

LONG ISLAND SOUND BEACH REPORT 2016-2018

PRESENTED BY



Save the Sound®

Woodmont Beach — Milford, Connecticut



Eagle Dock Beach — Cold Spring Harbor, New York

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Save the Sound is a bi-state program of Connecticut Fund for the Environment, a member-supported organization. Our mission is to protect and improve the water, land, and air of Connecticut and the Long Island Sound region. We use scientific and legal expertise and bring people together to achieve results that benefit our environment for current and future generations.

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Save the Sound®

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Sunken Meadow State Park — Kings Park, New York

INTRODUCTION

Long Island Sound is encircled by more than 200 beaches where the public can get in and enjoy the water. Millions of people visit these beaches each year, supporting our coastal economies and forging personal bonds with the Sound estuary. For many of us, these swimming spots hold the imprint of precious time spent with family and friends, or in solitude, connecting with nature. Their value is immeasurable.

This report is designed to provide the public and local officials with a three-year analysis of publicly available data on the water quality conditions at our swimming beaches from 2016 to 2018. This analysis shows how our beaches rank when measured against the criteria for safe swimming and indicate how wet or dry weather influences these conditions. It was produced using Save the Sound's online beach information tool www.SoundHealthExplorer.org, where beach monitoring data, dating back to 2004, from all Sound beaches are compiled and published for all to view, download, and share. The beach monitoring data are collected by local and county departments of health in each beach community, in accordance with state recreational water criteria, and posted to the federal water quality database.¹



Ocean Beach Park — New London, Connecticut

As this report shows, the quality of water varies greatly from beach to beach. Consistently clean and swimmable beaches can be situated near beaches that suffer from water pollution. This is because beach water quality, and the pollution that determines it, tend to be highly localized. So if this report shows pollution at your local beach, look for potential sources near it and take action to clean them up. Read on to learn more about water quality at our beaches, likely pollution sources, and ways that together we can help to ensure a cleaner environment in the years to come.

Rocky Neck State Park — Niantic, Connecticut



OVERVIEW

There are multiple sources of water quality concern (e.g. garbage, algae, pharmaceuticals, turbidity), but the most common risk when swimming in polluted water is coming in contact with, or ingesting, disease-causing microorganisms such as bacteria, viruses, and protozoa associated with fecal pollution. Collectively, these agents are known as pathogens. This is why fecal bacteria concentration measured at beaches is used to determine if the water is safe for swimming. Identifying sources of fecal pollution and managing them to improve our beaches are priorities for Save the Sound and the primary areas of this report's focus.

THE SCOPE OF THIS REPORT: WHERE IS MY BEACH?

We used the Environmental Protection Agency (EPA) Water Quality Portal database to retrieve all available water quality data from swimming beaches on Long Island Sound for inclusion in this report. Only beaches that monitor water quality in accordance with state law and the federal Beaches Environmental Assessment and Coastal Health (BEACH) Act are included.² If you know of a swimming beach that is not included here, it either is not monitored, or it is independently monitored and the data have not been shared with EPA.

Recreational swimming beach permits require all public and municipal beach operators monitor water quality weekly to confirm that conditions meet state criteria for swimming.³ Some private beach owners choose not to participate in the federally funded monitoring and reporting program. If your beach isn't listed here, we encourage you to ask your beach manager what type of monitoring they do and how often.

Some beaches in this report have been assigned "N/A" (not available) instead of a grade because those beaches do not have enough samples to be given a grade. We have set the minimum at nine samples per summer, which allows for one sample a week in July and August. Beaches that have fewer than nine samples are not sampling frequently enough to meet that minimum standard. Assessing beach quality and protecting public health require monitoring data—and more data allow better decision-making. Save the Sound urges all beach managers to monitor water quality at least once a week and make the results available to the public using that beach.

HOW YOUR BEACHES ARE MONITORED AND MANAGED

Weekly Monitoring

The public often assumes that water quality at swimming beaches is tested daily and that the results are immediately available to determine whether a beach is opened or closed for the day. Unfortunately, this is not the case.

Current standards, funding, and technology generally support only weekly testing for fecal bacteria—the primary pollution indicator used to manage beaches. The EPA-recommended fecal-indicating bacteria used in New York and Connecticut marine swimming beaches are enterococci (Enterococcus). The vast majority of beaches in the United States, including most Sound beaches, are tested once a week for Enterococcus during the swimming season. The water collected at the beach is taken to a lab to process and the results are not available until the day after collection.

COMMON REASONS FOR BEACH CLOSURES, ROUGHLY IN ORDER OF FREQUENCY, INCLUDE:

- **EXCEEDANCE** - BACTERIAL INDICATOR LEVELS EXCEED THE STATE STANDARD
- **PREDICTED EXCEEDANCE: MODEL** - A MODEL BASED ON ENVIRONMENTAL CONDITIONS PREDICTS THAT WATER QUALITY IS POOR
- **PREDICTED EXCEEDANCE: RAINFALL** - BECAUSE OF RECENT HEAVY RAIN, IT IS PREDICTED THAT WATER QUALITY IS POOR
- **HIGH WAVES** - WAVES OR ROUGH CONDITIONS
- **TURBIDITY** - CLOUDY WATER THAT COULD PREVENT LIFEGUARDS FROM BEING ABLE TO SEE SWIMMERS
- **NO LIFEGUARD** - WHEN LIFEGUARDS ARE NOT AVAILABLE, BEACHES ARE CLOSED
- **CLOSED FOR END OF SEASON** - BEACH CLOSED FOR THE SEASON
- **COLD WATER** - TEMPERATURES BELOW 50°F

Although weekly sampling is common practice, conditions can change from day to day; beaches with a history of significant or recurring contamination should get more frequent testing to protect public health and to track down pollution sources. Beach managers should be aware of the patterns of when their beach fails state swimming criteria and use preemptive closures whenever those conditions occur. Beaches that consistently fail to meet swimming criteria during and after rain should be closed when it rains and remain closed long enough for that water quality to improve. The impact of rainfall on water quality varies by location, so decisions should be informed by prior testing and/or modeling of each beach. For beaches that fail safe-swimming criteria in dry weather, additional water testing should be conducted to identify and eliminate the source of fecal bacteria contamination, be it leaky beach toilets, local goose populations on the shoreline, contaminated groundwater, or failing sewage infrastructure.

Waterborne Illnesses

Exposure to pathogen-contaminated water can cause symptoms such as nausea, vomiting, diarrhea, headache, and fever. Illnesses of the upper respiratory tract, and minor skin, eye, ear, nose and throat infections also have been associated with pathogen exposure in polluted water. Individuals with compromised immune systems, the elderly, and children (because of their level of activity and increased opportunities for ingestion of water) are most vulnerable to these illnesses. We recommend swimmers avoid polluted water and wash their hands after swimming and before eating.⁴

WET WEATHER INCREASES WATER POLLUTION

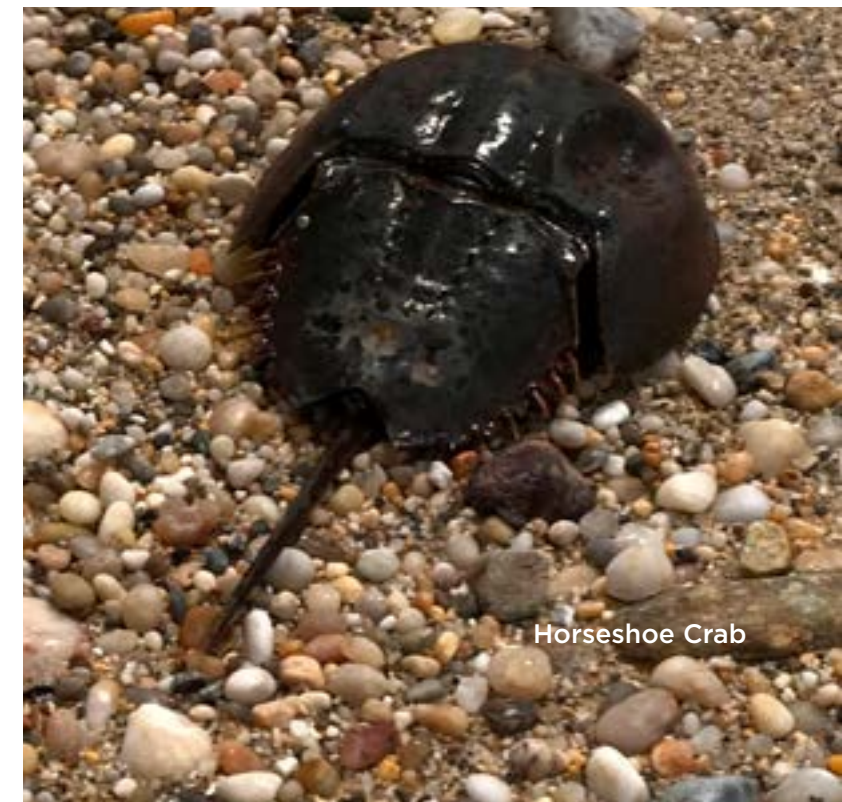
When it rains, the contents of local streams, rivers, and stormwater drainage pipes all flow to our coasts—often causing nearby beaches to experience a decline in water quality. How long it takes for those beaches to again be clean enough for swimming varies by location and, often, by the amount of rainfall. When fecal bacteria reach coastal waters, they are eventually diluted and dispersed by tides, and disinfected by exposure to the UV rays of the sun. The variables that determine the speed of that recovery include the pollution levels in the streams and stormwater, the volume of water, and how well the beach water flushes with the open Sound. Beaches with multiple sources of pollution, located inside of a bay, cove, or harbor where the tidal flushing is moderate, likely will take a longer time to recover from a storm than a beach with one source of pollution on the open coastline.

