Estuary 14: East Lyme / Waterford

Watershed Summary

WATERSHED DESCRIPTION AND MAPS

The East Lyme/Waterford Estuary (Estuary 14) covers an area of approximately 8,494 acres in southeastern Connecticut. The impaired segments are located in the eastern portion of Long Island Sound (LIS). Most of the impaired segments in this summary are located in the municipalities of East Lyme and Waterford, CT

The East Lyme/Waterford Estuary includes eleven segments impaired for direct shellfish harvesting due to elevated bacteria levels. These segments were assessed by Connecticut Department of Energy and Environmental Protection (CT DEEP) and included in the CT 2012 303(d) list of impaired waterbodies. Some other segments in the estuary are currently unassessed as of the writing of this document. This does not mean there are no potential issues on these segments, but indicates a lack of current data to evaluate the segments as part of the assessment process. An excerpt of the Integrated Water Quality Report (IWQR) is included in Table 1 (CT DEEP, 2012).

Impaired Segments

Segment 1: LIS EB Inner – Jordan cove (CT-E1_019) is part of the inner estuary, Jordan Cove from outlet at Pleasure Beach, upstream past RR crossing, to Saltwater limit at outlet dam of Jordan Mill Pond, adjacent to Route 156, Waterford. Segment 2: LIS EB Inner – Niantic River (mouth) (CT-E1_020) is part of the inner estuary, Niantic River (Inner Niantic Bay) from outlet at Route 156 and RR crossing, upstream to saltwater limit in Banning Cove (between Route 1 crossing and I95/I395), East Lyme/Waterford. Segment 3: LIS EB Inner – Pattagansett River (mouth) (CT-E1_021) is part of the inner estuary, Pattagansett River from outlet at RR crossing, upstream to saltwater limit at Route 156 crossing, East Lyme.

Segments 4 – 8 extend from the shoreline to approximately 1,000 feet offshore in East Lyme and Waterford, CT. Segment 4: LIS EB Shore -

Impaired Segment Facts

Impaired Segments, Classifications, and Areas (square miles):

Segment 1: LIS EB Inner - Jordan Cove (*CT-E1_019*); SA; 0.19

Segment 2: LIS EB Inner - Niantic River (mouth) (*CT-E1_020*); SA; 1.30

Segment 3: LIS EB Inner - Pattagansett River (mouth) (*CT-E1_021*), SA; 0.05

Segment 4: LIS EB Shore - Outer Jordan Cove (*CT-E2_012*); SA; 0.46

Segment 5: LIS EB Shore - Niantic Bay (East) (*CT-E2_013*); SA: 0.44

Segment 6: LIS EB Shore - Niantic Bay (West) (*CT-E2_014*); SA: 0.30

Segment 7: LIS EB Shore - Niantic Bay (Black Pt) (*CT-E2_015*); SA: 0.55

Segment 8: LIS EB Shore - Pattagansett River Mouth (*CT-E2_016*); SA: 0.32

Segment 9: LIS EB Midshore - Niantic Bay (*CT-E3_006*); SA: 6.18

Segment 10: LIS EB Midshore - East Lyme, Rocky Neck (*CT-E3_007*); SA: 2.93

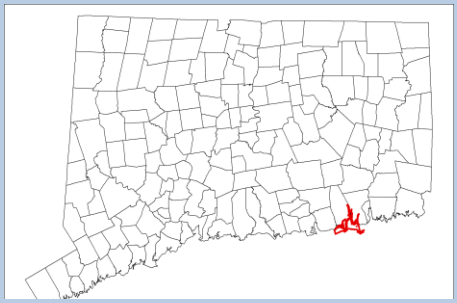
Segment 11: LIS EB Inner – Bride Brook- East Lyme (CT-E1_022); SA 0.29

Municipalities: East Lyme and Waterford

Designated Use Impairments: Shellfish, Recreation

MS4 Applicable? Yes

Applicable Season: Recreation Season (May 1 to September 30),Year Round for Shellfish Uses



Outer Jordan Cove (CT-E2_012) is located in Waterford from Millstone Point to SB/SA water quality boundary at Magonk Point, and includes waters affected by Millstone Power Plant. Segment 5: LIS EB Shore - Niantic Bay (East) (CT-E2_013) is located in Waterford from Smith Avenue at junction with Route 156 to Millstone Point, and includes waters affected by Millstone Power Plant. Segment 6: LIS EB Shore - Niantic Bay (West) (CT-E2_014) is located in East Lyme from Pond Point to Smith Avenue at junction with Route 156, and includes waters affected by Millstone Power Plant. Segment 7: LIS EB Shore - Niantic Bay (Black Pt) (CT-E2_015) is located in East Lyme from Point East of Griswald Island, past Black Point to Pond Point in Niantic Bay. Segment 8: LIS EB Shore - Pattagansett River Mouth (CT-E2_016) is located in East Lyme from Seal Rock (Great Neck) to Point East of Griswald Island (entire mouth of Pattagansett River, including area around Watts Island).

Segments 9 and 10 in LIS begin approximately 1,000 feet offshore out to the 50-foot contour line. Segment 9: LIS EB Midshore - Niantic Bay (CT-E3_006) is located from 1000 feet offshore Black Point, East Lyme to Magonk Point (SB/SA water quality boundary) Waterford, out to 50 ft contour (Niantic Bay). Segment 10: LIS EB Midshore - East Lyme, Rocky Neck (CT-E3_007) is located from approximately 1000 ft offshore Hatchett Point to Black Point, East Lyme, out to 50 ft contour (offshore of mouths of Fourmile and Pattagansett Rivers).

Segment 11 is Bride Brook inner estuary located in Rocky Neck State Park. CT-E1_022 is the main stem of the brook from its outlet at the railroad crossing, eastern end of Rocky Neck State Park, upstream to saltwater limit at Route 156 crossing, East Lyme.

These impaired segments (Segments 1 – 11) of the East Lyme/Waterford Estuary all have a water quality classification of SA. Designated uses include shellfish harvesting for direct human consumption, recreation, habitat for marine fish and other aquatic life and wildlife, industrial water supply, and navigation. These segments of the estuary are impaired due to elevated bacteria concentrations, affecting the designated use of direct shellfishing or as in segment 11, recreation.

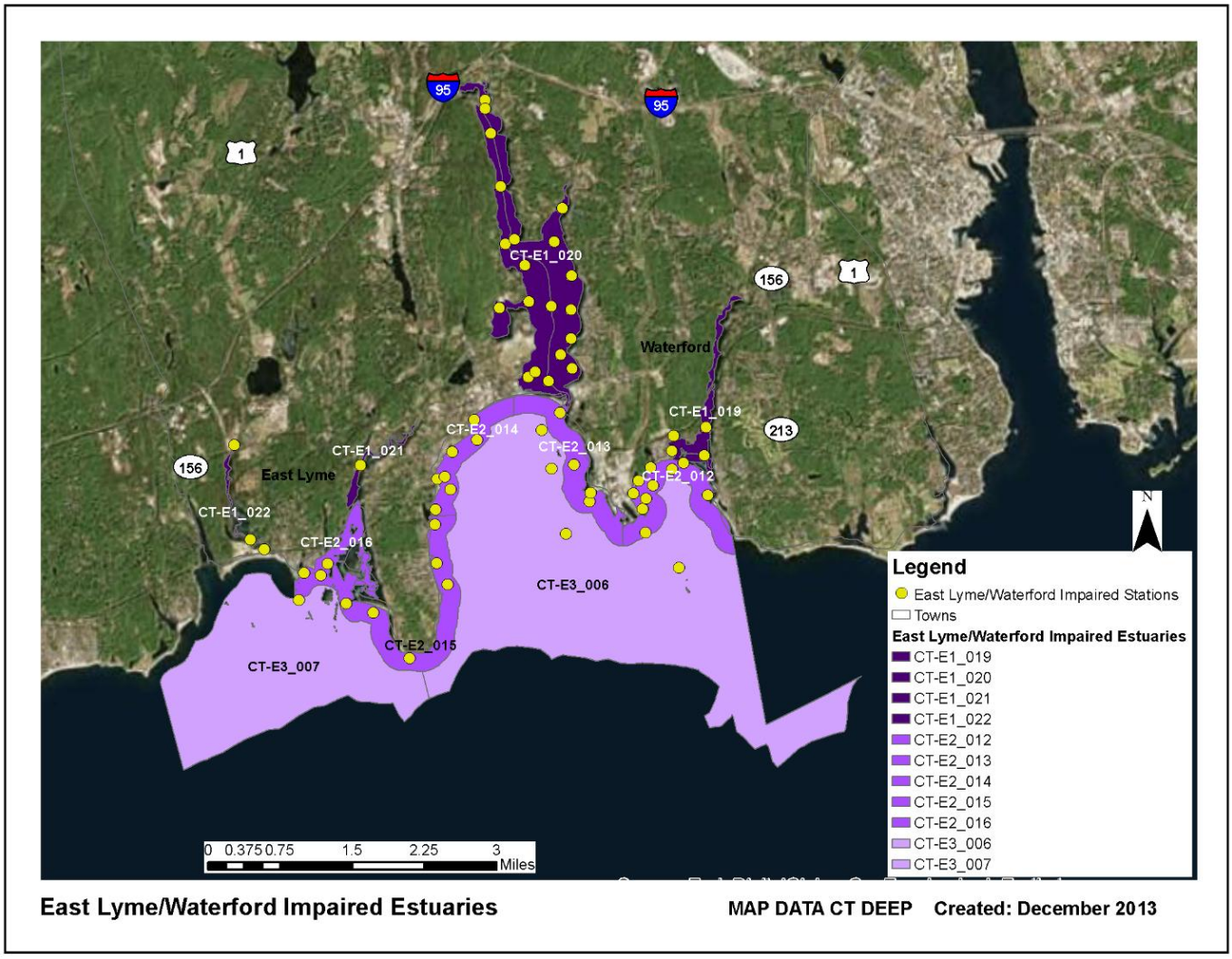
Table 1: Impaired segments in the East Lyme/Waterford Estuary from Connecticut 2012 IWQR

Waterbody ID	Waterbody Name	Location	Square Miles	Marine Aquatic Life	Recreation	Fish Consumption	Direct Shellfish	Commercial Shellfish
CT-E1_019	LIS EB Inner - Jordan Cove, Waterford	Eastern portion of LIS, Inner Estuary, Jordan Cove from outlet at Pleasure Beach, US past RR crossing, to Saltwater limit at outlet dam of Jordan Mill Pond, adjacent to Route 156, Waterford.	0.19	U	U	FULL	NOT	///
CT-E1_020	LIS EB Inner - Niantic River (mouth), Niantic	Eastern portion of LIS, Inner Estuary, Niantic River (Inner Niantic Bay) from outlet at Route 156 and RR crossing, US to saltwater limit in Banning Cove (between Route 1 crossing and I95/I395), East Lyme/Waterford.	1.30	NOT	NOT	FULL	NOT	///

Waterbody ID	Waterbody Name	Location	Square Miles	Marine Aquatic Life	Recreation	Fish Consumption	Direct Shellfish	Commercial Shellfish
CT-E1_021	LIS EB Inner - Pattagansett River (mouth), East Lyme	Eastern portion of LIS, Inner Estuary, Pattagansett River from outlet at RR crossing, US to saltwater limit at Route 156 crossing, East Lyme.	0.05	U	U	FULL	NOT	///
CT-E1_022	LIS EB Inner – Bride Brook, East Lyme	Bride Brook from outlet at Railroad crossing, eastern end of Rocky Neck State Park, upstream to saltwater limit at Route 156 crossing, East Lyme	0.029	U	NOT	FULL	NOT	///
CT-E2_012	LIS EB Shore - Outer Jordan Cove, Waterford	Eastern portion of LIS from Millstone Point to SB/SA water quality boundary at Magonk Point, out approximately 1000 ft offshore. Waters affected by Millstone Power Plant.	0.46	U	FULL	FULL	NOT	///
CT-E2_013	LIS EB Shore - Niantic Bay (East), Waterford	Eastern portion of LIS from Smith Avenue at junction with Route 156 to Millstone Point, out approximately 1000 ft offshore. Waters affected by Millstone Power Plant.	0.44	NOT	U	FULL	NOT	///
CT-E2_014	LIS EB Shore - Niantic Bay (West), East Lyme	Eastern portion of LIS from Pond Point to Smith Avenue at junction with Route 156, out approximately 1000 ft offshore. Waters affected by Millstone Power Plant.	0.30	NOT	FULL	FULL	NOT	///
CT-E2_015	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	Eastern portion of LIS from Point East of Griswald Island, past Black Point to Pond Point in Niantic Bay, out approximately1000 ft offshore.	0.55	NOT	U	FULL	NOT	///
CT-E2_016	LIS EB Shore - Pattagansett River Mouth, East Lyme	Eastern portion of LIS from Seal Rock (Great Neck) to Point East of Griswald Island (entire mouth of Pattagansett River, including area around Watts Island), out approximately 1000 ft offshore.	0.32	U	U	FULL	NOT	///
CT-E3_006	LIS EB Midshore - Niantic Bay	Eastern portion of LIS from approximately 1000 ft offshore Black Point, East Lyme to Magonk Point Waterford, out to 50 ft contour (Niantic Bay).	6.18	NOT	U	FULL	NOT	///

Waterbody ID	Waterbody Name	Location	Square Miles	Marine Aquatic Life	Recreation	Fish Consumption	Direct Shellfish	Commercial Shellfish
CT-E3_007	LIS EB Midshore - East Lyme, Rocky Neck	Eastern portion of LIS from approximately 1000 ft offshore Hatchett Point to Black Point, East Lyme, out to 50 ft contour (offshore of mouths of Fourmile and Pattagansett Rivers).	2.93	U	U	FULL	NOT	///
Shaded cells indicate impaired segment addressed in this TMDL **FULL = Designated Use Fully Supported NOT = Designated Use Not Supported** **U = Unassessed /// = Not Applicable to Segment**								

Figure 1: GIS map featuring general information for impaired segments in the East Lyme / Waterford Estuary



Shellfish Bed Classifications, Closures, and Lease Locations

The Connecticut Department of Agriculture/Bureau of Aquaculture (CT DA/BA) is responsible for regulating shellfish harvesting (http://www.ct.gov/doag/cwp/view.asp?a=1369&Q=259170). A shellfish growing area is defined by CT DA/BA as any area that supports or could support the growth and/or propagation of molluscan shellstock. Shellfish are defined by CT DA/BA as oysters, clams, mussels, and scallops, either shucked or in the shell, fresh or frozen, whole or roe-on. All shellfish growing areas are classified by CT DA/BA in accordance with the Interstate Shellfish Sanitation Conference (ISSC) National Shellfish Sanitation Program Model Ordinance (NSSP-MO) and CT General Statutes Chapter 491, §26-192e. These classifications, summarized below, are established to minimize health risks and may restrict the take and use of shellfish from some areas. They are based on fecal coliform bacteria standards as provided in the NSSP-MO (Interstate Shellfish Sanitation Conference, 2007). Any shellfish area, regardless of classification, may be temporarily closed to all activities when a potential public health emergency exists as a result of a storm event, flooding, sewage, chemical, or petroleum discharges, or a hazardous algal bloom.

Shellfish harvesting has been divided into two designated uses as specified in the Connecticut WQS: shellfish harvesting suitable for direct human consumption (Class SA waters), and shellfish harvesting suitable for commercial operations requiring depuration or relay (Class SB waters). These classifications are goals for the waterbody segments and set the goals for water quality. These uses determine the water quality criteria that are the target for each segment. The impaired segments in the East Lyme/Waterford Estuary include only Class SA waters.

<u>Shellfish Bed Classifications and Closures in the East Lyme/Waterford Estuary</u>

Shellfish classification areas in the East Lyme/Waterford Estuary are shown in Figure 2. The following classifications for shellfish growing areas are defined by CT DA/BA:

APPROVED AREA: Is a classification used to identify a growing area that is safe for the direct marketing or consumption of shellfish. An area may be classified as Approved when a sanitary survey finds that there is no contamination from pathogenic organisms, poisonous or deleterious substances, marine biotoxins, or bacteria concentrations exceeding the bacteriological standards for a growing area in this classification as set forth in the NSSP MO. The water quality in the growing area shall also meet the bacteriological standards for an Approved classification.

CONDITIONALLY APPROVED AREA: Is a classification used to identify a growing area that is safe for the direct, marketing or consumption of shellfish when the area is in the open status. The area must meet the criteria for Approved classification when the area is in the open status, and meets the criteria for the restricted classification in the closed status. An area may be classified as Conditionally Approved when a sanitary survey finds that the area can remain in the open status for a reasonable period of time, the factors impacting the area are known and predictable and do not preclude a reasonable management approach, and the water quality correlates with the environmental conditions or other factors affecting the distribution of pollutants into the growing area. Each Conditionally Approved growing area must have a written management plan that is adhered to by all responsible parties.

RESTRICTED RELAY/DEPURATION: Is a classification used to identify a growing area where harvested shellstock is relayed to Approved or Conditionally Approved waters for natural cleansing or depuration*. An area may be classified as Restricted Relay when a sanitary survey finds a limited degree of pollution and levels of fecal pollution, human pathogens, or poisonous or deleterious substances so that shellstock can be made safe for human consumption by either relaying, depuration or low acid-canned

food processing. Shellfish may only be harvested from restricted areas by special license, and may not be directly harvested for market or consumption.

*Depuration means the process of reducing the pathogenic organisms that may be present in shellstock by using a controlled aquatic environment as the treatment process.

CONDITIONALLY RESTRICTED: Is a classification used to identify a growing area where a sanitary survey has found that the area meets the criteria for Restricted classification when the area is in the open status and meets the criteria for Prohibited classification when the area is in the closed status. Each Conditionally Restricted growing area must have a written management plan that designates whether harvested shellfish are relayed or depurated. Shellfish may only be harvested from Conditionally Restricted areas by special license, and may not be directly harvested for market or consumption**.**

PROHIBITED: Is a classification used to identify a growing area where there has been no current sanitary survey or where a sanitary survey has found that the area is adjacent to a sewage treatment plant or other point source outfall with public health significance; pollution sources may unpredictably contaminate the growing area; the growing area is contaminated with fecal waste so that the shellfish may be vectors for disease microorganisms; and/or that the concentration of biotoxin is sufficient to cause a public health risk. Shellfish may not be harvested from Prohibited areas except for seed oystering or depletion of the areas.

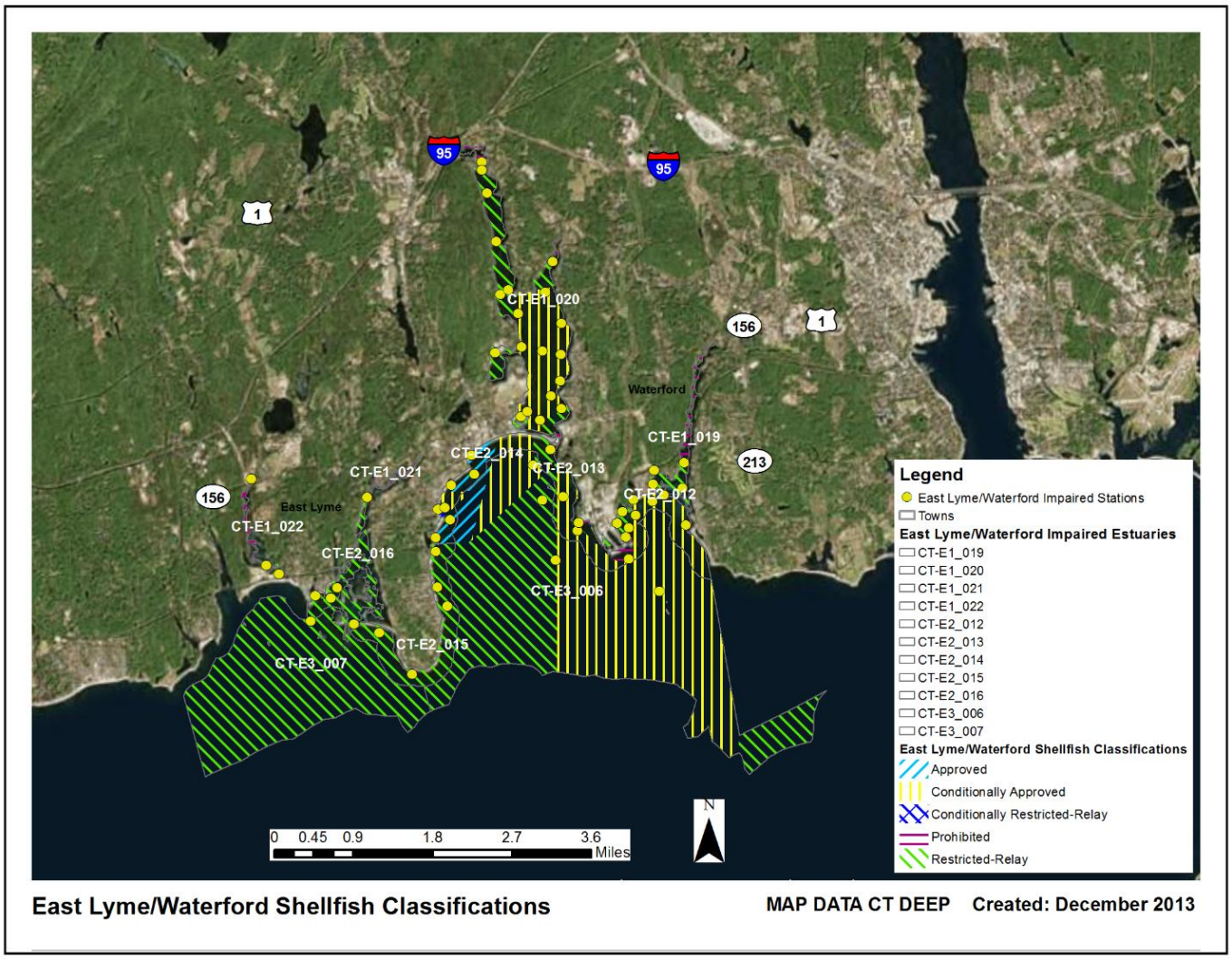
As discussed above and shown in Table 1, Segments 1 – 10 did not meet their designated use for shellfish harvesting for direct consumption due to bacteria (Table 1). Segment 1 (CT-E1_019) is Prohibited from direct shellfish harvesting from outlet dam at Jordan Mill Pond to RR crossing, then Restricted-Relay/Depuration from the remainder of the segment. The innermost portions of Segment 2 (CT-E1_020) are Prohibited from direct shellfish harvesting, remaining portions of the segment are split between Conditionally Approved and permitted by Restricted-Relay/Depuration. Similar to Segment 2, the innermost portions of Segment 3 (CT-E1_021) are Prohibited from direct shellfish harvesting, with the remaining portions of the segment are permitted by Restricted-Relay/Depuration. The majority of Segments 4 (CT-E2_012) and 5 (CT-E2_013) are Conditionally Approved with small portions either permitted by Restricted-Relay/Depuration or Prohibited. Segment 6 (CT-E2_014) is Approved for direct shellfish harvesting for the majority of the segment, with small areas Conditionally Approved and a very small area permitted by Conditionally Restricted-Relay. Segments 7 (CT-E2_015) and 8 (CT-E2_016) are permitted by Restricted-Relay/Depuration. Segment 9 (CT-E3_006) is split between Conditionally Approved and permitted by Restricted-Relay/Depuration, with a small portion along Segment 7 that is permitted by Conditionally Restricted-Relay. Segment 10 (CT-E3_007) is permitted by Restricted-Relay/Depuration (Figure 2).

