242	46	46	UG/KG	U		2.02

Appendix B - 2010 Peconic River Sediment Samples

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28579-007	PR-SS-07	5/11/2010	1330	8082	Aroclor 1248	46	46	UG/KG	U		2.02
28579-007	PR-SS-07	5/11/2010	1330	8082	Aroclor 1254	46	46	UG/KG	U		2.02
28579-007	PR-SS-07	5/11/2010	1330	8082	Aroclor 1260	46	46	UG/KG	U		2.02
28579-006	PR-SS-06	5/11/2010	1320	8082	Aroclor 1016	46	46	UG/KG	U		2.08
28579-006	PR-SS-06	5/11/2010	1320	8082	Aroclor 1221	46	46	UG/KG	U		2.08
28579-006	PR-SS-06	5/11/2010	1320	8082	Aroclor 1232	46	46	UG/KG	U		2.08
28579-006	PR-SS-06	5/11/2010	1320	8082	Aroclor 1242	46	46	UG/KG	U		2.08
28579-006	PR-SS-06	5/11/2010	1320	8082	Aroclor 1248	46	46	UG/KG	U		2.08
28579-006	PR-SS-06	5/11/2010	1320	8082	Aroclor 1254	46	46	UG/KG	U		2.08
28579-006	PR-SS-06	5/11/2010	1320	8082	Aroclor 1260	46	46	UG/KG	U		2.08
28579-005	PR-SS-05	5/11/2010	1300	8082	Aroclor 1016	78	78	UG/KG	U		2.32
28579-005	PR-SS-05	5/11/2010	1300	8082	Aroclor 1221	78	78	UG/KG	U		2.32
28579-005	PR-SS-05	5/11/2010	1300	8082	Aroclor 1232	78	78	UG/KG	U		2.32
28579-005	PR-SS-05	5/11/2010	1300	8082	Aroclor 1242	78	78	UG/KG	U		2.32
28579-005	PR-SS-05	5/11/2010	1300	8082	Aroclor 1248	78	78	UG/KG	U		2.32
28579-005	PR-SS-05	5/11/2010	1300	8082	Aroclor 1254	78	78	UG/KG	U		2.32
28579-005	PR-SS-05	5/11/2010	1300	8082	Aroclor 1260	78	78	UG/KG	U		2.32
28579-004	PR-SS-04	5/11/2010	1240	8082	Aroclor 1016	61	61	UG/KG	U		2.52
28579-004	PR-SS-04	5/11/2010	1240	8082	Aroclor 1221	61	61	UG/KG	U		2.52
28579-004	PR-SS-04	5/11/2010	1240	8082	Aroclor 1232	61	61	UG/KG	U		2.52
28579-004	PR-SS-04	5/11/2010	1240	8082	Aroclor 1242	61	61	UG/KG	U		2.52
28579-004	PR-SS-04	5/11/2010	1240	8082	Aroclor 1248	61	61	UG/KG	U		2.52
28579-004	PR-SS-04	5/11/2010	1240	8082	Aroclor 1254	61	61	UG/KG	U		2.52
28579-004	PR-SS-04	5/11/2010	1240	8082	Aroclor 1260	61	61	UG/KG	U		2.52
28579-003	PR-SS-03	5/11/2010	1230	8082	Aroclor 1016	62	62	UG/KG	U		2.65
28579-003	PR-SS-03	5/11/2010	1230	8082	Aroclor 1221	62	62	UG/KG	U		2.65
28579-003	PR-SS-03	5/11/2010	1230	8082	Aroclor 1232	62	62	UG/KG	U		2.65
28579-003	PR-SS-03	5/11/2010	1230	8082	Aroclor 1242	62	62	UG/KG	U		2.65
28579-003	PR-SS-03	5/11/2010	1230	8082	Aroclor 1248	62	62	UG/KG	U		2.65
28579-003	PR-SS-03	5/11/2010	1230	8082	Aroclor 1254	62	62	UG/KG	U		2.65
28579-003	PR-SS-03	5/11/2010	1230	8082	Aroclor 1260	62	62	UG/KG	U		2.65
28579-002	PR-SS-02	5/11/2010	1220	8082	Aroclor 1016	220	220	UG/KG	U		2.76
28579-002	PR-SS-02	5/11/2010	1220	8082	Aroclor 1221	220	220	UG/KG	U		2.76
28579-002	PR-SS-02	5/11/2010	1220	8082	Aroclor 1232	220	220	UG/KG	U		2.76
28579-002	PR-SS-02	5/11/2010	1220	8082	Aroclor 1242	220	220	UG/KG	U		2.76
28579-002	PR-SS-02	5/11/2010	1220	8082	Aroclor 1248	220	220	UG/KG	U		2.76

Appendix B - 2010 Peconic River Sediment Samples

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28579-002	PR-SS-02	5/11/2010	1220	8082	Aroclor 1254	220	220	UG/KG	U		2.76
28579-002	PR-SS-02	5/11/2010	1220	8082	Aroclor 1260	220	220	UG/KG	U		2.76
28579-001	PR-SS-01	5/11/2010	1200	8082	Aroclor 1016	67	67	UG/KG	U		2.9
28579-001	PR-SS-01	5/11/2010	1200	8082	Aroclor 1221	67	67	UG/KG	U		2.9
28579-001	PR-SS-01	5/11/2010	1200	8082	Aroclor 1232	67	67	UG/KG	U		2.9
28579-001	PR-SS-01	5/11/2010	1200	8082	Aroclor 1242	67	67	UG/KG	U		2.9
28579-001	PR-SS-01	5/11/2010	1200	8082	Aroclor 1248	67	67	UG/KG	U		2.9
28579-001	PR-SS-01	5/11/2010	1200	8082	Aroclor 1254	67	67	UG/KG	U		2.9
28579-001	PR-SS-01	5/11/2010	1200	8082	Aroclor 1260	67	67	UG/KG	U		2.9
28580-002	PR-MR-02	5/11/2010	1050	8082	Aroclor 1016	55	55	UG/KG	U		4.5
28580-002	PR-MR-02	5/11/2010	1050	8082	Aroclor 1221	55	55	UG/KG	U		4.5
28580-002	PR-MR-02	5/11/2010	1050	8082	Aroclor 1232	55	55	UG/KG	U		4.5
28580-002	PR-MR-02	5/11/2010	1050	8082	Aroclor 1242	55	55	UG/KG	U		4.5
28580-002	PR-MR-02	5/11/2010	1050	8082	Aroclor 1248	55	55	UG/KG	U		4.5
28580-002	PR-MR-02	5/11/2010	1050	8082	Aroclor 1254	55	55	UG/KG	U		4.5
28580-002	PR-MR-02	5/11/2010	1050	8082	Aroclor 1260	55	55	UG/KG	U		4.5
28580-001	PR-MR-01	5/11/2010	1100	8082	Aroclor 1016	130	130	UG/KG	U		4.28
28580-001	PR-MR-01	5/11/2010	1100	8082	Aroclor 1221	130	130	UG/KG	U		4.28
28580-001	PR-MR-01	5/11/2010	1100	8082	Aroclor 1232	130	130	UG/KG	U		4.28
28580-001	PR-MR-01	5/11/2010	1100	8082	Aroclor 1242	130	130	UG/KG	U		4.28
28580-001	PR-MR-01	5/11/2010	1100	8082	Aroclor 1248	130	130	UG/KG	U		4.28
28580-001	PR-MR-01	5/11/2010	1100	8082	Aroclor 1254	130	130	UG/KG	U		4.28
28580-001	PR-MR-01	5/11/2010	1100	8082	Aroclor 1260	130	130	UG/KG	U		4.28

[1] Qualifiers

U - Indicates that the analyte was analyzed for but not detected.

Appendix C - 2010 Peconic River Sediment Samples

Radionuclides

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28587-008	PR-SS-38	5/13/2010	1130	901.1 MOD	Cesium-137	0.81	0.14	0.05	PCI/G			0.36
28587-007	PR-SS-37	5/13/2010	1110	901.1 MOD	Cesium-137	1.79	0.2	0.05	PCI/G			0.47
28587-006	PR-SS-35	5/13/2010	1105	901.1 MOD	Cesium-137	0.71	0.1	0.03	PCI/G			0.49
28587-005	PR-SS-33	5/13/2010	1100	901.1 MOD	Cesium-137	2.65	0.3	0.12	PCI/G			0.49
28587-004	PR-SS-31	5/13/2010	1040	901.1 MOD	Cesium-137	0.36	0.12	0.1	PCI/G			0.67
28587-003	PR-SS-30	5/13/2010	1035	901.1 MOD	Cesium-137	0.401	0.079	0.042	PCI/G			0.69
28587-002	PR-SS-29	5/13/2010	1030	901.1 MOD	Cesium-137	0.58	0.11	0.05	PCI/G			0.69
28587-001	PR-SS-26	5/13/2010	1020	901.1 MOD	Cesium-137	0.222	0.055	0.023	PCI/G			0.75
28583-010	PR-SS-24	5/12/2010	1240	901.1 MOD	Cesium-137	1.03	0.19	0.12	PCI/G			0.8
28583-009	PR-SS-23	5/12/2010	1230	901.1 MOD	Cesium-137	0.59	0.11	0.03	PCI/G			0.85
28583-008	PR-SS-21	5/12/2010	1220	901.1 MOD	Cesium-137	0.65	0.11	0.06	PCI/G			0.91
28583-007	PR-SS-19	5/12/2010	1210	901.1 MOD	Cesium-137	0.72	0.12	0.05	PCI/G			1.2
28583-006	PR-SS-18	5/12/2010	1200	901.1 MOD	Cesium-137	1.1	0.15	0.05	PCI/G			1.27
28583-005	PR-SS-17	5/12/2010	1140	901.1 MOD	Cesium-137	1	0.16	0.05	PCI/G			1.33
28583-004	PR-SS-16	5/12/2010	1120	901.1 MOD	Cesium-137	0.8	0.1	0.03	PCI/G			1.4
28583-003	PR-SS-15	5/12/2010	1115	901.1 MOD	Cesium-137	0.67	0.16	0.13	PCI/G			1.52
28583-002	PR-SS-14	5/12/2010	1110	901.1 MOD	Cesium-137	0.6	0.13	0.07	PCI/G			1.56
28583-001	PR-SS-12	5/12/2010	1100	901.1 MOD	Cesium-137	0.366	0.073	0.025	PCI/G			1.66
28579-009	PR-SS-10	5/11/2010	1350	901.1 MOD	Cesium-137	0.62	0.11	0.05	PCI/G			1.84
28579-008	PR-SS-09	5/11/2010	1340	901.1 MOD	Cesium-137	0.249	0.076	0.06	PCI/G			1.93
28579-007	PR-SS-07	5/11/2010	1330	901.1 MOD	Cesium-137	0.059	0.057	0.09	PCI/G	U		2.02
28579-006	PR-SS-06	5/11/2010	1320	901.1 MOD	Cesium-137	0.08	0.051	0.075	PCI/G	J		2.08
28579-005	PR-SS-05	5/11/2010	1300	901.1 MOD	Cesium-137	1.1	0.14	0.05	PCI/G			2.32
28579-004	PR-SS-04	5/11/2010	1240	901.1 MOD	Cesium-137	0.066	0.058	0.089	PCI/G	U		2.52
28579-003	PR-SS-03	5/11/2010	1230	901.1 MOD	Cesium-137	0.331	0.068	0.024	PCI/G			2.65
28579-002	PR-SS-02	5/11/2010	1220	901.1 MOD	Cesium-137	0.19	0.17	0.27	PCI/G	U		2.76
28579-001	PR-SS-01	5/11/2010	1200	901.1 MOD	Cesium-137	0.045	0.055	0.09	PCI/G	U		2.9
28580-002	PR-MR-02	5/11/2010	1050	901.1 MOD	Cesium-137	0.169	0.061	0.051	PCI/G	J		4.5
28580-001	PR-MR-01	5/11/2010	1100	901.1 MOD	Cesium-137	0.32	0.1	0.12	PCI/G			4.28
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Actinium-227	-0.0157	0.231	0.354	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Actinium-228	0.666	0.271	0.205	PCI/G	J		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Americium-241	0.0312	0.0428	0.0595	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Antimony-124	0.0327	0.109	0.19	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Antimony-125	0.00586	0.0928	0.15	PCI/G	U		6.75

Appendix C - 2010 Peconic River Sediment Samples

Radionuclides

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Antimony-126	-0.156	0.309	0.479	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Antimony-127	-17.8	19.1	28.2	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Barium-133	0.0271	0.0404	0.0613	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Barium-137m	0.49	0.102	0.0636	PCI/G	J		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Barium-140	0.568	0.626	1.02	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Beryllium-7	0.217	0.406	0.671	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Bismuth-207	0.0489	0.0466	0.0859	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Bismuth-211	2.43	0.533	0.291	PCI/G	J-UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Bismuth-212	0.455	0.58	0.943	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Bismuth-214	0.821	0.197	0.111	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cadmium-109	1.5	0.635	0.719	PCI/G	J-UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cadmium-115	741	1120	0	PCI/G	J-UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cerium-139	-0.00535	0.0231	0.0361	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cerium-141	-0.0715	0.0641	0.0957	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cerium-143	344000	260000	0	PCI/G	UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cerium-144	-0.0404	0.158	0.222	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cesium-134	0.0691	0.0494	0.0888	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cesium-135	0.0613	0.136	0.215	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cesium-136	0.0739	0.217	0.374	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cesium-137	0.518	0.108	0.0672	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Chromium-51	0.0797	0.472	0.779	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Co-60	-0.00105	0.0405	0.0659	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cobalt-56	0.0109	0.0404	0.0672	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cobalt-57	-0.00384	0.0166	0.0263	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Cobalt-58	-0.019	0.0455	0.0706	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Europium-152	-0.047	0.106	0.146	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Europium-154	-0.0374	0.109	0.17	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Europium-155	0.0336	0.0615	0.102	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Gadolinium-153	-0.0582	0.046	0.0692	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Iodine-126	0.327	0.541	0.827	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Iodine-131	0.236	0.404	0.679	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Iodine-133	-5.38E+08	9.35E+08	0	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Iodine-135	4.53E+31	1.69E+32	0	PCI/G	UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Irid-192	0.00613	0.0354	0.0586	PCI/G	U		6.75

Appendix C - 2010 Peconic River Sediment Samples

Radionuclides

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Iron-59	0.025	0.109	0.185	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Lanthanum-140	-0.0631	0.222	0.355	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Lead-210	3.39	0.642	0.436	PCI/G	J		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Lead-211	-0.401	0.689	1.02	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Lead-212	0.599	0.11	0.07	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Lead-214	0.88	0.199	0.106	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Manganese-54	-0.00521	0.0405	0.0647	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Mercury-203	0.0144	0.042	0.0658	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Molybdenum-99	319	519	0	PCI/G	J-UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Neodymium-147	-0.522	1.33	2.01	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Neptunium-239	-0.0875	0.252	0.398	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Niobium-94	-0.000228	0.0364	0.0595	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Niobium-95	0.00399	0.0485	0.0794	PCI/G	DL		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Potassium-40	2.97	0.81	0.532	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Promethium-144	-0.0295	0.0403	0.0622	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Promethium-146	-0.00333	0.0487	0.0702	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Promethium-149	-2420	9110	0	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Protactinium-231	-0.2	1.25	1.89	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Protactinium-233	-0.0382	0.0565	0.0884	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Protactinium-234	0.245	0.313	0.537	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	234m	-4.02	5.62	7.22	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Radium-223	-0.623	0.577	0.862	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Radium-224	2.01	0.756	0.752	PCI/G	J-UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Radium-226	0.821	0.197	0.111	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Radium-228	0.666	0.271	0.205	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Radon-219	0.0777	0.392	0.64	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Rhodium-106	0.143	0.313	0.535	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Ruthenium-103	0.0124	0.0519	0.084	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Ruthenium-106	0.143	0.313	0.535	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Scandium-46	-0.0268	0.0434	0.0647	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Selenium-75	-0.0284	0.0447	0.0657	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Silver-108m	-0.000769	0.0301	0.0481	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Silver-110m	0.0183	0.0421	0.0633	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Sodium-22	-0.0157	0.0391	0.0605	PCI/G	DL		6.75

Appendix C - 2010 Peconic River Sediment Samples

Radionuclides

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP (miles)
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Sodium-24	-3.97E+12	1.08E+13	0	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Strontium-85	-0.239	0.0723	0.0869	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Tantalum-182	0.03	0.163	0.273	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Technetium-99m	6.02E+33	3.21E+34	0	PCI/G	UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Tellurium-123m	0.0163	0.0226	0.0371	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Tellurium-125m	2.95	6.76	11.1	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Tellurium-132	-7.35	15.9	0	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thallium-208	0.104	0.0761	0.0536	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thorium-227	-0.0157	0.231	0.354	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thorium-228	0.599	0.11	0.07	PCI/G			6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thorium-229	0.171	0.412	0.661	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thorium-230	0.821	0.192	0.111	PCI/G	J		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thorium-231	-0.623	0.577	0.862	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thorium-232	0.666	0.271	0.205	PCI/G	J		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Thorium-234	0.0741	0.51	0.78	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Tin-113	0.0446	0.0464	0.0793	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Tin-117m	0.0314	0.0858	0.139	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Tin-126	0.143	0.0607	0.0642	PCI/G	J-UI		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Uranium-234	0.821	0.192	0.111	PCI/G	J		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Uranium-235	0.125	0.167	0.251	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Uranium-238	0.0741	0.51	0.78	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Vanadium-48	0.0688	0.118	0.202	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Yttrium-88	0.00791	0.0417	0.0714	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Zinc-65	0.0332	0.0846	0.129	PCI/G	U		6.75
28621-001	PR-DP-01	5/25/2010	1030	DOE HASL 300	Zirconium-95	0.0517	0.086	0.147	PCI/G	U		6.75

[1] Qualifiers

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected.

