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

# Reappraisal Report of Shellfish Growing Area NE3

# Shrewsbury River

## June 2014

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# Shrewsbury River


**New Jersey Department of Environmental Protection (NJDEP)**

Bureau of Marine Water Monitoring (BMWM)
Robert Schuster, InterimChief


June 2014
Data from January 1, 2011 – May 31, 2014


**Report prepared by:**

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Cover Photo – Gunning Island (photo by Tracy Fay)

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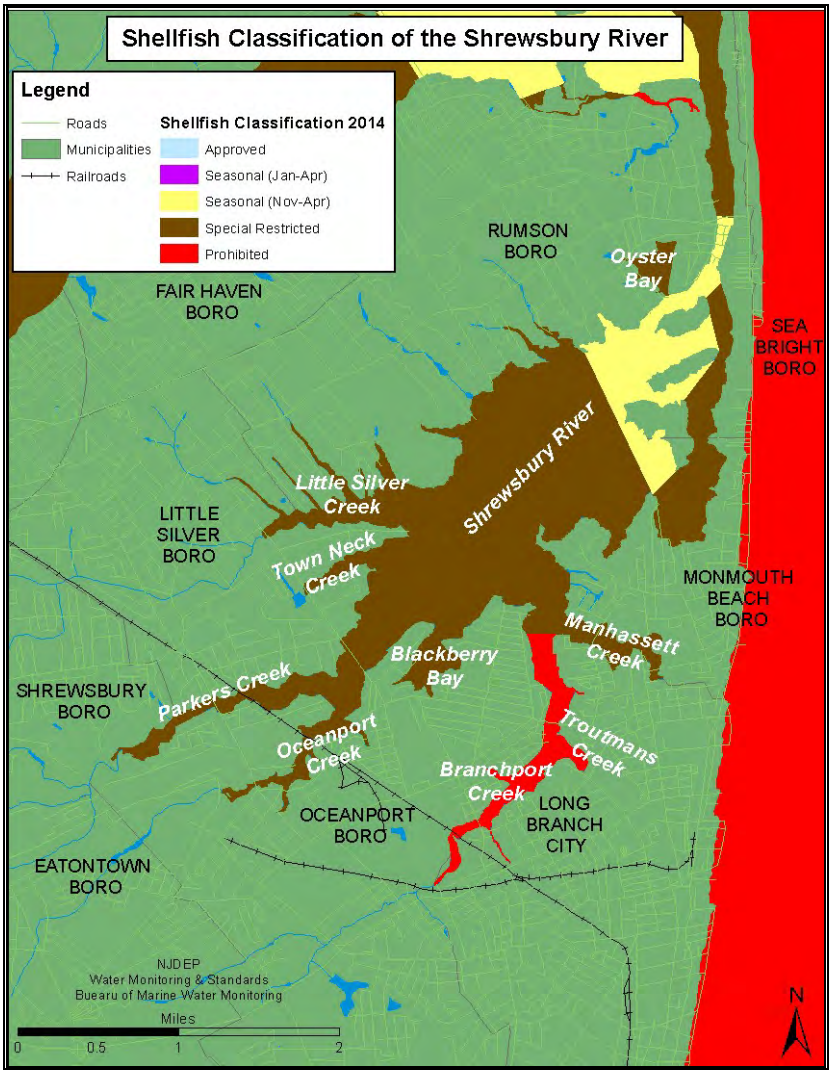
# EXECUTIVE SUMMARY

The Shrewsbury River is located in Monmouth County, New Jersey. The water quality data presented in this Reappraisal Report of the Shrewsbury River was collected between January 1, 2011 and May 31, 2014 using the Systematic Random Sampling (SRS) strategy. Approximately 1,400 water samples were collected and tested for coliform bacteria. Most of the waters in the Shrewsbury River are classified as *Special Restricted*, however, there is a section of *Seasonal (Nov-Apr)* in the eastern portion of the river, and a section of *Prohibited* waters in the Branchport Creek area. Fourteen stations exceeded the *Approved* criteria set by the National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish (NSSP Guide). There are no *Approved* waters in the Shrewsbury River and 30 sets of data show the stations in the *Seasonal (Nov-Apr)* section fit within the criteria for the months they are open for harvest. Three stations exceeded the *Special Restricted* criteria set by the NSSP Guide, but these stations are located in the *Prohibited* area. Analyses of the Shrewsbury River shellfish growing area samples indicate that the coliform geometric mean and/or estimated 90$^{th}$ percentile levels meet the standards of the NSSP Guide. Therefore, there are no recommendations for changes in shellfish classification or sampling strategy.



# DESCRIPTION OF GROWING AREA

## *Location & Description*

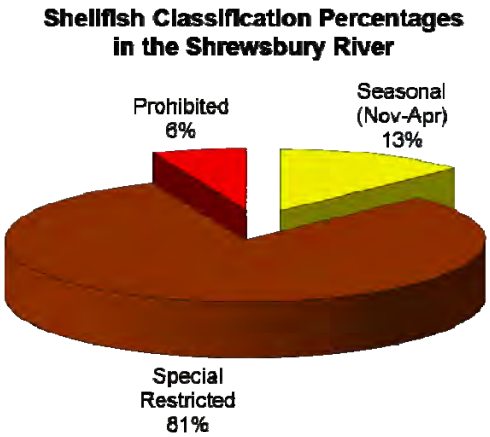

The Shrewsbury River is located in northern Monmouth County. Tidal waters enter the Shrewsbury River Basin via Sandy Hook Bay. The Shrewsbury River connects to the Navesink River via a narrow channel (see adjacent figure). The Navesink River is part of the Shrewsbury River Basin, but for the purpose of this report, it is examined as a separate growing area.

There are numerous small creeks off of the Shrewsbury River including Little Silver Creek, Parkers Creek, Oceanport Creek, and Branchport Creek.

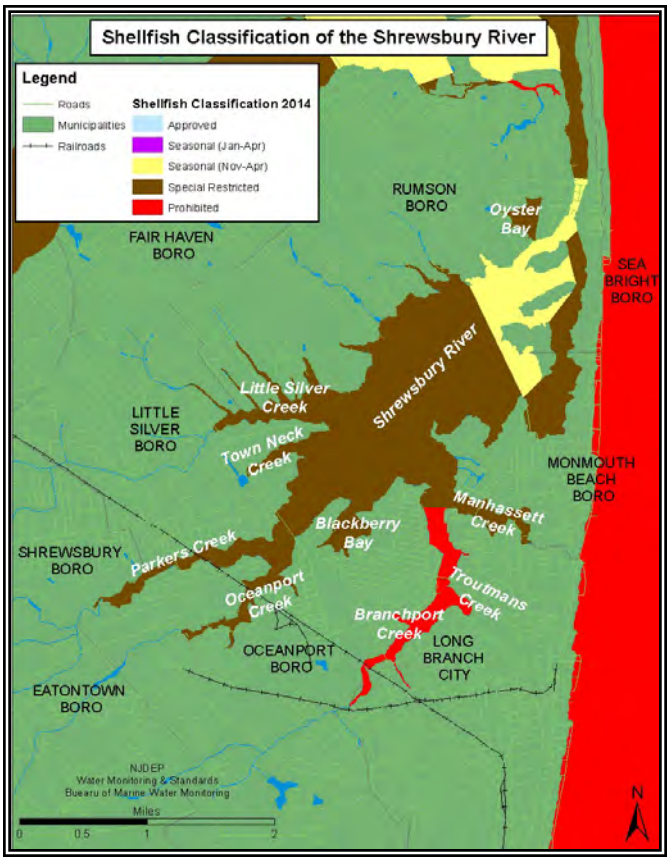
Seven municipalities surround the Shrewsbury River; they are Rumson Borough, Little Silver Borough, Shrewsbury Borough, Oceanport Borough, Long Branch City, Monmouth Beach Borough, and Sea Bright Borough (see adjacent figure). In total, the Shrewsbury River drains an area of 27 square miles.


## *Growing Area Classification Summary*

The approximate size of this shellfish growing area is 2,200 acres. Shellfish classifications in this growing area include *Seasonal (November-April)*, *Special Restricted*, and *Prohibited* waters (see figure on following page).



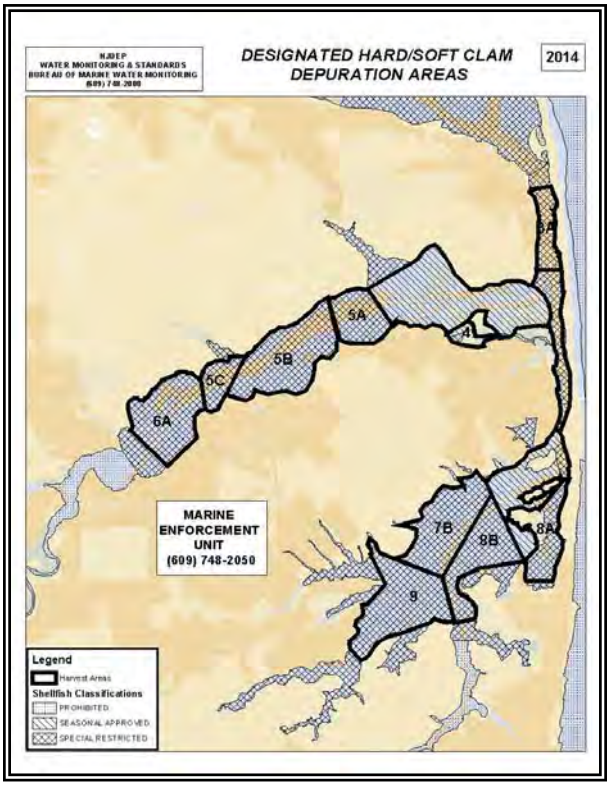

The *Seasonal (November-April)* waters can be found on the eastern end of the Shrewsbury River. (see *N.J.A.C.* 7:12 for official boundaries). These waters are open for harvest from November 1st to April 30th, and closed for harvest from May 1st to October 31st of each year.




The majority of waters in this shellfish growing area are classified as *Special Restricted*. Recreational harvest of shellfish is not permitted from *Special Restricted* waters. The *Special Restricted* waters are located throughout the Shrewsbury River, including the connector to Sandy Hook Bay, Oyster Bay, and all of the waters west of the *Seasonal (Nov – Apr)* section (see adjacent figure). *Special Restricted* waters are approved for commercial harvest, when they are followed by depuration or relay, which help to cleanse bacteria from the shellfish. Harvesting clams for either depuration or relay requires issuance of a Special Permit, acquired at the Bureau of Marine Water Monitoring. Also, under the Special Permit Program, shellfish can only be harvested from designated lots in *Special Restricted* waters (see below figure).

A reappraisal report on the Shrewsbury River using data from October 1, 2003 to September 30, 2007 downgraded approximately 150 acres of waters from *Special Restricted* to *Prohibited*. This downgrade encompassed a section of South Shrewsbury River, Branchport Creek, and Troutmans Creek.

The Shrewsbury River is displayed on chart # 3 of the current State of New Jersey Shellfish Growing Water Classification Chart or 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*

Shellfish species harvested in New Jersey include hard clams (*Mercenaria mercenaria*), soft clams (*Mya arenaria*), mussels, bay scallops (*Aequipecten irradians*), oysters (*Crassostrea virginica*), ocean quahogs (*Arctica islandica*), surf clams (*Spisula solidissima*), and sea scallops (*Placopecten magellanicus*) (NMFS, 2007).

The Shrewsbury River has moderate to high densities of hard clams (according to the last clam census in the 1980's done by NJDEP's Fish & Wildlife). Populations of soft clams also reside within this estuary. Factors that

contribute to having a viable resource include salinity, dissolved oxygen levels, bottom conditions, and predator activity.

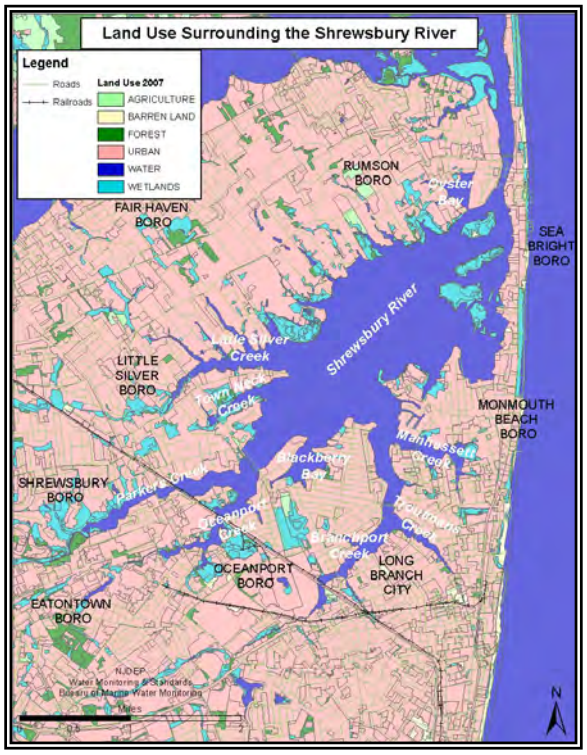
## SHORELINE SURVEY: EVALUATION OF POTENTIAL POLLUTION SOURCES

Shoreline surveys were conducted on three dates; see the Appendix for further details.

Waterfowl are known to inhabit this area, especially during winter months. Herons, ducks, geese, and egrets are common sights. When the tributaries ice over in winter months, the bird populations tend to accumulate on the ice.

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

The area is a well-known tourist spot on the New Jersey shore and entertains an influx of population in the summer months. Since Superstorm Sandy there has been a lot of construction on condominiums and residential homes and rebuilding of docks, bulkheads and other structures at residential homes and commercial marinas (see adjacent photo).




### *Land Use*

The current land use surrounding the Shrewsbury River is predominately urban, commonly residential (see adjacent figure). However, there are sections of wetlands, barren lands, forests, and agricultural areas. Seven municipalities surround the Shrewsbury River; they are Rumson Borough, Little Silver Borough, Shrewsbury Borough, Oceanport Borough, Long Branch City, Monmouth Beach Borough, and Sea Bright Borough. Most properties in this area contain a single family home. However, there are some condominium-type structures, primarily in Sea Bright Borough. Monmouth Park Racetrack is located in Oceanport Borough, along Branchport Creek. The property formally occupied by Fort Monmouth is located in Oceanport Borough, along Parkers Creek. Two Rivers Water Reclamation Authority is located in Monmouth Beach, along the Shrewsbury River.

## *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. The discharge of pollutant from a point source is authorized under New Jersey Pollutant Discharge Elimination System (NJPDES), and the regulations are found at *N.J.A.C. 7:14A*. NJPDES permits limit the amount or concentration of pollutants that can be discharged.

There are no direct discharges into the waters of the Shrewsbury River. However, there are two domestic treatment facilities in the general vicinity, Two River Water Reclamation Authority (TRWRA) and Long Branch Sewerage Authority (LBSA); both discharge treated wastewater into the Atlantic Ocean.

The TRWRA was founded in 1965 and had its first flow in 1971 (TRWRA, 2014 / see below figure). It has six member towns: Monmouth Beach, Fair Haven, Little Silver, Shrewsbury Borough, Oceanport, and West Long Branch. It also has seven customer communities: Sea Bright, Rumson, Red Bank, Eatontown, Shrewsbury Township, Tinton Falls, and Fort Monmouth. The TRWRA serves 90,000 people and discharges treated wastewater one-half mile off Monmouth Beach into the Atlantic Ocean. TRWRA facilities include 200 miles of sanitary sewer mains, 18 pump stations, and 9 meter chambers; the most recent plant expansion allows the TRWRA to handle average flows of 13.83 MGD (TRWRA, 2011).

(Source: TRWRA, 2014 http://www.trwra.org/tr/tr.nsf/site/water-reclamation-overview)

Long Branch's wastewater is handled by the Long Branch Sewerage Authority. The LBSA was founded in 1953 and had its first flow in 1968 (LBSA, 2014). This wastewater treatment facility has a permitted design flow of 5.4 million gallons per day of discharged treated wastewater effluent, which is discharged into the Atlantic Ocean.

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.

## *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.

Boating is a very popular summertime activity within the Shrewsbury River. According to the BMW's latest marina survey, there are a total of 25 marinas in the Shrewsbury River (see below figure and appendix for map key). The majority of the marinas, 15, are located in Sea Bright Borough or Monmouth Beach Borough. All marinas, anchorages, or other places where docking or mooring facilities are provided for boats 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).