Shellfish Bed Lease Locations

Shellfish beds in the East Lyme/Waterford Estuary are also classified by their management (Figure 3). CT DA/BA defines these areas as follows:

> **State and Town Beds**: In 1881, a line, referred to as the Commissioner's Line, was established to divide the waters of the State into northern and southern sections. All beds south of this line are State beds and most beds north of this line are town beds. Town beds are leased, owned or managed through the local shellfish commission. However, CT DA/BA still controls all the licensing and regulations for both state and town beds. For example, DA/BA issues licenses and determines when an area will be closed to shellfishing due to a change in water quality. Towns may require additional permits to work in waters under local jurisdiction. Beds north of the line in

Figure 2: GIS map featuring Shellfish Bed Classifications and Closures for the impaired segments in the East Lyme / Waterford Estuary



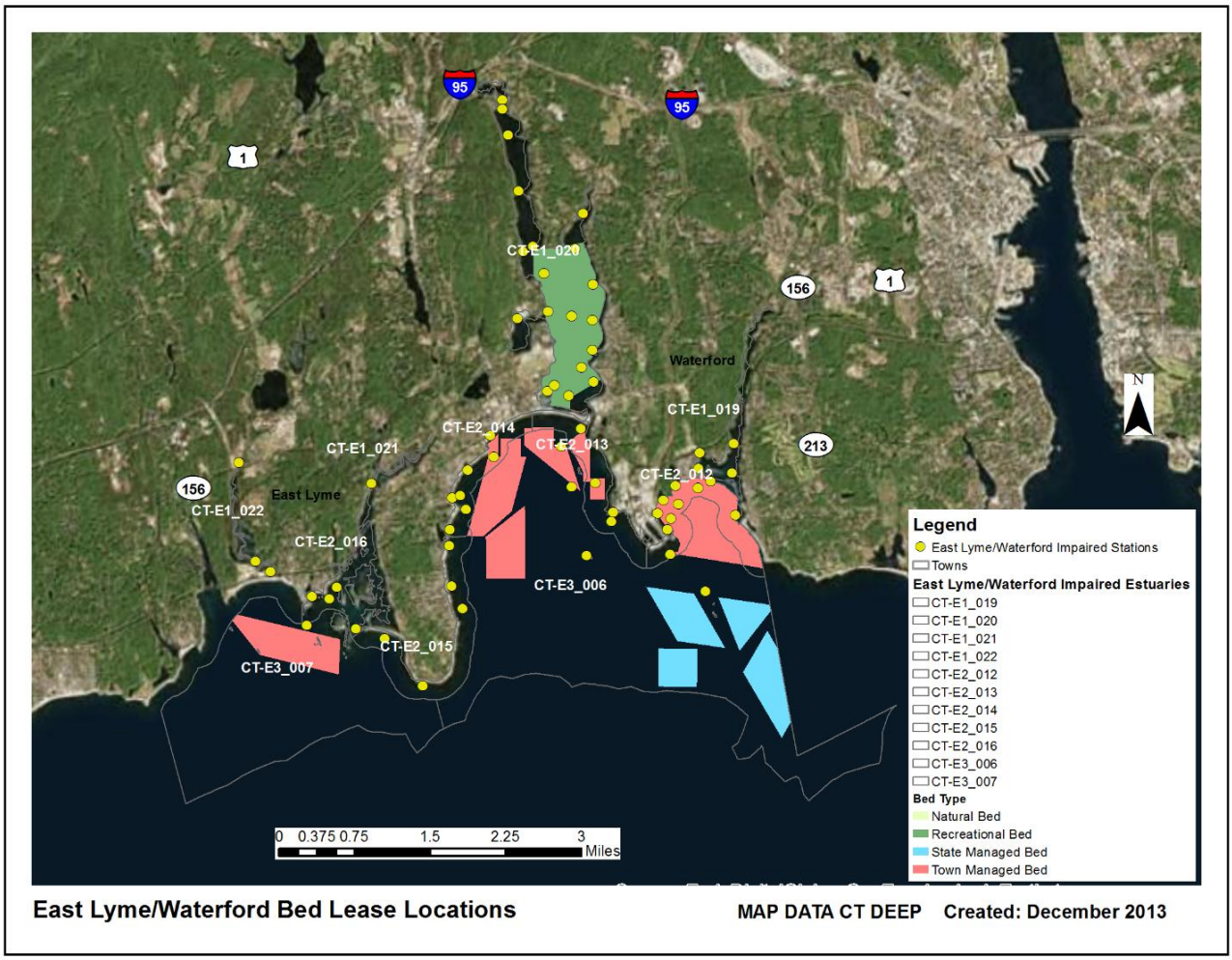
Westport, Milford, West Haven, and New Haven are exceptions to this as they are fully under State control.

State and Town Natural Beds: Natural beds get their name from the fact that shellfish, especially oyster, naturally inhabited the area. These areas tend to be closer to shore, usually at the mouth of a river. Natural beds have specific regulations concerning their use, including licensing and harvesting methods. They are predominately seed beds that cannot be mechanically harvested. Use of natural beds requires a Relay/Transplant License I or II and/or Seed Oyster Harvesting License from CT DA/BA. Any person assisting in the harvesting of seed oysters must have a Helper's License. These beds cannot be leased or subdivided; they are to remain open to any properly licensed harvester. State natural beds are natural beds south of the Commissioner's Line. Descriptions of these beds can be found in §3295 of the Connecticut General Statutes (CGS), revision of 1918. Not all beds listed in §3295 were mapped, and many natural beds in State waters off Greenwich are managed through leases. Town natural beds were defined by law under §2326 of the CGS of 1888. Each town had the opportunity to map areas to be considered natural beds. The documents, written descriptions, and maps were submitted to the Superior Court with

jurisdiction for that town. Several towns did not avail themselves to this opportunity, and some, such as Westport, have changed the delineation of their natural beds in recent court decisions. There are also areas that may have been declared natural beds, but are now leased.

Most shellfish beds in Segment 2 (CT-E1_020) are recreational beds. Portions of shellfish beds in Segments 4 (CT-E2_012), 5 (CT-E2_013), 6 (CT-E2_014), 9 (CT-E3_006) and 10 (CT-E3_007) are town-managed beds. Additional portions of shellfish beds in Segment 9 (CT-E3_006) are State-managed beds. No bed classifications are shown for Segments 1 (CT-E1_019), 3 (CT-E1_021), 7 (CT-E2_015) and 8 (CT-E2_016) (Figure 3).

Figure 3: GIS map featuring Shellfish Bed Lease Locations for the impaired segments in the East Lyme/ Waterford Estuary



WHY IS A TMDL NEEDED?

For saltwater segments, the indicator bacteria, fecal coliform, is used in the CT Water Quality Standards (WQS) to assess shellfish uses for Class SA and SB waters (CTDEEP, 2013). Enterococcus is the indicator bacteria used to assess recreational uses for Class SA and SB waters. All data are from CT DEEP, Bureau of Aquaculture, or volunteer monitoring efforts at stations located on the impaired segments.

Segments 1 – 11 are Class SA saltwater waterbodies. Their applicable designated uses include shellfish harvesting for direct human consumption, recreation, habitat for marine fish and other aquatic life and wildlife, industrial water supply, fish consumption and navigation. Water quality analyses were conducted using data from four sampling locations on Segment 1 (CT-E1_019), twenty sampling locations on Segment 2 (CT-E1_020), one sampling location on Segment 3 (CT-E1_021), ten sampling locations on Segments 4 (CT-E2_012), four sampling locations on Segment 5 (CT-E2_013), seven sampling locations on Segment 6 (CT-E2_014), five sampling locations on Segment 7 (CT- E2_015), four sampling locations on Segments 8 (CT-E2_016) and 9 (CT-E3_006), and one sampling location on Segment 10 (CT-E3_007). Segment 11 had three sampling locations (Table 2). The water quality criteria for fecal coliform and enterococci, along with bacteria sampling results from 2000 – 2013, are presented in Tables 12-23. These segments of the estuary are impaired due to elevated bacteria concentrations, affecting the designated use of direct shellfishing with segment 2 and 11 impaired for recreation. To aid in identifying possible bacteria sources, the geometric mean was also calculated for wet-weather and dry-weather sampling days for all stations in the segments, where possible (Tables 12-21).

Segment 1 (CT-E1_019): As shown in 12, 90% less than values exceeded the WQS for fecal coliform at least once at all four stations in Segment 1, with multiple years of exceedances at three of the four stations during the sampling period. Geometric mean values also exceeded the WQS for fecal coliform nine times at Station 152-10.1, three times at Station 152-10.8 and once at Station 152-10.7 during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions. Although there were geomean exceedances in individual years, geometric means for wet and dry-weather only exceeded the WQS for fecal coliform at two stations and at one station for dry weather.

Segment 2 (CT-E1_020): As shown in Table 13, geometric mean values exceeded the WQS for fecal coliform at least once at eight stations in Segment 2, with eight years of exceedances at Station 045-16.3 during the sampling period. 90% less than values exceeded the WQS for fecal coliform at least once at thirteen stations in Segment 2 during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting in exceedance of WQS for fecal coliform during dry and wet-weather at Station 045-16.3, and wet-weather at Station 045-14.3.

Table 23 includes data for enterococci to compare with recreation use in segment (CT-E1_020). Single sample maximums and geomean WQS were exceeded at each station in multiple years of sampling efforts. The 2011 data included the largest exceedances and also the most wet weather data.

Segment 3 (CT-E1_021): As shown in Table 14, 90% less than values exceeded the WQS for fecal coliform at Station 045-02.2 for all years during the sampling period except 2008 and 2010. Geometric mean values also exceeded the WQS for fecal coliform for all sampling years during the sampling period Station 045-02.2 except 2010. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting in exceedances of the WQS for fecal coliform.

Segment 4 (CT-E2_012): As shown in Table 15, 90% less than values exceeded the WQS for fecal coliform at least once at nine of the ten stations during the sampling period. Geometric mean values exceeded the WQS for fecal coliform once at three stations and three times at Station 152-09.6 in Segment 4 during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting in no exceedance of the WQS for fecal coliform.

Segment 5 (CT-E2_013): As shown in Table 16, 90% less than values exceeded the WQS for fecal coliform multiple times at Station 045-10.0, once at Station 152-06.0 and twice at Station 152-07.1 in Segment 5 during the sampling period. Geometric mean values exceeded the WQS for fecal coliform once at Station 045-10.0 in 2000 during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions. Although there were geomean exceedances in individual years, geometric means for wet and dry-weather did not exceed the WQS for fecal coliform at any station.

Segment 6 (CT-E2_014): As shown in Table 17, 90% less than values exceeded the WQS for fecal coliform at least once at all stations during the sampling period. Geometric mean values exceeded the WQS for fecal coliform once at Station 045-07.1, and twice at Stations 045-08.1 and 045-08.2 during the sampling period. Stations 084-03.0 and 084-04.1 geometric mean values did not exceed the WQS for any sampling year. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting in an exceedance of the WQS for fecal coliform during wet-weather at Station 045-08.1.

Segment 7 (CT-E2_015): As shown in Table 18, 90% less than values exceeded the WQS for fecal coliform once at Station 045-04.0 and multiples times at the rest of the stations during the sampling period. Geometric mean values exceeded the WQS for fecal coliform only at Station 045-04.1 in 2003 during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting in no exceedance of the WQS for fecal coliform.

Segment 8 (CT-E2_016): As shown in Table 19, 90% less than values exceeded the WQS for fecal coliform at least once at all stations during the sampling period. Geometric mean values also exceeded the WQS for fecal coliform at least once at all stations during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting exceedances of wet-weather at Stations 045-02.0, 045-02.1 and 045-02.3.

Segment 9 (CT-E3_006): As shown in Table 20, 90% less than values exceeded the WQS for fecal coliform once at Station 045-10.3, twice at Station 045-10.2 and four time at Station 045-10.1 during the sampling period. Geometric mean values exceeded the WQS for fecal coliform once at Station 045-10.1 in 2003 during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting in no exceedance of the WQS for fecal coliform.

Segment 10 (CT-E3_007): As shown in Table 21, 90% less than values exceeded the WQS for fecal coliform three times at Station 045-02.4 during the sampling period. Geometric mean values exceeded the WQS for fecal coliform in 2003 and 2004 during the sampling period. Geometric means for data collected during the sampling period were also calculated for each station using wet and dry-weather conditions, resulting in no exceedance of the WQS for fecal coliform.

Segment 11 (CT-E1_022): As shown in Table 22, this segment is impaired due to elevated enterococci concentrations that affect recreational use of the waterbody. There are exceedances of single sample and geomean WQS for at least one station each year of sampling within the segment.

Due to the elevated bacteria measurements presented in Tables 12 – 23, these eleven impaired segments did not meet CT's bacteria WQS, were identified as impaired, and were placed on the CT List of Waterbodies Not Meeting Water Quality Standards, also known as the CT 303(d) Impaired Waters List. The Clean Water Act requires that all 303(d) listed waters undergo a TMDL assessment that describes the impairments and identifies the measures needed to restore water quality. The goal is for all waterbodies to comply with State WQS.

Table 2: Sampling station location description for the impaired segments in the East Lyme / Waterford Estuary

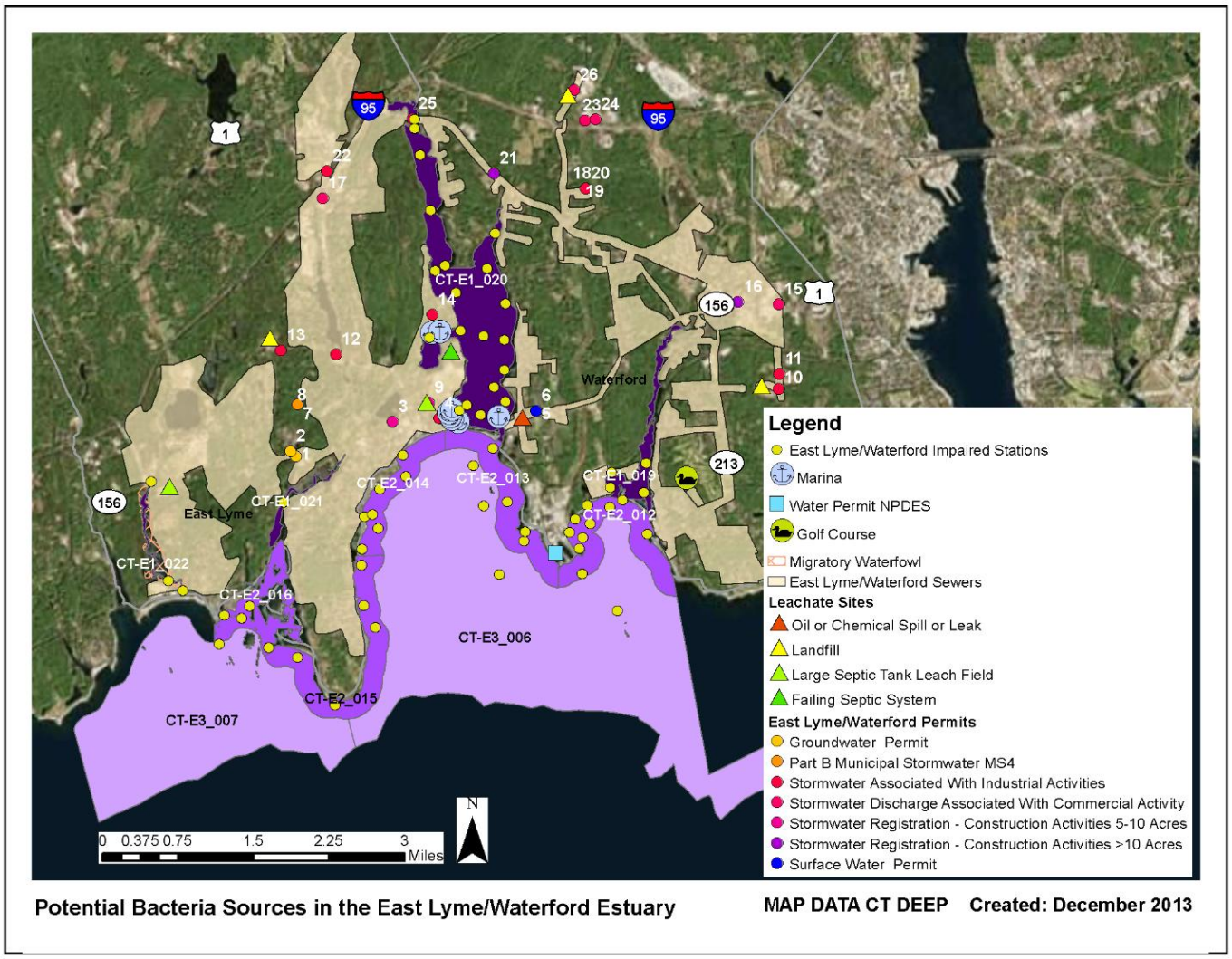
Waterbody ID	Station	Station Description	Municipality	Latitude	Longitude
CT-E1_019	152-10.1	Jordan Cove Rd. bridge	Waterford	41.319	-72.149
	152-10.3		Waterford	41.315	-72.149
	152-10.7	Alewife Cove	Waterford	41.316	-72.156
	152-10.8	Alewife Cove	Waterford	41.318	-72.155
CT-E1_020	045-11.0	CA "B"	East Lyme	41.326	-72.180
	045-12.0	CA "B"	East Lyme	41.328	-72.183
	045-12.1	Boats Inc	East Lyme	41.327	-72.184
	045-13.1	CA "A"	East Lyme	41.338	-72.180
	045-14.0	CA "B"	East Lyme	41.338	-72.184
	045-14.3	Smith Cove	East Lyme	41.337	-72.190
	045-15.0	CA "A"	East Lyme	41.344	-72.185
	045-16.0	W of Sandy Pt.	East Lyme	41.347	-72.189
	045-16.3	Golden Spur at Rt. 1 bridge	East Lyme	41.369	-72.193
	152-01.0	Area A	East Lyme	41.347	-72.179
	152-01.1	Keeny Cove	East Lyme	41.352	-72.177
	152-02.0	Area A	East Lyme	41.342	-72.176
	152-03.0	Area A	East Lyme	41.337	-72.176
	152-03.1	Area B	East Lyme	41.333	-72.176
	152-04.0	Area B	East Lyme	41.330	-72.178
	152-05.0	Area B	East Lyme	41.328	-72.176
	EL-19-FG		East Lyme	41.3676	-72.1927
	EL-20-FG		East Lyme	41.3638	-72.1916
	EL-21-FG		East Lyme	41.3558	-72.1897
	EL-22-FG		East Lyme	41.3478	-72.1871
CT-E1_021	045-02.2	Pattagansett River at Gada Rd.	East Lyme	41.314	-72.218
CT-E1_022	17604	At upper crabbing area limit on entry to park (RNBB-2)	East Lyme	41.30268	-72.2402
	14730	At Route 156 (RN-156)	East Lyme	41.316922	-72.243383
	14882	At Railroad crossing in park	East Lyme	41.301217	-72.237481

Waterbody ID	Station	Station Description	Municipality	Latitude	Longitude
		(RNBB-1)			
CT-E2_012	152-08.0	Area C	Waterford	41.303	-72.161
	152-09.0	Area C	Waterford	41.311	-72.160
	152-09.1	Area C	Waterford	41.308	-72.161
	152-09.2	Area A	Waterford	41.313	-72.160
	152-09.5		Waterford	41.311	-72.163
	152-09.6	Millstone environmental dock	Waterford	41.307	-72.162
	152-09.7	Millstone	Waterford	41.309	-72.164
	152-10.4	Area G	Waterford	41.314	-72.153
	152-11.0	Area G	Waterford	41.309	-72.149
	152-11.2	Area C	Waterford	41.313	-72.156
CT-E2_013	045-10.0	entrance to Niantic River	Waterford	41.321	-72.178
	152-06.0	Area C	Waterford	41.314	-72.175
	152-07.0	Millstone	Waterford	41.309	-72.172
	152-07.1	Area C	Waterford	41.308	-72.172
CT-E2_014	045-07.1	Pond Pt.	East Lyme	41.307	-72.203
	045-08.0	CA "F"	East Lyme	41.312	-72.201
	045-08.1	Crescent Beach	East Lyme	41.312	-72.203
	045-08.2	Niantic Bay Yacht Club	East Lyme	41.310	-72.200
	045-09.0	Wigwam Rock	East Lyme	41.317	-72.195
	045-09.1	off McCook Beach	East Lyme	41.316	-72.200
	045-09.2	Hole-in-the-wall Beach	East Lyme	41.321	-72.195
CT-E2_015	045-04.0	S of Black Pt. private beach	East Lyme	41.292	-72.216
	045-05.0	S of Black Pt.	East Lyme	41.285	-72.209
	045-06.0	E of Black Pt. in Niantic Bay	East Lyme	41.299	-72.203
	045-06.1	E of Black Pt. in Niantic Bay	East Lyme	41.296	-72.201
	045-07.0	Attawan Beach	East Lyme	41.305	-72.203
CT-E2_016	045-02.0	Giants Neck mooring area	East Lyme	41.297	-72.226
	045-02.1	Giants Neck	East Lyme	41.299	-72.225
	045-02.3	Giants Neck pond outlet	East Lyme	41.298	-72.230
	045-03.0	Long Ledge	East Lyme	41.293	-72.221
CT-E3_006	045-10.1	CA "E"	East Lyme	41.319	-72.182
	045-10.2	W of Waterford Is.	East Lyme	41.313	-72.180
	045-10.3	W of White Rock	East Lyme	41.303	-72.177
	152-12.1	Area C	East Lyme	41.298	-72.155
CT-E3_007	045-02.4	between Long Rk and Seal Rk	East Lyme	41.293	-72.231

POTENTIAL BACTERIA SOURCES

Potential sources of indicator bacteria in a watershed include point and non-point sources, such as stormwater runoff, agriculture, sanitary sewer overflows (collection system failures), illicit discharges, and inappropriate discharges to the waterbody. Potential sources that have been tentatively identified in the East Lyme / Waterford Estuary are presented in Table 3 and Figure 4. However, the list of potential sources is general in nature and should not be considered comprehensive. There may be other sources not listed here that contribute to the observed water quality impairment in the study segments. Further monitoring and investigation will confirm listed sources and discover additional ones. Some segments in this watershed are currently listed as unassessed by CT DEEP procedures. This does not mean that there are no data or impairments in existence in the segment. There are data from permitted sources for some segments, and CT DEEP recommends that any elevated concentrations found from those permitted sources be addressed through permit required and additional voluntary reduction measures. More detailed evaluation of potential sources is expected to become available as activities are conducted to implement these TMDLs.

Figure 4: Potential bacteria sources to the impaired segments in the East Lyme/Waterford Estuary



Potential Bacteria Sources in the East Lyme/Waterford Estuary MAP DATA CT DEEP Created: December 2013

The potential sources map for the impaired basin was developed after thorough analysis of available data sets. If information is not displayed in the map, then no sources were discovered during the analysis. The following is the list of potential sources that were evaluated: problems with migratory waterfowl, golf course locations, reservoirs, proposed and existing sewer service, cattle farms, poultry farms, permitted sources of bacteria loading (surface water discharge, MS4 permit, industrial stormwater, commercial stormwater, groundwater permits, and construction related stormwater), and leachate and discharge sources (agricultural waste, CSOs, failing septic systems, landfills, large septic tank leach fields, septage lagoons, sewage treatment plants, and water treatment or filter backwash).

Table 3: Potential bacteria sources to the impaired segments in the East Lyme/Waterford Estuary

Segment #	Impaired Segment	Permit Source	Illicit Discharge	CSO/SSO Issue	Failing Septic System	Marinas	Stormwater Runoff	Nuisance Wildlife/Pets	Other
1	CT-E1_019	x		x			x	x	
2	CT-E1_020	x		x	x	x	x	x	
3	CT-E1_021	x		x			x	x	
4	CT-E2_012	x		x			x	x	
5	CT-E2_013	x		x	x	x	x		
6	CT-E2_014	x		x	x	x	x		
7	CT-E2_015			x			x		
8	CT-E2_016	x		x			x		
9	CT-E3_006					x	x		
10	CT-E3_007						x		
11	CT-E1_022				x		x	x	

Point Sources

Permitted sources within the watershed that could potentially contribute to the bacteria loading are identified in Table 4. This table includes permit types that may or may not be present in the impaired watershed. A list of active permits in municipalities that drain to the East Lyme/Waterford Estuary is included in Table 5 and geographically presented in Figure 4. Additional investigation and monitoring could reveal the presence of other discharges in the estuary.

Table 4: General categories list of permitted discharges

Permit Code	Permit Description Type	Number in Estuary
CT	Surface Water Discharges	1
GPL	Discharge of Swimming Pool Wastewater	0
GSC	Stormwater Discharge Associated with Commercial Activity	6
GSI	Stormwater Associated with Industrial Activity	9
GSM	Part B Municipal Stormwater MS4	2
GSN	Stormwater Registration – Construction	4
LF	Groundwater Permit (Landfill)	0
UI	Underground Injection	2

Permitted Sources

As shown in Table 5, there are multiple permitted discharges in East Lyme and Waterford that could be contributing bacteria to the impaired segments, including stormwater permits and one surface water permit. The surface water permit is the only NPDES permitted industrial wastewater discharge in Waterford. According to the 2009 Waterford Estuary Report, this discharge is from the Dominion (formerly Northeast Utilities) Millstone Nuclear Power Station at Millstone Point. This facility has three electric generating units fueled by nuclear power. All three units were shut down in 1996 by the Nuclear Regulatory Commission (NRC) due to operational and management violations. Unit 3 was restarted in July 1998 and was shut down for refueling from May-July in 1999. Unit 2 restarted in 1999. Unit 1 was permanently shutdown in 1996. Non-contact water is circulated through these units and discharged to Long Island Sound even during these shutdowns but at one third the normal volume. According to the 2008 East Lyme Estuary Report from DABA, there are 11 commercial marinas and/or association docks in East Lyme, not including four commercial marinas and one municipal dock on the Waterford side of the Niantic River between Mago Point and the Amtrak Railroad Bridge (Waterford Estuary Report). The only marinas located in Waterford outside the Niantic River are the Dominion Millstone Power Station Environmental Laboratory docks. As shown in Table 6, there are water quality data available for some of these discharges. Although this data cannot be compared to the WQS as there is no single sample shellfish standard for fecal coliform, several samples were high, exceeding 2,000 colonies/100 mL, including Niantic Bay Marina (GSI000161), Ozone Industries (GSI001350), Dominion Nuclear CT, Inc. (GSI001430), Northeast Utilities NE Nuclear Energy Company (GSI000626), and Dean's Auto (GSI001444) (Table 6).