Appendix D

2010 Water Column Total Mercury, Methyl Mercury and TSS Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28746-001	PR-WCS-07	6/15/2010	0	U	CAL	EPA 1631E	Mercury	4.2	0.2	NG/L			7.23
30170-001	PR-WCS-07	7/22/2010	0	U	CAL	EPA 1631E	Mercury	3.6	0.2	NG/L			7.23
28746-001	PR-WCS-07	6/15/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.655	0.02	NG/L			7.23
30170-001	PR-WCS-07	7/22/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.687	0.02	NG/L			7.23
30171-001	PR-WCS-07	7/22/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			7.23
30170-001	PR-WCS-07	7/22/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		7.23
28746-001	PR-WCS-07	6/15/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	JB		7.23
28745-001	PR-WCS-07	6/15/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			7.23
30170-002	PR-WCS-06	7/22/2010	0	U	CAL	EPA 1631E	Mercury	3.2	0.2	NG/L			6.75
28746-002	PR-WCS-06	6/15/2010	0	U	CAL	EPA 1631E	Mercury	4.7	0.2	NG/L			6.75
28746-002	PR-WCS-06	6/15/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.37	0.02	NG/L			6.75
30170-002	PR-WCS-06	7/22/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.565	0.02	NG/L			6.75
30170-002	PR-WCS-06	7/22/2010	0	U	CAL	SM20-2540 D	TSS	3	2	MG/L			6.75
30171-002	PR-WCS-06	7/22/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			6.75
28745-002	PR-WCS-06	6/15/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			6.75
28746-002	PR-WCS-06	6/15/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		6.75
30170-003	PR-WCS-05	7/22/2010	0	U	CAL	EPA 1631E	Mercury	3.1	0.2	NG/L			6.04
28746-003	PR-WCS-05	6/15/2010	0	U	CAL	EPA 1631E	Mercury	3.9	0.2	NG/L			6.04
28746-003	PR-WCS-05	6/15/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.832	0.02	NG/L			6.04
30170-003	PR-WCS-05	7/22/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.5	0.02	NG/L			6.04
30171-003	PR-WCS-05	7/22/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			6.04
30170-003	PR-WCS-05	7/22/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		6.04
28745-003	PR-WCS-05	6/15/2010	0	U	STL-MO	160.2	TSS	2	1	MG/L			6.04
28746-003	PR-WCS-05	6/15/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	JB		6.04
30156-001	PR-WCS-04	7/19/2010	0	U	CAL	EPA 1631E	Mercury	7.6	0.2	NG/L			4.77
30090-001	PR-WCS-04	6/8/2010	0	U	CAL	EPA 1631E	Mercury	14.8	0.2	NG/L			4.77
30090-001	PR-WCS-04	6/8/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.44	0.02	NG/L			4.77
30156-001	PR-WCS-04	7/19/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.89	0.02	NG/L			4.77
30206-001	PR-WCS-04	8/4/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			4.77
28774-001	PR-WCS-04	6/23/2010	0	U	STL-MO	160.2	TSS	9	1	MG/L			4.77
30157-001	PR-WCS-04	7/19/2010	0	U	STL-MO	160.2	TSS	14	1	MG/L			4.77
30156-001	PR-WCS-04	7/19/2010	0	U	CAL	SM20-2540 D	TSS	4	2	MG/L			4.77
30091-001	PR-WCS-04	6/8/2010	0	U	STL-MO	160.2	TSS	16	1	MG/L			4.77
30090-001	PR-WCS-04	6/8/2010	0	U	CAL	SM20-2540 D	TSS	7	2	MG/L			4.77
28609-001	PR-WCS-04	5/20/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		4.77
30090-002	PR-WCS-03	6/8/2010	0	U	CAL	EPA 1631E	Mercury	13.8	0.2	NG/L			4.44
30156-002	PR-WCS-03	7/19/2010	0	U	CAL	EPA 1631E	Mercury	6.9	0.2	NG/L			4.44
30090-002	PR-WCS-03	6/8/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.56	0.02	NG/L			4.44

Appendix D

2010 Water Column Total Mercury, Methyl Mercury and TSS Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30156-002	PR-WCS-03	7/19/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.05	0.02	NG/L			4.44
30156-002	PR-WCS-03	7/19/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		4.44
30157-002	PR-WCS-03	7/19/2010	0	U	STL-MO	160.2	TSS	9	1	MG/L			4.44
30090-002	PR-WCS-03	6/8/2010	0	U	CAL	SM20-2540 D	TSS	5	2	MG/L			4.44
30090-003	PR-WCS-02	6/8/2010	0	U	CAL	EPA 1631E	Mercury	15.4	0.2	NG/L			3.99
30156-003	PR-WCS-02	7/19/2010	0	U	CAL	EPA 1631E	Mercury	7.9	0.2	NG/L			3.99
30090-003	PR-WCS-02	6/8/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.68	0.02	NG/L			3.99
30156-003	PR-WCS-02	7/19/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.69	0.02	NG/L			3.99
30156-003	PR-WCS-02	7/19/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	JB		3.99
30157-003	PR-WCS-02	7/19/2010	0	U	STL-MO	160.2	TSS	8	1	MG/L			3.99
30090-003	PR-WCS-02	6/8/2010	0	U	CAL	SM20-2540 D	TSS	9	2	MG/L			3.99
30091-003	PR-WCS-02	6/8/2010	0	U	STL-MO	160.2	TSS	12	1	MG/L			3.99
30090-004	PR-WCS-01	6/8/2010	0	U	CAL	EPA 1631E	Mercury	16.5	0.2	NG/L			3.42
30156-004	PR-WCS-01	7/19/2010	0	U	CAL	EPA 1631E	Mercury	9	0.2	NG/L			3.42
30090-004	PR-WCS-01	6/8/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.46	0.02	NG/L			3.42
30156-004	PR-WCS-01	7/19/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.45	0.02	NG/L			3.42
30156-004	PR-WCS-01	7/19/2010	0	U	CAL	SM20-2540 D	TSS	13	1	MG/L			3.42
30157-004	PR-WCS-01	7/19/2010	0	U	STL-MO	160.2	TSS	16	1	MG/L			3.42
30091-004	PR-WCS-01	6/8/2010	0	U	STL-MO	160.2	TSS	10	1	MG/L			3.42
30090-004	PR-WCS-01	6/8/2010	0	U	CAL	SM20-2540 D	TSS	5	2	MG/L			3.42
28734-004	PR-WC-12-D7	6/10/2010	0	U	CAL	EPA 1631E	Mercury	15.3	0.2	NG/L			-0.04
30167-004	PR-WC-12-D7	7/21/2010	0	U	BROOKS	EPA 1631E	Mercury	13.3	0.2	NG/L			-0.04
30167-004	PR-WC-12-D7	7/21/2010	0	U	BROOKS	DRAFT EPA 1630	Methyl Mercury	4.27	0.02	NG/L			-0.04
28734-004	PR-WC-12-D7	6/10/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.54	0.02	NG/L			-0.04
30168-003	PR-WC-12-D7	7/21/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			-0.04
30167-004	PR-WC-12-D7	7/21/2010	0	U	BROOKS	SM20-2540 D	TSS	6	2	MG/L			-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	STL-MO	160.2	TSS	4	1	MG/L			-0.04
28734-004	PR-WC-12-D7	6/10/2010	0	U	CAL	SM20-2540 D	TSS	3	2	MG/L			-0.04
28734-002	PR-WC-11DS	6/10/2010	0	U	CAL	EPA 1631E	Mercury	19.9	0.2	NG/L			0.01
30167-002	PR-WC-11DS	7/21/2010	0	U	BROOKS	EPA 1631E	Mercury	33.4	0.2	NG/L			0.01
28734-002	PR-WC-11DS	6/10/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.09	0.02	NG/L			0.01
30167-002	PR-WC-11DS	7/21/2010	0	U	BROOKS	DRAFT EPA 1630	Methyl Mercury	2.31	0.02	NG/L			0.01
30167-002	PR-WC-11DS	7/21/2010	0	U	BROOKS	SM20-2540 D	TSS	2	2	MG/L	U		0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.01
28734-002	PR-WC-11DS	6/10/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.01
30167-001	PR-WC-10	7/21/2010	0	U	BROOKS	EPA 1631E	Mercury	36.8	0.2	NG/L			0.3
28734-001	PR-WC-10	6/10/2010	0	U	CAL	EPA 1631E	Mercury	22.5	0.2	NG/L			0.3

Appendix D

2010 Water Column Total Mercury, Methyl Mercury and TSS Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28734-001	PR-WC-10	6/10/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.4	0.02	NG/L			0.3
30167-001	PR-WC-10	7/21/2010	0	U	BROOKS	DRAFT EPA 1630	Methyl Mercury	1.92	0.02	NG/L			0.3
30210-004	PR-WC-10	8/5/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			0.3
30168-001	PR-WC-10	7/21/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		0.3
30167-001	PR-WC-10	7/21/2010	0	U	BROOKS	SM20-2540 D	TSS	2	2	MG/L	U		0.3
28776-004	PR-WC-10	6/23/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.3
28734-001	PR-WC-10	6/10/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		0.3
28735-001	PR-WC-10	6/10/2010	0	U	STL-MO	160.2	TSS	2	1	MG/L			0.3
28610-004	PR-WC-10	5/21/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		0.3
28732-003	PR-WC-08	6/10/2010	0	U	CAL	EPA 1631E	Mercury	29	0.2	NG/L			0.78
30161-003	PR-WC-08	7/20/2010	0	U	CAL	EPA 1631E	Mercury	48	0.2	NG/L			0.78
28732-003	PR-WC-08	6/10/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	3.76	0.02	NG/L			0.78
30161-003	PR-WC-08	7/20/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.18	0.02	NG/L			0.78
30210-002	PR-WC-08	8/5/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			0.78
28610-002	PR-WC-08	5/21/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		0.78
28776-002	PR-WC-08	6/23/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.78
30162-003	PR-WC-08	7/20/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.78
30161-003	PR-WC-08	7/20/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		0.78
28733-003	PR-WC-08	6/10/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.78
28732-003	PR-WC-08	6/10/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		0.78
28732-001	PR-WC-06	6/10/2010	0	U	CAL	EPA 1631E	Mercury	23.6	0.2	NG/L			1.1
30161-001	PR-WC-06	7/20/2010	0	U	CAL	EPA 1631E	Mercury	17.2	0.2	NG/L			1.1
28732-001	PR-WC-06	6/10/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.67	0.02	NG/L			1.1
30161-001	PR-WC-06	7/20/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.84	0.02	NG/L			1.1
30210-001	PR-WC-06	8/5/2010	0	U	STL-MO	160.2	TSS	2	1	MG/L			1.1
28776-001	PR-WC-06	6/23/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			1.1
30161-001	PR-WC-06	7/20/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		1.1
30162-001	PR-WC-06	7/20/2010	0	U	STL-MO	160.2	TSS	6	1	MG/L			1.1
28732-001	PR-WC-06	6/10/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		1.1
28733-001	PR-WC-06	6/10/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			1.1
28610-001	PR-WC-06	5/21/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		1.1
28727-004	PR-WC-05	6/9/2010	0	U	CAL	EPA 1631E	Mercury	35.3	0.2	NG/L			1.46
30159-004	PR-WC-05	7/20/2010	0	U	CAL	EPA 1631E	Mercury	26.6	0.2	NG/L			1.46
28727-004	PR-WC-05	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	6.74	0.02	NG/L			1.46
30159-004	PR-WC-05	7/20/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.61	0.02	NG/L			1.46
30160-004	PR-WC-05	7/20/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			1.46
30159-004	PR-WC-05	7/20/2010	0	U	CAL	SM20-2540 D	TSS	3	2	MG/L			1.46
28727-004	PR-WC-05	6/9/2010	0	U	CAL	SM20-2540 D	TSS	28	2	MG/L			1.46

Appendix D

2010 Water Column Total Mercury, Methyl Mercury and TSS Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28728-004	PR-WC-05	6/9/2010	0	U	STL-MO	160.2	TSS	7	1	MG/L			1.46
28727-002	PR-WC-03	6/9/2010	0	U	CAL	EPA 1631E	Mercury	25.3	0.2	NG/L			2.1
30159-002	PR-WC-03	7/20/2010	0	U	CAL	EPA 1631E	Mercury	12	0.2	NG/L			2.1
28727-002	PR-WC-03	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	3.9	0.02	NG/L			2.1
30159-002	PR-WC-03	7/20/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.3	0.02	NG/L			2.1
30206-003	PR-WC-03	8/4/2010	0	U	STL-MO	160.2	TSS	5	1	MG/L			2.1
28774-003	PR-WC-03	6/23/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			2.1
30159-002	PR-WC-03	7/20/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		2.1
30160-002	PR-WC-03	7/20/2010	0	U	STL-MO	160.2	TSS	4	1	MG/L			2.1
28728-002	PR-WC-03	6/9/2010	0	U	STL-MO	160.2	TSS	2	1	MG/L			2.1
28727-002	PR-WC-03	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		2.1
28609-003	PR-WC-03	5/20/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		2.1
30091-002	PR-WC-03	6/8/2010	0	U	STL-MO	160.2	TSS	13	1	MG/L			2.1
30090-005	PR-WC-01	6/8/2010	0	U	CAL	EPA 1631E	Mercury	15.9	0.2	NG/L			2.98
30159-001	PR-WC-01	7/20/2010	0	U	CAL	EPA 1631E	Mercury	4.6	0.2	NG/L			2.98
30159-001	PR-WC-01	7/20/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.829	0.02	NG/L			2.98
30090-005	PR-WC-01	6/8/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.25	0.02	NG/L			2.98
28774-002	PR-WC-01	6/23/2010	0	U	STL-MO	160.2	TSS	8	1	MG/L			2.98
30091-005	PR-WC-01	6/8/2010	0	U	STL-MO	160.2	TSS	7	1	MG/L			2.98
30090-005	PR-WC-01	6/8/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		2.98
30206-002	PR-WC-01	8/4/2010	0	U	STL-MO	160.2	TSS	5	1	MG/L			2.98
30160-001	PR-WC-01	7/20/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			2.98
30159-001	PR-WC-01	7/20/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		2.98
28609-002	PR-WC-01	5/20/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		2.98
28398-004	WC-4	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	19.8	0.59	ng/L			
28520-004	WC-4	4/21/2010	0	U	CAL	EPA 1631E	Mercury	17	0.2	NG/L			
28729-004	WC-4	6/9/2010	0	U	CAL	EPA 1631E	Mercury	26.4	0.2	NG/L			
30166-004	WC-4	7/21/2010	0	U	CAL	EPA 1631E	Mercury	15.6	0.2	NG/L			
28729-004	WC-4	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.63	0.02	NG/L			
30166-004	WC-4	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.72	0.02	NG/L			
28398-004	WC-4	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.594	0.039	ng/L			
28520-004	WC-4	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.959	0.02	NG/L			
28729-004	WC-4	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28730-004	WC-4	6/9/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		
30166-004	WC-4	7/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
30165-004	WC-4	7/21/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			
28520-004	WC-4	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28398-004	WC-4	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	0.8	0.8	mg/L	U		

Appendix D

2010 Water Column Total Mercury, Methyl Mercury and TSS Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30166-003	WC-3	7/21/2010	0	U	CAL	EPA 1631E	Mercury	23.6	0.2	NG/L			
28398-003	WC-3	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	21.6	0.6	ng/L			
28520-003	WC-3	4/21/2010	0	U	CAL	EPA 1631E	Mercury	21	0.2	NG/L			
28729-003	WC-3	6/9/2010	0	U	CAL	EPA 1631E	Mercury	27.1	0.2	NG/L			
28398-003	WC-3	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.651	0.04	ng/L			
28520-003	WC-3	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.01	0.02	NG/L			
28729-003	WC-3	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	5.26	0.02	NG/L			
30166-003	WC-3	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.88	0.02	NG/L			
30166-003	WC-3	7/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
30165-003	WC-3	7/21/2010	0	U	STL-MO	160.2	TSS	2	1	MG/L			
28729-003	WC-3	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28730-003	WC-3	6/9/2010	0	U	STL-MO	160.2	TSS	2	1	MG/L			
28520-003	WC-3	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28398-003	WC-3	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	1.4	0.3	mg/L			
28729-002	WC-2	6/9/2010	0	U	CAL	EPA 1631E	Mercury	28	0.2	NG/L			
30166-002	WC-2	7/21/2010	0	U	CAL	EPA 1631E	Mercury	9.9	0.2	NG/L			
28398-002	WC-2	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	21.3	0.55	ng/L			
28520-002	WC-2	4/21/2010	0	U	CAL	EPA 1631E	Mercury	17	0.2	NG/L			
28729-002	WC-2	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	5.86	0.02	NG/L			
30166-002	WC-2	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.46	0.02	NG/L			
28398-002	WC-2	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.64	0.041	ng/L			
28520-002	WC-2	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.638	0.02	NG/L			
28729-002	WC-2	6/9/2010	0	U	CAL	SM20-2540 D	TSS	7	2	MG/L			
28730-002	WC-2	6/9/2010	0	U	STL-MO	160.2	TSS	6	1	MG/L			
30165-002	WC-2	7/21/2010	0	U	STL-MO	160.2	TSS	4	1	MG/L			
30166-002	WC-2	7/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28520-002	WC-2	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28398-002	WC-2	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	0.9	0.3	mg/L	B		
30166-001	WC-1	7/21/2010	0	U	CAL	EPA 1631E	Mercury	9.9	0.2	NG/L			
28398-001	WC-1	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	21.2	0.51	ng/L			
28520-001	WC-1	4/21/2010	0	U	CAL	EPA 1631E	Mercury	18	0.2	NG/L			
28729-001	WC-1	6/9/2010	0	U	CAL	EPA 1631E	Mercury	26	0.2	NG/L			
28398-001	WC-1	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.571	0.04	ng/L			
28520-001	WC-1	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.951	0.02	NG/L			
28729-001	WC-1	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.94	0.02	NG/L			
30166-001	WC-1	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.47	0.02	NG/L			
30165-001	WC-1	7/21/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			
30166-001	WC-1	7/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		

