NJ Department of Environmental Protection
Water Monitoring and Standards
Marine Water Monitoring

Sanitary Survey Report of Shellfish Growing Area BB2

Central Barnegat Bay

October 2013

State of New Jersey
Chris Christie, Governor
Kim Guadagno, Lt. Governor

NJ Department of Environmental Protection
Bob Martin, Commissioner

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New Jersey Department of Environmental Protection (NJDEP)

Bureau of Marine Water Monitoring (BMWM)
Bruce Friedman, Chief

October 2013

Data from July 1, 2007 – December 31, 2011

Report prepared by:

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This report was written under the direction of NJDEP WM&S administration. Special acknowledgment is given to the Boat Captains, the laboratory staff, and the technical and support staff.

Cover Photo – Sunset over BerkeleyTwp. (photo by Tracy Fay)

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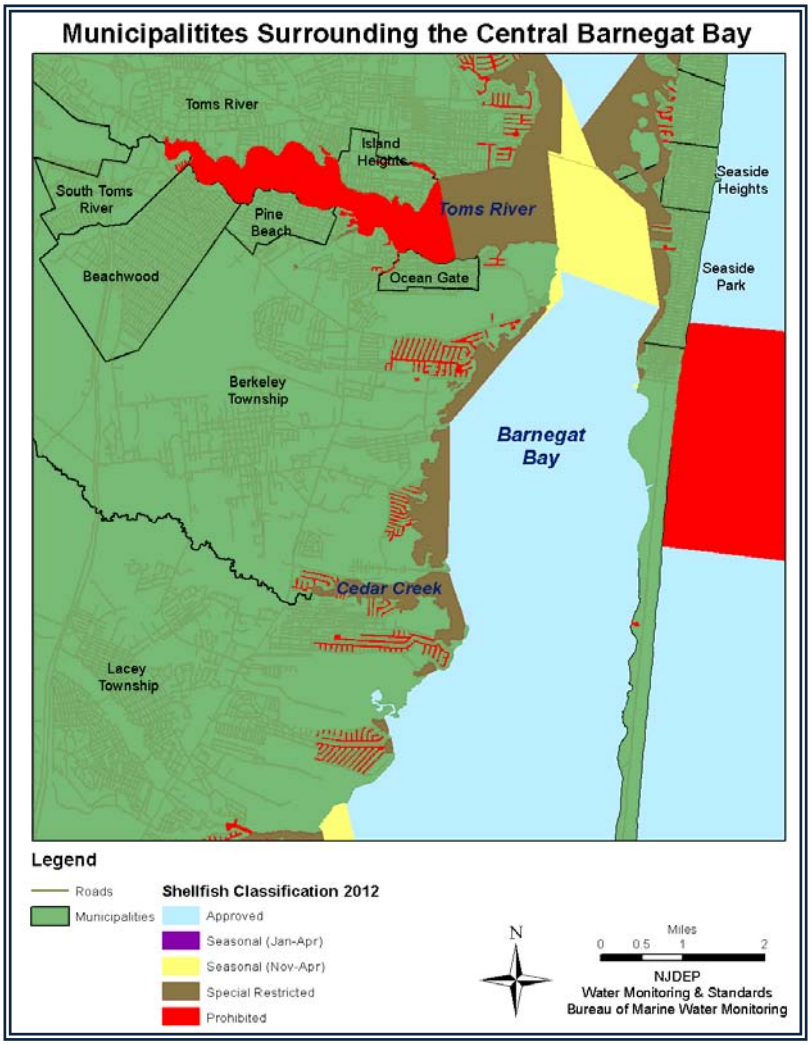
EXECUTIVE SUMMARY

The Central Barnegat Bay (BB2) consists of the marine waters from Bay Shore to Sunrise Beach, which includes a large section of the Barnegat Bay, Toms River, and Cedar Creek. Currently, the headwaters of the Toms River are classified as *Prohibited*, and the remaining waters of Toms River are classified as *Special Restricted*. All lagoons are classified as *Prohibited*. The portion of the Barnegat Bay adjacent to Toms River is classified as *Seasonally Approved (Nov-Apr)*. The Cedar Creek is classified as *Special Restricted*, and there is a buffer of *Special Restricted* waters on the western portion of the Barnegat Bay and bordering the communities of Seaside Heights and Seaside Park. Apart from marina buffers, the rest of the Central Barnegat Bay in this growing area is classified as *Approved* (see below figure).

The sampling strategy for this area is Systematic Random Sampling. Data was analyzed from July 1, 2007 to December 31, 2011 for total coliform. All 93 sampling stations in the Central Barnegat Bay area remain in compliance with their respective classification criteria. The water quality of the Central Barnegat Bay is consistent with the shellfish growing area classification as specified by the National Shellfish Sanitation Program (NSSP) criteria. As a result of the data analyzed for this report period there will be no upgrade or downgrade of shellfish waters.



DESCRIPTION OF GROWING AREA

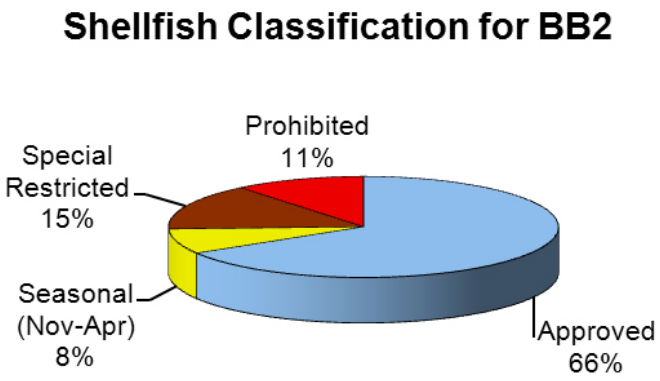
Location & Description

The Central Barnegat Bay region includes the waters of Toms River, Cedar Creek, and a large section of Barnegat Bay. The Barnegat Bay estuary is about 64-square miles and drains approximately 1,350-square miles (US Fish and Wildlife Service, 1997). The average depth of the estuary is 5-feet; therefore, it is considered a shallow estuary (US Fish and Wildlife Service, 1997). This Central Barnegat Bay growing area includes almost 14,000 acres of marine waters.

The Barnegat Bay Inlet can be found just south of Island Beach State Park, approximately seven miles southeast of Cedar Creek. The inlet governs the tides in Barnegat Bay and provides a tidal flush for the bay water.

Growing Area Classification Summary

Much of the Central Barnegat Bay area is *Approved* for harvesting shellfish, with buffers of *Seasonally Approved*, *Special Restricted*, or *Prohibited* around the urbanized areas and marinas (see figure on page 1). Toms River is a large waterway surrounded by urban areas. There are many small tributaries that feed into Toms River, which include Davenport's Branch, Jake's Branch, Union Branch, and Wrangle Brook. These freshwater inputs mix with the salt water of the bay to create an estuary. The inland waters of Toms River are *Prohibited* for harvesting shellfish. This area has urban land use and an abundance of marinas. The eastern portion of Toms River is *Special Restricted*.



The majority of the western coastline of the Central Barnegat Bay is wetlands, with a mix of urban and forested areas further inland; *Special Restricted* waters border much of the western coastline. The greater part of the eastern coastline is Island Beach State Park, a natural habitat for birds and wildlife, which is bordered by *Approved* waters. Further north on the eastern coastline are the boroughs of Seaside Heights and Seaside Park, which have high urban land use, especially during the summer; *Special Restricted* waters border these towns. There is a section of *Seasonally Approved* waters in the section of the bay between the mouth of the Toms River and the *Special Restricted* waters surrounding Seaside Heights and Seaside Park. There are numerous minor streams and creeks in this growing area, as well as many lagoon systems. All lagoons are classified as *Prohibited.* The remaining portion of the Barnegat Bay in this growing area is *Approved* for harvesting shellfish.

The State of New Jersey Shellfish Growing Water Classification Chart (NJDEP, 2007-2012) displays the classification of this area. This information can also be found on the Bureau of Marine Water Monitoring's (BMWM) website at http://www.state.nj.us/dep/bmw/; the official and most current classification descriptions can be found at N.J.A.C. 7:12.

Evaluation of Biological Resources

Commercially important shellfish native to New Jersey include: hard clams (*Mercenaria mercenaria*), soft clams (*Mya arenaria*), blue mussels (*Mytilus edulis*), eastern oysters (*Crassostrea virginica*), ocean quahogs (*Arctica islandica*), surf clams (*Spisula solidissima*), and sea scallops (*Placopecten magellanicus*).

The Central Barnegat Bay area is not very productive for shellfish harvesting at this time. The most densely populated and economically productive species in the area are hard clams (NJDEP, 1986). There are higher densities of hard clams in the southern portion of Barnegat Bay due to the open water and sandflat areas. However, this does not mean that viable shellfish resources are not present or may not be present in the

Central Barnegat Bay in the future. Factors that contribute to having a viable resource include: salinity, dissolved oxygen levels, bottom conditions, and predator activity.

SHORELINE SURVEY: EVALUATION OF POTENTIAL POLLUTION SOURCES

A comprehensive action plan to address the health of Barnegat Bay was began in 2011. As part of this action plan, NJDEP created a comprehensive monitoring network to collect water quality data that will establish the baseline conditions of the Barnegat Bay and assess this condition against applicable water quality standards. Data from this monitoring program will be used to establish a linkage between loadings of pollutants and the observed conditions in the Bay and thereby direct actions to restore the Barnegat Bay. Intensive sampling was done in accordance with this plan in 2012. For more information on this action plan, including the parameters and data, please visit http://www.state.nj.us/dep/barnegatbay/plan-wqstandards.htm.

While helping in the intensive sampling in the BB2 area on August 13-16, some shoreline observations were done (see adjacent photo and Appendix for shoreline survey sheets). No new marinas or development were noted on the surveys, populations of waterfowl were noted in the Toms River and Good Luck Point areas. Only very small amounts of SAV were observed off the coast of Island Beach State Park.

There are many marinas in this area, which have significant high use in the summer months due to the influx of tourists. Seaside Park and surrounding areas are well-known tourist spots on the New Jersey shore during the summer. Therefore, the waters in the summertime have the potential to receive more pollutants due to factors like increased population and recreational boating.

Waterfowl are known to inhabit the Central Barnegat Bay, especially during winter months. At low tide many gulls, ducks, and geese occupy the sandbars and shoreline. Oftentimes, these waterfowl also nest within the wetlands. Bird waste can add to contamination of the waters, which can contribute to high coliform values.

Vegetation is an essential part of the marine ecosystem, offering habitat and nursery grounds for numerous species. In the Central Barnegat Bay, the submerged aquatic vegetation (SAV) is prevalent in shallow areas. Some of the most common species of SAV in New Jersey include widgeon grass (*Ruppia maritima*), sago pondweed (*Potamogeton pectinatus*), horned pondweed (*Zannichellia palustris*) and eelgrass (*Zostera marina*).

Land Use

The majority of land use in this area is divided into wetlands, urban, and forested areas (see figure on following page). Island Beach State Park and Good Luck Point are wetland areas. Wetlands serve to purify

water; organic and inorganic materials are removed for plant growth. Therefore, the wetlands can contribute to maintaining good water quality in this area. The condition of the wetlands is very important to the health of the shellfish.

Urban areas are found along Toms River, in occasional pocketed lagoon areas along the western shoreline, and north of Island Beach State Park. These areas experience population fluxes each year, high in summer, lower in winter. Forested areas are interspersed around the Central Barnegat Bay. Several forested areas are within the National Pinelands Reserve; others are parks and undeveloped sections. Agricultural land use is not particularly high in this area; furthermore, the agricultural areas tend to be situated inland.

Many lagoons can be found in the Central Barnegat Bay. A lagoon is essentially a manmade canal, surrounded by bulkheaded properties, with access to the bay. Lagoon areas are laden with storm water outfalls that often drain directly into the canal water. Additionally, many homeowners have docks, which are used to store their own boats. Although there are pump out stations at many marinas, some boat owners will discharge sanitary waste directly into the bay water. For these reasons, all lagoons are classified as *Prohibited.* The areas directly outside all lagoons are then appropriately classified as *Prohibited, Seasonally Approved (Nov - Apr), Seasonally Approved (Jan - Apr),* or *Special Restricted.*

Surface and Ground Water Discharges

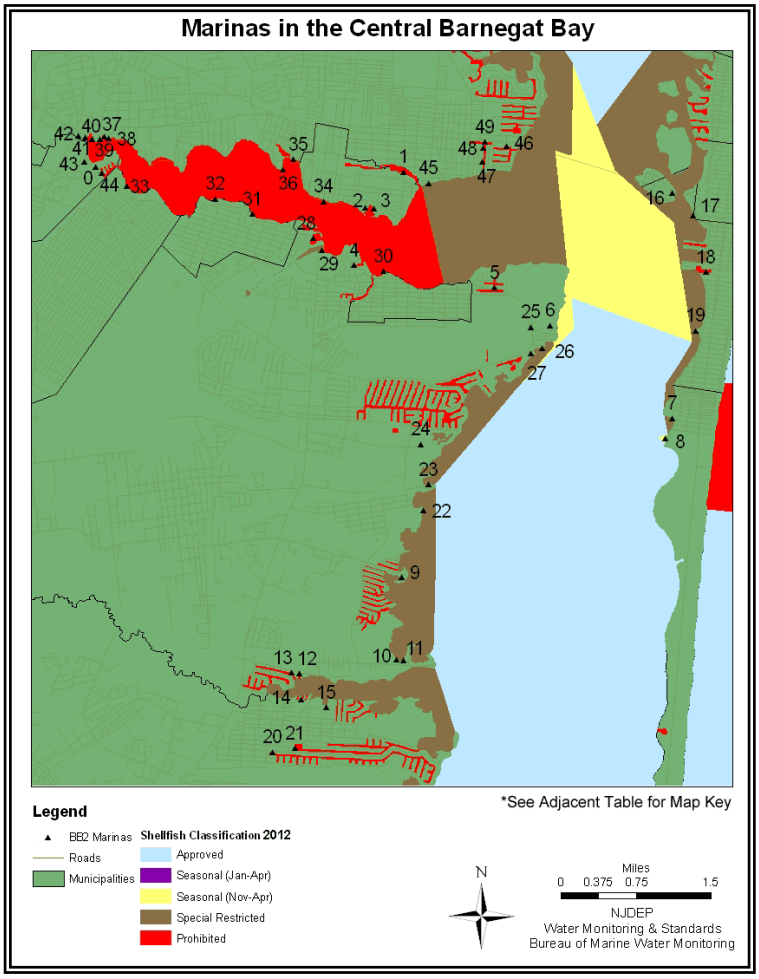
A surface water discharge involves the release of treated effluent from various municipal and industrial facilities directly into a river, stream, or the ocean. There are no known effluent discharges directly into the Central Barnegat Bay waters. The Ocean County Utilities Authority's (OCUA) Central Water Pollution Control Facility (CWPCF) treats the domestic wastes and handles the sanitary wastewater in this growing area (OCUA, 2012). The plant is located three miles south of Toms River and west of Route 9 in Bayville, Berkeley Township. The facility sends treated effluent one mile into the Atlantic Ocean at a location east of Seaside Park. As a precautionary measure, the NSSP requires a closed safety zone, so ocean waters adjacent to the outfall line are classified as *Prohibited* for the harvesting of shellfish for a distance of 1.5

miles offshore. Although the ocean outfall line is not within the confines of the Central Barnegat Bay area, the pipeline runs through this growing area. Therefore, there is the potential for leaks and breaks in the line, which would affect the surrounding waters.

According to New Jersey Pollutant Discharge Elimination System (NJPDES), there are a few facilities with an active Discharge to Groundwater (DGW) permit in this area. Besides groundwater dischargers, septic systems are occasionally used where public sewer lines are inaccessible. When septic systems fail to function properly, it could lead to groundwater contamination. The only large section along the coastline that uses septic systems in this growing area is Island Beach State Park.

Marinas

Marina facilities have the potential to affect the suitability of shellfish growing areas for the harvest of shellfish. The biological and chemical contamination associated with marina facilities may be of public health significance.



Map Key	Marina Name	Number of Slips	Buffer (Radius in Ft.)
0	Cedar Cove Marina	65	1116
1	Dillion's Creek Marina	200	1711
2	Nelson Marine Basin	94	1586
3	Cozy Cove Marina	70	1369
4	Santo Marine	85	1168
5	Ocean Gate Yacht Basin	168	1643
6	Good Luck Point Marina	120	1388
7	Red Top Boats	150	2004
8	Wheelhouse Marina	78	861
9	Whitey's Landing	30	694
10	Downe's Fishing Camp	40	1035
11	Trixie's Landing Marina	70	1369
12	Up the Creek Marina	40	1035
13	Cedar Creek Marina	60	1267
14	Lanoka Harbor Marina	200	2314
15	Ocean Beach Marina South	78	1072
16	Coty Marine	40	801
17	Seaside Boats	20	732
18	Seaside Park Marina	200	2314
19	Seaside Park Yacht Club	40	896
20	Unknown	30	494
21	Laurel Harbor Marina	177	1686
22	Unknown	10	264
23	Dick's Landing	62	998
24	Rinderer's Marina	40	801
25	Unknown Name	8	463
26	Becker's Boat Basin	28	866
27	Unknown Name	40	801
28	River Bank Marina	205	1696
29	Stump Creek Slipways	25	634
30	Ocean Gate Yacht Club	20	634
31	Pine Beach Yacht Club	18	538
32	Toms River Municipal Boat	12	439
33	Unknown Name	55	684
34	Island Heights Yacht	37	862
35	Island Beach Civic A	50	1002
36	Toms River Yacht Club	90	1344
37	Unknown Name	24	801
38	Toms River Boat Work	35	968
39	Condo	50	1157
40	Condo	20	732
41	Unknown Name	18	694
42	Unknown Name	24	801
43	Unknown Name	15	323
44	Lighthouse Point Marina	250	2068
45	Gilford Park Yacht Club	85	1168
46	Unknown Name	60	896
47	Unknown Name	20	517
48	Unknown Name	16	463
49	Barnegat Bay Boat Sales	150	1146

There are 50 marinas in the Central Barnegat Bay area, as shown in the above figure. Although there are marinas throughout this growing area, they are particularly numerous in Toms River, Cedar Creek, and around Seaside Heights and Seaside Park. The waters enclosed by the footprint of a marina are classified as *Prohibited*; depending on the size of the marina and the water quality, water immediately adjacent to each marina may be classified as *Prohibited*, *Special Restricted*, or *Seasonally Approved* (no harvest during summer months when the marina is active). Marina buffer zones were calculated using the Virginia Model or the marina buffer equation, depending on the location. The size of each buffer zone is shown in the appendix. Additional information on the marina equations used for buffer generation can be found in the NJDEP *Shellfish Growing Area Report Guidance Document* (2007). This document can be found online at: http://www.nj.gov/dep/bmw/reports.htm.

NJDEP's 'Clean Marina' program is voluntary and provides guidelines that aim, "to prevent adverse impacts to water quality, sensitive habitats, and living resources in proximity to marinas" (NJDEP Clean Marina Program, 2012). Certified 'Clean Marinas' in the Central Barnegat Bay are Dillions' Creek Marina in Island Heights, Riverbank Marina in Bayville, Hobby Lobby Marina in Toms River, Ocean Gate Yacht Basin and Good Luck Point Marina, both in Berkeley. Cozy Cove Marina in Island Heights, Lanoka Harbor Marina in Lanoka Harbor, and Nelson Marine Basin in Island Heights have made a pledge to become a 'Clean Marina'.

Spills, Unpermitted Discharges, and Closures

Spills reported to the NJDEP hotline (1-877-WARN-DEP) are passed on to the BMWM when shellfish waters might be impacted. Since there is a direct relationship between the pollution of shellfish growing areas and the transmission of diseases to humans, BMWM must carefully assess each spill occurrence. If the spill is determined to be detrimental to the shellfish beds, then a closure is made in the impacted area to protect public health. The closure is not lifted until the source of the problem is fixed/eliminated and all samples in that area fit within the appropriate classification criteria.

On August 27, 2011 all state waters in New Jersey were closed for shellfish harvest in preparation for Hurricane Irene. The waters of the Barnegat Bay remained closed until September 6, 2011, when water and tissue tests showed that the shellfish were safe for human consumption. There were no other spills causing shellfish bed closures in the Central Barnegat Bay during the July 1, 2007 - December 31, 2011 time period; prior spills are summarized in past reports.

The process of dredging can impair water quality and contaminate shellfish beds near dredging and disposal sites. BMWM is given the opportunity to review such project through CAFRA submission and will respond with a request for denial of the project if the proposed dredging or disposal site can potentially contaminate shellfish beds or impair water quality. BMWM's comments are taken into consideration by the NJDEP, Division of Land Use Regulation (DLUR) when approving or denying a permit.

Stormwater Discharges

Environmental pressures on shellfish beds in New Jersey can originate in pollutants that enter growing waters via stormwater runoff. Storm drains along roads collect runoff and transmit it to stormwater outfalls. The stormwater outfalls deposit the runoff directly into the bay, or indirectly via other water bodies.

While some of this runoff provides nutrients for plants and animals, it also carries pollutants that potentially contaminate the waters. Stormwater outfalls are one of the most significant non-point sources of pollution. Pesticides, animal wastes, petroleum fuel products and bacteria from faulty septic systems and failing municipal infrastructure are among the harmful materials in runoff. Runoff can easily transport the bacteria to swimming beaches and other waterbodies. Among other things, this can cause human illness through recreational contact or through consumption of contaminated shellfish. The storm water outfalls are often found in urban areas, and are especially common within lagoon communities. Lagoon storm water discharges are especially harmful because lagoons see little tidal flushing, heavy boat usage, and high quantities of bulkheading.

BMWM conducts storm water projects, where water samples are taken before and during a storm event in order to determine the effect of runoff. Once a possible source of the problem is identified, then the appropriate State and local officials are notified to attempt to remedy the situation. Around 2000, a storm water project was done in the area of Seaside Heights; more information on this storm water project can be found in past reports on the Central Barnegat Bay area.

WATER QUALITY STUDIES

Sampling Strategy

The State Shellfish Control Authority has the option of choosing one of two water monitoring sampling strategies for each growing area. For additional information on the types of sampling strategies see the NJDEP *Shellfish Growing Area Report Guidance Document* (2007). This shellfish growing area is not impacted by discharges from sewage treatment facilities or combined sewer overflows; therefore, it was sampled under the Systematic Random Sampling Strategy (SRS).

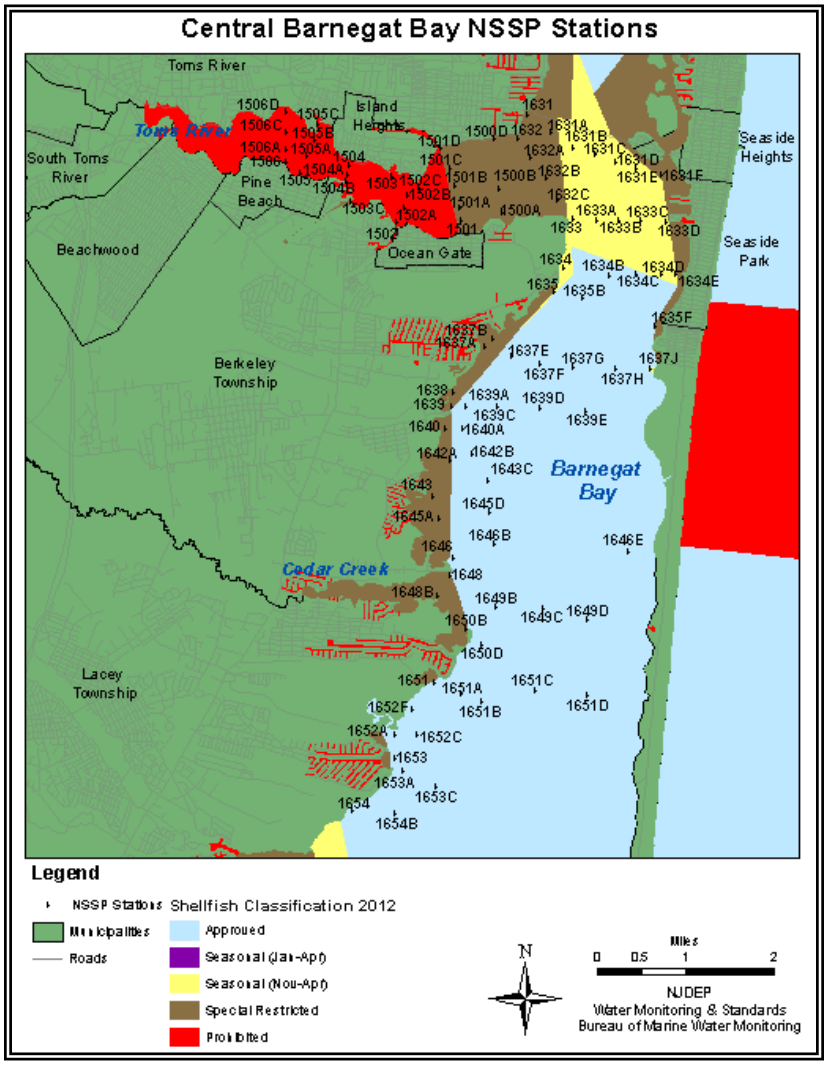
Each shellfish producing state is directed to adopt either the total coliform or fecal coliform criterion. While New Jersey bases its growing water classifications on the total coliform criterion, the laboratory does have the ability to make corresponding fecal coliform determinations. Each classification criterion is composed of a measure of the statistical 'central tendency' (geometric mean) and the relative variability of the data set. The criteria for the bacterial acceptability of shellfish growing waters are provided in the NSSP *Guide for the Control of Molluscan Shellfish*, 2007 Revision. For the Systematic Random Sampling Strategy, variability is expressed as the estimated 90th percentile. The following table shows the statistical criteria for the SRS strategy.