In many locations, a larger storm with more rain will result in less concentrated pollution, and a smaller rain storm may result in the delivery of pollution in a more concentrated form. This is because the “first flush” of rain empties out the waste that has built up in storm drains, washes wildlife waste off the nearby landscape, and then delivers the pollution on the riverbanks to the coast. Once that “slug” of pollution is in the water, additional rain may dilute the contamination and help to push it out into the open Sound.

For the three summers covered in this report, the overall failure rate of beach samples more than doubled in wet weather—jumping from 5.4% to 11.1%. As a result of climate change, the Sound region is expected to experience steadily increasing rainfall over the coming decades.⁵ This trend will pose a challenge to preserving the quality of our beaches. Coastal communities need to start planning now, committing to maintain clean stormwater drainage systems, rivers, streams, and creeks. We also need to eliminate combined sewer outfalls (which discharge untreated sewage and stormwater) near beaches and properly maintain local sewage infrastructure, including septic systems.

IS THERE REAL-TIME WATER TESTING TECHNOLOGY?

NEW DNA TECHNOLOGY BEING PILOTED AT CALIFORNIA BEACHES CAN PROVIDE SAME-DAY MONITORING RESULTS. WE DON'T KNOW HOW MANY YEARS WE WILL HAVE TO WAIT AND HOW MANY DOLLARS WE'LL NEED TO INVEST BEFORE THAT TECHNOLOGY CAN REPLACE THE 24-HOUR TESTS WE RELY ON TODAY. THE FEDERAL FUNDING TO PAY FOR OUR CURRENT BEACH MONITORING HAS BEEN ON THE BUDGET CUTTING-BLOCK FOR YEARS; ACHIEVING A MAJOR INCREASE IN THAT FUNDING WILL BE AN UPHILL BATTLE. PUBLIC SUPPORT FOR SUSTAINED EPA FUNDING IS CRITICAL TO CONTINUE AND IMPROVE ON OUR BEACH MONITORING PRACTICES.



Horseshoe Crab

ALL POLLUTION IS NOT CREATED EQUAL

This report assesses beaches based on how often they fail state swimming criteria when tested (**frequency** of pollution), as well as how high the fecal contamination level gets (**magnitude** of pollution). It is important to include magnitude of failure in our scoring because water only slightly over the acceptable fecal bacteria level poses a lower public health risk than water quality far in excess of the acceptable fecal bacteria level.⁶ For example, if you swim at a beach with a large resident goose population, the fecal count in the water may double when it rains. If, however, you swim at a beach near a large storm drain that delivers animal waste from city streets, or a combined sewer overflow that contains untreated sewage, the fecal count may increase tenfold. The higher the fecal contamination level, the more the expected incidents of waterborne illnesses among swimmers.

NEW YORK AND CONNECTICUT STATE CRITERIA FOR MARINE SWIMMING WATER

DUE TO THE WIDE VARIETY OF PATHOGENS, IT IS NOT PRACTICAL TO TEST FOR THEM DIRECTLY. INSTEAD, BEACH WATER QUALITY IS ASSESSED BY TESTING FOR THE FECAL-INDICATING BACTERIA ENTEROCOCCI (ENTERO).

ACCEPTABLE ENTERO COUNTS =
0-104 CFU/100 ML

UNACCEPTABLE ENTERO COUNTS =
GREATER THAN 104 CFU/100 ML

[CFU = COLONY FORMING UNIT;
100 ML = 1/10TH OF A LITER]

WATER POLLUTION

There are many types of pollution at our beaches, including floatable trash, harmful algae blooms, pharmaceutical waste, toxic metals, and fecal waste. Similarly, there are many sources of pollution, including animal feces, human sewage, industrial waste, and runoff from farms and city streets. Those that directly impact human health and safety are considered when approving a swimming beach. The primary pollutant indicator measured when deciding if a beach should be opened or closed for swimming is fecal bacteria. Exposure to pathogens from human or animal waste can cause a variety of illnesses including viral, parasitic, and bacterial infections.⁷

FAILING WASTEWATER INFRASTRUCTURE: SEWAGE

When people learn that there is sewage getting into their beach water, they might assume something isn't working at a nearby wastewater treatment plant. This is sometimes the case, but more often the pipes and pumps that deliver our sewage to the treatment plants or the functioning of local septic systems are the problem. These exposures to sewage can occur in a few ways:

Sanitary Sewer Overflows (SSOs) and Discharges from Sewer Line Breaks

When underground pipes crack or collapse, untreated sewage can leak out and reach beaches. When it rains, cracked pipes can fill up, causing a mix of raw sewage and rainwater to flow out of manholes and into the nearest stormwater catch basin or river, ultimately delivering that contaminated water to the coast and, possibly, to a beach near you. This widespread problem of sewage escaping the collection system before reaching a treatment plant is called a sanitary sewer overflow (SSO).

Combined Sewer Overflows (CSOs) Triggered by Rain

Some of the older cities on the Sound have combined sewer systems. In combined systems, stormwater runoff and wastewater flow into the same pipe and are treated at a wastewater treatment plant. However, during storms when the combined volume of rain and wastewater is greater than the capacity of the treatment plant's delivery pipes—or is too great for the plant to treat—the excess untreated wastewater and storm runoff gets discharged directly into nearby waterways, an event called a combined sewage overflow (CSO). This toxic brew of raw sewage, household and industrial wastewater, and street runoff causes sudden and often dramatic spikes in fecal bacteria and other pollutants in the water. Swimming near a CSO outfall is not recommended following rainfall (e.g. often within 48 hours of rain), which is why state law in Connecticut and New York requires that each outfall be marked with a sign.

COMMUNITIES ON THE SOUND WITH COMBINED SEWER SYSTEMS

NEW YORK CITY • NEW HAVEN • BRIDGEPORT • NORWALK

SEE THE LOCATION OF EACH CSO OUTFALL ON WWW.SOUNDHEALTHEXPLORER.ORG



Harbor Island Park and Beach — Mamaroneck, New York

Septic Systems

There are hundreds of thousands of septic systems and cesspools in communities that drain to the Sound, and they're a common source of fecal bacteria pollution. People who purchase homes with such simple forms of privately owned wastewater infrastructure rarely are trained in how to properly maintain them. Few towns provide any oversight. As a result, improperly maintained systems leach pollutants into the groundwater and/or flood in the rain, delivering raw or partially treated sewage to our coastlines or into our drinking water.

BOATING WASTE

IT IS ILLEGAL FOR BOATERS TO DUMP ANY WASTE IN LONG ISLAND SOUND.

THERE ARE PUMP-OUT SERVICES OFFERED AT MARINAS AND ROVING PUMP-OUT BOATS AVAILABLE AROUND THE SOUND FOR PROPER DISPOSAL OF HUMAN SANITARY WASTE.

PLEASE USE THEM!

STORMWATER RUNOFF: POLLUTION DELIVERY SYSTEM

Rainwater that has run off of polluted surfaces and traveled through a stormwater drainage system before reaching the coast carries with it a host of pollutants, none of which you want to swim in. The most common pollutant measured for beach management—fecal bacteria—can be abundant in stormwater, depending on the route it has followed to the beach. In addition to animal waste washed off of streets, yards, and parks by the rain, the stormwater also picks up the fecal matter already in stormwater catch basins and pipes. Fecal matter in the drainage system can be naturally occurring from wildlife, such as raccoons or rats that make their homes there, or it can result from pet owners who don't realize dropping dog waste in catch basins will end up in the Sound. Leaking sewer and septic systems can infiltrate stormwater systems in some locations, adding human waste. Rain that falls on streets, parking areas, rooftops, or other hard surfaces picks up oil and grease from vehicles, fertilizers, pesticides, and other harmful chemicals that contribute to water pollution.

ANIMAL WASTE

Wildlife

High levels of animal waste in the water pose a health threat to swimmers. Some beaches become preferred homes to flocks of large birds, such as geese or gulls, providing a 24/7 source of fecal matter.

Livestock

Runoff from farms can be a potent source of fecal bacteria. Connecticut has concentrated animal feeding operations (CAFOs) near the Sound, where huge quantities of manure can pose major water quality challenges.⁸ New York State is also home to CAFOs, but none in the Long Island Sound region. Small farms that don't follow best management practices can also be sources of water pollution. Manure spread as fertilizer on farms and other properties can be washed into waterways and storm drains and end up contaminating beaches in the same manner as street runoff.

OTHER POLLUTANTS THAT HARM OUR BEACHES

Marine Debris and Plastics

People are finally waking up to the limited capacity of our oceans to absorb all the waste we are generating. Plastics make up the majority of the marine debris in part because we produce it and throw it away in such massive volumes, and in part because it takes so long to break down in the environment. Marine debris is costing society dearly in the environmental harm it is causing, and it costs local coastal economies when littered beaches and water turns away beachgoers.

