

### **2020 UPDATE**

This 2020 revised version of the 2016-2018 Long Island Sound Beach Report contains updated grades from its original release in 2019. In our pursuit for the most accurate grades, we have updated the way in which these grades are calculated. While most grades have stayed the same, this update has resulted in some grades being slightly better and some being slightly worse. Our overall findings remain the same.



# LONG ISLAND SOUND BEACH REPORT 2016-2018

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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# 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.<sup>1</sup>



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.



# 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.<sup>2</sup> 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.<sup>3</sup> 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 enteroccoci (Entero). The vast majority of beaches in the United States, including most Sound beaches, are tested once a week for Entero 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.<sup>4</sup>

# 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 4.9% to 14.4%. As a result of climate change, the Sound region is expected to experience steadily increasing rainfall over the coming decades.<sup>5</sup> 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.



# 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.<sup>6</sup> 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.<sup>7</sup>

# 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

### **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. 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



# 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 = Entero counts 0-104 cfu/100 ml Failing Sample = Entero counts greater than 104 cfu/100 ml [Entero = 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**

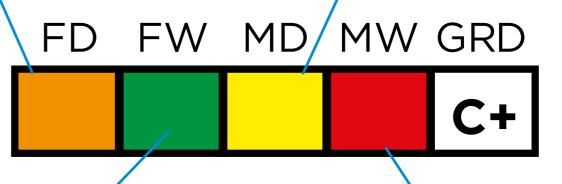
All four sub-categories (FD, FW, MD, MW) are assigned a score, represented by green, yellow, orange, and red, with green representing excellent water quality and red representing very poor water quality.

#### 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.



### 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

# 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

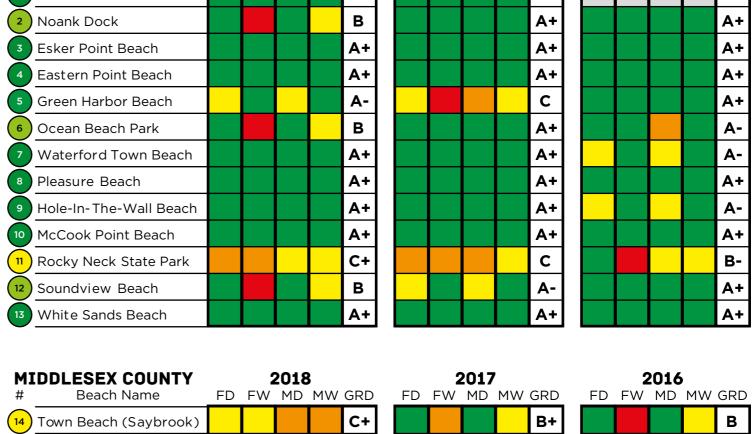
C+

2016 FD FW MD MW GRD

IEW HAVEN COUNTY		_	2018					2017					2016			<b>NEW LONDON COUNT</b>	-		2018	_			2017		
Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	FD	FW	MD	MW GRD	_	# Beach Name	FD	FW	MD	MW GRD	FD	FW	MD	MW	GRE
Hammonasset Beach SP					C+					В				C+		duBois Beach				A+					Α÷
Pent Road Beach					A+					A+				C+		Noank Dock				В					A+
East Wharf Beach					A+					A+				A+		3 Esker Point Beach				A+					A+
West Wharf Beach					В					A+				B+		4 Eastern Point Beach				A+					A+
Surf Club Beach					Α+					A+				A+		Green Harbor Beach				Α-					С
Jacob's Beach					Α-					NA				A+		Ocean Beach Park				В					A+
Stony Creek Beach					A-					A+				C+		Waterford Town Beach				A+					A+
Branford Point Beach					B-					A-				A+		Pleasure Beach				A+					A+
Johnson's Beach					С					C-				A+		9 Hole-In-The-Wall Beach				A+					A+
East Haven Town Beach					Α+					Α				A+		McCook Point Beach				A+					A+
Lighthouse Point Beach					B+					C+				Α		Rocky Neck State Park				C+					С
Fort Hale Park Beach					Α					C+				B+		Soundview Beach				В					A-
Morse Beach					Α+					В				B+		White Sands Beach				A+					A+
Altschuler Beach					Α+					В				С											
Oak Street Beach B					Α+					A+				С		MIDDLESEX COUNTY			2018	D			2017	,	
Oak Street Beach A					Α+					Α-				B-		# Beach Name	FD			MW GRD	FD		<b>ZU1</b> 2		GRD
Rock Street Beach					В					C+				C-	(	Town Beach (Saybrook)		П		C+					B+
Seabluff Beach					В					A+				D		Harvey's Beach				В					A+
Dawson Beach					В					A+				С		Westbrook Town Beach				A+					A+