Although good for tourism, the marinas, and the accompanying boats, can discharge many harmful pollutants into the water. Gas fumes, oil, and grease from boats and marinas can contribute to the contamination of the waters. There are some irresponsible boat owners who do not use available pumpout stations or pumpout boats, instead dumping human wastes directly into the local waterbodies; which is not allowed since the Shrewsbury River was made a "No Discharge Zone" in 2000 (EPA, 2011). The biological and chemical contamination associated with marina facilities may be of public health significance.

## *Spills, Unpermitted Discharges, and Closures*

The process of dredging can impair water quality and contaminate shellfish beds that are living near dredging and disposal sites. BMWM is given the opportunity to review such project through CAFRA submission and will recommend a denial of a 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 Regulations (DLUR) when approving or denying a permit.

Spills reported to the DEP hotline (1-877-WARN-DEP) are passed on to the BMWM when shellfish waters are involved. 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.

All state waters in New Jersey were closed for shellfish harvest in preparation for Hurricane Irene in 2011 and Superstorm Sandy in 2012. In both instances the shellfish growing waters of the state remained closed until water and, in some cases, tissue tests showed that the shellfish were safe for human consumption.

There were no other significant spills, unpermitted discharges, or closures concerning the Shrewsbury River since the last report on the area.

## *Stormwater Discharges*

Runoff is a term for the surface water that moves from land to the ocean. Storm drains along roads collect runoff and transmit it to stormwater outfalls. The outfalls deposit the runoff directly into the bay, or indirectly via other waterbodies. Therefore, pollutants in the runoff gradually make their way to the bay/ocean waters. During this transition the water picks up both nutrients and pollutants. While some nutrients in the runoff provide food for plants and animals, excessive nutrient loads can lead to eutrophic conditions, where algae and other organisms proliferate and cause low levels of dissolved oxygen. In this region, runoff from the urban areas is the most likely cause of pollutants. Pollutants, like bird wastes, agricultural pesticides, animal waste, and remnants from faulty septic systems enter the water through runoff. Fecal waste carries a great deal of bacteria, and runoff can easily bring the bacteria to swimming beaches and other waterbodies. Among other things, this can cause human sickness through recreational contact or through consumption of contaminated shellfish.

There are many storm water inputs into the Shrewsbury River and its tributaries, especially in Oceanport and Brachport Creeks (see adjacent figure). Stormwater outfalls are one of the most significant non-point sources of pollution. Stormwater outfalls are mostly found in urban areas, and are especially common within lagoon communities. Lagoon stormwater discharges are especially harmful because lagoons see little tidal flushing, heavy boat usage, and high quantities of bulkheading.

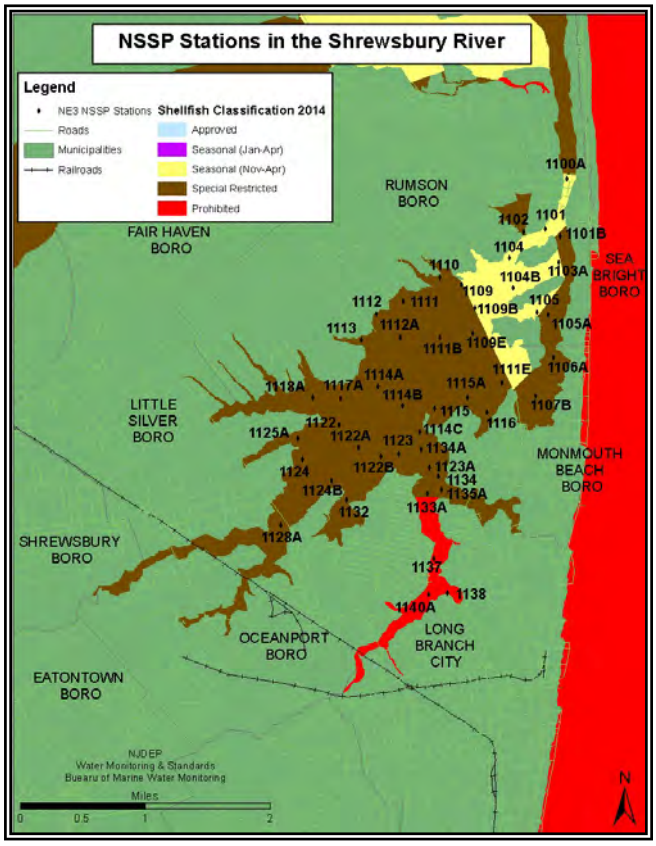

WM&S's BMWM has the ability to conduct stormwater projects. Water samples are taken before and during a storm event in order to determine the effect of runoff. Once a possible source of the problem is identified, then the appropriate State and local officials are notified to attempt to remedy the situation. Currently, there is not a storm water study scheduled for the Shrewsbury River, however, this report recommends a storm water study in the area of Branchport Creek (see the '*Recommendations*' section).

# 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; total coliform or fecal coliform. For additional information on the types of sampling strategies see the NJDEP *Shellfish Growing Area Report Guidance Document* (2011). New Jersey bases its growing water classifications on the fecal coliform criterion. 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 were developed by the NSSP Guide to ensure that shellfish harvested from designated waters would safe for human consumption. 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). For the Systematic Random Sampling Strategy, variability is expressed as the estimated 90$^{th}$ percentile. The water quality of each growing area must be evaluated before an area can be classified as *Approved, Seasonal (Nov-Apr or Jan-Apr), Special Restricted*, or *Prohibited*. A *Seasonal* 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.

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. Data management and analysis were accomplished using database applications developed for the BMWM. Mapping of data was performed with Geographic Information System software (GIS: ArcMap).

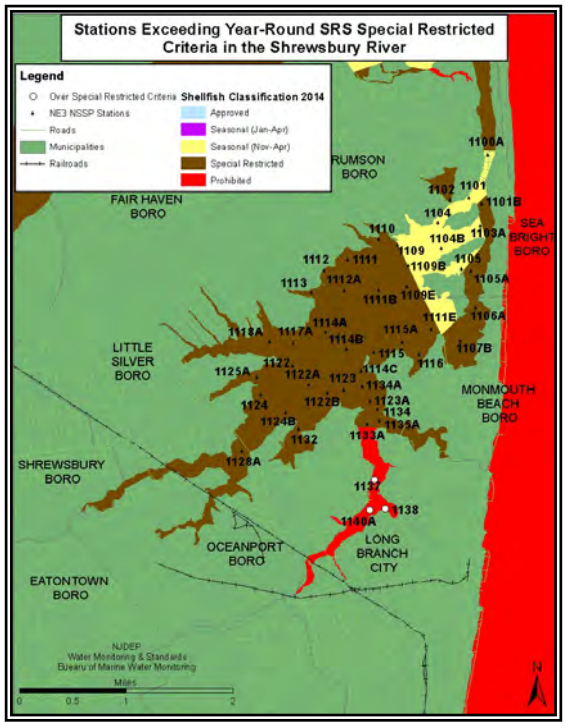



## *Bacteriological Quality*

Over 1,400 water samples were collected between January 1, 2011 and May 31, 2014 and analyzed by membrane filtration for fecal coliform levels. The adjacent figure shows the 46 Shellfish Growing Water Quality monitoring stations in the Shrewsbury River (see Appendix for data).

## *Compliance with NSSP Guide Criteria*

Fourteen sampling stations exceeded the NSSP Guide criteria for *Approved* waters (see Appendix). There are no Approved waters within this shellfish growing area. All the noted stations are located in *Special Restricte*d or *Prohibited* waters.



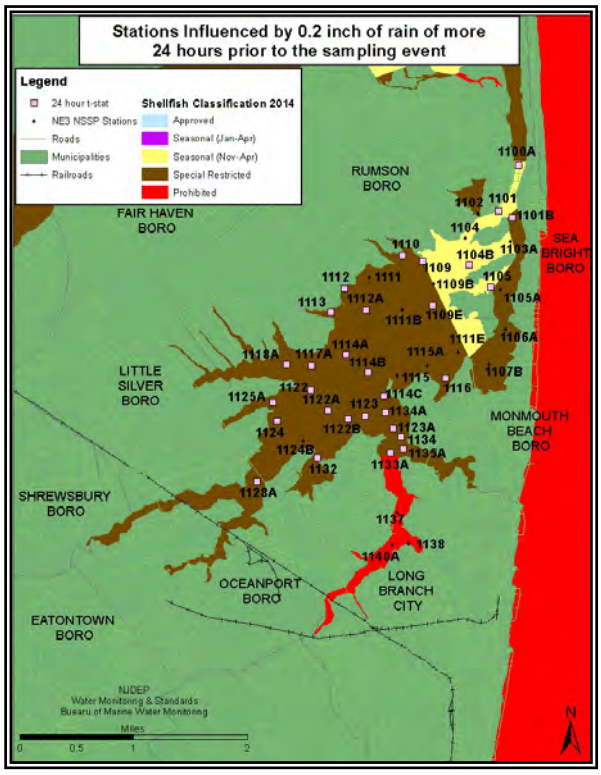

An eastern portion of the Shrewsbury River is classified as *Seasonal (Nov-Apr)*. Harvesting of shellfish in this area is permitted from November through April (winter) and prohibited from May through October (summer). To fully evaluate if the *Seasonal (Nov-Apr)* waters are correctly classified; the timeframe was extended back to October 1, 2005 in order to get the 30 or more SRS samples for both summer and winter. With the extended timeframe, thirty-two stations were over the SRS criteria for *Approved* waters during the summer, but none of these stations are in *Approved* or *Seasonal* waters. Six stations were above the SRS criteria for *Approved* waters during the winter months with the extended timeframe, but none of these stations are in *Approved* or *Seasonal (Nov-Apr)* waters. This means that when the sample size is extended to fit NSSP Guide recommendations, the *Seasonal (Nov-Apr)* waters are still in compliance.

For waters to be classified as *Special Restricted*, the Geometric Mean must be below 700 MPN/100ml and the Est. 90$^{th}$ Percentile must be below 3300 MPN/100ml. Three stations exceeded the SRS fecal coliform NSSP Guide *Special Restricted* criteria; stations 1137, 1138, and 1140A (see above figure). These three stations are all in *Prohibited* waters and therefore, correctly classified.

## *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 sometime occur during the late summer and fall. The primary weather station for this area is in the headwaters of the Shrewsbury River at National Oceanic and Atmospheric Administration's (NOAA) station RA004.

A *t*-test is used to compare log-transformed fecal 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 scenario used for this growing area was based on a wet/dry cutoff of 0.1 inch.



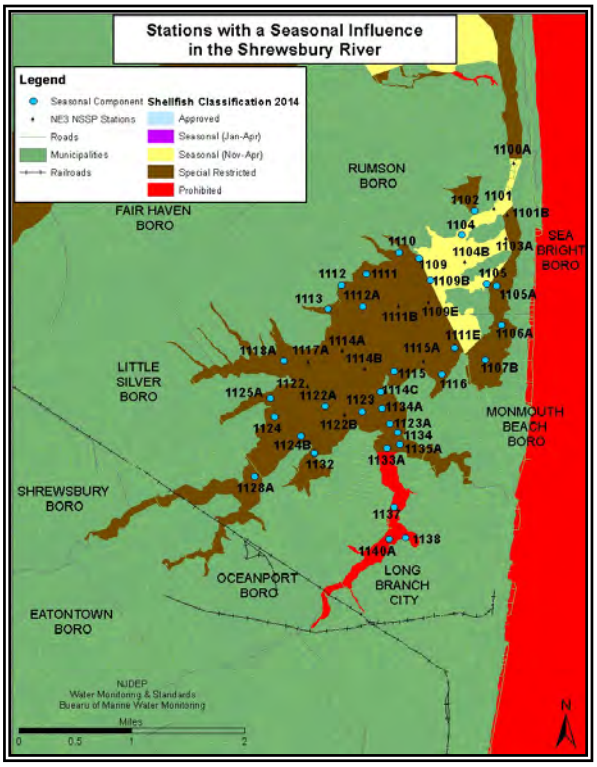

The effects of the 'first flush' should be captured by the

'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 data were analyzed at '24hr prior to sampling', '48hr prior to sampling', and '72hr prior to sampling'. Rainfall analysis shows that the Shrewsbury River is influenced by rain, particularly around 0.2 inch of rain or more. There were 30 stations that triggered within the first 24 hours prior to sampling, and 17 stations within the 48-72 hours prior to sampling (see previous figure). Overall, there are both immediate and extended effects on the coliform levels in the river due to rainfall. Rainfall appears to be a significant factor for the stations located in this growing area. This is expected since this area is urban and is abundant in impervious surfaces.

## *Seasonal Effects*

The Shrewsbury River undergoes a population surge in the summer, which increases sewage use as well as other utilities. Therefore, it is probable that the stations with a seasonal component are affected by non-point source pollution from increased summer population and/or increased use of water-related activities (boating, etc.) during the summer. Seasonal variation may also be the result of a variety of conditions, including temperature, precipitation, specific agricultural land-use practices, biological activity, stream flow and/or sediment.




Seasonal components were observed at thirty-three stations (see adjacent figure). SRS seasonal components were assessed using a *t*-test to compare log-transformed fecal coliform values for summer verses winter data. The *t*-statistical probability must be less than or equal to 0.05 for a station to have a seasonal component (see Appendix). All of the stations with a seasonal component had higher coliform values in the summer.

Overall, none of the noted stations had a geometric mean that exceeded the established values for the present classifications. The Est. 90$^{th}$ 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

Water Monitoring and Standard's (WM&S) Bureau of Marine Water Monitoring (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 parameter including dissolved oxygen and total nitrogen. The parameters are evaluated, analyzed, and presented 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. BMWM, in accordance with the NSSP Guide requirements, collects and analyzes phytoplankton data throughout the summer to determine the occurrence of marine phytoplankton species that could produce biotoxins. For more information on the Phytoplankton program visit the BMWM website, www.nj.gov/dep/bmw.

## *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, 2012). 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, no NCA data is available for

the Shrewsbury River for the years 2011-2014. 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 no mussel watch station in the Shrewsbury River. 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 January 1, 2011 to May 31, 2014. Systematic Random Sampling strategy was used to collect the samples, laboratory tests were run, and a thorough analysis of the coliform data was assembled for this report. The bacteriological data for each station must support the respective criteria for the current classification under the fecal coliform standard. Based on the data, fourteen stations exceeded the SRS *Approved* criteria; however, there are no *Approved* waters in the Shrewsbury River. The *Seasonal (Nov-Apr)* portion of the Shrewsbury River fits within the criteria when the timeframe is extended to have at least 30 samples during the winter months. Three stations exceeded the SRS *Special Restricted* criteria; however, these stations are located in *Prohibited* waters. Therefore, analyses of the Shrewsbury River shellfish growing area samples indicate that the fecal coliform geometric mean and/or estimated $90^{th}$ percentile levels meet the standards of the NSSP Guide.

# RECOMMENDATIONS

There are no recommendations for classification changes in this reappraisal report. The Shrewsbury River is currently sampled by one assignment run under the Systematic Random Sampling strategy. There are forty-six stations in the Shrewsbury River and ten sampling runs are done per year. The recommendation for the Shrewsbury River is that the monitoring schedule be maintained. The rainfall/storm water study done in 2005-2006 was very beneficial in providing insight into the actual conditions of the upper Navesink River; if at all possible, a storm water study is recommended in the area of South Shrewsbury, Branchport Creek, and Troutmans Creek. This will give insight the possible pollution source/s.