CRITERIA FOR SYSTEMATIC RANDOM SAMPLING STRATEGY				
	Total Coliform Criteria		**Fecal Coliform Criteria**	
	Geometric mean (MPN/100 mL)	**Max. 90th Percentile** (MPN/100 mL)	**Geometric mean** (MPN/100 mL)	**Max. 90th Percentile** (MPN/100 mL)
Approved Classification	70	330	14	49
Special Restricted Classification	700	3300	88	300

The water quality of each growing area must be evaluated before an area can be classified as *Approved, Seasonally Approved (Nov-Apr or Jan-Apr), Special Restricted,* or *Prohibited*. A *Seasonally Approved* area must be sampled and meet the *Approved* criterion during the time of the year that it is open for harvest. The

criteria for the bacterial acceptability of shellfish growing waters are provided in the NSSP *Guide for the Control of Molluscan Shellfish*, 2007 Revision.

Water sampling was performed in accordance with the Field Procedures Manual (NJDEP, 2005). Water quality sampling, shoreline, and watershed surveys were conducted in accordance with the NSSP *Guide for the Control of Molluscan Shellfish*, 2007 Revision. Data management and analysis were accomplished using database applications developed forBMWM. Mapping of data was performed with Geographic Information System software (GIS: ArcMap).



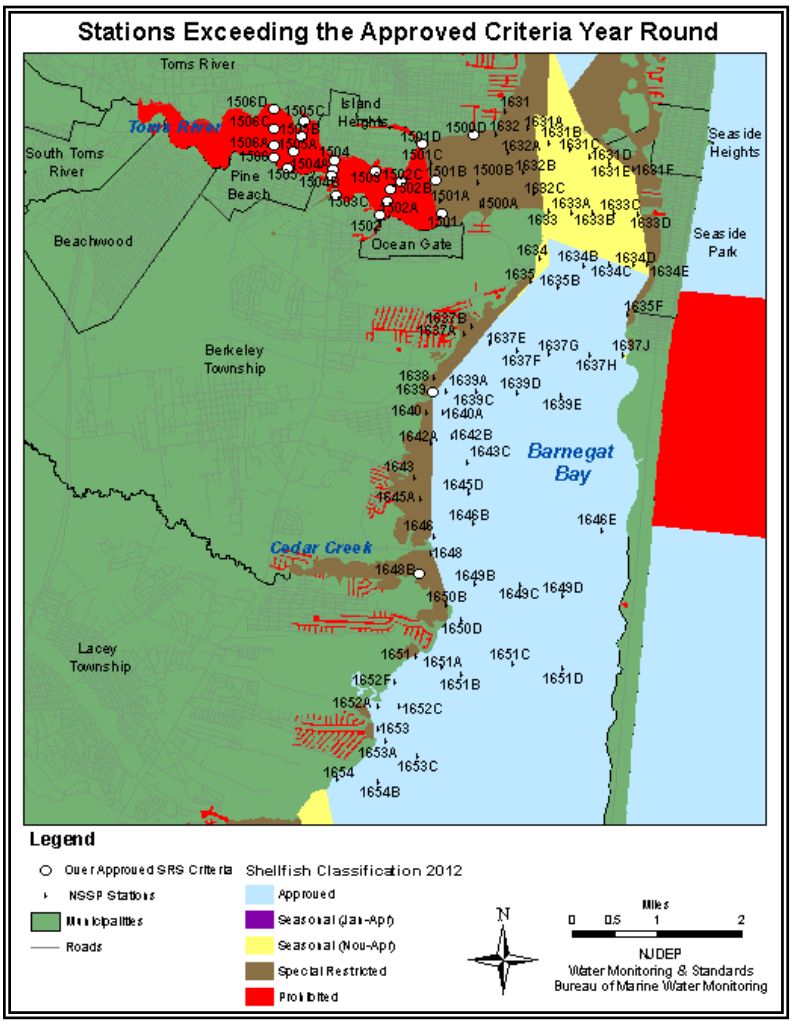
Bacteriological Quality

Over 3,000 water samples were collected in the Central Barnegat Bay between July 1, 2007 and December 31, 2011 and analyzed by the three-tube, three-dilution (at some stations four-dilutions are used) standard total coliform fermentation method according to the American Public Health Association (APHA, 1970 & 1995). The adjacent figure shows the Shellfish Growing Water Quality monitoring stations in the Central Barnegat Bay. Over 1,700 NSSP stations total are monitored each year for coliform levels throughout the state; 93 are located in the Central Barnegat Bay and were sampled with the Systematic Random Sampling (SRS) strategy (see adjacent figure).

Compliance with NSSP Criteria

Four separate assignment runs are required for this large growing area. Three of these assignment runs are in Barnegat Bay (102, 107, & 108) and one is in Toms River (097). This report examined the data from the assignment runs done between July 1, 2007 and December 31, 2011. These assignment runs provided sufficient samples for evaluation, bearing in mind the sample size must be at least 30 for each station according to the Systematic Random Sampling strategy.

In order for waters to be classified as *Approved*, the total coliform geometric mean must be below 70 MPN/100ml and the total coliform Est. 90th Percentile must be below 330 MPN/100ml. Twenty-three stations did not meet the SRS *Approved* criteria year-round; however, all stations that are currently located in *Approved* waters meet the total coliform SRS *Approved* criteria. Therefore, no changes in classification are needed based on the stations in *Approved* waters (see adjacent figure).



The year-round data are divided between the summer and winter sampling seasons. The summer season runs from May through October, and the winter season runs from November through April. Stations in *Seasonally Approved* waters must fit the *Approved* criteria for the time that they are open for harvest. There are sections of *Seasonally Approved* waters in the Central Barnegat Bay that are open for harvest during the winter. Data from July 1, 2007 through December 31, 2011 shows that the stations in *Seasonally Approved* waters do fit within *Approved* criteria during the winter months. The data timeframe was also extended to January 1, 2004 to capture a sample size of at least 30 during the winter; with the extended timeframe the stations in *Seasonally Approved* waters also fit within *Approved* criteria. Therefore, no changes in classification are recommended to the *Seasonally Approved* waters.

For waters to be classified as *Special Restricted*, the Geometric Mean must be below 700 MPN/100ml and the Est. 90th Percentile must be below 3300 MPN/100ml. All sampled stations complied with the NSSP total coliform criteria for *Special Restricted* waters. Since no stations in *Special Restricted* waters had values above the NSSP criteria, no changes in classification are needed.

Rainfall Effects

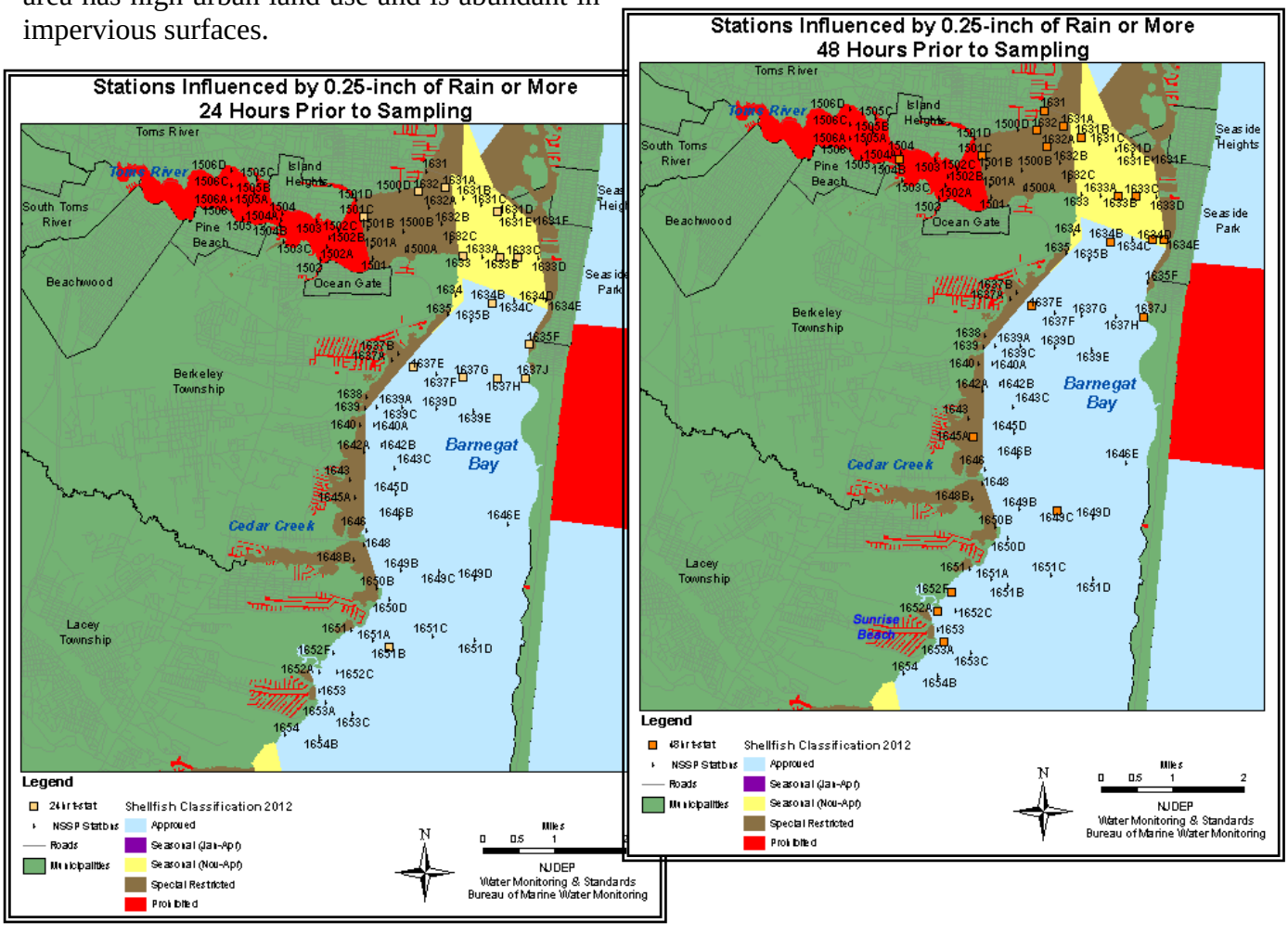
Precipitation patterns in the coastal areas of New Jersey are typical of the Mid-Atlantic coastal region. Summer storms are localized and often associated with thunder and lightning activity. Winter storms are frequently associated with northeasters. Hurricanes can occur during the summer and early fall.

Rainfall amounts are based on the closest established NOAA/National Weather Service station; each assignment run is assigned to a weather station to accurately reflect the rainfall at the sampling stations.

A *t*-test is used to compare log-transformed total coliform values for wet verses dry data. The *t*-statistical probability must be less than or equal to 0.05 for a station to be rainfall impacted. There is also a wet/dry cutoff for each growing area that dictates what data is considered 'wet' and what data is considered 'dry'.

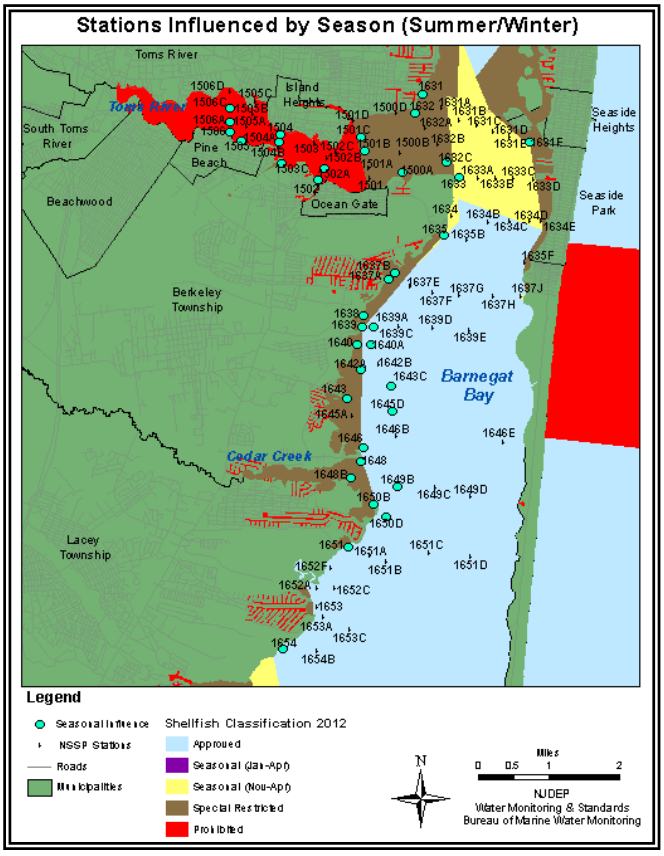
The effects of the 'first flush' should be captured by the '24 hours prior to sampling' *t*-statistics. *T*-statistics are also determined for the 'cumulative 48 hours prior to sampling' and the 'cumulative 72 hours prior to sampling'. These *t*-statistics help to determine if there is a delayed impact on the waterbody.

The best scenario that represented this growing area was based on a wet/dry cutoff of 0.25 inch. Once this was determined, the data were analyzed at '24hr prior to sampling', '48hr prior to sampling', and '72hr prior to sampling'. The 'first flush' after 0.25 inch of rainfall especially impacts the *Seasonally Approved* and *Approved* waters in the Barnegat Bay outside of the Toms River (see below figure). The 'cumulative 48 hours prior to sampling' generally illustrates the spread of the 24-hour impacted stations, with the addition of stations around the Sunrise Beach lagoon system (see below figure). The 'cumulative 72 hours prior to sampling' shows the impact spread throughout the lower portion of the Central Barnegat Bay. Rainfall appears to be a significant factor for the stations located in this growing area. This is expected since this area has high urban land use and is abundant in impervious surfaces.



Seasonal Effects

Temperature, precipitation, wind, and the general circulation of the atmosphere have seasonal variations that affect the marine environment (Ingmanson and Wallace, 1989). Seasonal variation may also be the result of a variety of conditions, including specific agricultural land-use practices, biological activity, stream flow and/or sediment. Summertime pressures are usually more likely to impact these waters because of such things as heavy boat travel and higher temperatures. The water quality also has the potential to be affected by other non-point sources from increased summer population and/or increased use of recreational water activities.



Statistically significant seasonal impacts were observed at thirty-seven stations. SRS seasonal components were assessed using a *t*-test to compare log-transformed total coliform values for summer verses winter data (see adjacent figure). The *t*-statistical probability must be less than or equal to 0.05 for a station to have a seasonal component. All of the stations with a seasonal component have higher coliform values in the summer. However, none of the noted stations had a Geometric Mean that exceeded the established values for the present classifications. The Est. 90th Percentile values for these stations also fit within criteria. No changes in classification are needed as a result of the seasonal components at these stations.

RELATED STUDIES

WM&S'BMWM also monitors New Jersey waters for levels of nutrients (estuarine monitoring), phytoplankton, and bathing beach standards.

Nutrients

Coastal water quality is monitored for ecological health parameters including dissolved oxygen and total nitrogen. Samples are collected on a quarterly basis at 15 stations in the Central Barnegat Bay. The parameters are evaluated, analyzed, and presented in a separate report by the Bureau of Marine Water Monitoring, available on the web at: www.nj.gov/dep/bmw.

Phytoplankton

Phytoplankton are photosynthetic algae that play a critical role at the base of aquatic food webs. Phytoplankton studies are used to show what species are present and in what concentration. Normally, New Jersey's coastal waters are populated with non-threatening diatoms during the summer months. However, algal blooms have historically been recurrent to the Barnegat Bay area.

The BMWM and USEPA (United States Environmental Protection Agency) Region 2 conduct routine helicopter surveillance throughout the summer to determine the occurrence of species of marine phytoplankton that could produce biotoxins. BMWM, in accordance with the NSSP requirements, also analyzes the data. Please see www.nj.gov/dep/bmw/reports.htm for further information and the most recent phytoplankton reports.

Bathing Beaches

WM&S cooperatively works with the New Jersey Department of Health and local health agencies to monitor the bathing beaches in New Jersey. Together, these agencies implement the Cooperative Coastal Monitoring Program (CCMP). With this program, the coastal and estuarine waters that are open to the public for recreational bathing are surveyed and regularly monitored for the concentration of bacteria. The CCMP, in conjunction with US Army Corps of Engineers, also carries out the NY/NJ Harbor Estuary Program's Floatables Action Plan that utilizes aerial surveillance to detect floating solid waste and debris. Flights are scheduled for six days a week, weather permitting, during the summer months.

Typically, bathing beach samples are taken once a week for the entire summer. These samples are tested for Enterococci as a fecal coliform indicator. Ocean and bay recreational beaches are subject to opening and closing procedures of the State Sanitary Code. Local health agencies and law enforcement may close a bathing beach if the results exceed the State Sanitary Code of 104 Enterococci per 100 mL. Stations must be re-sampled when bacteria concentrations exceed the primary contact standard of 104 Enterococci per 100 mL of sample (NJDEP CCMP, 2009). Consecutive samples that exceed the standard require the closing of the beach until a sample is obtained that is within the standard. Environmental stations are not bathing beaches and do not require re-sampling. Beaches can also be closed at any time if health or enforcement agencies believe it is in the interest of public health. BMWM utilizes this data as adjunct information; the closure of shellfish waters does not correspond with these results. Please see http://www.njbeaches.org/ for further information.

Toxic Monitoring

Toxic chemicals such as heavy metals, pesticides, polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs) are dangerous chemicals that can be found in the environment. These substances can be released into the environment by storm drains, runoff, sewage treatment facilities, and atmospheric deposition. Bottom dwelling organisms are most vulnerable to these chemicals and may pose a risk to human health if consumed.

USEPA National Coastal Assessment Program (NCA)

USEPA National Coastal Assessment EMAP and its partners began sampling in the coastal and estuarine water of the United States in 1990. Data collected include water column parameters, sediment chemistry & toxicity, benthic communities, and tissue contaminants. These data are collected once every five (5) years, as part of USEPA's National Aquatic Resource Surveys. Currently, there is no NCA data available for the July 1, 2007 to December 31, 2011 timeframe. Please see http://www.epa.gov/emap/nca/index.html for further information and the most recent data.

National Oceanic and Atmospheric Administration (NOAA) Mussel Watch

The National Oceanic and Atmospheric Administration (NOAA) Mussel Watch Program monitors the levels of toxins and metals in shellfish. The blue mussel, *Mytilus edulis*, occurs worldwide and effectively takes up

toxins and metals from seawater and sediments. The toxins and metals then become concentrated in the mussel's living tissues. Assays from the living tissues of this shellfish can be made easily and cheaply. The Mussel Watch Program monitors metals such as mercury, lead, zinc, nickel, cadmium, copper, chromium, aluminum, silicon, manganese, iron, arsenic, selenium, tin, antimony, thallium, and silver. The program also monitors toxins such as the synthetic organic compounds that are widely used in pesticides, solvents, flame-retardants, and other products. There is a no mussel watch station in the Central Barnegat Bay. Please see http://ccma.nos.noaa.gov/about/coast/nsandt/musselwatch.aspx for further information and the most recent data.

CONCLUSIONS

The appendix lists the water quality data obtained from the sampling period of July 1, 2007 to December 31, 2011. Systematic Random Sampling strategy was used to collect the samples, laboratory tests were run for total coliform, and a thorough analysis of the data was assembled for this report. The bacteriological data for each station supports the respective criteria for their classification under the total coliform standard. Based on the data, this growing area is adequately classified.

There were 23 stations with a seasonal component. It was found that the urban areas in the Central Barnegat Bay are impacted by rainfall accumulations above 0.25 inch. On analysis it was found that none of the impacted stations require a change in classification.

Analysis of the Central Barnegat Bay shellfish growing area samples indicates that total coliform levels meet the standards of the National Shellfish Sanitation Program (NSSP). The western portion of the Toms River is and should remain *Prohibited*, even though it did not exceed *Special Restricted* criteria due to the elevated total coliform levels, the abundance of marinas, past mercury levels found in the sediment, and high urban land use. The eastern portion of the Toms River fits within the criteria for *Special Restricted* and is adequately classified due to the surrounding urban land use. The Barnegat Bay, at the mouth of the Toms River, is sufficiently classified as *Seasonally Approved (Nov-Apr)*, since it receives the flush from the northern portion of the Barnegat Bay and Toms River, both which have high summer populations. The urban coastline of Barnegat Bay is classified as *Special Restricted*, including Cedar Creek, and should remain so, due to runoff, outfalls, and marinas. The rest of Barnegat Bay is *Approved*, excluding the *Special Restricted* areas off of Seaside Heights and Seaside Park and *Seasonally Approved* marina buffers. There is no reason to downgrade these *Approved* waters, since all stations fit within the total coliform *Approved* criteria. The Central Barnegat Bay is acceptably classified, as supported by the total coliform levels sampled from July 1, 2007 to December 31, 2011. No changes in classification are recommended at this time.

RECOMMENDATIONS

There are no recommended changes in classification for the Central Barnegat Bay. There are no recommended changes in monitoring schedule for the Central Barnegat Bay. The recommendation for further study is to plan an on-site survey of stations 1639, 1648, and 1648B. These three stations have particularly high summer coliform values when compared to the winter values; however, these stations do not exceed the NSSP criteria for their current classification. Doing field work might help explain the difference in coliform values. Otherwise, continue sampling under the existing sampling protocol and analyzing the samples for total coliform.

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APPENDICES

A. Statistical Summary

B. Seasonal Evaluation

C. Precipitation

- Rainfall Amount
- Weather Observations
- Wet/Dry Statistics

D. Data Listing – July 1, 2007 to December 31, 2011

E. Shoreline Survey Reports

A. Total Coliform
Statistical Summary (SRS)

Total Coliform Statistical Summary (SRS)

From: 7/1/2007 *to* 12/31/2011

Report Area: BB2

Station	*Depth*	*Status*	*Year Round Geometric Mean*	*Est. 90th*	*N*	*Summer Geometric Mean*	*Summer Est. 90th*	*N*	*Winter Geometric Mean*	*Winter Est. 90th*	*N*
NSSP MONITORING											
COMBO											
1500A	S	SR	32.6	284.0	36	54.3	354.2	22	14.7	139.4	14
1500B	S	SR	24.6	160.2	36	35.1	192.9	22	14.1	100.4	14
1500D	S	SR	49.5	882.1	36	75.2	1617.8	22	25.6	289.8	14
1501	S	SR	47.2	484.8	36	60.8	638.8	22	31.7	311.1	14
1501A	S	SR	23.5	227.5	36	31.0	321.7	22	15.1	126.3	14
1501B	S	SR	35.6	357.0	36	59.4	627.7	22	15.9	102.3	14
1501C	S	SR	26.4	218.6	36	48.8	367.1	22	10.0	53.0	14
1501D	S	SR	106.7	1,597.2	36	172.6	1822.5	22	50.2	1,022.7	14
1502	S	P	87.8	1,156.8	36	176.9	1988.5	22	29.2	269.9	14
1502A	S	P	59.5	622.5	36	109.3	826.9	22	22.9	243.7	14
1502B	S	P	80.6	670.1	36	108.3	1035.6	22	50.6	304.7	14
1502C	S	P	57.9	618.4	36	88.3	793.8	22	29.9	349.0	14
1503	S	P	96.6	939.9	36	152.9	1257.6	22	47.0	465.3	14
1503C	S	P	132.6	1,333.4	36	233.3	2470.9	22	54.6	314.7	14
1504	S	P	116.0	1,012.1	36	181.4	1367.9	22	57.4	492.2	14
1504A	S	P	86.8	929.9	36	156.7	1516.6	22	34.3	274.7	14
1504B	S	P	123.9	1,107.9	36	179.8	1570.9	22	69.1	555.0	14
1505	S	P	106.7	1,018.6	36	171.3	1490.0	22	50.7	427.7	14
1505A	S	P	122.4	1,170.6	36	175.7	1645.8	22	69.4	607.7	14
1505B	S	P	112.3	1,024.4	36	162.9	1686.3	22	62.6	390.0	14
1505C	S	P	215.8	2,082.2	36	329.5	3430.0	22	110.9	757.7	14
1506	S	P	136.7	1,269.6	36	234.6	2370.1	22	58.5	298.2	14
1506A	S	P	129.5	1,508.9	36	238.5	2603.9	22	49.6	398.5	14
1506C	S	P	132.9	1,091.7	36	209.3	1673.0	22	65.0	421.3	14
1506D	S	P	126.7	1,561.8	36	190.4	2463.6	22	66.8	655.3	14
1631	S	SR	15.6	80.2	36	26.8	134.7	22	6.6	17.2	14
1631A	S	SR	15.9	97.3	31	19.0	127.0	16	13.1	75.2	15
1631B	S	S	12.5	83.5	31	16.1	112.3	16	9.5	61.0	15
1631C	S	S	11.2	56.8	30	11.9	60.7	15	10.6	56.1	15
1631D	S	S	10.5	74.7	31	16.9	165.4	16	6.3	24.1	15
1631E	S	S	11.0	72.6	31	15.3	135.9	16	7.7	33.0	15
1631F	S	SR	21.8	244.3	31	50.2	833.2	16	8.9	28.8	15
1632	S	SR	22.4	196.5	35	39.0	370.4	21	9.7	47.3	14
1632A	S	SR	12.0	68.6	36	16.9	97.5	22	7.0	32.8	14
1632B	S	SR	16.7	104.9	35	19.6	113.8	21	13.1	94.5	14
1632C	S	SR	21.4	186.8	36	36.0	265.7	22	9.4	74.3	14
1633	S	S	17.5	125.0	30	31.5	263.2	16	9.0	35.9	14

