



Town of Darien

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Health Department

Report on Beach Water Quality - Summer 2015

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Overview:

This department collected water samples once a week at Pear Tree Point and Weed Beaches from Memorial Day through Labor Day. This year, forty two (42) samples were taken from three sampling stations at Pear Tree Point Beach and twenty eight (28) samples were taken from the two stations at Weed Beach. These samples were submitted to the Stamford Health Department laboratory to be tested for bacteria. The purpose of the testing is to ensure that the water conforms to the public health safety standards established by the Connecticut Department of Public Health and the EPA using bacteria counts as the indicator. Current protocol requires beach closures if test results from all stations exceed limits on two consecutive sampling days.

In addition to water sampling, this department monitors rainfall amounts during the season and has established a protocol of notifying the Parks and Recreation Department to close the beaches for swimming when over one (1) inch of rainfall occurs in a 24 hour period. This policy is consistent with that of other communities along the shoreline. Water sampling and targeted testing conducted by this office over the past several years has confirmed that bacteria levels exceed state standards during and immediately after such rainfall events. There is a HOTLINE (203-656-7323) that provides residents with up-to-the-minute messages regarding the status of our beaches.

Results:

- There have been **NO** beach closures due to elevated bacteria counts from 2009 through 2015.
- This summer, beaches were **preemptively** closed for a total of three days in conjunction with rainfall events over one (1) inch.

The Future:

The Darien Health Department has partnered with the Westport/Weston and East Shore Health Districts to conduct a DNA source tracking study for bacteria entering Long Island Sound. Upstream of where Goodwives River enters Gorham's Pond will be our sampling location where we hope to identify sources of bacteria that impact our waters after rainfall, whether human, wildlife, birds or just general urban runoff. This is a year-long study, beginning this October, with the final report due in December 2016.

Recent Developments

In July, Save the Sound, a program of the Connecticut Fund for the Environment, launched a new webpage intended to provide a glimpse of water quality at all beaches surrounding Long Island Sound. Water test results submitted by local health departments to the State Department of Public Health were used to compile the website and each beach was assigned a letter grade in accordance with the percentage of times the water samples exceeded the EPA standard. Notification of this new "tool" was provided to First Selectman Jayme Stevenson via an email stating that Pear Tree Point and Weed beaches were "*ranked in the lowest quarter out of 208 beaches*" in Long Island Sound and assigned grades of "C" for the time period of 2010 through 2014. It should be noted that no health department participated in the development

of this website or evaluation “tool”, nor was any health department notified in advance of the impending release of this initiative. Please see the summary below.

Summary of Water Sampling from 2010-2014

- Pear Tree Point Beach – a total of 271 samples were taken from 3 sampling stations
 - 7% exceedance during dry weather (when people swim)
 - 30% during and after rainfall (beaches are closed)
 - 15% composite exceedances which is the value used to determine the grade of “C”
- Weed Beach – a total of 176 samples were taken from 2 sampling stations
 - 7% in dry weather
 - 25% after rain
 - 13% composite for a letter grade of “C”

Summary of Water Sampling from 2005 – 2009

- Pear Tree Point – 118 samples
 - 6% dry weather
 - 5% wet
 - 6% composite – grade assigned was a “B”
- Weed Beach – 75 Samples collected
 - 4% dry weather
 - 9% rain
 - 4% composite – Grade assigned was “A-“

Please note the apparent “decline” in the composite letter grade in the range of years selected. Using this as the basis for the claim that water quality in the Sound has deteriorated in recent years could be considered a misrepresentation of the facts – this department undertook an evaluation of the impact of rainfall on water quality from 2010 through 2012 (note the magnitude difference in the number of water samples collected between the two five year periods). The relatively high values of exceedances noted after rains support our current protocol of preemptively closing beaches after over one (1) inch of rain in a 24 hour period.

Summary of water sampling from 2015:

- Pear Tree Point – 42 samples – 7% (or 3) over standard – letter grade would be a “B+”
- Weed Beach – 28 Samples – 4% (or 1) exceeded the standard - letter grade would be an “A”

As a final comment, the DNA source tracking study is expected to provide scientific answers as to the source of bacteria after rainfall events.

Grades are based on “Safe Swimming Failure Rates” and are as follows:

*A (0 – 5%)
B (6 – 11%)
C (12 – 17%)
D (18 – 23%)
F (23% and above)*