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# APPENDICES

A. Statistical Summary

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   Rainfall Amount
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# A. Statistical Summary

# *Fecal Coliform Statistical Summary: SRS (Approved)*

*From: 1/1/2011* *To: 5/31/2014*

*Report Area: NE3*

*Note: NSSP requires a sample set (N) of 30 or more.*

| | | | | Year-Round | | | | Summer | | | | Winter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Station* | *Depth* | *Status* | *Criteria* | *Geometric Mean* | *Est.90th Percentile* | *Exceed Criteria* | *N* | *Geometric Mean* | *Est.90th Percentile* | *Exceed Criteria* | *N* | *Geometric Mean* | *Est.90th Percentile* | *Exceed Criteria* | *N* |
| 1100A | S | S | 35 | 3.6 | 8.4 | ☐ | 32 | 3.9 | 10.8 | ☐ | 15 | 3.4 | 6.7 | ☐ | 17 |
| 1101 | S | S | 35 | 4.7 | 15.3 | ☐ | 32 | 5.7 | 17.1 | ☐ | 15 | 4.0 | 13.8 | ☐ | 17 |
| 1101B | S | SR | 35 | 4.7 | 14.9 | ☐ | 32 | 6.1 | 23.0 | ☐ | 15 | 3.8 | 9.3 | ☐ | 17 |
| 1102 | S | SR | 35 | 7.1 | 36.5 | ☑ | 32 | 15.4 | 86.0 | ☐ | 15 | 3.5 | 9.1 | ☐ | 17 |
| 1103A | S | S | 35 | 5.3 | 17.3 | ☐ | 32 | 7.2 | 28.5 | ☐ | 15 | 4.0 | 9.8 | ☐ | 17 |
| 1104 | S | S | 35 | 4.5 | 14.3 | ☐ | 32 | 6.4 | 23.6 | ☐ | 15 | 3.3 | 7.8 | ☐ | 17 |
| 1104B | S | S | 35 | 4.3 | 11.5 | ☐ | 32 | 5.6 | 16.2 | ☐ | 15 | 3.5 | 7.8 | ☐ | 17 |
| 1105 | S | S | 35 | 6.1 | 22.0 | ☐ | 32 | 9.2 | 36.6 | ☐ | 15 | 4.2 | 11.7 | ☐ | 17 |
| 1105A | S | SR | 35 | 6.1 | 20.9 | ☐ | 32 | 11.2 | 39.8 | ☐ | 15 | 3.6 | 7.0 | ☐ | 17 |
| 1106A | S | SR | 35 | 6.3 | 27.3 | ☐ | 32 | 10.9 | 65.2 | ☐ | 15 | 3.9 | 7.8 | ☐ | 17 |
| 1107B | S | SR | 35 | 5.8 | 21.5 | ☐ | 32 | 9.7 | 43.5 | ☐ | 15 | 3.7 | 8.0 | ☐ | 17 |
| 1109 | S | SR | 35 | 4.9 | 17.0 | ☐ | 32 | 7.5 | 29.2 | ☐ | 15 | 3.4 | 8.5 | ☐ | 17 |
| 1109B | S | S | 35 | 4.8 | 14.6 | ☐ | 32 | 6.8 | 27.2 | ☐ | 15 | 3.5 | 6.4 | ☐ | 17 |
| 1109E | S | SR | 35 | 4.9 | 17.5 | ☐ | 32 | 6.6 | 29.4 | ☐ | 15 | 3.8 | 10.0 | ☐ | 17 |
| 1110 | S | SR | 35 | 7.9 | 39.3 | ☑ | 32 | 16.5 | 89.1 | ☐ | 15 | 4.1 | 10.8 | ☐ | 17 |
| 1111 | S | SR | 35 | 5.0 | 20.3 | ☐ | 32 | 7.9 | 46.3 | ☐ | 15 | 3.4 | 6.6 | ☐ | 17 |
| 1111B | S | SR | 35 | 4.8 | 14.9 | ☐ | 32 | 6.4 | 21.9 | ☐ | 15 | 3.7 | 9.7 | ☐ | 17 |
| 1111E | S | SR | 35 | 9.2 | 39.7 | ☑ | 32 | 19.2 | 88.6 | ☐ | 15 | 4.8 | 9.9 | ☐ | 17 |
| 1112 | S | SR | 35 | 6.4 | 28.3 | ☐ | 32 | 12.5 | 56.4 | ☐ | 15 | 3.6 | 9.7 | ☐ | 17 |
| 1112A | S | SR | 35 | 5.0 | 21.1 | ☐ | 32 | 7.6 | 41.9 | ☐ | 15 | 3.4 | 9.1 | ☐ | 17 |
| 1113 | S | SR | 35 | 6.5 | 32.8 | ☐ | 32 | 13.3 | 72.6 | ☐ | 15 | 3.5 | 9.8 | ☐ | 17 |
| 1114A | S | SR | 35 | 4.9 | 21.7 | ☐ | 32 | 5.9 | 37.7 | ☐ | 15 | 4.1 | 12.3 | ☐ | 17 |
| 1114B | S | SR | 35 | 6.4 | 33.9 | ☐ | 32 | 9.8 | 83.3 | ☐ | 15 | 4.4 | 11.1 | ☐ | 17 |
| 1114C | S | SR | 35 | 7.0 | 37.0 | ☑ | 32 | 12.7 | 90.4 | ☐ | 15 | 4.2 | 11.2 | ☐ | 17 |
| 1115 | S | SR | 35 | 5.5 | 24.4 | ☐ | 32 | 8.6 | 50.1 | ☐ | 15 | 3.7 | 10.1 | ☐ | 17 |
| 1115A | S | SR | 35 | 5.8 | 22.0 | ☐ | 32 | 8.4 | 36.0 | ☐ | 15 | 4.1 | 12.4 | ☐ | 17 |
| 1116 | S | SR | 35 | 7.2 | 29.3 | ☐ | 32 | 11.8 | 62.6 | ☐ | 15 | 4.6 | 10.6 | ☐ | 17 |
| 1117A | S | SR | 35 | 4.8 | 18.8 | ☐ | 32 | 6.4 | 33.2 | ☐ | 15 | 3.7 | 10.2 | ☐ | 17 |
| 1118A | S | SR | 35 | 6.9 | 27.8 | ☐ | 32 | 11.5 | 44.3 | ☐ | 15 | 4.4 | 14.4 | ☐ | 17 |
| 1122 | S | SR | 35 | 5.2 | 18.5 | ☐ | 32 | 7.4 | 29.9 | ☐ | 15 | 3.8 | 10.7 | ☐ | 17 |
| 1122A | S | SR | 35 | 5.0 | 16.2 | ☐ | 32 | 7.7 | 34.0 | ☐ | 15 | 3.4 | 5.4 | ☐ | 17 |
| 1122B | S | SR | 35 | 5.2 | 20.3 | ☐ | 32 | 6.4 | 36.8 | ☐ | 15 | 4.4 | 10.5 | ☐ | 17 |
| 1123 | S | SR | 35 | 6.2 | 29.4 | ☐ | 32 | 10.6 | 59.3 | ☐ | 15 | 3.8 | 11.8 | ☐ | 17 |
| 1123A | S | SR | 35 | 7.7 | 36.0 | ☑ | 32 | 13.9 | 71.0 | ☐ | 15 | 4.6 | 14.2 | ☐ | 17 |
| 1124 | S | SR | 35 | 6.3 | 25.1 | ☐ | 32 | 9.8 | 47.1 | ☐ | 15 | 4.3 | 11.5 | ☐ | 17 |
| 1124B | S | SR | 35 | 9.7 | 49.3 | ☑ | 32 | 16.6 | 102.8 | ☐ | 15 | 6.1 | 19.6 | ☐ | 17 |
| 1125A | S | SR | 35 | 6.2 | 26.7 | ☐ | 32 | 10.8 | 51.7 | ☐ | 15 | 3.8 | 10.9 | ☐ | 17 |
| 1128A | S | SR | 35 | 9.9 | 54.5 | ☑ | 32 | 16.9 | 93.8 | ☐ | 15 | 6.1 | 27.5 | ☐ | 17 |
| 1132 | S | SR | 34 | 6.0 | 26.1 | ☐ | 31 | 9.4 | 58.2 | ☐ | 14 | 4.1 | 10.3 | ☐ | 17 |
| 1133A | S | SR | 35 | 7.7 | 44.7 | ☑ | 32 | 16.8 | 122.5 | ☐ | 15 | 3.9 | 9.4 | ☐ | 17 |
| 1134 | S | SR | 35 | 7.2 | 45.5 | ☑ | 32 | 12.5 | 90.0 | ☐ | 15 | 4.4 | 20.1 | ☐ | 17 |
| 1134A | S | SR | 35 | 7.3 | 39.6 | ☑ | 32 | 13.8 | 81.9 | ☐ | 15 | 4.2 | 14.7 | ☐ | 17 |
| 1135A | S | SR | 35 | 8.1 | 46.7 | ☑ | 32 | 17.2 | 116.7 | ☐ | 15 | 4.1 | 11.9 | ☐ | 17 |
| 1137 | S | P | 35 | 20.7 | 214.6 | ☑ | 32 | 59.2 | 596.6 | ☐ | 15 | 8.2 | 42.9 | ☐ | 17 |
| 1138 | S | P | 35 | 38.5 | 424.8 | ☑ | 32 | 111.1 | 989.7 | ☐ | 15 | 15.1 | 104.5 | ☐ | 17 |
| 1140A | S | P | 35 | 58.2 | 560.7 | ☑ | 32 | 202.8 | 1,059.9 | ☐ | 15 | 19.4 | 110.9 | ☐ | 17 |

# *Fecal Coliform Statistical Summary: SRS (Special Restricted)*

*From: 1/1/2011* *To: 5/31/2014*

*Report Area: NE3*

*Note: NSSP requires a sample set (N) of 30 or more.*

| | | | | Year-Round | | | | Summer | | | | Winter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Station* | *Depth* | *Status* | *Criteria* | *Geometric Mean* | *Est.90th Percentile* | *Exceed Criteria* | *N* | *Geometric Mean* | *Est.90th Percentile* | *Exceed Criteria* | *N* | *Geometric Mean* | *Est.90th Percentile* | *Exceed Criteria* | *N* |
| 1100A | S | S | 190 | 3.6 | 8.4 | ☐ | 32 | 3.9 | 10.8 | ☐ | 15 | 3.4 | 6.7 | ☐ | 17 |
| 1101 | S | S | 190 | 4.7 | 15.3 | ☐ | 32 | 5.7 | 17.1 | ☐ | 15 | 4.0 | 13.8 | ☐ | 17 |
| 1101B | S | SR | 190 | 4.7 | 14.9 | ☐ | 32 | 6.1 | 23.0 | ☐ | 15 | 3.8 | 9.3 | ☐ | 17 |
| 1102 | S | SR | 190 | 7.1 | 36.5 | ☐ | 32 | 15.4 | 86.0 | ☐ | 15 | 3.5 | 9.1 | ☐ | 17 |
| 1103A | S | S | 190 | 5.3 | 17.3 | ☐ | 32 | 7.2 | 28.5 | ☐ | 15 | 4.0 | 9.8 | ☐ | 17 |
| 1104 | S | S | 190 | 4.5 | 14.3 | ☐ | 32 | 6.4 | 23.6 | ☐ | 15 | 3.3 | 7.8 | ☐ | 17 |
| 1104B | S | S | 190 | 4.3 | 11.5 | ☐ | 32 | 5.6 | 16.2 | ☐ | 15 | 3.5 | 7.8 | ☐ | 17 |
| 1105 | S | S | 190 | 6.1 | 22.0 | ☐ | 32 | 9.2 | 36.6 | ☐ | 15 | 4.2 | 11.7 | ☐ | 17 |
| 1105A | S | SR | 190 | 6.1 | 20.9 | ☐ | 32 | 11.2 | 39.8 | ☐ | 15 | 3.6 | 7.0 | ☐ | 17 |
| 1106A | S | SR | 190 | 6.3 | 27.3 | ☐ | 32 | 10.9 | 65.2 | ☐ | 15 | 3.9 | 7.8 | ☐ | 17 |
| 1107B | S | SR | 190 | 5.8 | 21.5 | ☐ | 32 | 9.7 | 43.5 | ☐ | 15 | 3.7 | 8.0 | ☐ | 17 |
| 1109 | S | SR | 190 | 4.9 | 17.0 | ☐ | 32 | 7.5 | 29.2 | ☐ | 15 | 3.4 | 8.5 | ☐ | 17 |
| 1109B | S | S | 190 | 4.8 | 14.6 | ☐ | 32 | 6.8 | 27.2 | ☐ | 15 | 3.5 | 6.4 | ☐ | 17 |
| 1109E | S | SR | 190 | 4.9 | 17.5 | ☐ | 32 | 6.6 | 29.4 | ☐ | 15 | 3.8 | 10.0 | ☐ | 17 |
| 1110 | S | SR | 190 | 7.9 | 39.3 | ☐ | 32 | 16.5 | 89.1 | ☐ | 15 | 4.1 | 10.8 | ☐ | 17 |
| 1111 | S | SR | 190 | 5.0 | 20.3 | ☐ | 32 | 7.9 | 46.3 | ☐ | 15 | 3.4 | 6.6 | ☐ | 17 |
| 1111B | S | SR | 190 | 4.8 | 14.9 | ☐ | 32 | 6.4 | 21.9 | ☐ | 15 | 3.7 | 9.7 | ☐ | 17 |
| 1111E | S | SR | 190 | 9.2 | 39.7 | ☐ | 32 | 19.2 | 88.6 | ☐ | 15 | 4.8 | 9.9 | ☐ | 17 |
| 1112 | S | SR | 190 | 6.4 | 28.3 | ☐ | 32 | 12.5 | 56.4 | ☐ | 15 | 3.6 | 9.7 | ☐ | 17 |
| 1112A | S | SR | 190 | 5.0 | 21.1 | ☐ | 32 | 7.6 | 41.9 | ☐ | 15 | 3.4 | 9.1 | ☐ | 17 |
| 1113 | S | SR | 190 | 6.5 | 32.8 | ☐ | 32 | 13.3 | 72.6 | ☐ | 15 | 3.5 | 9.8 | ☐ | 17 |
| 1114A | S | SR | 190 | 4.9 | 21.7 | ☐ | 32 | 5.9 | 37.7 | ☐ | 15 | 4.1 | 12.3 | ☐ | 17 |
| 1114B | S | SR | 190 | 6.4 | 33.9 | ☐ | 32 | 9.8 | 83.3 | ☐ | 15 | 4.4 | 11.1 | ☐ | 17 |
| 1114C | S | SR | 190 | 7.0 | 37.0 | ☐ | 32 | 12.7 | 90.4 | ☐ | 15 | 4.2 | 11.2 | ☐ | 17 |
| 1115 | S | SR | 190 | 5.5 | 24.4 | ☐ | 32 | 8.6 | 50.1 | ☐ | 15 | 3.7 | 10.1 | ☐ | 17 |
| 1115A | S | SR | 190 | 5.8 | 22.0 | ☐ | 32 | 8.4 | 36.0 | ☐ | 15 | 4.1 | 12.4 | ☐ | 17 |
| 1116 | S | SR | 190 | 7.2 | 29.3 | ☐ | 32 | 11.8 | 62.6 | ☐ | 15 | 4.6 | 10.6 | ☐ | 17 |
| 1117A | S | SR | 190 | 4.8 | 18.8 | ☐ | 32 | 6.4 | 33.2 | ☐ | 15 | 3.7 | 10.2 | ☐ | 17 |
| 1118A | S | SR | 190 | 6.9 | 27.8 | ☐ | 32 | 11.5 | 44.3 | ☐ | 15 | 4.4 | 14.4 | ☐ | 17 |
| 1122 | S | SR | 190 | 5.2 | 18.5 | ☐ | 32 | 7.4 | 29.9 | ☐ | 15 | 3.8 | 10.7 | ☐ | 17 |
| 1122A | S | SR | 190 | 5.0 | 16.2 | ☐ | 32 | 7.7 | 34.0 | ☐ | 15 | 3.4 | 5.4 | ☐ | 17 |
| 1122B | S | SR | 190 | 5.2 | 20.3 | ☐ | 32 | 6.4 | 36.8 | ☐ | 15 | 4.4 | 10.5 | ☐ | 17 |
| 1123 | S | SR | 190 | 6.2 | 29.4 | ☐ | 32 | 10.6 | 59.3 | ☐ | 15 | 3.8 | 11.8 | ☐ | 17 |
| 1123A | S | SR | 190 | 7.7 | 36.0 | ☐ | 32 | 13.9 | 71.0 | ☐ | 15 | 4.6 | 14.2 | ☐ | 17 |
| 1124 | S | SR | 190 | 6.3 | 25.1 | ☐ | 32 | 9.8 | 47.1 | ☐ | 15 | 4.3 | 11.5 | ☐ | 17 |
| 1124B | S | SR | 190 | 9.7 | 49.3 | ☐ | 32 | 16.6 | 102.8 | ☐ | 15 | 6.1 | 19.6 | ☐ | 17 |
| 1125A | S | SR | 190 | 6.2 | 26.7 | ☐ | 32 | 10.8 | 51.7 | ☐ | 15 | 3.8 | 10.9 | ☐ | 17 |
| 1128A | S | SR | 190 | 9.9 | 54.5 | ☐ | 32 | 16.9 | 93.8 | ☐ | 15 | 6.1 | 27.5 | ☐ | 17 |
| 1132 | S | SR | 187 | 6.0 | 26.1 | ☐ | 31 | 9.4 | 58.2 | ☐ | 14 | 4.1 | 10.3 | ☐ | 17 |
| 1133A | S | SR | 190 | 7.7 | 44.7 | ☐ | 32 | 16.8 | 122.5 | ☐ | 15 | 3.9 | 9.4 | ☐ | 17 |
| 1134 | S | SR | 190 | 7.2 | 45.5 | ☐ | 32 | 12.5 | 90.0 | ☐ | 15 | 4.4 | 20.1 | ☐ | 17 |
| 1134A | S | SR | 190 | 7.3 | 39.6 | ☐ | 32 | 13.8 | 81.9 | ☐ | 15 | 4.2 | 14.7 | ☐ | 17 |
| 1135A | S | SR | 190 | 8.1 | 46.7 | ☐ | 32 | 17.2 | 116.7 | ☐ | 15 | 4.1 | 11.9 | ☐ | 17 |
| 1137 | S | P | 190 | 20.7 | 214.6 | ☑ | 32 | 59.2 | 596.6 | ☐ | 15 | 8.2 | 42.9 | ☐ | 17 |
| 1138 | S | P | 190 | 38.5 | 424.8 | ☑ | 32 | 111.1 | 989.7 | ☐ | 15 | 15.1 | 104.5 | ☐ | 17 |
| 1140A | S | P | 190 | 58.2 | 560.7 | ☑ | 32 | 202.8 | 1,059.9 | ☐ | 15 | 19.4 | 110.9 | ☐ | 17 |