Station	Depth	Status	Year Round Geometric Mean	Est. 90th	N	Summer Geometric Mean	Summer Est. 90th	N	Winter Geometric Mean	Winter Est. 90th	N
1633A	S	S	11.6	82.4	31	19.0	166.5	16	6.9	30.7	15
1633B	S	S	12.0	97.6	31	14.8	189.0	16	9.7	43.6	15
1633C	S	S	12.9	91.0	31	15.5	155.5	16	10.6	49.1	15
1633D	S	S	16.6	137.4	31	23.8	294.7	16	11.3	51.3	15
1634	S	S	14.4	106.4	31	21.6	209.8	16	9.3	43.9	15
1634B	S	A	8.6	42.5	31	11.4	88.5	16	6.4	14.3	15
1634C	S	A	13.0	78.7	31	20.1	165.5	16	8.2	27.2	15
1634D	S	S	14.1	123.0	31	16.4	226.9	16	11.9	59.8	15
1634E	S	S	14.3	114.3	31	23.1	247.6	16	8.5	39.6	15
1635	S	S	11.5	75.9	31	20.1	163.3	16	6.4	23.6	15
1635B	S	A	9.4	67.5	31	12.1	122.2	16	7.1	33.3	15
1635F	S	SR	11.4	73.7	31	15.3	147.4	16	8.3	29.9	15
1637A	S	SR	13.0	88.7	31	24.8	208.8	16	6.5	21.5	15
1637B	S	SR	14.7	124.6	30	32.0	331.0	15	6.7	26.5	15
1637E	S	A	6.3	26.9	31	8.4	47.8	16	4.6	12.3	15
1637F	S	A	7.2	33.4	31	8.0	47.0	16	6.5	23.2	15
1637G	S	A	6.9	36.3	30	8.9	66.5	16	5.1	15.4	14
1637H	S	A	7.5	39.8	31	9.5	77.6	16	5.9	16.0	15
1637J	S	A	10.3	70.4	31	15.1	122.1	16	6.9	35.1	15
1638	S	SR	15.7	90.7	32	29.2	195.6	15	9.1	33.2	17
1639	S	SR	38.8	353.9	32	121.2	719.9	15	14.2	79.0	17
1639A	S	A	17.4	114.3	32	31.9	236.8	15	10.2	46.3	17
1639C	S	A	15.6	94.6	32	22.4	142.0	15	11.3	62.8	17
1639D	S	A	6.2	26.6	32	5.7	17.4	22	7.4	59.8	10
1639E	S	A	6.5	53.2	32	6.4	69.5	22	6.6	27.6	10
1640	S	SR	18.6	151.8	32	43.6	449.4	15	8.7	31.9	17
1640A	S	A	17.8	143.1	32	37.0	366.1	15	9.4	42.2	17
1642A	S	SR	13.1	105.7	32	28.3	283.2	15	6.6	28.1	17
1642B	S	A	11.1	57.8	32	13.0	88.9	15	9.8	39.3	17
1643	S	SR	16.3	147.0	32	34.0	361.8	15	8.5	47.0	17
1643C	S	A	7.8	39.3	32	13.1	99.9	15	5.0	11.2	17
1645A	S	SR	11.7	70.3	32	16.8	143.2	15	8.5	32.9	17
1645D	S	A	8.1	44.1	32	14.1	113.5	15	4.9	12.5	17
1646	S	A	13.5	91.9	32	24.0	160.9	15	8.1	46.0	17
1646B	S	A	8.5	45.2	32	12.9	106.4	15	5.8	16.0	17
1646E	S	A	4.7	17.2	32	4.9	21.6	22	4.3	9.4	10
1648	S	SR	17.9	151.6	32	37.6	406.4	15	9.3	42.3	17
1648B	S	SR	37.3	338.4	32	89.1	983.9	15	17.3	75.7	17
1649B	S	A	9.5	91.2	32	21.6	358.6	15	4.6	12.9	17
1649C	S	A	4.0	8.2	32	4.0	8.4	22	4.0	7.9	10
1649D	S	A	4.6	12.3	32	4.3	11.2	22	5.4	15.3	10
1650B	S	SR	12.7	72.2	32	28.5	158.8	15	6.2	20.2	17
1650D	S	A	13.6	130.2	32	36.9	355.0	15	5.6	27.5	17
1651	S	A	8.7	47.3	32	14.9	105.1	15	5.4	17.5	17

Station	Depth	Status	Year Round Geometric Mean	Est. 90th	N	Summer Geometric Mean	Summer Est. 90th	N	Winter Geometric Mean	Winter Est. 90th	N
1651A	S	A	7.6	46.0	32	11.4	95.8	15	5.4	20.7	17
1651B	S	A	4.9	15.6	32	4.7	13.5	22	5.3	21.8	10
1651C	S	A	3.9	6.7	32	3.8	6.0	22	4.2	8.6	10
1651D	S	A	4.6	19.3	32	4.7	24.6	22	4.3	10.0	10
1652A	S	A	7.6	30.3	32	10.4	52.3	15	5.7	16.7	17
1652C	S	A	5.8	26.4	32	8.5	63.5	15	4.1	8.4	17
1652F	S	A	7.0	31.0	32	9.4	59.0	15	5.4	15.3	17
1653	S	A	8.8	51.4	32	12.2	94.4	15	6.5	27.8	17
1653A	S	A	7.8	44.7	32	11.8	95.9	15	5.5	18.9	17
1653C	S	A	4.5	10.1	32	4.5	10.8	22	4.6	8.7	10
1654	S	A	6.3	30.2	32	10.2	78.3	15	4.1	8.0	17
1654B	S	A	6.0	27.6	32	7.9	58.1	15	4.7	11.5	17

B. Seasonal Evaluation

Season Statistics - Total Coliform

From: 7/1/2007 *to* 12/31/2011

Report Area: **BB2**

Station	Station Status	Depth	t-Statistic Probability	Summer Count	Summer Geometric Mean	Winter Count	Winter Geometric Mean
NSSP MONITORING							
COMBO							
1500A	SR	S	0.021	22	54.3	14	14.7
1500B	SR	S	0.067	22	35.1	14	14.1
1500D	SR	S	0.165	22	75.2	14	25.6
1501	SR	S	0.302	22	60.8	14	31.7
1501A	SR	S	0.242	22	31.0	14	15.1
1501B	SR	S	0.030	22	59.4	14	15.9
1501C	SR	S	0.004	22	48.8	14	10.0
1501D	SR	S	0.088	22	172.6	14	50.2
1502	P	S	0.007	22	176.9	14	29.2
1502A	P	S	0.011	22	109.3	14	22.9
1502B	P	S	0.183	22	108.3	14	50.6
1502C	P	S	0.087	22	88.3	14	29.9
1503	P	S	0.051	22	152.9	14	47.0
1503C	P	S	0.016	22	233.3	14	54.6
1504	P	S	0.045	22	181.4	14	57.4
1504A	P	S	0.014	22	156.7	14	34.3
1504B	P	S	0.103	22	179.8	14	69.1
1505	P	S	0.041	22	171.3	14	50.7
1505A	P	S	0.125	22	175.7	14	69.4
1505B	P	S	0.106	22	162.9	14	62.6
1505C	P	S	0.071	22	329.5	14	110.9
1506	P	S	0.017	22	234.6	14	58.5
1506A	P	S	0.014	22	238.5	14	49.6
1506C	P	S	0.036	22	209.3	14	65.0
1506D	P	S	0.120	22	190.4	14	66.8
1631	SR	S	0.001	22	26.8	14	6.6
1631A	SR	S	0.472	16	19.0	15	13.1
1631B	S	S	0.332	16	16.1	15	9.5
1631C	S	S	0.796	15	11.9	15	10.6
1631D	S	S	0.072	16	16.9	15	6.3
1631E	S	S	0.203	16	15.3	15	7.7
1631F	SR	S	0.008	16	50.2	15	8.9
1632	SR	S	0.015	21	39.0	14	9.7
1632A	SR	S	0.056	22	16.9	14	7.0
1632B	SR	S	0.423	21	19.6	14	13.1
1632C	SR	S	0.018	22	36.0	14	9.4
1633	S	S	0.023	16	31.5	14	9.0
1633A	S	S	0.063	16	19.0	15	6.9
1633B	S	S	0.480	16	14.8	15	9.7
1633C	S	S	0.496	16	15.5	15	10.6
1633D	S	S	0.215	16	23.8	15	11.3
1634	S	S	0.136	16	21.6	15	9.3
1634B	A	S	0.198	16	11.4	15	6.4
1634C	A	S	0.075	16	20.1	15	8.2
1634D	S	S	0.604	16	16.4	15	11.9
1634E	S	S	0.089	16	23.1	15	8.5

Station	Station Status	Depth	t-Statistic Probability	Summer Count	Summer Geometric Mean	Winter Count	Winter Geometric Mean
1635	S	S	0.028	16	20.1	15	6.4
1635B	A	S	0.348	16	12.1	15	7.1
1635F	SR	S	0.252	16	15.3	15	8.3
1637A	SR	S	0.010	16	24.8	15	6.5
1637B	SR	S	0.008	15	32.0	15	6.7
1637E	A	S	0.140	16	8.4	15	4.6
1637F	A	S	0.627	16	8.0	15	6.5
1637G	A	S	0.256	16	8.9	14	5.1
1637H	A	S	0.314	16	9.5	15	5.9
1637J	A	S	0.147	16	15.1	15	6.9
1638	SR	S	0.013	15	29.2	17	9.1
1639	SR	S	0.000	15	121.2	17	14.2
1639A	A	S	0.026	15	31.9	17	10.2
1639C	A	S	0.173	15	22.4	17	11.3
1639D	A	S	0.549	22	5.7	10	7.4
1639E	A	S	0.966	22	6.4	10	6.6
1640	SR	S	0.004	15	43.6	17	8.7
1640A	A	S	0.014	15	37.0	17	9.4
1642A	SR	S	0.009	15	28.3	17	6.6
1642B	A	S	0.542	15	13.0	17	9.8
1643	SR	S	0.020	15	34.0	17	8.5
1643C	A	S	0.027	15	13.1	17	5.0
1645A	SR	S	0.172	15	16.8	17	8.5
1645D	A	S	0.022	15	14.1	17	4.9
1646	A	S	0.039	15	24.0	17	8.1
1646B	A	S	0.085	15	12.9	17	5.8
1646E	A	S	0.742	22	4.9	10	4.3
1648	SR	S	0.016	15	37.6	17	9.3
1648B	SR	S	0.005	15	89.1	17	17.3
1649B	A	S	0.011	15	21.6	17	4.6
1649C	A	S	0.987	22	4.0	10	4.0
1649D	A	S	0.464	22	4.3	10	5.4
1650B	SR	S	0.001	15	28.5	17	6.2
1650D	A	S	0.001	15	36.9	17	5.6
1651	A	S	0.027	15	14.9	17	5.4
1651A	A	S	0.132	15	11.4	17	5.4
1651B	A	S	0.747	22	4.7	10	5.3
1651C	A	S	0.558	22	3.8	10	4.2
1651D	A	S	0.837	22	4.7	10	4.3
1652A	A	S	0.123	15	10.4	17	5.7
1652C	A	S	0.078	15	8.5	17	4.1
1652F	A	S	0.172	15	9.4	17	5.4
1653	A	S	0.208	15	12.2	17	6.5
1653A	A	S	0.110	15	11.8	17	5.5
1653C	A	S	0.944	22	4.5	10	4.6
1654	A	S	0.033	15	10.2	17	4.1
1654B	A	S	0.226	15	7.9	17	4.7

C. Precipitation

-Rainfall Amounts

-Weather Observations

-Wet/Dry Analysis

Rainfall Amounts

Report Area: BB2

Date	*NOAA Weather Station*	*Prior 24-hour Cumulative*	*Prior 48-hour Cumulative*	*Prior 72-hour Cumulative*
7/10/2007	RA013	0.00	0.00	0.00
7/19/2007	RA013	2.00	2.00	2.00
8/6/2007	RA013	0.13	0.13	0.13
8/7/2007	RA015	0.02	0.26	0.26
8/22/2007	RA013	1.34	1.94	2.71
9/18/2007	RA013	0.00	0.00	0.03
9/20/2007	RA013	0.00	0.00	0.00
9/25/2007	RA015	0.00	0.00	0.00
10/4/2007	RA013	0.00	0.00	0.00
10/9/2007	RA017	0.01	0.01	0.01
11/8/2007	RA017	0.00	0.45	0.46
11/9/2007	RA013	0.00	0.00	0.50
11/23/2007	RA015	0.03	0.03	0.06
12/3/2007	RA013	0.54	0.54	0.54
12/5/2007	RA013	0.02	0.02	0.56
12/7/2007	RA015	0.00	0.02	0.03
12/26/2007	RA017	0.00	0.00	1.49
1/8/2008	RA013	0.00	0.00	0.01
1/16/2008	RA015	0.00	0.30	0.81
2/19/2008	RA013	0.22	0.32	0.32
3/10/2008	RA017	0.00	0.53	1.38
3/12/2008	RA015	0.00	0.00	0.00
3/17/2008	RA013	0.06	0.07	0.21
3/18/2008	RA013	0.00	0.06	0.07
3/28/2008	RA013	0.03	0.03	0.03
4/10/2008	RA013	0.00	0.00	0.00
4/15/2008	RA015	0.00	0.00	0.21
4/18/2008	RA017	0.00	0.00	0.00
5/1/2008	RA013	0.00	0.05	0.36
5/20/2008	RA017	0.05	0.31	0.31
5/27/2008	RA013	0.00	0.05	0.05
5/29/2008	RA015	0.00	0.10	0.10
6/4/2008	RA013	0.50	0.50	0.50
6/9/2008	RA015	0.00	0.00	0.00
6/10/2008	RA013	0.00	0.00	0.00
6/30/2008	RA015	0.15	0.15	0.68
6/30/2008	RA017	0.15	0.27	0.63
7/9/2008	RA013	0.00	0.77	0.77
7/28/2008	RA017	0.59	0.59	0.59
7/30/2008	RA015	0.00	0.00	0.57
10/22/2008	RA015	0.00	0.00	0.00
10/24/2008	RA013	0.00	0.00	0.00
11/12/2008	RA015	0.00	0.00	0.00
11/20/2008	RA013	0.00	0.00	0.00
11/24/2008	RA013	0.00	0.00	0.00
12/15/2008	RA017	0.00	0.00	0.01
12/18/2008	RA015	0.02	0.70	0.73
1/9/2009	RA017	0.00	0.65	1.66
3/24/2009	RA017	0.00	0.00	0.00
4/9/2009	RA013	0.00	0.00	0.91

Date	NOAA Weather Station	Prior 24-hour Cumulative	Prior 48-hour Cumulative	Prior 72-hour Cumulative
4/17/2009	RA015	0.00	0.35	1.04
4/30/2009	RA013	0.14	0.14	0.14
5/7/2009	RA017	0.37	0.70	0.87
5/8/2009	RA015	0.12	0.41	0.71
5/15/2009	RA015	0.59	0.59	0.59
5/18/2009	RA013	0.04	0.07	0.07
5/29/2009	RA013	0.01	0.01	0.09
6/3/2009	RA017	0.02	0.02	0.02
6/17/2009	RA013	0.00	0.04	0.04
7/6/2009	RA013	0.00	0.00	0.00
7/20/2009	RA017	0.00	0.00	0.00
8/3/2009	RA013	0.82	0.82	1.84
8/4/2009	RA017	0.00	0.72	0.72
8/31/2009	RA017	0.00	0.21	0.58
10/13/2009	RA017	0.00	0.00	0.02
10/22/2009	RA013	0.00	0.00	0.00
10/29/2009	RA013	0.81	2.36	2.37
11/16/2009	RA015	0.00	0.01	0.76
12/1/2009	RA017	0.31	0.31	0.31
12/2/2009	RA013	0.00	0.18	0.18
1/26/2010	RA015	1.38	1.38	1.38
1/28/2010	RA013	0.00	0.00	1.32
3/2/2010	RA017	0.00	0.00	0.00
3/11/2010	RA015	0.00	0.00	0.00
3/12/2010	RA013	0.00	0.00	0.00
4/5/2010	RA013	0.00	0.00	0.00
4/6/2010	RA015	0.00	0.00	0.00
4/23/2010	RA013	0.03	0.25	0.25
4/27/2010	RA015	0.30	1.15	1.40
5/5/2010	RA013	0.00	0.23	0.25
5/5/2010	RA017	0.00	0.12	0.14
5/25/2010	RA013	0.00	0.09	0.16
6/2/2010	RA013	0.31	0.31	0.31
6/3/2010	RA015	0.00	0.22	0.22
6/9/2010	RA017	0.00	0.00	0.00
7/12/2010	RA017	0.24	0.32	0.32
7/13/2010	RA015	0.00	0.08	0.10
7/20/2010	RA013	0.05	0.05	0.11
7/22/2010	RA013	0.01	0.03	0.08
8/3/2010	RA013	0.00	0.04	0.04
8/4/2010	RA017	0.00	0.00	0.02
8/19/2010	RA013	0.23	0.23	0.23
9/14/2010	RA013	0.06	0.15	0.15
9/23/2010	RA017	0.22	0.22	0.22
10/7/2010	RA015	0.02	0.07	0.74
10/20/2010	RA013	0.35	0.43	0.43
10/22/2010	RA013	0.00	0.00	0.35
10/26/2010	RA017	0.00	0.00	0.01
11/16/2010	RA013	0.05	0.05	0.05
11/18/2010	RA013	0.00	0.53	0.58
11/18/2010	RA015	0.00	0.54	0.59
12/6/2010	RA017	0.00	0.00	0.00
12/8/2010	RA015	0.00	0.00	0.00

Date	NOAA Weather Station	Prior 24-hour Cumulative	Prior 48-hour Cumulative	Prior 72-hour Cumulative
2/14/2011	RA013	0.00	0.00	0.00
2/24/2011	RA013	0.00	0.00	0.03
3/15/2011	RA013	0.00	0.00	0.00
5/12/2011	RA013	0.00	0.00	0.00
5/25/2011	RA017	0.00	0.02	0.03
6/1/2011	RA013	0.00	0.18	0.18
6/9/2011	RA017	0.00	0.00	0.00
6/14/2011	RA013	0.04	0.04	0.05
6/23/2011	RA015	0.15	0.15	0.15
7/12/2011	RA017	0.00	0.00	0.00
7/25/2011	RA013	0.02	0.02	0.15
7/26/2011	RA013	0.05	0.07	0.07
8/10/2011	RA013	0.42	0.42	0.51
8/12/2011	RA017	0.00	0.00	0.47
9/8/2011	RA015	0.13	0.50	0.58
9/14/2011	RA017	0.00	0.00	0.37
9/16/2011	RA015	0.09	0.09	0.09
9/28/2011	RA013	0.00	0.00	0.00
9/29/2011	RA013	0.00	0.00	0.00
10/27/2011	RA017	0.02	0.02	0.02
11/3/2011	RA013	0.00	0.00	0.00
11/4/2011	RA015	0.00	0.00	0.00
11/7/2011	RA013	0.00	0.00	0.00
12/7/2011	RA013	0.12	0.12	0.12
12/8/2011	RA015	1.18	1.30	1.30
12/9/2011	RA013	0.00	1.19	1.31
12/21/2011	RA013	0.03	0.03	0.03

Weather Observations

Report Area	*Station*	*Date*	*Air Temp C°*	*Water Temp C°*	*Wind Direction*	*Wind Velocity mph*	*Conditions*	*Comments*
BB2								
	1500D							
		8/6/2007	25.0	26.0	190	14	Cloudy	
		9/18/2007	16.0	18.0	60	14	Cloudless	
		10/4/2007	22.0	22.0	0	0	Fog Or Haze	
		3/28/2008	8.0	8.0	60	2	Cloudy	
		4/10/2008	7.0	11.0	330	2	Fog Or Haze	
		7/9/2008	25.0	25.0	240	9	Cloudy	
		6/17/2009	20.0	19.0	90	10	Cloudy	
		10/29/2009	11.0	12.0	70	12	Overcast	
		12/2/2009	10.0	6.7	180	5	Cloudy	
		3/12/2010	6.1	5.6	60	13	Drizzle	
		5/5/2010	13.9	17.8	220	4	Cloudless	
		6/2/2010	18.3	21.7	200	2	Cloudless	
		7/20/2010	26.1	26.7	60	5	Cloudless	
		8/3/2010	22.8	25.6	180	4	Cloudy	
		9/14/2010	16.7	19.4	320	1	Cloudy	
		10/22/2010	9.4	12.8	300	12	Cloudy	
		11/16/2010	12.2	8.9	110	4	Overcast	
		2/14/2011	3.9	1.1	150	2	Cloudless	
		2/24/2011	6.1	3.3	240	5	Cloudy	
	1501A							
		8/22/2007	17.0	18.0	60	9	Rain	
	1505A							
		4/30/2009	10.0	10.0	90	5	Cloudy	
	1506D							
		3/17/2008	3.0	6.0	330	14	Cloudless	
		5/1/2008	12.0	13.0	140	8	Cloudy	
	1631							
		7/10/2007	27.0	26.0	240	1	Overcast	
		6/4/2008	19.0	20.0	180	8	Rain	
		11/24/2008	5.0	2.0	180	2	Cloudless	
	1631A							
		5/27/2008	20.0	19.0	210	8	Drizzle	
		4/9/2009	10.0	9.0	240	2	Cloudless	
		10/22/2009	11.0	11.0	210	3	Cloudy	
		1/28/2010	-1.1	2.8	210	8	Cloudy	
		3/12/2010	4.4	6.1	60	6	Fog Or Haze	
		4/5/2010	10.0	12.2	0	0	Cloudy	

Report Area	Station	Date	Air Temp C°	Water Temp C°	Wind Direction	Wind Velocity mph	Conditions	Comments
		4/23/2010	10.6	11.7	320	5	Cloudless	
		5/25/2010	20.6	13.9	60	7	Cloudless	
		7/22/2010	26.1	26.7	310	6	Cloudless	
		8/19/2010	21.1	23.9	40	4	Cloudless	
		11/18/2010	6.1	8.9	270	5	Cloudless	
		3/15/2011	-1.0	5.6	90	3	Cloudless	
	1631B							
		9/20/2007	13.0	17.0	330	1	Cloudy	
		5/29/2009	16.0	17.0	60	9	Fog Or Haze	
	1631C							
		11/9/2007	4.0	7.0	330	2	Overcast	
	1631E							
		6/10/2008	29.0	27.0	210	2	Cloudless	
	1632A							
		12/5/2007	2.0	2.0	330	1	Overcast	
	1632B							
		5/18/2009	15.0	16.0	340	10	Cloudy	
	1633							
		10/20/2010	0.0	0.0	0	0	Cloudless	
	1633A							
		8/3/2009	24.0	25.0	10	2	Cloudless	
	1637A							
		10/24/2008	11.1	9.1	140	1	Cloudless	
	1637J							
		1/8/2008	8.0	4.0	180	8	Cloudless	
	1639A							
		9/25/2007	17.0	20.0	240	9	Fog Or Haze	
		6/9/2008	20.0	15.0	330	8	Cloudless	
	1639C							
		11/23/2007	5.0	8.0	0	8	Cloudy	
		12/7/2007	0.0	1.0	330	1	Overcast	
		1/16/2008	3.0	4.0	340	10	Cloudless	
		6/30/2008	24.0	25.0	240	5	Cloudy	
		7/30/2008	24.0	25.0	0	0	Cloudless	
		11/12/2008	9.0	9.0	50	3	Cloudy	
		12/18/2008	3.0	7.0	330	3	Overcast	
		4/17/2009	8.0	9.0	240	5	Cloudless	
		5/15/2009	16.0	17.0	60	2	Fog Or Haze	
		11/16/2009	15.2	10.0	5	6	Cloudless	
		1/26/2010	1.7	5.0	270	10	Cloudless	
		3/11/2010	7.0	6.0	0	0	Cloudy	
		4/6/2010	12.2	14.7	0	0	Cloudy	
		6/3/2010	21.0	23.0	195	10	Fog Or Haze	

Report Area	Station	Date	Air Temp C°	Water Temp C°	Wind Direction	Wind Velocity mph	Conditions	Comments
		7/13/2010	27.0	26.0	150	10	Overcast	
		10/7/2010	13.0	13.0	260	10	Cloudless	
		12/8/2010	-2.2	0.6	320	12	Cloudless	
	1645D							
		5/29/2008	14.0	16.0	5	6	Cloudless	
	1649B							
		8/7/2007	26.0	26.0	330	2	Fog Or Haze	
	1650D							
		3/12/2008	7.0	7.0	310	14	Cloudy	
		5/8/2009	17.0	17.0	0	0	Cloudless	
	1652F							
		4/15/2008	9.0	11.0	50	10	Cloudy	
	1653A							
		11/18/2010	5.6	9.6	270	5	Cloudless	
	1654							
		10/22/2008	7.2	9.0	245	15	Cloudless	
		4/27/2010	13.0	13.4	340	2	Cloudy	