Appendix D

2010 Water Column Total Mercury, Methyl Mercury and TSS Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28729-001	WC-1	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28730-001	WC-1	6/9/2010	0	U	STL-MO	160.2	TSS	1	1	MG/L			
28520-001	WC-1	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28398-001	WC-1	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	1.2	0.3	mg/L			
28398-008	WC4	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	21.1	0.56	ng/L			
28520-008	WC4	4/21/2010	0	U	CAL	EPA 1631E	Mercury	17	0.2	NG/L			
28729-008	WC4	6/9/2010	0	U	CAL	EPA 1631E	Mercury	32.8	0.2	NG/L			
30166-008	WC4	7/21/2010	0	U	CAL	EPA 1631E	Mercury	14	0.2	NG/L			
30166-008	WC4	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.55	0.02	NG/L			
28520-008	WC4	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.05	0.02	NG/L			
28729-008	WC4	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.62	0.02	NG/L			
28398-008	WC4	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.684	0.04	ng/L			
28520-008	WC4	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28729-008	WC4	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	JB		
30165-008	WC4	7/21/2010	0	U	STL-MO	160.2	TSS	5	1	MG/L			
30166-008	WC4	7/21/2010	0	U	CAL	SM20-2540 D	TSS	5	2	MG/L			
28398-008	WC4	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	1.5	0.3	mg/L			
30166-007	WC3	7/21/2010	0	U	CAL	EPA 1631E	Mercury	16.9	0.2	NG/L			
28729-007	WC3	6/9/2010	0	U	CAL	EPA 1631E	Mercury	28.1	0.2	NG/L			
28398-007	WC3	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	20.7	0.59	ng/L			
28520-007	WC3	4/21/2010	0	U	CAL	EPA 1631E	Mercury	16	0.2	NG/L			
28398-007	WC3	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.636	0.04	ng/L			
28520-007	WC3	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.987	0.02	NG/L			
28729-007	WC3	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.53	0.02	NG/L			
30166-007	WC3	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.15	0.02	NG/L			
28729-007	WC3	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
30166-007	WC3	7/21/2010	0	U	CAL	SM20-2540 D	TSS	3	2	MG/L			
30165-007	WC3	7/21/2010	0	U	STL-MO	160.2	TSS	7	1	MG/L			
28520-007	WC3	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28398-007	WC3	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	0.9	0.3	mg/L	B		
30166-006	WC2	7/21/2010	0	U	CAL	EPA 1631E	Mercury	12.2	0.2	NG/L			
28398-006	WC2	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	21.3	0.58	ng/L			
28520-006	WC2	4/21/2010	0	U	CAL	EPA 1631E	Mercury	15	0.2	NG/L			
28729-006	WC2	6/9/2010	0	U	CAL	EPA 1631E	Mercury	27.3	0.2	NG/L			
28520-006	WC2	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.228	0.02	NG/L			
28729-006	WC2	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	4.07	0.02	NG/L			
28398-006	WC2	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.85	0.04	ng/L			
30166-006	WC2	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	2.96	0.02	NG/L			

Appendix D

2010 Water Column Total Mercury, Methyl Mercury and TSS Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30165-006	WC2	7/21/2010	0	U	STL-MO	160.2	TSS	5	1	MG/L			
30166-006	WC2	7/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28520-006	WC2	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28729-006	WC2	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28730-006	WC2	6/9/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			
28398-006	WC2	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	1.3	0.3	mg/L			
30166-005	WC1	7/21/2010	0	U	CAL	EPA 1631E	Mercury	12.3	0.2	NG/L			
28729-005	WC1	6/9/2010	0	U	CAL	EPA 1631E	Mercury	26	0.2	NG/L			
28398-005	WC1	3/9/2010	0	U	BROOKS	EPA 1631	Mercury	21.2	0.46	ng/L			
28520-005	WC1	4/21/2010	0	U	CAL	EPA 1631E	Mercury	16	0.2	NG/L			
28398-005	WC1	3/9/2010	0	U	BROOKS	EPA 1630	Methyl Mercury	0.869	0.039	ng/L			
28520-005	WC1	4/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.692	0.02	NG/L			
28729-005	WC1	6/9/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	3.92	0.02	NG/L			
30166-005	WC1	7/21/2010	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	3.15	0.02	NG/L			
28729-005	WC1	6/9/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	JB		
28730-005	WC1	6/9/2010	0	U	STL-MO	160.2	TSS	2	1	MG/L			
30165-005	WC1	7/21/2010	0	U	STL-MO	160.2	TSS	3	1	MG/L			
30166-005	WC1	7/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28520-005	WC1	4/21/2010	0	U	CAL	SM20-2540 D	TSS	2	2	MG/L	U		
28398-005	WC1	3/9/2010	0	U	BROOKS	EPA 160.2	TSS	1.7	0.3	mg/L			

[1] Qualifiers

B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected.

Appendix E

2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
Round 1 : 5/20/2010 to 5/21/2010												
28609-002	PR-WC-01	5/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.98
28609-002	PR-WC-01	5/20/2010	0	U	160.2	TSS	1	1	MG/L	U		2.98
28609-002	PR-WC-01	5/20/2010	0	U	300	Nitrogen	0.15	0.15	MG/L	U		2.98
28609-002	PR-WC-01	5/20/2010	0	U	300.0A	Nitrate (as N)	0.0068	0.02	MG/L	B		2.98
28609-002	PR-WC-01	5/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
28609-002	PR-WC-01	5/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.28	0.5	MG/L	B		2.98
28609-002	PR-WC-01	5/20/2010	0	U	365.2	Phosphorus	97.7	50	UG/L	J		2.98
28609-002	PR-WC-01	5/20/2010	0	U	9060	TOC	8.4	1	MG/L			2.98
28609-003	PR-WC-03	5/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.1
28609-003	PR-WC-03	5/20/2010	0	U	160.2	TSS	1	1	MG/L	U		2.1
28609-003	PR-WC-03	5/20/2010	0	U	300	Nitrogen	0.62	0.15	MG/L			2.1
28609-003	PR-WC-03	5/20/2010	0	U	300.0A	Nitrate (as N)	0.062	0.02	MG/L			2.1
28609-003	PR-WC-03	5/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
28609-003	PR-WC-03	5/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.5	0.5	MG/L	U		2.1
28609-003	PR-WC-03	5/20/2010	0	U	365.2	Phosphorus	150	50	UG/L	J		2.1
28609-003	PR-WC-03	5/20/2010	0	U	9060	TOC	10.2	2	MG/L			2.1
28609-004	PR-WC-04	5/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.7
28609-004	PR-WC-04	5/20/2010	0	U	160.2	TSS	1	1	MG/L	U		1.7
28609-004	PR-WC-04	5/20/2010	0	U	300	Nitrogen	0.12	0.15	MG/L	B		1.7
28609-004	PR-WC-04	5/20/2010	0	U	300.0A	Nitrate (as N)	0.12	0.02	MG/L			1.7
28609-004	PR-WC-04	5/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.7
28609-004	PR-WC-04	5/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.42	0.5	MG/L	B		1.7
28609-004	PR-WC-04	5/20/2010	0	U	365.2	Phosphorus	172	50	UG/L	J		1.7
28609-004	PR-WC-04	5/20/2010	0	U	9060	TOC	10.8	2	MG/L			1.7
28609-001	PR-WCS-04	5/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.77
28609-001	PR-WCS-04	5/20/2010	0	U	160.2	TSS	1	1	MG/L	U		4.77
28609-001	PR-WCS-04	5/20/2010	0	U	300	Nitrogen	0.15	0.15	MG/L	U		4.77

Appendix E

2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28609-001	PR-WCS-04	5/20/2010	0	U	300.0A	Nitrate (as N)	0.0082	0.02	MG/L	B		4.77
28609-001	PR-WCS-04	5/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
28609-001	PR-WCS-04	5/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.5	0.5	MG/L	U		4.77
28609-001	PR-WCS-04	5/20/2010	0	U	365.2	Phosphorus	112	50	UG/L	J		4.77
28609-001	PR-WCS-04	5/20/2010	0	U	9060	TOC	8.1	1	MG/L			4.77
28610-001	PR-WC-06	5/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.1
28610-001	PR-WC-06	5/21/2010	0	U	160.2	TSS	1	1	MG/L	U		1.1
28610-001	PR-WC-06	5/21/2010	0	U	300	Nitrogen	0.23	0.15	MG/L			1.1
28610-001	PR-WC-06	5/21/2010	0	U	300.0A	Nitrate (as N)	0.23	0.02	MG/L			1.1
28610-001	PR-WC-06	5/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.1
28610-001	PR-WC-06	5/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.43	0.5	MG/L	B		1.1
28610-001	PR-WC-06	5/21/2010	0	U	365.2	Phosphorus	142	50	UG/L	J		1.1
28610-001	PR-WC-06	5/21/2010	0	U	9060	TOC	12.6	2	MG/L			1.1
28610-002	PR-WC-08	5/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.78
28610-002	PR-WC-08	5/21/2010	0	U	160.2	TSS	1	1	MG/L	U		0.78
28610-002	PR-WC-08	5/21/2010	0	U	300	Nitrogen	0.29	0.15	MG/L			0.78
28610-002	PR-WC-08	5/21/2010	0	U	300.0A	Nitrate (as N)	0.29	0.02	MG/L			0.78
28610-002	PR-WC-08	5/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.78
28610-002	PR-WC-08	5/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.29	0.5	MG/L	B		0.78
28610-002	PR-WC-08	5/21/2010	0	U	365.2	Phosphorus	147	50	UG/L	J		0.78
28610-002	PR-WC-08	5/21/2010	0	U	9060	TOC	12.8	2	MG/L			0.78
28610-003	PR-WC-09	5/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.56
28610-003	PR-WC-09	5/21/2010	0	U	160.2	TSS	1	1	MG/L			0.56
28610-003	PR-WC-09	5/21/2010	0	U	300	Nitrogen	0.48	0.15	MG/L			0.56
28610-003	PR-WC-09	5/21/2010	0	U	300.0A	Nitrate (as N)	0.48	0.02	MG/L			0.56
28610-003	PR-WC-09	5/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.56
28610-003	PR-WC-09	5/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.33	0.5	MG/L	B		0.56
28610-003	PR-WC-09	5/21/2010	0	U	365.2	Phosphorus	157	50	UG/L	J		0.56

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2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28610-003	PR-WC-09	5/21/2010	0	U	9060	TOC	11.7	2	MG/L			0.56
28610-004	PR-WC-10	5/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.3
28610-004	PR-WC-10	5/21/2010	0	U	160.2	TSS	1	1	MG/L	U		0.3
28610-004	PR-WC-10	5/21/2010	0	U	300	Nitrogen	0.56	0.15	MG/L			0.3
28610-004	PR-WC-10	5/21/2010	0	U	300.0A	Nitrate (as N)	0.56	0.02	MG/L			0.3
28610-004	PR-WC-10	5/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.3
28610-004	PR-WC-10	5/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.37	0.5	MG/L	B		0.3
28610-004	PR-WC-10	5/21/2010	0	U	365.2	Phosphorus	152	50	UG/L	J		0.3
28610-004	PR-WC-10	5/21/2010	0	U	9060	TOC	12.3	2	MG/L			0.3
Round 2 : 6/1/2010 to 6/15/2010												
30091-005	PR-WC-01	6/8/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.98
30091-005	PR-WC-01	6/8/2010	0	U	160.2	TSS	7	1	MG/L			2.98
30091-005	PR-WC-01	6/8/2010	0	U	300	Nitrogen	0.82	0.15	MG/L			2.98
30091-005	PR-WC-01	6/8/2010	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.98
30091-005	PR-WC-01	6/8/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
30091-005	PR-WC-01	6/8/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.82	0.5	MG/L			2.98
30091-005	PR-WC-01	6/8/2010	0	U	365.2	Phosphorus	221	50	UG/L			2.98
30091-005	PR-WC-01	6/8/2010	0	U	9060	TOC	9.5	1	MG/L			2.98
30091-002	PR-WC-03	6/8/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.1
30091-002	PR-WC-03	6/8/2010	0	U	160.2	TSS	13	1	MG/L			2.1
30091-002	PR-WC-03	6/8/2010	0	U	300	Nitrogen	0.71	0.15	MG/L			2.1
30091-002	PR-WC-03	6/8/2010	0	U	300.0A	Nitrate (as N)	0.0068	0.02	MG/L	B		2.1
30091-002	PR-WC-03	6/8/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
30091-002	PR-WC-03	6/8/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.7	0.5	MG/L			2.1
30091-002	PR-WC-03	6/8/2010	0	U	365.2	Phosphorus	317	50	UG/L			2.1
30091-002	PR-WC-03	6/8/2010	0	U	9060	TOC	10.7	2	MG/L			2.1
30091-004	PR-WCS-01	6/8/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		3.42
30091-004	PR-WCS-01	6/8/2010	0	U	160.2	TSS	10	1	MG/L			3.42

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2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30091-004	PR-WCS-01	6/8/2010	0	U	300	Nitrogen	0.88	0.15	MG/L			3.42
30091-004	PR-WCS-01	6/8/2010	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		3.42
30091-004	PR-WCS-01	6/8/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.42
30091-004	PR-WCS-01	6/8/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.88	0.5	MG/L			3.42
30091-004	PR-WCS-01	6/8/2010	0	U	365.2	Phosphorus	251	50	UG/L			3.42
30091-004	PR-WCS-01	6/8/2010	0	U	9060	TOC	10.2	2	MG/L			3.42
30091-003	PR-WCS-02	6/8/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		3.99
30091-003	PR-WCS-02	6/8/2010	0	U	160.2	TSS	12	1	MG/L			3.99
30091-003	PR-WCS-02	6/8/2010	0	U	300	Nitrogen	0.98	0.15	MG/L			3.99
30091-003	PR-WCS-02	6/8/2010	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		3.99
30091-003	PR-WCS-02	6/8/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.99
30091-003	PR-WCS-02	6/8/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.98	0.5	MG/L			3.99
30091-003	PR-WCS-02	6/8/2010	0	U	365.2	Phosphorus	347	50	UG/L			3.99
30091-003	PR-WCS-02	6/8/2010	0	U	9060	TOC	9.8	2	MG/L			3.99
30091-001	PR-WCS-04	6/8/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.77
30091-001	PR-WCS-04	6/8/2010	0	U	160.2	TSS	16	1	MG/L			4.77
30091-001	PR-WCS-04	6/8/2010	0	U	300	Nitrogen	0.7	0.15	MG/L			4.77
30091-001	PR-WCS-04	6/8/2010	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		4.77
30091-001	PR-WCS-04	6/8/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
30091-001	PR-WCS-04	6/8/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.72	0.5	MG/L			4.77
30091-001	PR-WCS-04	6/8/2010	0	U	365.2	Phosphorus	326	50	UG/L			4.77
30091-001	PR-WCS-04	6/8/2010	0	U	9060	TOC	10.5	2	MG/L			4.77
28728-001	PR-WC-02	6/9/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.52
28728-001	PR-WC-02	6/9/2010	0	U	160.2	TSS	2	1	MG/L			2.52
28728-001	PR-WC-02	6/9/2010	0	U	300	Nitrogen	1.2	0.15	MG/L			2.52
28728-001	PR-WC-02	6/9/2010	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.52
28728-001	PR-WC-02	6/9/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.52
28728-001	PR-WC-02	6/9/2010	0	U	351.2	Total Kjeldahl Nitrogen	1.2	0.5	MG/L			2.52

Appendix E

2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28728-001	PR-WC-02	6/9/2010	0	U	365.2	Phosphorus	209	50	UG/L			2.52
28728-001	PR-WC-02	6/9/2010	0	U	9060	TOC	9.5	1	MG/L			2.52
28728-002	PR-WC-03	6/9/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.1
28728-002	PR-WC-03	6/9/2010	0	U	160.2	TSS	2	1	MG/L			2.1
28728-002	PR-WC-03	6/9/2010	0	U	300	Nitrogen	1.3	0.15	MG/L			2.1
28728-002	PR-WC-03	6/9/2010	0	U	300.0A	Nitrate (as N)	0.023	0.02	MG/L			2.1
28728-002	PR-WC-03	6/9/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
28728-002	PR-WC-03	6/9/2010	0	U	351.2	Total Kjeldahl Nitrogen	1.3	0.5	MG/L			2.1
28728-002	PR-WC-03	6/9/2010	0	U	365.2	Phosphorus	239	50	UG/L			2.1
28728-002	PR-WC-03	6/9/2010	0	U	9060	TOC	9	1	MG/L			2.1
28728-003	PR-WC-04	6/9/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.7
28728-003	PR-WC-04	6/9/2010	0	U	160.2	TSS	2	1	MG/L			1.7
28728-003	PR-WC-04	6/9/2010	0	U	300	Nitrogen	1.2	0.15	MG/L			1.7
28728-003	PR-WC-04	6/9/2010	0	U	300.0A	Nitrate (as N)	0.045	0.02	MG/L			1.7
28728-003	PR-WC-04	6/9/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.7
28728-003	PR-WC-04	6/9/2010	0	U	351.2	Total Kjeldahl Nitrogen	1.2	0.5	MG/L			1.7
28728-003	PR-WC-04	6/9/2010	0	U	365.2	Phosphorus	253	50	UG/L			1.7
28728-003	PR-WC-04	6/9/2010	0	U	9060	TOC	9.5	1	MG/L			1.7
28728-004	PR-WC-05	6/9/2010	0	U	10200 H	Chlorophyll a	31.3	10	UG/L			1.46
28728-004	PR-WC-05	6/9/2010	0	U	160.2	TSS	7	1	MG/L			1.46
28728-004	PR-WC-05	6/9/2010	0	U	300	Nitrogen	0.89	0.15	MG/L			1.46
28728-004	PR-WC-05	6/9/2010	0	U	300.0A	Nitrate (as N)	0.062	0.02	MG/L			1.46
28728-004	PR-WC-05	6/9/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.46
28728-004	PR-WC-05	6/9/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.83	0.5	MG/L			1.46
28728-004	PR-WC-05	6/9/2010	0	U	365.2	Phosphorus	266	50	UG/L			1.46
28728-004	PR-WC-05	6/9/2010	0	U	9060	TOC	9.1	1	MG/L			1.46
28733-001	PR-WC-06	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.1
28733-001	PR-WC-06	6/10/2010	0	U	160.2	TSS	3	1	MG/L			1.1