# Fecal Coliform Statistical Summary: SRS (Approved)

*From: 10/1/2005* *To: 5/31/2014*

*Report Area: NE3*

*Note: NSSP requires a sample set (N) of 30 or more.*

| Station | Depth | Status | Criteria | Year-Round | | | | Summer | | | | Winter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Geometric Mean | Est.90th Percentile | Exceed Criteria | N | Geometric Mean | Est.90th Percentile | Exceed Criteria | N | Geometric Mean | Est.90th Percentile | Exceed Criteria | N |
| 1100A | S | S | 43 | 4.5 | 16.9 | ☐ | 78 | 5.0 | 20.0 | ☐ | 45 | 3.8 | 13.2 | ☐ | 33 |
| 1101 | S | S | 43 | 4.8 | 22.3 | ☐ | 78 | 5.7 | 24.0 | ☐ | 45 | 3.9 | 19.6 | ☐ | 33 |
| 1101B | S | SR | 43 | 4.7 | 23.0 | ☐ | 78 | 5.6 | 26.8 | ☐ | 45 | 3.6 | 18.2 | ☐ | 33 |
| 1102 | S | SR | 43 | 8.0 | 47.7 | ☑ | 78 | 12.7 | 69.6 | ☑ | 45 | 4.2 | 20.9 | ☐ | 33 |
| 1103A | S | S | 43 | 5.5 | 27.0 | ☐ | 78 | 6.7 | 29.9 | ☐ | 45 | 4.2 | 22.4 | ☐ | 33 |
| 1104 | S | S | 43 | 5.2 | 23.6 | ☐ | 78 | 7.0 | 29.7 | ☐ | 45 | 3.5 | 15.0 | ☐ | 33 |
| 1104B | S | S | 43 | 5.4 | 22.6 | ☐ | 78 | 5.4 | 20.0 | ☐ | 45 | 5.4 | 27.0 | ☐ | 33 |
| 1105 | S | S | 43 | 6.2 | 23.1 | ☐ | 78 | 7.2 | 26.4 | ☐ | 45 | 5.0 | 18.5 | ☐ | 33 |
| 1105A | S | SR | 43 | 6.8 | 33.6 | ☐ | 78 | 9.7 | 43.8 | ☑ | 45 | 4.3 | 19.4 | ☐ | 33 |
| 1106A | S | SR | 43 | 7.6 | 42.8 | ☐ | 78 | 11.6 | 58.9 | ☑ | 45 | 4.3 | 21.6 | ☐ | 33 |
| 1107B | S | SR | 43 | 7.5 | 36.4 | ☐ | 78 | 10.5 | 45.8 | ☑ | 45 | 4.8 | 22.5 | ☐ | 33 |
| 1109 | S | SR | 43 | 6.3 | 31.9 | ☐ | 78 | 8.2 | 39.0 | ☐ | 45 | 4.3 | 22.0 | ☐ | 33 |
| 1109B | S | S | 43 | 5.1 | 21.1 | ☐ | 78 | 6.2 | 24.9 | ☐ | 45 | 4.0 | 16.0 | ☐ | 33 |
| 1109E | S | SR | 43 | 6.4 | 28.3 | ☐ | 78 | 7.8 | 30.1 | ☐ | 45 | 4.9 | 24.4 | ☐ | 33 |
| 1110 | S | SR | 43 | 8.2 | 40.0 | ☐ | 78 | 11.2 | 50.8 | ☑ | 45 | 5.4 | 25.0 | ☐ | 33 |
| 1111 | S | SR | 43 | 6.1 | 29.7 | ☐ | 78 | 8.4 | 49.3 | ☑ | 45 | 3.8 | 11.5 | ☐ | 33 |
| 1111B | S | SR | 43 | 5.4 | 20.6 | ☐ | 78 | 6.2 | 23.6 | ☐ | 45 | 4.4 | 16.7 | ☐ | 33 |
| 1111E | S | SR | 42 | 10.3 | 43.6 | ☑ | 76 | 14.6 | 59.3 | ☑ | 44 | 6.4 | 23.0 | ☐ | 32 |
| 1112 | S | SR | 43 | 7.4 | 36.8 | ☐ | 78 | 11.9 | 49.9 | ☑ | 45 | 3.9 | 16.9 | ☐ | 33 |
| 1112A | S | SR | 43 | 5.6 | 27.1 | ☐ | 78 | 7.1 | 35.2 | ☐ | 45 | 4.0 | 17.5 | ☐ | 33 |
| 1113 | S | SR | 43 | 9.9 | 67.0 | ☑ | 78 | 18.5 | 107.5 | ☑ | 45 | 4.2 | 20.0 | ☐ | 33 |
| 1114A | S | SR | 43 | 5.8 | 31.1 | ☐ | 78 | 7.0 | 39.2 | ☐ | 45 | 4.4 | 21.8 | ☐ | 33 |
| 1114B | S | SR | 42 | 8.5 | 52.0 | ☑ | 77 | 10.8 | 68.0 | ☑ | 45 | 6.0 | 33.2 | ☐ | 32 |
| 1114C | S | SR | 42 | 10.6 | 69.2 | ☑ | 77 | 12.9 | 81.2 | ☑ | 45 | 8.0 | 53.5 | ☑ | 32 |
| 1115 | S | SR | 42 | 7.6 | 36.4 | ☐ | 77 | 9.2 | 45.3 | ☑ | 45 | 5.8 | 25.5 | ☐ | 32 |
| 1115A | S | SR | 42 | 7.1 | 35.6 | ☐ | 77 | 8.9 | 46.9 | ☑ | 45 | 5.1 | 22.4 | ☐ | 32 |
| 1116 | S | SR | 42 | 8.2 | 44.9 | ☑ | 77 | 10.7 | 60.7 | ☑ | 45 | 5.6 | 26.6 | ☐ | 32 |
| 1117A | S | SR | 43 | 6.8 | 41.0 | ☐ | 78 | 8.6 | 50.9 | ☑ | 45 | 5.0 | 28.9 | ☐ | 33 |
| 1118A | S | SR | 43 | 10.6 | 71.1 | ☑ | 78 | 16.3 | 97.0 | ☑ | 45 | 5.9 | 36.4 | ☐ | 33 |
| 1122 | S | SR | 43 | 6.9 | 33.6 | ☐ | 78 | 7.8 | 39.4 | ☐ | 45 | 5.7 | 26.9 | ☐ | 33 |
| 1122A | S | SR | 43 | 7.2 | 40.6 | ☐ | 78 | 8.7 | 52.3 | ☑ | 45 | 5.6 | 27.7 | ☐ | 33 |
| 1122B | S | SR | 43 | 8.1 | 40.4 | ☐ | 78 | 9.0 | 50.5 | ☑ | 45 | 7.0 | 29.5 | ☐ | 33 |
| 1123 | S | SR | 43 | 9.6 | 58.2 | ☑ | 78 | 14.2 | 82.3 | ☑ | 45 | 5.6 | 29.2 | ☐ | 33 |
| 1123A | S | SR | 43 | 10.4 | 51.5 | ☑ | 78 | 14.6 | 66.8 | ☑ | 45 | 6.6 | 30.5 | ☐ | 33 |
| 1124 | S | SR | 43 | 8.5 | 49.8 | ☑ | 78 | 10.7 | 71.2 | ☑ | 45 | 6.1 | 28.1 | ☐ | 33 |
| 1124B | S | SR | 43 | 10.5 | 56.1 | ☑ | 78 | 13.7 | 80.5 | ☑ | 45 | 7.4 | 30.8 | ☐ | 33 |
| 1125A | S | SR | 43 | 8.7 | 59.1 | ☑ | 78 | 12.9 | 98.4 | ☑ | 45 | 5.2 | 23.4 | ☐ | 33 |
| 1128A | S | SR | 43 | 13.7 | 96.2 | ☑ | 78 | 17.5 | 124.8 | ☑ | 45 | 9.8 | 63.8 | ☑ | 33 |
| 1132 | S | SR | 42 | 9.4 | 60.1 | ☑ | 77 | 12.3 | 85.3 | ☑ | 44 | 6.5 | 34.6 | ☐ | 33 |
| 1133A | S | SR | 43 | 13.8 | 97.8 | ☑ | 78 | 21.0 | 148.5 | ☑ | 45 | 7.8 | 44.2 | ☑ | 33 |
| 1134 | S | SR | 43 | 11.6 | 80.5 | ☑ | 78 | 17.1 | 119.2 | ☑ | 45 | 6.8 | 38.8 | ☐ | 33 |
| 1134A | S | SR | 43 | 9.7 | 61.9 | ☑ | 78 | 13.4 | 88.4 | ☑ | 45 | 6.3 | 33.4 | ☐ | 33 |
| 1135A | S | SR | 43 | 12.4 | 77.6 | ☑ | 78 | 19.3 | 98.0 | ☑ | 45 | 6.8 | 42.9 | ☐ | 33 |
| 1137 | S | P | 43 | 33.5 | 275.8 | ☑ | 78 | 60.0 | 414.7 | ☑ | 45 | 15.1 | 103.4 | ☑ | 33 |
| 1138 | S | P | 43 | 57.3 | 480.0 | ☑ | 78 | 108.8 | 777.3 | ☑ | 45 | 23.9 | 147.6 | ☑ | 33 |
| 1140A | S | P | 43 | 68.2 | 563.2 | ☑ | 78 | 149.0 | 874.7 | ☑ | 45 | 23.5 | 136.3 | ☑ | 33 |

# Fecal Coliform Statistical Summary: SRS (Special Restricted)

*From: 10/1/2005* *To: 5/31/2014*

*Report Area: NE3*

*Note: NSSP requires a sample set (N) of 30 or more.*

| | | | | Year-Round | | | | Summer | | | | Winter | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station | Depth | Status | Criteria | Geometric Mean | Est.90th Percentile | Exceed Criteria | N | Geometric Mean | Est.90th Percentile | Exceed Criteria | N | Geometric Mean | Est.90th Percentile | Exceed Criteria | N |
| 1100A | S | S | 249 | 4.5 | 16.9 | ☐ | 78 | 5.0 | 20.0 | ☐ | 45 | 3.8 | 13.2 | ☐ | 33 |
| 1101 | S | S | 249 | 4.8 | 22.3 | ☐ | 78 | 5.7 | 24.0 | ☐ | 45 | 3.9 | 19.6 | ☐ | 33 |
| 1101B | S | SR | 249 | 4.7 | 23.0 | ☐ | 78 | 5.6 | 26.8 | ☐ | 45 | 3.6 | 18.2 | ☐ | 33 |
| 1102 | S | SR | 249 | 8.0 | 47.7 | ☐ | 78 | 12.7 | 69.6 | ☐ | 45 | 4.2 | 20.9 | ☐ | 33 |
| 1103A | S | S | 249 | 5.5 | 27.0 | ☐ | 78 | 6.7 | 29.9 | ☐ | 45 | 4.2 | 22.4 | ☐ | 33 |
| 1104 | S | S | 249 | 5.2 | 23.6 | ☐ | 78 | 7.0 | 29.7 | ☐ | 45 | 3.5 | 15.0 | ☐ | 33 |
| 1104B | S | S | 249 | 5.4 | 22.6 | ☐ | 78 | 5.4 | 20.0 | ☐ | 45 | 5.4 | 27.0 | ☐ | 33 |
| 1105 | S | S | 249 | 6.2 | 23.1 | ☐ | 78 | 7.2 | 26.4 | ☐ | 45 | 5.0 | 18.5 | ☐ | 33 |
| 1105A | S | SR | 249 | 6.8 | 33.6 | ☐ | 78 | 9.7 | 43.8 | ☐ | 45 | 4.3 | 19.4 | ☐ | 33 |
| 1106A | S | SR | 249 | 7.6 | 42.8 | ☐ | 78 | 11.6 | 58.9 | ☐ | 45 | 4.3 | 21.6 | ☐ | 33 |
| 1107B | S | SR | 249 | 7.5 | 36.4 | ☐ | 78 | 10.5 | 45.8 | ☐ | 45 | 4.8 | 22.5 | ☐ | 33 |
| 1109 | S | SR | 249 | 6.3 | 31.9 | ☐ | 78 | 8.2 | 39.0 | ☐ | 45 | 4.3 | 22.0 | ☐ | 33 |
| 1109B | S | S | 249 | 5.1 | 21.1 | ☐ | 78 | 6.2 | 24.9 | ☐ | 45 | 4.0 | 16.0 | ☐ | 33 |
| 1109E | S | SR | 249 | 6.4 | 28.3 | ☐ | 78 | 7.8 | 30.1 | ☐ | 45 | 4.9 | 24.4 | ☐ | 33 |
| 1110 | S | SR | 249 | 8.2 | 40.0 | ☐ | 78 | 11.2 | 50.8 | ☐ | 45 | 5.4 | 25.0 | ☐ | 33 |
| 1111 | S | SR | 249 | 6.1 | 29.7 | ☐ | 78 | 8.4 | 49.3 | ☐ | 45 | 3.8 | 11.5 | ☐ | 33 |
| 1111B | S | SR | 249 | 5.4 | 20.6 | ☐ | 78 | 6.2 | 23.6 | ☐ | 45 | 4.4 | 16.7 | ☐ | 33 |
| 1111E | S | SR | 247 | 10.3 | 43.6 | ☐ | 76 | 14.6 | 59.3 | ☐ | 44 | 6.4 | 23.0 | ☐ | 32 |
| 1112 | S | SR | 249 | 7.4 | 36.8 | ☐ | 78 | 11.9 | 49.9 | ☐ | 45 | 3.9 | 16.9 | ☐ | 33 |
| 1112A | S | SR | 249 | 5.6 | 27.1 | ☐ | 78 | 7.1 | 35.2 | ☐ | 45 | 4.0 | 17.5 | ☐ | 33 |
| 1113 | S | SR | 249 | 9.9 | 67.0 | ☐ | 78 | 18.5 | 107.5 | ☐ | 45 | 4.2 | 20.0 | ☐ | 33 |
| 1114A | S | SR | 249 | 5.8 | 31.1 | ☐ | 78 | 7.0 | 39.2 | ☐ | 45 | 4.4 | 21.8 | ☐ | 33 |
| 1114B | S | SR | 248 | 8.5 | 52.0 | ☐ | 77 | 10.8 | 68.0 | ☐ | 45 | 6.0 | 33.2 | ☐ | 32 |
| 1114C | S | SR | 248 | 10.6 | 69.2 | ☐ | 77 | 12.9 | 81.2 | ☐ | 45 | 8.0 | 53.5 | ☐ | 32 |
| 1115 | S | SR | 248 | 7.6 | 36.4 | ☐ | 77 | 9.2 | 45.3 | ☐ | 45 | 5.8 | 25.5 | ☐ | 32 |
| 1115A | S | SR | 248 | 7.1 | 35.6 | ☐ | 77 | 8.9 | 46.9 | ☐ | 45 | 5.1 | 22.4 | ☐ | 32 |
| 1116 | S | SR | 248 | 8.2 | 44.9 | ☐ | 77 | 10.7 | 60.7 | ☐ | 45 | 5.6 | 26.6 | ☐ | 32 |
| 1117A | S | SR | 249 | 6.8 | 41.0 | ☐ | 78 | 8.6 | 50.9 | ☐ | 45 | 5.0 | 28.9 | ☐ | 33 |
| 1118A | S | SR | 249 | 10.6 | 71.1 | ☐ | 78 | 16.3 | 97.0 | ☐ | 45 | 5.9 | 36.4 | ☐ | 33 |
| 1122 | S | SR | 249 | 6.9 | 33.6 | ☐ | 78 | 7.8 | 39.4 | ☐ | 45 | 5.7 | 26.9 | ☐ | 33 |
| 1122A | S | SR | 249 | 7.2 | 40.6 | ☐ | 78 | 8.7 | 52.3 | ☐ | 45 | 5.6 | 27.7 | ☐ | 33 |
| 1122B | S | SR | 249 | 8.1 | 40.4 | ☐ | 78 | 9.0 | 50.5 | ☐ | 45 | 7.0 | 29.5 | ☐ | 33 |
| 1123 | S | SR | 249 | 9.6 | 58.2 | ☐ | 78 | 14.2 | 82.3 | ☐ | 45 | 5.6 | 29.2 | ☐ | 33 |
| 1123A | S | SR | 249 | 10.4 | 51.5 | ☐ | 78 | 14.6 | 66.8 | ☐ | 45 | 6.6 | 30.5 | ☐ | 33 |
| 1124 | S | SR | 249 | 8.5 | 49.8 | ☐ | 78 | 10.7 | 71.2 | ☐ | 45 | 6.1 | 28.1 | ☐ | 33 |
| 1124B | S | SR | 249 | 10.5 | 56.1 | ☐ | 78 | 13.7 | 80.5 | ☐ | 45 | 7.4 | 30.8 | ☐ | 33 |
| 1125A | S | SR | 249 | 8.7 | 59.1 | ☐ | 78 | 12.9 | 98.4 | ☐ | 45 | 5.2 | 23.4 | ☐ | 33 |
| 1128A | S | SR | 249 | 13.7 | 96.2 | ☐ | 78 | 17.5 | 124.8 | ☐ | 45 | 9.8 | 63.8 | ☐ | 33 |
| 1132 | S | SR | 248 | 9.4 | 60.1 | ☐ | 77 | 12.3 | 85.3 | ☐ | 44 | 6.5 | 34.6 | ☐ | 33 |
| 1133A | S | SR | 249 | 13.8 | 97.8 | ☐ | 78 | 21.0 | 148.5 | ☐ | 45 | 7.8 | 44.2 | ☐ | 33 |
| 1134 | S | SR | 249 | 11.6 | 80.5 | ☐ | 78 | 17.1 | 119.2 | ☐ | 45 | 6.8 | 38.8 | ☐ | 33 |
| 1134A | S | SR | 249 | 9.7 | 61.9 | ☐ | 78 | 13.4 | 88.4 | ☐ | 45 | 6.3 | 33.4 | ☐ | 33 |
| 1135A | S | SR | 249 | 12.4 | 77.6 | ☐ | 78 | 19.3 | 98.0 | ☐ | 45 | 6.8 | 42.9 | ☐ | 33 |
| 1137 | S | P | 249 | 33.5 | 275.8 | ☑ | 78 | 60.0 | 414.7 | ☑ | 45 | 15.1 | 103.4 | ☐ | 33 |
| 1138 | S | P | 249 | 57.3 | 480.0 | ☑ | 78 | 108.8 | 777.3 | ☑ | 45 | 23.9 | 147.6 | ☐ | 33 |
| 1140A | S | P | 249 | 68.2 | 563.2 | ☑ | 78 | 149.0 | 874.7 | ☑ | 45 | 23.5 | 136.3 | ☐ | 33 |