D

(17) Town Beach (Clinton)



Seaview Beach

South Street Beach

C

A-

В

A+



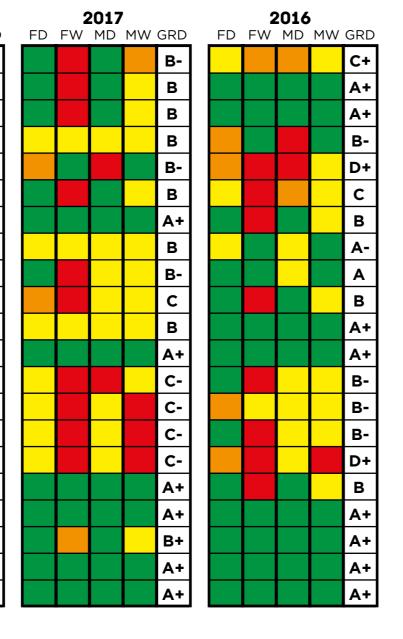
# CONNECTICUT

WEST

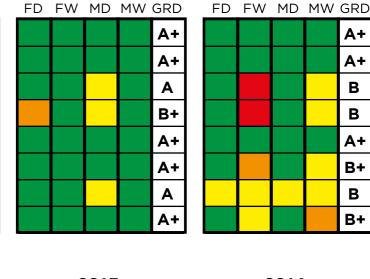
Grades displayed on map are for 2018 NOT ENOUGH O **FD** = Frequency of DRY weather failures **FW** = Frequency of WET weather failures

**MD** = Magnitude of DRY weather failures **MW** = Magnitude of WET weather failures

<b>FAIRFIELD COUNTY</b> # Beach Name	FD	FW	<b>2018</b> MD	GRD
Short Beach				В
Marnick's Beach				В
Long Beach				A+
Pleasure Beach				A+
Seaside Park Beach				D+
Jennings Beach				A+
Penfield Beach				A-
South Pine Creek Beach				B+
Sasco Beach				C-
54 Southport Beach				С
Burying Hill Beach				A+
Sherwood Island S P				B+
Compo Beach				B-
58 Shady Beach				C+
Calf Pasture Beach				A+
Marvin Beach				A-
Hickory Bluff Beach				C-
Rowayton Beach				B-
Bell Island Beach				Α
Pear Tree Point Beach				A+
Weed Beach				B+

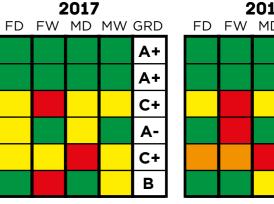


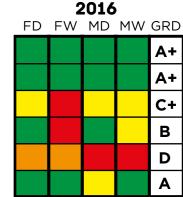
FAIRFIELD COUNTY # Beach Name	FD	_	2018 MD	<b>B</b> MW	GRD
East Beach (Cove Isd.)					A+
G7 Quigle y Beach					Α+
68 Cummings Beach					Α
69 West Beach					A-
Greenwich Point Beach					B-
71 Island Beach					A+
Byram Beach					D-
73 Great Captain Island Bch					В



2017

NEW HAVEN COUNTY # Beach Name	FD	2018 MD	<b>B</b> MW	GRD
Woodmont Beach				A+
Anchor Beach #2				A+
Anchor Beach #1				C+
Gulf Beach				B+
Silver Sands State Pk				D
Walnut Beach				B-