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28733-001	PR-WC-06	6/10/2010	0	U	300	Nitrogen	0.97	0.15	MG/L			1.1
28733-001	PR-WC-06	6/10/2010	0	U	300.0A	Nitrate (as N)	0.38	0.02	MG/L			1.1
28733-001	PR-WC-06	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.1
28733-001	PR-WC-06	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.59	0.5	MG/L			1.1
28733-001	PR-WC-06	6/10/2010	0	U	365.2	Phosphorus	252	50	UG/L			1.1
28733-001	PR-WC-06	6/10/2010	0	U	9060	TOC	7.3	1	MG/L			1.1
28733-002	PR-WC-07	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.96
28733-002	PR-WC-07	6/10/2010	0	U	160.2	TSS	1	1	MG/L			0.96
28733-002	PR-WC-07	6/10/2010	0	U	300	Nitrogen	1.1	0.15	MG/L			0.96
28733-002	PR-WC-07	6/10/2010	0	U	300.0A	Nitrate (as N)	0.5	0.02	MG/L			0.96
28733-002	PR-WC-07	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.96
28733-002	PR-WC-07	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.61	0.5	MG/L			0.96
28733-002	PR-WC-07	6/10/2010	0	U	365.2	Phosphorus	242	50	UG/L			0.96
28733-002	PR-WC-07	6/10/2010	0	U	9060	TOC	7.2	1	MG/L			0.96
28733-003	PR-WC-08	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.78
28733-003	PR-WC-08	6/10/2010	0	U	160.2	TSS	3	1	MG/L			0.78
28733-003	PR-WC-08	6/10/2010	0	U	300	Nitrogen	1.6	0.15	MG/L			0.78
28733-003	PR-WC-08	6/10/2010	0	U	300.0A	Nitrate (as N)	1	0.1	MG/L			0.78
28733-003	PR-WC-08	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.78
28733-003	PR-WC-08	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.62	0.5	MG/L			0.78
28733-003	PR-WC-08	6/10/2010	0	U	365.2	Phosphorus	262	50	UG/L			0.78
28733-003	PR-WC-08	6/10/2010	0	U	9060	TOC	7.4	1	MG/L			0.78
28733-004	PR-WC-09	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.56
28733-004	PR-WC-09	6/10/2010	0	U	160.2	TSS	2	1	MG/L			0.56
28733-004	PR-WC-09	6/10/2010	0	U	300	Nitrogen	1.6	0.15	MG/L			0.56
28733-004	PR-WC-09	6/10/2010	0	U	300.0A	Nitrate (as N)	0.89	0.02	MG/L			0.56
28733-004	PR-WC-09	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.56
28733-004	PR-WC-09	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.67	0.5	MG/L			0.56

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28733-004	PR-WC-09	6/10/2010	0	U	365.2	Phosphorus	234	50	UG/L			0.56
28733-004	PR-WC-09	6/10/2010	0	U	9060	TOC	8.5	1	MG/L			0.56
28735-001	PR-WC-10	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.3
28735-001	PR-WC-10	6/10/2010	0	U	160.2	TSS	2	1	MG/L			0.3
28735-001	PR-WC-10	6/10/2010	0	U	300	Nitrogen	1.5	0.15	MG/L			0.3
28735-001	PR-WC-10	6/10/2010	0	U	300.0A	Nitrate (as N)	0.8	0.02	MG/L			0.3
28735-001	PR-WC-10	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.3
28735-001	PR-WC-10	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.69	0.5	MG/L			0.3
28735-001	PR-WC-10	6/10/2010	0	U	365.2	Phosphorus	209	50	UG/L			0.3
28735-001	PR-WC-10	6/10/2010	0	U	9060	TOC	9.1	1	MG/L			0.3
28735-002	PR-WC-11DS	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	160.2	TSS	3	1	MG/L			0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	300	Nitrogen	1.6	0.15	MG/L			0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	300.0A	Nitrate (as N)	0.96	0.02	MG/L			0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.67	0.5	MG/L			0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	365.2	Phosphorus	169	50	UG/L			0.01
28735-002	PR-WC-11DS	6/10/2010	0	U	9060	TOC	8.8	1	MG/L			0.01
28735-003	PR-WC-12-D7	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	160.2	TSS	4	1	MG/L			-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	300	Nitrogen	0.59	0.15	MG/L			-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	300.0A	Nitrate (as N)	0.027	0.02	MG/L			-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.56	0.5	MG/L			-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	365.2	Phosphorus	46.1	50	UG/L	B		-0.04
28735-003	PR-WC-12-D7	6/10/2010	0	U	9060	TOC	9.5	1	MG/L			-0.04
28735-004	PR-WC-13	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		-0.07
28735-004	PR-WC-13	6/10/2010	0	U	160.2	TSS	7	1	MG/L			-0.07

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28735-004	PR-WC-13	6/10/2010	0	U	300	Nitrogen	0.63	0.15	MG/L			-0.07
28735-004	PR-WC-13	6/10/2010	0	U	300.0A	Nitrate (as N)	0.027	0.02	MG/L			-0.07
28735-004	PR-WC-13	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.07
28735-004	PR-WC-13	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.6	0.5	MG/L			-0.07
28735-004	PR-WC-13	6/10/2010	0	U	365.2	Phosphorus	51.1	50	UG/L			-0.07
28735-004	PR-WC-13	6/10/2010	0	U	9060	TOC	9.4	1	MG/L			-0.07
28735-005	PR-WC-14	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		-0.13
28735-005	PR-WC-14	6/10/2010	0	U	160.2	TSS	4	1	MG/L			-0.13
28735-005	PR-WC-14	6/10/2010	0	U	300	Nitrogen	0.65	0.15	MG/L			-0.13
28735-005	PR-WC-14	6/10/2010	0	U	300.0A	Nitrate (as N)	0.03	0.02	MG/L			-0.13
28735-005	PR-WC-14	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.13
28735-005	PR-WC-14	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.62	0.5	MG/L			-0.13
28735-005	PR-WC-14	6/10/2010	0	U	365.2	Phosphorus	41.1	50	UG/L	B		-0.13
28735-005	PR-WC-14	6/10/2010	0	U	9060	TOC	9.5	1	MG/L			-0.13
28735-006	PR-WC-15	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		-0.17
28735-006	PR-WC-15	6/10/2010	0	U	160.2	TSS	4	1	MG/L			-0.17
28735-006	PR-WC-15	6/10/2010	0	U	300	Nitrogen	0.72	0.15	MG/L			-0.17
28735-006	PR-WC-15	6/10/2010	0	U	300.0A	Nitrate (as N)	0.032	0.02	MG/L			-0.17
28735-006	PR-WC-15	6/10/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.17
28735-006	PR-WC-15	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.69	0.5	MG/L			-0.17
28735-006	PR-WC-15	6/10/2010	0	U	365.2	Phosphorus	48.6	50	UG/L	B		-0.17
28735-006	PR-WC-15	6/10/2010	0	U	9060	TOC	9.1	1	MG/L			-0.17
28735-008	STP-EFF-UVG	6/10/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0
28735-008	STP-EFF-UVG	6/10/2010	0	U	160.2	TSS	1	1	MG/L			0
28735-008	STP-EFF-UVG	6/10/2010	0	U	300	Nitrogen	10	0.15	MG/L			0
28735-008	STP-EFF-UVG	6/10/2010	0	U	300.0A	Nitrate (as N)	8.2	0.4	MG/L			0
28735-008	STP-EFF-UVG	6/10/2010	0	U	300.0A	Nitrite (as N)	0.0035	0.02	MG/L	B		0
28735-008	STP-EFF-UVG	6/10/2010	0	U	351.2	Total Kjeldahl Nitrogen	1.8	0.5	MG/L			0

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28735-008	STP-EFF-UVG	6/10/2010	0	U	365.2	Phosphorus	1400	250	UG/L			0
28735-008	STP-EFF-UVG	6/10/2010	0	U	9060	TOC	2.4	1	MG/L			0
28745-004	CONNETQUOT	6/15/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		
28745-004	CONNETQUOT	6/15/2010	0	U	160.2	TSS	2	1	MG/L			
28745-004	CONNETQUOT	6/15/2010	0	U	300	Nitrogen	6	0.15	MG/L			
28745-004	CONNETQUOT	6/15/2010	0	U	300.0A	Nitrate (as N)	5.9	0.02	MG/L			
28745-004	CONNETQUOT	6/15/2010	0	U	300.0A	Nitrite (as N)	0.052	0.02	MG/L			
28745-004	CONNETQUOT	6/15/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.5	0.5	MG/L	U		
28745-004	CONNETQUOT	6/15/2010	0	U	365.2	Phosphorus	24.4	50	UG/L	B		
28745-004	CONNETQUOT	6/15/2010	0	U	9060	TOC	2.4	1	MG/L			
28745-003	PR-WCS-05	6/15/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		6.04
28745-003	PR-WCS-05	6/15/2010	0	U	160.2	TSS	2	1	MG/L			6.04
28745-003	PR-WCS-05	6/15/2010	0	U	300	Nitrogen	0.41	0.15	MG/L			6.04
28745-003	PR-WCS-05	6/15/2010	0	U	300.0A	Nitrate (as N)	0.0069	0.02	MG/L	B		6.04
28745-003	PR-WCS-05	6/15/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.04
28745-003	PR-WCS-05	6/15/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.4	0.5	MG/L	B		6.04
28745-003	PR-WCS-05	6/15/2010	0	U	365.2	Phosphorus	85.7	50	UG/L			6.04
28745-003	PR-WCS-05	6/15/2010	0	U	9060	TOC	6.4	1	MG/L			6.04
28745-002	PR-WCS-06	6/15/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		6.75
28745-002	PR-WCS-06	6/15/2010	0	U	160.2	TSS	3	1	MG/L			6.75
28745-002	PR-WCS-06	6/15/2010	0	U	300	Nitrogen	0.59	0.15	MG/L			6.75
28745-002	PR-WCS-06	6/15/2010	0	U	300.0A	Nitrate (as N)	0.0048	0.02	MG/L	B		6.75
28745-002	PR-WCS-06	6/15/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.75
28745-002	PR-WCS-06	6/15/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.59	0.5	MG/L			6.75
28745-002	PR-WCS-06	6/15/2010	0	U	365.2	Phosphorus	124	50	UG/L			6.75
28745-002	PR-WCS-06	6/15/2010	0	U	9060	TOC	7.2	1	MG/L			6.75
28745-001	PR-WCS-07	6/15/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		7.23
28745-001	PR-WCS-07	6/15/2010	0	U	160.2	TSS	3	1	MG/L			7.23

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28745-001	PR-WCS-07	6/15/2010	0	U	300	Nitrogen	0.51	0.15	MG/L			7.23
28745-001	PR-WCS-07	6/15/2010	0	U	300.0A	Nitrate (as N)	0.0079	0.02	MG/L	B		7.23
28745-001	PR-WCS-07	6/15/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		7.23
28745-001	PR-WCS-07	6/15/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.53	0.5	MG/L			7.23
28745-001	PR-WCS-07	6/15/2010	0	U	365.2	Phosphorus	78	50	UG/L			7.23
28745-001	PR-WCS-07	6/15/2010	0	U	9060	TOC	6.7	1	MG/L			7.23
Round 3 : 6/23/2010 to 6/23/2010												
28774-002	PR-WC-01	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.98
28774-002	PR-WC-01	6/23/2010	0	U	160.2	TSS	8	1	MG/L			2.98
28774-002	PR-WC-01	6/23/2010	0	U	300	Nitrogen	0.7	0.15	MG/L			2.98
28774-002	PR-WC-01	6/23/2010	0	U	300.0A	Nitrate (as N)	0.0048	0.02	MG/L	B		2.98
28774-002	PR-WC-01	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
28774-002	PR-WC-01	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.7	0.5	MG/L			2.98
28774-002	PR-WC-01	6/23/2010	0	U	365.2	Phosphorus	169	50	UG/L			2.98
28774-002	PR-WC-01	6/23/2010	0	U	9060	TOC	9.1	1	MG/L			2.98
28774-003	PR-WC-03	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.1
28774-003	PR-WC-03	6/23/2010	0	U	160.2	TSS	1	1	MG/L			2.1
28774-003	PR-WC-03	6/23/2010	0	U	300	Nitrogen	0.61	0.15	MG/L			2.1
28774-003	PR-WC-03	6/23/2010	0	U	300.0A	Nitrate (as N)	0.013	0.02	MG/L	B		2.1
28774-003	PR-WC-03	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
28774-003	PR-WC-03	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.6	0.5	MG/L			2.1
28774-003	PR-WC-03	6/23/2010	0	U	365.2	Phosphorus	205	50	UG/L			2.1
28774-003	PR-WC-03	6/23/2010	0	U	9060	TOC	8.9	1	MG/L			2.1
28774-004	PR-WC-04	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L			1.7
28774-004	PR-WC-04	6/23/2010	0	U	160.2	TSS	2	1	MG/L			1.7
28774-004	PR-WC-04	6/23/2010	0	U	300	Nitrogen	0.76	0.15	MG/L			1.7
28774-004	PR-WC-04	6/23/2010	0	U	300.0A	Nitrate (as N)	0.014	0.02	MG/L	B		1.7
28774-004	PR-WC-04	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.7

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28774-004	PR-WC-04	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.75	0.5	MG/L			1.7
28774-004	PR-WC-04	6/23/2010	0	U	365.2	Phosphorus	242	50	UG/L			1.7
28774-004	PR-WC-04	6/23/2010	0	U	9060	TOC	8.2	1	MG/L			1.7
28776-001	PR-WC-06	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.1
28776-001	PR-WC-06	6/23/2010	0	U	160.2	TSS	1	1	MG/L			1.1
28776-001	PR-WC-06	6/23/2010	0	U	300	Nitrogen	0.89	0.15	MG/L			1.1
28776-001	PR-WC-06	6/23/2010	0	U	300.0A	Nitrate (as N)	0.17	0.02	MG/L			1.1
28776-001	PR-WC-06	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.1
28776-001	PR-WC-06	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.72	0.5	MG/L			1.1
28776-001	PR-WC-06	6/23/2010	0	U	365.2	Phosphorus	280	50	UG/L			1.1
28776-001	PR-WC-06	6/23/2010	0	U	9060	TOC	7.8	1	MG/L			1.1
28776-002	PR-WC-08	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.78
28776-002	PR-WC-08	6/23/2010	0	U	160.2	TSS	3	1	MG/L			0.78
28776-002	PR-WC-08	6/23/2010	0	U	300	Nitrogen	1.6	0.15	MG/L			0.78
28776-002	PR-WC-08	6/23/2010	0	U	300.0A	Nitrate (as N)	0.95	0.4	MG/L			0.78
28776-002	PR-WC-08	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.78
28776-002	PR-WC-08	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.64	0.5	MG/L			0.78
28776-002	PR-WC-08	6/23/2010	0	U	365.2	Phosphorus	357	50	UG/L			0.78
28776-002	PR-WC-08	6/23/2010	0	U	9060	TOC	8.5	1	MG/L			0.78
28776-003	PR-WC-09	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.56
28776-003	PR-WC-09	6/23/2010	0	U	160.2	TSS	3	1	MG/L			0.56
28776-003	PR-WC-09	6/23/2010	0	U	300	Nitrogen	1.9	0.15	MG/L			0.56
28776-003	PR-WC-09	6/23/2010	0	U	300.0A	Nitrate (as N)	1	0.4	MG/L			0.56
28776-003	PR-WC-09	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.56
28776-003	PR-WC-09	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.86	0.5	MG/L			0.56
28776-003	PR-WC-09	6/23/2010	0	U	365.2	Phosphorus	350	50	UG/L			0.56
28776-003	PR-WC-09	6/23/2010	0	U	9060	TOC	8	1	MG/L			0.56
28776-004	PR-WC-10	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.3

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
28776-004	PR-WC-10	6/23/2010	0	U	160.2	TSS	3	1	MG/L			0.3
28776-004	PR-WC-10	6/23/2010	0	U	300	Nitrogen	2.1	0.15	MG/L			0.3
28776-004	PR-WC-10	6/23/2010	0	U	300.0A	Nitrate (as N)	1.3	0.4	MG/L			0.3
28776-004	PR-WC-10	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.3
28776-004	PR-WC-10	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.82	0.5	MG/L			0.3
28776-004	PR-WC-10	6/23/2010	0	U	365.2	Phosphorus	357	50	UG/L			0.3
28776-004	PR-WC-10	6/23/2010	0	U	9060	TOC	8.4	1	MG/L			0.3
28774-001	PR-WCS-04	6/23/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.77
28774-001	PR-WCS-04	6/23/2010	0	U	160.2	TSS	9	1	MG/L			4.77
28774-001	PR-WCS-04	6/23/2010	0	U	300	Nitrogen	0.81	0.15	MG/L			4.77
28774-001	PR-WCS-04	6/23/2010	0	U	300.0A	Nitrate (as N)	0.0073	0.02	MG/L	B		4.77
28774-001	PR-WCS-04	6/23/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
28774-001	PR-WCS-04	6/23/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.79	0.5	MG/L			4.77
28774-001	PR-WCS-04	6/23/2010	0	U	365.2	Phosphorus	177	50	UG/L			4.77
28774-001	PR-WCS-04	6/23/2010	0	U	9060	TOC	7.8	1	MG/L			4.77
Round 4 : 7/19/2010 to 7/23/2010												
30157-004	PR-WCS-01	7/19/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		3.42
30157-004	PR-WCS-01	7/19/2010	0	U	160.2	TSS	16	1	MG/L			3.42
30157-004	PR-WCS-01	7/19/2010	0	U	300	Nitrogen	1	0.15	MG/L			3.42
30157-004	PR-WCS-01	7/19/2010	0	U	300.0A	Nitrate (as N)	0.009	0.02	MG/L	B		3.42
30157-004	PR-WCS-01	7/19/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.42
30157-004	PR-WCS-01	7/19/2010	0	U	351.2	Total Kjeldahl Nitrogen	1	0.5	MG/L			3.42
30157-004	PR-WCS-01	7/19/2010	0	U	365.2	Phosphorus	265	50	UG/L			3.42
30157-004	PR-WCS-01	7/19/2010	0	U	9060	TOC	9.1	1	MG/L			3.42
30157-003	PR-WCS-02	7/19/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		3.99
30157-003	PR-WCS-02	7/19/2010	0	U	160.2	TSS	8	1	MG/L			3.99
30157-003	PR-WCS-02	7/19/2010	0	U	300	Nitrogen	0.74	0.15	MG/L			3.99
30157-003	PR-WCS-02	7/19/2010	0	U	300.0A	Nitrate (as N)	0.0087	0.02	MG/L	B		3.99