# B. Seasonal Evaluation

# *Fecal Coliform Statistics Summary: Seasonal*

*From: 1/1/2011* *To: 5/31/2014*

*Report Area: NE3*

| Station | Depth | Status | Strategy | t-Statistic Probability | Exceed Criteria (t-Stats < 0.05) | Summer | | Winter | | GeoMean Differences |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Geometric Mean | N | Geometric Mean | N | |
| 1100A | S | S | SRS | 0.545 | ☐ | 3.9 | 15 | 3.4 | 17 | 0.5 |
| 1101 | S | S | SRS | 0.290 | ☐ | 5.7 | 15 | 4.0 | 17 | 1.7 |
| 1101B | S | SR | SRS | 0.135 | ☐ | 6.1 | 15 | 3.8 | 17 | 2.3 |
| 1102 | S | SR | SRS | 0.001 | ☑ | 15.4 | 15 | 3.5 | 17 | 11.9 |
| 1103A | S | S | SRS | 0.070 | ☐ | 7.2 | 15 | 4.0 | 17 | 3.2 |
| 1104 | S | S | SRS | 0.036 | ☑ | 6.4 | 15 | 3.3 | 17 | 3.1 |
| 1104B | S | S | SRS | 0.082 | ☐ | 5.6 | 15 | 3.5 | 17 | 2.1 |
| 1105 | S | S | SRS | 0.025 | ☑ | 9.2 | 15 | 4.2 | 17 | 5.0 |
| 1105A | S | SR | SRS | 0.000 | ☑ | 11.2 | 15 | 3.6 | 17 | 7.6 |
| 1106A | S | SR | SRS | 0.008 | ☑ | 10.9 | 15 | 3.9 | 17 | 7.0 |
| 1107B | S | SR | SRS | 0.006 | ☑ | 9.7 | 15 | 3.7 | 17 | 6.0 |
| 1109 | S | SR | SRS | 0.017 | ☑ | 7.5 | 15 | 3.4 | 17 | 4.1 |
| 1109B | S | S | SRS | 0.029 | ☑ | 6.8 | 15 | 3.5 | 17 | 3.3 |
| 1109E | S | SR | SRS | 0.129 | ☐ | 6.6 | 15 | 3.8 | 17 | 2.7 |
| 1110 | S | SR | SRS | 0.001 | ☑ | 16.5 | 15 | 4.1 | 17 | 12.4 |
| 1111 | S | SR | SRS | 0.026 | ☑ | 7.9 | 15 | 3.4 | 17 | 4.5 |
| 1111B | S | SR | SRS | 0.082 | ☐ | 6.4 | 15 | 3.7 | 17 | 2.7 |
| 1111E | S | SR | SRS | 0.000 | ☑ | 19.2 | 15 | 4.8 | 17 | 14.4 |
| 1112 | S | SR | SRS | 0.001 | ☑ | 12.5 | 15 | 3.6 | 17 | 8.9 |
| 1112A | S | SR | SRS | 0.041 | ☑ | 7.6 | 15 | 3.4 | 17 | 4.2 |
| 1113 | S | SR | SRS | 0.001 | ☑ | 13.3 | 15 | 3.5 | 17 | 9.8 |
| 1114A | S | SR | SRS | 0.383 | ☐ | 5.9 | 15 | 4.1 | 17 | 1.8 |
| 1114B | S | SR | SRS | 0.078 | ☐ | 9.8 | 15 | 4.4 | 17 | 5.5 |
| 1114C | S | SR | SRS | 0.013 | ☑ | 12.7 | 15 | 4.2 | 17 | 8.6 |
| 1115 | S | SR | SRS | 0.039 | ☑ | 8.6 | 15 | 3.7 | 17 | 4.9 |
| 1115A | S | SR | SRS | 0.052 | ☐ | 8.4 | 15 | 4.1 | 17 | 4.3 |
| 1116 | S | SR | SRS | 0.014 | ☑ | 11.8 | 15 | 4.6 | 17 | 7.2 |
| 1117A | S | SR | SRS | 0.149 | ☐ | 6.4 | 15 | 3.7 | 17 | 2.7 |
| 1118A | S | SR | SRS | 0.010 | ☑ | 11.5 | 15 | 4.4 | 17 | 7.2 |
| 1122 | S | SR | SRS | 0.059 | ☐ | 7.4 | 15 | 3.8 | 17 | 3.6 |
| 1122A | S | SR | SRS | 0.010 | ☑ | 7.7 | 15 | 3.4 | 17 | 4.3 |
| 1122B | S | SR | SRS | 0.332 | ☐ | 6.4 | 15 | 4.4 | 17 | 2.0 |
| 1123 | S | SR | SRS | 0.015 | ☑ | 10.6 | 15 | 3.8 | 17 | 6.8 |
| 1123A | S | SR | SRS | 0.007 | ☑ | 13.9 | 15 | 4.6 | 17 | 9.3 |
| 1124 | S | SR | SRS | 0.028 | ☑ | 9.8 | 15 | 4.3 | 17 | 5.5 |
| 1124B | S | SR | SRS | 0.022 | ☑ | 16.6 | 15 | 6.1 | 17 | 10.5 |
| 1125A | S | SR | SRS | 0.008 | ☑ | 10.8 | 15 | 3.8 | 17 | 7.0 |
| 1128A | S | SR | SRS | 0.030 | ☑ | 16.9 | 15 | 6.1 | 17 | 10.7 |
| 1132 | S | SR | SRS | 0.042 | ☑ | 9.4 | 14 | 4.1 | 17 | 5.4 |
| 1133A | S | SR | SRS | 0.001 | ☑ | 16.8 | 15 | 3.9 | 17 | 12.9 |
| 1134 | S | SR | SRS | 0.039 | ☑ | 12.5 | 15 | 4.4 | 17 | 8.1 |
| 1134A | S | SR | SRS | 0.008 | ☑ | 13.8 | 15 | 4.2 | 17 | 9.6 |
| 1135A | S | SR | SRS | 0.002 | ☑ | 17.2 | 15 | 4.1 | 17 | 13.1 |
| 1137 | S | P | SRS | 0.001 | ☑ | 59.2 | 15 | 8.2 | 17 | 50.9 |
| 1138 | S | P | SRS | 0.001 | ☑ | 111.1 | 15 | 15.1 | 17 | 96.0 |
| 1140A | S | P | SRS | 0.000 | ☑ | 202.8 | 15 | 19.4 | 17 | 183.4 |

# C. Precipitation
## -Rainfall Amount
## -Wet/Dry Statistics

# *Rainfall Summary*

***From: 1/1/2011*** ***To: 5/31/2014***

***Report Area: NE3***

| | | *Rainfall Amount* | | |
|---|---|---|---|---|
| ***Date*** | ***NOAA*** | ***24Hrs*** | ***48Hrs*** | ***72Hrs*** |
| 3/3/2011 | RA004 | 0.00 | 0.00 | 0.07 |
| 4/20/2011 | RA004 | 0.02 | 0.02 | 0.02 |
| 5/4/2011 | RA004 | 0.03 | 0.03 | 0.03 |
| 6/13/2011 | RA004 | 0.00 | 0.42 | 0.42 |
| 8/3/2011 | RA004 | 0.00 | 0.00 | 0.06 |
| 9/28/2011 | RA004 | 0.01 | 0.01 | 0.01 |
| 10/25/2011 | RA004 | 0.00 | 0.00 | 0.00 |
| 11/15/2011 | RA004 | 0.00 | 0.00 | 0.00 |
| 11/30/2011 | RA004 | 0.42 | 0.42 | 0.42 |
| 2/8/2012 | RA004 | 0.00 | 0.00 | 0.00 |
| 3/21/2012 | RA004 | 0.00 | 0.00 | 0.00 |
| 4/17/2012 | RA004 | 0.00 | 0.00 | 0.04 |
| 8/1/2012 | RA004 | 0.00 | 0.00 | 0.00 |
| 9/5/2012 | RA004 | 0.53 | 0.89 | 1.16 |
| 9/14/2012 | RA004 | 0.00 | 0.00 | 0.00 |
| 10/1/2012 | RA004 | 0.00 | 0.00 | 0.14 |
| 12/12/2012 | RA004 | 0.12 | 0.26 | 0.70 |
| 1/15/2013 | RA004 | 0.24 | 0.24 | 0.24 |
| 3/12/2013 | RA004 | 0.00 | 0.00 | 0.00 |
| 4/4/2013 | RA004 | 0.00 | 0.00 | 0.00 |
| 4/9/2013 | RA004 | 0.00 | 0.00 | 0.00 |
| 5/28/2013 | RA004 | 0.00 | 0.00 | 0.05 |
| 7/22/2013 | RA004 | 0.02 | 0.02 | 0.02 |
| 8/19/2013 | RA004 | 0.00 | 0.00 | 0.00 |
| 10/7/2013 | RA004 | 0.00 | 0.00 | 0.04 |
| 11/21/2013 | RA004 | 0.00 | 0.00 | 0.01 |
| 12/6/2013 | RA004 | 0.00 | 0.00 | 0.00 |
| 1/16/2014 | RA004 | 0.00 | 0.37 | 0.37 |
| 3/18/2014 | RA004 | 0.16 | 0.27 | 0.27 |
| 4/3/2014 | RA004 | 0.06 | 0.06 | 0.18 |
| 5/12/2014 | RA004 | | | |
| 5/27/2014 | RA004 | | | |