Both East Lyme and Waterford have MS4 permits. Since the MS4 permits are not targeted to a specific location, but the geographic area of the regulated municipality, there is no one accurate location on the map to display the location of these permits. One dot will be displayed at the geographic center of the municipality as a reference point. Sometimes this location falls outside of the targeted watershed and therefore the MS4 permit will not be displayed in the Potential Sources Map. Using the municipal border as a guideline will show which areas of an affected watershed are covered by an MS4 permit.

Table 5: Permitted facilities in or near East Lyme and Waterford, CT that may be affecting the East Lyme/Waterford Estuary

Town	Client	Permit ID	Permit Type	Site Name	Address	Map #
Niantic	Pondcliff Condominium Association, Inc.	UI0000107	Groundwater Permit	Pondcliff Condominium Association	97 W Main St	1
East Lyme	Pondcliff Condominium Association, Inc.	UI0000107	Groundwater Permit	Pondcliff Manor	--	2
East Lyme	Town Of East Lyme	GSM000014	Part B Municipal Stormwater MS4	East Lyme, Town Of	MS4 Permit	8
Waterford	Town Of Waterford	GSM000023	Part B Municipal Stormwater MS4	Waterford, Town Of	MS4 Permit	19
Niantic	Port Niantic, Inc.	GSI000856	Stormwater Associated With Industrial Activities	Port Niantic, Inc.	17 Smith Ave	4
Waterford	Dominion Nuclear Connecticut, Inc.	GSI001430	Stormwater Associated With Industrial Activities	Millstone Power Station	Rope Ferry Rd	5
Waterford	Town Of Waterford	GSI001409	Stormwater Associated With Industrial Activities	Waterford Bulky Waste Landfill	85 Miner Ln	10
Waterford	Murphy Road Recycling, LLC	GSI001985	Stormwater Associated With Industrial Activities	Murphy Road Recycling Llc	56 Miner Ln	11
Niantic	Town Of East Lyme	GSI001604	Stormwater Associated With Industrial Activities	East Lyme Public Works Complex	12 Roxbury Road	12
Niantic	Town Of East Lyme	GSI000887	Stormwater Associated With Industrial Activities	Transfer Station/Closed Landfill	91 Roxbury Rd	13
Niantic	Three Belles LLC	GSI001997	Stormwater Associated With Industrial Activities	Three Belles Marina	113 Oswegatchie Hills Rd	14
Waterford	GCE, LLC	GSI002184	Stormwater Associated With Industrial Activities	Gce, Llc	8-10 River Street	20
East Lyme	State Of Connecticut Department Of Transportation	GSI000018	Stormwater Associated With Industrial Activities	East Lyme Maintenance Facility	279 Flanders Road	22
Waterford	Waterford And Miner LLC	GSC000343	Stormwater Discharge Associated With Commercial Activity	Waterford & Miner LLC	104-106 Boston Post Road & 22 Miner Lane	15
East Lyme	L & L East Lyme LLC	GSC000241	Stormwater Discharge Associated With Commercial Activity	Town Line Plaza	248 Flanders Road	17

Town	Client	Permit ID	Permit Type	Site Name	Address	Map #
Waterford	Lowe's Home Centers Inc	GSC000307	Stormwater Discharge Associated With Commercial Activity	Lowe's Home Centers, Inc.	167 Parkway North	23
Waterford	Wal-Mart Stores East, Lp	GSC000277	Stormwater Discharge Associated With Commercial Activity	Wal-Mart Store #2331	155 Waterford Parkway North	24
Waterford	Big Y Foods, Inc	GSC000290	Stormwater Discharge Associated With Commercial Activity	Big Y Foods, Inc.	Boston Post Road & Minor Lane	25
Waterford	BJ's Wholesale Club, Inc.	GSC000318	Stormwater Discharge Associated With Commercial Activity	BJ's Wholesale Club	125 Cross Rd	26
Waterford	Town Of Waterford	GSN002151	Stormwater Registration - Construction Activities >10 Acres	Waterford High School	20 Rope Ferry Rd	16
Waterford	Town Of Waterford	GSN001779	Stormwater Registration - Construction Activities >10 Acres	Oswegatchie School	470 Boston Post Rd	21
Niantic	Jv Hope Street, LLC	GSN001698	Stormwater Registration - Construction Activities 5-10 Acres	Hermitage Hospital Products	38 Hope St	3
Niantic	State Of Connecticut Military Department	GSN001840	Stormwater Registration - Construction Activities 5-10 Acres	Camp Niantic	38 Smith St	9
Waterford	Dominion Nuclear Connecticut, Inc.	CT0003263	Surface Water Permit	Millstone Power Station	Rope Ferry Rd	6

Table 6: Industrial permits affecting the East Lyme/Waterford Estuary and available fecal coliform data (colonies/100mL). The results cannot be compared to the water quality standard as there is no single sample shellfish standard for fecal coliform.

Town	Location	Permit Number	Receiving Water	Sample Location	Sample Date	Result
East Lyme	CT Army National Guard- Stones Ranch	GSI000107	Four Mile River	BR-1	09/14/01	200,000
East Lyme	CT Army National Guard- Stones Ranch	GSI000107	Four Mile River	MH-1	09/14/01	5,000
East Lyme	Stone's Ranch Military Reservation	GSI000107	Four Mile River	Stones Ranch,MH-1	09/15/02	10
East Lyme	Port Niantic	GSI000856	Niantic River	CB outflow	09/26/00	30
East Lyme	Port Niantic	GSI000856	Niantic River	CB outflow	09/21/01	230
East Lyme	Port Niantic	GSI000856	Niantic River	CB outflow	10/16/02	3
East Lyme	Town of East Lyme	GSI000887	Red Brook	S side pipe	02/27/02	40
East Lyme	Town of East Lyme	GSI000887	Red Brook	outlet#1;SE of trf station	10/11/02	9
East Lyme	Ozone Industries	GSI001350	Pattagansett River	outfall#1-N end of bldg SD	06/11/01	60
East Lyme	Ozone Industries	GSI001350	Pattagansett River	outfall#2-settling pond on S prop. line	06/11/01	4,000
Waterford	Niantic Bay Marina	GSI000161	Niantic River		09/19/00	9
Waterford	Niantic Bay Marina	GSI000161	Niantic River	1st street CB outlet	09/21/01	>24000
Waterford	Northeast Utilities	GSI000626	Jordan Cove	DSN 012	06/06/00	384
Waterford	Northeast Utilities	GSI000626	Jordan Cove	DSN 012A	06/06/00	831
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 012	09/19/00	200
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 015	09/13/00	>20000
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 024	09/13/00	100
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 027	09/13/00	>20,000
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 030	09/02/00	100
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 019	09/02/00	500

Town	Location	Permit Number	Receiving Water	Sample Location	Sample Date	Result
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 021	08/23/00	>2400
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 032	08/23/00	>2400
Waterford	Northeast Utilities NE Nuclear Energy Company	GSI000626	Jordan Cove	DSN 022	08/23/00	>2400
Waterford	Blinkers And More	GSI001087			07/02/01	1,100
Waterford	Waste Management of Connecticut	GSI001120	Jordan Brook-2201	DSN-001	06/06/00	>600
Waterford	Waste Management of CT	GSI001120	Jordan Brook	DSN-001	06/05/02	>600
Waterford	Waste Management of CT	GSI001120		DSN-001	12/20/02	410
Waterford	Town of Waterford	GSI001409	2000	03	05/01/03	>2000
Waterford	Town of Waterford	GSI001409	SE shoreline 2000-30-01	03	06/18/03	>200
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 012	05/21/01	70
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 012A	05/21/01	10
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 027	08/10/01	>24000
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 030	08/10/01	11,000
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 032	08/10/01	4,200
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 021	04/17/01	40
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 022	04/06/01	100
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 024	04/06/01	100
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 015	08/23/01	>24000
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 019	08/27/01	817
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 020A	08/28/01	76
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 021	09/21/01	>24000

Town	Location	Permit Number	Receiving Water	Sample Location	Sample Date	Result
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 012	03/13/02	100
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 012A	03/13/02	100
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 022	03/26/02	100
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 024	03/26/02	100
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 015	04/22/02	230
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 019	06/14/02	90
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Jordan Cove	Millstone DSN 020A	06/05/02	<30
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 021	06/05/02	930
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 027	06/05/02	>24000
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 030	06/14/02	<30
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 032	09/26/02	40
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 022	02/04/03	10
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 027	02/04/03	230
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 012	05/01/03	10
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 012A	05/01/03	10
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 019	04/22/03	10
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 032	04/22/03	10
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 021	07/11/03	470
Waterford	Dominion Nuclear CT, Inc.	GSI001430	Niantic Bay	Millstone DSN 024	07/11/03	150
Waterford	Dean's Auto	GSI001444	Thames River	left rear of property	01/11/02	>20000
Waterford	Dean's Auto	GSI001444	Thames River	cement platform	01/11/02	>20000

Town	Location	Permit Number	Receiving Water	Sample Location	Sample Date	Result
Waterford	Town of Waterford	GSI001471		001-public works garage	11/14/00	3
Waterford	Town of Waterford	GSI001471		002-public works garage	11/14/00	3
Waterford	Town of Waterford	GSI001471		003-public works garage	11/14/00	4
Waterford	Town of Waterford DPW	GSI001471		Outfall 001	04/22/02	30
Waterford	Town of Waterford DPW	GSI001471		Outfall 002	04/22/02	30
Waterford	Town of Waterford DPW	GSI001471		Outfall 003	04/22/02	30
Waterford	Laidlaw Transit Inc	GSI001888	Wetlands W of facility	Waterford	12/16/05	18,500

Municipal Stormwater Permitted Sources

Per the EPA Phase II Stormwater rule all municipal storm sewer systems (MS4s) operators located within US Census Bureau Urbanized Areas (UAs) must be covered under MS4 permits regulated by the appropriate State agency. There is a waiver process by which municipalities, with a population of less than 1,000 in the UA, can be granted an exemption from the MS4 program. In Connecticut, DEEP has granted such waivers to 19 municipalities under the current MS4 permit term. One hundred and thirteen (113) small MS4s, as defined by EPA, in Connecticut are currently regulated by DEEP's General Permit for the Discharge of Stormwater from Small Municipal Storm Sewer Systems, reissued on January 1, 2013 (MS4 general permit). Stormwater discharges from CT's only medium MS4, as defined by EPA, are regulated by an individual permit.

The US Census Bureau defines a UA as a densely settled area that has a census population of at least 50,000. A UA generally consists of a geographic core of block groups or blocks that exceeds the 50,000 people threshold and has a population density of at least 1,000 people per square mile. The UA will also include adjacent block groups and blocks with at least 500 people per square mile. A UA consists of all or part of one or more incorporated places and/or census designated places, and may include additional territory outside of any place (67 FR 11663).

For the 2000 Census a new geographic entity was created to supplement the UA blocks of land. This created a block known as an Urban Cluster (UC) and is slightly different than the UA. The definition of a UC is a densely settled area that has a census population of 2,500 to 49,999. A UC generally consists of a geographic core of block groups or blocks that have a population density of at least 1,000 people per square mile, and adjacent block groups and blocks with at least 500 people per square mile. A UC consists of all or part of one or more incorporated places and/or census designated places; such a place(s) together with adjacent territory; or territory outside of any place. The major difference is the total population cap of 49,999 people for a UC compared to >50,000 people for a UA (67 FR 11663).

While it is possible that CT DEEP will be expanding the MS4 program to include additional municipalities (with or without UCs) in the near future, they are not currently regulated by the MS4

general permit. However, the GIS data used to create the MS4 maps in this Statewide TMDL did include both UA and UC blocks. This factor creates some municipalities that appear to be within a MS4 permit program that are not currently regulated by a permit. This oversight can explain a municipality that is at least partially shaded grey in the maps and there are no active MS4 reporting materials or information included in the appropriate appendix. While these areas are not technically in the MS4 permit program, they are still considered urban by the cluster definition above and are likely to contribute similar stormwater discharges to affected waterbodies covered in this TMDL

As previously noted, DEEP can grant a waiver to a municipality to exempt it from the requirements of the MS4 general permit. There are 19 municipalities in Connecticut that have received waivers: Andover, Bozrah, Canterbury, Coventry, East Hampton, Franklin, Haddam, Killingworth, Litchfield, Lyme, New Hartford, Plainfield, Preston, Salem, Sherman, Sprague, Stafford, Washington, and Woodstock. There will be no MS4 reporting documents from these towns even if they are displayed in an MS4 area in the maps of this document.

The list of US Census UCs is defined by geographic regions and is named for those regions, not necessarily by following municipal borders. In Connecticut the list of UCs includes blocks in the following Census Bureau regions: Colchester, Danielson, Lake Pocotopaug, Plainfield, Stafford, Storrs, Torrington, Willimantic, Winsted, and the border area with Westerly, RI (67 FR 11663). Any MS4 maps showing these municipalities may show grey areas that are not currently regulated by the CT DEEP MS4 general permit program.

The impaired segments of the East Lyme/Waterford Estuary are located within the Towns of East Lyme and Waterford, and City of New London, CT. These municipalities have designated urban areas, and are required to comply with the MS4 general permit (Figure 5). This general permit is only applicable to municipalities that are identified in Appendix A of the MS4 general permit that contain designated urban areas and discharge stormwater via a separate storm sewer system to surface waters of the State. The permit requires municipalities to develop a Stormwater Management Plan (SMP) to reduce the discharge of pollutants as well as protect water quality. The MS4 general permit is discussed further in the "TMDL Implementation Guidance" section of the core TMDL document. Additional information regarding stormwater management and the MS4 general permit can be obtained on CTDEEP's website (www.ct.gov/deep/stormwater).

There are eighteen MS4 outfalls that have been sampled for *E. coli* bacteria in the watershed in East Lyme and Waterford, discharging directly to the shoreline of LIS or indirectly through Jordan Brook, Thames River, Niantic River, Stoney Brook, Oil Mill Brook, Alewife Cove, Latimer Brook, Pattagansett River or Bride Brook (Table 7). Although the results cannot be compared to the water quality standard as there is no single sample shellfish standard for *E. coli*, high counts were detected at four of the twelve outfalls in Waterford and six of the six outfalls in East Lyme.

Figure 5: MS4 areas near the East Lyme/Waterford Estuary

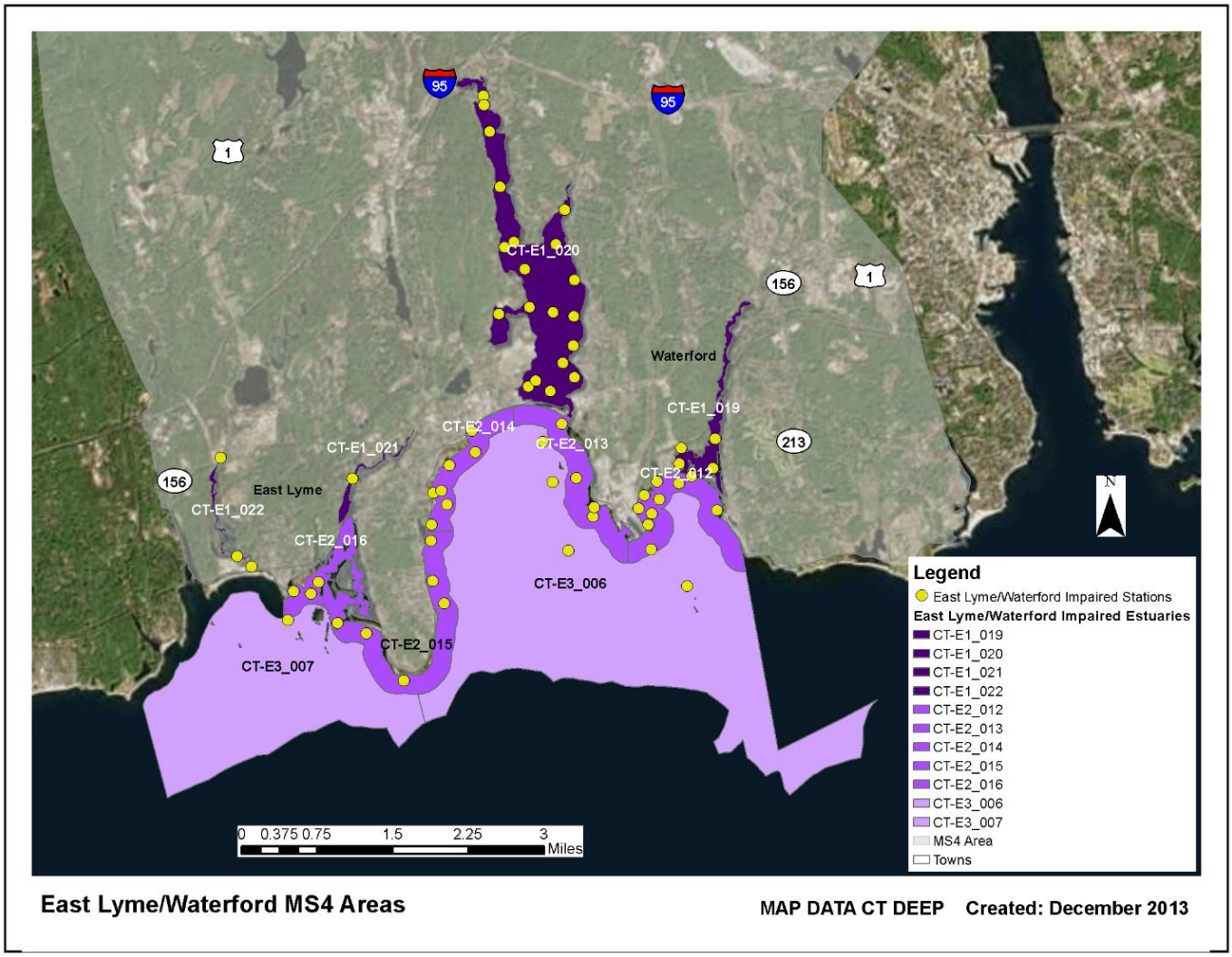


Table 7: List of MS4 sample locations and *E. coli* (colonies/100 mL) results in the East Lyme/ Waterford Estuary. The results cannot be compared to the water quality standard as there is no single sample shellfish standard for *E. coli*.

Town	Location	MS4 Type	Receiving Waters	Sample Date	Result
Waterford	Avery Lane #10010	Commercial	Jordan Brook	09/08/04	945
Waterford	Avery Lane #10010	Commercial	Jordan Brook/Jordan Cove	11/02/06	10
Waterford	Avery Lane #10010	Commercial	Jordan Brook	10/27/2011	5
Waterford	Bolles Court	Residential	Smith Cove, Thames River	10/25/05	10
Waterford	Bolles Court	Residential	Smith's Cove-Thames River	05/02/07	10
Waterford	Bolles Court	Residential	Smith's Cove-Thames River	1/7/2009	10
Waterford	Cross Road #20107	Industrial	Niantic River	09/08/04	384
Waterford	Cross Road #20107	Industrial	Niantic River	11/02/06	10
Waterford	Cross Road #20107	Industrial	SE Western Complex	10/27/2011	31

Town	Location	MS4 Type	Receiving Waters	Sample Date	Result
Waterford	Cross Road Commercial Conn Co-ordinate grid:696,489N;1,60,889E	Commercial	Niantic River	10/25/05	10
Waterford	Cross Road-696,489N;1,160,889	Commercial	Stoney Brook	05/02/07	10
Waterford	Cross Road-696,489N;1,160,889	Commercial	Stoney Brook	1/7/2009	10
Waterford	Cross Road-Dicin-700,064 N;1,161,331 E	Industrial	Stoney Brook	05/02/07	60
Waterford	Cross Road-Dicin-700,064 N;1,161,331 E	Industrial	Stoney Brook	1/7/2009	10
Waterford	Crossroad-Dicin-Industrial Conn Co-ordinate grid:700,064N;1,161,331E	Industrial	Niantic River	10/25/05	10
Waterford	Douglas Lane-704,913 N;1,161,632 E	Commercial	Jordan Brook	05/02/07	10
Waterford	Douglas Lane-704,913 N;1,161,632 E	Commercial	Jordan Brook	1/7/2009	10
Waterford	Douglas Lane-Commercial Conn Co-ordinate grid:704,913N;1,161,632E	Commercial	Jordan Brook	10/25/05	10
Waterford	Hickory Lane #10127	Residential	Thames River	09/08/04	178
Waterford	Hickory Lane #10127	Residential	Thames River Basin	11/02/06	10
Waterford	Hickory Lane #10127	Residential	Thames River Basin	10/27/2011	10
Waterford	Industrial Drive	Industrial	Jordan Brook	11/02/06	10
Waterford	Industrial Drive #DHWDD 41-1	Industrial	Thames River Basin	10/27/2011	5
Waterford	Industrial Drive #DHWDD41-1	Industrial	Oil Mill Brook	09/08/04	406
Waterford	Industrial Drive Conn-Co-ordinate grid:707,244N;1,161,406E	Industrial	Jordan Brook	10/25/05	30
Waterford	Industrial Drive-707,244N;1,161,406	Industrial	Jordan Brook	05/02/07	60
Waterford	Industrial Drive-707,244N;1,161,406	Industrial	Jordan Brook	1/7/2009	10
Waterford	Miner Lane #10003	Commercial	SE Shoreline	09/08/04	31
Waterford	Miner Lane #10003	Commercial	SE Shoreline	11/02/06	10
Waterford	Miner Lane #10003	Commercial	SE Shoreline	10/27/2011	5
Waterford	Niles Hill Rd/Residential Conn Co-ordinate grid:677,898N;1,176,433E	Residential	Alewife Cove	10/25/05	10
Waterford	Niles Hill Rd-677,898 N;1,176,433E	Residential	Alewife Cove	05/02/07	10
Waterford	Niles Hill Rd-677,898 N;1,176,433E	Residential	Alewife Cove	1/7/2009	10
Waterford	Stone Heights #10121	Residential	Jordan Brook	09/08/04	20
Waterford	Stone Heights Dr #10121	Residential	Jordan Brook/Jordan Cove	11/02/06	10
Waterford	Stone Heights Drive #10121	Residential	Jordan Brook	10/27/2011	53

Town	Location	MS4 Type	Receiving Waters	Sample Date	Result
East Lyme	Colony Road	Residential	Latimer Brook	05/02/06	26
East Lyme	Colony Road	Residential	Latimer Brook	12/13/06	40
East Lyme	Colony Road	Residential	Latimer Brook	07/12/06	2,700
East Lyme	Colony Road	Residential	Latimer Brook	8/6/2008	3500
East Lyme	hole-in-the-wall	Commercial	LIS	05/02/06	280
East Lyme	hole-in-the-wall	Commercial	LIS	5/8/2008	300
East Lyme	hole-in-the-wall	Commercial	LIS	07/12/06	1,640
East Lyme	hole-in-the-wall beach	Commercial	LIS	8/6/2008	2800
East Lyme	hole-in-the-wall drainage outlet (Baptist Lane)	Commercial	LIS	08/30/05	5,500
East Lyme	Industrial Park Road	Industrial	Gordon Pond	05/02/06	80
East Lyme	Industrial Park Road	Industrial	Pattagansett River	12/13/06	20
East Lyme	Industrial Park Road	Industrial	Pattagansett River	5/8/2008	40
East Lyme	Industrial Park Road	Industrial	Pattagansett River	07/12/06	60
East Lyme	Industrial Park Road	Industrial	Pattagansett River	8/6/2008	560
East Lyme	Lee Farm Road	Residential	unnamed brook to LIS	12/13/06	200
East Lyme	Lee Farm Road	Residential	unnamed brook to LIS	05/02/06	650
East Lyme	Lee Farm Road	Residential	unnamed brook to LIS	5/8/2008	1200
East Lyme	Lee Farm Road	Residential	unnamed brook to LIS	07/12/06	1,380
East Lyme	Lee Farm Road	Residential	unnamed brook to LIS	8/6/2008	5400
East Lyme	Liberty Way	Industrial	Bride Brook	8/6/2008	540
East Lyme	Liberty Way	Industrial	Bride Brook	12/13/06	40
East Lyme	Liberty Way	Industrial	Bride Brook	05/02/06	320
East Lyme	Liberty Way	Industrial	Bride Brook	07/12/06	480
East Lyme	Stop & Shop	Commercial	Gordon Pond	05/02/06	220
East Lyme	Stop & Shop	Commercial	Pattagansett River	07/12/06	40
East Lyme	Stop & Shop (248 Flanders Rd)	Commercial	Pattagansett River	12/13/06	20
East Lyme	Stop & Shop (248 Flanders Rd)	Commercial	Pattagansett River	5/8/2008	100
East Lyme	Stop & Shop (248 Flanders Rd)	Commercial	Pattagansett River	8/6/2008	860

Publicly Owned Treatment Works

According to the 2012 East Lyme Estuary Report from DABA, there are no water pollution control facilities (WPCFs) in East Lyme; pump stations carry effluent to the New London WPCF on the Thames River. There are no combined sewage overflows. Over 90% of the town is sewered with over 99% of the shoreline area sewered. East Lyme has 13 Pump Stations; information about each pump station can be found in DA/BA files. Also, there are no permitted private WPCFs in town.

According to the 2011 Waterford Estuary Report from DABA, there are no public or private sewage treatment facilities in Waterford. Pump stations send the effluent to the New London WPCF; the town of Waterford began discharging sewage to the New London sewer system in the mid 1970's. Also, the sanitary wastewater discharges from the City of New London, City of Groton and the Town of Groton WPCFs in New London Harbor may indirectly impact the eastern portion of Waterford shellfish growing waters in Long Island Sound.

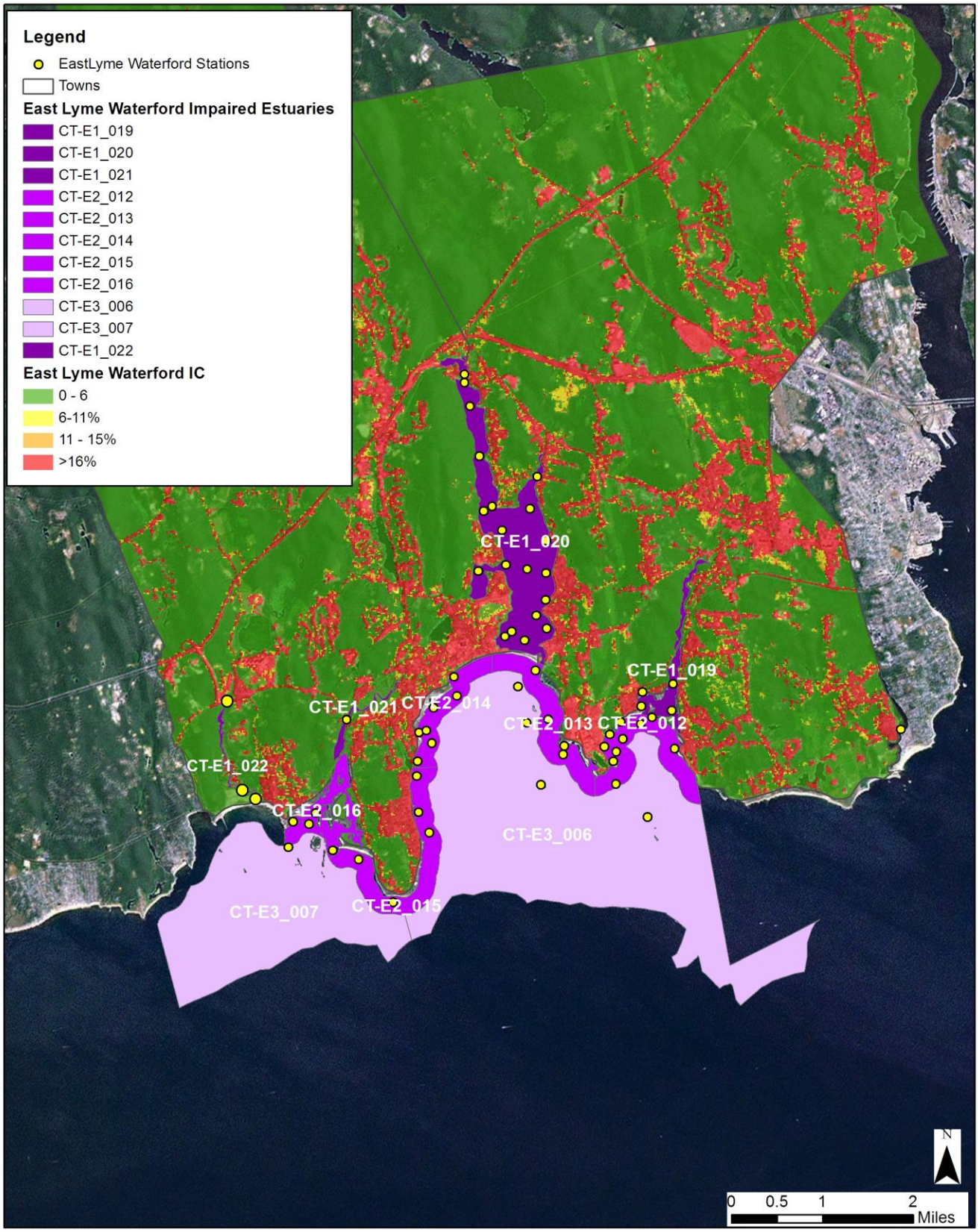
Non-point Sources

Non-point source (NPS) pollution comes from many diffuse sources and is more difficult to identify and control. NPS pollution is often associated with certain land-use practices. Examples of NPS that can contribute bacteria to surface waters include stormwater runoff, illicit discharges, insufficient septic systems, pet and wildlife waste, agriculture, and contact recreation (swimming or wading). With the waters of the East Lyme/Waterford Estuary being tidally influenced, many bacterial sources that appear to be downstream of the impaired segment may be affecting the water quality in upstream segments. Potential sources of NPS to the impaired segments in the East Lyme/Waterford Estuary are described below.

Stormwater Runoff from Developed Areas

The Towns of East Lyme and Waterford feature small areas of heavy development, but are predominantly in the 0-6% range for impervious cover. Impervious surfaces, or surface areas such as roofs and roads that force water to run off land surfaces rather than infiltrate soil, often characterize developed areas. Studies have shown a link between the amount of impervious area in a watershed and water quality conditions (CWP, 2003). In one study, researchers correlated the amount of fecal coliform to the percentage of land with impervious cover in a watershed (Mallin *et al.*, 2000). Both inland and coastal land bordering the estuary in East Lyme and Waterford exceeds 16% impervious surfaces (Figure 6). Also, stations in five of the ten segments in this estuary exceeded the WQS for fecal coliform during wet-weather, which indicates that stormwater runoff is likely contributing bacteria to the estuary.

Figure 6: Impervious cover (%) for East Lyme and Waterford, CT



East Lyme Waterford Impervious Surface **MAP DATA CT DEEP** **Created June 2014**

Illicit Discharges and Insufficient Septic Systems

As shown in Figure 4, a number of areas within East Lyme and Waterford rely on a municipal sanitary sewer system. According to the 2008 East Lyme Estuary Report most of the East Lyme shoreline is connected to the sewer system. Sewer system leaks and other illicit discharges can contribute bacteria to nearby surface waters.

However, large portions of the watershed, particularly near the Niantic River, Jordan Cove, and the Pattagansett River, also rely on onsite wastewater treatment systems, such as septic systems. Properly managed septic systems and leach fields have the ability to effectively remove bacteria from waste. If systems are not maintained, waste will not be adequately treated and may result in bacteria reaching nearby surface and ground water.

Wildlife and Domestic Animal Waste

Wildlife, including waterfowl, and domestic animals within the municipalities of East Lyme and Waterford, including those present in the estuary, represent another potential source of bacteria to the impaired waterbodies. Elevated bacteria levels due solely to a natural population of wildlife are not subject to the WQS. However, any exacerbation of wildlife population sizes or residency times influenced by human activities is subject to the CT WQS and TMDL provisions. As described in the 2008 East Lyme Estuary Report, there is a significant swan population in the Niantic River. The highest concentration of swans and geese are found in the upper sections of Keeny Cove in Waterford, Smith Cove and Golden Spur in East Lyme. Waterfowl are also found in the Four Mile River, Pattagansett River, Waterford Island in Niantic Bay, Bride Brook watershed and Long Ledge Rock near Griswold Island. Large flocks of waterfowl are found in Keeny Cove near Kiddies Beach and do impact water quality in this area as reflected at water quality monitoring station 152-1.1 in Segment 2 (CT-E1_020). With the construction of roads and drainage systems, wastes from these waterfowl may no longer be retained on the landscape, but instead may be conveyed via stormwater to the nearest surface waterbody. As such, physical land alterations can exacerbate the impact of these natural sources on water quality (USEPA, 2001).

Geese and other waterfowl are known to congregate in open areas, including recreational fields, agricultural crop fields, and golf courses. In addition to creating a nuisance, large numbers of geese can create unsanitary conditions on the grassed areas and cause water quality problems due to bacterial contamination associated with their droppings. Large populations of geese can also lead to habitat destruction as a result of overgrazing on wetland and riparian plants.

As indicated previously, portions of East Lyme and Waterford near the estuary are heavily developed with commercial and residential properties. As such, waste from domestic animals, such as dogs, may also be contributing to bacteria concentrations in these impaired segments in the East Lyme/Waterford Estuary.

Marinas

Since its inception, the federal Clean Water Act has prohibited the discharge of untreated sewage from vessels in all of Long Island Sound. Now, eliminating the release of all sewage from boats, both treated and untreated, will result in further reductions of human fecal waste discharge and, therefore, reductions in nutrient loading and potential human exposure to bacterial and viral pathogens in swimming areas, shellfish beds and other environmentally sensitive aquatic habitats. Connecticut has designated No Discharge Areas (NDAs) in all of Connecticut's coastal waters from the Rhode Island state boundary in the Pawcatuck River to the New York State Boundary in the Byram River and extending from shore out

to the New York state boundary. In these waters the discharge of any sewage from any vessel is prohibited.

As noted previously, multiple marinas are located within the East Lyme/Waterford Estuary, particularly in the Niantic River (Figure 4 and Table 5). Marinas are located at the water's edge, and if no measures are taken to reduce pollutants, including buffering, pollutants can be transported via runoff from parking lots and hull maintenance areas directly into the marina basin. Common pollutants from marinas include bacteria and nutrients from stormwater runoff, solid and liquid materials used in boat maintenance and cleaning, fuel and oil, sewage from public restrooms and boat pump-outs, fish waste, and turbidity from boating activities. The CT DEEP has information on regional pump-out boats and facilities at its website, Connecticut Statewide Pumpout Facilities List. There are portable pump-out facilities at Bayreuther Boat Yard Inc. and Port Niantic Marina in the Niantic River in East Lyme and at Niantic Bay Marina in the Niantic River in Waterford. A permanent pump-out facility will be installed at Port Niantic. Save the River Save the Hills, a non-profit environmental organization operates a pump-out boat in the summer in the Niantic River. It offers free pump-outs and began operation in late 2003. Most services are free and eliminate the possibility of vessels dumping raw wastes into Long Island Sound, which is prohibited by CT Water Quality Standards Number 24, "the discharge of sewage from any vessel to any water is prohibited."

Recreation

People coming in direct contact with surface water presents another potential source of bacterial contamination. Microbial source tracking (MST) surveys conducted in New Hampshire have shown humans to be a source of bacterial contamination at beaches (Jones, 2006). Since there are several swimming areas along the shoreline, including Rocky Neck State Park, it is probable that some bacterial contamination can be attributed to human activities in the East Lyme/Waterford Estuary.

Additional Sources

Shellfish growing waters in Waterford are not impacted by sanitary landfills, septage disposal lagoons or refuse transfer stations, according to the 2012 Waterford Estuary Report. Also, according to the 2011East Lyme Estuary Report, there are no active sanitary landfills, no refuse transfer stations and no active septage disposal lagoons that would impact shellfish growing waters in East Lyme.

There may be other sources not listed here or identified in Figure 4 that contribute to the observed water quality impairments in the East Lyme/Waterford Estuary. Further monitoring and investigation will confirm the listed sources and discover additional ones. More detailed evaluation of potential sources is expected to become available as activities are conducted to implement this TMDL.

CURRENT MANAGEMENT ACTIVITIES

The Towns of East Lyme and Waterford have developed and implemented programs to protect water quality from bacterial contamination. In addition, the National Shellfish Sanitation Program (NSSP) has multiple requirements for the protection and evaluation of shellfish growing areas. More information about this program is provided below and available online: http://www.fda.gov/Food/GuidanceRegulation/FederalStateFoodPrograms/ucm2006754.htm.

The NSSP requires the completion of a sanitary survey to determine acceptable and unacceptable growing areas, and to accurately classify a growing area as Approved, Conditionally Approved, Restricted, Conditionally Restricted, or Prohibited. A sanitary survey is an in-depth evaluation of all environmental factors impacting water quality in a shellfish growing area. Environmental factors include both actual and potential pollutant sources, whether natural or man-made, along with meteorological and hydrographic characteristics of the growing area. The principal components of a sanitary survey are: (1) identification and evaluation of pollutant sources, (2) evaluation of meteorological factors, (3) evaluation of hydrographic factors affecting the distribution of pollutants, and (4) assessment of water quality.

The sanitary survey includes data and results from the following:

1. Shoreline survey;
2. Survey of the bacteriological quality of the water;
3. Evaluation of meteorological, hydrodynamic, and geographic characteristics of the growing area;
4. Analysis of shoreline survey, bacteriological water quality, and meteorological, hydrodynamic, and geographic characteristics; and
5. Determination of the appropriate growing area classification

Maintaining updated sanitary survey records consists primarily of routinely evaluating major pollutant sources, collecting water quality data from sampling stations under the selected NSSP water quality monitoring strategy, and analyzing the data to ensure that the classification continues to represent current sanitary conditions in the growing area. The entire sanitary survey process must be repeated every 12 years. In the interim, the sanitary quality of each growing area must be reviewed as often as necessary to ensure appropriate classification. Certain sanitary survey components are required by the Model Ordinance to be updated annually and triennially.

The growing area classification and supporting data from the sanitary survey shall be reviewed at least every three years. As required by the NSSP, this triennial re-evaluation shall include:

1. A review of water quality sampling results;
2. Documentation of any new pollutant sources and evaluation of their impact on the growing area;
3. Re-evaluation of all pollutant sources, including sources previously identified in the sanitary survey, as necessary to fully evaluate any changes in the sanitary conditions of the growing area. Re-evaluation may or may not include a site visit;
4. A comprehensive report analyzing the sanitary survey data and determining whether the existing growing area classification is accurate or requires revision; and
5. Reclassification of the growing area if re-evaluation determines that conditions for classification have changed based on data collected during the triennial review

NSSP also requires that the sanitary survey be updated annually to reflect changes in conditions in the growing area. The annual re-evaluation shall include:

1. Field observation of pollutant sources during drive-through surveys, sample collections, or other information sources;
2. Addition and review of current year's water quality sampling results to a database collected in accordance with the bacteriological standards and sample collection required;
3. Review of available inspection reports and effluent samples collected from pollutant sources;
4. Review of available performance standards for various types of discharges impacting the growing area; and
5. A brief report documenting annual re-evaluation findings.

The most recent triennial re-evaluation for the Shellfish Growing Waters in the Town of East Lyme was published in 2011 (East Lyme, 2011). According to this report, all East Lyme shellfish growing area classifications, last amended on 12/23/98, conform to the applicable criteria set forth in the NSSP Model Ordinance. No classification changes are recommended or required at this time. There have been no new known pollution sources since the 1995 shoreline survey.

The most recent triennial re-evaluation for the Shellfish Growing Waters in the Town of Waterford was published in 2012 (Waterford, 2012). According to this report, all Waterford shellfish growing area classifications, last amended on 5/21/11, conform to the applicable criteria set forth in the NSSP Model Ordinance.

Other efforts have been taken by East Lyme and Waterford to reduce bacteria to its surface waters. As indicated previously, East Lyme and Waterford are regulated under the MS4 general permit program. The MS4 permit requires regulated towns to prepare and implement a Stormwater Management Plan (SMP) that reduces the discharge of stormwater pollutants to improve water quality. The plan must address the following six minimum measures:

1. Public Education and Outreach.
2. Public Involvement/Participation.
3. Illicit discharge detection and elimination.
4. Construction site stormwater runoff control.
5. Post-construction stormwater management.
6. Pollution prevention/good housekeeping.

Each municipality is also required to submit an annual update outlining steps taken to meet the six minimum measures. The most recent updates that address bacterial contamination in the watershed are summarized in Tables 8 and 9.

Table 8: Summary of MS4 requirement updates related to the reduction of bacterial contamination from East Lyme, CT (Permit # GSM000014)

Minimum Measure	2008 East Lyme Annual Report (GSM000014)
Public Outreach and Education	1) Stencil storm drains with messages like "Do Not Dump - Drains Directly To the Sound", etc. Complete 20% of town each year. 2) New pamphlets developed and/or existing educational materials located for distribution to citizens and students that informs them about the impacts of stormwater on our environment.
Public Involvement and Participation	1) The town used volunteers, engineers, and other citizens willing to help install storm drain markings for about 1/4 of the town's catch basins.

Minimum Measure	2008 East Lyme Annual Report (GSM000014)
Illicit Discharge Detection and Elimination	--
Construction Site Stormwater Runoff Control	1) The Town evaluated the existing E&S program in place to make sure that it meets the requirements of Phase 2m and modified accordingly.
Post Construction Stormwater Management	1) Developed drainage maintenance agreements that require that developers file this agreement in the Town Clerk's Office to insure adequate long-term operation and maintenance of their BMP's.
Pollution Prevention and Good Housekeeping	1) Developed and implemented a street sweeping program 2) Developed and implemented catch basin cleaning program

Table 9: Summary of MS4 requirement updates related to the reduction of bacterial contamination from Waterford, CT (Permit # GSM000023)

Minimum Measure	2012 Waterford Annual Report (GSM000023)
Public Outreach and Education	1) Annual article published in local newspaper outlining permit requirements and Town's steps to meet guidelines. 2) Town website updated with Household Hazardous waste dates and general Stormwater information. Multiple Household Hazardous waste collections held.
Public Involvement and Participation	1) Local town meetings held to discuss Low Impact Development and new subdivision regulations. 2) Notification of the draft Annual Report posted on town website.
Illicit Discharge Detection and Elimination	1) Town continues to map any new outfalls >12". 2) Town continued monitoring and inspection of outfalls. 3) Training held for Public Works employees
Construction Site Stormwater Runoff Control	1) Distributed the "Town of Waterford Stormwater Management Plan Fact Sheet" to developers, contractors, engineers and the public at the Waterford Permitting Office 2) Revisions made to Zoning/Subdivision Regulations 3) Regularly inspect construction sites for compliance 4) Continued field training of departmental staff on the installation and maintenance of erosion and sediment control measures and construction stormwater run-off controls
Post Construction Stormwater Management	1) Post-construction inspection and maintenance continued with updated inventory list. 2) Planning Department staff participated in refresher training on design and construction of stormwater management structures at active construction
Pollution Prevention and Good Housekeeping	1) Street sweeping throughout Town was completed between March 1, 2010 and October 20, 2011. 2) Approximately 1,190 stormwater structures were cleaned by a sub-contractor this year.

RECOMMENDED NEXT STEPS

East Lyme and Waterford have developed and implemented programs to protect water quality from bacterial contamination. Future mitigative activities are necessary to ensure the long-term protection of Segments 1 – 11 in the East Lyme/Waterford Estuary and have been prioritized below.

1) Continue monitoring of permitted sources.

Regular monitoring should be established for all permitted sources to ensure compliance with permit requirements and to determine if current management measures are adequate or if additional measures are necessary for water quality protection. There are at least 24 permittees in the East Lyme/Waterford Estuary, some of which have shown historically high bacteria concentrations. Further monitoring will provide information essential to better locate, understand, and reduce pollution sources. If industrial facility monitoring indicates elevated bacteria, the General Permit for the Discharge of Stormwater Associated with Industrial Activity, effective October 1, 2011 (Industrial general permit) outlines an iterative approach of implementing additional control measures (in addition to required measures) to identify and reduce sources of bacterial contamination from the facility.

Section 6(k) of the MS4 general permit requires a municipality to modify its Stormwater Management Plan (SMP) to implement a TMDL within four months of TMDL approval by EPA if stormwater within the municipality contributes pollutant(s) in excess of the allocation established by the TMDL. The allocation is expressed as a daily target concentration to direct the permittee to implement best management practices towards improving water quality. The TMDL target goal is not expected to be a discharge permit limit because achieving the WQS will be determined through surface water sampling not discharge monitoring (for additional information see Section 5 of the Statewide Bacteria TMDL Core Document). For discharges to impaired waterbodies, the municipality must assess and modify the six minimum measures of its SMP, if necessary, to meet TMDL standards. Particular focus should be placed on the following plan components: public education, illicit discharge detection and elimination, stormwater structures cleaning, and the repair, upgrade, or retrofit of storm sewer structures. The goal of these modifications is to establish a program that improves water quality consistent with TMDL requirements. Once the MS4 modifies the SMP in response to a TMDL, they must notify DEEP of the modification(s).

Tables 10 and 11 detail the appropriate bacteria criteria for use as waste load allocations established by this TMDL for use as water quality targets by permittees as permits are renewed and updated, within the East Lyme/Waterford Estuary.

For any municipality subject to a MS4 general permit and affected by a TMDL, the permit requires a modification of the SMP to include BMPs that address the included impairment. In the case of bacteria related impairments, municipal BMPs could include: implementation or improvement to existing nuisance wildlife programs, septic system monitoring programs, any additional measures that can be added to the required illicit discharge detection and elimination (IDDE) programs, and an increased street sweeping frequency above basic permit requirements. Any non-MS4 municipalities can implement these same types of initiatives in an effort to reduce bacteria source loading to impaired waterways

Any industrial facilities that discharge regulated stormwater to impaired waters must update its Pollution Prevention Plan to reflect BMPs that can reduce bacteria loading to the receiving waterway. These BMPs could include nuisance wildlife control programs and any stormwater measures that increase infiltration of stormwater to the ground to reduce overall stormwater discharge to impaired surface waters. Similarly, facilities that are regulated under the General Permit for the Discharge of Stormwater from Commercial

Activity, reissued May 1, 2014 (Commercial general permit) and discharge stormwater to impaired waters should update its Stormwater Management Plan and implement additional BMPs, as listed above for industrial activities, to reduce bacteria from its stormwater discharges.

Table 10: Bacteria (Enterococci) TMDLs, WLAs, and LAs for Recreational Uses.

		Instantaneous Enterococcus (#/100mL)				Geometric Mean Enterococcus (#/100mL)	
Class	**Bacteria Source**	**WLA[6]**		**LA[6]**		**WLA[6]**	**LA[6]**
	Recreational Use	**1**	**2**	**1**	**2**	**All**	**All**
SA[5]	Illicit sewer connection	0	0			0	
	Leaking sewer lines	0	0			0	
	Stormwater (MS4s)	104[7]	500[7]			35[7]	
	Stormwater (non-MS4)			104[7]	500[7]		35[7]
	Wildlife direct discharge			104[7]	500[7]		35[7]
	Human or domestic animal direct discharge[3]			104	500		35
		Instantaneous Enterococcus (#/100mL)				**Geometric Mean Enterococcus (#/100mL)**	
Class	**Bacteria Source**	**WLA[6]**		**LA[6]**		**WLA[6]**	**LA[6]**
	Recreational Use	**1**	**2**	**1**	**2**	**All**	**All**
SB[5]	Non-Stormwater NPDES	104	500			35	
	CSOs	104	500			35	
	SSOs	0	0			0	
	OBDs[4]	0	0			0	
	Illicit sewer connection	0	0			0	
	Leaking sewer lines	0	0			0	
	Stormwater (MS4s)	104[7]	500[7]			35[7]	
	Stormwater (non-MS4)			104[7]	500[7]		35[7]
	Wildlife direct discharge			104[7]	500[7]		35[7]
	Human or domestic animal direct discharge[3]			104	500		35

(1) **Designated Swimming.** Procedures for monitoring and closure of bathing areas by State and Local Health Authorities are specified in: Guidelines for Monitoring Bathing Waters and Closure Protocol, adopted jointly by the Department of Environmental Protections and the Department of Public Health. May 1989. Revised April 2003 and updated December 2008.

(2) **All Other Recreational Uses.**

(3) Human direct discharge = swimmers

(4) All coastal and inland waters in Connecticut are designated as No Discharge Areas for Overboard Discharges (OBDs) from marine vessels with Marine Sanitation Devices.

(5) WLA and LA refer to Enterococcus of human and domestic animal origin

(6) Unless otherwise required by statute or regulation, compliance with this TMDL will be based on ambient concentrations and not end-of-pipe bacteria concentrations

(7) Replace numeric value with "natural levels" if only source is naturally occurring wildlife. Natural is defined as the biological, chemical and physical conditions and communities that occur within the environment which are unaffected or minimally affected by human influences (CT DEEP 2011a). Sections 2.2.2 and 6.2.7 of this Core Document deal with BMPs and delineating type of wildlife inputs.

Table 11: Bacteria (Fecal Coliform) TMDLs, WLAs, and LAs for Shellfish Harvesting Areas.

		Geometric Mean Fecal coliform (#/100mL)[4]		90% samples less than Fecal Coliform (#/100mL)[4]	
Class	**Bacteria Source[1]**	**WLA[5]**	**LA[5]**	**WLA[5]**	**LA[5]**
SA Direct Consumption	CSOs	14		31	
	SSOs	0		0	
	OBDs[3]	0		0	
	Illicit sewer connection	0		0	
	Leaking sewer lines	0		0	
	Stormwater (MS4s)	14[6]		31[6]	
	Stormwater (non-MS4)		14[6]		31[6]
	Wildlife direct discharge		14[6]		31[6]
	Human or domestic animal direct discharge[2]		14		31
SB Indirect Consumption	Non-Stormwater NPDES	88		260	
	CSOs	88		260	
	SSOs	0		0	
	OBDs[3]	0		0	
	Illicit sewer connection	0		0	
	Leaking sewer lines	0		0	
	Stormwater (MS4s)	88[6]		260[6]	
	Stormwater (non-MS4)		88[6]		260[6]
	Wildlife direct discharge		88[6]		260[6]
	Human or domestic animal direct discharge[2]		88		260

(1) Criteria are based on utilizing the mTec method as specified in the U.S. Food and Drug Administration National Shellfish Sanitation Program-Model Ordinance (NSSP-MO) document *Guide for the Control of Molluscan Shellfish 2007.*

(2) Human direct discharge = swimmers

(3) All coastal and inland waters in Connecticut are designated as No Discharge Areas for Overboard Discharges (OBDs) from marine vessels with Marine Sanitation Devices.

(4) Adverse Condition Allocations apply to areas affected by Point Sources. Adverse Condition or Random Sampling Allocations apply to areas affected by Nonpoint Sources. Adverse condition is defined as "... a State or situation caused by meteorological, hydrological or seasonal events or point source discharges that has historically resulted in elevated [bacteria] levels in the particular growing area." USFDA 2005

(5) Unless otherwise required by statute or regulation, compliance with this TMDL will be based on ambient concentrations and not end-of-pipe bacteria concentrations

(6) Replace numeric value with "natural levels" if only source is naturally occurring wildlife. Natural is defined as the biological, chemical and physical conditions and communities that occur within the environment which are unaffected or minimally affected by human influences (CT DEEP 2011a). Sections 2.2.2 and 6.2.7 of this Core Document deal with BMPs and delineating type of wildlife inputs.

2) Identify areas in East Lyme and Waterford to implement Best Management Practices (BMPs) to control stormwater runoff.

As noted previously, areas of East Lyme and Waterford near the East Lyme/Waterford Estuary have impervious cover greater than 16% and are urban areas regulated under the MS4 program. As such, stormwater runoff is likely contributing bacteria to the East Lyme/Waterford Estuary. To identify areas that are contributing bacteria to the impaired segments, municipalities should conduct wet-weather sampling at stormwater outfalls that discharge directly to the impaired segments in East Lyme/Waterford Estuary. To treat stormwater runoff, the towns should identify areas along the developed sections of the impaired segments to install BMPs designed to encourage stormwater to infiltrate the ground before entering the waterbodies. These BMPs would disconnect impervious areas and reduce pollutant loads to the estuary. More detailed information and BMP recommendations can be found in the core TMDL document.

3) Implement a program to evaluate the sanitary sewer system.

Both East Lyme and Waterford completed major public sewer expansion programs in the last several years that now cover large portions of the areas near the estuary (Figure 4). If not already in place, it is important for East Lyme and Waterford to develop a program to evaluate its sanitary sewer system and reduce leaks and overflows. This program should include periodic inspections of the sewer line.

4) Develop a program to monitor septic systems.

Although a number of residents near the East Lyme/Waterford Estuary rely on a municipal sanitary sewer system, the rest rely on septic systems. If not already in place, East Lyme and Waterford should establish a program to ensure that existing septic systems are properly operated and maintained. For instance, communities can create an inventory of existing septic systems through mandatory inspections. Inspections help encourage proper maintenance and identify failed and sub-standard systems. Policies that govern the eventual replacement of the sub-standard systems within a reasonable timeframe could be adopted. Municipalities can also develop programs to assist citizens with the replacement and repair of older and failing systems.

5) Evaluate municipal education and outreach programs regarding animal waste.

Any education and outreach program should highlight the importance of not feeding waterfowl and wildlife and managing waste from horses, dogs, and other pets. Municipalities and residents can take measures to minimize waterfowl-related impacts by allowing tall, coarse vegetation to grow in riparian areas of impaired segments frequented by waterfowl. Waterfowl, especially grazers like geese, prefer easy access to water. Maintaining an uncut vegetated buffer along the shore will make the habitat less desirable to geese and encourage migration. In addition, any educational program should emphasize that feeding waterfowl, such as ducks, geese, and swans, may contribute to water quality impairments in the East Lyme/Waterford Estuary and can harm human health and the environment. Animal wastes should be disposed of away from any waterbody or storm drain system. BMPs effective at reducing the impact of animal waste on water quality include installing signage, providing pet waste receptacles in high-use areas, enacting ordinances requiring the clean-up of pet waste, and targeting educational and outreach programs in problem areas.

6) Improve education and outreach programs regarding boats and marinas.
Marinas must comply with permit requirements that limit bacteria contribution to the East Lyme/Waterford Estuary. Other programs, such as Connecticut's Clean Marina Program, may also be adopted by all marinas in the estuary to reduce bacteria contribution from non-point source pollution from marinas (www.ct.gov/dep/cleanmarina). The Clean Marina Program is a voluntary program that encourages inland and coastal marina operators to minimize pollution, and recognizes Connecticut marinas, boatyards, and yacht clubs that go above and beyond regulatory compliance as "Certified Clean Marinas." All certified marinas receive a weatherproof Clean Marina Flag to fly at their facility and authorization to use the Clean Marina Program logo on company publications. CT DEEP recognizes certified Clean Marinas through press releases, on its web page, and at public events. As a companion to the Clean Marina Program, the Clean Boater Program encourages boaters to use clean boating techniques when operating and maintaining their boats.

BACTERIA DATA AND PERCENT REDUCTIONS TO MEET THE TMDL

Table 12: Segment 1: LIS EB Inner – Jordan Cove, Waterford Bacteria Data

Waterbody ID: CT-E1_019
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 86%
90% of Samples Less Than: 90%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Inner – Jordan Cove, Waterford (CT-E1_017) with annual geometric means and reduction goals for samples

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-10.1	LIS EB Inner - Jordan Cove, Waterford	2/15/2000	41	Wet	**101.2**	**90**
152-10.1	LIS EB Inner - Jordan Cove, Waterford	6/14/2000	250	Wet		
152-10.1	LIS EB Inner - Jordan Cove, Waterford	1/31/2001	29	Wet	29	n/a
152-10.1	LIS EB Inner - Jordan Cove, Waterford	9/18/2001	29	Dry		
152-10.1	LIS EB Inner - Jordan Cove, Waterford	1/24/2002	29	Dry	53.2	23
152-10.1	LIS EB Inner - Jordan Cove, Waterford	11/19/2002	179	Dry		
152-10.1	LIS EB Inner - Jordan Cove, Waterford	12/5/2002	29	Wet		
152-10.1	LIS EB Inner - Jordan Cove, Waterford	3/24/2003	8.6	Dry	8.6	n/a
152-10.1	LIS EB Inner - Jordan Cove, Waterford	12/13/2004	28	Dry	28	n/a
152-10.1	LIS EB Inner - Jordan Cove, Waterford	8/30/2005	171	Wet	39.2	40
152-10.1	LIS EB Inner - Jordan Cove, Waterford	9/26/2005	9	Wet		
152-10.1	LIS EB Inner - Jordan Cove, Waterford	12/27/2006	36	Wet	36	90
152-10.1	LIS EB Inner - Jordan Cove, Waterford	11/7/2007	59	Wet	59	90
152-10.1	LIS EB Inner - Jordan Cove, Waterford	12/15/2008	38	Wet	38	90
152-10.1	LIS EB Inner - Jordan Cove, Waterford	3/9/2009	2	Wet	7.5	n/a
152-10.1	LIS EB Inner - Jordan Cove, Waterford	11/18/2009	8	Dry		
152-10.1	LIS EB Inner - Jordan Cove, Waterford	12/16/2009	26	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-10.1	LIS EB Inner - Jordan Cove, Waterford	1/26/2010	27	Wet	27	n/a
152-10.3	LIS EB Inner - Jordan Cove, Waterford	4/26/2009	5	Dry	9.4	3
152-10.3	LIS EB Inner - Jordan Cove, Waterford	5/6/2009	22	Wet		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	7/7/2009	6	Wet		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	7/28/2009	41	Dry		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	7/30/2009	13	Dry		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	9/2/2009	3	Dry		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	10/28/2009	28	Wet		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	11/18/2009	2	Dry		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	9/7/2010	8	Dry	10.8	n/a
152-10.3	LIS EB Inner - Jordan Cove, Waterford	10/3/2010	26	Dry		
152-10.3	LIS EB Inner - Jordan Cove, Waterford	11/7/2010	6	Dry		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	1/31/2001	1.7	Wet	1.7	n/a
152-10.7	LIS EB Inner - Jordan Cove, Waterford	1/24/2002	248	Dry	47.7	57
152-10.7	LIS EB Inner - Jordan Cove, Waterford	10/28/2002	51	Dry		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	10/29/2002	8.6	Dry		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	3/24/2003	8.6	Dry	8.6	n/a
152-10.7	LIS EB Inner - Jordan Cove, Waterford	4/26/2009	1	Dry	7	n/a
152-10.7	LIS EB Inner - Jordan Cove, Waterford	5/6/2009	4	Wet		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	7/7/2009	17	Wet		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	7/28/2009	14	Dry		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	7/30/2009	9	Dry		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	9/2/2009	5	Dry		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	10/28/2009	27	Wet		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	11/18/2009	5	Dry		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	9/7/2010	27	Dry	15	23
152-10.7	LIS EB Inner - Jordan Cove, Waterford	10/3/2010	42	Wet		
152-10.7	LIS EB Inner - Jordan Cove, Waterford	11/7/2010	3	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-10.8	LIS EB Inner - Jordan Cove, Waterford	6/14/2000	250	Wet	N/A	90
152-10.8	LIS EB Inner - Jordan Cove, Waterford	9/18/2001	258	Dry	47.4	40
152-10.8	LIS EB Inner - Jordan Cove, Waterford	11/26/2001	8.7	Wet		
152-10.8	LIS EB Inner - Jordan Cove, Waterford	1/24/2002	179	Dry	179	90
152-10.8	LIS EB Inner - Jordan Cove, Waterford	3/24/2003	8.6	Dry	8.6	n/a
152-10.8	LIS EB Inner - Jordan Cove, Waterford	9/26/2005	10	Wet	10	n/a

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Inner – Jordan Cove, Waterford (CT-E1_019)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
152-10.1	LIS EB Inner - Jordan Cove, Waterford	2000-2011	11	7	30	33	26
152-10.3	LIS EB Inner - Jordan Cove, Waterford	2000-2011	3	7	10	15	8
152-10.7	LIS EB Inner - Jordan Cove, Waterford	2000-2011	5	11	11	11	11
152-10.8	LIS EB Inner - Jordan Cove, Waterford	2000-2011	3	3	45	28	74

Table 13: Segment 2: LIS EB Inner – Niantic River (mouth), Niantic Bacteria Data

Waterbody ID: CT-E1_020
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 94%
90% of Samples Less Than: 90%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Inner – Niantic River (mouth), Niantic (CT-E1_020) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.7	Wet	6.1	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	6/8/2000	22	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	6/4/2001	5.8	Dry	17.2	40
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	51	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	3/10/2002	1.6	Wet	5.1	23
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2002	51	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	11	Dry	11	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	2.2	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	9/28/2005	5	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/16/2006	2	Dry	2.2	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	6/6/2006	12	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	1	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	5	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/30/2008	19	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	6/17/2008	3	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	8/12/2008	12	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	3	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	8	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	1.9	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	12	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	5/18/2009	7	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	1	Wet		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	4	Wet	1.4	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	1	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	1	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	2	Dry	2.5	n/a
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	4	Dry		
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	2	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.7	Wet	7.8	40
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	6/8/2000	36	Wet		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	3/14/2001	1.6	Wet	17.5	50
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	6/4/2001	11	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	51	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	7/26/2001	36	Wet		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	7/27/2001	51	Wet		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	3/10/2002	1.6	Wet	3	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	5/16/2002	11	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	5.8	Dry	5.8	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	2	Dry	3.5	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	9/28/2005	6	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/16/2006	1	Dry	1.6	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Wet		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	4	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	4	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	16	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	4	Wet		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	1.7	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	4	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	2	Wet		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	3	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	1.6	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	1	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	6	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	3	Dry	4.5	n/a
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	5	Dry		
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	6	Dry		
045-12.1	BOATS INC	2/13/2000	1.7	Dry	1.8	n/a
045-12.1	BOATS INC	3/21/2000	1.6	Dry		
045-12.1	BOATS INC	4/17/2000	1.6	Wet		
045-12.1	BOATS INC	4/30/2000	1.6	Dry		
045-12.1	BOATS INC	10/9/2000	1.7	Dry		
045-12.1	BOATS INC	10/15/2000	1.7	Dry		
045-12.1	BOATS INC	11/19/2000	3.6	Dry		
045-12.1	BOATS INC	12/28/2000	1.6	Dry		
045-12.1	BOATS INC	1/28/2001	1.6	Dry	3.8	
045-12.1	BOATS INC	3/12/2001	1.6	Dry		n/a
045-12.1	BOATS INC	3/14/2001	3.6	Unknown		
045-12.1	BOATS INC	3/20/2001	5.8	Dry		
045-12.1	BOATS INC	3/28/2001	1.6	Dry		
045-12.1	BOATS INC	4/4/2001	1.6	Dry		
045-12.1	BOATS INC	4/29/2001	1.6	Dry		
045-12.1	BOATS INC	6/14/2001	50	Dry		
045-12.1	BOATS INC	6/24/2001	8.1	Dry		
045-12.1	BOATS INC	10/28/2001	1.7	Dry		
045-12.1	BOATS INC	11/26/2001	36	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-12.1	BOATS INC	12/16/2001	1.6	Dry		
045-12.1	BOATS INC	1/27/2002	36	Dry	3.4	n/a
045-12.1	BOATS INC	2/24/2002	3.6	Dry		
045-12.1	BOATS INC	3/10/2002	1.6	Wet		
045-12.1	BOATS INC	3/26/2002	5.8	Wet		
045-12.1	BOATS INC	4/7/2002	1.6	Wet		
045-12.1	BOATS INC	5/5/2002	1.6	Dry		
045-12.1	BOATS INC	5/23/2002	1.6	Dry		
045-12.1	BOATS INC	6/13/2002	14	Dry		
045-12.1	BOATS INC	6/26/2002	1.7	Dry		
045-12.1	BOATS INC	7/14/2002	1.6	Dry		
045-12.1	BOATS INC	8/18/2002	18	Dry		
045-12.1	BOATS INC	10/7/2002	1.6	Dry		
045-12.1	BOATS INC	11/11/2002	1.6	Dry		
045-12.1	BOATS INC	1/12/2003	1.7	Wet	3.4	n/a
045-12.1	BOATS INC	4/6/2003	1.6	Dry		
045-12.1	BOATS INC	5/4/2003	1.6	Dry		
045-12.1	BOATS INC	6/11/2003	3.6	Dry		
045-12.1	BOATS INC	7/30/2003	1.6	Dry		
045-12.1	BOATS INC	8/24/2003	1.7	Dry		
045-12.1	BOATS INC	9/29/2003	36	Dry		
045-12.1	BOATS INC	10/5/2003	5.8	Dry		
045-12.1	BOATS INC	10/13/2003	1.6	Dry		
045-12.1	BOATS INC	10/26/2003	1.7	Wet		
045-12.1	BOATS INC	11/16/2003	51	Dry		
045-12.1	BOATS INC	11/30/2003	3.6	Dry		
045-12.1	BOATS INC	12/29/2003	1.7	Dry		
045-12.1	BOATS INC	11/4/2004	1.6	Wet	1.6	n/a
045-12.1	BOATS INC	11/21/2004	1.7	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-12.1	BOATS INC	1/10/2005	0.9	Dry	1.8	n/a
045-12.1	BOATS INC	2/23/2005	3	Dry		
045-12.1	BOATS INC	4/11/2005	1	Dry		
045-12.1	BOATS INC	4/18/2005	2	Dry		
045-12.1	BOATS INC	5/15/2005	1	Wet		
045-12.1	BOATS INC	6/19/2005	2	Dry		
045-12.1	BOATS INC	7/24/2005	1	Dry		
045-12.1	BOATS INC	8/11/2005	4	Dry		
045-12.1	BOATS INC	8/28/2005	1	Wet		
045-12.1	BOATS INC	9/28/2005	4	Dry		
045-12.1	BOATS INC	11/6/2005	4	Wet		
045-12.1	BOATS INC	11/20/2005	2	Dry		
045-12.1	BOATS INC	2/22/2006	2	Dry	1.7	n/a
045-12.1	BOATS INC	3/8/2006	2	Dry		
045-12.1	BOATS INC	3/19/2006	1	Dry		
045-12.1	BOATS INC	4/16/2006	1	Dry		
045-12.1	BOATS INC	4/23/2006	1	Wet		
045-12.1	BOATS INC	5/31/2006	19	Dry		
045-12.1	BOATS INC	7/30/2006	6	Dry		
045-12.1	BOATS INC	9/12/2006	1	Dry		
045-12.1	BOATS INC	10/24/2006	1	Dry		
045-12.1	BOATS INC	12/12/2006	1	Dry		
045-12.1	BOATS INC	12/18/2006	1	Dry		
045-12.1	BOATS INC	4/24/2007	1	Dry	1.7	n/a
045-12.1	BOATS INC	6/24/2007	1	Dry		
045-12.1	BOATS INC	8/7/2007	4	Dry		
045-12.1	BOATS INC	8/28/2007	2	Dry		
045-12.1	BOATS INC	10/31/2007	1	Dry		
045-12.1	BOATS INC	12/20/2007	3	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-12.1	BOATS INC	1/23/2008	1	Dry	1	n/a
045-12.1	BOATS INC	3/13/2008	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.6	Wet	1.7	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	1.7	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	1.7	Wet		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	50	Dry	10.6	23
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	14	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	1.7	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	3/10/2002	1.6	Wet	1.6	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	8.1	Dry	8.1	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	1.7	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	9/28/2005	3	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/16/2006	1	Dry	1	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Wet		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3.5	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	11	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	4	Wet		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	1.8	7
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	34	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	1	Wet		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	1.9	n/a
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	9/7/2010	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	10/3/2010	6	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	9	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	2	Dry	2.6	n/a
045-13.1	LIS EB Inner – Niantic River	4/19/2011	4	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
	(mouth), Niantic					
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	4	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	6/20/2011	1	Dry		
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	6/27/2011	4	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	5.8	Wet	4.1	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	6/8/2000	18	Wet		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	1.7	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	1.6	Wet		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	18	Dry	8.2	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	18	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	1.7	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	3/10/2002	1.7	Wet	1.6	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	11	Dry	11	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	1	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	9/28/2005	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/16/2006	1	Dry	1	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3.9	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	15	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	4	Wet		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	2.1	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	16	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	6	Wet		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	2.2	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	9/7/2010	2	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	10/3/2010	14	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	4	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	1	Dry	3.4	n/a
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	5	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	10	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	6/20/2011	1	Dry		
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	6/27/2011	9	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	11	Wet	17.8	15
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	6/12/2000	258	Wet		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	1.6	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	22	Wet		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	3/14/2001	8.7	Wet	7.7	n/a
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	14	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	8.1	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	3.6	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	3/10/2002	1.7	Wet	3.4	n/a
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	14	Dry	14	n/a
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	12/13/2004	3.6	Dry	3.6	n/a
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	3	n/a
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	9/26/2005	3	Wet		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	9/28/2005	9	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	4/16/2006	1	Dry	1.6	n/a
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	4	Dry		
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3	n/a
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	9	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.7	Wet	6.6	15
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	6/8/2000	51	Wet		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	1.6	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	14	Wet		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	51	Dry	27.9	70
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	36	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	7/26/2001	50	Wet		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	7/27/2001	51	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	3.6	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	3/10/2002	1.6	Wet	3.3	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	5/16/2002	14	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	5/27/2003	51	Wet	10.2	23
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	5/29/2003	5.8	Wet		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	3.6	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	2.6	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	9/28/2005	7	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/16/2006	8	Dry	4.7	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	13	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3.9	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	10	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	6	Wet		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	3	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	12	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	6/23/2009	26	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	7/7/2009	4	Wet		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	7/28/2009	16	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	7/30/2009	1	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	8/4/2009	2	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	9/2/2009	2	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	6	Wet		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	3.2	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	9/7/2010	3	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	10/3/2010	13	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	3	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	9	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	1	Dry	2	n/a
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	2	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	16	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	6/20/2011	1	Dry		
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	6/27/2011	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	3.6	Wet	4.1	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	1.7	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	11	Wet		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	51	Dry	11.6	23
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	18	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	1.7	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	3/10/2002	1.6	Wet	4.2	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	11	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	5/27/2003	51	Wet	6.8	23
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	5/29/2003	1.7	Wet		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	3.6	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	12/13/2004	3.6	Dry	3.6	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	2.6	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	9/28/2005	7	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/16/2006	7	Dry	4.4	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	12	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3.5	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	12	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry	3.8	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	26	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	6/23/2009	9	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	7/7/2009	3	Wet		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	7/28/2009	51	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	7/30/2009	2	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	8/4/2009	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	9/2/2009	4	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	4	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	2	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	2.5	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	9/7/2010	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	10/3/2010	18	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	2	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	7	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	1	Dry	1.9	n/a
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	4	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	6/20/2011	1	Dry		
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	6/27/2011	7	Dry		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	2/15/2000	41	Wet	102.8	90
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	6/12/2000	258	Wet		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	6/6/2002	258	Wet	134.4	90
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2002	70	Dry		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	4/1/2003	29	Wet	29	n/a
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	3/8/2004	10	Dry	15.2	n/a
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	12/13/2004	23	Dry		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	7/11/2005	790	Dry	**222***	90
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	8/30/2005	171	Wet		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	9/26/2005	81	Wet		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	2/7/2006	2	Dry	2	n/a
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	½/2007	171	Wet	171	90
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	5/13/2008	74	Dry	58.3	90
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2008	46	Wet		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	2.3	n/a
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	2	Dry		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2009	6	Dry		
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	47	Wet	47	90
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.7	Wet	10	10
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	6/8/2000	51	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	5.8	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	9/12/2000	11	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	18	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	5.8	Dry	17.3	33
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	22	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	7/26/2001	51	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	7/27/2001	36	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	8/19/2001	50	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	3.6	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	11/26/2001	11	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	1/27/2002	3.6	Dry	3.2	n/a
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	5/16/2002	11	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	6/19/2002	1.6	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	5/27/2003	50	Wet	38	56
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	5/29/2003	50	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	22	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	1	n/a
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Wet	2	n/a
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	4	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	5.8	10
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	7	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	10/2/2008	43	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	22	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	12/21/2008	1	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	4	n/a
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	3/9/2009	1	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	2	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	72	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	5/6/2009	4	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	7/7/2009	7	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	7/28/2009	19	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	7/30/2009	13	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	9/2/2009	1	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	6	Wet		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	3	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	2.6	n/a
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	9/7/2010	2	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	10/3/2010	10	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	1	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	15	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	2	Dry	2.3	n/a
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	3	Dry		
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	2	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	3.6	Wet	8.5	15
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	1.6	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	9/12/2000	18	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	51	Wet		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	36	Dry	20.1	15
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	28	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	5.8	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	11/26/2001	28	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	1/27/2002	1.6	Dry	1.6	n/a
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.7	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	51	Dry	51	90
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.7	Wet	12.2	40
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	12/13/2004	88	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	9	40
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	9/26/2005	81	Wet		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	14	Wet	10.6	n/a
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	8	Dry		
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	5.7	40
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	32	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.6	Wet	6.4	10
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	6/8/2000	51	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	3.6	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	9/12/2000	1.7	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	22	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	3.6	Dry	7.3	19
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	1.6	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	7/26/2001	51	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	7/27/2001	36	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	8/19/2001	3.6	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	1.6	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	11/26/2001	18	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	1/27/2002	1.6	Dry	3.1	n/a
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	5/16/2002	22	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	6/19/2002	1.6	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	5/27/2003	50	Wet	23	23
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	5/29/2003	22	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	11	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.3	n/a
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	1	n/a
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	2	Wet	2.4	n/a
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	3	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3.5	n/a
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	3	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	10/2/2008	8	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	6	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	2.8	7
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	3/9/2009	1	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	46	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	5/6/2009	2	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	7/7/2009	13	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	7/28/2009	46	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	7/30/2009	5	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	9/2/2009	1	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	1	Wet		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	2	Wet	2.3	n/a
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	9/7/2010	1	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	10/3/2010	4	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	2	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	9	Dry		
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	1	Dry	1.7	n/a
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	5	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.7	Wet	2.9	10
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	6/8/2000	28	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	8/6/2000	1.7	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	9/12/2000	1.6	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	9/20/2000	1.7	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	1/15/2001	1.6	Wet	3.3	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	5.8	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	1.7	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	8/19/2001	8.1	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	1.6	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	11/26/2001	5.8	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	1/27/2002	3.6	Dry	2.4	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	3.6	Dry	3.6	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	1	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Wet	2	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	4	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3.4	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	4	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	10/2/2008	16	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	2	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	2.4	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	3/9/2009	1	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	22	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	5/6/2009	2	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	7/7/2009	3	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	7/28/2009	26	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	7/30/2009	2	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	9/2/2009	1	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	5	Wet		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	2	Wet	2.6	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	9/7/2010	1	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	10/3/2010	6	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	2	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	14	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	2	Dry	2.2	n/a
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	1	Dry		
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	6/15/2011	5	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.7	Wet	1.7	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	1/15/2001	28	Wet	11.2	7
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	51	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	5.8	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	8/19/2001	3.6	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	3.6	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	11/26/2001	18	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	1/27/2002	1.6	Dry	1.6	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	8.1	Dry	8.1	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	5	Dry	5	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	2	Wet	1.4	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	1	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	2.9	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	4	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	6	Wet		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	1.6	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	3/9/2009	1	Wet		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	24	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	1	Wet		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	1.7	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	2	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	4	Dry		
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	5	Dry	3.9	n/a
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	3	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	1.7	Wet	1.7	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	51	Dry	6.5	10
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	1.7	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	8/19/2001	1.7	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	3.6	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	11/26/2001	22	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	1/27/2002	1.6	Dry	1.6	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	8.1	Dry	8.1	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	6	Dry	6	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	6	Wet	2.4	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	1	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	3.3	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	6	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	6	Wet		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	2.2	4
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	3/9/2009	1	Wet		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	38	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	6	Wet		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	1.6	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	1	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	7	Dry		
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	3	Dry	3.9	n/a
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	5	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/17/2000	3.6	Wet	3.6	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	1/15/2001	5.8	Wet	10	7
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	6/14/2001	28	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	7/15/2001	1.6	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	8/19/2001	5.8	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	9/17/2001	18	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	11/26/2001	36	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	1/27/2002	5.8	Dry	3	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	5/5/2002	1.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	6/11/2003	1.6	Dry	1.6	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	3/7/2004	1.6	Wet	1.6	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/11/2005	1	Dry	1	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2006	1	Wet	1.7	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	10/24/2006	3	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/15/2008	1	Dry	2.7	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	9/11/2008	5	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	12/16/2008	4	Wet		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	1/12/2009	1	Dry	2.3	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	3/9/2009	3	Wet		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/14/2009	1	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/23/2009	24	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/26/2009	1	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	10/28/2009	5	Wet		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	11/18/2009	1	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	1/26/2010	1	Wet	1	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	3/17/2010	1	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	11/7/2010	1	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	12/15/2010	1	Dry		
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	3/2/2011	1	Dry	1.7	n/a
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	4/19/2011	3	Dry		

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Inner – Niantic River (mouth), Niantic (CT-E1_020)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-11.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	12	23	3	5	3
045-12.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	11	22	4	4	3
045-13.1	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	8	27	2	2	3

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-14.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	8	28	3	3	3
045-14.3	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	6	14	5	12	3
045-15.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	1	40	4	8	4
045-16.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	8	33	4	4	4
045-16.3	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	9	9	36	90	14
152-01.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	17	31	5	8	4
152-01.1	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	5	14	10	13	9
152-02.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	16	32	4	7	3
152-03.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	13	30	3	3	3
152-03.1	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	8	22	3	2	3
152-04.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	7	22	3	2	3
152-05.0	LIS EB Inner – Niantic River (mouth), Niantic	2000-2011	8	22	3	3	3

Table 14: Segment 3: LIS EB Inner – Pattagansett River (mouth), East Lyme Bacteria Data

Waterbody ID: CT-E1_021
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 92%
90% of Samples Less Than: 90%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Inner – Pattagansett River (mouth), East Lyme (CT-E1_021) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-02.2	LIS EB Inner – Pattagansett River (mouth), East Lyme	2/15/2000	18	Wet	68.1	40
045-02.2	LIS EB Inner – Pattagansett River (mouth), East Lyme	6/12/2000	258	Wet		
045-02.2	LIS EB Inner – Pattagansett River (mouth), East Lyme	3/14/2001	45	Wet	45	90
045-02.2	LIS EB Inner – Pattagansett River (mouth), East Lyme	6/6/2002	248	Wet	**185.7***	90
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	10/28/2002	139	Dry		
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	4/28/2003	36	Dry	36	90
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	11/29/2004	137	Wet	83.6	90
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	12/13/2004	51	Dry		
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	8/30/2005	171	Wet	54.1	57
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	9/26/2005	44	Wet		
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	12/20/2005	21	Dry		
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	10/3/2006	81	Dry	81	90
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	11/7/2007	171	Wet	171	90
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	12/15/2008	30	Wet	26.8	n/a
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	12/22/2008	24	Wet		
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	1/12/2009	8	Dry	20.1	23
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	11/18/2009	42	Dry		
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	12/16/2009	24	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	1/26/2010	7	Wet	7	n/a

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Inner – Pattagansett River (mouth), East Lyme (CT-E3_021)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-02.2	LIS EB Inner - Pattagansett River (mouth), East Lyme	2000-2011	11	8	50	61	37

Table 15: Segment 4: LIS EB Inner – Outer Jordan Cove, Waterford Bacteria Data

Waterbody ID: CT-E2_012
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 50%
90% of Samples Less Than: 40%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Inner – Outer Jordan Cove, Waterford (CT-E2_012) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	1.7	Wet	5	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/8/2000	28	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/13/2000	3.6	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/8/2000	3.6	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	1/15/2001	1.6	Wet	2.4	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/4/2001	1.7	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/15/2001	1.6	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2001	1.7	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2001	1.6	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	18	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	1.6	Dry	2.4	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.6	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/10/2002	8.1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/18/2002	1.6	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/3/2002	1.7	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2002	3.6	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/11/2003	1.6	Wet	5.4	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/23/2003	18	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	3/7/2004	1.6	Dry	2.9	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/14/2004	3.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/8/2004	1.6	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/22/2004	5.8	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/21/2004	3.6	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Dry	1	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Dry	2.2	10
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/6/2006	47	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/23/2006	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/6/2006	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Dry	1.9	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/30/2008	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/17/2008	1	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2008	2	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/12/2008	10	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	1	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/2/2008	5	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/14/2009	1	Wet	1.6	n/a
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/26/2009	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/6/2009	1	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/18/2009	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/20/2009	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/7/2009	1	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/8/2009	2	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2009	7	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2009	2	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/1/2009	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/2/2009	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/28/2009	19	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/16/2009	2	Wet		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/18/2009	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/7/2010	1	Dry	1.3	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/3/2010	1	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/7/2010	2	Dry		
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/19/2011	4	Dry	4	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	1.7	Dry	7.4	10
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/8/2000	18	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/13/2000	51	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/8/2000	8.1	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/12/2000	1.7	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	1/15/2001	1.6	Dry	3.8	7
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/4/2001	1.6	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/15/2001	1.6	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2001	8.6	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2001	1.7	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	51	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	3.6	Dry	3.7	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.6	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/10/2002	5.8	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/19/2002	1.6	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/18/2002	1.7	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2002	28	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/11/2003	11	Dry	4.3	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/23/2003	1.7	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	3/7/2004	1.6	Wet	4.2	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/14/2004	11	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Wet	1	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Wet	3.5	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/6/2006	15	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/23/2006	4	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/6/2006	3	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	3	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Dry	4.6	4

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/30/2008	1	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/17/2008	3	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2008	8	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/12/2008	44	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	6	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/2/2008	7	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/14/2009	2	Wet	2.5	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/26/2009	1	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/6/2009	1	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/18/2009	2	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/20/2009	1	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/7/2009	4	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/8/2009	10	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2009	13	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2009	3	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/1/2009	2	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/2/2009	1	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/28/2009	15	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/16/2009	1	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/18/2009	2	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/7/2010	1	Wet	1	n/a
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/3/2010	1	Wet		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/7/2010	1	Dry		
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/19/2011	4	Dry	4	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	5.8	Dry	16	40
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	6/8/2000	51	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	6/13/2000	140	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	11/30/2000	1.6	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	6/4/2001	1.6	Dry	4.2	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2001	29	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	1.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	22	Dry	4	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.6	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	6/10/2002	1.7	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	6/19/2002	1.6	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/18/2002	1.6	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2002	28	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	3/7/2004	1.6	Wet	4.2	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/14/2004	11	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Dry	1	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Wet	2.2	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	6/6/2006	16	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	8/23/2006	1	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	9/6/2006	3	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	1	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	4/30/2008	2	Dry	4.5	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	6/17/2008	8	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2008	12	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	8/12/2008	5	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	1	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	10/2/2008	9	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	4/14/2009	3	Dry	2.9	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	4/26/2009	1	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	5/6/2009	1	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	5/18/2009	10	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	5/20/2009	1	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/7/2009	1	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/8/2009	8	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2009	13	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2009	7	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	9/1/2009	3	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	9/2/2009	1	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	10/28/2009	7	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	11/16/2009	6	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	11/18/2009	1	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	9/7/2010	1	Dry	1	n/a
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	10/3/2010	1	Wet		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	11/7/2010	1	Dry		
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	4/19/2011	3	Dry	3	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	3.6	Dry	4.7	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	8/6/2000	5.8	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/12/2000	14	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	11/30/2000	1.6	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	1/15/2001	1.7	Wet	7.3	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	7/15/2001	3.6	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	8/19/2001	22	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2001	14	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	11	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	1/24/2002	54	Wet	10.7	23
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	14	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.6	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	3/24/2003	8.6	Dry	20.7	40
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	6/11/2003	50	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	3/7/2004	1.6	Dry	1.6	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Dry	1	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Wet	1.7	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	3	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Dry	1.9	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	1	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	10/2/2008	7	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/14/2009	4	Wet	3.8	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/26/2009	1	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	5/6/2009	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	7/1/2009	10	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	7/7/2009	6	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2009	16	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2009	2	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/2/2009	6	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	10/28/2009	12	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	11/18/2009	1	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/7/2010	1	Wet	2.8	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	10/3/2010	11	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	11/7/2010	2	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/19/2011	4	Dry	3.9	n/a
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	6/15/2011	2	Dry		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	6/20/2011	15	Wet		
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	6/27/2011	2	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	2/15/2000	41	Dry	7.3	10
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	1.6	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	8/6/2000	8.1	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	9/12/2000	11	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	11/30/2000	3.6	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	1/15/2001	1.6	Dry	6.6	4
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	7/15/2001	1.6	Wet		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	8/5/2001	1.7	Wet		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	8/19/2001	14	Wet		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2001	14	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	9/18/2001	179	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	3.6	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	1/24/2002	8.7	Dry	10.1	15
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	51	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.7	Wet		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	6/19/2002	14	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	6/11/2003	18	Dry	18	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	3/7/2004	1.6	Wet	1.6	n/a
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Dry	1	n/a
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Wet	1.4	n/a
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	2	Dry		
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Dry	3.9	n/a
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	15	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	2/15/2000	8.6	Wet	**27.9***	15
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	6/8/2000	28	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	6/13/2000	140	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	8/8/2000	18	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	1/31/2001	1.6	Dry	3.4	n/a
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	6/4/2001	1.7	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2001	3.6	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	9/18/2001	8.1	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	5.8	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	1/24/2002	8.6	Wet	4.8	n/a
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	5/20/2002	8.1	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	6/10/2002	14	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	7/18/2002	1.6	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	10/15/2002	1.6	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	6/23/2003	22	Dry	22	n/a
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	7/14/2004	51	Wet	51	90
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	6/6/2006	12	Dry	6.6	n/a
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	8/23/2006	2	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	9/6/2006	12	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	4/30/2008	1	Dry	2.6	n/a
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	6/17/2008	2	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2008	2	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	8/12/2008	11	Dry		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	5/18/2009	8	Dry	3	n/a
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	5/20/2009	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	7/8/2009	14	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	9/1/2009	1	Wet		
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	11/16/2009	2	Dry		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	2/15/2000	8.7	Dry	8.7	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	1/31/2001	8.7	Wet	15.6	23
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	9/18/2001	51	Wet		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	8.6	Dry		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	1/24/2002	8.7	Dry	11.8	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	10/28/2002	22	Dry		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	10/29/2002	8.6	Dry		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	12/13/2004	1.6	Dry	1.6	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	12/27/2004	1.7	Wet		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	7/5/2005	1	Dry	1	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	12/20/2005	1	Dry		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	12/27/2005	1	Dry		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	12/27/2006	1	Dry	1	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	11/7/2007	2	Wet	1.4	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Wet	1	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	3/9/2009	26	Wet	3.7	n/a
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	11/18/2009	2	Wet		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	12/16/2009	1	Dry		
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	1/26/2010	1	Wet	1	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	1.6	Wet	2.2	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	8/6/2000	1.6	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	9/12/2000	1.6	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	11/30/2000	5.8	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	1/15/2001	1.6	Wet	7.2	10
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	7/15/2001	3.6	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	8/19/2001	8.1	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2001	8.1	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	51	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	1/24/2002	18	Dry	8	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	18	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.6	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Dry	1	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Dry	2	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	4	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Dry	4.2	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	4	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	10/2/2008	19	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	4/14/2009	2	Dry	3.4	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	4/26/2009	1	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	5/6/2009	5	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	7/7/2009	1	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2009	13	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2009	4	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	9/2/2009	8	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	10/28/2009	16	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	11/18/2009	1	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	9/7/2010	5	Dry	5.9	n/a
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	10/3/2010	15	Wet		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	10/5/2010	16	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	11/7/2010	1	Dry		
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	4/19/2011	2	Dry	2	n/a
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	1.7	Dry	11.6	40
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/8/2000	36	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/13/2000	5.8	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/8/2000	51	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	1/15/2001	1.7	Wet	6.9	23
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/4/2001	51	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/15/2001	1.7	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2001	8.6	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2001	1.6	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	51	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	5.8	Dry	5.4	n/a
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.7	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/10/2002	5.8	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/18/2002	5.8	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2002	14	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/11/2003	1.6	Dry	9	40
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/23/2003	51	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	3/7/2004	1.6	Dry	3	n/a
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/14/2004	5.8	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Wet	1	n/a
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Wet	3.1	n/a
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/6/2006	16	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/23/2006	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/6/2006	18	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Dry	7	19
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/30/2008	41	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	6/17/2008	6	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2008	10	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	8/12/2008	81	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	1	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/2/2008	4	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/14/2009	4	Dry	2.6	n/a
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/26/2009	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/6/2009	2	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/18/2009	1	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	5/20/2009	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/7/2009	2	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/8/2009	26	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/28/2009	2	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	7/30/2009	3	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/1/2009	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/2/2009	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/28/2009	5	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/16/2009	18	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/18/2009	3	Wet		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	9/7/2010	4	Dry	1.7	n/a
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/3/2010	2	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	10/5/2010	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	11/7/2010	1	Dry		
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	4/19/2011	4	Dry	4	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/17/2000	11	Wet	5.3	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	8/6/2000	8.1	Dry		
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/12/2000	1.7	Dry		
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	1/15/2001	1.6	Wet	4.9	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	7/15/2001	1.6	Dry		
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/17/2001	8.1	Wet		
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	11/26/2001	28	Dry		
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	1/27/2002	1.6	Dry	1.6	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	5/5/2002	1.7	Wet		
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	6/11/2003	5.8	Wet	5.8	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	3/7/2004	1.6	Wet	1.6	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/11/2005	1	Wet	1	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/23/2006	1	Wet	1	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	10/24/2006	1	Dry		
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	4/15/2008	1	Wet	1.4	n/a
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	9/11/2008	2	Dry		

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Inner – Outer Jordan Cove, Waterford (CT-E2_012)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
152-08.0	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	21	33	2	3	2
152-09.0	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	23	29	3	4	3
152-09.1	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	16	29	3	2	4
152-09.2	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	15	23	4	4	4
152-09.5	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	7	16	5	3	7
152-09.6	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	13	15	6	9	4
152-09.7	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	8	10	3	4	3
152-10.4	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	13	19	4	3	4
152-11.0	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	15	36	4	5	4
152-11.2	LIS EB Shore - Outer Jordan Cove, Waterford	2000-2011	9	7	3	2	3

Table 16: Segment 5: LIS EB Shore – Niantic Bay (East), Waterford Bacteria Data

Waterbody ID: CT-E2_013
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 72%
90% of Samples Less Than: 40%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Shore – Niantic Bay (East), Waterford (CT-E2_013) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/8/2000	18	Wet	50.2	40
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/13/2000	140	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	3/26/2001	1.6	Wet	4.1	7
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	4/3/2001	1.6	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/4/2001	8.1	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/14/2001	36	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	7/15/2001	3.6	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	9/17/2001	1.7	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	5/5/2002	1.6	Dry	9.3	23
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/10/2002	5.8	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	9/17/2002	88	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/11/2003	5.8	Dry	11.3	n/a
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/23/2003	22	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	3/7/2004	1.6	Wet	1.6	n/a
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	7/14/2004	1.6	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	4/11/2005	1	Wet	1.4	n/a
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	9/28/2005	3	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	12/1/2005	1	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	4/16/2006	1	Dry	2.5	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	4/23/2006	1	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/6/2006	14	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	8/23/2006	1	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	9/6/2006	9	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	10/24/2006	2	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	4/15/2008	1	Dry	5.9	n/a
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	4/30/2008	14	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	6/17/2008	18	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	7/28/2008	6	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	8/12/2008	14	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	9/11/2008	2	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	5/18/2009	5	Dry	3.7	7
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2009	1	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	7/8/2009	120	Wet		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	9/1/2009	1	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	11/16/2009	1	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	12/14/2009	4	Dry		
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2010	3	Dry	3	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	4/17/2000	1.6	Wet	2.7	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/8/2000	1.7	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/13/2000	11	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	8/8/2000	1.7	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	1/15/2001	1.6	Dry	4.7	15
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/4/2001	3.6	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/19/2001	51	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/15/2001	1.7	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/30/2001	1.7	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	8/15/2001	3.6	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/17/2001	1.6	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	11/26/2001	51	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	1/27/2002	1.6	Dry	2.1	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	5/5/2002	1.6	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/10/2002	1.6	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/18/2002	1.7	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/3/2002	8.6	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/17/2002	1.6	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/11/2003	1.7	Wet	3.1	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/23/2003	5.8	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	3/7/2004	1.6	Wet	2.5	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/14/2004	1.7	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	8/8/2004	1.6	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/22/2004	14	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	10/21/2004	1.6	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/5/2005	1	Wet	1	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	4/23/2006	1	Wet	3.7	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/6/2006	4	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	8/23/2006	7	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/6/2006	4	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	10/24/2006	6	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	4/30/2008	4	Wet	2.9	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	6/17/2008	12	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/28/2008	4	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	8/12/2008	1	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/11/2008	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	10/2/2008	3	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	4/14/2009	1	Wet	2.1	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	4/26/2009	1	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	5/6/2009	1	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	5/18/2009	3	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2009	1	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/7/2009	2	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/8/2009	2	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/28/2009	7	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	7/30/2009	18	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/1/2009	1	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/2/2009	1	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	10/28/2009	19	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	11/16/2009	1	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	11/18/2009	1	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2010	1	Dry	2	n/a
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	9/7/2010	1	Dry		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	10/3/2010	16	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	11/7/2010	1	Wet		
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	4/19/2011	4	Dry	4	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	6/8/2000	1.6	Wet	3.4	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	6/13/2000	14	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	8/8/2000	1.7	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	6/4/2001	1.7	Dry	1.6	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	7/30/2001	1.6	Dry		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2002	1.7	Wet	2.8	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	6/10/2002	3.6	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	7/18/2002	1.6	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	9/17/2002	11	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	10/15/2002	1.7	Dry		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	6/23/2003	5.8	Dry	5.8	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	7/14/2004	5.8	Wet	5.8	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	7/5/2005	1	Wet	1	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	6/6/2006	22	Wet	4.4	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	8/23/2006	1	Dry		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	9/6/2006	4	Dry		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	4/30/2008	1	Wet	2.6	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	6/17/2008	3	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	7/28/2008	4	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	8/12/2008	4	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	5/18/2009	1	Dry	1.6	n/a
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2009	1	Dry		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	7/8/2009	4	Dry		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	9/1/2009	1	Dry		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	11/16/2009	3	Wet		
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2010	1	Dry	1	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/17/2000	1.6	Dry	2.6	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/8/2000	1.6	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/13/2000	11	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	8/8/2000	1.6	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	1/15/2001	1.6	Wet	4.1	3
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/4/2001	1.6	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/19/2001	51	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/15/2001	1.7	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/30/2001	1.6	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	8/15/2001	1.7	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/17/2001	5.8	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	11/26/2001	22	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	1/27/2002	1.6	Dry	3	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	5/5/2002	1.6	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/10/2002	3.6	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/18/2002	1.6	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/3/2002	5.8	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/17/2002	8.1	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/11/2003	1.6	Wet	3	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/23/2003	5.8	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	3/7/2004	1.6	Dry	2.1	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/14/2004	5.8	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	8/8/2004	1.6	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/22/2004	1.7	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	10/21/2004	1.7	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/11/2005	1	Dry	1	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/23/2006	1	Wet	2.8	10
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/6/2006	32	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	8/23/2006	1	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/6/2006	5	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	10/24/2006	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/15/2008	1	Dry	2.1	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/30/2008	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	6/17/2008	7	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/28/2008	1	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	8/12/2008	10	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/11/2008	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	10/2/2008	3	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/14/2009	1	Dry	1.6	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/26/2009	1	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	5/6/2009	1	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	5/18/2009	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2009	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/7/2009	1	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/8/2009	2	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/28/2009	5	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	7/30/2009	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/1/2009	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/2/2009	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	10/28/2009	13	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	11/16/2009	5	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	11/18/2009	1	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	5/20/2010	1	Wet	2.1	n/a
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	9/7/2010	3	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	10/3/2010	7	Wet		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	11/7/2010	1	Dry		
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	4/19/2011	5	Dry	5	n/a

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Shore – Niantic Bay (East), Waterford (CT-E2_013)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-10.0	LIS EB Shore - Niantic Bay (East), Waterford	2000-2011	13	24	4	9	3
152-06.0	LIS EB Shore - Niantic Bay (East), Waterford	2000-2011	25	31	3	2	3
152-07.0	LIS EB Shore - Niantic Bay (East), Waterford	2000-2011	15	11	3	3	2
152-07.1	LIS EB Shore - Niantic Bay (East), Waterford	2000-2011	23	34	2	2	2

Table 17: Segment 6: LIS EB Shore – Niantic Bay (West), East Lyme Bacteria Data

Waterbody ID: CT-E2_014
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 84%
90% of Samples Less Than: 56%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Shore – Niantic Bay (West), East Lyme (CT-E2_014) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/8/2000	11	Wet	7.3	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/13/2000	22	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/8/2000	1.6	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/26/2001	1.6	Wet	2.9	7
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/3/2001	1.6	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/4/2001	1.7	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/19/2001	51	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2001	1.6	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/15/2001	1.7	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/16/2002	5.8	Dry	5	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2002	5.8	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/10/2002	1.7	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/3/2002	5.8	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2002	28	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/18/2002	1.7	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/27/2003	22	Wet	3.9	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/29/2003	1.7	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2003	1.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/14/2004	22	Wet	22	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/1/2005	2	Dry	2	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/6/2006	7	Dry	5.7	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/23/2006	3	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/6/2006	9	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/15/2008	1	Dry	1.9	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/30/2008	1	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/17/2008	1	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2008	4	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/12/2008	3	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/11/2008	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/21/2008	8	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	1/12/2009	1	Dry	1.6	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/14/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/26/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/18/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/7/2009	3	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/8/2009	2	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2009	5	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2009	4	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/1/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/2/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	10/28/2009	11	Wet		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	11/16/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	11/18/2009	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/14/2009	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	1/26/2010	1	Wet	1.5	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/17/2010	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2010	3	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/7/2010	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	10/3/2010	2	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	11/7/2010	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/15/2010	3	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/2/2011	3	Dry	2	n/a
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/19/2011	5	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/15/2011	2	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/20/2011	1	Dry		
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/27/2011	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/17/2000	1.6	Wet	5.4	7
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/8/2000	14	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/13/2000	51	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/6/2000	1.6	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/8/2000	8.1	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/20/2000	1.6	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/14/2001	1.6	Wet	3.8	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/26/2001	1.6	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/3/2001	1.6	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/4/2001	1.7	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/14/2001	3.6	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/19/2001	50	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/15/2001	1.6	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2001	8.6	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/15/2001	11	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2001	3.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/5/2002	1.6	Dry	7.6	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/10/2002	14	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/3/2002	14	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2002	14	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/18/2002	5.8	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/27/2003	50	Wet	6.5	15
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/29/2003	5.8	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/11/2003	1.7	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2003	3.6	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/7/2004	1.6	Wet	8.9	40
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/14/2004	50	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/11/2005	1	Dry	3.6	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/28/2005	23	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	12/1/2005	2	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/16/2006	5	Dry	3.3	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2006	1	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/6/2006	9	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/23/2006	4	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/6/2006	7	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	10/24/2006	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/15/2008	1	Dry	1.9	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/30/2008	1	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/17/2008	1	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2008	1	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/12/2008	22	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/11/2008	2	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	1/12/2009	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2009	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/18/2009	1	Dry	1.9	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2009	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/8/2009	20	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/1/2009	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	10/28/2009	4	Wet		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	11/16/2009	3	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	11/18/2009	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	12/14/2009	3	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	1/26/2010	2	Wet	1.8	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/17/2010	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/7/2010	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	10/3/2010	2	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	11/7/2010	2	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	12/15/2010	4	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/2/2011	3	Dry	1.2	n/a
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/19/2011	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/15/2011	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/20/2011	1	Dry		
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/27/2011	1	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/8/2000	28	Wet	**85***	40
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/12/2000	258	Wet		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/14/2001	29	Wet	8.5	n/a
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/4/2001	5.8	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/14/2001	28	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/15/2001	14	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2001	1.6	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2001	3.6	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/5/2002	1.6	Dry	20.3	40

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/6/2002	258	Wet		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/11/2003	1.7	Dry	2.5	n/a
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2003	3.6	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/7/2004	1.6	Wet	6.1	n/a
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/14/2004	23	Wet		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/11/2005	1	Dry	13	56
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/26/2005	48	Wet		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/28/2005	46	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/16/2006	2	Dry	1.2	n/a
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2006	1	Wet		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/23/2006	1	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	10/24/2006	1	Dry		
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/15/2008	1	Dry	1	n/a
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/11/2008	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/8/2000	28	Wet	10.8	n/a
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/13/2000	28	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/8/2000	1.6	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	3/26/2001	1.6	Wet	4	7
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/3/2001	1.6	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/4/2001	1.7	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/19/2001	51	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2001	1.6	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/15/2001	11	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/16/2002	1.6	Dry	3.9	n/a
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2002	1.6	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/10/2002	1.7	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/3/2002	11	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2002	22	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/18/2002	3.6	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/27/2003	36	Wet	4.6	23
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/29/2003	1.6	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2003	1.7	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/14/2004	51	Wet	N/A	90
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/1/2005	22	Dry	N/A	n/a
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/6/2006	6	Dry	3.9	n/a
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/23/2006	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/6/2006	10	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/30/2008	1	Wet	1.9	n/a
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/17/2008	1	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2008	1	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/12/2008	3	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/21/2008	8	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	1/12/2009	1	Dry	1.1	n/a
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/14/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/26/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/18/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/8/2009	2	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/1/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	10/28/2009	1	Wet		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	11/16/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	11/18/2009	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/14/2009	2	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	1/26/2010	1	Wet	2.2	3
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	3/17/2010	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2010	2	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/7/2010	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	10/3/2010	59	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	10/5/2010	2	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	11/7/2010	2	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/15/2010	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	3/2/2011	2	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/19/2011	3	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/15/2011	1	Dry	1.4	n/a
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/20/2011	1	Dry		
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/27/2011	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/8/2000	14	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/13/2000	22	Wet	7.9	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/8/2000	1.6	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/26/2001	1.6	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/3/2001	1.7	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/4/2001	1.6	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/14/2001	3.6	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/19/2001	51	Wet	2.8	3
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/15/2001	1.7	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2001	1.6	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/15/2001	1.6	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2001	1.6	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/5/2002	1.6	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/10/2002	1.6	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/3/2002	3.6	Wet	3.3	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2002	28	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/18/2002	1.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/27/2003	51	Wet	7	15
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/29/2003	1.6	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/11/2003	1.6	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2003	18	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/7/2004	1.6	Wet	1.6	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/14/2004	1.7	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/11/2005	1	Dry	5.1	23
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/28/2005	65	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	12/1/2005	2	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/16/2006	1	Dry	2	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2006	1	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/6/2006	7	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/23/2006	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/6/2006	8	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	10/24/2006	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/15/2008	1	Dry	2	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/30/2008	1	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/17/2008	1	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2008	2	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	8/12/2008	3	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/11/2008	2	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	12/21/2008	11	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	1/12/2009	3	Dry	1.7	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/14/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/26/2009	2	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/18/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2009	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/7/2009	3	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/8/2009	2	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2009	10	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2009	3	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/1/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/2/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	10/28/2009	9	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	11/16/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	11/18/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	12/14/2009	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	1/26/2010	2	Wet		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/17/2010	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2010	3	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	9/7/2010	1	Dry	1.6	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	10/3/2010	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	11/7/2010	2	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	12/15/2010	2	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	3/2/2011	4	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	4/19/2011	5	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/15/2011	3	Dry	2.3	n/a
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/20/2011	1	Dry		
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	6/27/2011	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/8/2000	18	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/13/2000	28	Wet	9.5	n/a
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/8/2000	1.7	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/26/2001	1.6	Wet	2.9	1
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/3/2001	1.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/4/2001	1.7	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/14/2001	3.6	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/19/2001	51	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/15/2001	1.7	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2001	1.7	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/15/2001	3.6	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2001	1.6	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/5/2002	1.6	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/10/2002	1.7	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/3/2002	8.1	Wet	4.3	n/a
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2002	18	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/18/2002	3.6	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/27/2003	51	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/29/2003	1.7	Wet	5.3	15
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/11/2003	1.6	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2003	5.8	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/7/2004	1.6	Wet	1.6	n/a
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/14/2004	1.7	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/11/2005	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/28/2005	81	Dry	6.9	23
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/1/2005	4	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/16/2006	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2006	1	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/6/2006	11	Dry	2	n/a
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/23/2006	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/6/2006	5	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	10/24/2006	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/15/2008	1	Dry	1.6	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/30/2008	1	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/17/2008	1	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2008	2	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	8/12/2008	2	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/11/2008	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/21/2008	6	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	1/12/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/14/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	4/26/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/18/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2009	9	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/7/2009	1	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/8/2009	2	Wet	1.7	n/a
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2009	11	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/1/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/2/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	10/28/2009	5	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	11/16/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	11/18/2009	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/14/2009	4	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	1/26/2010	2	Wet		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/17/2010	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2010	2	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	9/7/2010	1	Dry	3.5	n/a
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	10/3/2010	3	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	11/7/2010	2	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	12/15/2010	7	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	3/2/2011	4	Dry	1.7	n/a
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/15/2011	2	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/20/2011	1	Dry		
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	6/27/2011	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/8/2000	22	Wet	12.2	23
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/13/2000	51	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/8/2000	1.6	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	3/26/2001	1.6	Wet	2.4	1
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/3/2001	1.6	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/4/2001	1.7	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/14/2001	1.6	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/19/2001	51	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/15/2001	1.6	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2001	1.6	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/15/2001	1.7	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2001	1.6	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/5/2002	1.6	Dry	3.5	n/a
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/10/2002	1.6	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/3/2002	8.1	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/17/2002	14	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/18/2002	1.7	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/27/2003	51	Wet	10.1	15
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/29/2003	1.7	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/11/2003	11	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2003	11	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	3/7/2004	1.6	Wet	3	n/a
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/14/2004	5.8	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/11/2005	1	Dry	3.3	n/a

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/28/2005	9	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/1/2005	4	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/16/2006	1	Dry	1.9	n/a
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2006	1	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/6/2006	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/23/2006	3	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/6/2006	8	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	10/24/2006	2	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/15/2008	1	Dry	1.3	n/a
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/17/2008	2	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2008	1	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	8/12/2008	1	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/11/2008	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/21/2008	3	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	1/12/2009	2	Dry	1.3	n/a
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/14/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/23/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/26/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/18/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/23/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/7/2009	1	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/8/2009	2	Wet		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/28/2009	3	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	7/30/2009	4	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/1/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/2/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	10/28/2009	3	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	11/16/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	11/18/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/14/2009	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	1/26/2010	2	Wet	2.6	n/a
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	3/17/2010	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	5/20/2010	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	9/7/2010	3	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	10/3/2010	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	11/7/2010	19	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	12/15/2010	8	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	3/2/2011	5	Dry	1.6	n/a
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	4/19/2011	2	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/15/2011	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/20/2011	1	Dry		
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	6/27/2011	1	Dry		

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Shore – Niantic Bay (West), East Lyme (CT-E2_014)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-07.1	LIS EB Shore - Niantic Bay (West), East Lyme	2000-2011	21	37	3	5	2
045-08.0	LIS EB Shore - Niantic Bay (West), East Lyme	2000-2011	23	41	3	6	2
045-08.1	LIS EB Shore - Niantic Bay (West), East Lyme	2000-2011	8	16	6	24	3
045-08.2	LIS EB Shore - Niantic Bay (West), East Lyme	2000-2011	19	35	3	6	2
045-09.0	LIS EB Shore - Niantic Bay (West), East Lyme	2000-2011	22	47	2	4	2
045-09.1	LIS EB Shore - Niantic Bay (West), East Lyme	2000-2011	22	43	3	4	2
045-09.2	LIS EB Shore - Niantic Bay (West), East Lyme	2000-2011	21	46	2	4	2

Table 18: Segment 7: LIS EB Shore – Niantic Bay (Black Pt), East Lyme Bacteria Data

Waterbody ID: CT-E2_015
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: N/A
90% of Samples Less Than: 23%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Shore – Niantic Bay (Black Pt), East Lyme (CT-E2_015) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/8/2000	5.8	Wet	5.6	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/13/2000	18	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2000	1.7	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/4/2001	5.8	Dry	3.3	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/30/2001	3.6	Dry		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/15/2001	1.7	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2002	5.8	Dry	5.5	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/10/2002	3.6	Dry		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/17/2002	8.1	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/23/2003	51	Dry	N/A	90
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/14/2004	8.1	Wet	8.1	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/1/2005	1	Dry	1	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/6/2006	10	Dry	3.7	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/23/2006	1	Dry		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/6/2006	5	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	11/28/2007	1	Dry	1	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/30/2008	1	Wet	4.2	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/17/2008	16	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/28/2008	2	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/12/2008	10	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/18/2009	1	Dry	1.1	n/a
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2009	1	Dry		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/8/2009	2	Wet		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/1/2009	1	Dry		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	11/16/2009	1	Dry		
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/14/2009	1	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/8/2000	1.6	Wet	5.1	23
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/13/2000	50	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2000	1.7	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	3/26/2001	1.6	Wet	6.1	7
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/3/2001	3.6	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/4/2001	14	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/19/2001	51	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/30/2001	1.6	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/15/2001	8.1	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/16/2002	1.6	Dry	2.4	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2002	1.6	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/10/2002	1.7	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/3/2002	8.1	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/17/2002	3.6	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/18/2002	1.6	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/27/2003	1.6	Wet	3.8	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/29/2003	1.7	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/3/2003	3.6	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/23/2003	22	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/14/2004	11	Wet	2.7	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2004	1.7	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/22/2004	1.7	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	10/21/2004	1.7	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/1/2005	1	Dry	1	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/6/2006	21	Dry	3.5	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/23/2006	1	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/6/2006	2	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	11/28/2007	1	Dry	1	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/30/2008	1	Wet	4.9	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/17/2008	24	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/28/2008	8	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/12/2008	3	Wet		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/18/2009	1	Dry	1.7	n/a
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2009	1	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/8/2009	4	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/1/2009	2	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	11/16/2009	3	Dry		
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/14/2009	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/8/2000	11	Wet	3.9	23
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/13/2000	51	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2000	1.6	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	3/26/2001	1.7	Wet	2.9	n/a
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/3/2001	1.7	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/4/2001	1.6	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/19/2001	51	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/30/2001	1.6	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/15/2001	1.7	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/16/2002	8.1	Dry	5.2	n/a
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2002	1.7	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/10/2002	8.1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/3/2002	1.7	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/17/2002	18	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/18/2002	5.8	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/27/2003	11	Wet	3.2	n/a
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/29/2003	1.7	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/23/2003	1.7	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	3/7/2004	1.6	Wet	3.8	n/a
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/14/2004	22	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2004	1.6	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/22/2004	8.1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	10/21/2004	1.7	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/11/2005	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/28/2005	81	Dry	5.5	23
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/1/2005	2	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/16/2006	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/23/2006	1	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/6/2006	8	Dry	3	10
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/23/2006	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/6/2006	32	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/30/2008	1	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/17/2008	1	Wet	1.7	n/a
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/28/2008	4	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/12/2008	2	Wet		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/18/2009	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2009	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/8/2009	4	Wet	1.3	n/a
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/1/2009	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	11/16/2009	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/14/2009	1	Dry		
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2010	1	Dry	1	n/a
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/8/2000	3.6	Wet	6.8	23

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/13/2000	51	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2000	1.7	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	3/26/2001	1.7	Wet	4.1	7
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/3/2001	1.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/4/2001	3.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/19/2001	51	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/30/2001	1.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/15/2001	5.8	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/16/2002	1.6	Dry	2.4	n/a
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2002	1.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/10/2002	1.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/17/2002	8.1	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/27/2003	3.6	Wet	2.7	n/a
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/29/2003	3.6	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/23/2003	1.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/14/2004	5.8	Wet	4.4	n/a
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2004	1.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/22/2004	11	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	10/21/2004	3.6	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/6/2006	2	Dry	2	n/a
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/30/2008	1	Wet	1	n/a
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/17/2008	1	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/28/2008	1	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/12/2008	1	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/18/2009	1	Dry	1.3	n/a
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2009	2	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/8/2009	2	Wet		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/1/2009	1	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	11/16/2009	1	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/14/2009	1	Dry		
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2010	1	Dry	1	n/a
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/8/2000	18	Wet	10.1	23
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/13/2000	36	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2000	1.6	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	3/26/2001	1.6	Wet	3.7	7
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/3/2001	1.6	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/4/2001	1.6	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/19/2001	50	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/30/2001	1.6	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/15/2001	8.1	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/16/2002	1.7	Dry	3	n/a
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2002	1.6	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/10/2002	1.7	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/3/2002	1.6	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/17/2002	28	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/18/2002	3.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/27/2003	36	Wet	10.3	23
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/29/2003	18	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/23/2003	1.7	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	3/7/2004	1.6	Wet	4	n/a
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/14/2004	18	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/8/2004	1.6	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/22/2004	3.6	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	10/21/2004	5.8	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/11/2005	1	Dry	3.5	23
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/28/2005	44	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/1/2005	1	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/16/2006	1	Dry	1.7	n/a
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/23/2006	1	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/6/2006	1	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/23/2006	1	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/6/2006	14	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	4/30/2008	1	Wet	1.2	n/a
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/17/2008	1	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/28/2008	1	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	8/12/2008	2	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/18/2009	1	Dry	1.5	n/a
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2009	1	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	6/23/2009	4	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	7/8/2009	2	Wet		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	9/1/2009	1	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	11/16/2009	1	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	12/14/2009	2	Dry		
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	5/20/2010	1	Dry	1	n/a

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Shore – Niantic Bay (Black Pt), East Lyme (CT-E2_015)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-04.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	2000-2011	11	15	3	4	3
045-05.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	2000-2011	16	22	3	5	2
045-06.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	2000-2011	18	24	3	4	3
045-06.1	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	2000-2011	15	17	2	4	2
045-07.0	LIS EB Shore - Niantic Bay (Black Pt), East Lyme	2000-2011	18	25	3	5	2

Table 19: Segment 8: LIS EB Shore – Pattagansett River Mouth, East Lyme Bacteria Data

Waterbody ID: CT-E2_016
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 84%
90% of Samples Less Than: 40%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Shore – Pattagansett River Mouth, East Lyme (CT-E2_016) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/8/2000	41	Wet	44.1	90
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/13/2000	41	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/8/2000	51	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/4/2001	5.8	Dry	6.6	n/a
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/30/2001	5.8	Dry		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/15/2001	8.6	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	5/20/2002	8.7	Dry	14.1	n/a
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/10/2002	11	Dry		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	9/17/2002	29	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/23/2003	173	Dry	N/A	90
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/14/2004	11	Wet	11	n/a
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	12/1/2005	2	Dry	2	n/a
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/6/2006	26	Dry	3.7	n/a
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/23/2006	1	Dry		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	9/6/2006	2	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	11/28/2007	1	Dry	1	n/a
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	4/30/2008	9	Wet	19.9	40
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/17/2008	6	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/28/2008	36	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/12/2008	81	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	5/18/2009	2	Dry	1.8	n/a
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	5/20/2009	1	Dry		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/8/2009	2	Wet		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	9/1/2009	1	Dry		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	11/16/2009	1	Dry		
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	12/14/2009	10	Dry		
045-02.1	LIS EB Shore – Pattagansett River Mouth, East Lyme	2/15/2000	29	Wet	**86.5***	40
045-02.1	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/12/2000	258	Wet		
045-02.1	LIS EB Shore – Pattagansett River Mouth, East Lyme	3/14/2001	8.7	Wet	8.7	n/a
045-02.1	LIS EB Shore – Pattagansett River Mouth, East Lyme	2/7/2006	18	Dry	N/A	n/a
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/8/2000	51	Wet	63.6	90
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/13/2000	140	Wet		
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/8/2000	36	Wet		
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/4/2001	8.7	Dry	4.8	n/a
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/30/2001	1.6	Dry		
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/15/2001	8.1	Wet		
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	5/20/2002	8.1	Dry	4.8	n/a
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/10/2002	1.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	9/17/2002	8.6	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/8/2000	5.8	Wet	8.4	n/a
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/13/2000	3.6	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/8/2000	28	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/4/2001	5.8	Dry	3.8	n/a
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/30/2001	1.6	Dry		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/15/2001	5.8	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	5/20/2002	1.6	Dry	3.9	n/a
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/10/2002	5.8	Dry		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	9/17/2002	8.1	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/23/2003	51	Dry	N/A	90
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/14/2004	50	Wet	N/A	90
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	12/1/2005	2	Dry	2	n/a
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/6/2006	25	Dry	5.8	n/a
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/23/2006	2	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	9/6/2006	4	Dry		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	11/28/2007	2	Dry	2	n/a
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	4/30/2008	1	Wet	5.7	15
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	6/17/2008	4	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/28/2008	6	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	8/12/2008	43	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	5/18/2009	1	Dry	2.1	n/a
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	5/20/2009	1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	7/8/2009	20	Wet		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	9/1/2009	1	Dry		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	11/16/2009	2	Dry		
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	12/14/2009	2	Dry		

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Pattagansett River Mouth, East Lyme (CT-E2_016)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-02.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	2000-2011	11	15	8	18	4
045-02.1	LIS EB Shore – Pattagansett River Mouth, East Lyme	2000-2011	3	1	33	40	18
045-02.3	LIS EB Shore – Pattagansett River Mouth, East Lyme	2000-2011	5	4	11	28	4
045-03.0	LIS EB Shore – Pattagansett River Mouth, East Lyme	2000-2011	12	14	5	8	3

Table 20: Segment 9: LIS EB Midshore – Niantic Bay Bacteria Data

Waterbody ID: CT-E3_006
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 8%
90% of Samples Less Than: 23%

Data : 2000 – 2011 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Midshore – Niantic Bay (CT-E3_006) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-10.1	LIS EB Midshore – Niantic Bay	4/17/2000	1.6	Wet	6.8	23
045-10.1	LIS EB Midshore – Niantic Bay	6/8/2000	8.1	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	6/13/2000	50	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	8/6/2000	1.7	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	8/8/2000	51	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	9/20/2000	1.7	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	3/26/2001	1.6	Wet	6.5	12
045-10.1	LIS EB Midshore – Niantic Bay	4/3/2001	1.6	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	6/4/2001	18	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	6/14/2001	36	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	6/19/2001	51	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	7/15/2001	1.6	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	7/30/2001	8.6	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	8/15/2001	11	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	9/17/2001	1.6	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	5/5/2002	1.6	Dry	3.1	n/a
045-10.1	LIS EB Midshore – Niantic Bay	6/10/2002	3.6	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	9/3/2002	1.7	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	9/17/2002	18	Wet		
045-10.1	LIS EB Midshore – Niantic Bay	9/18/2002	1.7	Dry		
045-10.1	LIS EB Midshore – Niantic Bay	5/27/2003	51	Wet	**15.2***	15
045-10.1	LIS EB Midshore - Niantic Bay	5/29/2003	3.6	Wet		
045-10.1	LIS EB Midshore - Niantic	6/11/2003	8.1	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
	Bay					
045-10.1	LIS EB Midshore - Niantic Bay	6/23/2003	36	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	3/7/2004	1.6	Wet	1.6	n/a
045-10.1	LIS EB Midshore - Niantic Bay	7/14/2004	1.7	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	4/11/2005	1	Dry	1	n/a
045-10.1	LIS EB Midshore - Niantic Bay	9/28/2005	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	12/1/2005	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	4/16/2006	2	Dry	2.1	n/a
045-10.1	LIS EB Midshore - Niantic Bay	4/23/2006	1	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	6/6/2006	7	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	8/23/2006	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	9/6/2006	3	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	10/24/2006	2	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	4/15/2008	1	Dry	2.8	n/a
045-10.1	LIS EB Midshore - Niantic Bay	4/30/2008	15	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	6/17/2008	1	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	7/28/2008	1	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	8/12/2008	12	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	9/11/2008	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	12/21/2008	8	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	1/12/2009	1	Dry	2.1	n/a
045-10.1	LIS EB Midshore - Niantic Bay	4/14/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	4/23/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	4/26/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	5/18/2009	5	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	5/20/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	6/23/2009	8	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	7/7/2009	3	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	7/8/2009	112	Wet		
045-10.1	LIS EB Midshore - Niantic Bay	7/28/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	7/30/2009	6	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	9/1/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	9/2/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	10/28/2009	3	Wet		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-10.1	LIS EB Midshore - Niantic Bay	11/16/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	11/18/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	12/14/2009	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	1/26/2010	3	Wet	2.6	4
045-10.1	LIS EB Midshore - Niantic Bay	3/17/2010	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	5/20/2010	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	9/7/2010	4	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	10/3/2010	2	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	11/7/2010	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	12/15/2010	32	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	3/2/2011	1	Dry	1.6	n/a
045-10.1	LIS EB Midshore - Niantic Bay	4/19/2011	5	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	6/15/2011	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	6/20/2011	1	Dry		
045-10.1	LIS EB Midshore - Niantic Bay	6/27/2011	2	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	3/26/2001	1.7	Wet	3.8	7
045-10.2	LIS EB Midshore - Niantic Bay	4/3/2001	1.6	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	6/4/2001	1.6	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	6/19/2001	51	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	7/30/2001	1.6	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	8/15/2001	8.1	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	5/16/2002	1.7	Dry	2.5	n/a
045-10.2	LIS EB Midshore - Niantic Bay	5/20/2002	1.7	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	6/10/2002	1.7	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	9/3/2002	8.1	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	9/17/2002	3.6	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	9/18/2002	1.6	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	5/27/2003	51	Wet	13.4	23
045-10.2	LIS EB Midshore - Niantic Bay	5/29/2003	1.7	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	6/23/2003	28	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	7/14/2004	1.7	Wet	2.7	n/a
045-10.2	LIS EB Midshore - Niantic Bay	8/8/2004	1.6	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	9/22/2004	5.8	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	10/21/2004	3.6	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-10.2	LIS EB Midshore - Niantic Bay	12/1/2005	4	Dry	4	n/a
045-10.2	LIS EB Midshore - Niantic Bay	6/6/2006	15	Dry	6.5	n/a
045-10.2	LIS EB Midshore - Niantic Bay	8/23/2006	1	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	9/6/2006	18	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	4/30/2008	12	Wet	4.2	n/a
045-10.2	LIS EB Midshore - Niantic Bay	6/17/2008	5	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	7/28/2008	1	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	8/12/2008	5	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	4/23/2009	1	Dry	1.3	n/a
045-10.2	LIS EB Midshore - Niantic Bay	5/18/2009	1	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	5/20/2009	1	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	7/8/2009	2	Wet		
045-10.2	LIS EB Midshore - Niantic Bay	9/1/2009	1	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	11/16/2009	1	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	12/14/2009	4	Dry		
045-10.2	LIS EB Midshore - Niantic Bay	5/20/2010	1	Dry	1	n/a
045-10.3	LIS EB Midshore - Niantic Bay	3/26/2001	1.6	Wet	3.3	7
045-10.3	LIS EB Midshore - Niantic Bay	4/3/2001	1.7	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	6/4/2001	1.6	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	6/19/2001	51	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	7/30/2001	1.7	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	8/15/2001	3.6	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	5/16/2002	5.8	Dry	2.5	n/a
045-10.3	LIS EB Midshore - Niantic Bay	5/20/2002	1.6	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	6/10/2002	1.6	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	9/3/2002	1.6	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	9/17/2002	5.8	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	9/18/2002	1.6	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	5/27/2003	8.1	Wet	7.4	n/a
045-10.3	LIS EB Midshore - Niantic Bay	5/29/2003	3.6	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	6/23/2003	14	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	7/14/2004	1.7	Wet	3.2	n/a
045-10.3	LIS EB Midshore - Niantic Bay	8/8/2004	1.6	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	9/22/2004	11	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-10.3	LIS EB Midshore - Niantic Bay	10/21/2004	3.6	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	12/1/2005	2	Dry	2	n/a
045-10.3	LIS EB Midshore - Niantic Bay	6/6/2006	15	Dry	2.5	n/a
045-10.3	LIS EB Midshore - Niantic Bay	8/23/2006	1	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	9/6/2006	1	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	4/30/2008	1	Wet	1.6	n/a
045-10.3	LIS EB Midshore - Niantic Bay	6/17/2008	1	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	7/28/2008	3	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	8/12/2008	2	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	4/23/2009	1	Dry	1.1	n/a
045-10.3	LIS EB Midshore - Niantic Bay	5/18/2009	1	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	5/20/2009	1	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	7/8/2009	2	Wet		
045-10.3	LIS EB Midshore - Niantic Bay	9/1/2009	1	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	11/16/2009	1	Dry		
045-10.3	LIS EB Midshore - Niantic Bay	12/14/2009	1	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	6/8/2000	28	Wet	8.6	n/a
152-12.1	LIS EB Midshore - Niantic Bay	6/13/2000	14	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	8/8/2000	1.6	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	1/15/2001	5.8	Wet	2.3	n/a
152-12.1	LIS EB Midshore - Niantic Bay	6/4/2001	1.6	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	7/15/2001	1.6	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	7/30/2001	1.6	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	9/17/2001	1.7	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	11/26/2001	3.6	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	1/27/2002	1.6	Dry	3.1	n/a
152-12.1	LIS EB Midshore - Niantic Bay	5/5/2002	1.6	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	6/10/2002	11	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	7/18/2002	1.6	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	9/3/2002	3.6	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	9/17/2002	5.8	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	6/11/2003	1.6	Dry	1.6	n/a
152-12.1	LIS EB Midshore - Niantic Bay	6/23/2003	1.7	Dry		
152-12.1	LIS EB Midshore - Niantic	3/7/2004	1.6	Wet	3	n/a

	Bay					
152-12.1	LIS EB Midshore - Niantic Bay	7/14/2004	5.8	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	4/23/2006	1	Wet	2.7	n/a
152-12.1	LIS EB Midshore - Niantic Bay	6/6/2006	26	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	8/23/2006	1	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	9/6/2006	6	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	10/24/2006	1	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	4/15/2008	1	Dry	1.7	n/a
152-12.1	LIS EB Midshore - Niantic Bay	4/30/2008	1	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	6/17/2008	1	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	7/28/2008	1	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	8/12/2008	7	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	9/11/2008	3	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	4/14/2009	1	Dry	1.1	n/a
152-12.1	LIS EB Midshore - Niantic Bay	5/18/2009	1	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	5/20/2009	1	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	7/8/2009	2	Wet		
152-12.1	LIS EB Midshore - Niantic Bay	9/1/2009	1	Dry		
152-12.1	LIS EB Midshore - Niantic Bay	11/16/2009	1	Dry		

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Midshore – Niantic Bay (CT-E3_006)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-10.1	LIS EB Midshore - Niantic Bay	2000-2011	24	47	3	6	2
045-10.2	LIS EB Midshore - Niantic Bay	2000-2011	13	22	3	5	2
045-10.3	LIS EB Midshore - Niantic Bay	2000-2011	13	21	2	3	2
152-12.1	LIS EB Midshore - Niantic Bay	2000-2011	14	22	2	3	2

Table 21: Segment 10: LIS EB Midshore – East Lyme, Rocky Neck Bacteria Data

Waterbody ID: CT-E3_007
Characteristics: Saltwater, Class SA
Impairment: Shellfishing
Water Quality Criteria for Fecal coliform:
Geometric Mean: 14 colonies/100 ml
90% of Samples Less Than: 31 colonies/100 ml
Percent reduction to meet:
Geometric Mean: N/A
90% of Samples Less Than: 23%

Data : 2000 – 2009 from CT DEEP target sampling efforts, 2012 TMDL cycle
Single sample fecal coliform data (colonies/100mL) for all monitoring stations on segment : LIS EB Midshore – East Lyme, Rocky Neck (CT-E3_007) with annual geometric means and reduction goals for samples.

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	6/8/2000	22	Wet	9.4	n/a
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	6/13/2000	22	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	8/8/2000	1.7	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	6/4/2001	1.7	Dry	1.7	n/a
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	7/30/2001	1.6	Dry		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	8/15/2001	1.7	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	5/20/2002	1.6	Dry	2.7	n/a
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	6/10/2002	3.6	Dry		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	9/17/2002	3.6	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	6/23/2003	51	Dry	N/A	90
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	7/14/2004	18	Wet	N/A	n/a
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	12/1/2005	1	Dry	1	
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	6/6/2006	34	Dry	4.1	23
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	8/23/2006	1	Dry		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	9/6/2006	2	Dry		

Station #	Station Name	Date	Results	Wet/Dry	Geomean	90% Reduction
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	4/30/2008	3	Wet	8.8	15
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	6/17/2008	3	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	7/28/2008	16	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	8/12/2008	41	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	5/18/2009	1	Dry	1.1	n/a
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	5/20/2009	1	Dry		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	7/8/2009	2	Wet		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	9/1/2009	1	Dry		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	11/16/2009	1	Dry		
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	12/14/2009	1	Dry		

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS EB Midshore - East Lyme, Rocky Neck (CT-E3_007)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
045-02.4	LIS EB Midshore - East Lyme, Rocky Neck	2000-2009	11	14	4	7	2

Table 22: Segment 11: LIS EB Inner –Bride Brook

Waterbody ID: CT-E1_022
Characteristics: Saltwater, Class SA
Impairment: Recreation
Water Quality Criteria for Enterococci (all other uses):
Geometric Mean: 35 colonies/100 ml
Single Sample : 500 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 95%
Single Sample: 75%

Data : 2009 – 2012 from CT DEEP target sampling efforts, 2012 TMDL cycle Single sample enterococci data (colonies/100mL) for all monitoring stations on segment : LIS EB Inner – Bride Brook, East Lyme (CT-E1_022) with annual geometric means and single sample reduction goals
*results percent reductions are calculated from for the segment

Station #	Station Name	Date	Results	Wet/Dry	Geomean
14730	At Route 156 (RN-156)	5/19/2009	10	Dry	51
14730	At Route 156 (RN-156)	5/19/2009	20	dry	
14730	At Route 156 (RN-156)	5/26/2009	10	Dry	
14730	At Route 156 (RN-156)	6/1/2009	31	Dry	
14730	At Route 156 (RN-156)	6/8/2009	10	Dry	
14730	At Route 156 (RN-156)	6/15/2009	10	Dry	
14730	At Route 156 (RN-156)	6/24/2009	120	Dry	
14730	At Route 156 (RN-156)	6/29/2009	140	Dry	
14730	At Route 156 (RN-156)	7/7/2009	120	Wet	
14730	At Route 156 (RN-156)	7/13/2009	31	Dry	
14730	At Route 156 (RN-156)	7/20/2009	31	Dry	
14730	At Route 156 (RN-156)	7/27/2009	87	Dry	
14730	At Route 156 (RN-156)	8/3/2009	120	Dry	
14730	At Route 156 (RN-156)	8/10/2009	85	Dry	
14730	At Route 156 (RN-156)	8/17/2009	230	Dry	
14730	At Route 156 (RN-156)	8/24/2009	150	Dry	
14730	At Route 156 (RN-156)	8/31/2009	270	Dry	
14730	At Route 156 (RN-156)	5/25/2010	87	Dry	**694***
14730	At Route 156 (RN-156)	6/1/2010	53	Wet	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
14730	At Route 156 (RN-156)	6/7/2010	830	Dry	
14730	At Route 156 (RN-156)	6/14/2010	250	dry	
14730	At Route 156 (RN-156)	6/21/2010	180	Dry	
14730	At Route 156 (RN-156)	6/28/2010	780	Wet	
14730	At Route 156 (RN-156)	7/7/2010	1700	Dry	
14730	At Route 156 (RN-156)	7/8/2010	1100	Dry	
14730	At Route 156 (RN-156)	7/12/2010	500	Dry	
14730	At Route 156 (RN-156)	7/19/2010	**2001**	Wet	
14730	At Route 156 (RN-156)	7/21/2010	1300	Wet	
14730	At Route 156 (RN-156)	7/26/2010	1000	Wet	
14730	At Route 156 (RN-156)	8/2/2010	450	Dry	
14730	At Route 156 (RN-156)	8/9/2010	1400	Dry	
14730	At Route 156 (RN-156)	8/16/2010	**2001**	Wet	
14730	At Route 156 (RN-156)	8/18/2010	1300	Dry	
14730	At Route 156 (RN-156)	8/23/2010	**2001**	Wet	
14730	At Route 156 (RN-156)	8/25/2010	1300	Dry	
14730	At Route 156 (RN-156)	8/30/2010	700	Dry	
14730	At Route 156 (RN-156)	5/23/2011	99	Wet	
14730	At Route 156 (RN-156)	5/25/2011	75	Wet	
14730	At Route 156 (RN-156)	5/31/2011	87	Dry	
14730	At Route 156 (RN-156)	6/6/2011	380	Dry	
14730	At Route 156 (RN-156)	6/13/2011	290	Wet	
14730	At Route 156 (RN-156)	6/20/2011	150	Dry	176
14730	At Route 156 (RN-156)	6/27/2011	250	Dry	
14730	At Route 156 (RN-156)	7/5/2011	110	Dry	
14730	At Route 156 (RN-156)	7/11/2011	160	Dry	
14730	At Route 156 (RN-156)	7/18/2011	140	Dry	
14730	At Route 156 (RN-156)	7/25/2011	220	Dry	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
14730	At Route 156 (RN-156)	8/1/2011	190	Dry	
14730	At Route 156 (RN-156)	8/8/2011	740	Wet	
14730	At Route 156 (RN-156)	8/15/2011	1300	Wet	
14730	At Route 156 (RN-156)	8/17/2011	97	Dry	
14730	At Route 156 (RN-156)	8/22/2011	87	Dry	
14730	At Route 156 (RN-156)	8/30/2011	64	Dry	
14730	At Route 156 (RN-156)	5/31/2012	140	Dry	
14730	At Route 156 (RN-156)	6/4/2012	87	Wet	
14730	At Route 156 (RN-156)	6/11/2012	120	Dry	
14730	At Route 156 (RN-156)	6/18/2012	53	Dry	
14730	At Route 156 (RN-156)	6/25/2012	**2001**	Dry	
14730	At Route 156 (RN-156)	7/2/2012	1200	Wet	395
14730	At Route 156 (RN-156)	7/16/2012	2000	Dry	
14730	At Route 156 (RN-156)	7/23/2012	450	Dry	
14730	At Route 156 (RN-156)	7/30/2012	430	Wet	
14730	At Route 156 (RN-156)	8/6/2012	1400	Wet	
14730	At Route 156 (RN-156)	8/20/2012	450	Dry	
14730	At Route 156 (RN-156)	8/27/2012	320	Dry	
14730	At Route 156 (RN-156)	5/21/2013	110	wet	
14730	At Route 156 (RN-156)	5/28/2013	42	wet	
14730	At Route 156 (RN-156)	6/3/2013	110	wet	
14730	At Route 156 (RN-156)	6/10/2013	210	wet	
14730	At Route 156 (RN-156)	6/17/2013	53	dry	
14730	At Route 156 (RN-156)	6/24/2013	42	dry	
14730	At Route 156 (RN-156)	7/1/2013	320	wet	
14730	At Route 156 (RN-156)	7/8/2013	240	dry	
14730	At Route 156 (RN-156)	7/15/2013	160	dry	
14730	At Route 156 (RN-156)	7/17/2013	220	dry	127

Station #	Station Name	Date	Results	Wet/Dry	Geomean
14730	At Route 156 (RN-156)	7/22/2013	180	dry	
14730	At Route 156 (RN-156)	7/29/2013	110	dry	
14730	At Route 156 (RN-156)	8/5/2013	64	wet	
14730	At Route 156 (RN-156)	8/12/2013	120	wet	
14730	At Route 156 (RN-156)	8/19/2013	110	dry	
14730	At Route 156 (RN-156)	8/26/2013	410	wet	
14882	At Railroad crossing in park (RNBB-1)	5/19/2009	10	Dry	
14882	At Railroad crossing in park (RNBB-1)	5/26/2009	53	dry	
14882	At Railroad crossing in park (RNBB-1)	6/1/2009	20	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/8/2009	10	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/15/2009	31	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/24/2009	20	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/29/2009	950	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/7/2009	20	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/13/2009	1200	Wet	160
14882	At Railroad crossing in park (RNBB-1)	7/13/2009	2000	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/20/2009	**2001**	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/27/2009	2000	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/3/2009	480	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/10/2009	160	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/17/2009	**2001**	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/24/2009	53	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/24/2009	53	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/31/2009	890	Dry	
14882	At Railroad crossing in park (RNBB-1)	5/25/2010	53	Wet	
14882	At Railroad crossing in park (RNBB-1)	6/1/2010	10	Dry	83
14882	At Railroad crossing in park (RNBB-1)	6/1/2010	10	dry	
14882	At Railroad crossing in park (RNBB-1)	6/7/2010	64	Dry	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
14882	At Railroad crossing in park (RNBB-1)	6/14/2010	20	Wet	
14882	At Railroad crossing in park (RNBB-1)	6/21/2010	120	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/28/2010	120	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/7/2010	290	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/8/2010	250	Wet	
14882	At Railroad crossing in park (RNBB-1)	7/12/2010	10	Wet	
14882	At Railroad crossing in park (RNBB-1)	7/19/2010	**2001**	Wet	
14882	At Railroad crossing in park (RNBB-1)	7/21/2010	500	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/26/2010	10	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/2/2010	1100	Wet	
14882	At Railroad crossing in park (RNBB-1)	8/9/2010	63	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/16/2010	730	Wet	
14882	At Railroad crossing in park (RNBB-1)	8/18/2010	450	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/23/2010	180	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/25/2010	10	Wet	
14882	At Railroad crossing in park (RNBB-1)	8/25/2010	10	Wet	
14882	At Railroad crossing in park (RNBB-1)	8/30/2010	75	Dry	
14882	At Railroad crossing in park (RNBB-1)	5/23/2011	250	Dry	
14882	At Railroad crossing in park (RNBB-1)	5/25/2011	75	Wet	
14882	At Railroad crossing in park (RNBB-1)	5/31/2011	42	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/6/2011	150	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/13/2011	380	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/20/2011	140	Dry	82
14882	At Railroad crossing in park (RNBB-1)	6/27/2011	160	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/5/2011	240	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/11/2011	150	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/18/2011	340	Wet	
14882	At Railroad crossing in park (RNBB-1)	7/25/2011	190	Wet	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
14882	At Railroad crossing in park (RNBB-1)	8/1/2011	20	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/8/2011	64	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/15/2011	53	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/17/2011	20	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/22/2011	10	Wet	
14882	At Railroad crossing in park (RNBB-1)	8/30/2011	10	Dry	
14882	At Railroad crossing in park (RNBB-1)	5/23/2012	53	Dry	
14882	At Railroad crossing in park (RNBB-1)	5/31/2012	240	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/4/2012	10	Wet	
14882	At Railroad crossing in park (RNBB-1)	6/11/2012	42	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/18/2012	20	Dry	
14882	At Railroad crossing in park (RNBB-1)	6/25/2012	**2001**	Wet	
14882	At Railroad crossing in park (RNBB-1)	7/2/2012	10	Wet	
14882	At Railroad crossing in park (RNBB-1)	7/16/2012	740	Dry	55
14882	At Railroad crossing in park (RNBB-1)	7/23/2012	240	Dry	
14882	At Railroad crossing in park (RNBB-1)	7/30/2012	31	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/6/2012	64	dry	
14882	At Railroad crossing in park (RNBB-1)	8/13/2012	31	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/20/2012	31	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/22/2012	20	Dry	
14882	At Railroad crossing in park (RNBB-1)	8/27/2012	10	Dry	
14882	At Railroad crossing in park (RNBB-1)	5/21/2013	10	wet	
14882	At Railroad crossing in park (RNBB-1)	5/28/2013	10	wet	
14882	At Railroad crossing in park (RNBB-1)	6/3/2013	500	wet	
14882	At Railroad crossing in park (RNBB-1)	6/10/2013	75	wet	109
14882	At Railroad crossing in park (RNBB-1)	6/17/2013	10	dry	
14882	At Railroad crossing in park (RNBB-1)	6/24/2013	210	dry	
14882	At Railroad crossing in park (RNBB-1)	7/1/2013	380	wet	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
14882	At Railroad crossing in park (RNBB-1)	7/8/2013	1000	dry	
14882	At Railroad crossing in park (RNBB-1)	7/15/2013	1400	dry	
14882	At Railroad crossing in park (RNBB-1)	7/17/2013	480	dry	
14882	At Railroad crossing in park (RNBB-1)	7/22/2013	64	dry	
14882	At Railroad crossing in park (RNBB-1)	7/29/2013	480	dry	
14882	At Railroad crossing in park (RNBB-1)	8/5/2013	10	wet	
14882	At Railroad crossing in park (RNBB-1)	8/12/2013	590	wet	
14882	At Railroad crossing in park (RNBB-1)	8/19/2013	10	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/19/2009	42	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/26/2009	42	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/1/2009	53	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/8/2009	10	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/15/2009	75	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/24/2009	75	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/29/2009	250	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/7/2009	**2001**	Dry	304
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/13/2009	1700	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/20/2009	**2001**	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/27/2009	2000	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/3/2009	340	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/10/2009	**2001**	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/17/2009	910	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/24/2009	1200	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/31/2009	410	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/25/2010	10	Dry	191
17604	At upper crabbing area limit on entry to	6/1/2010	87	Dry	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
	park (RNBB-2)				
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/7/2010	99	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/14/2010	430	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/21/2010	75	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/28/2010	160	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/7/2010	780	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/8/2010	620	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/12/2010	10	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/19/2010	**2001**	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/21/2010	1000	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/26/2010	110	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/2/2010	360	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/9/2010	110	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/16/2010	690	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/18/2010	560	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/23/2010	240	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/25/2010	110	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/30/2010	120	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/23/2011	120	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/25/2011	10	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/31/2011	31	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/6/2011	110	Dry	77
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/20/2011	150	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/27/2011	99	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/5/2011	240	Dry	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/11/2011	160	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/18/2011	340	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/25/2011	340	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/1/2011	20	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/8/2011	53	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/15/2011	140	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/17/2011	41	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/22/2011	42	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/30/2011	20	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/31/2012	410	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/4/2012	64	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/11/2012	31	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/18/2012	110	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/25/2012	**2001**	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/2/2012	740	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/16/2012	150	Dry	108
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/23/2012	140	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/30/2012	42	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/6/2012	87	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/13/2012	64	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/20/2012	87	Wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/22/2012	53	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/27/2012	10	Dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/21/2013	10	wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	5/28/2013	110	wet	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/3/2013	270	wet	157
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/10/2013	42	wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/17/2013	31	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	6/24/2013	150	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/1/2013	410	wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/8/2013	700	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/15/2013	410	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/17/2013	290	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	7/29/2013	200	dry	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/5/2013	1100	wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/12/2013	620	wet	
17604	At upper crabbing area limit on entry to park (RNBB-2)	8/19/2013	20	dry	

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS Inner Bride Brook- East Lyme, Rocky Neck (CT-E1_022)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
14730	At Route 156 (RN-156)	2009-2013	25	56	198	327	158
14882	At Railroad crossing in park (RNBB-1)	2009-2013	24	62	93	88	95
17604	At upper crabbing area limit on entry to park (RNBB-2)	2009-2013	24	57	152	134	157

Table 23: Segment 2: LIS EB Inner –Niantic River

Waterbody ID: CT-E1_020
Characteristics: Saltwater, Class SA
Impairment: Recreation
Water Quality Criteria for Enterococci (all other uses):
Geometric Mean: 35 colonies/100 ml
Single Sample : 500 colonies/100 ml
Percent reduction to meet:
Geometric Mean: 90%
Single Sample: 75%

Data : 2009-2011 Save the River Save the Hills volunteer sampling efforts, 2012 TMDL cycle single sample enterococci data (colonies/100mL) for monitoring stations on segment : LIS EB Inner – Niantic River, East Lyme (CT-E1_020) with annual geometric mean and single sample reduction goals
*results percent reductions are calculated from for the segment

Station #	Station Name	Date	Results	Wet/Dry	Geomean
EL-19-FG		5/27/2009	87	Wet	17
EL-19-FG		6/8/2009	10	Dry	
EL-19-FG		6/15/2009	10	Wet	
EL-19-FG		6/22/2009	20	Dry	
EL-19-FG		6/29/2009	10	Dry	
EL-19-FG		7/10/2009	10	Dry	
EL-19-FG		7/13/2009	10	Dry	
EL-19-FG		7/20/2009	10	dry	
EL-19-FG		7/29/2009	150	Dry	
EL-19-FG		8/3/2009	10	Dry	
EL-19-FG		8/10/2009	10	Dry	
EL-19-FG		7/26/2010	20	Wet	51
EL-19-FG		8/9/2010	30	Dry	
EL-19-FG		8/26/2010	110	Wet	
EL-19-FG		8/30/2010	99	dry	
EL-19-FG		5/20/2011	180	Dry	**348***
EL-19-FG		6/1/2011	110	Wet	
EL-19-FG		6/13/2011	210	Wet	
EL-19-FG		6/20/2011	450	Dry	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
EL-19-FG		6/24/2011	**2000**	Wet	
EL-19-FG		6/29/2011	64	Wet	
EL-19-FG		7/27/2011	1300	Wet	
EL-19-FG		8/15/2011	380	Wet	
EL-19-FG		8/17/2011	63	Dry	
EL-19-FG		9/8/2011	950	Wet	
EL-19-FG		10/20/2011	1300	wet	
EL-20-FG		5/27/2009	10	Wet	
EL-20-FG		6/8/2009	10	Dry	
EL-20-FG		6/15/2009	10	Wet	
EL-20-FG		6/22/2009	75	Dry	
EL-20-FG		6/29/2009	10	Dry	13
EL-20-FG		7/10/2009	10	Dry	
EL-20-FG		7/13/2009	10	Dry	
EL-20-FG		7/20/2009	10	Dry	
EL-20-FG		7/29/2009	10	Dry	
EL-20-FG		8/10/2009	10	dry	
EL-20-FG		7/26/2010	42	Wet	
EL-20-FG		8/9/2010	130	Dry	30
EL-20-FG		8/26/2010	42	Wet	
EL-20-FG		8/30/2010	10	dry	
EL-20-FG		5/20/2011	430	Wet	
EL-20-FG		6/1/2011	150	Wet	
EL-20-FG		6/13/2011	210	Wet	
EL-20-FG		6/20/2011	430	dry	201
EL-20-FG		6/24/2011	1100	wet	
EL-20-FG		6/29/2011	64	Wet	
EL-20-FG		7/27/2011	190	Wet	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
EL-20-FG		8/15/2011	120	Wet	
EL-20-FG		8/17/2011	20	Dry	
EL-20-FG		9/8/2011	99	Wet	
EL-20-FG		10/20/2011	1200	Wet	
EL-21-FG		5/27/2009	53	wet	
EL-21-FG		6/8/2009	10	Dry	
EL-21-FG		6/15/2009	20	Wet	
EL-21-FG		6/22/2009	20	Dry	
EL-21-FG		6/29/2009	10	dry	
EL-21-FG		7/10/2009	10	Dry	14
EL-21-FG		7/13/2009	10	Dry	
EL-21-FG		7/20/2009	10	Dry	
EL-21-FG		7/29/2009	20	Dry	
EL-21-FG		8/3/2009	10	Dry	
EL-21-FG		8/10/2009	10	dry	
EL-21-FG		7/26/2010	20	Wet	
EL-21-FG		8/9/2010	10	Dry	12
EL-21-FG		8/26/2010	10	Wet	
EL-21-FG		8/30/2010	10	dry	
EL-21-FG		5/20/2011	360	Wet	
EL-21-FG		6/1/2011	10	Wet	
EL-21-FG		6/13/2011	75	Wet	
EL-21-FG		6/20/2011	190	Dry	
EL-21-FG		6/24/2011	**2000**	Wet	104
EL-21-FG		6/29/2011	10	Wet	
EL-21-FG		7/27/2011	53	Wet	
EL-21-FG		8/15/2011	500	Wet	
EL-21-FG		8/17/2011	41	Wet	

Station #	Station Name	Date	Results	Wet/Dry	Geomean
EL-21-FG		9/8/2011	180	Wet	
EL-21-FG		10/20/2011	75	wet	
EL-22-FG		5/27/2009	150	wet	17
EL-22-FG		6/8/2009	20	Dry	
EL-22-FG		6/15/2009	10	Wet	
EL-22-FG		6/22/2009	20	Dry	
EL-22-FG		6/29/2009	10	dry	
EL-22-FG		7/10/2009	10	Dry	
EL-22-FG		7/13/2009	10	Dry	
EL-22-FG		7/20/2009	31	Dry	
EL-22-FG		8/3/2009	10	dry	
EL-22-FG		8/10/2009	10	dry	
EL-22-FG		7/26/2010	31	Wet	34
EL-22-FG		8/9/2010	10	Dry	
EL-22-FG		8/26/2010	450	Wet	
EL-22-FG		8/30/2010	10	dry	
EL-22-FG		5/20/2011	560	wet	103
EL-22-FG		6/1/2011	10	wet	
EL-22-FG		6/13/2011	53	dry	
EL-22-FG		6/20/2011	99	dry	
EL-22-FG		6/24/2011	**2000**	wet	
EL-22-FG		6/29/2011	20	wet	
EL-22-FG		7/27/2011	42	wet	
EL-22-FG		8/15/2011	270	wet	
EL-22-FG		8/17/2011	31	wet	
EL-22-FG		9/8/2011	380	wet	
EL-22-FG		10/20/2011	87	wet	

Wet and dry weather geometric mean values for all monitoring stations on segment : LIS Inner Niantic River - East Lyme, (CT-E1_020)

Station #	Station Name	Years Sampled	Number of Samples		Geometric Mean		
			Wet	Dry	All	Wet	Dry
EL-19-FG		2009-2011					
EL-20-FG		2009-2011					
EL-21-FG		2009-2011					
EL-22-FG		2009-2011					

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