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2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30157-003	PR-WCS-02	7/19/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.99
30157-003	PR-WCS-02	7/19/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.74	0.5	MG/L			3.99
30157-003	PR-WCS-02	7/19/2010	0	U	365.2	Phosphorus	224	50	UG/L			3.99
30157-003	PR-WCS-02	7/19/2010	0	U	9060	TOC	8.8	1	MG/L			3.99
30157-002	PR-WCS-03	7/19/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.44
30157-002	PR-WCS-03	7/19/2010	0	U	160.2	TSS	9	1	MG/L			4.44
30157-002	PR-WCS-03	7/19/2010	0	U	300	Nitrogen	0.8	0.15	MG/L			4.44
30157-002	PR-WCS-03	7/19/2010	0	U	300.0A	Nitrate (as N)	0.0055	0.02	MG/L	B		4.44
30157-002	PR-WCS-03	7/19/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.44
30157-002	PR-WCS-03	7/19/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.8	0.5	MG/L			4.44
30157-002	PR-WCS-03	7/19/2010	0	U	365.2	Phosphorus	324	50	UG/L			4.44
30157-002	PR-WCS-03	7/19/2010	0	U	9060	TOC	9.4	1	MG/L			4.44
30157-001	PR-WCS-04	7/19/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.77
30157-001	PR-WCS-04	7/19/2010	0	U	160.2	TSS	14	1	MG/L			4.77
30157-001	PR-WCS-04	7/19/2010	0	U	300	Nitrogen	1	0.15	MG/L			4.77
30157-001	PR-WCS-04	7/19/2010	0	U	300.0A	Nitrate (as N)	0.011	0.02	MG/L	B		4.77
30157-001	PR-WCS-04	7/19/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
30157-001	PR-WCS-04	7/19/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.96	0.5	MG/L			4.77
30157-001	PR-WCS-04	7/19/2010	0	U	365.2	Phosphorus	278	50	UG/L			4.77
30157-001	PR-WCS-04	7/19/2010	0	U	9060	TOC	8.6	1	MG/L			4.77
30160-005	CONNETQUOT	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		
30160-005	CONNETQUOT	7/20/2010	0	U	160.2	TSS	1	1	MG/L	U		
30160-005	CONNETQUOT	7/20/2010	0	U	300	Nitrogen	4.4	0.15	MG/L			
30160-005	CONNETQUOT	7/20/2010	0	U	300.0A	Nitrate (as N)	4.4	0.2	MG/L			
30160-005	CONNETQUOT	7/20/2010	0	U	300.0A	Nitrite (as N)	0.0067	0.02	MG/L	B		
30160-005	CONNETQUOT	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.5	0.5	MG/L	U		
30160-005	CONNETQUOT	7/20/2010	0	U	365.2	Phosphorus	40.9	50	UG/L	B		
30160-005	CONNETQUOT	7/20/2010	0	U	9060	TOC	2.6	1	MG/L			

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2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30160-001	PR-WC-01	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.98
30160-001	PR-WC-01	7/20/2010	0	U	160.2	TSS	1	1	MG/L			2.98
30160-001	PR-WC-01	7/20/2010	0	U	300	Nitrogen	0.6	0.15	MG/L			2.98
30160-001	PR-WC-01	7/20/2010	0	U	300.0A	Nitrate (as N)	0.0055	0.02	MG/L	B		2.98
30160-001	PR-WC-01	7/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
30160-001	PR-WC-01	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.6	0.5	MG/L			2.98
30160-001	PR-WC-01	7/20/2010	0	U	365.2	Phosphorus	126	50	UG/L			2.98
30160-001	PR-WC-01	7/20/2010	0	U	9060	TOC	7.1	1	MG/L			2.98
30160-002	PR-WC-03	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.1
30160-002	PR-WC-03	7/20/2010	0	U	160.2	TSS	4	1	MG/L			2.1
30160-002	PR-WC-03	7/20/2010	0	U	300	Nitrogen	0.72	0.15	MG/L			2.1
30160-002	PR-WC-03	7/20/2010	0	U	300.0A	Nitrate (as N)	0.0049	0.02	MG/L	B		2.1
30160-002	PR-WC-03	7/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
30160-002	PR-WC-03	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.72	0.5	MG/L			2.1
30160-002	PR-WC-03	7/20/2010	0	U	365.2	Phosphorus	345	50	UG/L			2.1
30160-002	PR-WC-03	7/20/2010	0	U	9060	TOC	7	1	MG/L			2.1
30160-003	PR-WC-04	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.7
30160-003	PR-WC-04	7/20/2010	0	U	160.2	TSS	5	1	MG/L			1.7
30160-003	PR-WC-04	7/20/2010	0	U	300	Nitrogen	0.76	0.15	MG/L			1.7
30160-003	PR-WC-04	7/20/2010	0	U	300.0A	Nitrate (as N)	0.01	0.02	MG/L	B		1.7
30160-003	PR-WC-04	7/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.7
30160-003	PR-WC-04	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.76	0.5	MG/L			1.7
30160-003	PR-WC-04	7/20/2010	0	U	365.2	Phosphorus	375	50	UG/L			1.7
30160-003	PR-WC-04	7/20/2010	0	U	9060	TOC	7.3	1	MG/L			1.7
30160-004	PR-WC-05	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.46
30160-004	PR-WC-05	7/20/2010	0	U	160.2	TSS	1	1	MG/L			1.46
30160-004	PR-WC-05	7/20/2010	0	U	300	Nitrogen	1.1	0.15	MG/L			1.46
30160-004	PR-WC-05	7/20/2010	0	U	300.0A	Nitrate (as N)	0.11	0.02	MG/L			1.46

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30160-004	PR-WC-05	7/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.46
30160-004	PR-WC-05	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	1	0.5	MG/L			1.46
30160-004	PR-WC-05	7/20/2010	0	U	365.2	Phosphorus	438	50	UG/L			1.46
30160-004	PR-WC-05	7/20/2010	0	U	9060	TOC	7.3	1	MG/L			1.46
30162-001	PR-WC-06	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.1
30162-001	PR-WC-06	7/20/2010	0	U	160.2	TSS	6	1	MG/L			1.1
30162-001	PR-WC-06	7/20/2010	0	U	300	Nitrogen	1.3	0.15	MG/L			1.1
30162-001	PR-WC-06	7/20/2010	0	U	300.0A	Nitrate (as N)	0.47	0.02	MG/L			1.1
30162-001	PR-WC-06	7/20/2010	0	U	300.0A	Nitrite (as N)	0.0061	0.02	MG/L	B		1.1
30162-001	PR-WC-06	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.87	0.5	MG/L			1.1
30162-001	PR-WC-06	7/20/2010	0	U	365.2	Phosphorus	496	100	UG/L			1.1
30162-001	PR-WC-06	7/20/2010	0	U	9060	TOC	6.7	1	MG/L			1.1
30162-002	PR-WC-07	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.96
30162-002	PR-WC-07	7/20/2010	0	U	160.2	TSS	1	1	MG/L			0.96
30162-002	PR-WC-07	7/20/2010	0	U	300	Nitrogen	1.5	0.15	MG/L			0.96
30162-002	PR-WC-07	7/20/2010	0	U	300.0A	Nitrate (as N)	0.53	0.02	MG/L			0.96
30162-002	PR-WC-07	7/20/2010	0	U	300.0A	Nitrite (as N)	0.0042	0.02	MG/L	B		0.96
30162-002	PR-WC-07	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.96	0.5	MG/L			0.96
30162-002	PR-WC-07	7/20/2010	0	U	365.2	Phosphorus	475	50	UG/L			0.96
30162-002	PR-WC-07	7/20/2010	0	U	9060	TOC	6.3	1	MG/L			0.96
30162-003	PR-WC-08	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.78
30162-003	PR-WC-08	7/20/2010	0	U	160.2	TSS	3	1	MG/L			0.78
30162-003	PR-WC-08	7/20/2010	0	U	300	Nitrogen	2.2	0.15	MG/L			0.78
30162-003	PR-WC-08	7/20/2010	0	U	300.0A	Nitrate (as N)	1.4	0.04	MG/L			0.78
30162-003	PR-WC-08	7/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.78
30162-003	PR-WC-08	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.85	0.5	MG/L			0.78
30162-003	PR-WC-08	7/20/2010	0	U	365.2	Phosphorus	613	100	UG/L			0.78
30162-003	PR-WC-08	7/20/2010	0	U	9060	TOC	5.6	1	MG/L			0.78

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30162-004	PR-WC-09	7/20/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.56
30162-004	PR-WC-09	7/20/2010	0	U	160.2	TSS	3	1	MG/L			0.56
30162-004	PR-WC-09	7/20/2010	0	U	300	Nitrogen	3.1	0.15	MG/L			0.56
30162-004	PR-WC-09	7/20/2010	0	U	300.0A	Nitrate (as N)	1.6	0.04	MG/L			0.56
30162-004	PR-WC-09	7/20/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.56
30162-004	PR-WC-09	7/20/2010	0	U	351.2	Total Kjeldahl Nitrogen	1.5	0.5	MG/L			0.56
30162-004	PR-WC-09	7/20/2010	0	U	365.2	Phosphorus	608	100	UG/L			0.56
30162-004	PR-WC-09	7/20/2010	0	U	9060	TOC	5.7	1	MG/L			0.56
30168-001	PR-WC-10	7/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.3
30168-001	PR-WC-10	7/21/2010	0	U	160.2	TSS	1	1	MG/L	U		0.3
30168-001	PR-WC-10	7/21/2010	0	U	300	Nitrogen	2.9	0.15	MG/L			0.3
30168-001	PR-WC-10	7/21/2010	0	U	300.0A	Nitrate (as N)	2	0.2	MG/L			0.3
30168-001	PR-WC-10	7/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.3
30168-001	PR-WC-10	7/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.9	0.5	MG/L			0.3
30168-001	PR-WC-10	7/21/2010	0	U	365.2	Phosphorus	496	100	UG/L			0.3
30168-001	PR-WC-10	7/21/2010	0	U	9060	TOC	6.3	1	MG/L			0.3
30168-002	PR-WC-11DS	7/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	160.2	TSS	3	1	MG/L			0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	300	Nitrogen	2.8	0.15	MG/L			0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	300.0A	Nitrate (as N)	2	0.2	MG/L			0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.81	0.5	MG/L			0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	365.2	Phosphorus	431	50	UG/L			0.01
30168-002	PR-WC-11DS	7/21/2010	0	U	9060	TOC	6.9	1	MG/L			0.01
30168-003	PR-WC-12-D7	7/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		-0.04
30168-003	PR-WC-12-D7	7/21/2010	0	U	160.2	TSS	3	1	MG/L			-0.04
30168-003	PR-WC-12-D7	7/21/2010	0	U	300	Nitrogen	0.61	0.15	MG/L			-0.04
30168-003	PR-WC-12-D7	7/21/2010	0	U	300.0A	Nitrate (as N)	0.011	0.02	MG/L	B		-0.04

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30168-003	PR-WC-12-D7	7/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.04
30168-003	PR-WC-12-D7	7/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.61	0.5	MG/L			-0.04
30168-003	PR-WC-12-D7	7/21/2010	0	U	365.2	Phosphorus	50.1	50	UG/L			-0.04
30168-003	PR-WC-12-D7	7/21/2010	0	U	9060	TOC	9.5	1	MG/L			-0.04
30168-008	STP-EFF-UVG	7/21/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0
30168-008	STP-EFF-UVG	7/21/2010	0	U	160.2	TSS	1	1	MG/L			0
30168-008	STP-EFF-UVG	7/21/2010	0	U	300	Nitrogen	5.6	0.15	MG/L			0
30168-008	STP-EFF-UVG	7/21/2010	0	U	300.0A	Nitrate (as N)	5.6	0.2	MG/L			0
30168-008	STP-EFF-UVG	7/21/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0
30168-008	STP-EFF-UVG	7/21/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.5	0.5	MG/L	U		0
30168-008	STP-EFF-UVG	7/21/2010	0	U	365.2	Phosphorus	1040	250	UG/L			0
30168-008	STP-EFF-UVG	7/21/2010	0	U	9060	TOC	3.1	1	MG/L			0
30171-003	PR-WCS-05	7/22/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		6.04
30171-003	PR-WCS-05	7/22/2010	0	U	160.2	TSS	3	1	MG/L			6.04
30171-003	PR-WCS-05	7/22/2010	0	U	300	Nitrogen	0.15	0.15	MG/L	U		6.04
30171-003	PR-WCS-05	7/22/2010	0	U	300.0A	Nitrate (as N)	0.012	0.02	MG/L	B		6.04
30171-003	PR-WCS-05	7/22/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.04
30171-003	PR-WCS-05	7/22/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.48	0.5	MG/L	B		6.04
30171-003	PR-WCS-05	7/22/2010	0	U	365.2	Phosphorus	127	50	UG/L			6.04
30171-003	PR-WCS-05	7/22/2010	0	U	9060	TOC	6.9	1	MG/L			6.04
30171-002	PR-WCS-06	7/22/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		6.75
30171-002	PR-WCS-06	7/22/2010	0	U	160.2	TSS	3	1	MG/L			6.75
30171-002	PR-WCS-06	7/22/2010	0	U	300	Nitrogen	0.63	0.15	MG/L			6.75
30171-002	PR-WCS-06	7/22/2010	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		6.75
30171-002	PR-WCS-06	7/22/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.75
30171-002	PR-WCS-06	7/22/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.63	0.5	MG/L			6.75
30171-002	PR-WCS-06	7/22/2010	0	U	365.2	Phosphorus	124	50	UG/L			6.75
30171-002	PR-WCS-06	7/22/2010	0	U	9060	TOC	7.5	1	MG/L			6.75

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Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30171-001	PR-WCS-07	7/22/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		7.23
30171-001	PR-WCS-07	7/22/2010	0	U	160.2	TSS	3	1	MG/L			7.23
30171-001	PR-WCS-07	7/22/2010	0	U	300	Nitrogen	0.65	0.15	MG/L			7.23
30171-001	PR-WCS-07	7/22/2010	0	U	300.0A	Nitrate (as N)	0.017	0.02	MG/L	B		7.23
30171-001	PR-WCS-07	7/22/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		7.23
30171-001	PR-WCS-07	7/22/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.65	0.5	MG/L			7.23
30171-001	PR-WCS-07	7/22/2010	0	U	365.2	Phosphorus	121	50	UG/L			7.23
30171-001	PR-WCS-07	7/22/2010	0	U	9060	TOC	7.8	1	MG/L			7.23
Round 5 : 8/4/2010 to 8/5/2010												
30206-002	PR-WC-01	8/4/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.98
30206-002	PR-WC-01	8/4/2010	0	U	160.2	TSS	5	1	MG/L			2.98
30206-002	PR-WC-01	8/4/2010	0	U	300	Nitrogen	0.72	0.15	MG/L			2.98
30206-002	PR-WC-01	8/4/2010	0	U	300.0A	Nitrate (as N)	0.0051	0.02	MG/L	B		2.98
30206-002	PR-WC-01	8/4/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
30206-002	PR-WC-01	8/4/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.72	0.5	MG/L			2.98
30206-002	PR-WC-01	8/4/2010	0	U	365.2	Phosphorus	145	50	UG/L	J		2.98
30206-002	PR-WC-01	8/4/2010	0	U	9060	TOC	8.2	1	MG/L			2.98
30206-003	PR-WC-03	8/4/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		2.1
30206-003	PR-WC-03	8/4/2010	0	U	160.2	TSS	5	1	MG/L			2.1
30206-003	PR-WC-03	8/4/2010	0	U	300	Nitrogen	0.87	0.15	MG/L			2.1
30206-003	PR-WC-03	8/4/2010	0	U	300.0A	Nitrate (as N)	0.0054	0.02	MG/L	B		2.1
30206-003	PR-WC-03	8/4/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
30206-003	PR-WC-03	8/4/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.87	0.5	MG/L			2.1
30206-003	PR-WC-03	8/4/2010	0	U	365.2	Phosphorus	260	50	UG/L	J		2.1
30206-003	PR-WC-03	8/4/2010	0	U	9060	TOC	6.8	1	MG/L			2.1
30206-004	PR-WC-04	8/4/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.7
30206-004	PR-WC-04	8/4/2010	0	U	160.2	TSS	2	1	MG/L			1.7
30206-004	PR-WC-04	8/4/2010	0	U	300	Nitrogen	0.72	0.15	MG/L			1.7