# Rainfall Statistics Summary: 24Hrs Cumulative

*From: 1/1/2011* *To: 5/31/2014*

*Report Area: NE3* *Wet/Dry Cutoff: 0.2*

| Station | Depth | Status | Strategy | NOAA | t-Statistic Probability | Exceed Criteria (t-Stats <0.05) | Dry Weather Geometric Mean | Dry Weather N | Wet Weather Geometric Mean | Wet Weather N | GeoMean Difference |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1100A | S | S | SRS | RA004 | 0.002 | ☑ | 3.3 | 29 | 10.5 | 3 | -7 |
| 1101 | S | S | SRS | RA004 | 0.005 | ☑ | 4.1 | 29 | 18.4 | 3 | -14 |
| 1101B | S | SR | SRS | RA004 | 0.012 | ☑ | 4.2 | 29 | 15.6 | 3 | -11 |
| 1102 | S | SR | SRS | RA004 | 0.134 | ☐ | 6.3 | 29 | 20.4 | 3 | -14 |
| 1103A | S | S | SRS | RA004 | 0.054 | ☐ | 4.8 | 29 | 14.0 | 3 | -9 |
| 1104 | S | S | SRS | RA004 | 0.341 | ☐ | 4.3 | 29 | 7.3 | 3 | -3 |
| 1104B | S | S | SRS | RA004 | 0.000 | ☑ | 3.8 | 29 | 16.8 | 3 | -13 |
| 1105 | S | S | SRS | RA004 | 0.007 | ☑ | 5.2 | 29 | 25.7 | 3 | -21 |
| 1105A | S | SR | SRS | RA004 | 0.203 | ☐ | 5.7 | 29 | 12.0 | 3 | -6 |
| 1106A | S | SR | SRS | RA004 | 0.060 | ☐ | 5.6 | 29 | 20.4 | 3 | -15 |
| 1107B | S | SR | SRS | RA004 | 0.050 | ☐ | 5.2 | 29 | 17.3 | 3 | -12 |
| 1109 | S | SR | SRS | RA004 | 0.006 | ☑ | 4.2 | 29 | 20.3 | 3 | -16 |
| 1109B | S | S | SRS | RA004 | 0.119 | ☐ | 4.4 | 29 | 10.1 | 3 | -6 |
| 1109E | S | SR | SRS | RA004 | 0.001 | ☑ | 4.1 | 29 | 27.8 | 3 | -24 |
| 1110 | S | SR | SRS | RA004 | 0.031 | ☑ | 6.8 | 29 | 34.1 | 3 | -27 |
| 1111 | S | SR | SRS | RA004 | 0.053 | ☐ | 4.4 | 29 | 15.9 | 3 | -11 |
| 1111B | S | SR | SRS | RA004 | 0.056 | ☐ | 4.4 | 29 | 12.1 | 3 | -8 |
| 1111E | S | SR | SRS | RA004 | 0.283 | ☐ | 8.5 | 29 | 18.2 | 3 | -10 |
| 1112 | S | SR | SRS | RA004 | 0.039 | ☑ | 5.6 | 29 | 23.6 | 3 | -18 |
| 1112A | S | SR | SRS | RA004 | 0.001 | ☑ | 4.1 | 29 | 33.6 | 3 | -29 |
| 1113 | S | SR | SRS | RA004 | 0.046 | ☑ | 5.7 | 29 | 25.7 | 3 | -20 |
| 1114A | S | SR | SRS | RA004 | 0.003 | ☑ | 4.1 | 29 | 29.2 | 3 | -25 |
| 1114B | S | SR | SRS | RA004 | 0.011 | ☑ | 5.3 | 29 | 37.2 | 3 | -32 |
| 1114C | S | SR | SRS | RA004 | 0.017 | ☑ | 5.9 | 29 | 37.2 | 3 | -31 |
| 1115 | S | SR | SRS | RA004 | 0.072 | ☐ | 4.9 | 29 | 17.4 | 3 | -12 |
| 1115A | S | SR | SRS | RA004 | 0.212 | ☐ | 5.4 | 29 | 11.9 | 3 | -7 |
| 1116 | S | SR | SRS | RA004 | 0.014 | ☑ | 6.2 | 29 | 30.5 | 3 | -24 |
| 1117A | S | SR | SRS | RA004 | 0.001 | ☑ | 3.9 | 29 | 29.2 | 3 | -25 |
| 1118A | S | SR | SRS | RA004 | 0.011 | ☑ | 5.9 | 29 | 30.3 | 3 | -24 |
| 1122 | S | SR | SRS | RA004 | 0.001 | ☑ | 4.4 | 29 | 26.8 | 3 | -22 |
| 1122A | S | SR | SRS | RA004 | 0.031 | ☑ | 4.5 | 29 | 14.7 | 3 | -10 |
| 1122B | S | SR | SRS | RA004 | 0.030 | ☑ | 4.6 | 29 | 18.2 | 3 | -14 |
| 1123 | S | SR | SRS | RA004 | 0.004 | ☑ | 5.1 | 29 | 39.0 | 3 | -34 |
| 1123A | S | SR | SRS | RA004 | 0.005 | ☑ | 6.4 | 29 | 46.4 | 3 | -40 |
| 1124 | S | SR | SRS | RA004 | 0.014 | ☑ | 5.5 | 29 | 26.2 | 3 | -21 |
| 1124B | S | SR | SRS | RA004 | 0.230 | ☐ | 8.9 | 29 | 22.7 | 3 | -14 |
| 1125A | S | SR | SRS | RA004 | 0.007 | ☑ | 5.3 | 29 | 31.8 | 3 | -27 |
| 1128A | S | SR | SRS | RA004 | 0.001 | ☑ | 7.8 | 29 | 90.4 | 3 | -83 |
| 1132 | S | SR | SRS | RA004 | 0.012 | ☑ | 5.1 | 28 | 27.9 | 3 | -23 |
| 1133A | S | SR | SRS | RA004 | 0.012 | ☑ | 6.3 | 29 | 48.3 | 3 | -42 |
| 1134 | S | SR | SRS | RA004 | 0.001 | ☑ | 5.5 | 29 | 91.8 | 3 | -86 |
| 1134A | S | SR | SRS | RA004 | 0.004 | ☑ | 5.9 | 29 | 54.5 | 3 | -49 |
| 1135A | S | SR | SRS | RA004 | 0.008 | ☑ | 6.6 | 29 | 56.4 | 3 | -50 |
| 1137 | S | P | SRS | RA004 | 0.065 | ☐ | 17.1 | 29 | 131.0 | 3 | -114 |
| 1138 | S | P | SRS | RA004 | 0.054 | ☐ | 31.4 | 29 | 277.9 | 3 | -246 |
| 1140A | S | P | SRS | RA004 | 0.055 | ☐ | 48.1 | 29 | 371.5 | 3 | -323 |

# Rainfall Statistics Summary: 48Hrs Cumulative

*From: 1/1/2011* *To: 5/31/2014*

*Report Area: NE3* *Wet/Dry Cutoff: 0.2*

| Station | Depth | Status | Strategy | NOAA | t-Statistic Probability | Exceed Criteria (t-Stats <0.05) | Dry Weather | | Wet Weather | | GeoMean Difference |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Geometric Mean | N | Geometric Mean | N | |
| 1100A | S | S | SRS | RA004 | 0.165 | ☐ | 3.3 | 25 | 4.9 | 7 | -2 |
| 1101 | S | S | SRS | RA004 | 0.175 | ☐ | 4.2 | 25 | 7.2 | 7 | -3 |
| 1101B | S | SR | SRS | RA004 | 0.168 | ☐ | 4.2 | 25 | 7.2 | 7 | -3 |
| 1102 | S | SR | SRS | RA004 | 0.089 | ☐ | 5.8 | 25 | 14.7 | 7 | -9 |
| 1103A | S | S | SRS | RA004 | 0.150 | ☐ | 4.6 | 25 | 8.3 | 7 | -4 |
| 1104 | S | S | SRS | RA004 | 0.456 | ☐ | 4.2 | 25 | 5.6 | 7 | -1 |
| 1104B | S | S | SRS | RA004 | 0.161 | ☐ | 3.9 | 25 | 6.2 | 7 | -2 |
| 1105 | S | S | SRS | RA004 | 0.091 | ☐ | 5.2 | 25 | 10.7 | 7 | -6 |
| 1105A | S | SR | SRS | RA004 | 0.608 | ☐ | 5.8 | 25 | 7.2 | 7 | -1 |
| 1106A | S | SR | SRS | RA004 | 0.299 | ☐ | 5.6 | 25 | 9.4 | 7 | -4 |
| 1107B | S | SR | SRS | RA004 | 0.189 | ☐ | 5.1 | 25 | 9.1 | 7 | -4 |
| 1109 | S | SR | SRS | RA004 | 0.071 | ☐ | 4.1 | 25 | 8.8 | 7 | -5 |
| 1109B | S | S | SRS | RA004 | 0.190 | ☐ | 4.3 | 25 | 7.0 | 7 | -3 |
| 1109E | S | SR | SRS | RA004 | 0.058 | ☐ | 4.1 | 25 | 9.2 | 7 | -5 |
| 1110 | S | SR | SRS | RA004 | 0.097 | ☐ | 6.5 | 25 | 15.8 | 7 | -9 |
| 1111 | S | SR | SRS | RA004 | 0.131 | ☐ | 4.3 | 25 | 8.7 | 7 | -4 |
| 1111B | S | SR | SRS | RA004 | 0.289 | ☐ | 4.4 | 25 | 6.6 | 7 | -2 |
| 1111E | S | SR | SRS | RA004 | 0.584 | ☐ | 8.6 | 25 | 11.4 | 7 | -3 |
| 1112 | S | SR | SRS | RA004 | 0.064 | ☐ | 5.3 | 25 | 13.1 | 7 | -8 |
| 1112A | S | SR | SRS | RA004 | 0.016 | ☑ | 3.9 | 25 | 12.1 | 7 | -8 |
| 1113 | S | SR | SRS | RA004 | 0.094 | ☐ | 5.4 | 25 | 13.2 | 7 | -8 |
| 1114A | S | SR | SRS | RA004 | 0.002 | ☑ | 3.6 | 25 | 15.0 | 7 | -11 |
| 1114B | S | SR | SRS | RA004 | 0.048 | ☑ | 5.0 | 25 | 15.1 | 7 | -10 |
| 1114C | S | SR | SRS | RA004 | 0.024 | ☑ | 5.4 | 25 | 18.4 | 7 | -13 |
| 1115 | S | SR | SRS | RA004 | 0.068 | ☐ | 4.5 | 25 | 11.2 | 7 | -7 |
| 1115A | S | SR | SRS | RA004 | 0.469 | ☐ | 5.4 | 25 | 7.5 | 7 | -2 |
| 1116 | S | SR | SRS | RA004 | 0.189 | ☐ | 6.2 | 25 | 11.7 | 7 | -5 |
| 1117A | S | SR | SRS | RA004 | 0.013 | ☑ | 3.7 | 25 | 11.3 | 7 | -8 |
| 1118A | S | SR | SRS | RA004 | 0.010 | ☑ | 5.3 | 25 | 17.0 | 7 | -12 |
| 1122 | S | SR | SRS | RA004 | 0.062 | ☐ | 4.4 | 25 | 9.6 | 7 | -5 |
| 1122A | S | SR | SRS | RA004 | 0.089 | ☐ | 4.4 | 25 | 8.5 | 7 | -4 |
| 1122B | S | SR | SRS | RA004 | 0.003 | ☑ | 4.0 | 25 | 14.3 | 7 | -10 |
| 1123 | S | SR | SRS | RA004 | 0.024 | ☑ | 4.8 | 25 | 15.2 | 7 | -10 |
| 1123A | S | SR | SRS | RA004 | 0.011 | ☑ | 5.8 | 25 | 20.8 | 7 | -15 |
| 1124 | S | SR | SRS | RA004 | 0.010 | ☑ | 4.9 | 25 | 15.5 | 7 | -11 |
| 1124B | S | SR | SRS | RA004 | 0.037 | ☑ | 7.6 | 25 | 23.3 | 7 | -16 |
| 1125A | S | SR | SRS | RA004 | 0.042 | ☑ | 5.0 | 25 | 13.4 | 7 | -8 |
| 1128A | S | SR | SRS | RA004 | 0.010 | ☑ | 7.2 | 25 | 29.9 | 7 | -23 |
| 1132 | S | SR | SRS | RA004 | 0.204 | ☐ | 5.2 | 25 | 10.3 | 6 | -5 |
| 1133A | S | SR | SRS | RA004 | 0.022 | ☑ | 5.7 | 25 | 21.5 | 7 | -16 |
| 1134 | S | SR | SRS | RA004 | 0.017 | ☑ | 5.2 | 25 | 22.2 | 7 | -17 |
| 1134A | S | SR | SRS | RA004 | 0.018 | ☑ | 5.5 | 25 | 20.2 | 7 | -15 |
| 1135A | S | SR | SRS | RA004 | 0.047 | ☑ | 6.3 | 25 | 19.9 | 7 | -14 |
| 1137 | S | P | SRS | RA004 | 0.119 | ☐ | 15.9 | 25 | 53.9 | 7 | -38 |
| 1138 | S | P | SRS | RA004 | 0.145 | ☐ | 29.8 | 25 | 96.7 | 7 | -67 |
| 1140A | S | P | SRS | RA004 | 0.235 | ☐ | 47.7 | 25 | 118.6 | 7 | -71 |

# *Rainfall Statistics Summary: 72Hrs Cumulative*

*From: 1/1/2011* *To: 5/31/2014*

*Report Area: NE3* *Wet/Dry Cutoff: 0.2*

| Station | Depth | Status | Strategy | NOAA | t-Statistic Probability | Exceed Criteria (t-Stats <0.05) | Dry Weather Geometric Mean | Dry Weather N | Wet Weather Geometric Mean | Wet Weather N | GeoMean Difference |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1100A | S | S | SRS | RA004 | 0.165 | ☐ | 3.3 | 25 | 4.9 | 7 | -2 |
| 1101 | S | S | SRS | RA004 | 0.175 | ☐ | 4.2 | 25 | 7.2 | 7 | -3 |
| 1101B | S | SR | SRS | RA004 | 0.168 | ☐ | 4.2 | 25 | 7.2 | 7 | -3 |
| 1102 | S | SR | SRS | RA004 | 0.089 | ☐ | 5.8 | 25 | 14.7 | 7 | -9 |
| 1103A | S | S | SRS | RA004 | 0.150 | ☐ | 4.6 | 25 | 8.3 | 7 | -4 |
| 1104 | S | S | SRS | RA004 | 0.456 | ☐ | 4.2 | 25 | 5.6 | 7 | -1 |
| 1104B | S | S | SRS | RA004 | 0.161 | ☐ | 3.9 | 25 | 6.2 | 7 | -2 |
| 1105 | S | S | SRS | RA004 | 0.091 | ☐ | 5.2 | 25 | 10.7 | 7 | -6 |
| 1105A | S | SR | SRS | RA004 | 0.608 | ☐ | 5.8 | 25 | 7.2 | 7 | -1 |
| 1106A | S | SR | SRS | RA004 | 0.299 | ☐ | 5.6 | 25 | 9.4 | 7 | -4 |
| 1107B | S | SR | SRS | RA004 | 0.189 | ☐ | 5.1 | 25 | 9.1 | 7 | -4 |
| 1109 | S | SR | SRS | RA004 | 0.071 | ☐ | 4.1 | 25 | 8.8 | 7 | -5 |
| 1109B | S | S | SRS | RA004 | 0.190 | ☐ | 4.3 | 25 | 7.0 | 7 | -3 |
| 1109E | S | SR | SRS | RA004 | 0.058 | ☐ | 4.1 | 25 | 9.2 | 7 | -5 |
| 1110 | S | SR | SRS | RA004 | 0.097 | ☐ | 6.5 | 25 | 15.8 | 7 | -9 |
| 1111 | S | SR | SRS | RA004 | 0.131 | ☐ | 4.3 | 25 | 8.7 | 7 | -4 |
| 1111B | S | SR | SRS | RA004 | 0.289 | ☐ | 4.4 | 25 | 6.6 | 7 | -2 |
| 1111E | S | SR | SRS | RA004 | 0.584 | ☐ | 8.6 | 25 | 11.4 | 7 | -3 |
| 1112 | S | SR | SRS | RA004 | 0.064 | ☐ | 5.3 | 25 | 13.1 | 7 | -8 |
| 1112A | S | SR | SRS | RA004 | 0.016 | ☑ | 3.9 | 25 | 12.1 | 7 | -8 |
| 1113 | S | SR | SRS | RA004 | 0.094 | ☐ | 5.4 | 25 | 13.2 | 7 | -8 |
| 1114A | S | SR | SRS | RA004 | 0.002 | ☑ | 3.6 | 25 | 15.0 | 7 | -11 |
| 1114B | S | SR | SRS | RA004 | 0.048 | ☑ | 5.0 | 25 | 15.1 | 7 | -10 |
| 1114C | S | SR | SRS | RA004 | 0.024 | ☑ | 5.4 | 25 | 18.4 | 7 | -13 |
| 1115 | S | SR | SRS | RA004 | 0.068 | ☐ | 4.5 | 25 | 11.2 | 7 | -7 |
| 1115A | S | SR | SRS | RA004 | 0.469 | ☐ | 5.4 | 25 | 7.5 | 7 | -2 |
| 1116 | S | SR | SRS | RA004 | 0.189 | ☐ | 6.2 | 25 | 11.7 | 7 | -5 |
| 1117A | S | SR | SRS | RA004 | 0.013 | ☑ | 3.7 | 25 | 11.3 | 7 | -8 |
| 1118A | S | SR | SRS | RA004 | 0.010 | ☑ | 5.3 | 25 | 17.0 | 7 | -12 |
| 1122 | S | SR | SRS | RA004 | 0.062 | ☐ | 4.4 | 25 | 9.6 | 7 | -5 |
| 1122A | S | SR | SRS | RA004 | 0.089 | ☐ | 4.4 | 25 | 8.5 | 7 | -4 |
| 1122B | S | SR | SRS | RA004 | 0.003 | ☑ | 4.0 | 25 | 14.3 | 7 | -10 |
| 1123 | S | SR | SRS | RA004 | 0.024 | ☑ | 4.8 | 25 | 15.2 | 7 | -10 |
| 1123A | S | SR | SRS | RA004 | 0.011 | ☑ | 5.8 | 25 | 20.8 | 7 | -15 |
| 1124 | S | SR | SRS | RA004 | 0.010 | ☑ | 4.9 | 25 | 15.5 | 7 | -11 |
| 1124B | S | SR | SRS | RA004 | 0.037 | ☑ | 7.6 | 25 | 23.3 | 7 | -16 |
| 1125A | S | SR | SRS | RA004 | 0.042 | ☑ | 5.0 | 25 | 13.4 | 7 | -8 |
| 1128A | S | SR | SRS | RA004 | 0.010 | ☑ | 7.2 | 25 | 29.9 | 7 | -23 |
| 1132 | S | SR | SRS | RA004 | 0.204 | ☐ | 5.2 | 25 | 10.3 | 6 | -5 |
| 1133A | S | SR | SRS | RA004 | 0.022 | ☑ | 5.7 | 25 | 21.5 | 7 | -16 |
| 1134 | S | SR | SRS | RA004 | 0.017 | ☑ | 5.2 | 25 | 22.2 | 7 | -17 |
| 1134A | S | SR | SRS | RA004 | 0.018 | ☑ | 5.5 | 25 | 20.2 | 7 | -15 |
| 1135A | S | SR | SRS | RA004 | 0.047 | ☑ | 6.3 | 25 | 19.9 | 7 | -14 |
| 1137 | S | P | SRS | RA004 | 0.119 | ☐ | 15.9 | 25 | 53.9 | 7 | -38 |
| 1138 | S | P | SRS | RA004 | 0.145 | ☐ | 29.8 | 25 | 96.7 | 7 | -67 |
| 1140A | S | P | SRS | RA004 | 0.235 | ☐ | 47.7 | 25 | 118.6 | 7 | -71 |