Nuisance and Toxic Algae and Seaweeds

Anyone who has spent time on a beach with an overabundance of seaweed or algae knows how unpleasant it can be. From the smell of rotting seaweed on the shore to the unwelcome feeling of it in the water, seaweed and algae are big negatives for most beachgoers.

There are a wide variety of seaweeds and algae, which range from highly beneficial (as part of the aquatic food chain) to harmful and even toxic. Harmful algae blooms (known as "HABs") and marine biotoxins have become increasingly menacing on the Sound—threatening important habitat, disrupting food chains for many marine species, and harming economically viable fisheries. New York State and Connecticut both monitor for HABs and marine biotoxins; however, they are not a part of standard beach monitoring and therefore not a focus of this report. For more information on this topic, visit the Stopping Pollution section of www.SaveTheSound.org.

CLIMATE CHANGE HARMS OUR BEACHES

OUR COAST IS THE FRONT LINE FOR IMPACTS FROM CLIMATE CHANGE IN OUR REGION. THE MOST VISIBLE CHANGE WILL BE THE LOSS OF COASTAL PROPERTY FROM A COMBINATION OF SEA LEVEL RISE, EROSION, AND MAJOR STORMS, ALL OF WHICH WILL ACCELERATE IN COMING YEARS, LEADING TO A COMPLETE LOSS OF SOME BEACHES.

WE ARE ALREADY EXPERIENCING MORE PRECIPITATION AND MORE FLASH-FLOOD RAIN PATTERNS—A TREND THAT WILL CONTINUE IN THE NORTHEAST. WITHOUT IMPROVED MANAGEMENT AND MAINTENANCE OF INFRASTRUCTURE, INCREASED RAIN WILL RESULT IN DEGRADED SWIMMING WATER QUALITY FROM STORMWATER RUNOFF AND COMBINED SEWAGE OVERFLOWS. OUR LOCAL, STATE, AND FEDERAL GOVERNMENTS NEED TO SUPPORT LOCAL PLANNING AND INVESTMENT IN STORMWATER MANAGEMENT NOW. GREEN INFRASTRUCTURE SHOULD BE USED TO THE WIDEST EXTENT PRACTICABLE AS THE MOST COST-EFFECTIVE APPROACH TO CAPTURING STORMWATER AND REDUCING RUNOFF. OUR WASTEWATER COLLECTION AND TREATMENT SYSTEMS THAT OVERFLOW WHEN IT RAINS NEED CAPITAL IMPROVEMENTS SO THEY CAN HANDLE THE INCREASING PRECIPITATION WE FACE.

Learn More About Your Local Beaches at: www.SoundHealthExplorer.org

This website provides beach monitoring data from Long Island Sound swimming beaches dating back to 2004, as well as information related to potential pollution sources including:

- Location and permit # of all wastewater treatment plants on the Sound
- Location of all combined sewage outfalls (CSOs) that discharge to the Sound
- Coastal watershed boundaries showing the local drainage area
- Land use and land cover maps
- Percent of impervious surfaces



Playland Park and Beach — Rye, New York

BEACH GRADES

The grading system used in this report aims to capture for each beach 1) how often water quality was found to be unsafe for swimming (frequency), and 2) a measure of how high the level of contamination was (magnitude) on the worst sampling day of the season. Because sources and concentration of contamination can vary with weather, the frequency and magnitude grades are measured for both dry and wet weather conditions.*

NY & CT State Criteria for Marine Swimming Water Quality

Passing Sample = Enterococcus counts 0-104 cfu/100 ml

Failing Sample = Enterococcus counts greater than 104 cfu/100 ml

[Enterococcus = FIB enterococci; cfu = colony forming unit; 100 ml = 1/10th of a liter]

* Wet weather samples = equal to or greater than 1/4 inch of rain in the 48 hours before sampling

* Dry weather samples = less than 1/4 inch of rain in the 48 hours before sampling

HOW TO READ THE BEACH GRADES

All four sub-categories (FD, FW, MD, MW) are assigned a score, represented by green, yellow, orange, and red, with green representing excellent water quality and red representing very poor water quality.

FREQUENCY DRY (FD):

THE PERCENTAGE OF SAMPLES, COLLECTED DURING PERIODS OF PROLONGED DRY WEATHER THAT FAIL TO MEET THE STATE WATER QUALITY CRITERIA FOR SAFE SWIMMING. A HIGH PERCENTAGE OF FD FAILURE WOULD INDICATE A CONSISTENT SOURCE OF POLLUTION THAT IS UNRELATED TO WET WEATHER (E.G. GROUNDWATER DISCHARGE).

MAGNITUDE DRY (MD):

REPRESENTS THE HIGHEST CONCENTRATION OF FECAL INDICATOR BACTERIA MEASURED IN ANY SAMPLE COLLECTED DURING PERIODS OF PROLONGED DRY WEATHER. HIGHER BACTERIAL LEVELS ARE ASSOCIATED WITH MORE RISK OF ILLNESS TO SWIMMERS, AND THEREFORE MD REPRESENTS A MEASURE OF WATER QUALITY ON THE WORST DRY WEATHER SAMPLING DAY OF THE SEASON.

FD FW MD MW GRD



FREQUENCY WET (FW):

THE PERCENTAGE OF SAMPLES, COLLECTED AFTER RAIN THAT FAIL TO MEET THE STATE WATER QUALITY CRITERIA FOR SAFE SWIMMING. A HIGHER PERCENTAGE OF FW FAILURE THAN FD FAILURE WOULD INDICATE THE PRESENCE OF POLLUTION SOURCES TRIGGERED BY PRECIPITATION (E.G. CSO OR URBAN STORMWATER).

MAGNITUDE WET (MW):

REPRESENTS THE HIGHEST CONCENTRATION OF FECAL INDICATOR BACTERIA MEASURED IN ANY SAMPLE COLLECTED AFTER RAIN. HIGHER BACTERIAL LEVELS ARE ASSOCIATED WITH MORE RISK OF ILLNESS TO SWIMMERS, AND THEREFORE MW REPRESENTS A MEASURE OF WATER QUALITY ON THE WORST WET WEATHER SAMPLING DAY OF THE SEASON.

Additional information on the grading procedures can be found at www.SoundHealthExplorer.org.



CONNECTICUT EAST

KEY Grades displayed on map are for 2018

A B C D F NOT ENOUGH DATA

FD = Frequency of DRY weather failures
 FW = Frequency of WET weather failures
 MD = Magnitude of DRY weather failures
 MW = Magnitude of WET weather failures

NEW HAVEN COUNTY

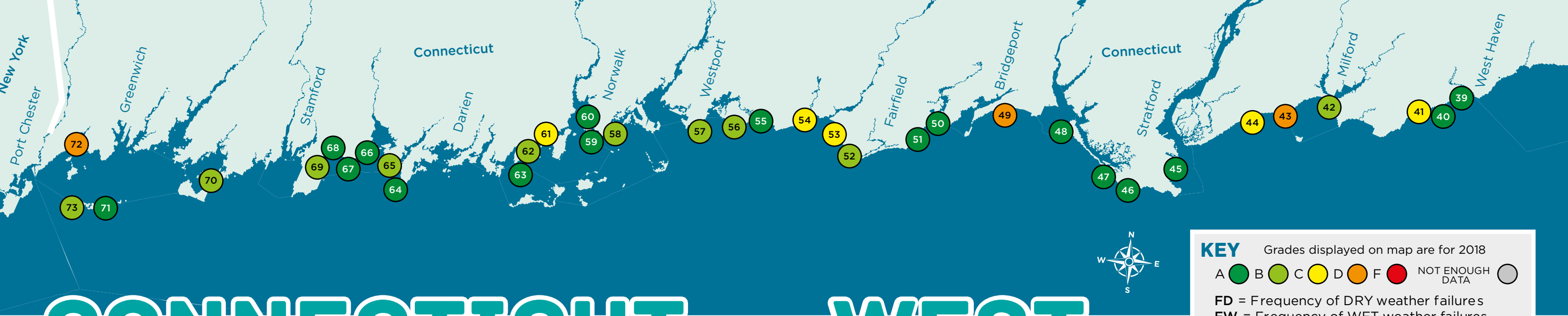
2018						2017						2016					
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	
18	Hammonasset Beach SP					B-					B+					C	
19	Pent Road Beach					A+					A+					C+	
20	East Wharf Beach					A+					A+					A+	
21	West Wharf Beach					B+					A+					B+	
22	Surf Club Beach					A+					A+					A+	
23	Jacob's Beach					A-					NA					A+	
24	Stony Creek Beach					B+					A+					C+	
25	Branford Point Beach					B-					A-					A+	
26	Clark Avenue Beach					C-					C-					A+	
27	East Haven Town Beach					A+					A					A+	
28	Lighthouse Point Beach					A-					C+					A	
29	Fort Hale Park Beach					A-					C+					B+	
30	Morse Beach					A+					B+					B+	
31	Altschuler Beach					A+					B+					C	
32	Oak Street Beach B					A+					A+					C	
33	Oak Street Beach A					A+					A					B	
34	Rock Street Beach					B					B-					C-	
35	Seabluff Beach					B					A+					D	
36	Dawson Beach					B					A+					C	
37	Seaview Beach					C					A-					D	
38	South Street Beach					A+					A-					C+	