Appendix E

2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30206-004	PR-WC-04	8/4/2010	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		1.7
30206-004	PR-WC-04	8/4/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.7
30206-004	PR-WC-04	8/4/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.72	0.5	MG/L			1.7
30206-004	PR-WC-04	8/4/2010	0	U	365.2	Phosphorus	289	50	UG/L	J		1.7
30206-004	PR-WC-04	8/4/2010	0	U	9060	TOC	7.3	1	MG/L			1.7
30206-001	PR-WCS-04	8/4/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.77
30206-001	PR-WCS-04	8/4/2010	0	U	160.2	TSS	3	1	MG/L			4.77
30206-001	PR-WCS-04	8/4/2010	0	U	300	Nitrogen	1.1	0.15	MG/L			4.77
30206-001	PR-WCS-04	8/4/2010	0	U	300.0A	Nitrate (as N)	0.0061	0.02	MG/L	B		4.77
30206-001	PR-WCS-04	8/4/2010	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
30206-001	PR-WCS-04	8/4/2010	0	U	351.2	Total Kjeldahl Nitrogen	1.1	0.5	MG/L			4.77
30206-001	PR-WCS-04	8/4/2010	0	U	365.2	Phosphorus	188	50	UG/L	J		4.77
30206-001	PR-WCS-04	8/4/2010	0	U	9060	TOC	6.8	1	MG/L			4.77
30210-001	PR-WC-06	8/5/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.1
30210-001	PR-WC-06	8/5/2010	0	U	160.2	TSS	2	1	MG/L			1.1
30210-001	PR-WC-06	8/5/2010	0	U	300	Nitrogen	1.1	0.15	MG/L			1.1
30210-001	PR-WC-06	8/5/2010	0	U	300.0A	Nitrate (as N)	0.25	0.02	MG/L			1.1
30210-001	PR-WC-06	8/5/2010	0	U	300.0A	Nitrite (as N)	0.041	0.02	MG/L			1.1
30210-001	PR-WC-06	8/5/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.82	0.5	MG/L			1.1
30210-001	PR-WC-06	8/5/2010	0	U	365.2	Phosphorus	346	50	UG/L	J		1.1
30210-001	PR-WC-06	8/5/2010	0	U	9060	TOC	5.1	1	MG/L			1.1
30210-002	PR-WC-08	8/5/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.78
30210-002	PR-WC-08	8/5/2010	0	U	160.2	TSS	1	1	MG/L			0.78
30210-002	PR-WC-08	8/5/2010	0	U	300	Nitrogen	2.8	0.15	MG/L			0.78
30210-002	PR-WC-08	8/5/2010	0	U	300.0A	Nitrate (as N)	2	0.2	MG/L			0.78
30210-002	PR-WC-08	8/5/2010	0	U	300.0A	Nitrite (as N)	0.04	0.02	MG/L			0.78
30210-002	PR-WC-08	8/5/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.76	0.5	MG/L			0.78
30210-002	PR-WC-08	8/5/2010	0	U	365.2	Phosphorus	478	50	UG/L	J		0.78

Appendix E

2010 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual[1]	Rev Qual	Distance From STP
30210-002	PR-WC-08	8/5/2010	0	U	9060	TOC	4.1	1	MG/L			0.78
30210-003	PR-WC-09	8/5/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.56
30210-003	PR-WC-09	8/5/2010	0	U	160.2	TSS	1	1	MG/L			0.56
30210-003	PR-WC-09	8/5/2010	0	U	300	Nitrogen	4.2	0.15	MG/L			0.56
30210-003	PR-WC-09	8/5/2010	0	U	300.0A	Nitrate (as N)	3.3	0.2	MG/L			0.56
30210-003	PR-WC-09	8/5/2010	0	U	300.0A	Nitrite (as N)	0.033	0.02	MG/L			0.56
30210-003	PR-WC-09	8/5/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.87	0.5	MG/L			0.56
30210-003	PR-WC-09	8/5/2010	0	U	365.2	Phosphorus	880	100	UG/L	J		0.56
30210-003	PR-WC-09	8/5/2010	0	U	9060	TOC	4	1	MG/L			0.56
30210-004	PR-WC-10	8/5/2010	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.3
30210-004	PR-WC-10	8/5/2010	0	U	160.2	TSS	1	1	MG/L			0.3
30210-004	PR-WC-10	8/5/2010	0	U	300	Nitrogen	3.3	0.15	MG/L			0.3
30210-004	PR-WC-10	8/5/2010	0	U	300.0A	Nitrate (as N)	3.3	0.2	MG/L			0.3
30210-004	PR-WC-10	8/5/2010	0	U	300.0A	Nitrite (as N)	0.031	0.02	MG/L			0.3
30210-004	PR-WC-10	8/5/2010	0	U	351.2	Total Kjeldahl Nitrogen	0.41	0.5	MG/L	B		0.3
30210-004	PR-WC-10	8/5/2010	0	U	365.2	Phosphorus	846	100	UG/L	J		0.3
30210-004	PR-WC-10	8/5/2010	0	U	9060	TOC	4.4	1	MG/L			0.3

[1] Qualifiers

B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected.

Appendix F

2010 Peconic River Fish Scale and Otolith Age Interpretation[1]

Area[2]	Species	Date Collected	ID No.	Length (mm)	Age Interpretor 1	Age Interpretor 2	Final Agreed Age	Notes Interpretor 1	Notes Interpretor 2
A	Bluegill	7/15/2010	10-166	187	4+	5+	5+	Counted one near focus	
A	Bluegill	7/15/2010	10-169	85	1+	1+	1+		
A	Bluegill	7/15/2010	10-170	71	1+	1+	1+		
A	Bluegill	7/15/2010	10-167	95	1+	1+	1+		
A	Bluegill	7/15/2010	10-168	86	1+	1+	1+		
A	Brown Bullhead	7/15/2010	10-153	225				Only otoltih was broken	useless
A	Brown Bullhead	7/15/2010	10-155	124	2M	2M	2M	Annulus easiest to see from below	
A	Brown Bullhead	7/15/2010	10-152	318	5M	5M	5M	View with side lighting	
A	Brown Bullhead	7/15/2010	10-154	186	2+	3M	2+		
A	Brown Bullhead	7/15/2010	10-156	104	1M	2M	1+	Could not find a definitive annulus	
A	Chain Pickerel	7/15/2010	10-160	265	1+	1+	1+		
A	Chain Pickerel	7/15/2010	10-157	334	1+	1+	1+		
A	Chain Pickerel	7/15/2010	10-158	292	1+	1+	1+		
A	Chain Pickerel	7/15/2010	10-159	276	1+	1+	1+	JAC - didn't grow much its first year. Counted faint annulus near focus.	
A	Largemouth Bass	7/15/2010	10-161	145	1+	1+	1+		
A	Largemouth Bass	7/15/2010	10-163	125	1+	1+	1+		
A	Largemouth Bass	7/15/2010	10-164	122				No sample in envelope	
A	Largemouth Bass	7/15/2010	10-162	132	1+	1+	1+		
A	Largemouth Bass	7/15/2010	10-165	107	1+	1+	1+		
A	Pumpkinseed	7/15/2010	10-173	153	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-174	147	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-175	139	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-178	136	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-180	130	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-188	115	1+	1+	1+	Maybe 1 very close to focus that was not apparent on most scales	
A	Pumpkinseed	7/15/2010	10-189	109	1+	1+	1+		
A	Pumpkinseed	7/15/2010	10-177	136	2+	2+	2+	JAC - it looks to me if there could be another annulus in between 1 and 2	just didn't have enough characteristics and inconsistent between scales.

Appendix F

2010 Peconic River Fish Scale and Otolith Age Interpretation[1]

Area[2]	Species	Date Collected	ID No.	Length (mm)	Age Interpretor 1	Age Interpretor 2	Final Agreed Age	Notes Interpretor 1	Notes Interpretor 2
A	Pumpkinseed	7/15/2010	10-183	125	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-185	122	2+	2+	2+	JAC - 2nd annulus has all of the characteristics of the other two? Crossing over and consistent	2 and 3 may be a little close together I guess…
A	Pumpkinseed	7/15/2010	10-190	107	1+	1+	1+		
A	Pumpkinseed	7/15/2010	10-192	100	1+	1+	1+		
A	Pumpkinseed	7/15/2010	10-193	91	1+	1+	1+		
A	Pumpkinseed	7/15/2010	10-171	168	2+	3+	3+		
A	Pumpkinseed	7/15/2010	10-172	158	2+	3+	2+		
A	Pumpkinseed	7/15/2010	10-181	130	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-184	124	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-186	121	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-176	149	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-179	131	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-182	128	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-187	117	2+	2+	2+		
A	Pumpkinseed	7/15/2010	10-191	102	1+	1+	1+		
A	Pumpkinseed	7/15/2010	10-194	89	1+	1+	1+		
C	Brown Bullhead	7/13/2010	10-129	146	2M	2M	2M		
C	Brown Bullhead	7/13/2010	10-125	341	5M	5M	5M		
C	Brown Bullhead	7/13/2010	10-126	302	4M	4M	4M		
C	Brown Bullhead	7/13/2010	10-127	296	4M	4M	4M		
C	Brown Bullhead	7/13/2010	10-128	160	2M	2M	2M	Annulus easiest to see from below	
C	Chain Pickerel	7/13/2010	10-150	100	0+	0+	0+		
C	Chain Pickerel	7/13/2010	10-149	105	0+	0+	0+		
C	Chain Pickerel	7/13/2010	10-151	97	0+	0+	0+		
C	Chain Pickerel	7/13/2010	10-147	110	0+	0+	0+		
C	Chain Pickerel	7/13/2010	10-146	115	0+	0+	0+		
C	Chain Pickerel	7/13/2010	10-148	108	0+	0+	0+		
C	Largemouth Bass	7/13/2010	10-143	115	1+	1+	1+		
C	Largemouth Bass	7/13/2010	10-142	145	1+	1+	1+		
C	Pumpkinseed	7/13/2010	10-132	145	2+	2+	2+		
C	Pumpkinseed	7/13/2010	10-138	80	1+	1+	1+		

Appendix F

2010 Peconic River Fish Scale and Otolith Age Interpretation[1]

Area[2]	Species	Date Collected	ID No.	Length (mm)	Age Interpretor 1	Age Interpretor 2	Final Agreed Age	Notes Interpretor 1	Notes Interpretor 2
C	Pumpkinseed	7/13/2010	10-139	79	1+	1+	1+		
C	Pumpkinseed	7/13/2010	10-135	136	2+	2+	2+		
C	Pumpkinseed	7/13/2010	10-136	121	3+	2+	3+	JAC - I aged three of the scales on this slide three years old and the others age-2 I went w/ two because of length and distance from last annulus to margin of scale.	
C	Pumpkinseed	7/13/2010	10-140	79	1+	1+	1+		
C	Pumpkinseed	7/13/2010	10-134	142	2+	2+	2+		
C	Pumpkinseed	7/13/2010	10-141	75	1+	1+	1+	Not much growth as YOY; JAC - I agree hard to even find an annulus	
C	Pumpkinseed	7/13/2010	10-133	143	2+	2+	2+		
C	Pumpkinseed	7/13/2010	10-137	81	1+	1+	1+		
D	Bluegill	8/11/2010	10-222	124	2+	1+	2+	One right at edge	
D	Bluegill	8/11/2010	10-221	135	2+	2+	1+		
D	Bluegill	8/11/2010	10-219	148	2+	1+	2+	One close to edge?	
D	Bluegill	8/11/2010	10-220	144	1+	1+	1+		
D	Brown Bullhead	8/11/2010	10-212	305	5+	5+	5+		
D	Brown Bullhead	8/11/2010	10-214	281	4+	4+	4+		
D	Brown Bullhead	8/11/2010	10-213	283	4+	4+	4+	Counted 1 very near focus	
D	Brown Bullhead	8/11/2010	10-215	265	3+	3+	3+		
D	Brown Bullhead	8/11/2010	10-216	175	1+	1+	1+		
D	Largemouth Bass	8/11/2010	10-217	320	4+	4+	4+		
D	Largemouth Bass	8/11/2010	10-218	201	1+	1+	1+		
D	Pumpkinseed	8/11/2010	10-225	144	3+	3+	3+		
D	Pumpkinseed	8/11/2010	10-224	144	3+	2+	3+	One right at edge	
D	Pumpkinseed	8/11/2010	10-227	130	2+	1+	2+	One right at edge	
D	Pumpkinseed	8/11/2010	10-228	121	1+	1+	1+	Possibly one right at edge on some?	

Appendix F

2010 Peconic River Fish Scale and Otolith Age Interpretation[1]

Area[2]	Species	Date Collected	ID No.	Length (mm)	Age Interpretor 1	Age Interpretor 2	Final Agreed Age	Notes Interpretor 1	Notes Interpretor 2
D	Pumpkinseed	8/11/2010	10-223	145	3+	2+	3+	One right at edge; JAC - Maybe the ones near the edge are spawning checks?? Otherwise I think too little growth for the entire growing season to be considered an annulus.	
D	Pumpkinseed	8/11/2010	10-226	133	3+	2+	3+	One right at edge	
D	Brown Bullhead	8/3/2010	10-198	248	4+	4+	4+		
D	Brown Bullhead	8/3/2010	10-202	147	1+	1+	1+		
D	Brown Bullhead	8/3/2010	10-203	146	1+	1+	1+		
D	Brown Bullhead	8/3/2010	10-206	134	1+	1+	1+		
D	Brown Bullhead	8/3/2010	10-196	255	4+	4+	4+		
D	Brown Bullhead	8/3/2010	10-199	245	4+	4+	4+	1st is hard to see	use side lighting
D	Brown Bullhead	8/3/2010	10-204	139	1+	1+	1+		
D	Brown Bullhead	8/3/2010	10-195	295	4+	4+	4+		
D	Brown Bullhead	8/3/2010	10-197	252	4+	4+	4+		
D	Brown Bullhead	8/3/2010	10-200	245	2+	2+	2+		
D	Brown Bullhead	8/3/2010	10-207	130	1+	1+	1+	View upside down for best image	
D	Brown Bullhead	8/3/2010	10-201	240	2+	2+	2+		
D	Brown Bullhead	8/3/2010	10-205	134	1+	1+	1+		
D	Largemouth Bass	8/3/2010	10-211	284	4+	4+	4+		
D	Pumpkinseed	8/3/2010	10-208	150	2+	2+	2+		
D	Pumpkinseed	8/3/2010	10-210	110	1+	1+	1+		
D	Pumpkinseed	8/3/2010	10-209	124	1+	1+	1+		
SR	Brown Bullhead	8/13/2010	10-254	242	4+	4+	4+	View upside down for best image	
SR	Brown Bullhead	8/13/2010	10-253	260	4+	4+	4+		
MR	Bluegill	8/13/2010	10-252	110	2+	1+	1+	annulus near focus	
MR	Brown Bullhead	8/13/2010	10-237	237	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-238	236	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-240	215	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-241	195	2+	2+	2+		

Appendix F

2010 Peconic River Fish Scale and Otolith Age Interpretation[1]

Area[2]	Species	Date Collected	ID No.	Length (mm)	Age Interpretor 1	Age Interpretor 2	Final Agreed Age	Notes Interpretor 1	Notes Interpretor 2
MR	Brown Bullhead	8/13/2010	10-244	169	2+	2+	2+	View upside down for best image	
MR	Brown Bullhead	8/13/2010	10-245	167	2+	2+	2+		
MR	Brown Bullhead	8/13/2010	10-229	290	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-233	251	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-234	245	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-239	230	4+	4+	4+	Counted 1 near focus	
MR	Brown Bullhead	8/13/2010	10-247	162	2+	2+	2+		
MR	Brown Bullhead	8/13/2010	10-236	242	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-230	281	5+	5+	5+		
MR	Brown Bullhead	8/13/2010	10-231	268	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-232	261	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-235	244	4+	4+	4+		
MR	Brown Bullhead	8/13/2010	10-242	190	2+	2+	2+		
MR	Brown Bullhead	8/13/2010	10-243	171	2+	2+	2+		
MR	Brown Bullhead	8/13/2010	10-246	163	2+	2+	2+		
MR	Largemouth Bass	8/13/2010	10-248	203	2+	2+	2+		
MR	Pumpkinseed	8/13/2010	10-250	149	2+	2+	2+		
MR	Pumpkinseed	8/13/2010	10-251	145	2+	2+	2+		
MR	Pumpkinseed	8/13/2010	10-249	151	3+	3+	3+		
DP	Bluegill	5/25/2010	10-038	195	4+	4+	4+		
DP	Bluegill	5/25/2010	10-043	203	5+	5+	5+		
DP	Bluegill	5/25/2010	10-036	180	4+	4+	4+		
DP	Bluegill	5/25/2010	10-039	210	4+	4+	4+		
DP	Bluegill	5/25/2010	10-034	181	4+	4+	4+		
DP	Bluegill	5/25/2010	10-040	198	5+	5+	5+		
DP	Bluegill	5/25/2010	10-042	100	5+	5+	5+		
DP	Bluegill	5/25/2010	10-035	180	5+	5+	5+		
DP	Bluegill	5/25/2010	10-037	195	7+	5+	6+		
DP	Bluegill	5/25/2010	10-041	189	5+	4+	5+		
DP	Bluegill	5/25/2010	10-044	232	5+	4+	5+		
DP	Brown Bullhead	5/25/2010	10-054	300	11M	12M	12M	JAC - Counted one near the focus	
DP	Brown Bullhead	5/25/2010	10-055	317	5M	5M	5M		

Appendix F

2010 Peconic River Fish Scale and Otolith Age Interpretation[1]

Area[2]	Species	Date Collected	ID No.	Length (mm)	Age Interpretor 1	Age Interpretor 2	Final Agreed Age	Notes Interpretor 1	Notes Interpretor 2
DP	Brown Bullhead	5/25/2010	10-050	300	6M	6M	6M		
DP	Brown Bullhead	5/25/2010	10-057	315	11M	11M	11M		
DP	Brown Bullhead	5/25/2010	10-058	334	6M	6M	6M		
DP	Brown Bullhead	5/25/2010	10-049	299	12M	12M	12M	View upside-down for best image	
DP	Brown Bullhead	5/25/2010	10-051	300	4M	4M	4M		
DP	Brown Bullhead	5/25/2010	10-052	300	5M	5M	5M		
DP	Brown Bullhead	5/25/2010	10-056	305	8M	8M	8M		
DP	Brown Bullhead	5/25/2010	10-053	310	5M	5M	5M	Gave it my best shot; not totally confident could be a 4M	
DP	Chain Pickerel	5/25/2010	10-048	338	3+	3+	3+		
DP	Largemouth Bass	5/25/2010	10-046	262	5+	6+	6+		
DP	Largemouth Bass	5/25/2010	10-045	242	4M	4+	4+	Counted margin as 4th annulus	
DP	Largemouth Bass	5/25/2010	10-047	455	10+	9 +	8+		
DP	Pumpkinseed	5/25/2010	10-029	190	6+	5+	6+		
DP	Pumpkinseed	5/25/2010	10-032	195	6+	6+	6+		
DP	Pumpkinseed	5/25/2010	10-021	175	6+	5+	5+		
DP	Pumpkinseed	5/25/2010	10-023	180	6+	6+	6+		
DP	Pumpkinseed	5/25/2010	10-026	180	7+	6+	6+		
DP	Pumpkinseed	5/25/2010	10-025	175	3+	3+	4+	Difficult; should check again	
DP	Pumpkinseed	5/25/2010	10-027	170	6+	5+	5+		
DP	Pumpkinseed	5/25/2010	10-031	190	6+	5+	5+		
DP	Pumpkinseed	5/25/2010	10-033	200	4+	4+	4+		
DP	Pumpkinseed	5/25/2010	10-022	175	4+	3+	3+		
DP	Pumpkinseed	5/25/2010	10-024	179	5+	5+	5+		
DP	Pumpkinseed	5/25/2010	10-028	180	5+	5+	5+		
DP	Pumpkinseed	5/25/2010	10-030	190	6+	5+	5+		

[1] Scale and Odolith age interpretation performed by Ecologic, LLC, Cazenovia, New York.