2016

A+

В

В

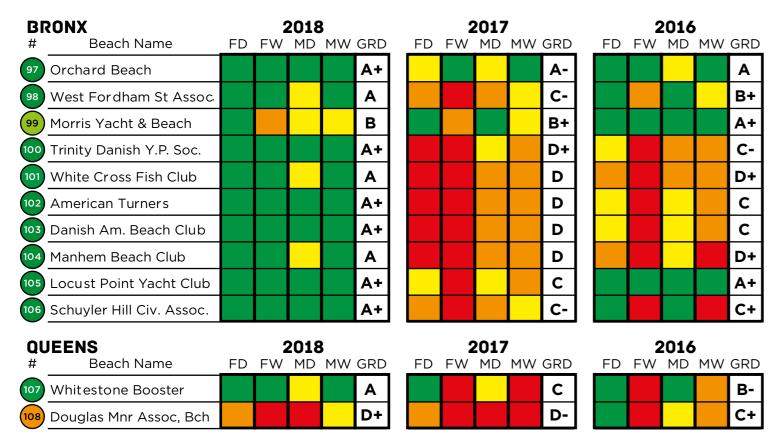
A+

B+

В

B+





# WESTCHESTER

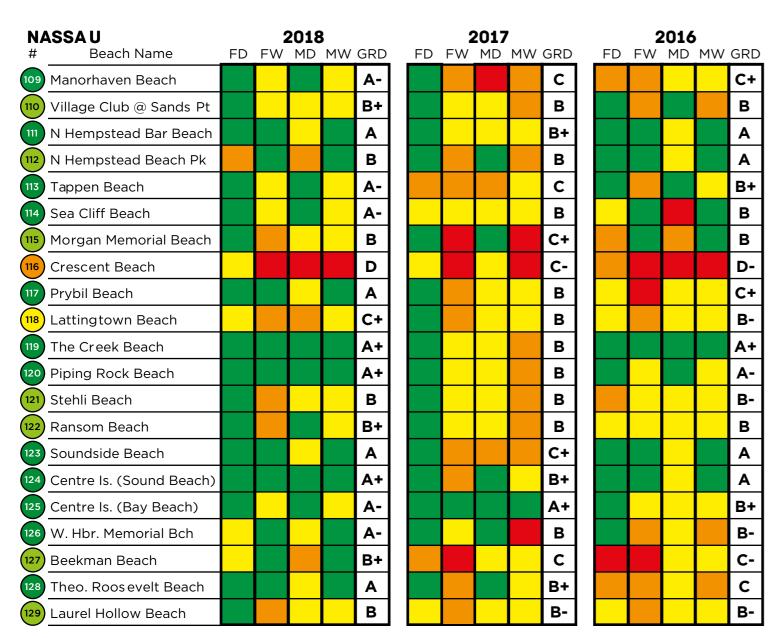
**KEY** Grades displayed on map are for 2018

FD = Frequency of DRY weather failuresFW = Frequency of WET weather failuresMD = Magnitude of DRY weather failuresMW = Magnitude of WET weather failures