Wet/Dry Statistics - Total Coliform

From: 7/1/2007 *to* 12/31/2011

Post Impact Time: 24 Hours Prior

Report Area: BB2

Wet and Dry Cutoff: 0.25

Station	*Station Status*	*Depth*	*t-Statistic Probability*	*Wet Count*	*Wet Geo Mean*	*Dry Count*	*Dry Geo Mean*	*Wet/Dry Difference*
NSSP MONITORING								
COMBO								
1500A	SR	S	0.950	5	31.2	31	32.9	2
1500B	SR	S	0.198	5	54.2	31	21.7	-33
1500D	SR	S	0.128	5	206.7	31	39.3	-167
1501	SR	S	0.666	5	65.8	31	44.8	-21
1501A	SR	S	0.585	5	35.4	31	22.0	-13
1501B	SR	S	0.207	5	92.3	31	30.5	-62
1501C	SR	S	0.018	5	128.9	31	20.4	-108
1501D	SR	S	0.268	5	285.8	31	91.1	-195
1502	P	S	0.325	5	202.3	31	76.8	-126
1502A	P	S	0.141	5	183.7	31	49.6	-134
1502B	P	S	0.978	5	82.2	31	80.3	-2
1502C	P	S	0.965	5	56.0	31	58.3	2
1503	P	S	0.480	5	164.2	31	88.7	-75
1503C	P	S	0.155	5	387.6	31	111.5	-276
1504	P	S	0.846	5	133.3	31	113.4	-20
1504A	P	S	0.197	5	236.5	31	73.8	-163
1504B	P	S	0.763	5	154.3	31	119.6	-35
1505	P	S	0.422	5	193.8	31	96.9	-97
1505A	P	S	0.937	5	129.9	31	121.3	-9
1505B	P	S	0.273	5	249.1	31	98.8	-150
1505C	P	S	0.320	5	453.0	31	191.4	-262
1506	P	S	0.899	5	150.2	31	134.7	-16
1506A	P	S	0.533	5	214.7	31	119.3	-95
1506C	P	S	0.392	5	240.8	31	120.7	-120
1506D	P	S	0.497	5	222.6	31	115.7	-107
1631	SR	S	0.056	5	42.8	31	13.2	-30
1631A	SR	S	0.005	4	92.7	27	12.2	-80
1631B	S	S	0.053	4	47.3	27	10.3	-37

Station	Station Status	Depth	t-Statistic Probability	Wet Count	Wet Geo Mean	Dry Count	Dry Geo Mean	Wet/Dry Difference
1631C	S	S	0.665	3	15.3	27	10.8	-4
1631D	S	S	0.021	4	53.0	27	8.3	-45
1631E	S	S	0.230	4	25.4	27	9.7	-16
1631F	SR	S	0.214	4	65.9	27	18.5	-47
1632	SR	S	0.009	4	171.8	31	17.2	-155
1632A	SR	S	0.051	5	35.9	31	10.0	-26
1632B	SR	S	0.700	5	21.1	30	16.1	-5
1632C	SR	S	0.961	5	22.1	31	21.2	-1
1633	S	S	0.008	4	109.2	26	13.2	-96
1633A	S	S	0.076	4	41.1	27	9.6	-31
1633B	S	S	0.002	4	117.5	27	8.6	-109
1633C	S	S	0.023	4	63.0	27	10.2	-53
1633D	S	S	0.101	4	58.8	27	13.7	-45
1634	S	S	0.340	4	29.2	27	13.0	-16
1634B	A	S	0.018	4	33.0	27	7.1	-26
1634C	A	S	0.096	4	38.8	27	11.0	-28
1634D	S	S	0.052	4	64.7	27	11.2	-53
1634E	S	S	0.052	4	61.5	27	11.5	-50
1635	S	S	0.062	4	41.3	27	9.6	-32
1635B	A	S	0.080	4	33.0	27	7.8	-25
1635F	SR	S	0.032	4	48.2	27	9.2	-39
1637A	SR	S	0.083	4	43.6	27	10.8	-33
1637B	SR	S	0.195	4	40.7	26	12.5	-28
1637E	A	S	0.000	4	41.3	27	4.8	-36
1637F	A	S	0.401	4	11.7	27	6.8	-5
1637G	A	S	0.005	4	34.4	26	5.4	-29
1637H	A	S	0.047	4	24.8	27	6.3	-19
1637J	A	S	0.036	4	43.9	27	8.3	-36
1638	SR	S	0.790	4	18.7	28	15.3	-3
1639	SR	S	0.084	4	156.3	28	31.8	-124
1639A	A	S	0.749	4	21.8	28	16.9	-5
1639C	A	S	0.538	4	10.3	28	16.5	6
1639D	A	S	0.651	3	4.6	29	6.4	2
1639E	A	S	0.407	3	3.0	29	7.0	4

Station	Station Status	Depth	t-Statistic Probability	Wet Count	Wet Geo Mean	Dry Count	Dry Geo Mean	Wet/Dry Difference
1640	SR	S	0.800	4	15.2	28	19.1	4
1640A	A	S	0.148	4	54.1	28	15.2	-39
1642A	SR	S	0.742	4	16.9	28	12.6	-4
1642B	A	S	0.949	4	11.6	28	11.1	-1
1643	SR	S	0.946	4	15.4	28	16.4	1
1643C	A	S	0.366	4	4.5	28	8.4	4
1645A	SR	S	0.891	4	12.8	28	11.5	-1
1645D	A	S	0.611	4	5.9	28	8.5	3
1646	A	S	0.168	4	35.8	28	11.8	-24
1646B	A	S	0.959	4	8.2	28	8.5	0
1646E	A	S	0.427	3	3.0	29	4.9	2
1648	SR	S	0.535	4	29.4	28	16.7	-13
1648B	SR	S	0.307	4	86.0	28	33.1	-53
1649B	A	S	0.801	4	7.7	28	9.8	2
1649C	A	S	0.315	3	5.5	29	3.9	-2
1649D	A	S	0.387	3	3.2	29	4.8	2
1650B	SR	S	0.296	4	24.9	28	11.5	-13
1650D	A	S	0.247	4	35.8	28	11.8	-24
1651	A	S	0.109	4	23.5	28	7.5	-16
1651A	A	S	0.506	4	11.9	28	7.2	-5
1651B	A	S	0.007	3	17.8	29	4.3	-14
1651C	A	S	0.562	3	3.4	29	3.9	1
1651D	A	S	0.569	3	3.2	29	4.7	2
1652A	A	S	0.265	4	13.4	28	7.0	-6
1652C	A	S	0.865	4	5.2	28	5.8	1
1652F	A	S	0.079	4	18.1	28	6.1	-12
1653	A	S	0.293	4	17.5	28	7.9	-10
1653A	A	S	0.376	4	13.9	28	7.2	-7
1653C	A	S	0.945	3	4.6	29	4.5	0
1654	A	S	0.660	4	8.2	28	6.1	-2
1654B	A	S	0.599	4	8.1	28	5.7	-2

Wet/Dry Statistics - Total Coliform

From: 7/1/2007 *to* 12/31/2011

Post Impact Time: 48 Hours Prior

Report Area: BB2

Wet and Dry Cutoff: 0.25

Station	*Station Status*	*Depth*	*t-Statistic Probability*	*Wet Count*	*Wet Geo Mean*	*Dry Count*	*Dry Geo Mean*	*Wet/Dry Difference*
NSSP MONITORING								
COMBO								
1500A	SR	S	0.647	6	43.8	30	30.8	-13
1500B	SR	S	0.056	6	69.4	30	20.0	-49
1500D	SR	S	0.061	6	236.2	30	36.2	-200
1501	SR	S	0.340	6	91.0	30	41.4	-50
1501A	SR	S	0.395	6	41.6	30	20.9	-21
1501B	SR	S	0.158	6	92.4	30	29.4	-63
1501C	SR	S	0.007	6	132.2	30	19.1	-113
1501D	SR	S	0.318	6	237.0	30	91.0	-146
1502	P	S	0.139	6	268.3	30	70.3	-198
1502A	P	S	0.060	6	214.0	30	46.1	-168
1502B	P	S	0.949	6	83.9	30	79.9	-4
1502C	P	S	0.398	6	104.7	30	51.5	-53
1503	P	S	0.205	6	225.4	30	81.5	-144
1503C	P	S	0.177	6	330.8	30	110.4	-220
1504	P	S	0.332	6	215.8	30	102.4	-113
1504A	P	S	0.043	6	347.9	30	65.7	-282
1504B	P	S	0.399	6	214.0	30	111.1	-103
1505	P	S	0.265	6	223.8	30	92.0	-132
1505A	P	S	0.687	6	160.4	30	116.0	-44
1505B	P	S	0.106	6	319.0	30	91.2	-228
1505C	P	S	0.124	6	598.1	30	176.0	-422
1506	P	S	0.672	6	181.0	30	129.3	-52
1506A	P	S	0.471	6	218.7	30	116.6	-102
1506C	P	S	0.170	6	310.2	30	112.1	-198
1506D	P	S	0.262	6	290.5	30	107.3	-183
1631	SR	S	0.032	6	42.9	30	12.7	-30
1631A	SR	S	0.006	7	55.1	24	11.0	-44
1631B	S	S	0.006	7	46.4	24	8.5	-38

Station	Station Status	Depth	t-Statistic Probability	Wet Count	Wet Geo Mean	Dry Count	Dry Geo Mean	Wet/Dry Difference
1631C	S	S	0.229	6	19.7	24	9.7	-10
1631D	S	S	0.134	7	22.6	24	8.4	-14
1631E	S	S	0.353	7	17.5	24	9.6	-8
1631F	SR	S	0.337	7	40.2	24	18.2	-22
1632	SR	S	0.001	5	209.2	30	15.4	-194
1632A	SR	S	0.042	6	33.3	30	9.7	-24
1632B	SR	S	0.517	6	23.8	29	15.5	-8
1632C	SR	S	0.949	6	22.3	30	21.2	-1
1633	S	S	0.052	7	46.6	23	13.0	-34
1633A	S	S	0.061	7	30.0	24	8.8	-21
1633B	S	S	0.007	7	49.4	24	8.0	-41
1633C	S	S	0.005	7	49.9	24	8.7	-41
1633D	S	S	0.067	7	45.2	24	12.4	-33
1634	S	S	0.375	7	23.0	24	12.6	-10
1634B	A	S	0.043	7	19.8	24	6.8	-13
1634C	A	S	0.217	7	23.3	24	10.9	-12
1634D	S	S	0.043	7	43.5	24	10.1	-33
1634E	S	S	0.041	7	42.6	24	10.4	-32
1635	S	S	0.118	7	24.9	24	9.2	-16
1635B	A	S	0.172	7	19.0	24	7.6	-11
1635F	SR	S	0.053	7	28.9	24	8.7	-20
1637A	SR	S	0.209	7	24.5	24	10.8	-14
1637B	SR	S	0.338	7	25.2	23	12.4	-13
1637E	A	S	0.004	7	17.9	24	4.6	-13
1637F	A	S	0.158	7	12.8	24	6.1	-7
1637G	A	S	0.081	6	15.7	24	5.6	-10
1637H	A	S	0.310	7	11.8	24	6.6	-5
1637J	A	S	0.032	7	29.5	24	7.6	-22
1638	SR	S	0.301	11	22.3	21	13.1	-9
1639	SR	S	0.085	11	80.3	21	26.5	-54
1639A	A	S	0.075	11	33.0	21	12.5	-21
1639C	A	S	0.076	11	28.6	21	11.3	-17
1639D	A	S	0.209	10	9.0	22	5.2	-4
1639E	A	S	0.530	10	4.9	22	7.3	2

Station	Station Status	Depth	t-Statistic Probability	Wet Count	Wet Geo Mean	Dry Count	Dry Geo Mean	Wet/Dry Difference
1640	SR	S	0.592	11	23.1	21	16.5	-7
1640A	A	S	0.164	11	31.1	21	13.3	-18
1642A	SR	S	0.149	11	23.3	21	9.7	-14
1642B	A	S	0.313	11	15.4	21	9.4	-6
1643	SR	S	0.866	11	17.5	21	15.7	-2
1643C	A	S	0.517	11	9.6	21	7.0	-3
1645A	SR	S	0.026	11	24.7	21	7.9	-17
1645D	A	S	0.783	11	7.4	21	8.5	1
1646	A	S	0.112	11	24.2	21	10.0	-14
1646B	A	S	0.142	11	13.6	21	6.6	-7
1646E	A	S	0.545	10	4.0	22	5.1	1
1648	SR	S	0.085	11	36.1	21	12.4	-24
1648B	SR	S	0.194	11	64.8	21	27.9	-37
1649B	A	S	0.295	11	15.1	21	7.5	-8
1649C	A	S	0.028	10	5.5	22	3.4	-2
1649D	A	S	0.974	10	4.6	22	4.6	0
1650B	SR	S	0.178	11	19.9	21	10.0	-10
1650D	A	S	0.097	11	27.8	21	9.3	-18
1651	A	S	0.250	11	12.6	21	7.1	-6
1651A	A	S	0.064	11	14.4	21	5.5	-9
1651B	A	S	0.279	10	6.4	22	4.4	-2
1651C	A	S	0.581	10	4.1	22	3.8	0
1651D	A	S	0.920	10	4.7	22	4.5	0
1652A	A	S	0.002	11	16.6	21	5.0	-12
1652C	A	S	0.078	11	9.6	21	4.4	-5
1652F	A	S	0.003	11	15.6	21	4.6	-11
1653	A	S	0.077	11	15.9	21	6.4	-9
1653A	A	S	0.004	11	19.5	21	4.8	-15
1653C	A	S	0.123	10	5.8	22	4.0	-2
1654	A	S	0.150	11	9.7	21	5.0	-5
1654B	A	S	0.092	11	9.8	21	4.6	-5

Wet/Dry Statistics - Total Coliform

From: 7/1/2007 *to* 12/31/2011

Post Impact Time: 72 Hours Prior

Report Area: BB2

Wet and Dry Cutoff: 0.25

Station	*Station Status*	*Depth*	*t-Statistic Probability*	*Wet Count*	*Wet Geo Mean*	*Dry Count*	*Dry Geo Mean*	*Wet/Dry Difference*
NSSP MONITORING								
COMBO								
1500A	SR	S	0.873	9	35.4	27	31.8	-4
1500B	SR	S	0.115	9	48.0	27	19.7	-28
1500D	SR	S	0.197	9	115.4	27	37.3	-78
1501	SR	S	0.476	9	69.1	27	41.6	-28
1501A	SR	S	0.649	9	29.8	27	21.7	-8
1501B	SR	S	0.526	9	49.8	27	31.8	-18
1501C	SR	S	0.073	9	62.0	27	19.8	-42
1501D	SR	S	0.983	9	105.3	27	107.2	2
1502	P	S	0.267	9	168.9	27	70.6	-98
1502A	P	S	0.123	9	135.1	27	45.3	-90
1502B	P	S	0.483	9	57.3	27	90.3	33
1502C	P	S	0.736	9	69.6	27	54.5	-15
1503	P	S	0.283	9	168.8	27	80.2	-89
1503C	P	S	0.181	9	267.6	27	104.9	-163
1504	P	S	0.560	9	155.1	27	105.3	-50
1504A	P	S	0.087	9	216.9	27	63.9	-153
1504B	P	S	0.282	9	212.3	27	103.6	-109
1505	P	S	0.386	9	167.0	27	91.9	-75
1505A	P	S	0.941	9	127.2	27	120.9	-6
1505B	P	S	0.434	9	167.1	27	98.4	-69
1505C	P	S	0.501	9	306.2	27	192.0	-114
1506	P	S	0.817	9	153.9	27	131.4	-23
1506A	P	S	0.643	9	168.2	27	118.7	-50
1506C	P	S	0.250	9	230.9	27	110.5	-120
1506D	P	S	0.650	9	164.7	27	116.1	-49
1631	SR	S	0.138	9	27.0	27	12.9	-14
1631A	SR	S	0.151	10	27.0	21	12.3	-15
1631B	S	S	0.076	10	24.8	21	9.0	-16

Station	Station Status	Depth	t-Statistic Probability	Wet Count	Wet Geo Mean	Dry Count	Dry Geo Mean	Wet/Dry Difference
1631C	S	S	0.358	9	15.6	21	9.7	-6
1631D	S	S	0.659	10	12.6	21	9.6	-3
1631E	S	S	0.941	10	10.7	21	11.2	0
1631F	SR	S	0.915	10	23.0	21	21.2	-2
1632	SR	S	0.010	8	83.5	27	15.1	-68
1632A	SR	S	0.239	9	19.1	27	10.2	-9
1632B	SR	S	0.378	9	24.2	26	14.7	-9
1632C	SR	S	0.898	9	22.8	27	20.9	-2
1633	S	S	0.453	10	23.7	20	15.0	-9
1633A	S	S	0.337	10	17.1	21	9.6	-7
1633B	S	S	0.061	10	26.6	21	8.2	-18
1633C	S	S	0.057	10	27.3	21	9.0	-18
1633D	S	S	0.296	10	26.2	21	13.3	-13
1634	S	S	0.628	10	17.6	21	13.1	-5
1634B	A	S	0.229	10	12.8	21	7.1	-6
1634C	A	S	0.407	10	17.7	21	11.2	-6
1634D	S	S	0.120	10	28.0	21	10.1	-18
1634E	S	S	0.321	10	21.9	21	11.6	-10
1635	S	S	0.401	10	16.0	21	9.9	-6
1635B	A	S	0.677	10	11.1	21	8.6	-2
1635F	SR	S	0.173	10	19.2	21	8.9	-10
1637A	SR	S	0.953	10	13.3	21	12.8	0
1637B	SR	S	0.977	10	14.9	20	14.6	0
1637E	A	S	0.072	10	10.7	21	4.9	-6
1637F	A	S	0.119	10	11.8	21	5.8	-6
1637G	A	S	0.217	9	10.8	21	5.7	-5
1637H	A	S	0.407	10	10.0	21	6.6	-3
1637J	A	S	0.154	10	18.1	21	7.9	-10
1638	SR	S	0.091	15	24.3	17	10.7	-14
1639	SR	S	0.034	15	76.7	17	21.3	-55
1639A	A	S	0.029	15	31.6	17	10.3	-21
1639C	A	S	0.114	15	23.7	17	10.7	-13
1639D	A	S	0.001	14	12.5	18	3.6	-9
1639E	A	S	0.017	14	14.0	18	3.5	-10

Station	Station Status	Depth	t-Statistic Probability	Wet Count	Wet Geo Mean	Dry Count	Dry Geo Mean	Wet/Dry Difference
1640	SR	S	0.044	15	34.4	17	10.8	-24
1640A	A	S	0.065	15	31.3	17	10.9	-20
1642A	SR	S	0.050	15	23.8	17	7.7	-16
1642B	A	S	0.543	15	13.0	17	9.8	-3
1643	SR	S	0.082	15	28.6	17	9.9	-19
1643C	A	S	0.385	15	9.6	17	6.5	-3
1645A	SR	S	0.021	15	21.2	17	6.9	-14
1645D	A	S	0.893	15	7.8	17	8.3	1
1646	A	S	0.036	15	24.3	17	8.1	-16
1646B	A	S	0.060	15	13.4	17	5.6	-8
1646E	A	S	0.069	14	6.8	18	3.5	-3
1648	SR	S	0.037	15	34.2	17	10.1	-24
1648B	SR	S	0.007	15	86.4	17	17.7	-69
1649B	A	S	0.180	15	15.0	17	6.4	-9
1649C	A	S	0.001	14	5.6	18	3.1	-3
1649D	A	S	0.025	14	6.5	18	3.6	-3
1650B	SR	S	0.102	15	19.3	17	8.8	-11
1650D	A	S	0.074	15	24.6	17	8.1	-17
1651	A	S	0.106	15	13.0	17	6.1	-7
1651A	A	S	0.031	15	13.4	17	4.7	-9
1651B	A	S	0.005	14	8.0	18	3.3	-5
1651C	A	S	0.096	14	4.5	18	3.5	-1
1651D	A	S	0.014	14	7.8	18	3.0	-5
1652A	A	S	0.001	15	14.3	17	4.3	-10
1652C	A	S	0.065	15	8.7	17	4.0	-5
1652F	A	S	0.001	15	14.1	17	3.8	-10
1653	A	S	0.054	15	14.4	17	5.6	-9
1653A	A	S	0.003	15	16.3	17	4.1	-12
1653C	A	S	0.263	14	5.2	18	4.0	-1
1654	A	S	0.107	15	9.2	17	4.6	-5
1654B	A	S	0.050	15	9.3	17	4.1	-5

D. Data Listing
July 1, 2007 – December 31, 2011

Shellfish Growing Water - Data Listing

New Jersey Department of Environmental Protection

Bureau of Marine Water Monitoring

Report Area: **BB2**

NSSP MONITORING

Station: 1500A
COMBO : Surface
Restricted

Geo Mean:	32.6
Est 90th:	284.0
# Samples:	36
5.6% >	*330*

Date:	*Results:*
7/10/2007	9.1
8/6/2007	23.0
8/22/2007	21.0
9/18/2007	3.0 K
10/4/2007	460.0
12/5/2007	23.0
3/17/2008	29.0
3/28/2008	3.6
4/10/2008	240.0
5/1/2008	23.0
6/4/2008	21.0
7/9/2008	240.0
11/24/2008	3.6
4/30/2009	43.0
5/18/2009	150.0
6/17/2009	240.0
10/29/2009	93.0
12/2/2009	9.1
3/12/2010	7.3
5/5/2010	240.0
6/2/2010	3.0 K
7/20/2010	150.0
8/3/2010	43.0
9/14/2010	43.0
10/22/2010	23.0
11/16/2010	3.6
2/14/2011	9.1
2/24/2011	3.0 K
5/12/2011	43.0
6/14/2011	240.0
7/25/2011	23.0
8/10/2011	240.0
9/28/2011	240.0
11/3/2011	1,100.0
12/7/2011	11.0
12/21/2011	3.0 K

Station: 1500B
COMBO : Surface
Restricted

Geo Mean:	24.6
Est 90th:	160.2
# Samples:	36
0.0% >	*330*

Date:	*Results:*
7/10/2007	21.0
8/6/2007	3.0 K
8/22/2007	93.0
9/18/2007	43.0
10/4/2007	43.0
12/5/2007	93.0
3/17/2008	93.0
3/28/2008	3.0 K
4/10/2008	43.0
5/1/2008	3.0 K
6/4/2008	75.0
7/9/2008	240.0
11/24/2008	3.6
4/30/2009	9.1
5/18/2009	43.0
6/17/2009	43.0
10/29/2009	240.0
12/2/2009	7.3
3/12/2010	3.6
5/5/2010	240.0
6/2/2010	3.0 K
7/20/2010	23.0
8/3/2010	21.0
9/14/2010	23.0
10/22/2010	43.0
11/16/2010	3.0 K
2/14/2011	3.6
2/24/2011	23.0
5/12/2011	15.0
6/14/2011	93.0
7/25/2011	9.1
8/10/2011	93.0
9/28/2011	93.0
11/3/2011	150.0
12/7/2011	93.0
12/21/2011	3.6

Station: 1500D
COMBO : Surface
Restricted

Geo Mean:	49.5
Est 90th:	882.1
# Samples:	36
25.0% >	*330*

Date:	*Results:*
7/10/2007	39.0
8/6/2007	3.0 K
8/22/2007	2,400.0 L
9/18/2007	15.0
10/4/2007	23.0
12/5/2007	93.0
3/17/2008	3.6
3/28/2008	43.0
4/10/2008	93.0
5/1/2008	15.0
6/4/2008	9.1
7/9/2008	460.0
11/24/2008	7.3
4/30/2009	150.0
5/18/2009	93.0
6/17/2009	9.1
10/29/2009	2,400.0 L
12/2/2009	9.1
3/12/2010	3.6
5/5/2010	2,400.0 L
6/2/2010	3.0 K
7/20/2010	15.0
8/3/2010	9.1
9/14/2010	2,400.0 L
10/22/2010	15.0
11/16/2010	3.6
2/14/2011	43.0
2/24/2011	3.0 K
5/12/2011	93.0
6/14/2011	460.0
7/25/2011	9.1
8/10/2011	2,400.0 L
9/28/2011	460.0
11/3/2011	23.0
12/7/2011	2,400.0 L
12/21/2011	43.0

Station: 1501
COMBO : Surface
Restricted

Geo Mean:	47.2
Est 90th:	484.8
# Samples:	36
19.4% >	*330*

Date:	*Results:*
7/10/2007	21.0
8/6/2007	3.6
8/22/2007	240.0
9/18/2007	3.0 K
10/4/2007	150.0
12/5/2007	75.0
3/17/2008	75.0
3/28/2008	9.1
4/10/2008	2,400.0 L
5/1/2008	93.0
6/4/2008	43.0
7/9/2008	460.0
11/24/2008	9.1
4/30/2009	28.0
5/18/2009	1,100.0
6/17/2009	460.0
10/29/2009	430.0
12/2/2009	15.0
3/12/2010	3.0 K
5/5/2010	93.0
6/2/2010	3.0 K
7/20/2010	43.0
8/3/2010	21.0
9/14/2010	230.0
10/22/2010	9.1
11/16/2010	7.3
2/14/2011	9.1
2/24/2011	15.0
5/12/2011	93.0
6/14/2011	430.0
7/25/2011	3.0 K
8/10/2011	93.0
9/28/2011	93.0
11/3/2011	430.0
12/7/2011	75.0
12/21/2011	23.0

Station: 1501A
COMBO : Surface
Restricted

Geo Mean:	23.5
Est 90th:	227.5
# Samples:	36
8.3% >	*330*

Date:	*Results:*
7/10/2007	3.6
8/6/2007	3.6
8/22/2007	240.0
9/18/2007	9.1
10/4/2007	23.0
12/5/2007	43.0
3/17/2008	75.0
3/28/2008	3.6
4/10/2008	23.0
5/1/2008	3.6
6/4/2008	7.3
7/9/2008	93.0
11/24/2008	3.6
4/30/2009	3.6
5/18/2009	240.0
6/17/2009	15.0
10/29/2009	460.0
12/2/2009	7.2
3/12/2010	3.0 K
5/5/2010	43.0
6/2/2010	3.0 K
7/20/2010	240.0
8/3/2010	3.0
9/14/2010	23.0
10/22/2010	23.0
11/16/2010	3.0 K
2/14/2011	9.1
2/24/2011	15.0
5/12/2011	93.0
6/14/2011	240.0
7/25/2011	9.1
8/10/2011	23.0
9/28/2011	1,100.0
11/3/2011	1,100.0
12/7/2011	43.0
12/21/2011	23.0