# D. Data Listing
January 1, 2011 to May 31, 2014

# *Shellfish Growing Water - Data Listing*

*New Jersey Department of Environmental Protection*

*Bureau of Marine Water Monitoring*

***Report Area:*** **NE3**

| *Station:* 1100A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 3.6 |
| *Est 90th (YR):* | 8.4 |
| *# Samples (YR):* | 32 |
| 0.0% > | *35* |
| *ShellClass:* | S |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 4.1 |
| 5/4/2011 | 4.1 |
| 6/13/2011 | 1.2 |
| 8/3/2011 | 1.5 |
| 9/28/2011 | 4.1 |
| 10/25/2011 | 7.0 |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 5.8 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 33.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 3.0 K |
| 1/15/2013 | 6.0 |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 3.0 K |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 6.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 12.0 |
| 5/12/2014 | 6.0 |
| 5/27/2014 | 3.0 |

| *Station:* 1101 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.7 |
| *Est 90th (YR):* | 15.3 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | S |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 4.1 |
| 5/4/2011 | 2.3 |
| 6/13/2011 | 5.8 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 63.0 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 |
| 8/1/2012 | 9.0 |
| 9/5/2012 | 33.0 |
| 9/14/2012 | 3.0 K |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 9.0 |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 24.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1101B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.7 |
| *Est 90th (YR):* | 14.9 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 9.6 |
| 5/4/2011 | 2.8 |
| 6/13/2011 | 9.6 |
| 8/3/2011 | 4.1 |
| 9/28/2011 | 2.8 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 17.7 |
| 2/8/2012 | 6.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 12.0 |
| 9/5/2012 | 36.0 |
| 9/14/2012 | 90.0 |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 3.0 K |
| 1/15/2013 | 6.0 |
| 3/12/2013 | 12.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 6.0 |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1102 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.1 |
| *Est 90th (YR):* | 36.5 |
| *# Samples (YR):* | 32 |
| 15.6% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 3.2 |
| 5/4/2011 | 25.9 |
| 6/13/2011 | 126.0 |
| 8/3/2011 | 9.6 |
| 9/28/2011 | 63.0 |
| 10/25/2011 | 10.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 25.9 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 9.0 |
| 9/5/2012 | 110.0 |
| 9/14/2012 | 55.0 |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 15.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 9.0 |
| 7/22/2013 | 70.0 |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 3.0 |

| *Station:* 1103A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.3 |
| *Est 90th (YR):* | 17.3 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | S |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 9.6 |
| 5/4/2011 | 5.8 |
| 6/13/2011 | 17.7 |
| 8/3/2011 | 1.5 |
| 9/28/2011 | 9.6 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 17.7 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 52.0 |
| 9/14/2012 | 73.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 6.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 3.0 K |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 6.0 |
| 1/16/2014 | 6.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 9.0 |
| 5/12/2014 | 9.0 |
| 5/27/2014 | 6.0 |

*Report Area:* **NE3**

| *Station:* 1104 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.5 |
| *Est 90th (YR):* | 14.3 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | S |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 17.7 |
| 5/4/2011 | 2.8 |
| 6/13/2011 | 17.7 |
| 8/3/2011 | 9.6 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 1.2 |
| 11/30/2011 | 2.0 |
| 2/8/2012 | 6.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 64.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 3.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 6.0 |
| 10/7/2013 | 9.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 12.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 9.0 |

| *Station:* 1104B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.3 |
| *Est 90th (YR):* | 11.5 |
| *# Samples (YR):* | 32 |
| 3.1% > | *35* |
| *ShellClass:* | S |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 5.8 |
| 5/4/2011 | 4.1 |
| 6/13/2011 | 2.8 |
| 8/3/2011 | 2.8 |
| 9/28/2011 | 4.1 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 17.7 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 45.0 |
| 9/14/2012 | 27.0 |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 6.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 6.0 |
| 7/22/2013 | 3.0 K |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 9.0 |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 9.0 |

| *Station:* 1105 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.1 |
| *Est 90th (YR):* | 22.0 |
| *# Samples (YR):* | 32 |
| 3.1% > | *35* |
| *ShellClass:* | S |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 1.5 |
| 5/4/2011 | 2.8 |
| 6/13/2011 | 17.7 |
| 8/3/2011 | 9.6 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 25.9 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 110.0 |
| 9/14/2012 | 15.0 |
| 10/1/2012 | 30.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 6.0 |
| 3/12/2013 | 6.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 21.0 |
| 10/7/2013 | 12.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 21.0 |
| 5/12/2014 | 6.0 |
| 5/27/2014 | 3.0 |

| *Station:* 1105A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.1 |
| *Est 90th (YR):* | 20.9 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 5.4 |
| 5/4/2011 | 5.8 |
| 6/13/2011 | 21.7 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 5.8 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 12.0 |
| 9/5/2012 | 100.0 |
| 9/14/2012 | 42.0 |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 3.0 K |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 6.0 |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 6.0 |
| 8/19/2013 | 27.0 |
| 10/7/2013 | 18.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 18.0 |
| 5/12/2014 | 6.0 |
| 5/27/2014 | 9.0 |

| *Station:* 1106A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.3 |
| *Est 90th (YR):* | 27.3 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.3 |
| 4/20/2011 | 2.3 |
| 5/4/2011 | 1.5 |
| 6/13/2011 | 9.6 |
| 8/3/2011 | 37.6 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 5.8 |
| 11/30/2011 | 17.7 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 27.0 |
| 9/5/2012 | 160.0 |
| 9/14/2012 | 77.0 |
| 10/1/2012 | 18.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 6.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 3.0 K |
| 8/19/2013 | 30.0 |
| 10/7/2013 | 9.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 6.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 9.0 |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 3.0 |

*Report Area:* **NE3**

| *Station:* 1107B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.8 |
| *Est 90th (YR):* | 21.5 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 17.7 |
| 6/13/2011 | 37.6 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 9.6 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 180.0 |
| 9/14/2012 | 15.0 |
| 10/1/2012 | 21.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 K |
| 8/19/2013 | 6.0 |
| 10/7/2013 | 12.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 15.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 9.0 |

| *Station:* 1109 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.9 |
| *Est 90th (YR):* | 17.0 |
| *# Samples (YR):* | 32 |
| 3.1% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 9.6 |
| 5/4/2011 | 5.8 |
| 6/13/2011 | 17.7 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 33.8 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 21.0 |
| 9/5/2012 | 83.0 |
| 9/14/2012 | 18.0 |
| 10/1/2012 | 3.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 18.0 |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 3.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1109B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.8 |
| *Est 90th (YR):* | 14.6 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | S |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 3.2 |
| 4/20/2011 | 4.1 |
| 5/4/2011 | 17.7 |
| 6/13/2011 | 14.9 |
| 8/3/2011 | 2.8 |
| 9/28/2011 | 5.8 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 4.1 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 6.0 |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 9.0 |
| 9/5/2012 | 83.0 |
| 9/14/2012 | 36.0 |
| 10/1/2012 | 3.0 K |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 12.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 12.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 |

| *Station:* 1109E | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.9 |
| *Est 90th (YR):* | 17.5 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 |
| 4/20/2011 | 9.6 |
| 5/4/2011 | 4.1 |
| 6/13/2011 | 9.6 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 4.1 |
| 11/30/2011 | 37.6 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 190.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 3.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 9.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 9.0 |

| *Station:* 1110 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.9 |
| *Est 90th (YR):* | 39.3 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 5.8 |
| 5/4/2011 | 9.6 |
| 6/13/2011 | 234.3 L |
| 8/3/2011 | 9.6 |
| 9/28/2011 | 5.8 |
| 10/25/2011 | 7.0 |
| 11/15/2011 | 4.1 |
| 11/30/2011 | 63.0 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 18.0 |
| 9/5/2012 | 210.0 |
| 9/14/2012 | 21.0 |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 61.0 |
| 8/19/2013 | 33.0 |
| 10/7/2013 | 21.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 6.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 6.0 |
| 5/27/2014 | 6.0 |

*Report Area:* **NE3**

| *Station:* 1111 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.0 |
| *Est 90th (YR):* | 20.3 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 2.3 |
| 5/4/2011 | 126.0 |
| 6/13/2011 | 17.7 |
| 8/3/2011 | 1.2 K |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 9.6 |
| 2/8/2012 | 12.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 140.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 12.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 6.0 |
| 8/19/2013 | 9.0 |
| 10/7/2013 | 3.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 9.0 |

| *Station:* 1111B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.8 |
| *Est 90th (YR):* | 14.9 |
| *# Samples (YR):* | 32 |
| 3.1% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 14.9 |
| 5/4/2011 | 8.9 |
| 6/13/2011 | 5.8 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 9.6 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 9.6 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 61.0 |
| 9/14/2012 | 27.0 |
| 10/1/2012 | 21.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 6.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 3.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 21.0 |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1111E | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 9.2 |
| *Est 90th (YR):* | 39.7 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 5.4 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 63.0 |
| 6/13/2011 | 37.6 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 23.0 |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 9.6 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 210.0 |
| 9/14/2012 | 18.0 |
| 10/1/2012 | 12.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 12.0 |
| 4/4/2013 | 6.0 |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 6.0 |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 21.0 |
| 11/21/2013 | 9.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 12.0 |
| 4/3/2014 | 9.0 |
| 5/12/2014 | 24.0 |
| 5/27/2014 | 140.0 |

| *Station:* 1112 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.4 |
| *Est 90th (YR):* | 28.3 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 1.5 |
| 5/4/2011 | 9.6 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 7.0 |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 25.9 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 170.0 |
| 9/14/2012 | 6.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 9.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 9.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 6.0 |
| 7/22/2013 | 21.0 |
| 8/19/2013 | 15.0 |
| 10/7/2013 | 67.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1112A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.0 |
| *Est 90th (YR):* | 21.1 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 4.1 |
| 6/13/2011 | 37.6 |
| 8/3/2011 | 1.5 |
| 9/28/2011 | 13.1 |
| 10/25/2011 | 27.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 63.0 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 200.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 21.0 |
| 12/12/2012 | 3.0 K |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 12.0 |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

*Report Area:* **NE3**

| *Station:* 1113 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.5 |
| *Est 90th (YR):* | 32.8 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.3 |
| 4/20/2011 | 1.5 |
| 5/4/2011 | 5.8 |
| 6/13/2011 | 25.9 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 63.0 |
| 10/25/2011 | 13.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 37.6 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 150.0 |
| 9/14/2012 | 21.0 |
| 10/1/2012 | 21.0 |
| 12/12/2012 | 18.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 12.0 |
| 8/19/2013 | 12.0 |
| 10/7/2013 | 130.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 |

| *Station:* 1114A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.9 |
| *Est 90th (YR):* | 21.7 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 1.2 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 1.2 K |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 37.6 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 12.0 |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 220.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 15.0 |
| 12/12/2012 | 12.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 9.0 |
| 4/4/2013 | 6.0 |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 6.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 3.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1114B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.4 |
| *Est 90th (YR):* | 33.9 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 5.8 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 1.5 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 17.7 |
| 2/8/2012 | 6.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 970.0 |
| 9/14/2012 | 21.0 |
| 10/1/2012 | 15.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 21.0 |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 18.0 |
| 10/7/2013 | 21.0 |
| 11/21/2013 | 9.0 |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1114C | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.0 |
| *Est 90th (YR):* | 37.0 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 17.7 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 2.8 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 13.0 |
| 11/15/2011 | 1.2 |
| 11/30/2011 | 17.7 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 18.0 |
| 9/5/2012 | 970.0 |
| 9/14/2012 | 3.0 K |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 24.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 9.0 |
| 7/22/2013 | 6.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 18.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 9.0 |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 6.0 |
| 5/12/2014 | 6.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1115 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.5 |
| *Est 90th (YR):* | 24.4 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 1.5 |
| 5/4/2011 | 5.8 |
| 6/13/2011 | 25.9 |
| 8/3/2011 | 2.3 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 5.8 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 24.0 |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 300.0 |
| 9/14/2012 | 9.0 |
| 10/1/2012 | 27.0 |
| 12/12/2012 | 9.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 9.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 18.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 6.0 |
| 4/3/2014 | 6.0 |
| 5/12/2014 | 9.0 |
| 5/27/2014 | 3.0 K |

*Report Area:* **NE3**

| *Station:* 1115A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.8 |
| *Est 90th (YR):* | 22.0 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 4.1 |
| 5/4/2011 | 17.7 |
| 6/13/2011 | 9.6 |
| 8/3/2011 | 2.3 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 1.5 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 130.0 |
| 9/14/2012 | 15.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 9.0 |
| 1/15/2013 | 9.0 |
| 3/12/2013 | 6.0 |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 12.0 |
| 10/7/2013 | 12.0 |
| 11/21/2013 | 36.0 |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 9.0 |
| 5/27/2014 | 3.0 |

| *Station:* 1116 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.2 |
| *Est 90th (YR):* | 29.3 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 17.7 |
| 4/20/2011 | 2.3 |
| 5/4/2011 | 5.8 |
| 6/13/2011 | 9.6 |
| 8/3/2011 | 1.5 |
| 9/28/2011 | 59.7 |
| 10/25/2011 | 7.0 |
| 11/15/2011 | 2.3 |
| 11/30/2011 | 9.6 |
| 2/8/2012 | 6.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 15.0 |
| 9/5/2012 | 330.0 |
| 9/14/2012 | 15.0 |
| 10/1/2012 | 21.0 |
| 12/12/2012 | 12.0 |
| 1/15/2013 | 9.0 |
| 3/12/2013 | 6.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 18.0 |
| 8/19/2013 | 15.0 |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 15.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1117A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 4.8 |
| *Est 90th (YR):* | 18.8 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 2.3 |
| 5/4/2011 | 3.2 |
| 6/13/2011 | 17.7 |
| 8/3/2011 | 2.8 |
| 9/28/2011 | 8.9 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 37.6 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 9.0 |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 220.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 3.0 K |
| 12/12/2012 | 3.0 K |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 33.0 |
| 10/7/2013 | 18.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 6.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 |

| *Station:* 1118A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.9 |
| *Est 90th (YR):* | 27.8 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 3.2 |
| 5/4/2011 | 17.7 |
| 6/13/2011 | 55.3 |
| 8/3/2011 | 9.6 |
| 9/28/2011 | 5.8 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 92.9 |
| 2/8/2012 | 6.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 30.0 |
| 9/5/2012 | 100.0 |
| 9/14/2012 | 6.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 6.0 |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 18.0 |
| 10/7/2013 | 9.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 15.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 24.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1122 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.2 |
| *Est 90th (YR):* | 18.5 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 4.1 |
| 4/20/2011 | 1.5 |
| 5/4/2011 | 5.4 |
| 6/13/2011 | 14.9 |
| 8/3/2011 | 1.5 |
| 9/28/2011 | 9.6 |
| 10/25/2011 | 10.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 37.6 |
| 2/8/2012 | 15.0 |
| 3/21/2012 | 9.0 |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 170.0 |
| 9/14/2012 | 6.0 |
| 10/1/2012 | 18.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 6.0 |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 3.0 K |