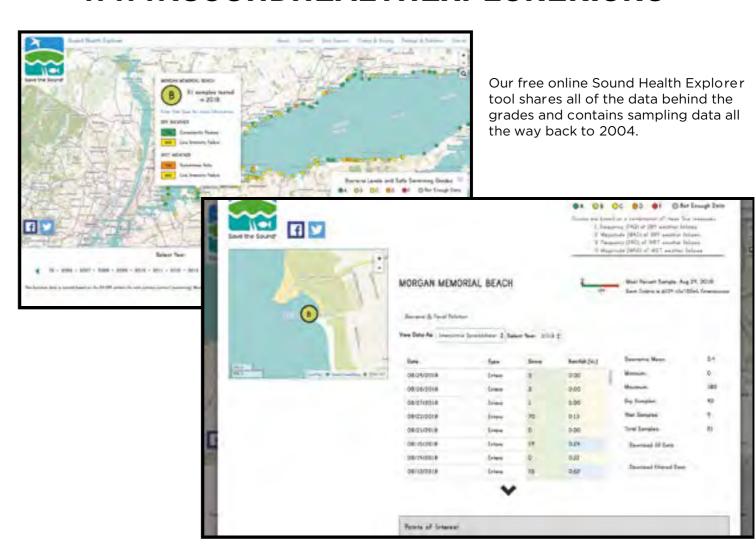
B C D F NOT ENOUGH OATA

WESTCHESTER			2018			2017				2016						
# Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	_	FD	FW	MD	MW	GRD
WC Country Club Beach					B+					В						A+
Manursing Island Club					A+					В						A+
Rye Playland Beach					A-					A+						A+
Rye Town/Oakland Bch					A+					A+						A-
Coveleigh Beach Club					С					В						В
Shenorock Shore Club					В					В						A+
American Yacht Club					A+					C+						A+
MMNK Beach & Cabana					C+					A-						В
Shore Acres Club					A+					B-						C-
Harbor Island Beach					C-					Α						С
84) Beach Point Club					C+					C+						Α+
Orienta Beach Club					B-					В						B+
Larchmont Manor Park					A+					A+						A+
Larchmont Shore Club					A+					A+						A+
Echo Bay Yacht Club					A-					A+						В
Hudson Park					D					С						B-
90 New Roch. Rowing Club					A+					A+						A+
91) Surf Club					B+					C+						B-
92 Davenport Club					A+					С						В
93 Greentree Club					A+					B-						A+
94 VIP Club					A-					В						C-
95 Beckwithe Pointe					A-					C-						В
Glen Island Park					B+					A-						A+

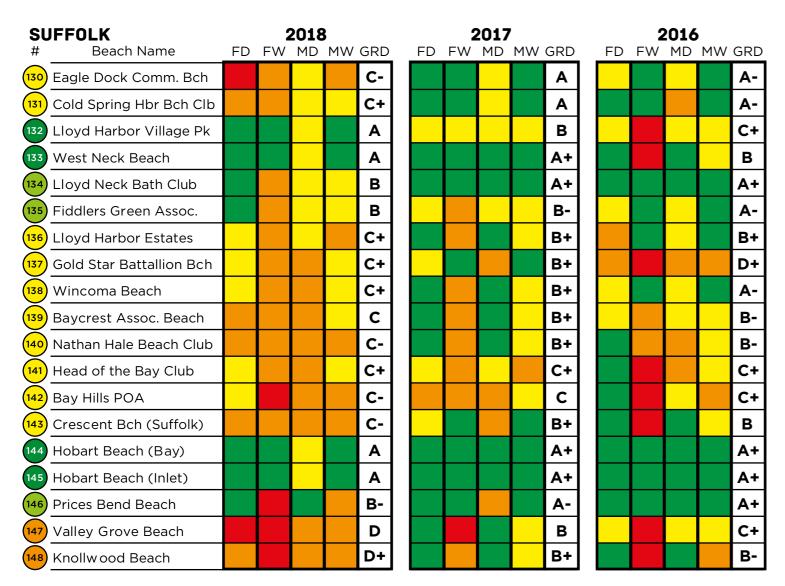




# DIVE INTO THE DATA AT WWW.SOUNDHEALTHEXPLORER.ORG

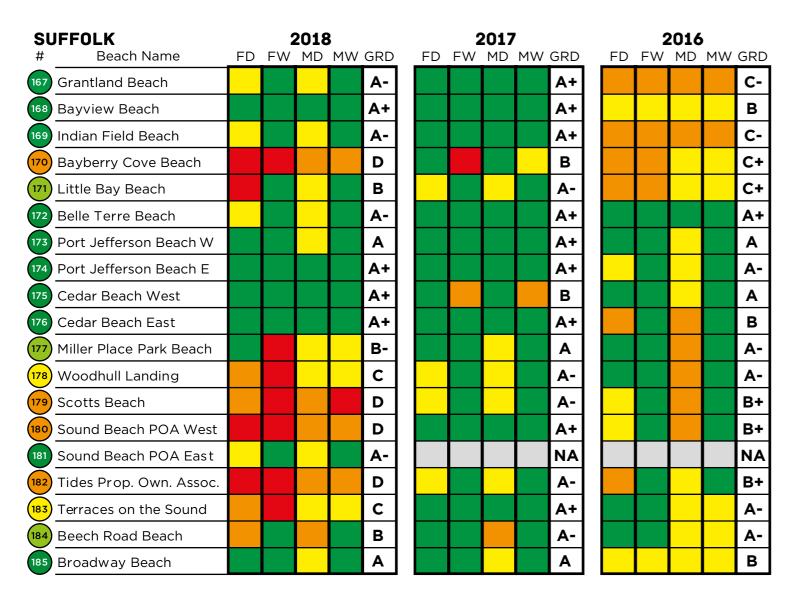






SUFFOLK		2	2018				2	2017					2	2016		
# Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD	_	FD	FW	MD	MW	GRD
Fleet's Cove Beach					B-					B-						C+
Huntington Bch Assoc.					C-					B+						C-
Centerport Beach					В					A+						В
Centerport Yacht Club					С					A+						C+
Steers Beach					С					В						C-
Asharoken Beach					С					B+						C+
Crab Meadow Beach					С					C+						C+
Callahan 's Beach					C+					Α						A-
Sunken Meadow SP					B+					C+						B-
Short Beach					B-					B-						Α
Nissequogue Point Bch					В					C+						B+
Long Beach					В					B+						A+
Schubert Beach					B+					A+						Α
Stony Brook Yacht Club					NA					NA						C+
Stony Brook Beach					C-					A+						Α
Sound View Bch Assoc.					С					A+						B+
West Meadow Beach					B+					C+						B+
Old Field Club					B+					A+						Α