NEW LONDON COUNTY

2018						2017						2016					
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	
1	duBois Beach					A+					NA					NA	
2	Noank Dock					B+					A+					A+	
3	Esker Point Beach					A+					A+					A+	
4	Eastern Point Beach					A+					A+					A+	
5	Green Harbor Beach					B+					C					A+	
6	Ocean Beach Park					B+					A+					A-	
7	Waterford Town Beach					A+					A+					A-	
8	Pleasure Beach					A+					A+					A+	
9	Hole-In-The-Wall Beach					A+					A+					A-	
10	McCook Point Beach					A+					A+					A+	
11	Rocky Neck State Park					B-					C+					B	
12	Soundview Beach					B+					A-					A+	
13	White Sands Beach					A+					A+					A+	

MIDDLESEX COUNTY

2018						2017						2016					
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	
14	Town Beach (Saybrook)					B+					A+					B	
15	Harvey's Beach					B+					A+					B	
16	West/Westbrook Beach					A+					A-					A+	
17	Town Beach (Clinton)					B					C+					C+	



CONNECTICUT WEST

KEY Grades displayed on map are for 2018

A B C D F NOT ENOUGH DATA

FD = Frequency of DRY weather failures
FW = Frequency of WET weather failures
MD = Magnitude of DRY weather failures
MW = Magnitude of WET weather failures

FAIRFIELD COUNTY

2018						2017						2016					
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	
45	Short Beach					A-					B+					C+	
46	Long Beach (Marnick's)					A-					A-					A+	
47	Long Beach (Proper)					A+					A-					A+	
48	Pleasure Beach					A+					B					C+	
49	Seaside Park Beach					D+					B-					C-	
50	Jennings Beach					A+					A					C	
51	Penfield Beach					A-					A+					B	
52	South Pine Creek Beach					B+					A-					A-	
53	Sasco Beach					C-					A-					A	
54	Southport Beach					C					B+					B+	
55	Burying Hill Beach					A+					A-					A+	
56	Sherwood Island S P					B+					A+					A+	
57	Compo Beach					B-					B-					B	
58	Shady Beach					B-					B-					B-	
59	Calf Pasture Beach					A+					B-					B-	
60	Marvin Beach					A-					C					D+	
61	Hickory Bluff Beach					C+					A+					B+	
62	Rowayton Beach					B-					A+					A+	
63	Bell Island Beach					A-					A					A+	
64	Pear Tree Point Beach					A+					A+					A+	
65	Weed Beach					B+					A+					A+	

FAIRFIELD COUNTY

2018						2017						2016					
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	
66	East Beach (Cove Isd.)					A+					A+					A+	
67	Quigley Beach					A+					A+					A+	
68	Cummings Beach					A-					A					A-	
69	West Beach					B					B+					A-	
70	Greenwich Point Beach					B-					A+					A+	
71	Island Beach					A+					A+					B+	
72	Byram Beach					D-					A					B-	
73	Great Captain's Island					B					A+					B-	

NEW HAVEN COUNTY

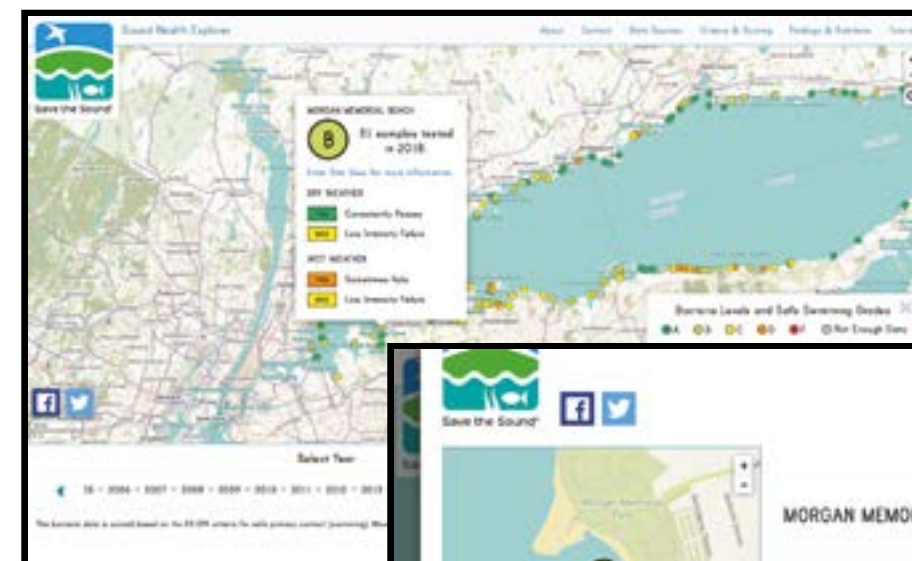
2018						2017						2016					
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	
39	Woodmont Beach					A+					A+					A+	
40	Anchor Beach #2					A+					A+					B+	
41	Anchor Beach #1					C+					B+					A-	
42	Gulf Beach					B+					A-					B	
43	Silver Sands State Pk					D					B-					B-	
44	Walnut Beach					C+					A					A	



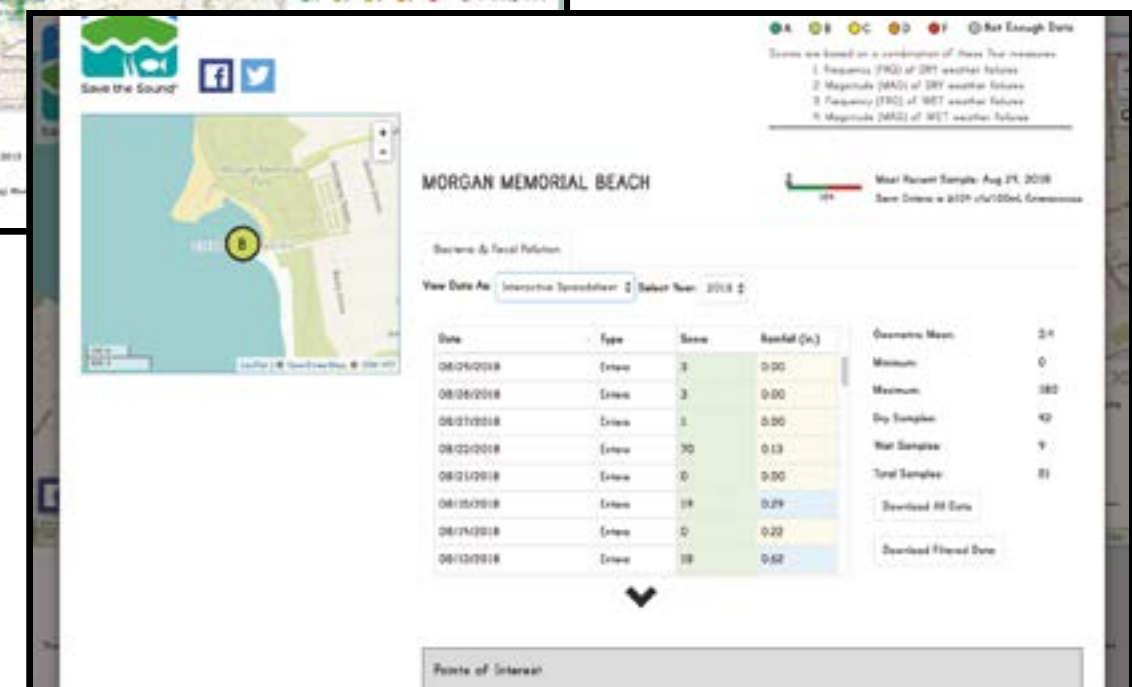
NASSAU, L.I.

NASSAU		2018					2017					2016				
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD
109	Manor Haven Beach					B+					C					C+
110	Village Club @ Sands Pt					B					B					B
111	Bar Beach					A					B+					A
112	Hempstead Harbor Bch					B+					B					A
113	Tappen Beach					A					C					B+
114	Sea Cliff Beach					A					B					B
115	Morgan Memorial Beach					B					C-					B
116	Crescent Beach					D					D					D-
117	Prybil Beach					A					B					B-
118	Lattingtown Beach					C+					B					C+
119	The Creek Beach					A+					B					A+
120	Piping Rock Beach					A+					B					A-
121	Stehli Beach					B+					B-					C+
122	Ransom Beach					B+					B					B
123	Soundside Beach					A					C+					A
124	Centre Is. (Sound Bch)					A+					B+					A
125	Centre Is. (Bay Beach)					A-					A+					B+
126	W. Hbr. Memorial Bch					A-					B					B-
127	Beekman Beach					B-					C					C-
128	Theo. Roosevelt Beach					A					B+					C
129	Village of Laurel Hollow					B					B-					B-

DIVE INTO THE DATA AT WWW.SOUNDHEALTHEXPLORER.ORG



Our free online Sound Health Explorer tool shares all of the data behind the grades and contains sampling data all the way back to 2004.





SUFFOLK		2018					2017					2016				
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD
130	Eagle Dock Comm. Bch					C					A					A-
131	Cold Spring Hbr Bch Clb					C+					A					A-
132	Lloyd Harbor Village Pk					A-					A-					C+
133	West Neck Beach					A-					A+					B
134	Lloyd Neck Bath Club					B+					A+					A+
135	Fiddlers Green Assoc.					B					B+					C+
136	Lloyd Harbor Estates					C+					A-					C+
137	Gold Star Battallion Bch					B-					B+					D+
138	Wincoma Beach					B-					A					A-
139	Baycrest Assoc. Beach					C					A					B-
140	Nathan Hale Beach Club					C					A					B+
141	Head of the Bay Club					B-					B+					C+
142	Bay Hills POA					C					C+					C+
143	Crescent Bch (Suffolk)					C-					C+					B
144	Hobart Beach (Bay)					A					A+					A+
145	Hobart Beach (Inlet)					A					A+					A+
146	Prices Bend Beach					C+					A-					A+
147	Valley Grove Beach					D					B+					B-
148	Knollwood Beach					D+					B+					A-

SUFFOLK		2018					2017					2016				
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD
149	Fleet's Cove Beach					C+					B-					B+
150	Huntington Bch Assoc.					C					B+					B
151	Centerport Beach					B-					A+					A
152	Centerport Yacht Club					C					A+					C+
153	Steers Beach					C					B					C
154	Asharoken Beach					C+					B+					C+
155	Crab Meadow Beach					C					C+					B+
156	Callahan's Beach					C					A					A-
157	Sunken Meadow SP					B+					C+					B-
158	Short Beach					B-					B-					A
159	Nissequogue Point Bch					C-					C+					B+
160	Long Beach					C					B+					A+
161	Schubert Beach					B+					A+					A
162	Stony Brook Yacht Club					NA					NA					B+
163	Stony Brook Beach					C-					A+					A
164	Sound View Bch Assoc.					C+					A+					B+
165	West Meadow Beach					B+					C+					B+
166	Old Field Club					B+					A+					A



SUFFOLK, L.I. EAST

SUFFOLK		2018					2017					2016				
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD
167	Grantland Beach					B+					A+					C-
168	Bayview Beach					A+					A+					B
169	Indian Field Beach					B+					A+					C-
170	Bayberry Cove Beach					D					A-					C+
171	Little Bay Beach					C-					A-					C+
172	Belle Terre Beach					A-					A+					A+
173	Port Jefferson Beach W					A					A+					A
174	Port Jefferson Beach E					A+					A+					A-
175	Cedar Beach West					A+					A-					A
176	Cedar Beach East					A+					A+					B
177	Miller Place Park Beach					B-					A					A-
178	Woodhull Landing					C					A-					A-
179	Scotts Beach					D					A-					C+
180	Sound Beach POA West					D					A+					C+
181	Sound Beach POA East					A-					NA					NA
182	Tides Prop. Own. Assoc.					D+					A-					B+
183	Terraces on the Sound					C					A+					A-
184	Beech Road Beach					D+					A-					A
185	Broadway Beach					A-					A-					A-

SUFFOLK		2018					2017					2016				
#	Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD
186	Friendship Drive Beach					C-					A+					B+
187	Shoreham Village Beach					B-					A+					A-
188	Shoreham Shore Club					B-					A+					A-
189	Shoreham Beach					B					A+					B+
190	Wading River Beach					C					B-					A+
191	Camp DeWolfe					D+					A+					A+
192	Wildwood SP Bch					B					A-					A-
193	Camp Baiting Hollow					D+					B+					A+
194	Woodcliff Park POA					C-					A+					A+
195	Dorothy P. Flint Camp					A+					B+					A+
196	Reeves Beach					C-					B+					A+
197	Iron Pier Beach					A+					A-					A+
198	Mattituck Breakwater					A+					A-					A+
199	Kenney's Beach					A+					A-					B+
200	McCabe's Beach					A+					B+					A+
201	Southhold Beach					A+					A+					B
202	Hay Harbor Club					NA					NA					NA
203	Island People's Project					NA					NA					NA
204	Fisher's Island C. Club					NA					NA					NA

TRENDS & FINDINGS

Working with our science advisors, we have identified the following patterns in the beach data. The work to review the data and identify trends, as described briefly below, is the first step toward building a more complete understanding of these patterns, their drivers, and management actions that can improve beach water quality. Our ability to manage our coastal environment relies on the continued collection of data that can help us to better understand and improve environmental quality.

REGIONAL TRENDS: 10-YEAR VIEW

By examining beach water quality by region over the last 10 years we can start to see some trends relevant to beach use and management. While some individual beaches consistently have excellent water quality (see *20 Best Beaches and Beach Grades*), there is no single region that consistently earned the highest grade every year (Figure 1, below). Regional beach quality has differed by year and all regions have opportunities for improvement.

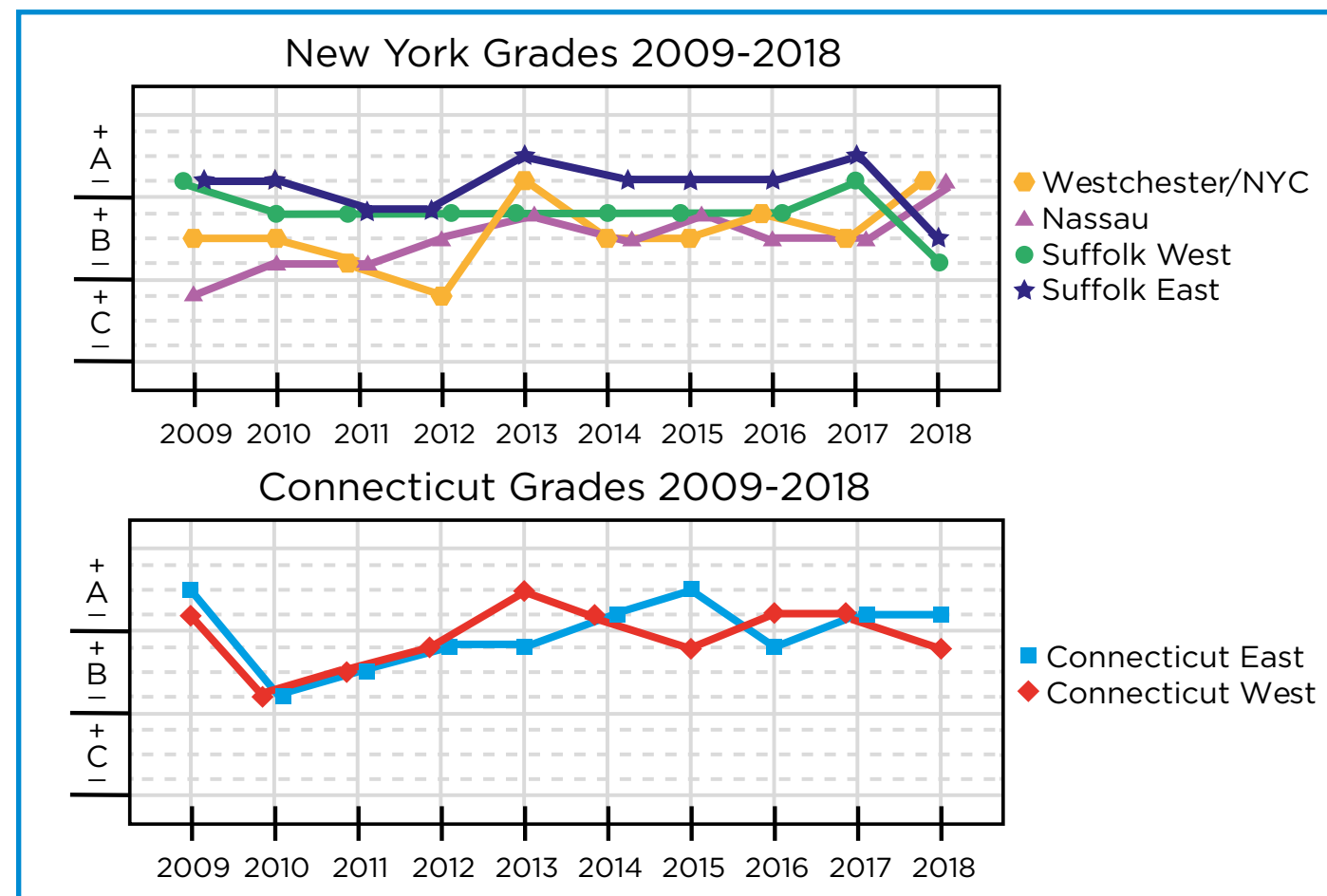


FIGURE 1. THESE CHARTS SHOW THE ANNUAL REGIONAL BEACH GRADES CALCULATED BY AVERAGING ALL THE BEACH GRADES IN EACH REGION THAT YEAR. ALL DATA USED WERE COLLECTED BY LOCAL DEPARTMENTS OF HEALTH AND REPORTED TO EPA.

Overall, there is a pattern of higher grades in the eastern Sound and lower grades to the western Sound. However, this east-west gradient is not constant in every year. For example, 2018 showed the largest decline in water quality at the beaches in eastern Suffolk County, with slightly better water quality in Westchester/NYC. 2018 was a relatively dry year and that may have contributed to improved conditions in the western sound where CSOs and urban stormwater are large management concerns, but the sharp decrease of water quality at many Suffolk County beaches in 2018 is more difficult to explain. The responses in eastern versus western New York may demonstrate the regionally differing sources of water pollution and the importance of managing for both dry and wet weather sources of contamination.

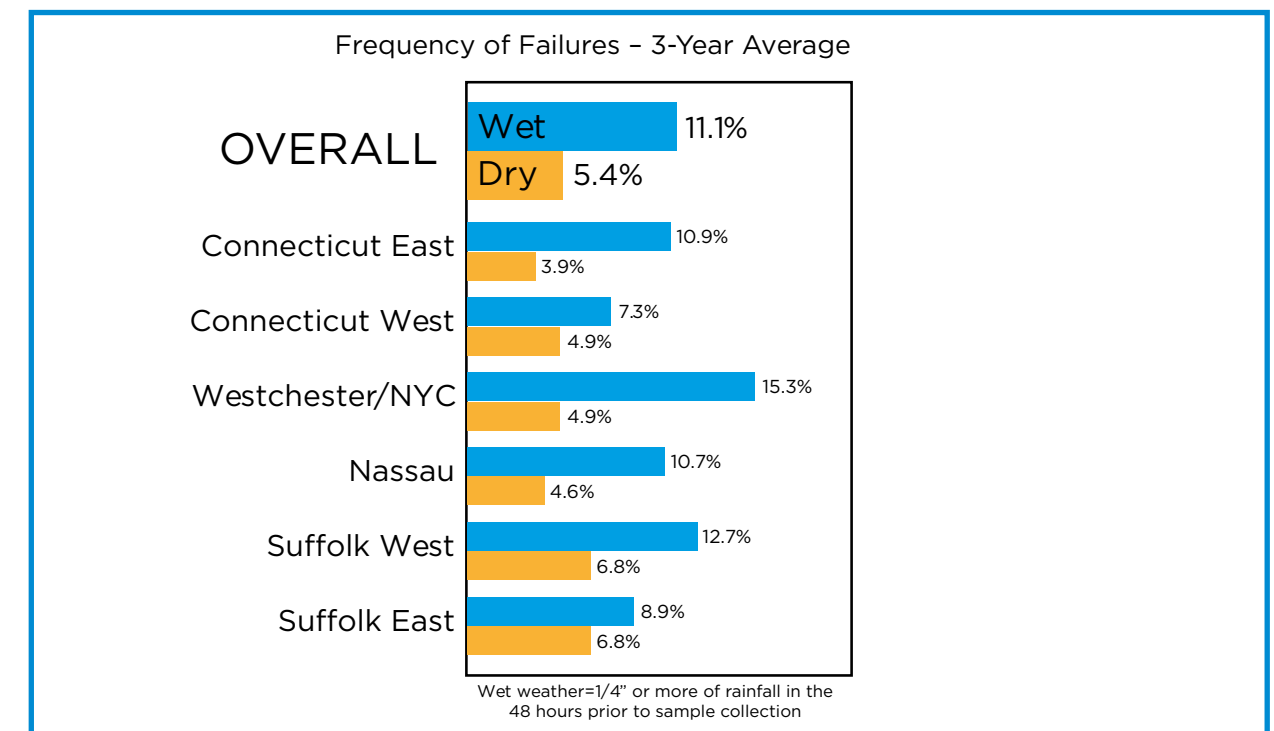


FIGURE 2. THIS CHART SHOWS THE PERCENT OF SAMPLES THAT FAILED TO MEET STATE SWIMMING CRITERIA, DIVIDED BY WET- WEATHER SAMPLES AND DRY-WEATHER SAMPLES, FOR EVERY BEACH IN THIS REPORT, FOR THE RECREATIONAL SEASONS 2016, 2017, 2018. ALL DATA INCLUDED WERE COLLECTED BY LOCAL DEPARTMENTS OF HEALTH AND REPORTED TO EPA.

FREQUENCY OF CONTAMINATION: WET VS. DRY WEATHER

In the period 2016 to 2018, the average rate of failure to meet state criteria for safe swimming at Sound beaches was 6.7%. That means, on average, our beaches met safe-swimming criteria 93.3% of the time, which is better than the national average. That average failure rate dropped to 5.4% of samples collected at a beach in dry weather, but jumped to 11.1% after rain (as represented by the orange and blue bars in Figure 2, above).

Decline in water quality after rainfall is consistent in all regions. It demonstrates the connection between land, river, and stream pollution and water quality at our beaches. The water is a mirror of how we live on the land, and rain is the delivery system that moves our waste and pollution out to sea. Two exceptions to this wet weather rule were eastern Suffolk County in 2016 and 2017, and western Connecticut in 2017, where the failures were more frequent in dry weather. We are investigating these patterns, but these regions are known to have sources of contamination (e.g. groundwater discharge) that are more constant and less influenced by precipitation.

The Westchester/NYC region—home to New York City’s massive combined sewage overflow (CSO) system, millions of people, and heavily built and paved neighborhoods—had the highest rate of wet-weather failure (15.3%), triple its dry-weather failure rate (4.9%). The lowest average rate of wet-weather failure over the three-year period occurred in Western Connecticut (7.3%) and Eastern Suffolk County (8.9%)—although these regions experienced a much higher rate of wet weather failures in 2018.

MAGNITUDE OF CONTAMINATION: WET VS. DRY WEATHER

The maximum magnitude (concentration of fecal bacteria) of failure also differed by region, and exhibited complex patterns both locally and regionally in the period 2016 to 2018. In the Westchester/NYC region, where CSOs and urban surfaces deliver concentrated pollution during rain events, the maximum magnitude at beaches averaged more than one and a half times higher during wet weather (459/100 ml), as compared to dry weather (280/100 ml). In Connecticut and Suffolk County, where onsite sewage treatment and animal sources are more prevalent and can reach the water independently of weather, the magnitudes of contamination were often highest in dry weather.

Large rain events sometimes result in the more widespread distribution of contamination (leading to greater frequency of failures), but the heavier dilution of some nearshore sources can result in lower maximum concentrations. Although these patterns of magnitude are complicated when viewed regionally, within particular localities it can be especially helpful to examine failure patterns for their frequency and magnitude when making decisions about where and when to swim.

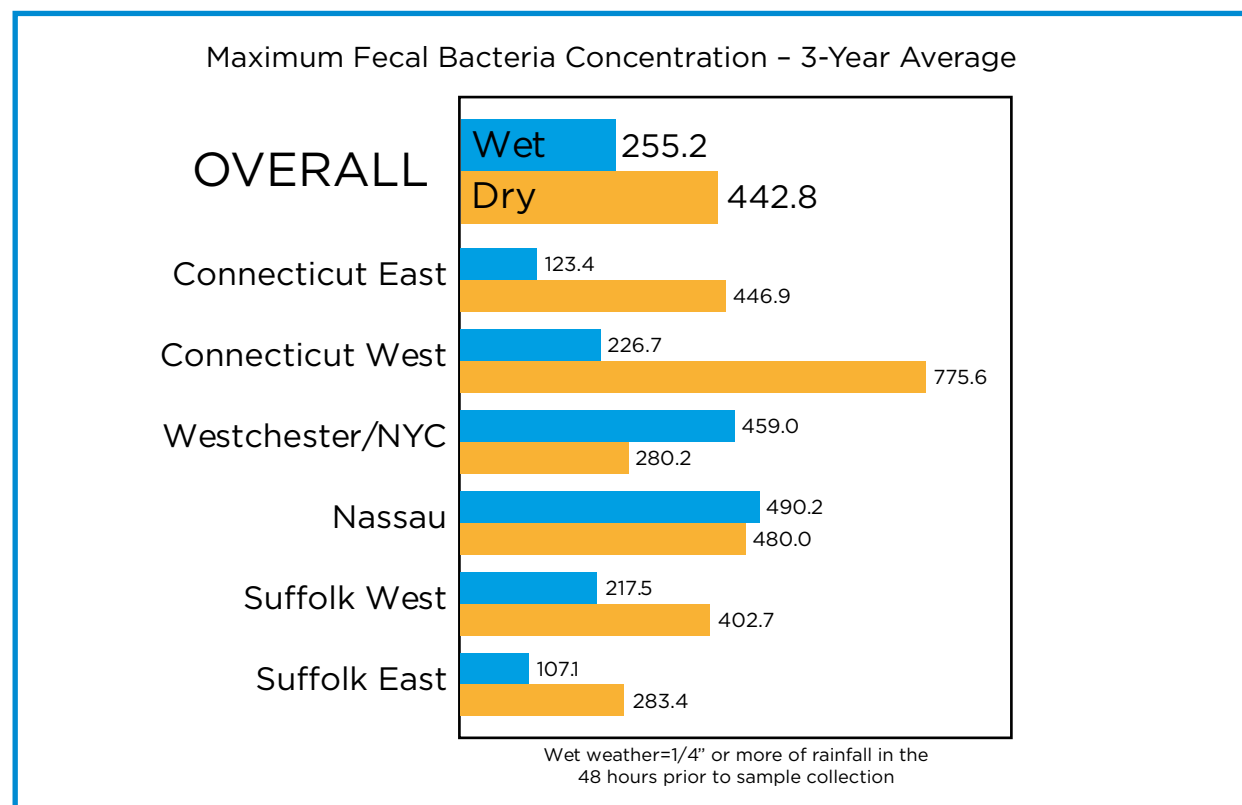


FIGURE 3: THIS CHART SHOWS THE AVERAGE OF THE MAXIMUM FECAL BACTERIA CONCENTRATION OBSERVED AT EACH BEACH IN THE REGION DURING THE 2016 THROUGH 2018 RECREATIONAL SEASONS. THE BLUE BARS SHOW THE AVERAGE FOR SAMPLES COLLECTED AFTER RAINFALL. THE ORANGE BARS SHOW THE AVERAGE FOR SAMPLES COLLECTED IN DRY WEATHER. ALL DATA INCLUDED WERE COLLECTED BY LOCAL DEPARTMENTS OF HEALTH AND REPORTED TO EPA.

20 BEST LONG ISLAND SOUND SWIMMING BEACHES

All great things are worth sharing. That’s why our best swimming beaches list includes only public beaches. Some require a fee for parking and/or entry, call or check online for details.

10 BEST BEACHES IN NEW YORK: 2016-2018

Beach Name	Town	County
Rye Town Park - Oakland Beach	Rye	Westchester
Hobart Beach (Sand City) Inlet	Northport	Suffolk
Hobart Beach (Sand City) Bay	Northport	Suffolk
Port Jefferson Beach - West*	Brookhaven	Suffolk
Iron Pier Beach	Riverhead	Suffolk
Mattituck Breakwater Beach	Southold	Suffolk
Port Jefferson Beach - East*	Brookhaven	Suffolk
Belle Terre Beach*	Brookhaven	Suffolk
Orchard Beach	Bronx	Bronx
Rye Playland Beach	Rye	Westchester

* These beaches have limited access for local residents only

10 BEST BEACHES IN CONNECTICUT: 2016-2018

Beach Name	Town	County
Surf Club Beach	Madison	New Haven
Quigley Beach	Stamford	Fairfield
Eastern Point Beach	Groton	New London
Esker Point Beach	Groton	New London
East (Cove Island) Beach	Stamford	Fairfield
McCook Point Beach	East Lyme	New London
White Sands Beach*	Old Lyme	New London
Pleasure Beach	Waterford	New London
East Wharf Beach	Madison	New Haven
Pear Tree Point Beach*	Darien	Fairfield

* These beaches have limited access for local residents only

TAKING ACTION

LOCAL SOLUTIONS TO LOCAL PROBLEMS

It takes everyone to protect and preserve our healthy beaches. Every community has a responsibility to be on the look out for pollution and contaminants entering our local waterways that lead directly to the Sound.

SANITARY SEWER OVERFLOWS AND DISCHARGES FROM SEWER LINE

Save the Sound works to identify and eliminate sanitary sewer overflows in communities all around the Sound. We have two water quality monitoring labs that can test for fecal bacteria using the same EPA-approved method used for beach management. We have used our lab in Mamaroneck, NY, to successfully identify and get repairs made to multiple broken sewer lines in coastal Westchester County. With the addition of a mobile lab on our Soundkeeper patrol boat, we are bringing this pollution track-down technology to communities all around the Sound.

In addition to helping to find and eliminate SSOs, our team has successfully lobbied for billions of dollars in state grants and loans for Connecticut and New York communities to invest in repairing and upgrading their local sewage infrastructure to address this problem.

WHAT YOU CAN DO

IF YOUR PROPERTY IS HOOKED UP TO A MUNICIPAL SEWAGE SYSTEM, BE SURE THAT THE LINE THAT CONNECTS YOUR HOME OR BUSINESS TO THE TOWN LINE IS FREE OF CRACKS. IF YOU NEED TO HAVE A PLUMBER CUT ROOTS OUT OF YOUR SEWER LINE, THEN IT HAS CRACKS THAT CAN ALLOW RAINWATER AND GROUNDWATER IN, AND RAW SEWAGE OUT. NEW TECHNOLOGY AVAILABLE TO HOMEOWNERS CAN REPAIR CRACKED LINES WITHOUT DIGGING UP YOUR PROPERTY—"TRENCHLESS PIPE LINERS" CAN BE INSTALLED FROM INSIDE THE PIPE AT A GREATLY REDUCED COST.

AS A RESIDENT, SUPPORT ALL EFFORTS IN YOUR VILLAGE, TOWN, OR CITY TO INVEST IN YOUR MUNICIPAL SEWAGE COLLECTION AND TREATMENT SYSTEM. TIMELY REPAIR AND MAINTENANCE OF THESE CRITICAL INFRASTRUCTURE COMPONENTS NOT ONLY REWARD YOU WITH CLEAN WATER—THEY SAVE YOU MONEY BY AVOIDING MAJOR BREAKS AND REPAIRS.

GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE IS AN APPROACH TO WATER MANAGEMENT THAT PROTECTS, RESTORES, OR MIMICS THE NATURAL WATER CYCLE. RAIN GARDENS, GREEN ROOFS, POROUS PAVEMENT, AND OTHER GREEN INFRASTRUCTURE TECHNOLOGIES SLOW THE FLOW OF STORMWATER, FILTER IT, HELP ELIMINATE SEWAGE OVERFLOWS, AND REDUCE LOCALIZED FLOODING. LEARN MORE AT WWW.REDUCERUNOFF.ORG



Leaking Storm Drain

COMBINED SEWER OVERFLOWS TRIGGERED BY RAIN

Save the Sound is working to get all remaining combined sewage overflows (CSOs) around Long Island Sound eliminated. We design and build green infrastructure projects that use the natural power of soil and native plants to divert, collect, and filter rain, keeping it out of the combined sewage and stormwater system. We use our legal expertise to enforce needed improvements in traditional infrastructure, including expanding treatment plant capacities and building retaining tanks.

WHAT YOU CAN DO

IF YOU LIVE IN A COMMUNITY EXPERIENCING CSOS, KEEP THE RAIN THAT FALLS ON YOUR PROPERTY OUT OF THE STORM DRAINS BY ADDING GREEN INFRASTRUCTURE STORMWATER SOLUTIONS. FOR EXAMPLE, CAPTURE PRECIPITATION IN A RAIN GARDEN OR ON A GREEN ROOF, OR RECHARGE IT THROUGH A PERVIOUS DRIVEWAY. YOU ALSO CAN DIVERT GUTTER WATER INTO RAIN BARRELS ATTACHED TO YOUR DOWNSPOUTS. BECOME INFORMED ABOUT THE LOCATION OF CSOS AND ENCOURAGE YOUR COMMUNITY TO UPGRADE YOUR SEWAGE SYSTEM, USING BOTH TRADITIONAL AND GREEN INFRASTRUCTURE SOLUTIONS.

SEPTIC SYSTEMS

Save the Sound has successfully lobbied for state funding to reduce the number of coastal properties using septic systems on Long Island, which can be accomplished by connecting more communities to existing wastewater treatment plants and upgrading those plants where needed. Where expanded municipal wastewater treatment is not an option, we promote the installation of new, next-generation septic systems that reduce another priority water pollutant—nitrogen—while also removing more fecal bacteria.

WHAT YOU CAN DO

EDUCATE YOURSELF ON THE TYPE OF SEPTIC SYSTEM OR CESSPOOL YOU HAVE (SEE WWW.EPA.GOV/SEPTIC/TYPES-SEPTIC-SYSTEMS), AND UPGRADE YOUR SYSTEM TO ONE OF THE NEWER TECHNOLOGIES CURRENTLY AVAILABLE! IF YOU LIVE IN SUFFOLK COUNTY, YOU MAY BE ELIGIBLE FOR A GRANT TO OFFSET THE COST (SEE THE SUFFOLK SEPTIC IMPROVEMENT PROGRAM⁹). SET UP A SERVICE CONTRACT FOR YOUR SYSTEM AND COMMIT TO A REGULAR SCHEDULE OF MAINTENANCE TO ENSURE THAT YOUR WASTEWATER IS FULLY TREATED ON YOUR PROPERTY AND NOT CONTRIBUTING TO WATER POLLUTION IN YOUR COMMUNITY.

STORMWATER RUNOFF

Save the Sound works on stormwater issues and impacts in every facet of our work. We design and build nature-based solutions that capture stormwater and let it percolate into the ground—keeping rain where it falls and reducing the volume entering stormwater drainage systems. We work on permits and laws that provide better oversight of stormwater management and use our legal skills to enforce them.

WHAT YOU CAN DO

MAKE YOUR HOME AND PROPERTY AS RAIN-FRIENDLY AS POSSIBLE, RECHARGING WATER INTO THE GROUND WITH RAIN GARDENS AND PERVIOUS PAVEMENT, OR COLLECTING IT IN RAIN BARRELS FOR USE AFTER THE STORM. NEVER THROW ANY GARBAGE OR CHEMICALS, INCLUDING ANIMAL WASTE, INTO CATCH BASINS ON THE SIDE OF THE ROAD—THEY DRAIN TO A LOCAL WATERBODY. SUPPORT (OR PROMOTE!) THE CREATION OF A STORMWATER AUTHORITY FOR YOUR CITY. IF ONE OF YOUR BELOVED BEACHES IS NEAR A STORMWATER OUTFALL, LOBBY TO HAVE THAT OUTFALL MOVED OR ITS DISCHARGE REDUCED THROUGH INVESTMENT IN GREEN INFRASTRUCTURE IN THE WATERSHED.



East Wharf Beach Park — Madison, Connecticut

ANIMAL WASTE: WILDLIFE, PETS, AND LIVESTOCK

Save the Sound supports beach communities in tackling animal waste using non-toxic and humane strategies. We encourage local farmers to use best management practices to reduce or eliminate any negative water quality impacts associated with their work.

WHAT YOU CAN DO

BEACHES CAN BE RAKED DAILY TO REMOVE ANIMAL WASTE AND DISPOSE OF IT PROPERLY AT A LANDFILL BEFORE IT CONTAMINATES THE WATER. THERE ARE A HOST OF DECOYS AND OTHER PHYSICAL DETERRENT PRODUCTS THAT CAN BE PLACED ON BEACHES TO DISCOURAGE WATERFOWL FROM SETTING UP CAMP IN RECREATION AREAS. SEVERAL COMMUNITIES ON THE SOUND ARE HAVING SUCCESS WITH SERVICES THAT BRING TRAINED DOGS TO BEACHES THROUGHOUT THE SWIMMING SEASON TO CHASE OFF GEESE AND DISCOURAGE THEM FROM RETURNING.

IF YOU HAVE LIVESTOCK ON YOUR PROPERTY, FOLLOW BEST MANAGEMENT PRACTICES TO PROTECT YOUR LOCAL WATERWAYS!¹⁰ KEEP LIVESTOCK OUT OF STREAMS. MANAGE MANURE STORAGE AND APPLICATIONS TO PREVENT POLLUTED DISCHARGES FROM YOUR LAND DURING RAIN.



Marine Debris — Queens, New York

MARINE DEBRIS AND PLASTICS

Save the Sound has been fighting marine debris on multiple fronts for years. We conduct coastal cleanups at scores of Long Island Sound beaches each year (averaging 70 beaches cleaned and 8,000 pounds of litter removed annually) and engage thousands of local residents in this important, ongoing work. Our staff lobbies for state and local bans on harmful plastics. This year, Connecticut and New York State both passed single-use plastic bag bans! New York City and Westchester County passed a partial ban on Styrofoam.

WHAT YOU CAN DO

STOP USING SINGLE-USE PLASTICS AND STYROFOAM. USE REUSABLE BAGS, CUTLERY, AND CUPS WHENEVER POSSIBLE. TRY TO LIMIT YOUR USE OF TAKE-OUT FOOD AND EAT IN THE RESTAURANT INSTEAD. DON'T BRING-SINGLE USE PLASTICS WITH YOU TO THE BEACH. INSTEAD, BRING A GARBAGE BAG OR BUCKET THAT YOU CAN USE TO COLLECT BEACH LITTER AND BRING IT HOME FOR PROPER DISPOSAL. NEVER RELEASE BALLOONS INTO THE AIR—THEY COME DOWN EVENTUALLY AND CAN KILL WILDLIFE. PLEASE JOIN OUR EMAIL ACTION NETWORK AT WWW.SAVETHESOUND.ORG AND SUPPORT OUR WORK TO EXPAND SINGLE-USE PLASTIC BANS IN THE COMING MONTHS AND YEARS!

NUISANCE AND TOXIC ALGAE AND SEaweEDS

Save the Sound dedicates significant resources to address nitrogen pollution around the Sound. We have another report, the Long Island Sound Report Card, which covers this important issue in detail.¹¹ Reducing the amount of nitrogen entering the Sound is a focus of our legal team, which has been instrumental in getting EPA to require nitrogen reduction from New York, Connecticut, and other upstream states in the Sound watershed. Our staff scientists lead a Sound-wide monitoring program, the Unified Water Study, which is identifying the bays and harbors on the Sound that suffer from nitrogen pollution, to target solutions in those areas.

WHAT YOU CAN DO

AS WITH FECAL BACTERIA, NITROGEN POLLUTION HAS VERY LOCAL IMPACTS AND CAN BE IMPROVED WITH LOCAL ACTIONS. ALL PROPERTY OWNERS SHOULD ELIMINATE OR REDUCE FERTILIZER APPLICATION ON THEIR LAWNS AS MUCH AS POSSIBLE. OLD SEPTIC SYSTEMS AND CESSPOOLS SHOULD BE REPLACED WITH NEW SEPTIC TECHNOLOGY THAT TREATS NITROGEN AS WELL AS BACTERIA. REDUCE STORMWATER RUNOFF WITH GREEN INFRASTRUCTURE TECHNOLOGIES, SUCH AS RAIN GARDENS, GREEN ROOFS, AND PERMEABLE PAVEMENT, AND SUPPORT RESTORATION OF NATURAL WETLAND BUFFERS THAT HAVE BEEN DAMAGED BY NITROGEN.



Hammonasset Beach State Park — Madison, Connecticut

FEDERAL ACTIONS NEEDED

Supporting Science: Funding Water Monitoring and Research

The federal government supports the local cost of monitoring our beaches so the public is not unwittingly exposed to poor water quality that would harm our health. For the past decade, this funding has been under attack in the budget process, though representatives from coastal states fight to keep the funding in place. Federal dollars also are needed to invest in the proper maintenance and operations of our water infrastructure. Properly designed and operated wastewater and stormwater systems are essential if we are to keep our beaches swimmable and open. Save the Sound lobbies every year for increased state and federal funding to support these priorities.

WHAT YOU CAN DO

TELL YOUR SENATOR AND CONGRESSIONAL REPRESENTATIVES HOW IMPORTANT BEACH WATER QUALITY MONITORING IS TO YOU. ENCOURAGE THEM TO INCREASE FUNDING TO THE EPA TO SUPPORT THE DEVELOPMENT OF DNA WATER TESTING THAT WILL ALLOW SAME-DAY MONITORING RESULTS AND IMPROVED SOURCE-IDENTIFICATION TECHNOLOGIES. SUPPORT FEDERAL, STATE, AND LOCAL INVESTMENTS IN WASTEWATER AND STORMWATER INFRASTRUCTURE.

Westbrook Town Beach — Westbrook, Connecticut



Sherwood Island State Park — Westport, Connecticut



STATE ACTIONS NEEDED

Improve State Recreational Water Quality Criteria

New York and Connecticut both follow an outdated EPA guideline for recreational water quality criteria and beach management practices. EPA published an updated federal guideline in 2012 based on new science related to waterborne illnesses, but there is no federal mandate for New York or Connecticut to adopt it. Save the Sound is lobbying for both states to update their state water criteria and to use EPA's most protective "Beach Action Value" bacteria standard for making beach management decisions. We also work on the state and local level to improve public notification of water pollution at beaches.

WHAT YOU CAN DO

EDUCATE YOURSELF ON THE BEACH MANAGEMENT PRACTICES WHERE YOU SWIM AND ASK YOUR LOCAL AND STATE REPRESENTATIVES TO FOLLOW THE BEST PRACTICES RECOMMENDED BY EPA. SIGN UP FOR STATE NOTIFICATIONS OF WATER POLLUTION THROUGH THE SEWAGE POLLUTION RIGHT TO KNOW LAWS IN NEW YORK AND CONNECTICUT (YOU CAN GET EMAIL OR TEXT MESSAGES) AND WHEN YOU LEARN OF POLLUTION, INFORM YOUR NEIGHBORS AND FRIENDS. RAISING AWARENESS OF WATER POLLUTION IS OUR BEST TOOL FOR REDUCING IT!



West Meadow Beach — Stony Brook, New York

END NOTES

¹ Federal open-source water data portal:
<https://www.waterqualitydata.us/>

² The BEACH Act, an amendment to the Clean Water Act, is designed to “reduce the risk of disease to users of the Nation’s coastal recreation waters.” It authorizes federal funding, administered by EPA, for local beach monitoring and public notification. EPA maintains an online database containing the state-reported beach monitoring and notification data. <https://www.epa.gov/beach-tech/about-beach-act>

³ New York beach water quality criteria, see 6-2.15 water quality monitoring: https://www.health.ny.gov/regulations/nycrr/title_10/part_6/subpart_6-2.htm#s6215; Connecticut beach water quality criteria, see Guidelines for Monitoring Bathing Water and Beach Closures: <https://portal.ct.gov/DPH/Environmental-Health/Recreation/Public-Beaches>

⁴ For more information on waterborne illnesses visit <https://www.cdc.gov/healthywater/swimming/swimmers/rwi.html>

⁵ Anji Seth and Guiling Wang, University of Connecticut: “Temperature and Precipitation Projections: An Update for Connecticut” <https://circa.uconn.edu/ct-climate-science/#>

⁶ <https://www.epa.gov/beach-tech/measure-beach-water-learn-how-clean-it>

⁷ <https://www.cdc.gov/healthywater/swimming/swimmers/rwi.html#rwi-infections>

⁸ See General Permit for Connecticut CAFOs here: https://www.ct.gov/deep/lib/deep/water_regulating_and_discharges/cafo/03finalrpt.pdf

⁹ <https://reclaimourwater.info/SepticImprovementProgram.aspx>

¹⁰ https://www.ct.gov/deep/cwp/view.asp?a=2718&q=325372&deepNav_GID=1645

¹¹ Explore the interactive Long Island Sound Report Card here: <https://ecoreportcard.org/report-cards/long-island-sound/>

ACKNOWLEDGEMENTS

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All photos by Tracy Brown, Martin Hain and Burns Patterson.

Data Sources

This report was created using the water quality monitoring data posted to the federal EPA Water Quality Portal database. The beach data in Water Quality Portal are collected and posted by departments of health that conduct the beach monitoring.

Precipitation data are from the IBM Weather Underground online database www.wunderground.com

All data contained in this report can be reviewed in detail at www.SoundHealthExplorer.org

Created with support from the Long Island Sound Funders Collaborative

Long Island Sound Funders Collaborative is a group of funders with missions that include protecting and restoring the Long Island Sound. www.lisfc.org

Silver Sands State Park — Milford, Connecticut



More information on Save the Sound and our activities related to improving water quality in Long Island Sound can be found at www.SaveTheSound.org