[2] Key SR=Schultz Road, MR=Manor Road, DP=Donoahue's Pond

* Length from COC

Appendix G - 2010 Peconic River Fish Samples

Mercury

Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	SDG	Sample Date	Sample Time	Method	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual[1]	Rev Qual
A	30148-001	10-152	Brown Bullhead	318	426	123.3	5	256637	7/15/2010	1500	EPA 7471A	0.124	0.00342		
A	30148-002	30148-bc2	Brown Bullhead	206	296	90.8	2	256637	7/15/2010	1500	EPA 7471A	0.383	0.00355		
A	30148-003	30148-bc3	Brown Bullhead	114	46	10	1.5	256637	7/15/2010	1500	EPA 7471A	1.2	0.0348		
A	30148-004	10-157	Chain Pickerel	334	224	100.3	1	256637	7/15/2010	1500	EPA 7471A	0.356	0.00399		
A	30148-005	30148-bc5	Chain Pickerel	278	426	172.3	1	256637	7/15/2010	1500	EPA 7471A	0.351	0.00346		
A	30148-006	30148-bc6	Largemouth Bass	131	146	47.9	1	256637	7/15/2010	1500	EPA 7471A	0.276	0.00379		
A	30148-007	10-165	Largemouth Bass	107	20	7.3	1	256637	7/15/2010	1500	EPA 7471A	0.41	0.00381		
A	30148-008	10-166	Bluegill	187	154	54.1	5	256637	7/15/2010	1500	EPA 7471A	0.289	0.00386		
A	30148-009	30148-bc9	Bluegill	84	64	19.5	1	256637	7/15/2010	1500	EPA 7471A	0.854	0.0398		
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 7471A	0.427	0.00382		
A	30148-011	30148-bc11	Pumpkinseed	132	350	112.7	2	256637	7/15/2010	1500	EPA 7471A	0.489	0.00382		
A	30148-012	30148-bc12	Pumpkinseed	121	262	83.9	1.8	256637	7/15/2010	1500	EPA 7471A	0.5	0.00362		
A	30148-013	30148-bc13	Pumpkinseed	100	148	45.7	1	256637	7/15/2010	1500	EPA 7471A	0.367	0.00378		
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 7471A	0.163	0.00403	*EN	
C	28834-002	10-126	Brown Bullhead	302	394	101	4	256552	7/13/2010	1200	EPA 7471A	0.237	0.0034	*EN	
C	28834-003	10-127	Brown Bullhead	296	386	110.1	4	256552	7/13/2010	1200	EPA 7471A	0.215	0.00398	*EN	
C	28834-004	10-128	Brown Bullhead	160	54	13.2	2	256552	7/13/2010	1200	EPA 7471A	0.385	0.004	*EN	
C	28834-005	10-129	Brown Bullhead	146	42	12.6	2	256552	7/13/2010	1200	EPA 7471A	0.648	0.034	*EN	
C	28834-008	10-132	Pumpkinseed	145	74	25	2	256552	7/13/2010	1200	EPA 7471A	0.301	0.00361	*EN	
C	28834-009	10-133	Pumpkinseed	143	68	27.3	2	256552	7/13/2010	1200	EPA 7471A	0.252	0.0034	*EN	
C	28834-010	10-134	Pumpkinseed	142	66	21.1	2	256552	7/13/2010	1200	EPA 7471A	0.234	0.00393	*EN	
C	28834-011	10-135	Pumpkinseed	136	58	22.3	2	256552	7/13/2010	1200	EPA 7471A	0.234	0.00389	*EN	
C	28834-012	10-136	Pumpkinseed	121	40	14.2	3	256552	7/13/2010	1200	EPA 7471A	0.289	0.00366	*EN	
C	28834-013	28834-bc13	Pumpkinseed	81	20	8.1	1	256552	7/13/2010	1200	EPA 7471A	0.709	0.0401	*EN	
C	28834-014	28834-bc14	Pumpkinseed	77	18	8.2	1	256552	7/13/2010	1200	EPA 7471A	0.323	0.00376	*EN	
C	28834-015	10-140	Pumpkinseed	79	10	5.8	1	256552	7/13/2010	1200	EPA 7471A	0.212	0.00378	*EN	
C	28834-016	10-142	Largemouth Bass	145	42	15.8	1	256552	7/13/2010	1200	EPA 7471A	0.696	0.034	*EN	
C	28834-017	10-143	Largemouth Bass	115	26	11.1	1	256552	7/13/2010	1200	EPA 7471A	0.839	0.0347	*EN	
C	28834-020	28834-bc20	Chain Pickerel	113	16	8.2	0	256552	7/13/2010	1200	EPA 7471A	0.315	0.00382	*EN	
C	28834-021	28834-bc21	Chain Pickerel	107	14	7	0	256552	7/13/2010	1200	EPA 7471A	0.503	0.00384	*EN	
C	28834-022	28834-bc22	Chain Pickerel	99	12	6.8	0	256552	7/13/2010	1200	EPA 7471A	0.569	0.00405	*EN	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 7471A	0.156	0.00366	*EN	
D	30239-002	30239-bc2	Brown Bullhead	273	530	159.3	3.5	258722	8/11/2010	1200	EPA 7471A	0.109	0.00342	*EN	
D	30239-003	10-216	Brown Bullhead	175	68	21.4	1	258722	8/11/2010	1200	EPA 7471A	0.118	0.00403	*EN	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 7471A	0.503	0.00391	*EN	
D	30239-005	10-218	Largemouth Bass	201	130	46.9	1	258722	8/11/2010	1200	EPA 7471A	0.362	0.0036	*EN	
D	30239-006	30239-bc6	Bluegill	138	208	95.8	1.5	258722	8/11/2010	1200	EPA 7471A	0.243	0.00389	*EN	
D	30239-007	30239-bc7	Pumpkinseed	136	384	137.1	2.5	258722	8/11/2010	1200	EPA 7471A	0.209	0.00389	*EN	
D	30203-001	10-195	Brown Bullhead	295	332	86.1	4	257938	8/3/2010	1200	EPA 7471A	0.312	0.00408	N	
D	30203-002	10-196	Brown Bullhead	255	246	71	4	257938	8/3/2010	1200	EPA 7471A	0.315	0.00343	N	
D	30203-003	10-197	Brown Bullhead	252	200	59.8	4	257938	8/3/2010	1200	EPA 7471A	0.283	0.00402	N	
D	30203-004	10-198	Brown Bullhead	248	212	64.3	4	257938	8/3/2010	1200	EPA 7471A	0.259	0.00368	N	
D	30203-005	10-199	Brown Bullhead	245	212	72.4	4	257938	8/3/2010	1200	EPA 7471A	0.331	0.00381	N	
D	30203-006	10-200	Brown Bullhead	245	204	63.4	2	257938	8/3/2010	1200	EPA 7471A	0.0634	0.0034	N	
D	30203-007	10-201	Brown Bullhead	240	192	60.7	2	257938	8/3/2010	1200	EPA 7471A	0.168	0.00392	N	
D	30203-008	10-202	Brown Bullhead	147	40	10.1	1	257938	8/3/2010	1200	EPA 7471A	0.371	0.00361	N	
D	30203-009	10-203	Brown Bullhead	146	42	11.8	1	257938	8/3/2010	1200	EPA 7471A	0.242	0.00392	N	
D	30203-010	10-204	Brown Bullhead	139	34	10.1	1	257938	8/3/2010	1200	EPA 7471A	0.473	0.00378	N	

Appendix G - 2010 Peconic River Fish Samples

Mercury

Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	SDG	Sample Date	Sample Time	Method	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual[1]	Rev Qual
D	30203-011	10-205	Brown Bullhead	134	32	9.3	1	257938	8/3/2010	1200	EPA 7471A	0.296	0.00378	N	
D	30203-012	10-206	Brown Bullhead	134	28	9.9	1	257938	8/3/2010	1200	EPA 7471A	0.236	0.00384	N	
D	30203-013	10-207	Brown Bullhead	130	28	9.7	1	257938	8/3/2010	1200	EPA 7471A	0.312	0.00392	N	
D	30203-014	10-208	Pumpkinseed	150	82	33.7	2	257938	8/3/2010	1200	EPA 7471A	0.182	0.00353	N	
D	30203-015	10-209	Pumpkinseed	124	40	14.9	1	257938	8/3/2010	1200	EPA 7471A	0.584	0.00788	N	
D	30203-016	10-210	Pumpkinseed	110	26	9.9	1	257938	8/3/2010	1200	EPA 7471A	0.574	0.0073	N	
D	30203-017	10-211	Largemouth Bass	284	332	123.9	4	257938	8/3/2010	1200	EPA 7471A	0.387	0.0034	N	
SR	30244-001	30244-bc1	Brown Bullhead	251	444	113.4	4	258848	8/13/2010	1200	EPA 7471A	0.363	0.00408		
MR	30236-001	10-229	Brown Bullhead	290	368	107.2	4	258846	8/13/2010	1200	EPA 7471A	0.235	0.00388		
MR	30236-002	10-230	Brown Bullhead	281	318	78.2	5	258846	8/13/2010	1200	EPA 7471A	0.289	0.004		
MR	30236-003	10-231	Brown Bullhead	268	262	77.3	4	258846	8/13/2010	1200	EPA 7471A	0.299	0.00343		
MR	30236-004	30236-bc4	Brown Bullhead	256	506	143.5	4	258846	8/13/2010	1200	EPA 7471A	0.241	0.00407		
MR	30236-005	10-234	Brown Bullhead	245	222	73.3	4	258846	8/13/2010	1200	EPA 7471A	0.25	0.00351		
MR	30236-006	30236-bc6	Brown Bullhead	243	368	103.2	4	258846	8/13/2010	1200	EPA 7471A	0.202	0.00342		
MR	30236-007	30236-bc7	Brown Bullhead	237	354	112	4	258846	8/13/2010	1200	EPA 7471A	0.317	0.00396		
MR	30236-008	30236-bc8	Brown Bullhead	223	300	87.4	4	258846	8/13/2010	1200	EPA 7471A	0.235	0.0039		
MR	30236-009	30236-bc9	Brown Bullhead	185	234	70.8	2	258846	8/13/2010	1200	EPA 7471A	0.202	0.00408		
MR	30236-010	10-244	Brown Bullhead	169	58	15	2	258846	8/13/2010	1200	EPA 7471A	0.282	0.00386		
MR	30236-011	10-245	Brown Bullhead	167	62	14.8	2	258846	8/13/2010	1200	EPA 7471A	0.348	0.00386		
MR	30236-012	10-246	Brown Bullhead	163	48	12.9	2	258846	8/13/2010	1200	EPA 7471A	0.223	0.00376		
MR	30236-013	10-247	Brown Bullhead	162	52	12.9	2	258846	8/13/2010	1200	EPA 7471A	0.283	0.00384		
MR	30236-014	10-248	Largemouth Bass	203	114	34.6	2	258846	8/13/2010	1200	EPA 7471A	0.278	0.00355		
MR	30236-015	10-249	Pumpkinseed	151	78	21.9	3	258846	8/13/2010	1200	EPA 7471A	0.293	0.00374		
MR	30236-016	10-250	Pumpkinseed	149	82	26	2	258846	8/13/2010	1200	EPA 7471A	0.107	0.00391		
MR	30236-017	10-251	Pumpkinseed	145	64	17.5	2	258846	8/13/2010	1200	EPA 7471A	0.158	0.00387		
MR	30236-018	10-252	Bluegill	110	28	8.8	1	258846	8/13/2010	1200	EPA 7471A	0.266	0.0039		
DP	28623-001	28623-bc1	Pumpkinseed	175	242	86.6	4	253786	5/25/2010	1500	EPA 7471A	0.129	0.0034		
DP	28623-002	28623-bc2	Pumpkinseed	180	282	97.9	6	253786	5/25/2010	1500	EPA 7471A	0.163	0.00359		
DP	28623-003	10-024	Pumpkinseed	179	138	55.6	5	253786	5/25/2010	1500	EPA 7471A	0.138	0.00358		
DP	28623-004	10-025	Pumpkinseed	175	148	56.6	4	253786	5/25/2010	1500	EPA 7471A	0.0889	0.0034		
DP	28623-005	28623-bc5	Pumpkinseed	175	290	97	5	253786	5/25/2010	1500	EPA 7471A	0.0638	0.00407		
DP	28623-006	28623-bc6	Pumpkinseed	190	326	93.4	5.5	253786	5/25/2010	1500	EPA 7471A	0.17	0.00396		
DP	28623-007	10-031	Pumpkinseed	190	168	53.6	5	253786	5/25/2010	1500	EPA 7471A	0.0733	0.00408		
DP	28623-008	10-032	Pumpkinseed	195	192	62.3	6	253786	5/25/2010	1500	EPA 7471A	0.161	0.004		
DP	28623-009	10-033	Pumpkinseed	200	212	63	4	253786	5/25/2010	1500	EPA 7471A	0.0788	0.00388		
DP	28623-010	10-034	Bluegill	181	160	60.1	4	253786	5/25/2010	1500	EPA 7471A	0.0797	0.00393		
DP	28623-011	10-035	Bluegill	180	162	49.2	5	253786	5/25/2010	1500	EPA 7471A	0.256	0.00402		
DP	28623-012	10-036	Bluegill	180	162	59.3	4	253786	5/25/2010	1500	EPA 7471A	0.0728	0.0037		
DP	28623-013	10-037	Bluegill	195	168	55.1	6	253786	5/25/2010	1500	EPA 7471A	0.155	0.00365		
DP	28623-014	10-038	Bluegill	195	192	63.6	4	253786	5/25/2010	1500	EPA 7471A	0.151	0.00379		
DP	28623-015	10-039	Bluegill	210	192	62.8	4	253786	5/25/2010	1500	EPA 7471A	0.121	0.00352		
DP	28623-016	10-040	Bluegill	198	196	60.7	5	253786	5/25/2010	1500	EPA 7471A	0.122	0.0035		
DP	28623-017	10-041	Bluegill	189	196	61.9	5	253786	5/25/2010	1500	EPA 7471A	0.0686	0.00372		
DP	28623-018	10-042	Bluegill	100	202	70.6	5	253786	5/25/2010	1500	EPA 7471A	0.188	0.00408		
DP	28623-019	10-043	Bluegill	203	220	78	5	253786	5/25/2010	1500	EPA 7471A	0.149	0.00389		
DP	28623-020	10-044	Bluegill	232	232	80	5	253786	5/25/2010	1500	EPA 7471A	0.192	0.00404		
DP	28624-001	10-045	Largemouth Bass	242	208	70.1	4	253785	5/25/2010	1500	EPA 7471A	0.348	0.0034		
DP	28624-002	10-046	Largemouth Bass	262	274	88.7	6	253785	5/25/2010	1500	EPA 7471A	0.452	0.00394		

Appendix G - 2010 Peconic River Fish Samples

Mercury

Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	SDG	Sample Date	Sample Time	Method	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual[1]	Rev Qual
DP	28624-003	10-047	Largemouth Bass	455	1304	340.2	8	253785	5/25/2010	1500	EPA 7471A	0.96	0.0402		
DP	28624-004	10-048	Chain Pickerel	338	212	78.7	3	253785	5/25/2010	1500	EPA 7471A	0.131	0.00392		
DP	28624-005	10-049	Brown Bullhead	299	424	112.9	12	253785	5/25/2010	1500	EPA 7471A	0.146	0.00408		
DP	28624-006	10-050	Brown Bullhead	300	482	134.5	6	253785	5/25/2010	1500	EPA 7471A	0.0865	0.00407		
DP	28624-007	10-051	Brown Bullhead	300	488	135	4	253785	5/25/2010	1500	EPA 7471A	0.0242	0.0034		
DP	28624-008	10-052	Brown Bullhead	300	492	144.2	5	253785	5/25/2010	1500	EPA 7471A	0.0724	0.0038		
DP	28624-009	10-053	Brown Bullhead	310	518	161.3	5	253785	5/25/2010	1500	EPA 7471A	0.0478	0.00402		
DP	28624-010	10-054	Brown Bullhead	300	504	107.1	12	253785	5/25/2010	1500	EPA 7471A	0.151	0.00408		
DP	28624-011	10-055	Brown Bullhead	317	544	160.6	5	253785	5/25/2010	1500	EPA 7471A	0.0415	0.00372		
DP	28624-012	10-056	Brown Bullhead	305	548	132.7	8	253785	5/25/2010	1500	EPA 7471A	0.107	0.00355		
DP	28624-013	10-057	Brown Bullhead	315	592	122.7	11	253785	5/25/2010	1500	EPA 7471A	0.0646	0.00354		
DP	28624-014	10-058	Brown Bullhead	334	696	195.6	6	253785	5/25/2010	1500	EPA 7471A	0.0401	0.00349		

[1] Qualifiers

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

E - Used when the reported value is estimated because of the presence of interference.

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

B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

U - Indicates that the analyte was analyzed for but not detected.

Appendix H - 2010 Peconic River Fish Samples

PCBs

Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (years)	SDG	Sample Date	Sample Time	Method	Analyte	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual[1]	Rev Qual
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 8082	Aroclor 1016	50	50	U	
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 8082	Aroclor 1221	50	50	U	
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 8082	Aroclor 1232	50	50	U	
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 8082	Aroclor 1242	50	50	U	
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 8082	Aroclor 1248	50	50	U	
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 8082	Aroclor 1254	22.5	50	J	
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	256637	7/15/2010	1500	EPA 8082	Aroclor 1260	50	50	U	
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 8082	Aroclor 1016	9.95	9.95	U	
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 8082	Aroclor 1221	9.95	9.95	U	
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 8082	Aroclor 1232	9.95	9.95	U	
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 8082	Aroclor 1242	9.95	9.95	U	
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 8082	Aroclor 1248	9.95	9.95	U	
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 8082	Aroclor 1254	9.95	9.95	U	
C	28834-001	10-125	Brown Bullhead	341	616	192	5	256552	7/13/2010	1200	EPA 8082	Aroclor 1260	9.95	9.95	U	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 8082	Aroclor 1016	9.91	9.91	U	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 8082	Aroclor 1221	9.91	9.91	U	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 8082	Aroclor 1232	9.91	9.91	U	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 8082	Aroclor 1242	9.91	9.91	U	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 8082	Aroclor 1248	9.91	9.91	U	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 8082	Aroclor 1254	9.91	9.91	U	
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	258722	8/11/2010	1200	EPA 8082	Aroclor 1260	5.2	9.91	J	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 8082	Aroclor 1016	10	10	U	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 8082	Aroclor 1221	10	10	U	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 8082	Aroclor 1232	10	10	U	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 8082	Aroclor 1242	10	10	U	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 8082	Aroclor 1248	10	10	U	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 8082	Aroclor 1254	10	10	U	
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	258722	8/11/2010	1200	EPA 8082	Aroclor 1260	10	10	U	

[1] Qualifiers

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected.

Appendix I - 2010 Peconic River Fish Samples

Radionuclides

Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	Sample Date	Method	Analyte	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual[1]	Rev Qual
A	30148-001	10-152	Brown Bullhead	318	426	123.3	5	7/15/2010	DOE HASL 300	Cesium-137	0.249	0.0702	0.045		
A	30148-002	30148-bc2	Brown Bullhead	206	296	90.8	2	7/15/2010	DOE HASL 300	Cesium-137	0.241	0.0576	0.0411		
A	30148-004	10-157	Chain Pickerel	334	224	100.3	1	7/15/2010	DOE HASL 300	Cesium-137	0.172	0.0581	0.049		
A	30148-005	30148-bc5	Chain Pickerel	278	426	172.3	1	7/15/2010	DOE HASL 300	Cesium-137	0.119	0.0685	0.0407		
A	30148-008	10-166	Bluegill	187	154	54.1	5	7/15/2010	DOE HASL 300	Cesium-137	0.132	0.0513	0.0375		
A	30148-010	30148-bc10	Pumpkinseed	152	663	192.4	2.2	7/15/2010	DOE HASL 300	Cesium-137	0.235	0.0892	0.0782		
A	30148-011	30148-bc11	Pumpkinseed	132	350	112.7	2	7/15/2010	DOE HASL 300	Cesium-137	0.237	0.0508	0.0376		
A	30148-012	30148-bc12	Pumpkinseed	121	262	83.9	1.8	7/15/2010	DOE HASL 300	Cesium-137	0.223	0.0651	0.0555		
C	28834-001	10-125	Brown Bullhead	341	616	192	5	7/13/2010	DOE HASL 300	Cesium-137	0.219	0.0691	0.0379		
C	28834-002	10-126	Brown Bullhead	302	394	101	4	7/13/2010	DOE HASL 300	Cesium-137	0.324	0.0822	0.06		
C	28834-003	10-127	Brown Bullhead	296	386	110.1	4	7/13/2010	DOE HASL 300	Cesium-137	0.178	0.0676	0.0441		
D	30239-001	30239-bc1	Brown Bullhead	294	706	232.1	4.5	8/11/2010	DOE HASL 300	Cesium-137	0.13	0.049	0.0427		
D	30239-002	30239-bc2	Brown Bullhead	273	530	159.3	3.5	8/11/2010	DOE HASL 300	Cesium-137	0.129	0.0427	0.0414		
D	30239-004	10-217	Largemouth Bass	320	564	236.8	4	8/11/2010	DOE HASL 300	Cesium-137	0.131	0.0806	0.0544		
D	30239-006	30239-bc6	Bluegill	138	208	95.8	1.5	8/11/2010	DOE HASL 300	Cesium-137	0.0877	0.0448	0.0467		
D	30239-007	30239-bc7	Pumpkinseed	136	384	137.1	2.5	8/11/2010	DOE HASL 300	Cesium-137	0.0862	0.0356	0.0378		
D	30203-001	10-195	Brown Bullhead	295	332	86.1	4	8/3/2010	DOE HASL 300	Cesium-137	0.201	0.0479	0.0362		
D	30203-002	10-196	Brown Bullhead	255	246	71	4	8/3/2010	DOE HASL 300	Cesium-137	0.178	0.0554	0.0538		
D	30203-003	10-197	Brown Bullhead	252	200	59.8	4	8/3/2010	DOE HASL 300	Cesium-137	0.0745	0.0619	0.11	DL	U-DL
D	30203-004	10-198	Brown Bullhead	248	212	64.3	4	8/3/2010	DOE HASL 300	Cesium-137	0.146	0.048	0.0565		
D	30203-005	10-199	Brown Bullhead	245	212	72.4	4	8/3/2010	DOE HASL 300	Cesium-137	0.215	0.0693	0.0417		
D	30203-006	10-200	Brown Bullhead	245	204	63.4	2	8/3/2010	DOE HASL 300	Cesium-137	0.124	0.0419	0.0511		
D	30203-007	10-201	Brown Bullhead	240	192	60.7	2	8/3/2010	DOE HASL 300	Cesium-137	0.076	0.0543	0.052		
D	30203-017	10-211	Largemouth Bass	284	332	123.9	4	8/3/2010	DOE HASL 300	Cesium-137	0.164	0.0485	0.0473		
SR	30244-001	30244-bc1	Brown Bullhead	251	444	113.4	4	8/13/2010	DOE HASL 300	Cesium-137	0.111	0.0438	0.0393		
MR	30236-001	10-229	Brown Bullhead	290	368	107.2	4	8/13/2010	DOE HASL 300	Cesium-137	0.135	0.0567	0.0499		
MR	30236-002	10-230	Brown Bullhead	281	318	78.2	5	8/13/2010	DOE HASL 300	Cesium-137	0.081	0.0523	0.045		
MR	30236-003	10-231	Brown Bullhead	268	262	77.3	4	8/13/2010	DOE HASL 300	Cesium-137	0.103	0.0518	0.0405		
MR	30236-004	30236-bc4	Brown Bullhead	256	506	143.5	4	8/13/2010	DOE HASL 300	Cesium-137	0.11	0.0464	0.0529		
MR	30236-005	10-234	Brown Bullhead	245	222	73.3	4	8/13/2010	DOE HASL 300	Cesium-137	0.117	0.0586	0.0381		
MR	30236-006	30236-bc6	Brown Bullhead	243	368	103.2	4	8/13/2010	DOE HASL 300	Cesium-137	0.0757	0.0656	0.0417		
MR	30236-007	30236-bc7	Brown Bullhead	237	354	112	4	8/13/2010	DOE HASL 300	Cesium-137	0.0324	0.0422	0.0824	DL	U-DL
MR	30236-008	30236-bc8	Brown Bullhead	223	300	87.4	4	8/13/2010	DOE HASL 300	Cesium-137	0.12	0.045	0.0407		
MR	30236-009	30236-bc9	Brown Bullhead	185	234	70.8	2	8/13/2010	DOE HASL 300	Cesium-137	0.0709	0.0503	0.0518		
DP	28623-001	28623-bc1	Pumpkinseed	175	242	86.6	4	5/25/2010	DOE HASL 300	Cesium-137	0.0461	0.0377	0.0359		
DP	28623-001	28623-bc1	Pumpkinseed	175	242	86.6	4	5/25/2010	DOE HASL 300	Potassium-40	2.86	0.835	0.4		
DP	28623-002	28623-bc2	Pumpkinseed	180	282	97.9	6	5/25/2010	DOE HASL 300	Cesium-137	0.0311	0.029	0.0529	DL	U-DL
DP	28623-002	28623-bc2	Pumpkinseed	180	282	97.9	6	5/25/2010	DOE HASL 300	Potassium-40	2.27	0.707	0.3		
DP	28623-005	28623-bc5	Pumpkinseed	175	290	97	5	5/25/2010	DOE HASL 300	Cesium-137	0.0758	0.046	0.0361		
DP	28623-005	28623-bc5	Pumpkinseed	175	290	97	5	5/25/2010	DOE HASL 300	Potassium-40	2.68	0.718	0.381		
DP	28623-006	28623-bc6	Pumpkinseed	190	326	93.4	5.5	5/25/2010	DOE HASL 300	Cesium-137	0.0618	0.0495	0.0922	DL	U-DL
DP	28623-006	28623-bc6	Pumpkinseed	190	326	93.4	5.5	5/25/2010	DOE HASL 300	Potassium-40	3.4	1.14	0.796		
DP	28623-008	10-032	Pumpkinseed	195	192	62.3	6	5/25/2010	DOE HASL 300	Cesium-137	0.0398	0.0294	0.0333		
DP	28623-008	10-032	Pumpkinseed	195	192	62.3	6	5/25/2010	DOE HASL 300	Potassium-40	3.08	0.663	0.348		
DP	28623-009	10-033	Pumpkinseed	200	212	63	4	5/25/2010	DOE HASL 300	Cesium-137	0.0864	0.0409	0.0733	UI	
DP	28623-009	10-033	Pumpkinseed	200	212	63	4	5/25/2010	DOE HASL 300	Potassium-40	3.46	1.07	0.699		
DP	28623-010	10-034	Bluegill	181	160	60.1	4	5/25/2010	DOE HASL 300	Cesium-137	0.103	0.0403	0.029		
DP	28623-010	10-034	Bluegill	181	160	60.1	4	5/25/2010	DOE HASL 300	Potassium-40	2.74	0.69	0.32		
DP	28623-014	10-038	Bluegill	195	192	63.6	4	5/25/2010	DOE HASL 300	Cesium-137	0.0516	0.0402	0.0682	DL	U-DL
DP	28623-014	10-038	Bluegill	195	192	63.6	4	5/25/2010	DOE HASL 300	Potassium-40	3.23	0.875	0.55		

Appendix I - 2010 Peconic River Fish Samples
Radionuclides

Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	Sample Date	Method	Analyte	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual[1]	Rev Qual
DP	28623-015	10-039	Bluegill	210	192	62.8	4	5/25/2010	DOE HASL 300	Cesium-137	0.0456	0.0266	0.0508	DL	U-DL
DP	28623-015	10-039	Bluegill	210	192	62.8	4	5/25/2010	DOE HASL 300	Potassium-40	2.65	0.658	0.54		
DP	28623-016	10-040	Bluegill	198	196	60.7	5	5/25/2010	DOE HASL 300	Cesium-137	0.0501	0.0407	0.0682	DL	U-DL
DP	28623-016	10-040	Bluegill	198	196	60.7	5	5/25/2010	DOE HASL 300	Potassium-40	3.43	1.04	0.546		
DP	28623-017	10-041	Bluegill	189	196	61.9	5	5/25/2010	DOE HASL 300	Cesium-137	0.0177	0.0249	0.0442	DL	U-DL
DP	28623-017	10-041	Bluegill	189	196	61.9	5	5/25/2010	DOE HASL 300	Potassium-40	2.99	0.76	0.403		
DP	28623-018	10-042	Bluegill	100	202	70.6	5	5/25/2010	DOE HASL 300	Cesium-137	0.121	0.0503	0.0484		
DP	28623-018	10-042	Bluegill	100	202	70.6	5	5/25/2010	DOE HASL 300	Potassium-40	2.62	0.819	0.45		
DP	28623-019	10-043	Bluegill	203	220	78	5	5/25/2010	DOE HASL 300	Cesium-137	0.0757	0.051	0.0365		
DP	28623-019	10-043	Bluegill	203	220	78	5	5/25/2010	DOE HASL 300	Potassium-40	2.78	0.723	0.511		
DP	28623-020	10-044	Bluegill	232	232	80	5	5/25/2010	DOE HASL 300	Cesium-137	0.0645	0.0423	0.0356		
DP	28623-020	10-044	Bluegill	232	232	80	5	5/25/2010	DOE HASL 300	Potassium-40	2.1	0.72	0.406		
DP	28624-001	10-045	Largemouth Bass	242	208	70.1	4	5/25/2010	DOE HASL 300	Cesium-137	0.0402	0.0299	0.056	DL	U-DL
DP	28624-001	10-045	Largemouth Bass	242	208	70.1	4	5/25/2010	DOE HASL 300	Potassium-40	3.83	0.841	0.495		
DP	28624-002	10-046	Largemouth Bass	262	274	88.7	6	5/25/2010	DOE HASL 300	Cesium-137	0.132	0.0497	0.0368		
DP	28624-002	10-046	Largemouth Bass	262	274	88.7	6	5/25/2010	DOE HASL 300	Potassium-40	3.33	0.732	0.385		
DP	28624-003	10-047	Largemouth Bass	455	1304	340.2	8	5/25/2010	DOE HASL 300	Cesium-137	0.106	0.0417	0.0336		
DP	28624-003	10-047	Largemouth Bass	455	1304	340.2	8	5/25/2010	DOE HASL 300	Potassium-40	2.89	0.756	0.527		
DP	28624-004	10-048	Chain Pickerel	338	212	78.7	3	5/25/2010	DOE HASL 300	Cesium-137	0.1	0.0352	0.0308		
DP	28624-004	10-048	Chain Pickerel	338	212	78.7	3	5/25/2010	DOE HASL 300	Potassium-40	3.71	0.706	0.29		
DP	28624-005	10-049	Brown Bullhead	299	424	112.9	12	5/25/2010	DOE HASL 300	Cesium-137	0.0627	0.0406	0.0429		
DP	28624-005	10-049	Brown Bullhead	299	424	112.9	12	5/25/2010	DOE HASL 300	Potassium-40	3.56	0.852	0.555		
DP	28624-006	10-050	Brown Bullhead	300	482	134.5	6	5/25/2010	DOE HASL 300	Cesium-137	0.0469	0.0353	0.0364		
DP	28624-006	10-050	Brown Bullhead	300	482	134.5	6	5/25/2010	DOE HASL 300	Potassium-40	4.29	0.759	0.382		
DP	28624-007	10-051	Brown Bullhead	300	488	135	4	5/25/2010	DOE HASL 300	Cesium-137	0.0647	0.0361	0.0389		
DP	28624-007	10-051	Brown Bullhead	300	488	135	4	5/25/2010	DOE HASL 300	Potassium-40	3.96	0.762	0.389		
DP	28624-008	10-052	Brown Bullhead	300	492	144.2	5	5/25/2010	DOE HASL 300	Cesium-137	0.0606	0.0276	0.0275		
DP	28624-008	10-052	Brown Bullhead	300	492	144.2	5	5/25/2010	DOE HASL 300	Potassium-40	3.49	0.696	0.349		
DP	28624-009	10-053	Brown Bullhead	310	518	161.3	5	5/25/2010	DOE HASL 300	Cesium-137	0.0772	0.0335	0.0317		
DP	28624-009	10-053	Brown Bullhead	310	518	161.3	5	5/25/2010	DOE HASL 300	Potassium-40	4.1	0.712	0.375		
DP	28624-010	10-054	Brown Bullhead	300	504	107.1	12	5/25/2010	DOE HASL 300	Cesium-137	0.0986	0.0486	0.0338		
DP	28624-010	10-054	Brown Bullhead	300	504	107.1	12	5/25/2010	DOE HASL 300	Potassium-40	3.79	0.741	0.258		
DP	28624-011	10-055	Brown Bullhead	317	544	160.6	5	5/25/2010	DOE HASL 300	Cesium-137	0.0561	0.0316	0.033		
DP	28624-011	10-055	Brown Bullhead	317	544	160.6	5	5/25/2010	DOE HASL 300	Potassium-40	3.91	0.693	0.42		
DP	28624-012	10-056	Brown Bullhead	305	548	132.7	8	5/25/2010	DOE HASL 300	Cesium-137	0.0832	0.0379	0.0342		
DP	28624-012	10-056	Brown Bullhead	305	548	132.7	8	5/25/2010	DOE HASL 300	Potassium-40	3.35	0.787	0.351		
DP	28624-013	10-057	Brown Bullhead	315	592	122.7	11	5/25/2010	DOE HASL 300	Cesium-137	0.0671	0.0476	0.0335		
DP	28624-013	10-057	Brown Bullhead	315	592	122.7	11	5/25/2010	DOE HASL 300	Potassium-40	4.18	0.713	0.29		
DP	28624-014	10-058	Brown Bullhead	334	696	195.6	6	5/25/2010	DOE HASL 300	Cesium-137	0.0688	0.0388	0.0378		
DP	28624-014	10-058	Brown Bullhead	334	696	195.6	6	5/25/2010	DOE HASL 300	Potassium-40	4.89	0.742	0.387		

[1] Qualifiers

DL - Detection limit requirements not met. Data quality objectives may not be met.

J - The associated numerical value is an estimated quantity.

J - The associated numerical value is an estimated quantity.

UI - (Uncertain identification for gamma spectroscopy) - Radionuclide peaks that are detected but fail to meet the positive identification criteria.