SUFFOLK	2018				2	2017	,		2016							
# Beach Name	FD	FW	MD	MW	GRD	FD	FW	MD	MW	GRD		FD	FW	MD	MW	GRD
Friendship Beach					В					A+						C+
Shoreham Village Beach					A-					A+						В
Shoreham Shore Club					B-					A+						Α-
Shoreham Beach					В					<b>A</b> +						C+
Wading River Beach					С					B-						A+
Camp DeW olfe					D+					A+						A+
Wildwood SP Bch					В					A-						A-
Baiting Hollow Camp					D+					B+						A+
Woodcliff Park POA					C-					A+						A+
Dorothy P. Flint Camp					A+					B+						A+
Reeves Beach					D+					B+						A+
197 Iron Pier Beach					A+					A-						A+
Mattituck Breakwater					A+					A-						A+
Kenney's Beach					A+					A-						B+
McCabe's Beach					A+					B+						A+
Southhold Beach					A+					A+						В
Hay Harbor Club					NA					NA						NA
203 Island People's Project					NA					NA						NA
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.

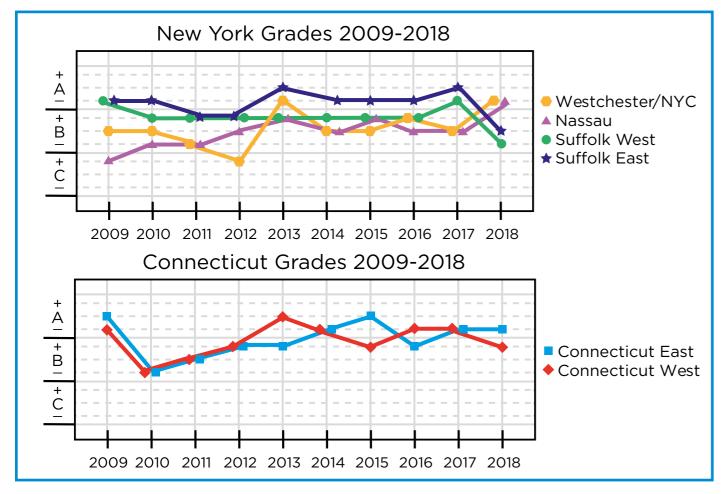


FIGURE 1. THESE CHARTS SHOW THE ANNUAL REGIONAL BEACH GRADES CALCULATED BY AVERAGING ALL THE BEACH GRADES IN EACH REGION THAT YEAR. ALL DATA USED WERE COLLECTED BY LOCAL DEPARTMENTS OF HEALTH AND REPORTED TO EPA.

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.

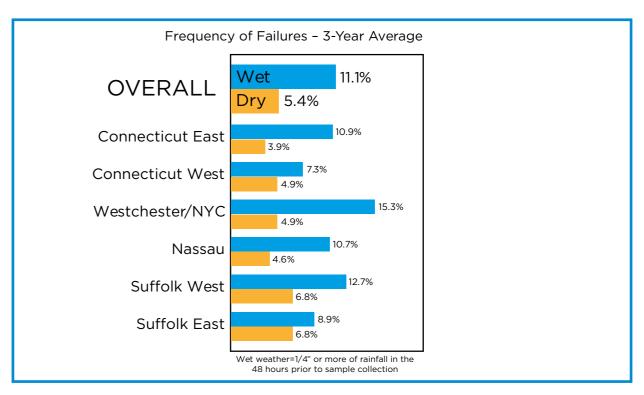


FIGURE 2. THIS CHART SHOWS THE PERCENT OF SAMPLES THAT FAILED TO MEET STATE SWIMMING CRITERIA, DIVIDED BY WET- WEATHER SAMPLES AND DRY-WEATHER SAMPLES, FOR EVERY BEACH IN THIS REPORT, FOR THE RECREATIONAL SEASONS 2016, 2017, 2018. ALL DATA INCLUDED WERE COLLECTED BY LOCAL DEPARTMENTS OF HEALTH AND REPORTED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