Report Area: **BB2**

Station: 1501B		*Station:* 1501C		*Station:* 1501D		*Station:* 1502		*Station:* 1502A	
COMBO : Surface		COMBO : Surface		COMBO : Surface		COMBO : Surface		COMBO : Surface	
Restricted		Restricted		Restricted		Prohibited		Prohibited	
Geo Mean:	35.6	*Geo Mean:*	26.4	*Geo Mean:*	106.7	*Geo Mean:*	87.8	*Geo Mean:*	59.5
Est 90th:	357.0	*Est 90th:*	218.6	*Est 90th:*	1597.2	*Est 90th:*	1156.8	*Est 90th:*	622.5
# Samples:	36	*# Samples:*	36	*# Samples:*	36	*# Samples:*	36	*# Samples:*	36
13.9% >	*330*	8.3% >	*330*	33.3% >	*330*	27.8% >	*330*	19.4% >	*330*

Date:	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*
7/10/2007	23.0	7/10/2007	43.0	7/10/2007	1,100.0	7/10/2007	21.0	7/10/2007	93.0
8/6/2007	43.0	8/6/2007	21.0	8/6/2007	93.0	8/6/2007	2,400.0 L	8/6/2007	93.0
8/22/2007	1,100.0	8/22/2007	210.0	8/22/2007	2,400.0 L	8/22/2007	460.0	8/22/2007	240.0
9/18/2007	21.0	9/18/2007	23.0	9/18/2007	240.0	9/18/2007	93.0	9/18/2007	21.0
10/4/2007	15.0	10/4/2007	23.0	10/4/2007	1,100.0	10/4/2007	43.0	10/4/2007	460.0
12/5/2007	93.0	12/5/2007	15.0	12/5/2007	23.0	12/5/2007	43.0	12/5/2007	39.0
3/17/2008	15.0	3/17/2008	9.1	3/17/2008	460.0	3/17/2008	150.0	3/17/2008	210.0
3/28/2008	23.0	3/28/2008	20.0	3/28/2008	3.6	3/28/2008	7.3	3/28/2008	3.6
4/10/2008	3.6	4/10/2008	3.0 K	4/10/2008	460.0	4/10/2008	240.0	4/10/2008	93.0
5/1/2008	9.1	5/1/2008	23.0	5/1/2008	43.0	5/1/2008	93.0	5/1/2008	43.0
6/4/2008	9.1	6/4/2008	460.0	6/4/2008	240.0	6/4/2008	93.0	6/4/2008	1,100.0
7/9/2008	93.0	7/9/2008	150.0	7/9/2008	93.0	7/9/2008	1,100.0	7/9/2008	460.0
11/24/2008	3.0 K	11/24/2008	3.6	11/24/2008	3.6	11/24/2008	9.3	11/24/2008	3.6
4/30/2009	15.0	4/30/2009	23.0	4/30/2009	23.0	4/30/2009	93.0	4/30/2009	150.0
5/18/2009	240.0	5/18/2009	150.0	5/18/2009	240.0	5/18/2009	93.0	5/18/2009	460.0
6/17/2009	75.0	6/17/2009	9.1	6/17/2009	93.0	6/17/2009	240.0	6/17/2009	150.0
10/29/2009	2,400.0 L	10/29/2009	1,100.0	10/29/2009	460.0	10/29/2009	2,400.0 L	10/29/2009	1,100.0
12/2/2009	23.0	12/2/2009	3.6	12/2/2009	93.0	12/2/2009	3.6	12/2/2009	15.0
3/12/2010	3.0 K	3/12/2010	3.0 K	3/12/2010	3.0 K	3/12/2010	3.6	3/12/2010	3.6
5/5/2010	460.0	5/5/2010	460.0	5/5/2010	460.0	5/5/2010	1,100.0	5/5/2010	93.0
6/2/2010	3.0 K	6/2/2010	3.6	6/2/2010	3.0 K	6/2/2010	3.0 K	6/2/2010	3.0 K
7/20/2010	75.0	7/20/2010	23.0	7/20/2010	1,100.0	7/20/2010	93.0	7/20/2010	43.0
8/3/2010	15.0	8/3/2010	15.0	8/3/2010	9.1	8/3/2010	9.1	8/3/2010	23.0
9/14/2010	460.0	9/14/2010	43.0	9/14/2010	240.0	9/14/2010	2,400.0 L	9/14/2010	93.0
10/22/2010	3.6	10/22/2010	7.3	10/22/2010	9.1	10/22/2010	75.0	10/22/2010	93.0
11/16/2010	9.1	11/16/2010	3.0 K	11/16/2010	93.0	11/16/2010	93.0	11/16/2010	43.0
2/14/2011	9.1	2/14/2011	43.0	2/14/2011	23.0	2/14/2011	15.0	2/14/2011	3.6
2/24/2011	7.3	2/24/2011	3.6	2/24/2011	3.0 K	2/24/2011	3.0 K	2/24/2011	3.6
5/12/2011	240.0	5/12/2011	43.0	5/12/2011	1,100.0	5/12/2011	93.0	5/12/2011	93.0
6/14/2011	93.0	6/14/2011	93.0	6/14/2011	93.0	6/14/2011	460.0	6/14/2011	460.0
7/25/2011	7.3	7/25/2011	3.6	7/25/2011	23.0	7/25/2011	23.0	7/25/2011	3.6
8/10/2011	93.0	8/10/2011	93.0	8/10/2011	2,400.0 L	8/10/2011	1,100.0	8/10/2011	240.0
9/28/2011	240.0	9/28/2011	240.0	9/28/2011	150.0	9/28/2011	1,100.0	9/28/2011	240.0
11/3/2011	460.0	11/3/2011	93.0	11/3/2011	2,400.0 L	11/3/2011	460.0	11/3/2011	460.0
12/7/2011	93.0	12/7/2011	93.0	12/7/2011	2,400.0 L	12/7/2011	150.0	12/7/2011	150.0
12/21/2011	7.3	12/21/2011	3.6	12/21/2011	43.0	12/21/2011	9.1	12/21/2011	3.6

Report Area: **BB2**

Station: 1502B
COMBO : Surface
Prohibited

Geo Mean:	80.6
Est 90th:	670.1
# Samples:	36
16.7% >	*330*

Date:	*Results:*
7/10/2007	150.0
8/6/2007	93.0
8/22/2007	430.0
9/18/2007	15.0
10/4/2007	230.0
12/5/2007	230.0
3/17/2008	150.0
3/28/2008	43.0
4/10/2008	120.0
5/1/2008	23.0
6/4/2008	11.0
7/9/2008	93.0
11/24/2008	23.0
4/30/2009	43.0
5/18/2009	93.0
6/17/2009	230.0
10/29/2009	1,100.0
12/2/2009	9.1
3/12/2010	3.0 K
5/5/2010	150.0
6/2/2010	3.0 K
7/20/2010	460.0
8/3/2010	43.0
9/14/2010	1,100.0
10/22/2010	3.6
11/16/2010	11.0
2/14/2011	93.0
2/24/2011	23.0
5/12/2011	240.0
6/14/2011	2,400.0 L
7/25/2011	43.0
8/10/2011	240.0
9/28/2011	240.0
11/3/2011	460.0
12/7/2011	93.0
12/21/2011	150.0

Station: 1502C
COMBO : Surface
Prohibited

Geo Mean:	57.9
Est 90th:	618.4
# Samples:	36
11.1% >	*330*

Date:	*Results:*
7/10/2007	240.0
8/6/2007	43.0
8/22/2007	240.0
9/18/2007	7.3
10/4/2007	93.0
12/5/2007	93.0
3/17/2008	93.0
3/28/2008	3.0 K
4/10/2008	75.0
5/1/2008	43.0
6/4/2008	9.1
7/9/2008	2,400.0 L
11/24/2008	7.3
4/30/2009	43.0
5/18/2009	150.0
6/17/2009	93.0
10/29/2009	2,400.0 L
12/2/2009	460.0
3/12/2010	3.0 K
5/5/2010	240.0
6/2/2010	3.0 K
7/20/2010	93.0
8/3/2010	23.0
9/14/2010	240.0
10/22/2010	7.3
11/16/2010	11.0
2/14/2011	9.1
2/24/2011	3.0 K
5/12/2011	93.0
6/14/2011	240.0
7/25/2011	240.0
8/10/2011	35.0
9/28/2011	240.0
11/3/2011	1,100.0
12/7/2011	150.0
12/21/2011	11.0

Station: 1503
COMBO : Surface
Prohibited

Geo Mean:	96.6
Est 90th:	939.9
# Samples:	36
22.2% >	*330*

Date:	*Results:*
7/10/2007	240.0
8/6/2007	93.0
8/22/2007	240.0
9/18/2007	15.0
10/4/2007	240.0
12/5/2007	460.0
3/17/2008	75.0
3/28/2008	23.0
4/10/2008	23.0
5/1/2008	43.0
6/4/2008	460.0
7/9/2008	1,100.0
11/24/2008	3.6
4/30/2009	240.0
5/18/2009	43.0
6/17/2009	150.0
10/29/2009	2,400.0 L
12/2/2009	150.0
3/12/2010	3.0 K
5/5/2010	240.0
6/2/2010	3.0 K
7/20/2010	240.0
8/3/2010	75.0
9/14/2010	460.0
10/22/2010	43.0
11/16/2010	23.0
2/14/2011	15.0
2/24/2011	9.1
5/12/2011	75.0
6/14/2011	2,400.0 L
7/25/2011	23.0
8/10/2011	150.0
9/28/2011	1,100.0
11/3/2011	240.0
12/7/2011	1,100.0
12/21/2011	43.0

Station: 1503C
COMBO : Surface
Prohibited

Geo Mean:	132.6
Est 90th:	1333.4
# Samples:	36
30.6% >	*330*

Date:	*Results:*
7/10/2007	1,100.0
8/6/2007	1,100.0
8/22/2007	2,400.0 L
9/18/2007	28.0
10/4/2007	43.0
12/5/2007	240.0
3/17/2008	150.0
3/28/2008	150.0
4/10/2008	43.0
5/1/2008	93.0
6/4/2008	460.0
7/9/2008	150.0
11/24/2008	9.1
4/30/2009	93.0
5/18/2009	460.0
6/17/2009	240.0
10/29/2009	2,400.0 L
12/2/2009	75.0
3/12/2010	7.3
5/5/2010	150.0
6/2/2010	3.0
7/20/2010	460.0
8/3/2010	9.1
9/14/2010	150.0
10/22/2010	240.0
11/16/2010	150.0
2/14/2011	23.0
2/24/2011	3.6
5/12/2011	460.0
6/14/2011	2,400.0 L
7/25/2011	23.0
8/10/2011	1,100.0
9/28/2011	1,100.0
11/3/2011	240.0
12/7/2011	150.0
12/21/2011	43.0

Station: 1504
COMBO : Surface
Prohibited

Geo Mean:	116.0
Est 90th:	1012.1
# Samples:	36
30.6% >	*330*

Date:	*Results:*
7/10/2007	150.0
8/6/2007	23.0
8/22/2007	460.0
9/18/2007	460.0
10/4/2007	1,100.0
12/5/2007	93.0
3/17/2008	150.0
3/28/2008	7.3
4/10/2008	93.0
5/1/2008	23.0
6/4/2008	23.0
7/9/2008	2,400.0 L
11/24/2008	11.0
4/30/2009	460.0
5/18/2009	150.0
6/17/2009	93.0
10/29/2009	2,400.0 L
12/2/2009	240.0
3/12/2010	3.0 K
5/5/2010	460.0
6/2/2010	3.6
7/20/2010	210.0
8/3/2010	240.0
9/14/2010	240.0
10/22/2010	240.0
11/16/2010	43.0
2/14/2011	43.0
2/24/2011	7.3
5/12/2011	150.0
6/14/2011	460.0
7/25/2011	39.0
8/10/2011	460.0
9/28/2011	240.0
11/3/2011	460.0
12/7/2011	460.0
12/21/2011	43.0

Report Area: **BB2**

Station: 1504A
COMBO : Surface
Prohibited

Geo Mean:	86.8
Est 90th:	929.9
# Samples:	36
22.2% >	*330*

Date:	*Results:*
7/10/2007	240.0
8/6/2007	93.0
8/22/2007	460.0
9/18/2007	93.0
10/4/2007	240.0
12/5/2007	43.0
3/17/2008	43.0
3/28/2008	15.0
4/10/2008	23.0
5/1/2008	150.0
6/4/2008	93.0
7/9/2008	2,400.0 L
11/24/2008	3.6
4/30/2009	43.0
5/18/2009	150.0
6/17/2009	43.0
10/29/2009	2,400.0 L
12/2/2009	23.0
3/12/2010	3.0 K
5/5/2010	93.0
6/2/2010	3.0 K
7/20/2010	210.0
8/3/2010	3.6
9/14/2010	460.0
10/22/2010	93.0
11/16/2010	93.0
2/14/2011	43.0
2/24/2011	15.0
5/12/2011	240.0
6/14/2011	460.0
7/25/2011	15.0
8/10/2011	2,400.0 L
9/28/2011	460.0
11/3/2011	2,400.0 L
12/7/2011	150.0
12/21/2011	21.0

Station: 1504B
COMBO : Surface
Prohibited

Geo Mean:	123.9
Est 90th:	1107.9
# Samples:	36
36.1% >	*330*

Date:	*Results:*
7/10/2007	460.0
8/6/2007	39.0
8/22/2007	1,100.0
9/18/2007	23.0
10/4/2007	1,100.0
12/5/2007	460.0
3/17/2008	93.0
3/28/2008	21.0
4/10/2008	75.0
5/1/2008	43.0
6/4/2008	240.0
7/9/2008	1,100.0
11/24/2008	43.0
4/30/2009	93.0
5/18/2009	120.0
6/17/2009	240.0
10/29/2009	460.0
12/2/2009	75.0
3/12/2010	3.6
5/5/2010	460.0
6/2/2010	3.0 K
7/20/2010	240.0
8/3/2010	9.1
9/14/2010	1,100.0
10/22/2010	460.0
11/16/2010	240.0
2/14/2011	43.0
2/24/2011	9.1
5/12/2011	460.0
6/14/2011	460.0
7/25/2011	15.0
8/10/2011	240.0
9/28/2011	460.0
11/3/2011	2,400.0 L
12/7/2011	150.0
12/21/2011	23.0

Station: 1505
COMBO : Surface
Prohibited

Geo Mean:	106.7
Est 90th:	1018.6
# Samples:	36
30.6% >	*330*

Date:	*Results:*
7/10/2007	93.0
8/6/2007	75.0
8/22/2007	2,400.0 L
9/18/2007	460.0
10/4/2007	460.0
12/5/2007	93.0
3/17/2008	20.0
3/28/2008	93.0
4/10/2008	93.0
5/1/2008	93.0
6/4/2008	75.0
7/9/2008	460.0
11/24/2008	7.3
4/30/2009	64.0
5/18/2009	1,100.0
6/17/2009	240.0
10/29/2009	460.0
12/2/2009	240.0
3/12/2010	9.1
5/5/2010	150.0
6/2/2010	3.0 K
7/20/2010	240.0
8/3/2010	3.0 K
9/14/2010	1,100.0
10/22/2010	93.0
11/16/2010	9.1
2/14/2011	29.0
2/24/2011	3.6
5/12/2011	150.0
6/14/2011	460.0
7/25/2011	43.0
8/10/2011	1,100.0
9/28/2011	93.0
11/3/2011	460.0
12/7/2011	1,100.0
12/21/2011	93.0

Station: 1505A
COMBO : Surface
Prohibited

Geo Mean:	122.4
Est 90th:	1170.6
# Samples:	36
27.8% >	*330*

Date:	*Results:*
7/10/2007	240.0
8/6/2007	1,100.0
8/22/2007	2,400.0 L
9/18/2007	240.0
10/4/2007	93.0
12/5/2007	240.0
3/17/2008	150.0
3/28/2008	1,100.0
4/10/2008	240.0
5/1/2008	93.0
6/4/2008	23.0
7/9/2008	460.0
11/24/2008	15.0
4/30/2009	93.0
5/18/2009	210.0
6/17/2009	240.0
10/29/2009	2,400.0 L
12/2/2009	93.0
3/12/2010	3.6
5/5/2010	240.0
6/2/2010	3.0 K
7/20/2010	1,100.0
8/3/2010	43.0
9/14/2010	460.0
10/22/2010	23.0
11/16/2010	43.0
2/14/2011	9.1
2/24/2011	7.3
5/12/2011	93.0
6/14/2011	460.0
7/25/2011	9.1
8/10/2011	93.0
9/28/2011	1,100.0
11/3/2011	460.0
12/7/2011	240.0
12/21/2011	43.0

Station: 1505B
COMBO : Surface
Prohibited

Geo Mean:	112.3
Est 90th:	1024.4
# Samples:	36
30.6% >	*330*

Date:	*Results:*
7/10/2007	1,100.0
8/6/2007	2,400.0 L
8/22/2007	1,100.0
9/18/2007	43.0
10/4/2007	240.0
12/5/2007	460.0
3/17/2008	240.0
3/28/2008	43.0
4/10/2008	93.0
5/1/2008	9.1
6/4/2008	240.0
7/9/2008	1,100.0
11/24/2008	20.0
4/30/2009	43.0
5/18/2009	240.0
6/17/2009	93.0
10/29/2009	1,100.0
12/2/2009	75.0
3/12/2010	3.6
5/5/2010	240.0
6/2/2010	3.0 K
7/20/2010	460.0
8/3/2010	43.0
9/14/2010	43.0
10/22/2010	23.0
11/16/2010	43.0
2/14/2011	93.0
2/24/2011	7.3
5/12/2011	460.0
6/14/2011	53.0
7/25/2011	15.0
8/10/2011	1,100.0
9/28/2011	460.0
11/3/2011	460.0
12/7/2011	240.0
12/21/2011	43.0

Station: 1505C
COMBO : Surface
Prohibited

Geo Mean:	215.8
Est 90th:	2082.2
# Samples:	36
41.7% >	*330*

Date:	*Results:*
7/10/2007	460.0
8/6/2007	93.0
8/22/2007	460.0
9/18/2007	1,100.0
10/4/2007	1,100.0
12/5/2007	150.0
3/17/2008	240.0
3/28/2008	240.0
4/10/2008	93.0
5/1/2008	23.0
6/4/2008	2,400.0 L
7/9/2008	2,400.0 L
11/24/2008	43.0
4/30/2009	240.0
5/18/2009	460.0
6/17/2009	240.0
10/29/2009	2,400.0 L
12/2/2009	75.0
3/12/2010	3.0 K
5/5/2010	460.0
6/2/2010	3.0 K
7/20/2010	240.0
8/3/2010	9.1
9/14/2010	1,100.0
10/22/2010	150.0
11/16/2010	93.0
2/14/2011	43.0
2/24/2011	43.0
5/12/2011	150.0
6/14/2011	2,400.0
7/25/2011	150.0
8/10/2011	2,400.0 L
9/28/2011	460.0
11/3/2011	460.0
12/7/2011	2,400.0 L
12/21/2011	120.0

Station: 1506
COMBO : Surface
Prohibited

Geo Mean:	136.7
Est 90th:	1269.6
# Samples:	36
36.1% >	*330*

Date:	*Results:*
7/10/2007	460.0
8/6/2007	93.0
8/22/2007	460.0
9/18/2007	460.0
10/4/2007	1,100.0
12/5/2007	150.0
3/17/2008	75.0
3/28/2008	43.0
4/10/2008	93.0
5/1/2008	20.0
6/4/2008	21.0
7/9/2008	460.0
11/24/2008	15.0
4/30/2009	75.0
5/18/2009	1,100.0
6/17/2009	43.0
10/29/2009	2,400.0 L
12/2/2009	93.0
3/12/2010	3.6
5/5/2010	93.0
6/2/2010	3.0 K
7/20/2010	2,400.0 L
8/3/2010	43.0
9/14/2010	1,100.0
10/22/2010	460.0
11/16/2010	93.0
2/14/2011	43.0
2/24/2011	9.1
5/12/2011	93.0
6/14/2011	2,400.0 L
7/25/2011	75.0
8/10/2011	1,100.0
9/28/2011	240.0
11/3/2011	210.0
12/7/2011	460.0
12/21/2011	93.0

Station: 1506A
COMBO : Surface
Prohibited

Geo Mean:	129.5
Est 90th:	1508.9
# Samples:	36
30.6% >	*330*

Date:	*Results:*
7/10/2007	240.0
8/6/2007	1,100.0
8/22/2007	2,400.0 L
9/18/2007	2,400.0 L
10/4/2007	93.0
12/5/2007	460.0
3/17/2008	75.0
3/28/2008	23.0
4/10/2008	150.0
5/1/2008	23.0
6/4/2008	20.0
7/9/2008	240.0
11/24/2008	3.6
4/30/2009	93.0
5/18/2009	240.0
6/17/2009	150.0
10/29/2009	1,100.0
12/2/2009	150.0
3/12/2010	3.0 K
5/5/2010	240.0
6/2/2010	3.6
7/20/2010	1,100.0
8/3/2010	23.0
9/14/2010	240.0
10/22/2010	93.0
11/16/2010	28.0
2/14/2011	23.0
2/24/2011	23.0
5/12/2011	1,100.0
6/14/2011	2,400.0 L
7/25/2011	23.0
8/10/2011	2,400.0 L
9/28/2011	460.0
11/3/2011	1,100.0
12/7/2011	43.0
12/21/2011	43.0

Station: 1506C
COMBO : Surface
Prohibited

Geo Mean:	132.9
Est 90th:	1091.7
# Samples:	36
33.3% >	*330*

Date:	*Results:*
7/10/2007	460.0
8/6/2007	460.0
8/22/2007	2,400.0 L
9/18/2007	93.0
10/4/2007	43.0
12/5/2007	150.0
3/17/2008	230.0
3/28/2008	43.0
4/10/2008	43.0
5/1/2008	93.0
6/4/2008	93.0
7/9/2008	1,100.0
11/24/2008	23.0
4/30/2009	75.0
5/18/2009	93.0
6/17/2009	240.0
10/29/2009	1,100.0
12/2/2009	43.0
3/12/2010	3.0 K
5/5/2010	1,100.0
6/2/2010	3.0 K
7/20/2010	1,100.0
8/3/2010	23.0
9/14/2010	460.0
10/22/2010	150.0
11/16/2010	21.0
2/14/2011	75.0
2/24/2011	23.0
5/12/2011	150.0
6/14/2011	460.0
7/25/2011	23.0
8/10/2011	1,100.0
9/28/2011	240.0
11/3/2011	1,100.0
12/7/2011	460.0
12/21/2011	93.0

Station: 1506D
COMBO : Surface
Prohibited

Geo Mean:	126.7
Est 90th:	1561.8
# Samples:	36
30.6% >	*330*

Date:	*Results:*
7/10/2007	2,400.0 L
8/6/2007	240.0
8/22/2007	460.0
9/18/2007	43.0
10/4/2007	43.0
12/5/2007	150.0
3/17/2008	39.0
3/28/2008	9.1
4/10/2008	23.0
5/1/2008	23.0
6/4/2008	150.0
7/9/2008	1,100.0
11/24/2008	15.0
4/30/2009	240.0
5/18/2009	93.0
6/17/2009	1,100.0
10/29/2009	1,100.0
12/2/2009	240.0
3/12/2010	3.6
5/5/2010	93.0
6/2/2010	3.0 K
7/20/2010	460.0
8/3/2010	3.6
9/14/2010	2,400.0 L
10/22/2010	43.0
11/16/2010	210.0
2/14/2011	93.0
2/24/2011	9.1
5/12/2011	43.0
6/14/2011	2,400.0 L
7/25/2011	240.0
8/10/2011	2,400.0 L
9/28/2011	240.0
11/3/2011	1,100.0
12/7/2011	1,100.0
12/21/2011	43.0

Report Area: **BB2**

Station: 1631
COMBO : Surface
Restricted

Geo Mean:	15.6
Est 90th:	80.2
# Samples:	36
2.8% >	*330*

Date:	*Results:*
7/10/2007	3.6
8/6/2007	43.0
8/22/2007	460.0
9/18/2007	23.0
10/4/2007	15.0
12/5/2007	15.0
3/17/2008	15.0
3/28/2008	3.6
4/10/2008	7.3
5/1/2008	3.6
6/4/2008	15.0
7/9/2008	43.0
11/24/2008	23.0
4/30/2009	15.0
5/18/2009	43.0
6/17/2009	9.1
10/29/2009	93.0
12/2/2009	7.3
3/12/2010	3.0 K
5/5/2010	120.0
6/2/2010	3.0
7/20/2010	28.0
8/3/2010	43.0
9/14/2010	43.0
10/22/2010	23.0
11/16/2010	3.0
2/14/2011	3.0 K
2/24/2011	3.0 K
5/12/2011	15.0
6/14/2011	20.0
7/25/2011	9.1
8/10/2011	75.0
9/28/2011	150.0
11/3/2011	9.1
12/7/2011	3.0 K
12/21/2011	9.1

Station: 1631A
COMBO : Surface
Restricted

Geo Mean:	15.9
Est 90th:	97.3
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	93.0
9/20/2007	15.0
11/9/2007	3.0 K
12/3/2007	23.0
1/8/2008	15.0
2/19/2008	93.0
3/18/2008	3.0
5/27/2008	23.0
6/10/2008	3.0 K
10/24/2008	9.1
11/20/2008	23.0
4/9/2009	3.0
5/29/2009	3.0 K
7/6/2009	23.0
8/3/2009	460.0
10/22/2009	43.0
1/28/2010	15.0
3/12/2010	3.0 K
4/5/2010	93.0
4/23/2010	23.0
5/25/2010	23.0
7/22/2010	3.0 K
8/19/2010	7.3
10/20/2010	75.0
11/18/2010	3.0 K
3/15/2011	3.0 K
6/1/2011	23.0
7/26/2011	3.0
9/29/2011	93.0
11/7/2011	43.0
12/9/2011	75.0