*Report Area:* **NE3**

| *Station:* 1122A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.0 |
| *Est 90th (YR):* | 16.2 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 5.8 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 2.8 |
| 6/13/2011 | 36.3 |
| 8/3/2011 | 1.5 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 10.0 |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 9.6 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 110.0 |
| 9/14/2012 | 6.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 3.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 9.0 |
| 10/7/2013 | 21.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 9.0 |

| *Station:* 1122B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 5.2 |
| *Est 90th (YR):* | 20.3 |
| *# Samples (YR):* | 32 |
| 6.3% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 9.6 |
| 4/20/2011 | 2.3 |
| 5/4/2011 | 9.6 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 1.2 K |
| 9/28/2011 | 14.9 |
| 10/25/2011 | 7.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 9.6 |
| 2/8/2012 | 12.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 3.0 K |
| 9/5/2012 | 210.0 |
| 9/14/2012 | 3.0 |
| 10/1/2012 | 12.0 |
| 12/12/2012 | 18.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 6.0 |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 K |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 3.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 6.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 6.0 |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1123 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.2 |
| *Est 90th (YR):* | 29.4 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 9.6 |
| 6/13/2011 | 59.7 |
| 8/3/2011 | 2.8 |
| 9/28/2011 | 36.3 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 59.7 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 330.0 |
| 9/14/2012 | 15.0 |
| 10/1/2012 | 15.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 6.0 |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 9.0 |
| 10/7/2013 | 15.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 6.0 |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 |

| *Station:* 1123A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.7 |
| *Est 90th (YR):* | 36.0 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 14.9 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 25.9 |
| 10/25/2011 | 27.0 |
| 11/15/2011 | 2.3 |
| 11/30/2011 | 63.0 |
| 2/8/2012 | 6.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 15.0 |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 530.0 |
| 9/14/2012 | 18.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 15.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 6.0 |
| 7/22/2013 | 12.0 |
| 8/19/2013 | 6.0 |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 6.0 |
| 4/3/2014 | 3.0 |
| 5/12/2014 | 9.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1124 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.3 |
| *Est 90th (YR):* | 25.1 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 4.1 |
| 5/4/2011 | 37.6 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 5.8 |
| 10/25/2011 | 10.0 |
| 11/15/2011 | 4.1 |
| 11/30/2011 | 37.6 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 15.0 |
| 9/5/2012 | 160.0 |
| 9/14/2012 | 3.0 K |
| 10/1/2012 | 15.0 |
| 12/12/2012 | 21.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 9.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 12.0 |
| 8/19/2013 | 9.0 |
| 10/7/2013 | 3.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 3.0 K |

*Report Area:* **NE3**

| *Station:* 1124B | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 9.7 |
| *Est 90th (YR):* | 49.3 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 5.8 |
| 4/20/2011 | 1.5 |
| 5/4/2011 | 14.9 |
| 6/13/2011 | 234.3 |
| 8/3/2011 | 4.1 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 53.0 |
| 11/15/2011 | 8.9 |
| 11/30/2011 | 17.7 |
| 2/8/2012 | 33.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 12.0 |
| 9/5/2012 | 220.0 |
| 9/14/2012 | 6.0 |
| 10/1/2012 | 45.0 |
| 12/12/2012 | 30.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 9.0 |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 |
| 7/22/2013 | 12.0 |
| 8/19/2013 | 24.0 |
| 10/7/2013 | 27.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 6.0 |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 15.0 |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1125A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.2 |
| *Est 90th (YR):* | 26.7 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.8 |
| 4/20/2011 | 2.3 |
| 5/4/2011 | 36.3 |
| 6/13/2011 | 17.7 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 4.1 |
| 10/25/2011 | 10.0 |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 59.7 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 18.0 |
| 9/5/2012 | 180.0 |
| 9/14/2012 | 3.0 K |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 15.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 73.0 |
| 8/19/2013 | 15.0 |
| 10/7/2013 | 6.0 |
| 11/21/2013 | 3.0 |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 6.0 |

| *Station:* 1128A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 9.9 |
| *Est 90th (YR):* | 54.5 |
| *# Samples (YR):* | 32 |
| 18.8% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 9.6 |
| 5/4/2011 | 9.6 |
| 6/13/2011 | 59.7 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 4.1 |
| 10/25/2011 | 17.0 |
| 11/15/2011 | 5.8 |
| 11/30/2011 | 234.3 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 15.0 |
| 8/1/2012 | 36.0 |
| 9/5/2012 | 350.0 |
| 9/14/2012 | 3.0 K |
| 10/1/2012 | 52.0 |
| 12/12/2012 | 18.0 |
| 1/15/2013 | 9.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 6.0 |
| 7/22/2013 | 12.0 |
| 8/19/2013 | 67.0 |
| 10/7/2013 | 21.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 9.0 |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 18.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1132 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 6.0 |
| *Est 90th (YR):* | 26.1 |
| *# Samples (YR):* | 31 |
| 12.9% > | *34* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 2.3 |
| 4/20/2011 | 1.5 |
| 5/4/2011 | 9.6 |
| 8/3/2011 | 2.8 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 87.0 |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 36.3 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 200.0 |
| 9/14/2012 | 6.0 |
| 10/1/2012 | 6.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 6.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 3.0 K |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 9.0 |
| 10/7/2013 | 33.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 6.0 |
| 5/12/2014 | 3.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1133A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.7 |
| *Est 90th (YR):* | 44.7 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 4.1 |
| 4/20/2011 | 4.1 |
| 5/4/2011 | 2.8 |
| 6/13/2011 | 234.3 L |
| 8/3/2011 | 17.7 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 17.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 37.6 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 3.0 K |
| 8/1/2012 | 6.0 |
| 9/5/2012 | 1,000.0 |
| 9/14/2012 | 12.0 |
| 10/1/2012 | 9.0 |
| 12/12/2012 | 9.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 6.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 12.0 |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 12.0 |
| 10/7/2013 | 21.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 6.0 |
| 5/27/2014 | 3.0 K |

*Report Area:* **NE3**

| *Station:* 1134 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.2 |
| *Est 90th (YR):* | 45.5 |
| *# Samples (YR):* | 32 |
| 9.4% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 9.6 |
| 4/20/2011 | 1.2 |
| 5/4/2011 | 17.7 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 17.7 |
| 9/28/2011 | 17.7 |
| 10/25/2011 | 3.0 |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 234.3 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 1,100.0 |
| 9/14/2012 | 12.0 |
| 10/1/2012 | 15.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 3.0 |
| 5/28/2013 | 15.0 |
| 7/22/2013 | 3.0 |
| 8/19/2013 | 3.0 |
| 10/7/2013 | 12.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 9.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1134A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 7.3 |
| *Est 90th (YR):* | 39.6 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 5.8 |
| 4/20/2011 | 2.8 |
| 5/4/2011 | 9.6 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 17.7 |
| 9/28/2011 | 59.7 |
| 10/25/2011 | 3.0 K |
| 11/15/2011 | 1.2 K |
| 11/30/2011 | 110.3 |
| 2/8/2012 | 3.0 |
| 3/21/2012 | 3.0 K |
| 4/17/2012 | 6.0 |
| 8/1/2012 | 15.0 |
| 9/5/2012 | 490.0 |
| 9/14/2012 | 12.0 |
| 10/1/2012 | 12.0 |
| 12/12/2012 | 15.0 |
| 1/15/2013 | 3.0 K |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 21.0 |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 3.0 K |
| 10/7/2013 | 12.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 K |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 3.0 K |
| 5/27/2014 | 3.0 K |

| *Station:* 1135A | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 8.1 |
| *Est 90th (YR):* | 46.7 |
| *# Samples (YR):* | 32 |
| 12.5% > | *35* |
| *ShellClass:* | SR |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 K |
| 4/20/2011 | 4.1 |
| 5/4/2011 | 17.7 |
| 6/13/2011 | 63.0 |
| 8/3/2011 | 5.8 |
| 9/28/2011 | 37.6 |
| 10/25/2011 | 10.0 |
| 11/15/2011 | 2.8 |
| 11/30/2011 | 59.7 |
| 2/8/2012 | 6.0 |
| 3/21/2012 | 3.0 |
| 4/17/2012 | 9.0 |
| 8/1/2012 | 3.0 |
| 9/5/2012 | 1,000.0 |
| 9/14/2012 | 27.0 |
| 10/1/2012 | 33.0 |
| 12/12/2012 | 6.0 |
| 1/15/2013 | 3.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 3.0 K |
| 5/28/2013 | 24.0 |
| 7/22/2013 | 3.0 K |
| 8/19/2013 | 30.0 |
| 10/7/2013 | 9.0 |
| 11/21/2013 | 3.0 K |
| 12/6/2013 | 3.0 K |
| 1/16/2014 | 3.0 |
| 3/18/2014 | 6.0 |
| 4/3/2014 | 3.0 K |
| 5/12/2014 | 9.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1137 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 20.7 |
| *Est 90th (YR):* | 214.6 |
| *# Samples (YR):* | 32 |
| 31.3% > | *35* |
| *ShellClass:* | P |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.5 |
| 4/20/2011 | 17.7 |
| 5/4/2011 | 14.9 |
| 6/13/2011 | 1,460.5 L |
| 8/3/2011 | 17.7 |
| 9/28/2011 | 36.3 |
| 10/25/2011 | 23.0 |
| 11/15/2011 | 1.5 |
| 11/30/2011 | 234.3 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 45.0 |
| 4/17/2012 | 12.0 |
| 8/1/2012 | 670.0 |
| 9/5/2012 | 1,600.0 |
| 9/14/2012 | 21.0 |
| 10/1/2012 | 48.0 |
| 12/12/2012 | 15.0 |
| 1/15/2013 | 6.0 |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 K |
| 4/9/2013 | 9.0 |
| 5/28/2013 | 140.0 |
| 7/22/2013 | 21.0 |
| 8/19/2013 | 100.0 |
| 10/7/2013 | 83.0 |
| 11/21/2013 | 24.0 |
| 12/6/2013 | 6.0 |
| 1/16/2014 | 9.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 9.0 |
| 5/12/2014 | 15.0 |
| 5/27/2014 | 3.0 K |

| *Station:* 1138 | *Depth:* S |
|---|---|
| *Geo Mean (YR):* | 38.5 |
| *Est 90th (YR):* | 424.8 |
| *# Samples (YR):* | 32 |
| 50.0% > | *35* |
| *ShellClass:* | P |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 1.2 |
| 4/20/2011 | 9.6 |
| 5/4/2011 | 110.3 |
| 6/13/2011 | 785.6 L |
| 8/3/2011 | 59.7 |
| 9/28/2011 | 36.3 |
| 10/25/2011 | 27.0 |
| 11/15/2011 | 5.8 |
| 11/30/2011 | 392.9 |
| 2/8/2012 | 9.0 |
| 3/21/2012 | 12.0 |
| 4/17/2012 | 150.0 |
| 8/1/2012 | 1,000.0 |
| 9/5/2012 | 2,600.0 |
| 9/14/2012 | 42.0 |
| 10/1/2012 | 55.0 |
| 12/12/2012 | 130.0 |
| 1/15/2013 | 21.0 |
| 3/12/2013 | 3.0 K |
| 4/4/2013 | 9.0 |
| 4/9/2013 | 15.0 |
| 5/28/2013 | 1,200.0 |
| 7/22/2013 | 9.0 |
| 8/19/2013 | 93.0 |
| 10/7/2013 | 160.0 |
| 11/21/2013 | 39.0 |
| 12/6/2013 | 6.0 |
| 1/16/2014 | 12.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 30.0 |
| 5/12/2014 | 83.0 |
| 5/27/2014 | 12.0 |

*Station:* 1140A *Depth:* S

| | |
|---|---|
| *Geo Mean (YR):* | 58.2 |
| *Est 90th (YR):* | 560.7 |
| *# Samples (YR):* | 32 |
| 65.6% > | *35* |
| *ShellClass:* | P |

| *Date* | *Results* |
|---|---|
| 3/3/2011 | 36.3 |
| 4/20/2011 | 17.7 |
| 5/4/2011 | 392.9 |
| 6/13/2011 | 1,460.5 L |
| 8/3/2011 | 36.3 |
| 9/28/2011 | 161.2 |
| 10/25/2011 | 57.0 |
| 11/15/2011 | 17.7 |
| 11/30/2011 | 392.9 |
| 2/8/2012 | 3.0 K |
| 3/21/2012 | 27.0 |
| 4/17/2012 | 39.0 |
| 8/1/2012 | 830.0 |
| 9/5/2012 | 1,500.0 |
| 9/14/2012 | 350.0 |
| 10/1/2012 | 110.0 |
| 12/12/2012 | 70.0 |
| 1/15/2013 | 87.0 |
| 3/12/2013 | 3.0 |
| 4/4/2013 | 3.0 |
| 4/9/2013 | 9.0 |
| 5/28/2013 | 1,000.0 |
| 7/22/2013 | 39.0 |
| 8/19/2013 | 100.0 |
| 10/7/2013 | 190.0 |
| 11/21/2013 | 48.0 |
| 12/6/2013 | 12.0 |
| 1/16/2014 | 21.0 |
| 3/18/2014 | 3.0 K |
| 4/3/2014 | 30.0 |
| 5/12/2014 | 97.0 |
| 5/27/2014 | 61.0 |

# E. Marina Map Key

## MARINA FACILITIES LOCATED ON THE SHREWSBURY RIVER

| Map Key | Marina Name | Estimate # of Slips |
|---|---|---|
| 0 | Breakwater Cove Condominiums | 25 |
| 1 | Weston's Marina | 28 |
| 2 | Wharfside Manor Condos | 79 |
| 3 | Atlantis Yacht Club | 55 |
| 4 | Channel Club Marina | 146 |
| 5 | Monmouth Sailing Center | 135 |
| 6 | Pattern Point Yacht | 75 |
| 7 | Long Branch Ice Boat | 60 |
| 8 | Mariners Emporium | 78 |
| 9 | Marina Bay Condos | 72 |
| 10 | Sea Winds Condo | 50 |
| 11 | Pleasure Bay Marina | 90 |
| 12 | Rumson Country Club | 33 |
| 13 | Oceanport Landing | 85 |
| 14 | The Waterways Condos | 30 |
| 15 | Fort Monmouth Marina | 73 |
| 16 | Bridgewater Townhomes | 10 |
| 17 | Carriage House Marina | 37 |
| 18 | Cove Sail Marina | 65 |
| 19 | Chris Landing Condos | 50 |
| 20 | Anglers Marina | 54 |
| 21 | Surfside Marina | 55 |
| 22 | Trade Winds Condos | 20 |
| 23 | Fountains Condos | 50 |
| 24 | Navesink Marina | 115 |

# F. Shoreline Survey Reports

**SHORELINE SURVEY AREA** Shrewsbury River NE3 Boat ☐ Land ☑ Air ☐

**SURVEYOR:** Tracy Fay **DATE:** 4/14/11 **TIME:** 1pm

**WEATHER CONDITIONS:** Sunny **TEMPERATURE:** ~56

**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.**

At least 4 new homes (or rebuilt homes).

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

Ducks

**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.):**

Garbage and debris at low tide.
Some roadwork - couldn't tell if water or sewer lines.
Minimal algae noted in tributary.

Insert Photos:


**SHORELINE SURVEY AREA** Shrewsbury River NE3 Boat ☑ Land ☐ Air ☐

**SURVEYOR:** Tracy Fay **DATE:** 9/22/11 **TIME:** 10am

**WEATHER CONDITIONS:** Partially Cloudy **TEMPERATURE:** ~64

**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.**

No.

**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.):**

Out with marine police and Gary Wolf.

Insert Photos:


**SHORELINE SURVEY AREA** NE3 Shrewsbury River  Boat ☑ Land ☐ Air ☐

**SURVEYOR:** Fay/Nguyen/Wolf/Scott **DATE:** 5/28/2014 **TIME:** 10am-3pm

**WEATHER CONDITIONS:** overcast, rainy **TEMPERATURE:** 62

**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.**

Yes. Rebuilding from Superstorm Sandy, and many homes that have not been repaired also remain.

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

Some ducks on Gunning Island.

**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.):**

No signs marking the Seasonal area.
Check into the depuration lot numbering for the Seasonal portion of the Shrewsbury Resource on northern portion of Gunning Island.

Insert Photos:

Seasonal Area

Residential

Wildlife

Reconstruction

Gunning Island

Storm Water Outfalls