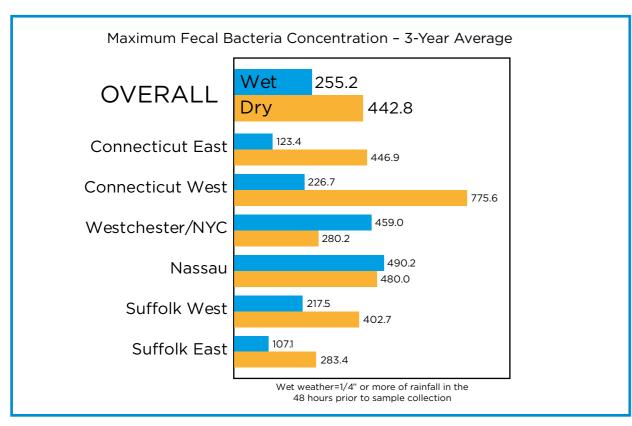


FIGURE 3: THIS CHART SHOWS THE AVERAGE OF THE MAXIMUM FECAL BACTERIA CONCENTRATION OBSERVED AT EACH BEACH IN THE REGION DURING THE 2016 THROUGH 2018 RECREATIONAL SEASONS. THE BLUE BARS SHOW THE AVERAGE FOR SAMPLES COLLECTED AFTER RAINFALL. THE ORANGE BARS SHOW THE AVERAGE FOR SAMPLES COLLECTED IN DRY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

# 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
RyeTown 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

<sup>\*</sup> 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

<sup>\*</sup> These beaches have limited access for local residents only

# TAKING 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



# 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 PROGRAM<sup>9</sup>). 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.

# 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. KEEP LIVESTOCK OUT OF STREAMS. MANAGE MANURE STORAGE AND APPLICATIONS TO PREVENT POLLUTED DISCHARGES FROM YOUR LAND DURING RAIN.



# 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. 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

Hammonasset Beach State Park — Madison, Connecticut

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.

# 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.





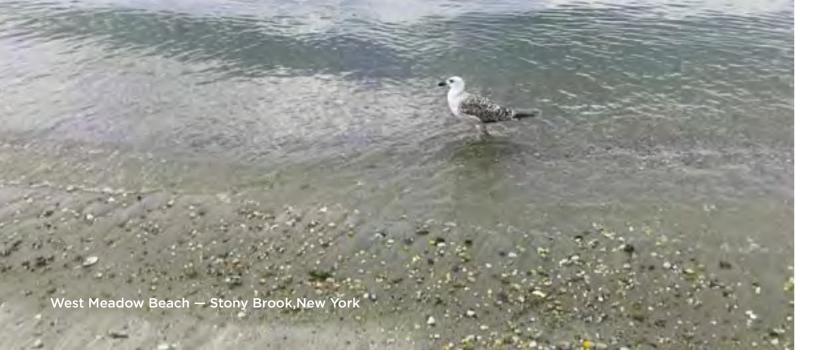
# STATE ACTIONS NEEDED

#### **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!



### **END NOTES**

- <sup>1</sup>Federal open-source water data portal: https://www.waterqualitydata.us/
- <sup>2</sup> 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
- <sup>3</sup> 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
- <sup>4</sup> For more information on waterborne illnesses visit https://www.cdc.gov/healthywater/swimming/swimmers/rwi.html
- <sup>5</sup> Anji Seth and Guiling Wang, University of Connecticut: "Temperature and Precipitation Projections:An Update for Connecticut" https://circa.uconn.edu/ct-climate-science/#
- <sup>6</sup> https://www.epa.gov/beach-tech/measure-beach-water-learn-how-clean-it
- <sup>7</sup> https://www.cdc.gov/healthywater/swimming/swimmers/rwi.html#rwi-infections
- <sup>8</sup> See General Permit for Connecticut CAFOs here: https://www.ct.gov/deep/lib/deep/water\_regulating\_and\_discharges/cafo/03finalrpt.pdf
- <sup>9</sup> https://reclaimourwater.info/SepticImprovementProgram.aspx
- <sup>10</sup> https://www.ct.gov/deep/cwp/view.asp?a=2718&q=325372&deepNav\_GID=1645
- <sup>11</sup> 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

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



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