Station: 1631B
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	12.5
Est 90th:	83.5
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	93.0
9/20/2007	3.0
11/9/2007	3.0 K
12/3/2007	3.0 K
1/8/2008	3.6
2/19/2008	43.0
3/18/2008	3.0 K
5/27/2008	3.6
6/10/2008	15.0
10/24/2008	7.3
11/20/2008	15.0
4/9/2009	3.0 K
5/29/2009	3.6
7/6/2009	23.0
8/3/2009	460.0
10/22/2009	43.0
1/28/2010	21.0
3/12/2010	3.0 K
4/5/2010	240.0
4/23/2010	3.6
5/25/2010	9.1
7/22/2010	3.0 K
8/19/2010	43.0
10/20/2010	39.0
11/18/2010	93.0
3/15/2011	7.3
6/1/2011	3.0 K
7/26/2011	9.1
9/29/2011	93.0
11/7/2011	3.0 K
12/9/2011	23.0

Station: 1631C
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	11.2
Est 90th:	56.8
# Samples:	30
0.0% >	*330*

Date:	*Results:*
7/19/2007	43.0
9/20/2007	3.0 K
11/9/2007	43.0
12/3/2007	3.6
1/8/2008	9.1
2/19/2008	3.0 K
3/18/2008	3.0 K
5/27/2008	23.0
6/10/2008	3.6
10/24/2008	9.1
11/20/2008	43.0
4/9/2009	3.0 K
5/29/2009	3.6
7/6/2009	9.1
10/22/2009	93.0
1/28/2010	7.3
3/12/2010	3.0 K
4/5/2010	23.0
4/23/2010	3.6
5/25/2010	7.3
7/22/2010	3.0 K
8/19/2010	23.0
10/20/2010	23.0
11/18/2010	23.0
3/15/2011	15.0
6/1/2011	3.0 K
7/26/2011	9.1
9/29/2011	150.0
11/7/2011	9.1
12/9/2011	240.0

Station: 1631D
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	10.5
Est 90th:	74.7
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	240.0
9/20/2007	3.0 K
11/9/2007	3.6
12/3/2007	15.0
1/8/2008	3.6
2/19/2008	3.0 K
3/18/2008	3.0 K
5/27/2008	23.0
6/10/2008	9.1
10/24/2008	3.6
11/20/2008	15.0
4/9/2009	3.0 K
5/29/2009	9.1
7/6/2009	3.6
8/3/2009	240.0
10/22/2009	15.0
1/28/2010	3.0 K
3/12/2010	3.0 K
4/5/2010	43.0
4/23/2010	3.0 K
5/25/2010	7.3
7/22/2010	3.0 K
8/19/2010	9.1
10/20/2010	9.1
11/18/2010	3.0 K
3/15/2011	3.6
6/1/2011	3.6
7/26/2011	240.0
9/29/2011	460.0
11/7/2011	23.0
12/9/2011	43.0

Report Area: **BB2**

Station: 1631E
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	11.0
Est 90th:	72.6
# Samples:	31
0.0% >	*330*

Date:	*Results:*
7/19/2007	21.0
9/20/2007	3.0 K
11/9/2007	3.6
12/3/2007	9.1
1/8/2008	9.1
2/19/2008	3.6
3/18/2008	9.1
5/27/2008	3.6
6/10/2008	3.0 K
10/24/2008	7.3
11/20/2008	23.0
4/9/2009	3.0 K
5/29/2009	93.0
7/6/2009	15.0
8/3/2009	240.0
10/22/2009	9.1
1/28/2010	3.6
3/12/2010	3.0 K
4/5/2010	75.0
4/23/2010	3.6
5/25/2010	3.0
7/22/2010	3.0 K
8/19/2010	43.0
10/20/2010	9.1
11/18/2010	3.6
3/15/2011	3.6
6/1/2011	3.0 K
7/26/2011	240.0
9/29/2011	240.0
11/7/2011	9.1
12/9/2011	93.0

Station: 1631F
COMBO : Surface
Restricted

Geo Mean:	21.8
Est 90th:	244.3
# Samples:	31
9.7% >	*330*

Date:	*Results:*
7/19/2007	2,400.0 L
9/20/2007	15.0
11/9/2007	11.0
12/3/2007	9.1
1/8/2008	9.1
2/19/2008	9.1
3/18/2008	3.6
5/27/2008	150.0
6/10/2008	93.0
10/24/2008	39.0
11/20/2008	23.0
4/9/2009	3.0 K
5/29/2009	240.0
7/6/2009	43.0
8/3/2009	240.0
10/22/2009	7.3
1/28/2010	7.3
3/12/2010	3.0 K
4/5/2010	43.0
4/23/2010	3.6
5/25/2010	3.0 K
7/22/2010	3.0 K
8/19/2010	1,100.0
10/20/2010	3.6
11/18/2010	23.0
3/15/2011	3.6
6/1/2011	3.0 K
7/26/2011	460.0
9/29/2011	93.0
11/7/2011	7.3
12/9/2011	43.0

Station: 1632
COMBO : Surface
Restricted

Geo Mean:	22.4
Est 90th:	196.5
# Samples:	35
8.6% >	*330*

Date:	*Results:*
7/10/2007	43.0
8/6/2007	9.1
8/22/2007	1,100.0
9/18/2007	11.0
10/4/2007	23.0
12/5/2007	15.0
3/17/2008	39.0
3/28/2008	3.0 K
4/10/2008	43.0
5/1/2008	9.1
7/9/2008	460.0
11/24/2008	3.6
4/30/2009	3.6
5/18/2009	43.0
6/17/2009	43.0
10/29/2009	1,100.0
12/2/2009	23.0
3/12/2010	3.0 K
5/5/2010	93.0
6/2/2010	3.0 K
7/20/2010	3.6
8/3/2010	3.6
9/14/2010	43.0
10/22/2010	43.0
11/16/2010	3.0 K
2/14/2011	3.6
2/24/2011	3.0 K
5/12/2011	23.0
6/14/2011	29.0
7/25/2011	11.0
8/10/2011	240.0
9/28/2011	240.0
11/3/2011	43.0
12/7/2011	75.0
12/21/2011	9.1

Station: 1632A
COMBO : Surface
Restricted

Geo Mean:	12.0
Est 90th:	68.6
# Samples:	36
0.0% >	*330*

Date:	*Results:*
7/10/2007	23.0
8/6/2007	3.6
8/22/2007	15.0
9/18/2007	3.6
10/4/2007	43.0
12/5/2007	3.0
3/17/2008	21.0
3/28/2008	3.0
4/10/2008	7.3
5/1/2008	3.6
6/4/2008	240.0
7/9/2008	23.0
11/24/2008	15.0
4/30/2009	3.6
5/18/2009	15.0
6/17/2009	3.6
10/29/2009	240.0
12/2/2009	3.6
3/12/2010	3.0 K
5/5/2010	23.0
6/2/2010	3.0 K
7/20/2010	15.0
8/3/2010	7.3
9/14/2010	9.1
10/22/2010	23.0
11/16/2010	9.1
2/14/2011	3.0 K
2/24/2011	3.6
5/12/2011	15.0
6/14/2011	43.0
7/25/2011	3.6
8/10/2011	23.0
9/28/2011	240.0
11/3/2011	240.0
12/7/2011	9.1
12/21/2011	3.6

Station: 1632B
COMBO : Surface
Restricted

Geo Mean:	16.7
Est 90th:	104.9
# Samples:	35
2.9% >	*330*

Date:	*Results:*
7/10/2007	3.0 K
8/6/2007	9.1
8/22/2007	210.0
9/18/2007	9.1
10/4/2007	23.0
12/5/2007	93.0
3/17/2008	43.0
3/28/2008	3.0 K
4/10/2008	43.0
5/1/2008	7.3
6/4/2008	3.6
7/9/2008	43.0
11/24/2008	9.1
4/30/2009	3.0 K
5/18/2009	240.0
10/29/2009	43.0
12/2/2009	9.1
3/12/2010	3.0 K
5/5/2010	150.0
6/2/2010	3.0 K
7/20/2010	9.1
8/3/2010	3.6
9/14/2010	93.0
10/22/2010	23.0
11/16/2010	3.6
2/14/2011	3.0 K
2/24/2011	7.3
5/12/2011	21.0
6/14/2011	9.1
7/25/2011	9.1
8/10/2011	43.0
9/28/2011	43.0
11/3/2011	460.0
12/7/2011	29.0
12/21/2011	11.0

Station: 1632C
COMBO : Surface
Restricted

Geo Mean:	21.4
Est 90th:	186.8
# Samples:	36
8.3% >	*330*

Date:	*Results:*
7/10/2007	7.3
8/6/2007	9.1
8/22/2007	93.0
9/18/2007	3.0 K
10/4/2007	23.0
12/5/2007	21.0
3/17/2008	240.0
3/28/2008	3.0 K
4/10/2008	150.0
5/1/2008	15.0
6/4/2008	7.3
7/9/2008	23.0
11/24/2008	3.0 K
4/30/2009	3.6
5/18/2009	1,100.0
6/17/2009	43.0
10/29/2009	93.0
12/2/2009	3.0 K
3/12/2010	3.0 K
5/5/2010	460.0
6/2/2010	3.0 K
7/20/2010	15.0
8/3/2010	43.0
9/14/2010	43.0
10/22/2010	43.0
11/16/2010	9.1
2/14/2011	3.0 K
2/24/2011	3.6
5/12/2011	75.0
6/14/2011	150.0
7/25/2011	15.0
8/10/2011	28.0
9/28/2011	460.0
11/3/2011	93.0
12/7/2011	7.3
12/21/2011	3.0 K

Station: 1633
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	17.5
Est 90th:	125.0
# Samples:	30
6.7% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	43.0
11/9/2007	3.6
12/3/2007	39.0
1/8/2008	3.0
2/19/2008	15.0
3/18/2008	3.0
5/27/2008	23.0
6/10/2008	3.6
10/24/2008	23.0
4/9/2009	3.6
5/29/2009	43.0
7/6/2009	23.0
8/3/2009	1,100.0
10/22/2009	15.0
1/28/2010	9.1
3/12/2010	3.0 K
4/5/2010	21.0
4/23/2010	3.6
5/25/2010	150.0
7/22/2010	3.0 K
8/19/2010	7.3
10/20/2010	7.2
11/18/2010	15.0
3/15/2011	93.0
6/1/2011	93.0
7/26/2011	9.1
9/29/2011	75.0
11/7/2011	7.3
12/9/2011	15.0

Station: 1633A
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	11.6
Est 90th:	82.4
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	1,100.0
9/20/2007	23.0
11/9/2007	3.0 K
12/3/2007	3.0 K
1/8/2008	3.0 K
2/19/2008	3.6
3/18/2008	3.6
5/27/2008	15.0
6/10/2008	23.0
10/24/2008	43.0
11/20/2008	43.0
4/9/2009	3.6
5/29/2009	23.0
7/6/2009	9.1
8/3/2009	240.0
10/22/2009	43.0
1/28/2010	9.1
3/12/2010	3.0 K
4/5/2010	28.0
4/23/2010	3.6
5/25/2010	3.6
7/22/2010	3.0 K
8/19/2010	3.6
10/20/2010	3.6
11/18/2010	23.0
3/15/2011	3.0 K
6/1/2011	3.0 K
7/26/2011	9.1
9/29/2011	93.0
11/7/2011	3.6
12/9/2011	93.0

Station: 1633B
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	12.0
Est 90th:	97.6
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	2,400.0 L
9/20/2007	21.0
11/9/2007	9.1
12/3/2007	23.0
1/8/2008	3.0 K
2/19/2008	11.0
3/18/2008	3.6
5/27/2008	23.0
6/10/2008	3.6
10/24/2008	3.0 K
11/20/2008	93.0
4/9/2009	3.0 K
5/29/2009	3.6
7/6/2009	43.0
8/3/2009	150.0
10/22/2009	11.0
1/28/2010	9.1
3/12/2010	3.0 K
4/5/2010	93.0
4/23/2010	3.0 K
5/25/2010	3.0
7/22/2010	3.0 K
8/19/2010	3.6
10/20/2010	23.0
11/18/2010	23.0
3/15/2011	3.6
6/1/2011	3.0 K
7/26/2011	3.0
9/29/2011	240.0
11/7/2011	9.1
12/9/2011	15.0

Station: 1633C
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	12.9
Est 90th:	91.0
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	2,400.0 L
9/20/2007	3.0 K
11/9/2007	3.6
12/3/2007	3.0 K
1/8/2008	9.1
2/19/2008	23.0
3/18/2008	9.1
5/27/2008	9.1
6/10/2008	3.0 K
10/24/2008	23.0
11/20/2008	9.1
4/9/2009	3.6
5/29/2009	28.0
7/6/2009	9.1
8/3/2009	240.0
10/22/2009	23.0
1/28/2010	23.0
3/12/2010	3.0 K
4/5/2010	93.0
4/23/2010	3.0 K
5/25/2010	9.1
7/22/2010	3.0 K
8/19/2010	3.6
10/20/2010	9.1
11/18/2010	23.0
3/15/2011	23.0
6/1/2011	3.0 K
7/26/2011	15.0
9/29/2011	43.0
11/7/2011	3.6
12/9/2011	93.0

Report Area: **BB2**

Station: 1633D
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	16.6
Est 90th:	137.4
# Samples:	31
6.5% >	*330*

Date:	*Results:*
7/19/2007	2,400.0 L
9/20/2007	9.1
11/9/2007	7.3
12/3/2007	3.0 K
1/8/2008	15.0
2/19/2008	15.0
3/18/2008	3.0 K
5/27/2008	23.0
6/10/2008	3.0 K
10/24/2008	9.1
11/20/2008	43.0
4/9/2009	3.6
5/29/2009	240.0
7/6/2009	43.0
8/3/2009	460.0
10/22/2009	9.1
1/28/2010	15.0
3/12/2010	3.0 K
4/5/2010	93.0
4/23/2010	3.6
5/25/2010	7.3
7/22/2010	3.0 K
8/19/2010	75.0
10/20/2010	3.6
11/18/2010	23.0
3/15/2011	9.1
6/1/2011	3.0 K
7/26/2011	23.0
9/29/2011	43.0
11/7/2011	9.1
12/9/2011	93.0

Station: 1634
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	14.4
Est 90th:	106.4
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	93.0
9/20/2007	3.0 K
11/9/2007	3.0 K
12/3/2007	3.6
1/8/2008	3.6
2/19/2008	15.0
3/18/2008	43.0
5/27/2008	1,100.0
6/10/2008	3.0 K
10/24/2008	23.0
11/20/2008	28.0
4/9/2009	3.0 K
5/29/2009	3.0 K
7/6/2009	43.0
8/3/2009	240.0
10/22/2009	3.6
1/28/2010	93.0
3/12/2010	3.0 K
4/5/2010	23.0
4/23/2010	3.0 K
5/25/2010	43.0
7/22/2010	3.0 K
8/19/2010	9.1
10/20/2010	9.1
11/18/2010	7.3
3/15/2011	3.0 K
6/1/2011	93.0
7/26/2011	23.0
9/29/2011	43.0
11/7/2011	9.1
12/9/2011	43.0

Station: 1634B
COMBO : Surface
Approved

Geo Mean:	8.6
Est 90th:	42.5
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	9.1
11/9/2007	3.0 K
12/3/2007	3.6
1/8/2008	9.1
2/19/2008	7.3
3/18/2008	3.0
5/27/2008	7.3
6/10/2008	3.0
10/24/2008	3.6
11/20/2008	7.3
4/9/2009	3.6
5/29/2009	21.0
7/6/2009	9.1
8/3/2009	240.0
10/22/2009	23.0
1/28/2010	9.1
3/12/2010	3.6
4/5/2010	23.0
4/23/2010	7.3
5/25/2010	23.0
7/22/2010	3.0 K
8/19/2010	3.0 K
10/20/2010	3.0 K
11/18/2010	9.1
3/15/2011	3.0 K
6/1/2011	3.0 K
7/26/2011	3.0 K
9/29/2011	43.0
11/7/2011	9.1
12/9/2011	15.0

Station: 1634C
COMBO : Surface
Approved

Geo Mean:	13.0
Est 90th:	78.7
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	11.0
11/9/2007	15.0
12/3/2007	3.6
1/8/2008	9.1
2/19/2008	7.3
3/18/2008	3.0 K
5/27/2008	15.0
6/10/2008	9.1
10/24/2008	23.0
11/20/2008	43.0
4/9/2009	3.6
5/29/2009	150.0
7/6/2009	9.1
8/3/2009	150.0
10/22/2009	43.0
1/28/2010	15.0
3/12/2010	3.0 K
4/5/2010	43.0
4/23/2010	3.0 K
5/25/2010	23.0
7/22/2010	3.0 K
8/19/2010	3.6
10/20/2010	9.1
11/18/2010	15.0
3/15/2011	7.3
6/1/2011	3.0 K
7/26/2011	3.0 K
9/29/2011	240.0
11/7/2011	3.0 K
12/9/2011	15.0

Station: 1634D
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	14.1
Est 90th:	123.0
# Samples:	31
9.7% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	3.6
11/9/2007	93.0
12/3/2007	23.0
1/8/2008	6.0
2/19/2008	9.1
3/18/2008	3.0 K
5/27/2008	3.6
6/10/2008	3.0 K
10/24/2008	3.0 K
11/20/2008	23.0
4/9/2009	3.0 K
5/29/2009	460.0
7/6/2009	9.1
8/3/2009	460.0
10/22/2009	23.0
1/28/2010	3.6
3/12/2010	3.0 K
4/5/2010	93.0
4/23/2010	3.0 K
5/25/2010	7.3
7/22/2010	3.0 K
8/19/2010	93.0
10/20/2010	3.6
11/18/2010	43.0
3/15/2011	11.0
6/1/2011	3.0 K
7/26/2011	3.6
9/29/2011	150.0
11/7/2011	9.1
12/9/2011	43.0

Report Area: **BB2**

Station: 1634E
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	14.3
Est 90th:	114.3
# Samples:	31
6.5% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	240.0
11/9/2007	3.6
12/3/2007	3.6
1/8/2008	3.0 K
2/19/2008	9.1
3/18/2008	3.6
5/27/2008	3.0 K
6/10/2008	3.0 K
10/24/2008	3.0 K
11/20/2008	43.0
4/9/2009	9.1
5/29/2009	23.0
7/6/2009	15.0
8/3/2009	93.0
10/22/2009	15.0
1/28/2010	3.0 K
3/12/2010	3.0 K
4/5/2010	43.0
4/23/2010	3.6
5/25/2010	9.1
7/22/2010	3.0 K
8/19/2010	93.0
10/20/2010	93.0
11/18/2010	93.0
3/15/2011	3.0
6/1/2011	3.0 K
7/26/2011	14.0
9/29/2011	460.0
11/7/2011	23.0
12/9/2011	21.0

Station: 1635
COMBO : Surface
Seasonal (Nov - Apr)

Geo Mean:	11.5
Est 90th:	75.9
# Samples:	31
6.5% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	23.0
11/9/2007	3.0 K
12/3/2007	3.6
1/8/2008	3.6
2/19/2008	7.3
3/18/2008	11.0
5/27/2008	7.3
6/10/2008	3.0
10/24/2008	15.0
11/20/2008	9.1
4/9/2009	3.0 K
5/29/2009	460.0
7/6/2009	15.0
8/3/2009	240.0
10/22/2009	9.1
1/28/2010	21.0
3/12/2010	3.0 K
4/5/2010	21.0
4/23/2010	3.0
5/25/2010	21.0
7/22/2010	3.0 K
8/19/2010	15.0
10/20/2010	7.3
11/18/2010	3.0
3/15/2011	3.6
6/1/2011	3.0 K
7/26/2011	15.0
9/29/2011	43.0
11/7/2011	3.6
12/9/2011	93.0

Station: 1635B
COMBO : Surface
Approved

Geo Mean:	9.4
Est 90th:	67.5
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	23.0
11/9/2007	3.0 K
12/3/2007	3.6
1/8/2008	93.0
2/19/2008	3.6
3/18/2008	3.6
5/27/2008	3.6
6/10/2008	3.0 K
10/24/2008	3.6
11/20/2008	43.0
4/9/2009	3.0 K
5/29/2009	7.3
7/6/2009	23.0
8/3/2009	240.0
10/22/2009	43.0
1/28/2010	3.6
3/12/2010	3.0 K
4/5/2010	43.0
4/23/2010	3.6
5/25/2010	3.6
7/22/2010	3.0 K
8/19/2010	3.6
10/20/2010	3.0 K
11/18/2010	9.1
3/15/2011	3.0 K
6/1/2011	3.0 K
7/26/2011	3.6
9/29/2011	240.0
11/7/2011	3.6
12/9/2011	23.0

Station: 1635F
COMBO : Surface
Restricted

Geo Mean:	11.4
Est 90th:	73.7
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	1,100.0
9/20/2007	9.1
11/9/2007	9.1
12/3/2007	9.1
1/8/2008	3.6
2/19/2008	15.0
3/18/2008	3.0 K
5/27/2008	3.0 K
6/10/2008	3.0 K
10/24/2008	3.6
11/20/2008	23.0
4/9/2009	3.0 K
5/29/2009	39.0
7/6/2009	93.0
8/3/2009	150.0
10/22/2009	9.1
1/28/2010	15.0
3/12/2010	3.0 K
4/5/2010	93.0
4/23/2010	3.6
5/25/2010	9.1
7/22/2010	3.0 K
8/19/2010	93.0
10/20/2010	3.6
11/18/2010	9.1
3/15/2011	6.2
6/1/2011	3.0 K
7/26/2011	9.1
9/29/2011	23.0
11/7/2011	3.6
12/9/2011	23.0

Station: 1637A
COMBO : Surface
Restricted

Geo Mean:	13.0
Est 90th:	88.7
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	240.0
9/20/2007	9.1
11/9/2007	3.0 K
12/3/2007	21.0
1/8/2008	3.0 K
2/19/2008	3.0 K
3/18/2008	7.3
5/27/2008	23.0
6/10/2008	3.6
10/24/2008	43.0
11/20/2008	9.1
4/9/2009	3.0 K
5/29/2009	240.0
7/6/2009	9.1
8/3/2009	240.0
10/22/2009	15.0
1/28/2010	3.6
3/12/2010	3.0 K
4/5/2010	39.0
4/23/2010	3.0 K
5/25/2010	9.1
7/22/2010	3.0 K
8/19/2010	460.0
10/20/2010	3.0 K
11/18/2010	21.0
3/15/2011	3.0 K
6/1/2011	23.0
7/26/2011	9.1
9/29/2011	43.0
11/7/2011	7.3
12/9/2011	23.0

Report Area: BB2

Station: 1637B
COMBO : Surface
Restricted

Geo Mean:	14.7
Est 90th:	124.6
# Samples:	30
10.0% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	39.0
11/9/2007	3.0 K
12/3/2007	3.6
1/8/2008	9.1
2/19/2008	15.0
3/18/2008	3.0 K
5/27/2008	43.0
6/10/2008	20.0
10/24/2008	43.0
11/20/2008	43.0
4/9/2009	3.0 K
5/29/2009	460.0
7/6/2009	9.1
8/3/2009	460.0
10/22/2009	150.0
1/28/2010	9.1
3/12/2010	3.0 K
4/5/2010	39.0
4/23/2010	3.0 K
5/25/2010	7.3
7/22/2010	3.0 K
8/19/2010	9.1
10/20/2010	3.6
11/18/2010	3.6
3/15/2011	3.0 K
7/26/2011	3.0 K
9/29/2011	93.0
11/7/2011	3.0 K
12/9/2011	43.0

Station: 1637E
COMBO : Surface
Approved

Geo Mean:	6.3
Est 90th:	26.9
# Samples:	31
0.0% >	*330*

Date:	*Results:*
7/19/2007	93.0
9/20/2007	3.6
11/9/2007	3.0 K
12/3/2007	3.6
1/8/2008	3.0 K
2/19/2008	3.0 K
3/18/2008	3.0
5/27/2008	3.0 K
6/10/2008	3.0 K
10/24/2008	3.0 K
11/20/2008	23.0
4/9/2009	3.0 K
5/29/2009	3.0 K
7/6/2009	9.1
8/3/2009	93.0
10/22/2009	9.1
1/28/2010	3.6
3/12/2010	3.0 K
4/5/2010	15.0
4/23/2010	3.6
5/25/2010	15.0
7/22/2010	3.0 K
8/19/2010	3.0 K
10/20/2010	93.0
11/18/2010	3.0 K
3/15/2011	3.0
6/1/2011	3.0 K
7/26/2011	3.6
9/29/2011	23.0
11/7/2011	3.6
12/9/2011	23.0

Station: 1637F
COMBO : Surface
Approved

Geo Mean:	7.2
Est 90th:	33.4
# Samples:	31
0.0% >	*330*

Date:	*Results:*
7/19/2007	75.0
9/20/2007	3.6
11/9/2007	7.3
12/3/2007	3.0 K
1/8/2008	3.0 K
2/19/2008	3.0 K
3/18/2008	3.0 K
5/27/2008	3.0 K
6/10/2008	3.0
10/24/2008	3.0 K
11/20/2008	9.1
4/9/2009	3.0 K
5/29/2009	9.1
7/6/2009	43.0
8/3/2009	23.0
10/22/2009	9.1
1/28/2010	43.0
3/12/2010	3.0 K
4/5/2010	9.1
4/23/2010	3.0 K
5/25/2010	7.3
7/22/2010	3.0 K
8/19/2010	3.0 K
10/20/2010	3.6
11/18/2010	23.0
3/15/2011	3.0 K
6/1/2011	3.0 K
7/26/2011	3.0
9/29/2011	240.0
11/7/2011	9.1
12/9/2011	43.0

