

# CONNECTICUT DEPARTMENT OF PUBLIC HEALTH RECREATION PROGRAM

## ANNUAL BEACH GRANT REPORT

*2018 Season*

Submitted May, 2019



*Lighthouse Point Park, New Haven*



[WWW.CT.GOV/DPH/PUBLICBEACHES](http://WWW.CT.GOV/DPH/PUBLICBEACHES)

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## Introduction

The Recreation Program of the Connecticut Department of Public Health (CT DPH) has completed Connecticut's 2018 Annual Report for the US Environmental Protection Agency (US EPA) Beach Grant #00A00142. This report describes the monitoring of regulated marine bathing areas and how the 2016 Quality Assurance Project Plan (QAPP) is being implemented. It also provides information on public notification and water quality monitoring efforts. As part of the Beach Grant work plan, Connecticut provides US EPA with seasonal data for marine recreational water quality monitoring and information on the times and duration of interventions. Much of these data are summarized within this report.

Furthermore, it describes how 24 shoreline towns, 18 local health agencies, CT DPH, and Connecticut's Department of Energy and Environmental Protection (CT DEEP) work together to monitor the shoreline marine beaches.

## A: Elements of the Beach Monitoring and Notification Program

The Beach Grant includes specific goals for both US EPA and Connecticut. The goals for Connecticut are achieved by following a carefully developed work plan. The work plan addresses the twelve specific identified activities described below.

**A1: CT DEEP Beach Monitoring.** CT DEEP performs weekly or more frequent beach monitoring at 4 coastal state beaches. The coastal State beaches include the following: Sherwood Island State Park, Westport; Silver Sands State Park, Milford; Hammonasset State Park, Madison; and Rocky Neck State Park, East Lyme. Beach sampling will begin the week before Memorial Day and ends prior to Labor Day. This activity proceeds according to the beach QAPP. The beach monitoring that is conducted at the coastal state beaches is partial funded under a Memorandum of Agreement executed with the CT DEEP. This funding is used to hire seasonal personnel who are responsible for the collection of the water samples and the transport of samples to the CT DPH Microbiology Laboratory. In 2018, the CT DPH Laboratory analyzed 266 samples collected at the coastal State Park beaches.

**A2: CT DPH Microbiology Laboratory.** CT DPH provides indicator bacteria analysis services for beach samples at no cost to CT DEEP and local health agencies. The courier service has regional drop off locations where local officials may transfer beach samples to a courier for delivery of samples to the CT DPH Microbiology Laboratory in Rocky Hill. The DPH Recreation Program partially funds the hiring of seasonal personnel by the CT DPH Microbiology Laboratory, vehicle rental, and the purchase of laboratory supplies associated with the monitoring process. The seasonal employees provide the courier services to local health agencies and perform the laboratory services associated with the analysis of water samples. In 2018, the CT DPH Laboratory analyzed 1242 samples collected at all beaches along the Connecticut coastline. This represents approximately 69% of all 1804 enterococci samples collected on Connecticut marine beaches and sent to US EPA for the 2018 season. All other enterococci samples were tested by State-certified laboratories, specifically; Eastern Analytical Laboratory, Greenwich Health Department Laboratory, Norwalk Health Department Laboratory, and Stamford Health

Department Laboratory. These data were forwarded to CT DPH and they were added to our database and to EPA's Beacon 2 web site.

**A3: Methods and Quality Control.** Sampling design and methods are described in the *QAPP*. The established bacterial indicator for designated marine bathing water in Connecticut is *Enterococci*. The benchmark single sample criterion is 104 Colony Forming Units (CFU) or Most Probable Number (MPN)), with a five-sample geometric mean benchmark of 35.

According to Criterion 10 of the National Beach Guidance and Required Performance Criteria for Grants, 2014 Edition, states and tribes receiving beach grants under the CWA section 406 are expected to select a beach notification threshold, i.e.; the Beach Action Value (BAV), that is based on the 75th percentile value of the illness rate in EPA's 2012 Recreational Water Quality Criteria. However, states and tribes have the option to submit a written justification to use an alternative value. The CT DPH has submitted to EPA its justification for maintaining the current threshold values for 2018 instead of the EPA-preferred BAV value. EPA's response is included as Appendix C.

**A4: Coastal Recreational Waters List.** CT DPH provides US EPA with a list of regulated marine bathing areas and monitoring site locations where data are collected. In 2018 there were 73 beaches on this list. This list also includes one dormant beach that is being monitored (Fort Hale-New Haven). As noted in the DPH database, and on Beacon 2, Fort Hale Beach in New Haven is permanently closed and has been so since listed in 2011. The swimming beach at this city park remains dormant at least until a major redevelopment and repair project is complete. In the interim, the City continues to evaluate the water quality at Fort Hale because it is a popular site for fishing.

**A5: Local Beach Monitoring and Notification.** Local public beaches are managed by municipal health department officials or regional health district personnel. The Connecticut General Statutes outlines enforcement authority under Chapter 98, Municipal Powers. Section 7-148 states that municipalities have the power to "control and operate" recreation places, public beaches and beach facilities. They also have the power to "regulate and prohibit swimming or bathing in the public or exposed places within the municipality". (See [https://www.cga.ct.gov/current/pub/chap\\_098.htm#sec\\_7-148](https://www.cga.ct.gov/current/pub/chap_098.htm#sec_7-148).) The monitoring and closure/advisory practices at such coastal beaches are the responsibility of the local health authorities under the guidance of the CT DPH. Protocols for managing the opening and closing of municipal beaches are outlined in the *QAPP* and The State of Connecticut Guidelines for Monitoring Swimming Water and Closure Protocol (March, 2016).

**A6: Communicating Beach Location, Closure/Advisory, Notification, Potential Pollution Sources, and Monitoring Information.** The CT DPH Recreation Program uses an annual US EPA Beach Survey to collect organization, beach contact, location updates, closure, advisory, public notification, and known potential pollution source data for the regulated marine bathing areas under the authority of shoreline towns and CT DEEP. The 2018 Annual Review of Marine Beach Monitoring and Notification Data report was distributed to municipalities and CT DEEP on March 19<sup>th</sup>, 2019. These monitoring and survey data are validated, stored electronically in a local Access database developed and maintained by the CT DPH Recreation Program. The data are subsequently reformatted, translated and parsed for upload to US EPA. The monitoring data was compiled and accepted into EPA databases on December 12, 2018, while the notification

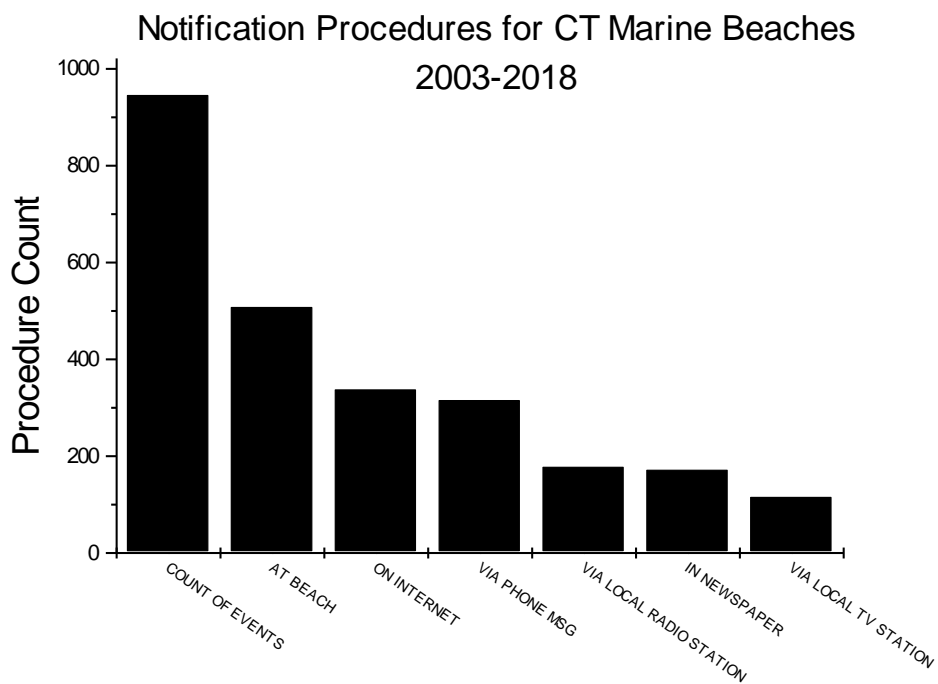
data was compiled and accepted into EPA databases on December 18th, 2018. Monitoring data for the CT DEEP state park coastal bathing areas are provided to US EPA directly by CT DEEP, in accordance with the Memorandum of Agreement.

**A7: Measures that Inform the Public of Potential Risks.** Each year prior to the opening of Connecticut’s beach season, the CT DEEP and CT DPH collaboratively issue a press release that discusses the state beach monitoring program and informs the public of potential risks associated with swimming in contaminated waters. The CT DPH provides the risk information on the CT DPH Recreation Program Web site ([www.ct.gov/dph/publicbeaches](http://www.ct.gov/dph/publicbeaches)). The site contains a listing of all municipal and state park regulated marine bathing areas and their tiered classification. It contains links to local health agencies and CT DEEP for the most up-to-date information about beach status. The site also contains links to beach related topics on US EPA and US Center for Disease Control and Prevention web sites. Communicating the status of state park beaches is accomplished by updating both the CT DEEP web site, and the State Beach “hotline”. Updates are accomplished the same day (Monday through Friday) as results are received from the CT DPH laboratory. Notifications procedures for CT municipalities compiled from closure data for years 2003 2018 are shown in Table A1 and Figure A1. Many municipalities utilize more than one means to notify the public of beach advisories and closures.

**Table A1:** Public Notification Procedures Listed by current State or municipal agencies (2003-2018). This list includes all current regulating agencies with a history of closing beaches. Second column is the count of closing or advisory events. Subsequent columns show the notification count.

DEPARTMENT	COUNT OF EVENTS	AT BEACH	ON INTERNET	VIA PHONE MSG	VIA LOCAL RADIO STATION	IN NEWSPAPER	VIA LOCAL TV STATION
Norwalk Health Department	40	40	40	34	0	28	0
Stamford Health Department	64	83	58	87	41	41	2
Stratford Health Department	45	41	21	5	32	0	12
Bridgeport Health Department	20	12	3	0	7	9	4
Westbrook Health Department	28	8	3	1	0	0	1
West Haven Health Department	83	30	32	3	1	9	1
Connecticut River Area Health District	40	29	3	10	0	0	0
Darien Health Department	32	32	16	32	0	0	0
Westport Weston Health District	30	15	14	2	5	5	5
East Shore District Health Department	46	10	0	9	0	0	0
Ledge Light Health District	141	12	14	6	0	2	1
Connecticut Department of Energy & Environmental Protection	63	32	32	32	13	7	26
Fairfield Health Department	80	76	50	33	42	27	42
Greenwich Department of Health	62	44	42	40	16	21	0
Guilford Health Department	15	11	1	3	0	0	0
Madison Health Department	60	0	0	0	0	0	0
Milford Health Department	75	24	9	19	21	23	22
New Haven Health Department	22	9	0	0	0	0	0

**Figure A1:** Notification Procedures for CT Marine Beaches (2003-2018). This figure presents the sums from Table A1.



**A8: Coastal Beach Monitoring Meetings with Public Health Officials.** CT DPH hosts a spring meeting for coastal Public Health Officials to review the current status of the Beach Grant in Connecticut. Speakers at the meeting have previously included representatives from US EPA Region 1, CT DPH State Laboratory, and the Aquaculture Division of the Department of Agriculture, the National Oceanic and Atmospheric Association (NOAA), municipal government officials, and CT DPH. The agenda includes a review of protocols for collecting beach closure and advisory information during the bathing season plus guidance/training for collecting and transporting samples. The agenda for the May, 2018 meeting is found in Appendix A.

**A9: Providing Beach Grant Generated Data upon Request.** At various times throughout the year, the CT DPH Recreation Program receives requests from conservation organizations and other interested parties for the notification and monitoring data. In 2018 the DPH Recreation Program responded to a request from the CT Council on Environmental Quality. The CT Council on Environmental Quality publishes their annual report in mid-April. The summary data for the 2018 beach closures will be available on Council's internet site (<http://www.ct.gov/ceq/cwp/view.asp?a=986&q=248850>). The Council reports event incidence relative to the prior year. When the report is issued, it should thus show an increase in closures for 2018 relative to 2017. The CT DPH Beach Program has also incorporated monitoring and



notification data to CT DPH's internal accreditation review board for the purpose of supporting this agency's re-accreditation.

**A10: US EPA Annual Report.** CT DPH prepares and submits an annual Beach Grant report to US EPA Region 1 using a format that was developed jointly between US EPA Region 1 and CT DPH. The annual report includes descriptions of beach data collection and management along with performance criteria and beach data summaries.

**A11: Education and Outreach.** When CT DPH is invited to explain or review Connecticut's beach monitoring effort, presentations describe the history of beach monitoring in Connecticut, current beach monitoring guidelines, and implementation programs. Connecticut's beach monitoring effort is presented in the annual Environmental Health Training offered at Southern Connecticut State University by the grant's Data Coordinator.

**A12: Assorted Office Supplies and Related Equipment.** Implementing the Beach Grant generates assorted office supply and related equipment ordering activity. Supplies include paper, color toner cartridges, binders, audio visual and computer equipment ordered to support daily operations and the semi-annual meeting for coastal Public Health officials.

## **B: CT DPH Staff and Responsibilities**

Of the four CT DPH staff positions described on this page, the Beach Grant serves to partially fund the Beach Grant coordinator positions.

**The Beach Grant coordinator** (Stewart Chute) is responsible for; working cooperatively with the EPA Region 1 Grant Manager (Ann Rodney) in preparing the grant application and budget, work plan development and implementation, grant coordination with CT DEEP and the CT DPH State Laboratory, providing interpretive guidance to shoreline local health departments and CT DEEP for beach closures, and integrating Beach Grant related activities with public health issues in Connecticut.

**The Beach Grant data coordinator** (Stewart Chute) is responsible for; providing custom beach data sets upon request and analytic/technical assistance to support beach monitoring, preparing Connecticut's annual US EPA Beach Survey used to collect notification and pollution source data, assembling beach monitoring and notification data, organizing and presenting at the shoreline meeting for Public Health Officials, processing and packaging beach data for transmittal to US EPA, writing Connecticut's Annual Report for the US EPA Beach Grant, maintaining/updating the local custom database that CT DPH uses to hold and manage Beach Grant and related data, and participating in biweekly conference calls with EPA technical staff as needed.

**The Supervising Microbiologist** (Kim Holmes-Talbot) oversees the CT DPH Microbiology Laboratory where marine recreational water samples are tested for Enterococci. Additionally, she hires seasonal staff for the courier sample pick up service and trains them to help perform indicator bacteria testing conducted during the summer. Sample results data are provided by the Laboratory to CT DPH, local health departments and CT DEEP.

**The Quality Assurance Program Plan (QAPP) developer** (Jeff Curran) was responsible for authorizing the Quality Assurance Project Plan for the Beach Monitoring and Notification Program for Connecticut Coastal Beaches. This required experience in writing and reviewing quality assurance project plans for various types of environmental programs and projects.

## C: Performance Criteria and Attainment of Grant Criteria

The Federal Clean Water Act section 406(a) and Section 406(b) authorizes the US Environmental Protection Agency (US EPA) to award grants to implement monitoring and notification programs, but only if the programs meet certain requirements. One of these requirements is that the monitoring and notification programs be consistent with EPA’s performance criteria. These performance criteria provide the basis for US EPA’s evaluation of Connecticut’s 406(b) grant award. The general requirements US EPA’s nine performance criteria are summarized in Table C1. While the quality of CT’s beaches has been regularly evaluated by outside agencies such as the Connecticut Council for the Environment and the National Resources Defense Council, the author knows of no other government agency, outside the US EPA, that has formally evaluated the effectiveness of CT DPH’s Beach Program.

**Table C1:** Generalized Description of US EPA’s Nine Performance Criteria for Grant Recipients.

Category	Performance Criterion	Criterion General Requirements
Evaluation and Classification	1	Develop risk-based beach evaluation and classification plan
	2	Develop tiered monitoring plan
Monitoring	3	Monitoring report submission and delegation
	4	Methods and assessment procedures
	5	Public notification and risk communication plan
Public Notification and Prompt Risk Communication	6	Measures to notify EPA and local governments
	7	Measures to notify the public
	8	Notification report submission and delegation
	9	Public evaluation of program

CT DPH maintains a beach monitoring and notification program in compliance with the nine performance criteria listed above. In brief, using custom software CT DPH receives, manages, maintains and uses marine beach data supplied to it by the state laboratory, local health departments and CT DEEP. Beach data sets are interrelated and include: a roster of beach managers and regulated marine bathing areas; current geospatial location data for these beaches and their sampling stations; a beach tier list that is updated annually; date and time stamped water quality monitoring results; beach closure and advisory events including extent of beach, duration and cause; and ways the public is notified of beach closures and advisories. CT DPH’s custom software is enabled for both incoming and outgoing electronic data interchange and includes utilities to cross check and validate beach data. This monitoring and notification system and its associated database have been used, adapted, and improved since 2003.

The purpose of this Section is to describe CT DPH’s beach monitoring and notification program within the context of the nine criteria shown in TableC1. To this end, a brief sequential summary of each criterion is presented below.

**C1: Performance Criterion 1: Develop Risk-Based Beach Evaluation & Classification Plan:**

The US EPA beach grant requires funds to be prioritized based on water usage and risk to human health. To fulfill this requirement, CT DPH has developed a risk-based beach evaluation and classification procedure for coastal recreational waters. This plan is part of the “Beach Monitoring and Notification Program for Connecticut Coastal Beaches”, (Quality Assurance Project Plan - RFA11178). The 2016 Quality Assurance Project Plan was signed by EPA’s QA/QC officer on May 5<sup>th</sup>, 2017.

**C2: Performance Criterion 2: Develop Tiered Monitoring Plan:**

The Tiered Monitoring Plan (TMP) addresses monitoring frequency, location and assessment of coastal waters. The TMP is based on the Risk-Based Beach Evaluation and Classification. The TMP is reviewed and revised on an annual basis. The evaluation and classification plan considers factors of beach usage, historical environmental conditions, past test results, and if a beach is listed by CT DEEP as impaired according to Federal 305(b)/303(d) methodology. Coastal beaches are evaluated weekly during the season and classified annually on the potential threat public health visitors might face (Table C2).

Connecticut beaches are ranked in three tiers with a classification scheme as follows:

- Tier I beaches had no more than one closure occurrence during the season.
- Tier II beaches had no more than three closure occurrences during the season.
- Tier III beaches do not meet minimum recommended sampling requirements, or had more than three closure events during the season.

**Table C2: Tier Rank.** CT regulated beaches are listed by Town along with rank and change in rank relative to the previous season. Last column denotes the change in Tier Rank in 2018 relative to the previous season.

TOWN	BEACH_NAME	2018	2017	Change
BRANFORD	BRANFORD POINT BEACH	tier 1	tier 1	no change
BRANFORD	CLARK AVENUE BEACH	tier 1	tier 1	no change
BRANFORD	STONY CREEK BEACH	tier 1	tier 1	no change
BRIDGEPORT	PLEASURE BEACH-BRIDGEPORT	tier 1	tier 3	decrease
BRIDGEPORT	SEASIDE PARK BEACH	tier 3	tier 1	increase
CLINTON	TOWN BEACH (CLINTON)	tier 1	tier 2	decrease
DARIEN	PEAR TREE POINT BEACH	tier 2	tier 2	no change
DARIEN	WEED BEACH	tier 2	tier 2	no change
EAST HAVEN	EAST HAVEN TOWN BEACH	tier 1	tier 1	no change
EAST LYME	HOLE-IN-THE-WALL BEACH	tier 1	tier 1	no change
EAST LYME	MCCOOK POINT BEACH	tier 1	tier 1	no change
EAST LYME	ROCKY NECK STATE PARK	tier 2	tier 2	no change
FAIRFIELD	JENNINGS BEACH	tier 2	tier 1	increase
FAIRFIELD	PENFIELD BEACH	tier 2	tier 1	increase
FAIRFIELD	SASCO BEACH	tier 2	tier 1	increase
FAIRFIELD	SOUTH PINE CREEK BEACH	tier 2	tier 1	increase
FAIRFIELD	SOUTHPORT BEACH	tier 2	tier 1	increase
GREENWICH	BYRAM BEACH	tier 3	tier 3	no change
GREENWICH	GREAT CAPTAIN'S ISLAND BEACH	tier 1	tier 1	no change
GREENWICH	GREENWICH POINT BEACH	tier 1	tier 1	no change
GREENWICH	ISLAND BEACH	tier 1	tier 1	no change
GROTON	EASTERN POINT BEACH	tier 1	tier 1	no change
GROTON	ESKER POINT BEACH	tier 1	tier 1	no change
GROTON	NOANK DOCK	tier 1	tier 1	no change
GUILFORD	JACOBS BEACH (TOWN BEACH)	tier 1	tier 3	decrease
MADISON	EAST WHARF BEACH	tier 1	tier 1	no change
MADISON	HAMMONASSET BEACH STATE PARK BEACH	tier 1	tier 1	no change
MADISON	PENT ROAD BEACH	tier 1	tier 1	no change
MADISON	SURF CLUB BEACH	tier 1	tier 1	no change
MADISON	WEST WHARF BEACH	tier 1	tier 1	no change
MILFORD	ANCHOR BEACH (MERWIN POINT) #1	tier 1	tier 1	no change
MILFORD	ANCHOR BEACH (MERWIN POINT) #2	tier 1	tier 1	no change
MILFORD	GULF BEACH	tier 1	tier 1	no change
MILFORD	SILVER SANDS STATE PARK	tier 2	tier 2	no change
MILFORD	WALNUT BEACH	tier 1	tier 1	no change
MILFORD	WOODMONT BEACH	tier 1	tier 1	no change

TOWN	BEACH_NAME	2018	2017	Change
NEW HAVEN	FORT HALE PARK BEACH	tier 1	tier 1	no change
NEW HAVEN	LIGHTHOUSE POINT BEACH	tier 1	tier 2	decrease
NEW LONDON	GREEN HARBOR BEACH	tier 1	tier 1	no change
NEW LONDON	OCEAN BEACH PARK	tier 1	tier 1	no change
NORWALK	BELL ISLAND BEACH	tier 2	tier 1	increase
NORWALK	CALF PASTURE BEACH	tier 2	tier 1	increase
NORWALK	HICKORY BLUFF BEACH	tier 2	tier 1	increase
NORWALK	MARVIN BEACH	tier 2	tier 1	increase
NORWALK	ROWAYTON BEACH	tier 2	tier 1	increase
NORWALK	SHADY BEACH	tier 2	tier 1	increase
OLD LYME	SOUNDVIEW BEACH	tier 1	tier 1	no change
OLD LYME	WHITE SANDS BEACH	tier 1	tier 1	no change
OLD SAYBROOK	HARVEY'S BEACH	tier 1	tier 1	no change
OLD SAYBROOK	TOWN BEACH (OLD SAYBROOK)	tier 1	tier 1	no change
STAMFORD	CUMMINGS BEACH	tier 3	tier 3	no change
STAMFORD	EAST (COVE ISLAND) BEACH	tier 3	tier 3	no change
STAMFORD	QUIGLEY BEACH	tier 3	tier 3	no change
STAMFORD	WEST BEACH	tier 3	tier 3	no change
STONINGTON	DUBOIS BEACH	tier 1	tier 1	no change
STRATFORD	LONG BEACH (MARNICK'S)	tier 2	tier 1	increase
STRATFORD	LONG BEACH (PROPER)	tier 2	tier 1	increase
STRATFORD	SHORT BEACH	tier 2	tier 1	increase
WATERFORD	PLEASURE BEACH-WATERFORD	tier 1	tier 1	no change
WATERFORD	WATERFORD TOWN BEACH	tier 1	tier 1	no change
WEST HAVEN	ALTSCHULER BEACH	tier 1	tier 1	no change
WEST HAVEN	DAWSON BEACH	tier 1	tier 1	no change
WEST HAVEN	MORSE BEACH	tier 1	tier 1	no change
WEST HAVEN	OAK STREET A BEACH	tier 1	tier 1	no change
WEST HAVEN	OAK STREET B BEACH	tier 1	tier 1	no change
WEST HAVEN	ROCK STREET BEACH	tier 1	tier 1	no change
WEST HAVEN	SEABLUFF BEACH	tier 1	tier 1	no change
WEST HAVEN	SEAVIEW BEACH	tier 1	tier 1	no change
WEST HAVEN	SOUTH STREET BEACH	tier 1	tier 1	no change
WESTBROOK	WESTBROOK TOWN BEACH/WEST BEACH	tier 1	tier 1	no change
WESTPORT	BURYING HILL BEACH	tier 1	tier 1	no change
WESTPORT	COMPO BEACH	tier 1	tier 1	no change
WESTPORT	SHERWOOD ISLAND STATE PARK	tier 1	tier 1	no change

**C3: Performance Criterion 3: Monitoring Report Submission and Delegation:**

The CT DPH beach database is a stand-alone Access database. The module was completed and fully operational in October 2003 and has been constantly improved and adapted to changing needs. The database contains monitoring data on the beaches and information on associated contacts, advisories, pollution sources, and reported illnesses. Beaches are related to monitoring data in the core of the database. The module meets the XML data sharing protocols specified by US EPA. The complete monitoring data set for the 2018 season was submitted to US EPA on December 12<sup>th</sup>, 2018 and is available from their Beacon 2 website (<http://watersgeo.epa.gov/beacon2>).

**C4: Performance Criterion 4: Methods and Assessment Procedures:**

All methods for assessing ambient waters and for making decisions concerning the protection of human health at beaches were established in accordance with EPA recommended standard methods. The current QAPP includes sample collection techniques, analytical procedures, and data verification and validation processes. As outlined in the QAPP, coastal waters are analyzed for Enterococci bacteria. While the majority of samples are analyzed at CT DPH's Katherine Kelly Laboratory, some towns use their own State-certified environmental testing laboratories. Each laboratory utilizes analytical methods approved by EPA. In general, results are assessed in comparison to the state standard of 104 CFU/100 ml water and advisories are issued when appropriate. In addition, the director of health will consider 24-hour rainfall data and other local factors (e.g.; storm sewer overflow, sewage overflow, waterfowl, seaweed drift, etc.) when deciding on bathing beach closures.

**C5: Performance Criterion 5: Public Notification and Risk Communication Plan:**

CT DPH has developed a comprehensive "Beach Closure and Notification" plan. This plan describes how the public will be notified of potential risks associated with water contact activities in coastal recreational waters, and describes the advisory process for issuing, re-sampling and removing advisories. Notification protocols are described within current QAPP. In summary, beach advisories are issued as soon as elevated results are received by CT DEEP staff or local Health Directors. Advisory information is relayed to beach managers who are asked to post signs at beach entrances. The advisory is also listed on the managing authority's telephone hot-line or web site. Once re-sample results are below state standards, the advisory is removed and the public is notified through the same channels as with the posting of the advisory.

**C6: Performance Criterion 6: Measures to Notify EPA and Local Governments:**

CT DPH has developed a mechanism for prompt notification of the EPA and local governments of the occurrence, nature, location, and pollutants involved when a violation of water quality standards for public beaches occurs. These methods also communicate the extent of exceedance or the likelihood of exceeding applicable state water quality standards for pathogen indicators. CT DPH works closely with 24 municipalities along the Long Island Sound shoreline and their 18 local health departments plus the CT DEEP to support the consistent use of statewide beach monitoring guidelines and beach closure protocol. CT DPH hosts meetings for public health officials to: promote standardized beach monitoring practices; provide updates; to review marine beach tracking data for the state; and provide a forum for US EPA and public health officials to discuss beach issues. The spring 2018 meeting with shoreline public health

officials was held on May 16<sup>th</sup> at the Fort Trumbull State Park and Museum Conference Center, New London CT. Approximately 30 representatives from 12 of the 18 shoreline local health departments/districts attended the meeting. Presentations were given by Dr. Stewart Chute of the CT DPH Recreation Program, Kimberly Holmes-Talbot of the CT DPH Public Health Laboratory, staff from the CT DEEP, and Julie Rose of the National Oceanic and Atmospheric Association. A copy of the meeting agenda is found in Appendix A.

**C7: Performance Criterion 7: Measures to Notify the Public:**

If it is necessary to close a State Beach, the CT DEEP Project Manager or designee contacts the CT DEEP Parks Division and CT DEEP Communications Office by telephone and email. They take appropriate actions to close state beaches and initiate the public notification process. Municipalities have their own notification procedures. (See Table A1) Communication of closure status at State beaches to the general public is presently accomplished by updating the CT DEEP web site and amending the State Beach "Hotline". Updates are the responsibility of CT DEEP Parks or Office of Communications personnel on the same day significant sample results are received from the CT DPH laboratory. The CT DEEP also issues press releases on the same day the laboratory results are received that are carried by area radio and television stations, and newspapers. Finally, the CT DPH immediately communicates the closure status of any State Beach with appropriate local health officials by telephone or email. A voice-mail message is recorded if direct contact is not made at any point in the above sequence. If the caller does not receive a call back within an hour to acknowledge the voice-mail, subsequent calls are made to alternative staff according to a predetermined sequence until an appropriate person is contacted directly. In addition, CT DEEP maintains a web site for public notification of State beach status ([www.ct.gov/deep/beachstatus](http://www.ct.gov/deep/beachstatus)). CT DEEP is also using social media including Facebook and Twitter to provide updated information for selected facilities.

If the local director of health deems it necessary to close a bathing beach, the CT DPH is to be advised of such closure by telephone or fax as soon after the closure as possible but not later than 4-hours. The local health district/department is responsible for the notification of the general public by posting on a local municipality's website and/or via a press release to the local media.

**C8: Performance Criterion 8: Notification Report Submission and Delegation:**

States are required to report on activities taken to notify the public in the case of water quality standard exceedances, promptly report notification data to the public, and submit annual notification data elements to the US EPA. All beach notification data were entered into CT DPH's Access database before the end of 2018. CT DPH submitted the 2018 notification data to US EPA on December 18<sup>th</sup> 2018. This data is available from US EPA's Beacon 2 website (<http://watersgeo.epa.gov/beacon2>).

**C9: Performance Criterion 9: Public Evaluation of the Program:**

The public has been provided with an opportunity to review the list of coastal recreational waters and associated public beaches, the tier designation of coastal public beaches, and yearly reports. All documents are displayed on the CT DPH website ([www.ct.gov/dph/publicbeaches](http://www.ct.gov/dph/publicbeaches)), and comments are requested. CT DPH also sends monitoring and notification data to selected public non-governmental organizations and other interested parties upon request.

## D: Performance Measures

Connecticut’s monitored beaches were safe for swimming 98.3% of the 2018 swim season. Within the 73 monitored beaches, there were 115 closure days and 16 advisory days during the 95 day season. These totals are derived from 83 closure and 9 advisory events. Thirty-eight percent of all closures were due to elevated indicator bacteria, while preemptive closures were predominantly due to heavy rainfall. Table D1 shows these results along with other indices. These monitoring results include one closed public beach that is being monitored.

**Table D1:** Summary Counts for Key Parameters from the 2018 Marine Beach Season.

<i>Parameter</i>	<i>Count</i>
Marine beaches tracked for the US EPA Beach Grant	73
Count of marine beaches monitored weekly during the bathing season	73
Reported marine beach Advisory Events	9
Reported marine beach Advisory Days	16
Reported marine beach Closure Events	83
Reported marine beach Closure Days	115
Total reported marine beach events (closure events and advisory events)	92
Total reported marine beach event days (closure days and advisory days)	131
Tier 1 marine beaches	49
Tier 2 marine beaches	18
Tier 3 marine beaches	6
Reported marine beach closure events due to elevated indicator bacteria	32
Reported marine beach closure events preemptive due to heavy rainfall	60
Reported marine beach recreational water quality monitoring samples	1804
Marine beach recreational water quality monitoring samples that exceeded 104 CFU/100ml	122
Marine beaches with one or more marine recreational water quality samples that exceeded 104 CFU/100ml	44

## E: Beach Advisories and Outside Appraisal

CT DPH collects information on notification events from each of the twenty State and municipal agencies charged with monitoring marine beaches. CT DPH generates the survey forms and distributed them in October 2018. Survey forms were returned to CT DPH by the end of November 2018. Information on the survey was reviewed and compiled into a custom database. Notification data was then formatted and initially submitted to US EPA on December 18th, 2018. The 2018 Annual Review of Marine Beach Monitoring and Notification Data report was distributed to municipalities and CT DEEP on March 19<sup>th</sup>, 2019. During the sampling season 92 coastal notification events were recorded (Table E1). These data can be distributed to outside agencies upon request.

**Table E1:** Connecticut Beach Advisories and Closures for the 2018 Swim Season. Notification data as reported to CT DPH by shoreline local health departments, health districts and CT DEEP. Data set is sorted by Town, and Event Start Date. If the municipal authority does not know the source of elevated bacteria, “unknown” is reported under the “SOURCE” column.

TOWN	BEACH NAME	EVENT TYPE	START DATE	DURATION (DAYS)	REASON	SOURCE
BRIDGEPORT	SEASIDE PARK BEACH	Close	06/12/2018	2	Elevated bacteria	Storm water runoff
BRIDGEPORT	SEASIDE PARK BEACH	Close	07/10/2018	4	Elevated bacteria	Storm water runoff
BRIDGEPORT	PLEASURE BEACH-BRIDGEPORT	Close	07/18/2018	2	Preemptive - Rainfall	Storm water runoff
BRIDGEPORT	SEASIDE PARK BEACH	Close	07/18/2018	2	Preemptive - Rainfall	Storm water runoff
BRIDGEPORT	SEASIDE PARK BEACH	Close	07/24/2018	2	Elevated bacteria	Storm water runoff
BRIDGEPORT	SEASIDE PARK BEACH	Close	08/14/2018	2	Elevated bacteria	Storm water runoff
CLINTON	TOWN BEACH (CLINTON)	Close	06/26/2018	1	Elevated bacteria	Storm water runoff
DARIEN	PEAR TREE POINT BEACH	Close	06/25/2018	1	Preemptive - Rainfall	Storm water runoff
DARIEN	WEED BEACH	Close	06/25/2018	1	Preemptive - Rainfall	Storm water runoff
DARIEN	WEED BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
DARIEN	PEAR TREE POINT BEACH	Close	06/29/2018	1	Preemptive - Rainfall	Storm water runoff
DARIEN	PEAR TREE POINT BEACH	Close	07/25/2018	1	Preemptive - Rainfall	Storm water runoff
DARIEN	WEED BEACH	Close	07/25/2018	1	Preemptive - Rainfall	Storm water runoff
EAST LYME	ROCKY NECK STATE PARK BEACH	Close	06/05/2018	1	Elevated bacteria	Wildlife
EAST LYME	ROCKY NECK STATE PARK BEACH	Close	06/28/2018	2	Elevated bacteria	Storm water runoff
FAIRFIELD	SASCO BEACH	Close	05/31/2018	1	Elevated bacteria	Storm water runoff
FAIRFIELD	SOUTH PINE CREEK BEACH	Close	05/31/2018	2	Elevated bacteria	Storm water runoff
FAIRFIELD	SOUTHPORT BEACH	Close	05/31/2018	2	Elevated bacteria	Storm water runoff
FAIRFIELD	SASCO BEACH	Close	06/18/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	SASCO BEACH	Close	06/26/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	JENNINGS BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	PENFIELD BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	SOUTH PINE CREEK BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff



**Table E1: Connecticut Beach Advisories for the 2018 Swim Season. (Continued)**

TOWN	BEACH NAME	EVENT TYPE	START DATE	DURATION (DAYS)	REASON	SOURCE
FAIRFIELD	SOUTHPORT BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	JENNINGS BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	PENFIELD BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	SOUTH PINE CREEK BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
FAIRFIELD	SOUTHPORT BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	06/25/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	07/15/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	07/22/2018	2	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	07/25/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	08/02/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	08/08/2018	1	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	08/12/2018	3	Preemptive - Rainfall	Storm water runoff
GREENWICH	GREENWICH POINT BEACH	Close	08/12/2018	2	Preemptive - Rainfall	Storm water runoff
GREENWICH	BYRAM BEACH	Close	08/15/2018	1	Elevated bacteria	Storm water runoff
GREENWICH	BYRAM BEACH	Close	08/18/2018	1	Preemptive - Rainfall	Storm water runoff
GROTON	NOANK DOCK	Advisory	06/05/2018	2	Elevated bacteria	Unknown
MILFORD	SILVER SANDS STATE PARK BEACH	Close	06/05/2018	1	Elevated bacteria	Storm water runoff
MILFORD	SILVER SANDS STATE PARK BEACH	Close	07/24/2018	2	Elevated bacteria	Storm water runoff
NEW LONDON	GREEN HARBOR BEACH	Advisory	05/30/2018	1	Elevated bacteria	Unknown
NEW LONDON	OCEAN BEACH PARK	Advisory	06/05/2018	2	Elevated bacteria	Unknown
NEW LONDON	GREEN HARBOR BEACH	Close	07/27/2018	5	Elevated bacteria	Unknown
NORWALK	BELL ISLAND BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	CALF PASTURE BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	HICKORY BLUFF BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	MARVIN BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	ROWAYTON BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	SHADY BEACH	Close	06/28/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	HICKORY BLUFF BEACH	Close	07/24/2018	2	Elevated bacteria	Unknown
NORWALK	BELL ISLAND BEACH	Close	08/11/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	CALF PASTURE BEACH	Close	08/11/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	HICKORY BLUFF BEACH	Close	08/11/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	MARVIN BEACH	Close	08/11/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	ROWAYTON BEACH	Close	08/11/2018	1	Preemptive - Rainfall	Storm water runoff
NORWALK	SHADY BEACH	Close	08/11/2018	1	Preemptive - Rainfall	Storm water runoff
OLD LYME	SOUNDVIEW BEACH	Advisory	06/05/2018	2	Elevated bacteria	Unknown
OLD LYME	WHITE SANDS BEACH	Advisory	08/09/2018	1	Elevated bacteria	Unknown
OLD SAYBROOK	HARVEY'S BEACH	Close	06/26/2018	1	Elevated bacteria	Storm water runoff
OLD SAYBROOK	TOWN BEACH (OLD SAYBROOK)	Close	06/26/2018	1	Elevated bacteria	Storm water runoff
STAMFORD	WEST BEACH	Close	06/27/2018	1	Elevated bacteria	Unknown

**Table E1:** Connecticut Beach Advisories for the 2018 Swim Season. (Continued)

TOWN	BEACH NAME	EVENT TYPE	START DATE	DURATION (DAYS)	REASON	SOURCE
STAMFORD	CUMMINGS BEACH	Close	06/29/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	EAST (COVE ISLAND) BEACH	Close	06/29/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	QUIGLEY BEACH	Close	06/29/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	WEST BEACH	Close	06/29/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	CUMMINGS BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	EAST (COVE ISLAND) BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	QUIGLEY BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	WEST BEACH	Close	07/18/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	CUMMINGS BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	EAST (COVE ISLAND) BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	QUIGLEY BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	WEST BEACH	Close	07/26/2018	1	Preemptive - Rainfall	Storm water runoff
STAMFORD	CUMMINGS BEACH	Close	08/11/2018	2	Preemptive - Rainfall	Storm water runoff
STAMFORD	EAST (COVE ISLAND) BEACH	Close	08/11/2018	2	Preemptive - Rainfall	Storm water runoff
STAMFORD	QUIGLEY BEACH	Close	08/11/2018	2	Preemptive - Rainfall	Storm water runoff
STAMFORD	WEST BEACH	Close	08/11/2018	2	Preemptive - Rainfall	Storm water runoff
STAMFORD	WEST BEACH	Close	08/21/2018	1	Elevated bacteria	Unknown
STRATFORD	LONG BEACH (MARNICK'S)	Close	06/05/2018	2	Elevated bacteria	Unknown
STRATFORD	LONG BEACH (PROPER)	Close	06/05/2018	2	Elevated bacteria	Unknown
STRATFORD	SHORT BEACH	Close	06/05/2018	2	Elevated bacteria	Unknown
STRATFORD	LONG BEACH (MARNICK'S)	Close	08/13/2018	2	Preemptive - Rainfall	Unknown
STRATFORD	LONG BEACH (PROPER)	Close	08/13/2018	2	Preemptive - Rainfall	Unknown
STRATFORD	SHORT BEACH	Close	08/13/2018	2	Preemptive - Rainfall	Unknown
WEST HAVEN	DAWSON BEACH	Advisory	08/13/2018	2	Elevated bacteria	Unknown
WEST HAVEN	SEABLUFF BEACH	Advisory	08/13/2018	2	Elevated bacteria	Unknown
WEST HAVEN	SEAVIEW BEACH	Advisory	08/14/2018	2	Elevated bacteria	Unknown
WEST HAVEN	ROCK STREET BEACH	Advisory	08/27/2018	2	Elevated bacteria	Unknown
WESTPORT	SHERWOOD ISLAND STATE PARK BEACH	Close	08/14/2018	2	Elevated bacteria	Storm water runoff

Appendix A: Spring Meeting Agenda.

CONNECTICUT BEACH GRANT MEETING FOR  
COASTAL HEALTH OFFICIALS  
Wednesday May 16, 2018

*Fort Trumbull State Park and Museum  
Conference Center  
90 Walbach St, New London, CT 06320  
(860) 444-7591  
AGENDA*

9:00 - 9:15	Stewart Chute, <i>DPH</i>	Welcome
9:15 - 9:45	Kimberly Holmes-Talbot, <i>DPH</i>	The State Laboratory and summer beach monitoring
9:45 - 10:00	Stewart Chute, <i>DPH</i>	Beach Grant annual report
10:00 - 10:30	Chris Bellucci/Tracy Lizotte; <i>DEEP</i>	State Park Beach Monitoring Program Update
10:30 - 10:50	Break	
10:50 -11:20	Kenny Foscue, <i>DPH</i>	Public Notification and Risk Communication: Evaluating Community Strategies
11:20 - 11:50	Julie Rose, <i>National Oceanic and Atmospheric Association</i>	Ribbed Mussel Cultures to Improve LIS Water Quality
11:50	Henry Alves, <i>FT Park Manager</i>	Tour Fort Trumbull

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Connecticut Department of Public Health, Recreation Program  
Stewart Chute, Toxicologist, (860) 509-7758

## Appendix B: Sixteen year summary data.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Count of marine beaches tracked for the US EPA Beach Grant	67	67	67	67	66	66	66	66	73	73	73	73	74	73	73	73
Count of marine beaches monitored weekly during the bathing season	65	65	65	63	64	66	65	65	72	72	72	72	72	72	73	73
Count of reported marine beach <b>Advisory Events</b>	19	2	7	1	1	1	1	1	16	28	12	3	4	3	8	9
Count of reported marine beach <b>Advisory Days</b>	28	7	69	2	1	30	2	3	101	191	52	6	5	6	22	16
Count of reported marine beach <b>Closure Events</b>	115	95	86	106	65	66	74	66	152	68	66	65	50	79	52	83
Count of reported marine beach <b>Closure Days</b>	179	176	131	222	107	105	106	140	535	107	99	111	70	157	132	115
Count of total marine beach <b>events</b> (closure events and advisory events)	134	97	93	107	66	67	75	67	168	96	78	68	54	82	60	92
Count of total marine beach event days  (closure days and advisory days)	207	183	200	224	108	135	108	143	636	298	151	117	75	163	154	131

Count of Tier 1 marine beaches <sup>1</sup>	46	43	41	46	54	54	49	52	29	55	57	53	57	54	60	49
Count of Tier 2 marine beaches <sup>1</sup>	6	11	15	8	7	4	10	11	27	12	11	14	14	9	6	18
Count of Tier 3 marine beaches <sup>1</sup>	15	13	11	13	5	8	7	3	17	6	5	6	3	10	7	6
Count of marine beach <b>closure events</b> due to elevated indicator bacteria	18	13	15	18	8	13	9	37	49	12	17	18	13	46	17	32
Count of preemptive <b>closure events</b> (usually due to heavy rainfall)	89	77	70	81	54	53	65	27	95	56	47	47	37	33	34	60
Number of reported marine beach recreational water quality monitoring samples	966	1086	1129	1385	1682	1636	1962	2213	2051	1953	1806	1787	1864	1826	1981	1804
Number of marine beach recreational water quality monitoring samples that exceeded the US EPA standard of 104 CFU/100ml for marine recreational water	51	62	47	75	89	73	93	261	235	156	112	108	74	124	105	122
Number of marine beaches with one or more marine recreational water quality samples that exceeded the US EPA standard of 104 CFU/100ml for marine recreational water	16	18	14	29	39	28	33	55	58	44	40	30	30	41	39	44

## Appendix C: EPA's Reply to Connecticut's Justification to Maintain Its Current Beach Action Values



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 1  
5 POST OFFICE SQUARE, SUITE 100  
BOSTON, MA 02109-3912

June 22, 2016

Ronald Skomro  
Environmental Health Section, Recreation Program  
Connecticut Department of Public Health  
410 Capitol Avenue, MS#51AIR  
P.O. Box 340308  
Hartford, CT 06134-0308

**RE: Justification for Alternate Beach Notification Threshold**

Dear Ron,

We have reviewed your justification for use of an Alternate Beach Notification Threshold (BNT) dated May 6, 2016 and approve your request to continue using the alternate Beach Notification Threshold (BNT) of 104 cfu of Enterococci at Connecticut beaches. This decision is based on your analysis of historical data in Connecticut. If at any point in the future you decide to use the EPA-recommended BAVs or a different BNT, please contact your project officer.

Thank you!

Sincerely,

Handwritten signature of Ann Rodney in blue ink.

Ann Rodney,  
Project Officer, CT Beach Program

Handwritten signature of Alicia Grimaldi in blue ink.

Alicia Grimaldi,  
Region 1 Beach Program Coordinator

## END OF ANNUAL REPORT