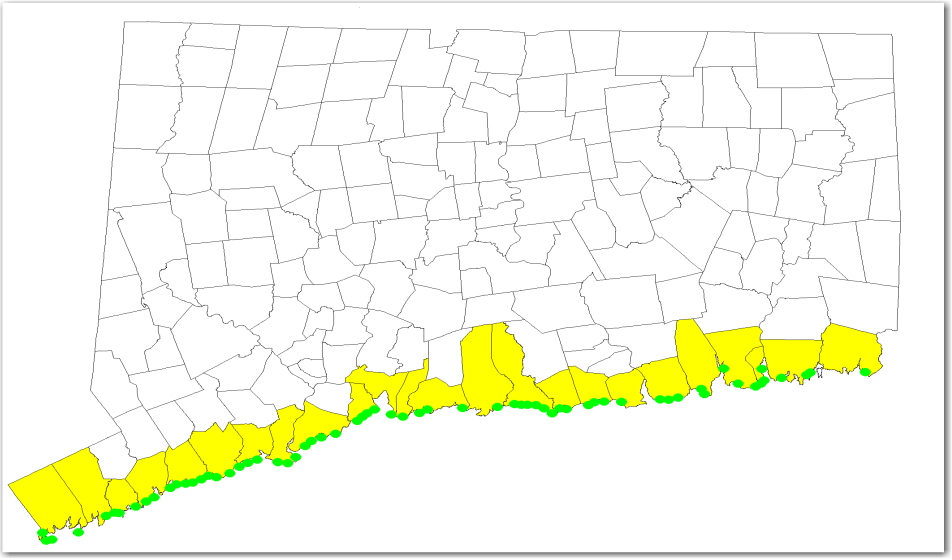
CONNECTICUT'S 2011 ANNUAL REPORT
FOR THE US EPA BEACH GRANT
WITH SUMMARY DATA FOR 2003-2011



02/02/2012

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Commissioner

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Jewel Mullen, M.D., M.P.H., M.P.A.
Commissioner

Dannel Malloy
Governor

02/02/2012

Ms Caitlyn Whittle
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Boston, MA 02109-3912

Dear Ms Whittle:

The Recreation Program of the Connecticut Department of Public Health (DPH) has completed Connecticut's 2011 Annual Report for the US EPA Beach Grant. This comprehensive report satisfies one of Connecticut's Beach Grant work plan requirements.

This work plan focuses on: monitoring regulated marine bathing areas; implementing a Quality Assurance Project Plan (renewed 2011); providing public notification for beach closures and advisories; and identifying known potential sources of pollution at marine beaches. In addition Connecticut provides US EPA with seasonal data for marine recreational water quality monitoring, beach locations, public notifications and potential sources of pollution at the beaches we monitor. The annual report describes how 24 shoreline towns, 19 local health departments and districts, DPH and the Connecticut Department of Energy and Environmental Protection monitor the shoreline marine beaches.

This report includes full beach data sets and summaries for nine (9) swimming seasons (2003-2011) reflecting a sustained and cooperative environmental monitoring effort designed to protect public health that is consistent with the Beach Grant.

If you have questions about this annual report, require additional background information about Connecticut marine beach monitoring or have questions about how we implement the Beach Grant please contact me.

Sincerely,

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For information about Connecticut's 2011 Annual Report for the US EPA Beach Grant please contact the author:

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This annual report is available at:
www.ct.gov/dph/publicbeaches

Visit the US EPA BEACON2 website to locate beaches and view beach data:
http://watersgeo.epa.gov/beacon2/

IT WOULDN'T BE SUMMER WITHOUT CONNECTICUT BEACHES

Municipal and state park beaches throughout Connecticut are waiting for you; the seventy three (73) regulated marine beaches that the Connecticut Department of Public Health (CT DPH) tracks for the US EPA Beach Grant are distributed more or less evenly among the 24 shoreline towns found on Long Island Sound. This natural estuary holds about 8 trillion U.S. gallons - plenty of water for swimming and summer boating.

Starting in 1989, Connecticut adopted US EPA standards in a set of guidelines for monitoring the recreational water at its beaches. Since then local health departments have relied on these Guidelines for Monitoring Bathing Waters and Closure Protocol - now in their third revision. They provide us with a set of beach monitoring standards that have the flexibility we need to adapt to changes at our beaches.

In the year 2000 the United States Congress took a direct interest in the nation's beaches when it amended the Clean Water Act to include the Beach Act. It focuses on coastal marine beaches and freshwater beaches found on the Great Lakes. Congress enacted a set of national requirements for: beach monitoring; public notification of beach closures and advisories; and development of newer technologies to assess bathing water for contamination.

Connecticut is one of 35 states and territories receiving funding that Congress allocated to implement the Beach Act. The Beach Grant has allowed Connecticut to strengthen its distributed marine beach monitoring effort in a number of ways that include covering much of the cost associated with lab work and the courier pickup service. Our drivers gather marine water samples collected by shoreline health departments and delivers them to the State Laboratory. These samples are collected regularly and analyzed for an indicator of fecal contamination that may be a significant cause of swimmer illness.

Each year CT DPH assembles the results from laboratory analysis of more than one thousand marine samples. We also collect beach closure/advisory histories and summary public notification statistics from the shoreline health departments and the Connecticut Department of Energy and Environmental Protection (for the state park beaches). We organize, format and forward this information to the US EPA. In addition, we provide beach data upon request to a broad spectrum of interested groups that include local health departments, the Natural Resources Defense Council, the Long Island Sound Study, SurfRider Foundation and the Interstate Environmental Commission.

We currently have beach data for nine (9) years - going on ten (10) by the end of summer 2012. It's clear that shoreline health departments understand their beaches and they are current with beach monitoring best practices. For instance, national beach data summaries show that storm water outfall is a major source of recreational water contamination. Connecticut shoreline health departments protect public health by closing their beaches preemptively when it rains heavily. Local health departments use a variety of ways to notify the public when a beach is closed, under advisory and later re-opened. These include signs posted directly at a beach, telephone hotlines and the Internet. The Connecticut Department of Energy and Environmental Protection posts state park beach status on the Web Monday through Friday.

New England is no stranger to shoreline protection. Consider lighthouses and those familiar navigation aids: charts, buoys, channel markers, and marine weather forecasts. Coordinated beach monitoring parallels this effort and strengthens the reach of public health to include beach goers.

While it wouldn't be Connecticut without Long Island Sound, it sure wouldn't be summer without Connecticut's shoreline health departments and the beaches they monitor.

HIGHLIGHTS OF CONNECTICUT'S 2011 BEACH GRANT ANNUAL REPORT

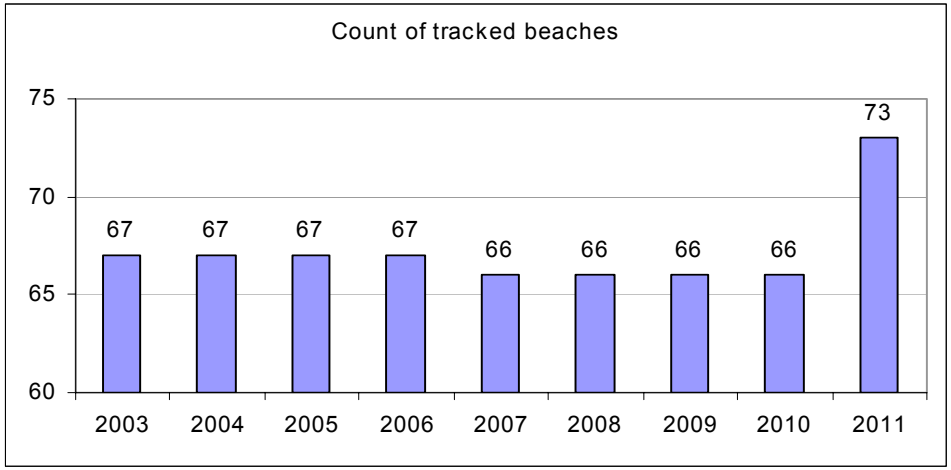
- The 2011 Beach Grant Annual Report presents beach data for 2003 through 2011 inclusive.
- Summary beach data charts for 2003-2011 are found on the next four pages.
- The INTRODUCTION section includes reference to Connecticut's published framework for managing Unsafe Incidents At The Beach. (p. 10)
- A short overview of proposed federal beach legislation. (p. 22)
- Connecticut has developed a functional proof-of-concept Intranet application for tracking and presenting beach data. (p. 23)
- Beach management software includes utilities to: find beach length using waypoints and Great Circle Distance (p.40); generate KML files for locating beaches and displaying beach data with Google Earth (p. 42); automate email with custom report attachments (p. 46); run the Receiver Operator Characteristic/Area Under Curve (ROC/AUC) method for predictive modeling (p. 47), and print bar coded waterproof labels for recreational water quality sample bottles (p. 49).
- The CONNECTICUT SHORELINE AT-A-GLANCE section has shoreline statistics. (p. 51)
- The Beach Tier list has been updated for 2011. (p. 63)
- The PUBLIC NOTIFICATION section has been updated for 2011. (starting on p. 75)
- The Public Beaches web page has been updated and is included. (p. 79)
- Summary recreational water quality monitoring data for 2011 are included (as well as the monitoring data for 2003 through 2010). (starting on p. 85)

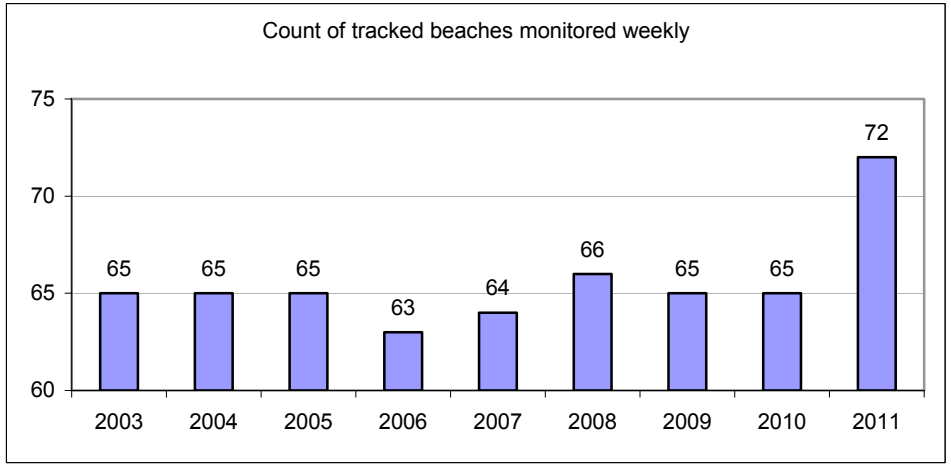
  Monitoring data generated for the *Quality Assurance Project Plan* are included for 2011. (starting on p. 88)

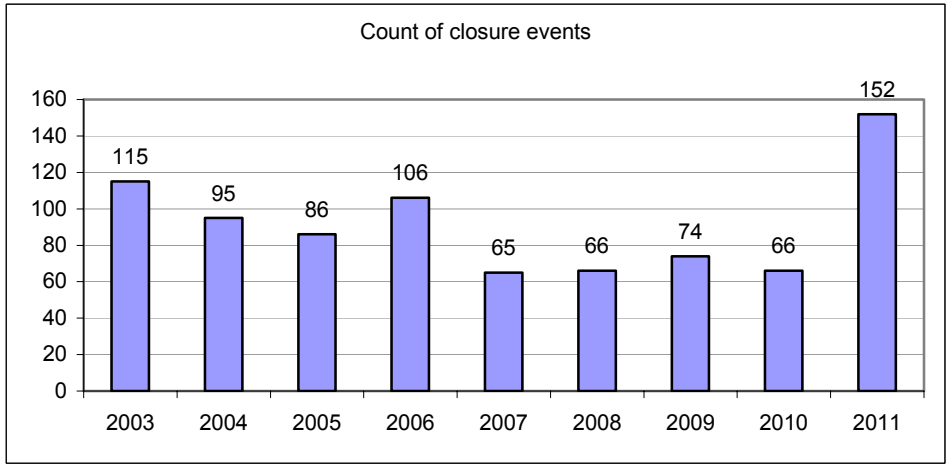
  Monitoring data for 2011 are plotted on a three axis chart for the Connecticut shoreline. (p. 106)

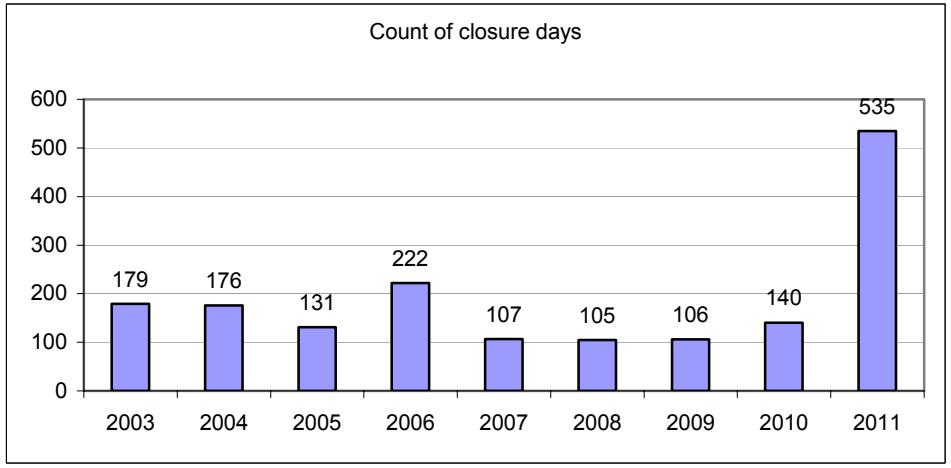
  Single sample exceedance data for 2003-2011 are plotted on a three axis chart for the Connecticut shoreline. (p. 109)
- The ROLLING GEOMETRIC MEAN section includes 2011 data. (starting on p. 110)
- Detected beach exceedance days are listed for 2011. (p. 117)
- Beach closure and advisory event data for 2011 are included (as well as closure and advisory event data for 2003 through 2010). (starting on p. 121)
- A three axis chart plots the relative geographic distribution of all closure events for 2003-2011 along the Connecticut shoreline. (p. 122)
- Summary beach closure and advisory day and event counts are grouped by EPA Reason and Source for 2003-2010. (starting on p. 153)
- Known potential sources of pollution are reported for 2011 with the 2007 through 2011 data mapped as well. (starting on p. 161)
- Two case studies report the public health response to heavy rainfall and a late summer hurricane (p. 182)
- The Connecticut Beach Score Card has been updated with 2011 beach data. (p. 181)
- Connecticut's US EPA formatted beach data for 2006 through 2010 are included in Appendices A through E.

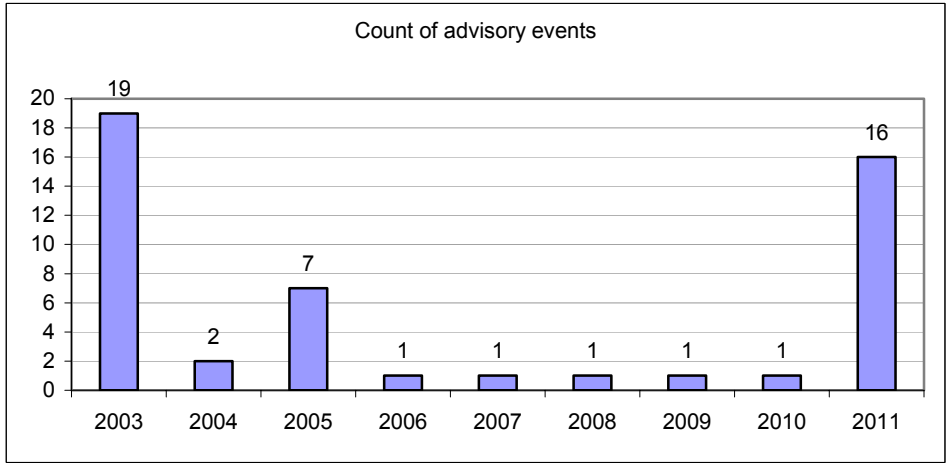
2003-2011 CONNECTICUT SUMMARY BEACH DATA CHARTS FOR THE US EPA BEACH GRANT

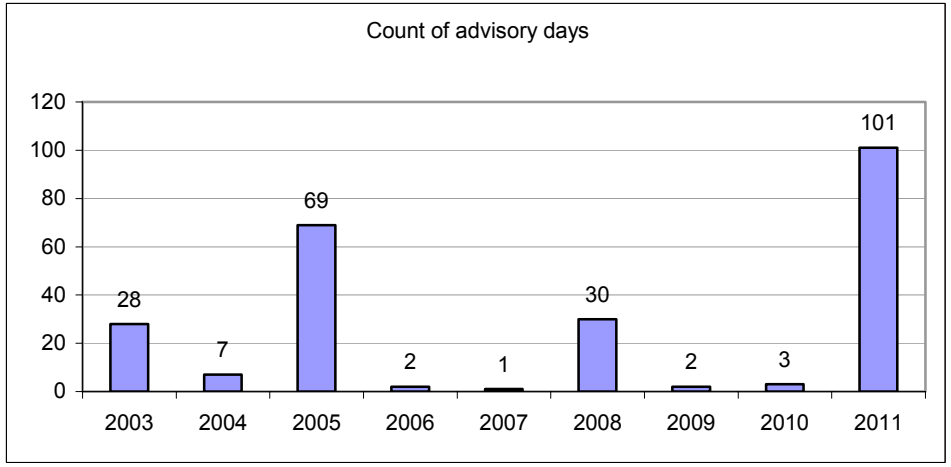












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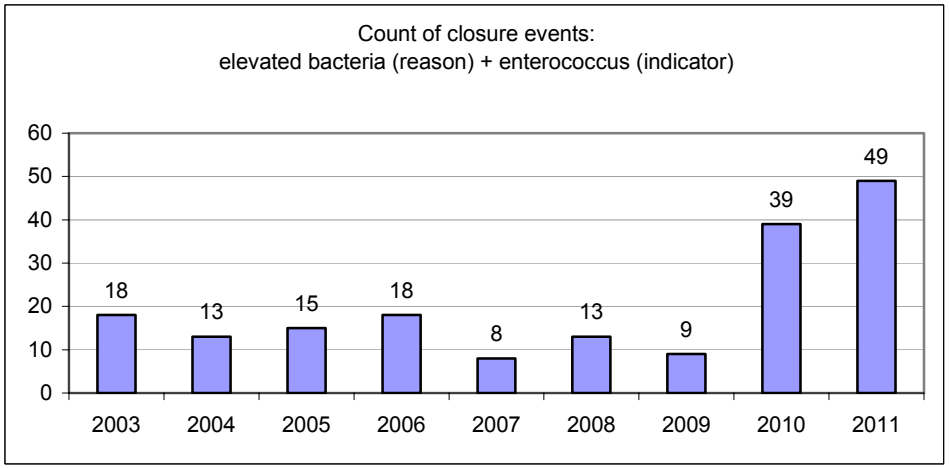

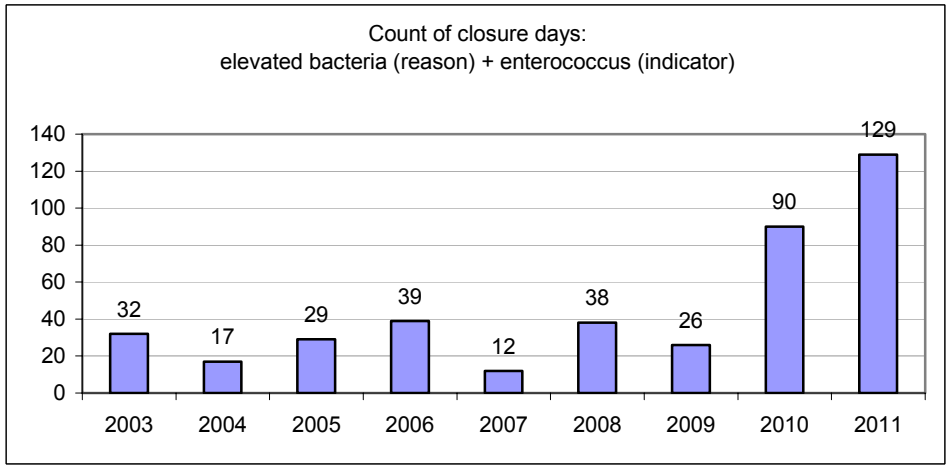

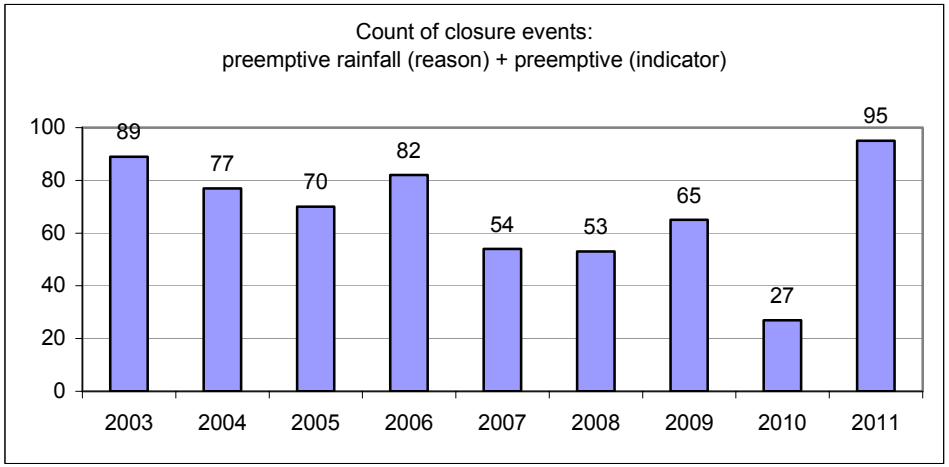

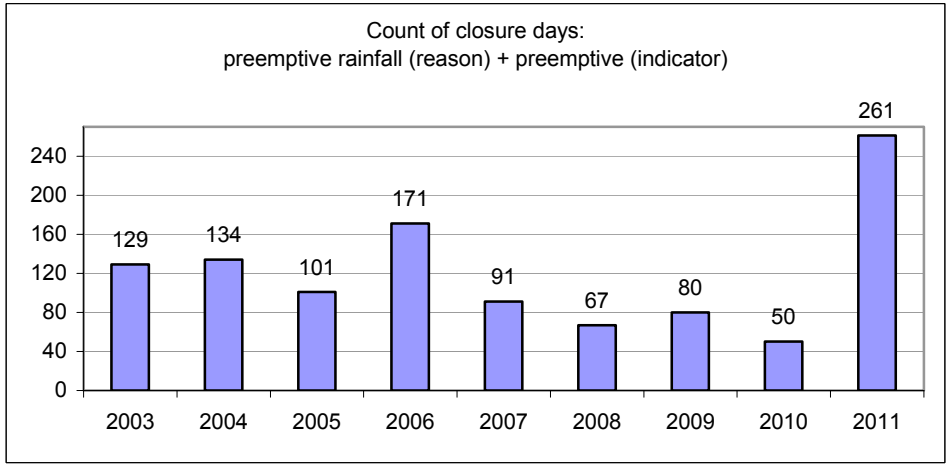

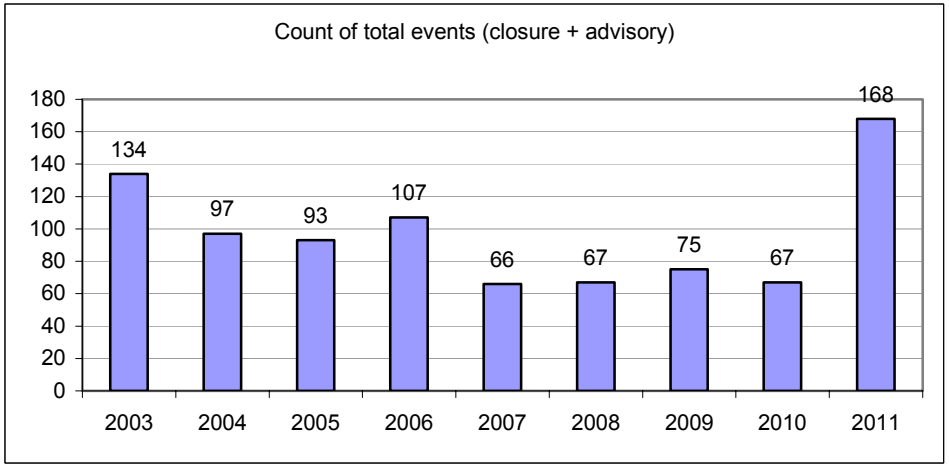

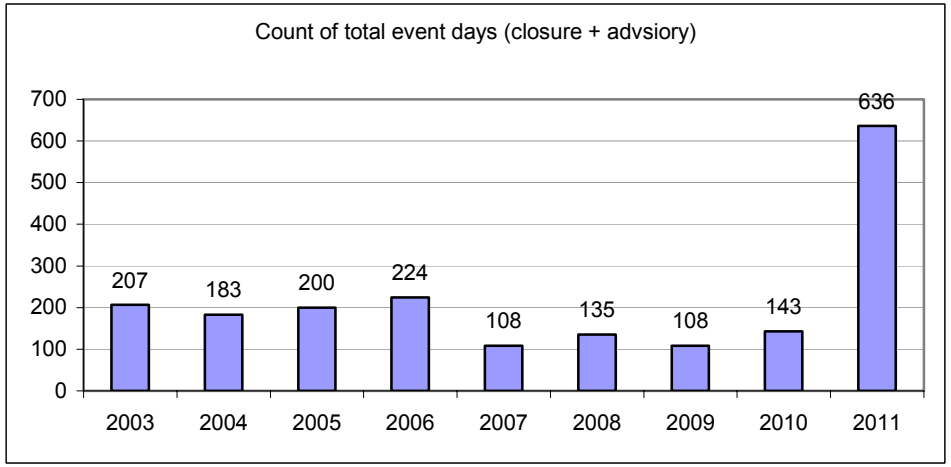

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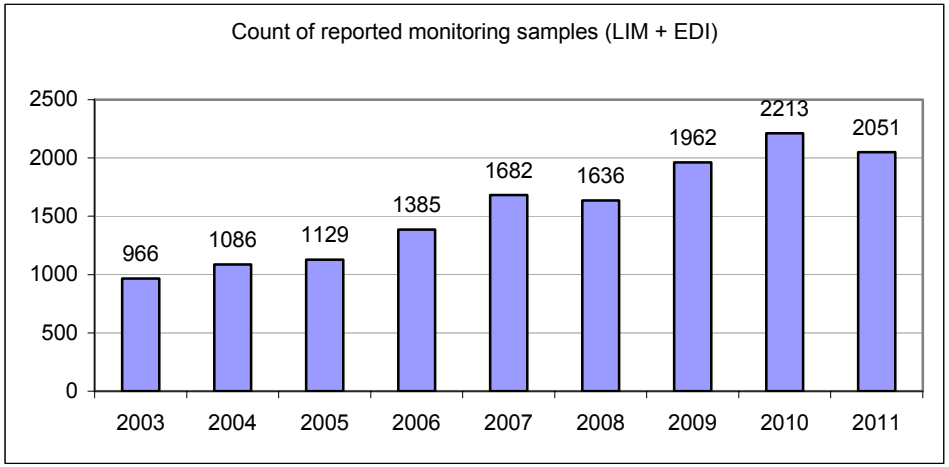

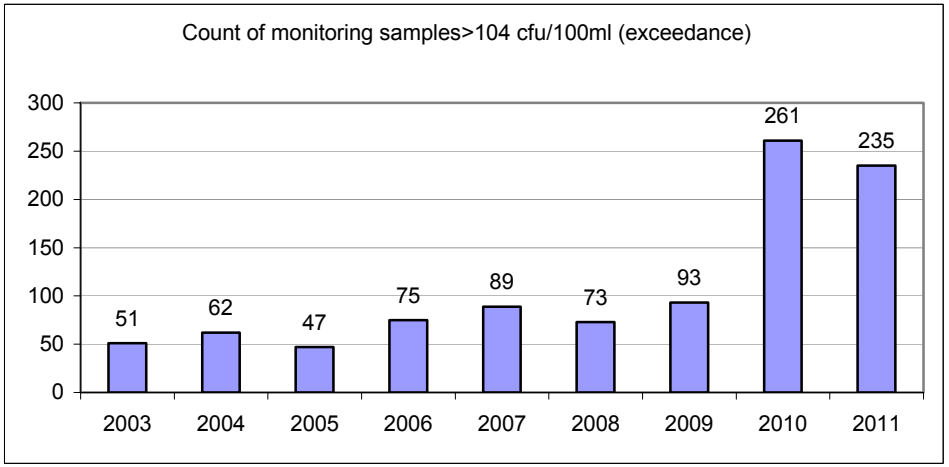

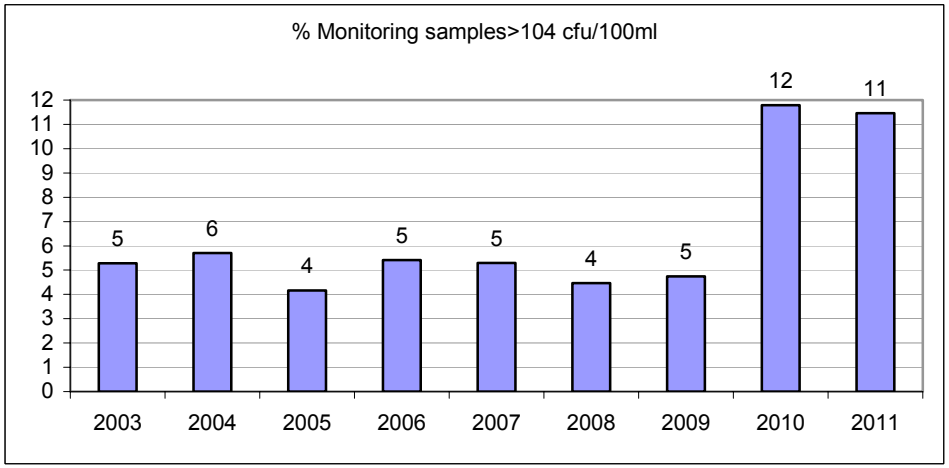

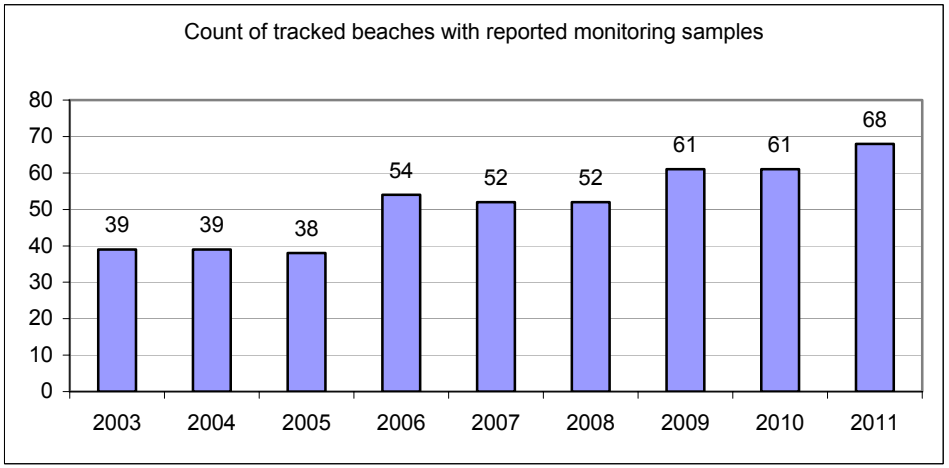

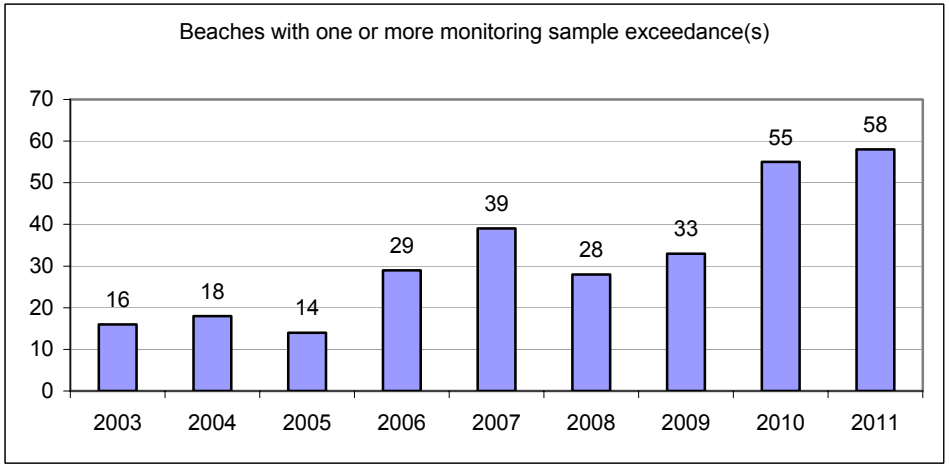

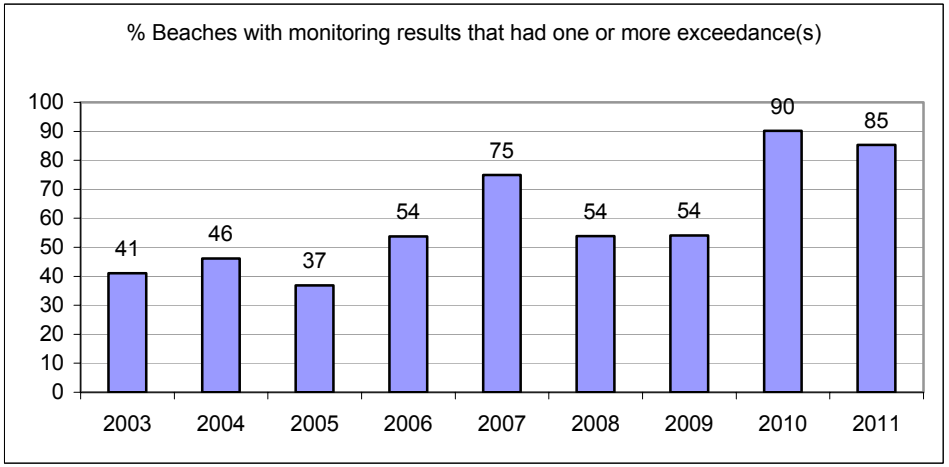

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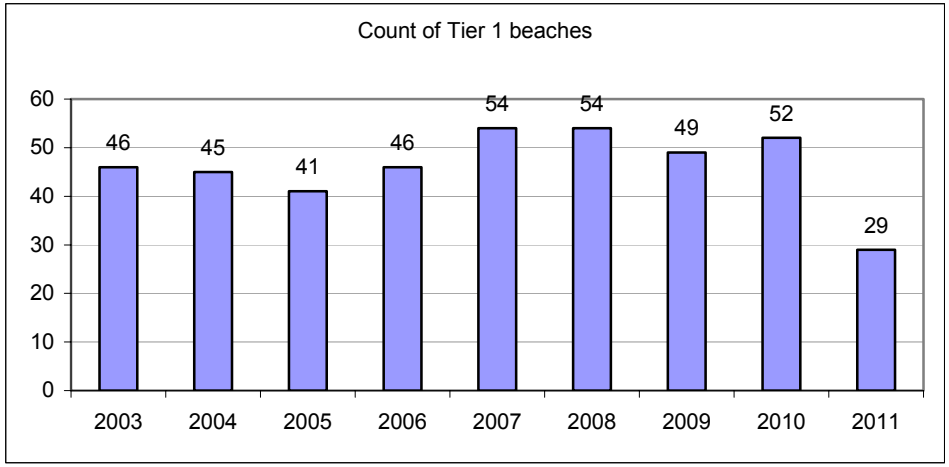

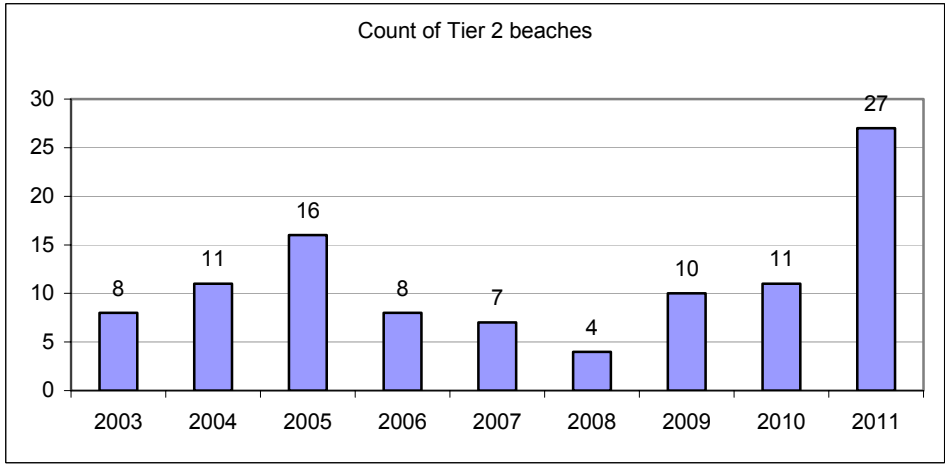

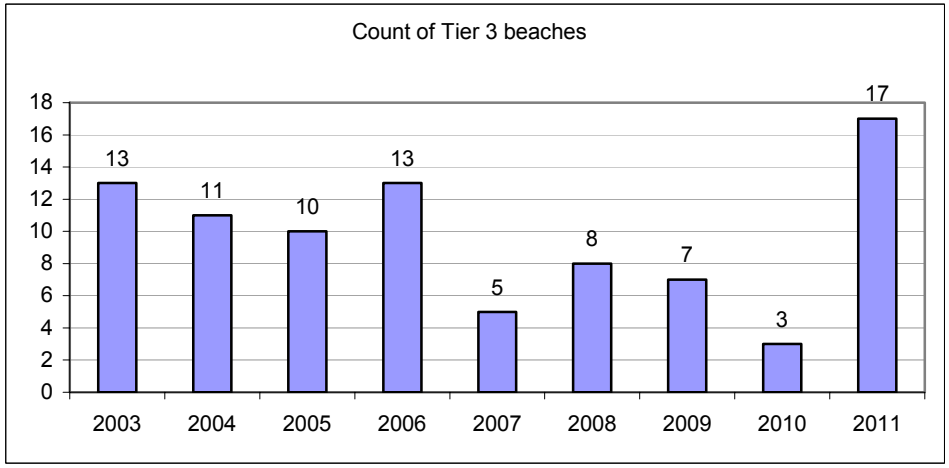

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APPENDICES

The Appendices section contains US EPA formatted beach data for Connecticut's 2006 through 2010 bathing seasons that was provided for review by US EPA in support of its ongoing national beach data quality assurance effort.

You may have received the edition of Connecticut's 2011 Annual Report for the US EPA Beach Grant that was provided without the Appendices section. If you need the Appendices section, call or email the author for a copy of it.

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1.0 INTRODUCTION AND BACKGROUND

Connecticut has a distributed beach monitoring effort (the Beach Program) that operates under the *State of Connecticut Guidelines for Monitoring Bathing Water and Closure Protocol* (*Guidelines*) and the *Quality Assurance Project Plan For the Beach Monitoring and Notification Program For Connecticut Coastal Beaches* (*Quality Assurance Project Plan* or *QAPP*). Both the *Guidelines* and the *QAPP* reflect Connecticut's adoption of US EPA recreational water quality criteria. The *Guidelines* were first published in May 1989 by the Public Health Workgroup convened in late 1988 in response to public concern and a rash of beach closures during the summer of 1988, mainly on the western Long Island Sound shoreline. The workgroup consisted of public health professionals convened by the Connecticut Department of Public Health (DPH) and the Connecticut Department of Energy and Environmental Protection (DEEP). The *Guidelines* have been revised three (3) times, most recently in April of 2003 and updated in December 2008. They provide public health officials in Connecticut with beach monitoring and closure protocols that are based on United States Environmental Protection Agency (US EPA) water quality standards.

The *QAPP* details the policies and procedures for the operation of coastal beach monitoring and DEEP state park freshwater beach monitoring. It was revised in 2007, approved in late 2009, and with minor revisions it was renewed in 2011 by US EPA for five (5) years.

Supplementing the *Guidelines* is a framework document called *Unsafe Incidents At The Beach* (first issued September 2009) that local health departments can use to plan for managing beach hazards. This is a resource document for local health departments that includes a list of potentially unsafe incidents - including major coastal storms and fecal/vomit accidents, contact lists, recommendations and additional written resource documentation collected over the last seven (7) years of beach monitoring in Connecticut.

On October 10, 2000 the "Beaches Environmental Assessment and Coastal Health Act" (i.e. the Beach Act) was signed into law as an extension of the US EPA Clean Water Act. The Beach Act through the US EPA Beach Grant is intended to promote: comprehensive public beach monitoring; public notification of beach closures and advisories; and improved analytic assessment tools to better protect public health at coastal bathing beaches. In Connecticut the DPH is responsible for implementing the Beach Grant. This includes promoting the *Guidelines* mentioned above and meeting the US EPA Beach Grant data reporting requirements.

With the US EPA Beach Grant, the DPH and its State Laboratory have become more involved in marine beach monitoring. The agency works closely with 24 municipalities along the Long Island Sound shoreline and their 19 local health departments and health districts plus the DEEP to support the consistent use of statewide beach monitoring *Guidelines* and beach closure protocol. DPH hosts spring and fall meetings for public health officials to: promote standardized beach monitoring practices; provide updates; and review marine beach tracking data for the state.

Using custom software the DPH receives, manages, maintains and uses marine beach data supplied to it by the State Laboratory, local health departments and 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; ways the public is notified of beach closures and advisories; and known potential sources of beach area pollution. The DPH custom software is enabled for both incoming and outgoing Electronic Data Interchange (EDI) and includes utilities to transform, cross check and validate beach data.

This annual report describes the scope and reach of the Connecticut distributed beach monitoring effort and continues with an introduction of the key participants and their assorted responsibilities. The report reviews how we monitor beaches and manage beach data. It presents much of the data that we have collected, use to implement beach monitoring and meet our reporting responsibilities to US EPA.

Starting in 2006, EPA required Beach Grant states to identify known sources of potential pollution at their beaches. This annual report includes these Connecticut data for 2006 through 2011 with the acknowledgement that human fecal contamination - currently, the main focus of beach monitoring - is not the only cause of swimmer illness nor the only concern of beach managers.

The assembled beach data presented here are valued and requested by: members of Congress, other state agencies, commissions, environmental and study groups, consultants, graduate students, news media outlets, businesses and individuals. The report concludes with a summary discussion of the beach data, a beach management success story, two case studies and Appendices with US EPA formatted beach data for Connecticut's 2006 through 2010 shoreline swimming seasons (found in Appendices A through E at the end of the report).

2.0 PROGRAM ACTIVITIES

There are several kinds of program activities spread among the DPH, DEEP and the 24 shoreline municipalities with their 19 local health departments and districts. Some program activities were in place before the US EPA Beach Act and the Beach Grant, while other activities are a direct result of accepting Beach Grant funding. Beach grant related program activities fall into two (2) broad categories: those specified in the Beach Grant work plan for Connecticut, and those that are inspired by the work plan or by interest in beaches generated by the Beach Act.

SCOPE OF THE BEACH MONITORING AND NOTIFICATION PROGRAM

Since the late 1980's, beach monitoring responsibilities have been shared by DPH, Local Health Departments and DEEP, with DEEP collecting indicator bacteria samples at state owned coastal beaches all of which are managed as part of the State Parks system.

DPH responsibilities include:

- adopting the US EPA Enterococcus and E. coli criteria for designated bathing areas (May 2002) under the *Guidelines*;
- being the lead state agency for revisions to the *Guidelines* and to the *Quality Assurance Project Plan* (*QAPP*) ;
- setting policy before regulatory action is required or revising as needed the DPH Public Health Code criteria for public bathing areas;
- overseeing monitoring of beaches performed by local public health officials with whom DEEP shares the results of its beach monitoring;
- providing laboratory courier pickup service and laboratory analytic service for municipal beach monitoring samples collected by local health departments; and providing laboratory analytic service for all DEEP beach samples;
- convening the coastal beach monitoring meetings for public health officials in the spring and fall;
- updating as needed the laboratory related quality assurance documents;
- interpreting indicator bacteria results for state beaches and when requested, assisting local health directors with such interpretations;
- communicating with US EPA regarding programmatic issues;
- maintaining a complete list of Global Positioning System (GPS) identified municipal and state park regulated marine bathing areas and providing this list annually to US EPA;
- maintaining a complete list of monitoring site locations (sampling stations) at municipal and state park regulated marine bathing areas identified using ArcView Geographic Information System (GIS) software with field work and providing this list annually to US EPA;
- collecting, validating, maintaining and transmitting marine beach monitoring data from the state lab and other laboratories to the US EPA WQX/STORET national archive database each year;
- collecting, validating, maintaining and transmitting beach notification and pollution source data from local health departments and DEEP to the US EPA CDX/PRAWN archive database;
- maintaining and updating a DPH Recreation Program Web site that provides: a list of municipal and state park regulated marine bathing areas, a list of regulated marine bathing areas with tiered monitoring status, access to closure and advisory information, plus additional information that includes beach monitoring and closure policy *Guidelines* for the state; and
- DPH program staff will meet with EPA and other Federal or State agencies to discuss various programmatic actions as necessary.

Local Health Department responsibilities include:

- collecting water samples at regulated marine bathing areas;
- performing beach closing, advisory and reopening actions;
- preparing and issuing beach advisory, closure and reopening notices via beach postings and news media;
- being first line responders for beach contamination issues;
- arranging for monitoring sample pickup at designated courier locations;
- working cooperatively with DEEP and DPH on contamination issues;
- completing the annual US EPA Beach Survey;
- attending the coastal beach monitoring meetings for public health officials; and
- identifying sources of contamination and/or pollution that affect beaches.

DEEP responsibilities include:

- performing monitoring at four (4) coastal state beaches (and 17 inland beaches);
- transmitting annual state beach monitoring information directly to US EPA ;
- adopting and amending standards of water quality including indicator bacteria criteria consistent with the federal Clean Water Act as required by Section 22a-426 of the Connecticut General Statutes;
- maintaining a DEEP beach "hotline" and up to date DEEP web site information concerning the closure status of any DEEP beach;
- completing the annual US EPA Beach Survey; and
- being the lead state agency for state park beach closure related press releases.

DPH beach monitoring activities occur throughout the year, even though the bathing season in Connecticut runs from Memorial Day through Labor Day. Some of these activities are independent of the Beach Grant work plan.

Connecticut Department of Public Health Yearly Beach Monitoring Activities	
Activity	**When**
Provide analytic/technical services in support of beach monitoring to: shoreline local health departments, the media, the public and others with questions about beaches	Ongoing. Emphasis during the summer months on answering questions from the public and local health departments. Emphasis during the fall/winter on answering questions about beach monitoring data.
Education and outreach: present the DPH Beach Grant implementation by invitation from interested third parties	Ongoing
Maintain and update beach contact, beach location and sample station location data as required	Ongoing
Upgrade and enhance custom software used to maintain and process beach data	Ongoing and as required by changes to US EPA beach data specification
Provide Beach data upon request to other state agencies, non-governmental organizations, councils, study groups and individuals	Ongoing with an emphasis on winter and spring
Update US EPA Region 1 on Connecticut implementation of the Beach Grant	Ongoing
Attend local, regional and national beach related conferences and meetings	Ongoing and as required
Provide sanitary survey service for selected beaches	As required and as funding is available
Maintain DPH Recreation Program Web page	As required and to update Beach Tier list, etc.
Update the US EPA *Quality Assurance Project Plan* (*QAPP*) for the Beach Grant	As required
Plan the spring shoreline meeting for public health officials	April
Host the spring shoreline meeting for public health officials: training, education and outreach	May
Provide technical support to local health departments and DEEP for beach closings and re-opening	June - September
Maintain telephone support for incoming calls and emails with questions about Connecticut beaches	Ongoing with emphasis during May - September
Plan the fall shoreline meeting for public health officials	September
Receive and process monitoring data from DPH State Laboratory. Includes *QAPP* monitoring data.	October
Receive and process monitoring data from local health departments that do not use the DPH State Laboratory	October
Host the fall shoreline meeting for public health officials: review, education and outreach	October
Prepare and mail US EPA Beach Surveys	October
Receive and data enter US EPA Beach Surveys	November
Process, package and forward beach notification and monitoring data to US EPA	December - January
Participate in US EPA data conference calls	Monthly
Participate in US EPA Region 1 meetings and conference calls	As scheduled
Validate and correct (as required) beach data received by US EPA	January - February
Produce the Beach Grant Annual Report for Connecticut	Decmber - January

2.1 CONNECTICUT BEACH MONITORING AND NOTIFICATION PROJECT WORK PLAN TO IMPLEMENT THE US EPA BEACH GRANT

The US EPA Beach Grant is a source of funding to support Connecticut's distributed beach monitoring effort. While the Beach Grant does not support the entire effort, that effort is enhanced by this grant. The Beach Grant includes specific goals for both US EPA and recipient states. The goals for Connecticut are implemented by following a carefully developed work plan. The work plan first addresses twelve (12) specific identified activities and then details their costs.

2.1.1 DEEP Beach Monitoring and Related Expenses

The DEEP will perform weekly or more frequent beach monitoring at 4 coastal state beaches. The DEEP also monitors 17 inland beaches whose activities are not funded by the Beach Grant. Beach sampling will begin the week before Memorial Day and ends prior to Labor Day. This activity proceeds according to the *Quality Assurance Project Plan* (*QAPP*).

2.1.2 Microbiology Laboratory and Related Expenses

As discussed in the background narrative, the DPH provides indicator bacteria analysis services for beach samples at no cost to DEEP and local health agencies. This service will continue as will the courier service. The courier service has regional drop off locations where local officials may transfer beach samples to a courier for delivery of samples to the DPH microbiology laboratory in Hartford. The courier service operated during the 2011 swimming season. Benefits of the courier service include:

- lower municipal expenditures (personnel time, laboratory and travel expenses), possibly enabling additional beach monitoring or sanitary surveys;
- greater quality control assurances as samples are analyzed at a single laboratory;
- data sharing and communication improvements;
- providing a consistent dependable sample collection process; and
- efficient/effective use of federal money.

2.1.3 Methods and Quality Control Requirements

Sampling design and methods are described in the *Guidelines* (available upon request) and the *Quality Assurance Project Plan* (*QAPP*) approved by US EPA in 2009 (available upon request) and renewed in 2011 for five (5) years.

Local health departments that utilize the DPH courier system or otherwise participate in the Beach Grant program follow the approved *QAPP* (see p. 13 for LHD responsibilities). The established bacterial indicator for designated marine bathing water in Connecticut is *Enterococcus*. Samples should not exceed the single sample criterion of 104 CFU (Colony Forming Units), 104 MPN (Most Probable Number) per 100 ml or a geometric mean of 35 CFU or MPN per 100 ml based on 5 or more samples collected within a 30-day period. Beginning with the 2002 bathing season, *Escherichia coli* (E. coli) became the bacteria indicator for designated bathing area in freshwaters. *Escherichia coli* samples should not exceed a criterion of

235 CFU or MPN per 100 ml for a single sample or a geometric mean of 126 CFU or MPN per 100 ml based on 5 or more samples collected within a 30-day period (US EPA, 1986).

All analytical quality control is the responsibility of the DPH Microbiology Laboratory. The DPH Microbiology Laboratory is audited every three (3) years by the US EPA for drinking water and the US FDA for shellfish seawater.

2.1.4 Coastal Recreational Waters List Maintenance

Update and provide to US EPA a list of regulated marine bathing areas and monitoring site locations where data are collected as required by the work plan and add these regulated marine bathing areas to the risk based tiered monitoring classification list.

DPH – Permanent staff supported by the Beach Grant will complete this task.

2.1.5 Local Beach Monitoring and Notification

Local public beaches are monitored by municipal health department officials or regional health district personnel. The monitoring and closure/advisory practices at such coastal beaches are the responsibility of the local health authorities under the guidance of the DPH. Local health agencies are encouraged to follow the guidance described in the *Guidelines*.

DPH – Permanent staff supported by the Beach Grant will *support* this task along with the Beach Grant coordinator

2.1.6 Communicating Beach Location, Closure/Advisory, Notification, Potential Pollution Sources, and Monitoring Information

2.1.6.1 Location Information

The locations for sixty seven (67) regulated marine bathing areas were identified using GPS in 2003. Subsequently, the monitoring site locations for these bathing areas were identified using: a) maps provided to the DPH Recreation Program by shoreline towns plus DEEP, and b) ArcView GIS software. As beach location and monitoring site location information changes, the DPH Recreation Program updates its rosters and provides this information to US EPA annually. Currently we maintain location information for 73 regulated marine bathing areas.

DPH – Permanent staff supported by the Beach Grant will complete this task.

2.1.6.2 Closure/Advisory, Notification and Known Potential Sources of Pollution Information

The *Guidelines* provide a Bathing Area Closure Notification form to communicate beach notification information to DPH. The 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 DEEP. The annual US EPA Beach Survey was mailed following the 2011 bathing season.

With the return of all the surveys at the conclusion of the marine bathing season, data contained in the surveys are validated and stored electronically in an Access database developed and maintained by the DPH Recreation Program. These data are then parsed, translated, formatted

and moved to a custom Access database application provided by US EPA that converts the data to an eXtensible Markup Language (XML) formatted text file. DPH forwards the XML text file to US EPA for inclusion in its PRAWN national archive database. PRAWN stands for the PRogram tracking, beach Advisories, Water quality standards and Nutrients database.

DPH – Permanent staff supported by the Beach Grant will complete this task.

2.1.6.3 Monitoring Results Information

Monitoring results are linked to beach and sampling station locations. Therefore, DPH will maintain and update its list of regulated marine bathing areas and their sampling stations as existing sites change or new sites are added. This information will be submitted to US EPA .

The Recreation Program collects monitoring data from the Laboratory Information Management System (LIMS) operated by DPH State Laboratory and from other laboratories. The monitoring data of interest come from those coastal towns that regulated marine bathing areas. These monitoring data are validated, stored electronically in a local Access database developed and maintained by the DPH Recreation Program. The data are subsequently reformatted, translated and parsed for upload to a local copy of an EPA supplied custom Access database that produces an eXtensible Markup Language (XML) text file for upload to the EPA Water Quality Exchange (WQX/STORET) database.

Monitoring data for the DEEP state park coastal bathing areas are provided to EPA directly by DEEP .

DPH – Permanent staff supported by the Beach Grant will complete this task.

2.1.7 Measures that Inform the Public of Potential Risks

Each year prior to the opening of Connecticut's beach season, the DEEP and 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 DPH provides the risk information on the DPH Recreation Program Web site (www.ct.gov/dph/publicbeaches). The site contains advice to swimmers, a listing of all municipal and state park regulated marine bathing areas and their tiered classification. It contains links to local health agencies and DEEP for the most up-to-date information about beach status. The site also contains links to beach related US EPA and CDC Web sites for information about risks and Recreation Water Illnesses.

Improving the communication of local beach status is an issue of continuing discussion at the semi-annual shoreline meetings for public health officials. DPH answers or redirects beach related questions when they are received by telephone, email or other communication.

Communicating the status of state park beaches is accomplished by updating both the DEEP web site, and the State Beach "hotline" (866) 287-2757 (option #7). For additional information from DEEP call (860) 424-4100. Updates are accomplished the same day (Monday through Friday) as results are received from the DPH laboratory. Additional efforts are made to communicate state beach closures and subsequent beach openings. For such instances, DEEP issues press releases (on the same day the laboratory results are received) that are readily used by area radio stations, local television news broadcast and newspapers. Finally, the DPH communicates the pending closure of any state beach with appropriate local officials who may be closely monitoring municipal beaches nearby.

DPH – Permanent staff supported by the Beach Grant will update the DPH Recreation Program web page with risk communication information.

2.1.8 Coastal Beach Monitoring Meetings with Public Health Officials

DPH hosts a spring and fall meeting for coastal Public Health Officials to review the current status of the Beach Grant in Connecticut. Speakers at the meeting have included representatives of US EPA Region 1, DPH State Laboratory, the Aquaculture Division of the Department of Agriculture (for shellfish), municipal government officials and DPH. The spring meeting reviews protocols for collecting beach closure and advisory information during the bathing season plus the guidelines for taking marine water samples (including Quality Assurance samples) and transporting them to the State Laboratory using the courier service that is funded by the Beach Grant. The fall meeting reviews the preceding bathing season, US EPA Beach Grant updates, and completing the annual US EPA Beach Survey.

DPH – Permanent staff supported by the Beach Grant will arrange to complete this task.

2.1.9 Providing Beach Grant Generated Data upon Request

At various times throughout the year and most typically at the end of the bathing season the DPH Recreation Program receives requests from assorted parties for subsets or all of the notification and monitoring data generated and collected through the activities of the Beach Grant. Requests for data originate with the US EPA, non governmental organizations (NGO) interested in environmental stewardship, graduate students, and other state agencies (e.g. DEEP, Department of Agriculture). With consultation to refine and focus these requests, the DPH Recreation Program assembles data sets and makes them available.

DPH – Permanent staff supported by the Beach Grant will complete this task.

2.1.10 US EPA Annual Report

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 DPH. The annual report includes: program activities, description of beach data collection and management, program scope and inventory, performance criteria, deliverables, a description of Connecticut's marine beach monitoring program, status of the two (2) Flagship beaches (Ocean Beach Park in New London and Rocky Neck State Park in East Lyme), and beach data summaries.

DPH – Permanent staff supported by the Beach Grant will complete this task.

2.1.11 Education, Outreach, Extramural meetings and Conferences

From time to time, DPH is invited to present, explain or review Connecticut's distributed beach monitoring effort. Presentation lengths can range between 5 and 90 minutes. Presentations include the history of beach monitoring in Connecticut, current beach monitoring guidelines and implementation, the technology used to manage beach data, beach data summaries and

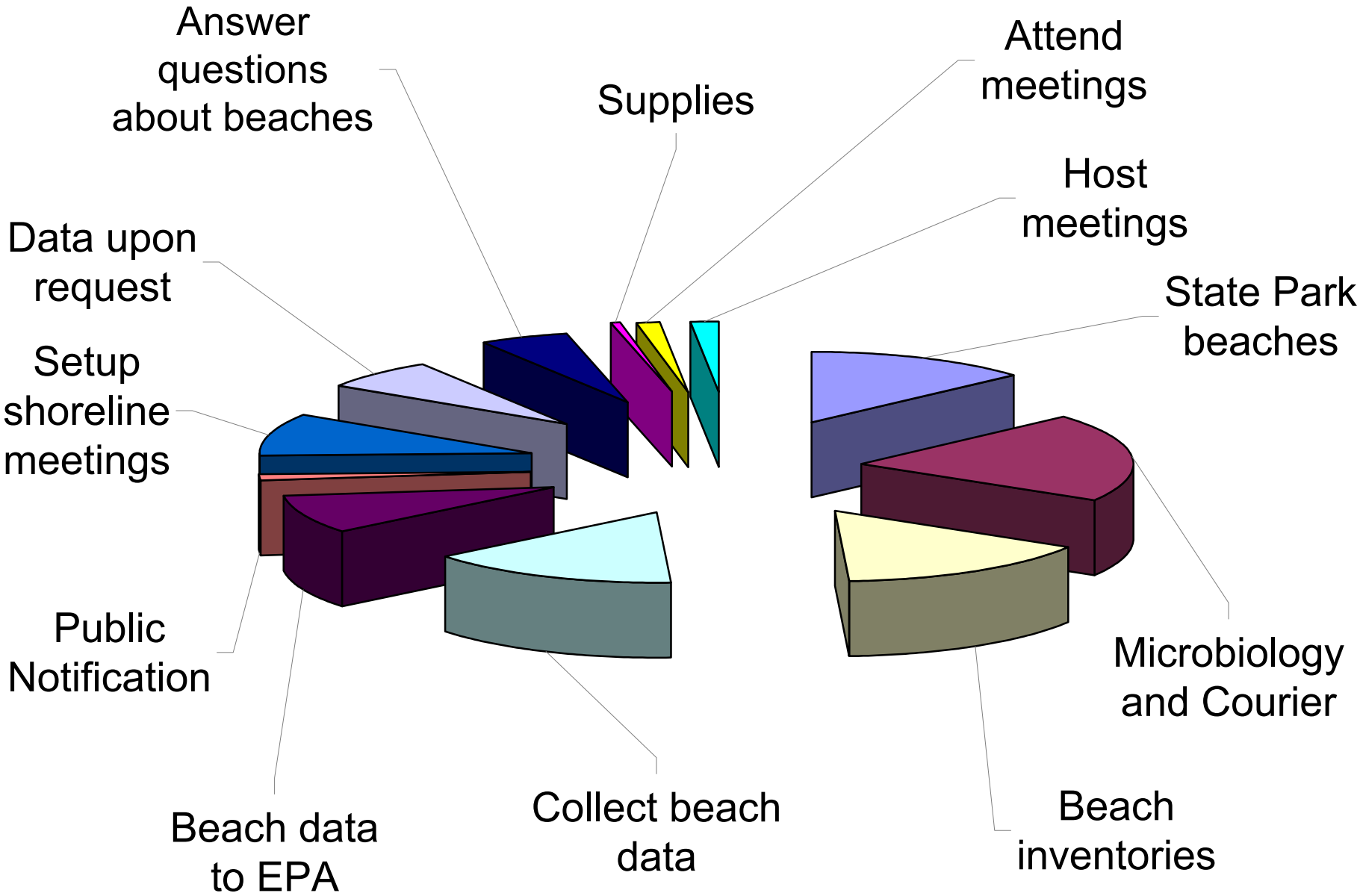
conclusions. DPH program staff will meet with EPA and other Federal or State agencies to discuss various programmatic actions as necessary. Connecticut's distributed beach monitoring effort is now presented in the annual training program for prospective Environmental Sanitarians at Southern Connecticut State University.

DPH – Permanent staff supported by the Beach Grant will complete this task.

2.1.12 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 shoreline meetings.

CONNECTICUT BEACH GRANT ACTIVITIES



2.2 BEACH GRANT PROGRAM COORDINATION

Although the Beach Grant is not a large grant it requires much the same degree of attention required by significantly larger public health or environmental tracking grants. Of the four (4) major responsibilities described on this page, the Beach Grant funds just the Beach Grant data coordinator.

Ray Jarema serves as overall Beach Grant coordinator and is responsible for: grant application preparation; work plan development and implementation; grant coordination with DEEP and the DPH State Laboratory; presenting at the two (2) meetings held for Public Health Officials; providing interpretive guidance to shoreline local health departments and DEEP for beach closures; and integrating Beach Grant related activities with public health issues in Connecticut.

Jon Dinneen serves as the Beach Grant data coordinator and 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 spring and fall shoreline meetings 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; and maintaining/updating the local custom database that DPH uses to hold and manage Beach Grant and related data. He reformatted and made minor revisions to the Beach Grant *Quality Assurance Project Plan* in 2011 prior to its renewal for five (5) years.

Stacey Kinney is the Supervising Microbiolgist who oversees the DPH Microbiology Laboratory where marine recreational water samples are tested for Enterococcus. Additionally, she hires seasonal staff for the courier sample pick up service and trains them to help existing staff with the heavy load of indicator bacteria testing conducted during the summer. Sample results data are provided by the Laboratory to DPH, local health departments and DEEP.

Jeff Curran served as the Program Quality Assurance Program Plan (QAPP) developer and was responsible for updating and maintaining the *Quality Assurance Project Plan For the Beach Monitoring and Notification Program For Connecticut Coastal Beaches*. He has over 25 years of environmental analytical experience including extensive experience in writing and reviewing quality assurance project plans for various types of environmental programs and projects.

2.3 THE FUTURE OF PROGRAM ACTIVITIES

The future of beach monitoring will be influenced by ongoing US EPA efforts mandated by a consent decree with the Natural Resources Defense Council (NRDC). This work aims to satisfy the legislative intent of the Beach Act 2000. In addition, over the last few years, there has been much interest in revising and updating the Beach Act 2000 with new legislation.

Required efforts by US EPA focus on developing new recreational water quality criteria and identifying rapid laboratory methods to either detect or infer the presence of pathogens in recreational waters that can cause waterborne illness. These efforts include studying the feasibility of deploying rapid detection methods and providing guidance for their appropriate use.

2.3.1 LEGISLATION

Both chambers of the 111th Congress considered but did not pass new beach legislation. Updated beach legislation was brought to committee during the 112th Congress. It remains clear that some members of this Congress are interested in: current US EPA efforts to complete its mandate as spelled out in the Beach Act 2000; and updating existing beach legislation.

This newly proposed beach legislation shares much with previously advanced beach legislation: 1) improve notification through a publicly searchable database that is updated within 24 hours when a beach is closed, placed under advisory or experiences unacceptable recreational water quality; 2) update recreational water quality monitoring criteria and speed up the development of more rapid molecular methods to detect pathogens that can cause swimmer illness; 3) spur states to meet the terms of the Beach Protection Act through tighter fiscal monitoring, annual review and sanctions for unspent funds; 4) provide adequate but unspecified funding for beach monitoring; 5) allow for pollution source tracking; and 6) possibly permit remediation efforts.

The proposed legislation is ambitious and recommends enough funding so that no parts of it could be viewed as an unfunded mandate. Proposed funding and final allocation are often not the same, so the implementation of any final bill signed into law would depend heavily on its final funding allocation. With reduced funding will come probable scale back of legislative provisions or implementation.

2.3.2 SURVEY OF MARINE BEACH REGULATORS

In the fall of 2008, the Recreation Program of DPH conducted an online survey of shoreline health departments and the Connecticut Department of Energy and Environmental Protection (for the state park marine beaches). Out of 20 potential respondents, 17 completed the survey. There was strong interest in continuing both the spring <u>and</u> fall shoreline meetings for public health officials. This bodes well for the future of beach monitoring in Connecticut because any new beach monitoring legislation signed into law (with full or even reduced funding) will require meeting time to explore its ramifications and lay the necessary groundwork.

Of more immediate concern to beach managers in Connecticut are: a) dealing with wildlife and waterfowl at our beaches; b) communicating all monitoring results from the State Laboratory more rapidly to shoreline health departments; c) increased funding for more sampling; d) better communication between and among shoreline health departments regarding beach monitoring related issues (e.g. area wide advisories); and e) standardize beach closure and advisory signage.

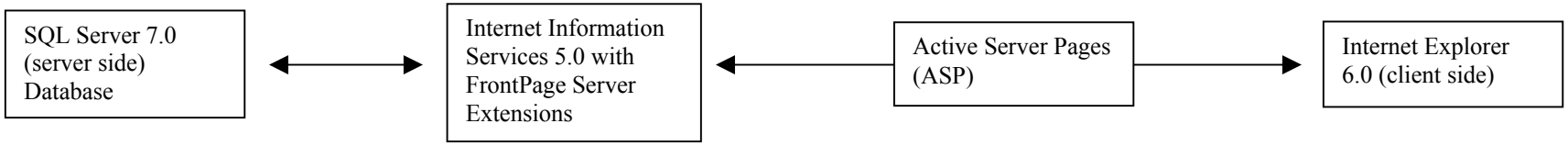
2.3.3 USING THE INTERNET FOR PUBLIC NOTIFICATION

A major part of current and particularly proposed future beach legislation concerns public notification of beach closures and advisories. There is much interest in using the Internet as one way and perhaps the most timely way to communicate beach closings, advisories and reopenings. Connecticut has developed a fully functional prototype *Intranet* application as a proof of concept for Web based public notification for regulated marine recreational bathing areas. *Intranet* applications run on local networked environments but cannot be accessed from outside the local network.

The application permits password protected login to an *Intranet* hosted web site to be used for updating a database containing beach closure, advisory and reopening data as well as single sample recreational water quality monitoring exceedances. Another facet of the application permits anyone with access to the *Intranet* to view current and historical beach status and monitoring exceedance data. This side of the application includes beach mapping (with a zoom feature) that is tied directly to beach data for review. This *Intranet* application appears just as it would if it could be viewed over the Internet.

Several interrelated components are required to enable this prototype. They are: 1) a back end database server to hold and serve data; 2) a Web page Server (in this case serving a local *Intranet*) that stands between the data server and the web pages; 3) the Web pages themselves; and 4) the client's Web browser - Internet Explorer 6.0 or higher. We are using Microsoft SQL Server 7.0 as the back end database server. We connect to it with an OLEDB connection string and use ADODB objects to pass SQL commands to the database and receive the returned recordsets from it. The Web page server is Microsoft's Internet Information Services Manager 5.0 (IIS5.0). We used FrontPage 2003 to design and build the core set of Active Server Pages (ASP) in this prototype. We modified much of code in these and added original code to them - both VBScript and JScript.

Here is another way to visualize how the components in this project hold together. Data are passed all along the line in a two (2) direction channel that connects server computers (shown on the left) with client end users (shown on the right). Often data coming from the client side (far right) influences what the Active Server Pages send back to the client side for display to the end user.



This prototype is fully described in another document.

Because this prototype is complex and would most likely be hosted on State of Connecticut computer servers, the prototype would have to be rendered by approved programmers (i.e. contractors) using current technology (FrontPage 2003 is out of date). This effort would require an adequate funding stream for development and later maintenance.

Google Earth can also be used to show both historic and near-current beach status. See page 42 for more information.

☞ US EPA has redesigned and opened its BEach Advisories And Online Notification (BEACON) web site at http://watersgeo.epa.gov/beacon2/ where anyone can now locate and view beach data plus build reports for one or more Beach Grant beaches.

2.3.4 NEW RECREATIONAL WATER QUALITY CRITERIA DEVELOPMENT

US EPA and those sponsored by the agency reported in March 2011 epidemiological studies conducted in different locations throughout the country and in Puerto Rico. These studies aimed to determine the strength of associations between one or more indicator organisms and swimmer illness. The agency released its draft updated recreational water quality criteria in December 2011 (docket number: EPA-HQ-OW-2011-0466). This release invited scientific comments through February 21, 2012. After a comment period, the agency will release the final recreational water quality criteria along with guidance. States and territories will have a period of time to refine these criteria for their own use, seek approval for adoption and, finally, adopt new recreational water quality criteria.

In Connecticut, The Department of Energy and Environmental Protection (DEEP) has responsibility to adopt and amend recreational water quality criteria for the state.

Included here for reference is the Federal Register notice of the Draft Recreational Water Quality Criteria.

[Federal Register Volume 76, Number 245 (Wednesday, December 21, 2011)]
[Notices]
[Pages 79176-79177]
From the Federal Register Online via the Government Printing Office [www.gpo.gov]
[FR Doc No: 2011-32651]

ENVIRONMENTAL PROTECTION AGENCY

[EPA-OW-2011-0466; FRL-9609-3]

Notice of Availability of Draft Recreational Water Quality
Criteria and Request for Scientific Views

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Pursuant to section 304(a) of the Clean Water Act (CWA), the Environmental Protection Agency (EPA) is announcing the availability of the draft document Recreational Water Quality Criteria (RWQC). The document contains the EPA's draft ambient water quality criteria

recommendations for protecting human health in ambient waters that are designated for primary contact recreation. CWA Section 304(c) water quality criteria recommendations are intended as guidance to States and authorized Tribes in developing water quality standards. The draft RWQC document describes the relevant scientific findings, explains how these findings were used to derive criteria, and lists the water quality methods associated with the criteria.

The draft RWQC differs from the current 1986 RWQC in the following ways: the EPA introduces a new term, Statistical Threshold Value (STV), as a clarification and replacement for the term single sample maximum (SSM); there are no longer recommendations for different criteria values for beaches used with more or less frequency; the EPA introduces a rapid analytical technique for the detection of enterococci in recreational water; the EPA provides information on tools for assessing and managing recreational waters, such as predictive modeling, and for developing site-specific criteria.

The CWA, as amended by the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000, requires the EPA to conduct studies associated with pathogens and human health under Section 104(v), and to publish new or revised criteria for pathogens and pathogen indicators based on those studies under Section 304(a)(9). The draft criteria announced today for scientific views are the draft new or revised criteria that EPA is required to publish under Section 304(a)(9) of the CWA, as amended by the BEACH Act.

DATES: Scientific views must be received on or before February 21, 2012. Comments postmarked after this date may not be considered.

ADDRESSES: Submit your scientific views, identified by Docket ID No. EPA-HQ-OW-2011-0466, and obtain the document (EPA-HQ-OW-2011-0466-0002) by one of the following methods:

www.regulations.gov: Follow the on-line instructions for submitting comments.

Email: OW-Docket@epa.gov.

Mail: U.S. Environmental Protection Agency; EPA Docket Center (EPA/DC) Water Docket, MC 28221T; 1200 Pennsylvania Avenue NW., Washington, DC 20460.

Hand Delivery: EPA Docket Center, 1301 Constitution Ave. NW., EPA West, Room 3334, Washington, DC. Such deliveries are only

accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-OW-2011-0466. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or email. The www.regulations.gov Web site is an ``anonymous access'' system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through www.regulations.gov your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Office of Water Docket/ EPA/DC, 1301 Constitution Ave. NW., EPA West, Room 3334, Washington, DC. This Docket Facility is open from 8:30 a.m. until 4:30 p.m., EST, Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Office of Water Docket is (202) 566-2426.

FOR FURTHER INFORMATION CONTACT: For questions concerning the science supporting this criteria, contact Sharon Nappier, Health and Ecological Criteria Division (4304T), nappier.sharon@epa.gov, U.S. EPA, 1200 Pennsylvania Ave. NW., Washington, DC 20460; (202) 566-0740. For questions concerning the use of EPA's criteria recommendations, contact Tracy Bone, Standards and Health Protection Division (4305T), bone.tracy@epa.gov, U.S. EPA, 1200 Pennsylvania Ave. NW., Washington, DC 20460; (202) 564-5257.
SUPPLEMENTARY INFORMATION:

I. What are Section 304(a) water quality criteria?

Section 304(a) water quality criteria are recommendations developed by EPA under authority of section 304(a) of the Clean Water Act based on the latest scientific information on the relationship that the effect of a constituent concentration has on particular aquatic species and/or human health.

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Section 304(a)(1) of the Clean Water Act requires the EPA to develop and publish and, from time to time, revise, criteria for water quality accurately reflecting the latest scientific knowledge. Water quality criteria developed under section 304(a) are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects. Section 304(a) criteria do not reflect consideration of economic impacts or the technological feasibility of meeting pollutant concentrations in ambient water.

Section 304(a) criteria provide guidance to States and authorized Tribes in adopting water quality standards that ultimately provide a basis for controlling discharges or releases of pollutants. The criteria also provide guidance to the EPA when promulgating federal regulations under section 303(c) when such action is necessary. Under the CWA and its implementing regulations, States and authorized Tribes are to adopt water quality criteria to protect designated uses (e.g., aquatic life, recreational use). The EPA's water quality criteria recommendations are not regulations. Thus, the EPA's recommended

criteria do not constitute legally binding requirements. States and authorized Tribes may adopt other scientifically defensible water quality criteria that differ from these recommendations. When adopting new or revised water quality standards, the States and authorized Tribes must adopt criteria that are scientifically defensible and protective of the designated uses of the bodies of water. States have the flexibility to do this by adopting criteria based on (1) EPA's recommended criteria, (2) EPA's criteria modified to reflect site-specific conditions, or (3) other scientifically defensible methods.

II. What are the recreational water quality criteria recommendations?

The EPA is today publishing the draft Recreational Water Quality Criteria (EPA-OW-2011-0466-0002) recommendations for protecting human health. The EPA evaluated the available data and determined that the designated use of primary contact recreation would be protected if the following criteria were adopted into water quality standards:

(a) Fresh Water Criteria

Magnitude: Culturable E. coli at a geometric mean (GM) of 126 colony forming units (cfu) per 100 milliliters (mL) and a statistical threshold value (STV) of 235 cfu per 100 mL measured using EPA Method 1603, or any other equivalent method that measures culturable E. coli; culturable enterococci at a GM of 33 cfu per 100 mL and an STV of 61 cfu per 100 mL measured using EPA Method 1600, or any other equivalent method that measures culturable enterococci; or both of the above criteria.

Duration: For calculating the GM and associated STV, EPA recommends a duration between 30 days and 90 days. The duration for calculating the GM and associated STV should not exceed 90 days. The duration is a component of a water quality criterion, and as such, would need to be explicitly included in the State's WQS. The recreational season may vary by location depending on the length of the beach season. Sampling of waterbodies should be representative of meteorological conditions (e.g., wet and dry weather) for the recreational season.

Frequency: EPA recommends a frequency of zero exceedances of the GM and <= 25 percent exceedance of the STV, during the recreation duration

specified. The frequency of exceedance is a component of a water quality criterion, and as such, would need to be explicitly included in State's water quality standard (WQS).

(b) Marine Criteria

Magnitude: Culturable enterococci at a GM of 35 cfu per 100 mL and an STV of 104 cfu per 100 mL measured using EPA Method 1600, or any other equivalent method that measures culturable enterococci.

Duration: For calculating the GM and associated STV, EPA recommends a duration between 30 days and 90 days. The duration for calculating the GM and associated STV should not exceed 90 days. The duration is a component of a water quality criterion, and as such, would need to be explicitly included in the State's WQS. The recreational season may vary by location depending on the length of the beach season. Sampling of waterbodies should be representative of meteorological conditions (e.g., wet and dry weather) for the recreational season.

Frequency: EPA recommends a frequency of zero exceedances of the GM and <= 25 percent exceedance of the STV, during the recreation duration specified. The frequency of exceedance is a component of a water quality criterion, and as such, would need to be explicitly included in State's WQS.

EPA has also developed a quantitative polymerase chain reaction (qPCR) method to detect and quantify enterococci more rapidly than the culture method. For the purposes of beach monitoring, alternative site-specific criteria could be adopted into State standards measured by EPA's Enterococcus qPCR method A based on a site-specific performance characterization. For States interested in adopting a value for enterococci using EPA's Enterococcus qPCR method A into their WQS, EPA recommends a GM criterion of 475 calibrator cell equivalent (CCE) per 100 mL and an STV criterion of 1,000 CCE per 100 mL in freshwaters and marine waters based on its epidemiological study data.

Dated: December 15, 2011.

Nancy K. Stoner,

Acting Assistant Administrator for Water.

[FR Doc. 2011-32651 Filed 12-20-11; 8:45 am]

BILLING CODE 6560-50-P

3.0 BEACH DATA MANAGEMENT AND DATA PROCESSING

While the quantity of Connecticut beach data collected and reported annually to the US EPA is by no means large, the complexity of the evolving US EPA data reporting requirements warrant custom software. US EPA not only requires selected data sets but also has specified how those data must be normalized, packaged and formatted prior to forwarding them to US EPA WQX/STORET and CDX/PRAWN national archives.

Connecticut opted to use a local copy of the US EPA STORET archive data solution (running with ORACLE 8i) to package its beach monitoring data and its sampling station location data for 2003 through 2007. In 2008 Connecticut switched to an EPA provided Access database that packages monitoring data in an eXtensible Markup Language (XML) text file that we submit to WQX through CDX (Central Data eXchange).

Beach closure, advisory, location, organization, potential pollution source and public notification data are packaged using a US EPA provided Access database that produces XML text file output. We send these data packaged in a XML text file to the US EPA CDX/PRAWN archive. While beach data reside in PRAWN, beach location data are sent to the EPA maintained Reach Address Database (RAD).

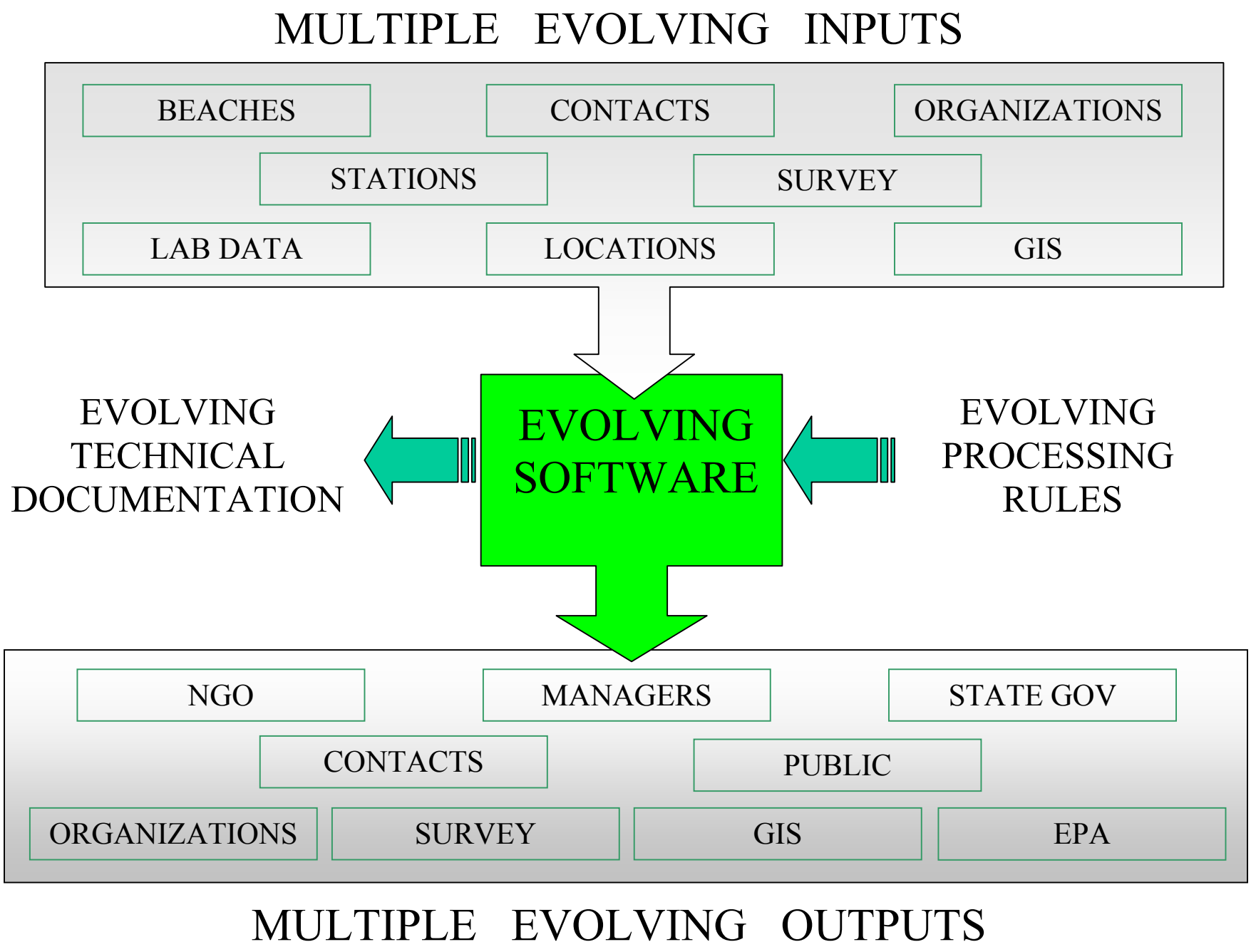
On their way from the field, the laboratory and the annual US EPA Beach Survey to their final diverse resting places with US EPA, the beach data are first stored at the state level where they are used to help implement the US EPA Beach Grant. For example, the annual US EPA Beach Survey is preprinted using beach data and comprehensive beach data reports are provided to the shoreline municipalities to help them audit their data submissions. The beach data are used to answer queries about Connecticut's regulated marine bathing areas that come from other state agencies (e.g. DEEP) and third party non-governmental organizations like: the SurfRider Foundation USA, the Natural Resources Defense Council (NRDC), the Long Island Sound Study (LISS), the Connecticut Council on Environmental Quality, the Interstate Environment Commission (IES) and news media outlets.

Connecticut developed and uses custom software to meet the annual Beach Grant and other data reporting goals. These require: organizing beach data into discrete data sets; pivoting the data (moving them from rows to columns), validating and cross checking them; and - for some data sets - creating new data on-the-fly. For instance beach closure and advisory data include reason, source and indicator collected from the annual US EPA Beach Survey. Later each closure and advisory event is tagged with US EPA specified coding that indicates the event's reason, source and indicator (e.g. CSO = Combined Sewer Overflow, and so on). Monitoring data also require specific processing to render them compatible with US EPA reporting requirements. For example, US EPA currently requires us to associate each monitoring result with identifiers for project, activity, and sampling station. Project and activity identifiers are not part of the laboratory data sets provided to us by the State Laboratory nor do we use these identifiers on a daily basis throughout the year, so we create and apply them to the monitoring results consistent with US EPA guidelines.

Because the rules for processing beach data are complex and used generally once a year, we have chosen to execute those rules in discrete but tightly integrated software utilities rather than use cut-and-paste or semi-automated spreadsheets to prepare beach data for US EPA. Software organized into discrete steps is far easier to maintain and update and it processes data very quickly.

These data processing rules require multiple steps often using data from diverse sources (tables) and would be difficult to execute by hand. For instance, keeping track of inactive contact persons, organizations and beach roles from year-to-year or pivoting column data to rows are good jobs for software - with careful programming. Intensive beach data validation and cross checking also falls to software.

The next page summarizes the evolving scope of the beach data collection, management and use.


MULTIPLE EVOLVING INPUTS
BEACHES
CONTACTS
ORGANIZATIONS
STATIONS
SURVEY
LAB DATA
LOCATIONS
GIS
EVOLVING TECHNICAL DOCUMENTATION
EVOLVING SOFTWARE
EVOLVING PROCESSING RULES
NGO
MANAGERS
STATE GOV
CONTACTS
PUBLIC
ORGANIZATIONS
SURVEY
GIS
EPA
MULTIPLE EVOLVING OUTPUTS

3.1 DATABASE FEATURES

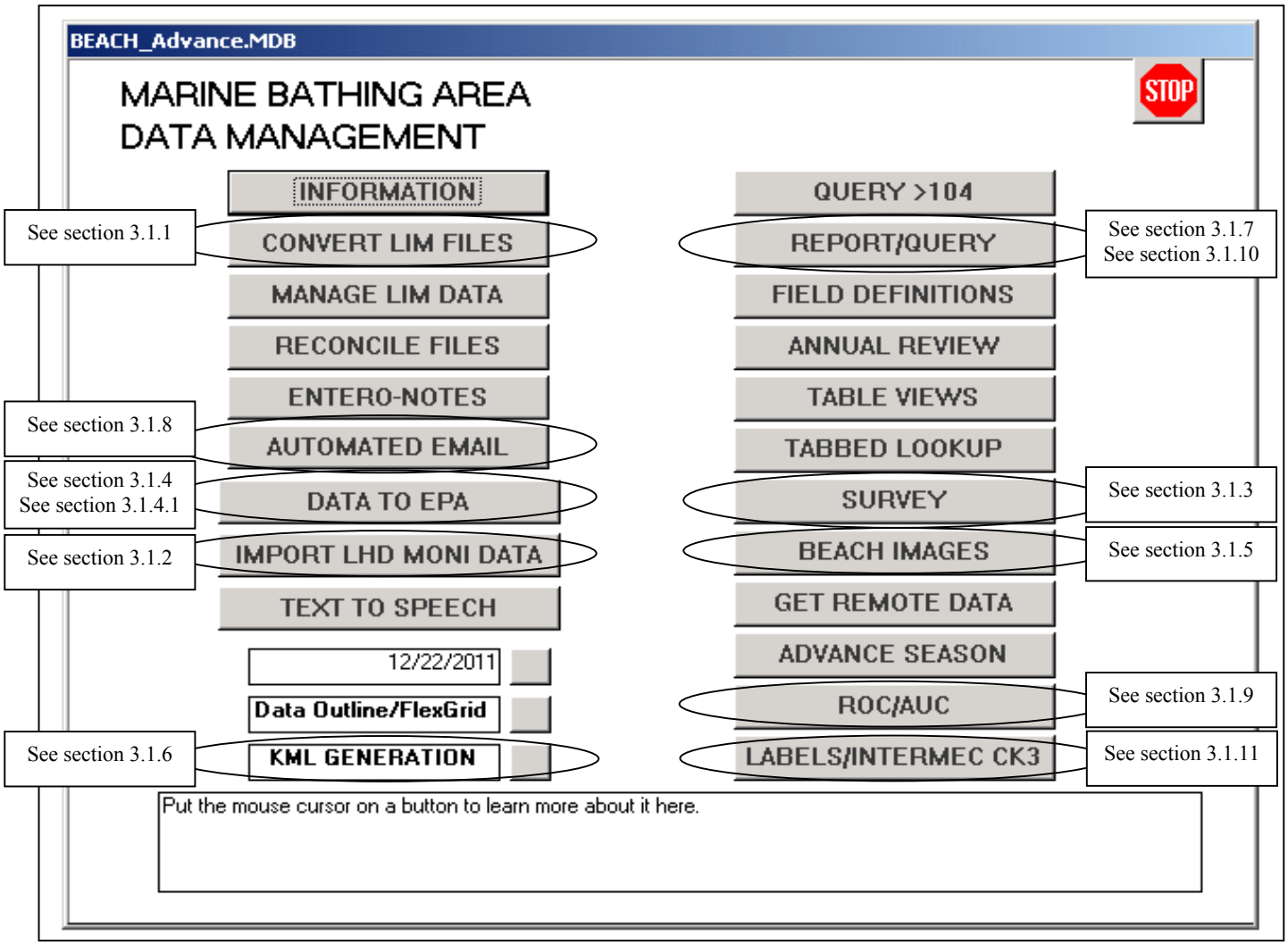
The custom software that DPH uses to manage beach data was developed expressly for this purpose and provides core services. Here is a list of the general features that we find most useful for managing beach data. Later several of the most important features will be described in detail.

- Manages marine bathing area data. These include data from: field survey work to establish beach and sampling station geographic locations; beach closure, advisory and public notification reporting; organization and contacts lists; water quality monitoring test result reporting from the DPH State Laboratory and municipalities; and known potential sources of beach pollution. Marine bathing area data are cross-referenced to hot-spot enabled beach map images stored in the database.
- Beach map images and geo-spatial data contained in the database are readily accessible; beach images can be printed for use and reference by beach organizations.
- Sampling station data and beach notification data are linked directly to each beach/sampling station map image where they can be displayed with the map for quick seasonal reviews.
- Utilities to quickly identify a beach or organization by name and learn the identifier for fast recall of related data on other selected screen views (e.g. the Beach Survey screen views).
- Provides an Annual Review data audit report that summarizes beach and sampling station locations, organizational responsibility for marine bathing areas, water quality monitoring data (when available), potential pollution sources and US EPA Beach Survey notification data.
- Preserves all tracking and location data by year including: monitoring data; Beach Survey data; beach contacts and organizations; beach end points and sampling station names and locations.
- Accepts monitoring results data electronically from the State Laboratory and municipalities and associates them with sampling stations, beaches, and organizations. Processing data received electronically generates process/error log files and reports.
- Validity and cross-reference checking, audit trail and data reconciliation.
- Provides several geometric mean reports for water quality monitoring test results. Generates a geometric mean alert report. Generates a rolling or running geometric mean report for sets of five (5) consecutive results for an entire bathing season for beaches and sampling stations.
- Can plot monitoring test results and beach closing/advisory events along a common time line for each sampling station with reported results and Beach Survey data.
- Self documenting: reports table and field definitions for most tables contained in the database; generates a report that describes how to setup the database for a new bathing season; on screen learn-more display areas offer help when you position the mouse cursor over a utility or function button.
- Permits US EPA Beach Survey data entry, review, editing, deletion and cross-check validation.
- Quick access to selected data tables to speed data review.
- Customized reports linked to automated email to support quality assurance data review.
- Receiver Operator Characteristic with Area Under Curve (ROC/AUC) predictive modeling software is built-in.

(continued)

- Can generate KML or KMZ files to permit Google Earth to present beach location, notification, monitoring exceedance, pollution source data and current beach status and contact information.
- Manage, pre-process, transform and compile US EPA beach data to create comma delimited text files from assorted beach data for use with US EPA software. Detects changes in the active/inactive status of beach related data objects like: contact person; mailing address; beach organization role; and beach person role assignments.
- Quickly generates a comprehensive beach tier, beach event, and beach event day count datasheet based on current beach data.
- Provides data support for the annual US EPA Beach Survey that is customized for each beach organization that receives it.

Several features are central to beach data management and will be described here. Command buttons that activate these features are circled on the software startup screen view.



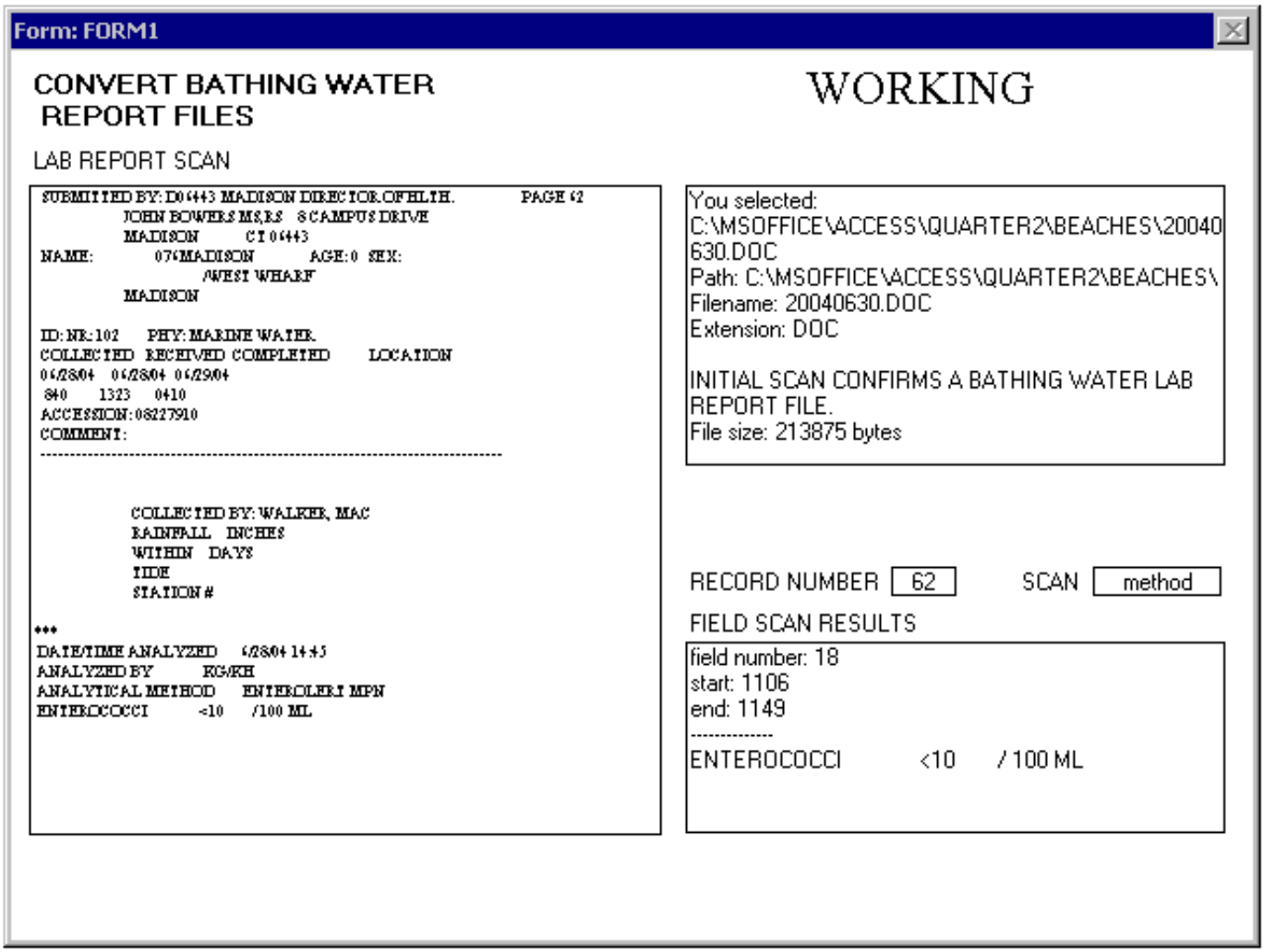
When US EPA data requirements change, those changes must be reflected in the tables, queries, forms, reports and software coding of this evolving application.

Each circled function will be described briefly on the following pages.

3.1.1 CONVERT LIM FILES

The DPH State Laboratory provides a courier service to pick up water monitoring samples and deliver them to that laboratory where they are analyzed. Marine water quality analysis results are stored at the laboratory in the Laboratory Information Management System (LIMS) (a computer running LIM software) along with other analysis results. The LIMS computer outputs marine results for Beach Grant beaches as well as other beaches including freshwater sites. A data selection process running under software control results in monitoring data for regulated marine beaches stored in tables dedicated to managing Beach Grant data.

bch05a.bmp

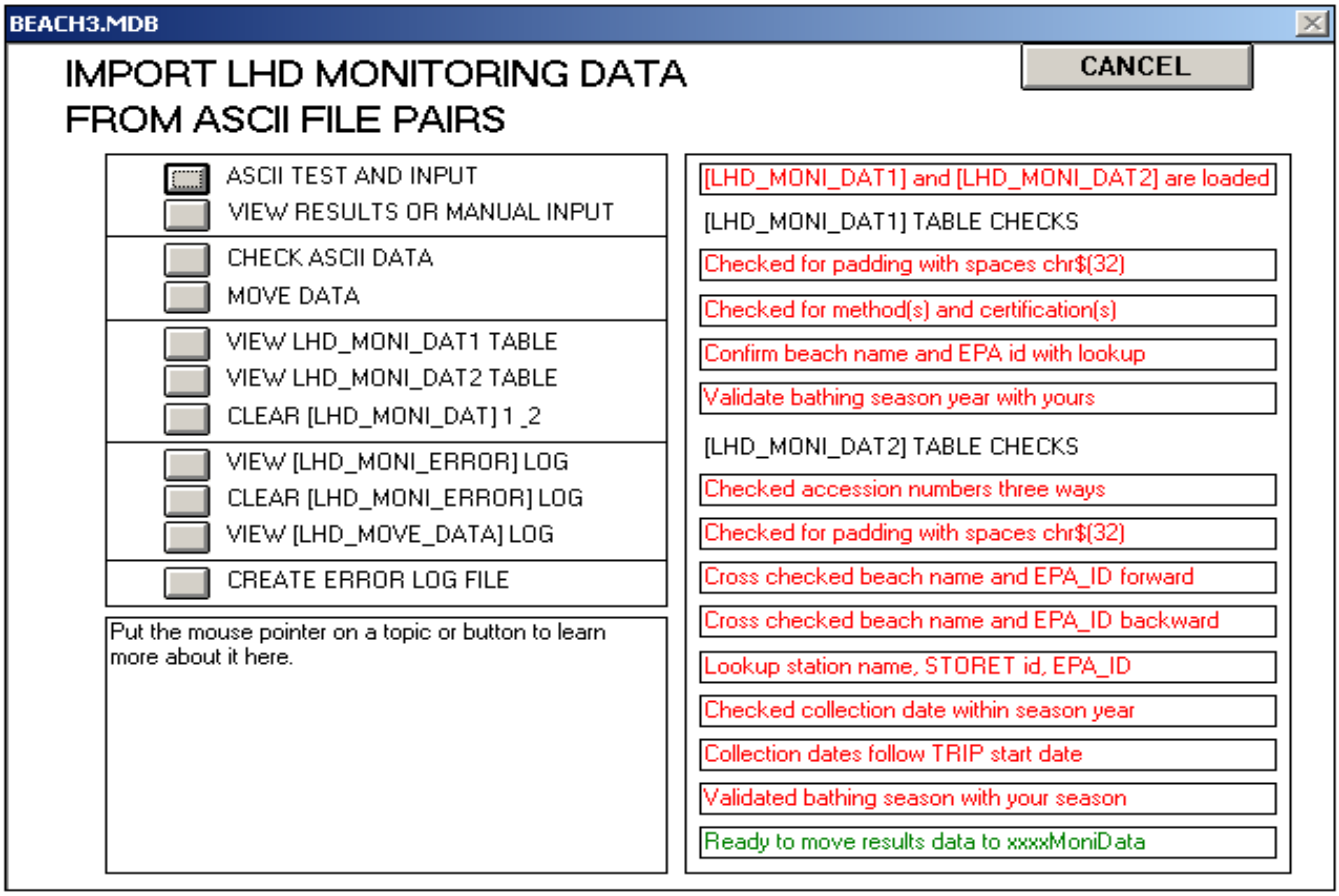


The software can scan and review 8,000 electronic monitoring results from the State Laboratory for a summer bathing season in about 6 minutes, eliminating about 4,500 results that do not apply to marine beach monitoring. The remaining results must be reviewed manually to select the results that apply directly to regulated marine bathing areas tracked for the US EPA Beach Grant.

3.1.2 IMPORT LOCAL HEALTH DEPARTMENT MONITORING DATA

While many local health departments along the Connecticut shoreline use the services of the DPH State Laboratory, some do not. We have developed a protocol and matching intake software for those health departments so they can submit their monitoring results data electronically.

edi06.bmp

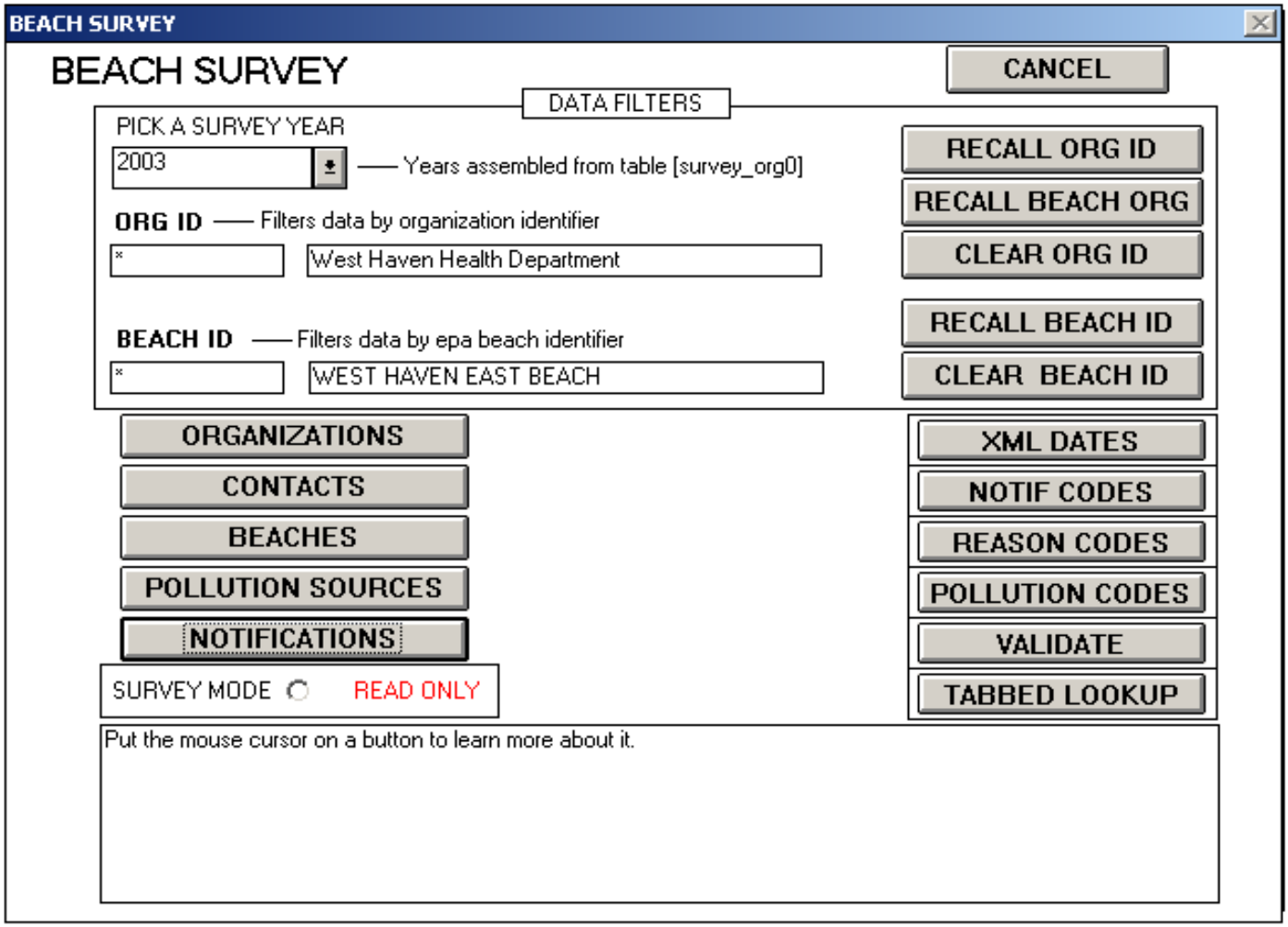


The software scans, validates, cross checks and finally accepts or rejects monitoring results that have been submitted electronically. Accepted data are merged with data captured from the State Laboratory LIM system. A diagnostic error report is produced for submitted data that fails one (1) or more of the tests run against them by the software.

3.1.3 BEACH SURVEY

We use an annual US EPA Beach Survey to collect beach closure, advisory, public notification, and known potential sources of pollution data. The survey also allows us to update: weekly monitoring self-certification, beach contact and organization information.

bch24.bmp



The software permits review and entry of Beach Survey data. It also can pre-process, cross check and validate them before they are compiled by other software utilities for use with US EPA supplied applications. We can review data for selected beach organizations or beaches by entering their identifiers on the Beach Survey screen.

A page similar to the annual US EPA Beach Survey page that we use to collect beach closure and advisory data (along with reason, source and indicator for each closure and advisory event) is shown on the next page.

When US EPA data requirements change, these changes often require modifications to the annual Beach Survey (part of which is shown on the next page) and to the software we use to accept and process survey data.

4. Advisories/Closings and Potential Sources of Pollution Reporting for the 2011 Swimming Season

Please enter information about the advisories/closings and potential pollution sources for this beach in the table below. An example for an advisory is entered in the table for your reference. Please use the following keys to fill out the KEY 1, KEY 2, and KEY 3 columns. *Be sure to provide the sampling station name(s) when elevated bacteria was the Reason for a beach closure or advisory.*

REASON KEY 1

Use this list for the **"Reason(s)"** why the advisories or closings were implemented.
(Select all that apply.)

(1) Monitoring that revealed elevated bacteria levels
(2) Preemptive—Rainfall
(3) Preemptive—Sewage discharge or spill
(4) Preemptive—Chemical or oil discharge/spill
(5) Other *(Please specify)*

SOURCE KEY 2

Use this list for the **"Sources(s)"** that resulted in advisories or closings.
(Select all that apply.)

(1) CSO (Combined Sewer Overflow)
(2) SSO (Sanitary Sewer Overflow)
(3) POTW (Publicly Owned Treatment Works)
(4) Septic systems
(5) Sewer line blockage/break
(6) Boat discharge
(7) Storm water runoff
(8) Wildlife
(9) Concentrated Animal Feeding Op.
(10) Urban runoff
(11) Agricultural runoff
(12) Unknown
(13) Other *(Please specify)*

INDICATOR KEY 3

Use this list for the **"Indicator type(s)"** used to close a beach or issue an advisory.
(Select all that apply.)

(1) Preemptive
(2) Enterococci
Total Coliform
Fecal Coliform
E. coli
Total/Fecal Ratio
(3) Other

KNOWN POTENTIAL SOURCES OF POLLUTION AT THIS BEACH

If there are NO potential sources of pollution at this beach then check either A or B:

☐ (A) No pollution sources
☐ (B) Pollution sources not investigated

If there are known potential sources of pollution at this beach then check each one that applies:

☐ (1) CSO (Combined Sewer Overflow)
☐ (2) SSO (Sanitary Sewer Overflow)
☐ (3) POTW (Publicly Owned Treatment Works)
☐ (4) Septic systems
☐ (5) Sewer line/blockage/break
☐ (6) Boat discharge
☐ (7) Storm water runoff
☐ (8) Wildlife
☐ (9) CAFO (Concentrated Animal Feeding Operation)
☐ (10) Urban runoff
☐ (11) Agricultural runoff
☐ (12) Unknown
☐ (13) Other *(Please specify)*_____

Answer Table

An example is entered for your reference.

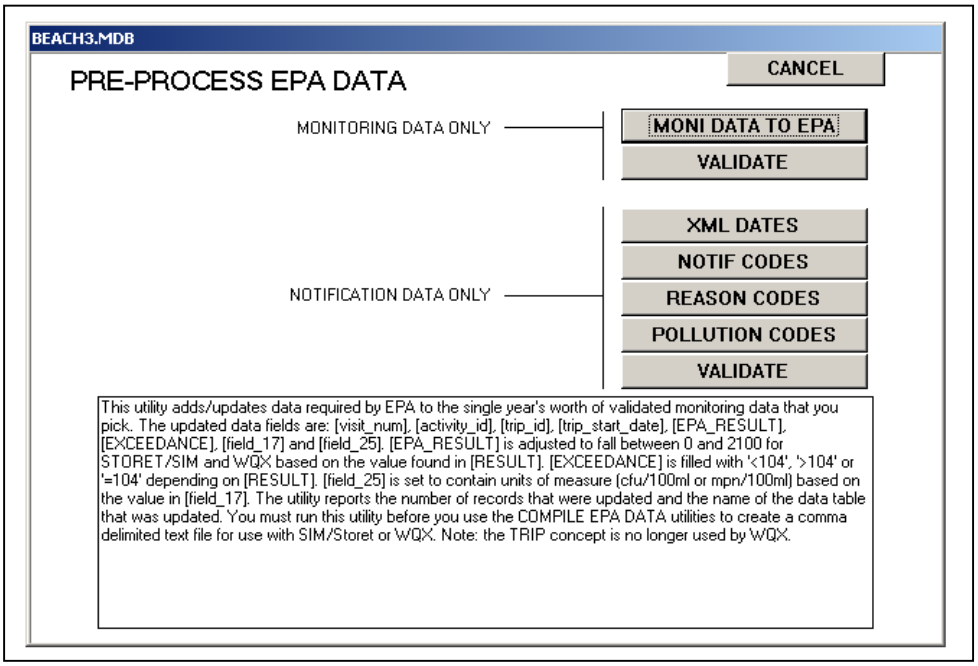
[«BEACH_NAME»] EPA ID[«EPA_ID»]

						KEY 1	KEY 2	KEY 3	SAMPLING STATION NAME
Advisory or Closing	Start Date (mm/dd/yyyy)	End Date (mm/dd/yyyy)	Total number of days posted	Is this part of a general or area-wide advisory or closing? (yes or no)	Percent of this beach affected	**Reason(s)** use number(s) from **KEY 1** above	**Source(s)** use numbers from **KEY 2** above	**Indicator type(s) used to close or issue and advisory** use numbers from **KEY 3** above	**ELEVATED BACTERIA?** Enter the name(s) of the sampling station(s) at this beach where water samples containing elevated bacteria were collected when that was the Reason (Item 1from Key 1) for a beach closure or advisory. *Use the 2011 season sampling station name.*
Advisory	08/05/2011	08/08/2011	3	no	25	1, 5	2, 3	2	ANNB2, ANNB3
PLEASE NOTE: If you need to add more advisory/closing events for this beach, use the next page									

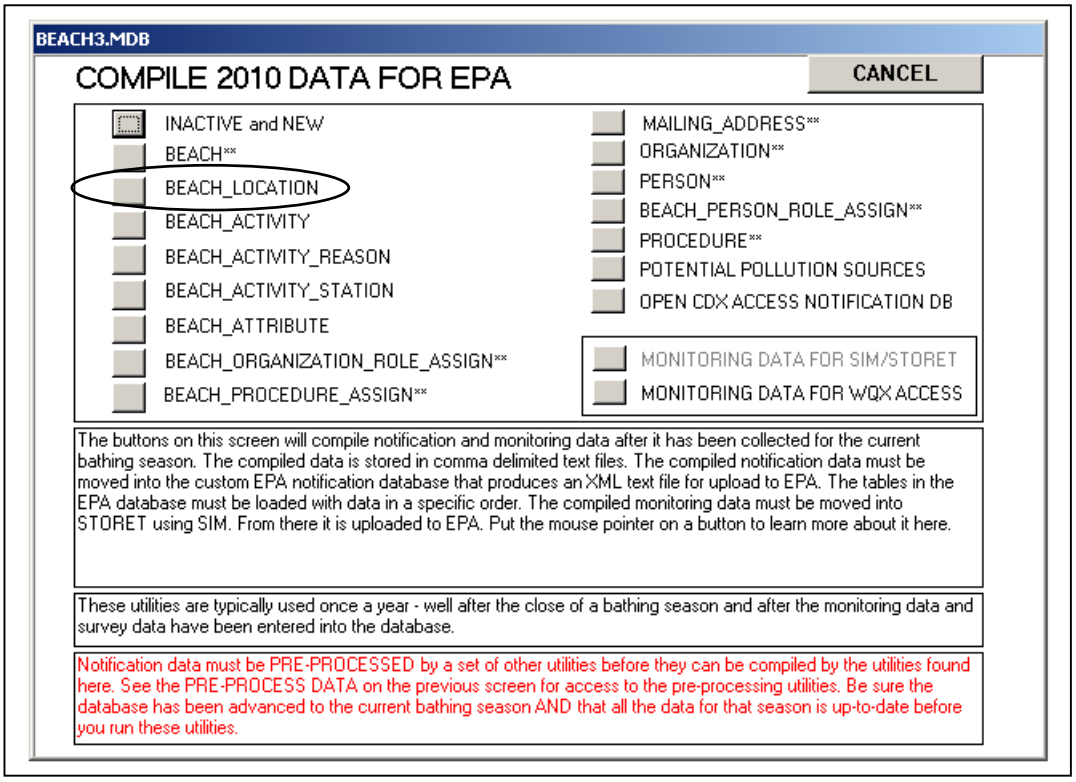
[«EPA_ORG_ID»]

3.1.4 PREPARING AND SENDING DATA TO US EPA

Beach data held in the custom database are stored in tables. These data must be pre-processed, renormalized, validated and compiled before they are packaged for use with US EPA supplied software. Shown below are the utilities that do this work. After pre-processing, these data are validated with more than 32,000 cross reference checks.



Shown next are the utilities that compile monitoring and notification data.



The utilities can identify inactive contact person, beach organizations and beach roles and set various status flags as required by the US EPA beach data schema. The BEACH_LOCATION utility can calculate the Great Circle Distance (GCD) for each beach. This utility is described in the next section.

The utilities shown here package the data so they can be loaded into the two (2) EPA Access database solutions that produce XML text files holding the notification and monitoring data.

XML is a text markup language that identifies data elements with human readable tag names, making XML contained data to some extent self-documenting. XML is used to represent a hierarchy of dependent and related data sets.

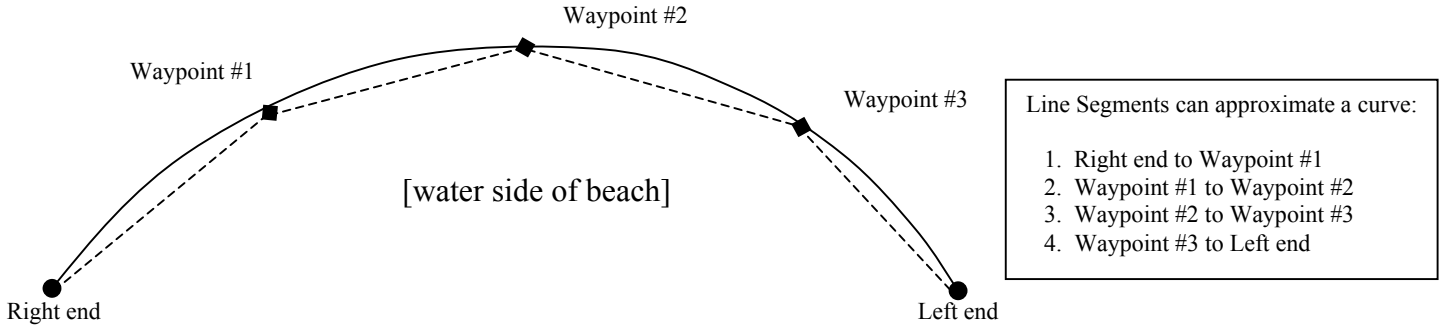
When the US EPA data requirements change, the software utilities that underlie this screen view must be modified.

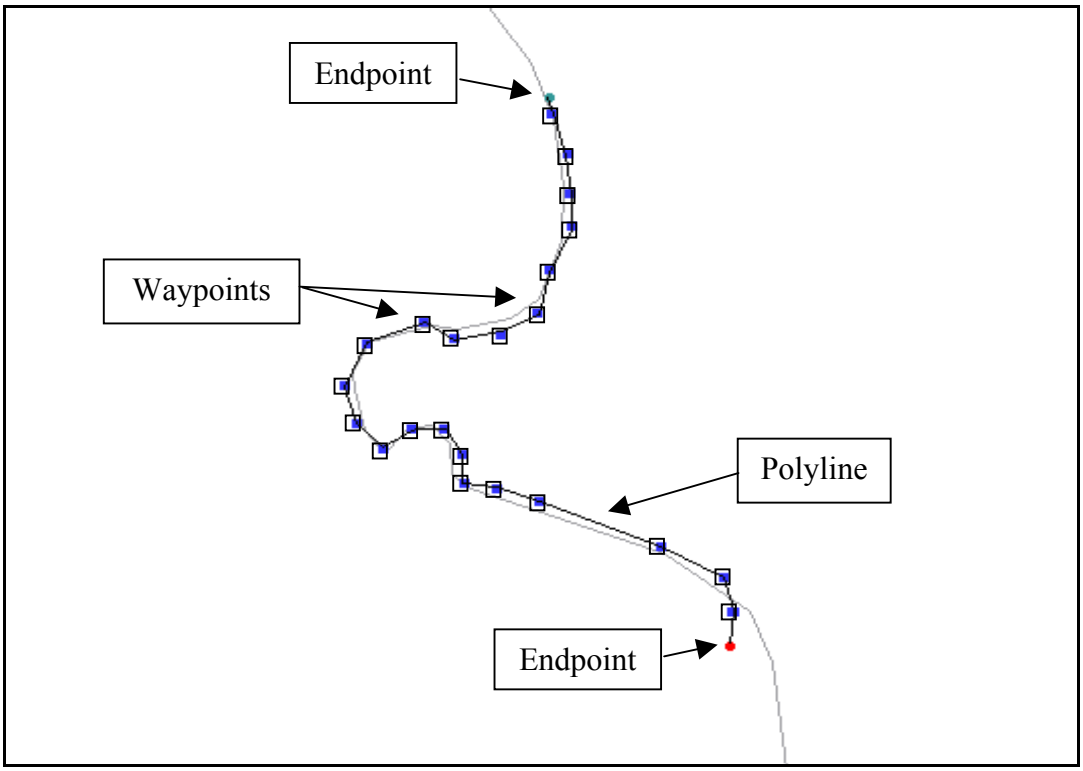
3.1.4.1 USING GREAT CIRCLE DISTANCE TO FIND BEACH LENGTH

Beach locations are an important part of the Beach Grant because they allow US EPA and other interested parties to associate beach monitoring and notification data with specific locations on Earth. Beach lengths are important because US EPA uses them in the Beach Grant funding allocation formula.

Beach lengths were determined using hand held GPS units set to record the distance traversed starting at one end of each beach, walking to the other end and returning to the start. The two (2) traversed distances were averaged to find beach length.

Another approach calculates the Great Circle Distance (GCD) between beach points as it moves from one endpoint to adjacent waypoint and so on to the other end of the beach. The set of GCD for a beach are summed to find its length. It's worth noting here that the GCD method takes into account the curvature of the Earth.





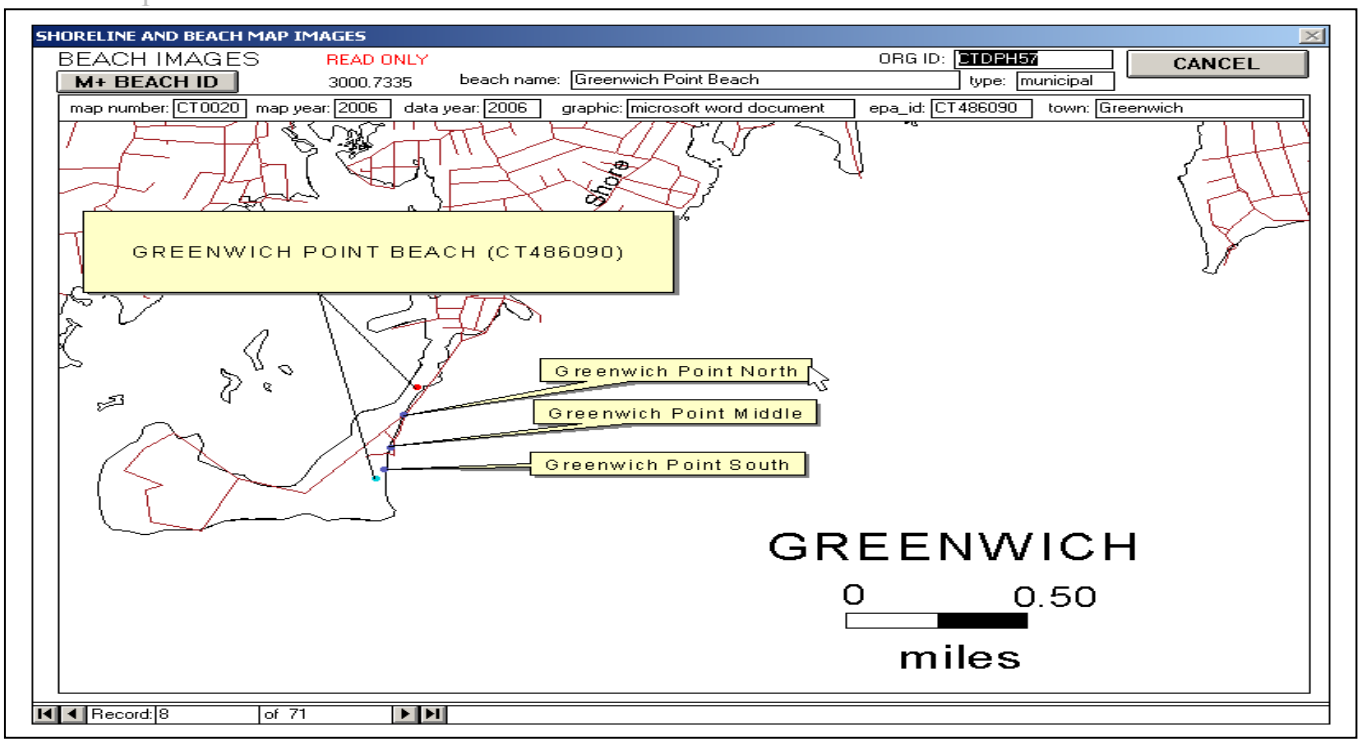
The BEACH_LOCATION utility (described earlier) includes this function based on a formula developed by Hexa Software Development Center. There is very good agreement between the traverse method and the waypoint (GCD) method for determining Connecticut's marine beach lengths.

Calculating beach length using waypoints and GCD is described fully in another document.

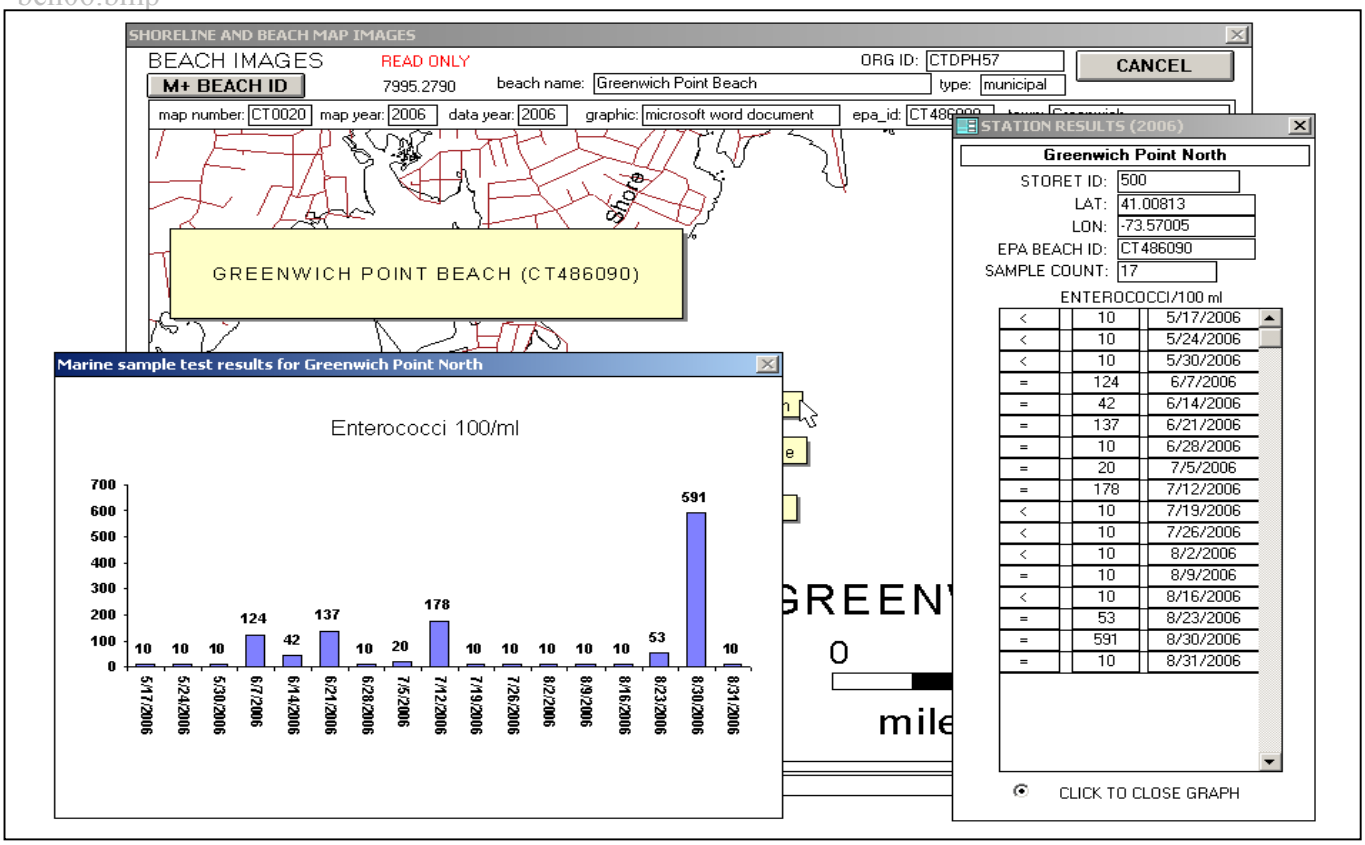
3.1.5 VISUALIZING BEACH DATA

The beach database contains not only beach location, notification and monitoring data but also images of beach maps as well. Monitoring data and notification data are linked to each beach map image and can be displayed by clicking either a beach name (for notification data) or sampling station name (for monitoring data). Monitoring (but not notification) data can be graphed on screen as shown here.

bch05.bmp

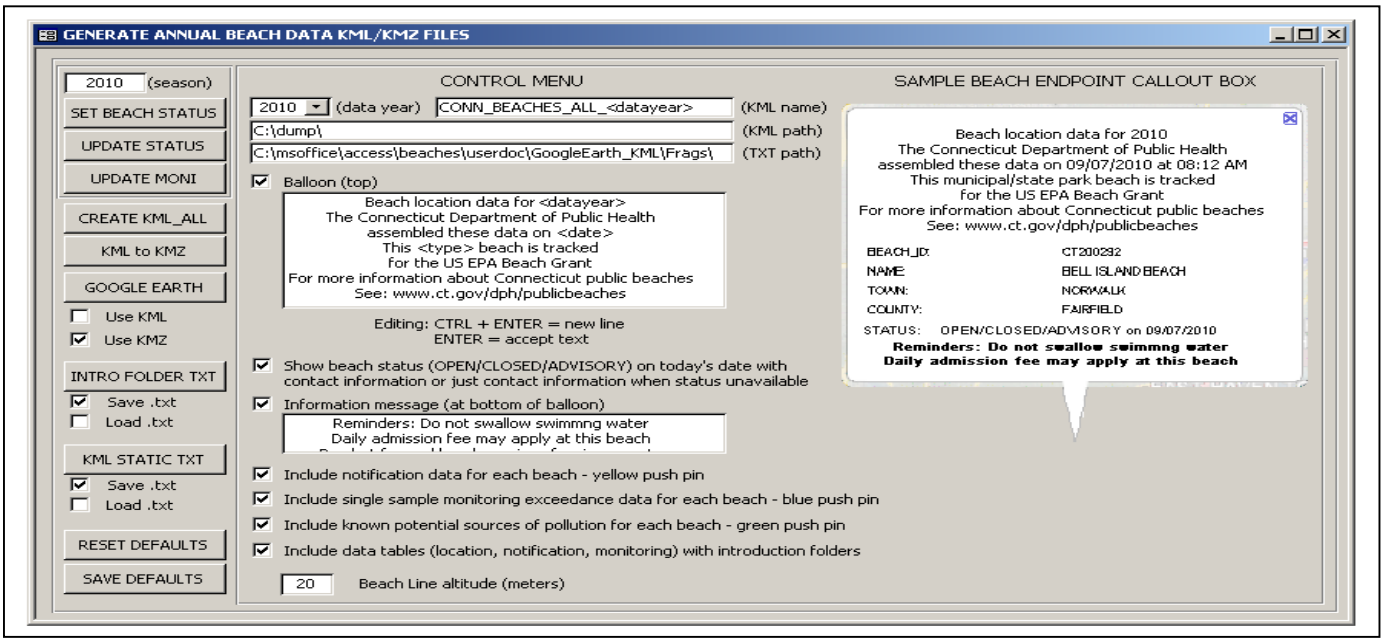


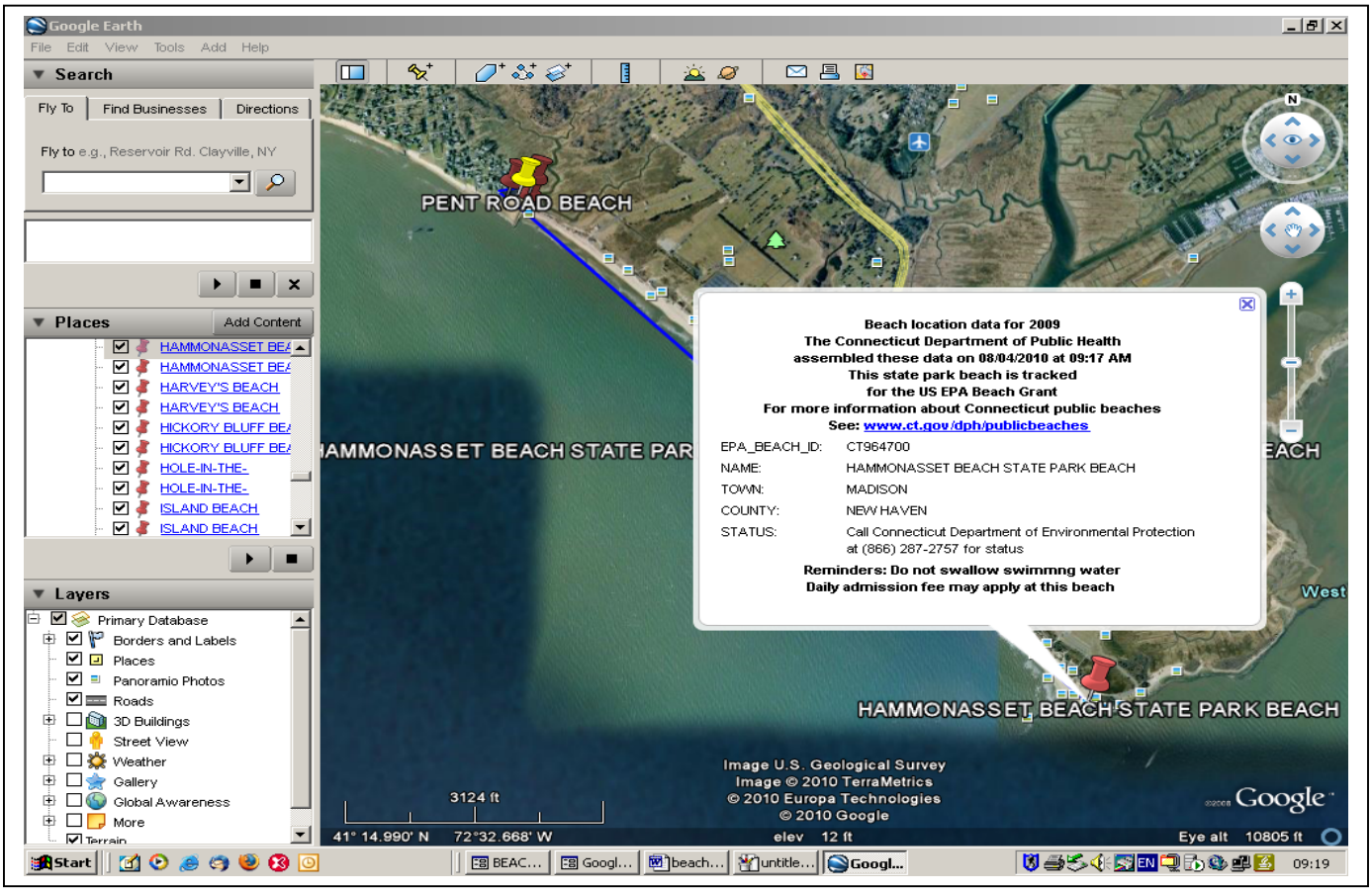
bch06.bmp



3.1.6 USING GOOGLE EARTH TO VISUALIZE BEACH DATA

The software can quickly generate a Keyhole Markup Language (KML) tagged text file for use with Google Earth to locate beaches and present information about them including location, status, contact, notification, monitoring, and pollution source data. The software allows selecting beach data by year, selecting the kinds of data to appear in Google Earth callouts and editing the text in placemark callout boxes. Shown here is the KML generator control panel and below it an example of a Google Earth beach callout box. The KML generator is fully described in another document.





3.1.7 REPORTING BEACH DATA

Reports are an integral part of any comprehensive software database solution. They are useful when you need to review, present, audit or validate data. They are particularly useful when you need to combine linked but disparate data sets and present them in a way that promotes comprehension. Sections of several reports are shown on this and following pages.

This report page provides local health departments with their beach contact, organization, location and seasonal beach data including their reported known potential sources of pollution for review.

annual_review 2006.tif

MAP_NUMBER: 0005
BEACH NAME: GREAT CAPTAIN'S ISLAND BEACH
BEACH EPA ID CT096148 REGULATORY ORG ID: CTDPH57

Mr. Michael S. Long - Director of Environmental Services
Greenwich Department of Health
101 Field Point Road
Greenwich CT 06830
(203) 622-7838 mlong@greenwichct.org

LEFT END LAT: 40.98239
LEFT END LON: -73.62633
RIGHT END LAT: 40.98125
RIGHT END LON -73.62944
LENGTH (MILES): 0.2218

TOWN: GREENWICH
COUNTY: FAIRFIELD
FIPS: 09001 REACH: 01100006030
Monitored 4 times per month
2005 tier classification: TIER 1

Known potential sources of pollution: - Septic systems - Boat discharge - Wildlife -

Type	Start date	Days	Area advisory?	Part of beach	Key 1	Key 2	Key 3
Close	6/27/2006	1	no	100	1	6	2

REPORTED ADVISORY/CLOSURE DAYS: 1 REPORTED ADVISORY/CLOSURE EVENTS: 1

BEACH EPA_ID: CT096148
STATION NAME in 2005: Great Captain's North STORET_ID: 100 LAT: 40.98301 LON: -73.62732

6/5/2006	<	10
6/12/2006	<	10
6/19/2006	=	53
6/26/2006	=	10
6/27/2006	=	10
7/5/2006	<	10
7/10/2006	<	10
7/17/2006	<	10
7/24/2006	<	10
7/31/2006	<	10
8/7/2006	<	10
8/14/2006	<	10
8/23/2006	<	10
8/28/2006	<	10

STATION NAME in 2005: Great Captain's South STORET_ID: 200 LAT: 40.98232 LON: -73.62703

6/5/2006	<	10
6/12/2006	<	10
6/19/2006	=	20
6/26/2006	<	10
6/27/2006	<	10
7/5/2006	=	10
7/10/2006	<	10
7/17/2006	<	10
7/24/2006	<	10
7/31/2006	<	10
8/7/2006	<	10
8/14/2006	<	10
8/23/2006	<	10
8/28/2006	<	10

END OF BEACH SECTION

2

This report page presents a running or rolling geometric mean for monitoring results that produce a geometric mean greater than the five (5) sample standard set by US EPA.

rolling_geomean.tif

TOWN: BRANFORD

BEACH NAME: CLARK AVENUE BEACH

Season	EPA ID	Notif type	Start date	Notif days	Area advisory?	Beach part	Key1	Key2	Key3

No closures or advisories reported by the regulating authority for this beach during the season.

STATION NAME: CLARK AVENUE AT CLARK AVENUE BEACH

GEOMETRIC MEAN: **67.934**
STANDARD DEVIATION: 555.86221314279
LOG STANDARD DEVIATION: 0.9055034739392
SERIES START DATE: 5/29/2007
SERIES END DATE: 6/11/2007
DAY COUNT: 13

result 1: 10 cfu/100ml on 5/29/2007
result 2: **1300 cfu/100ml on 6/4/2007** <– note
result 3: **210 cfu/100ml on 6/6/2007** <– note resample: 2 days
result 4: 53 cfu/100ml on 6/11/2007 resample: 5 days
result 5: 10 cfu/100ml on 6/11/2007

GEOMETRIC MEAN: **78.036**
STANDARD DEVIATION: 554.49959422889
LOG STANDARD DEVIATION: 0.8442858959567
SERIES START DATE: 6/4/2007
SERIES END DATE: 6/18/2007
DAY COUNT: 14

result 1: **1300 cfu/100ml on 6/4/2007** <– note
result 2: **210 cfu/100ml on 6/6/2007** <– note resample: 2 days
result 3: 53 cfu/100ml on 6/11/2007 resample: 5 days
result 4: 10 cfu/100ml on 6/11/2007
result 5: 20 cfu/100ml on 6/18/2007

-- end of station --

There are a few things about this report that you should note. While the *Guidelines* recommend calculating the geometric mean for 5 samples collected over 30 days, this report calculates the geometric mean for 5 date-consecutive samples from a sampling station. As a result, the five (5) sample set used by the software to calculate the geometric mean often spans fewer than 30 days. Or it can span more than 30 days. In this regard, the report offers a geometric mean that approximates the recommended found in the *Guidelines*.

The report shows both the standard deviation (i.e. the sample standard deviation) and the log standard deviation (i.e. the log sample standard deviation) of the 5 numbers used to calculate a geometric mean. The log standard deviation is the standard deviation of the Logs(base10) of the 5 samples used to calculate the geometric mean. In other words, each of the 5 samples in a set of samples is first converted to its Log(base 10) equivalent, and then the software calculates the standard deviation of these Log normalized numbers.

The complete discussion of rolling geometric mean with summary data starts on page 110. For an overview of the data processing steps that support rolling geometric mean see page 48.

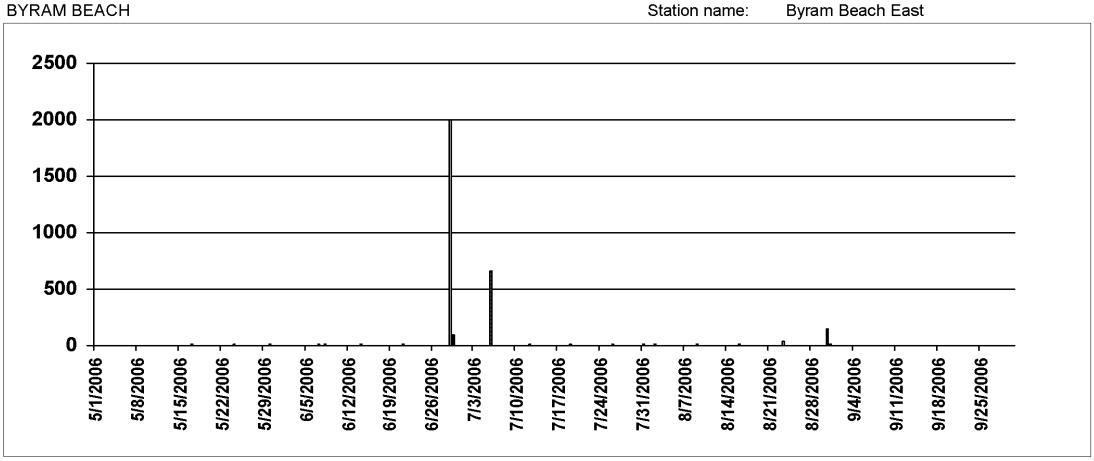
This report page displays monitoring data and closure/advisory data in tables and combined in a chart along a common time line. The page shown here reflects mostly preemptive beach closures due to rainfall. Each listed closing is located on the horizontal time line with a letter “C”.

graph_entero.tif

BYRAM BEACH EPA id: CT872506 Station name: Byram Beach East

Sample date:	5/1/2006			<<----Time line boundary; not a valid sample result
Sample date:	5/17/2006	result:	10	
Sample date:	5/24/2006	result:	10	
Sample date:	5/30/2006	result:	10	
Sample date:	6/7/2006	result:	10	
Sample date:	6/8/2006	result:	10	
Sample date:	6/14/2006	result:	10	
Sample date:	6/21/2006	result:	10	
Sample date:	6/28/2006	result:	2005	
Sample date:	6/29/2006	result:	89	
Sample date:	7/5/2006	result:	659	
Sample date:	7/12/2006	result:	10	
Sample date:	7/19/2006	result:	10	
Sample date:	7/26/2006	result:	10	
Sample date:	7/31/2006	result:	10	
Sample date:	8/2/2006	result:	10	
Sample date:	8/9/2006	result:	10	
Sample date:	8/16/2006	result:	10	
Sample date:	8/23/2006	result:	42	
Sample date:	8/30/2006	result:	150	
Sample date:	8/31/2006	result:	20	
Sample date:	9/30/2006			<<----Time line boundary; not a valid sample result

BYRAM BEACH Station name: Byram Beach East



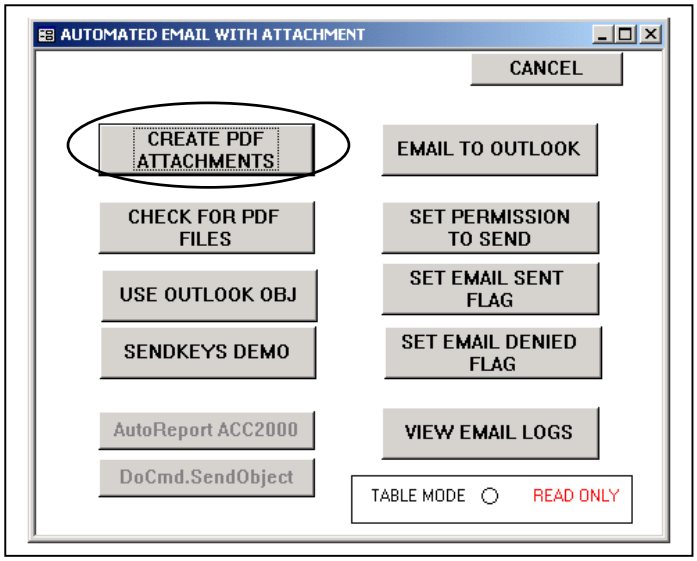
		Type	Start date	Duration (days)	Area advisory	Beach part	KEY1	KEY2	KEY3
2006	CT872506	Close	6/2/2006	2	no	100	2	7	1
2006	CT872506	Close	6/8/2006	1	no	100	2	7	1
2006	CT872506	Close	6/24/2006	3	no	100	2	7	1
2006	CT872506	Close	6/28/2006	2	no	100	2	7	1
2006	CT872506	Close	7/13/2006	1	no	100	2	7	1
2006	CT872506	Close	7/19/2006	1	no	100	2	7	1
2006	CT872506	Close	7/22/2006	2	no	100	2	7	1
2006	CT872506	Close	8/25/2006	2	no	100	2	7	1
2006	CT872506	Close	8/28/2006	3	no	100	2	7	1
2006	CT872506	Close	8/31/2006	1	no	100	1	6	2

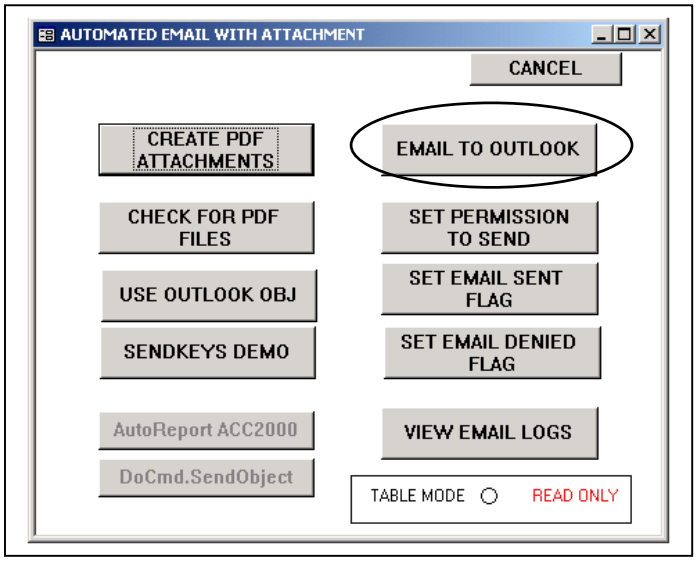
6

3.1.8 CUSTOM REPORTING AND AUTOMATED EMAIL

Custom reporting linked to automated email was designed to facilitate two (2) tasks within the context of the beach monitoring data. First, it has become more important to supply local health departments with quality assurance data sets for their review. Data review reports contain the data the local health departments have provided to us: laboratory results for water quality monitoring; US EPA Beach Surveys; beach/sampling station location data; and known potential sources of pollution. And second, email presents itself as a convenient way to forward these custom data sets for review.

While there are many ways to package custom data sets for review including spreadsheets or Comma Separated Value (CSV) files we settled on Access reports contained in Adobe PDF files. Access reports can be easily designed to present custom datasets selected for local health departments or beach contacts, and they can be formatted for enhanced readability. Email attachments stand as the obvious way to distribute customized Access reports for review.





Automated email as implemented here is broken into two (2) distinct parts or steps. The first involves creating a set of PDF file attachments to be used exclusively with email for distribution (see the left panel above). The second step involves creating individualized emails and attaching PDF files to them.

Behind the scenes are several tables that are used by the software to record its progress in each of these two (2) distinct steps. This permits the end user to halt either process (attachment creation or email creation) and return to it later. Because the tables are updated and used dynamically the software can halt a batch job if data are missing.

Automated email is described fully in another document.

3.1.9 MODELING WITH RECEIVER OPERATOR CHARACTERISTIC CURVE

One widely used predictive method, Receiver Operator Characteristic with Area Under Curve (ROC/AUC), has been found helpful for generating and evaluating the usefulness of predictive models that attempt to associate physical parameter data collected from or near marine recreational water with the suitability of recreational water for swimming.

The custom beach data management software includes ROC/AUC software to evaluate the usefulness of either current or antecedent rainfall data or recreational water salinity data for predicting the suitability of recreational water for swimming.

Given input data, the software generates a documented ROC/AUC report (shown here) designed to help beach managers judge the predictive value of physical parameter data collected during a bathing season.

RECEIVER OPERATOR CHARACTERISTIC CURVE AND REPORTED METRICS (test data)

Printed by Jon Dinneen
Report Printed on 6/24/2010 01:43:41 PM
Report Name roc_auc

This report shows results for rain data. The software ran with the assumption of a direct relationship between Enterococcus density and rainfall. The Area Under Curve (AUC) is 0.884.The 95% confidence interval (+/- 2 standard error) has a lower bound of 0.808; and an upper bound of 0.961. AUC of 1 = high predictive value. AUC of .5 = no predictive value. TPR is the proportion of times the Enterococcus density (i.e. 104 cfu/100ml) would be well detected if you regulated at a particular threshold value of the indicator variable rain. For reference: total [EX] (unsutiable swimming water) unique cases = 74 and total [NOEX] (suitable swimming water) unique cases = 74. Rows with duplicated rain values have been removed from the report.

DATA PROVIDED BY END USER					SOFTWARE OUTPUT																
Beach_name	Coll_date	Year	gmEC	RAIN	EX	NOEX	TPR	FPR	TPRu	FPRu	SENS	SPEC	COST	TP	TN	FP	FN	LR+	LR-	PPV	NPV
data anchor record		2004	0	0	0	0	1	1	0.297	0.243	0	0	0	0	0	0	0			0	0
experimental	5/7/2004	2004	10	0.01	0	1	1	0.986	0.297	0.23	1	0.014	367	74	1	73	0	1.014	0.000	0.503	1
experimental	7/20/2004	2004	200	0.02	1	0	0.986	0.946	0.284	0.23	0.97	0.054	364	72	4	70	2	1.042	0.259	0.507	0.667
experimental	5/9/2004	2004	10	0.03	0	1	0.892	0.311	0.284	0.216	0.89	0.689	241	66	51	23	8	2.868	0.157	0.742	0.864
experimental	5/10/2004	2004	10	0.04	0	1	0.892	0.203	0.284	0.203	0.89	0.797	217	66	59	15	8	4.394	0.136	0.815	0.881
experimental	5/11/2004	2004	10	0.05	0	1	0.892	0.189	0.284	0.189	0.89	0.811	214	66	60	14	8	4.720	0.133	0.825	0.882
experimental	5/12/2004	2004	10	0.06	0	1	0.892	0.176	0.284	0.176	0.89	0.824	211	66	61	13	8	5.068	0.131	0.835	0.884
experimental	5/13/2004	2004	10	0.07	0	1	0.892	0.162	0.284	0.162	0.89	0.838	208	66	62	12	8	5.506	0.129	0.846	0.886
experimental	5/14/2004	2004	10	0.08	0	1	0.892	0.149	0.284	0.149	0.89	0.851	205	66	63	11	8	5.987	0.127	0.857	0.887
experimental	5/15/2004	2004	10	0.09	0	1	0.892	0.135	0.284	0.135	0.89	0.865	202	66	64	10	8	6.607	0.125	0.868	0.889
experimental	5/16/2004	2004	10	0.1	0	1	0.892	0.122	0.284	0.122	0.89	0.878	199	66	65	9	8	7.311	0.123	0.88	0.89
experimental	5/17/2004	2004	10	0.11	0	1	0.892	0.108	0.284	0.108	0.89	0.892	196	66	66	8	8	8.259	0.121	0.892	0.892
experimental	5/18/2004	2004	10	0.12	0	1	0.892	0.095	0.284	0.095	0.89	0.905	193	66	67	7	8	9.389	0.119	0.904	0.893
experimental	5/19/2004	2004	10	0.13	0	1	0.892	0.081	0.284	0.081	0.89	0.919	190	66	68	6	8	11.012	0.118	0.917	0.895
experimental	5/20/2004	2004	10	0.14	0	1	0.892	0.068	0.284	0.068	0.89	0.932	187	66	69	5	8	13.118	0.116	0.93	0.896
experimental	5/21/2004	2004	10	0.15	0	1	0.892	0.054	0.284	0.054	0.89	0.946	184	66	70	4	8	16.519	0.114	0.943	0.897
experimental	5/22/2004	2004	10	0.16	0	1	0.892	0.041	0.284	0.041	0.89	0.959	181	66	71	3	8	21.756	0.113	0.957	0.899

The report shows both the data provided by the beach manager and the data generated by the ROC/AUC method.

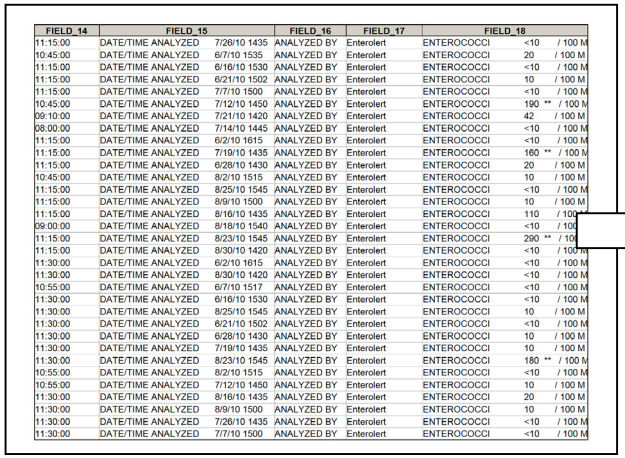
The ROC/AUC method software is described fully in another document.

3.1.10 ROLLING GEOMETRIC MEAN

The US EPA single sample marine recreational water quality standard for the indicator bacteria Enterococcus is based squarely on the 5-sample 30-day geometric mean standard developed through epidemiology in the late 1980's. Often overlooked, the geometric mean standard is useful for evaluating longer term recreational water quality. Unless a beach monitoring program is set up expressly to collect 5 samples over 30 days, the next closest approximation is to construct and evaluate 5-sample rolling geometric means as described in section 7.2.3 of this Annual Report (starting on page 110).

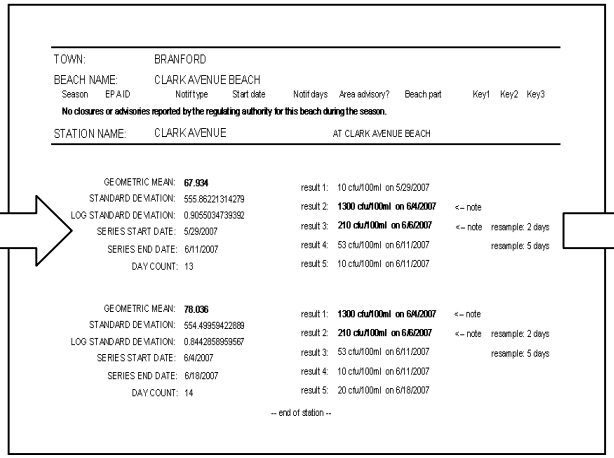
In total, the data processing steps to enable rolling geometric mean reporting and summary breakouts are among the most complex software controlled tasks found in the constellation of automated tasks for beach data management. For starters the *seasonal monitoring data* must be quality assured. Prior to opening the rolling geometric mean report, software must scan and organize the seasonal monitoring data to prepare them for additional processing steps that occur within the *geometric mean report* but before the report becomes visible on screen. Once the report is visible for preview and/or printing, background software takes over and prepares the *summary breakouts* page used to fill the assorted rolling geometric mean tables found in this Annual Report.

Seasonal monitoring data



FIELD_14	FIELD_15		FIELD_16	FIELD_17	FIELD_18		
11:15:00	DATE/TIME ANALYZED	7/26/10 1435	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
10:45:00	DATE/TIME ANALYZED	6/7/10 1535	ANALYZED BY	Enterolert	ENTEROCOCCI	20	/ 100 M
11:15:00	DATE/TIME ANALYZED	6/16/10 1530	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:15:00	DATE/TIME ANALYZED	6/21/10 1502	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:15:00	DATE/TIME ANALYZED	7/7/10 1500	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
10:45:00	DATE/TIME ANALYZED	7/12/10 1450	ANALYZED BY	Enterolert	ENTEROCOCCI	190 **	/ 100 M
09:10:00	DATE/TIME ANALYZED	7/21/10 1420	ANALYZED BY	Enterolert	ENTEROCOCCI	42	/ 100 M
08:00:00	DATE/TIME ANALYZED	7/14/10 1445	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:15:00	DATE/TIME ANALYZED	6/2/10 1615	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:15:00	DATE/TIME ANALYZED	7/19/10 1435	ANALYZED BY	Enterolert	ENTEROCOCCI	160 **	/ 100 M
11:15:00	DATE/TIME ANALYZED	6/28/10 1430	ANALYZED BY	Enterolert	ENTEROCOCCI	20	/ 100 M
10:45:00	DATE/TIME ANALYZED	8/2/10 1515	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:15:00	DATE/TIME ANALYZED	8/25/10 1545	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:15:00	DATE/TIME ANALYZED	8/9/10 1500	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:15:00	DATE/TIME ANALYZED	8/16/10 1435	ANALYZED BY	Enterolert	ENTEROCOCCI	110	/ 100
09:00:00	DATE/TIME ANALYZED	8/18/10 1540	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100
11:15:00	DATE/TIME ANALYZED	8/23/10 1545	ANALYZED BY	Enterolert	ENTEROCOCCI	290 **	/ 10
11:15:00	DATE/TIME ANALYZED	8/30/10 1420	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:30:00	DATE/TIME ANALYZED	6/2/10 1615	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:30:00	DATE/TIME ANALYZED	8/30/10 1420	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
10:55:00	DATE/TIME ANALYZED	6/7/10 1517	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:30:00	DATE/TIME ANALYZED	6/16/10 1530	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:30:00	DATE/TIME ANALYZED	8/25/10 1545	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:30:00	DATE/TIME ANALYZED	6/21/10 1502	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:30:00	DATE/TIME ANALYZED	6/28/10 1430	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:30:00	DATE/TIME ANALYZED	7/19/10 1435	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:30:00	DATE/TIME ANALYZED	8/23/10 1545	ANALYZED BY	Enterolert	ENTEROCOCCI	180 **	/ 100 M
10:55:00	DATE/TIME ANALYZED	8/2/10 1515	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
10:55:00	DATE/TIME ANALYZED	7/12/10 1450	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:30:00	DATE/TIME ANALYZED	8/16/10 1435	ANALYZED BY	Enterolert	ENTEROCOCCI	20	/ 100 M
11:30:00	DATE/TIME ANALYZED	8/9/10 1500	ANALYZED BY	Enterolert	ENTEROCOCCI	10	/ 100 M
11:30:00	DATE/TIME ANALYZED	7/26/10 1435	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M
11:30:00	DATE/TIME ANALYZED	7/7/10 1500	ANALYZED BY	Enterolert	ENTEROCOCCI	<10	/ 100 M

Rolling geometric report



TOWN: BRANFORD

BEACH NAME: CLARK AVENUE BEACH

Season	EPA ID	Notif type	Start date	Notif days	Area advisory?	Beach part	Key1	Key2	Key3

No closures or advisories reported by the regulating authority for this beach during the season.

STATION NAME: CLARK AVENUE — AT CLARK AVENUE BEACH

GEOMETRIC MEAN: **67.934**
STANDARD DEVIATION: 555.86221314279
LOG STANDARD DEVIATION: 0.905503473939 2
SERIES START DATE: 5/29/2007
SERIES END DATE: 6/11/2007
DAY COUNT: 13

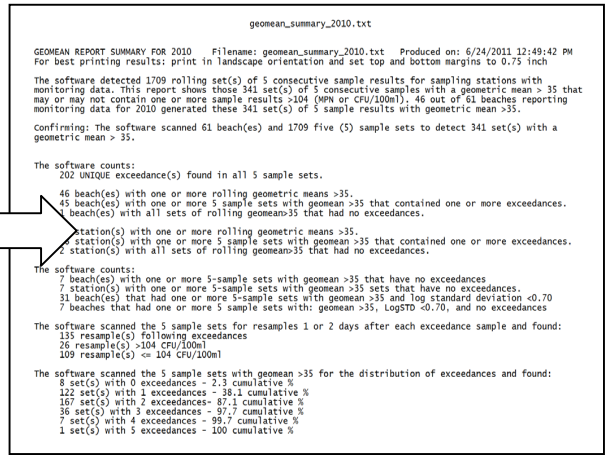
result 1: 10 cfu/100ml on 5/29/2007
result 2: **1300 cfu/100ml on 6/4/2007** <-- note
result 3: **210 cfu/100ml on 6/6/2007** <-- note resample: 2 days
result 4: 53 cfu/100ml on 6/11/2007 resample: 5 days
result 5: 10 cfu/100ml on 6/11/2007

GEOMETRIC MEAN: **78.036**
STANDARD DEVIATION: 554.49959422889
LOG STANDARD DEVIATION: 0.844285959567
SERIES START DATE: 6/4/2007
SERIES END DATE: 6/18/2007
DAY COUNT: 14

result 1: **1300 cfu/100ml on 6/4/2007** <-- note
result 2: **210 cfu/100ml on 6/6/2007** <-- note resample: 2 days
result 3: 53 cfu/100ml on 6/11/2007 resample: 5 days
result 4: 10 cfu/100ml on 6/11/2007
result 5: 20 cfu/100ml on 6/18/2007

-- end of station --

Summary breakouts



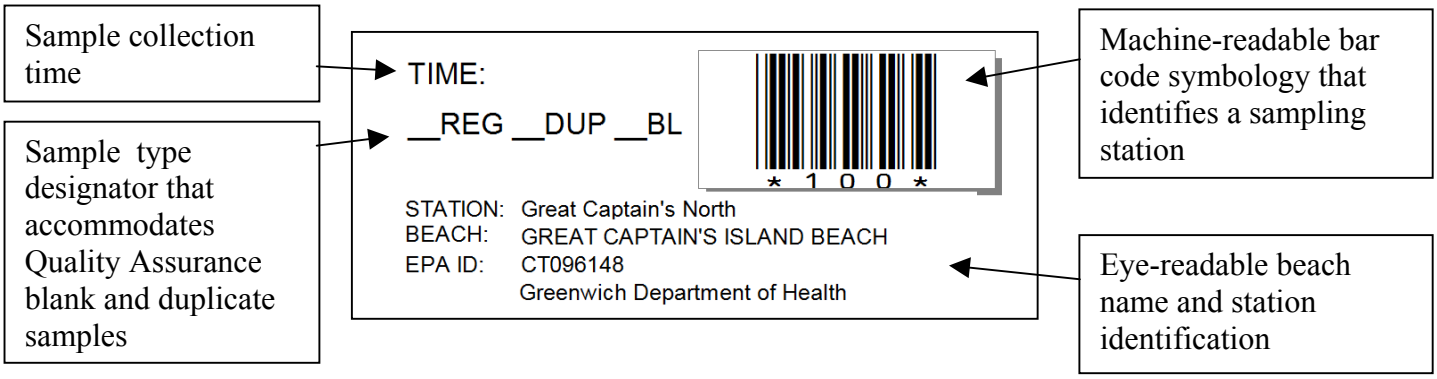
geomean_summary_2010.txt

```
GEOMEAN REPORT SUMMARY FOR 2010    Filename: geomean_summary_2010.txt   Produced on: 6/24/2011 12:49:42 PM
For best printing results: print in landscape orientation and set top and bottom margins to 0.75 inch

The software detected 1709 rolling set(s) of 5 consecutive sample results for sampling stations with
monitoring data. This report shows those 341 set(s) of 5 consecutive samples with a geometric mean > 35 that
may or may not contain one or more sample results >104 (MPN or CFU/100ml). 46 out of 61 beaches reporting
monitoring data for 2010 generated these 341 set(s) of 5 sample results with geometric mean >35.

Confirming: The software scanned 61 beach(es) and 1709 five (5) sample sets to detect 341 set(s) with a
geometric mean > 35.


The software counts:
     202 UNIQUE exceedance(s) found in all 5 sample sets.

     46 beach(es) with one or more rolling geometric means >35.
     45 beach(es) with one or more 5 sample sets with geomean >35 that contained one or more exceedances.
     1 beach(es) with all sets of rolling geomean>35 that had no exceedances.

     [illegible] station(s) with one or more rolling geometric means >35.
     [illegible] 5 station(s) with one or more 5 sample sets with geomean >35 that contained one or more exceedances.
     2 station(s) with all sets of rolling geomean>35 that had no exceedances.


The software counts:
     7 beach(es) with one or more 5-sample sets with geomean >35 that have no exceedances
     7 station(s) with one or more 5-sample sets with geomean >35 sets that have no exceedances.
     31 beach(es) that had one or more 5-sample sets with geomean >35 and log standard deviation <0.70
     7 beaches that had one or more 5 sample sets with: geomean >35, LogSTD <0.70, and no exceedances

The software scanned the 5 sample sets for resamples 1 or 2 days after each exceedance sample and found:
     135 resample(s) following exceedances
     26 resample(s) >104 CFU/100ml
     109 resample(s) <= 104 CFU/100ml

The software scanned the 5 sample sets with geomean >35 for the distribution of exceedances and found:
     8 set(s) with 0 exceedances - 2.3 cumulative %
     122 set(s) with 1 exceedances - 38.1 cumulative %
     167 set(s) with 2 exceedances- 87.1 cumulative %
     36 set(s) with 3 exceedances - 97.7 cumulative %
     7 set(s) with 4 exceedances - 99.7 cumulative %
     1 set(s) with 5 exceedances - 100 cumulative %
```

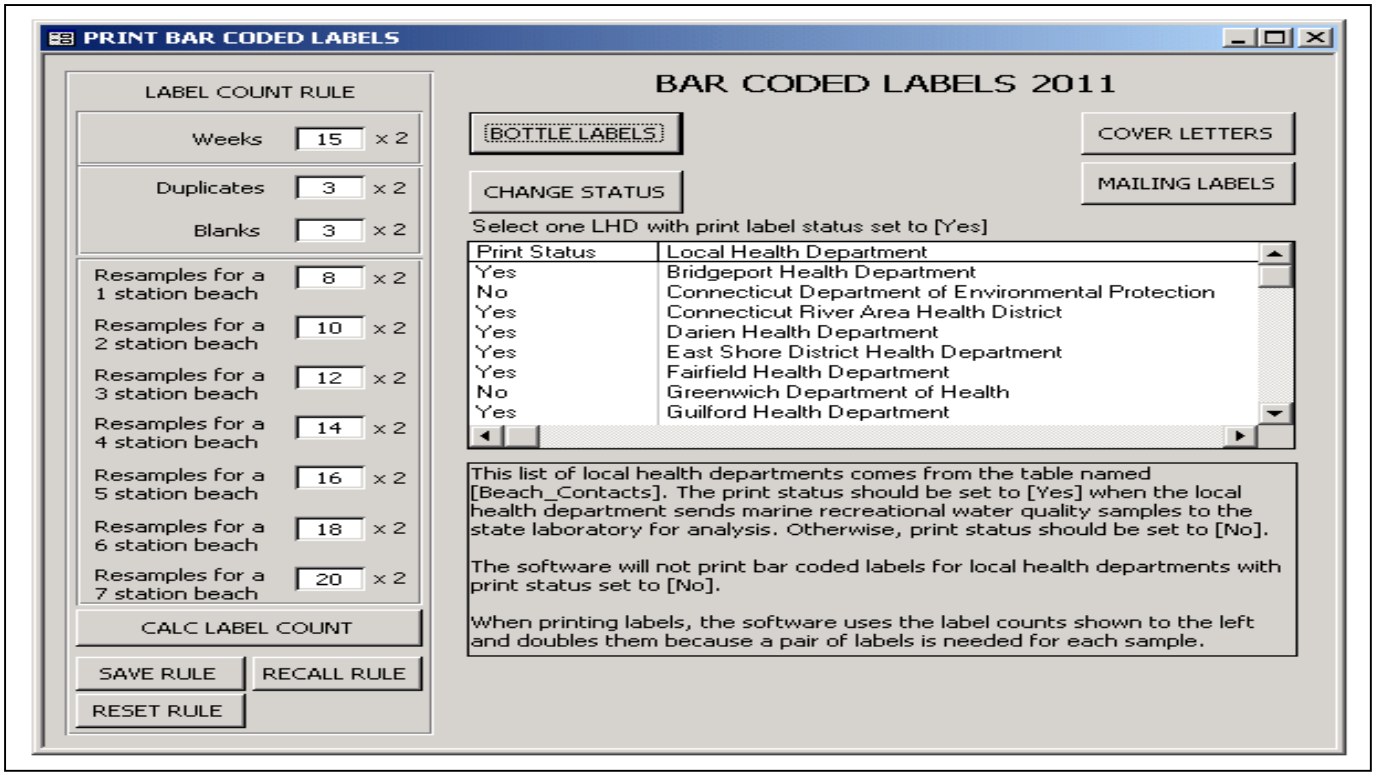
The complete discussion of rolling geometric mean with summary data starts on page 110. An introduction to the rolling geometric mean report is found on page 44.

3.1.11 BAR CODING FOR RECREATIONAL WATER SAMPLE BOTTLES

For the US EPA Beach Grant the central challenge of recreational water quality monitoring is correctly associating each analytic result reported by a laboratory with a geo-located place on Earth. This means associating the data imprinted or written on a bottle label with both a location and with the analytic results data rendered after the water in the bottle was collected. With appropriate adoption, pre-printed waterproof sample bottle labels that are both eye and machine-readable may help by allowing people to confirm the origin of the sample while allowing a bar code scanner to capture a sampling station identifier and enter it directly into the laboratory information management database.



A utility to manage and print bar coded sample bottle labels is now embedded in the beach data management software. It permits: a) setting the label count rule for sampling stations for an entire bathing season; b) printing sheets of labels for selected local health departments; and c) printing cover letters to accompany sets of bar coded labels.



Label sheets are printed with a local health department and beach name marker label to identify a set of labels for a beach and a station name marker label to identify the labels for each sampling station at the beach.

While printing bar coded sample bottle labels is fully functional, the labels have not yet been deployed to the field nor has laboratory sample intake software been programmed to read bar codes.

The software is fully described in another document.

4.0 PROGRAM SCOPE AND INVENTORY

4.1 CONNECTICUT SHORELINE AT-A-GLANCE

Connecticut's distributed beach monitoring effort takes place in the real world along the shoreline that borders Long Island Sound - a large and complex natural estuary with an estimated volume of 8 trillion US gallons (30 km^3) - that is bounded on the north side largely by Connecticut and on the southern edge by Long Island, New York. This estuary has a tidal gradient and a salinity gradient ranging from 23 to 33 parts per thousand (ppt) and opens onto the Atlantic Ocean near Stonington, Connecticut. From west to east the Housatonic, Connecticut, and Thames Rivers each drain freshwater into Long Island Sound.

The Connecticut Department of Energy and Environmental Protection issued the *Connecticut Coastal Shoreline Statistics Project* report (2006) that summarizes Long Island Sound and the Connecticut shoreline this way:

1065.2	miles of shoreline	-	are in contact with coastal waters having salinity no less than 0.5 ppt. This shoreline extent includes: Long Island Sound Direct Contact miles; Bay, Harbor and Cove miles; major and minor river miles; island miles; and shoreline miles in contact with artificial fill.
218.7	miles of shoreline	-	are in contact with Bays, Harbors and Coves.
113.3	miles of shoreline	-	are in Direct Contact with LIS.
332.0	miles of shoreline	-	are either in Direct Contact with LIS or in contact with Bays, Harbors and Coves.
88.0	miles of shoreline	-	are either sandy or mixed sand and gravel and found either in Direct Contact with LIS or along Bays, Harbors or Coves.

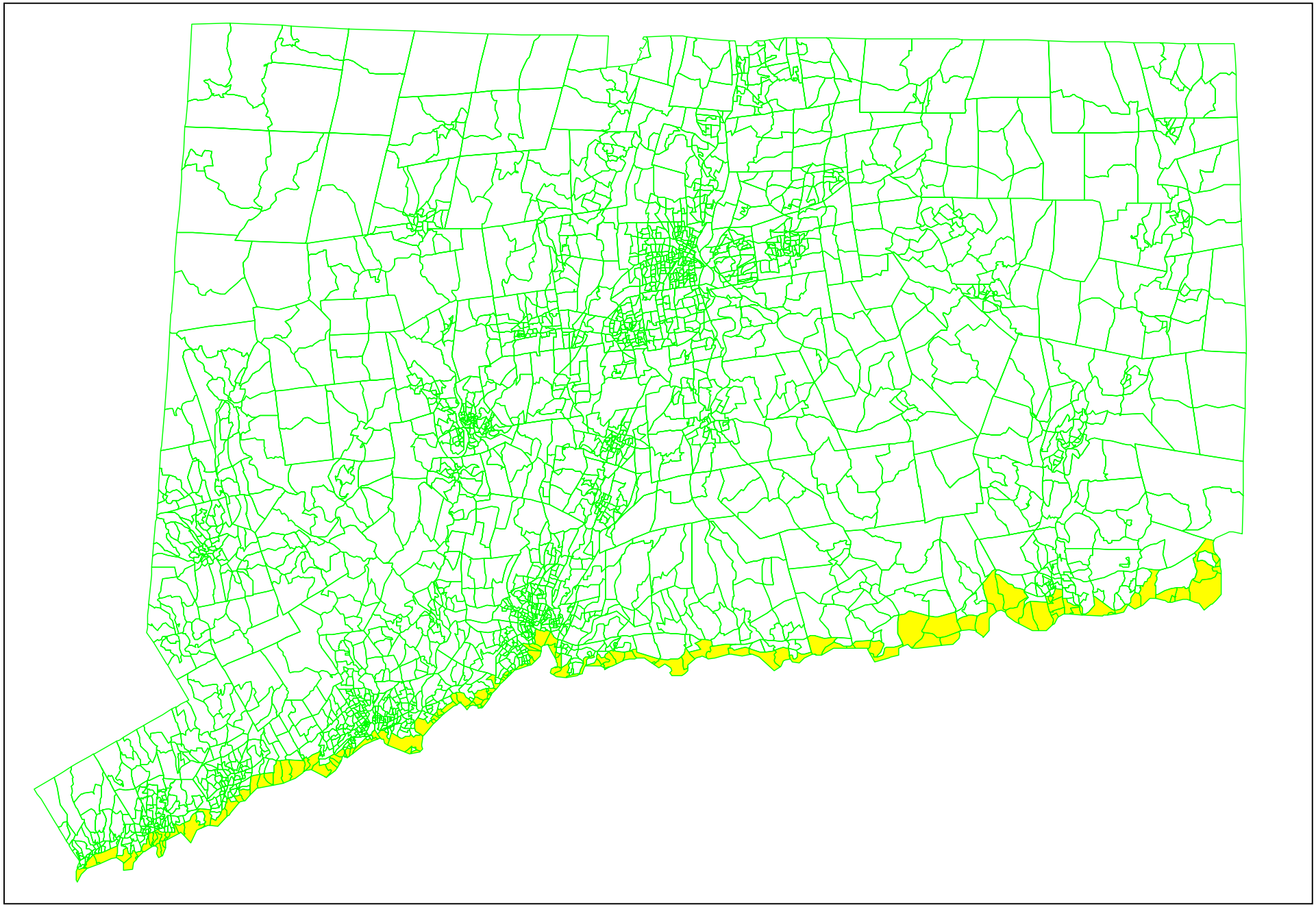
The *2000 Census* indicates there were approximately 66,000 occupied housing units found in the 133 square miles of the 136 census block groups immediately adjacent to Long Island Sound. Connecticut is no exception to the net population migration to the nation's coastal zone that now holds approximately 53% of the United States' population.

For this discussion there are twenty four (24) Connecticut municipalities (i.e. towns) along the shoreline that are currently served by 19 local health departments and districts. These twenty four (24) towns regulated 69 marine bathing areas in 2011. In addition, there are four (4) state parks along the shoreline with marine swimming beaches. These are managed by DEEP (that also manages 17 inland state parks with freshwater swimming areas - not described in this report) for a total of 73 regulated marine bathing areas that we track for the US EPA Beach Grant. These 73 beaches have 137 marine sample collection stations.

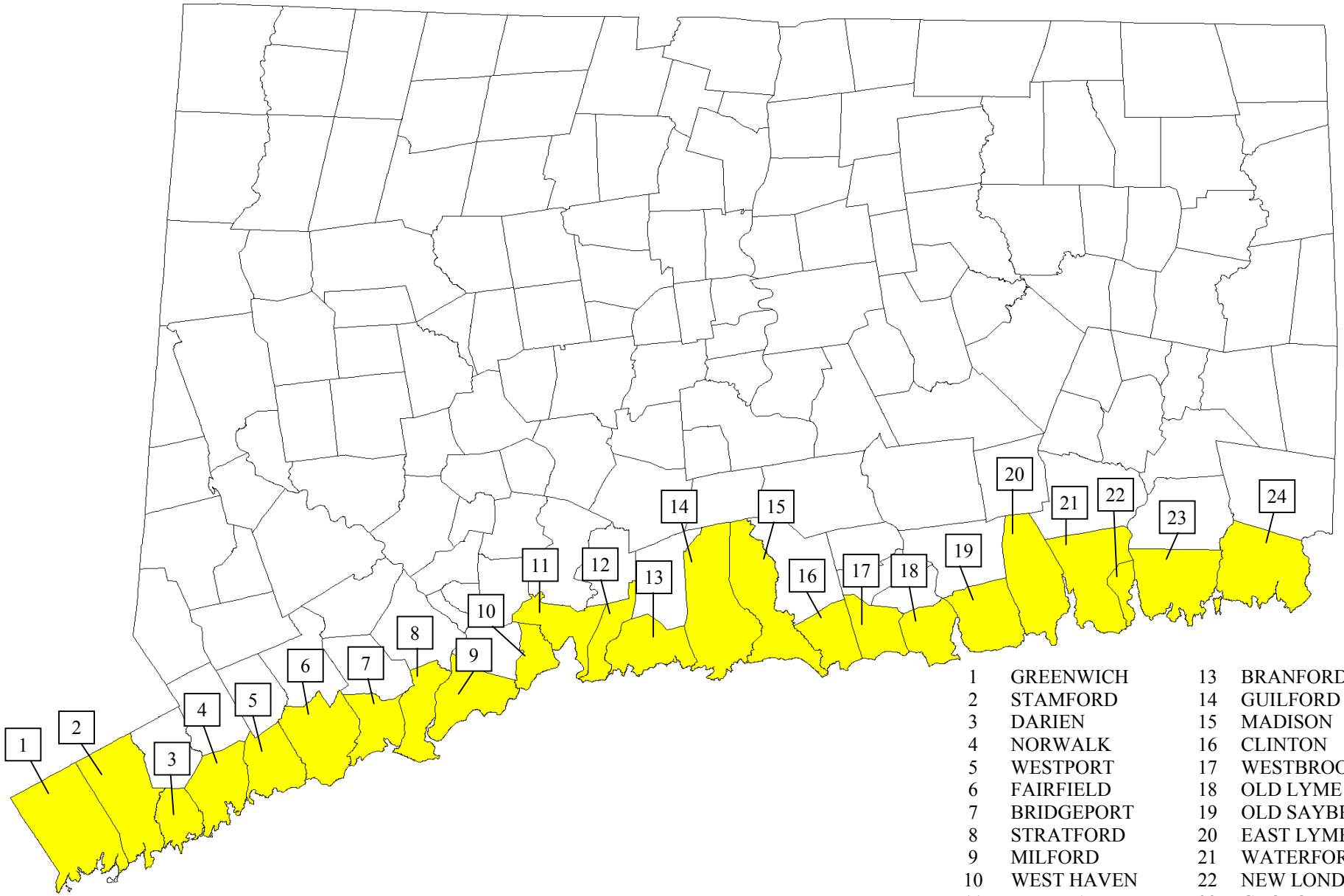
24	MUNICIPALITIES
19	LOCAL HEALTH DEPARTMENTS
69	BEACHES REGULATED BY LOCAL HEALTH DEPARTMENTS
4	STATE PARK BEACHES REGULATED BY DEP
137	SAMPLING STATIONS
15.48	REGULATED BEACH MILES ARE TRACKED FOR THE US EPA BEACH GRANT

We know the locations of the beach end points and sampling stations for each of these tracked beaches as well as the organizations that are responsible for public health at these swimming areas.

4.2 CONNECTICUT SHORELINE CENSUS 2000 BLOCK GROUPS

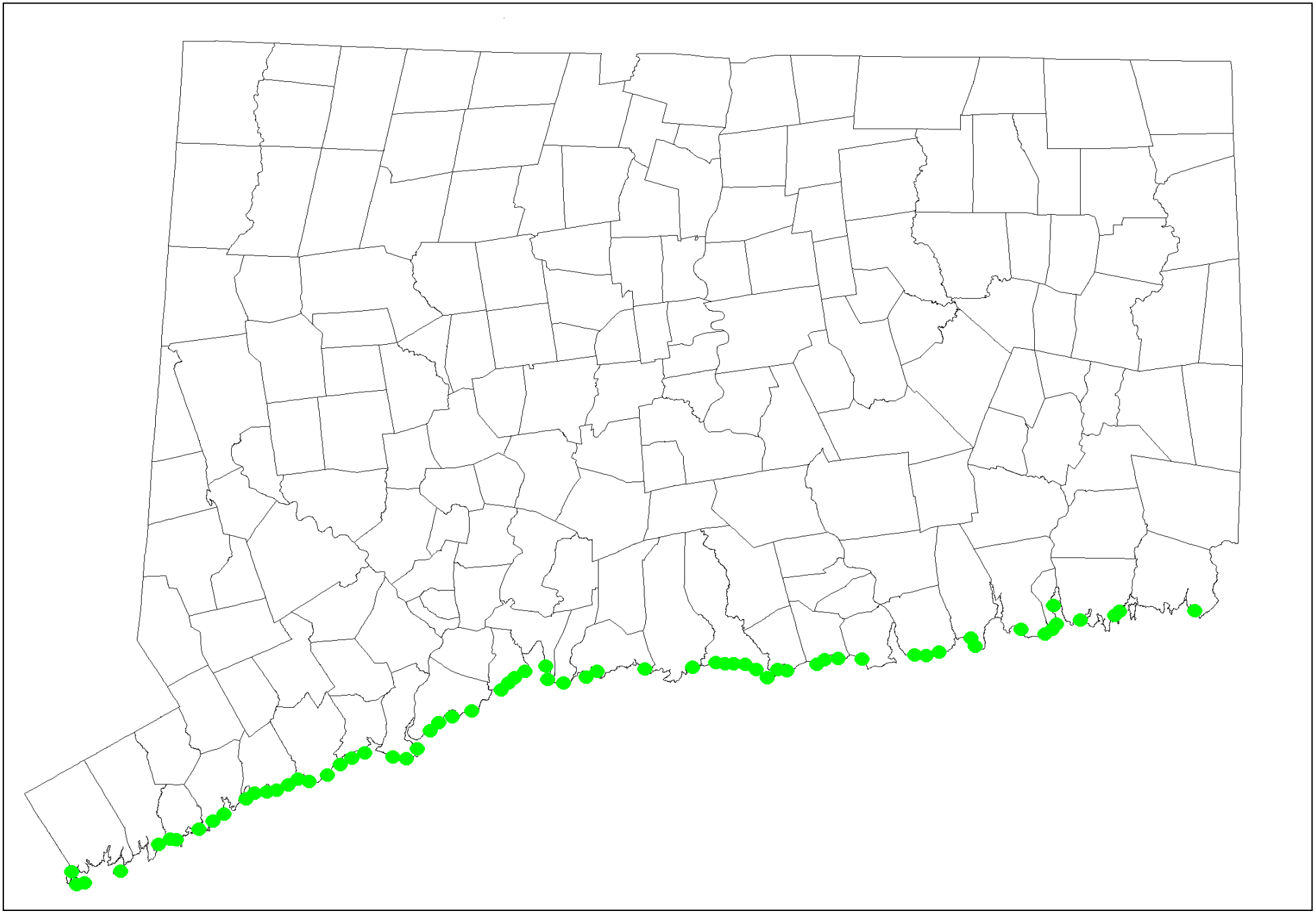


4.3 CONNECTICUT SHORELINE MUNICIPALITIES



1	GREENWICH	13	BRANFORD
2	STAMFORD	14	GUILFORD
3	DARIEN	15	MADISON
4	NORWALK	16	CLINTON
5	WESTPORT	17	WESTBROOK
6	FAIRFIELD	18	OLD LYME
7	BRIDGEPORT	19	OLD SAYBROOK
8	STRATFORD	20	EAST LYME
9	MILFORD	21	WATERFORD
10	WEST HAVEN	22	NEW LONDON
11	NEW HAVEN	23	GROTON
12	EAST HAVEN	24	STONINGTON

4.4 SHORELINE SAMPLING STATIONS (●) AT 73 REGULATED MARINE BATHING AREAS (BEACHES) FOR 2011



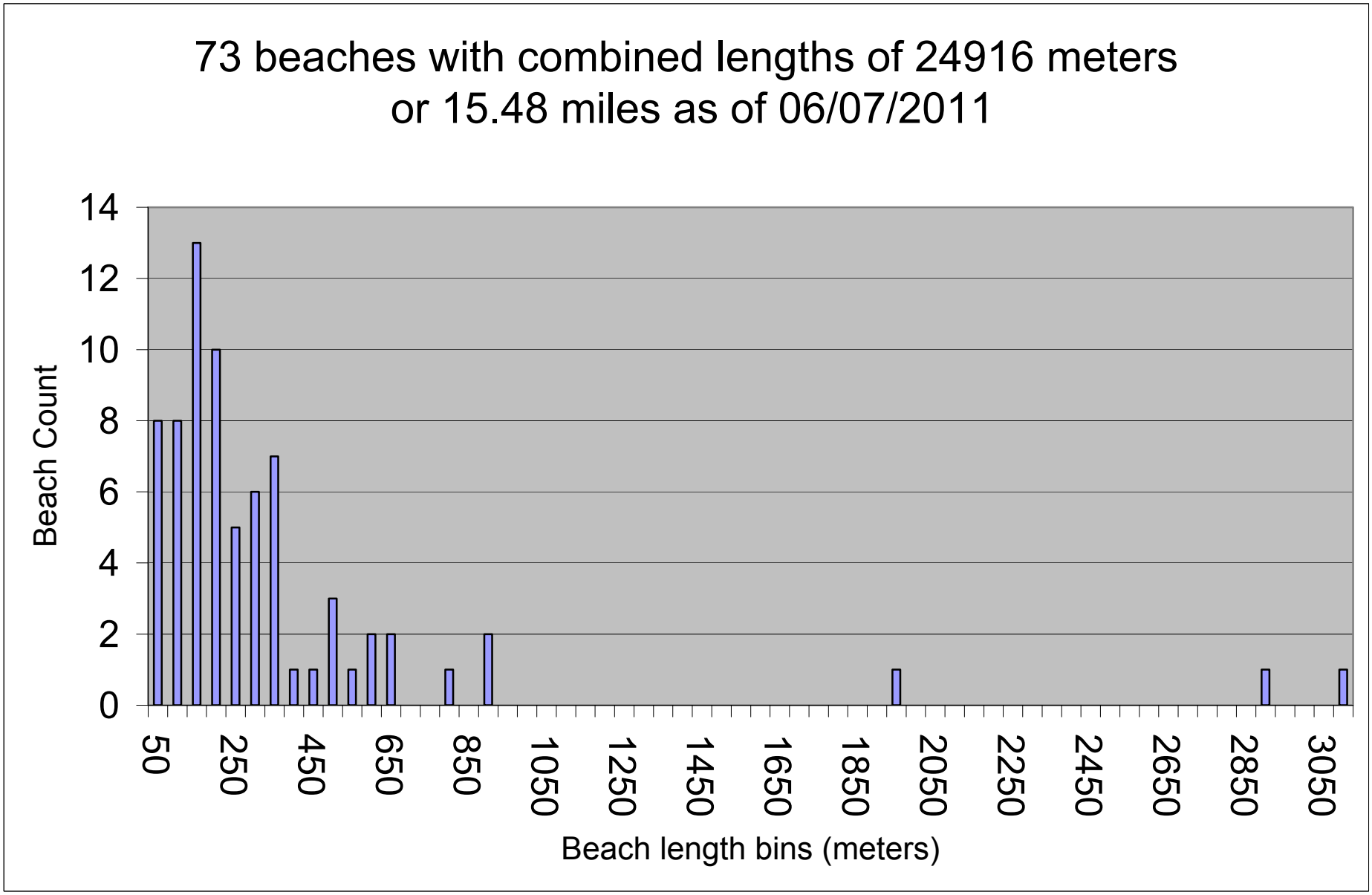
4.5 US EPA BEACH GRANT BEACHES LISTED IN SHORELINE ORDER FROM WEST TO EAST FOR 2003 - 2011

BEACH NAME	TOWN	ORGANIZATION
GREAT CAPTAIN'S ISLAND BEACH	GREENWICH	Greenwich Department of Health
BYRAM BEACH	GREENWICH	Greenwich Department of Health
ISLAND BEACH	GREENWICH	Greenwich Department of Health
GREENWICH POINT BEACH	GREENWICH	Greenwich Department of Health
WEST BEACH	STAMFORD	Stamford Health Department
CUMMINGS BEACH	STAMFORD	Stamford Health Department
QUIGLEY BEACH	STAMFORD	Stamford Health Department
EAST (COVE ISLAND) BEACH	STAMFORD	Stamford Health Department
WEED BEACH	DARIEN	Darien Health Department
PEAR TREE POINT BEACH	DARIEN	Darien Health Department
BELL ISLAND BEACH	NORWALK	Norwalk Health Department
ROWAYTON BEACH	NORWALK	Norwalk Health Department
HICKORY BLUFF BEACH	NORWALK	Norwalk Health Department
MARVIN BEACH	NORWALK	Norwalk Health Department
CALF PASTURE BEACH	NORWALK	Norwalk Health Department
SHADY BEACH	NORWALK	Norwalk Health Department
COMPO BEACH	WESTPORT	Westport Weston Health District
SHERWOOD ISLAND STATE PARK BEACH	WESTPORT	Connecticut Department of Energy and Environmental Protection
BURYING HILL BEACH	WESTPORT	Westport Weston Health District
SOUTHPORT BEACH	FAIRFIELD	Fairfield Health Department
SASCO BEACH	FAIRFIELD	Fairfield Health Department
SOUTH PINE CREEK BEACH	FAIRFIELD	Fairfield Health Department
PENFIELD BEACH	FAIRFIELD	Fairfield Health Department
JENNINGS BEACH	FAIRFIELD	Fairfield Health Department
SEASIDE PARK BEACH	BRIDGEPORT	Bridgeport Health Department
LONG BEACH (PROPER)	STRATFORD	Stratford Health Department
LONG BEACH (MARNICK'S)	STRATFORD	Stratford Health Department
SHORT BEACH	STRATFORD	Stratford Health Department
WALNUT BEACH	MILFORD	Milford Health Department
SILVER SANDS STATE PARK BEACH	MILFORD	Connecticut Department of Energy and Environmental Protection

BEACH NAME	TOWN	ORGANIZATION
GULF BEACH	MILFORD	Milford Health Department
ANCHOR BEACH (MERWIN POINT) #1	MILFORD	Milford Health Department
ANCHOR BEACH (MERWIN POINT) #2	MILFORD	Milford Health Department
WOODMONT BEACH	MILFORD	Milford Health Department
WEST HAVEN WEST BEACH (taken out of service in 2011)	WEST HAVEN	West Haven Health Department
SOUTH STREET BEACH (new 2011)	WEST HAVEN	West Haven Health Department
SEAVIEW BEACH (new 2011)	WEST HAVEN	West Haven Health Department
DAWSON BEACH (new 2011)	WEST HAVEN	West Haven Health Department
SEABLUFF BEACH (new 2011)	WEST HAVEN	West Haven Health Department
WEST HAVEN EAST BEACH (taken out of service in 2011)	WEST HAVEN	West Haven Health Department
ROCK STREET BEACH (new 2011)	WEST HAVEN	West Haven Health Department
OAK STREET A BEACH (new 2011)	WEST HAVEN	West Haven Health Department
OAK STREET B BEACH (new 2011)	WEST HAVEN	West Haven Health Department
ALTSCHULER BEACH (new 2011)	WEST HAVEN	West Haven Health Department
MORSE BEACH (new 2011)	WEST HAVEN	West Haven Health Department
FORT HALE PARK BEACH (new 2011)	NEW HAVEN	New Haven Health Department
LIGHTHOUSE POINT BEACH	NEW HAVEN	New Haven Health Department
EAST HAVEN TOWN BEACH	EAST HAVEN	East Shore District Health Department
CLARK AVENUE BEACH	BRANFORD	East Shore District Health Department
BRANFORD POINT BEACH	BRANFORD	East Shore District Health Department
STONY CREEK BEACH	BRANFORD	East Shore District Health Department
JACOBS BEACH (TOWN BEACH)	GUILFORD	Guilford Health Department
SURF CLUB BEACH	MADISON	Madison Health Department
WEST WHARF BEACH	MADISON	Madison Health Department
EAST WHARF BEACH	MADISON	Madison Health Department
PENT ROAD BEACH	MADISON	Madison Health Department
HAMMONASSET BEACH STATE PARK BEACH	MADISON	Connecticut Department of Energy and Environmental Protection
ESPOSITO BEACH (taken out of service in 2007)	CLINTON	Connecticut River Area Health District
TOWN BEACH	CLINTON	Connecticut River Area Health District
WESTBROOK TOWN BEACH/WEST BEACH	WESTBROOK	Town of Westbrook

BEACH NAME	TOWN	ORGANIZATION
MIDDLE BEACH/STANNARD BEACH	WESTBROOK	Town of Westbrook
HARVEY'S BEACH	OLD SAYBROOK	Connecticut River Area Health District
TOWN BEACH	OLD SAYBROOK	Connecticut River Area Health District
WHITE SANDS BEACH	OLD LYME	Town of Old Lyme
SOUNDVIEW BEACH	OLD LYME	Town of Old Lyme
ROCKY NECK STATE PARK BEACH	EAST LYME	Connecticut Department of Energy and Environmental Protection
MCCOOK POINT BEACH	EAST LYME	Ledge Light Health District
HOLE-IN-THE-WALL BEACH	EAST LYME	Ledge Light Health District
KIDDIE'S BEACH (taken out of service in 2011)	WATERFORD	Ledge Light Health District
PLEASURE BEACH	WATERFORD	Ledge Light Health District
WATERFORD TOWN BEACH	WATERFORD	Ledge Light Health District
OCEAN BEACH PARK	NEW LONDON	Ledge Light Health District
GREEN HARBOR BEACH	NEW LONDON	Ledge Light Health District
EASTERN POINT BEACH	GROTON	Ledge Light Health District
ESKER POINT BEACH	GROTON	Ledge Light Health District
NOANK DOCK	GROTON	Ledge Light Health District
DUBOIS BEACH	STONINGTON	Town of Stonington Health Department

4.5.1 CONNECTICUT REGULATED MARINE BATHING LENGTH DISTRIBUTION



5.0 PERFORMANCE CRITERIA

Responsibilities that come with accepting US EPA Beach Grant funding include maintaining and meeting selected performance criteria. For Connecticut these include:

- Beach classification plan (p. 60);
- Tiered beach list based on the beach classification plan (p. 63);
- Beach monitoring program (including sampling for Quality Assurance) (p. 66);
- Collecting and reporting beach data (p. 73); and
- Public notification and Web page devoted exclusively to beach information (p. 75)

Each performance criterion, starting with the beach classification plan, will be discussed in turn and presented here with supporting documentation.

5.1 BEACH CLASSIFICATION PLAN

US EPA requires a beach classification or tiered monitoring plan. Each Beach Grant state has been free to develop its own classification plan to meet its particular beach management goals. State classification plans may not be comparable and the tiered beach lists generated by these various plans are probably not useful tools to compare beaches between and among coastal states. Over time it may be useful to compare the yearly tiered beach lists for a state providing the classification plan for that state has remained the same. Changes to the tiered list status of a beach combined with other beach data may help a beach manager better understand some environmental dynamics operating at the beach.

Connecticut's Tiered Monitoring Plan for Coastal Beaches has three (3) parts. They are: 1) Beach Use Categories, 2) Beach Classification Scheme and 3) Risk Based Tiered Beach Classification Scheme Sampling Design.

BEACH USE CATEGORIES

Beach Status	Explanation
Open	Meets the minimum recommended sampling requirements and currently meets state standards for indicator bacteria concentrations.
Closed/Advisory	Beach may not be suitable for swimming or other water contact activities due to high concentration of indicator bacteria or observed contamination.
Not Monitored	Beach does not meet minimum recommended sampling requirements.

BEACH CLASSIFICATION SCHEME[1]

Classification	Definition	Notes
Tier I	Meets the minimum recommended sampling requirements and frequency and No more than one (1) closure occurrence during previous bathing season.	Beach sampled weekly; **and** 0 or 1 closure event/season
Tier II	Meets the minimum recommended sampling requirements and frequency and No more than three (3) closure occurrences during the previous bathing season.	Beach sampled weekly; **and** 2 or 3 closure events/season
Tier III	Does not meet minimum recommended sampling requirements and frequency or more than three (3) closures occurrences during the previous bathing season or beaches not monitored.	Beach **not** sampled weekly; **or** more than 3 closure events/season

[1] The beach classification scheme is used each year to generate the tiered beach list.

PLEASE NOTE: For Connecticut Beach Tier is a calculated value based on the monitoring frequency for a beach and count of closing events for that beach. Beach Tier is calculated at the end of the bathing season. Beach Tier is not related to bather loading, nor is beach Tier used to assign the number of sampling stations or their location at a beach.

RISK BASED TIERED BEACH CLASSIFICATION SCHEME SAMPLING DESIGN

Risk Categories	Tier I	Tier II	Tier III
1. Minimum Sampling Frequency	One week before opening of beach through beach closing at end of season: one sample per station per week.	Same	Non-compliant with minimum sampling frequency.
2. Designated Sample Locations	Beach length ≤ 300 ft. recommends at least one sample location. Beach length > 300 ft. and ≤ 700 ft. recommends at least 2 sample locations. Beach length > 700 ft. recommends 3 or more sample locations.	Same	Non-compliant with sample location guidance.
3. Sample Depth	Collected 12" - 18" below surface in water 3 – 4 feet deep.	Same	N/A
4. Sanitary Survey	Inspect beach grounds and watershed prior to bathing season.	Same	N/A
5. Additional Sampling Criteria			
5.1 Water quality violation and re-opening after closure/advisory	Re-sample; public notification.	Same	N/A
5.2 Sewage spill or pollution event	Re-sample; public notification.	Same	N/A
5.3 Bather load	High bather loads/concentrations may justify additional sample collection.	Same	N/A
5.4 Point sources such as culverts, drainage pipes, or CSOs	Recommends that additional samples be collected after rain events.	Same	N/A
5.5 Waterfowl	Recommends additional samples if waterfowl congregate on the beach or in the designated beach area.	Same	N/A
5.6 Sanitary Survey Information	Recommends additional samples be collected after rain events when beach may be impacted by potential non-point contamination.	Same	N/A

5.2 CONNECTICUT TIERED BEACH LIST FOR 2003-2011 BATHING SEASONS

US EPA ID	COUNTY	BEACH NAME	2003 Tier[1]	2004 Tier[1]	2005 Tier[2]	2006 Tier[2]	2007 Tier[2]	2008 Tier[2]	2009 Tier[2]	2010 Tier[2]	2011 Tier[2]
CT473427	NEW HAVEN	ALTSCHULER BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT974464	NEW HAVEN	ANCHOR BEACH (MERWIN POINT) #1	1	1	1	1	1	1	1	1	2
CT400424	NEW HAVEN	ANCHOR BEACH (MERWIN POINT) #2	1	1	1	1	1	1	1	1	2
CT200292	FAIRFIELD	BELL ISLAND BEACH	2	2	2	2	1	1	1	1	2
CT001209	NEW HAVEN	BRANFORD POINT BEACH	1	1	1	1	1	1	1	1	1
CT730976	FAIRFIELD	BURYING HILL BEACH	2	1	3	3	1	1	1	1	2
CT872506	FAIRFIELD	BYRAM BEACH	3	3	3	3	3	3	3	3	3
CT003939	FAIRFIELD	CALF PASTURE BEACH	2	2	2	2	1	1	2	2	2
CT409818	NEW HAVEN	CLARK AVENUE BEACH	1	1	2	1	1	1	1	1	1
CT135112	FAIRFIELD	COMPO BEACH	2	1	3	3	1	1	1	1	2
CT728213	FAIRFIELD	CUMMINGS BEACH	3	3	3	3	2	3	3	2	3
CT261657	NEW HAVEN	DAWSON BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT340493	NEW LONDON	DUBOIS BEACH	1	1	1	1	1	1	3	3	3
CT085278	FAIRFIELD	EAST (COVE ISLAND) BEACH	3	3	3	3	3	3	3	2	3
CT091682	NEW HAVEN	EAST HAVEN TOWN BEACH	1	1	1	1	1	1	1	1	1
CT153336	NEW HAVEN	EAST WHARF BEACH	1	1	1	1	1	1	1	1	1
CT705857	NEW LONDON	EASTERN POINT BEACH	1	1	1	1	1	1	1	1	1
CT434367	NEW LONDON	ESKER POINT BEACH	1	1	1	1	1	1	1	1	1
CT104944	MIDDLESEX	ESPOSITO BEACH (out of service in 2007)	1	2	1	1	n/a	n/a	n/a	n/a	n/a
CT946887	NEW HAVEN	FORT HALE PARK BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1
CT096148	FAIRFIELD	GREAT CAPTAIN'S ISLAND BEACH	1	2	1	1	1	1	1	1	2
CT496693	NEW LONDON	GREEN HARBOR BEACH	1	1	1	1	1	1	1	1	1
CT486090	FAIRFIELD	GREENWICH POINT BEACH	3	3	3	3	3	3	3	1	3
CT910056	NEW HAVEN	GULF BEACH	1	1	1	1	1	1	1	1	2
CT964700	NEW HAVEN	HAMMONASSET STATE PARK BEACH	1	1	1	1	1	1	1	1	1
CT766006	MIDDLESEX	HARVEY'S BEACH	1	1	1	1	1	1	2	1	1
CT010924	FAIRFIELD	HICKORY BLUFF BEACH	2	2	2	2	1	1	1	1	2
CT103938	NEW LONDON	HOLE-IN-THE-WALL BEACH	1	1	1	1	1	1	1	1	1
CT101236	FAIRFIELD	ISLAND BEACH	1	2	1	1	1	1	1	2	2
CT303093	NEW HAVEN	JACOBS BEACH (TOWN BEACH)	1	1	1	1	1	1	2	1	1
CT306507	FAIRFIELD	JENNINGS BEACH	3	1	2	1	1	1	1	1	3
CT303091	NEW LONDON	KIDDIE'S BEACH (out of service in 2011)	1	1	1	1	1	1	1	1	n/a
CT760987	NEW HAVEN	LIGHTHOUSE POINT BEACH	1	2	1	2	1	1	1	1	3
CT449733	FAIRFIELD	LONG BEACH (MARNICK'S)	1	3	2	3	2	2	2	2	2
CT921236	FAIRFIELD	LONG BEACH (PROPER)	1	3	3	3	2	2	2	2	2

US EPA ID	COUNTY	BEACH NAME	2003 Tier[1]	2004 Tier[1]	2005 Tier[2]	2006 Tier[2]	2007 Tier[2]	2008 Tier[2]	2009 Tier[2]	2010 Tier[2]	2011 Tier[2]
CT023928	FAIRFIELD	MARVIN BEACH	2	2	2	2	1	1	1	1	2
CT120292	NEW LONDON	MCCOOK POINT BEACH	1	1	1	1	1	1	1	1	1
CT221030	MIDDLESEX	MIDDLE BEACH/STANNARD BEACH	1	1	1	1	1	1	1	1	1
CT555601	NEW HAVEN	MORSE BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT110195	NEW LONDON	NOANK DOCK	1	1	1	1	1	1	1	1	1
CT143225	NEW HAVEN	OAK STREET A BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT816057	NEW HAVEN	OAK STREET B BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT407959	NEW LONDON	OCEAN BEACH PARK	1	1	1	1	1	1	1	1	1
CT927883	FAIRFIELD	PEAR TREE POINT BEACH	3	3	2	3	3	3	2	1	3
CT080788	FAIRFIELD	PENFIELD BEACH	3	1	2	1	1	1	1	1	3
CT320303	NEW HAVEN	PENT ROAD BEACH	1	1	1	1	1	1	1	1	1
CT079164	NEW LONDON	PLEASURE BEACH	1	1	1	1	1	1	1	1	1
CT202901	FAIRFIELD	QUIGLEY BEACH	3	3	3	3	2	3	3	2	3
CT914597	NEW HAVEN	ROCK STREET BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT207829	NEW LONDON	ROCKY NECK STATE PARK BEACH	1	1	1	1	1	1	1	3	2
CT200291	FAIRFIELD	ROWAYTON BEACH	2	2	2	2	1	1	1	1	2
CT634478	FAIRFIELD	SASCO BEACH	3	1	2	1	1	1	1	1	3
CT597147	NEW HAVEN	SEABLUFF BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT404927	FAIRFIELD	SEASIDE PARK BEACH	1	1	2	1	1	1	1	1	1
CT112011	NEW HAVEN	SEAVIEW BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT022992	FAIRFIELD	SHADY BEACH	2	2	2	2	1	1	2	2	3
CT299970	FAIRFIELD	SHERWOOD ISLAND STATE PARK BEACH	1	1	1	2	1	1	1	1	1
CT046814	FAIRFIELD	SHORT BEACH	1	3	3	3	2	3	2	2	2
CT222176	NEW HAVEN	SILVER SANDS STATE PARK BEACH	1	1	1	1	1	1	1	1	1
CT493837	NEW LONDON	SOUNDVIEW BEACH	1	1	1	1	1	1	1	1	1
CT428598	FAIRFIELD	SOUTH PINE CREEK BEACH	3	1	2	1	1	1	1	1	3
CT128305	NEW HAVEN	SOUTH STREET BEACH (new in 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT474040	FAIRFIELD	SOUTHPORT BEACH	3	1	2	1	1	1	1	1	3
CT224775	NEW HAVEN	STONY CREEK BEACH	1	1	1	1	1	1	1	1	1
CT386314	NEW HAVEN	SURF CLUB BEACH	1	1	1	1	1	1	1	1	1
CT104947	MIDDLESEX	TOWN BEACH (CLINTON)	1	2	1	1	2	1	2	2	3
CT996337	MIDDLESEX	TOWN BEACH (OLD SAYBROOK)	1	1	1	1	1	2	1	1	1
CT857174	NEW HAVEN	WALNUT BEACH	1	1	1	1	1	1	1	1	2
CT685151	NEW LONDON	WATERFORD TOWN BEACH	1	1	1	1	1	1	1	1	1
CT952269	FAIRFIELD	WEED BEACH	3	3	2	3	3	2	2	1	3

US EPA ID	COUNTY	BEACH NAME	2003 Tier[1]	2004 Tier[1]	2005 Tier[2]	2006 Tier[2]	2007 Tier[2]	2008 Tier[2]	2009 Tier[2]	2010 Tier[2]	2011 Tier[2]
CT992639	FAIRFIELD	WEST BEACH	3	3	3	3	2	3	3	2	3
CT399384	NEW HAVEN	WEST HAVEN EAST BEACH (out of service in 2011)	1	1	1	1	1	1	1	1	n/a
CT506928	NEW HAVEN	WEST HAVEN WEST BEACH (out of service in 2011)	1	1	1	1	1	1	1	1	n/a
CT210340	NEW HAVEN	WEST WHARF BEACH	1	1	1	1	1	1	1	1	1
CT939211	MIDDLESEX	WESTBROOK TOWN BEACH/WEST BEACH	1	1	1	1	1	1	1	1	1
CT282823	NEW LONDON	WHITE SANDS BEACH	1	1	1	1	1	1	1	1	1
CT351834	NEW HAVEN	WOODMONT BEACH	1	1	1	1	1	1	1	1	2

[1] Weekly monitoring frequency recommended by State of Connecticut *Guidelines* or self reported by local health department.
[2] Calculated using data from the US EPA Beach Survey submitted by local health departments and DEEP.

5.3 BEACH MONITORING PROGRAM

Beach monitoring in Connecticut proceeds according to the recommended *Guidelines*. They were developed by a working group of public health professionals known as the Public Health Workgroup that was convened jointly by DPH and DEEP in late 1988.

See: www.ct.gov/dph/publicbeaches where you can download a copy of the *Guidelines*.

The *Guidelines* are a comprehensive statement of policy regarding freshwater and marine beach monitoring as well as beach closure protocol. They were developed for use by local health departments and DEEP and they reflect adoption by Connecticut of US EPA water quality standards. This guidance focuses on protecting swimmers from human fecal contamination but accommodates other sources of pollution as well. For a thorough understanding of beach monitoring and beach closure protocol in Connecticut, please study the *Guidelines* in their entirety. They can be summarized for marine beaches as follows:

SUMMARY OF MONITORING PROTOCOL FOR MARINE BATHING AREAS

1. The recommended sampling frequency for tidal (marine) public bathing areas is weekly.

2. The number of sampling stations is governed by beach length.

   One (1) station minimum is recommended for beaches less than 300 linear feet in length

   Two (2) stations minimum are recommended for beaches between 300 and 700 linear feet in length

   Three (3) stations minimum are recommended for beaches longer than 700 linear feet

3. All bathing samples are to be collected under the auspices of the director of health for municipality beaches and under the auspices of DEEP for state park beaches.

4. Water samples are to be collected at a depth of 12 to 18 inches in standing marine water that is 3 to 4 feet deep.

5. Enterococcus is the fecal contamination indicator organism for marine water samples. US EPA approved methods are to be used to test for the concentration of this organism in water samples.

SUMMARY OF CLOSURE PROTOCOL FOR MARINE BATHING AREAS

1. A concentration of Enterococci equal to or less than 104 CFU/100ml is generally considered satisfactory for a **single sample** from a marine bathing area.

2. When a **single sample** has an Enterococci concentration greater than 104 CFU/ml, a resample is required and a sanitary survey should be conducted immediately to evaluate the suitability of the area for swimming - if no known sources of pollution have already been identified. If the survey reveals discharges of raw or partially treated sewage then the bathing area should be closed by the local director of health.

3. When using the enterococcal organism as a fecal contamination indicator, a running geometric mean for each sampling station is to be used. An acceptable running geometric mean for enterococcal indicator organism density for marine bathing waters is less than or equal to 35 for 5 samples per 30-day period.

4. If there is a known waste contamination event such as a sewage bypass or mechanical failure at a sewage treatment plant or a sewer line break/rupture beach closures may be recommended by the regulating local health department.

5. If sample results exceed the standards and a sanitary survey reveals no evidence of sewage contamination, the bathing area should be examined on an individual basis with consultation from DPH before any decision is made about beach closure.

6. If the bathing area is impacted by a mass of floating debris, the director of health may close the area to bathing for safety reasons.

7. The director of health may also want to consider bathing area closure based on rainfall data (n.b. this is known as a preemptive rainfall event closure).

SUMMARY OF BEACH CLOSURE NOTIFICATION AND REOPENING

1. A sign or flag indicating when a beach is closed should be posted in a conspicuous location at the beach such as the beach entrance.

2. Signs shall be posted with directions to the nearest public telephone for emergency use. The emergency telephone number may be 911 or the telephone numbers of the closest emergency response service.

3. If the local director of health deems it necessary to close a bathing beach, DPH should be advised of the closure by telephone as soon as possible after the closure but not less than 4 hours after the closure. Notification shall include the reason for the closure.

4. DPH shall be notified when any bathing beach has reopened along with the rationale for the reopening.

ADDITIONAL COMMENTS

1. By long standing practice and agreement, DEEP consults DPH prior to closing a state park beach.

☞ 2. Authorities regulating marine bathing areas in Connecticut may adopt standards that are more protective of public health than the standards detailed in the *Guidelines*.

5.3.1 THE ROLE OF THE DPH STATE LABORATORY

The Summer Beach Monitoring Program was established at the State Laboratory to detect the concentration of the fecal contamination indicator organism known as Enterococcus that may be found in submitted marine water samples. The State Laboratory runs this Program with support from the US EPA Beach Grant. Marine water sample analysis is available to local health departments along the shoreline. This service includes a courier pickup service with seasonal employees who collect water samples delivered by local health departments to several shoreline locations. The courier service transports these samples on ice to the State Laboratory for analysis.

The laboratory has adopted the US EPA approved Enterolert method that has a twenty four (24) hour turnaround time from receipt of a sample to analysis results. The State Laboratory calls a submitting local health department or DEEP when it detects a single sample exceedance of the 104 CFU/100ml standard (i.e. the sample result is greater than 104 CFU/100 ml). All results are mailed to local health departments and DEEP typically within 3-4 business days of sample processing. In addition, the State Laboratory provides sterile sample bottles to municipalities and DEEP.

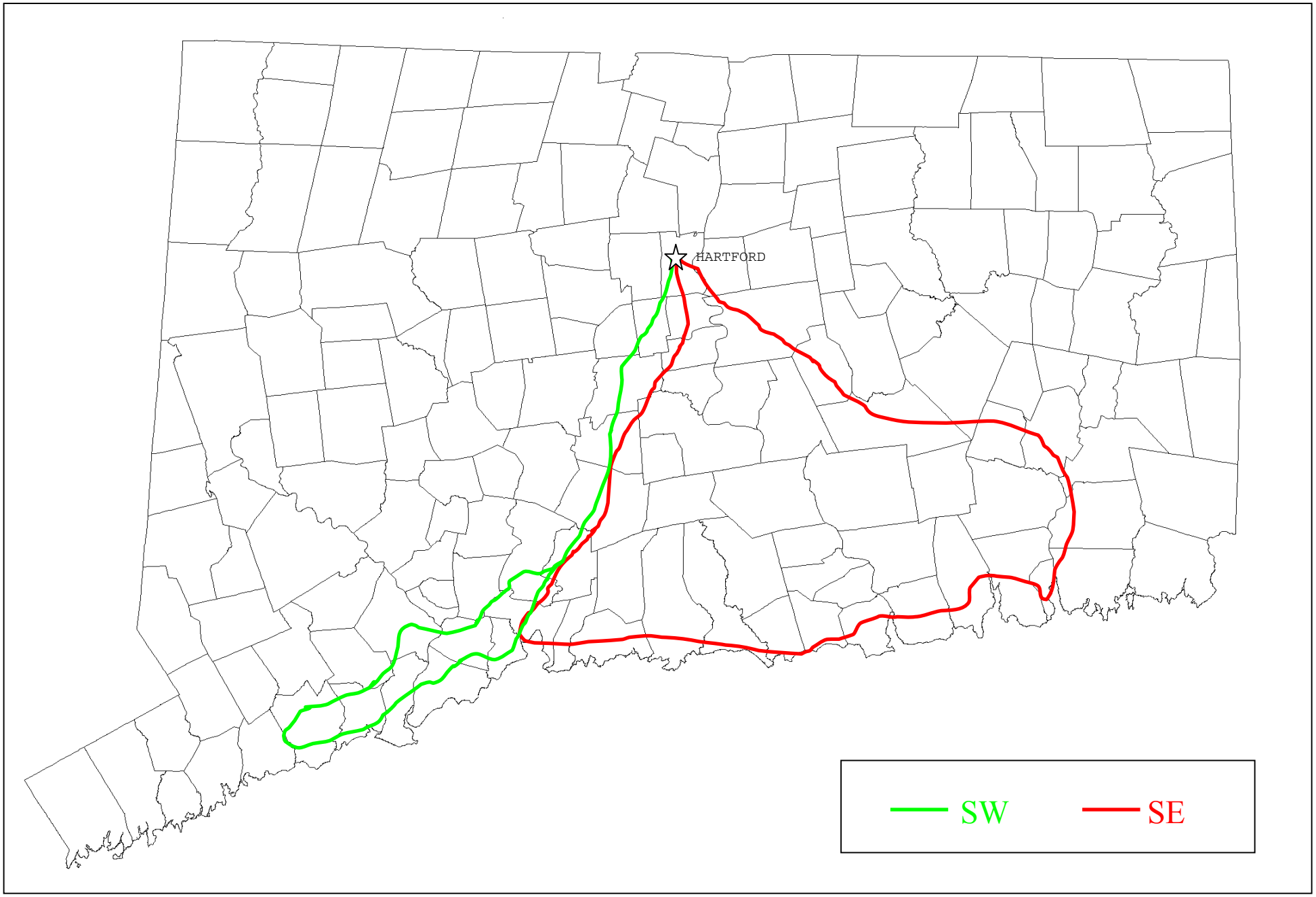
The Summer Beach Monitoring Program also supports the *Quality Assurance Project Plan For the Beach Monitoring and Notification Program For Connecticut Coastal Beaches(QAPP)* and accepts both blank and duplicate samples submitted by local health departments for beaches covered by the US EPA Beach Grant. See section 5.3.4 on page 71 and section 7.2.1 on page 88 for more information about the *QAPP*.

As mentioned earlier, sample results are stored in the Laboratory Information Management System (LIMS) where they are captured during the bathing season by DPH for further processing, validation and upload to US EPA at the end of the season.

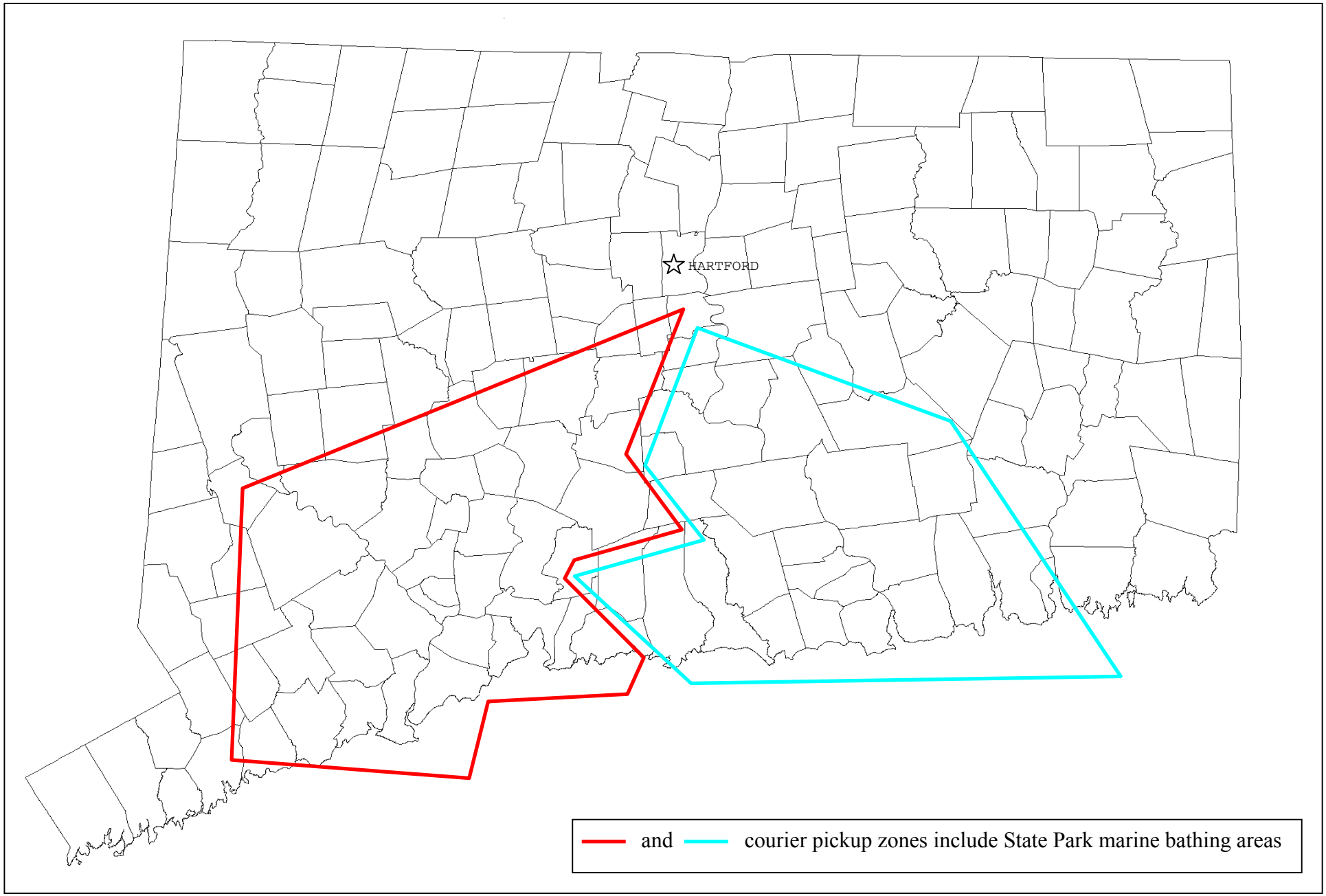
Many towns along the shoreline and DEEP use the State Laboratory Summer Beach Monitoring Program to monitor marine bathing water. DEEP maintains its own courier pickup service using seasonal employees to monitor state park beaches. In addition, monitoring results for state park beaches are sent directly to US EPA by DEEP.

Southwestern shoreline local health departments tend to use their own health department laboratories for summer beach monitoring. Several of these local health departments submit their monitoring results directly to DPH for inclusion in the Beach Grant data sets.

5.3.2 DPH MARINE BATHING AREA COURIER PICKUP ROUTES



5.3.3 DEEP MARINE BATHING AREA COURIER PICKUP ZONES



5.3.4 THE QUALITY ASSURANCE PROJECT PLAN (QAPP)

The US EPA Beach Grant is implemented in Connecticut according to both the work plan (described earlier) and *Quality Assurance Project Plan For the Beach Monitoring and Notification Program For Connecticut Coastal Beaches* (*QAPP*) (described in a separate document) that lays out the policies and procedures for the operation of the program. The *QAPP* was completed in February 2003 and approved in May of that year. In 2007 the *QAPP* was revised. Late in 2008 it was reviewed by US EPA and submitted to DPH for comments. The revised *QAPP* was approved by US EPA in late 2009. Its approval was renewed in 2011 for five (5) years.

The *QAPP* under revision was applied to the 2007, 2008, 2009 swimming seasons. The *QAPP* approved in 2009 was applied to the 2010 swimming season and the QAPP with renewed approval in 2011 was applied to 2011 swimming season. Our goal for each of these seasons was to collect one (1) blank and one (1) matching duplicate-sample pair for each **quality assurance beach** for each of the three (3) summer months that define our marine swimming season.

A **quality assurance beach** is one for which recreational water quality monitoring samples are submitted to the State Laboratory.

See section 7.2.1 on page 88 for the recreational water quality monitoring results generated by application of the *QAPP*.

5.3.5 THE ROLE OF LOCAL HEALTH DEPARTMENTS AND DEEP

Connecticut has 169 towns and cities (i.e. municipalities) and is considered by some to be a "home rule" state in part because it lacks county governance and in part because the municipalities play a major role in civic life as seen in Title 7 of the Connecticut General Statutes. A local health department or health district serves each of the municipalities. 19 local health departments and health districts currently serve the 24 towns along the shoreline of Connecticut. They enforce public health code and policy guidelines at municipal marine beaches and some private and association beaches as well. The DEEP regulates state park beaches.

While local health departments and health districts receive some state funding formulated in part on a per capita basis, there is no direct state funding for beach maintenance, sample collection and public notification. Municipal beaches are typically maintained by municipal recreation and parks departments while state park beaches are maintained by the DEEP. The cost of marine water sample collection (e.g. seasonal employees and transportation) is borne directly by municipal government. DEEP bears that cost for state park beaches with some limited support from the US EPA Beach Grant.

Local health departments and districts have the responsibility to close and reopen beaches as well as issue advisories when public health code or policy guidelines require this. They also have the responsibility to notify the public of these events. DEEP has these responsibilities for state park beaches and long standing practice leads DEEP to consult with DPH prior to issuing a beach closure, advisory or reopening.

Town	Organization
Branford	East Shore District Health Department
Bridgeport	Bridgeport Health Department
Clinton	Connecticut River Area Health District
Darien	Darien Health Department
East Haven	East Shore District Health Department
East Lyme	Ledge Light Health District
Fairfield	Fairfield Health Department
Greenwich	Greenwich Department of Health
Groton	Ledge Light Health District
Guilford	Guilford Health Department
Madison	Madison Health Department
Milford	Milford Health Department
New Haven	New Haven Health Department
New London	Ledge Light Health District
Norwalk	Norwalk Health Department
Old Lyme	Town of Old Lyme
Old Saybrook	Connecticut River Area Health District
Stamford	Stamford Health Department
State Beaches	Connecticut Department of Energy and Environmental Protection
Stonington	Town of Stonington Health Department
Stratford	Stratford Health Department
Waterford	Ledge Light Health District
West Haven	West Haven Health Department
Westbrook	Town of Westbrook
Westport	Westport Weston Health District

Once marine water samples have been collected, they can be picked up by a courier service (described earlier in this report) and transported to the State Laboratory where the costs of transportation, analysis and results reporting are defrayed by funding from the US EPA Beach Grant. The southwest courier route of the State Laboratory Summer Beach Monitoring Program does not extend to the far western shoreline border with New York State, and some towns in that region of Connecticut use private or municipal laboratories to analyze marine water samples with no direct cost subsidy from the state or from the US EPA Beach Grant.

☞ It should be clear from this discussion that the US EPA Beach Grant does not cover the entire cost of seasonal marine beach monitoring in Connecticut.

5.4 COLLECTING, MANAGING AND REPORTING BEACH DATA

DPH collects and manages the following types of beach data:

- beach contact person;
- beach organization;
- beach name and location;
- sampling station name and location;
- water quality monitoring results for marine beaches regulated by shoreline local health departments;
- beach closure and advisory event with extent of beach, duration plus reason, source and indicator;
- public notification procedures; and
- known potential sources of beach pollution;

DEEP has the responsibility to collect, manage and report to US EPA the following types of beach data:

- water quality monitoring results for state park marine beaches

MANAGING BEACH DATA

Beach data collected by DPH for its use and the use of the US EPA are stored and managed by custom relational database software described earlier in this report. DEEP uses its own database software to manage its beach data.

BEACH DATA REPORTED TO US EPA

Beach data reported to US EPA are collected in a variety of ways that include: electronic transfer, email, regular mail, telephone calls, GIS map markup, field surveys with handheld GPS units and the annual US EPA Beach Survey. The four (4) major sets of beach data reported to US EPA are:

1. LOCATION DATA

   Location data for beach end points and sampling stations are reported directly to US EPA. When any of these data change, those changes are reported to US EPA as required.

2. MONITORING DATA

   Most monitoring data are collected from the LIMS maintained by the State Laboratory. Some monitoring data are provided by local health departments that do not use the services of the State Laboratory for marine beach monitoring.

3. NOTIFICATION DATA

   Notification data include beach contact, beach organization, beach closure and advisory events, extent of beach, event duration plus reason, source and indicator tags. These data are collected using the annual US EPA Beach Survey.

4. KNOWN POTENTIAL SOURCES OF BEACH POLLUTION

   Starting in 2006 US EPA required Beach Grant states to report known potential sources of pollution for each Beach Grant beach. Beginning in 2007 EPA also wanted to know whether or not investigations had been done to detect known sources of pollution.

5. 5 REPORTING DATA TO US EPA

DPH sends beach data directly to US EPA at the end of the bathing season and usually before January 31 of the New Year following the bathing season. For 2011, DPH reported beach monitoring data to the US EPA WQX/STORET database through CDX and reported beach notification data to US EPA through CDX to the PRAWN database.

DPH BEACH GRANT DATA SUBMISSION SUMMARY

Was data submitted to US EPA, received and accepted?									
Season ⇨ / Data Type ⇩	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Location	yes	yes	yes	yes	yes	yes	yes	yes	yes
Monitoring	yes[1]	yes[1]	yes	yes	yes	yes	yes	yes	yes
Notification	yes	yes	yes	yes	yes	yes	yes	yes	yes
Pollution[2]	n/a	n/a	n/a	yes	yes	yes	yes	yes	yes

[1] Beach monitoring data for 2003 and 2004 were submitted to US EPA in 2005.
[2] US EPA required reporting known potential pollution sources starting in 2006.

5.6 PUBLIC NOTIFICATION AND THE PUBLIC BEACHES WEB PAGE

For the US EPA Beach Grant, DPH tracks regulated marine bathing areas that fall under the jurisdiction of either municipal local health departments and health districts or under the management and control of DEEP. These regulating authorities have the responsibility to notify the public of beach closures, advisories and reopenings.

DPH collects data for public notification procedures using the annual US EPA Beach Survey. *The survey asks respondents to indicate for each of their beaches all the ways the public was notified during the bathing season for all the closures or advisories the beach experienced during that season.*

☞ Because the annual US EPA Beach Survey asks respondents directly for aggregate public notification procedure data it is not possible to tell which public notification procedures were applied at the time of a specific closure or advisory event, nor is it possible to tell whether a particular procedure (e.g. posting signs) was applied to all closure or advisory events at a beach, but it is possible to tell which notification procedures are preferred collectively by the organizations in Connecticut that regulate marine beaches.

The annual US EPA Beach Survey provides respondents with three (3) groups of public notification procedures for closing, advisory and combined closing/advisory events. The survey asks respondents to check all procedures that were applied to a beach for the entire bathing season.

PUBLIC NOTIFICATION PROCEDURES FOR BEACH CLOSURES AND ADVISORIES

A. Closings - procedure(s) used to notify the public if this beach was closed in 2011

- ☐ Post closing at the beach
- ☐ Post closing on the Internet
- ☐ Publish closing in local newspaper
- ☐ Provide closing information on phone hotline
- ☐ Close and isolate contaminated area
- ☐ Closing announced on local radio station
- ☐ Closing announced on local TV station

B. Advisories - procedure(s) used to notify the public if an advisory(s) was issued in 2011 for this beach.

- ☐ Post advisory at the beach
- ☐ Post advisory on the Internet
- ☐ Publish advisory in local newspaper
- ☐ Provide advisory information on phone hotline
- ☐ Advise and isolate contaminated area
- ☐ Advisory announced on local radio station
- ☐ Advisory announced on local TV station

C. Combined - procedure(s) used to notify the public if a closing and an advisory were issued simultaneously for this beach in 2011.

- ☐ Both closing and advisory posted at the beach
- ☐ Both closing and advisory posted on the Internet
- ☐ Both closing and advisory published in local newspaper
- ☐ Provide both closing and advisory information on phone hotline
- ☐ Close, advise and isolate contaminated area
- ☐ Both closing and advisory announced on local radio station
- ☐ Both closing and advisory announced on local TV station

☞ Notification procedure inventories can vary from beach to beach, from organization to organization and from year to year.

The table below lists the count of positive responses for each notification procedure tallied from all received annual US EPA Beach Surveys for a bathing season. The table also tallies the count of positive responses for each individual notification procedure across all seasons for which there are data.

USED NOTIFICATION PROCEDURES TALLIED FOR ALL RESPONDENTS										
BATHING SEASON ⇨	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2003-2011**
NOTIFICATION PROCEDURE ⇩	count	count	count	count	count	count	count	count	count	count
Post closing at the beach	32	28	26	39	33	23	29	38	54	302
Post closing on the Internet	13	13	10	19	17	10	20	29	46	177
Publish closing in local newspaper	12	16	18	24	14	11	8	10	17	130
Provide closing information on phone hotline	15	14	15	31	16	17	22	28	30	188
Close and isolate contaminated area	7	1	7	1	2	0	5	10	7	40
Closing announced on local radio station	16	17	15	26	15	12	13	15	13	142
Closing announced on local TV station	8	6	5	15	9	6	6	8	12	75
Post advisory at the beach	12	2	7	1	9	1	1	1	6	40
Post advisory on the Internet	6	0	0	0	0	2	1	0	8	17
Publish advisory in local newspaper	5	1	4	0	1	0	0	0	0	11
Provide advisory information on phone hotline	4	2	4	0	3	0	0	0	4	17
Advise and isolate contaminated area	0	0	1	0	0	0	1	0	0	2
Advisory announced on local radio station	4	1	5	0	0	0	0	0	0	10
Advisory announced on local TV station	0	1	0	0	0	0	0	0	0	1
Both closing and advisory posted at the beach	10	3	6	1	5	3	0	0	0	28
Both closing and advisory posted on the Internet	6	0	0	0	0	0	0	0	0	6
Both closing and advisory published in local newspaper	1	1	6	0	0	0	0	0	0	8
Provide both closing and advisory information on phone hotline	3	0	0	1	0	0	0	0	4	8
Close, advise and isolate contaminated area	0	0	6	0	0	0	0	0	0	6
Both closing and advisory announced on local radio station	3	1	6	0	0	0	0	0	0	10
Both closing and advisory announced on local TV station	0	1	5	0	0	0	0	0	0	6

While a variety of notification procedures (or means) are used to tell the public that a beach is closed or under an advisory, in practice posting signage directly at the beach is the preferred notification procedure with telephone hotline, radio station announcement, publishing in local newspaper and the Internet not too far behind. One local health department will email closing and advisory notices to interested parties.

The table below lists the percent of positive responses for each notification procedure *within each procedure group* (i.e. closing, advisory, and combined closing/advisory) for each notification procedure tallied from all received annual US EPA Beach Surveys for a bathing season. The table also tallies the percent of positive responses for each individual notification procedure within a procedure group across all seasons for which there are data.

The table indicates preference for using a notification procedure and does not indicate whether or not a procedure was used for events of the same type (e.g. all closure events or all advisory events).

RESPONDENT SELECTED NOTIFICATION PROCEDURES BY PERCENT AND YEAR										
BATHING SEASON ⇨	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2003-2011**
NOTIFICATION PROCEDURE ⇩	%	%	%	%	%	%	%	%	%	%
Post closing at the beach	31.1	29.5	27.1	25.2	26.6	29.1	28.2	27.5	30.2	28.7
Post closing on the Internet	12.6	13.7	10.4	12.3	13.7	12.7	19.4	21.0	25.7	16.8
Publish closing in local newspaper	11.7	16.8	18.8	15.5	11.3	13.9	7.8	7.3	9.5	12.3
Provide closing information on phone hotline	14.6	14.7	15.6	20.0	12.9	21.5	21.4	20.3	16.8	17.8
Close and isolate contaminated area	6.8	1.1	7.3	0.7	1.2	0.0	4.9	7.3	3.9	3.8
Closing announced on local radio station	15.5	17.9	15.6	16.8	12.1	15.2	12.6	10.9	7.3	13.5
Closing announced on local TV station	7.8	6.3	5.2	9.7	7.3	7.6	5.8	5.8	6.7	7.1
Post advisory at the beach	38.7	28.6	33.3	100.0	69.2	33.3	33.3	100.0	33.3	40.8
Post advisory on the Internet	19.4	0.0	0.0	0.0	0.0	66.7	33.3	0.0	44.4	17.4
Publish advisory in local newspaper	16.1	14.3	19.1	0.0	7.7	0.0	0.0	0.0	0.0	11.2
Provide advisory information on phone hotline	12.9	28.6	19.1	0.0	23.1	0.0	0.0	0.0	22.2	17.4
Advise and isolate contaminated area	0.0	0.0	4.8	0.0	0.0	0.0	33.3	0.0	0.0	2.0
Advisory announced on local radio station	12.9	14.3	23.8	0.0	0.0	0.0	0.0	0.0	0.0	10.2
Advisory announced on local TV station	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Both closing and advisory posted at the beach	43.5	50.0	20.7	50.0	100	100	0.0	0.0	0.0	38.9
Both closing and advisory posted on the Internet	26.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3
Both closing and advisory published in local newspaper	4.4	16.7	20.7	0.0	0.0	0.0	0.0	0.0	0.0	11.1
Provide both closing and advisory information on phone hotline	13.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	100	11.1
Close, advise and isolate contaminated area	0.0	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0	8.3
Both closing and advisory announced on local radio station	13.0	16.7	20.7	0.0	0.0	0.0	0.0	0.0	0.0	13.9
Both closing and advisory announced on local TV station	0.0	16.7	17.2	0.0	0.0	0.0	0.0	0.0	0.0	8.3

This table ranks the notification procedures *within each procedure group* (i.e. closing, advisory and combined closing/advisory) in order of the preference for each procedure indicated by the responding organizations. The table does not indicate the percentage of events covered by a particular notification procedure.

PROCEDURE RANK AND BATHING SEASONS ⇨	**RANK**	**2003-2011**
NOTIFICATION PROCEDURE ⇩		%
Post closing at the beach	1	28.65
Provide closing information on phone hotline	2	17.84
Post closing on the Internet	3	16.79
Closing announced on local radio station	4	13.47
Publish closing in local newspaper	5	12.33
Closing announced on local TV station	6	7.12
Close and isolate contaminated area	7	3.80
Post advisory at the beach	1	40.82
Post advisory on the Internet	2	17.35
Provide advisory information on phone hotline	2	17.35
Publish advisory in local newspaper	3	11.22
Advisory announced on local radio station	4	10.20
Advise and isolate contaminated area	5	2.04
Advisory announced on local TV station	6	1.02
Both closing and advisory posted at the beach	1	38.89
Both closing and advisory announced on local radio station	2	13.89
Both closing and advisory published in local newspaper	3	11.11
Provide both closing and advisory information on phone hotline	3	11.11
Both closing and advisory posted on the Internet	4	8.33
Close, advise and isolate contaminated area	4	8.33
Both closing and advisory announced on local TV station	4	8.33

THE PUBLIC BEACHES WEB PAGE

The Public Beaches Web page is maintained by the DPH Recreation Program (part of the Environmental Health Section, Regulatory Services Branch of DPH). The Web page is shown on the following page and includes links to:

- Connecticut's US EPA Beach Grant Annual Report
- Advice to Swimmers
- US EPA BEACON2 web site used to locate beaches and view beach data
- Beach list
- Tiered Beach Lists
- Organizations (for current beach status and additional beach information)
- Pertinent Connecticut Public Health Code Regulations
- Guidelines for Monitoring Bathing Water and Beach Closure Protocol
- Centers for Disease Control and Prevention

See: http://www.ct.gov/dph/publicbeaches

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Check the Calendar
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CT Alert WE CAN'T ALERT YOU... IF WE CAN'T REACH YOU

Public Beaches

Public beaches in Connecticut are regulated by the local health departments/districts. Beaches at State Parks are controlled by the Connecticut Department of Environmental Protection.

Connecticut's 2011 US EPA Beach Grant Annual Report (pdf)

- Advice to Swimmers (pdf)
- Visit the US EPA BEACON2 website to locate beaches and view beach data.

Beaches

For the listing of Connecticut's Regulated Coastal Bathing Areas, click here

- 2003-2011 Tiered Beach Lists (pdf)
- Tiered Monitoring Plan (pdf)

The Connecticut Department of Public Health implements a US EPA grant funded by the Beach Act. The activities in this grant funded project focus on coastal beaches. To learn more about New England Beaches from the US EPA click here.

Beach Closure Information

Public Beaches:

For the most up-to-date information concerning the status of a public beach you should contact your local health department. A list of local health departments is available here.

State Park Beaches:

For the most up-to-date information concerning the status of a State Park Beach you should contact Department of Environmental Protection here.

Further Information

Regulations pertaining to Public Bathing Areas:

- Connecticut Public Health Code Regulations 19-13-B34
- Connecticut Public Health Code Regulations 19-13-B36
- 2007-16 Circular Letter (pdf) - Safe Bathing Season

Links:

- Guidelines for Monitoring Bathing Water and Beach Closure
- Centers for Disease Control and Prevention Health Swimming
- Clam digger's/Swimmer's itch fact sheet (pdf)

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5.6.1 ADVICE TO SWIMMERS

Based on seven (7) years of providing information about Connecticut's marine beaches, the Connecticut Department of Public Health, Recreation Program assembled this ADVICE TO SWIMMERS page now found on the public beaches web page. This page was developed in Connecticut for Connecticut beach goers.

CONNECTICUT'S ADVICE TO SWIMMERS

Here are a few simple precautions that can help make your beach visit a great way to cool off during the summer.

- In Connecticut, pick a beach and then check with the local health department that regulates it to be sure it is open for swimming. Check with the Connecticut Department of Energy and Environmental Protection if you plan to visit a State Park beach.
- If you pack a picnic lunch, keep it cold at the beach to help prevent spoiling and food borne illness.
- Wear sun screen.
- At the beach look for signs and advisories and heed them. Do **not** swim at a closed beach.
- Don't swim near storm water discharge pipes at urban beaches after a heavy rainfall.
- Keep your head above water and try not to swallow water, to help avoid water borne illness.
- Look for and avoid animal waste. Always carry away your pet's droppings.
- Leave the water immediately if there is a diarrhea or vomit accident.
- Don't bury yourself, your friends or your children in beach sand; bacteria from bird droppings and other sources can seep into beach sand and remain active.
- If you believe you have been exposed to contaminated swimming water, rinse with soap and water and clean any skin abrasions, cuts or wounds. Gargle with mouthwash or clean water. Dry your ears. Wash swimsuits and towels as soon as possible.
- If you have recent cuts, abrasions, surgical scars or infections, it's best to stay out of the water.
- If you have an impaired immune system or you are ill, it's best to stay out of the water.
- Do **not** touch or handle dead waterfowl (seagulls, geese, ducks, etc). Report dead waterfowl to the CT Department of Energy and Environmental Protection, Wildlife Division at (860) 642-6528.
- Do **not** pickup or handle medical waste (syringes, bandages, tubing) or other unusual objects. This can include objects floating in the water or washed ashore that may look like lumps of plastic foam or discs. Immediately report them to the Life Guard or to your Local Health Department.
- If you get caught in a **rip current** that pulls you away from the beach, don't panic. Swim parallel to the shore until you are outside the current, then swim back to the shore or call for help.

6. 0 FLAGSHIP BEACH STATUS

Connecticut hosts two (2) US EPA designated Flagship Beaches. They are located at Ocean Beach Park in New London and Rocky Neck State Park in East Lyme, Connecticut. The beach at Ocean Beach Park is municipal, managed by the city of New London, and falls under the jurisdiction of the Ledge Light Health District. The beach at Rocky Neck State Park is managed and regulated for public safety by the DEEP. Both beaches are heavily used during the summer bathing season.

OCEAN BEACH PARK BEACH (EPA ID: CT407959)

Ocean Beach Park Beach has no reported closure or advisory events for the bathing season years 2003 through 2010 and two (2) advisory events reported in 2011.

Season	Beach name	EPA ID	Event	Days	EPA Reason	EPA Source
2011	OCEAN BEACH PARK	CT407959	Advisory	3	ELEV BACT	URBAN RUNOFF
2011	OCEAN BEACH PARK	CT407959	Advisory	6	OTHER	HURRICANE

ROCKY NECK STATE PARK BEACH (EPA ID: CT207829)

Rocky Neck State Park Beach had nine (9) reported closure events for 2003 through 2011. Seven (7) events were triggered by elevated concentration of the indicator organism Enterococcus. The events are list below:

Season	Beach name	EPA ID	Event	Days	EPA Reason	EPA Source
2003	ROCKY NECK STATE PARK BEACH	CT207829	Close	2	ELEV BACT	UNKNOWN
2006	ROCKY NECK STATE PARK BEACH	CT207829	Close	2	ELEV BACT	STORM
2010	ROCKY NECK STATE PARK BEACH	CT207829	Close	4	ELEV BACT	UNKNOWN
2010	ROCKY NECK STATE PARK BEACH	CT207829	Close	2	ELEV BACT	UNKNOWN
2010	ROCKY NECK STATE PARK BEACH	CT207829	Close	2	ELEV BACT	UNKNOWN
2010	ROCKY NECK STATE PARK BEACH	CT207829	Close	2	ELEV BACT	UNKNOWN
2010	ROCKY NECK STATE PARK BEACH	CT207829	Close	2	RAINFALL	UNKNOWN
2011	ROCKY NECK STATE PARK BEACH	CT207829	Close	1	ELEV BACT	UNKNOWN
2011	ROCKY NECK STATE PARK BEACH	CT207829	Close	4	RAINFALL	STORM WATER

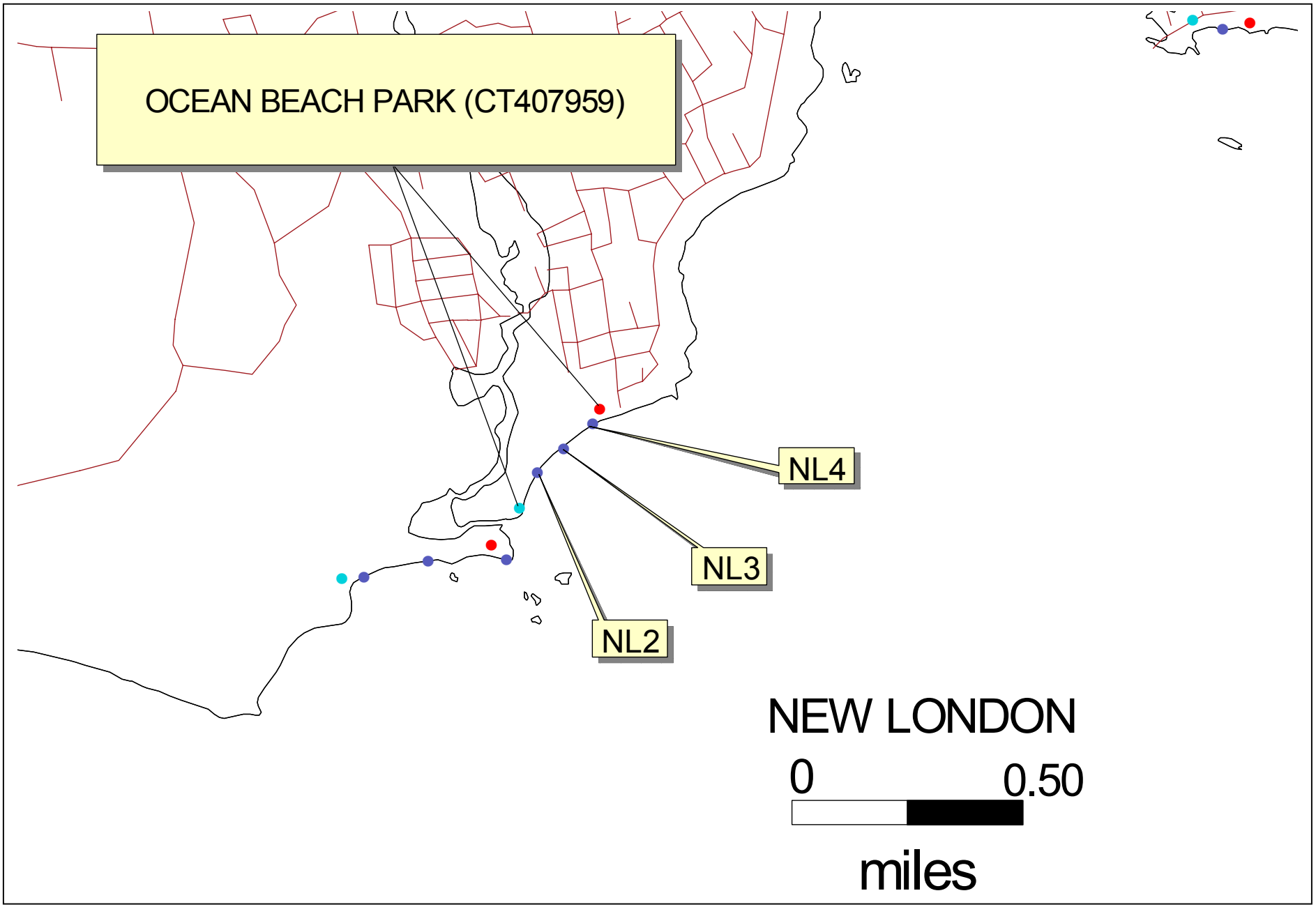
FLAGSHIP BEACH MAPS

For reference, a map for each Flagship beach is provided next. These maps show the locations of the water monitoring sampling stations at each beach.

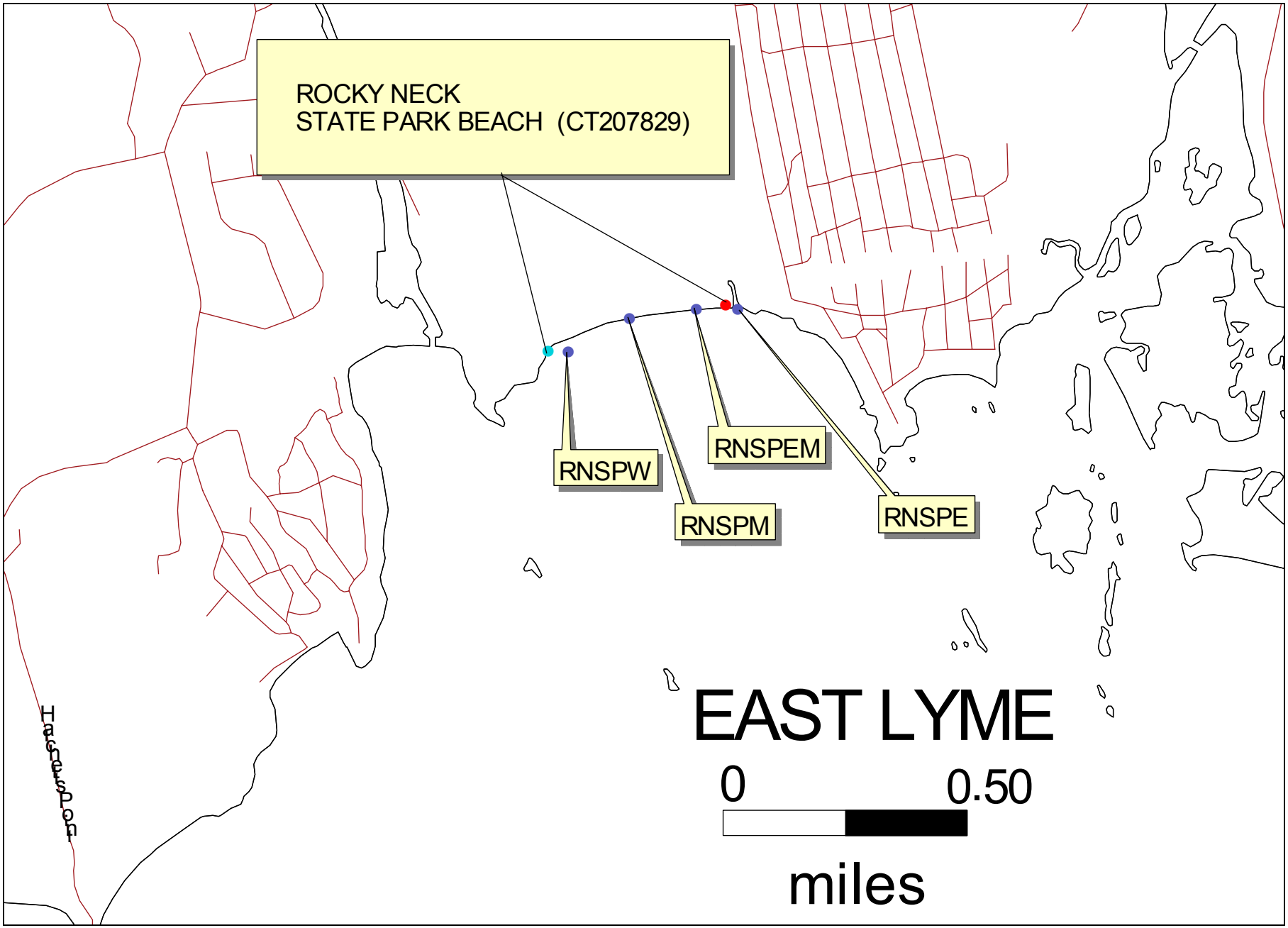
FLAGSHIP BEACH DATA

Closure, advisory and public notification data are collected for Flagship beaches by DPH. Monitoring data for Ocean Beach Park beach are collected by DPH while monitoring data for Rocky Neck State Park beach are collected by DEEP.

FLAGSHIP BEACH: OCEAN BEACH PARK



FLAGSHIP BEACH: ROCKY NECK STATE PARK



7. 0 BEACH DATA SUMMARIES AND DISCUSSION

7. 1 INTRODUCTION

Beach goers, beach managers and many others are interested in beach data. The public wants to know that beaches are safe for swimming and beach managers need to know when to close and, later, reopen a beach to protect public health. Beach data can help everyone assess individual beaches as well as past and current beach management practice. Beach data can also inform future beach management practices by identifying trends and the behavior of water bodies during one (1) or more bathing seasons.

Connecticut has collected beach data for the 2003 through 2011 bathing seasons by tracking regulated marine bathing areas for the US EPA Beach Grant. The Connecticut bathing season runs from Memorial Day to Labor Day. Beach data gathered during this summer bathing season include monitoring data for municipal marine beaches and notification data for both municipal marine and DEEP state park marine beaches. Beach end point and sampling station location data are also collected and maintained but they will not be discussed here.

☞ **Monitoring data** means analytic results provided by licensed environmental laboratories certified to use US EPA approved methods to identify the concentration of the fecal contamination indicator organism Enterococcus. Concentration is reported in CFU per 100 ml (Colony Forming Units per 100ml) or MPN/100ml (Most Probable Number per 100 ml) - depending on the analytic method and considered equivalent. A Colony Forming Unit is viable and can create a clone of itself. Starts on page 85.

☞ **Notification data** means marine beach closure event, advisory event and public notification procedures data. Public notification procedures have been discussed earlier starting on page 75. Closure and advisory event data include beach extent, duration and tags to identify reason, and source and indicator organism reported for each event. Starts on page 121.

☞ **Known potential sources of pollution** are revealed through investigation. Starts on page 161.

REVIEWING BEACH DATA

Beach data have a story to tell. Each part of this narrative sheds light on Connecticut's near shore marine swimming environment. With nine (9) years of beach data collection and review we know more about:

- the geographic and temporal distribution of detected Enterococcus densities that exceeded the single sample standard of 104 CFU/100ml;
- calculated rolling geometric means that exceeded 35 CFU/100ml for sets of five (5) consecutive single Enterococcus samples; and
- the frequency, duration and triggers for beach closure and advisory events at Connecticut's regulated marine bathing areas.

The collected beach data allow us to consider several important questions. They are:

- is there a pattern to the temporal/geographic distribution and duration of reported single sample Enterococcus densities greater than 104 CFU/100ml;
- what drives the calculated geometric means to exceed 35 CFU/100ml;
- why do beach managers close beaches and issue advisories;
- do marine beach managers need faster US EPA approved methods to measure the density of fecal contamination indicators; and
- what sources of pollution impact Connecticut's marine beaches?

7.2 MONITORING DATA

DPH has logged 14110 marine water samples for the 2003 through 2011 bathing seasons collected from regulated marine bathing areas and reported them to US EPA. At the request of US EPA, DEEP logs and reports separately the monitoring data for State Park beaches. The DPH reported samples were collected weekly during each bathing season at known sampling stations. 986 or 7.0 % of these 14110 samples exceeded the single sample marine bathing water standard of 104 CFU/100ml for Enterococcus. Enterococcus is the EPA approved indicator organism for fecal contamination in marine recreational waters.

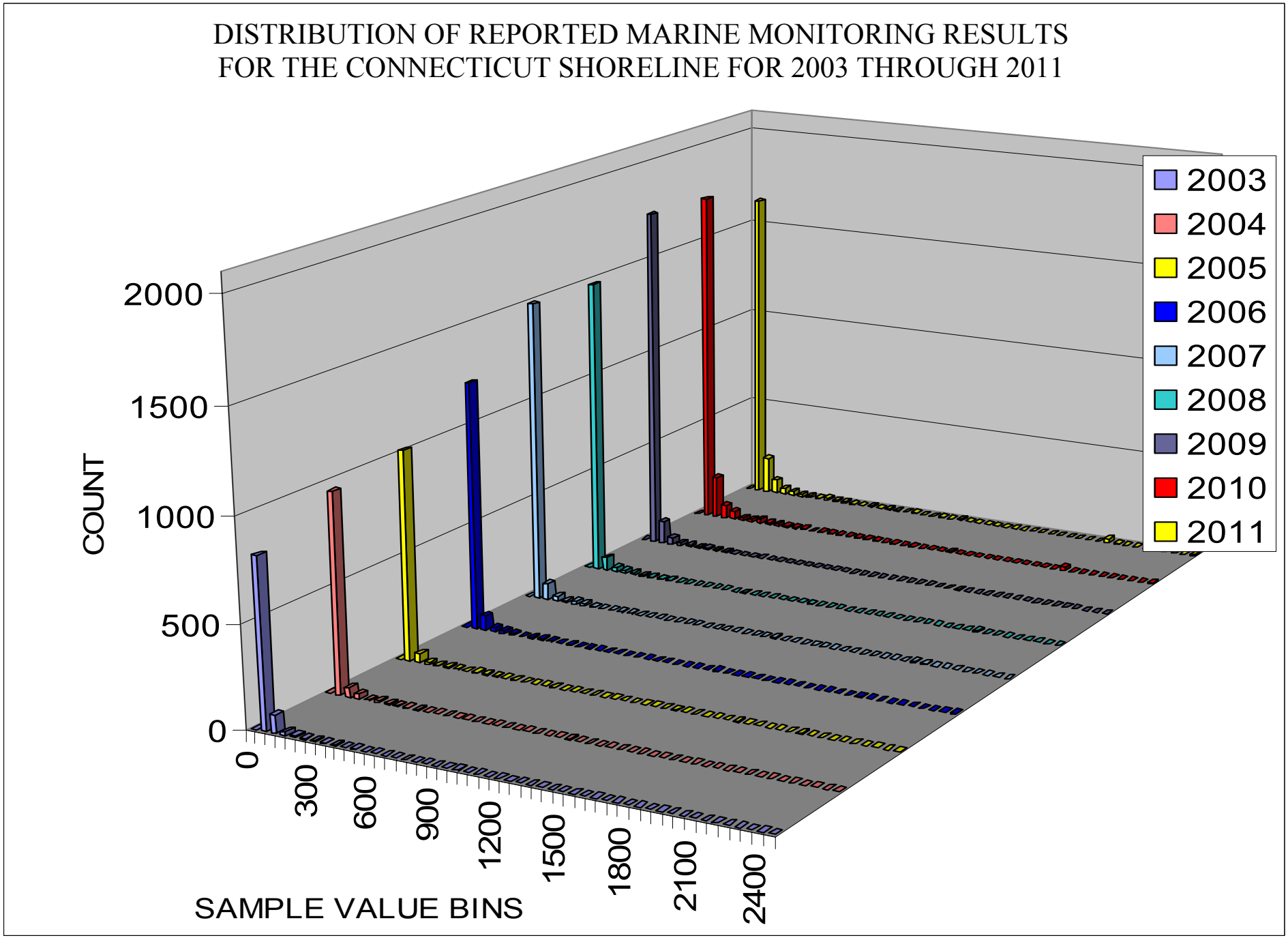
Season	Samples reported	Reporting beaches	Reporting sampling stations	Samples >104 CFU/100ml	% Exceedance
2003	966	39	82	51	5.3
2004	1086	39	82	62	5.7
2005	1129	38	79	47	4.2
2006	1385	54	109	75	5.4
2007	1682	52	109	89	5.3
2008	1636	52	108	73	4.5
2009	1962	61	126	93	4.7
2010	2213	61	126	261	11.8
2011	2051	68	113	235	11.5
2003-2011	14110	n/a	n/a	986	7.0

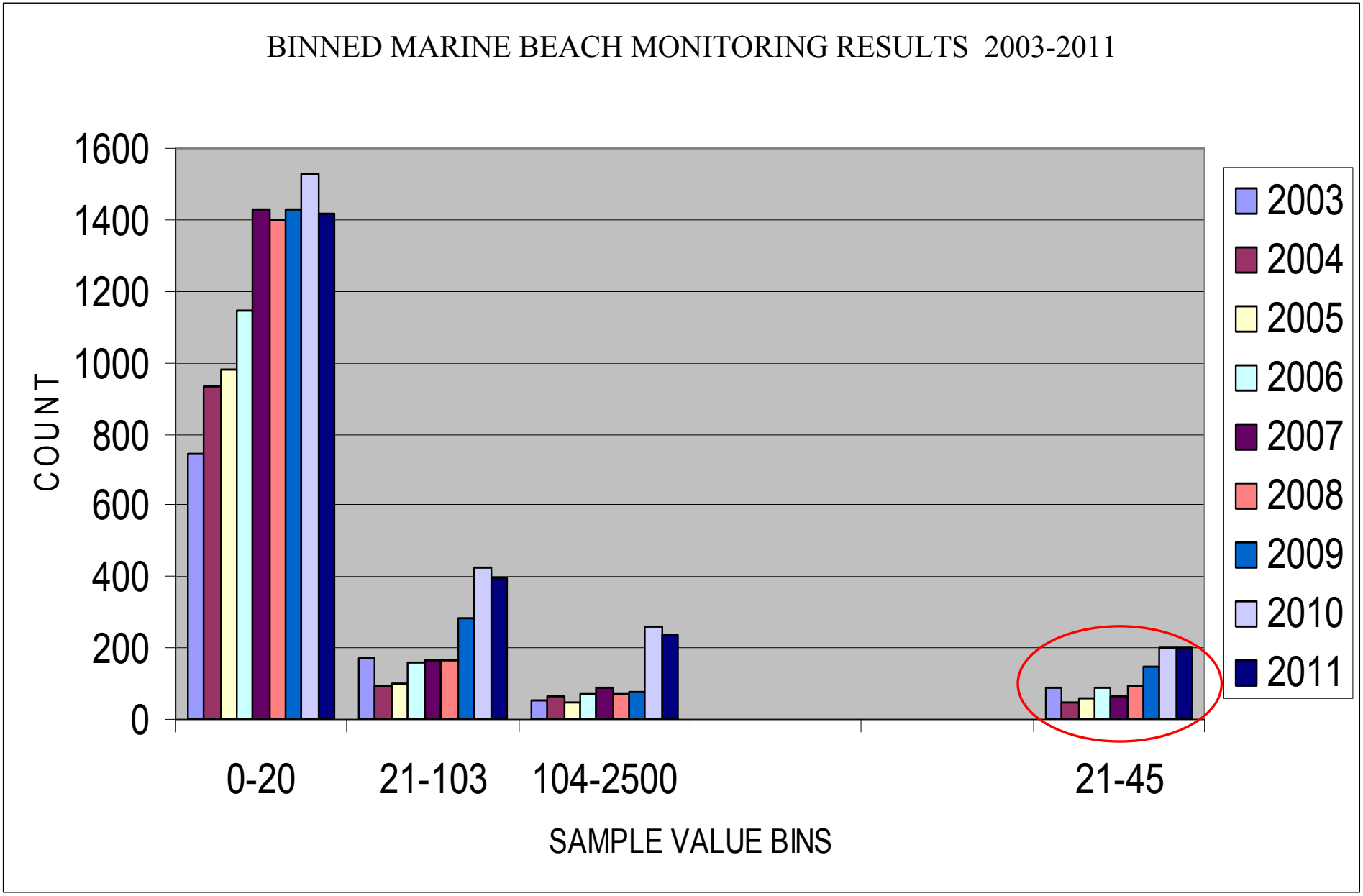
Beach monitoring data are presented in the following formats:

- Monitoring results distribution (p. 86, p. 87)
- *Quality Assurance Project Plan* results (p. 88)
- Geographic, temporal and result value distribution by bathing season (p. 99)
- Rolling geometric mean (p. 110)
- Beaches with detected exceedance days (p. 117)

A discussion follows the monitoring data summaries.

The chart on the next page shows the distribution of reported marine monitoring results for the 2003 through 2011 bathing seasons. The chart displays the count of results for a range of sample result values and indicates that most reported results fall below the 104 CFU/100ml single sample maximum for marine bathing water (as shown in the table above).


DISTRIBUTION OF REPORTED MARINE MONITORING RESULTS
FOR THE CONNECTICUT SHORELINE FOR 2003 THROUGH 2011
COUNT
0
500
1000
1500
2000
SAMPLE VALUE BINS
0
300
600
900
1200
1500
1800
2100
2400
2003
2004
2005
2006
2007
2008
2009
2010
2011



Note: The bin that spans sample results 21-45 encompasses the range of Enterococcus densities most closely linked to EPA reported epidemiology that associates swimmer illness with indicator organism density for marine recreational waters.

7.2.1 THE QUALITY ASSURANCE PROJECT PLAN (QAPP)

For the purposes of this Annual Report, the *QAPP* focuses on **quality assurance beaches** - those beaches for which marine water quality monitoring samples were submitted to the DPH State Laboratory. The *QAPP* is concerned with assuring and assessing quality control, which we can review by looking at laboratory results for matched duplicate-sample pairs as well as blank samples.

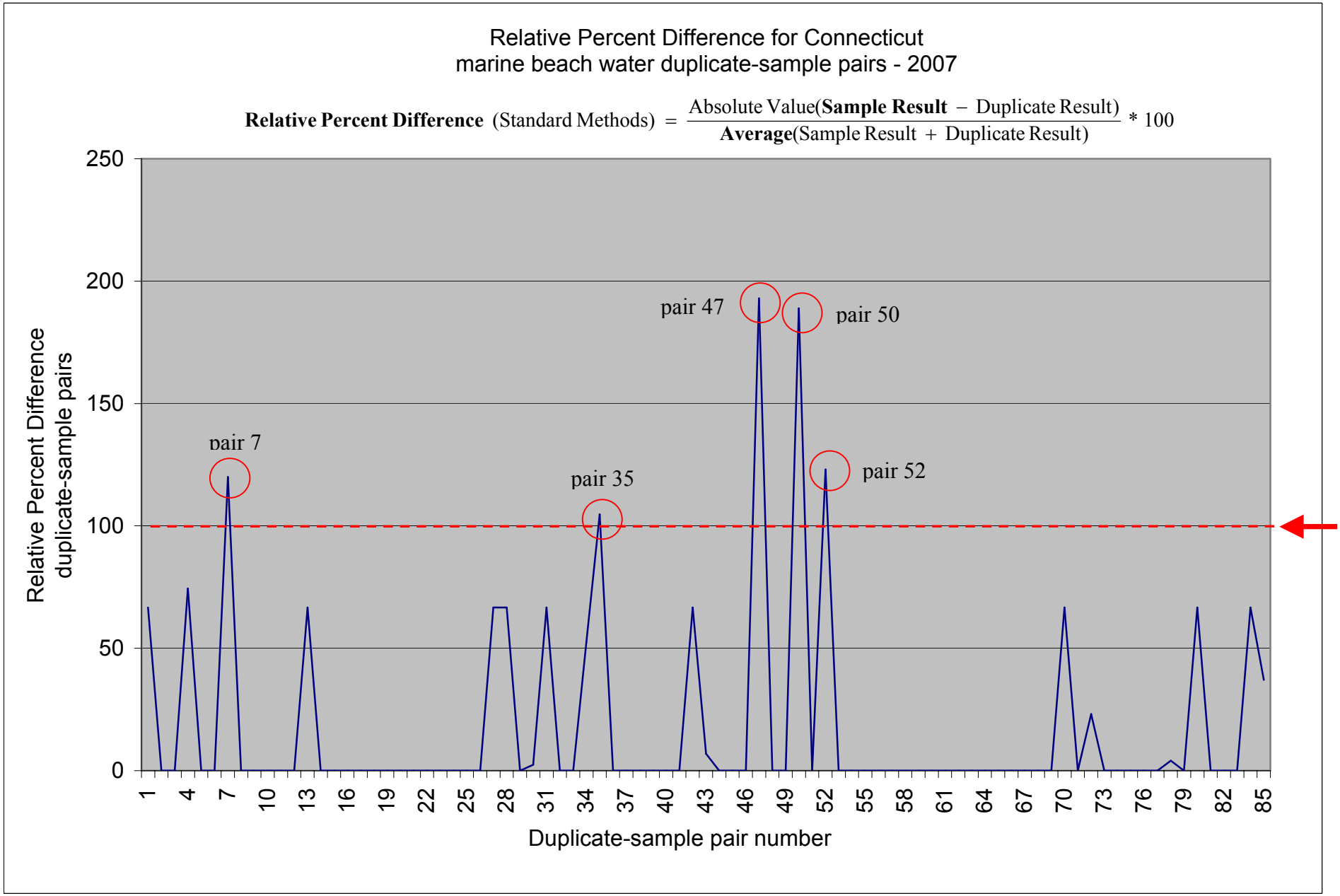
Collecting a matched duplicate-sample pair involves collecting a regularly scheduled marine water sample at a designated sampling station location and matching it with a second marine water sample (the duplicate) collected at the same location and at the same time. Both the regular sample and the matched duplicate in the pair are transported to the laboratory in the same way and analyzed for Enterococcus. The relative percent difference (RPD) is calculated and plotted for each duplicate-sample pair. RPD for each pair is compared to an arbitrary 100 RPD. Duplicate-sample pairs with RPD >100 invite further review.

Blank samples are prepared by filling a marine water sample collection bottle with sterile dilution water directly at a designated marine beach sampling station on a regularly scheduled sampling visit. The blank sample is delivered to the laboratory along with regularly collected samples and analyzed for Enterococcus. Results for these blank samples that are equal to or greater than 10 CFU/100ml invite further review.

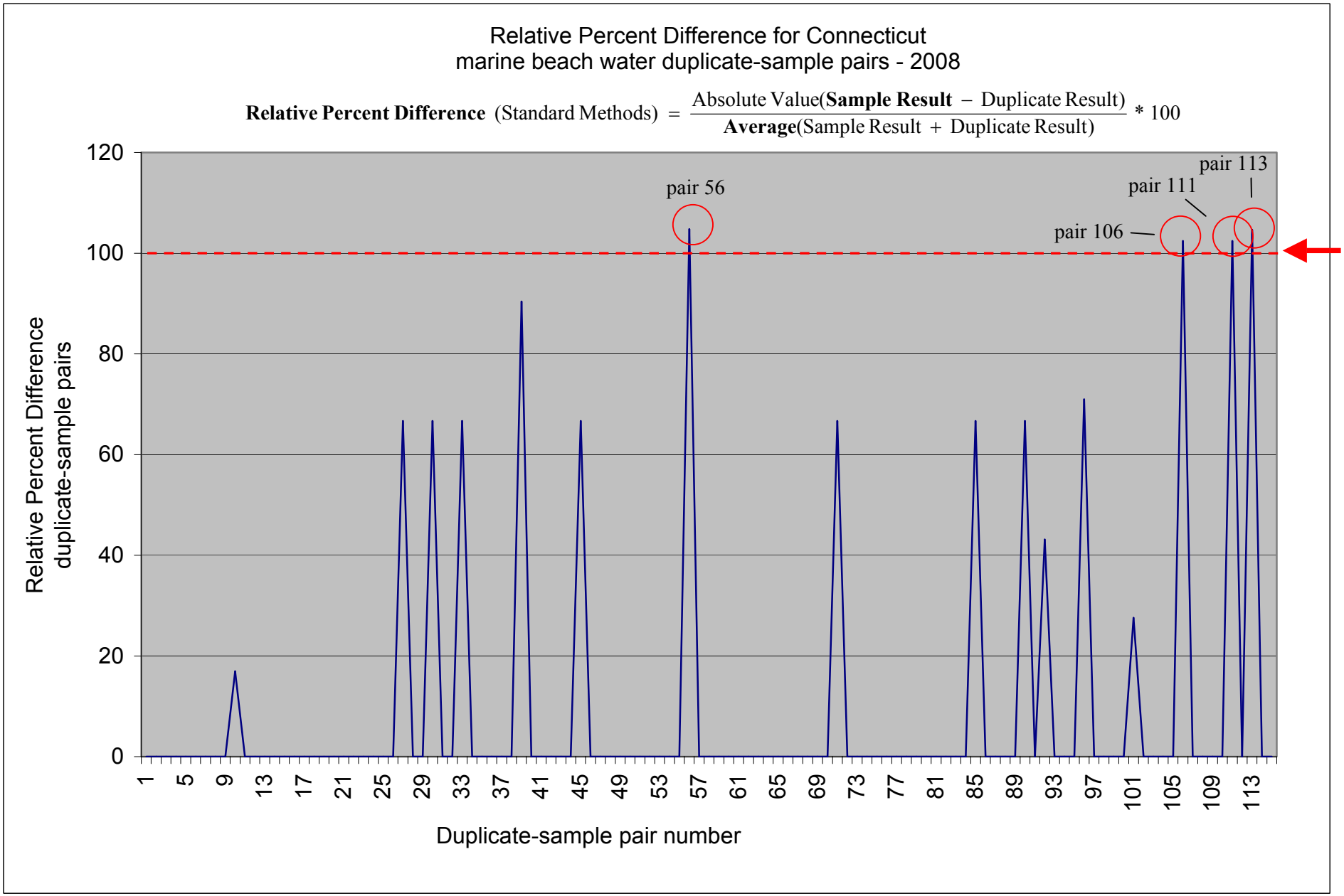
QUALITY ASSURANCE PROTOCOL FOR MARINE BEACHES (renewed 2011)			
Quality Assurance Type	Collecting Location	Collection Frequency Per Beach	Collection Duration (months)
Sterile dilution water (blank)	Regular sampling station	One blank sample per month	3
Duplicate-sample pair	Regular sampling station	One duplicate-sample pair per month	3

QUALITY ASSURANCE SAMPLING RESULTS FOR MARINE BEACHES					
Bathing season ⇨	**2007**	**2008**	**2009**	**2010**	**2011**
Quality Assurance Beaches	41	44	45	45	52
Expected sterile dilution water sample blanks ( )	(123)	(132)	(135)	(135)	(156)
Received sample blanks	55	112	83	102	130
Expected duplicate-sample pairs ( )	(123)	(132)	(135)	(135)	(156)
Received duplicate-sample pairs	85	115	91	103	152

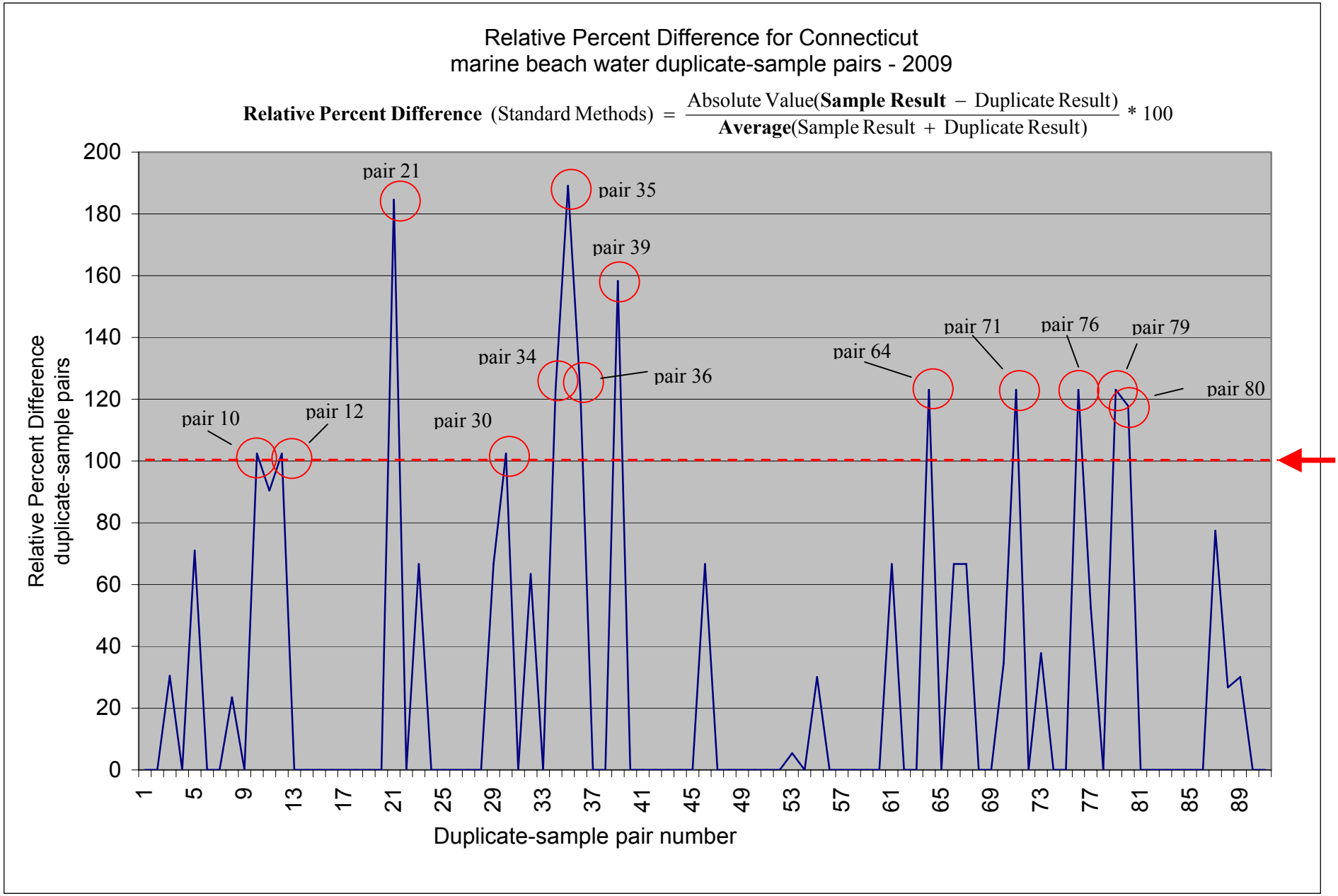
Analysis of the matched duplicate-sample pairs and blank samples follows over the next ten (10) pages.



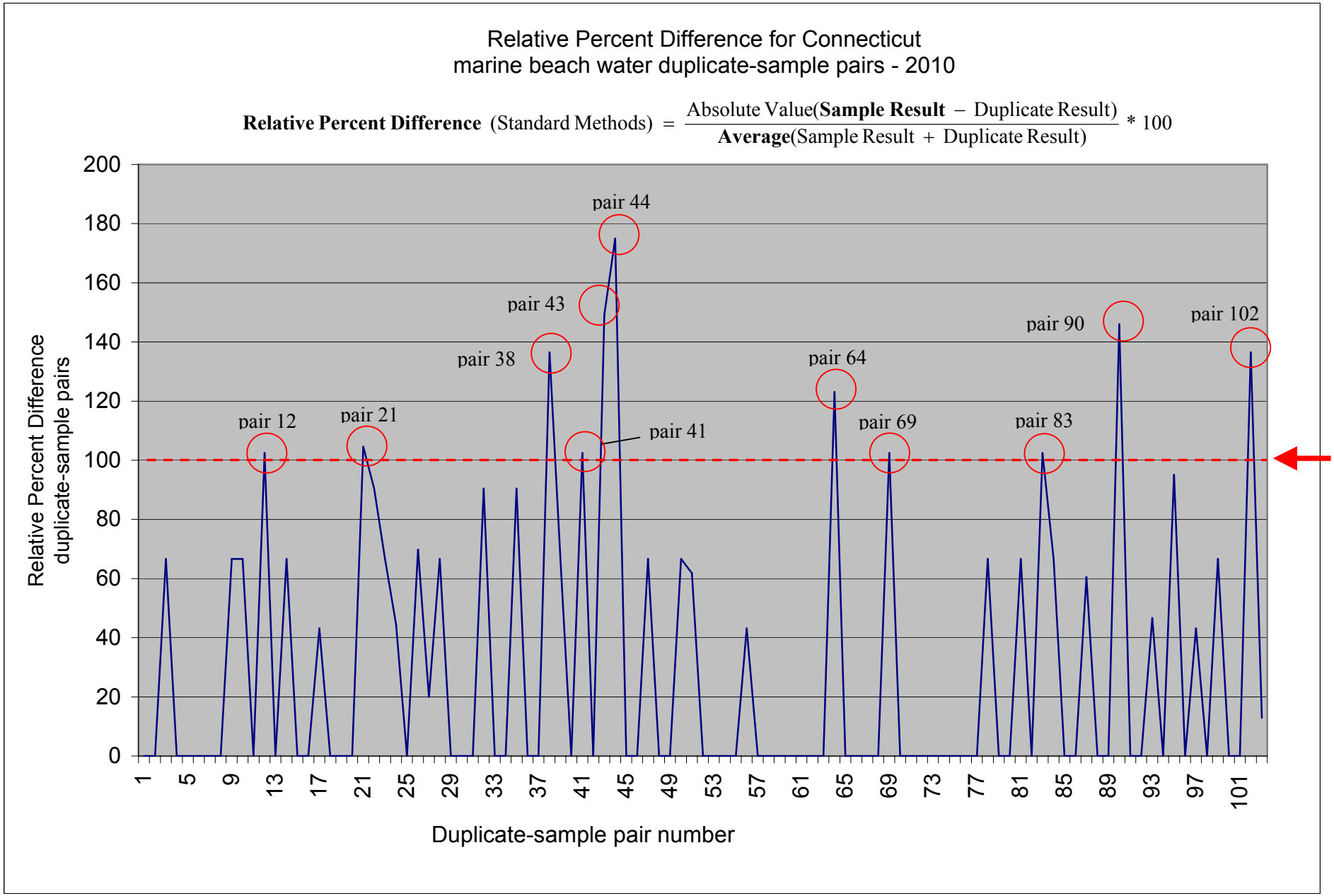
With the threshold of acceptability for duplicates set arbitrarily at 100 relative percent difference (RDP), 5 matched duplicate-sample pairs stand out as worrisome in 2007.



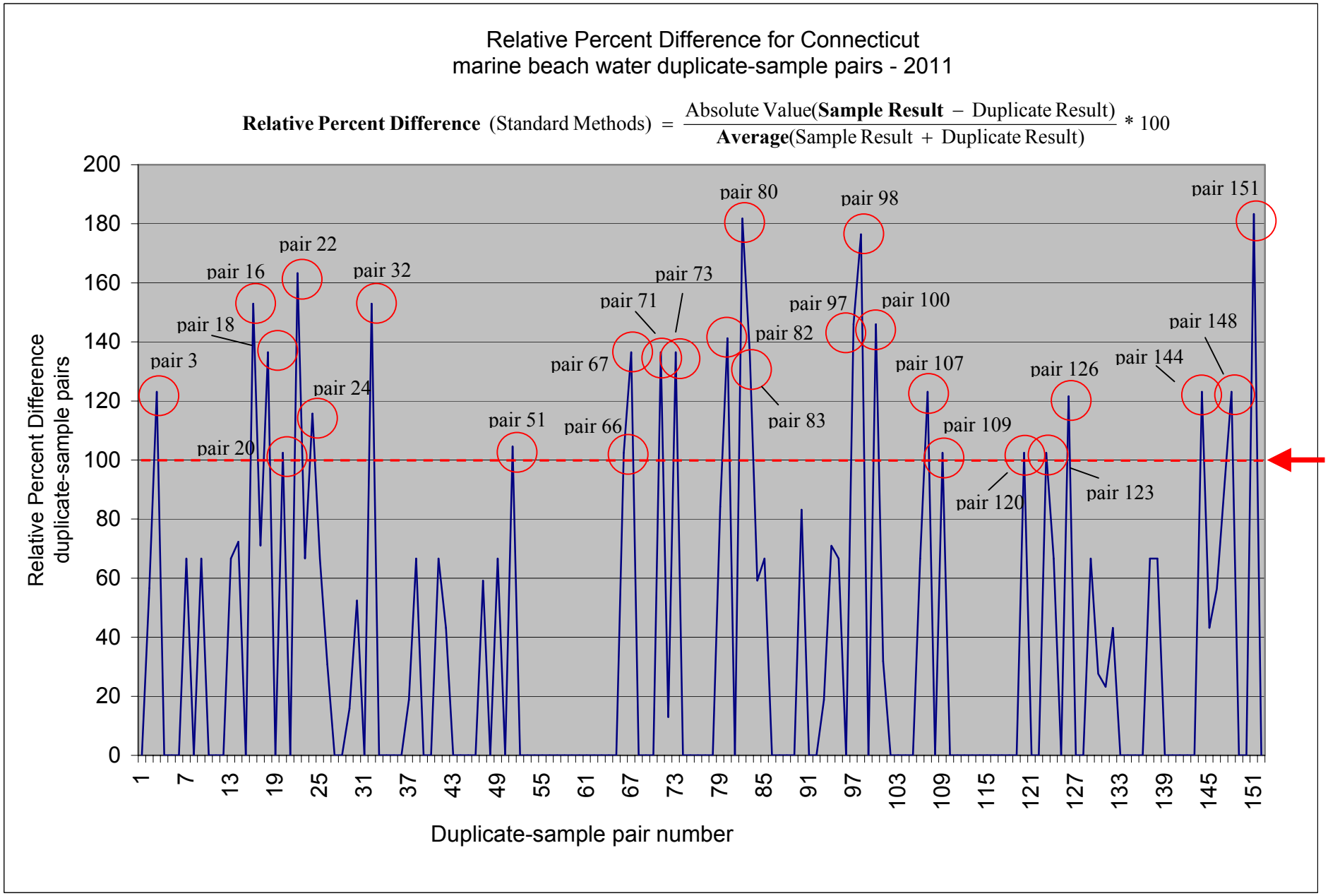
With the threshold of acceptability for duplicates set arbitrarily at 100 relative percent difference (RDP), 4 matched duplicate-sample pairs stand out as worrisome in 2008.



With the threshold of acceptability for duplicates set arbitrarily at 100 relative percent difference (RDP), 13 matched duplicate-sample pairs stand out as worrisome in 2009.

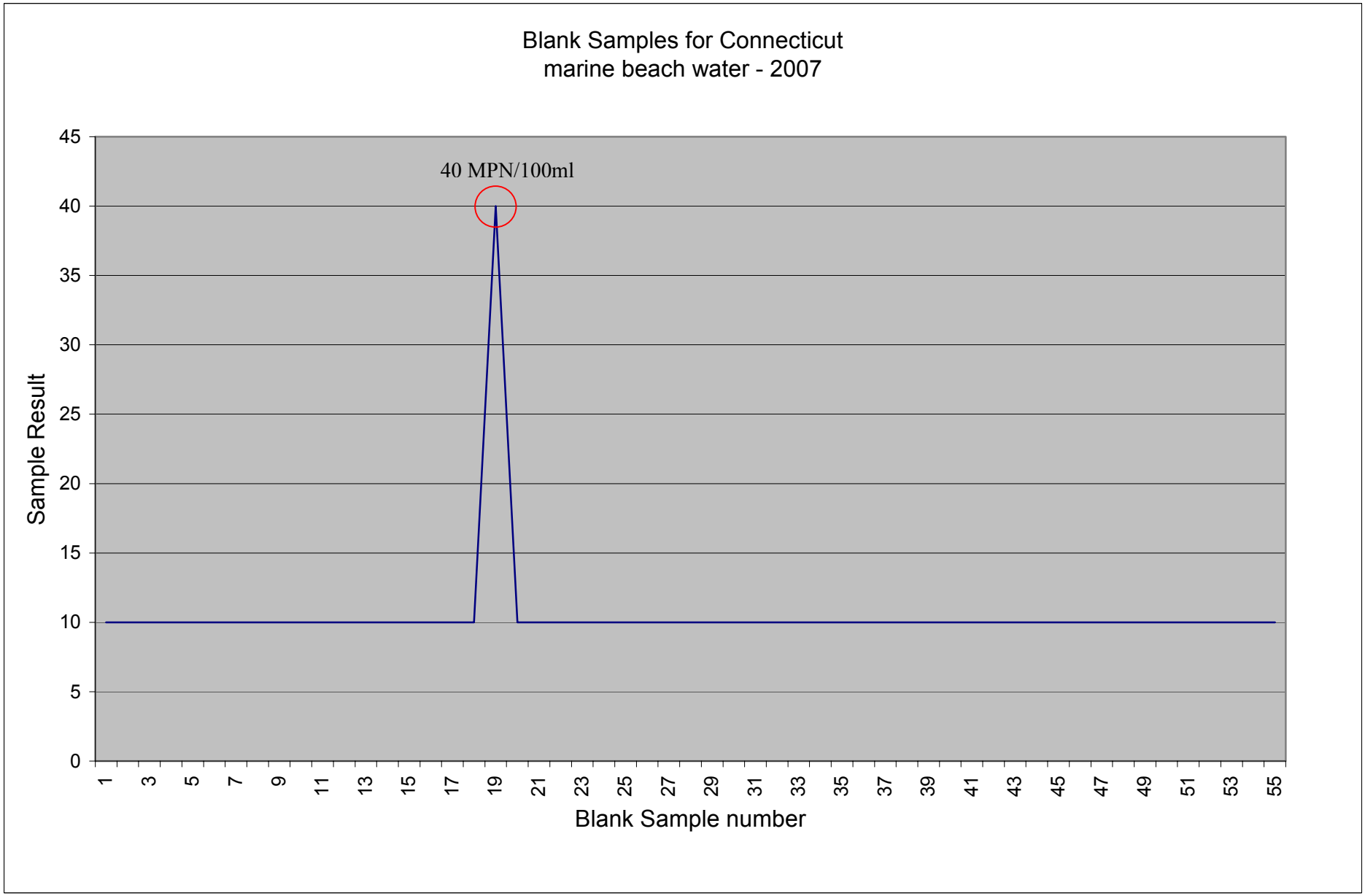


With the threshold of acceptability for duplicates set arbitrarily at 100 relative percent difference (RDP), 11 matched duplicate-sample pairs stand out as worrisome in 2010.

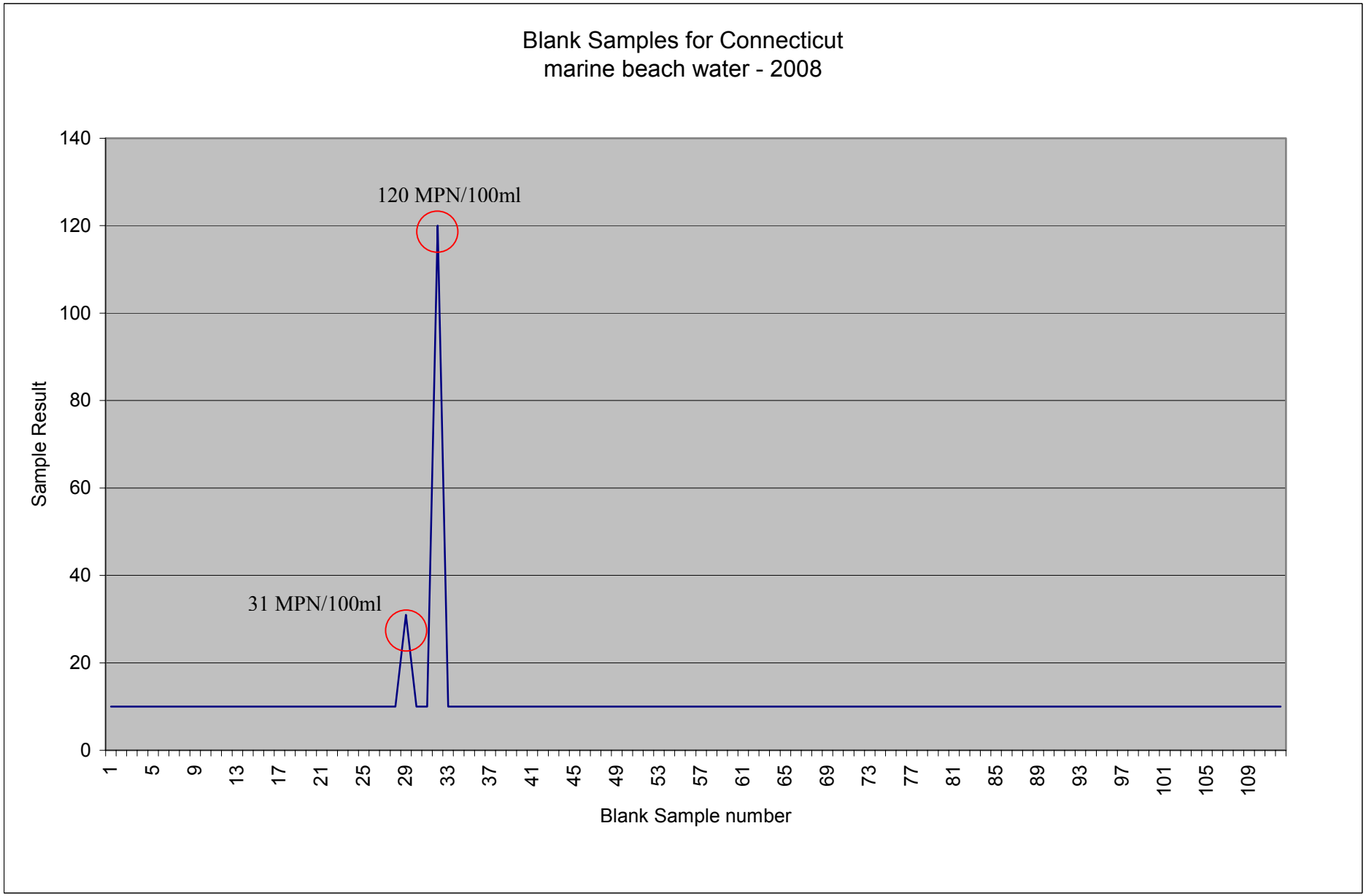


With the threshold of acceptability for duplicates set arbitrarily at 100 relative percent difference (RDP), 26 matched duplicate-sample pairs stand out as worrisome in 2011. The Quality Assurance effort will continue with the 2012 swimming season.

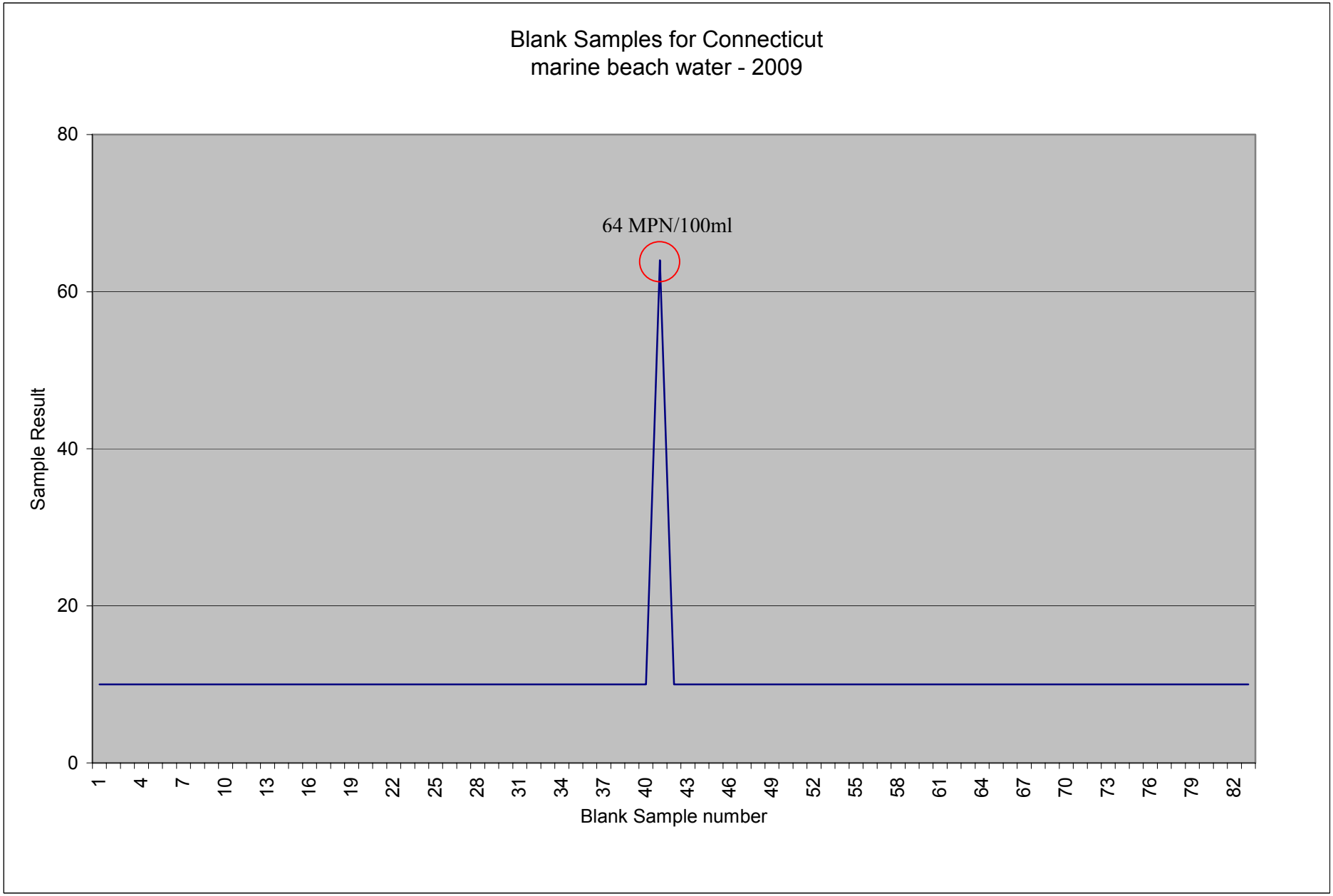
In 2007 one (1) blank sample out of 55 blank samples returned an out-of-bounds Enterococcus density that was above the minimum quantification limit for the procedure used by the State Laboratory.



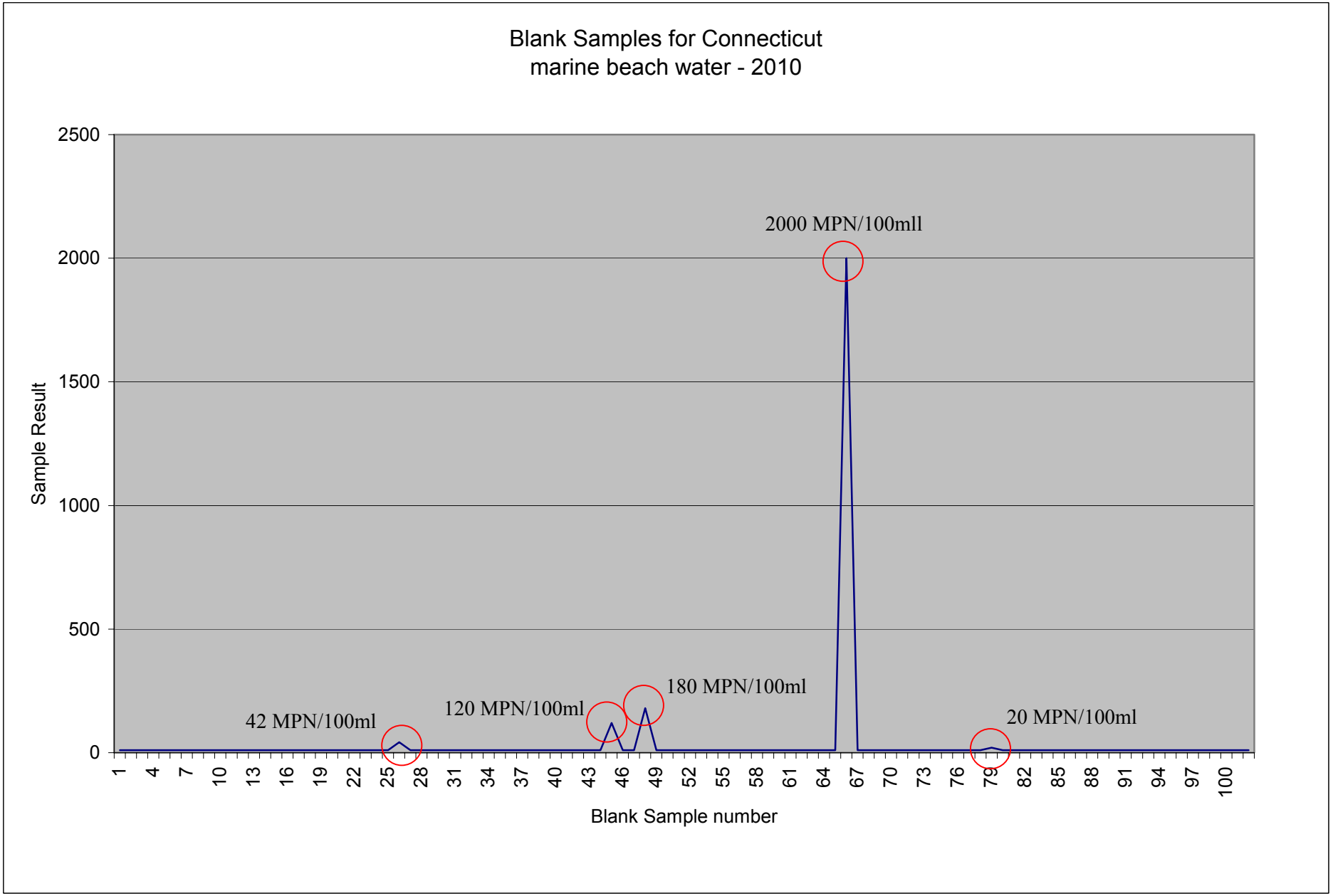
In 2008 two (2) blank samples out of 112 blank samples returned an out-of-bounds Enterococcus density that was above the minimum quantification limit for the procedure used by the State Laboratory.



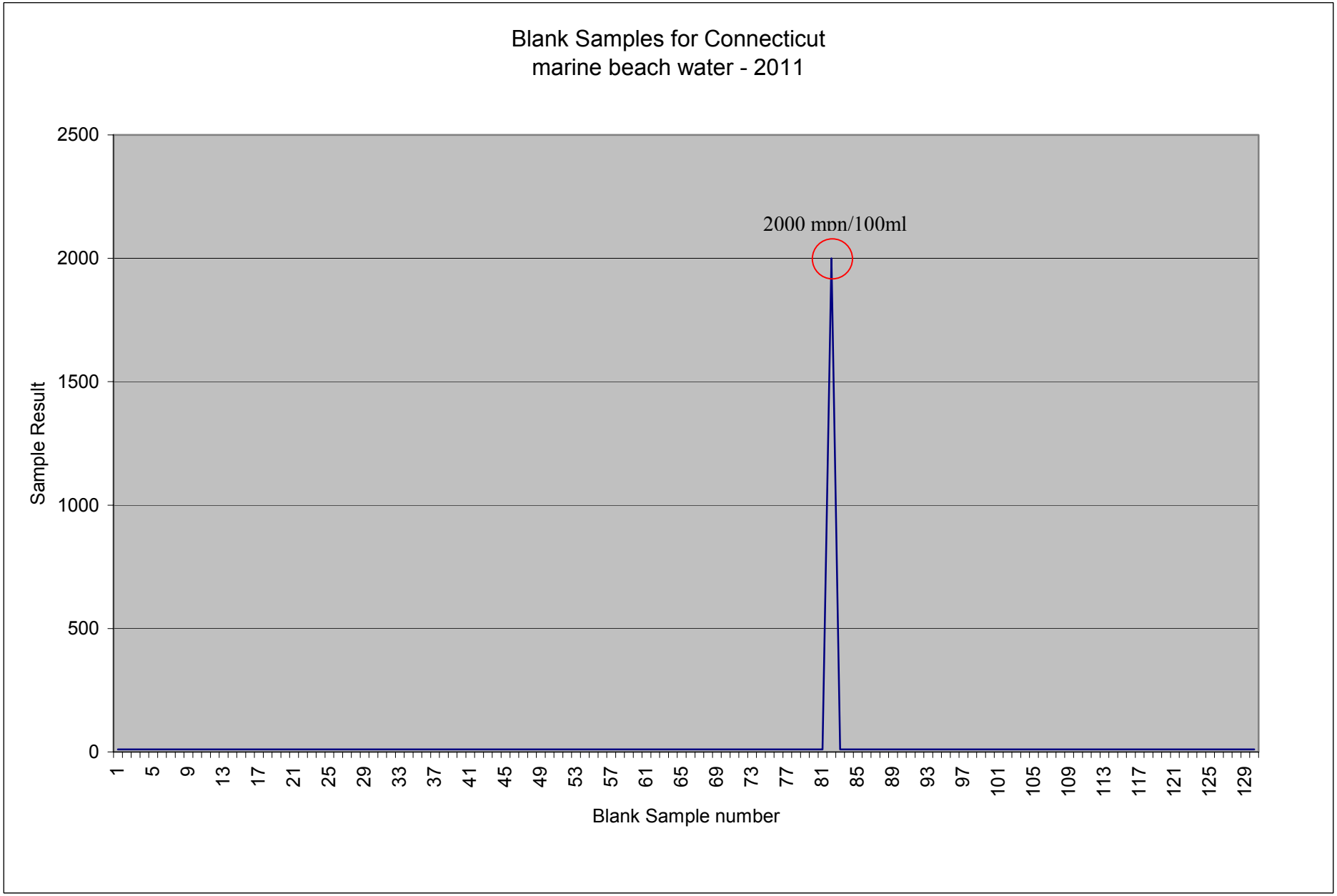
In 2009 one (1) blank sample out of 83 blank samples returned an out-of-bounds Enterococcus density that was above the minimum quantification limit for the procedure used by the State Laboratory.



In 2010 five (5) blank samples out of 102 blank samples returned an out-of-bounds Enterococcus density that was above the minimum quantification limit for the procedure used by the State Laboratory.



In 2011 one (1) blank sample out of 130 blank samples returned an out-of-bounds Enterococcus density that was above the minimum quantification limit for the procedure used by the State Laboratory.



7.2.2 GEOGRAPHIC AND SEASONAL DISTRIBUTION OF MONITORING RESULTS

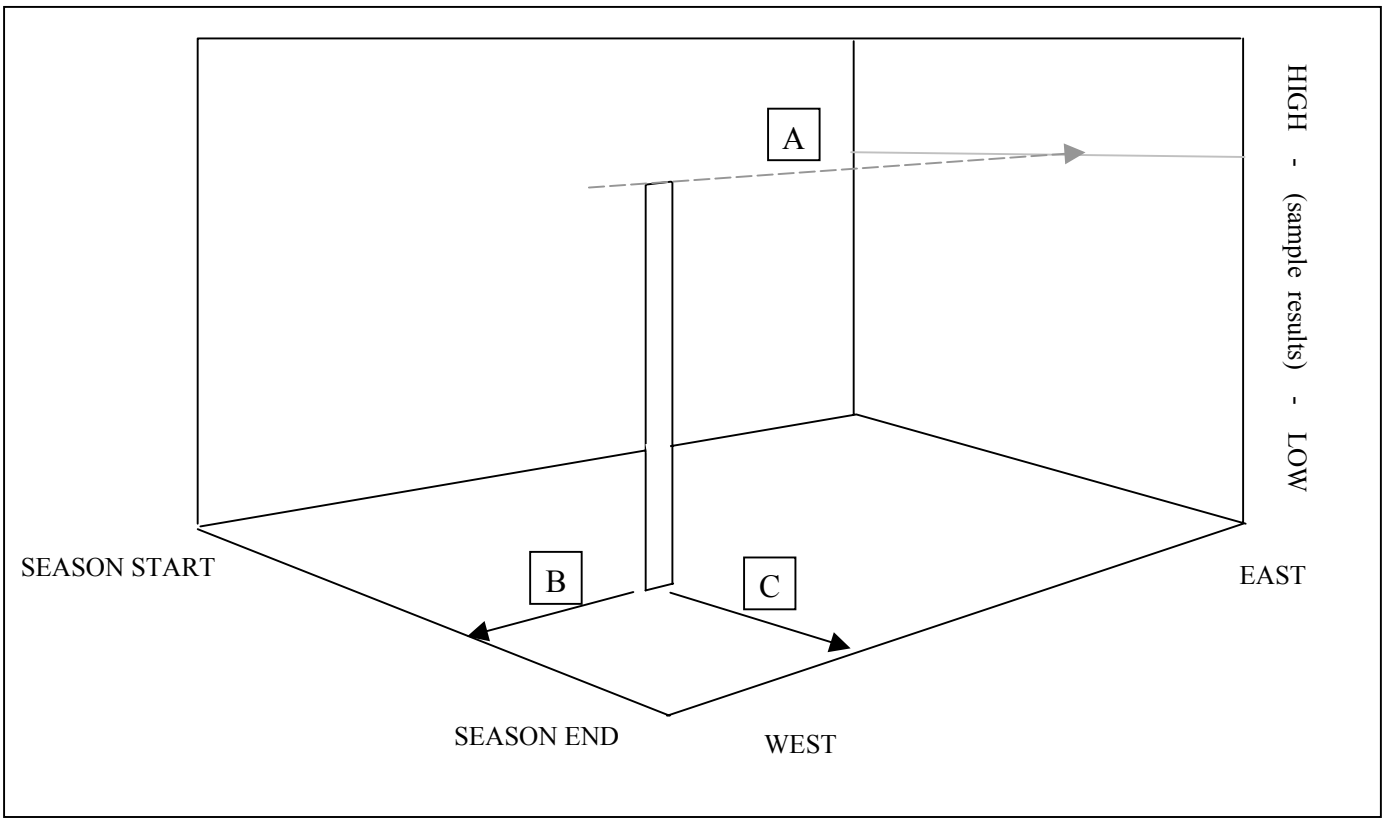
Where and when did the exceedances occur over the nine (9) seasons (2003-2011) for which we have reported marine bathing water monitoring results? On the following nine (9) pages you will find a three axis (i.e. X,Y,Z) chart for each bathing season that displays the relationship between sampling station location along the shoreline, sample collection date and the reported density of Enterococcus for each sample. A tenth chart shows just exceedances reported over the nine (9) seasons (2003-2011).

Here's how to read each of these ten (10) charts. Sample results are shown as vertical bars rising from the chart floor that has a rear and right wall.

- The height of each vertical bar indicates the value of a single sample result that you can find by reading from the top of the bar across to the right vertical wall of the chart. See the bar height arrow labeled A that points to the right side wall. Taller bars indicate larger sample result values in CFU/100ml for Enterococcus. The example bar indicates a relatively large sample result value for the single sample represented by the vertical bar.

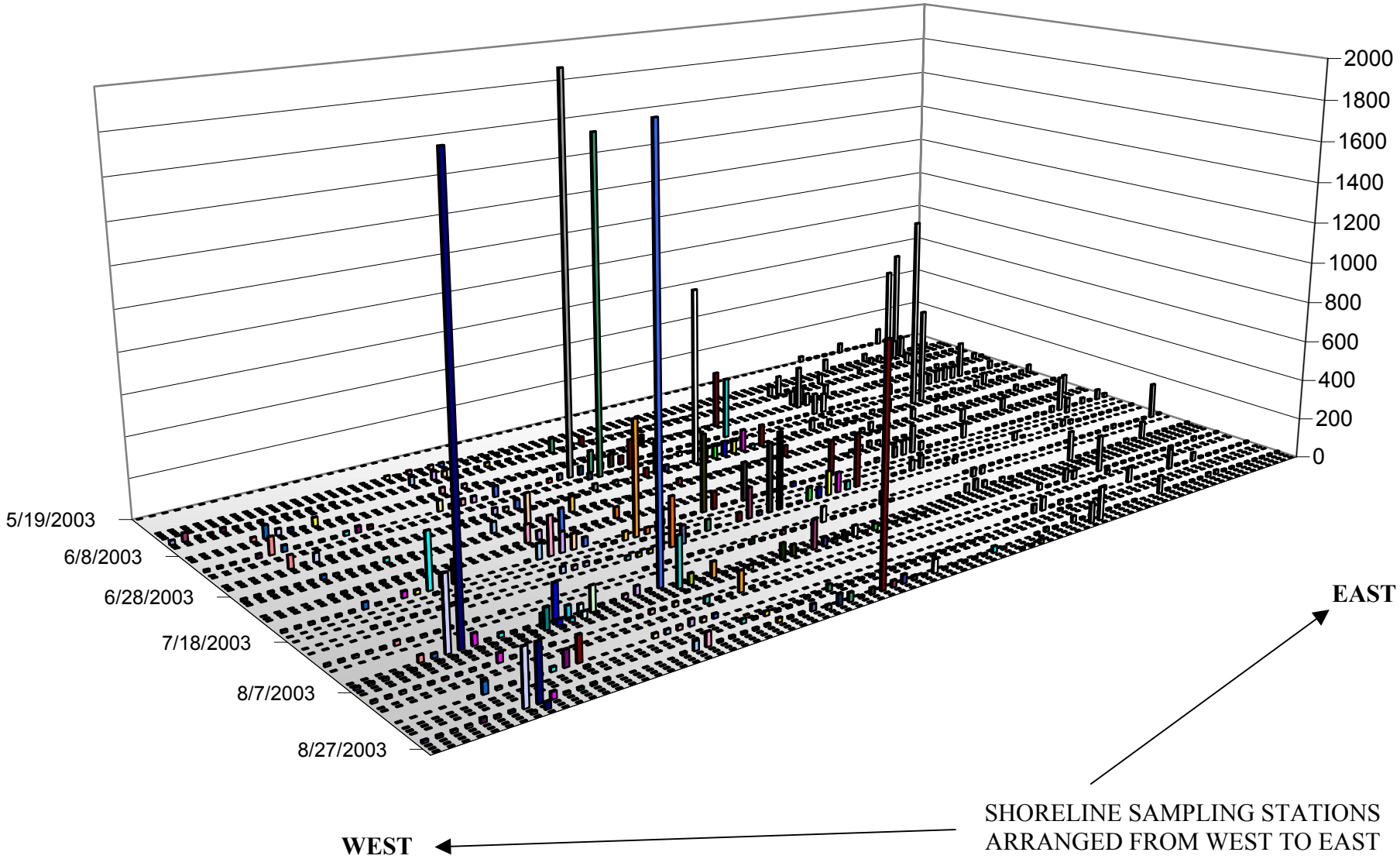
- The sample collection date is indicated by the bar's front-to-back position on the floor of the chart with the timeline running from the season start at the back of floor to the end of the season at the front of the chart floor. See the arrow labeled B that points from the base of the bar to the season time line on the left side of the chart floor. The example bar indicates a sample that was collected closer to the end of the bathing season.

- The relative location of the station where the sample was collected along the Connecticut shoreline can be read from left (west end of the shoreline) to right (east end of the shoreline) along the front of the chart floor. See the arrow labeled C that points from the base of the bar to the front shoreline axis of the chart. The example bar indicates a sample collected closer to the western end of the shoreline.



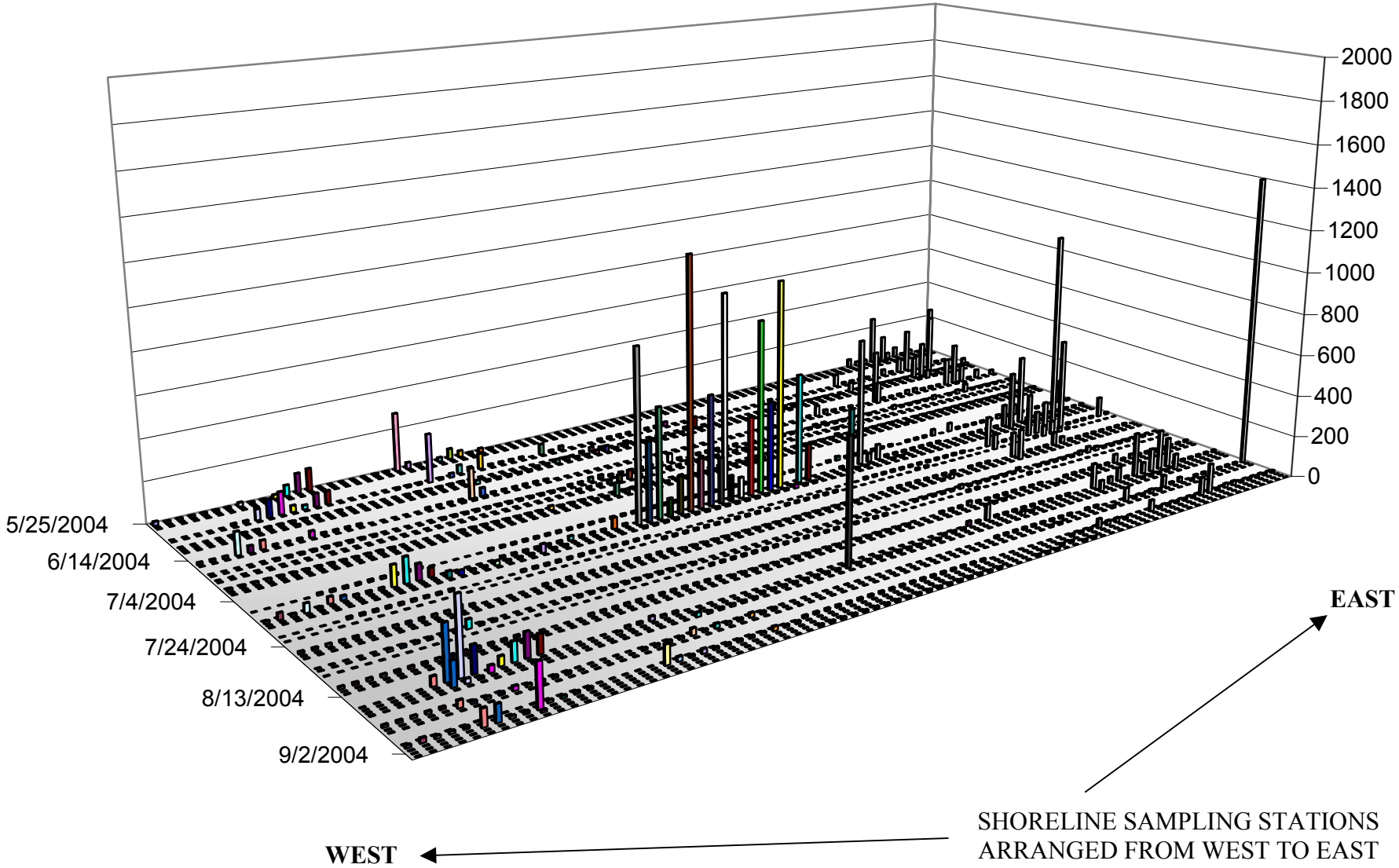
2003 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



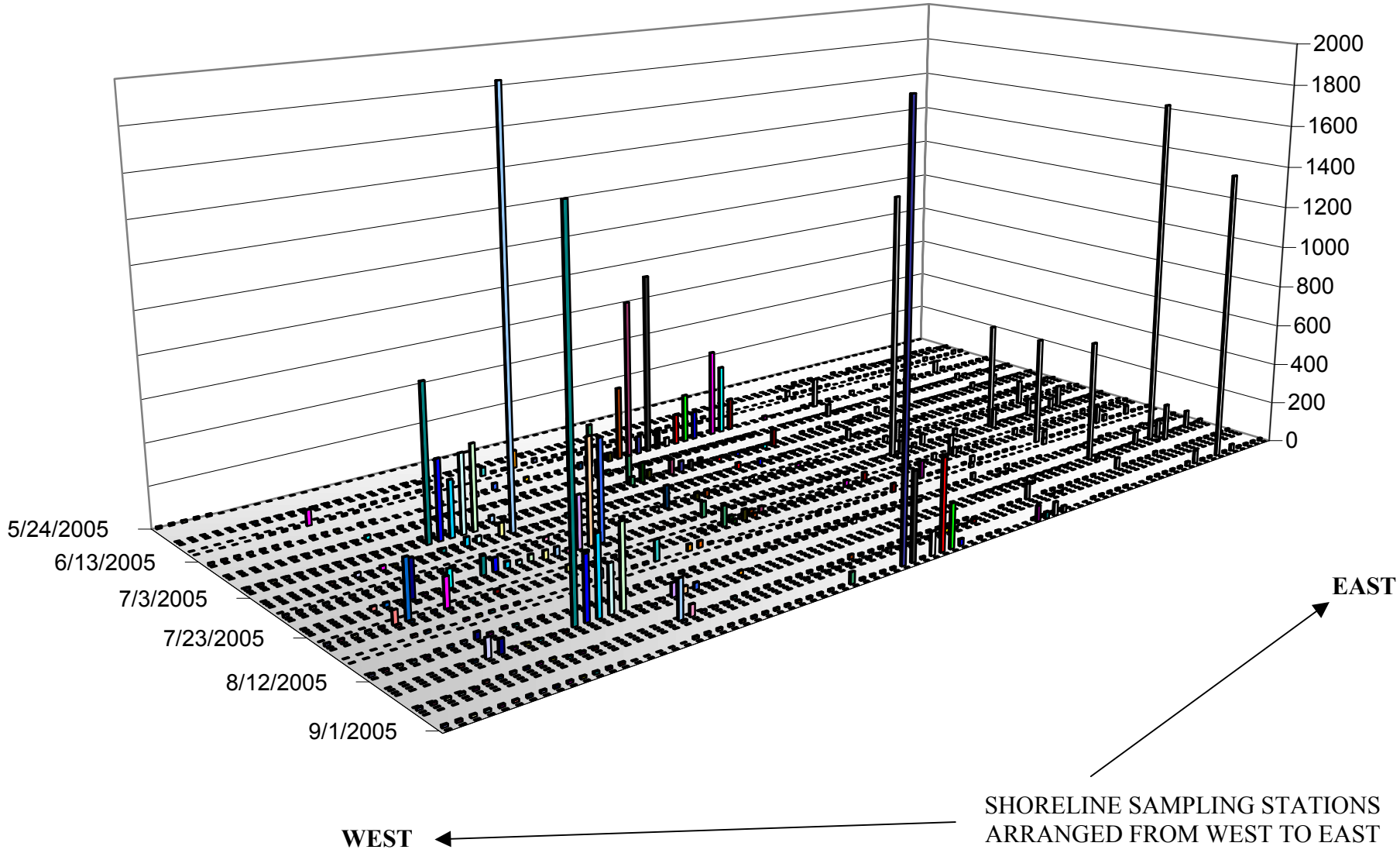
2004 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



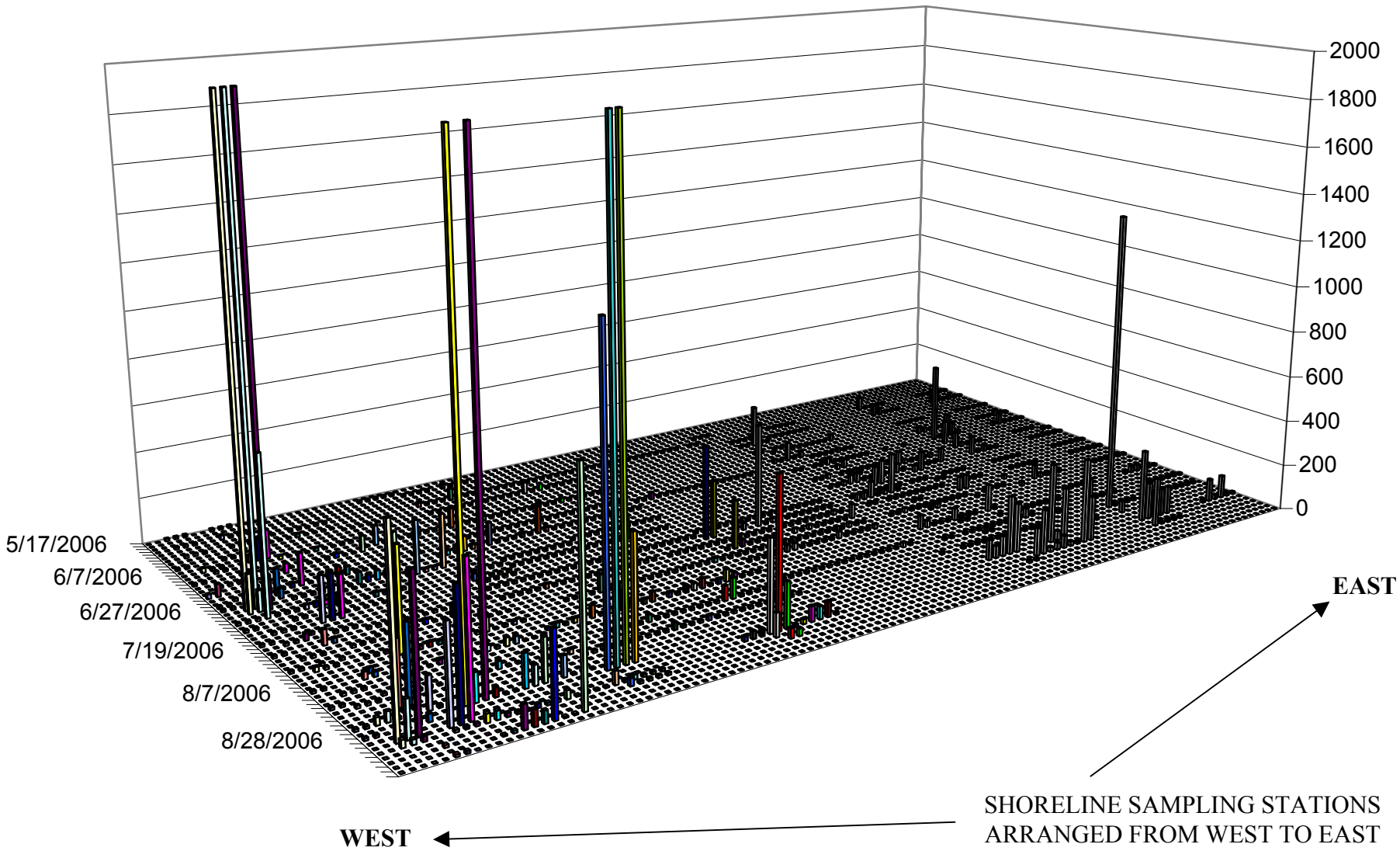
2005 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



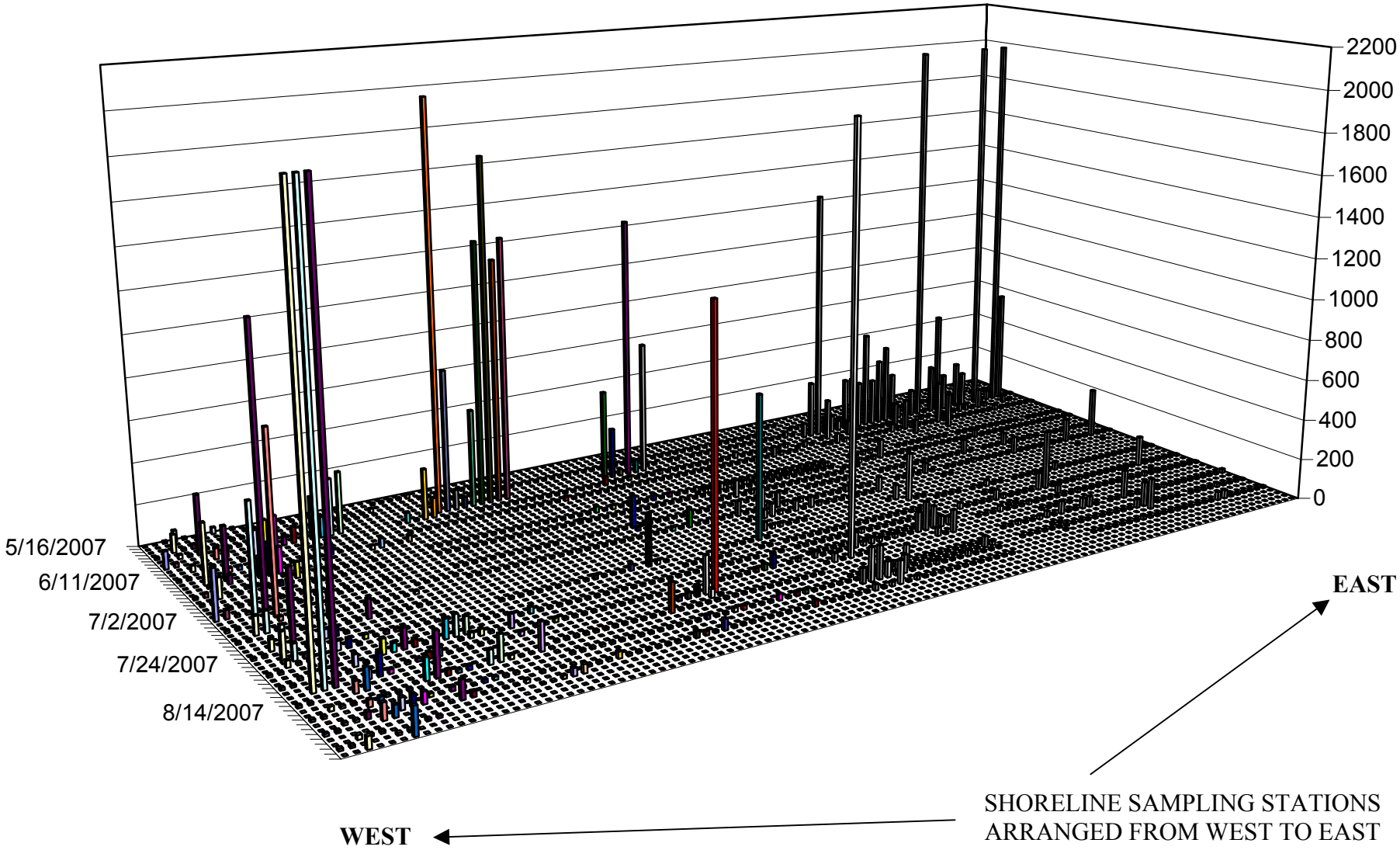
2006 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



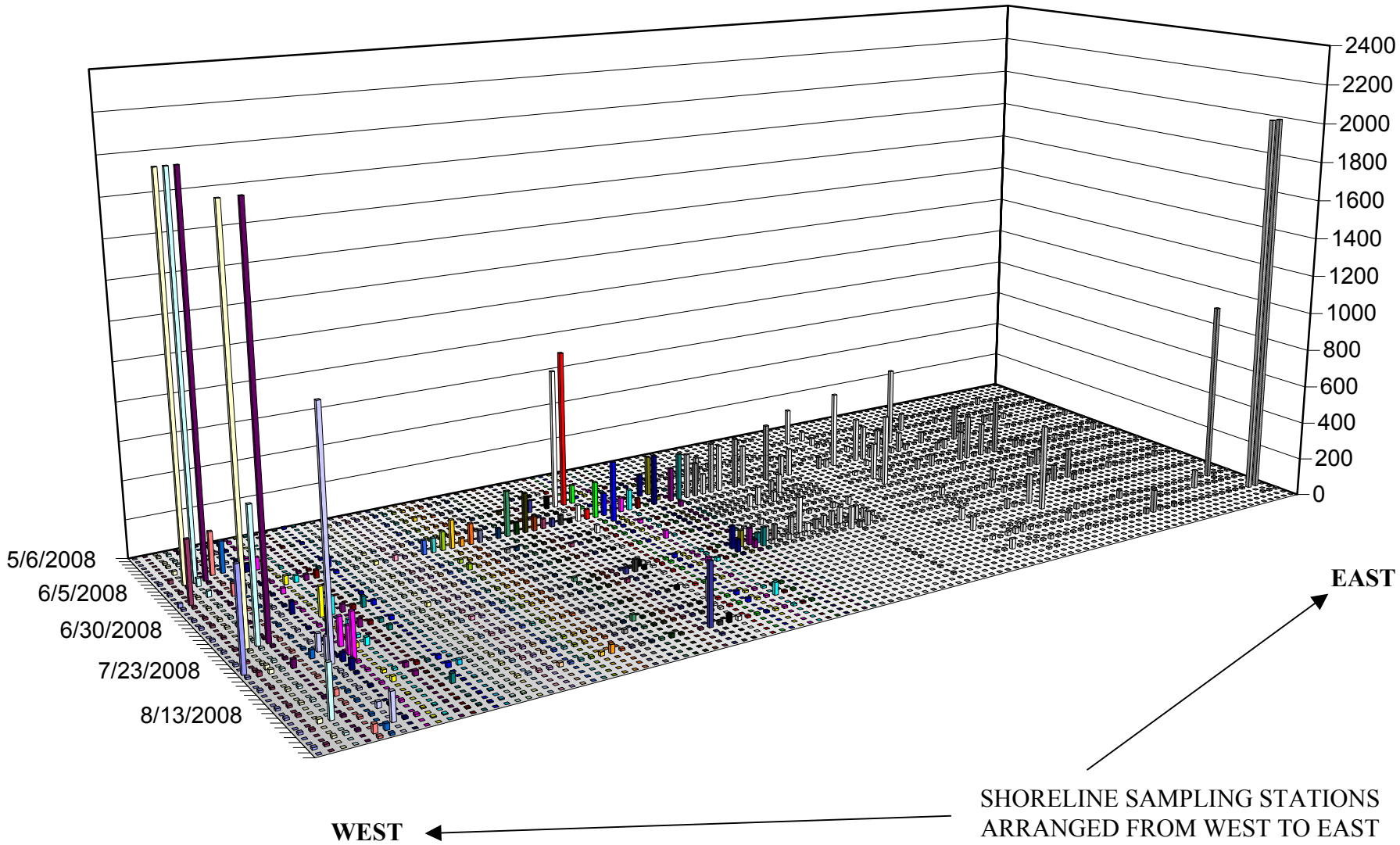
2007 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



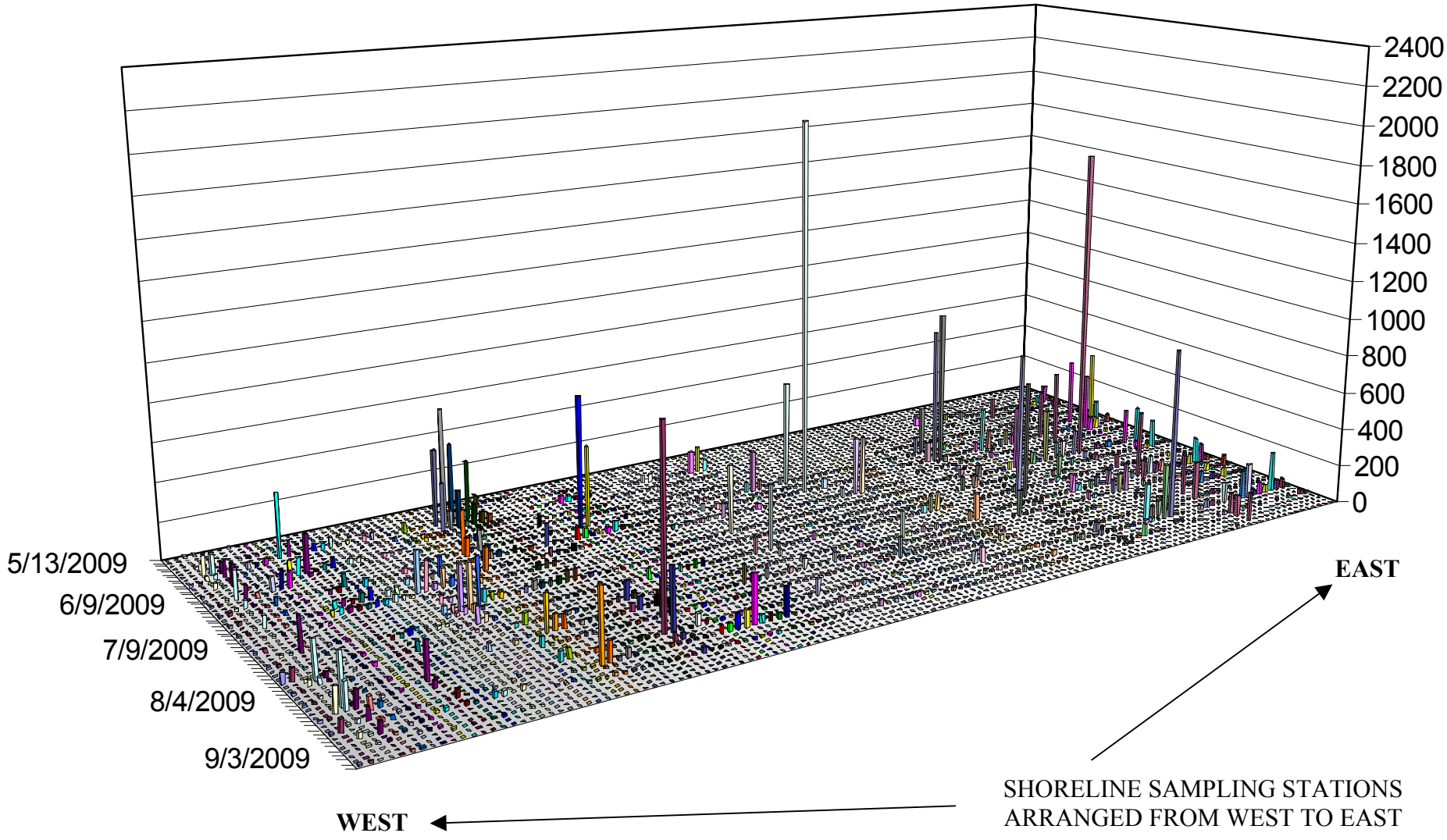
2008 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



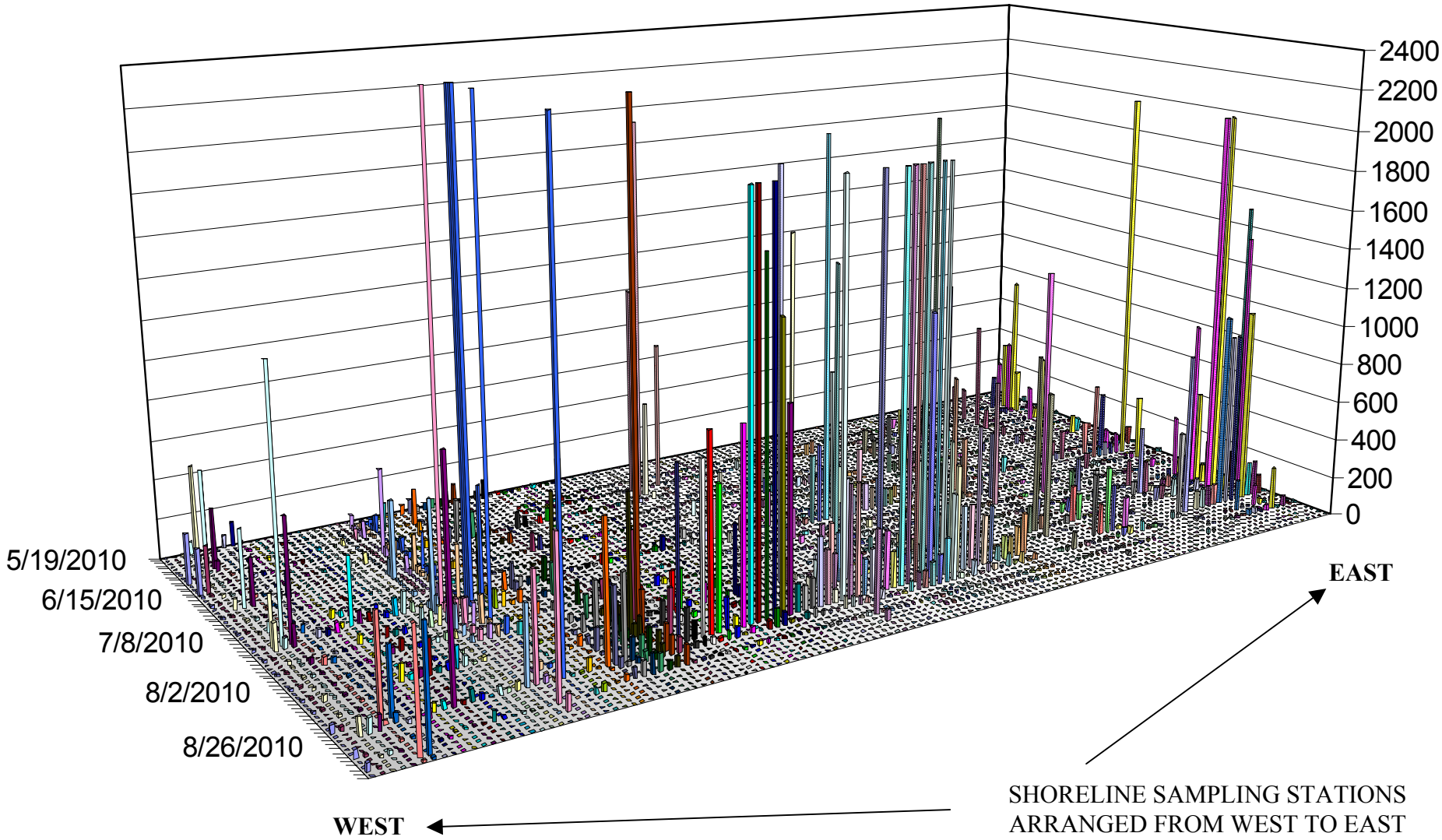
2009 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



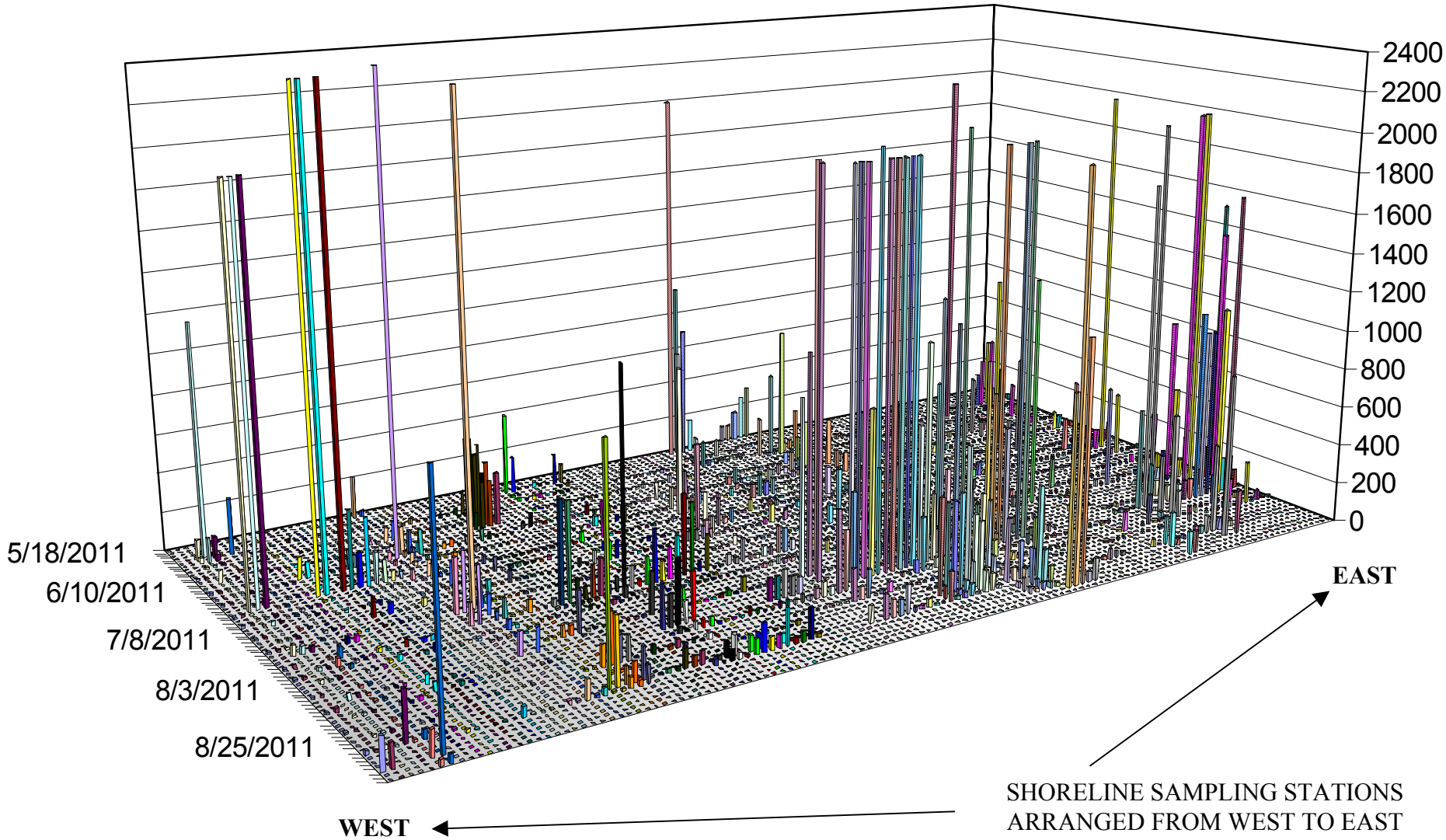
2010 BATHING SEASON

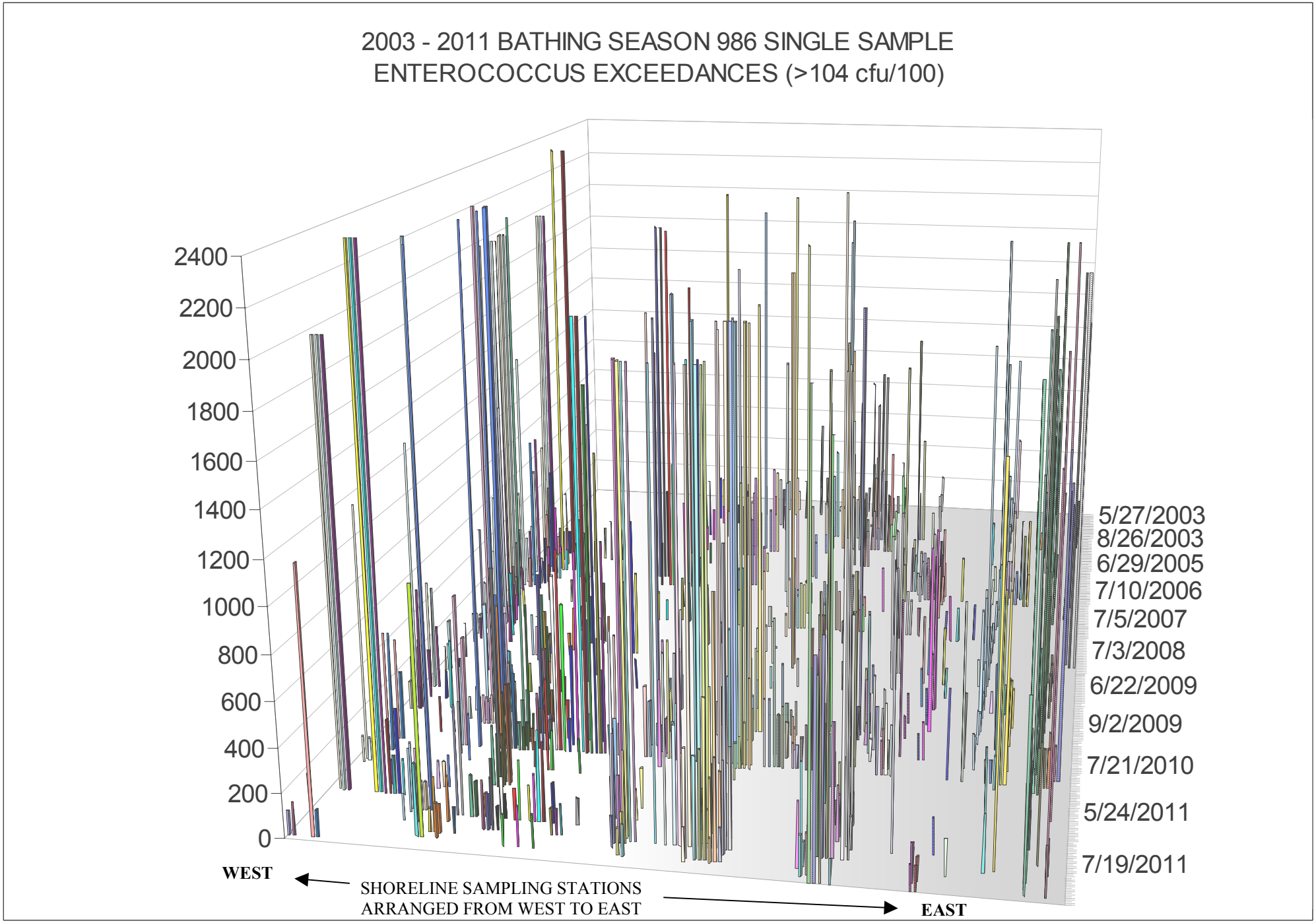
CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT



2011 BATHING SEASON

CONNECTICUT STATE LABORATORY AND LHD
MARINE WATER SAMPLING DATA FOR THE EPA BEACH GRANT




2003 - 2011 BATHING SEASON 986 SINGLE SAMPLE
ENTEROCOCCUS EXCEEDANCES (>104 cfu/100)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
5/27/2003
8/26/2003
6/29/2005
7/10/2006
7/5/2007
7/3/2008
6/22/2009
9/2/2009
7/21/2010
5/24/2011
7/19/2011
WEST
SHORELINE SAMPLING STATIONS
ARRANGED FROM WEST TO EAST
EAST

7.2.3 ROLLING GEOMETRIC MEAN

Single sample Enterococcus densities greater than 104 CFU/100ml for marine recreational waters are useful indicators of bathing water contamination at a particular location and *at the time those samples were collected (certainly not the next day)*. Is there a way to take a longer term look at recreational water quality?

The single sample standard for marine recreational waters (and for fresh recreational waters, as well) developed by US EPA is based on an underlying geometric mean standard although the geometric mean standard for marine and fresh recreational waters are not the same. Each standard uses the geometric mean of 5 sample results collected over 30 days. The standard is a valuable (and sometimes overlooked) tool for assessing recreational water quality over time. This section takes a close look at the geometric mean.

The GEOMETRIC MEAN can be defined as the **n**th root of the product of **n** numbers. Finding the **n**th root of the product of **n** numbers is the same as raising the product of **n** numbers to the power of the reciprocal of **n** numbers.

☞ **The 5 sample 30 day geometric mean standard for <u>marine</u> recreational water is 35.**

Example (5 samples):	**Geometric mean solution:**
n1 = 10 n2 = 31 n3 = 360 n4 = 110 n5 = 75	= (n1 * n2 * n3 * n4 * n5) ^ (1/n) = (10 * 31 * 360 * 110 * 75) ^ .2 = 920700000 ^ .2 = **62.062**

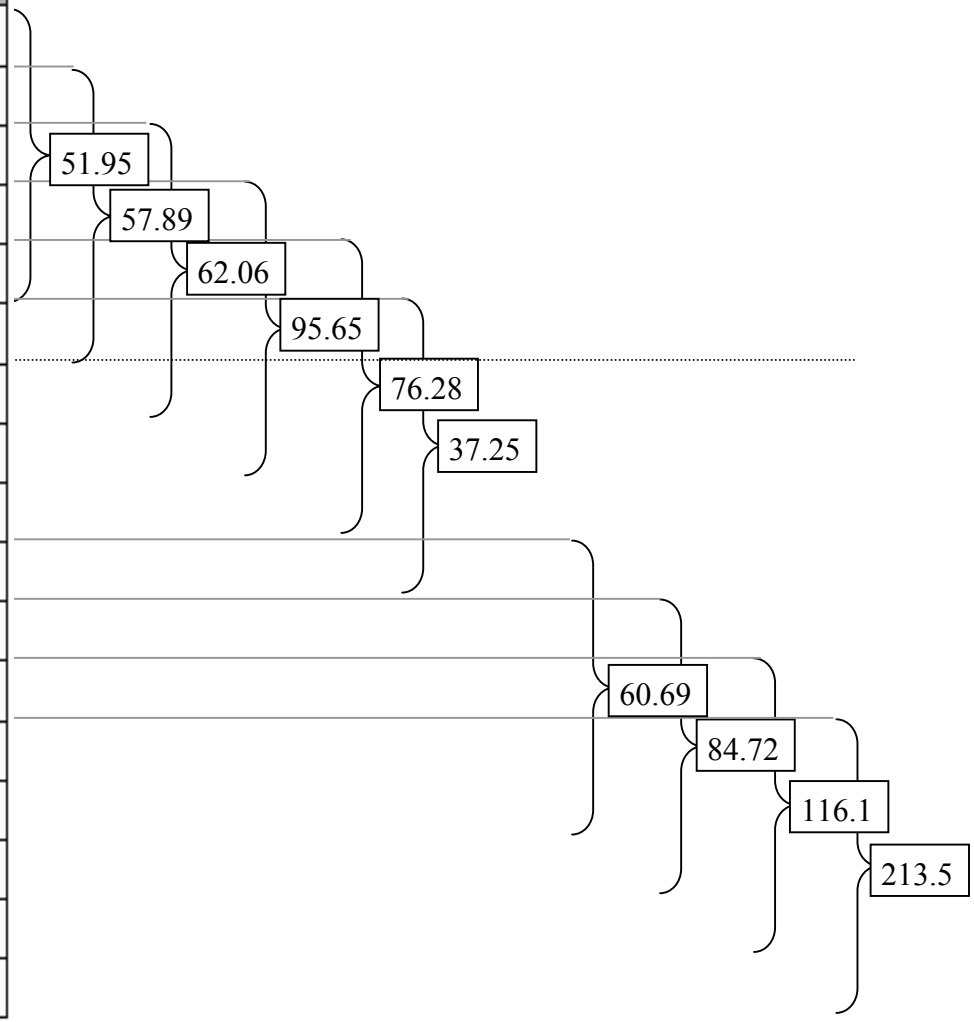
When it is not possible to identify 5 samples collected over 30 days, then calculating a **rolling geometric mean** for 5 samples can provide an approximation of the 5 sample 30 day standard.

<u>Calculating the rolling (or running) geometric means for a sample station works this way</u>: All the validated marine bathing area monitoring results (excluding state park beaches) for the bathing season year are gathered and sorted by 1) town, 2) beach 3) sampling station name and 4) result date. DPH uses a geometric mean crawler software utility that works its way through the results for each sampling station one at a time starting with the first result for a station. The crawler uses the current result (n1) plus the next four (4) consecutive results (n2, n3, n4, n5) to calculate the geometric mean. If the geometric mean is greater than 35, it is saved along with supporting data in a table for later use. Then the crawler starts with the next result (n2) for that station (i.e. the second result in this example) and uses that result plus the next four (4) results (n3, n4, n5, n6) to calculate the next geometric mean that it saves when it is greater than 35. The crawler rolls along through the sampling results until it detects a new sampling station when it stops, resets, and proceeds as described above until it reaches the end of the list.

Rolling geometric means use overlapping sets of sampling results for a station. Looking at the seasonal results for a station can help answer the question, "What triggers a calculated geometric mean greater than 35 for a set of 5 results?" A set of five (5) sample results can generate a geometric mean greater then 35 when one (1) or more of those results exceeds the single sample standard of 104 CFU/100ml or a set of five (5) results can contain no single sample greater than 104 CFU/100ml and still generate a geometric mean greater then 35.

EXAMPLE: 17 SAMPLES PRODUCE 10 ROLLING GEOMETRIC MEANS >35

STATION	RESULT DATE	RESULT
WFD5	5/30/2006	64
WFD5	6/5/2006	53
WFD5	6/12/2006	10
WFD5	6/19/2006	31
WFD5	6/26/2006	360
WFD5	6/28/2006	110
WFD5	7/3/2006	75
WFD5	7/10/2006	87
WFD5	7/17/2006	10
WFD5	7/24/2006	10
WFD5	7/31/2006	64
WFD5	8/7/2006	10
WFD5	8/14/2006	99
WFD5	8/21/2006	1300
WFD5	8/23/2006	53
WFD5	8/29/2006	310
WFD5	8/31/2006	210



There were 10 rolling geometric means calculated for the 17 samples reported by the station in this example. Each geometric mean was associated with one (1) or more results > 104 CFU/100ml. Just 5 out of 17 reported results for this station exceeded 104 CFU/100ml. Geometric mean >35 can be triggered when none of the 5 results exceeds 104 CFU/100ml (not shown here). Many geometric means in this example have sets of 5 samples that overlap. *Also note that this method does not heed the recommended 30 day time span between first and fifth sample in a five (5) sample set*.

7.2.3.1 ROLLING GEOMETRIC MEANS AND SINGLE SAMPLE EXCEEDANCES

Software can generate and report rolling geometric means greater than 35 for sets of 5 *consecutive* sample results (regardless of the time span between the first and last result in the 5 sample set). See page 48 for an overview of the data processing steps performed to support this section of the Annual Report.

Many rolling geometric means greater than 35 are associated with one (1) or more values in the set of five (5) samples that are greater than 104 CFU/100ml. For instance all rolling geometric means greater than 35 for the 2006 bathing season included at least one (1) result that exceeded 104 CFU/100ml. However 5 results - all less than 104 CFU/100ml - can generate a geometric mean greater than 35. For example here are two (2) sets of 5 results that both produce a geometric mean greater than 35. The set of 5 results in the left panel contains no result greater than 104 CFU/100ml. The set of 5 consecutive results in the right panel contains one (1) result greater than 104 CFU/100ml.

GEOMETRIC MEAN: 41.066	result 1: 10 cfu/100ml on 7/13/2005
SERIES START DATE: 7/13/2005	result 2: 53 cfu/100ml on 7/14/2005
SERIES END DATE: 7/28/2005	result 3: 53 cfu/100ml on 7/19/2005
DAY COUNT: 15	result 4: 99 cfu/100ml on 7/27/2005
	result 5: 42 cfu/100ml on 7/28/2005

GEOMETRIC MEAN: 51.955	result 1: 64 cfu/100ml on 5/30/2006	
SERIES START DATE: 5/30/2006	result 2: 53 cfu/100ml on 6/5/2006	
SERIES END DATE: 6/26/2006	result 3: 10 cfu/100ml on 6/12/2006	
DAY COUNT: 27	result 4: 31 cfu/100ml on 6/19/2006	
	result 5: 360 cfu/100ml on 6/26/2006	<-- note

☞ Many but by no means all rolling geometric means calculated for the regulated marine bathing areas along the Connecticut shoreline occur when (1) or more sampling results in a set of five (5) results are greater than 104 CFU/100ml.

SEASON	Count of rolling sample sets with geomean >35	Unique single sample results >104 CFU100ml found in all rolling sample sets with geomean >35	All single sample results >104 CFU/100ml reported for the season	Beaches with one or more rolling geomean >35	Stations with one or more rolling geomean >35
2003	65	34	51	10	19
2004	37	25	62	7	11
2005	35	22	47	8	13
2006	43	27	75	10	14
2007	52	25	89	9	12
2008	34	17	73	8	11
2009	85	53	93	16	26
2010	341	202	261	46	80
2011	319	173	235	41	62

From the table above, it is clear that not all single sample monitoring results > 104 CFU/100ml reported for a station are associated with a 5-sample geometric mean greater than 35. For instance there were 51 reported single sample exceedances in 2003 but just 34 of these are associated with a rolling geometric mean >35.

Occasionally, a set of five (5) sample results that contain no single sample greater than 104 CFU/100ml can generate a geometric mean greater than 35. Beaches with sampling station results that generate geometric means greater than 35 in this way deserve closer attention by beach managers.

Sets of 5 consecutive samples that contain **no results** > 104 CFU/100ml and that generated a geometric mean >35			
SEASON	Sets of 5 consecutive samples	Beaches with one or more rolling geomean >35	Stations with one or more rolling geomean >35
2003	7	3	3
2004	1	1	1
2005	3	1	1
2006	0	0	0
2007	2	2	2
2008	1	1	1
2009	0	0	0
2010	8	7	7
2011	11	7	7

☞ A set of 5 monitoring results can generate a geometric mean >35 when it contains no results >104 CFU/100 ml or when it contains one (1) or more results >104 CFU/100 ml.

Here is the distribution of the count of samples >104 CFU/100ml for those five (5) sample sets that produced a geometric mean >35. For instance 8 5-sample sets in 2010 had no single sample exceedances and 122 5-sample sets contained one sample result > 104 CFU/100ml.

		Count of samples >104 CFU/100 ml in bathing season sample sets with geometric mean >35						
SEASON	Count of all rolling 5 sample sets	0	1	2	3	4	5	Count of rolling sample sets with geomean >35
2003	656	7	25	30	3	0	0	65
2004	777	1	14	16	6	0	0	37
2005	797	3	20	12	0	0	0	35
2006	900	0	20	22	1	0	0	43
2007	1169	2	33	13	4	0	0	52
2008	1156	1	19	11	3	0	0	34
2009	1467	0	49	25	8	3	0	85
2010	1709	8	122	167	36	7	1	341
2011	1599	11	153	111	34	8	2	319

For most bathing seasons, **approximately** half of the five 5-sample sets that produced a geometric mean >35 did so when those sets contained between zero (0) and one (1) result >104 CFU/100 ml while the remaining half of the five (5) sample sets generated a geometric mean >35 when they contained between two (2) and five (5) results >104 CFU/100 ml.

☞ If single sample exceedances are often driving (i.e. contributing to) elevated geometric means, then how valuable is the geometric mean as a hindsight indicator of recreational water quality over the longer term?

7.2.3.2 ROLLING GEOMETRIC MEAN AND LOG STANDARD DEVIATION

There is more to the geometric mean standard for marine recreational water than meets the eye, and one detail in particular points the way to a more reasoned use of the geometric mean standard.

The single sample standard for marine recreational waters adopted by US EPA is based on epidemiology reported by US EPA between 1983 and 1986 (see: Ambient Water Quality Criteria for Bacteria - 1986, document identifier: EPA440/5-84-002, January 1986).

☞ That US EPA epidemiology identified unacceptable levels of swimmer illness associated with steady state (sunny, dry, and calm weather) marine recreational water when five (5) water samples collected over 30 days had a geometric mean greater than 35 and a *log standard deviation* less than or equal to 0.70. According to US EPA, a single marine recreational water sample greater than 104 CFU/100ml has a reasonable chance (single sided .75 confidence level) of being drawn from water that would exceed the geometric mean standard.

The LOG STANDARD DEVIATION for a set of numbers is the standard deviation of the logs(base 10) for those numbers. First convert each number in the set to its log(base 10) equivalent, and then find the sample standard deviation (n-1) of the log (base 10) values.

Example: log standard deviation (5 samples):

samples	**log(10)**
n1 = 10	1.00
n2 = 31	1.49
n3 = 360	2.56
n4 = 110	2.04
n5 = 75	1.88

log standard deviation of [10, 31, 360, 110, 75]

= sample standard deviation (n-1) of [1.00, 1.49, 2.56, 2.04, 1.88]
= **0.587**

We generate a report at the end of the bathing season that details 5-sample rolling geometric means and their log standard deviations as a tool to assist beach managers. Below is an example of a rolling geometric mean calculated for 5 consecutive water samples collected at one (1) sampling station. Because the geometric mean for the 5 samples is greater than 35 and the log standard deviation is less than 0.70, this <u>may</u> indicate impaired water. Note that this illustration shows the 5 samples were collected over 21 days and no sample exceeded the 104 CFU/100ml standard.

GEOMETRIC MEAN:	**37.949**	result 1:	10 cfu/100ml on 8/4/2008
STANDARD DEVIATION:	37.165844535003	result 2:	75 cfu/100ml on 8/10/2008
→ LOG STANDARD DEVIATION:	0.4167884228619	result 3:	99 cfu/100ml on 8/10/2008
SERIES START DATE:	8/4/2008	result 4:	20 cfu/100ml on 8/18/2008
SERIES END DATE:	8/25/2008	result 5:	53 cfu/100ml on 8/25/2008
→ DAY COUNT:	21		

Here are counts for beaches from 2003 through 2011 that experienced one (1) or more rolling geometric means >35 with a log standard deviation < 0.70 and with no single sample exceedances.

BATHING SEASON	Beaches with one or more rolling geometric mean >35	BEACHES WITH ONE OR MORE ROLLING 5-SAMPLE SETS THAT HAD GEOMETRIC MEAN >35 AND LOG STANDARD DEVIATION < 0.70	BEACHES WITH ONE OR MORE ROLLING 5-SAMPLE SETS THAT HAD GEOMETRIC MEAN >35 AND LOG STANDARD DEVIATION < 0.70 AND NO SINGLE SAMPLE EXCEEDANCES	% MONITORED BEACHES WITH ONE OR MORE ROLLING 5-SAMPLE SETS THAT HAD GEOMETRIC MEAN >35 AND LOG STANDARD DEVIATION < 0.70 AND NO SINGLE SAMPLE EXCEEDANCES
2003	10	9	3	30.0
2004	7	5	1	14.3
2005	8	5	1	12.5
2006	10	5	0	0
2007	9	7	2	22.2
2008	8	5	1	12.5
2009	16	13	0	0
2010	46	31	7	15.2
2011	41	24	7	17.1

☞ When a beach generates a rolling geometric mean >35 with a log standard deviation <0.70 for 5 samples, it's worth taking a moment to ask what might be going on with the beach and its adjacent water.

Because of alignment with US EPA epidemiology a closer look may be warranted when a beach generates a 5-sample set with geometric mean >35, log standard deviation < 0.70 and the 5-sample set contains no single sample exceedances.

It may not be time to close the beach because conditions may not have been steady state (see page 114) and the source of Enterococcus may not be human fecal contamination (see page 120).

☞ Compare the data for 2010 and 2011 presented in this rolling geometric section with the data in this same section for other bathing seasons. The rolling geometric mean data presented here mirror the deteriorating marine recreational water quality reported during those two summers. See the bathing season case studies for 2010-2011 starting on p. 182 for more information.

7.2.3.3 ROLLING GEOMETRIC MEAN AND RESAMPLING

The rolling geometric mean reports produced by the beach data management software also show the number of days between each result > 104 CFU/100ml (in a set of 5 samples generating a geometric mean greater than 35) and the next consecutive sample result. When the next consecutive sample result for a station is between 1 and 2 days after the result with the exceedance (>104 CFU or MPN/100ml), we can note the value of the resample result to see whether it is greater than or less than 104 CFU/100ml. This gives us a snapshot of the rise and fall of Enterococcus densities over a one (1) or two (2) day period.

SEASON	1 or 2 day follow-up resamples	1 or 2 day follow-up resample results >104	1 or 2 day follow-up resample results =<104
2003	9	1	8
2004	17	3	14
2005	6	0	6
2006	11	4	7
2007	11	2	9
2008	10	3	7
2009	28	6	22
2010	135	26	109
2011	108	30	78

Frequently, but not always, a resample taken between 1 and 2 days after a single sample exceedance result reveals much lower density (below 104 CFU/100ml) of the indicator organism Enterococcus.

7.2.4 DETECTED BEACH EXCEEDANCE DAYS

986 samples (or 7.0%) out of 14110 marine single sample Enterococcus results for the period from 2003-2011 were reported as exceeding the 104 CFU/100ml single sample standard. The current US EPA methods for detecting the marine fecal contamination indicator organism Enterococcus have a twenty four (24) hour turn around time. Unless a beach with one (1) of these single sample exceedances was already closed or under advisory, the beach would have been open for swimming when the Enterococcus spike occurred and that swimming day at the beach would count as a detected beach exceedance day.

> ☞ A **detected beach exceedance day** for the purpose of this annual report is any day during the bathing season when one (1) or more sampling stations at a beach reported a single sample Enterococcus result >104 CFU/100ml and *at the same time* the beach was not under a closure or advisory.

The following table presents detected beach exceedance days for the period 2003-2011 for beaches with single sample monitoring results and notification data.

BEACHES WITH DETECTED EXCEEDANCE DAYS[1]																				
SEASON ⇨	2003		2004		2005		2006		2007		2008		2009		2010		2011		2003-2011	
BEACH NAME ⇩	days	%	days	%	days	%	days	%	days	%	days	%	days	%	days	%	days	%	days	%
ALTSCHULER BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0.9	1	0.2
ANCHOR BEACH (MERWIN POINT) #1	2	5.7							1	2.0	1	2.5	1	1.5	4	2.7	1	0.9	9	1.7
ANCHOR BEACH (MERWIN POINT) #2	1	2.9											1	1.5	1	0.7	1	0.9	5	0.9
BELL ISLAND BEACH															2	1.4			2	0.4
BRANFORD POINT BEACH							1	2.5							5	3.4	3	2.8	9	1.7
BURYING HILL BEACH															1	0.7			1	0.2
BYRAM BEACH							1	2.5	1	2.0	1	2.5	5	7.4			3	2.8	11	2.0
CALF PASTURE BEACH													3	4.4	3	2.0	2	1.9	8	1.5
CLARK AVENUE BEACH			1	2.7			1	2.5	2	3.9	2	5.0			4	2.7	5	4.7	15	2.8
COMPO BEACH			1	2.7			1	2.5					3	4.4	3	2.0	3	2.8	11	2.0
CUMMINGS BEACH							1	2.5	1	2.0					1	0.7			3	0.6
DAWSON BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	1.9	2	0.4
DUBOIS BEACH	1	2.9	2	5.4							1	2.5							4	0.7
EAST (COVE ISLAND) BEACH							2	5.0	1	2.0					1	0.7			4	0.7
EAST HAVEN TOWN BEACH			1	2.7					1	2.0			1	1.5	3	2.0	2	1.9	8	1.5
EAST WHARF BEACH							1	2.5	1	2.0					1	0.7			3	0.6
EASTERN POINT BEACH			2	5.4									5	7.4	2	1.4	1	0.9	10	1.8
ESKER POINT BEACH			1	2.7					2	3.9					1	0.7	2	1.9	6	1.1
ESPOSITO BEACH[2]							1	2.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0.2
GREAT CAPTAIN'S ISLAND BEACH									1	2.0	2	5.0			2	1.4	1	0.9	6	1.1
GREEN HARBOR BEACH	4	11.4	7	18.9	4	20.0	2	5.0	3	5.9			3	4.4	12	8.2	5	4.7	40	7.3
GREENWICH POINT BEACH							4	10.0	2	3.9	4	10.0			2	1.4			12	2.2
GULF BEACH															1	0.7	1	0.9	2	0.4
HARVEY'S BEACH									1	2.0									1	0.2
HICKORY BLUFF BEACH													1	1.5			1	0.9	2	0.4
HOLE-IN-THE-WALL BEACH							1	2.5	1	2.0	1	2.5	1	1.5	2	1.4	1	0.9	7	1.3
ISLAND BEACH							2	5.0	3	5.9	1	2.5			2	1.4	2	1.9	10	1.8
JACOBS BEACH (TOWN BEACH)	4	11.4			1	5.0	2	5.0	2	3.9			1	1.5	4	2.7	4	3.7	18	3.3
JENNINGS BEACH	2	5.7	2	5.4			1	2.5	1	2.0			1	1.5	2	1.4	2	1.9	11	2.0
KIDDIE'S BEACH[3]	3	8.6	6	16.2	3	15.0	5	12.5	6	11.8	3	7.5	11	16.2	7	4.8	n/a	n/a	44	8.1

(continued)

BEACHES WITH DETECTED EXCEEDANCE DAYS[1]																				
SEASON ⇨	2003		2004		2005		2006		2007		2008		2009		2010		2011		2003-2011	
BEACH NAME ⇩	days	%	days	%	days	%	days	%	days	%	days	%	days	%	days	%	days	%	days	%
LIGHTHOUSE POINT BEACH									1	2.0							6	5.6	7	1.3
LONG BEACH (MARNICK'S)	1	2.9											1	1.5	4	2.7	2	1.9	8	1.5
LONG BEACH (PROPER)					1	5.0			1	1.96	1	2.5			5	3.4	3	2.8	11	2.0
MARVIN BEACH													3	4.4	1	0.7	2	1.9	6	1.1
MCCOOK POINT BEACH					1	5.0					1	2.5			1	0.7	1	0.9	4	0.7
MIDDLE BEACH/STANNARD BEACH											1	2.5	1	1.5	2	1.4			4	0.7
MORSE BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0.9	1	0.2
NOANK DOCK									1	2.0	1	2.5			1	0.7			3	0.6
OAK STREET B BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0.9	1	0.2
OCEAN BEACH PARK			5	13.5	1	5.0	1	2.5	1	2.0			1	1.5	5	3.4	2	1.9	16	2.9
PEAR TREE POINT BEACH									1	2.0			2	2.9	5	3.4	6	5.6	14	2.6
PENFIELD BEACH	1	2.9									1	2.5			2	1.4	1	0.9	5	0.9
PENT ROAD BEACH							1	2.5	1	2.0	1	2.5			3	2.0			6	1.1
PLEASURE BEACH	1	2.9					1	2.5											2	0.4
QUIGLEY BEACH							1	2.5							1	0.7			2	0.4
ROWAYTON BEACH													1	1.5			1	0.9	2	0.4
SASCO BEACH	1	2.9	1	2.7	1	5.0					1	2.5	1	1.5	2	1.4	2	1.9	9	1.7
SEABLUFF BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	6.5	7	1.3
SEASIDE PARK BEACH					1	5.0			2	3.9	1	2.5			1	0.7	2	1.9	7	1.3
SEAVIEW BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	2.8	3	0.6
SHADY BEACH													2	2.9	8	5.4	5	4.7	15	2.8
SHORT BEACH	3	8.6					1	2.5			3	7.5	1	1.5	4	2.7	6	5.6	18	3.3
SOUTH PINE CREEK BEACH			2	5.4	1	5.0							1	1.5	1	0.7	1	0.9	6	1.1
SOUTH STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	1.9	1	1.3
SOUTHPORT BEACH			2	5.4	1	5.0									2	1.4	2	0.9	7	0.2
STONY CREEK BEACH							1	2.5					1	1.5	1	0.7	1	0.9	4	0.7
SURF CLUB BEACH									1	2.0	1	2.5			2	1.4			4	0.7
TOWN BEACH (CLINTON)									3	5.9	1	2.5	1	1.5	3	2.0			8	1.5
TOWN BEACH (OLD SAYBROOK)													1	1.5	1	0.7			2	0.4
WALNUT BEACH	1	2.9									2	5.0			2	1.4	1	0.9	6	1.1
WATERFORD TOWN BEACH							2	5.0	1	2.0			1	1.5	3	2.0			7	1.3
WEED BEACH													1	1.5	5	3.4	4	3.7	10	1.8
WEST BEACH							2	5.0			1	2.5	3	4.4	1	0.7	1	0.9	8	1.5
WEST HAVEN EAST BEACH[3]	6	17.1	3	8.1	2	10.0	1	2.5	3	5.9	4	10.0	2	2.9	8	5.4	n/a	n/a	29	5.3
WEST HAVEN WEST BEACH[3]	4	11.4	1	2.7	3	15.0	2	5.0	4	7.8	3	7.5	3	4.4	2	1.4	n/a	n/a	22	4.0
WEST WHARF BEACH							1	2.5	1	2.0					2	1.4	1	0.9	5	0.9
WESTBROOK TOWN BEACH											1	2.5	4	5.9	2	1.4			7	1.3
WOODMONT BEACH															1	0.7	1	0.9	2	0.4
Total exceedance days and total %	35	100	37	100	20	100	40	100	51	100	40	100	68	100	147	100	107	100	545	100
Count of beaches with exceedance days	15		15		12		26		30		25		32		53		46		68	

[1] Detected beach exceedance days can only be determined for those beaches with reported: 1) monitoring data, and 2) reported notification event data. Not all regulated marine bathing areas have reported monitoring data for the bathing seasons covered by this table.

[2] Beach taken out of service 2007; [3] Beach taken out of service 2011

COMMENT

If marine beach closure protocol required beach closure when Enterococcus density exceeded 104 CFU/100ml at one (1) or more sampling stations and the US EPA approved method was fast enough to allow early morning sampling with Enterococcus detection before beach opening time, there would be no detected beach exceedance days because the beach would be closed during the spike in Enterococcus.

Compare the exceedance day count for 2007 with 2008 and 2009 with 2010. Less sampling detects fewer single sample exceedances and so we expect to see fewer beach exceedance days with less sampling.

7.2.5 MONITORING RESULTS DISCUSSION

Near shore marine bathing area monitoring for the fecal contamination indicator organism Enterococcus over the past nine (9) bathing seasons shows few Enterococcus exceedances each year for the first seven (7) out of nine (9) years. Most sample results fall below the single sample criterion of 104 CFU/100ml.

- If you think of each of the nine (9) seasonal three axis charts as a picture, you can see that the geographic and temporal distribution patterns for sample result exceedances are different for each bathing season year.
- The density of detected Enterococcus can change rapidly over time although elevated Enterococcus densities can occur at adjacent sampling stations along the shoreline at the same time.
- Based on the nine (9) bathing seasons for which we have reported sampling results, it is not possible to predict in advance where or when the few single sample monitoring result exceedances (>104 CFU/100ml) will occur. However for 2010 and 2011, single sample exceedances do appear to associate with heavy rainfall.
- Most often we do not know why Enterococcus densities exceed the single sample threshold of 104 CFU/100ml. If we did know why these spikes occur, we could predict them.
- Most single sample Enterococcus exceedances - as detailed earlier and considered in the section covering rolling geometric means - last no more than 24 hours.
- More sampling leads to detecting more single sample exceedances.
- Detected beach exceedance days occur when a beach reports one (1) or more single sample results >104 CFU/100ml and *at the same time* the beach was not under a closure or advisory. Beach exceedance days highlight the need for a faster US EPA approved method to detect spikes in the fecal contamination indicator organism.

These monitoring results prompt several observations. They are:

- Effective beach management requires a US EPA approved laboratory method or methods with short analysis and reporting time on the order of two (2) hours to detect spikes in pathogens (or their indicators) that cause swimmer illness. The current US EPA approved laboratory methods to detect the density of the fecal contamination indicator organism Enterococcus require time for: a) sample transport; b) sample preparation, incubation and results interpretation; and c) communicating sample results to beach managers. In practice, current sample turn around time is more than 24 hours. Beach managers have results that help them decide what they could have done yesterday but not what they should do today.
- Beach managers should share laboratory results between and among themselves as soon as possible to detect potential area-wide and longer lasting contamination events.
- Not all single sample results that exceed 104 CFU/100ml will trigger a 5 sample geometric mean greater than 35.
- Calculating the ongoing or rolling geometric mean for sets of 5 results for a sampling station can help beach managers judge whether or not to close a beach even though no individual result exceeds the single sample standard of 104 CFU/100ml.
- The US EPA approved fecal contamination indicator organism Enterococcus can originate with: human sewage, pets, livestock, wildlife, marine sediments and beach sand. Enterococcus can also persist and grow in ecologically permissive environments. This plus its many potential sources reduce its value as an indicator for human fecal contamination.

7.3 CLOSURE AND ADVISORY EVENT AND DAY COUNT DATA

DPH has logged 874 reported closure and advisory events for the Connecticut shoreline from 2003 through 2011. There were 1944 closure and advisory event days for 2003-2011. Of these, 1701 were closure days and 243 were advisory days. Beach closure and advisory event data come from the self-reported actions of public health officials and beach managers that directly effect people who want to know when the water is safe for swimming. We collect closure and advisory event data with the annual US EPA Beach Survey that is mailed to local health departments along the shoreline and to DEEP. The Survey also collects closure and advisory event duration in days, % of beach length involved and the reported reason, source and indicator for each event.

This section of the annual report presents data for individual beaches as well as cumulative data summaries for the shoreline. It presents event counts and event day counts as well as tabulations for reason and source that will help explain why beaches are closed along the Connecticut shoreline.

Beach notification data are presented in the following formats:

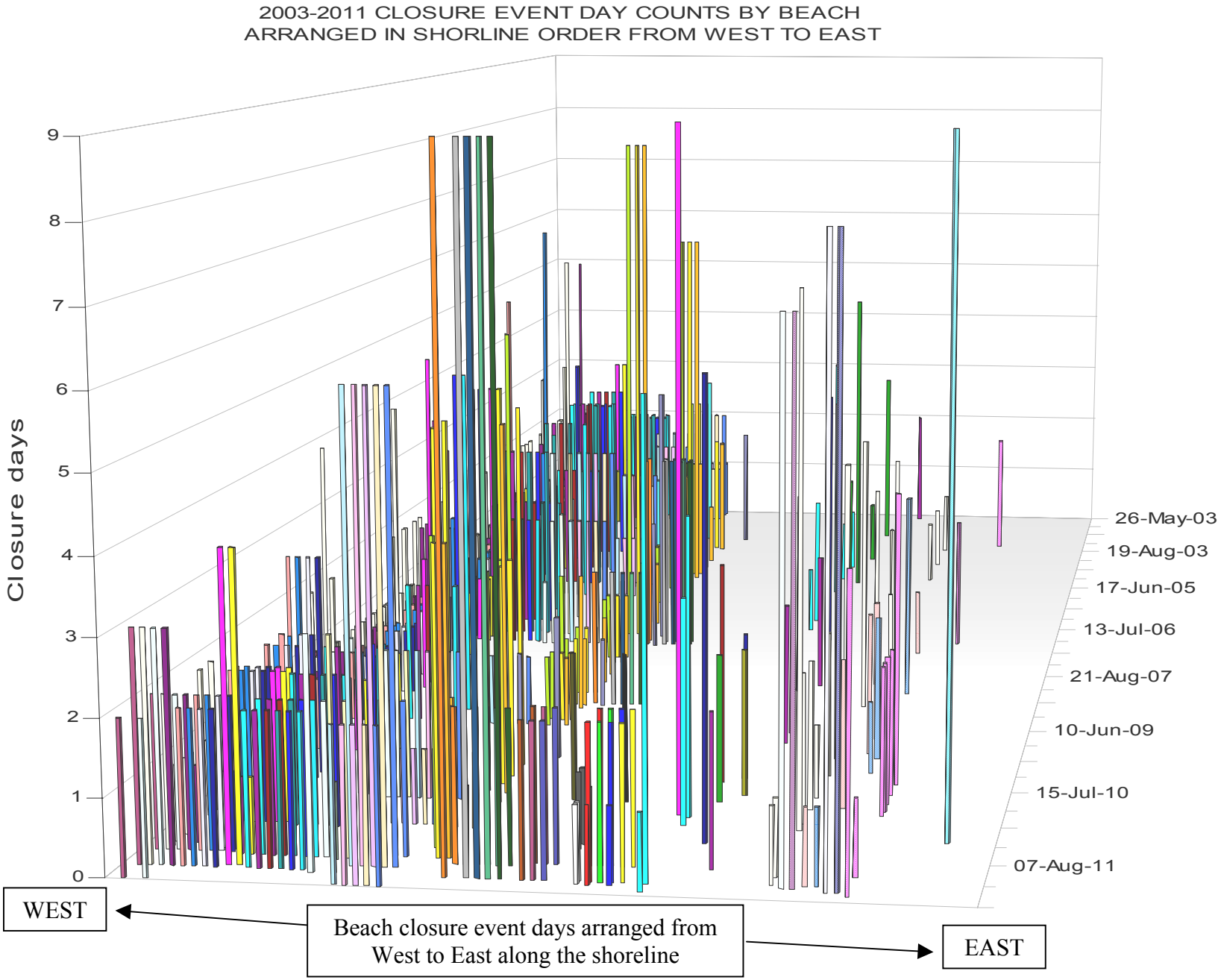
- Three axis (i.e. X,Y,Z) chart presenting all beach closures for 2003-2011 (p. 122)
- Advisory and closure *event* counts by beach with beach tier (p. 123)
- Advisory *event* and *day* counts by beach with beach tier (p. 126)
- Closure *event* and *day* counts by beach with beach tier (p. 129)
- Advisory and closure *day* counts by beach with beach tier (p. 132)
- Summary closure and advisory *day* counts grouped by reported EPA Reason and Source (p. 136)
- Summary closure and advisory *event* counts grouped by EPA Reason and Source (p. 153)
- *Day* and *event* counts for beach closures and advisories grouped by EPA Reason and Source (p. 157)

A notification data discussion follows these data summaries.

☞ You may also want to review closure and notification data summaries provided by US EPA that are found in Appendices A through E.

☞ Do not confuse closure and advisory <u>event</u> counts with closure and advisory <u>day</u> counts. An <u>event</u> can last one (1) or more days.

BEACH CLOSURES 2003-2011 (closure days on vertical axis)



CONNECTICUT ADVISORY AND CLOSURE EVENT COUNTS FOR THE 2003-2011 BATHING SEASONS WITH BEACH TIER FOR THOSE SEASONS

		WEEKLY MONITORING									ADVISORY EVENTS[3]									CLOSURE EVENTS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT473427	ALTSCHULER BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT974464	ANCHOR BEACH (MERWIN POINT) #1	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	1	1	1	1	1	1	1	1	2
CT400424	ANCHOR BEACH (MERWIN POINT) #2	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	1	1	1	1	1	1	1	1	2
CT200292	BELL ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	3	2	2	1	0	1	1	3	2	2	2	2	1	1	1	1	2
CT001209	BRANFORD POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1
CT730976	BURYING HILL BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0	0	1	2	2	1	3	3	1	1	1	1	2
CT872506	BYRAM BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	15	8	10	10	10	12	15	7	9	3	3	3	3	3	3	3	3	3
CT003939	CALF PASTURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	3	2	2	1	0	2	2	3	2	2	2	2	1	1	2	2	2
CT409818	CLARK AVENUE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	0	1	1	2	1	1	1	1	1	1
CT135112	COMPO BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	0	0	0	0	0	0	1	0	0	2	0	0	2	1	0	0	1	2	2	1	3	3	1	1	1	1	2
CT728213	CUMMINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	1	0	0	0	1	12	7	6	9	3	5	5	3	5	3	3	3	3	2	3	3	2	3
CT261657	DAWSON BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT340493	DUBOIS BEACH	yes	yes	yes	yes	yes	yes	no	no	no	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	3	3	3
CT085278	EAST (COVE ISLAND) BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	1	9	5	5	7	4	5	5	3	5	3	3	3	3	3	3	3	2	3
CT091682	EAST HAVEN TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1
CT153336	EAST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT705857	EASTERN POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT434367	ESKER POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT104944	ESPOSITO BEACH (taken out of service 2007)	yes	yes	yes	yes	n/a	n/a	n/a	n/a	n/a	0	0	0	0	n/a	n/a	n/a	n/a	n/a	1	2	1	1	n/a	n/a	n/a	n/a	n/a	1	2	1	1	n/a	n/a	n/a	n/a	n/a
CT946887	FORT HALE PARK BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1
CT096148	GREAT CAPTAIN'S ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	1	1	3	1	2	1	1	1	1	1	1	2
CT496693	GREEN HARBOR BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CT486090	GREENWICH POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	6	5	5	4	4	4	4	1	4	3	3	3	3	3	3	3	1	3
CT910056	GULF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	1	1	1	1	1	1	1	1	2
CT964700	HAMMONASSET BEACH STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1

		WEEKLY MONITORING									ADVISORY EVENTS[3]									CLOSURE EVENTS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT766006	HARVEY'S BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	1	1	1	1	1	1	1	2	1	1
CT010924	HICKORY BLUFF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	3	3	2	2	1	0	1	1	3	2	2	2	2	1	1	1	1	2
CT103938	HOLE-IN-THE-WALL BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT101236	ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	1	2	3	1	2	1	1	1	1	1	2	2
CT303093	JACOBS BEACH (TOWN BEACH)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	2	0	1	1	1	1	1	1	1	2	1	1
CT306507	JENNINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	1	3	1	1	0	1	1	4	3	1	2	1	1	1	1	1	3
CT303091	KIDDIE'S BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	1	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	0	n/a	1	1	1	1	1	1	1	1	n/a
CT760987	LIGHTHOUSE POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	4	1	2	1	2	1	1	1	1	3
CT449733	LONG BEACH (MARNICK'S)	yes	yes	yes	yes	yes	yes	yes	yes	yes	6	0	0	0	0	0	0	0	0	0	5	3	4	3	2	2	3	3	1	3	2	3	2	2	2	2	2
CT921236	LONG BEACH (PROPER)	yes	yes	yes	yes	yes	yes	yes	yes	yes	6	0	0	0	0	0	0	0	0	0	4	4	4	3	3	2	3	2	1	3	3	3	2	2	2	2	2
CT023928	MARVIN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	3	2	3	1	0	1	1	3	2	2	2	2	1	1	1	1	2
CT120292	MCCOOK POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT221030	MIDDLE BEACH/STANNARD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CT555601	MORSE BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT110195	NOANK DOCK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT143225	OAK STREET A BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT816057	OAK STREET B BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT407959	OCEAN BEACH PARK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT927883	PEAR TREE POINT BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	5	5	3	7	3	4	3	1	4	3	3	2	3	3	3	2	1	3
CT080788	PENFIELD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	1	3	1	1	0	1	1	4	3	1	2	1	1	1	1	1	3
CT320303	PENT ROAD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT079164	PLEASURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT202901	QUIGLEY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	1	9	5	4	6	3	5	5	3	5	3	3	3	3	2	3	3	2	3
CT914597	ROCK STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT207829	ROCKY NECK STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	2	1	1	1	1	1	1	1	3	2
CT200291	ROWAYTON BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	3	2	2	1	0	1	1	3	2	2	2	2	1	1	1	1	2
CT634478	SASCO BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	1	3	1	1	0	1	1	4	3	1	2	1	1	1	1	1	3
CT597147	SEABLUFF BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT404927	SEASIDE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	1	1	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1
CT112011	SEAVIEW BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2

		WEEKLY MONITORING									ADVISORY EVENTS[3]									CLOSURE EVENTS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT022992	SHADY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	3	2	2	1	0	2	2	4	2	2	2	2	1	1	2	2	3
CT299970	SHERWOOD ISLAND STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	1	1	1	1	1	2	1	1	1	1	1
CT046814	SHORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	7	0	0	0	0	0	0	0	0	0	6	4	4	3	5	2	2	3	1	3	3	3	2	3	2	2	2
CT222176	SILVER SANDS STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CT493837	SOUNDVIEW BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CT428598	SOUTH PINE CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	1	3	1	1	0	1	1	4	3	1	2	1	1	1	1	1	3
CT128305	SOUTH STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT474040	SOUTHPORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	1	3	1	1	0	1	1	4	3	1	2	1	1	1	1	1	3
CT224775	STONY CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1
CT386314	SURF CLUB BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT104947	TOWN BEACH (CLINTON)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	1	2	0	1	2	2	2	3	5	1	2	1	1	2	1	2	2	3
CT996337	TOWN BEACH (OLD SAYBROOK)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	1	1	1
CT857174	WALNUT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	1	1	1	1	1	1	1	1	2
CT685151	WATERFORD TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT952269	WEED BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	5	5	3	6	3	3	3	1	4	3	3	2	3	3	2	2	1	3
CT992639	WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	1	9	5	6	7	3	5	5	3	5	3	3	3	3	2	3	3	2	3
CT399384	WEST HAVEN EAST BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	1	n/a	1	1	1	1	1	1	1	1	n/a
CT506928	WEST HAVEN WEST BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	1	n/a	1	1	1	1	1	1	1	1	n/a
CT210340	WEST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CT282823	WHITE SANDS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CT351834	WOODMONT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	1	1	1	1	1	1	1	1	2
	Totals										**19**	**2**	**7**	**1**	**1**	**1**	**1**	**1**	**16**	**115**	**95**	**86**	**106**	**65**	**66**	**74**	**66**	**152**									

[1] Weekly monitoring frequency recommended by State of Connecticut *Guidelines* or self reported by local health department.
[2] Weekly monitoring frequency self-reported by local health departments and DEEP.
[3] Self reported by local health departments and DEEP using the annual US EPA Beach Survey or calculated using their reporting.
[4] Calculated using data from the US EPA Beach Survey submitted by local health departments and DEEP.

CONNECTICUT ADVISORY EVENT AND ADVISORY DAY COUNTS FOR THE 2003-2011 BATHING SEASONS WITH BEACH TIER FOR THOSE SEASONS

		WEEKLY MONITORING									ADVISORY EVENTS[3]									ADVISORY DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT473427	ALTSCHULER BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT974464	ANCHOR BEACH (MERWIN POINT) #1	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2
CT400424	ANCHOR BEACH (MERWIN POINT) #2	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2
CT200292	BELL ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	2
CT001209	BRANFORD POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT730976	BURYING HILL BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3	1	1	1	1	2
CT872506	BYRAM BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	3
CT003939	CALF PASTURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	2	2	2
CT409818	CLARK AVENUE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1
CT135112	COMPO BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	1	3	3	1	1	1	1	2
CT728213	CUMMINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	1	0	0	0	1	0	0	7	0	1	0	0	0	1	3	3	3	3	2	3	3	2	3
CT261657	DAWSON BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT340493	DUBOIS BEACH	yes	yes	yes	yes	yes	yes	no	no	no	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	3	3	3
CT085278	EAST (COVE ISLAND) BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	1	0	0	7	0	0	0	0	0	1	3	3	3	3	3	3	3	2	3
CT091682	EAST HAVEN TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT153336	EAST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT705857	EASTERN POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	1	1	1	1	1	1	1	1	1
CT434367	ESKER POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	9	1	1	1	1	1	1	1	1	1
CT104944	ESPOSITO BEACH (taken out of service 2007)	yes	yes	yes	yes	n/a	n/a	n/a	n/a	n/a	0	0	0	0	n/a	n/a	n/a	n/a	n/a	0	0	0	0	n/a	n/a	n/a	n/a	n/a	1	2	1	1	n/a	n/a	n/a	n/a	n/a
CT946887	FORT HALE PARK BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1
CT096148	GREAT CAPTAIN'S ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	2
CT496693	GREEN HARBOR BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3	21	1	1	1	1	1	1	1	1	1
CT486090	GREENWICH POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	1	3
CT910056	GULF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2
CT964700	HAMMONASSET BEACH STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1

		WEEKLY MONITORING									ADVISORY EVENTS[3]									ADVISORY DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT766006	HARVEY'S BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	1	1
CT010924	HICKORY BLUFF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	2
CT103938	HOLE-IN-THE-WALL BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	1	1	1	1	1	1	1	1	1
CT101236	ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	1	1	2	2
CT303093	JACOBS BEACH (TOWN BEACH)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1	1	1	1	1	2	1	1
CT306507	JENNINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	1	1	1	1	1	3
CT303091	KIDDIE'S BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	1	0	0	0	0	0	0	n/a	0	5	0	0	0	0	0	0	n/a	1	1	1	1	1	1	1	1	n/a
CT760987	LIGHTHOUSE POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2	1	1	1	1	3
CT449733	LONG BEACH (MARNICK'S)	yes	yes	yes	yes	yes	yes	yes	yes	yes	6	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	1	3	2	3	2	2	2	2	2
CT921236	LONG BEACH (PROPER)	yes	yes	yes	yes	yes	yes	yes	yes	yes	6	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	1	3	3	3	2	2	2	2	2
CT023928	MARVIN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	2
CT120292	MCCOOK POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	1	1	1	1	1	1	1	1	1
CT221030	MIDDLE BEACH/STANNARD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT555601	MORSE BEACH (new (2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT110195	NOANK DOCK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	1	1	1	1	1	1	1	1	1
CT143225	OAK STREET A BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT816057	OAK STREET B BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT407959	OCEAN BEACH PARK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	9	1	1	1	1	1	1	1	1	1
CT927883	PEAR TREE POINT BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	3	3	3	2	1	3
CT080788	PENFIELD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	1	1	1	1	1	3
CT320303	PENT ROAD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT079164	PLEASURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	1	1	1	1	1	1	1	1	1
CT202901	QUIGLEY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	1	0	0	7	0	0	0	0	0	1	3	3	3	3	2	3	3	2	3
CT914597	ROCK STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT207829	ROCKY NECK STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	3	2
CT200291	ROWAYTON BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	2
CT634478	SASCO BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	1	1	1	1	1	3
CT597147	SEABLUFF BEACH (new (2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT404927	SEASIDE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	1	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1
CT112011	SEAVIEW BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2

		WEEKLY MONITORING									ADVISORY EVENTS[3]									ADVISORY DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT022992	SHADY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	2	2	3
CT299970	SHERWOOD ISLAND STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	1	1	1
CT046814	SHORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	7	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	1	3	3	3	2	3	2	2	2
CT222176	SILVER SANDS STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT493837	SOUNDVIEW BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT428598	SOUTH PINE CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	1	1	1	1	1	3
CT128305	SOUTH STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT474040	SOUTHPORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	1	1	1	1	1	3
CT224775	STONY CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT386314	SURF CLUB BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT104947	TOWN BEACH (CLINTON)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	2	1	2	2	3
CT996337	TOWN BEACH (OLD SAYBROOK)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	1	1	1
CT857174	WALNUT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2
CT685151	WATERFORD TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	1	1	1	1	1	1	1	1	1
CT952269	WEED BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	3	3	2	2	1	3
CT992639	WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	0	0	0	1	0	0	7	0	0	0	0	0	1	3	3	3	3	2	3	3	2	3
CT399384	WEST HAVEN EAST BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	0	n/a	1	1	1	1	1	1	1	1	n/a
CT506928	WEST HAVEN WEST BEACH (taken out of service (2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	0	n/a	1	1	1	1	1	1	1	1	n/a
CT210340	WEST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	1	0	0	1	0	0	1	0	0	20	0	0	30	0	0	23	1	1	1	1	1	1	1	1	1
CT282823	WHITE SANDS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT351834	WOODMONT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2
	Totals										**19**	**2**	**7**	**1**	**1**	**1**	**1**	**1**	**16**	**28**	**7**	**69**	**2**	**1**	**30**	**2**	**3**	**101**									

[1] Weekly monitoring frequency recommended by State of Connecticut *Guidelines* or self reported by local health department.
[2] Weekly monitoring frequency self-reported by local health departments and DEEP.
[3] Self reported by local health departments and DEEP using the annual US EPA Beach Survey.
[4] Calculated using data from the US EPA Beach Survey submitted by local health departments and DEEP.

CONNECTICUT CLOSURE EVENT AND CLOSURE DAY COUNTS FOR THE 2003-2011 BATHING SEASONS WITH BEACH TIER FOR THOSE SEASONS

		WEEKLY MONITORING									CLOSURE EVENTS[3]									CLOSURE DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT473427	ALTSCHULER BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT974464	ANCHOR BEACH (MERWIN POINT) #1	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	1	1	0	0	2	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT400424	ANCHOR BEACH (MERWIN POINT) #2	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	1	1	0	0	2	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT200292	BELL ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	2	3	2	2	1	0	1	1	3	4	9	5	5	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT001209	BRANFORD POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	0	1	0	1	1	0	0	0	4	0	3	0	2	6	1	1	1	1	1	1	1	1	1
CT730976	BURYING HILL BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	2	0	0	1	1	0	0	1	2	2	0	0	3	1	0	0	2	5	2	1	3	3	1	1	1	1	2
CT872506	BYRAM BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	15	8	10	10	10	12	15	7	9	31	12	11	18	18	12	20	7	14	3	3	3	3	3	3	3	3	3
CT003939	CALF PASTURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	2	3	2	2	1	0	2	2	3	4	9	6	5	2	0	7	4	6	2	2	2	2	1	1	2	2	2
CT409818	CLARK AVENUE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	1	1	2	0	0	0	0	1	0	3	1	7	0	0	0	0	2	0	1	1	2	1	1	1	1	1	1
CT135112	COMPO BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	2	0	0	2	1	0	0	1	2	2	0	0	5	1	0	0	2	5	2	1	3	3	1	1	1	1	2
CT728213	CUMMINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	12	7	6	9	3	5	5	3	5	16	13	6	13	5	5	5	7	9	3	3	3	3	2	3	3	2	3
CT261657	DAWSON BEACH (new (2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT340493	DUBOIS BEACH	yes	yes	yes	yes	yes	yes	no	no	no	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	3	3	3
CT085278	EAST (COVE ISLAND) BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	9	5	5	7	4	5	5	3	5	10	5	5	10	6	5	5	7	9	3	3	3	3	3	3	3	2	3
CT091682	EAST HAVEN TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0	1	1	1	1	1	1	1	1	1
CT153336	EAST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT705857	EASTERN POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT434367	ESKER POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT104944	ESPOSITO BEACH (taken out of service 2007)	yes	yes	yes	yes	n/a	n/a	n/a	n/a	n/a	1	2	1	1	n/a	n/a	n/a	n/a	n/a	1	2	1	3	n/a	n/a	n/a	n/a		1	2	1	1	n/a	n/a	n/a	n/a	n/a
CT946887	FORT HALE PARK BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	98	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1
CT096148	GREAT CAPTAIN'S ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	2	0	1	0	1	1	1	3	0	3	0	1	0	1	1	1	7	1	2	1	1	1	1	1	1	2
CT496693	GREEN HARBOR BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	15	1	1	1	1	1	1	1	1	1
CT486090	GREENWICH POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	6	5	5	4	4	4	4	1	4	11	6	7	6	6	4	4	1	7	3	3	3	3	3	3	3	1	3
CT910056	GULF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	1	1	0	0	2	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT964700	HAMMONASSET BEACH STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1

		WEEKLY MONITORING									CLOSURE EVENTS[3]									CLOSURE DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT766006	HARVEY'S BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	1	0	2	1	1	0	0	0	0	1	0	4	2	10	1	1	1	1	1	1	2	1	1
CT010924	HICKORY BLUFF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	3	3	2	2	1	0	1	1	3	5	9	5	5	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT103938	HOLE-IN-THE-WALL BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT101236	ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	2	0	1	0	1	1	2	3	0	3	0	1	0	1	1	2	7	1	2	1	1	1	1	1	2	2
CT303093	JACOBS BEACH (TOWN BEACH)	yes	yes	yes	yes	yes	yes	yes	yes	yes	1	0	0	0	0	1	2	0	1	2	0	0	0	0	2	4	0	2	1	1	1	1	1	1	2	1	1
CT306507	JENNINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	4	1	3	1	1	0	1	1	4	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT303091	KIDDIE'S BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	0	n/a	1	1	1	1	1	1	1	1	n/a
CT760987	LIGHTHOUSE POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	2	1	2	0	0	0	0	4	0	2	4	3	0	0	0	0	14	1	2	1	2	1	1	1	1	3
CT449733	LONG BEACH (MARNICK'S)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	5	3	4	3	2	2	3	3	0	14	4	11	3	2	2	11	7	1	3	2	3	2	2	2	2	2
CT921236	LONG BEACH (PROPER)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	4	4	4	3	3	2	3	2	0	12	5	11	3	4	2	12	5	1	3	3	3	2	2	2	2	2
CT023928	MARVIN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	2	3	2	3	1	0	1	1	3	4	9	5	8	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT120292	MCCOOK POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT221030	MIDDLE BEACH/STANNARD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	1	1	1	1	1	1	1	1	1
CT555601	MORSE BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT110195	NOANK DOCK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT143225	OAK STREET A BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT816057	OAK STREET B BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT407959	OCEAN BEACH PARK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT927883	PEAR TREE POINT BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	5	5	4	7	3	4	3	1	4	8	5	3	13	3	18	3	1	9	3	3	2	3	3	3	2	1	3
CT080788	PENFIELD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	4	1	3	1	1	0	1	1	4	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT320303	PENT ROAD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT079164	PLEASURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT202901	QUIGLEY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	9	5	4	6	3	5	5	3	5	10	5	4	9	5	5	5	7	9	3	3	3	3	2	3	3	2	3
CT914597	ROCK STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT207829	ROCKY NECK STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	1	0	0	1	0	0	0	5	2	2	0	0	2	0	0	0	12	5	1	1	1	1	1	1	1	3	2
CT200291	ROWAYTON BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	2	3	2	2	1	0	1	1	3	4	9	5	5	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT634478	SASCO BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	4	1	3	1	1	0	1	1	4	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT597147	SEABLUFF BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT404927	SEASIDE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	1	0	2	0	0	0	0	0	0	3	0	4	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1
CT112011	SEAVIEW BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2

		WEEKLY MONITORING									CLOSURE EVENTS[3]									CLOSURE DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT022992	SHADY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	2	3	2	2	1	0	2	2	4	4	9	5	5	2	0	7	4	8	2	2	2	2	1	1	2	2	3
CT299970	SHERWOOD ISLAND STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	1	0	0	2	1	0	0	1	1	2	0	0	3	2	0	0	2	1	1	1	1	2	1	1	1	1	1
CT046814	SHORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	6	4	4	3	5	2	3	3	0	16	6	11	3	6	2	9	7	1	3	3	3	2	3	2	2	2
CT222176	SILVER SANDS STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	1	0	0	1	1	1	1	1	1	2	0	0	4	2	1	2	2	1	1	1	1	1	1	1	1	1	1
CT493837	SOUNDVIEW BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8	1	1	1	1	1	1	1	1	1
CT428598	SOUTH PINE CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	4	1	3	1	1	0	1	1	4	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT128305	SOUTH STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT474040	SOUTHPORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	4	1	3	1	1	0	1	1	4	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT224775	STONY CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	0	0	0	1	0	0	0	0	4	0	0	0	2	0	1	1	1	1	1	1	1	1	1
CT386314	SURF CLUB BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT104947	TOWN BEACH (CLINTON)	yes	yes	yes	yes	yes	yes	yes	yes	yes	1	2	0	1	2	2	2	3	5	1	2	0	3	3	7	9	5	22	1	2	1	1	2	1	2	2	3
CT996337	TOWN BEACH (OLD SAYBROOK)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	1	1	1	1	0	0	0	0	0	3	2	1	10	1	1	1	1	1	2	1	1	1
CT857174	WALNUT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	1	1	0	0	2	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT685151	WATERFORD TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT952269	WEED BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	5	5	2	6	3	3	3	1	4	8	5	3	11	3	11	3	1	9	3	3	2	3	3	2	2	1	3
CT992639	WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	9	5	6	7	3	5	5	3	5	10	5	10	10	5	5	5	7	9	3	3	3	3	2	3	3	2	3
CT399384	WEST HAVEN EAST BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	1	n/a	0	0	0	0	0	0	0	2	n/a	1	1	1	1	1	1	1	1	n/a
CT506928	WEST HAVEN WEST BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	1	n/a	0	0	0	0	0	0	0	2	n/a	1	1	1	1	1	1	1	1	n/a
CT210340	WEST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	1	1	1	1	1	1	1	1	1
CT282823	WHITE SANDS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8	1	1	1	1	1	1	1	1	1
CT351834	WOODMONT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	1	1	1	0	0	2	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
	Totals										**115**	**95**	**86**	**106**	**65**	**66**	**74**	**66**	**152**	**179**	**176**	**131**	**222**	**107**	**105**	**106**	**140**	**535**									

[1] Weekly monitoring frequency recommended by State of Connecticut *Guidelines* or self reported by local health department.
[2] Weekly monitoring frequency self-reported by local health departments and DEEP.
[3] Self reported by local health departments and DEEP using the annual US EPA Beach Survey.
[4] Calculated using data from the US EPA Beach Survey submitted by local health departments and DEEP.

CONNECTICUT ADVISORY AND CLOSURE DAY COUNTS FOR THE 2003-2011 BATHING SEASONS WITH BEACH TIER FOR THOSE SEASONS

		WEEKLY MONITORING									ADVISORY DAYS[3]									CLOSURE DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT473427	ALTSCHULER BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT974464	ANCHOR BEACH (MERWIN POINT) #1	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT400424	ANCHOR BEACH (MERWIN POINT) #2	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT200292	BELL ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	9	5	5	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT001209	BRANFORD POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	4	0	3	0	2	6	1	1	1	1	1	1	1	1	1
CT730976	BURYING HILL BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	0	0	3	1	0	0	2	5	2	1	3	3	1	1	1	1	2
CT872506	BYRAM BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	31	12	11	18	18	12	20	7	14	3	3	3	3	3	3	3	3	3
CT003939	CALF PASTURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	9	6	5	2	0	7	4	6	2	2	2	2	1	1	2	2	2
CT409818	CLARK AVENUE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	3	1	7	0	0	0	0	2	0	1	1	2	1	1	1	1	1	1
CT135112	COMPO BEACH	yes	yes	no	no	yes	yes	yes	yes	yes	0	0	0	0	0	0	2	0	0	2	0	0	5	1	0	0	2	5	2	1	3	3	1	1	1	1	2
CT728213	CUMMINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	7	0	1	0	0	0	1	16	13	6	13	5	5	5	7	9	3	3	3	3	2	3	3	2	3
CT261657	DAWSON BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT340493	DUBOIS BEACH	yes	yes	yes	yes	yes	yes	no	no	no	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	3	3	3
CT085278	EAST (COVE ISLAND) BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	7	0	0	0	0	0	1	10	5	5	10	6	5	5	7	9	3	3	3	3	3	3	3	2	3
CT091682	EAST HAVEN TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	1	1	1	1	1	1	1	1	1
CT153336	EAST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT705857	EASTERN POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT434367	ESKER POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT104944	ESPOSITO BEACH (taken out of service 2007)	yes	yes	yes	yes	n/a	n/a	n/a	n/a	n/a	0	0	0	0	n/a	n/a	n/a	n/a	n/a	1	2	1	3	n/a	n/a	n/a	n/a		1	2	1	1	n/a	n/a	n/a	n/a	n/a
CT946887	FORT HALE PARK BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	98	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1
CT096148	GREAT CAPTAIN'S ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	3	0	1	0	1	1	1	7	1	2	1	1	1	1	1	1	2
CT496693	GREEN HARBOR BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	3	21	0	0	0	0	0	0	0	0	15	1	1	1	1	1	1	1	1	1
CT486090	GREENWICH POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	11	6	7	6	6	4	4	1	7	3	3	3	3	3	3	3	1	3
CT910056	GULF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT964700	HAMMONASSET BEACH STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1

		WEEKLY MONITORING									ADVISORY DAYS[3]									CLOSURE DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT766006	HARVEY'S BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	2	10	1	1	1	1	1	1	2	1	1
CT010924	HICKORY BLUFF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	5	9	5	5	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT103938	HOLE-IN-THE-WALL BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT101236	ISLAND BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	3	0	1	0	1	1	2	7	1	2	1	1	1	1	1	2	2
CT303093	JACOBS BEACH (TOWN BEACH)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	2	0	0	0	0	0	2	0	0	0	0	2	4	0	2	1	1	1	1	1	1	2	1	1
CT306507	JENNINGS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT303091	KIDDIE'S BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	5	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	0	n/a	1	1	1	1	1	1	1	1	n/a
CT760987	LIGHTHOUSE POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	2	4	3	0	0	0	0	14	1	2	1	2	1	1	1	1	3
CT449733	LONG BEACH (MARNICK'S)	yes	yes	yes	yes	yes	yes	yes	yes	yes	9	0	0	0	0	0	0	0	0	0	14	4	11	3	2	2	11	7	1	3	2	3	2	2	2	2	2
CT921236	LONG BEACH (PROPER)	yes	yes	yes	yes	yes	yes	yes	yes	yes	9	0	0	0	0	0	0	0	0	0	12	5	11	3	4	2	12	5	1	3	3	3	2	2	2	2	2
CT023928	MARVIN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	9	5	8	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT120292	MCCOOK POINT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT221030	MIDDLE BEACH/STANNARD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	1	1	1	1	1	1	1	1
CT555601	MORSE BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT110195	NOANK DOCK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT143225	OAK STREET A BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT816057	OAK STREET B BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT407959	OCEAN BEACH PARK	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT927883	PEAR TREE POINT BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	8	5	3	13	3	18	3	1	9	3	3	2	3	3	3	2	1	3
CT080788	PENFIELD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT320303	PENT ROAD BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT079164	PLEASURE BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT202901	QUIGLEY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	7	0	0	0	0	0	1	10	5	4	9	5	5	5	7	9	3	3	3	3	2	3	3	2	3
CT914597	ROCK STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT207829	ROCKY NECK STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	12	5	1	1	1	1	1	1	1	3	2
CT200291	ROWAYTON BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	9	5	5	2	0	2	2	6	2	2	2	2	1	1	1	1	2
CT634478	SASCO BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT597147	SEABLUFF BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT404927	SEASIDE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	2	1	0	0	0	0	0	0	3	0	4	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1
CT112011	SEAVIEW BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2

		WEEKLY MONITORING									ADVISORY DAYS[3]									CLOSURE DAYS[3]									BEACH TIER								
EPA ID	BEACH NAME	2003[1]	2004[1]	2005[2]	2006[3]	2007[3]	2008[3]	2009[3]	2010[3]	2011[3]	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003	2004	2005	2006	2007	2008	2009	2010	2011	2003[1]	2004[1]	2005[4]	2006[4]	2007[4]	2008[4]	2009[4]	2010[4]	2011[4]
CT022992	SHADY BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	4	9	5	5	2	0	7	4	8	2	2	2	2	1	1	2	2	3
CT299970	SHERWOOD ISLAND STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	0	0	3	2	0	0	2	1	1	1	1	2	1	1	1	1	1
CT046814	SHORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	10	0	0	0	0	0	0	0	0	0	16	6	11	3	6	2	9	7	1	3	3	3	2	3	2	2	2
CT222176	SILVER SANDS STATE PARK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	2	0	0	4	2	1	2	2	1	1	1	1	1	1	1	1	1	1
CT493837	SOUNDVIEW BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	1	1	1	1	1	1	1	1
CT428598	SOUTH PINE CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT128305	SOUTH STREET BEACH (new 2011)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2
CT474040	SOUTHPORT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	6	2	4	3	2	0	1	2	11	3	1	2	1	1	1	1	1	3
CT224775	STONY CREEK BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	1	1	1	1	1	1	1	1	1
CT386314	SURF CLUB BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT104947	TOWN BEACH (CLINTON)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	1	2	0	3	3	7	9	5	22	1	2	1	1	2	1	2	2	3
CT996337	TOWN BEACH (OLD SAYBROOK)	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	10	1	1	1	1	1	2	1	1	1
CT857174	WALNUT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
CT685151	WATERFORD TOWN BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT952269	WEED BEACH	yes	yes	yes	no	no	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	8	5	3	11	3	11	3	1	9	3	3	2	3	3	2	2	1	3
CT992639	WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	7	0	0	0	0	0	1	10	5	10	10	5	5	5	7	9	3	3	3	3	2	3	3	2	3
CT399384	WEST HAVEN EAST BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	2	n/a	1	1	1	1	1	1	1	1	n/a
CT506928	WEST HAVEN WEST BEACH (taken out of service 2011)	yes	yes	yes	yes	yes	yes	yes	yes	n/a	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	0	2	n/a	1	1	1	1	1	1	1	1	n/a
CT210340	WEST WHARF BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	20	0	0	30	0	0	23	0	0	0	0	0	0	0	0	7	1	1	1	1	1	1	1	1	1
CT282823	WHITE SANDS BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	1	1	1	1	1	1	1	1
CT351834	WOODMONT BEACH	yes	yes	yes	yes	yes	yes	yes	yes	yes	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	0	0	15	1	1	1	1	1	1	1	1	2
	Totals										**28**	**7**	**69**	**2**	**1**	**30**	**2**	**3**	**101**	**179**	**176**	**131**	**222**	**107**	**105**	**106**	**140**	**535**									

[1] Weekly monitoring frequency recommended by State of Connecticut *Guidelines* or self reported by local health department.
[2] Weekly monitoring frequency self-reported by local health departments and DEEP.
[3] Self reported by local health departments and DEEP using the annual US EPA Beach Survey.
[4] Calculated using data from the US EPA Beach Survey submitted by local health departments and DEEP.

7.3.1 CLOSURES AND ADVISORIES WITH REASON AND SOURCE

This section of the annual report provides total beach closure and advisory day and event counts grouped by *reason* and *source* for each beach that had one (1) or more closures or advisories for the 2003 through 2011 bathing seasons.

For example: a particular beach may have had three (3) individual closure events lasting 1 day, 2 days and 5 days in 2003. The first two (2) events were caused by RAINFALL (the *reason*) that produced STORM water outfall (the *source*) for 3 total days due to this combination of reason and source. The third event lasting 5 days was caused by RAINFALL (the *reason*) and SSO (the *source)*.

This example beach would have just two (2) entries in the 2003 Closure Days table. The first entry would be for 3 days due to the combination of RAINFALL and STORM while the second entry would be for 5 days due to combination of RAINFALL and SSO.

Here is the key to help you interpret the US EPA reason and source codes.

US EPA CLOSURE AND ADVISORY EVENT REASON KEY

ELEV_BACT	Monitoring that revealed Elevated Bacteria levels
RAINFALL	Preemptive-Rainfall
SEWAGE	Preemptive-Sewage discharge or spill
CHEM_OIL	Preemptive-Chemical or Oil discharge/spill
OTHER	Other

US EPA CLOSURE AND ADVISORY EVENT SOURCE OF CONTAMINATION KEY

CSO	Combined Sewer Overflow
SSO	Sanitary Sewer Overflow
POTW	Publicly Owned Treatment Works
SEPTIC	Septic systems
SEWER_LINE	Sewer Line blockage/break
BOAT	Boat discharge
STORM	Storm water runoff
WILDLIFE	Wildlife
CAFO	Concentrated Animal Feeding Operation
RUNOFF	urban Runoff
AGRICULTURAL	Agricultural runoff
UNKNOWN	Unknown
OTHER	Other

☞ Do not confuse closure and advisory event counts with closure and advisory day counts. An event can last one (1) or more days.

2003 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

US EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT200292	BELL ISLAND BEACH	Close	4	RAINFALL	SSO
CT730976	BURYING HILL BEACH	Close	1	RAINFALL	STORM
CT730976	BURYING HILL BEACH	Close	1	SEWAGE	SSO
CT872506	BYRAM BEACH	Close	7	ELEV_BACT	STORM
CT872506	BYRAM BEACH	Close	24	RAINFALL	STORM
CT003939	CALF PASTURE BEACH	Close	4	RAINFALL	SSO
CT409818	CLARK AVENUE BEACH	Close	3	ELEV_BACT	UNKNOWN
CT135112	COMPO BEACH	Close	1	RAINFALL	STORM
CT135112	COMPO BEACH	Close	1	SEWAGE	SSO
CT728213	CUMMINGS BEACH	Close	6	ELEV_BACT	OTHER
CT728213	CUMMINGS BEACH	Close	10	RAINFALL	STORM
CT085278	EAST (COVE ISLAND) BEACH	Close	10	RAINFALL	STORM
CT104944	ESPOSITO BEACH[2]	Close	1	ELEV_BACT	UNKNOWN
CT486090	GREENWICH POINT BEACH	Close	1	ELEV_BACT	UNKNOWN
CT486090	GREENWICH POINT BEACH	Close	3	RAINFALL	STORM
CT486090	GREENWICH POINT BEACH	Close	7	SEWAGE	POTW
CT010924	HICKORY BLUFF BEACH	Close	1	ELEV_BACT	UNKNOWN
CT010924	HICKORY BLUFF BEACH	Close	4	RAINFALL	SSO
CT303093	JACOBS BEACH (TOWN BEACH)	Close	2	ELEV_BACT	STORM
CT306507	JENNINGS BEACH	Close	4	RAINFALL	STORM
CT306507	JENNINGS BEACH	Close	2	SEWAGE	POTW
CT023928	MARVIN BEACH	Close	4	RAINFALL	SSO
CT927883	PEAR TREE POINT BEACH	Close	2	ELEV_BACT	UNKNOWN
CT927883	PEAR TREE POINT BEACH	Close	6	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	4	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	2	SEWAGE	POTW
CT202901	QUIGLEY BEACH	Close	10	RAINFALL	STORM
CT207829	ROCKY NECK STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN
CT200291	ROWAYTON BEACH	Close	4	RAINFALL	SSO
CT634478	SASCO BEACH	Close	4	RAINFALL	STORM
CT634478	SASCO BEACH	Close	2	SEWAGE	STORM
CT404927	SEASIDE PARK BEACH	Close	3	SEWAGE	POTW
CT022992	SHADY BEACH	Close	4	RAINFALL	SSO
CT299970	SHERWOOD ISLAND STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN
CT222176	SILVER SANDS STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN
CT428598	SOUTH PINE CREEK BEACH	Close	2	RAINFALL	POTW
CT428598	SOUTH PINE CREEK BEACH	Close	4	RAINFALL	STORM
CT474040	SOUTHPORT BEACH	Close	2	RAINFALL	POTW
CT474040	SOUTHPORT BEACH	Close	4	RAINFALL	STORM
CT104947	TOWN BEACH (CLINTON)	Close	1	ELEV_BACT	UNKNOWN
CT952269	WEED BEACH	Close	2	ELEV_BACT	UNKNOWN
CT952269	WEED BEACH	Close	6	RAINFALL	STORM
CT992639	WEST BEACH	Close	10	RAINFALL	STORM
	Total		**179**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey
[2] Beach taken out of service in 2007

2003 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

US EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT449733	LONG BEACH (MARNICK'S)	Advisory	9	RAINFALL	STORM
CT921236	LONG BEACH (PROPER)	Advisory	9	RAINFALL	STORM
CT046814	SHORT BEACH	Advisory	10	RAINFALL	STORM
	Total		**28**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2004 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT200292	BELL ISLAND BEACH	Close	9	RAINFALL	STORM
CT872506	BYRAM BEACH	Close	12	RAINFALL	STORM
CT003939	CALF PASTURE BEACH	Close	9	RAINFALL	STORM
CT409818	CLARK AVENUE BEACH	Close	1	ELEV_BACT	STORM
CT728213	CUMMINGS BEACH	Close	2	ELEV_BACT	OTHER
CT728213	CUMMINGS BEACH	Close	6	OTHER	UNKNOWN
CT728213	CUMMINGS BEACH	Close	5	RAINFALL	STORM
CT085278	EAST (COVE ISLAND) BEACH	Close	5	RAINFALL	STORM
CT091682	EAST HAVEN TOWN BEACH	Close	1	ELEV_BACT	UNKNOWN
CT104944	ESPOSITO BEACH[2]	Close	2	ELEV_BACT	UNKNOWN
CT096148	GREAT CAPTAIN'S ISLAND BEACH	Close	1	ELEV_BACT	UNKNOWN
CT096148	GREAT CAPTAIN'S ISLAND BEACH	Close	2	RAINFALL	STORM
CT486090	GREENWICH POINT BEACH	Close	6	RAINFALL	STORM
CT010924	HICKORY BLUFF BEACH	Close	9	RAINFALL	STORM
CT101236	ISLAND BEACH	Close	1	ELEV_BACT	UNKNOWN
CT101236	ISLAND BEACH	Close	2	RAINFALL	UNKNOWN
CT306507	JENNINGS BEACH	Close	2	RAINFALL	SSO
CT760987	LIGHTHOUSE POINT BEACH	Close	1	ELEV_BACT	UNKNOWN
CT760987	LIGHTHOUSE POINT BEACH	Close	1	SEWAGE	POTW
CT449733	LONG BEACH (MARNICK'S)	Close	2	ELEV_BACT	UNKNOWN
CT449733	LONG BEACH (MARNICK'S)	Close	1	RAINFALL	UNKNOWN
CT449733	LONG BEACH (MARNICK'S)	Close	5	RAINFALL	WILDLIFE
CT449733	LONG BEACH (MARNICK'S)	Close	6	SEWAGE	POTW
CT921236	LONG BEACH (PROPER)	Close	1	RAINFALL	UNKNOWN
CT921236	LONG BEACH (PROPER)	Close	5	RAINFALL	WILDLIFE
CT921236	LONG BEACH (PROPER)	Close	6	SEWAGE	POTW
CT023928	MARVIN BEACH	Close	9	RAINFALL	STORM
CT927883	PEAR TREE POINT BEACH	Close	5	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	2	RAINFALL	SSO
CT202901	QUIGLEY BEACH	Close	5	RAINFALL	STORM
CT200291	ROWAYTON BEACH	Close	9	RAINFALL	STORM
CT634478	SASCO BEACH	Close	2	RAINFALL	SSO
CT022992	SHADY BEACH	Close	9	RAINFALL	STORM
CT046814	SHORT BEACH	Close	4	ELEV_BACT	UNKNOWN
CT046814	SHORT BEACH	Close	1	RAINFALL	UNKNOWN
CT046814	SHORT BEACH	Close	5	RAINFALL	WILDLIFE
CT046814	SHORT BEACH	Close	6	SEWAGE	POTW
CT428598	SOUTH PINE CREEK BEACH	Close	2	RAINFALL	SSO
CT474040	SOUTHPORT BEACH	Close	2	RAINFALL	SSO
CT104947	TOWN BEACH (CLINTON)	Close	2	ELEV_BACT	UNKNOWN
CT952269	WEED BEACH	Close	5	RAINFALL	STORM
CT992639	WEST BEACH	Close	5	RAINFALL	STORM
	TOTAL		**176**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey
[2] Beach taken out of service in 2007

2004 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT303091	KIDDIE'S BEACH[3]	Advisory	5	ELEV_BACT	WILDLIFE
CT404927	SEASIDE PARK BEACH	Advisory	2	RAINFALL	POTW
	TOTAL		**7**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey
[2] Beach taken out of service 2007
[3] Beach taken out of service 2011

2005 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT200292	BELL ISLAND BEACH	Close	5	RAINFALL	STORM
CT872506	BYRAM BEACH	Close	3	ELEV_BACT	UNKNOWN
CT872506	BYRAM BEACH	Close	8	RAINFALL	UNKNOWN
CT003939	CALF PASTURE BEACH	Close	6	RAINFALL	STORM
CT409818	CLARK AVENUE BEACH	Close	7	ELEV_BACT	STORM
CT728213	CUMMINGS BEACH	Close	1	ELEV_BACT	BOAT
CT728213	CUMMINGS BEACH	Close	4	RAINFALL	BOAT
CT728213	CUMMINGS BEACH	Close	1	SEWAGE	SEWER_LINE
CT085278	EAST (COVE ISLAND) BEACH	Close	1	ELEV_BACT	STORM
CT085278	EAST (COVE ISLAND) BEACH	Close	4	RAINFALL	STORM
CT104944	ESPOSITO BEACH[2]	Close	1	ELEV_BACT	OTHER
CT486090	GREENWICH POINT BEACH	Close	3	ELEV_BACT	UNKNOWN
CT486090	GREENWICH POINT BEACH	Close	4	RAINFALL	UNKNOWN
CT010924	HICKORY BLUFF BEACH	Close	5	RAINFALL	STORM
CT306507	JENNINGS BEACH	Close	4	RAINFALL	STORM
CT760987	LIGHTHOUSE POINT BEACH	Close	4	ELEV_BACT	UNKNOWN
CT449733	LONG BEACH (MARNICK'S)	Close	4	RAINFALL	UNKNOWN
CT921236	LONG BEACH (PROPER)	Close	1	ELEV_BACT	UNKNOWN
CT921236	LONG BEACH (PROPER)	Close	4	RAINFALL	UNKNOWN
CT023928	MARVIN BEACH	Close	5	RAINFALL	STORM
CT927883	PEAR TREE POINT BEACH	Close	3	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	4	RAINFALL	STORM
CT202901	QUIGLEY BEACH	Close	4	RAINFALL	STORM
CT200291	ROWAYTON BEACH	Close	5	RAINFALL	STORM
CT634478	SASCO BEACH	Close	4	RAINFALL	STORM
CT404927	SEASIDE PARK BEACH	Close	4	RAINFALL	POTW
CT022992	SHADY BEACH	Close	5	RAINFALL	STORM
CT046814	SHORT BEACH	Close	2	ELEV_BACT	UNKNOWN
CT046814	SHORT BEACH	Close	4	RAINFALL	UNKNOWN
CT428598	SOUTH PINE CREEK BEACH	Close	4	RAINFALL	STORM
CT474040	SOUTHPORT BEACH	Close	4	RAINFALL	STORM
CT952269	WEED BEACH	Close	3	RAINFALL	STORM
CT992639	WEST BEACH	Close	6	ELEV_BACT	BOAT
CT992639	WEST BEACH	Close	4	RAINFALL	BOAT
	TOTAL		**131**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey
[2] Beach taken out of service in 2007

2005 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT728213	CUMMINGS BEACH	Advisory	7	OTHER	OTHER
CT085278	EAST (COVE ISLAND) BEACH	Advisory	7	OTHER	OTHER
CT221030	MIDDLE BEACH/STANNARD BEACH	Advisory	20	OTHER	WILDLIFE
CT202901	QUIGLEY BEACH	Advisory	7	OTHER	OTHER
CT404927	SEASIDE PARK BEACH	Advisory	1	RAINFALL	STORM
CT992639	WEST BEACH	Advisory	7	OTHER	OTHER
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Advisory	20	OTHER	WILDLIFE
	TOTAL		**69**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2006 SUMMARY BEACH CLOSURE DAYS GROUPED REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT974464	ANCHOR BEACH (MERWIN POINT) #1	Close	3	RAINFALL	STORM
CT400424	ANCHOR BEACH (MERWIN POINT) #2	Close	3	RAINFALL	STORM
CT200292	BELL ISLAND BEACH	Close	5	RAINFALL	STORM
CT001209	BRANFORD POINT BEACH	Close	4	ELEV_BACT	STORM
CT730976	BURYING HILL BEACH	Close	3	ELEV_BACT	STORM
CT872506	BYRAM BEACH	Close	1	ELEV_BACT	BOAT
CT872506	BYRAM BEACH	Close	17	RAINFALL	STORM
CT003939	CALF PASTURE BEACH	Close	5	RAINFALL	STORM
CT135112	COMPO BEACH	Close	3	ELEV_BACT	STORM
CT135112	COMPO BEACH	Close	2	SEWAGE	POTW
CT728213	CUMMINGS BEACH	Close	1	ELEV_BACT	BOAT
CT728213	CUMMINGS BEACH	Close	9	RAINFALL	BOAT
CT728213	CUMMINGS BEACH	Close	3	SEWAGE	UNKNOWN
CT085278	EAST (COVE ISLAND) BEACH	Close	1	ELEV_BACT	UNKNOWN
CT085278	EAST (COVE ISLAND) BEACH	Close	9	RAINFALL	STORM
CT104944	ESPOSITO BEACH[2]	Close	3	ELEV_BACT	WILDLIFE
CT096148	GREAT CAPTAIN'S ISLAND BEACH	Close	1	ELEV_BACT	BOAT
CT486090	GREENWICH POINT BEACH	Close	1	ELEV_BACT	STORM
CT486090	GREENWICH POINT BEACH	Close	5	RAINFALL	STORM
CT910056	GULF BEACH	Close	3	RAINFALL	STORM
CT010924	HICKORY BLUFF BEACH	Close	5	RAINFALL	STORM
CT101236	ISLAND BEACH	Close	1	ELEV_BACT	BOAT
CT306507	JENNINGS BEACH	Close	3	RAINFALL	STORM
CT760987	LIGHTHOUSE POINT BEACH	Close	2	ELEV_BACT	UNKNOWN
CT760987	LIGHTHOUSE POINT BEACH	Close	1	OTHER	OTHER
CT449733	LONG BEACH (MARNICK'S)	Close	11	RAINFALL	UNKNOWN
CT921236	LONG BEACH (PROPER)	Close	11	RAINFALL	UNKNOWN
CT023928	MARVIN BEACH	Close	3	ELEV_BACT	UNKNOWN
CT023928	MARVIN BEACH	Close	5	RAINFALL	STORM
CT927883	PEAR TREE POINT BEACH	Close	11	RAINFALL	STORM
CT927883	PEAR TREE POINT BEACH	Close	2	SEWAGE	SEWER_LINE
CT080788	PENFIELD BEACH	Close	3	RAINFALL	STORM
CT202901	QUIGLEY BEACH	Close	9	RAINFALL	STORM
CT207829	ROCKY NECK STATE PARK BEACH	Close	2	ELEV_BACT	STORM
CT200291	ROWAYTON BEACH	Close	5	RAINFALL	STORM
CT634478	SASCO BEACH	Close	3	RAINFALL	STORM
CT022992	SHADY BEACH	Close	5	RAINFALL	STORM
CT299970	SHERWOOD ISLAND STATE PARK BEACH	Close	2	ELEV_BACT	STORM
CT299970	SHERWOOD ISLAND STATE PARK BEACH	Close	1	SEWAGE	POTW
CT046814	SHORT BEACH	Close	11	RAINFALL	UNKNOWN
CT222176	SILVER SANDS STATE PARK BEACH	Close	4	ELEV_BACT	STORM
CT428598	SOUTH PINE CREEK BEACH	Close	3	RAINFALL	STORM
CT474040	SOUTHPORT BEACH	Close	3	RAINFALL	STORM
CT224775	STONY CREEK BEACH	Close	4	ELEV_BACT	STORM
CT104947	TOWN BEACH (CLINTON)	Close	3	RAINFALL	STORM
CT857174	WALNUT BEACH	Close	3	RAINFALL	STORM

CT952269	WEED BEACH	Close	2	ELEV_BACT	STORM
CT952269	WEED BEACH	Close	9	RAINFALL	STORM
CT992639	WEST BEACH	Close	1	ELEV_BACT	UNKNOWN
CT992639	WEST BEACH	Close	9	RAINFALL	BOAT
CT351834	WOODMONT BEACH	Close	3	RAINFALL	STORM
	TOTAL		**222**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey
[2] Beach taken out of service 2007

2006 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT303093	JACOBS BEACH (TOWN BEACH)	Advisory	2	ELEV_BACT	STORM
	TOTAL		**2**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2007 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT974464	ANCHOR BEACH (MERWIN POINT) #1	Close	3	RAINFALL	STORM
CT400424	ANCHOR BEACH (MERWIN POINT) #2	Close	3	RAINFALL	STORM
CT200292	BELL ISLAND BEACH	Close	2	RAINFALL	STORM
CT730976	BURYING HILL BEACH	Close	1	OTHER	STORM
CT872506	BYRAM BEACH	Close	1	ELEV_BACT	SEWER_LINE
CT872506	BYRAM BEACH	Close	15	RAINFALL	STORM
CT872506	BYRAM BEACH	Close	2	SEWAGE	SEWER_LINE
CT003939	CALF PASTURE BEACH	Close	2	RAINFALL	STORM
CT135112	COMPO BEACH	Close	1	OTHER	STORM
CT728213	CUMMINGS BEACH	Close	5	RAINFALL	STORM
CT085278	EAST (COVE ISLAND) BEACH	Close	1	ELEV_BACT	UNKNOWN[2]
CT085278	EAST (COVE ISLAND) BEACH	Close	5	RAINFALL	STORM
CT486090	GREENWICH POINT BEACH	Close	2	ELEV_BACT	SEWER_LINE
CT486090	GREENWICH POINT BEACH	Close	4	RAINFALL	STORM
CT910056	GULF BEACH	Close	3	RAINFALL	STORM
CT766006	HARVEY'S BEACH	Close	1	ELEV_BACT	STORM
CT010924	HICKORY BLUFF BEACH	Close	2	RAINFALL	STORM
CT306507	JENNINGS BEACH	Close	2	RAINFALL	SSO
CT449733	LONG BEACH (MARNICK'S)	Close	3	RAINFALL	CSO
CT921236	LONG BEACH (PROPER)	Close	3	RAINFALL	CSO
CT023928	MARVIN BEACH	Close	2	RAINFALL	STORM
CT927883	PEAR TREE POINT BEACH	Close	3	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	2	RAINFALL	SSO
CT202901	QUIGLEY BEACH	Close	5	RAINFALL	STORM
CT200291	ROWAYTON BEACH	Close	2	RAINFALL	STORM
CT634478	SASCO BEACH	Close	2	RAINFALL	SSO
CT022992	SHADY BEACH	Close	2	RAINFALL	STORM
CT299970	SHERWOOD ISLAND STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN[2]
CT046814	SHORT BEACH	Close	3	RAINFALL	CSO
CT222176	SILVER SANDS STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN[2]
CT428598	SOUTH PINE CREEK BEACH	Close	2	RAINFALL	SSO
CT474040	SOUTHPORT BEACH	Close	2	RAINFALL	SSO
CT104947	TOWN BEACH (CLINTON)	Close	3	ELEV_BACT	STORM
CT857174	WALNUT BEACH	Close	3	RAINFALL	STORM
CT952269	WEED BEACH	Close	3	RAINFALL	STORM
CT992639	WEST BEACH	Close	5	RAINFALL	STORM
CT351834	WOODMONT BEACH	Close	3	RAINFALL	STORM
	TOTAL		**107**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey
[2] Incorrectly reported in the 2007 Annual Report as CSO.

2007 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT728213	CUMMINGS BEACH	Advisory	1	ELEV_BACT	BOAT
	TOTAL		**1**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2008 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT974464	ANCHOR BEACH (MERWIN POINT) #1	Close	2	RAINFALL	STORM
CT400424	ANCHOR BEACH (MERWIN POINT) #2	Close	2	RAINFALL	STORM
CT001209	BRANFORD POINT BEACH	Close	3	ELEV_BACT	UNKNOWN
CT872506	BYRAM BEACH	Close	1	ELEV_BACT	STORM
CT872506	BYRAM BEACH	Close	11	RAINFALL	STORM
CT728213	CUMMINGS BEACH	Close	5	RAINFALL	STORM
CT085278	EAST (COVE ISLAND) BEACH	Close	5	RAINFALL	STORM
CT096148	GREAT CAPTAIN'S ISLAND BEACH	Close	1	RAINFALL	STORM
CT486090	GREENWICH POINT BEACH	Close	1	ELEV_BACT	SEPTIC
CT486090	GREENWICH POINT BEACH	Close	3	RAINFALL	STORM
CT910056	GULF BEACH	Close	2	RAINFALL	STORM
CT101236	ISLAND BEACH	Close	1	RAINFALL	STORM
CT303093	JACOBS BEACH (TOWN BEACH)	Close	2	ELEV_BACT	WILDLIFE
CT449733	LONG BEACH (MARNICK'S)	Close	2	RAINFALL	UNKNOWN
CT921236	LONG BEACH (PROPER)	Close	2	ELEV_BACT	UNKNOWN
CT921236	LONG BEACH (PROPER)	Close	2	RAINFALL	UNKNOWN
CT927883	PEAR TREE POINT BEACH	Close	12	ELEV_BACT	STORM
CT927883	PEAR TREE POINT BEACH	Close	6	RAINFALL	STORM
CT202901	QUIGLEY BEACH	Close	5	RAINFALL	STORM
CT046814	SHORT BEACH	Close	2	ELEV_BACT	UNKNOWN
CT046814	SHORT BEACH	Close	4	RAINFALL	UNKNOWN
CT222176	SILVER SANDS STATE PARK BEACH	Close	1	RAINFALL	RUNOFF
CT104947	TOWN BEACH (CLINTON)	Close	7	ELEV_BACT	STORM
CT996337	TOWN BEACH (OLD SAYBROOK)	Close	3	ELEV_BACT	STORM
CT857174	WALNUT BEACH	Close	2	RAINFALL	STORM
CT952269	WEED BEACH	Close	5	ELEV_BACT	STORM
CT952269	WEED BEACH	Close	6	RAINFALL	STORM
CT992639	WEST BEACH	Close	5	RAINFALL	STORM
CT351834	WOODMONT BEACH	Close	2	RAINFALL	STORM
	TOTAL		**105**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2008 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Advisory	30	OTHER	WILDLIFE
	TOTAL		**30**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2009 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT200292	BELL ISLAND BEACH	Close	2	RAINFALL	STORM
CT872506	BYRAM BEACH	Close	20	RAINFALL	STORM
CT003939	CALF PASTURE BEACH	Close	5	ELEV_BACT	UNKNOWN
CT003939	CALF PASTURE BEACH	Close	2	RAINFALL	STORM
CT728213	CUMMINGS BEACH	Close	5	RAINFALL	STORM
CT085278	EAST (COVE ISLAND) BEACH	Close	5	RAINFALL	STORM
CT096148	GREAT CAPTAIN'S ISLAND BEACH	Close	1	RAINFALL	STORM
CT486090	GREENWICH POINT BEACH	Close	4	RAINFALL	STORM
CT766006	HARVEY'S BEACH	Close	4	ELEV_BACT	STORM
CT010924	HICKORY BLUFF BEACH	Close	2	RAINFALL	STORM
CT101236	ISLAND BEACH	Close	1	RAINFALL	STORM
CT303093	JACOBS BEACH (TOWN BEACH)	Close	4	ELEV_BACT	STORM
CT306507	JENNINGS BEACH	Close	1	RAINFALL	STORM
CT449733	LONG BEACH (MARNICK'S)	Close	2	RAINFALL	UNKNOWN
CT921236	LONG BEACH (PROPER)	Close	2	RAINFALL	UNKNOWN
CT023928	MARVIN BEACH	Close	2	RAINFALL	STORM
CT927883	PEAR TREE POINT BEACH	Close	3	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	1	RAINFALL	STORM
CT202901	QUIGLEY BEACH	Close	5	RAINFALL	STORM
CT200291	ROWAYTON BEACH	Close	2	RAINFALL	STORM
CT634478	SASCO BEACH	Close	1	RAINFALL	STORM
CT022992	SHADY BEACH	Close	5	ELEV_BACT	UNKNOWN
CT022992	SHADY BEACH	Close	2	RAINFALL	STORM
CT046814	SHORT BEACH	Close	2	RAINFALL	UNKNOWN
CT222176	SILVER SANDS STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN
CT428598	SOUTH PINE CREEK BEACH	Close	1	RAINFALL	STORM
CT474040	SOUTHPORT BEACH	Close	1	RAINFALL	STORM
CT104947	TOWN BEACH (CLINTON)	Close	4	ELEV_BACT	STORM
CT104947	TOWN BEACH (CLINTON)	Close	5	RAINFALL	STORM
CT996337	TOWN BEACH (OLD SAYBROOK)	Close	2	ELEV_BACT	STORM
CT952269	WEED BEACH	Close	3	RAINFALL	STORM
CT992639	WEST BEACH	Close	5	RAINFALL	STORM
	TOTAL		**106**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2009 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT135112	COMPO BEACH	Advisory	2	ELEV_BACT	UNKNOWN
	TOTAL		**2**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2010 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT200292	BELL ISLAND BEACH	Close	2	RAINFALL	STORM
CT001209	BRANFORD POINT BEACH	Close	2	ELEV_BACT	UNKNOWN
CT730976	BURYING HILL BEACH	Close	2	ELEV_BACT	STORM
CT872506	BYRAM BEACH	Close	1	ELEV_BACT	STORM
CT872506	BYRAM BEACH	Close	6	RAINFALL	STORM
CT003939	CALF PASTURE BEACH	Close	2	ELEV_BACT	OTHER
CT003939	CALF PASTURE BEACH	Close	2	RAINFALL	STORM
CT409818	CLARK AVENUE BEACH	Close	2	ELEV_BACT	WILDLIFE
CT135112	COMPO BEACH	Close	2	ELEV_BACT	STORM
CT728213	CUMMINGS BEACH	Close	7	RAINFALL	STORM
CT085278	EAST (COVE ISLAND) BEACH	Close	7	RAINFALL	STORM
CT091682	EAST HAVEN TOWN BEACH	Close	3	ELEV_BACT	UNKNOWN
CT096148	GREAT CAPTAIN'S ISLAND BEACH	Close	1	ELEV_BACT	WILDLIFE
CT486090	GREENWICH POINT BEACH	Close	1	RAINFALL	STORM
CT766006	HARVEY'S BEACH	Close	2	ELEV_BACT	STORM
CT010924	HICKORY BLUFF BEACH	Close	2	RAINFALL	STORM
CT101236	ISLAND BEACH	Close	2	ELEV_BACT	WILDLIFE
CT306507	JENNINGS BEACH	Close	2	ELEV_BACT	SSO
CT449733	LONG BEACH (MARNICK'S)	Close	11	ELEV_BACT	STORM
CT921236	LONG BEACH (PROPER)	Close	12	ELEV_BACT	STORM
CT023928	MARVIN BEACH	Close	2	RAINFALL	STORM
CT927883	PEAR TREE POINT BEACH	Close	1	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	2	ELEV_BACT	SSO
CT202901	QUIGLEY BEACH	Close	7	RAINFALL	STORM
CT207829	ROCKY NECK STATE PARK BEACH	Close	10	ELEV_BACT	UNKNOWN
CT207829	ROCKY NECK STATE PARK BEACH	Close	2	RAINFALL	UNKNOWN
CT200291	ROWAYTON BEACH	Close	2	RAINFALL	STORM
CT634478	SASCO BEACH	Close	2	ELEV_BACT	SSO
CT022992	SHADY BEACH	Close	2	ELEV_BACT	OTHER
CT022992	SHADY BEACH	Close	2	RAINFALL	STORM
CT299970	SHERWOOD ISLAND STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN
CT046814	SHORT BEACH	Close	9	ELEV_BACT	STORM
CT222176	SILVER SANDS STATE PARK BEACH	Close	2	ELEV_BACT	UNKNOWN
CT428598	SOUTH PINE CREEK BEACH	Close	2	ELEV_BACT	SSO
CT474040	SOUTHPORT BEACH	Close	2	ELEV_BACT	SSO
CT224775	STONY CREEK BEACH	Close	2	ELEV_BACT	UNKNOWN
CT104947	TOWN BEACH (CLINTON)	Close	5	ELEV_BACT	STORM
CT996337	TOWN BEACH (OLD SAYBROOK)	Close	1	ELEV_BACT	STORM
CT952269	WEED BEACH	Close	1	ELEV_BACT	STORM
CT992639	WEST BEACH	Close	7	RAINFALL	STORM
CT399384	WEST HAVEN EAST BEACH[2]	Close	2	ELEV_BACT	OTHER
CT506928	WEST HAVEN WEST BEACH[2]	Close	2	ELEV_BACT	OTHER
	TOTAL		**140**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey
[2] Beach taken out of service in 2011

2010 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT496693	GREEN HARBOR BEACH	Advisory	3	ELEV_BACT	UNKNOWN
	TOTAL		**3**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2011 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT473427	ALTSCHULER BEACH	Close	5	ELEV_BACT	STORM
CT974464	ANCHOR BEACH (MERWIN POINT) #1	Close	2	ELEV_BACT	STORM
CT974464	ANCHOR BEACH (MERWIN POINT) #1	Close	13	RAINFALL	STORM
CT400424	ANCHOR BEACH (MERWIN POINT) #2	Close	2	ELEV_BACT	STORM
CT400424	ANCHOR BEACH (MERWIN POINT) #2	Close	13	RAINFALL	STORM
CT200292	BELL ISLAND BEACH	Close	6	RAINFALL	STORM
CT001209	BRANFORD POINT BEACH	Close	6	ELEV_BACT	SEPTIC
CT730976	BURYING HILL BEACH	Close	2	ELEV_BACT	STORM
CT730976	BURYING HILL BEACH	Close	3	RAINFALL	STORM
CT872506	BYRAM BEACH	Close	14	RAINFALL	STORM
CT003939	CALF PASTURE BEACH	Close	6	RAINFALL	STORM
CT135112	COMPO BEACH	Close	2	ELEV_BACT	STORM
CT135112	COMPO BEACH	Close	3	RAINFALL	STORM
CT728213	CUMMINGS BEACH	Close	2	OTHER	OTHER
CT728213	CUMMINGS BEACH	Close	7	RAINFALL	STORM
CT261657	DAWSON BEACH	Close	4	ELEV_BACT	SSO
CT085278	EAST (COVE ISLAND) BEACH	Close	9	RAINFALL	STORM
CT946887	FORT HALE PARK BEACH	Close	98	OTHER	OTHER
CT096148	GREAT CAPTAIN'S ISLAND BEACH	Close	7	RAINFALL	STORM
CT496693	GREEN HARBOR BEACH	Close	15	ELEV_BACT	RUNOFF
CT486090	GREENWICH POINT BEACH	Close	7	RAINFALL	STORM
CT910056	GULF BEACH	Close	2	ELEV_BACT	STORM
CT910056	GULF BEACH	Close	13	RAINFALL	STORM
CT766006	HARVEY'S BEACH	Close	10	OTHER	OTHER
CT010924	HICKORY BLUFF BEACH	Close	6	RAINFALL	STORM
CT101236	ISLAND BEACH	Close	7	RAINFALL	STORM
CT303093	JACOBS BEACH (TOWN BEACH)	Close	2	ELEV_BACT	STORM
CT306507	JENNINGS BEACH	Close	11	RAINFALL	SSO
CT760987	LIGHTHOUSE POINT BEACH	Close	13	ELEV_BACT	UNKNOWN
CT760987	LIGHTHOUSE POINT BEACH	Close	1	OTHER	OTHER
CT449733	LONG BEACH (MARNICK'S)	Close	7	ELEV_BACT	STORM
CT921236	LONG BEACH (PROPER)	Close	5	ELEV_BACT	STORM
CT023928	MARVIN BEACH	Close	6	RAINFALL	STORM
CT221030	MIDDLE BEACH/STANNARD BEACH	Close	7	OTHER	OTHER
CT555601	MORSE BEACH	Close	4	RAINFALL	OTHER
CT143225	OAK STREET A BEACH	Close	5	ELEV_BACT	STORM
CT816057	OAK STREET B BEACH	Close	4	ELEV_BACT	STORM
CT927883	PEAR TREE POINT BEACH	Close	9	RAINFALL	STORM
CT080788	PENFIELD BEACH	Close	11	RAINFALL	SSO
CT202901	QUIGLEY BEACH	Close	9	RAINFALL	STORM

2011 SUMMARY BEACH CLOSURE DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT914597	ROCK STREET BEACH	Close	3	ELEV_BACT	SSO
CT207829	ROCKY NECK STATE PARK BEACH	Close	1	ELEV_BACT	UNKNOWN
CT207829	ROCKY NECK STATE PARK BEACH	Close	4	RAINFALL	STORM
CT200291	ROWAYTON BEACH	Close	6	RAINFALL	STORM
CT634478	SASCO BEACH	Close	11	RAINFALL	SSO
CT597147	SEABLUFF BEACH	Close	2	ELEV_BACT	SSO
CT112011	SEAVIEW BEACH	Close	4	ELEV_BACT	SSO
CT022992	SHADY BEACH	Close	2	ELEV_BACT	UNKNOWN
CT022992	SHADY BEACH	Close	6	RAINFALL	STORM
CT299970	SHERWOOD ISLAND STATE PARK BEACH	Close	1	ELEV_BACT	UNKNOWN
CT046814	SHORT BEACH	Close	3	ELEV_BACT	STORM
CT046814	SHORT BEACH	Close	4	RAINFALL	STORM
CT222176	SILVER SANDS STATE PARK BEACH	Close	1	ELEV_BACT	UNKNOWN
CT493837	SOUNDVIEW BEACH	Close	8	ELEV_BACT	STORM
CT428598	SOUTH PINE CREEK BEACH	Close	11	RAINFALL	SSO
CT128305	SOUTH STREET BEACH	Close	4	ELEV_BACT	SSO
CT474040	SOUTHPORT BEACH	Close	11	RAINFALL	SSO
CT104947	TOWN BEACH (CLINTON)	Close	12	ELEV_BACT	STORM
CT104947	TOWN BEACH (CLINTON)	Close	10	OTHER	OTHER
CT996337	TOWN BEACH (OLD SAYBROOK)	Close	10	OTHER	OTHER
CT857174	WALNUT BEACH	Close	2	ELEV_BACT	STORM
CT857174	WALNUT BEACH	Close	13	RAINFALL	STORM
CT952269	WEED BEACH	Close	9	RAINFALL	STORM
CT992639	WEST BEACH	Close	9	RAINFALL	STORM
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Close	7	OTHER	OTHER
CT282823	WHITE SANDS BEACH	Close	8	ELEV_BACT	STORM
CT351834	WOODMONT BEACH	Close	2	ELEV_BACT	STORM
CT351834	WOODMONT BEACH	Close	13	RAINFALL	STORM
	TOTAL		**535**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2011 SUMMARY BEACH ADVISORY DAYS GROUPED BY REPORTED US EPA REASON AND SOURCE

EPA ID	BEACH NAME	TYPE[1]	DAYS[1]	EPA REASON[1]	EPA SOURCE[1]
CT728213	CUMMINGS BEACH	Advisory	1	OTHER	OTHER
CT085278	EAST (COVE ISLAND) BEACH	Advisory	1	OTHER	OTHER
CT705857	EASTERN POINT BEACH	Advisory	5	OTHER	OTHER
CT434367	ESKER POINT BEACH	Advisory	9	OTHER	OTHER
CT496693	GREEN HARBOR BEACH	Advisory	7	ELEV_BACT	RUNOFF
CT496693	GREEN HARBOR BEACH	Advisory	14	OTHER	OTHER
CT103938	HOLE-IN-THE-WALL BEACH	Advisory	6	OTHER	OTHER
CT120292	MCCOOK POINT BEACH	Advisory	6	OTHER	OTHER
CT110195	NOANK DOCK	Advisory	6	OTHER	OTHER
CT407959	OCEAN BEACH PARK	Advisory	3	ELEV_BACT	RUNOFF
CT407959	OCEAN BEACH PARK	Advisory	6	OTHER	OTHER
CT079164	PLEASURE BEACH	Advisory	6	OTHER	OTHER
CT202901	QUIGLEY BEACH	Advisory	1	OTHER	OTHER
CT685151	WATERFORD TOWN BEACH	Advisory	6	OTHER	OTHER
CT992639	WEST BEACH	Advisory	1	OTHER	OTHER
CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Advisory	23	OTHER	OTHER
	TOTAL		**101**		

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

CLOSURE EVENT COUNTS WITH REASON AND SOURCE

Closure Event Counts by Reported Reason for All Sources[1]

	Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	**EPA REASON**	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Close	ELEV_BACT	18	15.7	13	13.7	15	17.4	18	17.0	8	14.9	13	19.7	9	12.2	39	59.1	49	32.2	182	22.1
Close	RAINFALL	89	77.4	77	81.1	70	81.4	82	77.4	54	80.6	53	80.3	65	87.8	27	41.0	95	62.5	612	74.2
Close	SEWAGE	8	7.0	4	4.2	1	1.2	5	4.7	1	1.5								0.0	19	2.3
Close	OTHER			1	1.1			1	0.9	2	3.0							8	5.3	12	1.5
Totals		115	100	95	100	86	100	106	100	65	100	66	100	74	100	66	100	152	100	825	100

Closure Event Counts by Reported Reason paired with Reported Source[1]

		Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	**EPA REASON**	**EPA SOURCE**	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Close	ELEV_BACT	BOAT					3	3.5	4	3.8										0.0	7	0.8
Close	ELEV_BACT	SEPTIC											1	1.5					1	0.7	2	0.2
Close	ELEV_BACT	SEWER-LINE									2	3.1								0.0	2	0.2
Close	ELEV_BACT	OTHER	3	2.6	1	1.1	1	1.2									4	6.0		0.0	9	1.1
Close	ELEV_BACT	RUNOFF																	1	0.7	1	0.1
Close	ELEV_BACT	SSO															5	7.5	11	7.2	16	1.9
Close	ELEV_BACT	STORM	5	4.4	1	1.1	3	3.5	9	8.5	3	4.6	7	10.6	6	8.1	17	25.7	29	19.1	80	9.7
Close	ELEV_BACT	UNKNOWN	10	8.7	11	11.6	8	9.3	4	3.8	3		4	6.1	3	4.1	9	13.6	7	4.6	59	7.2
Close	ELEV_BACT	WILDLIFE							1	0.9			1	1.5			4	6.1		0.0	6	0.7
Close	OTHER	OTHER							1	0.9									8	5.3	9	1.1
Close	OTHER	STORM									2	3.1								0.0	2	0.2
Close	OTHER	UNKNOWN			1	1.1														0.0	1	0.1
Close	RAINFALL	BOAT					8	9.3	12	11.3										0.0	20	2.4
Close	RAINFALL	CSO									9	13.9								0.0	9	1.1
Close	RAINFALL	OTHER																	2	1.3	2	0.2
Close	RAINFALL	POTW	2	1.7			2	2.3												0.0	4	0.5
Close	RAINFALL	SSO	12	10.4	5	5.3					5	7.7							20	13.2	42	5.1
Close	RAINFALL	STORM	75	65.2	62	65.3	41	47.7	58	54.7	40	61.5	45	68.2	59	79.7	26	38.8	73	48.0	479	58.1
Close	RAINFALL	RUNOFF											1	1.5						0.0	1	0.1
Close	RAINFALL	UNKNOWN			4	4.2	19	22.1	12	11.3			7	10.6	6	8.1	1	1.5		0.0	49	5.9
Close	RAINFALL	WILDLIFE			6	6.3														0.0	6	0.7
Close	SEWAGE	POTW	5	4.4	4	4.2			2	1.9										0.0	11	1.3
Close	SEWAGE	SEWER_LINE					1	1.2	1	0.9	1	1.5								0.0	3	0.4
Close	SEWAGE	SSO	2	1.7																0.0	2	0.2
Close	SEWAGE	STORM	1	0.9																0.0	1	0.1
Close	SEWAGE	UNKNOWN							2	1.9										0.0	2	0.2
Totals			115	100	95	100	86	100	106	100	65	100	66	100	74	100	66	100	152	100	825	100

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

ADVISORY EVENT COUNTS WITH REASON AND SOURCE

Advisory Event Counts by Reported Reason for All Sources[1]																					
	Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	EPA REASON	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Advisory	ELEV_BACT			1	50			1	100	1	100			1	100	1	100	2	12.5	7	14.3
Advisory	RAINFALL	19	100	1	50	1	14.3													21	42.9
Advisory	OTHER					6	85.7					1	100					14	87.5	21	42.9
Totals		19	100	2	100	7	100	1	100	1	100	1	100	1	100	1	100	16	100	49	100

Advisory Event Counts by Reported Reason paired with Reported Source[1]																							
		Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	EPA REASON	EPA SOURCE	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Advisory	ELEV_BACT	BOAT									1	100									1	2.0
Advisory	ELEV_BACT	RUNOFF																	2	12.5	2	4.1
Advisory	ELEV_BACT	STORM							1	100											1	2.0
Advisory	ELEV_BACT	WILDLIFE			1	50															1	2.0
Advisory	ELEV_BACT	UNKNOWN													1	100	1	100			2	4.1
Advisory	OTHER	OTHER					4	57.1											14	87.5	18	36.7
Advisory	OTHER	WILDLIFE					2	28.6					1	100							3	6.1
Advisory	RAINFALL	POTW			1	50															1	2.0
Advisory	RAINFALL	STORM	19	100			1	14.3													20	40.8
Totals			19	100	2	100	7	100	1	100	1	100	1	100	1	100	1	100	16	100	49	100

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

CLOSURE DAY COUNTS WITH REASON AND SOURCE

Closure Day Counts by Reported Reason for All Sources[1]

	Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	**EPA REASON**	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Close	ELEV_BACT	32	17.9	17	9.7	29	22.1	39	17.6	12	11.2	38	36.2	26	24.5	90	64.3	129	24.1	412	24.2
Close	RAINFALL	129	72.1	134	76.1	101	77.1	174	78.4	91	85.1	67	63.8	80	75.5	50	35.7	261	48.8	1087	63.9
Close	SEWAGE	18	10.1	19	10.8	1	0.8	8	3.6	2	1.9									48	2.8
Close	OTHER			6	3.4			1	0.5	2	1.9							145	27.1	154	9.1
Totals		179	100	176	100	131	100	222	100	107	100	105	100	106	100	140	100	535	100	1701	100

Closure Day Counts by Reported Reason paired with Reported Source[1]

		Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	**EPA REASON**	**EPA SOURCE**	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Close	ELEV_BACT	BOAT					7	5.3	4	1.8											11	0.6
Close	ELEV_BACT	SEPTIC											1	1.0					6	1.1	7	0.4
Close	ELEV_BACT	SEWER-LINE									3	2.8									3	0.2
Close	ELEV_BACT	OTHER	6	3.4	2	1.1	1	0.8									8	5.5			17	1.0
Close	ELEV_BACT	RUNOFF																	15	2.8	15	0.9
Close	ELEV_BACT	SSO															10	6.9	17	3.2	27	1.6
Close	ELEV_BACT	STORM	9	5.0	1	0.6	8	6.1	25	11.3	4	3.7	28	26.7	14	13.2	46	32.8	73	13.6	208	12.2
Close	ELEV_BACT	UNKNOWN	17	9.5	14	8.0	13	9.9	7	3.2	5		7	6.7	12	11.3	21	15.0	18	3.4	114	6.7
Close	ELEV_BACT	WILDLIFE							3	1.3			2	1.9			5	3.6			10	0.6
Close	OTHER	OTHER							1	0.5									145	27.1	146	8.6
Close	OTHER	STORM									2	1.9									2	0.1
Close	OTHER	UNKNOWN			6	3.4															6	0.4
Close	RAINFALL	BOAT					8	6.1	18	8.2											26	1.5
Close	RAINFALL	CSO									9	8.4									9	0.5
Close	RAINFALL	OTHER																	4	0.7	4	0.2
Close	RAINFALL	POTW	4	2.2			4	3.1													8	0.5
Close	RAINFALL	SSO	24	13.4	10	5.7					10	9.4							55	10.3	99	5.8
Close	RAINFALL	STORM	101	56.4	104	59.1	65	49.6	123	55.4	72	67.3	58	55.2	74	69.8	48	33.1	202	37.8	847	49.8
Close	RAINFALL	RUNOFF											1	1.0						0.0	1	0.1
Close	RAINFALL	UNKNOWN			5	2.8	24	18.3	33	14.9			8	7.6	6	5.7	2	1.4			78	4.6
Close	RAINFALL	WILDLIFE			15	8.5															15	0.9
Close	SEWAGE	POTW	14	7.8	19	10.8			3	1.4											36	2.1
Close	SEWAGE	SEWER_LINE					1	0.8	2	0.9	2	1.9									5	0.3
Close	SEWAGE	SSO	2	1.1																	2	0.1
Close	SEWAGE	STORM	2	1.1																	2	0.1
Close	SEWAGE	UNKNOWN							3	1.4											3	0.2
Totals			179	100	176	100	131	100	222	100	107	100	105	100	106	100	140	100	535	100	1701	100

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

ADVISORY DAY COUNTS WITH REASON AND SOURCE

Advisory Day Counts by Reported Reason for All Sources[1]																					
	Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	EPA REASON	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Advisory	ELEV_BACT			5	71.4			2	100	1	100			2	100	3	100	10	9.9	23	9.5
Advisory	RAINFALL	28	100	2	28.6	1	1.5													31	12.8
Advisory	OTHER					68	98.6					30	100					91	90.1	189	77.8
Totals		28	100	7	100	69	100	2	100	1	100	30	100	2	100	3	100	101		243	100

Advisory Day Counts by Reported Reason paired with Reported Source[1]																							
		Season ⇨	2003	2003	2004	2004	2005	2005	2006	2006	2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2003-2011	2003-2011
Notif type	EPA REASON	EPA SOURCE	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Advisory	ELEV_BACT	BOAT									1	100									1	0.4
Advisory	ELEV_BACT	RUNOFF																	10		10	4.1
Advisory	ELEV_BACT	STORM							2	100											2	0.8
Advisory	ELEV_BACT	WILDLIFE			5	71.4															5	2.1
Advisory	ELEV_BACT	UNKNOWN													2	100	3	100			5	2.1
Advisory	OTHER	OTHER					28	40.6											91		119	49.0
Advisory	OTHER	WILDLIFE					40	58.0					30	100							70	28.8
Advisory	RAINFALL	POTW			2	28.6															2	0.8
Advisory	RAINFALL	STORM	28	100			1	1.5													29	11.9
Totals			28	100	7	100	69	100	2	100	1	100	30	100	2	100	3	100	101	100	243	100

[1] Reported by local health departments and DEEP using the annual US EPA Beach Survey

2003-2011 DAY AND EVENT COUNTS FOR BEACH CLOSURES AND ADVISORIES GROUPED BY EPA REASON AND SOURCE

These tables tally beach notification day and event counts for *both closures and advisories* grouped by reported EPA REASON and EPA SOURCE. For instance, out of 1944 notification days reported for 2003-2011 there were 435 days due to the EPA REASON: ELEVATED BACTERIA. 210 or 48.28% of these 435 elevated bacteria notification days were due to the EPA SOURCE: STORM WATER. And out of 874 closure and advisory events reported for 2003-2011 633 of them were due to the EPA REASON: RAINFALL. 499 of these 633 rainfall events or 78.83 % of them were due to EPA SOURCE: STORM WATER. Counts are ranked within each EPA REASON group. NOTE: Chemical-oil spill or discharge was not reported as an EPA REASON for 2003-2011

EPA_REASON	EPA SOURCE	DAYS	% SOURCE	% REASON
ELEV BACT	STORM WATER	210	48.28	
ELEV BACT	UNKNOWN	119	27.36	
ELEV BACT	SSO	27	6.21	
ELEV BACT	RUNOFF	25	5.75	
ELEV BACT	OTHER	17	3.91	
ELEV BACT	WILDLIFE	15	3.45	
ELEV BACT	BOAT	12	2.76	
ELEV BACT	SEPTIC	7	1.61	
ELEV BACT	SEWER LINE	3	0.69	
TOTAL ELEV BACT DAYS		**435**	100.00	**22.38**
SEWAGE	POTW	36	75.00	
SEWAGE	SEWER LINE	5	10.42	
SEWAGE	UNKNOWN	3	6.25	
SEWAGE	SSO	2	4.17	
SEWAGE	STORM WATER	2	4.17	
TOTAL SEWAGE DAYS		**48**	100.00	**2.47**
RAINFALL	STORM WATER	876	78.35	
RAINFALL	SSO	99	8.86	
RAINFALL	UNKNOWN	78	6.98	
RAINFALL	BOAT	26	2.33	
RAINFALL	WILDLIFE	15	1.34	
RAINFALL	POTW	10	0.89	
RAINFALL	CSO	9	0.81	
RAINFALL	OTHER	4	0.36	
RAINFALL	RUNOFF	1	0.09	
TOTAL RAINFALL DAYS		**1118**	100	**57.51**
OTHER	OTHER	265	77.26	
OTHER	WILDLIFE	70	20.41	
OTHER	UNKNOWN	6	1.75	
OTHER	STORM WATER	2	0.58	
TOTAL OTHER DAYS		**343**	100.00	**17.64**
TOTAL DAYS (2003-2011)		**1944**		100.00

EPA_REASON	EPA SOURCE	EVENTS	% SOURCE	% REASON
ELEV BACT	STORM WATER	81	42.86	
ELEV BACT	UNKNOWN	61	32.28	
ELEV BACT	SSO	16	8.47	
ELEV BACT	OTHER	9	4.76	
ELEV BACT	BOAT	8	4.23	
ELEV BACT	WILDLIFE	7	3.70	
ELEV BACT	RUNOFF	3	1.59	
ELEV BACT	SEPTIC	2	1.06	
ELEV BACT	SEWER LINE	2	1.06	
TOTAL ELEV BACT EVENTS		**189**	100	**21.62**
SEWAGE	POTW	11	57.89	
SEWAGE	SEWER LINE	3	15.79	
SEWAGE	SSO	2	10.53	
SEWAGE	UNKNOWN	2	10.53	
SEWAGE	STORM WATER	1	5.26	
TOTAL SEWAGE EVENTS		**19**	100	**2.17**
RAINFALL	STORM WATER	499	78.83	
RAINFALL	UNKNOWN	49	7.74	
RAINFALL	SSO	42	6.64	
RAINFALL	BOAT	20	3.16	
RAINFALL	CSO	9	1.42	
RAINFALL	WILDLIFE	6	0.95	
RAINFALL	POTW	5	0.79	
RAINFALL	OTHER	2	0.32	
RAINFALL	RUNOFF	1	0.16	
TOTAL RAINFALL EVENTS		**633**	100	**72.43**
OTHER	OTHER	27	81.82	
OTHER	WILDLIFE	3	9.09	
OTHER	STORM WATER	2	6.06	
OTHER	UNKNOWN	1	3.03	
TOTAL OTHER EVENTS		**33**	100	**3.78**
TOTAL EVENTS (2003-2011)		**874**		100.00

7.3.2 CLOSURE AND ADVISORY EVENT DATA DISCUSSION

Connecticut has tracked and recorded closure and advisory events at 67 regulated marine bathing areas from 2003 to 2006. The beach count dropped to 66 for 2007 through 2010 and rose to 73 beaches for 2011. These beaches include municipal, state park and one (1) regulated association beach. With the exception of 2003 when there were 19 advisory events, the number of advisory events has ranged between 1 and 16 events per season. The number of beach closure events for 2003-2011 has ranged from a low of 65 events in 2007 to a high of 152 events reported in 2011.

The total number of advisory days per season has varied widely from a low of 1 day in 2007 to a high of 101 days reported in 2011. Advisory events have lasted from 1 to 30 days with an average of 4.96 advisory days per event during the period 2003-2011. The total number of closure days per season has varied from a low of 105 days in 2008 to a high of 535 days reported in 2011. Beach closures have lasted from 1 day to 98 days with an average of 2.06 closure days per event during the period 2003-2011.

The US EPA is interested in learning why beach closures and advisories are issued. This federal agency has identified five (5) reasons and thirteen (13) sources of contamination that can be associated with these events. The annual US EPA Beach Survey mailed to shoreline health departments and DEEP asks respondents to identify the reason and the source of contamination for each reported beach advisory or closure event using the US EPA model.

US EPA CLOSURE AND ADVISORY EVENT REASON KEY

ELEV_BACT	Monitoring that revealed Elevated Bacteria levels
RAINFALL	Preemptive-Rainfall
SEWAGE	Preemptive-Sewage discharge or spill
CHEM_OIL	Preemptive-Chemical or Oil discharge/spill
OTHER	Other

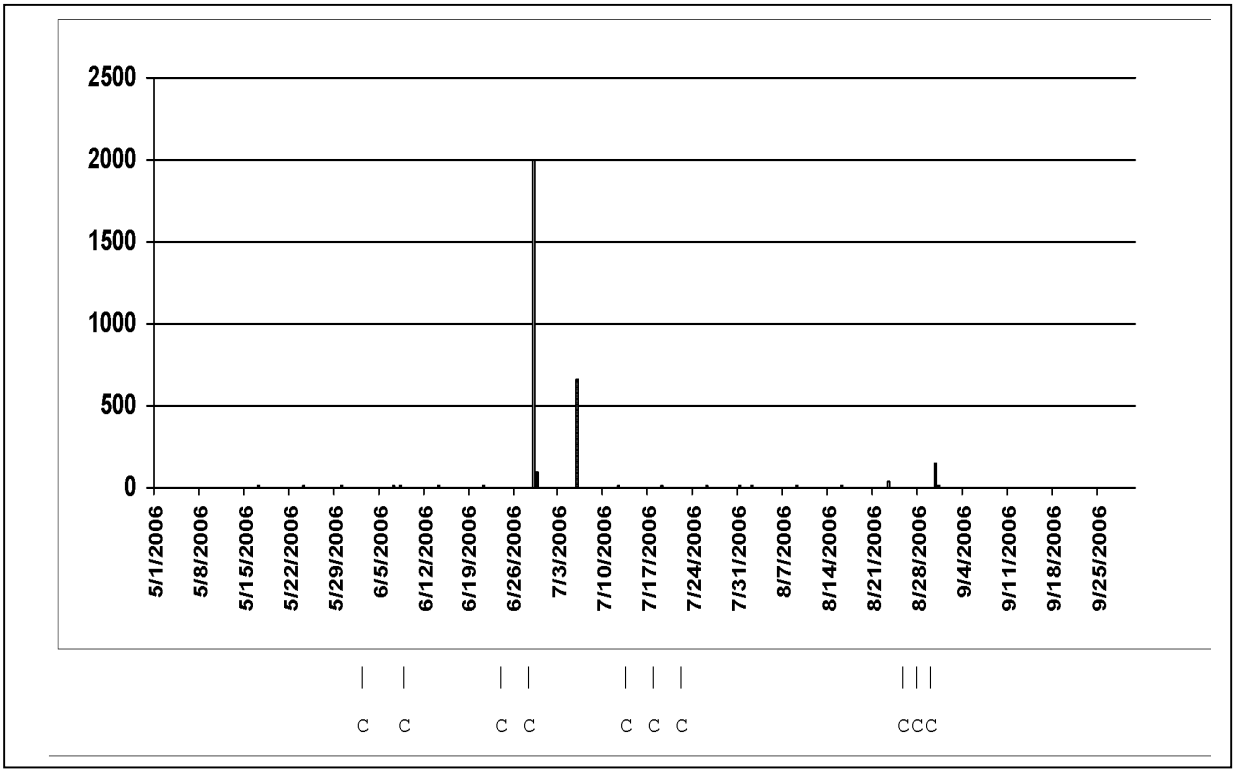
US EPA CLOSURE AND ADVISORY EVENT SOURCE OF CONTAMINATION KEY

CSO	Combined Sewer Overflow
SSO	Sanitary Sewer Overflow
POTW	Publicly Owned Treatment Works
SEPTIC	Septic systems
SEWER_LINE	Sewer Line blockage/break
BOAT	Boat discharge
STORM	Storm water runoff
WILDLIFE	Wildlife
CAFO	Concentrated Animal Feeding Operation
RUNOFF	urban Runoff
AGRICULTURAL	Agricultural runoff
UNKNOWN	Unknown
OTHER	Other

☞ Do not confuse closure and advisory event counts with closure and advisory day counts. An event can last one (1) or more days.

You can review the beach advisory and closure data presented in this annual report and learn more about the reasons and sources identified for individual beach events. Several patterns emerge from a review of closure and advisory data as a whole.

Here is a fairly typical bar graph showing all the sample results for one (1) beach sampling station during 2006. Closures (the letter "C") for that beach are shown on the same time line as the monitoring data.



Closures at many Connecticut marine beaches have little relationship to detected spikes in Enterococcus density (CFU/100ml).

Taken as a whole, the dominant *reason* for most beach closure *events* was rainfall. This pattern holds as true for individual bathing seasons as it does for the 2003-2011 aggregate data where 74.2% of all closure *events* were due to rainfall as the *reason* and just 22.1% of all closure *events* were due to elevated bacteria as the *reason*. 63.9% of all closure *days* for this same period were assigned rainfall as the reason while 24.2% of the closure *days* for this period were assigned elevated bacteria as the reason.

The largest contributor to the beach closure day counts is the combination of rainfall (the *reason*) and storm water outfall (the *source* of contamination).

Heavy rainfall flushes storm water drains that can contain bacteria and other debris. Storm water can also overload sewage treatment facilities causing bypass events. Knowing this, beach managers will often close beaches preemptively during periods of heavy rains before they have lab results returned to them for bathing area water samples.

☞ Most marine beach closures along the Connecticut shoreline due to storm water outfall are preemptive in nature (see the shaded row in the table below).

PREEMPTIVE CLOSURE DAY COUNTS												
REASON	**SOURCE**	**INDICATOR**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2003-2011**
RAINFALL	BOAT	PREEMPT			8	18						26
RAINFALL	POTW	PREEMPT	4		4							8
RAINFALL	CSO	PREEMPT					9					9
RAINFALL	SSO	PREEMPT	24	10			10				55	99
RAINFALL	STORM	PREEMPT	101	104	65	120	72	58	74	48	202	844
RAINFALL	RUNOFF	PREEMPT						1				1
RAINFALL	UNKNOWN	PREEMPT		5	24	33		8	6	2		78
RAINFALL	WILDLIFE	PREEMPT		15								15
RAINFALL	OTHER	PREEMPT									4	4
OTHER	OTHER	PREEMPT									30	30
Total preemptive closure days ->>												1114

Note: There were 1701 closure days for 2003-2011.

☞ Advisory day counts like advisory event counts cannot be easily associated with a dominant *reason* or *reason and source* combination although heavy rainfall can provoke preemptive rainfall advisories appearing in the beach data.

PREEMPTIVE ADVISORY DAY COUNTS												
REASON	**SOURCE**	**INDICATOR**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2003-2011**
RAINFALL	STORM	PREEMPT	28		1							29
RAINFALL	POTW	PREEMPT		2								2
OTHER	OTHER	PREEMPT									68	68
Total preemptive advisory days ->>												99

Note: There were 243 advisory days for 2003-2011.

7.4 KNOWN POTENTIAL SOURCES OF POLLUTION

Starting with the 2006 bathing season, US EPA asked Beach Grant states to report the known potential sources of pollution for their beaches on a beach-by-beach basis. Emphasis is on the words "known" and "potential". Sources of pollution identified through hearsay, anecdote or rumor were not to be tallied while sources of pollution that had been identified but had not yet necessarily impacted a beach were to be shown for each beach.

Later, starting with the 2007 bathing season, US EPA asked Beach Grant states to report whether or not pollution sources had been investigated when none were reported. Specifically, EPA wanted to know whether: a) investigation revealed no known potential sources of pollution or b) pollution sources had not been investigated.

Following are the pollution source data reported by Connecticut shoreline health departments and DEEP for 2006 through 2011. The data were collected using an EPA supplied checklist added to the annual EPA Beach Survey that collects notification data.

US EPA KNOWN POTENTIAL SOURCES OF POLLUTION KEY

CSO	Combined Sewer Overflow
SSO	Sanitary Sewer Overflow
POTW	Publicly Owned Treatment Works
SEPTIC	Septic systems
SEWER_LINE	Sewer Line blockage/break
BOAT	Boat discharge
STORM	Storm water runoff
WILDLIFE	Wildlife
CAFO	Concentrated Animal Feeding Operation
RUNOFF	urban Runoff
AGRICULTURAL	Agricultural runoff
UNKNOWN	Unknown
OTHER	Other

2006 KNOWN POTENTIAL SOURCES OF POLLUTION ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count
ANCHOR BEACH (MERWIN POINT) #1															0
ANCHOR BEACH (MERWIN POINT) #2															0
BELL ISLAND BEACH							✓								1
BRANFORD POINT BEACH															0
BURYING HILL BEACH															0
BYRAM BEACH		✓				✓	✓	✓		✓					5
CALF PASTURE BEACH							✓								1
CLARK AVENUE BEACH															0
COMPO BEACH															0
CUMMINGS BEACH															0
DUBOIS BEACH			✓			✓	✓	✓		✓					5
EAST (COVE ISLAND) BEACH							✓	✓		✓					3
EAST HAVEN TOWN BEACH															0
EAST WHARF BEACH															0
EASTERN POINT BEACH															0
ESKER POINT BEACH															0
ESPOSITO BEACH[1]															0
GREAT CAPTAIN'S ISLAND BEACH				✓		✓		✓							3
GREEN HARBOR BEACH															0
GREENWICH POINT BEACH		✓					✓			✓					3
GULF BEACH															0
HAMMONASSET BEACH STATE PARK BEACH															0
HARVEY'S BEACH															0
HICKORY BLUFF BEACH							✓								1
HOLE-IN-THE-WALL BEACH															0
ISLAND BEACH				✓		✓		✓							3
JACOBS BEACH (TOWN BEACH)						✓	✓	✓							3
JENNINGS BEACH							✓								1
KIDDIE'S BEACH[2]															0
LIGHTHOUSE POINT BEACH	✓		✓				✓	✓				✓			5
LONG BEACH (MARNICK'S)															0
LONG BEACH (PROPER)						✓									1
MARVIN BEACH							✓								1
MCCOOK POINT BEACH															0
MIDDLE BEACH/STANNARD BEACH															0
NOANK DOCK															0
OCEAN BEACH PARK															0
PEAR TREE POINT BEACH				✓	✓	✓	✓								4
PENFIELD BEACH							✓								1
PENT ROAD BEACH															0
PLEASURE BEACH															0

2006 KNOWN POTENTIAL SOURCES OF POLLUTION (continued) ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count
QUIGLEY BEACH															0
ROCKY NECK STATE PARK BEACH															0
ROWAYTON BEACH							✓								1
SASCO BEACH							✓								1
SEASIDE PARK BEACH															0
SHADY BEACH							✓								1
SHERWOOD ISLAND STATE PARK BEACH															0
SHORT BEACH		✓				✓									2
SILVER SANDS STATE PARK BEACH															0
SOUNDVIEW BEACH															0
SOUTH PINE CREEK BEACH							✓								1
SOUTHPORT BEACH							✓								1
STONY CREEK BEACH															0
SURF CLUB BEACH															0
TOWN BEACH (CLINTON)															0
TOWN BEACH (OLD SAYBROOK)															0
WALNUT BEACH															0
WATERFORD TOWN BEACH															0
WEED BEACH				✓		✓	✓								3
WEST BEACH															0
WEST HAVEN EAST BEACH[2]		✓	✓		✓	✓	✓	✓		✓					7
WEST HAVEN WEST BEACH[2]		✓	✓		✓	✓	✓	✓		✓					7
WEST WHARF BEACH															0
WESTBROOK TOWN BEACH/WEST BEACH															0
WHITE SANDS BEACH															0
WOODMONT BEACH															0
2006 POLLUTION SOURCE COUNTS	1	5	4	4	3	11	21	9	0	6	0	1	0	0	
2006 BEACHES WITH REPORTED POLLUTION SOURCES															25
2006 BEACHES WITHOUT REPORTED POLLUTION SOURCES															42

[1] Beach taken out of service 2007
[2] Beach taken out of service 2011

2007 KNOWN POTENTIAL SOURCES OF POLLUTION ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
ANCHOR BEACH (MERWIN POINT) #1							✓	✓		✓					3		
ANCHOR BEACH (MERWIN POINT) #2							✓			✓					2		
BELL ISLAND BEACH							✓								1		
BRANFORD POINT BEACH							✓								1		
BURYING HILL BEACH							✓								1		
BYRAM BEACH		✓			✓	✓	✓	✓							5		
CALF PASTURE BEACH							✓								1		
CLARK AVENUE BEACH							✓								1		
COMPO BEACH							✓								1		
CUMMINGS BEACH						✓	✓			✓					3		
DUBOIS BEACH			✓		✓										2		
EAST (COVE ISLAND) BEACH						✓	✓	✓		✓					4		
EAST HAVEN TOWN BEACH															0	✓	
EAST WHARF BEACH							✓								1		
EASTERN POINT BEACH															0		✓
ESKER POINT BEACH															0		✓
GREAT CAPTAIN'S ISLAND BEACH				✓		✓		✓							3		
GREEN HARBOR BEACH															0		✓
GREENWICH POINT BEACH		✓		✓	✓	✓	✓	✓							6		
GULF BEACH							✓			✓					2		
HAMMONASSET BEACH STATE PARK BEACH				✓		✓	✓	✓							4		
HARVEY'S BEACH							✓								1		
HICKORY BLUFF BEACH							✓								1		
HOLE-IN-THE-WALL BEACH															0		✓
ISLAND BEACH				✓		✓		✓							3		
JACOBS BEACH (TOWN BEACH)				✓			✓			✓			✓	water fowl	4		
JENNINGS BEACH		✓					✓								2		
KIDDIE'S BEACH[1]															0		✓
LIGHTHOUSE POINT BEACH	✓		✓				✓	✓							4		
LONG BEACH (MARNICK'S)							✓								1		
LONG BEACH (PROPER)							✓								1		
MARVIN BEACH							✓								1		
MCCOOK POINT BEACH															0		✓
MIDDLE BEACH/STANNARD BEACH															0		✓
NOANK DOCK															0		✓
OCEAN BEACH PARK															0		✓
PEAR TREE POINT BEACH				✓	✓	✓	✓	✓							5		
PENFIELD BEACH		✓					✓								2		
PENT ROAD BEACH															0	✓	

2007 KNOWN POTENTIAL SOURCES OF POLLUTION (continued) ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
PLEASURE BEACH															0		✓
QUIGLEY BEACH						✓	✓	✓							3		
ROCKY NECK STATE PARK BEACH				✓		✓	✓	✓							4		
ROWAYTON BEACH							✓								1		
SASCO BEACH		✓					✓								2		
SEASIDE PARK BEACH															0	✓	
SHADY BEACH							✓								1		
SHERWOOD ISLAND STATE PARK BEACH		✓	✓	✓			✓			✓			✓	water fowl	6		
SHORT BEACH							✓								1		
SILVER SANDS STATE PARK BEACH			✓			✓	✓			✓			✓	water fowl	5		
SOUNDVIEW BEACH															0	✓	
SOUTH PINE CREEK BEACH		✓					✓								2		
SOUTHPORT BEACH		✓					✓								2		
STONY CREEK BEACH							✓								1		
SURF CLUB BEACH															0	✓	
TOWN BEACH (CLINTON)							✓								1		
TOWN BEACH (OLD SAYBROOK)							✓								1		
WALNUT BEACH							✓			✓					2		
WATERFORD TOWN BEACH															0		✓
WEED BEACH				✓	✓	✓	✓	✓							5		
WEST BEACH						✓	✓			✓					3		
WEST HAVEN EAST BEACH[1]							✓			✓					2		
WEST HAVEN WEST BEACH[1]							✓			✓					2		
WEST WHARF BEACH															0	✓	
WESTBROOK TOWN BEACH/WEST BEACH															0		✓
WHITE SANDS BEACH															0	✓	
WOODMONT BEACH							✓			✓					2		
2007 POLLUTION SOURCE COUNTS	1	8	4	9	5	13	44	12	0	13	0	0	3	3			
2007 BEACHES WITH REPORTED POLLUTION SOURCES															47		
2007 BEACHES WITHOUT REPORTED POLLUTION SOURCES															19		
2007 INVESTIGATION REVEALED NO POLLUTION SOURCES																7	
2007 POLLUTION SOURCES NOT INVESTIGATED																	12

[1] Beach taken out of service 2011

2008 KNOWN POTENTIAL SOURCES OF POLLUTION ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
ANCHOR BEACH (MERWIN POINT) #1							✓	✓		✓					3		
ANCHOR BEACH (MERWIN POINT) #2							✓			✓					2		
BELL ISLAND BEACH															0	✓	
BRANFORD POINT BEACH							✓								1		
BURYING HILL BEACH							✓								1		
BYRAM BEACH		✓			✓	✓	✓	✓							5		
CALF PASTURE BEACH															0	✓	
CLARK AVENUE BEACH							✓								1		
COMPO BEACH							✓								1		
CUMMINGS BEACH							✓			✓					2		
DUBOIS BEACH			✓		✓										2		
EAST (COVE ISLAND) BEACH							✓			✓					2		
EAST HAVEN TOWN BEACH															0	✓	
EAST WHARF BEACH															0	✓	
EASTERN POINT BEACH															0		✓
ESKER POINT BEACH															0		✓
GREAT CAPTAIN'S ISLAND BEACH				✓		✓		✓							3		
GREEN HARBOR BEACH															0		✓
GREENWICH POINT BEACH		✓		✓	✓	✓	✓	✓							6		
GULF BEACH							✓			✓					2		
HAMMONASSET BEACH STATE PARK BEACH				✓		✓	✓	✓							4		
HARVEY'S BEACH							✓								1		
HICKORY BLUFF BEACH							✓								1		
HOLE-IN-THE-WALL BEACH															0		✓
ISLAND BEACH				✓		✓		✓							3		
JACOBS BEACH (TOWN BEACH)				✓			✓			✓			✓	water fowl	4		
JENNINGS BEACH		✓					✓								2		
KIDDIE'S BEACH[1]															0		✓
LIGHTHOUSE POINT BEACH	✓		✓				✓	✓							4		
LONG BEACH (MARNICK'S)							✓					✓			2		
LONG BEACH (PROPER)							✓					✓			2		
MARVIN BEACH							✓								1		
MCCOOK POINT BEACH															0		✓
MIDDLE BEACH/STANNARD BEACH															0	✓	
NOANK DOCK															0		✓
OCEAN BEACH PARK															0		✓
PEAR TREE POINT BEACH				✓		✓	✓	✓							4		
PENFIELD BEACH		✓					✓								2		
PENT ROAD BEACH															0	✓	

2008 KNOWN POTENTIAL SOURCES OF POLLUTION (continued) ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
PLEASURE BEACH															0		✓
QUIGLEY BEACH							✓			✓					2		
ROCKY NECK STATE PARK BEACH				✓		✓	✓	✓							4		
ROWAYTON BEACH															0	✓	
SASCO BEACH		✓					✓								2		
SEASIDE PARK BEACH			✓				✓								2		
SHADY BEACH															0	✓	
SHERWOOD ISLAND STATE PARK BEACH		✓	✓	✓			✓			✓			✓	water fowl	6		
SHORT BEACH							✓					✓			2		
SILVER SANDS STATE PARK BEACH			✓			✓	✓			✓			✓	water fowl	5		
SOUNDVIEW BEACH															0	✓	
SOUTH PINE CREEK BEACH		✓					✓								2		
SOUTHPORT BEACH		✓					✓								2		
STONY CREEK BEACH							✓								1		
SURF CLUB BEACH															0	✓	
TOWN BEACH (CLINTON)							✓								1		
TOWN BEACH (OLD SAYBROOK)							✓								1		
WALNUT BEACH							✓			✓					2		
WATERFORD TOWN BEACH															0		✓
WEED BEACH				✓	✓	✓	✓	✓							5		
WEST BEACH							✓			✓					2		
WEST HAVEN EAST BEACH[1]							✓			✓					2		
WEST HAVEN WEST BEACH[1]							✓			✓					2		
WEST WHARF BEACH															0	✓	
WESTBROOK TOWN BEACH/WEST BEACH															0	✓	
WHITE SANDS BEACH															0	✓	
WOODMONT BEACH							✓			✓					2		
2008 POLLUTION SOURCE COUNTS	1	8	5	9	4	9	40	10	0	14	0	3	3				
2008 BEACHES WITH REPORTED POLLUTION SOURCES															43		
2008 BEACHES WITHOUT REPORTED POLLUTION SOURCES															23		
2008 INVESTIGATION REVEALED NO POLLUTION SOURCES																13	
2008 POLLUTION SOURCES NOT INVESTIGATED																	10

[1] Beach taken out of service 2011

2009 KNOWN POTENTIAL SOURCES OF POLLUTION ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
ANCHOR BEACH (MERWIN POINT) #1							✓	✓		✓					3		
ANCHOR BEACH (MERWIN POINT) #2							✓			✓					2		
BELL ISLAND BEACH							✓								1		
BRANFORD POINT BEACH			✓				✓								2		
BURYING HILL BEACH							✓								1		
BYRAM BEACH						✓	✓	✓							3		
CALF PASTURE BEACH															0		✓
CLARK AVENUE BEACH							✓								1		
COMPO BEACH							✓								1		
CUMMINGS BEACH							✓			✓					2		
DUBOIS BEACH			✓		✓										2		
EAST (COVE ISLAND) BEACH							✓			✓					2		
EAST HAVEN TOWN BEACH															0	✓	
EAST WHARF BEACH															0	✓	
EASTERN POINT BEACH															0		✓
ESKER POINT BEACH															0		✓
GREAT CAPTAIN'S ISLAND BEACH								✓							1		
GREEN HARBOR BEACH															0		✓
GREENWICH POINT BEACH							✓	✓							2		
GULF BEACH							✓			✓					2		
HAMMONASSET BEACH STATE PARK BEACH				✓		✓	✓	✓							4		
HARVEY'S BEACH							✓								1		
HICKORY BLUFF BEACH							✓								1		
HOLE-IN-THE-WALL BEACH															0		✓
ISLAND BEACH								✓							1		
JACOBS BEACH (TOWN BEACH)				✓			✓			✓			✓	water fowl	4		
JENNINGS BEACH		✓					✓								2		
KIDDIE'S BEACH[1]															0		✓
LIGHTHOUSE POINT BEACH	✓		✓				✓	✓							4		
LONG BEACH (MARNICK'S)							✓					✓			2		
LONG BEACH (PROPER)							✓					✓			2		
MARVIN BEACH							✓								1		
MCCOOK POINT BEACH															0		✓
MIDDLE BEACH/STANNARD BEACH															0	✓	
NOANK DOCK															0		✓
OCEAN BEACH PARK															0		✓
PEAR TREE POINT BEACH				✓		✓	✓	✓							4		
PENFIELD BEACH		✓					✓								2		
PENT ROAD BEACH															0	✓	

2009 KNOWN POTENTIAL SOURCES OF POLLUTION (continued) ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
PLEASURE BEACH															0		✓
QUIGLEY BEACH							✓			✓					2		
ROCKY NECK STATE PARK BEACH				✓		✓	✓	✓							4		
ROWAYTON BEACH							✓								1		
SASCO BEACH		✓					✓								2		
SEASIDE PARK BEACH			✓				✓								2		
SHADY BEACH							✓								1		
SHERWOOD ISLAND STATE PARK BEACH		✓	✓	✓			✓			✓			✓	water fowl	6		
SHORT BEACH							✓					✓			2		
SILVER SANDS STATE PARK BEACH			✓			✓	✓			✓			✓	water fowl	5		
SOUNDVIEW BEACH															0	✓	
SOUTH PINE CREEK BEACH		✓					✓								2		
SOUTHPORT BEACH		✓					✓								2		
STONY CREEK BEACH				✓			✓								2		
SURF CLUB BEACH															0	✓	
TOWN BEACH (CLINTON)							✓								1		
TOWN BEACH (OLD SAYBROOK)							✓								1		
WALNUT BEACH							✓			✓					2		
WATERFORD TOWN BEACH															0		✓
WEED BEACH				✓	✓	✓	✓	✓							5		
WEST BEACH							✓			✓					2		
WEST HAVEN EAST BEACH[1]							✓			✓					2		
WEST HAVEN WEST BEACH[1]							✓			✓					2		
WEST WHARF BEACH															0	✓	
WESTBROOK TOWN BEACH/WEST BEACH															0	✓	
WHITE SANDS BEACH															0	✓	
WOODMONT BEACH							✓			✓					2		
2009 POLLUTION SOURCE COUNTS	1	6	6	7	2	6	43	10	0	14	0	3	3				
2009 BEACHES WITH REPORTED POLLUTION SOURCES															46		
2009 BEACHES WITHOUT REPORTED POLLUTION SOURCES															20		
2009 INVESTIGATION REVEALED NO POLLUTION SOURCES																9	
2009 POLLUTION SOURCES NOT INVESTIGATED																	11

[1] Beach taken out of service 2011

2010 KNOWN POTENTIAL SOURCES OF POLLUTION ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
ANCHOR BEACH (MERWIN POINT) #1							✓	✓		✓					3		
ANCHOR BEACH (MERWIN POINT) #2							✓			✓					2		
BELL ISLAND BEACH							✓								1		
BRANFORD POINT BEACH			✓				✓								2		
BURYING HILL BEACH							✓								1		
BYRAM BEACH						✓	✓	✓							3		
CALF PASTURE BEACH													✓	cross connection at concession stand	1		
CLARK AVENUE BEACH							✓								1		
COMPO BEACH							✓								1		
CUMMINGS BEACH							✓			✓					2		
DUBOIS BEACH			✓		✓										2		
EAST (COVE ISLAND) BEACH							✓			✓					2		
EAST HAVEN TOWN BEACH															0	✓	
EAST WHARF BEACH															0	✓	
EASTERN POINT BEACH															0		✓
ESKER POINT BEACH															0		✓
GREAT CAPTAIN'S ISLAND BEACH								✓							1		
GREEN HARBOR BEACH															0		✓
GREENWICH POINT BEACH							✓	✓							2		
GULF BEACH							✓			✓					2		
HAMMONASSET BEACH STATE PARK BEACH				✓		✓	✓	✓							4		
HARVEY'S BEACH							✓								1		
HICKORY BLUFF BEACH							✓								1		
HOLE-IN-THE-WALL BEACH															0		✓
ISLAND BEACH								✓							1		
JACOBS BEACH (TOWN BEACH)				✓			✓			✓			✓	water fowl	4		
JENNINGS BEACH		✓					✓								2		
KIDDIE'S BEACH[1]															0		✓
LIGHTHOUSE POINT BEACH	✓		✓				✓	✓							4		
LONG BEACH (MARNICK'S)							✓					✓			2		
LONG BEACH (PROPER)							✓					✓			2		
MARVIN BEACH							✓								1		
MCCOOK POINT BEACH															0		✓
MIDDLE BEACH/STANNARD BEACH															0	✓	
NOANK DOCK															0		✓
OCEAN BEACH PARK															0		✓
PEAR TREE POINT BEACH				✓		✓	✓	✓							4		
PENFIELD BEACH		✓					✓								2		

2010 KNOWN POTENTIAL SOURCES OF POLLUTION (continued) ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
PENT ROAD BEACH															0	✓	
PLEASURE BEACH															0		✓
QUIGLEY BEACH							✓			✓					2		
ROCKY NECK STATE PARK BEACH				✓		✓	✓	✓							4		
ROWAYTON BEACH							✓								1		
SASCO BEACH		✓					✓								2		
SEASIDE PARK BEACH			✓				✓								2		
SHADY BEACH							✓								1		
SHERWOOD ISLAND STATE PARK BEACH		✓	✓	✓			✓			✓			✓	water fowl	6		
SHORT BEACH							✓					✓			2		
SILVER SANDS STATE PARK BEACH			✓			✓	✓			✓			✓	water fowl	5		
SOUNDVIEW BEACH															0	✓	
SOUTH PINE CREEK BEACH		✓					✓								2		
SOUTHPORT BEACH		✓					✓								2		
STONY CREEK BEACH				✓			✓								2		
SURF CLUB BEACH															0	✓	
TOWN BEACH (CLINTON)							✓								1		
TOWN BEACH (OLD SAYBROOK)							✓								1		
WALNUT BEACH							✓			✓					2		
WATERFORD TOWN BEACH															0		✓
WEED BEACH				✓	✓	✓	✓	✓							5		
WEST BEACH							✓			✓					2		
WEST HAVEN EAST BEACH[1]							✓			✓					2		
WEST HAVEN WEST BEACH[1]							✓			✓					2		
WEST WHARF BEACH															0	✓	
WESTBROOK TOWN BEACH/WEST BEACH															0	✓	
WHITE SANDS BEACH															0	✓	
WOODMONT BEACH							✓			✓					2		
2010 POLLUTION SOURCE COUNTS	1	6	6	7	2	6	43	10	0	14	0	3	4			9	10
2010 BEACHES WITH REPORTED POLLUTION SOURCES															47		
2010 BEACHES WITHOUT REPORTED POLLUTION SOURCES															19		
2010 INVESTIGATION REVEALED NO POLLUTION SOURCES																9	
2010 POLLUTION SOURCES NOT INVESTIGATED																	10

[1] Beach taken out of service 2011

2011 KNOWN POTENTIAL SOURCES OF POLLUTION ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
ALTSCHULER BEACH		✓					✓			✓					3		
ANCHOR BEACH (MERWIN POINT) #1							✓	✓		✓					3		
ANCHOR BEACH (MERWIN POINT) #2							✓			✓					2		
BELL ISLAND BEACH							✓								1		
BRANFORD POINT BEACH			✓				✓								2		
BURYING HILL BEACH							✓						✓	flooding	2		
BYRAM BEACH							✓	✓							2		
CALF PASTURE BEACH							✓								1		
CLARK AVENUE BEACH							✓								1		
COMPO BEACH							✓						✓	flooding	2		
CUMMINGS BEACH							✓			✓					2		
DAWSON BEACH							✓			✓					2		
DUBOIS BEACH			✓		✓										2		
EAST (COVE ISLAND) BEACH							✓			✓					2		
EAST HAVEN TOWN BEACH															0	✓	
EAST WHARF BEACH															0	✓	
EASTERN POINT BEACH															0		✓
ESKER POINT BEACH															0		✓
FORT HALE PARK BEACH	✓		✓				✓	✓		✓		✓			6		
GREAT CAPTAIN'S ISLAND BEACH								✓							1		
GREEN HARBOR BEACH															0		✓
GREENWICH POINT BEACH							✓	✓							2		
GULF BEACH							✓			✓					2		
HAMMONASSET BEACH STATE PARK BEACH				✓		✓	✓	✓							4		
HARVEY'S BEACH							✓								1		
HICKORY BLUFF BEACH							✓								1		
HOLE-IN-THE-WALL BEACH															0		✓
ISLAND BEACH								✓							1		
JACOBS BEACH (TOWN BEACH)				✓			✓			✓			✓	water fowl	4		
JENNINGS BEACH		✓					✓								2		
LIGHTHOUSE POINT BEACH	✓		✓				✓	✓		✓		✓			6		
LONG BEACH (MARNICK'S)							✓					✓			2		
LONG BEACH (PROPER)							✓					✓			2		
MARVIN BEACH							✓								1		
MCCOOK POINT BEACH															0		✓
MIDDLE BEACH/STANNARD BEACH															0	✓	
MORSE BEACH		✓													1		
NOANK DOCK															0		✓
OAK STREET A BEACH		✓					✓			✓					3		
OAK STREET B BEACH		✓					✓			✓					3		

2011 KNOWN POTENTIAL SOURCES OF POLLUTION (continued) ⇨ BEACH NAME ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	Source count	No sources detected	Sources not investigated
OCEAN BEACH PARK															0		✓
PEAR TREE POINT BEACH				✓		✓	✓	✓							4		
PENFIELD BEACH		✓					✓								2		
PENT ROAD BEACH															0	✓	
PLEASURE BEACH															0		✓
QUIGLEY BEACH							✓			✓					2		
ROCK STREET BEACH		✓					✓			✓					3		
ROCKY NECK STATE PARK BEACH				✓	✓	✓	✓	✓							5		
ROWAYTON BEACH							✓								1		
SASCO BEACH		✓					✓								2		
SEABLUFF BEACH		✓					✓			✓					3		
SEASIDE PARK BEACH			✓				✓								2		
SEAVIEW BEACH		✓					✓			✓					3		
SHADY BEACH												✓			1		
SHERWOOD ISLAND STATE PARK BEACH		✓	✓	✓			✓			✓			✓	water fowl	6		
SHORT BEACH							✓					✓			2		
SILVER SANDS STATE PARK BEACH			✓			✓	✓			✓			✓	water fowl	5		
SOUNDVIEW BEACH							✓								1		
SOUTH PINE CREEK BEACH		✓					✓								2		
SOUTH STREET BEACH		✓					✓			✓					3		
SOUTHPORT BEACH		✓					✓								2		
STONY CREEK BEACH				✓			✓								2		
SURF CLUB BEACH															0	✓	
TOWN BEACH (CLINTON)							✓								1		
TOWN BEACH (OLD SAYBROOK)							✓								1		
WALNUT BEACH							✓			✓					2		
WATERFORD TOWN BEACH															0		✓
WEED BEACH				✓	✓	✓	✓	✓							5		
WEST BEACH							✓			✓					2		
WEST WHARF BEACH															0	✓	
WESTBROOK TOWN BEACH/WEST BEACH															0	✓	
WHITE SANDS BEACH							✓								1		
WOODMONT BEACH							✓			✓					2		
2011 POLLUTION SOURCE COUNTS	2	14	7	7	3	5	52	11	0	22	0	6	5			7	9
2011 BEACHES WITH REPORTED POLLUTION SOURCES															57		
2011 BEACHES WITHOUT REPORTED POLLUTION SOURCES															16		
2011 INVESTIGATION REVEALED NO POLLUTION SOURCES																7	
2011 POLLUTION SOURCES NOT INVESTIGATED																	9

7.4.1 SOURCES OF POLLUTION DISCUSSION

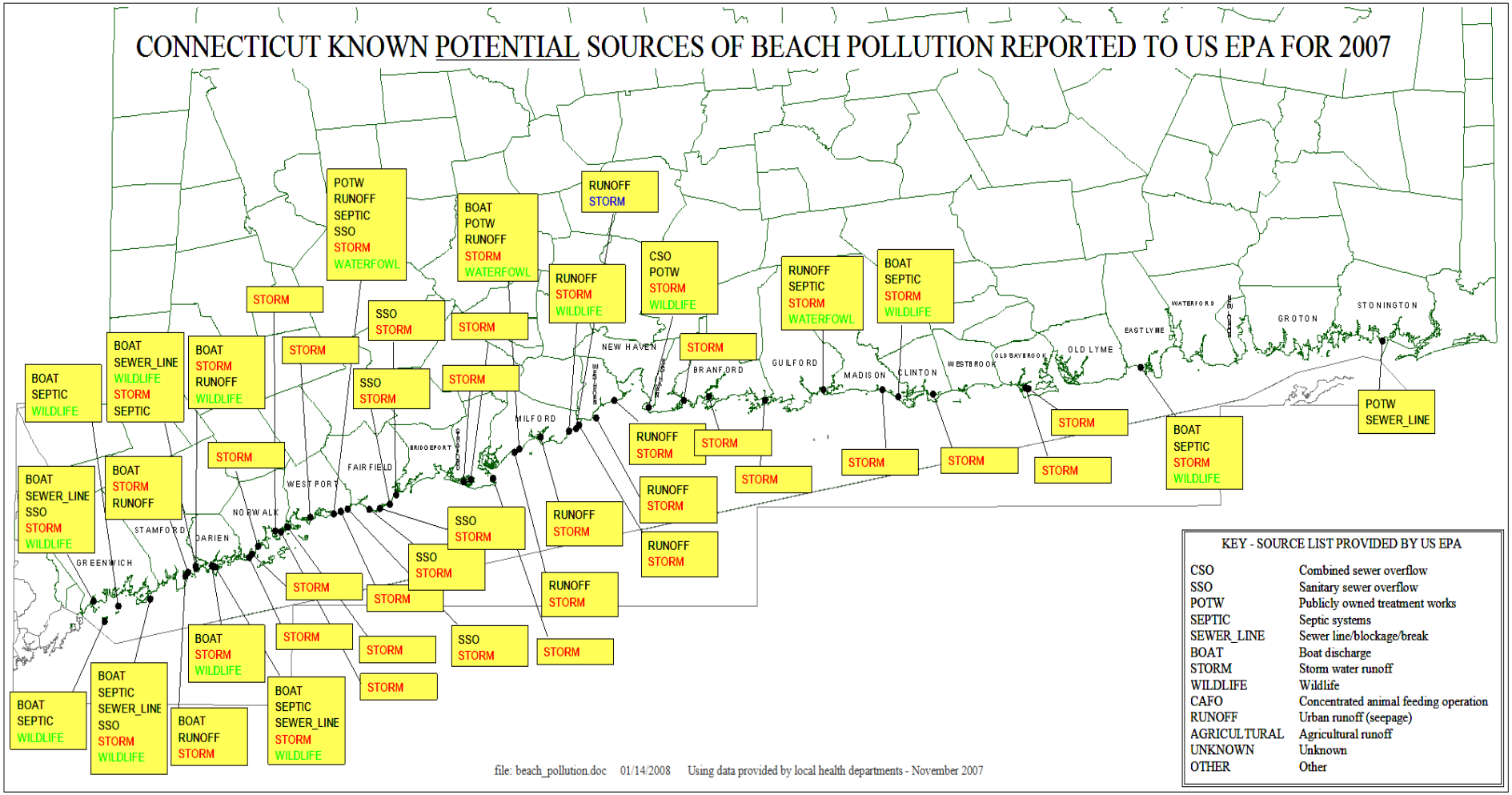
The 2006 survey results for known potential sources of pollution are roughly comparable to those results for 2007 through 2011 although this larger set of results derive from a slightly different take on the question of pollution sources - with an emphasis on the investigation component used to identify pollution sources.

For five (5) reporting years (2007, 2008, 2009, 2010 and 2011) there have been at least forty (40) beaches for which known potential sources of pollution were reported. For all reporting years storm water was identified as the most prevalent source of potential beach pollution with urban runoff and boat discharge tied for second place in 2007 and urban runoff coming in second place for 2008 - 2011.

Known Potential Pollution Sources ⇨ Season ⇩	CSO	SSO	POTW	Septic	Sewer	Boat	Storm water	Wildlife	CAFO	Urban runoff	Agricultural runoff	Unknown	Other	Other: comment	No sources detected	Sources not investigated
2006 totals	1	5	4	4	3	11	21	9	0	6	0	1	0	0	n/a	n/a
2007 totals	1	8	4	9	5	13	44	12	0	13	0	0	3	3	7	12
2008 totals	1	8	5	9	4	9	40	10	0	14	0	3	3	3	13	10
2009 totals	1	6	6	7	2	6	43	10	0	14	0	3	3	3	9	11
2010 totals	1	6	6	7	2	6	43	10	0	14	0	3	4	4	9	10
2011 totals	2	14	7	7	3	5	52	11	0	22	0	6	5	5	7	9

Six (6) of the potential sources of pollution found on the US EPA supplied pollution sources checklist used to collect these data can relate directly to human fecal contamination at bathing areas, while the remaining pollution sources can either cause swimmer illness or detract significantly from recreational waters. Monitoring recreational waters involves more than assessing the concentration of the fecal contamination indicator organism Enterococcus.

For the 2011 Beach Survey, we provided survey respondents with their 2010 beach pollution source tallies for ready comparison with their assessments for 2011.


CONNECTICUT KNOWN POTENTIAL SOURCES OF BEACH POLLUTION REPORTED TO US EPA FOR 2007
POTW RUNOFF SEPTIC SSO STORM WATERFOWL
BOAT POTW RUNOFF STORM WATERFOWL
RUNOFF STORM
CSO POTW STORM WILDLIFE
RUNOFF SEPTIC STORM WATERFOWL
BOAT SEPTIC STORM WILDLIFE
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BOAT SEWER_LINE WILDLIFE STORM SEPTIC
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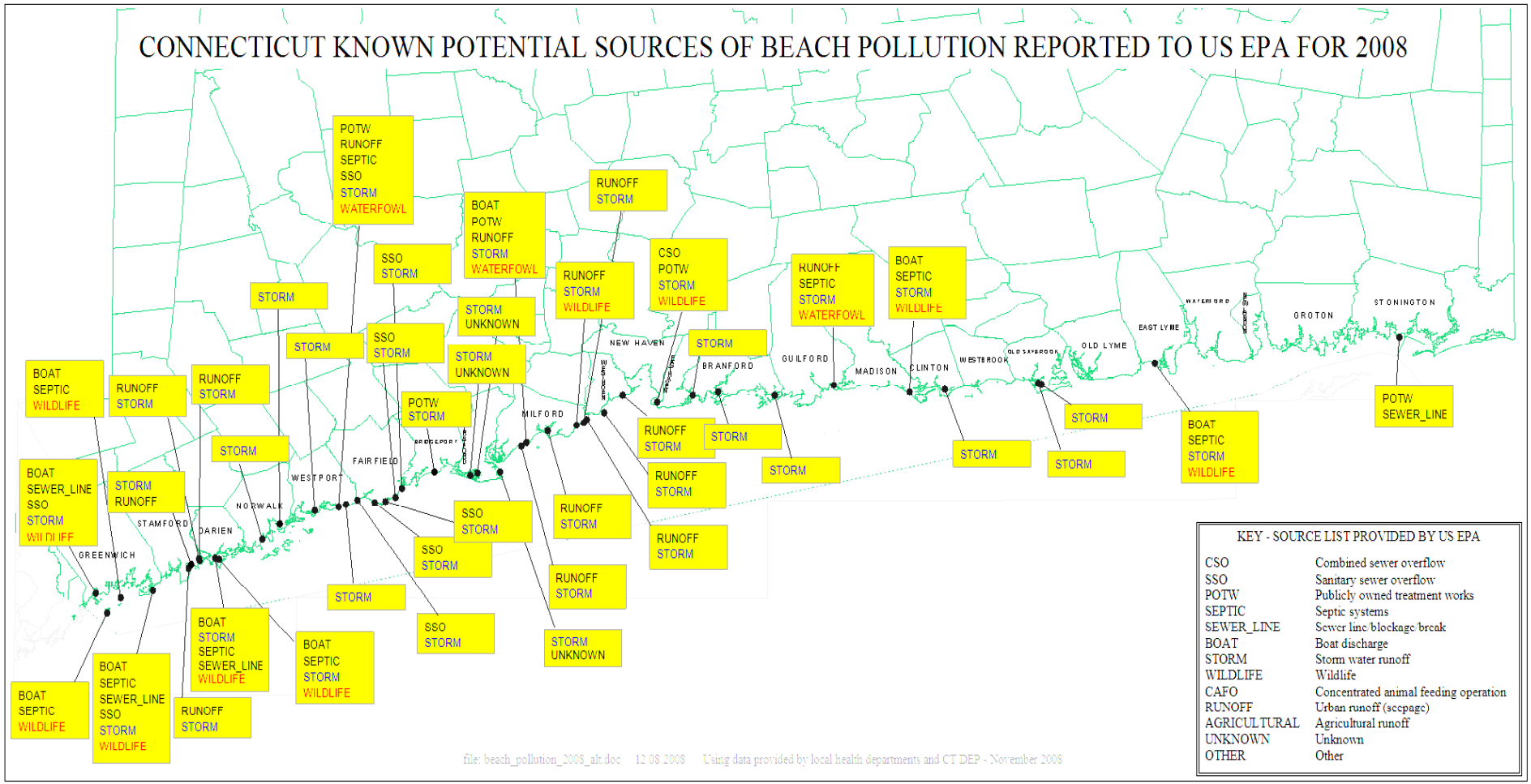
BOAT SEPTIC WILDLIFE
BOAT RUNOFF STORM
BOAT SEPTIC SEWER_LINE STORM WILDLIFE
NEW HAVEN
BRANFORD
GUILFORD
MADISON
CLINTON
WESTBROOK
OLD SAYBROOK
OLD LYME
EAST LYME
WATERFORD
GROTON
STONINGTON
MILFORD
BRIDGEPORT
FAIRFIELD
WESTPORT
NORWALK
STAMFORD
DARIEN
GREENWICH
KEY - SOURCE LIST PROVIDED BY US EPA
CSO Combined sewer overflow
SSO Sanitary sewer overflow
POTW Publicly owned treatment works
SEPTIC Septic systems
SEWER_LINE Sewer line/blockage/break
BOAT Boat discharge
STORM Storm water runoff
WILDLIFE Wildlife
CAFO Concentrated animal feeding operation
RUNOFF Urban runoff (seepage)
AGRICULTURAL Agricultural runoff
UNKNOWN Unknown
OTHER Other
file: beach_pollution.doc 01/14/2008 Using data provided by local health departments - November 2007


CONNECTICUT KNOWN POTENTIAL SOURCES OF BEACH POLLUTION REPORTED TO US EPA FOR 2008
POTW RUNOFF SEPTIC SSO STORM WATERFOWL
BOAT POTW RUNOFF STORM WATERFOWL
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CSO POTW STORM WILDLIFE
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NORWALK
WESTPORT
FAIRFIELD
BRIDGEPORT
MILFORD
NEW HAVEN
BRANFORD
GUILFORD
MADISON
CLINTON
WESTBROOK
OLD SAYBROOK
OLD LYME
EAST LYME
WATERFORD
GROTON
STONINGTON
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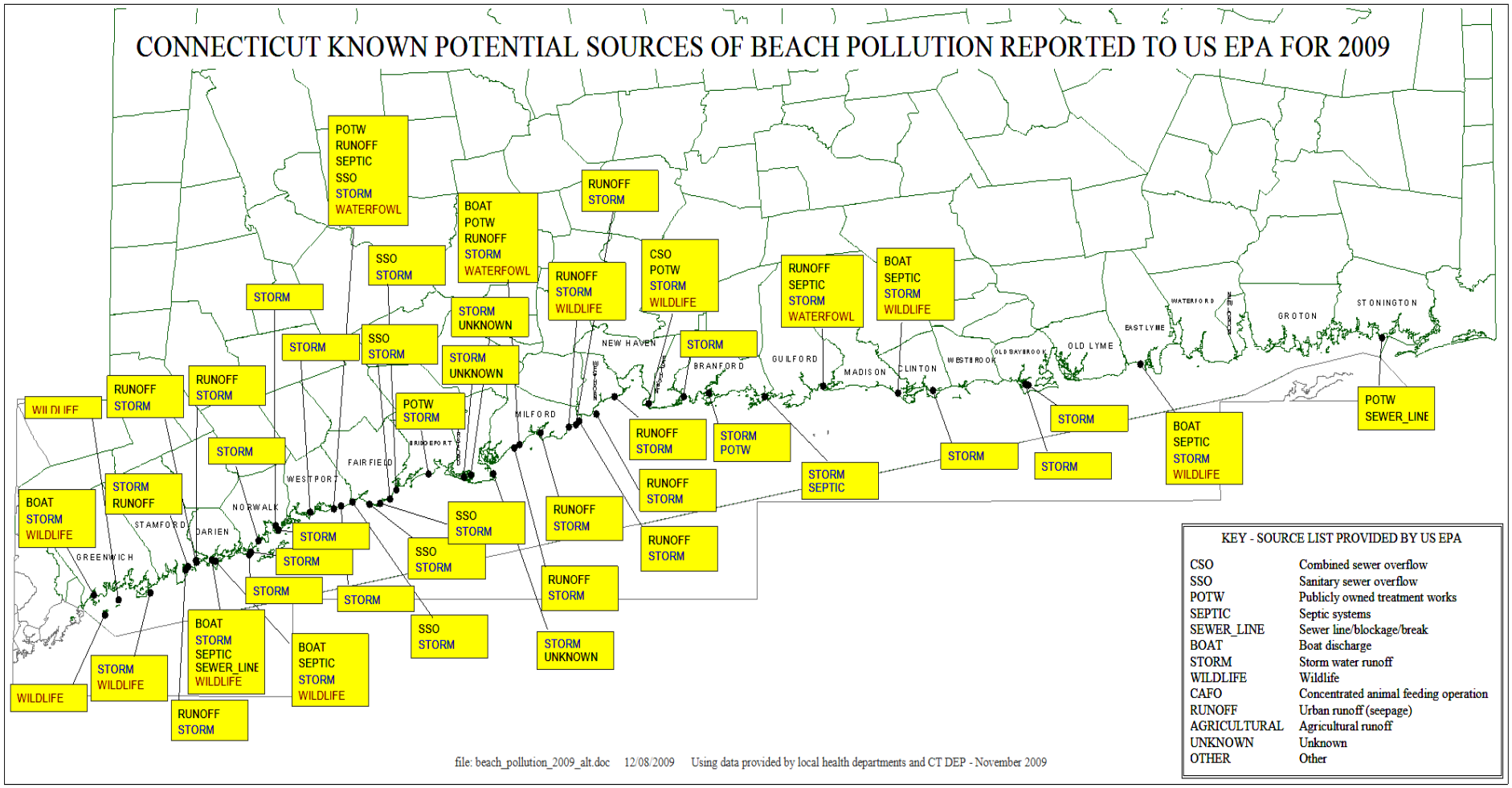
SEPTIC Septic systems
SEWER_LINE Sewer line/blockage/break
BOAT Boat discharge
STORM Storm water runoff
WILDLIFE Wildlife
CAFO Concentrated animal feeding operation
RUNOFF Urban runoff (seepage)
AGRICULTURAL Agricultural runoff
UNKNOWN Unknown
OTHER Other
file: beach_pollution_2008_alt.doc 12 08 2008 Using data provided by local health departments and CT DEP - November 2008


CONNECTICUT KNOWN POTENTIAL SOURCES OF BEACH POLLUTION REPORTED TO US EPA FOR 2009
POTW RUNOFF SEPTIC SSO STORM WATERFOWL
BOAT POTW RUNOFF STORM WATERFOWL
RUNOFF STORM
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CSO POTW STORM WILDLIFE
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EAST LYME
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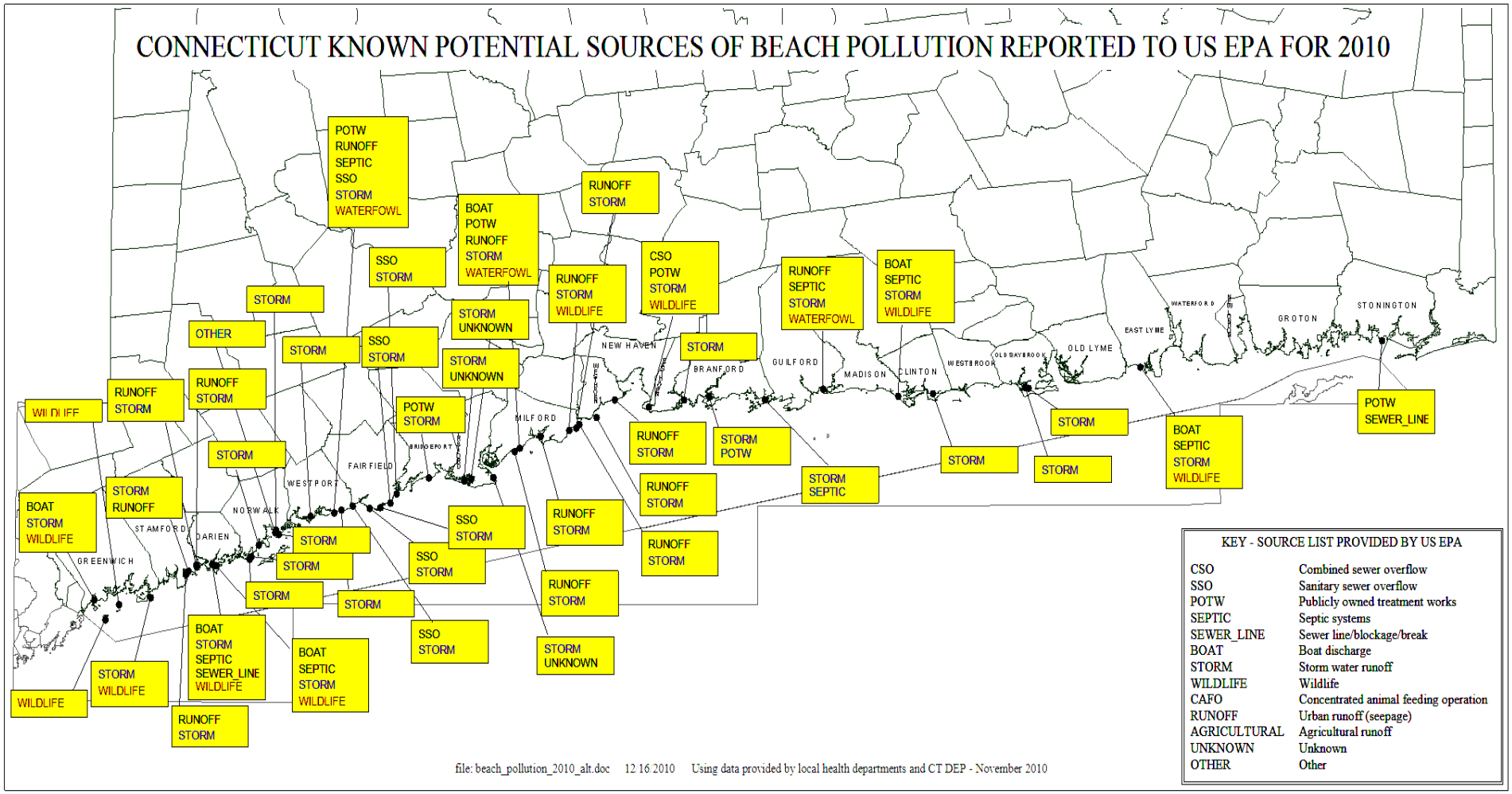
BOAT Boat discharge
STORM Storm water runoff
WILDLIFE Wildlife
CAFO Concentrated animal feeding operation
RUNOFF Urban runoff (seepage)
AGRICULTURAL Agricultural runoff
UNKNOWN Unknown
OTHER Other
file: beach_pollution_2009_alt.doc 12/08/2009 Using data provided by local health departments and CT DEP - November 2009


CONNECTICUT KNOWN POTENTIAL SOURCES OF BEACH POLLUTION REPORTED TO US EPA FOR 2010
POTW RUNOFF SEPTIC SSO STORM WATERFOWL
BOAT POTW RUNOFF STORM WATERFOWL
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CSO POTW STORM WILDLIFE
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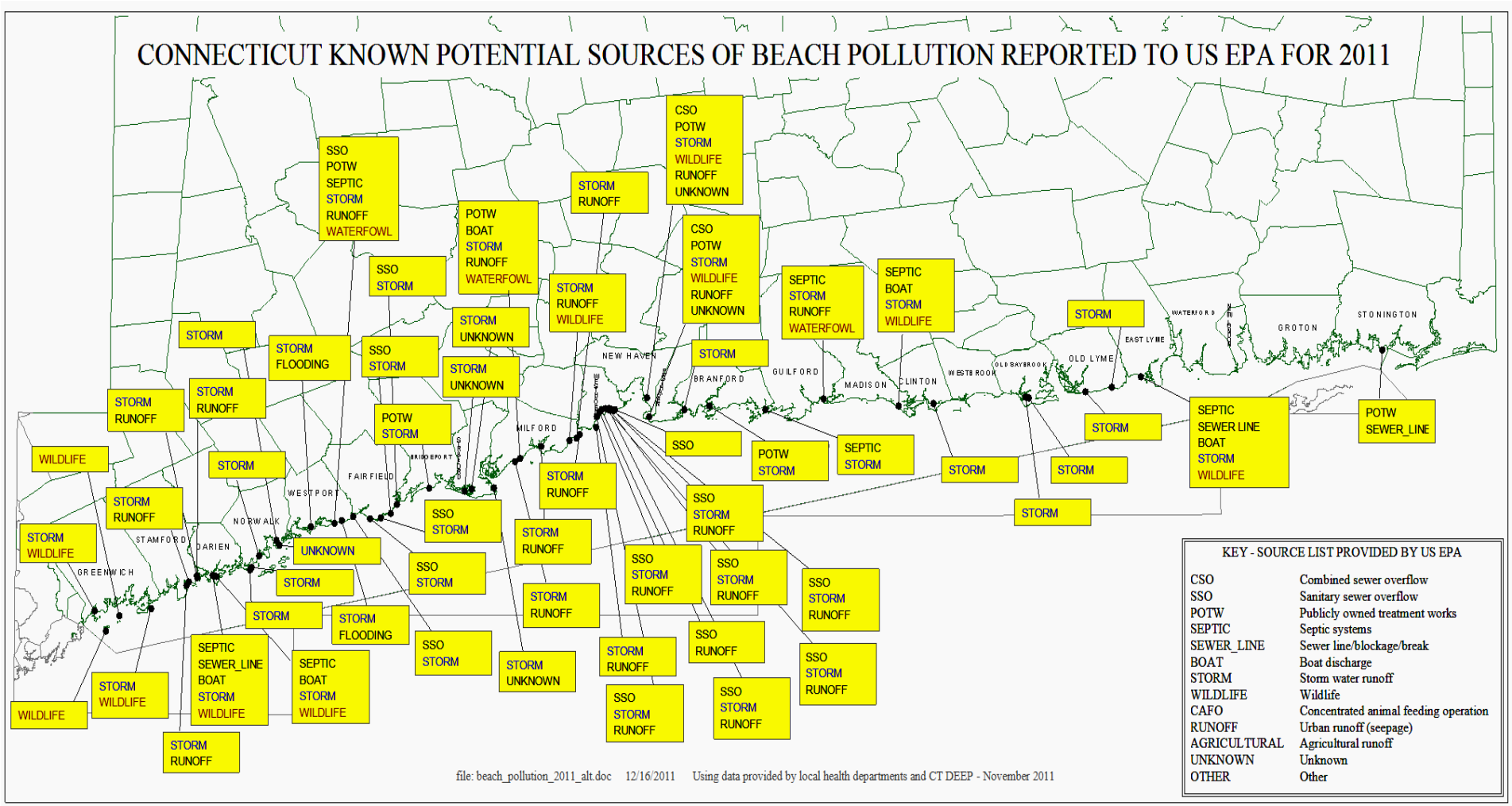
STORM Storm water runoff
WILDLIFE Wildlife
CAFO Concentrated animal feeding operation
RUNOFF Urban runoff (seepage)
AGRICULTURAL Agricultural runoff
UNKNOWN Unknown
OTHER Other
file: beach_pollution_2010_alt.doc 12 16 2010 Using data provided by local health departments and CT DEP - November 2010


CONNECTICUT KNOWN POTENTIAL SOURCES OF BEACH POLLUTION REPORTED TO US EPA FOR 2011
SSO POTW SEPTIC STORM RUNOFF WATERFOWL
CSO POTW STORM WILDLIFE RUNOFF UNKNOWN
STORM RUNOFF
POTW BOAT STORM RUNOFF WATERFOWL
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WILDLIFE Wildlife
CAFO Concentrated animal feeding operation
RUNOFF Urban runoff (seepage)
AGRICULTURAL Agricultural runoff
UNKNOWN Unknown
OTHER Other
file: beach_pollution_2011_alt.doc 12/16/2011 Using data provided by local health departments and CT DEEP - November 2011

7.5 BEACH DATA SUMMARY

Beach managers follow the *State of Connecticut Guidelines for Monitoring Bathing Water and Closure Protocol.* They are monitoring their beaches using current US EPA approved analytic methods to detect the fecal contamination indicator organism Enterococcus and they post advisories for a range of reasons that include wildlife (usually waterfowl), clam digger's itch (caused by a parasite), and rainfall (storm water). Because beach managers pay close attention to rainfall events, they frequently close beaches preemptively to protect public health since swimming in bathing water mixed with storm water outfall can lead to illness.

Regarding detected elevated densities of the fecal contamination indicator Enterococcus, the *Guidelines* recommend a resample when a single sample returns Enterococcus density greater than 104 CFU/100ml (or MPN/100ml depending on analytic method). When resampling is done one (1) or two (2) days following a detected exceedance, we often learn that the density of Enterococcus has dropped below the 104 CFU/100ml threshold. The single biggest challenge facing Connecticut's beach managers is protecting public health at marine swimming areas when unforeseen Enterococcus density spikes occur and knowing whether or not these spikes are due to human fecal contamination of recreational waters. Because current US EPA approved laboratory methods available to us to measure the density of Enterococcus require at least twenty four (24) hours, beach managers learn of a spike in fecal indicator density after it has come and often gone. In effect beach managers can tell you that a beach was unsafe for swimming yesterday but cannot tell you with assurance that it is safe for swimming today. In other words, yesterday's recreational marine water quality is not a good predictor of today's water quality. This is not a reflection on beach managers nor is it a reflection on the laboratories that analyze marine water samples.

Because single sample spikes in the density of Enterococcus can occur at any time or anywhere along the Connecticut shoreline, it is reasonable to argue that any beach can have a bad day. Rainy summers are highly likely to generate more closure and advisory event and day counts than drier, less rainy, summers because beach managers have learned to associate rainfall with swimming water contamination that is unsafe and they close beaches preemptively without testing for Enterococcus in the water.

Looking at the Connecticut Beach Score Card for 2003-2011 on the next page and considering the beach data presented in this report, the closure event counts and closure day counts remained about the same from 2003 through 2010 with a marked increase in 2011 in response to a rare late summer hurricane. The percent of reported marine water samples with Enterococcus densities greater than 104 CFU/100ml (the single sample density threshold that can trigger a recommended resample) held about the same for 2003 through 2009 but more than doubled for 2010 and 2011. This is good reason for the Connecticut shoreline public health departments and health districts to remain in a state of knowledgeable and vigilant equilibrium with the marine bathing areas on Long Island Sound.

Known potential sources of pollution that can affect regulated marine beaches have been reported to US EPA for 2006 through 2011 by shoreline local health departments and DEEP. Mapping for 2007 through 2011 shows that most identified known potential sources of pollution fall west of New Haven, Connecticut - where population density behind the shoreline is higher. The top six (6) contributors for 2011 were identified as storm water, urban runoff, sanitary sewer overflow, wildlife, publicly owned treatment works and septic systems. For 2003 through 2011, the top three identified sources of known potential pollution were storm water, urban runoff and wildlife.

Shoreline health departments and DEEP await one (1) or more US EPA approved rapid methods so they can detect spikes in the density of fecal contamination indicator organism(s) on the day they occur and better protect public health at marine bathing areas. In addition, there is interest in learning more about the other potential causes of swimmer illness that are not related to human fecal contamination, how to detect them and how best to notify swimmers at those times when they are of concern.

7.6 CONNECTICUT BEACH SCORECARD

2003-2011 Connecticut Beach Score Card

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Count of marine beaches tracked for the US EPA Beach Grant	67	67	67	67	66	66	66	66	73
Count of marine beaches monitored weekly during the bathing season as reported by local health departments	65	65	65	63	64	66	65	65	72
Count of reported marine beach **Advisory Days**	28	7	69	2	1	30	2	3	101
Count of reported marine beach **Advisory Events**	19	2	7	1	1	1	1	1	16
Count of reported marine beach **Closure Days**	179	176	131	222	107	105	106	140	535
Count of reported marine beach **Closure Events**	115	95	86	106	65	66	74	66	152
Count of total reported marine beach **events** (closure events and advisory events)	134	97	93	107	66	67	75	67	168
Count of total reported marine beach event **days** (closure days and advisory days)	207	183	200	224	108	135	108	143	636
Count of Tier 1 marine beaches[1]	46	45	41	46	54	54	49	52	29
Count of Tier 2 marine beaches[1]	8	11	16	8	7	4	10	11	27
Count of Tier 3 marine beaches[1]	13	11	10	13	5	8	7	3	17
Count of reported marine beach **closure events** due to elevated indicator bacteria	18	13	15	18	9	13	9	39	51
Count of reported marine beach **closure events** that were preemptive due to heavy rainfall	89	77	70	82	54	53	65	27	95
Number of reported marine beach recreational water quality monitoring samples	966	1086	1129	1385	1682	1636	1962	2213	2051
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
Number of beaches reporting marine recreational water quality monitoring samples	39	39	38	54	52	52	61	61	68
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

[1] Beach Tier is assigned at the end of each bathing season based on information contained in the submitted annual EPA Beach Survey.

☞ You may want to review the summary beach data charts found in the preview section at the start of this annual report.

7.7 TWO CASE STUDIES

Considering the years 2003 through 2011 for which we have beach monitoring and tracking data, the 2010 and 2011 bathing seasons stand out but for different reasons. While some of the data for both years are similar, the two bathing seasons stand out as different in their own right even though weather appears to be a common denominator.

Connecticut's 2010 and 2011 marine swimming seasons present both an anomaly and an opportunity for case studies that explore the public health response to largely but not necessarily time limited events and changes in marine recreational water quality. During these summers, we picked up anecdotal hints that each was shaping up as unique. Once the season ended, we reviewed the collected beach data for these two years and compared them with the data from the prior seasons.

For starters, the number of recreational water samples collected during each of those summers that exceeded 104 (either MPN/100ml or CFU/100ml) stood out as exceptional with the percentage of single sample exceedances more than double the typical percentage of exceedances seen for the previous seven (7) years.

MONITORING RESULTS SUMMARY 2003 - 2011

	2003	2004	2005	2006	2007	2008	2009	2010	2011
SAMPLES	966	1086	1129	1385	1682	1626	1962	2213	2051
>104 cfu/100ml	51	62	47	75	89	73	93	261	235
% >104	5.3	5.7	4.2	5.4	5.3	4.5	4.7	11.8	11.5

In addition, the results from rolling geometric analysis (starting on p. 110) differentiate both the 2010 and 2011 bathing seasons from previous ones.

Beyond single sample exceedance count, several other metrics stood out as well. They were: 1) beach closure days; 2) closure days due to elevated bacteria; 3) beach exceedance days; 4) beaches with one or more exceedance days; 5) preemptive beach closure days; and 6) percent preemptive beach closure days.

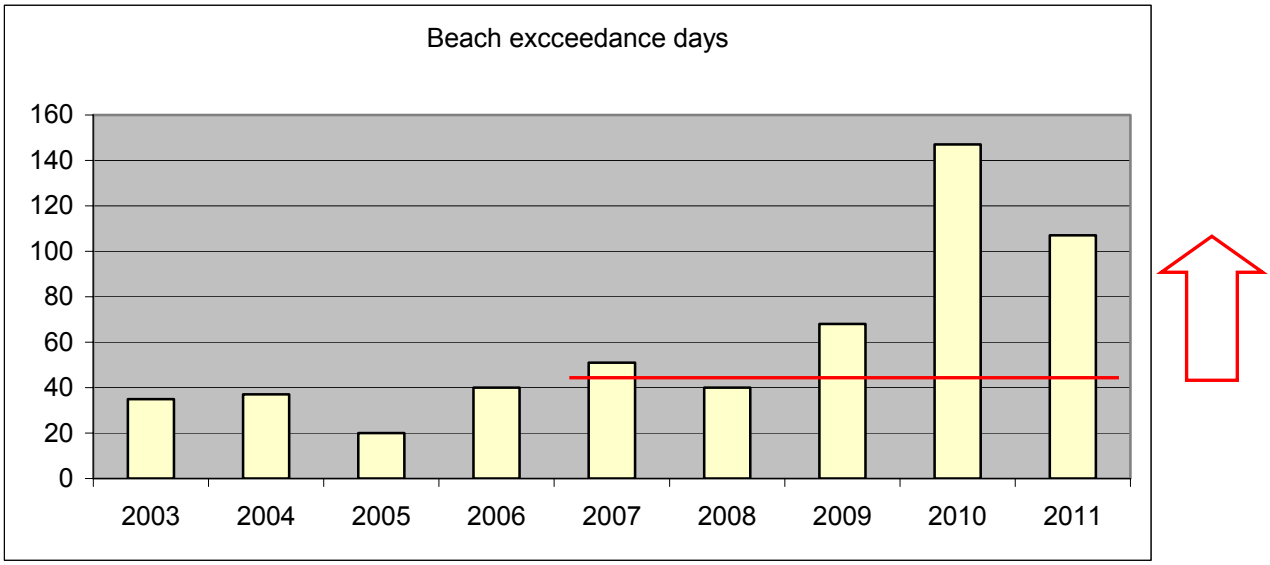
The table on the next page presents these six (6) metrics for 2003 – 2011. Compare the rows for the 2010 and 2011 bathing seasons with the previous bathing season rows presented in this table.

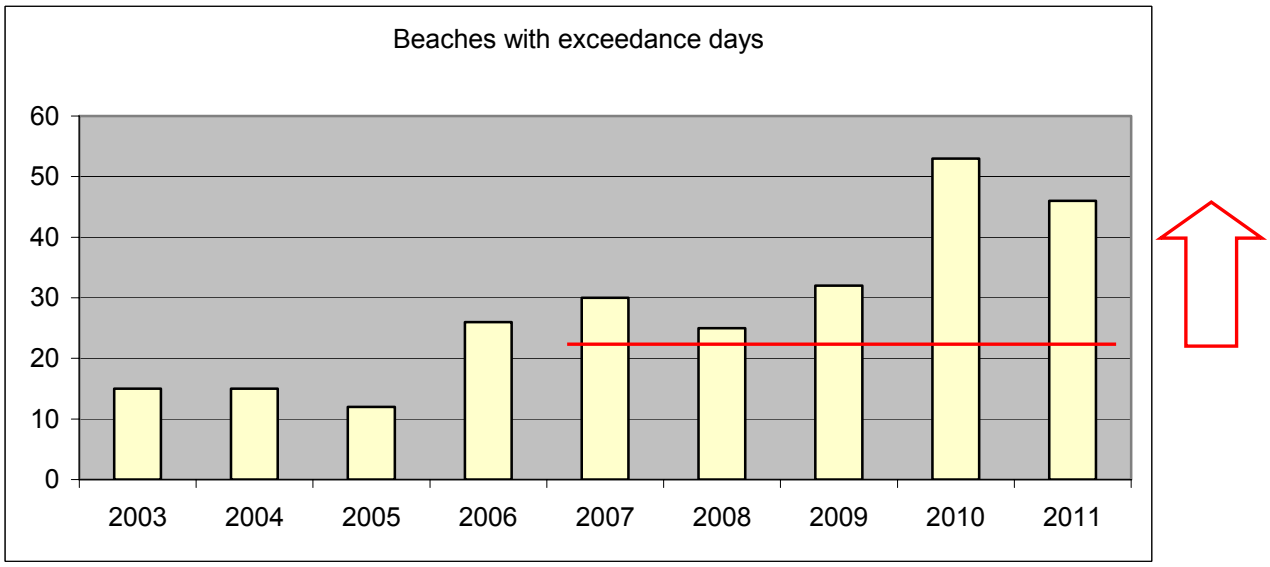
SIX BEACH TRACKING METRICS FOR 2003 - 2011

YEAR	CLOSURE DAYS	CLOSURE DAYS: ELEVATED BACTERIA	BEACH EXCEEDANCE DAYS	BEACHES WITH EXCEEDANCE DAYS	PREEMPTIVE CLOSURE DAYS	% PREEMPTIVE CLOSURE DAYS
2003	179	32	35	15	129	72
2004	176	17	37	15	134	76
2005	131	29	20	12	101	77
2006	222	39	40	26	171	78
2007	107	12	51	30	91	85
2008	105	38	40	25	67	64
2009	106	26	68	32	80	75
2010	140	90	147	53	50	36
2011	535	129	107	46	261	49

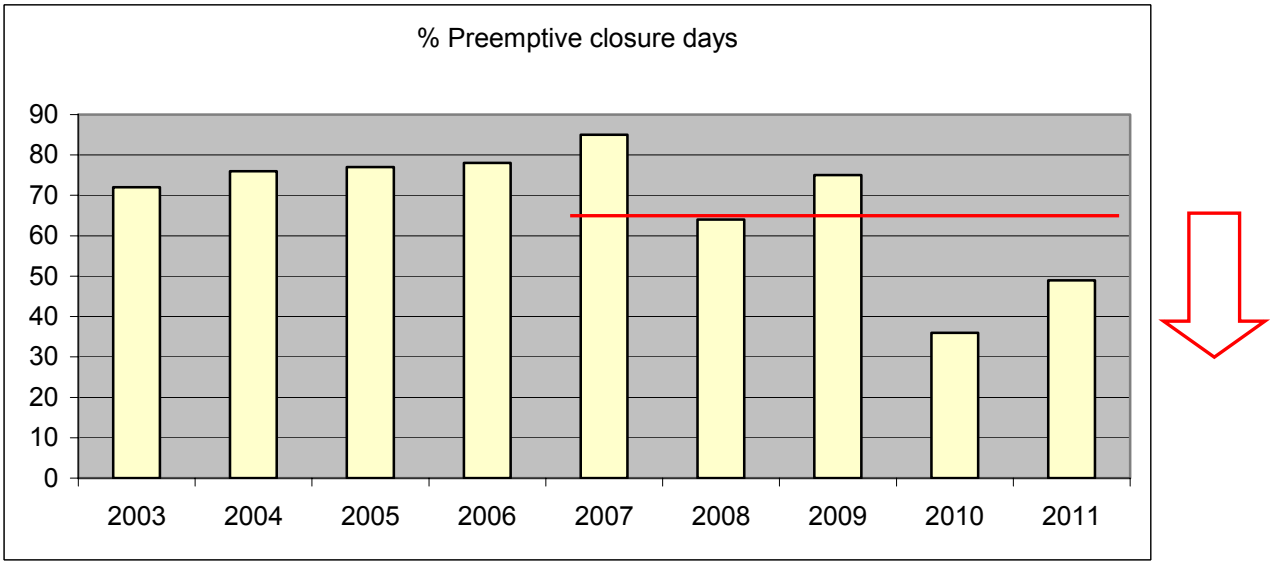
Consider beach exceedance days – a day when a beach is open for swimming and yet one or more recreational water quality samples collected at the beach on that day were reported 24 hours later with Enterococcus concentration greater than 104 (either MPN or CFU/100ml). For a description of beach exceedance days see p. 117.

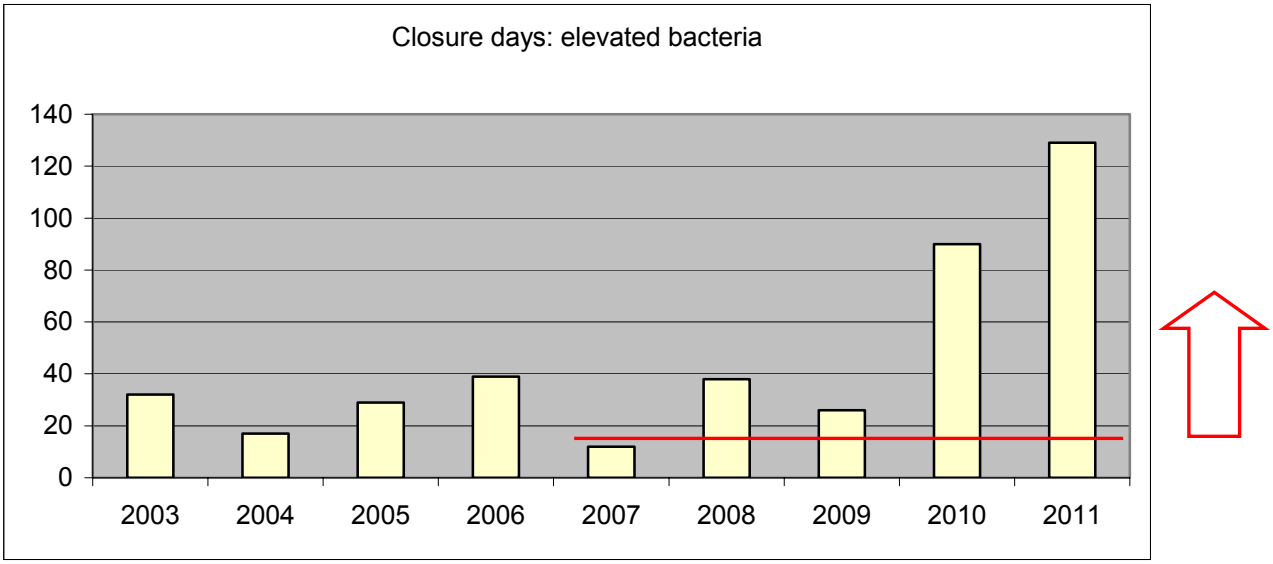
The beach exceedance days and beaches with exceedance days charts below make it clear that the summers of 2010 and 2011 were exceptional for Connecticut's regulated marine beaches.





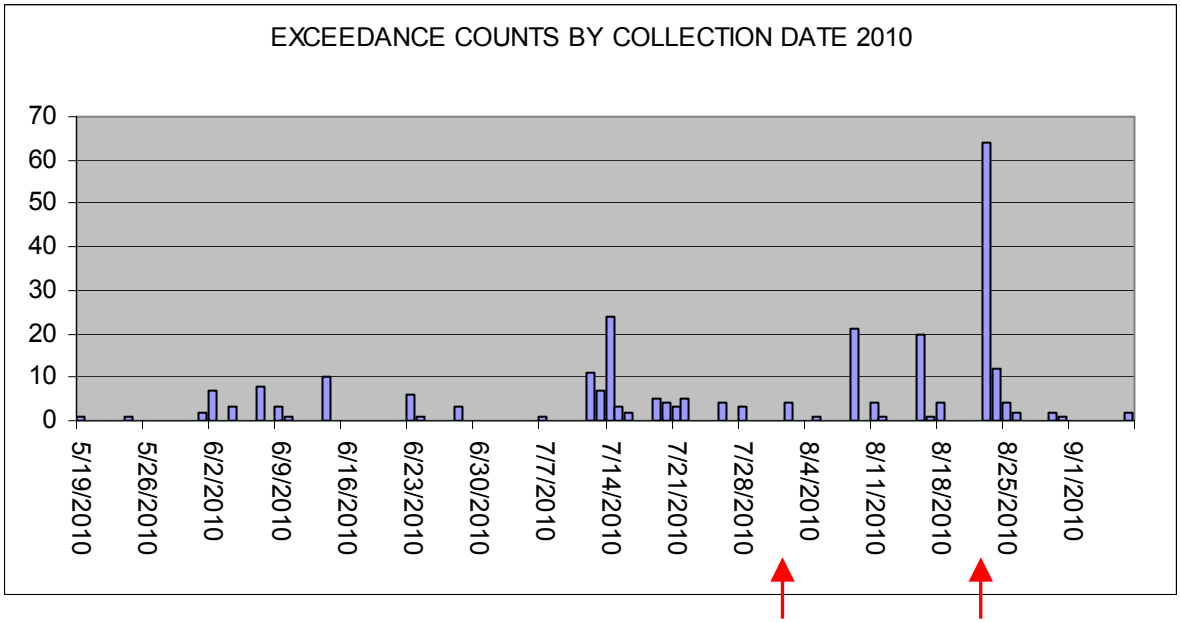
Charting the percent *preemptive closure day* and *elevated bacteria closure day* counts for 2003 – 2011 begins to unwrap the story and shed light on the public health response during the summers of 2010 and 2011.





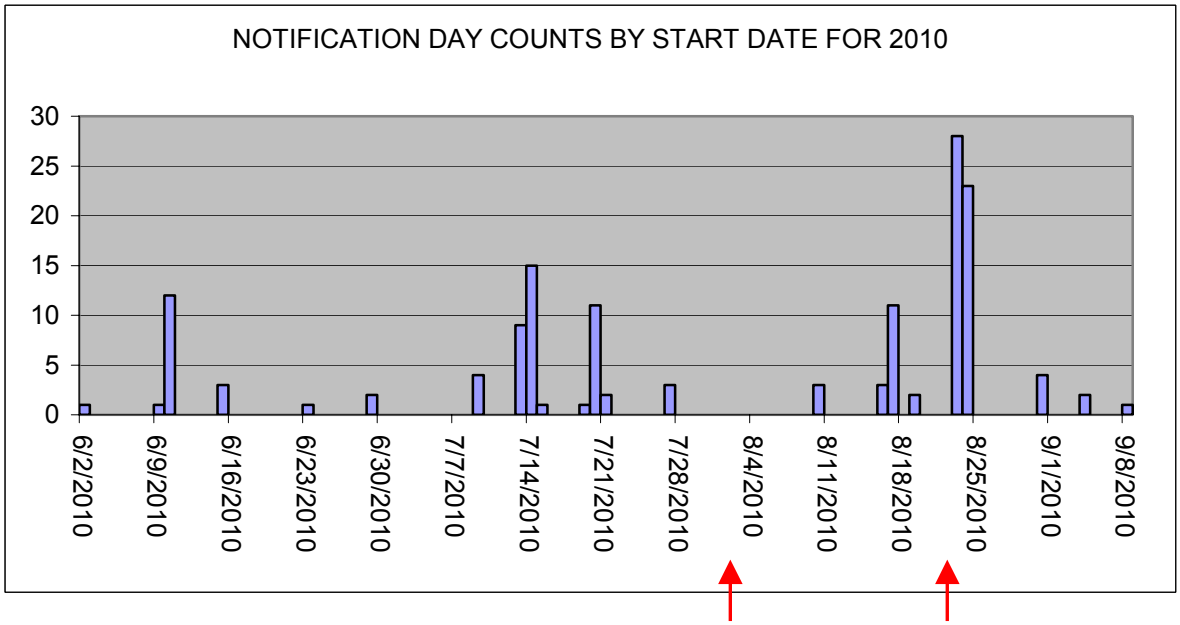
7.7.1 CASE STUDY FOR 2010 - RAINFALL

Starting first with the summer of 2010, slightly more than half of the single sample exceedances occurred in August. One third of all the exceedances for the summer of 2010 occurred in the last week of August.



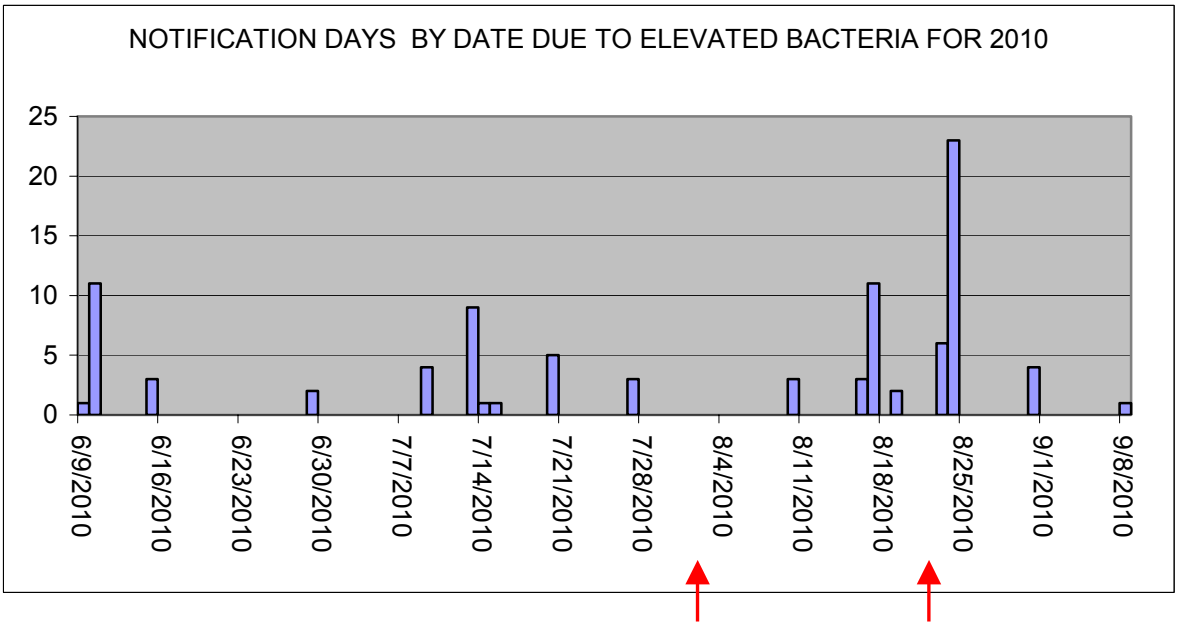
55% of the exceedances occurred after 08/01/2010
33% of the exceedances occurred after 08/21/2010

What was the public health response? For starters, more than half of the beach notification days for the summer of 2010 occurred after the start of August.



54% of the notification days occurred after 08/01/2010
41% of the notification days occurred after 08/21/2010

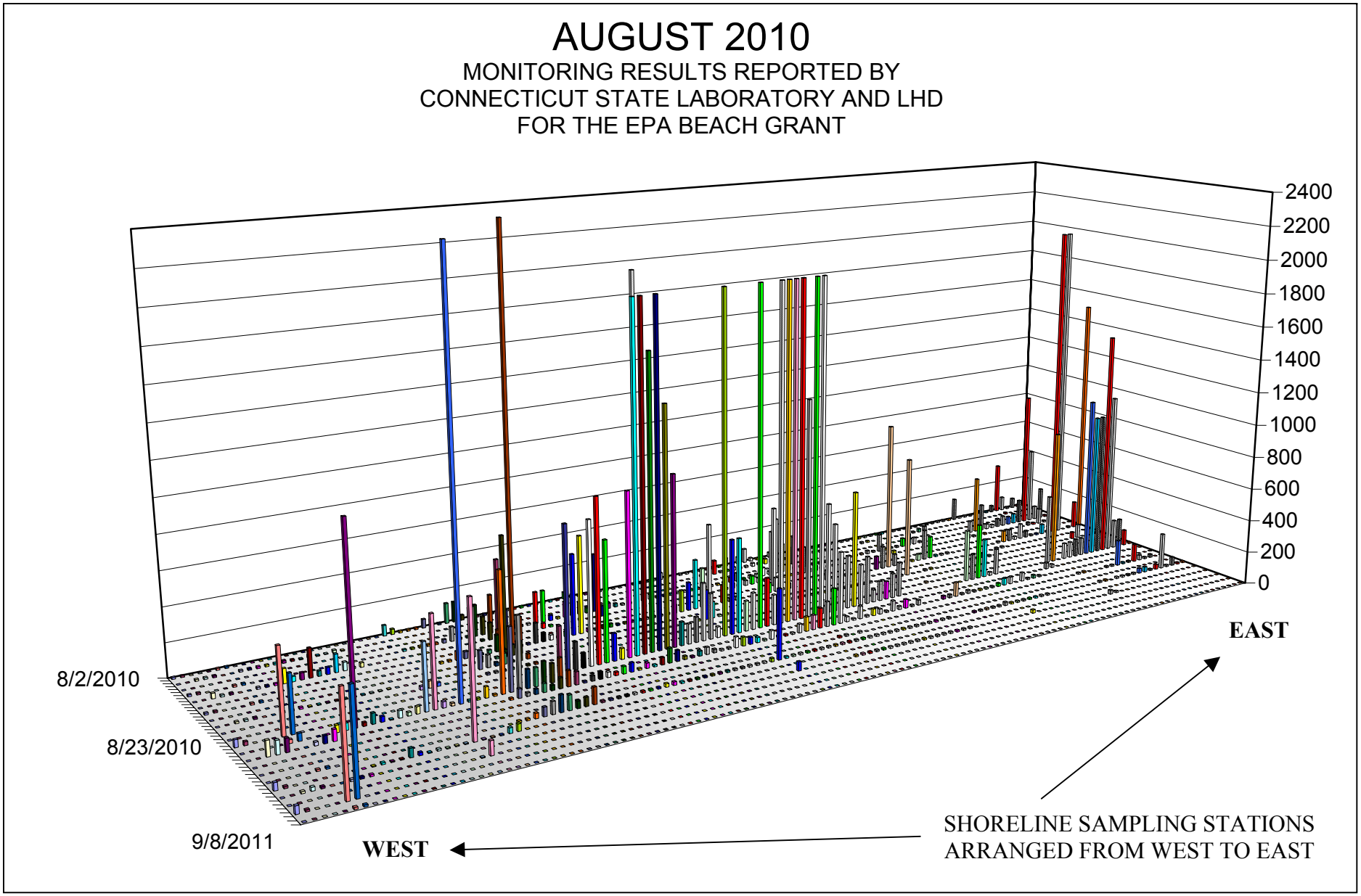
More than half of the beach notification days *due to elevated bacteria* occurred after the start of August.



57% of the elevated bacteria notification days occurred after 08/01/2010
37% of the elevated bacteria notification days occurred after 08/21/2010

☞ Connecticut's shoreline health departments and DEEP mounted a thoroughly appropriate and timely response that closely tracked deteriorating recreational water quality through the month of August 2010. The prevailing view places rainfall at the center of this story.

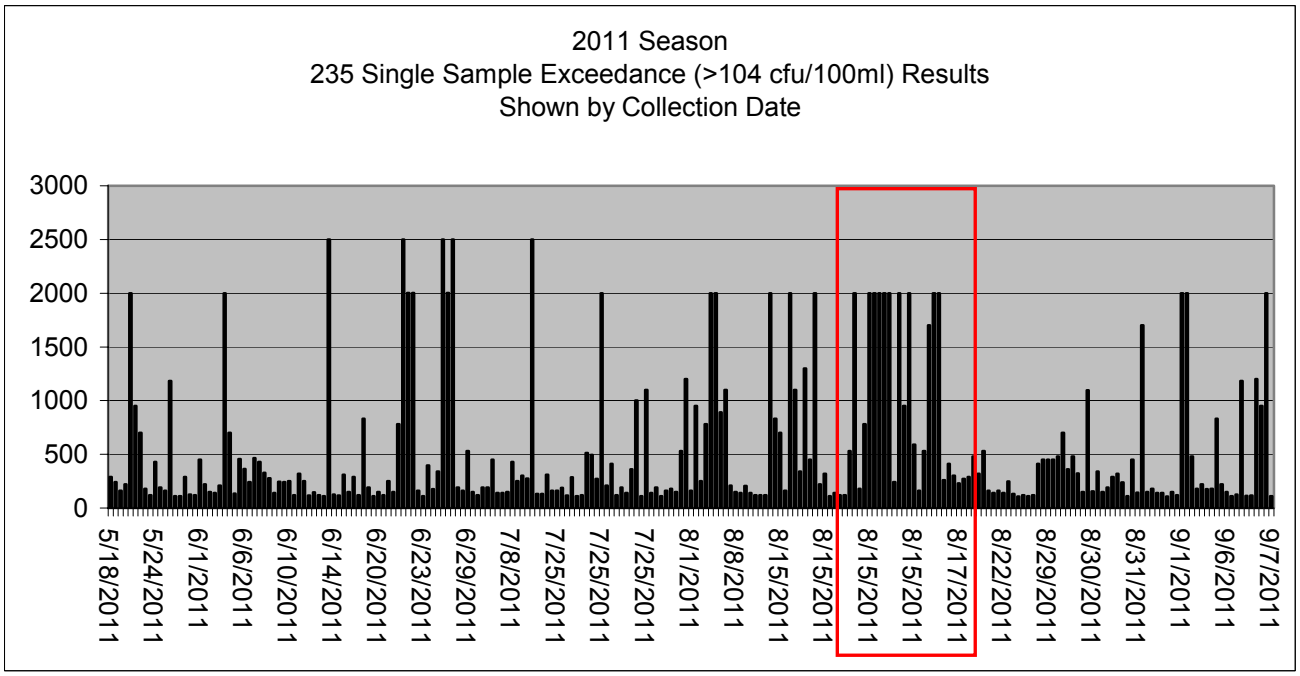
Here is a closer look at marine recreational water quality monitoring results for the month of August 2010 arranged in shoreline order from West to East (left to right on the chart) and from August 2 to September 8, 2010 (back to front on the chart). The heavy rainfall in August has a signature in this chart.

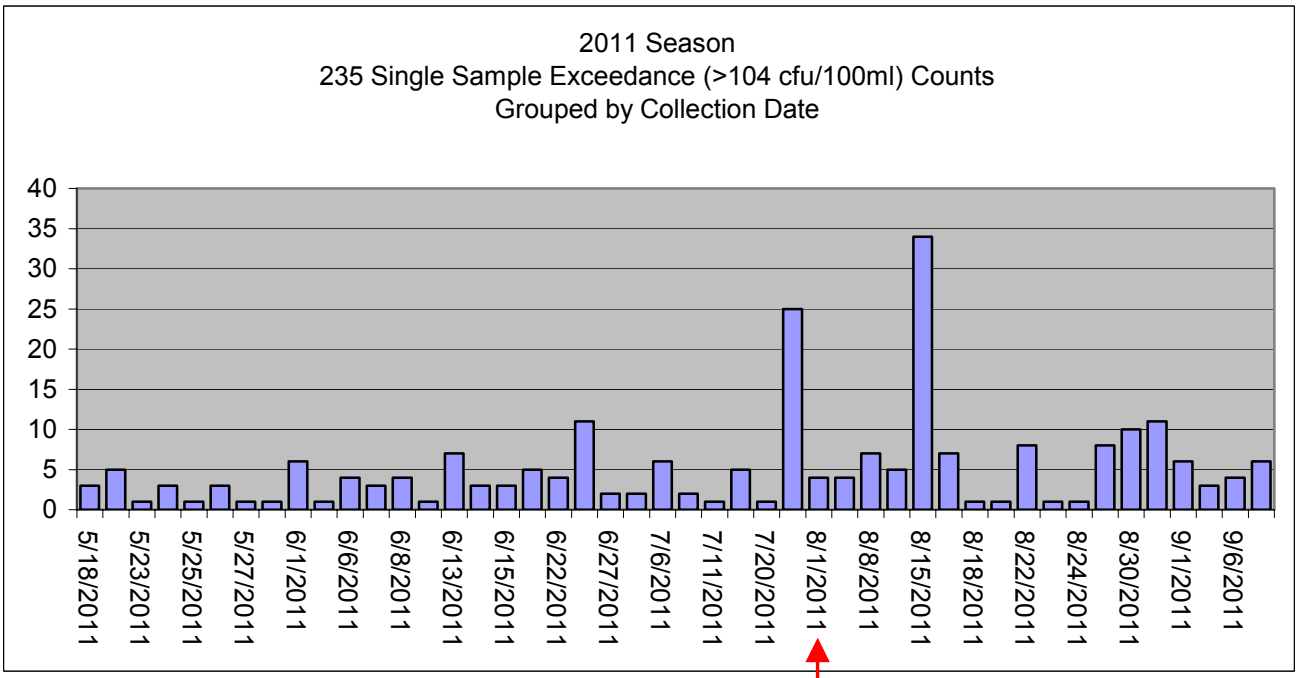


7.7.2 CASE STUDY FOR 2011 - HURRICANE

Moving on to the summer of 2011, hurricane Irene dominated the end of August and had a direct impact on beach data as well as the public health response near the end of that summer.

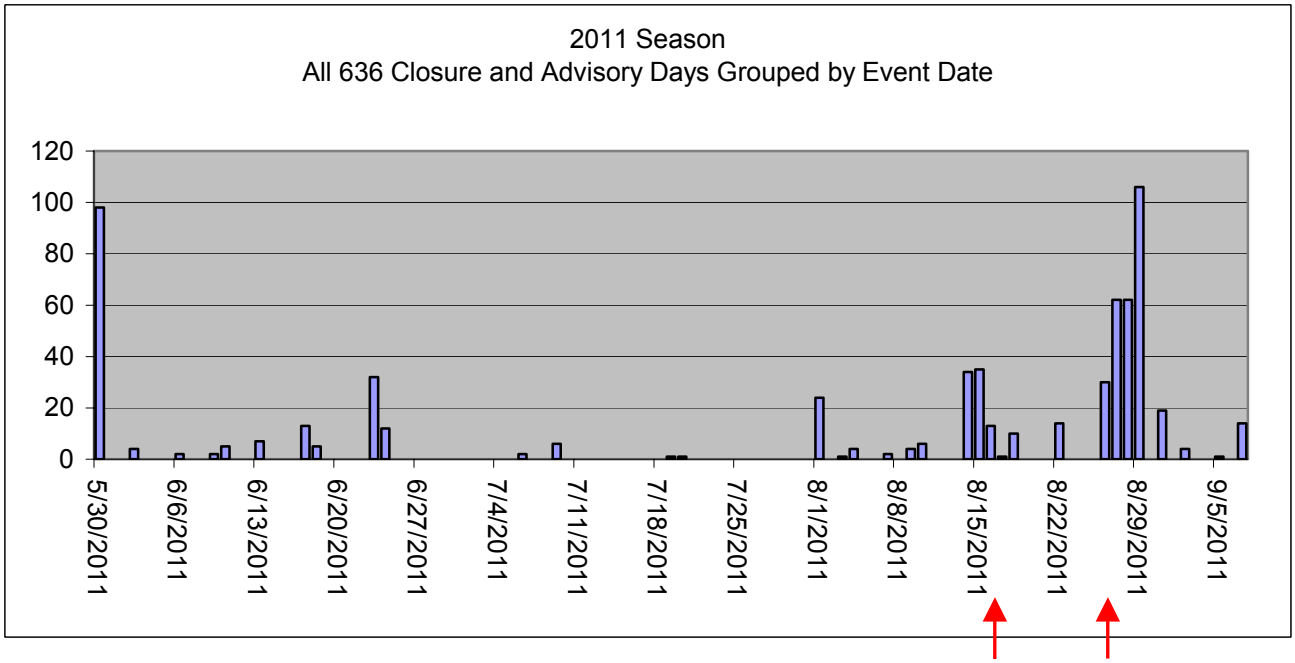
The summer of 2010 sensitized everyone to elevated bacteria in recreational water and it is natural to look at the 2011 monitoring results. Heavy rains occurred in mid-August and their signature appears in the chart below which plots all 235 single sample exceedance results and their sample collection dates.





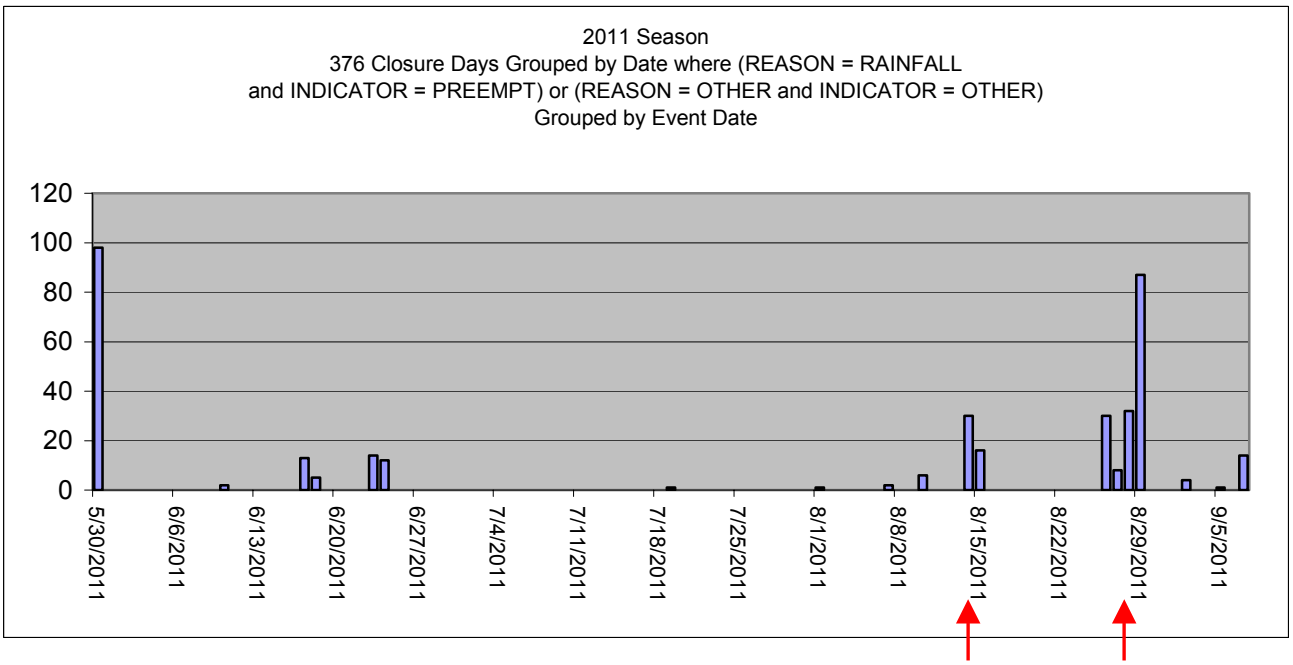
50% of the 235 single sample exceedances were collected on or after 08/01/2011

For 2011 there were 535 beach closure days and 101 beach advisory days. The next chart plots all of these notifications events.



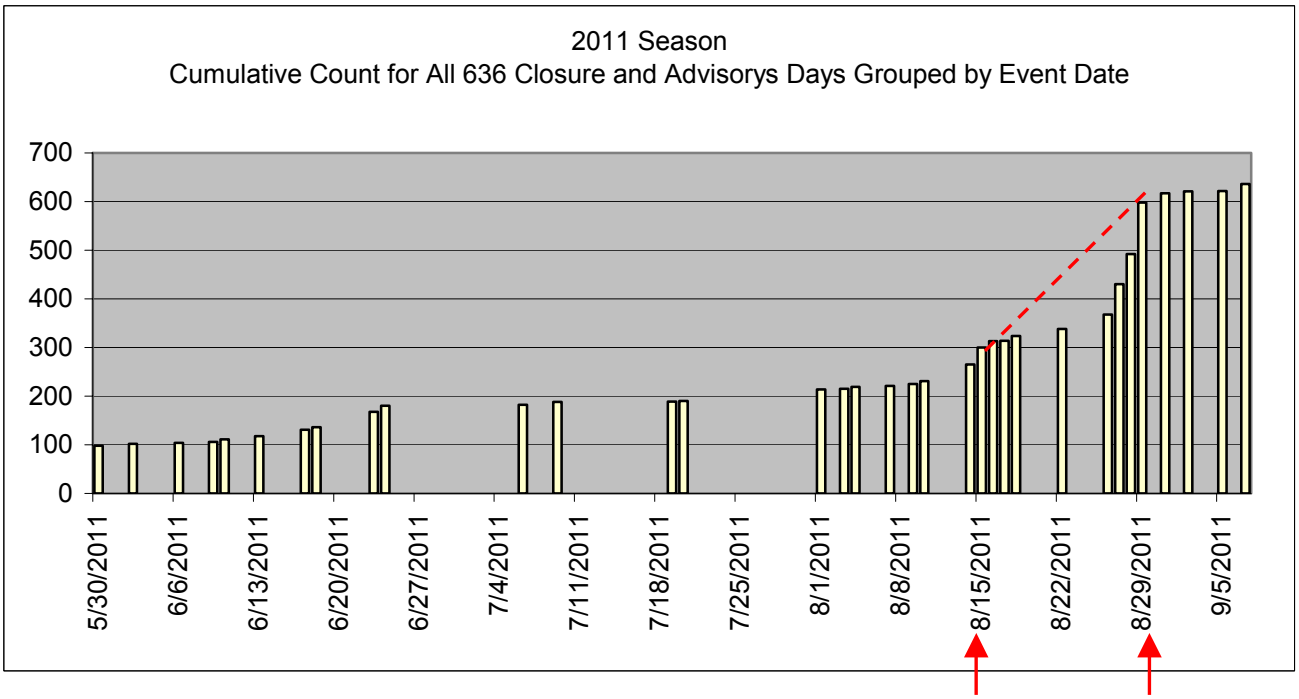
51% of all beach closures and advisory days occurred on or after 08/16/2011
42% of all beach closure and advisory days occurred on or after 08/26/2011

Of the 535 beach closure days, 376 of them were Preemptive due to rainfall or Other (hurricane Irene).

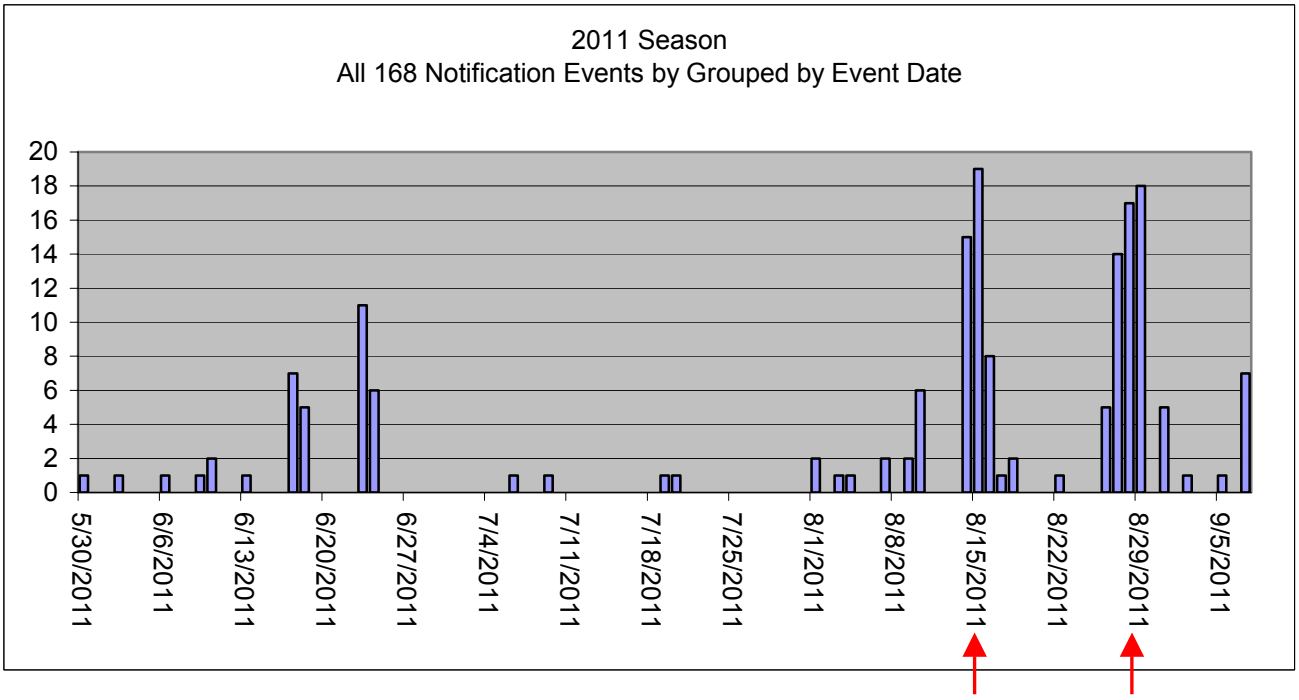


51% of the closure days for Preemptive Rainfall or Other occurred on or after 08/14/2011
28% of the closure days for Preemptive Rainfall or Other occurred on or after 08/28/2011

Cumulative closure and advisory day counts grouped by notification event date is yet another way to visualize the distribution of these events over the course of the summer and during August in particular.

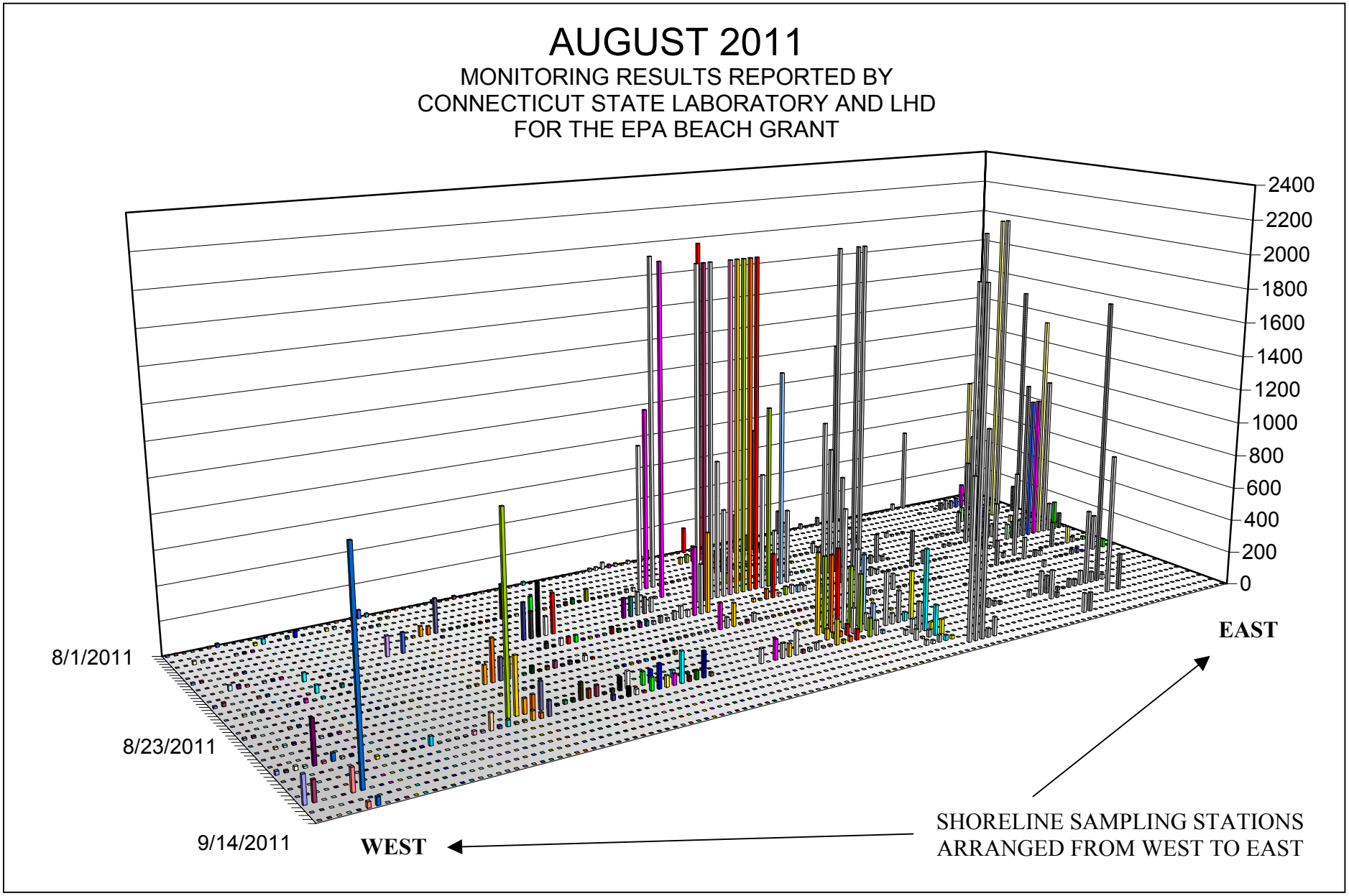


And finally, here is the distribution of all notification events (closure and advisory) for the summer of 2011. The mid-August rainfall signature and that of hurricane Irene are both visible in the chart.

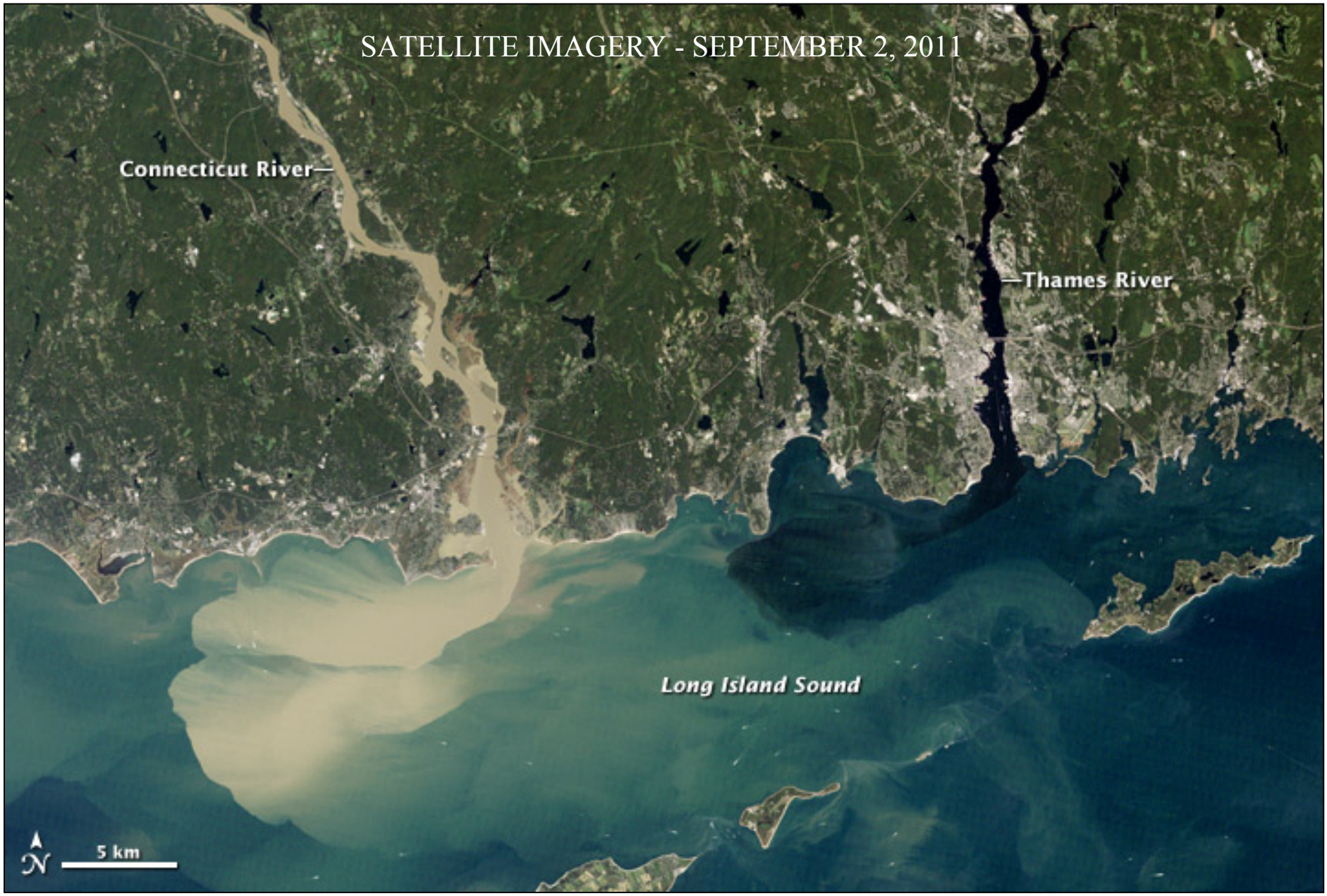


☞ Shoreline health departments and DEEP not only responded to heavy rainfall in August 2011 but they took seriously the threat to public health posed by hurricane Irene in late August. DPH issued storm advisory guidance for beach monitoring that referenced several conditions following a storm that beach managers need to consider before reopening a beach. These hazards include: storm tossed debris, flooding, poor recreational water quality, contaminated beach sand, and watershed drainage times leading to storm water outfall over a period of days.

Here is a closer look at marine recreational water quality monitoring results for the month of August 2011 arranged in shoreline order from West to East (left to right on the chart) and from August 1 to September 14, 2011 (back to front on the chart). There was heavy rainfall in early August and hurricane Irene passed over Connecticut in late August. Both events have a signature in this chart.



The Connecticut and Thames Rivers drain into the eastern end of Long Island Sound that experienced heavy Enterococcus bacteria loading in August 2011. Both rivers showed the effect of rainfall from hurricane Irene as seen in this satellite imagery. The Connecticut River watershed is larger than the heavily scoured Thames River watershed and has more topsoil available for transport. Both watersheds took many days to drain.



7.8 COMMUNICATING BEACH DATA

Roughly one half of this Annual Report contains beach data, just as about one half of the Connecticut's Beach Grant Workplan concerns these data in one way or another: collecting, managing, processing, and providing them to a wide variety of requestors from those with highly focused data needs to those whose requests may be more general.

The assembled data in this Annual Report have several stories to tell; they have an underlying narrative. When we provide beach data to requesters we are also providing part or all of that narrative. Over the years we have developed pointers that we use when communicating beach data. Here is that beach data communication framework.

Communicating a data narrative is important. Data have a story to tell. Increasingly, policy makers and interested third parties are using data to set a course for the future. Communicating beach data can be challenging.

The challenge of communicating beach data arises from:

- The requests for and questions about beach data.
- The backgrounds, interests, and perspectives of those requesting the data and how they plan to use them.
- The beach data themselves.

7.8.1 Beach data questions come in all flavors.

There is no standard answer for a beach data question. Here is a representative sample collected over the last 8 years.

1. Send me all your beach data for 2003 through 2011.
2. Why is Byram Beach closed so often?
3. You sent me beach data for 2007. I compared it with EPA supplied beach data for the same year, and the two data sets do not agree. Please explain.
4. How do you calculate beach closure days? Does EPA calculate beach closure days the same way?
5. How do you calculate beach days?
6. You sent me beach monitoring data. What does "CFU/100ml" mean?
7. How do you calculate geometric mean? How do you calculate the log standard deviation?
8. How is the single sample standard for marine recreational waters related to the 5 sample 30 day geometric mean?
9. What definition do you use for the term "beach". Why did you settle on that definition?

10. What causes most beach closures in Connecticut?

11. I took my own water sample and sent it to an environmental lab. The lab said that the result exceeded the EPA single sample standard for recreational water. What should I do?

12. Do you collect rainfall data?

13. Why was Byram Beach closed yesterday? What were the water quality sampling results for Byram Beach yesterday?

14. Explain how Connecticut assigns a beach Tier number to its beaches.

15. How many recreational water samples did you collect this summer? How many samples exceeded the single sample maximum?

16. How many pre-emptive beach closure days were there in 2007?

17. What is the relationship between reported beach closures and reported known "potential sources of pollution" at the beaches that you monitor?

☞ Do not confuse a request for beach data with this question: "What are you going to do about all these beach closures?" Understanding why beaches are closed is quite different from planning to or actually remediating the problem.

7.8.2 Who has requested beach data?

1. Consultants

2. Clerical staff on behalf of their managers and supervisors

3. Reporters (print and radio)

4. Agency managers and supervisors

5. Environmental watchdog, special interest and monitoring groups

6. Local health departments

7. Other state agencies

8. Selected federal agencies

9. Congressional offices

10. Individuals not affiliated with any of the above (e.g. swimmers)

7.8.3 What can be said about the beach data themselves?

1. Beach data are most often contained in tables (or worksheets); the tables contain records; each record contains fields; and underlying each field is a definition that describes what data may be stored in the field. **Field definitions** lie at the heart of beach data.

2. It may fall to you to reinforce the importance of field definitions. For instance, data requestors may confuse the distinction between a beach advisory and a beach closing. Or they may confuse the distinction between beach events and beach closings and identify all beach events as beach closings.

3. The data tables maintained by a Beach Grant state are usually **not** identical to the tables of beach data maintained by US EPA or other beach data requesters.

4. Some beach data must be exact. For example beach identifiers. On the other hand, some beach data come with a margin of error. For instance beach location data collected with hand held GPS units. Laboratory data can also include an implicit margin of error.

5. You must make every effort to assure your data are of the highest quality while acknowledging that most data sets of any kind usually contain some errors.

6. There are many ways to process, relate, tabulate, organize, format and compare beach data. This includes comparing beach-to-beach data and year-to-year data. How data are tabulated depends on their intended use.

7. Data have little or no meaning without their supporting context. Adequately reported beach data always include context and information that help to explain the data.

8. Every data set can have a story or narrative to tell. Temporal depth (e.g. multi-year data collected for the same set of beaches) usually means a data set can have a more compelling narrative.

9. People construct data narratives; data do not. A narrative must be carefully assembled for it to be understood and have lasting value. A narrative must be defensible. It cannot reflect wishful thinking.

10. Two people can disagree on a narrative for the same data set.

☞ Once you have released data to another party, you no longer have control over how they will be used or interpreted.

7.8.4 What can be said about communicating beach data?

1. Beach data are organized differently than the narrative you will construct to describe or explain them. A beach data narrative is organized more like an essay or even a short story and makes at least one compelling case. A data narrative can raise a question and then answer it. A data narrative has a beginning (opening statement), middle (supporting material) and end (conclusion). A narrative should be: developed for a target audience; easy to read or deliver verbally; and interesting. It should not be cluttered with senseless bells and whistles (PowerPoint users take note).

2. You must know your data intimately - right down to the field definitions.

3. You may want or need to annotate the data sets and narratives you provide to requestors. Annotation can include field definitions, summary statements, trends, or even questions for further study.

4. You must know how the data were collected; and you must understand all the weak points along the path taken by the data as they move from the beach to your database tables and on to specific data requestors. You may be called upon to explain errors in your datasets that have been detected by others.

5. You must be willing to probe each request for data to be sure you understand what is being sought. For instance, what is meant when a requestor says, "Send me all your beach data." Some requestors will resist answering questions that you ask about their data request. This may be particularly true of those requestors who have been tasked by a manager or supervisor to round up a data set in which the immediate requestor (as distinct from the manager or supervisor) has no interest.

6. You must be interested in and available to answer questions about the data sets you provide to requestors. Some requestors will resist asking questions but may change their mind later. This must be permitted and encouraged. Follow-on questions may appear months after an initial request for data.

7. The best way to build trust and encourage return business is to provide your requestors with high quality data sets and defensible narratives in a very timely (if not immediate) way. Since it can take years for the narrative to sink in and make sense to your requestors, their returning to you for additional data sets becomes all that more important.

8. You must be honest (particularly about data you do not have), concise, available, timely in your response, flexible (be open minded about each data request), objective, positive, professional, informed and believable when talking about, delivering or presenting your data.

9. When talking about or presenting your data, you must: understand the data narrative and how it is supported by the facts; understand your audience and their motivation; demonstrate competence and expertise; be open and honest; and be an example of commitment and dedication. If you believe in the narrative, your audience will, too.

10. It does no good to become defensive about your data. In fact, this will harm the impact of your data's narrative and can even destroy the narrative altogether.

☞ The more you talk and write about your data, the more effective you will become. Seek out opportunities to present you data to both friendly and hostile audiences.

☞ While you cannot control what lasting lessons individuals will take with them after they have encountered your data narrative, you can increase the odds they will remember it.

8.0 SUCCESS STORY FOR 2006

The Natural Resources Defense Council (NRDC) has taken an active interest in the nation's beaches and publishes the annual report "Testing the Waters" following a bathing season. One section of this report details so-called Beach Buddies and Beach Bums. For the 2006 bathing season, Walnut Beach in Milford Connecticut *appears first* in the NRDC national list of Beach Buddies.

Beach Buddies and Beach Bums: Testing the Waters 2006
NRDC's Annual Guide to Water Quality at Vacation Beaches

Criteria: No samples taken during the 2005 beach season exceeded the BEACH Act daily maximum standard, monitoring occurs at least once a week, and at least 75 percent of the total number of samples taken during the 2005 beach season have monitoring data.

Walnut Beach Milford, Connecticut.

Milford, a 2003 Beach Buddy, has a solid record of initiatives to maintain the water quality of its beaches, including efforts to improve storm water systems and increase public awareness. A number of local businesses trap and collect rainwater on their roofs to limit storm water discharges into the Atlantic Ocean. The city has enacted buffer zoning legislation to address habitat loss and water quality degradation. For the past 12 years, the Milford Environmental Concerns Coalition has held the Freedom Lawn Contest, recognizing local residents who show their commitment to protecting local water quality by growing beautiful lawns and gardens without the use of chemicals, pesticides or fertilizers.

End of Annual Report

Appendices

The Appendices section contains US EPA formatted beach data for Connecticut's 2006 through 2010 bathing seasons that was provided for review by US EPA in support of its ongoing national beach data quality assurance effort.

You may have received the edition of Connecticut's 2011 Annual Report for the US EPA Beach Grant that was provided without the Appendices section. If you need the Appendices section, call or email the author for a copy of it.

APPENDICES FOR

CONNECTICUT'S 2011 ANNUAL REPORT
FOR THE US EPA BEACH GRANT
WITH SUMMARY DATA FOR 2003-2011

02/02/2012

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www.ct.gov/dph/publicbeaches

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APPENDIX A - US EPA FORMATTED BEACH DATA FOR 2006

US EPA provided Beach Grant states and territories with formatted beach data summaries for the 2006 bathing season. The summaries were originally provided as seven (7) worksheets in an Excel spreadsheet and represent the data US EPA used for its national beach summary. The formatted US EPA beach data presented here for Connecticut have been reviewed and found to agree with the beach data presented earlier in this annual report for 2006.

If you are interested in comparing beach data between and among beach states and territories, you should use formatted US EPA beach data for the basis of your comparisons because the formatting should be the same for each Beach Grant state or territory.

US EPA has provided Attachment A and Attachment B that explain underlying assumptions for the summaries contained in Appendix A.

☞ Also note that US EPA has changed the arrangement of data summaries for subsequent years making it difficult to use these yearly summaries to compare beach data across years for a beach.

☞ Visit the US EPA BEACON2 website to locate beaches and view beach data:
http://watersgeo.epa.gov/beacon2/

http://watersgeo.epa.gov/beacon2/

Visit the US EPA BEACON2 website to locate beaches and view beach data:

A.1 CONECTICUT'S US EPA SUMMARY WORKSHEET FOR 2006

County	No. of beach days (monitored beaches)	No. of days under a beach action (monitored beaches)	Percent days under a beach action	No. of days not under a beach action (monitored beaches)	Percent days not under a beach action
FAIRFIELD	2,884	184	6.4%	2,700	93.6%
MIDDLESEX	618	6	1.0%	612	99.0%
NEW HAVEN	1,957	32	1.6%	1,925	98.4%
NEW LONDON	1,442	2	0.1%	1,440	99.9%
TOTALS	**6,901**	**224**	**3.2%**	**6,677**	**96.8%**

	PRAWN Beaches			Beaches with Actions				Beach Actions Sorted by Duration						Beach Days				
County	Number of beaches	No. of beaches monitored during swimming season	Percent of beaches monitored during swimming season	No. of monitored beaches with actions	No. of monitored beaches without actions	Percent of monitored beaches affected by a beach action	Percent of monitored beaches not affected by a beach action	No. of beach actions	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration	No. of beach days (monitored beaches)	No. of days under a beach action (monitored beaches)	Percent days under a beach action	No. of days not under a beach action (monitored beaches)	Percent days not under a beach action
FAIRFIELD	28	28	100.0%	27	1	96.4%	3.6%	93	49	18	24	2	0	2,884	184	6.4%	2,700	93.6%
MIDDLESEX	6	6	100.0%	2	4	33.3%	66.7%	2	0	0	2	0	0	618	6	1.0%	612	99.0%
NEW HAVEN	19	19	100.0%	10	9	52.6%	47.4%	11	1	2	8	0	0	1,957	32	1.6%	1,925	98.4%
NEW LONDON	14	14	100.0%	1	13	7.1%	92.9%	1	0	1	0	0	0	1,442	2	0.1%	1,440	99.9%
TOTALS	**67**	**67**	**100.0%**	**40**	**27**	**59.7%**	**40.3%**	**107**	**50**	**21**	**34**	**2**	**0**	**6,901**	**224**	**3.2%**	**6,677**	**96.8%**

A.2 US EPA BEACH SUMMARY WORKSHEET FOR 2006

EPA REGION	STATE	COUNTY	NO. OF BEACHES	NO. OF BEACHES MONITORED-SWIM SEASON	NO. OF BEACHES NOT MONITORED-SWIM SEASON
1	CT	FAIRFIELD	28	28	0
1	CT	MIDDLESEX	6	6	0
1	CT	NEW HAVEN	19	19	0
1	CT	NEW LONDON	14	14	0
			67	**67**	**0**

A.3 US EPA BEACH LIST WORKSHEET FOR 2006

EPA REGION	STATE	COUNTY	WATERBODY TYPE	COASTAL REGION	BEACH ID	BEACH NAME	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFFSEASON MONITOR FREQ	OFFSEASON MONITOR FREQ UNITS
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT200292	BELL ISLAND BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT730976	BURYING HILL BEACH	90	DAYS	3	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT872506	BYRAM BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT003939	CALF PASTURE BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT135112	COMPO BEACH	90	DAYS	3	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT728213	CUMMINGS BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT085278	EAST (COVE ISLAND) BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT096148	GREAT CAPTAIN'S ISLAND BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT486090	GREENWICH POINT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT010924	HICKORY BLUFF BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT101236	ISLAND BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT306507	JENNINGS BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT449733	LONG BEACH (MARNICK'S)	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT921236	LONG BEACH (PROPER)	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT023928	MARVIN BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT927883	PEAR TREE POINT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT080788	PENFIELD BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT202901	QUIGLEY BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT200291	ROWAYTON BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT634478	SASCO BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT404927	SEASIDE PARK BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT022992	SHADY BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT299970	SHERWOOD ISLAND STATE PARK BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT046814	SHORT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT428598	SOUTH PINE CREEK BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH

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EPA REGION	STATE	COUNTY	WATERBODY TYPE	COASTAL REGION	BEACH ID	BEACH NAME	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFFSEASON MONITOR FREQ	OFFSEASON MONITOR FREQ UNITS
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT474040	SOUTHPORT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT952269	WEED BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	FAIRFIELD	Sound, Bay, or Inlet	Atlantic Ocean	CT992639	WEST BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
					28				**28**		**0**	
1	CT	MIDDLESEX	Sound, Bay, or Inlet	Atlantic Ocean	CT104944	ESPOSITO BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	MIDDLESEX	Sound, Bay, or Inlet	Atlantic Ocean	CT766006	HARVEY'S BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	MIDDLESEX	Sound, Bay, or Inlet	Atlantic Ocean	CT221030	MIDDLE BEACH/STANNARD BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	MIDDLESEX	Sound, Bay, or Inlet	Atlantic Ocean	CT104947	TOWN BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	MIDDLESEX	Sound, Bay, or Inlet	Atlantic Ocean	CT996337	TOWN BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	MIDDLESEX	Sound, Bay, or Inlet	Atlantic Ocean	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
					6				**6**		**0**	
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT974464	ANCHOR BEACH (MERWIN POINT) #1	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT400424	ANCHOR BEACH (MERWIN POINT) #2	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT001209	BRANFORD POINT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT409818	CLARK AVENUE BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT091682	EAST HAVEN TOWN BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT153336	EAST WHARF BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT910056	GULF BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT964700	HAMMONASSET BEACH STATE PARK BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT303093	JACOBS BEACH (TOWN BEACH)	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT760987	LIGHTHOUSE POINT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT320303	PENT ROAD BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT222176	SILVER SANDS STATE PARK BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT224775	STONY CREEK BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT386314	SURF CLUB BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH

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EPA REGION	STATE	COUNTY	WATERBODY TYPE	COASTAL REGION	BEACH ID	BEACH NAME	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFFSEASON MONITOR FREQ	OFFSEASON MONITOR FREQ UNITS
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT857174	WALNUT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT399384	WEST HAVEN EAST BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT506928	WEST HAVEN WEST BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT210340	WEST WHARF BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW HAVEN	Sound, Bay, or Inlet	Atlantic Ocean	CT351834	WOODMONT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
					19				**19**		**0**	
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT340493	DUBOIS BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT705857	EASTERN POINT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT434367	ESKER POINT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT496693	GREEN HARBOR BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT103938	HOLE-IN-THE-WALL BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT303091	KIDDIE'S BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT120292	MCCOOK POINT BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT110195	NOANK DOCK	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT407959	OCEAN BEACH PARK	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT079164	PLEASURE BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT207829	ROCKY NECK STATE PARK BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT493837	SOUNDVIEW BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT685151	WATERFORD TOWN BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
1	CT	NEW LONDON	Sound, Bay, or Inlet	Atlantic Ocean	CT282823	WHITE SANDS BEACH	90	DAYS	4	PER_MONTH	0	PER_MONTH
					14				**13**		**0**	
		TOTALS	**No. of Beaches:**		**67**	**No. of Beaches Monitored During Swim Season:**			**67**			

A.4 US EPA ACTION SUMMARY WORKSHEET FOR 2006

EPA REGION	STATE	COUNTY	NO. OF BEACHES WITH ACTIONS	NO. OF ACTIONS	NO. OF ACTION DAYS
1	CT	FAIRFIELD	27	93	184
1	CT	MIDDLESEX	2	2	6
1	CT	NEW HAVEN	10	11	32
1	CT	NEW LONDON	1	1	2
			40	**107**	**224**

A.5 US EPA ACTION LIST WORKSHEET FOR 2006

EPA REGION	STATE	COUNTY	BEACH ID	BEACH NAME	STATION ID	ACTION TYPE	PRAWN START DATE/TIME	PRAWN END DATE/TIME	PRAWN DURATION (DAYS)	ACTION REASON	ACTION SOURCE	ACTION INDICATOR
1	CT	FAIRFIELD	CT200292	BELL ISLAND BEACH		Closure	7/19/06 08:00 AM	7/21/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT200292	BELL ISLAND BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT730976	BURYING HILL BEACH	4200	Closure	8/29/06 08:00 AM	9/1/06 05:00 AM	3	ELEV_BACT	STORM	ENTERO
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	6/2/06 08:00 AM	6/4/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	6/8/06 08:00 AM	6/9/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	6/24/06 08:00 AM	6/27/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	6/28/06 08:00 AM	6/30/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	7/13/06 08:00 AM	7/14/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	7/19/06 08:00 AM	7/20/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	7/22/06 08:00 AM	7/24/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	8/25/06 08:00 AM	8/27/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT872506	BYRAM BEACH	800	Closure	8/31/06 08:00 AM	9/1/06 05:00 AM	1	ELEV_BACT	BOAT	ENTERO
1	CT	FAIRFIELD	CT003939	CALF PASTURE BEACH		Closure	7/19/06 08:00 AM	7/21/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT003939	CALF PASTURE BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT135112	COMPO BEACH		Closure	7/11/06 08:00 AM	7/13/06 05:00 AM	2	SEWAGE	POTW	PREEMPT
1	CT	FAIRFIELD	CT135112	COMPO BEACH	3800	Closure	8/29/06 08:00 AM	9/1/06 05:00 AM	3	ELEV_BACT	STORM	ENTERO
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	6/3/06 08:00 AM	6/4/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	6/8/06 08:00 AM	6/9/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	6/27/06 08:00 AM	6/28/06 05:00 AM	1	SEWAGE	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	6/28/06 08:00 AM	6/29/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH	1500	Closure	6/30/06 08:00 AM	7/1/06 05:00 AM	1	ELEV_BACT	BOAT	ENTERO
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	7/13/06 08:00 AM	7/14/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	8/20/06 08:00 AM	8/22/06 05:00 AM	2	SEWAGE	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	8/26/06 08:00 AM	8/30/06 05:00 AM	4	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT728213	CUMMINGS BEACH		Closure	9/3/06 08:00 AM	9/4/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH		Closure	6/3/06 08:00 AM	6/4/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH		Closure	6/8/06 08:00 AM	6/9/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH		Closure	6/28/06 08:00 AM	6/29/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	1800	Closure	6/29/06 08:00 AM	6/30/06 05:00 AM	1	ELEV_BACT	UNKNOWN	ENTERO
1	CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH		Closure	7/13/06 08:00 AM	7/14/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH		Closure	8/26/06 08:00 AM	8/30/06 05:00 AM	4	RAINFALL	STORM	PREEMPT

(continued)

EPA REGION	STATE	COUNTY	BEACH ID	BEACH NAME	STATION ID	ACTION TYPE	PRAWN START DATE/TIME	PRAWN END DATE/TIME	PRAWN DURATION (DAYS)	ACTION REASON	ACTION SOURCE	ACTION INDICATOR
1	CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH		Closure	9/3/06 08:00 AM	9/4/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	100	Closure	6/27/06 08:00 AM	6/28/06 05:00 AM	1	ELEV_BACT	BOAT	ENTERO
1	CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH		Closure	7/13/06 08:00 AM	7/14/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH		Closure	8/26/06 08:00 AM	8/27/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH	500	Closure	8/31/06 08:00 AM	9/1/06 05:00 AM	1	ELEV_BACT	STORM	ENTERO
1	CT	FAIRFIELD	CT010924	HICKORY BLUFF BEACH		Closure	7/19/06 08:00 AM	7/21/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT010924	HICKORY BLUFF BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT101236	ISLAND BEACH	400	Closure	8/22/06 08:00 AM	8/23/06 05:00 AM	1	ELEV_BACT	BOAT	ENTERO
1	CT	FAIRFIELD	CT306507	JENNINGS BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)		Closure	6/4/06 08:00 AM	6/5/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)		Closure	6/7/06 08:00 AM	6/8/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)		Closure	7/19/06 08:00 AM	7/20/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)		Closure	8/28/06 08:00 AM	9/5/06 05:00 AM	8	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)		Closure	6/4/06 08:00 AM	6/5/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)		Closure	6/7/06 08:00 AM	6/8/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)		Closure	7/19/06 08:00 AM	7/20/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)		Closure	8/28/06 08:00 AM	9/5/06 05:00 AM	8	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT023928	MARVIN BEACH	3000	Closure	6/28/06 08:00 AM	7/1/06 05:00 AM	3	ELEV_BACT	UNKNOWN	ENTERO
1	CT	FAIRFIELD	CT023928	MARVIN BEACH		Closure	7/19/06 08:00 AM	7/21/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT023928	MARVIN BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH		Closure	6/8/06 08:00 AM	6/9/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH		Closure	6/9/06 08:00 AM	6/11/06 05:00 AM	2	SEWAGE	SEWER_LINE	PREEMPT
1	CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH		Closure	6/28/06 08:00 AM	6/30/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH		Closure	7/6/06 08:00 AM	7/7/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH		Closure	7/12/06 08:00 AM	7/14/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH		Closure	8/25/06 08:00 AM	8/29/06 05:00 AM	4	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH		Closure	9/3/06 08:00 AM	9/4/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT080788	PENFIELD BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT202901	QUIGLEY BEACH		Closure	6/3/06 08:00 AM	6/4/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT202901	QUIGLEY BEACH		Closure	6/8/06 08:00 AM	6/9/06 05:00 AM	1	RAINFALL	STORM	PREEMPT

(continued)

EPA REGION	STATE	COUNTY	BEACH ID	BEACH NAME	STATION ID	ACTION TYPE	PRAWN START DATE/TIME	PRAWN END DATE/TIME	PRAWN DURATION (DAYS)	ACTION REASON	ACTION SOURCE	ACTION INDICATOR
1	CT	FAIRFIELD	CT202901	QUIGLEY BEACH		Closure	6/28/06 08:00 AM	6/29/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT202901	QUIGLEY BEACH		Closure	7/13/06 08:00 AM	7/14/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT202901	QUIGLEY BEACH		Closure	8/26/06 08:00 AM	8/30/06 05:00 AM	4	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT202901	QUIGLEY BEACH		Closure	9/3/06 08:00 AM	9/4/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT200291	ROWAYTON BEACH		Closure	7/19/06 08:00 AM	7/21/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT200291	ROWAYTON BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT634478	SASCO BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT022992	SHADY BEACH		Closure	7/19/06 08:00 AM	7/21/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT022992	SHADY BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH		Closure	7/11/06 08:00 AM	7/12/06 05:00 AM	1	SEWAGE	POTW	PREEMPT
1	CT	FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	13400	Closure	8/29/06 08:00 AM	8/31/06 05:00 AM	2	ELEV_BACT	STORM	ENTERO
1	CT	FAIRFIELD	CT046814	SHORT BEACH		Closure	6/4/06 08:00 AM	6/5/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT046814	SHORT BEACH		Closure	6/7/06 08:00 AM	6/8/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT046814	SHORT BEACH		Closure	7/19/06 08:00 AM	7/20/06 05:00 AM	1	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT046814	SHORT BEACH		Closure	8/28/06 08:00 AM	9/5/06 05:00 AM	8	RAINFALL	UNKNOWN	PREEMPT
1	CT	FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT474040	SOUTHPORT BEACH		Closure	8/28/06 08:00 AM	8/31/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT952269	WEED BEACH		Closure	6/8/06 08:00 AM	6/9/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT952269	WEED BEACH	2200	Closure	6/28/06 08:00 AM	6/30/06 05:00 AM	2	ELEV_BACT	STORM	ENTERO
1	CT	FAIRFIELD	CT952269	WEED BEACH		Closure	7/6/06 08:00 AM	7/7/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT952269	WEED BEACH		Closure	7/12/06 08:00 AM	7/14/06 05:00 AM	2	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT952269	WEED BEACH		Closure	8/25/06 08:00 AM	8/29/06 05:00 AM	4	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT952269	WEED BEACH		Closure	9/3/06 08:00 AM	9/4/06 05:00 AM	1	RAINFALL	STORM	PREEMPT
1	CT	FAIRFIELD	CT992639	WEST BEACH		Closure	6/3/06 08:00 AM	6/4/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT992639	WEST BEACH		Closure	6/8/06 08:00 AM	6/9/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT992639	WEST BEACH		Closure	6/28/06 08:00 AM	6/29/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT992639	WEST BEACH		Closure	7/13/06 08:00 AM	7/14/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT992639	WEST BEACH	1100	Closure	8/4/06 08:00 AM	8/5/06 05:00 AM	1	ELEV_BACT	UNKNOWN	ENTERO
1	CT	FAIRFIELD	CT992639	WEST BEACH		Closure	8/26/06 08:00 AM	8/30/06 05:00 AM	4	RAINFALL	BOAT	PREEMPT
1	CT	FAIRFIELD	CT992639	WEST BEACH		Closure	9/3/06 08:00 AM	9/4/06 05:00 AM	1	RAINFALL	BOAT	PREEMPT
			27			**93**			**184**			

(continued)

EPA REGION	STATE	COUNTY	BEACH ID	BEACH NAME	STATION ID	ACTION TYPE	PRAWN START DATE/TIME	PRAWN END DATE/TIME	PRAWN DURATION (DAYS)	ACTION REASON	ACTION SOURCE	ACTION INDICATOR
1	CT	MIDDLESEX	CT104944	ESPOSITO BEACH	10200	Closure	8/31/06 08:00 AM	9/3/06 05:00 AM	3	ELEV_BACT	WILDLIFE	ENTERO
1	CT	MIDDLESEX	CT104947	TOWN BEACH		Closure	8/30/06 08:00 AM	9/2/06 05:00 AM	3	RAINFALL	STORM	ENTERO
			2			**2**			**6**			
1	CT	NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1		Closure	9/3/06 08:00 AM	9/6/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2		Closure	9/3/06 08:00 AM	9/6/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	NEW HAVEN	CT001209	BRANFORD POINT BEACH	9300	Closure	8/29/06 08:00 AM	9/2/06 05:00 AM	4	ELEV_BACT	STORM	ENTERO
1	CT	NEW HAVEN	CT910056	GULF BEACH		Closure	9/3/06 08:00 AM	9/6/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	9500	Contamination Advisory	8/30/06 08:00 AM	9/1/06 05:00 AM	2	ELEV_BACT	STORM	ENTERO
1	CT	NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	8900	Closure	7/7/06 08:00 AM	7/9/06 05:00 AM	2	ELEV_BACT	UNKNOWN	ENTERO
1	CT	NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH		Closure	8/1/06 08:00 AM	8/2/06 05:00 AM	1	OTHER	OTHER	OTHER
1	CT	NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	13700	Closure	8/29/06 08:00 AM	9/2/06 05:00 AM	4	ELEV_BACT	STORM	ENTERO
1	CT	NEW HAVEN	CT224775	STONY CREEK BEACH	9400	Closure	8/29/06 08:00 AM	9/2/06 05:00 AM	4	ELEV_BACT	STORM	ENTERO
1	CT	NEW HAVEN	CT857174	WALNUT BEACH		Closure	9/3/06 08:00 AM	9/6/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
1	CT	NEW HAVEN	CT351834	WOODMONT BEACH		Closure	9/3/06 08:00 AM	9/6/06 05:00 AM	3	RAINFALL	STORM	PREEMPT
			10			**11**			**32**			
1	CT	NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	13200	Closure	8/29/06 08:00 AM	8/31/06 05:00 AM	2	ELEV_BACT	STORM	ENTERO
			1			**1**			**2**			
		No. Beaches with Actions:	**40**		**No. of Actions:**	**107**		**No. of Actions Days:**	**224**			

A.6 US EPA DURATION WORKSHEET FOR 2006

	Beaches with Actions					Beach Actions Sorted by Duration				
County	Beach ID	Beach Name	No. of beach actions	No. of days under an action		No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration
FAIRFIELD	CT200292	BELL ISLAND BEACH	2	5			1	1		
FAIRFIELD	CT730976	BURYING HILL BEACH	1	3				1		
FAIRFIELD	CT872506	BYRAM BEACH	10	18		4	4	2		
FAIRFIELD	CT003939	CALF PASTURE BEACH	2	5			1	1		
FAIRFIELD	CT135112	COMPO BEACH	2	5			1	1		
FAIRFIELD	CT728213	CUMMINGS BEACH	9	13		7	1	1		
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	7	10		6		1		
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	1	1		1				
FAIRFIELD	CT486090	GREENWICH POINT BEACH	4	6		3		1		
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	2	5			1	1		
FAIRFIELD	CT101236	ISLAND BEACH	1	1		1				
FAIRFIELD	CT306507	JENNINGS BEACH	1	3				1		
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	4	11		3			1	
FAIRFIELD	CT921236	LONG BEACH (PROPER)	4	11		3			1	
FAIRFIELD	CT023928	MARVIN BEACH	3	8			1	2		
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	7	13		3	3	1		
FAIRFIELD	CT080788	PENFIELD BEACH	1	3				1		
FAIRFIELD	CT202901	QUIGLEY BEACH	6	9		5		1		
FAIRFIELD	CT200291	ROWAYTON BEACH	2	5			1	1		
FAIRFIELD	CT634478	SASCO BEACH	1	3				1		
FAIRFIELD	CT022992	SHADY BEACH	2	5			1	1		
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	2	3		1	1			
FAIRFIELD	CT046814	SHORT BEACH	4	11		3			1	
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	1	3				1		
FAIRFIELD	CT474040	SOUTHPORT BEACH	1	3				1		
FAIRFIELD	CT952269	WEED BEACH	6	11		3	2	1		
FAIRFIELD	CT992639	WEST BEACH	7	10		6		1		
	27		**93**	**184**		**49**	**18**	**23**	**3**	**0**
MIDDLESEX	CT104944	ESPOSITO BEACH	1	3				1		
MIDDLESEX	CT104947	TOWN BEACH	1	3				1		
	2		**2**	**6**		**0**	**0**	**2**	**0**	**0**

(continued)

	Beaches with Actions				Beach Actions Sorted by Duration				
County	Beach ID	Beach Name	No. of beach actions	No. of days under an action	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	1	3			1		
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	1	3			1		
NEW HAVEN	CT001209	BRANFORD POINT BEACH	1	4			1		
NEW HAVEN	CT910056	GULF BEACH	1	3			1		
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	1	2		1			
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	2	3	1	1			
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	1	4			1		
NEW HAVEN	CT224775	STONY CREEK BEACH	1	4			1		
NEW HAVEN	CT857174	WALNUT BEACH	1	3			1		
NEW HAVEN	CT351834	WOODMONT BEACH	1	3			1		
	10		**11**	**32**	**1**	**2**	**8**	**0**	**0**
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	1	2		1			
	1		**1**	**2**	**0**	**1**	**0**	**0**	**0**
TOTALS	**40**		**107**	**224**	**50**	**21**	**33**	**3**	**0**

A.7 US EPA BEACH DAYS WORKSHEET FOR 2006

			Swimming Season / Beach Days				Days Under a Beach Action				Days Not Under a Beach Action		
County	Beach ID	Beach Name (monitored beaches only)	Swimming season dates		Beach days		Beach action in 2006?	No. of days under a beach action		Percent days under a beach action	No. of days not under a beach action		Percent days not under a beach action
FAIRFIELD	CT200292	BELL ISLAND BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	5	DAYS	4.9%	98	DAYS	95.1%
FAIRFIELD	CT730976	BURYING HILL BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
FAIRFIELD	CT872506	BYRAM BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	18	DAYS	17.5%	85	DAYS	82.5%
FAIRFIELD	CT003939	CALF PASTURE BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	5	DAYS	4.9%	98	DAYS	95.1%
FAIRFIELD	CT135112	COMPO BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	5	DAYS	4.9%	98	DAYS	95.1%
FAIRFIELD	CT728213	CUMMINGS BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	13	DAYS	12.6%	90	DAYS	87.4%
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	10	DAYS	9.7%	93	DAYS	90.3%
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	1	DAYS	1.0%	102	DAYS	99.0%
FAIRFIELD	CT486090	GREENWICH POINT BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	6	DAYS	5.8%	97	DAYS	94.2%
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	5	DAYS	4.9%	98	DAYS	95.1%
FAIRFIELD	CT101236	ISLAND BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	1	DAYS	1.0%	102	DAYS	99.0%
FAIRFIELD	CT306507	JENNINGS BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	5/27/2006	9/6/2006	103	DAYS	Yes	11	DAYS	10.7%	92	DAYS	89.3%
FAIRFIELD	CT921236	LONG BEACH (PROPER)	5/27/2006	9/6/2006	103	DAYS	Yes	11	DAYS	10.7%	92	DAYS	89.3%
FAIRFIELD	CT023928	MARVIN BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	8	DAYS	7.8%	95	DAYS	92.2%
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	13	DAYS	12.6%	90	DAYS	87.4%
FAIRFIELD	CT080788	PENFIELD BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
FAIRFIELD	CT202901	QUIGLEY BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	9	DAYS	8.7%	94	DAYS	91.3%
FAIRFIELD	CT200291	ROWAYTON BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	5	DAYS	4.9%	98	DAYS	95.1%
FAIRFIELD	CT634478	SASCO BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
FAIRFIELD	CT404927	SEASIDE PARK BEACH	5/27/2006	9/6/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
FAIRFIELD	CT022992	SHADY BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	5	DAYS	4.9%	98	DAYS	95.1%
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
FAIRFIELD	CT046814	SHORT BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	11	DAYS	10.7%	92	DAYS	89.3%
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
FAIRFIELD	CT474040	SOUTHPORT BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
FAIRFIELD	CT952269	WEED BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	11	DAYS	10.7%	92	DAYS	89.3%
FAIRFIELD	CT992639	WEST BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	10	DAYS	9.7%	93	DAYS	90.3%
	28				**2,884**	**DAYS**	**27**	**184**	**DAYS**	**6.4%**	**2,700**	**DAYS**	**93.6%**
MIDDLESEX	CT104944	ESPOSITO BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
MIDDLESEX	CT766006	HARVEY'S BEACH	5/27/2006	9/6/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	5/27/2006	9/6/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
MIDDLESEX	CT104947	TOWN BEACH	5/27/2006	9/6/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
MIDDLESEX	CT996337	TOWN BEACH	5/27/2006	9/6/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	5/27/2006	9/6/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
	6				**618**	**DAYS**	**2**	**6**	**DAYS**	**1.0%**	**612**	**DAYS**	**99.0%**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	5/27/2006	9/4/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	5/27/2006	9/4/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%

(continued)

NEW HAVEN	CT001209	BRANFORD POINT BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	4	DAYS	3.9%	99	DAYS	96.1%
NEW HAVEN	CT409818	CLARK AVENUE BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT153336	EAST WHARF BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT910056	GULF BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	5/27/2006	9/4/2006	103	DAYS	Yes	2	DAYS	1.9%	101	DAYS	98.1%
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
NEW HAVEN	CT320303	PENT ROAD BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	4	DAYS	3.9%	99	DAYS	96.1%
NEW HAVEN	CT224775	STONY CREEK BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	4	DAYS	3.9%	99	DAYS	96.1%
NEW HAVEN	CT386314	SURF CLUB BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT857174	WALNUT BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT210340	WEST WHARF BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW HAVEN	CT351834	WOODMONT BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	3	DAYS	2.9%	100	DAYS	97.1%
	19				**1,957**	**DAYS**	**10**	**32**	**DAYS**	**1.6%**	**1,925**	**DAYS**	**98.4%**
NEW LONDON	CT340493	DUBOIS BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT434367	ESKER POINT BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT705857	EASTERN POINT BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT496693	GREEN HARBOR BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT303091	KIDDIE'S BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT120292	MCCOOK POINT BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT110195	NOANK DOCK	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT407959	OCEAN BEACH PARK	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT079164	PLEASURE BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	5/27/2006	9/4/2006	103	DAYS	Yes	2	DAYS	1.9%	101	DAYS	98.1%
NEW LONDON	CT493837	SOUNDVIEW BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT685151	WATERFORD TOWN BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
NEW LONDON	CT282823	WHITE SANDS BEACH	5/27/2006	9/4/2006	103	DAYS			DAYS	0.0%	103	DAYS	100.0%
	14				**1,442**	**DAYS**	**1**	**2**	**DAYS**	**0.1%**	**1,440**	**DAYS**	**99.9%**
	67				**6,901**		**40**	**224**		**3.2%**	**6,677**		**96.8%**

A.7 US EPA BEACH DAYS WORKSHEET FOR 2006 (continued)

TOTALS	
No. of monitored beaches:	67
No. of monitored beaches with actions:	40
No. of beach days for monitored beaches:	6,901
No. of days under a beach action:	224
Percent of days under a beach action:	3.2%
No. of days not under a beach action:	6,677
Percent of days not under a beach action:	96.8%

US EPA ATTACHMENT A

Explanation of Worksheets for Connecticut - 2006

1. State Summary *(Excel Worksheet 1 – "CT Summary")*

For each county
Displays summary statistics concerning beaches, beach action durations, and the number of days under a beach action during the swimming season.

These are the data that US EPA plans to report. They were developed using the assumptions discussed in ATTACHMENT B.

2. PRAWN Beach Summary *(Excel Worksheet 2 – "Beach Sum.")*

For each county
Displays the total number of beaches submitted to PRAWN and identifies how many were monitored during the swimming season.

3. PRAWN Beach List *(Excel Worksheet 3 – "Beach List")*

For each beach
Identifies details of each beach including: (1) basic location information, (2) swimming season length, and (3) in- and off-season monitoring frequency. The list is sorted by county and beach name.

4. PRAWN Beach Action Summary *(Excel Worksheet 4 – "Action Sum.")*

For each county
Summarizes information about beach actions including: (1) the number of beaches with actions, (2) the number of actions, and (3) the number of action days.

5. PRAWN Beach Action List *(Excel Worksheet 5 – "Action List")*

For each beach action
Presents details of each beach action submitted to PRAWN including: (1) type of action (e.g., closure, rain advisory, contamination advisory), (2) starting and ending date and time of the action, (3) duration of the action in days ("day" is defined as a 24-hour time block, not calendar days), (4) action reason, source, and the indicator used to trigger the action. The list is sorted by county, beach name, and action start date/time.

US EPA ATTACHMENT A (continued)

6. Action Durations *(Excel Worksheet 6 – "Durations")*

For each beach with an action

Sorts actions for each beach into one (1) of five (5) action duration groups (1 day duration, 2 days duration, 3-7 days duration, 8-30 days duration, or greater than 30 days duration).

7. Beach Days *(Excel Worksheet 7 – "Beach Days")*

For each beach
Presents the beginning and ending dates of the swimming season and the number of beach days. Other columns in the worksheet identify: (1) if the beach had an action and the total number days under the action(s), and (2) the percentage of season the beach was under an action.

US EPA ATTACHMENT B

Assumptions Used to Develop US EPA 's Summary Statistics for Connecticut – 2006

1. Length of 2006 Connecticut Swimming Season

Background

Summary statistics in US EPA 's national report include:

(1) No. of days in swimming season (referred to as "beach days")
(2) No. of actions that occur during the swimming season
(3) No. of beach days under a beach action

In order to derive these statistics US EPA must define the start and end dates of the 2006 swimming season.

In the 2006 PRAWN submission, Connecticut reports that all beaches have a swimming season of 90 days. June 2, 2006 is the earliest Connecticut action date listed in PRAWN and September 6, 2006 is the latest action date. These dates indicate the season is actually a little more than 90 days.

Assumption

EPA assumes all the actions occurred during the swimming season and that the season includes Memorial Day weekend and two (2) days past Labor Day. Specifically: EPA defines the 2006 Connecticut swimming season as beginning on Saturday, May 27, 2006 and ending on Wednesday, September 6, 2006 (103 beach days).

APPENDIX B - US EPA FORMATTED BEACH DATA FOR 2007

US EPA provided Beach Grant states and territories with formatted beach data summaries for the 2007 bathing season. The summaries were originally provided as five (5) worksheets in an Excel spreadsheet and represent the data US EPA used for its national beach summary. *Except where noted* the formatted US EPA beach data presented here for Connecticut have been reviewed and found to agree with the beach data presented earlier in this annual report for 2007.

The formatting and structure of these data summaries were changed by US EPA for the 2007 data presented here when compared with the EPA data released in 2006, found in Appendix A.

If you are interested in comparing beach data between and among beach states and territories, you should use formatted US EPA beach data for the basis of your comparisons because the formatting for a particular bathing season should be the same should be the same for each Beach Grant state or territory.

The EPA SOURCE for three (3) notification actions found in Appendix B.3 were revised after release of these data by US EPA from CSO to UNKNOWN. For reference these actions are marked in the Appendix.

☞ Visit the US EPA BEACON2 website to locate beaches and view beach data:
http://watersgeo.epa.gov/beacon2/

B.1 US EPA CONNECTICUT SUMMARY WORKSHEET FOR 2007

	PRAWN Beaches			Beaches with Actions				Beach Actions Sorted by Duration						Beach Days				
County	No. of beaches	No. of beaches monitored during swimming season	Percent of beaches monitored during swimming season	No. of monitored beaches with actions	No. of monitored beaches without actions	Percent of monitored beaches affected by a beach action	Percent of monitored beaches not affected by a beach action	No. of beach actions	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration	No. of beach days (monitored beaches)	No. of days under a beach action (monitored beaches)	Percent days under a beach action	No. of days not under a beach action (monitored beaches)	Percent days not under a beach action
FAIRFIELD	28	28	100.0%	25	3	89.3%	10.7%	57	29	27	1	0	0	2,744	87	3.2%	2,657	96.8%
MIDDLESEX	5	5	100.0%	2	3	40.0%	60.0%	3	2	1	0	0	0	490	4	0.8%	486	99.2%
NEW HAVEN	19	19	100.0%	6	13	31.6%	68.4%	6	0	1	5	0	0	1,862	17	0.9%	1,845	99.1%
NEW LONDON	14	14	100.0%	0	14	0.0%	100.0%	0	0	0	0	0	0	1,372	0	0.0%	1,372	100.0%
TOTALS	**66**	**66**	**100.0%**	**33**	**33**	**50.0%**	**50.0%**	**66**	**31**	**29**	**6**	**0**	**0**	**6,468**	**108**	**1.7%**	**6,360**	**98.3%**
KEY QUESTIONS:																		
	How many beaches were monitored?			How many beaches had actions?				How many actions were there and how long were they?						What portion of the swimming season were beaches under an action?				

B.2 US EPA BEACH LIST WORKSHEET FOR 2007

STATE	COUNTY	BEACH ID	BEACH NAME	BEACH TIER RANK	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFF SEASON MONITOR FREQ	OFF SEASON MONITOR FREQ UNITS	BEACH LENGTH	BEACH LENGTH UNITS	KNOWN POTENTIAL SOURCES OF POLLUTIO
CT	FAIRFIELD	CT200292	BELL ISLAND BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	200	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT730976	BURYING HILL BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	125	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT872506	BYRAM BEACH	3	98	DAYS	4	PER_MONTH	0	PER_MONTH	169	M	Storm Related/Wet-Weather Runoff, Wildlife, Boat Discharge, Sewer Line Leak/Break/Blockage, Sanitary Sewer Overflow
CT	FAIRFIELD	CT003939	CALF PASTURE BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	323	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT135112	COMPO BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	862	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT728213	CUMMINGS BEACH	2	98	DAYS	4	PER_MONTH	0	PER_MONTH	209	M	Boat Discharge, Storm Related/Wet-Weather Runoff, Non-Storm Related/Urban/Dryweather Runoff
CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	3	98	DAYS	4	PER_MONTH	0	PER_MONTH	289	M	Boat Discharge, Non-Storm Related/Urban/Dryweather Runoff, Wildlife, Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	357	M	Septic System Leakage, Wildlife, Boat Discharge
CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH	3	98	DAYS	4	PER_MONTH	0	PER_MONTH	649	M	Sewer Line Leak/Break/Blockage, Septic System Leakage, Sanitary Sewer Overflow, Wildlife, Boat Discharge,Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT010924	HICKORY BLUFF BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	2	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT101236	ISLAND BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	291	M	Wildlife, Boat Discharge, Septic System Leakage
CT	FAIRFIELD	CT306507	JENNINGS BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	633	M	Sanitary Sewer Overflow, Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	2	98	DAYS	4	PER_MONTH	0	PER_MONTH	60	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)	2	98	DAYS	4	PER_MONTH	0	PER_MONTH	499	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT023928	MARVIN BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	7	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH	3	98	DAYS	3	PER_MONTH	0	PER_MONTH	322	M	Sewer Line Leak/Break/Blockage, Septic System Leakage, Wildlife, Boat Discharge,Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT080788	PENFIELD BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	335	M	Sanitary Sewer Overflow, Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT202901	QUIGLEY BEACH	2	98	DAYS	4	PER_MONTH	0	PER_MONTH	160	M	Storm Related/Wet-Weather Runoff, Boat Discharge, Wildlife
CT	FAIRFIELD	CT200291	ROWAYTON BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	33	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT634478	SASCO BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	204	M	Storm Related/Wet-Weather Runoff, Sanitary Sewer Overflow
CT	FAIRFIELD	CT404927	SEASIDE PARK BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	2900	M	None Listed
CT	FAIRFIELD	CT022992	SHADY BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	341	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	1911	M	Sanitary Sewer Overflow, Non-Storm Related/Urban/Dryweather Runoff, Septic System Leakage, Publicly Owned Treatment Works, Storm Related/Wet-Weather Runoff, Other: waterfowl
CT	FAIRFIELD	CT046814	SHORT BEACH	2	98	DAYS	4	PER_MONTH	0	PER_MONTH	770	M	Storm Related/Wet-Weather Runoff
CT	FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	48	M	Storm Related/Wet-Weather Runoff, Sanitary Sewer Overflow
CT	FAIRFIELD	CT474040	SOUTHPORT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	254	M	Storm Related/Wet-Weather Runoff, Sanitary Sewer Overflow
CT	FAIRFIELD	CT952269	WEED BEACH	3	98	DAYS	3	PER_MONTH	0	PER_MONTH	150	M	Boat Discharge, Septic System Leakage, Sewer Line Leak/Break/Blockage, Storm Related/Wet-Weather Runoff, Wildlife
CT	FAIRFIELD	CT992639	WEST BEACH	2	98	DAYS	4	PER_MONTH	0	PER_MONTH	174	M	Storm Related/Wet-Weather Runoff, Boat Discharge, Non-Storm Related/Urban/Dryweather Runoff
		28					28						

(continued)

STATE	COUNTY	BEACH ID	BEACH NAME	BEACH TIER RANK	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFF SEASON MONITOR FREQ	OFF SEASON MONITOR FREQ UNITS	BEACH LENGTH	BEACH LENGTH UNITS	KNOWN POTENTIAL SOURCES OF POLLUTION
CT	MIDDLESEX	CT766006	HARVEY'S BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	74	M	Storm Related/Wet-Weather Runoff
CT	MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	77	M	Pollution Sources Not Investigated
CT	MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	2	98	DAYS	4	PER_MONTH	0	PER_MONTH	138	M	Storm Related/Wet-Weather Runoff
CT	MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	57	M	Storm Related/Wet-Weather Runoff
CT	MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	876	M	Pollution Sources Not Investigated
		5					**5**		**0**				
CT	NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	78	M	Storm Related/Wet-Weather Runoff, Non-Storm Related/Urban/Dryweather Runoff, Wildlife
CT	NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	175	M	Non-Storm Related/Urban/Dryweather Runoff, Storm Related/Wet-Weather Runoff
CT	NEW HAVEN	CT001209	BRANFORD POINT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	137	M	Storm Related/Wet-Weather Runoff
CT	NEW HAVEN	CT409818	CLARK AVENUE BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	68	M	Storm Related/Wet-Weather Runoff
CT	NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	258	M	None Listed
CT	NEW HAVEN	CT153336	EAST WHARF BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	117	M	Storm Related/Wet-Weather Runoff
CT	NEW HAVEN	CT910056	GULF BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	349	M	Non-Storm Related/Urban/Dryweather Runoff, Storm Related/Wet-Weather Runoff
CT	NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	3100	M	Wildlife, Septic System Leakage, Boat Discharge, Storm Related/Wet-Weather Runoff
CT	NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	139	M	Non-Storm Related/Urban/Dryweather Runoff, Storm Related/Wet-Weather Runoff, Septic System Leakage, Other: waterfowl
CT	NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	220	M	Publicly Owned Treatment Works, Storm Related/Wet-Weather Runoff, Combined Sewer Overflow
CT	NEW HAVEN	CT320303	PENT ROAD BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	99	M	None Listed
CT	NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	279	M	Storm Related/Wet-Weather Runoff, Non-Storm Related/Urban/Dryweather Runoff, Publicly Owned Treatment Works, Boat Discharge
CT	NEW HAVEN	CT224775	STONY CREEK BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	36	M	Storm Related/Wet-Weather Runoff
CT	NEW HAVEN	CT386314	SURF CLUB BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	330	M	None Listed
CT	NEW HAVEN	CT857174	WALNUT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	575	M	Storm Related/Wet-Weather Runoff, Non-Storm Related/Urban/Dryweather Runoff
CT	NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	3600	M	Storm Related/Wet-Weather Runoff, Non-Storm Related/Urban/Dryweather Runoff
CT	NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	2208	M	Storm Related/Wet-Weather Runoff, Non-Storm Related/Urban/Dryweather Runoff
CT	NEW HAVEN	CT210340	WEST WHARF BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	155	M	None Listed
CT	NEW HAVEN	CT351834	WOODMONT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	465	M	Non-Storm Related/Urban/Dryweather Runoff, Storm Related/Wet-Weather Runoff
		19					**19**		**0**				

(continued)

STATE	COUNTY	BEACH ID	BEACH NAME	BEACH TIER RANK	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFF SEASON MONITOR FREQ	OFF SEASON MONITOR FREQ UNITS	BEACH LENGTH	BEACH LENGTH UNITS	KNOWN POTENTIAL SOURCES OF POLLUTION
CT	NEW LONDON	CT340493	DUBOIS BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	37	M	Publicly Owned Treatment Works, Sewer Line Leak/Break/Blockage
CT	NEW LONDON	CT705857	EASTERN POINT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	209	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT434367	ESKER POINT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	32	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT496693	GREEN HARBOR BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	120	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	181	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT303091	KIDDIE'S BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	5	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT120292	MCCOOK POINT BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	190	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT110195	NOANK DOCK	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	11	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT407959	OCEAN BEACH PARK	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	463	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT079164	PLEASURE BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	200	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	598	M	Septic System Leakage, Storm Related/Wet-Weather Runoff, Wildlife, Boat Discharge
CT	NEW LONDON	CT493837	SOUNDVIEW BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	331	M	None Listed
CT	NEW LONDON	CT685151	WATERFORD TOWN BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	524	M	Pollution Sources Not Investigated
CT	NEW LONDON	CT282823	WHITE SANDS BEACH	1	98	DAYS	4	PER_MONTH	0	PER_MONTH	241	M	None Listed
		14					**14**		**0**				
STATE TOTALS		**66**					**66**						
		Beaches					**Monitored Beaches**						

B.3 US EPA ACTION LIST WORKSHEET FOR 2007

STATE	COUNTY	BEACH ID	BEACH NAME	ACTION TYPE	ACTION START DATE/TIME	ACTIION END DATE/TIME	ACTION DURATION (DAYS)	ACTION REASON	ACTION SOURCE	ACTION INDICATOR
CT	FAIRFIELD	CT200292	BELL ISLAND BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT730976	BURYING HILL BEACH	Closure	06/05/2007 08:00:00	06/06/2007 05:00:00	1	OTHER	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	06/12/2007 08:00:00	06/14/2007 05:00:00	2	SEWAGE	SEWER_LINE	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	06/14/2007 08:00:00	06/15/2007 05:00:00	1	ELEV_BACT	SEWER_LINE	ENTERO
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	06/28/2007 08:00:00	06/29/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	07/05/2007 08:00:00	07/06/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	07/18/2007 08:00:00	07/20/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	07/23/2007 08:00:00	07/25/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	07/28/2007 08:00:00	07/29/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	08/08/2007 08:00:00	08/12/2007 05:00:00	4	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT872506	BYRAM BEACH	Closure	08/21/2007 08:00:00	08/23/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT003939	CALF PASTURE BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT135112	COMPO BEACH	Closure	06/05/2007 08:00:00	06/06/2007 05:00:00	1	OTHER	STORM	PREEMPT
CT	FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	07/18/2007 08:00:00	07/20/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	08/08/2007 08:00:00	08/09/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT728213	CUMMINGS BEACH	Contamination Advisory	08/15/2007 08:00:00	08/16/2007 05:00:00	1	ELEV_BACT	BOAT	ENTERO
CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	07/18/2007 08:00:00	07/20/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	08/08/2007 08:00:00	08/09/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	08/15/2007 08:00:00	08/16/2007 05:00:00	1	ELEV_BACT	CSO	ENTERO
CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	06/14/2007 08:00:00	06/16/2007 05:00:00	2	ELEV_BACT	SEWER_LINE	ENTERO
CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	07/18/2007 08:00:00	07/20/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	08/08/2007 08:00:00	08/09/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	08/22/2007 08:00:00	08/23/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT306507	JENNINGS BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	SSO	PREEMPT
CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	06/03/2007 08:00:00	06/04/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	07/23/2007 08:00:00	07/24/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	08/07/2007 08:00:00	08/08/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	06/03/2007 08:00:00	06/04/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	07/23/2007 08:00:00	07/24/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	08/07/2007 08:00:00	08/08/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT023928	MARVIN BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	06/04/2007 08:00:00	06/05/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	07/25/2007 08:00:00	07/26/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	08/08/2007 08:00:00	08/09/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT080788	PENFIELD BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	SSO	PREEMPT
CT	FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	07/18/2007 08:00:00	07/20/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	08/08/2007 08:00:00	08/09/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT200291	ROWAYTON BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT634478	SASCO BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	SSO	PREEMPT
CT	FAIRFIELD	CT022992	SHADY BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Closure	06/05/2007 08:00:00	06/07/2007 05:00:00	2	ELEV_BACT	CSO	ENTERO
CT	FAIRFIELD	CT046814	SHORT BEACH	Closure	06/03/2007 08:00:00	06/04/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT046814	SHORT BEACH	Closure	07/23/2007 08:00:00	07/24/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT046814	SHORT BEACH	Closure	08/07/2007 08:00:00	08/08/2007 05:00:00	1	RAINFALL	CSO	PREEMPT
CT	FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	SSO	PREEMPT
CT	FAIRFIELD	CT474040	SOUTHPORT BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	SSO	PREEMPT
CT	FAIRFIELD	CT952269	WEED BEACH	Closure	06/04/2007 08:00:00	06/05/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT952269	WEED BEACH	Closure	07/25/2007 08:00:00	07/26/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT952269	WEED BEACH	Closure	08/08/2007 08:00:00	08/09/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT992639	WEST BEACH	Closure	06/04/2007 08:00:00	06/06/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT992639	WEST BEACH	Closure	07/18/2007 08:00:00	07/20/2007 05:00:00	2	RAINFALL	STORM	PREEMPT
CT	FAIRFIELD	CT992639	WEST BEACH	Closure	08/08/2007 08:00:00	08/09/2007 05:00:00	1	RAINFALL	STORM	PREEMPT
			25	57			87			

Later revised from CSO to UNKNOWN

Later revised from CSO to UNKNOWN

(continued)

STATE	COUNTY	BEACH ID	BEACH NAME	ACTION TYPE	ACTION START DATE/TIME	ACTIION END DATE/TIME	ACTION DURATION (DAYS)	ACTION REASON	ACTION SOURCE	ACTION INDICATOR
CT	MIDDLESEX	CT766006	HARVEY'S BEACH	Closure	06/06/2007 08:00:00	06/07/2007 05:00:00	1	ELEV_BACT	STORM	ENTERO
CT	MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	06/06/2007 08:00:00	06/08/2007 05:00:00	2	ELEV_BACT	STORM	ENTERO
CT	MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	06/13/2007 08:00:00	06/14/2007 05:00:00	1	ELEV_BACT	STORM	ENTERO
			2	**3**			**4**			
CT	NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Closure	06/04/2007 08:00:00	06/07/2007 05:00:00	3	RAINFALL	STORM	PREEMPT
CT	NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Closure	06/04/2007 08:00:00	06/07/2007 05:00:00	3	RAINFALL	STORM	PREEMPT
CT	NEW HAVEN	CT910056	GULF BEACH	Closure	06/04/2007 08:00:00	06/07/2007 05:00:00	3	RAINFALL	STORM	PREEMPT
CT	NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Closure	06/05/2007 08:00:00	06/07/2007 05:00:00	2	ELEV_BACT	CSO	ENTERO
CT	NEW HAVEN	CT857174	WALNUT BEACH	Closure	06/04/2007 08:00:00	06/07/2007 05:00:00	3	RAINFALL	STORM	PREEMPT
CT	NEW HAVEN	CT351834	WOODMONT BEACH	Closure	06/04/2007 08:00:00	06/07/2007 05:00:00	3	RAINFALL	STORM	PREEMPT
			6	**6**			**17**			
	State		**33**	**66**			**108**			
	Totals		**Beaches with Actions**	**Actions**			**Action Days**			

Later revised from CSO to UNKNOWN

B.4 US EPA EVENT DURATION WORKSHEET FOR 2007

	Beaches with Actions				Beach Actions Sorted by Duration				
County	Beach ID	Beach Name	No. of beach actions	No. of days under an action	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration
FAIRFIELD	CT200292	BELL ISLAND BEACH	1	2		1			
FAIRFIELD	CT730976	BURYING HILL BEACH	1	1	1				
FAIRFIELD	CT872506	BYRAM BEACH	10	18	4	5	1		
FAIRFIELD	CT003939	CALF PASTURE BEACH	1	2		1			
FAIRFIELD	CT135112	COMPO BEACH	1	1	1				
FAIRFIELD	CT728213	CUMMINGS BEACH	4	6	2	2			
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	4	6	2	2			
FAIRFIELD	CT486090	GREENWICH POINT BEACH	4	6	2	2			
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	1	2		1			
FAIRFIELD	CT306507	JENNINGS BEACH	1	2		1			
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	3	3	3				
FAIRFIELD	CT921236	LONG BEACH (PROPER)	3	3	3				
FAIRFIELD	CT023928	MARVIN BEACH	1	2		1			
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	3	3	3				
FAIRFIELD	CT080788	PENFIELD BEACH	1	2		1			
FAIRFIELD	CT202901	QUIGLEY BEACH	3	5	1	2			
FAIRFIELD	CT200291	ROWAYTON BEACH	1	2		1			
FAIRFIELD	CT634478	SASCO BEACH	1	2		1			
FAIRFIELD	CT022992	SHADY BEACH	1	2		1			
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	1	2		1			
FAIRFIELD	CT046814	SHORT BEACH	3	3	3				
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	1	2		1			
FAIRFIELD	CT474040	SOUTHPORT BEACH	1	2		1			
FAIRFIELD	CT952269	WEED BEACH	3	3	3				
FAIRFIELD	CT992639	WEST BEACH	3	5	1	2			
	25		**57**	**87**	**29**	**27**	**1**	**0**	**0**
MIDDLESEX	CT766006	HARVEY'S BEACH	1	1	1				
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	2	3	1	1			
	2		**3**	**4**	**2**	**1**	**0**	**0**	**0**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	1	3			1		
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	1	3			1		
NEW HAVEN	CT910056	GULF BEACH	1	3			1		
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	1	2		1			
NEW HAVEN	CT857174	WALNUT BEACH	1	3			1		
NEW HAVEN	CT351834	WOODMONT BEACH	1	3			1		
	6		**6**	**17**	**0**	**1**	**5**	**0**	**0**
TOTALS	**33**		**66**	**108**	**31**	**29**	**6**	**0**	**0**

B.5 US EPA BEACH DAYS WORKSHEET FOR 2007

			Swimming Season / Beach Days			Days Under a Beach Action				Days Not Under a Beach Action		
County	Beach ID	Beach Name (monitored beaches only)	Beginning and end dates of swimming season	Beach days		Beach action in 2007?	No. of days under a beach action		Percent days under a beach action	No. of days not under a beach action		Percent days not under a beach action
FAIRFIELD	CT200292	BELL ISLAND BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT730976	BURYING HILL BEACH	Unknown	98	DAYS	Yes	1	DAYS	1.0%	97	DAYS	99.0%
FAIRFIELD	CT872506	BYRAM BEACH	Unknown	98	DAYS	Yes	18	DAYS	18.4%	80	DAYS	81.6%
FAIRFIELD	CT003939	CALF PASTURE BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT135112	COMPO BEACH	Unknown	98	DAYS	Yes	1	DAYS	1.0%	97	DAYS	99.0%
FAIRFIELD	CT728213	CUMMINGS BEACH	Unknown	98	DAYS	Yes	6	DAYS	6.1%	92	DAYS	93.9%
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Unknown	98	DAYS	Yes	6	DAYS	6.1%	92	DAYS	93.9%
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Unknown	98	DAYS	Yes	6	DAYS	6.1%	92	DAYS	93.9%
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT101236	ISLAND BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
FAIRFIELD	CT306507	JENNINGS BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
FAIRFIELD	CT023928	MARVIN BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
FAIRFIELD	CT080788	PENFIELD BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT202901	QUIGLEY BEACH	Unknown	98	DAYS	Yes	5	DAYS	5.1%	93	DAYS	94.9%
FAIRFIELD	CT200291	ROWAYTON BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT634478	SASCO BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT404927	SEASIDE PARK BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
FAIRFIELD	CT022992	SHADY BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT046814	SHORT BEACH	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT474040	SOUTHPORT BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
FAIRFIELD	CT952269	WEED BEACH	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
FAIRFIELD	CT992639	WEST BEACH	Unknown	98	DAYS	Yes	5	DAYS	5.1%	93	DAYS	94.9%
	28			**2,744**	**DAYS**	**25**	**87**	**DAYS**	**3.2%**	**2,657**	**DAYS**	**96.8%**
MIDDLESEX	CT766006	HARVEY'S BEACH	Unknown	98	DAYS	Yes	1	DAYS	1.0%	97	DAYS	99.0%
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
	5			**490**	**DAYS**	**2**	**4**	**DAYS**	**0.8%**	**486**	**DAYS**	**99.2%**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT409818	CLARK AVENUE BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT153336	EAST WHARF BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT910056	GULF BEACH	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT320303	PENT ROAD BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Unknown	98	DAYS	Yes	2	DAYS	2.0%	96	DAYS	98.0%
NEW HAVEN	CT224775	STONY CREEK BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT386314	SURF CLUB BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT857174	WALNUT BEACH	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT210340	WEST WHARF BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW HAVEN	CT351834	WOODMONT BEACH	Unknown	98	DAYS	Yes	3	DAYS	3.1%	95	DAYS	96.9%
	19			**1,862**	**DAYS**	**6**	**17**	**DAYS**	**0.9%**	**1,845**	**DAYS**	**99.1%**
NEW LONDON	CT340493	DUBOIS BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT705857	EASTERN POINT BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%

(continued)

			Swimming Season / Beach Days			Days Under a Beach Action				Days Not Under a Beach Action		
County	Beach ID	Beach Name (monitored beaches only)	Beginning and end dates of swimming season	Beach days		Beach action in 2007?	No. of days under a beach action		Percent days under a beach action	No. of days not under a beach action		Percent days not under a beach action
NEW LONDON	CT434367	ESKER POINT BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT496693	GREEN HARBOR BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT303091	KIDDIE'S BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT120292	MCCOOK POINT BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT110195	NOANK DOCK	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT407959	OCEAN BEACH PARK	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT079164	PLEASURE BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT493837	SOUNDVIEW BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT685151	WATERFORD TOWN BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
NEW LONDON	CT282823	WHITE SANDS BEACH	Unknown	98	DAYS			DAYS	0.0%	98	DAYS	100.0%
	14			1,372	DAYS	0	0	DAYS	0.0%	1,372	DAYS	100.0%

TOTALS	
No. of monitored beaches:	66
No. of monitored beaches with actions:	33
No. of beach days for monitored beaches:	6,468
No. of days under a beach action:	108
Percent of days under a beach action:	1.7%
No. of days not under a beach action:	6,360
Percent of days not under a beach action:	98.3%

	66			6,468		33	108		1.7%	6,360		98.3%

APPENDIX C - US EPA FORMATTED BEACH DATA FOR 2008

US EPA provided Beach Grant states and territories with formatted beach data summaries for the 2008 bathing season. The summaries were originally provided as seven (7) worksheets in an Excel spreadsheet and represent the data US EPA used for its national beach summary. The formatted US EPA beach data presented here for Connecticut have been reviewed and found to agree with the beach data presented earlier in this annual report for 2008.

The formatting and structure of these data summaries were changed by US EPA for the 2008 data presented here when compared with the EPA data released in 2007, found in Appendix B.

If you are interested in comparing beach data between and among beach states and territories, you should use formatted US EPA beach data for the basis of your comparisons because the formatting for a particular bathing season should be the same for each Beach Grant state or territory.

☞ Visit the US EPA BEACON2 website to locate beaches and view beach data:
http://watersgeo.epa.gov/beacon2/

C.1 CONNECTICUT'S US EPA SUMMARY WORKSHEET FOR 2008

	BEACH Act Beaches			Beaches with Actions				Beach Actions Sorted by Duration						Beach Days				
County	No. of beaches	No. of beaches monitored during swimming season	Percent of beaches monitored during swimming season	No. of monitored beaches with actions	No. of monitored beaches without actions	Percent of monitored beaches affected by a beach action	Percent of monitored beaches not affected by a beach action	No. of beach actions	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration	No. of beach days (monitored beaches)	No. of days under a beach action (monitored beaches)	Percent days under a beach action	No. of days not under a beach action (monitored beaches)	Percent days not under a beach action
FAIRFIELD	28	28	100.0%	13	15	46.4%	53.6%	55	46	4	4	1	0	2,744	79	2.9%	2,665	97.1%
MIDDLESEX	5	5	100.0%	3	2	60.0%	40.0%	4	0	0	3	1	0	490	40	8.2%	450	91.8%
NEW HAVEN	19	19	100.0%	8	11	42.1%	57.9%	8	1	6	1	0	0	1,862	16	0.9%	1,846	99.1%
NEW LONDON	14	14	100.0%	0	14	0.0%	100.0%	0	---	---	---	---	---	1,372	0	0.0%	1,372	100.0%
	66	**66**	**100.0%**	**24**	**42**	**36.4%**	**63.6%**	**67**	**47**	**10**	**8**	**2**	**0**	**6,468**	**135**	**2.1%**	**6,333**	**97.9%**
KEY QUESTIONS:																		
	How many beaches were monitored?			How many beaches had actions?				How many actions were there and how long were they?						What portion of the swimming season were beaches under an action?				

C.2 US EPA BEACH MONITORING WORKSHEET FOR 2008

COUNTY	BEACH ID	BEACH NAME	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFF SEASON MONITOR FREQ	OFF SEASON MONITOR FREQ UNITS
FAIRFIELD	CT200292	BELL ISLAND BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT730976	BURYING HILL BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT872506	BYRAM BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT003939	CALF PASTURE BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT135112	COMPO BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT728213	CUMMINGS BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT486090	GREENWICH POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT101236	ISLAND BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT306507	JENNINGS BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT921236	LONG BEACH (PROPER)	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT023928	MARVIN BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT080788	PENFIELD BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT202901	QUIGLEY BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT200291	ROWAYTON BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT634478	SASCO BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT404927	SEASIDE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT022992	SHADY BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT046814	SHORT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT474040	SOUTHPORT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT952269	WEED BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT992639	WEST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
	28				**28**			
MIDDLESEX	CT766006	HARVEY'S BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	98	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	98	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
	5				**5**			
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT001209	BRANFORD POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH

(continued)

COUNTY	BEACH ID	BEACH NAME	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFF SEASON MONITOR FREQ	OFF SEASON MONITOR FREQ UNITS
NEW HAVEN	CT409818	CLARK AVENUE BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT153336	EAST WHARF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT910056	GULF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT320303	PENT ROAD BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT224775	STONY CREEK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT386314	SURF CLUB BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT857174	WALNUT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT210340	WEST WHARF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT351834	WOODMONT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
	19				**19**			
NEW LONDON	CT340493	DUBOIS BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT705857	EASTERN POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT434367	ESKER POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT496693	GREEN HARBOR BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT303091	KIDDIE'S BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT120292	MCCOOK POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT110195	NOANK DOCK	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT407959	OCEAN BEACH PARK	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT079164	PLEASURE BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT493837	SOUNDVIEW BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT685151	WATERFORD TOWN BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT282823	WHITE SANDS BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH
	14				**14**			
TOTALS:	**66**				**66**			

C.3 US EPA POSSIBLE POLLUTION SOURCES WORKSHEET FOR 2008

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES*												
COUNTY	BEACH ID	BEACH NAME	POLL. SOURCES INVESTI-GATED?	POLL. SOURCES FOUND?	RUNOFF	STORM	AGRICUL-TURAL	BOAT	CAFO	CSO	SSO	POTW	SEWER LINE	SEPTIC	WILDLIFE	OTHER	UNKNOWN
FAIRFIELD	CT200292	BELL ISLAND BEACH	Yes	No													
FAIRFIELD	CT730976	BURYING HILL BEACH	Yes	Yes		Yes											
FAIRFIELD	CT872506	BYRAM BEACH	Yes	Yes		Yes		Yes			Yes		Yes		Yes		
FAIRFIELD	CT003939	CALF PASTURE BEACH	Yes	No													
FAIRFIELD	CT135112	COMPO BEACH	Yes	Yes		Yes											
FAIRFIELD	CT728213	CUMMINGS BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Yes	Yes				Yes						Yes	Yes		
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Yes	Yes		Yes		Yes			Yes		Yes	Yes	Yes		
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Yes	Yes		Yes											
FAIRFIELD	CT101236	ISLAND BEACH	Yes	Yes				Yes						Yes	Yes		
FAIRFIELD	CT306507	JENNINGS BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Yes	Yes		Yes											Yes
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Yes	Yes		Yes											Yes
FAIRFIELD	CT023928	MARVIN BEACH	Yes	Yes		Yes											
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
FAIRFIELD	CT080788	PENFIELD BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT202901	QUIGLEY BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT200291	ROWAYTON BEACH	Yes	No													
FAIRFIELD	CT634478	SASCO BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT404927	SEASIDE PARK BEACH	Yes	Yes		Yes						Yes					
FAIRFIELD	CT022992	SHADY BEACH	Yes	No													
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Yes	Yes	Yes	Yes					Yes	Yes		Yes		Yes	
FAIRFIELD	CT046814	SHORT BEACH	Yes	Yes		Yes											Yes
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT474040	SOUTHPORT BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT952269	WEED BEACH	Yes	Yes		Yes		Yes					Yes	Yes	Yes		
FAIRFIELD	CT992639	WEST BEACH	Yes	Yes	Yes	Yes											
	28		**28**	**24**	**5**	**22**	**0**	**6**	**0**	**0**	**8**	**2**	**3**	**6**	**6**	**1**	**3**
MIDDLESEX	CT766006	HARVEY'S BEACH	Yes	Yes		Yes											
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	Yes	No													
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Yes	Yes		Yes											
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Yes	Yes		Yes											
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Yes	No													
	5		**5**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Yes	Yes	Yes	Yes									Yes		
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Yes	Yes	Yes	Yes											
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Yes	Yes		Yes											

(continued)

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES*												
COUNTY	BEACH ID	BEACH NAME	POLL. SOURCES INVESTI-GATED?	POLL. SOURCES FOUND?	RUNOFF	STORM	AGRICUL-TURAL	BOAT	CAFO	CSO	SSO	POTW	SEWER LINE	SEPTIC	WILDLIFE	OTHER	UNKNOWN
NEW HAVEN	CT409818	CLARK AVENUE BEACH	Yes	Yes		Yes											
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	Yes	No													
NEW HAVEN	CT153336	EAST WHARF BEACH	Yes	No													
NEW HAVEN	CT910056	GULF BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Yes	Yes	Yes	Yes								Yes		Yes	
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	Yes	Yes		Yes				Yes		Yes			Yes		
NEW HAVEN	CT320303	PENT ROAD BEACH	Yes	No													
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Yes	Yes	Yes	Yes		Yes				Yes				Yes	
NEW HAVEN	CT224775	STONY CREEK BEACH	Yes	Yes		Yes											
NEW HAVEN	CT386314	SURF CLUB BEACH	Yes	No													
NEW HAVEN	CT857174	WALNUT BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT210340	WEST WHARF BEACH	Yes	No													
NEW HAVEN	CT351834	WOODMONT BEACH	Yes	Yes	Yes	Yes											
	19		**19**	**14**	**9**	**14**	**0**	**2**	**0**	**1**	**0**	**2**	**0**	**2**	**3**	**2**	**0**
NEW LONDON	CT340493	DUBOIS BEACH	Yes	Yes								Yes	Yes				
NEW LONDON	CT705857	EASTERN POINT BEACH	No	N/A													
NEW LONDON	CT434367	ESKER POINT BEACH	No	N/A													
NEW LONDON	CT496693	GREEN HARBOR BEACH	No	N/A													
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	No	N/A													
NEW LONDON	CT303091	KIDDIE'S BEACH	No	N/A													
NEW LONDON	CT120292	MCCOOK POINT BEACH	No	N/A													
NEW LONDON	CT110195	NOANK DOCK	No	N/A													
NEW LONDON	CT407959	OCEAN BEACH PARK	No	N/A													
NEW LONDON	CT079164	PLEASURE BEACH	No	N/A													
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
NEW LONDON	CT493837	SOUNDVIEW BEACH	Yes	No													
NEW LONDON	CT685151	WATERFORD TOWN BEACH	No	N/A													
NEW LONDON	CT282823	WHITE SANDS BEACH	Yes	No													
	14		**4**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**1**	**1**	**0**	**0**
TOTALS:	**66**		**56**	**43**	**14**	**40**	**0**	**9**	**0**	**1**	**8**	**5**	**4**	**9**	**10**	**3**	**3**

C.4 US EPA NOTIFICATION EVENTS WORKSHEET FOR 2008

COUNTY	BEACH ID	BEACH NAME	ACTION TYPE	ACTION START DATE/TIME	ACTION END DATE/TIME	ACTION DURATION (DAYS)	ACTION REASON(S)	ACTION INDICATOR(S)	ACTION SOURCE(S)
FAIRFIELD	CT872506	BYRAM BEACH	Closure	5/28/2008	5/29/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/4/2008	6/5/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/5/2008	6/6/2008	1	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/9/2008	6/10/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/15/2008	6/16/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/17/2008	6/18/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/19/2008	6/20/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/14/2008	7/15/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/3/2008	8/4/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/6/2008	8/7/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/16/2008	8/17/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	6/4/2008	6/5/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	6/15/2008	6/16/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	8/2/2008	8/3/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	8/6/2008	8/7/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	6/4/2008	6/5/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	6/15/2008	6/16/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	8/2/2008	8/3/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	8/6/2008	8/7/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Closure	9/7/2008	9/8/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	8/1/2008	8/2/2008	1	ELEV_BACT	ENTERO	SEPTIC
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	8/3/2008	8/4/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	8/6/2008	8/7/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT101236	ISLAND BEACH	Closure	9/7/2008	9/8/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	8/9/2008	8/10/2008	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	8/9/2008	8/10/2008	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	8/26/2008	8/28/2008	2	ELEV_BACT	ENTERO	UNKNOWN
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	6/16/2008	6/20/2008	4	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	7/3/2008	7/11/2008	8	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	7/17/2008	7/21/2008	4	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	7/24/2008	7/26/2008	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	6/4/2008	6/5/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	6/15/2008	6/16/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	8/2/2008	8/3/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	8/6/2008	8/7/2008	1	RAINFALL	PREEMPT	STORM

(continued)

COUNTY	BEACH ID	BEACH NAME	ACTION TYPE	ACTION START DATE/TIME	ACTION END DATE/TIME	ACTION DURATION (DAYS)	ACTION REASON(S)	ACTION INDICATOR(S)	ACTION SOURCE(S)
FAIRFIELD	CT046814	SHORT BEACH	Closure	6/5/2008	6/6/2008	1	ELEV_BACT	ENTERO	UNKNOWN
FAIRFIELD	CT046814	SHORT BEACH	Closure	6/17/2008	6/18/2008	1	ELEV_BACT	ENTERO	UNKNOWN
FAIRFIELD	CT046814	SHORT BEACH	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT046814	SHORT BEACH	Closure	8/9/2008	8/10/2008	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT046814	SHORT BEACH	Closure	8/26/2008	8/28/2008	2	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT952269	WEED BEACH	Closure	6/16/2008	6/20/2008	4	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT952269	WEED BEACH	Closure	7/3/2008	7/8/2008	5	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT952269	WEED BEACH	Closure	7/24/2008	7/26/2008	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	6/4/2008	6/5/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	6/15/2008	6/16/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	7/24/2008	7/25/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	8/2/2008	8/3/2008	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	8/6/2008	8/7/2008	1	RAINFALL	PREEMPT	STORM
	13		**55**			**79**			
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	6/10/2008	6/13/2008	3	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	8/4/2008	8/8/2008	4	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Closure	6/30/2008	7/3/2008	3	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Contamination Advisory	8/1/2008	8/31/2008	30	OTHER	OTHER	WILDLIFE
	3		**4**			**40**			
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Closure	8/8/2008	8/10/2008	2	RAINFALL	PREEMPT	STORM
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Closure	8/8/2008	8/10/2008	2	RAINFALL	PREEMPT	STORM
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Closure	6/30/2008	7/3/2008	3	ELEV_BACT	ENTERO	UNKNOWN
NEW HAVEN	CT910056	GULF BEACH	Closure	8/8/2008	8/10/2008	2	RAINFALL	PREEMPT	STORM
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Closure	6/16/2008	6/18/2008	2	ELEV_BACT	ENTERO	WILDLIFE
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Closure	8/9/2008	8/10/2008	1	RAINFALL	PREEMPT	RUNOFF
NEW HAVEN	CT857174	WALNUT BEACH	Closure	8/8/2008	8/10/2008	2	RAINFALL	PREEMPT	STORM
NEW HAVEN	CT351834	WOODMONT BEACH	Closure	8/8/2008	8/10/2008	2	RAINFALL	PREEMPT	STORM
	8		**8**			**16**			
Totals:	**24**		**67**			**135**			

C.5 US EPA NOTIFICATION EVENT DURATIONS WORKSHEET FOR 2008

	Monitored Beaches with Actions During Swim Season				Swim Season Actions Sorted by Duration				
County	Beach ID	Beach Name	No. of beach actions	No. of days under an action	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration
FAIRFIELD	CT872506	BYRAM BEACH	12	12	12				
FAIRFIELD	CT728213	CUMMINGS BEACH	5	5	5				
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	5	5	5				
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	1	1	1				
FAIRFIELD	CT486090	GREENWICH POINT BEACH	4	4	4				
FAIRFIELD	CT101236	ISLAND BEACH	1	1	1				
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	2	2	2				
FAIRFIELD	CT921236	LONG BEACH (PROPER)	3	4	2	1			
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	4	18		1	2	1	
FAIRFIELD	CT202901	QUIGLEY BEACH	5	5	5				
FAIRFIELD	CT046814	SHORT BEACH	5	6	4	1			
FAIRFIELD	CT952269	WEED BEACH	3	11		1	2		
FAIRFIELD	CT992639	WEST BEACH	5	5	5				
	13		**55**	**79**	**46**	**4**	**4**	**1**	**0**
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	2	7			2		
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	1	3			1		
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	1	30				1	
	3		**4**	**40**	**0**	**0**	**3**	**1**	**0**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	1	2		1			
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	1	2		1			
NEW HAVEN	CT001209	BRANFORD POINT BEACH	1	3			1		
NEW HAVEN	CT910056	GULF BEACH	1	2		1			
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	1	2		1			
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	1	1	1				
NEW HAVEN	CT857174	WALNUT BEACH	1	2		1			
NEW HAVEN	CT351834	WOODMONT BEACH	1	2		1			
	8		**8**	**16**	**1**	**6**	**1**	**0**	**0**
	24		**67**	**135**	**47**	**10**	**8**	**2**	**0**

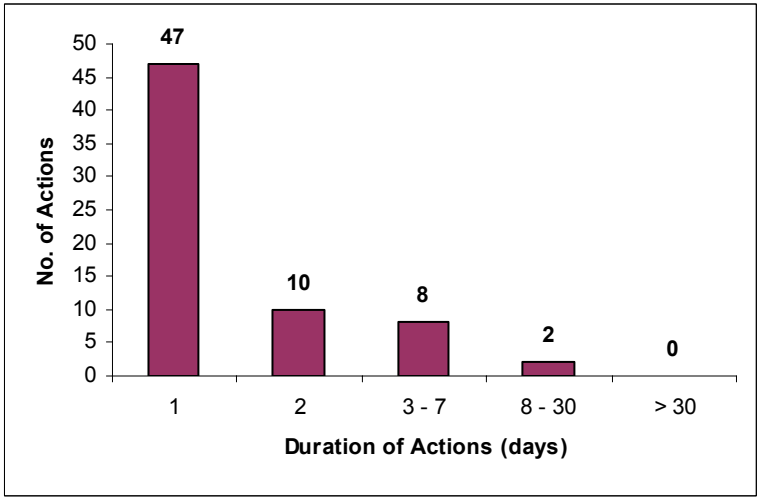
C.6 US EPA BEACH SEASON DAYS WORKSHEET FOR 2008

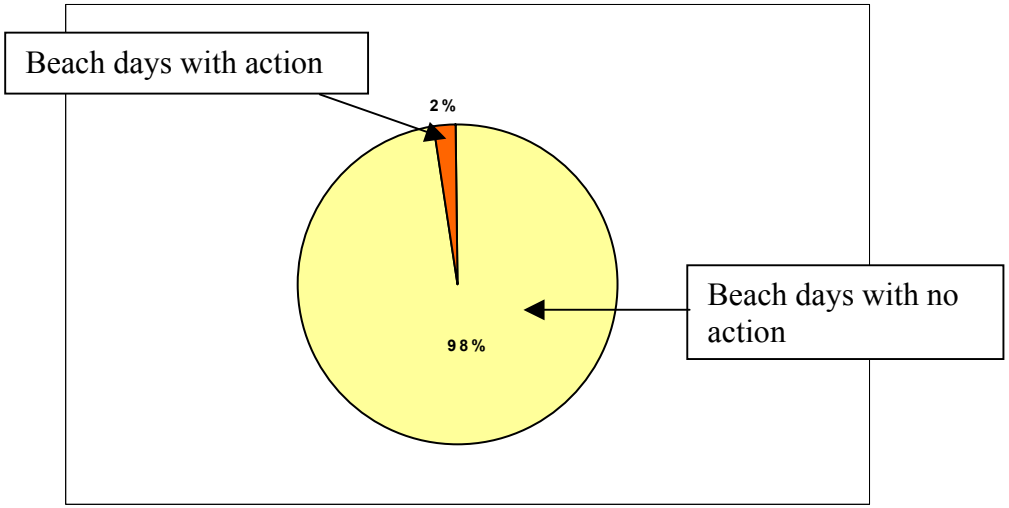
	Monitored Beaches			Under a Beach Action			Not Under an Action	
County	Beach ID	Beach Name	No. of beach days	Beach action in 2008?	No. of days under a beach action	Percent days under a beach action	No. of days not under a beach action	Percent days not under a beach action
FAIRFIELD	CT200292	BELL ISLAND BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT730976	BURYING HILL BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT872506	BYRAM BEACH	98	Yes	12	12.2%	86	87.8%
FAIRFIELD	CT003939	CALF PASTURE BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT135112	COMPO BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT728213	CUMMINGS BEACH	98	Yes	5	5.1%	93	94.9%
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	98	Yes	5	5.1%	93	94.9%
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	98	Yes	1	1.0%	97	99.0%
FAIRFIELD	CT486090	GREENWICH POINT BEACH	98	Yes	4	4.1%	94	95.9%
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT101236	ISLAND BEACH	98	Yes	1	1.0%	97	99.0%
FAIRFIELD	CT306507	JENNINGS BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT921236	LONG BEACH (PROPER)	98	Yes	4	4.1%	94	95.9%
FAIRFIELD	CT023928	MARVIN BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	98	Yes	18	18.4%	80	81.6%
FAIRFIELD	CT080788	PENFIELD BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT202901	QUIGLEY BEACH	98	Yes	5	5.1%	93	94.9%
FAIRFIELD	CT200291	ROWAYTON BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT634478	SASCO BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT404927	SEASIDE PARK BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT022992	SHADY BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT046814	SHORT BEACH	98	Yes	6	6.1%	92	93.9%
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT474040	SOUTHPORT BEACH	98		0	0.0%	98	100.0%
FAIRFIELD	CT952269	WEED BEACH	98	Yes	11	11.2%	87	88.8%
FAIRFIELD	CT992639	WEST BEACH	98	Yes	5	5.1%	93	94.9%
	28		**2,744**	**13**	**79**	**2.9%**	**2,665**	**97.1%**
MIDDLESEX	CT766006	HARVEY'S BEACH	98		0	0.0%	98	100.0%
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	98		0	0.0%	98	100.0%
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	98	Yes	7	7.1%	91	92.9%
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	98	Yes	3	3.1%	95	96.9%
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	98	Yes	30	30.6%	68	69.4%
	5		**490**	**3**	**40**	**8.2%**	**450**	**91.8%**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT001209	BRANFORD POINT BEACH	98	Yes	3	3.1%	95	96.9%

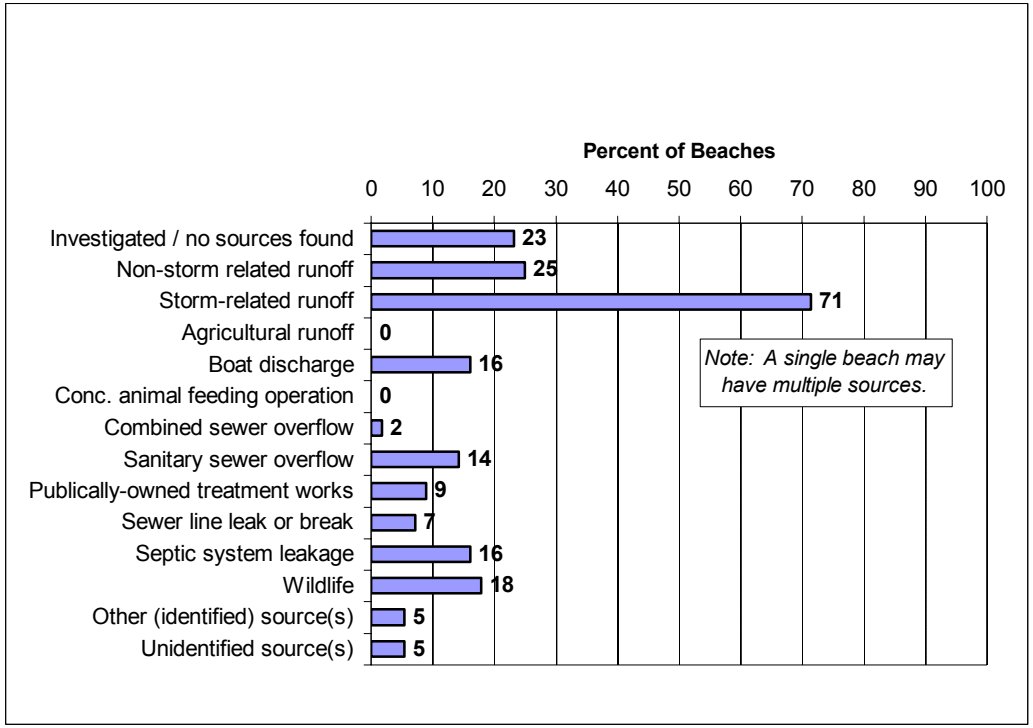
(continued)

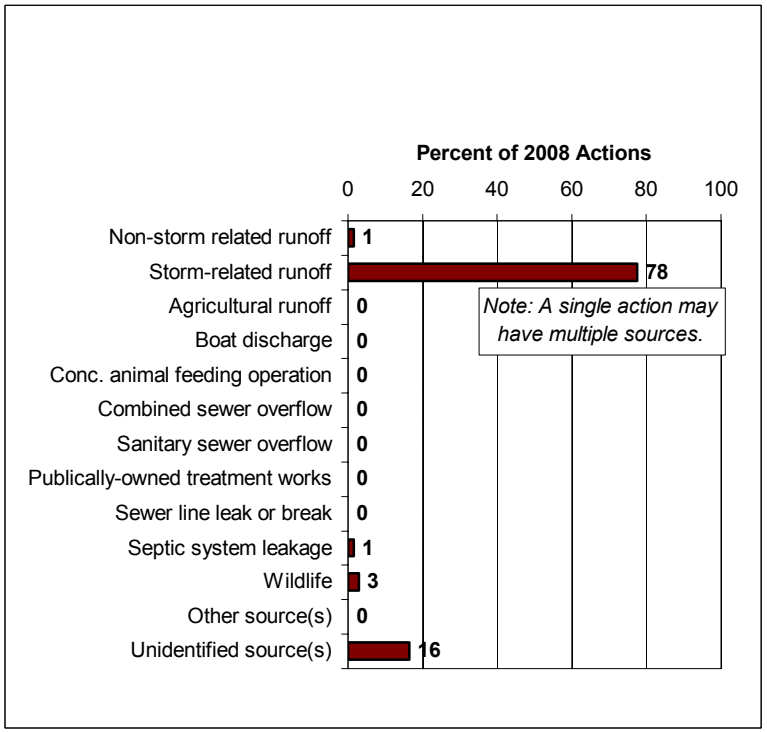
	Monitored Beaches			Under a Beach Action			Not Under an Action	
County	Beach ID	Beach Name	No. of beach days	Beach action in 2008?	No. of days under a beach action	Percent days under a beach action	No. of days not under a beach action	Percent days not under a beach action
NEW HAVEN	CT409818	CLARK AVENUE BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT153336	EAST WHARF BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT910056	GULF BEACH	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT320303	PENT ROAD BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	98	Yes	1	1.0%	97	99.0%
NEW HAVEN	CT224775	STONY CREEK BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT386314	SURF CLUB BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT857174	WALNUT BEACH	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT210340	WEST WHARF BEACH	98		0	0.0%	98	100.0%
NEW HAVEN	CT351834	WOODMONT BEACH	98	Yes	2	2.0%	96	98.0%
	19		**1,862**	**8**	**16**	**0.9%**	**1,846**	**99.1%**
NEW LONDON	CT340493	DUBOIS BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT705857	EASTERN POINT BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT434367	ESKER POINT BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT496693	GREEN HARBOR BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT303091	KIDDIE'S BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT120292	MCCOOK POINT BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT110195	NOANK DOCK	98		0	0.0%	98	100.0%
NEW LONDON	CT407959	OCEAN BEACH PARK	98		0	0.0%	98	100.0%
NEW LONDON	CT079164	PLEASURE BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT493837	SOUNDVIEW BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT685151	WATERFORD TOWN BEACH	98		0	0.0%	98	100.0%
NEW LONDON	CT282823	WHITE SANDS BEACH	98		0	0.0%	98	100.0%
	14		**1,372**	**0**	**0**	**0.0%**	**1,372**	**100.0%**
Totals:	**66**		**6,468**	**24**	**135**	**2.1%**	**6,333**	**97.9%**

C.7 US EPA BEACH DATA CHARTS FOR 2008









APPENDIX D - US EPA FORMATTED BEACH DATA FOR 2009

US EPA provided Beach Grant states and territories with formatted beach data summaries for the 2009 bathing season. The summaries were originally provided as seven (7) worksheets in an Excel spreadsheet and represent the data US EPA used for its national beach summary. Except where noted the formatted US EPA beach data presented here for Connecticut have been reviewed and found to agree with the beach data presented earlier in this annual report for 2009.

The formatting and structure of these data summaries for 2008 in Appendix C and 2009 in Appendix D remain the same.

If you are interested in comparing beach data between and among beach states and territories, you should use formatted US EPA beach data for the basis of your comparisons because the formatting for a particular bathing season should be the same for each Beach Grant state or territory.

☞ Visit the US EPA BEACON2 website to locate beaches and view beach data:
http://watersgeo.epa.gov/beacon2/

D.1 CONNECTICUT'S US EPA SUMMARY WORKSHEET FOR 2009

	BEACH Act Beaches			Beaches with Actions				Beach Actions Sorted by Duration						Beach Days				
County	No. of beaches	No. of beaches monitored during swimming season	Percent of beaches monitored during swimming season	No. of monitored beaches with actions	No. of monitored beaches without actions	Percent of monitored beaches affected by a beach action	Percent of monitored beaches not affected by a beach action	No. of beach actions	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 7 day duration	No. of actions of 8 30 day duration	No. of actions greater than 30 day duration	No. of beach days (monitored beaches)	No. of days under a beach action (monitored beaches)	Percent days under a beach action	No. of days not under a beach action (monitored beaches)	Percent days not under a beach action
FAIRFIELD	28	28	100.0%	25	3	89.3%	10.7%	67	55	9	3	0	0	2,940	87	3.0%	2,853	97.0%
MIDDLESEX	5	5	100.0%	3	2	60.0%	40.0%	5	0	3	2	0	0	525	15	2.9%	510	97.1%
NEW HAVEN	19	19	100.0%	2	17	10.5%	89.5%	3	0	3	0	0	0	1,995	6	0.3%	1,989	99.7%
NEW LONDON	14	13	92.9%	0	13	0.0%	100.0%	0	---	---	---	---	---	1,365	0	0.0%	1,365	100.0%
	66	**65**	**98.5%**	**30**	**35**	**46.2%**	**53.8%**	**75**	**55**	**15**	**5**	**0**	**0**	**6,825**	**108**	**1.6%**	**6,717**	**98.4%**
KEY QUESTIONS:																		
	How many beaches were monitored?			How many beaches had actions?				How many actions were there and how long were they?						What portion of the swimming season were beaches under an action?				

D.2 CONNECTICUT BEACH ATTRIBUTES WORKSHEET FOR 2009

						BEACH BOUNDARIES ENTERED?			
COUNTY	BEACH ID	BEACH NAME	BEACH ACT BEACH?	BEACH ACCESSIBILITY	BEACH TIER RANK	START LATITUDE	START LONGITUDE	END LATITUDE	END LONGITUDE
FAIRFIELD	CT200292	BELL ISLAND BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT730976	BURYING HILL BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT872506	BYRAM BEACH	Yes	Public/Public	3	Yes	Yes	Yes	Yes
FAIRFIELD	CT003939	CALF PASTURE BEACH	Yes	Public/Public	2	Yes	Yes	Yes	Yes
FAIRFIELD	CT135112	COMPO BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT728213	CUMMINGS BEACH	Yes	Public/Public	3	Yes	Yes	Yes	Yes
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Yes	Public/Public	3	Yes	Yes	Yes	Yes
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Yes	Public/Public	3	Yes	Yes	Yes	Yes
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT101236	ISLAND BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT306507	JENNINGS BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Yes	Public/Public	2	Yes	Yes	Yes	Yes
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Yes	Public/Public	2	Yes	Yes	Yes	Yes
FAIRFIELD	CT023928	MARVIN BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Yes	Public/Public	2	Yes	Yes	Yes	Yes
FAIRFIELD	CT080788	PENFIELD BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT202901	QUIGLEY BEACH	Yes	Public/Public	3	Yes	Yes	Yes	Yes
FAIRFIELD	CT200291	ROWAYTON BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT634478	SASCO BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT404927	SEASIDE PARK BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT022992	SHADY BEACH	Yes	Public/Public	2	Yes	Yes	Yes	Yes
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT046814	SHORT BEACH	Yes	Public/Public	2	Yes	Yes	Yes	Yes
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT474040	SOUTHPORT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
FAIRFIELD	CT952269	WEED BEACH	Yes	Public/Public	2	Yes	Yes	Yes	Yes
FAIRFIELD	CT992639	WEST BEACH	Yes	Public/Public	3	Yes	Yes	Yes	Yes
	28		**28**						
MIDDLESEX	CT766006	HARVEY'S BEACH	Yes	Public/Public	2	Yes	Yes	Yes	Yes
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Yes	Public/Public	2	Yes	Yes	Yes	Yes
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Yes	Public/Public	1	Yes	Yes	Yes	Yes
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
	5		**5**						
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT409818	CLARK AVENUE BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes

(continued)

						BEACH BOUNDARIES ENTERED?			
COUNTY	BEACH ID	BEACH NAME	BEACH ACT BEACH?	BEACH ACCESSIBILITY	BEACH TIER RANK	START LATITUDE	START LONGITUDE	END LATITUDE	END LONGITUDE
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT153336	EAST WHARF BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT910056	GULF BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Yes	Public/Public	2	Yes	Yes	Yes	Yes
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT320303	PENT ROAD BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT224775	STONY CREEK BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT386314	SURF CLUB BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT857174	WALNUT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT210340	WEST WHARF BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW HAVEN	CT351834	WOODMONT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
	19		**19**						
NEW LONDON	CT340493	DUBOIS BEACH	Yes	Private/Public	3	Yes	Yes	Yes	Yes
NEW LONDON	CT705857	EASTERN POINT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT434367	ESKER POINT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT496693	GREEN HARBOR BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT303091	KIDDIE'S BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT120292	MCCOOK POINT BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT110195	NOANK DOCK	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT407959	OCEAN BEACH PARK	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT079164	PLEASURE BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT493837	SOUNDVIEW BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT685151	WATERFORD TOWN BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
NEW LONDON	CT282823	WHITE SANDS BEACH	Yes	Public/Public	1	Yes	Yes	Yes	Yes
	14		**14**						
Total:	**66**		**66**						

D.3 US EPA BEACH MONITORING WORKSHEET FOR 2009

COUNTY	BEACH ID	BEACH NAME	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFF SEASON MONITOR FREQ	OFF SEASON MONITOR FREQ UNITS
FAIRFIELD	CT200292	BELL ISLAND BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT730976	BURYING HILL BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT872506	BYRAM BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT003939	CALF PASTURE BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT135112	COMPO BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT728213	CUMMINGS BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT486090	GREENWICH POINT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT101236	ISLAND BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT306507	JENNINGS BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT921236	LONG BEACH (PROPER)	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT023928	MARVIN BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT080788	PENFIELD BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT202901	QUIGLEY BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT200291	ROWAYTON BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT634478	SASCO BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT404927	SEASIDE PARK BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT022992	SHADY BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT046814	SHORT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT474040	SOUTHPORT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT952269	WEED BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
FAIRFIELD	CT992639	WEST BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
	28				**28**			
MIDDLESEX	CT766006	HARVEY'S BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	105	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	105	DAYS	4	PER_MONTH	0	PER_MONTH
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
	5				**5**			
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT001209	BRANFORD POINT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH

(continued)

COUNTY	BEACH ID	BEACH NAME	SWIM SEASON LENGTH	SWIM SEASON LENGTH UNITS	SWIM SEASON MONITOR FREQ	SWIM SEASON MONITOR FREQ UNITS	OFF SEASON MONITOR FREQ	OFF SEASON MONITOR FREQ UNITS
NEW HAVEN	CT409818	CLARK AVENUE BEACH	105	DAYS	7	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT153336	EAST WHARF BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT910056	GULF BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT320303	PENT ROAD BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT224775	STONY CREEK BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT386314	SURF CLUB BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT857174	WALNUT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT210340	WEST WHARF BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW HAVEN	CT351834	WOODMONT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
	19				**19**			
NEW LONDON	CT340493	DUBOIS BEACH	105	DAYS	0	PER_MONTH	0	PER_MONTH
NEW LONDON	CT705857	EASTERN POINT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT434367	ESKER POINT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT496693	GREEN HARBOR BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT303091	KIDDIE'S BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT120292	MCCOOK POINT BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT110195	NOANK DOCK	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT407959	OCEAN BEACH PARK	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT079164	PLEASURE BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT493837	SOUNDVIEW BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT685151	WATERFORD TOWN BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
NEW LONDON	CT282823	WHITE SANDS BEACH	105	DAYS	4	PER_MONTH	0	PER_MONTH
	14				**13**			
TOTALS:	**66**				**65**			

D.4 US EPA POSSIBLE POLLUTION SOURCES WORKSHEET FOR 2009

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES*												
COUNTY	BEACH ID	BEACH NAME	POLL. SOURCES INVESTI-GATED?	POLL. SOURCES FOUND?	RUNOFF	STORM	AGRICUL-TURAL	BOAT	CAFO	CSO	SSO	POTW	SEWER LINE	SEPTIC	WILDLIFE	OTHER	UNKNOWN
FAIRFIELD	CT200292	BELL ISLAND BEACH	Yes	Yes		Yes											
FAIRFIELD	CT730976	BURYING HILL BEACH	Yes	Yes		Yes											
FAIRFIELD	CT872506	BYRAM BEACH	Yes	Yes		Yes		Yes							Yes		
FAIRFIELD	CT003939	CALF PASTURE BEACH	No	N/A													
FAIRFIELD	CT135112	COMPO BEACH	Yes	Yes		Yes											
FAIRFIELD	CT728213	CUMMINGS BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Yes	Yes											Yes		
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Yes	Yes		Yes									Yes		
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Yes	Yes		Yes											
FAIRFIELD	CT101236	ISLAND BEACH	Yes	Yes											Yes		
FAIRFIELD	CT306507	JENNINGS BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Yes	Yes		Yes											Yes
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Yes	Yes		Yes											Yes
FAIRFIELD	CT023928	MARVIN BEACH	Yes	Yes		Yes											
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
FAIRFIELD	CT080788	PENFIELD BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT202901	QUIGLEY BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT200291	ROWAYTON BEACH	Yes	Yes		Yes											
FAIRFIELD	CT634478	SASCO BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT404927	SEASIDE PARK BEACH	Yes	Yes		Yes						Yes					
FAIRFIELD	CT022992	SHADY BEACH	Yes	Yes		Yes											
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Yes	Yes	Yes	Yes					Yes	Yes		Yes		Yes	
FAIRFIELD	CT046814	SHORT BEACH	Yes	Yes		Yes											Yes
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT474040	SOUTHPORT BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT952269	WEED BEACH	Yes	Yes		Yes		Yes					Yes	Yes	Yes		
FAIRFIELD	CT992639	WEST BEACH	Yes	Yes	Yes	Yes											
	28		**27**	**27**	**5**	**25**	**0**	**3**	**0**	**0**	**6**	**2**	**1**	**3**	**6**	**1**	**3**
MIDDLESEX	CT766006	HARVEY'S BEACH	Yes	Yes		Yes											
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	Yes	No													
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Yes	Yes		Yes											
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Yes	Yes		Yes											
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Yes	No													
	5		**5**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Yes	Yes	Yes	Yes									Yes		
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Yes	Yes	Yes	Yes											
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Yes	Yes		Yes						Yes					
NEW HAVEN	CT409818	CLARK AVENUE BEACH	Yes	Yes		Yes											

(continued)

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES*												
COUNTY	BEACH ID	BEACH NAME	POLL. SOURCES INVESTI-GATED?	POLL. SOURCES FOUND?	RUNOFF	STORM	AGRICUL-TURAL	BOAT	CAFO	CSO	SSO	POTW	SEWER LINE	SEPTIC	WILDLIFE	OTHER	UNKNOWN
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	Yes	No													
NEW HAVEN	CT153336	EAST WHARF BEACH	Yes	No													
NEW HAVEN	CT910056	GULF BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Yes	Yes	Yes	Yes								Yes		Yes	
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	Yes	Yes		Yes				Yes		Yes			Yes		
NEW HAVEN	CT320303	PENT ROAD BEACH	Yes	No													
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Yes	Yes	Yes	Yes		Yes				Yes				Yes	
NEW HAVEN	CT224775	STONY CREEK BEACH	Yes	Yes		Yes								Yes			
NEW HAVEN	CT386314	SURF CLUB BEACH	Yes	No													
NEW HAVEN	CT857174	WALNUT BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT210340	WEST WHARF BEACH	Yes	No													
NEW HAVEN	CT351834	WOODMONT BEACH	Yes	Yes	Yes	Yes											
	19		**19**	**14**	**9**	**14**	**0**	**2**	**0**	**1**	**0**	**3**	**0**	**3**	**3**	**2**	**0**
NEW LONDON	CT705857	EASTERN POINT BEACH	No	N/A													
NEW LONDON	CT434367	ESKER POINT BEACH	No	N/A													
NEW LONDON	CT496693	GREEN HARBOR BEACH	No	N/A													
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	No	N/A													
NEW LONDON	CT303091	KIDDIE'S BEACH	No	N/A													
NEW LONDON	CT120292	MCCOOK POINT BEACH	No	N/A													
NEW LONDON	CT110195	NOANK DOCK	No	N/A													
NEW LONDON	CT407959	OCEAN BEACH PARK	No	N/A													
NEW LONDON	CT079164	PLEASURE BEACH	No	N/A													
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
NEW LONDON	CT493837	SOUNDVIEW BEACH	Yes	No													
NEW LONDON	CT685151	WATERFORD TOWN BEACH	No	N/A													
NEW LONDON	CT282823	WHITE SANDS BEACH	Yes	No													
	13		**3**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**
TOTALS:	**65**		**54**	**45**	**14**	**43**	**0**	**6**	**0**	**1**	**6**	**5**	**1**	**7**	**10**	**3**	**3**

(continued)

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES*												
COUNTY	BEACH ID	BEACH NAME	POLL. SOURCES INVESTI-GATED?	POLL. SOURCES FOUND?	RUNOFF	STORM	AGRICUL-TURAL	BOAT	CAFO	CSO	SSO	POTW	SEWER LINE	SEPTIC	WILDLIFE	OTHER	UNKNOWN

*** POLLUTION SOURCES COLUMN HEADINGS**

***Note*: The pollution source categories allow states to document real and possible sources of pollution that impact a beach.**

RUNOFF: Non-storm related, dryweather runoff
STORM: Storm related, wet-weather runoff
AGRICULTURAL: Agricultural runoff
BOAT: Boat discharge
CAFO: Concentrated animal feeding operation
CSO: Combined sewer overflow
SSO: Sanitary sewer overflow
POTW: Pubicly-owned treatment works
SEWER LINE: Sewer line leak, blockage, or break
SEPTIC: Septic system leakage
WILDLIFE: Wildlife pollution
OTHER: Other source known but not listed above
UNKNOWN: Source exists but unidentified

D.5 US EPA NOTIFICATION EVENTS WORKSHEET FOR 2009

COUNTY	BEACH ID	BEACH NAME	ACTION TYPE	ACTION START DATE/TIME	ACTION END DATE/TIME	ACTION DURATION (DAYS)	ACTION REASON(S)	ACTION INDICATOR(S)	ACTION SOURCE(S)
FAIRFIELD	CT200292	BELL ISLAND BEACH	Closure	6/18/2009	6/20/2009	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/4/2009	6/5/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/6/2009	6/7/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/9/2009	6/11/2009	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/15/2009	6/16/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/18/2009	6/22/2009	4	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/27/2009	6/28/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/8/2009	7/9/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/21/2009	7/23/2009	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/24/2009	7/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/31/2009	8/1/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/3/2009	8/4/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/11/2009	8/12/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/22/2009	8/23/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/29/2009	8/30/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT003939	CALF PASTURE BEACH	Closure	5/29/2009	6/3/2009	5	ELEV_BACT	ENTERO	UNKNOWN
FAIRFIELD	CT003939	CALF PASTURE BEACH	Closure	6/18/2009	6/20/2009	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT135112	COMPO BEACH	Contamination Advisory	8/18/2009	8/20/2009	2	ELEV_BACT	ENTERO	UNKNOWN
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	6/9/2009	6/10/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	6/27/2009	6/28/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	8/22/2009	8/23/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	6/9/2009	6/10/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	6/27/2009	6/28/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	8/22/2009	8/23/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	8/11/2009	8/12/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	8/22/2009	8/23/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Closure	6/18/2009	6/20/2009	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT101236	ISLAND BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT306507	JENNINGS BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	6/10/2009	6/11/2009	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	6/10/2009	6/11/2009	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT023928	MARVIN BEACH	Closure	6/18/2009	6/20/2009	2	RAINFALL	PREEMPT	STORM

(continued)

COUNTY	BEACH ID	BEACH NAME	ACTION TYPE	ACTION START DATE/TIME	ACTION END DATE/TIME	ACTION DURATION (DAYS)	ACTION REASON(S)	ACTION INDICATOR(S)	ACTION SOURCE(S)
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	7/31/2009	8/1/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT080788	PENFIELD BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	6/9/2009	6/10/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	6/27/2009	6/28/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	8/22/2009	8/23/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT200291	ROWAYTON BEACH	Closure	6/18/2009	6/20/2009	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT634478	SASCO BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT022992	SHADY BEACH	Closure	5/29/2009	6/3/2009	5	ELEV_BACT	ENTERO	UNKNOWN
FAIRFIELD	CT022992	SHADY BEACH	Closure	6/18/2009	6/20/2009	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT046814	SHORT BEACH	Closure	6/10/2009	6/11/2009	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT046814	SHORT BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	UNKNOWN
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT474040	SOUTHPORT BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT952269	WEED BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT952269	WEED BEACH	Closure	7/31/2009	8/1/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT952269	WEED BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	6/9/2009	6/10/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	6/19/2009	6/20/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	6/27/2009	6/28/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	8/22/2009	8/23/2009	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	8/24/2009	8/25/2009	1	RAINFALL	PREEMPT	STORM
	25		**67**			**87**			
MIDDLESEX	CT766006	HARVEY'S BEACH	Closure	7/8/2009	7/10/2009	2	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT766006	HARVEY'S BEACH	Closure	8/4/2009	8/6/2009	2	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	7/10/2009	7/14/2009	4	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	8/17/2009	8/22/2009	5	RAINFALL	PREEMPT	STORM
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Closure	8/12/2009	8/14/2009	2	ELEV_BACT	ENTERO	STORM
	3		**5**			**15**			
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Closure	6/22/2009	6/24/2009	2	ELEV_BACT	ENTERO	STORM
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Closure	7/22/2009	7/24/2009	2	ELEV_BACT	ENTERO	STORM
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Closure	8/25/2009	8/27/2009	2	ELEV_BACT	ENTERO	UNKNOWN
	2		**3**			**6**			
Totals:	**30**		**75**			**108**			

D.6 US EPA NOTIFICATION EVENT DURATIONS FOR WORKSHEET 2009

	Monitored Beaches with Actions During Swim Season				Swim Season Actions Sorted by Duration				
County	Beach ID	Beach Name	No. of beach actions	No. of days under an action	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration
FAIRFIELD	CT200292	BELL ISLAND BEACH	1	2		1			
FAIRFIELD	CT872506	BYRAM BEACH	15	20	12	2	1		
FAIRFIELD	CT003939	CALF PASTURE BEACH	2	7		1	1		
FAIRFIELD	CT135112	COMPO BEACH	1	2		1			
FAIRFIELD	CT728213	CUMMINGS BEACH	5	5	5				
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	5	5	5				
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	1	1	1				
FAIRFIELD	CT486090	GREENWICH POINT BEACH	4	4	4				
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	1	2		1			
FAIRFIELD	CT101236	ISLAND BEACH	1	1	1				
FAIRFIELD	CT306507	JENNINGS BEACH	1	1	1				
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	2	2	2				
FAIRFIELD	CT921236	LONG BEACH (PROPER)	2	2	2				
FAIRFIELD	CT023928	MARVIN BEACH	1	2		1			
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	3	3	3				
FAIRFIELD	CT080788	PENFIELD BEACH	1	1	1				
FAIRFIELD	CT202901	QUIGLEY BEACH	5	5	5				
FAIRFIELD	CT200291	ROWAYTON BEACH	1	2		1			
FAIRFIELD	CT634478	SASCO BEACH	1	1	1				
FAIRFIELD	CT022992	SHADY BEACH	2	7		1	1		
FAIRFIELD	CT046814	SHORT BEACH	2	2	2				
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	1	1	1				
FAIRFIELD	CT474040	SOUTHPORT BEACH	1	1	1				
FAIRFIELD	CT952269	WEED BEACH	3	3	3				
FAIRFIELD	CT992639	WEST BEACH	5	5	5				
	25		**67**	**87**	**55**	**9**	**3**	**0**	**0**
MIDDLESEX	CT766006	HARVEY'S BEACH	2	4		2			
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	2	9			2		
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	1	2		1			
	3		**5**	**15**	**0**	**3**	**2**	**0**	**0**
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	2	4		2			
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	1	2		1			
	2		**3**	**6**	**0**	**3**	**0**	**0**	**0**
	30		**75**	**108**	**55**	**15**	**5**	**0**	**0**

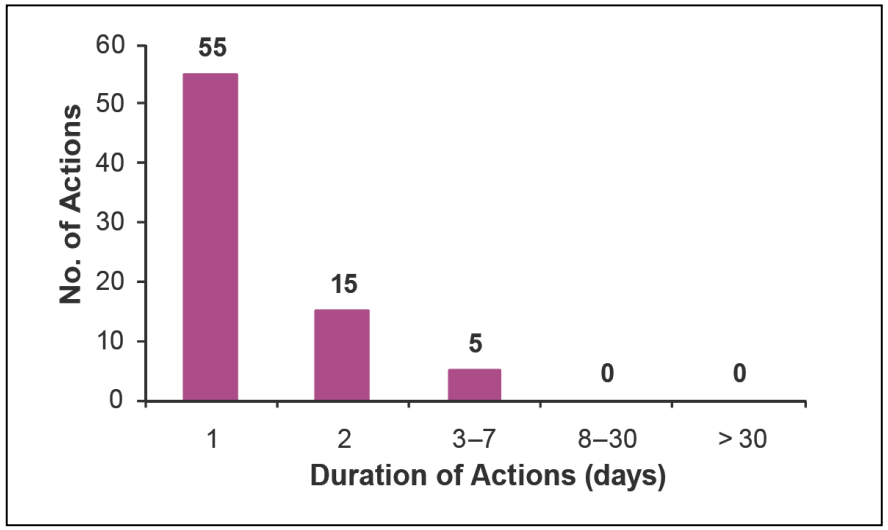
D.7 US EPA BEACH SEASON DAYS WORKSHEET FOR WORKSHEET 2009

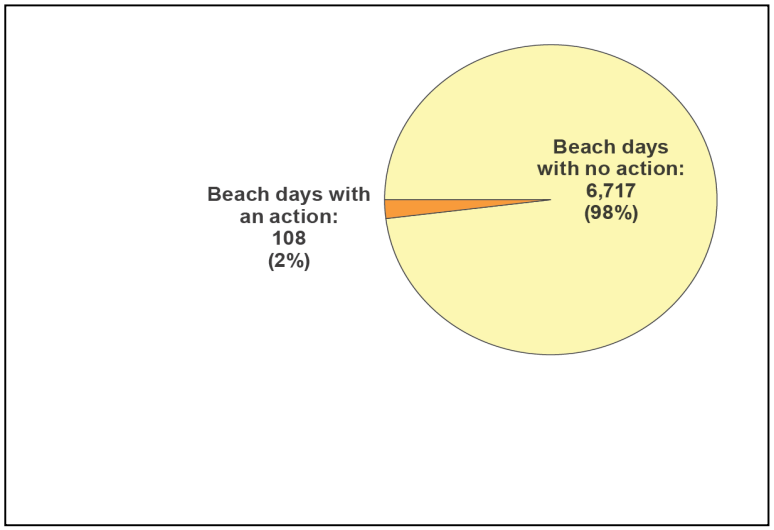
	Monitored Beaches			Under a Beach Action			Not Under an Action	
County	Beach ID	Beach Name	No. of beach days	Beach action in 2009?	No. of days under a beach action	Percent days under a beach action	No. of days not under a beach action	Percent days not under a beach action
FAIRFIELD	CT200292	BELL ISLAND BEACH	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT730976	BURYING HILL BEACH	105			0.0%	105	100.0%
FAIRFIELD	CT872506	BYRAM BEACH	105	Yes	20	19.0%	85	81.0%
FAIRFIELD	CT003939	CALF PASTURE BEACH	105	Yes	7	6.7%	98	93.3%
FAIRFIELD	CT135112	COMPO BEACH	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT728213	CUMMINGS BEACH	105	Yes	5	4.8%	100	95.2%
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	105	Yes	5	4.8%	100	95.2%
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	105	Yes	1	1.0%	104	99.0%
FAIRFIELD	CT486090	GREENWICH POINT BEACH	105	Yes	4	3.8%	101	96.2%
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT101236	ISLAND BEACH	105	Yes	1	1.0%	104	99.0%
FAIRFIELD	CT306507	JENNINGS BEACH	105	Yes	1	1.0%	104	99.0%
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT921236	LONG BEACH (PROPER)	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT023928	MARVIN BEACH	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	105	Yes	3	2.9%	102	97.1%
FAIRFIELD	CT080788	PENFIELD BEACH	105	Yes	1	1.0%	104	99.0%
FAIRFIELD	CT202901	QUIGLEY BEACH	105	Yes	5	4.8%	100	95.2%
FAIRFIELD	CT200291	ROWAYTON BEACH	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT634478	SASCO BEACH	105	Yes	1	1.0%	104	99.0%
FAIRFIELD	CT404927	SEASIDE PARK BEACH	105			0.0%	105	100.0%
FAIRFIELD	CT022992	SHADY BEACH	105	Yes	7	6.7%	98	93.3%
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	105			0.0%	105	100.0%
FAIRFIELD	CT046814	SHORT BEACH	105	Yes	2	1.9%	103	98.1%
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	105	Yes	1	1.0%	104	99.0%
FAIRFIELD	CT474040	SOUTHPORT BEACH	105	Yes	1	1.0%	104	99.0%
FAIRFIELD	CT952269	WEED BEACH	105	Yes	3	2.9%	102	97.1%
FAIRFIELD	CT992639	WEST BEACH	105	Yes	5	4.8%	100	95.2%
	28		**2,940**	**25**	**87**	**3.0%**	**2,853**	**97.0%**
MIDDLESEX	CT766006	HARVEY'S BEACH	105	Yes	4	3.8%	101	96.2%
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	105			0.0%	105	100.0%
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	105	Yes	9	8.6%	96	91.4%
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	105	Yes	2	1.9%	103	98.1%
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	105			0.0%	105	100.0%
	5		**525**	**3**	**15**	**2.9%**	**510**	**97.1%**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	105			0.0%	105	100.0%
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	105			0.0%	105	100.0%
NEW HAVEN	CT001209	BRANFORD POINT BEACH	105			0.0%	105	100.0%

(continued)

	Monitored Beaches			Under a Beach Action			Not Under an Action	
County	Beach ID	Beach Name	No. of beach days	Beach action in 2009?	No. of days under a beach action	Percent days under a beach action	No. of days not under a beach action	Percent days not under a beach action
NEW HAVEN	CT409818	CLARK AVENUE BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT153336	EAST WHARF BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT910056	GULF BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	105	Yes	4	3.8%	101	96.2%
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT320303	PENT ROAD BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	105	Yes	2	1.9%	103	98.1%
NEW HAVEN	CT224775	STONY CREEK BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT386314	SURF CLUB BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT857174	WALNUT BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT210340	WEST WHARF BEACH	105			0.0%	105	100.0%
NEW HAVEN	CT351834	WOODMONT BEACH	105			0.0%	105	100.0%
	19		**1,995**	**2**	**6**	**0.3%**	**1,989**	**99.7%**
NEW LONDON	CT705857	EASTERN POINT BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT434367	ESKER POINT BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT496693	GREEN HARBOR BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT303091	KIDDIE'S BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT120292	MCCOOK POINT BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT110195	NOANK DOCK	105		0	0.0%	105	100.0%
NEW LONDON	CT407959	OCEAN BEACH PARK	105		0	0.0%	105	100.0%
NEW LONDON	CT079164	PLEASURE BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT493837	SOUNDVIEW BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT685151	WATERFORD TOWN BEACH	105		0	0.0%	105	100.0%
NEW LONDON	CT282823	WHITE SANDS BEACH	105		0	0.0%	105	100.0%
	13		**1,365**	**0**	**0**	**0.0%**	**1,365**	**100.0%**
Totals:	**65**		**6,825**	**30**	**108**	**1.6%**	**6,717**	**98.4%**

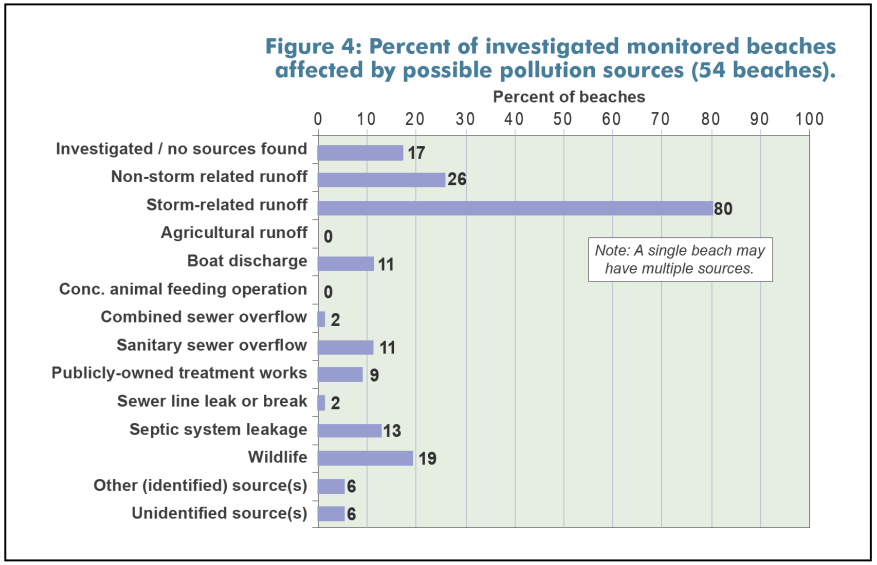
D.8 US EPA BEACH DATA CHARTS FOR 2009





Beach notification actions, 2007–2009

	2007	2008	2009
Number of monitored beaches	66	66	65
Number of beaches affected by notification actions	33	24	30
Percentage of beaches affected by notification actions	50%	36%	46%
Percentage of beach days affected by notification actions	2%	2%	2%



APPENDIX E - US EPA FORMATTED BEACH DATA FOR 2010

US EPA provided Beach Grant states and territories with formatted beach data summaries for the 2010 bathing season. The summaries were originally provided as seven (7) worksheets in an Excel spreadsheet and represent the data US EPA used for its national beach summary. Except where noted the formatted US EPA beach data presented here for Connecticut have been reviewed and found to agree with the beach data presented earlier in this annual report for 2010.

The formatting and structure of these data summaries for 2009 in Appendix D and 2010 in Appendix E remain largely the same but are not identical in some cases. Appendix E includes a US EPA Tier 1 Beach Statistics table that is new for the 2010 treatment of beach data. We strongly advise against comparing Teir 1 Beach Statistics between and among Beach Grant states and territories because each jurisdiction has set its own criteria (definition) for a Tier 1 beach.

If you are interested in comparing beach data between and among beach states and territories, you should use formatted US EPA beach data for the basis of your comparisons because the formatting for a particular bathing season should be the same for each Beach Grant state or territory.

☞ Visit the US EPA BEACON2 website to locate beaches and view beach data:
http://watersgeo.epa.gov/beacon2/

E.1 CONNECTICUT'S US EPA SUMMARY FOR WORKSHEET 2010

	BEACH Act Beaches						Actions During Swim Season			Actions Sorted by Duration						Swim Season Beach Days		
County	No. of BEACH Act beaches	No. of monitored beaches	Percent of beaches monitored	Total length of monitored beaches (M)	No. of Tier 1 beaches	Percent of Tier 1 beaches monitored	No. of monitored beaches with actions	No. of monitored beaches without actions	Percent of monitored beaches affected by a beach action	Total no. of beach actions	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration	No. of beach days (monitored beaches)	No. of days under a beach action (monitored beaches)	Percent days under a beach action
FAIRFIELD	28	28	100.0%	12,547	17	100%	27	1	96.4%	49	13	24	12	0	0	2,744	105	3.8%
MIDDLESEX	5	5	100.0%	1,222	4	100%	3	2	60.0%	5	2	3	0	0	0	490	8	1.6%
NEW HAVEN	19	19	100.0%	12,388	19	100%	7	12	36.8%	7	0	6	1	0	0	1,862	15	0.8%
NEW LONDON	14	13	92.9%	3,120	12	100%	2	11	15.4%	6	0	4	2	0	0	1,274	15	1.2%
	66	**65**	**98.5%**	**29,277**	**52**	100%	**39**	**26**	**60.0%**	**67**	**15**	**37**	**15**	**0**	**0**	**6,370**	**143**	**2.2%**

Definitions

BEACH Act Beaches: BEACH Act refers to the Beaches Environmental Assessment, Closure, and Health Act of 2000 which focuses on coastal recreational waters. States/territories provide EPA with a list of their coastal recreational beaches.

Monitored beaches: Beaches that are monitored at regular intervals. See "Monitoring" tab for monitoring frequency information

Tier 1 beaches: States and territories designate their significant public beaches as Tier 1 beaches (requirement of BEACH Act grant program). These are the beaches that have the highest risk. See "Attributes" tab for Tier designations.

Beach actions: Beach-specific advisories or closings issued by the reporting state or local governments. An action is recorded for a beach even if only a portion of the beach is affected. See "2010 Actions" tab for action information.

Action duration: Action duration is based on the times an action begins and ends. One "day" is considered the 24-hour period following the time an action is issued. Additional "days" are recorded when an action extends into any portion of subsequent 24-hour period(s). For example, an action that lasts 26 hours is recorded as a two-day action. See "Action Durations" tab for duration breakdowns.

Swim season: States indicate to EPA the period of time they consider to be the swim (or recreational) season for each beach. See "Monitoring" tab for swim season lengths.

Beach days: The number of days in the swim season. See "Beach Days" tab for the number of beach days under an action.

E.2 CONNECTICUT BEACH ATTRIBUTES FOR WORKSHEET 2010

County	Beach ID	Beach name	Beach accessibility	Beach tier rank	Beach length (M)	Start latitude	Start longitude	End latitude	End longitude
FAIRFIELD	CT200292	BELL ISLAND BEACH	Public/Public	1	200	41.05703	-73.43547	41.05714	-73.43772
FAIRFIELD	CT730976	BURYING HILL BEACH	Public/Public	1	125	41.11606	-73.31814	41.1155	-73.31922
FAIRFIELD	CT872506	BYRAM BEACH	Public/Public	3	169	41.00539	-73.64436	41.00403	-73.64511
FAIRFIELD	CT003939	CALF PASTURE BEACH	Public/Public	2	323	41.08636	-73.39214	41.08367	-73.39256
FAIRFIELD	CT135112	COMPO BEACH	Public/Public	1	862	41.10781	-73.34719	41.10222	-73.35319
FAIRFIELD	CT728213	CUMMINGS BEACH	Public/Public	2	413	41.0396	-73.51667	41.03858	-73.52064
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Public/Public	2	289	41.04714	-73.49692	41.04648	-73.50004
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Public/Public	1	357	40.98239	-73.62633	40.98125	-73.62944
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Public/Public	1	649	41.00978	-73.56942	41.00425	-73.57136
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Public/Public	1	2	41.07892	-73.42047	41.07894	-73.4205
FAIRFIELD	CT101236	ISLAND BEACH	Public/Public	2	291	40.98856	-73.61272	40.98903	-73.61042
FAIRFIELD	CT306507	JENNINGS BEACH	Public/Public	1	633	41.14297	-73.23394	41.13839	-73.23839
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Public/Public	2	60	41.1475	-73.12936	41.1475	-73.13006
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Public/Public	2	499	41.14892	-73.13786	41.15103	-73.14292
FAIRFIELD	CT023928	MARVIN BEACH	Public/Public	1	7	41.09192	-73.40086	41.09197	-73.40092
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Public/Public	1	322	41.04447	-73.48261	41.0461	-73.48333
FAIRFIELD	CT080788	PENFIELD BEACH	Public/Public	1	335	41.13597	-73.24014	41.13311	-73.24128
FAIRFIELD	CT202901	QUIGLEY BEACH	Public/Public	2	160	41.04425	-73.50162	41.04327	-73.50293
FAIRFIELD	CT200291	ROWAYTON BEACH	Public/Public	1	33	41.06211	-73.43492	41.06186	-73.43503
FAIRFIELD	CT634478	SASCO BEACH	Public/Public	1	204	41.12458	-73.27722	41.12528	-73.27944
FAIRFIELD	CT404927	SEASIDE PARK BEACH	Public/Public	1	2,900	41.16058	-73.19	41.14725	-73.21594
FAIRFIELD	CT022992	SHADY BEACH	Public/Public	2	341	41.08908	-73.39042	41.08636	-73.39214
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Public/Public	1	1,911	41.11528	-73.32031	41.11203	-73.33922
FAIRFIELD	CT046814	SHORT BEACH	Public/Public	2	770	41.16525	-73.10842	41.15869	-73.11047
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Public/Public	1	48	41.12089	-73.27047	41.12092	-73.27108
FAIRFIELD	CT474040	SOUTHPORT BEACH	Public/Public	1	254	41.12633	-73.29531	41.12486	-73.29756
FAIRFIELD	CT952269	WEED BEACH	Public/Public	1	150	41.04608	-73.492	41.04647	-73.49369
FAIRFIELD	CT992639	WEST BEACH	Public/Public	2	240	41.03839	-73.52161	41.03655	-73.5227
	28				**12,547**				
MIDDLESEX	CT766006	HARVEY'S BEACH	Public/Public	1	74	41.27344	-72.39508	41.27378	-72.39561
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	Public/Public	1	77	41.27861	-72.44222	41.27886	-72.44306
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Public/Public	2	138	41.26783	-72.51989	41.26892	-72.52047
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Public/Public	1	57	41.26872	-72.39303	41.26919	-72.39325
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Public/Public	1	876	41.27856	-72.45439	41.27408	-72.46267
	5				**1,222**				
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Public/Public	1	78	41.22347	-72.995	41.22347	-72.99589
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Public/Public	1	175	41.22344	-72.99292	41.22317	-72.99478
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Public/Public	1	137	41.26128	-72.82119	41.26192	-72.82236
NEW HAVEN	CT409818	CLARK AVENUE BEACH	Public/Public	1	68	41.25664	-72.85075	41.25617	-72.85114
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	Public/Public	1	258	41.24536	-72.86719	41.24514	-72.87006

(continued)

County	Beach ID	Beach name	Beach accessibility	Beach tier rank	Beach length (M)	Start latitude	Start longitude	End latitude	End longitude
NEW HAVEN	CT153336	EAST WHARF BEACH	Public/Public	1	117	41.27056	-72.59	41.27017	-72.59097
NEW HAVEN	CT910056	GULF BEACH	Public/Public	1	349	41.20875	-73.04467	41.20992	-73.048
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	Public/Public	1	3,100	41.24911	-72.54514	41.26794	-72.57006
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Public/Public	1	139	41.26839	-72.66733	41.26767	-72.66836
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	Public/Public	1	220	41.24719	-72.90086	41.24792	-72.90319
NEW HAVEN	CT320303	PENT ROAD BEACH	Public/Public	1	99	41.26858	-72.56983	41.26844	-72.57083
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Public/Public	1	279	41.20008	-73.06439	41.19783	-73.06575
NEW HAVEN	CT224775	STONY CREEK BEACH	Public/Public	1	36	41.26592	-72.752	41.26622	-72.752
NEW HAVEN	CT386314	SURF CLUB BEACH	Public/Public	1	330	41.27189	-72.61386	41.27203	-72.61767
NEW HAVEN	CT857174	WALNUT BEACH	Public/Public	1	575	41.19675	-73.07389	41.19428	-73.07961
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	Public/Public	1	3,600	41.268	-72.92467	41.25181	-72.95692
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	Public/Public	1	2,208	41.25181	-72.95692	41.23933	-72.97122
NEW HAVEN	CT210340	WEST WHARF BEACH	Public/Public	1	155	41.2705	-72.60789	41.27042	-72.60917
NEW HAVEN	CT351834	WOODMONT BEACH	Public/Public	1	465	41.22989	-72.98853	41.22617	-72.99083
	19				**12,388**				
NEW LONDON	CT340493	DUBOIS BEACH	Private/Public	3	37	41.32781	-71.906	41.32814	-71.90619
NEW LONDON	CT705857	EASTERN POINT BEACH	Public/Public	1	209	41.31994	-72.07136	41.32003	-72.07367
NEW LONDON	CT434367	ESKER POINT BEACH	Public/Public	1	32	41.32092	-71.99903	41.32075	-71.99931
NEW LONDON	CT496693	GREEN HARBOR BEACH	Public/Public	1	120	41.33781	-72.09969	41.33678	-72.09981
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	Public/Public	1	181	41.32114	-72.19547	41.32002	-72.19692
NEW LONDON	CT303091	KIDDIE'S BEACH	Public/Public	1	20	41.35267	-72.17675	41.35283	-72.17664
NEW LONDON	CT120292	MCCOOK POINT BEACH	Public/Public	1	190	41.31794	-72.19783	41.31694	-72.19958
NEW LONDON	CT110195	NOANK DOCK	Public/Public	1	11	41.32522	-71.98456	41.32517	-71.98464
NEW LONDON	CT407959	OCEAN BEACH PARK	Public/Public	1	463	41.30836	-72.09767	41.30536	-72.10092
NEW LONDON	CT079164	PLEASURE BEACH	Public/Public	1	200	41.30661	-72.14592	41.30783	-72.14764
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Public/Public	3	598	41.3005	-72.23767	41.29922	-72.24442
NEW LONDON	CT493837	SOUNDVIEW BEACH	Public/Public	1	331	41.28408	-72.27683	41.28331	-72.2805
NEW LONDON	CT685151	WATERFORD TOWN BEACH	Public/Public	1	524	41.30422	-72.10206	41.30325	-72.10811
NEW LONDON	CT282823	WHITE SANDS BEACH	Public/Public	1	241	41.27986	-72.30286	41.27978	-72.30564
	14				**3,157**				
		ATTRIBUTE SUMMARY							
		No. of BEACH Act beaches:	66						
		Total length of BEACH Act beaches:	29,314	Meters					

E.3 US EPA BEACH MONITORING WORKSHEET FOR WORKSHEET 2010

County	Beach ID	Beach Name	Swim Season Length	Swim Season Length Units	Swim Season Monitoring Frequency	Swim Season Monitoring Frequency Units	Off Season Monitoring Frequency	Off Season Monitoring Frequency Units	Monitored Beach Length (M)
FAIRFIELD	CT200292	BELL ISLAND BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	200
FAIRFIELD	CT730976	BURYING HILL BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	125
FAIRFIELD	CT872506	BYRAM BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	169
FAIRFIELD	CT003939	CALF PASTURE BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	323
FAIRFIELD	CT135112	COMPO BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	862
FAIRFIELD	CT728213	CUMMINGS BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	413
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	289
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	357
FAIRFIELD	CT486090	GREENWICH POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	649
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	2
FAIRFIELD	CT101236	ISLAND BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	291
FAIRFIELD	CT306507	JENNINGS BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	633
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	98	DAYS	4	PER_MONTH	0	PER_MONTH	60
FAIRFIELD	CT921236	LONG BEACH (PROPER)	98	DAYS	4	PER_MONTH	0	PER_MONTH	499
FAIRFIELD	CT023928	MARVIN BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	7
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	322
FAIRFIELD	CT080788	PENFIELD BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	335
FAIRFIELD	CT202901	QUIGLEY BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	160
FAIRFIELD	CT200291	ROWAYTON BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	33
FAIRFIELD	CT634478	SASCO BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	204
FAIRFIELD	CT404927	SEASIDE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	2,900
FAIRFIELD	CT022992	SHADY BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	341
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	1,911
FAIRFIELD	CT046814	SHORT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	770
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	48
FAIRFIELD	CT474040	SOUTHPORT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	254
FAIRFIELD	CT952269	WEED BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	150
FAIRFIELD	CT992639	WEST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	240
	28				**28**				**12,547**
MIDDLESEX	CT766006	HARVEY'S BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	74
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	77
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	98	DAYS	4	PER_MONTH	0	PER_MONTH	138
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	98	DAYS	4	PER_MONTH	0	PER_MONTH	57
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	876
	5				**5**				**1,222**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	98	DAYS	4	PER_MONTH	0	PER_MONTH	78
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	98	DAYS	4	PER_MONTH	0	PER_MONTH	175
NEW HAVEN	CT001209	BRANFORD POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	137
NEW HAVEN	CT409818	CLARK AVENUE BEACH	98	DAYS	7	PER_MONTH	0	PER_MONTH	68
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	258

(continued)

County	Beach ID	Beach Name	Swim Season Length	Swim Season Length Units	Swim Season Monitoring Frequency	Swim Season Monitoring Frequency Units	Off Season Monitoring Frequency	Off Season Monitoring Frequency Units	Monitored Beach Length (M)
NEW HAVEN	CT153336	EAST WHARF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	117
NEW HAVEN	CT910056	GULF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	349
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	3,100
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	98	DAYS	4	PER_MONTH	0	PER_MONTH	139
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	220
NEW HAVEN	CT320303	PENT ROAD BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	99
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	279
NEW HAVEN	CT224775	STONY CREEK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	36
NEW HAVEN	CT386314	SURF CLUB BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	330
NEW HAVEN	CT857174	WALNUT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	575
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	3,600
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	2,208
NEW HAVEN	CT210340	WEST WHARF BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	155
NEW HAVEN	CT351834	WOODMONT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	465
	19				**19**				**12,388**
NEW LONDON	CT340493	DUBOIS BEACH	98	DAYS	0	PER_MONTH	0	PER_MONTH	---
NEW LONDON	CT705857	EASTERN POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	209
NEW LONDON	CT434367	ESKER POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	32
NEW LONDON	CT496693	GREEN HARBOR BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	120
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	181
NEW LONDON	CT303091	KIDDIE'S BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	20
NEW LONDON	CT120292	MCCOOK POINT BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	190
NEW LONDON	CT110195	NOANK DOCK	98	DAYS	4	PER_MONTH	0	PER_MONTH	11
NEW LONDON	CT407959	OCEAN BEACH PARK	98	DAYS	4	PER_MONTH	0	PER_MONTH	463
NEW LONDON	CT079164	PLEASURE BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	200
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	598
NEW LONDON	CT493837	SOUNDVIEW BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	331
NEW LONDON	CT685151	WATERFORD TOWN BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	524
NEW LONDON	CT282823	WHITE SANDS BEACH	98	DAYS	4	PER_MONTH	0	PER_MONTH	241
	14				**13**				**3,120**
		= Beach is not monitored. It is not included in EPA's monitored beach summary statistics.							
		MONITORING SUMMARY							
		No. of BEACH Act beaches:	66						
		No. of monitored beaches:	65						
		Percent of BEACH Act beaches monitored:	98.5%						
		Total length of monitored beaches:	29,277	Meters					

E.4 US EPA POSSIBLE POLLUTION SOURCES AT MONITORED BEACHES WORKSHEET FOR 2010

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES												
County	Beach ID	Beach Name	Pollution sources investigated ?	Pollution sources found?	Runoff	Storm	Agriculture	Boat	CAFO	CSO	SSO	POTW	Sewer line	Septic	Wildlife	Other	Unknown
FAIRFIELD	CT200292	BELL ISLAND BEACH	Yes	Yes		Yes											
FAIRFIELD	CT730976	BURYING HILL BEACH	Yes	Yes		Yes											
FAIRFIELD	CT872506	BYRAM BEACH	Yes	Yes		Yes		Yes							Yes		
FAIRFIELD	CT003939	CALF PASTURE BEACH	Yes	Yes												Yes	
FAIRFIELD	CT135112	COMPO BEACH	Yes	Yes		Yes											
FAIRFIELD	CT728213	CUMMINGS BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Yes	Yes											Yes		
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Yes	Yes		Yes									Yes		
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Yes	Yes		Yes											
FAIRFIELD	CT101236	ISLAND BEACH	Yes	Yes											Yes		
FAIRFIELD	CT306507	JENNINGS BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Yes	Yes		Yes											Yes
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Yes	Yes		Yes											Yes
FAIRFIELD	CT023928	MARVIN BEACH	Yes	Yes		Yes											
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
FAIRFIELD	CT080788	PENFIELD BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT202901	QUIGLEY BEACH	Yes	Yes	Yes	Yes											
FAIRFIELD	CT200291	ROWAYTON BEACH	Yes	Yes		Yes											
FAIRFIELD	CT634478	SASCO BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT404927	SEASIDE PARK BEACH	Yes	Yes		Yes						Yes					
FAIRFIELD	CT022992	SHADY BEACH	Yes	Yes		Yes											
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Yes	Yes	Yes	Yes					Yes	Yes		Yes		Yes	
FAIRFIELD	CT046814	SHORT BEACH	Yes	Yes		Yes											Yes
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT474040	SOUTHPORT BEACH	Yes	Yes		Yes					Yes						
FAIRFIELD	CT952269	WEED BEACH	Yes	Yes		Yes		Yes					Yes	Yes	Yes		
FAIRFIELD	CT992639	WEST BEACH	Yes	Yes	Yes	Yes											
	28		**28**	**28**	**5**	**25**	**0**	**3**	**0**	**0**	**6**	**2**	**1**	**3**	**6**	**2**	**3**
MIDDLESEX	CT766006	HARVEY'S BEACH	Yes	Yes		Yes											
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	Yes	No													
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Yes	Yes		Yes											
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Yes	Yes		Yes											
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	Yes	No													
	5		**5**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	Yes	Yes	Yes	Yes									Yes		
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	Yes	Yes	Yes	Yes											

(continued)

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES												
County	Beach ID	Beach Name	Pollution sources investigated ?	Pollution sources found?	Runoff	Storm	Agriculture	Boat	CAFO	CSO	SSO	POTW	Sewer line	Septic	Wildlife	Other	Unknown
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Yes	Yes		Yes						Yes					
NEW HAVEN	CT409818	CLARK AVENUE BEACH	Yes	Yes		Yes											
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	Yes	No													
NEW HAVEN	CT153336	EAST WHARF BEACH	Yes	No													
NEW HAVEN	CT910056	GULF BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	Yes	Yes	Yes	Yes								Yes		Yes	
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	Yes	Yes		Yes				Yes		Yes			Yes		
NEW HAVEN	CT320303	PENT ROAD BEACH	Yes	No													
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Yes	Yes	Yes	Yes		Yes				Yes				Yes	
NEW HAVEN	CT224775	STONY CREEK BEACH	Yes	Yes		Yes								Yes			
NEW HAVEN	CT386314	SURF CLUB BEACH	Yes	No													
NEW HAVEN	CT857174	WALNUT BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	Yes	Yes	Yes	Yes											
NEW HAVEN	CT210340	WEST WHARF BEACH	Yes	No													
NEW HAVEN	CT351834	WOODMONT BEACH	Yes	Yes	Yes	Yes											
	19		**19**	**14**	**9**	**14**	**0**	**2**	**0**	**1**	**0**	**3**	**0**	**3**	**3**	**2**	**0**
NEW LONDON	CT705857	EASTERN POINT BEACH	No	N/A													
NEW LONDON	CT434367	ESKER POINT BEACH	No	N/A													
NEW LONDON	CT496693	GREEN HARBOR BEACH	No	N/A													
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	No	N/A													
NEW LONDON	CT303091	KIDDIE'S BEACH	No	N/A													
NEW LONDON	CT120292	MCCOOK POINT BEACH	No	N/A													
NEW LONDON	CT110195	NOANK DOCK	No	N/A													
NEW LONDON	CT407959	OCEAN BEACH PARK	No	N/A													
NEW LONDON	CT079164	PLEASURE BEACH	No	N/A													
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Yes	Yes		Yes		Yes						Yes	Yes		
NEW LONDON	CT493837	SOUNDVIEW BEACH	Yes	No													
NEW LONDON	CT685151	WATERFORD TOWN BEACH	No	N/A													
NEW LONDON	CT282823	WHITE SANDS BEACH	Yes	No													
	13		**3**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**

(continued)

	MONITORED BEACHES				POSSIBLE POLLUTION SOURCES												
County	Beach ID	Beach Name	Pollution sources investigated ?	Pollution sources found?	Runoff	Storm	Agriculture	Boat	CAFO	CSO	SSO	POTW	Sewer line	Septic	Wildlife	Other	Unknown
	POLLUTION SOURCES SUMMARY																
			No. of monitored beaches:			65											
			No. of investigated monitored beaches:			55											
	No. of investigated monitored beaches with possible pollution sources:					46											
		POLLUTION SOURCE TALLY				Totals	Percent										
		Runoff (Non-storm related, dryweather runoff):				14	14.0%										
		Storm (Storm related, wet-weather runoff):				43	43.0%										
		Agriculture (Agricultural runoff):				0	0.0%										
		Boat (Boat discharge):				6	6.0%										
		CAFO (Concentrated animal feeding operation):				0	0.0%										
		CSO (Combined sewer overflow):				1	1.0%										
		SSO (Sanitary sewer overflow):				6	6.0%										
		POTW (Publicly-owned treatment works):				5	5.0%										
		Sewer line (Sewer line leak, blockage, or break):				1	1.0%										
		Septic (Septic system leakage):				7	7.0%										
		Wildlife (Wildlife pollution):				10	10.0%										
		Other (Other source known but not listed above):				4	4.0%										
		Unknown (Source exists but unidentified):				3	3.0%										
						100	100.0%										

E.5 US EPA NOTIFICATION EVENTS WORKSHEET FOR 2010

County	Beach ID	Beach Name	Action type	Action start date/time	Action end date/time	Action duration (Days)	Action reason(s)	Action indicator(s)	Action source(s)
FAIRFIELD	CT200292	BELL ISLAND BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT730976	BURYING HILL BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/2/2010	6/3/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/10/2010	6/11/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	6/23/2010	6/24/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/14/2010	7/15/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/15/2010	7/16/2010	1	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	7/19/2010	7/20/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT872506	BYRAM BEACH	Closure	8/23/2010	8/24/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT003939	CALF PASTURE BEACH	Closure	8/17/2010	8/19/2010	2	ELEV_BACT	ENTERO	OTHER
FAIRFIELD	CT003939	CALF PASTURE BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT135112	COMPO BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	7/14/2010	7/17/2010	3	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	7/21/2010	7/23/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT728213	CUMMINGS BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	7/14/2010	7/17/2010	3	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	7/20/2010	7/22/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	Closure	6/15/2010	6/16/2010	1	ELEV_BACT	ENTERO	WILDLIFE
FAIRFIELD	CT486090	GREENWICH POINT BEACH	Closure	8/23/2010	8/24/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT101236	ISLAND BEACH	Closure	8/24/2010	8/25/2010	1	ELEV_BACT	ENTERO	WILDLIFE
FAIRFIELD	CT101236	ISLAND BEACH	Closure	9/8/2010	9/9/2010	1	ELEV_BACT	ENTERO	WILDLIFE
FAIRFIELD	CT306507	JENNINGS BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	PREEMPT	SSO
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	6/10/2010	6/15/2010	5	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	7/13/2010	7/16/2010	3	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	Closure	7/20/2010	7/23/2010	3	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	6/10/2010	6/16/2010	6	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	7/13/2010	7/16/2010	3	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT921236	LONG BEACH (PROPER)	Closure	8/10/2010	8/13/2010	3	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT023928	MARVIN BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	Closure	7/14/2010	7/15/2010	1	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT080788	PENFIELD BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	SSO
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	7/14/2010	7/17/2010	3	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	7/20/2010	7/22/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT202901	QUIGLEY BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT200291	ROWAYTON BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT634478	SASCO BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	SSO
FAIRFIELD	CT022992	SHADY BEACH	Closure	8/17/2010	8/19/2010	2	ELEV_BACT	ENTERO	OTHER
FAIRFIELD	CT022992	SHADY BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	UNKNOWN
FAIRFIELD	CT046814	SHORT BEACH	Closure	8/17/2010	8/22/2010	5	ELEV_BACT	ENTERO	STORM

(continued)

County	Beach ID	Beach Name	Action type	Action start date/time	Action end date/time	Action duration (Days)	Action reason(s)	Action indicator(s)	Action source(s)
FAIRFIELD	CT046814	SHORT BEACH	Closure	8/31/2010	9/4/2010	4	ELEV_BACT	ENTERO	STORM
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	SSO
FAIRFIELD	CT474040	SOUTHPORT BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	SSO
FAIRFIELD	CT952269	WEED BEACH	Closure	7/14/2010	7/15/2010	1	ELEV_BACT	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	7/14/2010	7/17/2010	3	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	7/20/2010	7/22/2010	2	RAINFALL	PREEMPT	STORM
FAIRFIELD	CT992639	WEST BEACH	Closure	8/23/2010	8/25/2010	2	RAINFALL	PREEMPT	STORM
	27		**49**			**105**			
MIDDLESEX	CT766006	HARVEY'S BEACH	Closure	8/23/2010	8/25/2010	2	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	6/15/2010	6/17/2010	2	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	7/27/2010	7/28/2010	1	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	STORM
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	Closure	6/9/2010	6/10/2010	1	ELEV_BACT	ENTERO	STORM
	3		**5**			**8**			
NEW HAVEN	CT001209	BRANFORD POINT BEACH	Closure	6/29/2010	7/1/2010	2	ELEV_BACT	ENTERO	UNKNOWN
NEW HAVEN	CT409818	CLARK AVENUE BEACH	Closure	8/19/2010	8/21/2010	2	ELEV_BACT	ENTERO	WILDLIFE
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	Closure	7/13/2010	7/16/2010	3	ELEV_BACT	ENTERO	UNKNOWN
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	UNKNOWN
NEW HAVEN	CT224775	STONY CREEK BEACH	Closure	7/27/2010	7/29/2010	2	ELEV_BACT	ENTERO	UNKNOWN
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	Closure	8/23/2010	8/25/2010	2	ELEV_BACT	ENTERO	OTHER
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	Closure	8/23/2010	8/25/2010	2	ELEV_BACT	ENTERO	OTHER
	7		**7**			**15**			
NEW LONDON	CT496693	GREEN HARBOR BEACH	Contamination Advisory	8/16/2010	8/19/2010	3	ELEV_BACT	ENTERO	UNKNOWN
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Closure	7/9/2010	7/13/2010	4	ELEV_BACT	ENTERO	UNKNOWN
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Closure	7/20/2010	7/22/2010	2	ELEV_BACT	ENTERO	UNKNOWN
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Closure	8/17/2010	8/19/2010	2	ELEV_BACT	ENTERO	UNKNOWN
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Closure	8/24/2010	8/26/2010	2	ELEV_BACT	ENTERO	UNKNOWN
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	Closure	9/4/2010	9/6/2010	2	RAINFALL	PREEMPT	UNKNOWN
	2		**6**			**15**			

(continued)

County	Beach ID	Beach Name	Action type	Action start date/time	Action end date/time	Action duration (Days)	Action reason(s)	Action indicator(s)	Action source(s)
	2010 ACTIONS SUMMARY								
		No. of monitored beaches with actions during swim season:	39						
		No. of actions during swim season:	67						
		No. of days under an action during swim season:	143						
		ACTION REASON, INDICATOR, AND SOURCE TALLY							
			Totals	**Percentages**					
		Action reasons summary:							
		ELEV_BACT:	40	59.7%					
		RAINFALL:	27	40.3%					
			67	100.0%					
		Action indicators summary:							
		ENTERO:	38	56.7%					
		PREEMPT:	29	43.3%					
			67	100.0%					
		Action sources summary:							
		SSO:	5	7.5%					
		STORM:	43	64.2%					
		WILDLIFE:	4	6.0%					
		OTHER:	4	6.0%					
		UNKNOWN:	11	16.4%					
			67	100.0%					

E.6 US EPA NOTIFICATION EVENT DURATIONS WORKSHEET FOR 2010

	Monitored Beaches with Actions During Swim Season				Swim Season Actions Sorted by Duration				
County	Beach ID	Beach Name	No. of beach actions	No. of days under an action	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration
FAIRFIELD	CT200292	BELL ISLAND BEACH	1	2		1			
FAIRFIELD	CT730976	BURYING HILL BEACH	1	2		1			
FAIRFIELD	CT872506	BYRAM BEACH	7	7	7				
FAIRFIELD	CT003939	CALF PASTURE BEACH	2	4		2			
FAIRFIELD	CT135112	COMPO BEACH	1	2		1			
FAIRFIELD	CT728213	CUMMINGS BEACH	3	7		2	1		
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	3	7		2	1		
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	1	1	1				
FAIRFIELD	CT486090	GREENWICH POINT BEACH	1	1	1				
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	1	2		1			
FAIRFIELD	CT101236	ISLAND BEACH	2	2	2				
FAIRFIELD	CT306507	JENNINGS BEACH	1	2		1			
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	3	11			3		
FAIRFIELD	CT921236	LONG BEACH (PROPER)	3	12			3		
FAIRFIELD	CT023928	MARVIN BEACH	1	2		1			
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	1	1	1				
FAIRFIELD	CT080788	PENFIELD BEACH	1	2		1			
FAIRFIELD	CT202901	QUIGLEY BEACH	3	7		2	1		
FAIRFIELD	CT200291	ROWAYTON BEACH	1	2		1			
FAIRFIELD	CT634478	SASCO BEACH	1	2		1			
FAIRFIELD	CT022992	SHADY BEACH	2	4		2			
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	1	2		1			
FAIRFIELD	CT046814	SHORT BEACH	2	9			2		
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	1	2		1			
FAIRFIELD	CT474040	SOUTHPORT BEACH	1	2		1			
FAIRFIELD	CT952269	WEED BEACH	1	1	1				
FAIRFIELD	CT992639	WEST BEACH	3	7		2	1		
	27		**49**	**105**	**13**	**24**	**12**	**0**	**0**
MIDDLESEX	CT766006	HARVEY'S BEACH	1	2		1			
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	3	5	1	2			
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	1	1	1				
	3		**5**	**8**	**2**	**3**	**0**	**0**	**0**
NEW HAVEN	CT001209	BRANFORD POINT BEACH	1	2		1			
NEW HAVEN	CT409818	CLARK AVENUE BEACH	1	2		1			
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	1	3			1		
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	1	2		1			
NEW HAVEN	CT224775	STONY CREEK BEACH	1	2		1			

(continued)

	Monitored Beaches with Actions During Swim Season				Swim Season Actions Sorted by Duration				
County	Beach ID	Beach Name	No. of beach actions	No. of days under an action	No. of actions of 1 day duration	No. of actions of 2 day duration	No. of actions of 3 - 7 day duration	No. of actions of 8 - 30 day duration	No. of actions greater than 30 day duration
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	1	2		1			
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	1	2		1			
	7		**7**	**15**	**0**	**6**	**1**	**0**	**0**
NEW LONDON	CT496693	GREEN HARBOR BEACH	1	3			1		
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	5	12		4	1		
	2		**6**	**15**	**0**	**4**	**2**	**0**	**0**
	2010 ACTIONS DURATION SUMMARY								
		No. of monitored beaches with actions during swim season:	39						
		No. of actions during the swim season:	67						
		No. of days under an action during the swim season:	143						
		ACTION DURATION DAY TALLY			**Totals**	**Percent**			
		No. of actions of 1 day duration:			15	22.4%			
		No. of actions of 2 day duration:			37	55.2%			
		No. of actions of 3-7 day duration:			15	22.4%			
		No. of actions of 8-30 day duration:			0	0.0%			
		No. of actions of greater than 30 day duration			0	0.0%			
					67	100.0%			

E.7 US EPA BEACH SEASON DAYS AT MONITORED BEACHES WORKSHEET FOR 2010

	Monitored Beaches			Under a Beach Action			Not Under an Action	
County	Beach ID	Beach Name	No. of beach days	Beach action in 2010?	No. of days under a beach action	Percent days under a beach action	No. of days not under a beach action	Percent days not under a beach action
FAIRFIELD	CT200292	BELL ISLAND BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT730976	BURYING HILL BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT872506	BYRAM BEACH	98	Yes	7	7.1%	91	92.9%
FAIRFIELD	CT003939	CALF PASTURE BEACH	98	Yes	4	4.1%	94	95.9%
FAIRFIELD	CT135112	COMPO BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT728213	CUMMINGS BEACH	98	Yes	7	7.1%	91	92.9%
FAIRFIELD	CT085278	EAST (COVE ISLAND) BEACH	98	Yes	7	7.1%	91	92.9%
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	98	Yes	1	1.0%	97	99.0%
FAIRFIELD	CT486090	GREENWICH POINT BEACH	98	Yes	1	1.0%	97	99.0%
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT101236	ISLAND BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT306507	JENNINGS BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT449733	LONG BEACH (MARNICK'S)	98	Yes	11	11.2%	87	88.8%
FAIRFIELD	CT921236	LONG BEACH (PROPER)	98	Yes	12	12.2%	86	87.8%
FAIRFIELD	CT023928	MARVIN BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	98	Yes	1	1.0%	97	99.0%
FAIRFIELD	CT080788	PENFIELD BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT202901	QUIGLEY BEACH	98	Yes	7	7.1%	91	92.9%
FAIRFIELD	CT200291	ROWAYTON BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT634478	SASCO BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT404927	SEASIDE PARK BEACH	98			0.0%	98	100.0%
FAIRFIELD	CT022992	SHADY BEACH	98	Yes	4	4.1%	94	95.9%
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT046814	SHORT BEACH	98	Yes	9	9.2%	89	90.8%
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT474040	SOUTHPORT BEACH	98	Yes	2	2.0%	96	98.0%
FAIRFIELD	CT952269	WEED BEACH	98	Yes	1	1.0%	97	99.0%
FAIRFIELD	CT992639	WEST BEACH	98	Yes	7	7.1%	91	92.9%
	28		**2,744**	**27**	**105**	**3.8%**	**2,639**	**96.2%**
MIDDLESEX	CT766006	HARVEY'S BEACH	98	Yes	2	2.0%	96	98.0%
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	98			0.0%	98	100.0%
MIDDLESEX	CT104947	TOWN BEACH (CLINTON)	98	Yes	5	5.1%	93	94.9%
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	98	Yes	1	1.0%	97	99.0%
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	98			0.0%	98	100.0%
	5		**490**	**3**	**8**	**1.6%**	**482**	**98.4%**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	98			0.0%	98	100.0%
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	98			0.0%	98	100.0%
NEW HAVEN	CT001209	BRANFORD POINT BEACH	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT409818	CLARK AVENUE BEACH	98	Yes	2	2.0%	96	98.0%

(continued)

	Monitored Beaches			Under a Beach Action			Not Under an Action	
County	Beach ID	Beach Name	No. of beach days	Beach action in 2010?	No. of days under a beach action	Percent days under a beach action	No. of days not under a beach action	Percent days not under a beach action
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	98	Yes	3	3.1%	95	96.9%
NEW HAVEN	CT153336	EAST WHARF BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT910056	GULF BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	98			0.0%	98	100.0%
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT320303	PENT ROAD BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT224775	STONY CREEK BEACH	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT386314	SURF CLUB BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT857174	WALNUT BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	98	Yes	2	2.0%	96	98.0%
NEW HAVEN	CT210340	WEST WHARF BEACH	98			0.0%	98	100.0%
NEW HAVEN	CT351834	WOODMONT BEACH	98			0.0%	98	100.0%
	19		**1,862**	**7**	**15**	**0.8%**	**1,847**	**99.2%**
NEW LONDON	CT705857	EASTERN POINT BEACH	98			0.0%	98	100.0%
NEW LONDON	CT434367	ESKER POINT BEACH	98			0.0%	98	100.0%
NEW LONDON	CT496693	GREEN HARBOR BEACH	98	Yes	3	3.1%	95	96.9%
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	98			0.0%	98	100.0%
NEW LONDON	CT303091	KIDDIE'S BEACH	98			0.0%	98	100.0%
NEW LONDON	CT120292	MCCOOK POINT BEACH	98			0.0%	98	100.0%
NEW LONDON	CT110195	NOANK DOCK	98			0.0%	98	100.0%
NEW LONDON	CT407959	OCEAN BEACH PARK	98			0.0%	98	100.0%
NEW LONDON	CT079164	PLEASURE BEACH	98			0.0%	98	100.0%
NEW LONDON	CT207829	ROCKY NECK STATE PARK BEACH	98	Yes	12	12.2%	86	87.8%
NEW LONDON	CT493837	SOUNDVIEW BEACH	98			0.0%	98	100.0%
NEW LONDON	CT685151	WATERFORD TOWN BEACH	98			0.0%	98	100.0%
NEW LONDON	CT282823	WHITE SANDS BEACH	98			0.0%	98	100.0%
	13		**1,274**	**2**	**15**	**1.2%**	**1,259**	**98.8%**
	2010 BEACH DAYS SUMMARY							
		No. of monitored beaches:	65					
		No. of beach days in swim season:	6,370					
		No. of monitored beaches with actions during swim season:	39					
		No. of beach days under an action during the swim season:	143					
		Percent of beach days under an action during the swim season:	2.2%					
		No. of beach days not under an action during the swim season:	6,227					
		Percent of beach days not under an action during the swim season:	97.8%					

E.8 US EPA TIER 1 BEACH STATISTICS WORKSHEET FOR 2010

COUNTY	BEACH ID	BEACH NAME	Beach Tier Rank	Beach Length (M)	Is beach monitored?	Swim season monitor frequency	Swim season monitor frequency units	No. of beach days	Beach action in 2010?	No. of days under a beach action	Percent days under a beach action
FAIRFIELD	CT200292	BELL ISLAND BEACH	1	200	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT730976	BURYING HILL BEACH	1	125	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT135112	COMPO BEACH	1	862	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT096148	GREAT CAPTAIN'S ISLAND BEACH	1	357	Yes	4	PER_MONTH	98	Yes	1	1.0%
FAIRFIELD	CT486090	GREENWICH POINT BEACH	1	649	Yes	4	PER_MONTH	98	Yes	1	1.0%
FAIRFIELD	CT010924	HICKORY BLUFF BEACH	1	2	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT306507	JENNINGS BEACH	1	633	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT023928	MARVIN BEACH	1	7	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT927883	PEAR TREE POINT BEACH	1	322	Yes	4	PER_MONTH	98	Yes	1	1.0%
FAIRFIELD	CT080788	PENFIELD BEACH	1	335	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT200291	ROWAYTON BEACH	1	33	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT634478	SASCO BEACH	1	204	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT404927	SEASIDE PARK BEACH	1	2,900	Yes	4	PER_MONTH	98			0.0%
FAIRFIELD	CT299970	SHERWOOD ISLAND STATE PARK BEACH	1	1,911	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT428598	SOUTH PINE CREEK BEACH	1	48	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT474040	SOUTHPORT BEACH	1	254	Yes	4	PER_MONTH	98	Yes	2	2.0%
FAIRFIELD	CT952269	WEED BEACH	1	150	Yes	4	PER_MONTH	98	Yes	1	1.0%
	17			**8,992**	**100%**	**17**		**1,666**	**16**	**28**	**1.7%**
MIDDLESEX	CT766006	HARVEY'S BEACH	1	74	Yes	4	PER_MONTH	98	Yes	2	2.0%
MIDDLESEX	CT221030	MIDDLE BEACH/STANNARD BEACH	1	77	Yes	4	PER_MONTH	98			0.0%
MIDDLESEX	CT996337	TOWN BEACH (OLD SAYBROOK)	1	57	Yes	4	PER_MONTH	98	Yes	1	1.0%
MIDDLESEX	CT939211	WESTBROOK TOWN BEACH/WEST BEACH	1	876	Yes	4	PER_MONTH	98			0.0%
	4			**1,084**	**100%**	**4**		**392**	**2**	**3**	**0.8%**
NEW HAVEN	CT974464	ANCHOR BEACH (MERWIN POINT) #1	1	78	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT400424	ANCHOR BEACH (MERWIN POINT) #2	1	175	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT001209	BRANFORD POINT BEACH	1	137	Yes	4	PER_MONTH	98	Yes	2	2.0%
NEW HAVEN	CT409818	CLARK AVENUE BEACH	1	68	Yes	7	PER_MONTH	98	Yes	2	2.0%
NEW HAVEN	CT091682	EAST HAVEN TOWN BEACH	1	258	Yes	4	PER_MONTH	98	Yes	3	3.1%
NEW HAVEN	CT153336	EAST WHARF BEACH	1	117	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT910056	GULF BEACH	1	349	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT964700	HAMMONASSET BEACH STATE PARK BEACH	1	3,100	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT303093	JACOBS BEACH (TOWN BEACH)	1	139	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT760987	LIGHTHOUSE POINT BEACH	1	220	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT320303	PENT ROAD BEACH	1	99	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT222176	SILVER SANDS STATE PARK BEACH	1	279	Yes	4	PER_MONTH	98	Yes	2	2.0%
NEW HAVEN	CT224775	STONY CREEK BEACH	1	36	Yes	4	PER_MONTH	98	Yes	2	2.0%
NEW HAVEN	CT386314	SURF CLUB BEACH	1	330	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT857174	WALNUT BEACH	1	575	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT399384	WEST HAVEN EAST BEACH	1	3,600	Yes	4	PER_MONTH	98	Yes	2	2.0%
NEW HAVEN	CT506928	WEST HAVEN WEST BEACH	1	2,208	Yes	4	PER_MONTH	98	Yes	2	2.0%

(continued)

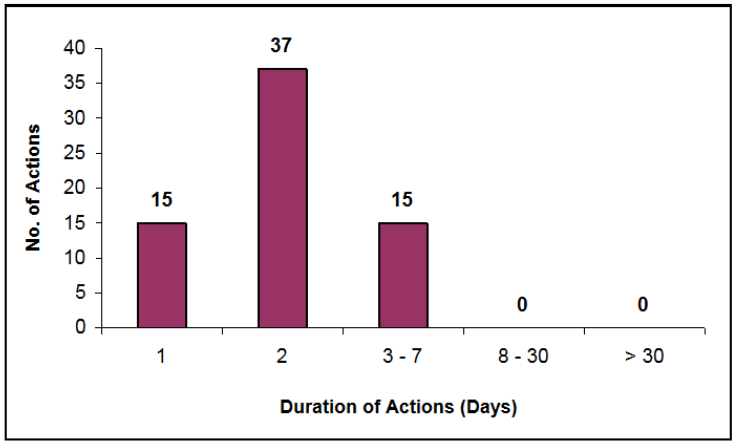
COUNTY	BEACH ID	BEACH NAME	Beach Tier Rank	Beach Length (M)	Is beach monitored?	Swim season monitor frequency	Swim season monitor frequency units	No. of beach days	Beach action in 2010?	No. of days under a beach action	Percent days under a beach action
NEW HAVEN	CT210340	WEST WHARF BEACH	1	155	Yes	4	PER_MONTH	98			0.0%
NEW HAVEN	CT351834	WOODMONT BEACH	1	465	Yes	4	PER_MONTH	98			0.0%
	19			**12,388**	**100%**	**19**		**1,862**	**7**	**15**	**0.8%**
NEW LONDON	CT705857	EASTERN POINT BEACH	1	209	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT434367	ESKER POINT BEACH	1	32	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT496693	GREEN HARBOR BEACH	1	120	Yes	4	PER_MONTH	98	Yes	3	3.1%
NEW LONDON	CT103938	HOLE-IN-THE-WALL BEACH	1	181	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT303091	KIDDIE'S BEACH	1	20	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT120292	MCCOOK POINT BEACH	1	190	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT110195	NOANK DOCK	1	11	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT407959	OCEAN BEACH PARK	1	463	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT079164	PLEASURE BEACH	1	200	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT493837	SOUNDVIEW BEACH	1	331	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT685151	WATERFORD TOWN BEACH	1	524	Yes	4	PER_MONTH	98			0.0%
NEW LONDON	CT282823	WHITE SANDS BEACH	1	241	Yes	4	PER_MONTH	98			0.0%
	12			**2,522**	**100%**	**12**		**1,176**	**1**	**3**	**0.3%**
		TIER 1 BEACH SUMMARY									
		No. of Tier 1 beaches:		52							
		Total length of Tier 1 beaches:		24,986	Meters						
		No. of Tier 1 beaches monitored:		52							
		Percent of Tier 1 beaches monitored:		100.0%							
		No. of Tier 1 beach days:		5,096							
		No. of Tier 1 beaches with actions:		26							
		No. of days under a Tier 1 beach action:		49							
		Percent of Tier 1 beach days under an action:		1.0%							

E.9 US EPA BEACH DATA CHARTS FOR 2010

Beach notification actions by duration.

1	15
2	37
3 - 7	15
8 - 30	0
> 30	0
Total no. of actions:	**67**

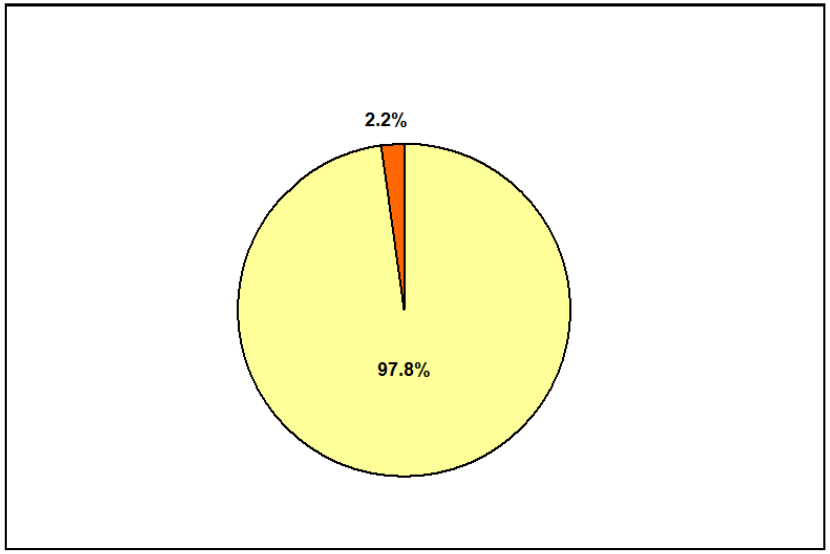
Corrections made to the "Action Durations" worksheet will alter this chart.



Beach days with and without notification actions.

Beach days with no action	6,227
Beach days under an action	143
Total no. of beach days:	**6,370**

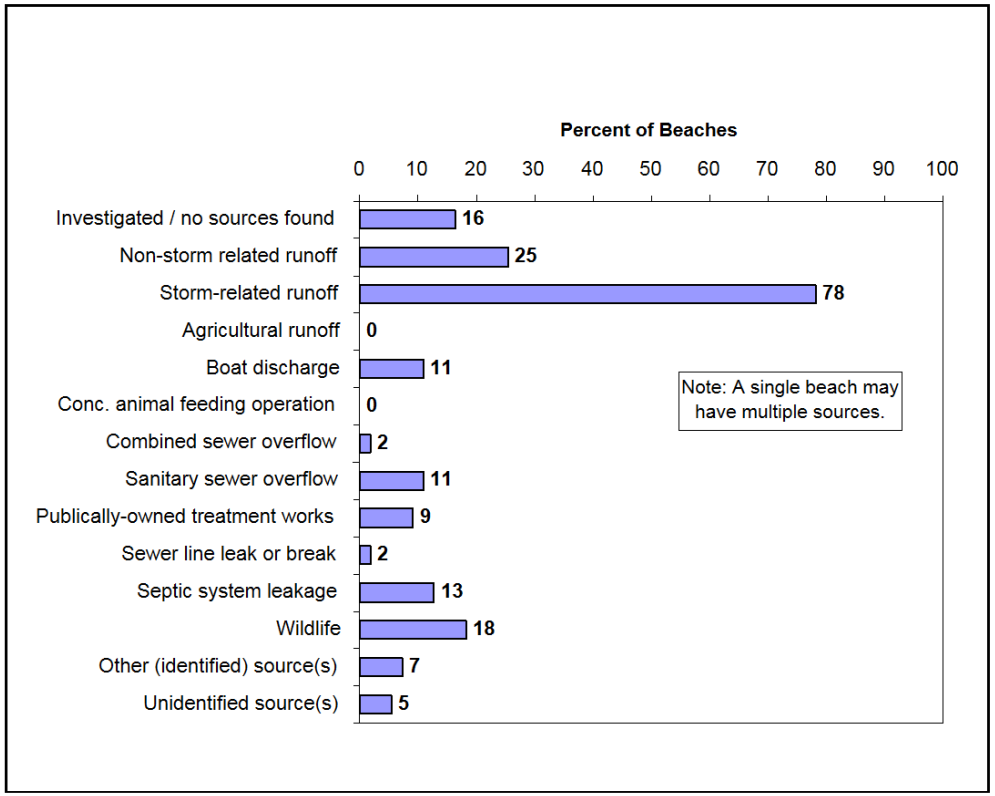
Corrections made to the "Beach Days" worksheet will alter this chart.



Percent of investigated monitored beaches possibly impacted by pollution sources (55 beaches).

	Percent	Count
Investigated / no sources found	16	9
Non-storm related runoff	25	14
Storm-related runoff	78	43
Agricultural runoff	0	0
Boat discharge	11	6
Conc. animal feeding operation	0	0
Combined sewer overflow	2	1
Sanitary sewer overflow	11	6
Publically-owned treatment works	9	5
Sewer line leak or break	2	1
Septic system leakage	13	7
Wildlife	18	10
Other (identified) source(s)	7	4
Unidentified source(s)	5	3
Total no. of beaches:		55

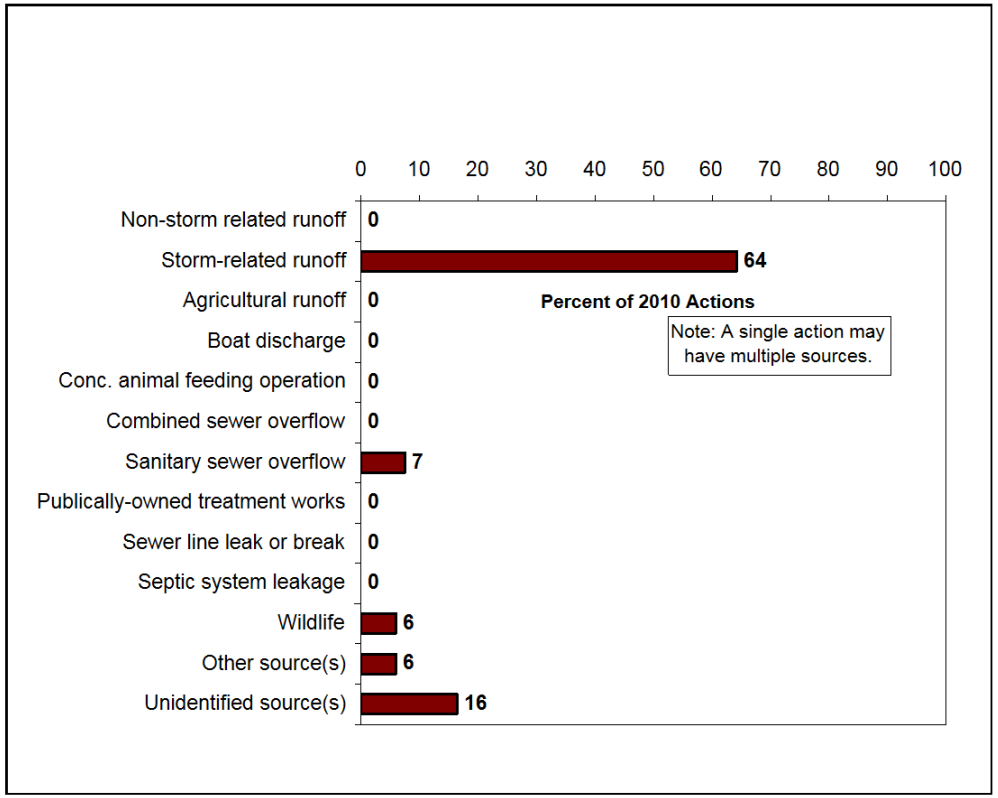
Corrections made to the "Pollution Sources" worksheet will alter this chart.



Percent of actions in 2010 by pollution sources (67 actions)

	Percent	Count
Non-storm related runoff	0	0
Storm-related runoff	64	43
Agricultural runoff	0	0
Boat discharge	0	0
Conc. animal feeding operation	0	0
Combined sewer overflow	0	0
Sanitary sewer overflow	7	5
Publically-owned treatment works	0	0
Sewer line leak or break	0	0
Septic system leakage	0	0
Wildlife	6	4
Other source(s)	6	4
Unidentified source(s)	16	11
Total no. of responses:		67

Corrections made to the "2010 Actions" worksheet will alter this chart.



End of Appendices