Station: 1637G
COMBO : Surface
Approved

Geo Mean:	6.9
Est 90th:	36.3
# Samples:	30
3.3% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	3.6
11/9/2007	3.0 K
12/3/2007	9.1
1/8/2008	3.0 K
2/19/2008	3.0 K
3/18/2008	3.0 K
5/27/2008	7.3
6/10/2008	3.0 K
10/24/2008	23.0
11/20/2008	43.0
4/9/2009	3.0 K
5/29/2009	3.6
7/6/2009	3.0 K
8/3/2009	93.0
10/22/2009	7.3
1/28/2010	15.0
3/12/2010	3.0 K
4/5/2010	15.0
4/23/2010	3.0 K
5/25/2010	9.1
7/22/2010	3.0 K
8/19/2010	3.0 K
10/20/2010	3.6
3/15/2011	3.6
6/1/2011	3.0 K
7/26/2011	3.0 K
9/29/2011	93.0
11/7/2011	3.6
12/9/2011	3.6

Station: 1637H
COMBO : Surface
Approved

Geo Mean:	7.5
Est 90th:	39.8
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	150.0
9/20/2007	9.1
11/9/2007	7.3
12/3/2007	9.1
1/8/2008	9.1
2/19/2008	3.0
3/18/2008	3.0 K
5/27/2008	3.0 K
6/10/2008	3.0 K
10/24/2008	3.6
11/20/2008	3.6
4/9/2009	3.0 K
5/29/2009	3.0 K
7/6/2009	9.1
8/3/2009	93.0
10/22/2009	23.0
1/28/2010	15.0
3/12/2010	3.0 K
4/5/2010	23.0
4/23/2010	3.0 K
5/25/2010	3.0 K
7/22/2010	3.0 K
8/19/2010	15.0
10/20/2010	3.0 K
11/18/2010	3.0 K
3/15/2011	3.0 K
6/1/2011	3.0 K
7/26/2011	3.0 K
9/29/2011	460.0
11/7/2011	23.0
12/9/2011	9.1

Station: 1637J
COMBO : Surface
Approved

Geo Mean:	10.3
Est 90th:	70.4
# Samples:	31
3.2% >	*330*

Date:	*Results:*
7/19/2007	460.0
9/20/2007	3.6
11/9/2007	3.0 K
12/3/2007	3.6
1/8/2008	3.6
2/19/2008	7.3
3/18/2008	3.0 K
5/27/2008	9.1
6/10/2008	3.6
10/24/2008	43.0
11/20/2008	9.1
4/9/2009	3.0 K
5/29/2009	43.0
7/6/2009	23.0
8/3/2009	150.0
10/22/2009	93.0
1/28/2010	21.0
3/12/2010	3.0 K
4/5/2010	43.0
4/23/2010	3.0 K
5/25/2010	3.6
7/22/2010	3.0 K
8/19/2010	3.6
10/20/2010	15.0
11/18/2010	3.0 K
3/15/2011	3.6
6/1/2011	3.0 K
7/26/2011	3.0 K
9/29/2011	43.0
11/7/2011	7.3
12/9/2011	240.0

Station: 1638
COMBO : Surface
Restricted

Geo Mean:	15.7
Est 90th:	90.7
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	23.0
9/25/2007	23.0
11/23/2007	23.0
12/7/2007	3.6
1/16/2008	15.0
3/12/2008	3.6
4/15/2008	3.6
5/29/2008	3.0 K
6/9/2008	7.3
6/30/2008	43.0
7/30/2008	9.1
10/22/2008	93.0
11/12/2008	3.6
12/18/2008	43.0
4/17/2009	3.0 K
5/8/2009	23.0
5/15/2009	9.1
11/16/2009	15.0
1/26/2010	7.3
3/11/2010	3.0 K
4/6/2010	7.3
4/27/2010	43.0
6/3/2010	43.0
7/13/2010	460.0
10/7/2010	150.0
11/18/2010	23.0
12/8/2010	3.6
6/23/2011	3.6
9/8/2011	240.0
9/16/2011	43.0
11/4/2011	7.3
12/8/2011	43.0

Station: 1639
COMBO : Surface
Restricted

Geo Mean:	38.8
Est 90th:	353.9
# Samples:	32
6.3% >	*330*

Date:	*Results:*
8/7/2007	240.0
9/25/2007	9.1
11/23/2007	9.1
12/7/2007	3.6
1/16/2008	11.0
3/12/2008	9.1
4/15/2008	3.0 K
5/29/2008	240.0
6/9/2008	150.0
6/30/2008	240.0
7/30/2008	9.1
10/22/2008	75.0
11/12/2008	9.1
12/18/2008	23.0
4/17/2009	3.0 K
5/8/2009	2,400.0 L
5/15/2009	460.0
11/16/2009	64.0
1/26/2010	93.0
3/11/2010	3.0 K
4/6/2010	43.0
4/27/2010	93.0
6/3/2010	93.0
7/13/2010	150.0
10/7/2010	150.0
11/18/2010	23.0
12/8/2010	3.6
6/23/2011	93.0
9/8/2011	150.0
9/16/2011	43.0
11/4/2011	7.3
12/8/2011	150.0

Station: 1639A
COMBO : Surface
Approved

Geo Mean:	17.4
Est 90th:	114.3
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	75.0
9/25/2007	3.0 K
11/23/2007	9.1
12/7/2007	7.3
1/16/2008	21.0
3/12/2008	3.6
4/15/2008	3.0 K
5/29/2008	3.0 K
6/9/2008	7.3
6/30/2008	21.0
7/30/2008	15.0
10/22/2008	460.0
11/12/2008	3.0
12/18/2008	75.0
4/17/2009	3.6
5/8/2009	240.0
5/15/2009	93.0
11/16/2009	93.0
1/26/2010	3.6
3/11/2010	3.6
4/6/2010	7.3
4/27/2010	93.0
6/3/2010	9.1
7/13/2010	93.0
10/7/2010	21.0
11/18/2010	9.1
12/8/2010	15.0
6/23/2011	23.0
9/8/2011	240.0
9/16/2011	23.0
11/4/2011	15.0
12/8/2011	7.3

Station: 1639C
COMBO : Surface
Approved

Geo Mean:	15.6
Est 90th:	94.6
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	3.6
9/25/2007	14.0
11/23/2007	3.0 K
12/7/2007	3.0
1/16/2008	150.0
3/12/2008	3.0 K
4/15/2008	3.6
5/29/2008	3.0
6/9/2008	3.0
6/30/2008	23.0
7/30/2008	9.1
10/22/2008	23.0
11/12/2008	9.1
12/18/2008	240.0
4/17/2009	7.3
5/8/2009	460.0
5/15/2009	23.0
11/16/2009	9.1
1/26/2010	7.3
3/11/2010	3.0 K
4/6/2010	43.0
4/27/2010	7.3
6/3/2010	23.0
7/13/2010	43.0
10/7/2010	21.0
11/18/2010	9.1
12/8/2010	15.0
6/23/2011	75.0
9/8/2011	240.0
9/16/2011	21.0
11/4/2011	43.0
12/8/2011	9.1

Report Area: **BB2**

Station: 1639D
COMBO : Surface
Approved

Geo Mean:	6.2
Est 90th:	26.6
# Samples:	32
3.1% >	*330*

Date:	*Results:*
10/9/2007	3.0 K
11/8/2007	3.6
12/26/2007	23.0
3/10/2008	460.0
4/18/2008	3.0 K
5/20/2008	15.0
6/30/2008	3.0 K
7/28/2008	3.6
12/15/2008	3.6
1/9/2009	15.0
3/24/2009	3.0 K
5/7/2009	9.1
6/3/2009	3.0 K
7/20/2009	3.6
8/4/2009	9.1
8/31/2009	43.0
10/13/2009	3.0 K
12/1/2009	3.0 K
3/2/2010	3.0 K
5/5/2010	7.3
6/9/2010	3.0 K
7/12/2010	3.6
8/4/2010	15.0
9/23/2010	3.0 K
10/26/2010	3.0 K
12/6/2010	3.0 K
5/25/2011	3.6
6/9/2011	3.0 K
7/12/2011	3.0
8/12/2011	23.0
9/14/2011	29.0
10/27/2011	3.0 K

Station: 1639E
COMBO : Surface
Approved

Geo Mean:	6.5
Est 90th:	53.2
# Samples:	32
6.3% >	*330*

Date:	*Results:*
10/9/2007	3.0 K
11/8/2007	3.6
12/26/2007	23.0
3/10/2008	75.0
4/18/2008	3.0 K
5/20/2008	3.0 K
6/30/2008	3.0 K
7/28/2008	3.0 K
12/15/2008	9.1
1/9/2009	11.0
3/24/2009	3.0 K
5/7/2009	3.0 K
6/3/2009	3.0 K
7/20/2009	3.0 K
8/4/2009	3.0 K
8/31/2009	23.0
10/13/2009	3.6
12/1/2009	3.0 K
3/2/2010	3.0 K
5/5/2010	3.0 K
6/9/2010	3.0 K
7/12/2010	3.6
8/4/2010	11.0
9/23/2010	3.6
10/26/2010	3.6
12/6/2010	3.0 K
5/25/2011	3.0 K
6/9/2011	3.0 K
7/12/2011	3.0 K
8/12/2011	2,400.0 L
9/14/2011	1,100.0
10/27/2011	3.0 K

Station: 1640
COMBO : Surface
Restricted

Geo Mean:	18.6
Est 90th:	151.8
# Samples:	32
6.3% >	*330*

Date:	*Results:*
8/7/2007	93.0
9/25/2007	3.0 K
11/23/2007	9.1
12/7/2007	3.6
1/16/2008	3.0 K
3/12/2008	3.0 K
4/15/2008	9.1
5/29/2008	3.0 K
6/9/2008	9.1
6/30/2008	460.0
7/30/2008	23.0
10/22/2008	43.0
11/12/2008	3.6
12/18/2008	43.0
4/17/2009	3.0 K
5/8/2009	240.0
5/15/2009	15.0
11/16/2009	43.0
1/26/2010	3.6
3/11/2010	3.0 K
4/6/2010	9.1
4/27/2010	43.0
6/3/2010	3.0 K
7/13/2010	460.0
10/7/2010	240.0
11/18/2010	9.1
12/8/2010	9.1
6/23/2011	43.0
9/8/2011	240.0
9/16/2011	93.0
11/4/2011	23.0
12/8/2011	23.0

Station: 1640A
COMBO : Surface
Approved

Geo Mean:	17.8
Est 90th:	143.1
# Samples:	32
0.0% >	*330*

Date:	*Results:*
8/7/2007	240.0
9/25/2007	3.0 K
11/23/2007	7.3
12/7/2007	3.0 K
1/16/2008	3.6
3/12/2008	7.3
4/15/2008	3.0 K
5/29/2008	3.6
6/9/2008	7.3
6/30/2008	93.0
7/30/2008	3.0 K
10/22/2008	240.0
11/12/2008	9.1
12/18/2008	15.0
4/17/2009	3.0 K
5/8/2009	240.0
5/15/2009	23.0
11/16/2009	15.0
1/26/2010	43.0
3/11/2010	3.0 K
4/6/2010	9.1
4/27/2010	93.0
6/3/2010	3.6
7/13/2010	150.0
10/7/2010	240.0
11/18/2010	3.6
12/8/2010	3.6
6/23/2011	93.0
9/8/2011	93.0
9/16/2011	43.0
11/4/2011	23.0
12/8/2011	93.0

Station: 1642A
COMBO : Surface
Restricted

Geo Mean:	13.1
Est 90th:	105.7
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	43.0
9/25/2007	9.1
11/23/2007	93.0
12/7/2007	3.0 K
1/16/2008	3.0
3/12/2008	3.0 K
4/15/2008	3.0
5/29/2008	3.6
6/9/2008	9.1
6/30/2008	150.0
7/30/2008	3.0 K
10/22/2008	43.0
11/12/2008	3.6
12/18/2008	15.0
4/17/2009	3.0 K
5/8/2009	1,100.0
5/15/2009	23.0
11/16/2009	3.6
1/26/2010	3.6
3/11/2010	3.0 K
4/6/2010	3.0 K
4/27/2010	23.0
6/3/2010	3.0 K
7/13/2010	93.0
10/7/2010	240.0
11/18/2010	23.0
12/8/2010	3.0 K
6/23/2011	3.6
9/8/2011	93.0
9/16/2011	43.0
11/4/2011	9.1
12/8/2011	43.0

Report Area: BB2

Station: 1642B		*Station:* 1643		*Station:* 1643C		*Station:* 1645A		*Station:* 1645D	
COMBO : Surface		COMBO : Surface		COMBO : Surface		COMBO : Surface		COMBO : Surface	
Approved		Restricted		Approved		Restricted		Approved	
Geo Mean:	11.1	*Geo Mean:*	16.3	*Geo Mean:*	7.8	*Geo Mean:*	11.7	*Geo Mean:*	8.1
Est 90th:	57.8	*Est 90th:*	147.0	*Est 90th:*	39.3	*Est 90th:*	70.3	*Est 90th:*	44.1
# Samples:	32	*# Samples:*	32	*# Samples:*	32	*# Samples:*	32	*# Samples:*	32
0.0% >	*330*	6.3% >	*330*	0.0% >	*330*	3.1% >	*330*	0.0% >	*330*

Date:	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*
8/7/2007	3.0	8/7/2007	3.6	8/7/2007	23.0	8/7/2007	23.0	8/7/2007	3.6
9/25/2007	3.0 K	9/25/2007	3.0 K	9/25/2007	3.6	9/25/2007	9.1	9/25/2007	3.6
11/23/2007	15.0	11/23/2007	9.1	11/23/2007	3.6	11/23/2007	3.0 K	11/23/2007	3.0 K
12/7/2007	23.0	12/7/2007	3.6	12/7/2007	9.1	12/7/2007	15.0	12/7/2007	7.3
1/16/2008	15.0	1/16/2008	3.6	1/16/2008	3.0	1/16/2008	11.0	1/16/2008	3.0 K
3/12/2008	3.6	3/12/2008	3.0 K	3/12/2008	3.6	3/12/2008	3.0 K	3/12/2008	3.0 K
4/15/2008	3.0 K	4/15/2008	3.0 K	4/15/2008	3.0 K	4/15/2008	3.6	4/15/2008	3.6
5/29/2008	3.6	5/29/2008	9.1	5/29/2008	3.0 K	5/29/2008	7.3	5/29/2008	3.0
6/9/2008	3.0 K	6/9/2008	43.0	6/9/2008	43.0	6/9/2008	3.6	6/9/2008	3.0 K
6/30/2008	3.0 K	6/30/2008	93.0	6/30/2008	3.0	6/30/2008	7.3	6/30/2008	3.6
7/30/2008	3.0 K	7/30/2008	23.0	7/30/2008	3.0 K	7/30/2008	3.0 K	7/30/2008	3.6
10/22/2008	9.1	10/22/2008	240.0	10/22/2008	93.0	10/22/2008	15.0	10/22/2008	120.0
11/12/2008	3.6	11/12/2008	3.0 K	11/12/2008	3.6	11/12/2008	3.0 K	11/12/2008	3.6
12/18/2008	93.0	12/18/2008	3.6	12/18/2008	21.0	12/18/2008	43.0	12/18/2008	3.0
4/17/2009	3.0 K	4/17/2009	3.0 K	4/17/2009	3.0 K	4/17/2009	3.0 K	4/17/2009	3.0 K
5/8/2009	150.0	5/8/2009	1,100.0	5/8/2009	240.0	5/8/2009	1,100.0	5/8/2009	93.0
5/15/2009	3.0 K	5/15/2009	9.1	5/15/2009	3.6	5/15/2009	9.1	5/15/2009	7.3
11/16/2009	11.0	11/16/2009	150.0	11/16/2009	11.0	11/16/2009	23.0	11/16/2009	3.6
1/26/2010	3.6	1/26/2010	3.6	1/26/2010	3.6	1/26/2010	3.0 K	1/26/2010	3.0 K
3/11/2010	3.0 K	3/11/2010	3.6	3/11/2010	3.0 K	3/11/2010	3.0 K	3/11/2010	3.0 K
4/6/2010	15.0	4/6/2010	9.1	4/6/2010	15.0	4/6/2010	23.0	4/6/2010	9.1
4/27/2010	43.0	4/27/2010	75.0	4/27/2010	3.6	4/27/2010	43.0	4/27/2010	3.6
6/3/2010	43.0	6/3/2010	21.0	6/3/2010	3.6	6/3/2010	3.0 K	6/3/2010	7.3
7/13/2010	43.0	7/13/2010	23.0	7/13/2010	3.6	7/13/2010	93.0	7/13/2010	3.6
10/7/2010	43.0	10/7/2010	460.0	10/7/2010	93.0	10/7/2010	75.0	10/7/2010	150.0
11/18/2010	3.6	11/18/2010	23.0	11/18/2010	3.6	11/18/2010	23.0	11/18/2010	3.6
12/8/2010	7.3	12/8/2010	3.6	12/8/2010	3.6	12/8/2010	3.0 K	12/8/2010	21.0
6/23/2011	43.0	6/23/2011	3.6	6/23/2011	3.6	6/23/2011	3.0 K	6/23/2011	43.0
9/8/2011	93.0	9/8/2011	240.0	9/8/2011	39.0	9/8/2011	93.0	9/8/2011	93.0
9/16/2011	43.0	9/16/2011	23.0	9/16/2011	43.0	9/16/2011	23.0	9/16/2011	93.0
11/4/2011	15.0	11/4/2011	75.0	11/4/2011	3.6	11/4/2011	9.1	11/4/2011	23.0
12/8/2011	39.0	12/8/2011	23.0	12/8/2011	9.1	12/8/2011	23.0	12/8/2011	15.0

Report Area: BB2

Station: 1646
COMBO : Surface
Approved

Geo Mean:	13.5
Est 90th:	91.9
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	15.0
9/25/2007	3.6
11/23/2007	3.6
12/7/2007	3.6
1/16/2008	3.0
3/12/2008	3.0 K
4/15/2008	3.0 K
5/29/2008	3.6
6/9/2008	3.6
6/30/2008	43.0
7/30/2008	15.0
10/22/2008	43.0
11/12/2008	3.6
12/18/2008	15.0
4/17/2009	3.0 K
5/8/2009	240.0
5/15/2009	43.0
11/16/2009	7.2
1/26/2010	3.6
3/11/2010	43.0
4/6/2010	7.3
4/27/2010	460.0
6/3/2010	7.3
7/13/2010	150.0
10/7/2010	75.0
11/18/2010	23.0
12/8/2010	3.0 K
6/23/2011	3.6
9/8/2011	93.0
9/16/2011	93.0
11/4/2011	9.1
12/8/2011	23.0

Station: 1646B
COMBO : Surface
Approved

Geo Mean:	8.5
Est 90th:	45.2
# Samples:	32
0.0% >	*330*

Date:	*Results:*
8/7/2007	9.1
9/25/2007	3.6
11/23/2007	3.0 K
12/7/2007	3.0 K
1/16/2008	3.0 K
3/12/2008	3.0 K
4/15/2008	3.0 K
5/29/2008	3.6
6/9/2008	3.0 K
6/30/2008	3.6
7/30/2008	7.3
10/22/2008	120.0
11/12/2008	3.0 K
12/18/2008	23.0
4/17/2009	3.0 K
5/8/2009	150.0
5/15/2009	3.0 K
11/16/2009	7.3
1/26/2010	7.2
3/11/2010	3.0 K
4/6/2010	15.0
4/27/2010	23.0
6/3/2010	43.0
7/13/2010	3.6
10/7/2010	150.0
11/18/2010	15.0
12/8/2010	3.0
6/23/2011	3.0 K
9/8/2011	150.0
9/16/2011	9.1
11/4/2011	9.1
12/8/2011	9.1

Station: 1646E
COMBO : Surface
Approved

Geo Mean:	4.7
Est 90th:	17.2
# Samples:	32
3.1% >	*330*

Date:	*Results:*
10/9/2007	3.0 K
11/8/2007	3.0 K
12/26/2007	3.0 K
3/10/2008	7.3
4/18/2008	3.0 K
5/20/2008	3.0 K
6/30/2008	3.0 K
7/28/2008	3.0 K
12/15/2008	3.0 K
1/9/2009	15.0
3/24/2009	3.0 K
5/7/2009	3.0 K
6/3/2009	3.0 K
7/20/2009	3.0 K
8/4/2009	3.6
8/31/2009	21.0
10/13/2009	3.6
12/1/2009	3.0 K
3/2/2010	3.0 K
5/5/2010	3.6
6/9/2010	3.0 K
7/12/2010	3.6
8/4/2010	11.0
9/23/2010	3.6
10/26/2010	3.0 K
12/6/2010	9.1
5/25/2011	3.0 K
6/9/2011	3.0 K
7/12/2011	3.0 K
8/12/2011	15.0
9/14/2011	460.0
10/27/2011	3.0 K

Station: 1648
COMBO : Surface
Restricted

Geo Mean:	17.9
Est 90th:	151.6
# Samples:	32
9.4% >	*330*

Date:	*Results:*
8/7/2007	460.0
9/25/2007	7.3
11/23/2007	3.0 K
12/7/2007	3.6
1/16/2008	7.3
3/12/2008	3.0 K
4/15/2008	3.6
5/29/2008	21.0
6/9/2008	9.1
6/30/2008	460.0
7/30/2008	3.0 K
10/22/2008	43.0
11/12/2008	3.6
12/18/2008	15.0
4/17/2009	9.1
5/8/2009	2,400.0 L
5/15/2009	7.3
11/16/2009	7.3
1/26/2010	93.0
3/11/2010	9.1
4/6/2010	43.0
4/27/2010	150.0
6/3/2010	93.0
7/13/2010	29.0
10/7/2010	75.0
11/18/2010	7.3
12/8/2010	3.0 K
6/23/2011	9.1
9/8/2011	23.0
9/16/2011	15.0
11/4/2011	11.0
12/8/2011	7.3

Station: 1648B
COMBO : Surface
Restricted

Geo Mean:	37.3
Est 90th:	338.4
# Samples:	32
15.6% >	*330*

Date:	*Results:*
8/7/2007	210.0
9/25/2007	3.0 K
11/23/2007	11.0
12/7/2007	9.1
1/16/2008	3.0 K
3/12/2008	9.1
4/15/2008	3.0 K
5/29/2008	20.0
6/9/2008	93.0
6/30/2008	1,100.0
7/30/2008	460.0
10/22/2008	23.0
11/12/2008	43.0
12/18/2008	9.1
4/17/2009	23.0
5/8/2009	1,100.0
5/15/2009	460.0
11/16/2009	11.0
1/26/2010	20.0
3/11/2010	150.0
4/6/2010	21.0
4/27/2010	64.0
6/3/2010	15.0
7/13/2010	23.0
10/7/2010	240.0
11/18/2010	23.0
12/8/2010	3.6
6/23/2011	7.3
9/8/2011	460.0
9/16/2011	93.0
11/4/2011	43.0
12/8/2011	93.0

Report Area: **BB2**

Station: 1649B
COMBO : Surface
Approved

Geo Mean:	9.5
Est 90th:	91.2
# Samples:	32
6.3% >	*330*

Date:	*Results:*
8/7/2007	39.0
9/25/2007	3.0 K
11/23/2007	9.1
12/7/2007	3.0 K
1/16/2008	3.6
3/12/2008	3.0 K
4/15/2008	3.6
5/29/2008	3.6
6/9/2008	3.6
6/30/2008	9.1
7/30/2008	3.0 K
10/22/2008	240.0
11/12/2008	3.0 K
12/18/2008	3.0
4/17/2009	3.6
5/8/2009	2,400.0 L
5/15/2009	9.1
11/16/2009	3.6
1/26/2010	3.0 K
3/11/2010	23.0
4/6/2010	7.3
4/27/2010	43.0
6/3/2010	9.1
7/13/2010	3.0 K
10/7/2010	460.0
11/18/2010	3.0 K
12/8/2010	3.0 K
6/23/2011	43.0
9/8/2011	240.0
9/16/2011	3.6
11/4/2011	3.0 K
12/8/2011	3.0 K

Station: 1649C
COMBO : Surface
Approved

Geo Mean:	4.0
Est 90th:	8.2
# Samples:	32
0.0% >	*330*

Date:	*Results:*
10/9/2007	3.0
11/8/2007	3.0
12/26/2007	15.0
3/10/2008	3.0
4/18/2008	3.0 K
5/20/2008	9.1
6/30/2008	3.0 K
7/28/2008	15.0
12/15/2008	3.0 K
1/9/2009	7.2
3/24/2009	3.0 K
5/7/2009	3.0 K
6/3/2009	3.0 K
7/20/2009	3.0 K
8/4/2009	3.6
8/31/2009	7.3
10/13/2009	3.0 K
12/1/2009	3.6
3/2/2010	3.0 K
5/5/2010	3.0 K
6/9/2010	3.0 K
7/12/2010	23.0
8/4/2010	3.6
9/23/2010	3.0 K
10/26/2010	3.0 K
12/6/2010	3.6
5/25/2011	3.0 K
6/9/2011	3.0 K
7/12/2011	3.0 K
8/12/2011	3.0 K
9/14/2011	3.6
10/27/2011	3.0 K

Station: 1649D
COMBO : Surface
Approved

Geo Mean:	4.6
Est 90th:	12.3
# Samples:	32
0.0% >	*330*

Date:	*Results:*
10/9/2007	3.0 K
11/8/2007	3.6
12/26/2007	15.0
3/10/2008	23.0
4/18/2008	3.0 K
5/20/2008	3.0 K
6/30/2008	3.0 K
7/28/2008	3.6
12/15/2008	3.6
1/9/2009	15.0
3/24/2009	3.0 K
5/7/2009	3.0 K
6/3/2009	3.0 K
7/20/2009	15.0
8/4/2009	3.6
8/31/2009	36.0
10/13/2009	3.0 K
12/1/2009	3.0 K
3/2/2010	3.0 K
5/5/2010	3.6
6/9/2010	3.0 K
7/12/2010	3.6
8/4/2010	6.1
9/23/2010	3.0 K
10/26/2010	3.0 K
12/6/2010	3.6
5/25/2011	3.6
6/9/2011	3.0 K
7/12/2011	3.0 K
8/12/2011	29.0
9/14/2011	3.0 K
10/27/2011	3.0 K

Station: 1650B
COMBO : Surface
Restricted

Geo Mean:	12.7
Est 90th:	72.2
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	43.0
9/25/2007	9.1
11/23/2007	3.6
12/7/2007	3.0 K
1/16/2008	3.6
3/12/2008	3.6
4/15/2008	3.0 K
5/29/2008	9.1
6/9/2008	64.0
6/30/2008	15.0
7/30/2008	21.0
10/22/2008	15.0
11/12/2008	3.6
12/18/2008	3.0
4/17/2009	3.0 K
5/8/2009	1,100.0
5/15/2009	23.0
11/16/2009	7.3
1/26/2010	9.1
3/11/2010	23.0
4/6/2010	9.1
4/27/2010	43.0
6/3/2010	3.6
7/13/2010	43.0
10/7/2010	43.0
11/18/2010	3.6
12/8/2010	3.6
6/23/2011	9.1
9/8/2011	93.0
9/16/2011	43.0
11/4/2011	7.3
12/8/2011	43.0

Station: 1650D
COMBO : Surface
Approved

Geo Mean:	13.6
Est 90th:	130.2
# Samples:	32
6.3% >	*330*

Date:	*Results:*
8/7/2007	150.0
9/25/2007	3.6
11/23/2007	3.0 K
12/7/2007	3.6
1/16/2008	3.6
3/12/2008	3.0
4/15/2008	3.0 K
5/29/2008	6.2
6/9/2008	93.0
6/30/2008	43.0
7/30/2008	3.0 K
10/22/2008	9.1
11/12/2008	7.3
12/18/2008	3.6
4/17/2009	3.0 K
5/8/2009	2,400.0 L
5/15/2009	43.0
11/16/2009	3.0 K
1/26/2010	9.1
3/11/2010	15.0
4/6/2010	3.6
4/27/2010	460.0
6/3/2010	9.1
7/13/2010	23.0
10/7/2010	240.0
11/18/2010	3.6
12/8/2010	3.0 K
6/23/2011	43.0
9/8/2011	93.0
9/16/2011	43.0
11/4/2011	3.0
12/8/2011	9.1

Report Area: BB2

Station: 1651		*Station:* 1651A		*Station:* 1651B		*Station:* 1651C		*Station:* 1651D	
COMBO : Surface		COMBO : Surface		COMBO : Surface		COMBO : Surface		COMBO : Surface	
Approved		Approved		Approved		Approved		Approved	
Geo Mean:	8.7	*Geo Mean:*	7.6	*Geo Mean:*	4.9	*Geo Mean:*	3.9	*Geo Mean:*	4.6
Est 90th:	47.3	*Est 90th:*	46.0	*Est 90th:*	15.6	*Est 90th:*	6.7	*Est 90th:*	19.3
# Samples:	32	*# Samples:*	32	*# Samples:*	32	*# Samples:*	32	*# Samples:*	32
0.0% >	*330*	3.1% >	*330*	0.0% >	*330*	0.0% >	*330*	0.0% >	*330*

Date:	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*	*Date:*	*Results:*
8/7/2007	43.0	8/7/2007	9.1	10/9/2007	3.0 K	10/9/2007	7.3	10/9/2007	3.0 K
9/25/2007	3.0 K	9/25/2007	9.1	11/8/2007	3.0 K	11/8/2007	3.0 K	11/8/2007	3.0 K
11/23/2007	3.6	11/23/2007	3.0 K	12/26/2007	43.0	12/26/2007	9.1	12/26/2007	3.6
12/7/2007	3.0 K	12/7/2007	3.6	3/10/2008	3.6	3/10/2008	15.0	3/10/2008	15.0
1/16/2008	3.6	1/16/2008	3.0 K	4/18/2008	3.0 K	4/18/2008	3.0 K	4/18/2008	3.0 K
3/12/2008	3.0 K	3/12/2008	3.6	5/20/2008	3.0 K	5/20/2008	3.6	5/20/2008	3.0 K
4/15/2008	3.6	4/15/2008	3.0 K	6/30/2008	3.6	6/30/2008	7.3	6/30/2008	3.0 K
5/29/2008	3.0 K	5/29/2008	3.0 K	7/28/2008	44.0	7/28/2008	3.0 K	7/28/2008	3.0 K
6/9/2008	43.0	6/9/2008	9.1	12/15/2008	3.0 K	12/15/2008	3.6	12/15/2008	3.0 K
6/30/2008	93.0	6/30/2008	9.1	1/9/2009	3.0 K	1/9/2009	3.0 K	1/9/2009	15.0
7/30/2008	3.0 K	7/30/2008	3.0 K	3/24/2009	3.0 K	3/24/2009	3.0 K	3/24/2009	3.0 K
10/22/2008	23.0	10/22/2008	9.1	5/7/2009	3.0 K	5/7/2009	3.6	5/7/2009	3.0 K
11/12/2008	9.1	11/12/2008	3.0 K	6/3/2009	3.6	6/3/2009	3.0 K	6/3/2009	3.0 K
12/18/2008	3.6	12/18/2008	3.0 K	7/20/2009	7.3	7/20/2009	3.0 K	7/20/2009	3.0 K
4/17/2009	3.0 K	4/17/2009	3.0 K	8/4/2009	15.0	8/4/2009	3.6	8/4/2009	9.1
5/8/2009	240.0	5/8/2009	1,100.0	8/31/2009	43.0	8/31/2009	3.6	8/31/2009	240.0
5/15/2009	39.0	5/15/2009	3.0 K	10/13/2009	3.6	10/13/2009	3.6	10/13/2009	3.0 K
11/16/2009	9.1	11/16/2009	3.6	12/1/2009	43.0	12/1/2009	3.6	12/1/2009	3.6
1/26/2010	3.6	1/26/2010	3.0 K	3/2/2010	3.0 K	3/2/2010	3.0 K	3/2/2010	3.0 K
3/11/2010	3.0 K	3/11/2010	3.0 K	5/5/2010	3.0 K	5/5/2010	3.6	5/5/2010	3.0 K
4/6/2010	9.1	4/6/2010	6.2	6/9/2010	3.0 K	6/9/2010	3.6	6/9/2010	3.0 K
4/27/2010	75.0	4/27/2010	150.0	7/12/2010	3.6	7/12/2010	3.0 K	7/12/2010	3.0 K
6/3/2010	93.0	6/3/2010	3.0 K	8/4/2010	3.6	8/4/2010	7.3	8/4/2010	3.0 K
7/13/2010	7.3	7/13/2010	7.3	9/23/2010	3.6	9/23/2010	3.0 K	9/23/2010	3.0 K
10/7/2010	15.0	10/7/2010	150.0	10/26/2010	3.0 K	10/26/2010	3.0 K	10/26/2010	3.0 K
11/18/2010	3.0	11/18/2010	23.0	12/6/2010	3.6	12/6/2010	3.6	12/6/2010	3.0 K
12/8/2010	3.0 K	12/8/2010	7.3	5/25/2011	3.6	5/25/2011	3.0 K	5/25/2011	3.0 K
6/23/2011	3.0 K	6/23/2011	3.0 K	6/9/2011	3.0 K	6/9/2011	3.0 K	6/9/2011	3.0 K
9/8/2011	3.6	9/8/2011	43.0	7/12/2011	3.0 K	7/12/2011	3.0	7/12/2011	3.0 K
9/16/2011	3.6	9/16/2011	9.1	8/12/2011	3.0 K	8/12/2011	9.1	8/12/2011	240.0
11/4/2011	3.6	11/4/2011	3.6	9/14/2011	7.3	9/14/2011	3.0 K	9/14/2011	3.0 K
12/8/2011	29.0	12/8/2011	15.0	10/27/2011	3.0 K	10/27/2011	3.0 K	10/27/2011	3.0 K

Report Area: **BB2**

Station: 1652A
COMBO : Surface
Approved

Geo Mean:	7.6
Est 90th:	30.3
# Samples:	32
0.0% >	*330*

Date:	*Results:*
8/7/2007	23.0
9/25/2007	3.0 K
11/23/2007	3.0 K
12/7/2007	3.0 K
1/16/2008	7.3
3/12/2008	3.6
4/15/2008	3.0 K
5/29/2008	3.0
6/9/2008	3.6
6/30/2008	43.0
7/30/2008	3.0 K
10/22/2008	15.0
11/12/2008	3.0 K
12/18/2008	21.0
4/17/2009	9.1
5/8/2009	150.0
5/15/2009	11.0
11/16/2009	3.0 K
1/26/2010	3.6
3/11/2010	3.0 K
4/6/2010	3.6
4/27/2010	21.0
6/3/2010	3.6
7/13/2010	39.0
10/7/2010	21.0
11/18/2010	7.3
12/8/2010	3.0 K
6/23/2011	3.0 K
9/8/2011	23.0
9/16/2011	3.6
11/4/2011	9.1
12/8/2011	39.0

Station: 1652C
COMBO : Surface
Approved

Geo Mean:	5.8
Est 90th:	26.4
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	23.0
9/25/2007	3.0 K
11/23/2007	3.0 K
12/7/2007	3.0 K
1/16/2008	3.0 K
3/12/2008	3.6
4/15/2008	3.0 K
5/29/2008	3.0 K
6/9/2008	3.0 K
6/30/2008	9.1
7/30/2008	3.0 K
10/22/2008	93.0
11/12/2008	3.0 K
12/18/2008	9.1
4/17/2009	3.6
5/8/2009	460.0
5/15/2009	3.0
11/16/2009	3.0 K
1/26/2010	3.0 K
3/11/2010	3.0 K
4/6/2010	9.1
4/27/2010	23.0
6/3/2010	3.0 K
7/13/2010	3.0 K
10/7/2010	23.0
11/18/2010	3.6
12/8/2010	3.0 K
6/23/2011	3.0 K
9/8/2011	23.0
9/16/2011	3.0 K
11/4/2011	3.6
12/8/2011	3.6

Station: 1652F
COMBO : Surface
Approved

Geo Mean:	7.0
Est 90th:	31.0
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	7.2
9/25/2007	3.0 K
11/23/2007	3.0 K
12/7/2007	3.6
1/16/2008	3.0 K
3/12/2008	3.0 K
4/15/2008	3.6
5/29/2008	3.0 K
6/9/2008	3.0 K
6/30/2008	43.0
7/30/2008	3.0 K
10/22/2008	7.3
11/12/2008	3.0 K
12/18/2008	21.0
4/17/2009	3.6
5/8/2009	460.0
5/15/2009	23.0
11/16/2009	3.6
1/26/2010	7.3
3/11/2010	3.0 K
4/6/2010	9.1
4/27/2010	43.0
6/3/2010	9.1
7/13/2010	3.6
10/7/2010	27.0
11/18/2010	7.3
12/8/2010	3.0 K
6/23/2011	3.0 K
9/8/2011	23.0
9/16/2011	3.6
11/4/2011	3.0 K
12/8/2011	15.0

Station: 1653
COMBO : Surface
Approved

Geo Mean:	8.8
Est 90th:	51.4
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	9.1
9/25/2007	3.0 K
11/23/2007	15.0
12/7/2007	3.0
1/16/2008	7.3
3/12/2008	3.0 K
4/15/2008	3.6
5/29/2008	3.0 K
6/9/2008	23.0
6/30/2008	9.1
7/30/2008	3.0 K
10/22/2008	93.0
11/12/2008	9.1
12/18/2008	9.1
4/17/2009	3.0
5/8/2009	460.0
5/15/2009	3.0 K
11/16/2009	3.6
1/26/2010	3.6
3/11/2010	3.0 K
4/6/2010	3.0 K
4/27/2010	93.0
6/3/2010	7.3
7/13/2010	9.1
10/7/2010	150.0
11/18/2010	9.1
12/8/2010	3.0 K
6/23/2011	3.6
9/8/2011	23.0
9/16/2011	3.6
11/4/2011	3.0 K
12/8/2011	93.0

Station: 1653A
COMBO : Surface
Approved

Geo Mean:	7.8
Est 90th:	44.7
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	43.0
9/25/2007	3.6
11/23/2007	3.6
12/7/2007	9.1
1/16/2008	3.6
3/12/2008	3.0 K
4/15/2008	3.0 K
5/29/2008	3.6
6/9/2008	3.0 K
6/30/2008	15.0
7/30/2008	3.0 K
10/22/2008	23.0
11/12/2008	3.0 K
12/18/2008	9.1
4/17/2009	3.0 K
5/8/2009	460.0
5/15/2009	9.1
11/16/2009	7.3
1/26/2010	3.0 K
3/11/2010	3.6
4/6/2010	3.6
4/27/2010	150.0
6/3/2010	3.6
7/13/2010	3.0 K
10/7/2010	29.0
11/18/2010	9.1
12/8/2010	3.0 K
6/23/2011	3.0 K
9/8/2011	240.0
9/16/2011	7.3
11/4/2011	3.6
12/8/2011	9.1

Report Area: BB2

Station: 1653C
COMBO : Surface
Approved

Geo Mean:	4.5
Est 90th:	10.1
# Samples:	32
0.0% >	*330*

Date:	*Results:*
10/9/2007	3.0 K
11/8/2007	3.0
12/26/2007	7.3
3/10/2008	9.1
4/18/2008	3.0 K
5/20/2008	3.0 K
6/30/2008	23.0
7/28/2008	3.0 K
12/15/2008	3.6
1/9/2009	7.3
3/24/2009	3.0 K
5/7/2009	3.6
6/3/2009	3.0 K
7/20/2009	3.0 K
8/4/2009	9.1
8/31/2009	3.6
10/13/2009	9.1
12/1/2009	9.1
3/2/2010	3.0 K
5/5/2010	3.0 K
6/9/2010	3.6
7/12/2010	3.6
8/4/2010	15.0
9/23/2010	23.0
10/26/2010	3.0 K
12/6/2010	3.0 K
5/25/2011	3.0 K
6/9/2011	3.6
7/12/2011	3.0 K
8/12/2011	3.0 K
9/14/2011	3.0 K
10/27/2011	3.0 K

Station: 1654
COMBO : Surface
Approved

Geo Mean:	6.3
Est 90th:	30.2
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	3.6
9/25/2007	3.0 K
11/23/2007	9.1
12/7/2007	3.0 K
1/16/2008	3.0 K
3/12/2008	3.0
4/15/2008	3.0
5/29/2008	3.0 K
6/9/2008	3.0 K
6/30/2008	3.6
7/30/2008	3.0 K
10/22/2008	43.0
11/12/2008	3.6
12/18/2008	3.0 K
4/17/2009	7.3
5/8/2009	460.0
5/15/2009	9.1
11/16/2009	3.6
1/26/2010	3.6
3/11/2010	3.0 K
4/6/2010	3.0 K
4/27/2010	9.1
6/3/2010	9.1
7/13/2010	23.0
10/7/2010	93.0
11/18/2010	3.6
12/8/2010	3.0 K
6/23/2011	3.0 K
9/8/2011	43.0
9/16/2011	3.0 K
11/4/2011	3.0 K
12/8/2011	15.0

Station: 1654B
COMBO : Surface
Approved

Geo Mean:	6.0
Est 90th:	27.6
# Samples:	32
3.1% >	*330*

Date:	*Results:*
8/7/2007	7.3
9/25/2007	3.0 K
11/23/2007	3.6
12/7/2007	3.0 K
1/16/2008	3.6
3/12/2008	3.0 K
4/15/2008	3.6
5/29/2008	3.0 K
6/9/2008	3.6
6/30/2008	3.0 K
7/30/2008	3.0 K
10/22/2008	3.6
11/12/2008	9.1
12/18/2008	7.3
4/17/2009	3.0 K
5/8/2009	460.0
5/15/2009	9.1
11/16/2009	3.0 K
1/26/2010	3.0
3/11/2010	3.0 K
4/6/2010	9.1
4/27/2010	43.0
6/3/2010	3.0 K
7/13/2010	3.0 K
10/7/2010	150.0
11/18/2010	3.0 K
12/8/2010	3.6
6/23/2011	3.0 K
9/8/2011	23.0
9/16/2011	9.1
11/4/2011	7.3
12/8/2011	3.6

E. Shoreline Survey Report

SHORELINE SURVEY AREA BB2 Central Barnegat Bay Boat ☐ Land ☑ Air ☐

SURVEYOR: Tracy Fay **DATE:** 8/26/08 **TIME:** 11am

WEATHER CONDITIONS: Sunny **TEMPERATURE:**

New Stormwater Outfalls:

	General Area	Latitude	Longitude	Diameter	Description (foul odor, damaged, etc.)
1					
2					
3					
4					

Is there any new development in the area that may have an effect on the coastline? Note name and location.

NO

Do you notice any significant animal populations (migrating birds, horseshoe crabs , etc.)? Note name and location.

Some small bird populations (seagulls).

Do you notice any expansion in local marinas? (Without approaching marina owners) Note name, location, & changes.

NO

Direct Discharges:

	Yes	No	Details
Any Direct Discharge to Growing Area?	☐	☑	
Plant Survey Conducted?	☐	☐	
Improvements Since Last Survey?	☐	☐	
Improvements Planned?	☐	☐	
Repairs Since Last Survey?	☐	☐	
Repairs Planned?	☐	☐	

Additional Direct Discharge Notes:

Additional Observations and Comments (bulkhead, land use, dredging, etc.):

Was passing through the area and wanted to check in on summertime activity in Pine Beach area.

Insert Photos:

Pine Beach

Lagoon

Berkeley Island County Park

Marsh area

Fishing/Crabbing

SHORELINE SURVEY AREA BB2 Central Barnegat Bay Boat ☐ Land ☑ Air ☐

SURVEYOR: Tracy Fay **DATE:** 10/21/08 **TIME:** 10am

WEATHER CONDITIONS: Partly Sunny **TEMPERATURE:**

New Stormwater Outfalls:

	General Area	Latitude	Longitude	Diameter	Description (foul odor, damaged, etc.)
1					
2					
3					
4					

Is there any new development in the area that may have an effect on the coastline? Note name and location.

NO

Do you notice any significant animal populations (migrating birds, horseshoe crabs , etc.)? Note name and location.

Bird Populations and bird waste on beaches. Animal waste on beaches. Bathrooms at some of the beach locations

Do you notice any expansion in local marinas? (Without approaching marina owners) Note name, location, & changes.

NO

Direct Discharges:

	Yes	No	Details
Any Direct Discharge to Growing Area?	☐	☑	
Plant Survey Conducted?	☐	☐	
Improvements Since Last Survey?	☐	☐	
Improvements Planned?	☐	☐	
Repairs Since Last Survey?	☐	☐	
Repairs Planned?	☐	☐	

Additional Direct Discharge Notes:

Additional Observations and Comments (bulkhead, land use, dredging, etc.):

Went out with part-time employees to bathing beaches to show how we do shoreline surveys. Already had the stormwater outfalls documented.

Insert Photos:

Good Luck Point Marsh Flooding

Monmouth Ave. in Ocean Gate

Beachwood Dog Beach

CCMPOC00119 outfall

CCMPOC00116 outfall (Beachwood)

CCMPOC00117

SHORELINE SURVEY AREA Barnegat Bay BB2 Boat ☑ Land ☐ Air ☐

SURVEYOR: Tracy Fay **DATE:** 8/13/12 **TIME:** 2-8:30pm

WEATHER CONDITIONS: Warm, Partly Cloudy **TEMPERATURE:** 86

New Stormwater Outfalls:

	General Area	Latitude	Longitude	Diameter	Description (foul odor, damaged, etc.)
1					
2					
3					
4					
5					
6					
7					
8					

Is there any new development in the area that may have an effect on the coastline? Note name and location.

No new development noted.

Do you notice any significant animal populations (migrating birds, horseshoe crabs , etc.)? Note name and location.

Bird populations near Good Luck Point. Marsh area.

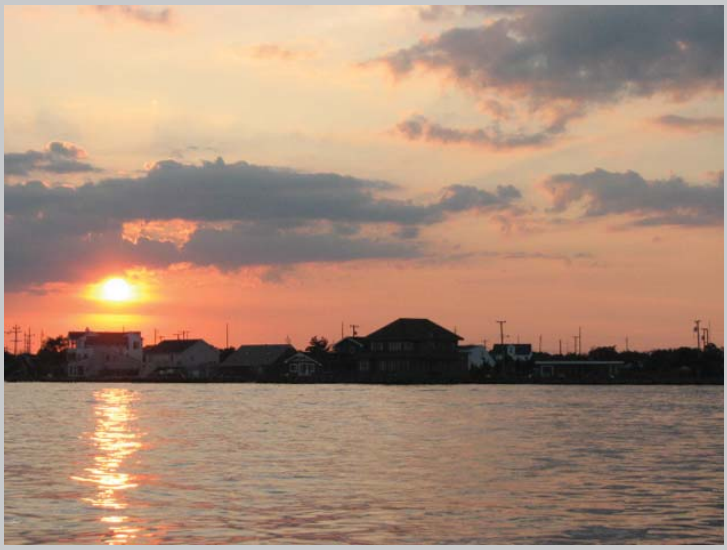
Do you notice any expansion in local marinas? (Without approaching marina owners) Note name, location, & changes.

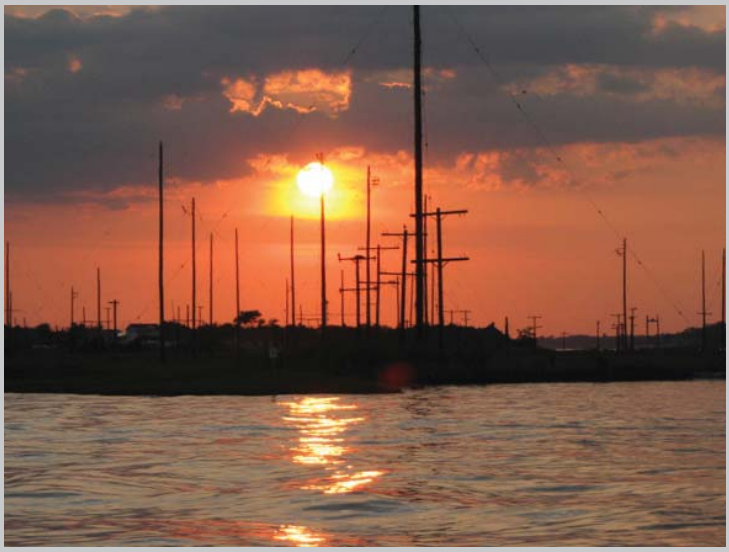
No.

Additional Observations and Comments (bulkhead, land use, dredging, etc.):

On 'Barnegat Bay Intensive Sampling Event' collecting water samples and probe data from BB05a and BB06.

Insert Photos:





SHORELINE SURVEY AREA Barnegat Bay BB2 Boat ☑ Land ☐ Air ☐

SURVEYOR: Tracy Fay **DATE:** 8/14/12 **TIME:** 2-8:30pm

WEATHER CONDITIONS: Cloudy, Thunderstorms **TEMPERATURE:** 82

New Stormwater Outfalls:

	General Area	Latitude	Longitude	Diameter	Description (foul odor, damaged, etc.)
1					
2					
3					
4					
5					
6					
7					
8					

Is there any new development in the area that may have an effect on the coastline? Note name and location.

No new development noted.

Do you notice any significant animal populations (migrating birds, horseshoe crabs , etc.)? Note name and location.

Bird populations near Good Luck Point. Marsh area. Ducks and geese near Gilford Yacht Club.

Do you notice any expansion in local marinas? (Without approaching marina owners) Note name, location, & changes.

No.

Additional Observations and Comments (bulkhead, land use, dredging, etc.):

On 'Barnegat Bay Intensive Sampling Event' collecting water samples and probe data from BB05a and BB06.

Very small quanities of Submerged Aquatic Vegetation were observed off of Island Beach State Park.

Insert Photos:

SHORELINE SURVEY AREA Barnegat Bay BB2 Boat ☑ Land ☐ Air ☐

SURVEYOR: Tracy Fay **DATE:** 8/15/12 **TIME:** 2-8:30pm

WEATHER CONDITIONS: Stormy, Cloudy **TEMPERATURE:** 85

New Stormwater Outfalls:

	General Area	Latitude	Longitude	Diameter	Description (foul odor, damaged, etc.)
1	Gilford Park Yacht Club	39.943388	-74.131586	1ft	high flow during rain event
2					
3					
4					
5					
6					
7					
8					

Is there any new development in the area that may have an effect on the coastline? Note name and location.

NO.

Do you notice any significant animal populations (migrating birds, horseshoe crabs , etc.)? Note name and location.

Ducks and Geese in the Toms River.

Do you notice any expansion in local marinas? (Without approaching marina owners) Note name, location, & changes.

NO.

Additional Observations and Comments (bulkhead, land use, dredging, etc.):

On 'Barnegat Bay Intensive Sampling Event' collecting water samples and probe data from BB05a and BB06.

Insert Photos:

SHORELINE SURVEY AREA Barnegat Bay BB2 Boat ☑ Land ☐ Air ☐

SURVEYOR: Tracy Fay **DATE:** 8/16/12 **TIME:** 2-8:30pm

WEATHER CONDITIONS: Sunny **TEMPERATURE:** 85

New Stormwater Outfalls:

	General Area	Latitude	Longitude	Diameter	Description (foul odor, damaged, etc.)
1					
2					
3					
4					
5					
6					
7					
8					

Is there any new development in the area that may have an effect on the coastline? Note name and location.

NO.

Do you notice any significant animal populations (migrating birds, horseshoe crabs , etc.)? Note name and location.

Ducks and Geese in the Toms River.

Do you notice any expansion in local marinas? (Without approaching marina owners) Note name, location, & changes.

NO.

Additional Observations and Comments (bulkhead, land use, dredging, etc.):

On 'Barnegat Bay Intensive Sampling Event' collecting water samples and probe data from BB05a and BB06.

Insert Photos: