
Maine Healthy Beaches

a unique partnership to
keep Maine beaches clean

STATUS & TRENDS 2005-2010



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www.mainehealthybeaches.org

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STATUS & TRENDS 2005-2010

WHY MONITOR BEACH WATER QUALITY?

Maine's ocean beaches are a major attraction for residents and visitors, and contribute greatly to the economy, especially during the summer tourist season. The beach experience is tarnished when swimming is restricted due to unhealthy bacteria levels in the water. Partners in the Maine Healthy Beaches Program monitor water at swimming beaches and notify the public when bacteria levels threaten human health. Participation in the Maine Healthy Beaches Program is voluntary, and jurisdiction for local beach management decisions stays at the local level.

HOW DOES THE PROGRAM WORK?

Maine's program takes a community-based approach to identifying and cleaning up pollution sources to keep beaches clean and safe for swimming. Maine has thousands of miles of coastline and limited financial and human resources available for monitoring, so the Maine Healthy Beaches Program builds local capacity for pollution prevention. This unique partnership approach has helped to identify and fix sources of bacteria polluting beaches, reducing the number of beach advisories in some areas.

WHO IS INVOLVED?

There are 29 beach management entities that are a part of the Maine Healthy Beaches Program. They include towns, state and national parks, and private beach associations. Beach managers are typically park managers, health nurses, fire chiefs, town administrators and other people who devote time to the Maine Healthy Beaches Program on top of their already full schedules. Citizen volunteers and municipal or park staff, trained annually in field methods, routinely monitor beaches between Memorial Day and Labor Day. In 2010, Maine Healthy Beaches trained 158 local staff and volunteers to monitor 59 beach management areas. Their combined volunteer efforts were valued as an estimated \$36,320 contribution to the program.

HOW DOES THE BEACH GET POLLUTED?

Unhealthy bacteria levels are the result of contamination from malfunctioning septic systems, sewage treatment plant overflows, polluted stormwater runoff, untreated boat sewage, domestic animal waste, waterfowl and wildlife waste, and poor sanitary practices at the beach.

Rivers, streams and storm drains can carry polluted water from land to coastal beaches. Rainfall, flooding, tide, currents and physical characteristics of the beach all can affect pollution levels.

Under the Federal Beaches Environmental Assessment and Coastal Health (BEACH) Act, the United States Environmental Protection Agency (US EPA) provides eligible states funding to monitor, assess and notify the public of water quality conditions at public swimming beaches.



Maine Healthy Beaches Program



Maine Healthy Beaches Program



Maine Healthy Beaches Program

WILL I GET SICK FROM THE WATER?

There is *always* a potential risk of getting sick; however, individual tolerances and immunity levels vary. When bacteria counts exceed the US EPA safety limit, or conditions at the beach increase pollution levels, the probability of getting sick increases. Symptoms may include nausea, diarrhea, stomach cramps, chills and fever, skin rashes, and infections of the eyes, ears, nose and throat. If you think you may have gotten sick after a trip to the beach, contact your physician.

HOW IS THE WATER TESTED?

Each year, between Memorial Day and Labor Day, participating Maine coastal beaches are monitored for the bacteria *Enterococci*, which indicates fecal contamination and the *possible* presence of disease-causing microorganisms. Maine has adopted the US EPA safety limit of 104 *Enterococci* per 100 milliliters of sample water. When bacteria levels exceed this limit, there's an *increased probability* of contracting illness from the water. This is currently the best available strategy for comprehensive public health monitoring of saltwater beaches.

Town or park personnel, in partnership with program staff, select the monitoring sites for each beach management area based on recommended criteria from US EPA, locations where people swim, and at "high risk" areas like rivers, streams, storm drain outlets, and other freshwater inputs to the beach. Monitoring frequency varies based on local characteristics, and is increased for areas with historically poor water quality and higher risk of pollution. Monitoring frequency intensifies following an exceedance, after a sewage spill or pollution event, heavy rainfall, etc. Conversely, the monitoring frequency is reduced for areas with low risk and where monitoring results are consistently within acceptable limits. In addition to bacteria samples, volunteers and staff also record air and water temperature, salinity, tidal stage, weather conditions and beach characteristics.



M. Bailey

WHEN IS A BEACH ADVISORY POSTED?

When fecal indicator bacteria results exceed the safety standard, the beach manager, in consultation with program staff, decides whether or not to post an advisory (a sign at access points to the beach and on the www.mainehealthybeaches.org website). An advisory is a recommendation to the public to avoid water contact activities. A beach advisory lasts until monitoring results meet safety standards, or when conditions at the beach no longer pose



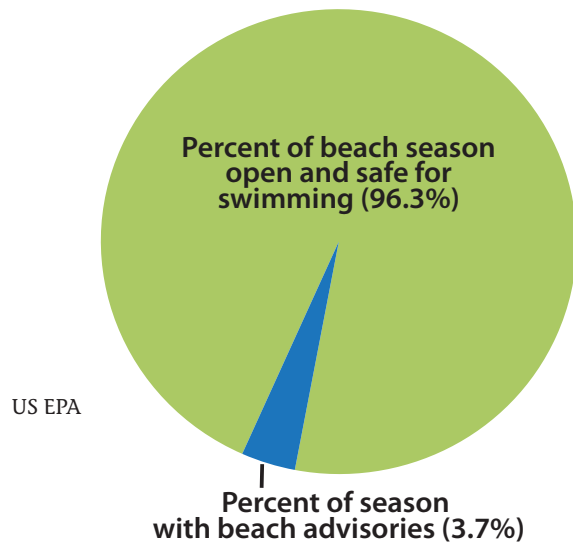
Maine Healthy Beaches Program

a health risk. Beaches that exceed safety limits are resampled, and an advisory will be lifted if the resample result is clean. However, due to the lag time in results (28-32 hours after the sample is collected), it may take several days for an advisory to be lifted. For this reason, and because beach conditions can change from day to day and hour to hour, beach status may not reflect current water quality conditions or health risk.

Beach actions are not based on a single bacteria count alone. The surf zone is a dynamic place that varies widely from hour to hour and day to day. In addition to bacteria results, the beach manager and program staff take other factors into account when considering an advisory. For beaches with historically good water quality and a low risk of pollution, beach managers will often wait for resample results before posting the beach.



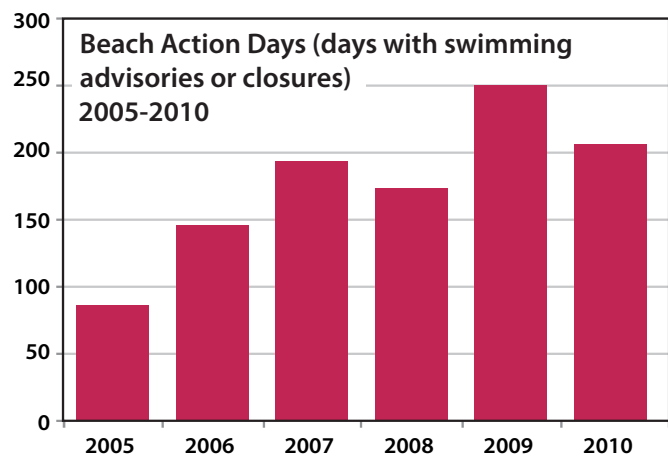
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2010 BEACH SEASON

For 2010, the number of beach action days represents only 3.7% of total beach days, meaning the beaches were open and safe for swimming 96.3% of the time during the 2010 season.

In 2010, a total of 207 beach action days were reported at 29 beach management areas. The total number of beach action days fluctuates each year, in part because both the number of beaches participating in the program and the number of monitoring sites have changed over time and environmental conditions differ from year to year.



How to read individual beach pages

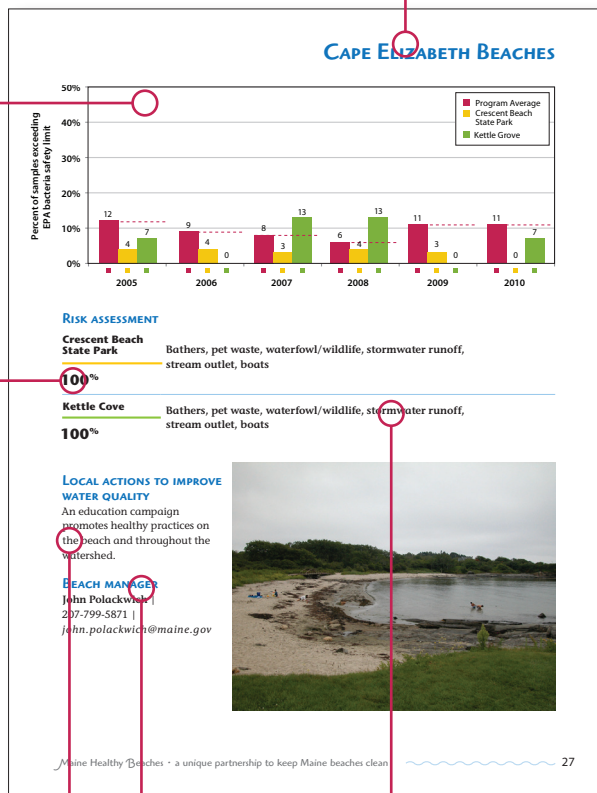
Participating beaches by town (from south to north)

Beaches participating in the Maine Healthy Beaches Program include coastal beaches (public or privately owned) with adequate public access and medium to high public usage. Eligible beaches have a management entity (municipality, park, private beach association,

etc.) and a plan for monitoring, assessment and public notification of water quality conditions. New beaches will continue to be recruited over time, as resources and funding allow and/or circumstances change eligibility for program participation.

Graph: Percent of samples exceeding US EPA bacteria safety limit

Each town page has a graph that shows **percent exceedance** for each beach each year from 2005 to 2010. Percent exceedance is the number of samples that exceeded US EPA bacteria standards divided by the total number of samples for that year. The average annual exceedance rate for all beaches in the program is also shown in red. Note that not all beaches were monitored every year.



Risk assessment

The **percent cleanliness rate** is the number of resamples that are reported as clean divided by the total number of resamples. A water sample that exceeds the US EPA safety limit for bacteria doesn't necessarily mean the beach is polluted. A high percent cleanliness can indicate a transient or temporary bacteria problem. A lower cleanliness rate suggests a more persistent bacteria issue. Beach managers take this resample information into account when determining whether or not to post a beach. Beach status (whether or not a beach is under an advisory) is based on the previous day's bacteria monitoring results, AND other local characteristics that determine pollution risk, such as historical water quality, heavy rainfall or flooding, known sewage malfunctions, and/or other safety hazards. The procedure and bacteria action levels are based on US EPA guidance.

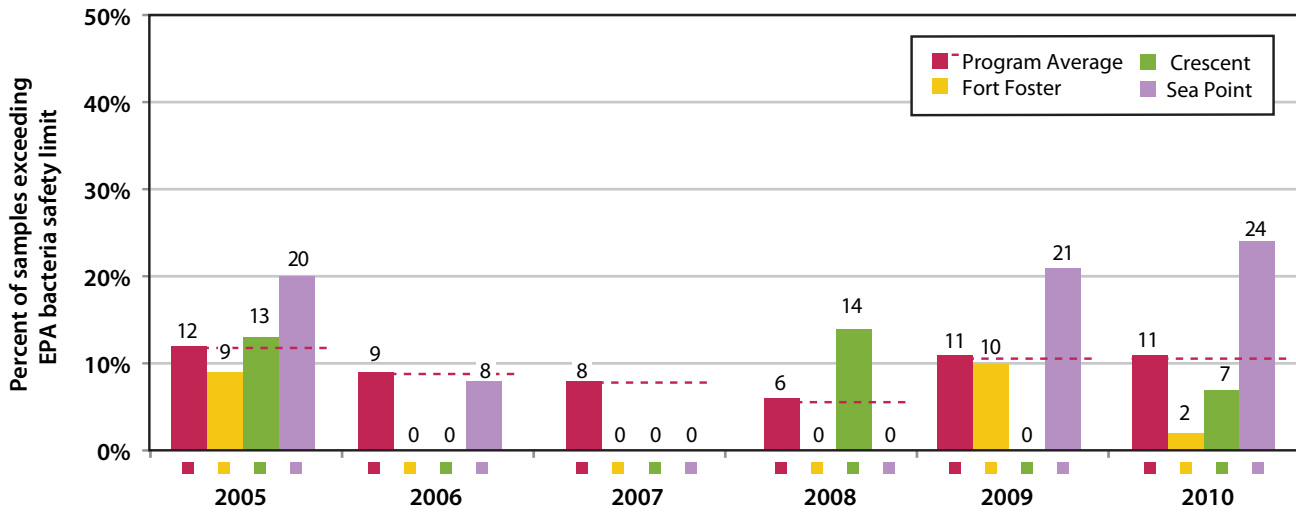
Known or potential pollution sources

Local actions to improve water quality

Beyond routine beach monitoring, the Maine Healthy Beaches Program works with communities to develop strategies to find, fix and prevent pollution sources. This includes evaluating the potential risk of pollution from sources located offshore, along the shoreline,

or upstream from the beach through special studies and sanitary surveys. This section describes any such studies to address pollution sources initiated since 2005, as well as education campaigns, infrastructure improvements, and other actions.

Beach manager
 name | telephone | email



RISK ASSESSMENT

Beach

Known or potential pollution sources

Fort Foster

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, salt marsh

100% of resamples reported as clean

Crescent

Bathers, pet waste, waterfowl/wildlife, stormwater runoff

75% of resamples reported as clean

Sea Point

Bathers, pet waste, waterfowl/wildlife, stormwater runoff

58% of resamples reported as clean

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

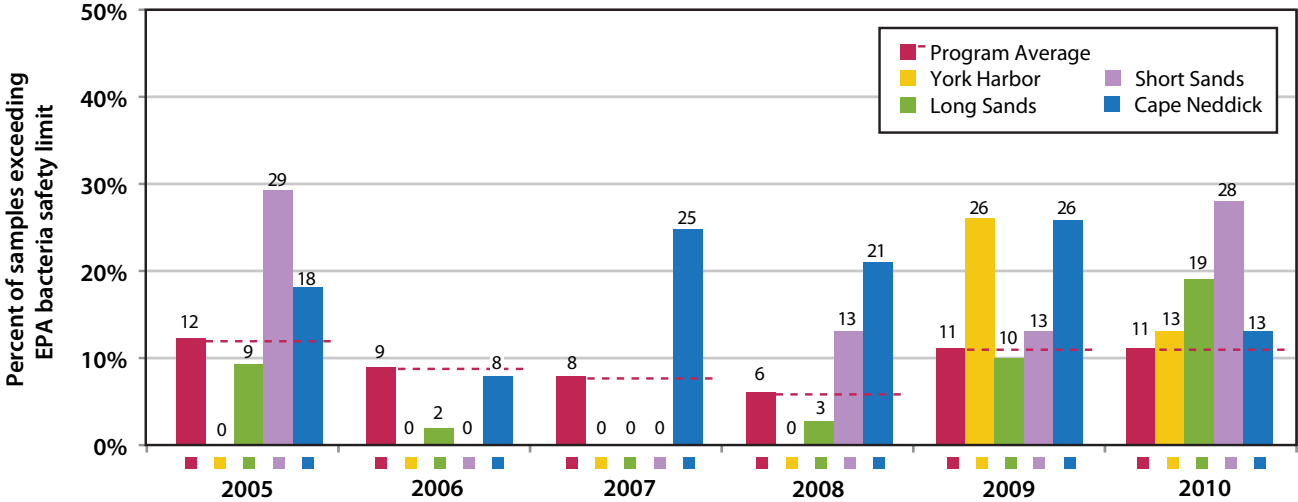
In response to elevated bacteria levels at Sea Point Beach in 2010, we conducted intensified monitoring at multiple depths and locations along the beach to determine the source(s) of pollution. Additionally, we assessed bacteria levels in seaweed mats (wrack) to determine if seaweed impacts surf zone water quality.



Crescent Beach / Maine Healthy Beaches Program

BEACH MANAGER

Jonathan Carter | 207-439-1633 | jcarter@kitteryme.org



RISK ASSESSMENT

Beach

Known or potential pollution sources

York Harbor

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, marina, boats, river/stream outlet

86% of resamples reported as clean

Long Sands

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains/marsh outlet, boats

100% of resamples reported as clean

Short Sands

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, zoo

69% of resamples reported as clean

Cape Neddick

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, boats

72% of resamples reported as clean



Long Sands / Maine Healthy Beaches Program

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

In 2007, the Town of York appointed a Shoreland Resource Officer to help expand the water quality program beyond the shoreline to the Cape Neddick River and Short Sands Brook watersheds.

York’s supplemental plumbing ordinance, which exceeds the state plumbing code minimum requirements, establishes guidelines and rules for septic system design, construction, operation and maintenance, including requiring that systems

be pumped out on a routine basis. Geographical Information System (GIS) data layers assist in pollution source identification efforts.

At Short Sands Beach, we intensified monitoring in Short Sands Brook. Improvements to the stormwater infrastructure in 2010 included reducing the impact of runoff from the zoo located in the watershed.

At Cape Neddick Beach, intensified monitoring, a fluorometry study, *Enterococci* and rainfall study, and risk assessment modeling identified priority areas for sanitary survey work. A 2010 workshop brought together local and agency partners to share data and remediation strategies.

In 2010, the town-appointed Cape Neddick River Task Force developed a plan to complete sanitary survey work and to improve beach facilities, including installation of a public restroom.

BEACH MANAGER

Mike Sullivan | 207-363-1040 | msullivan@yorkmaine.org



York Harbor / Maine Healthy Beaches Program

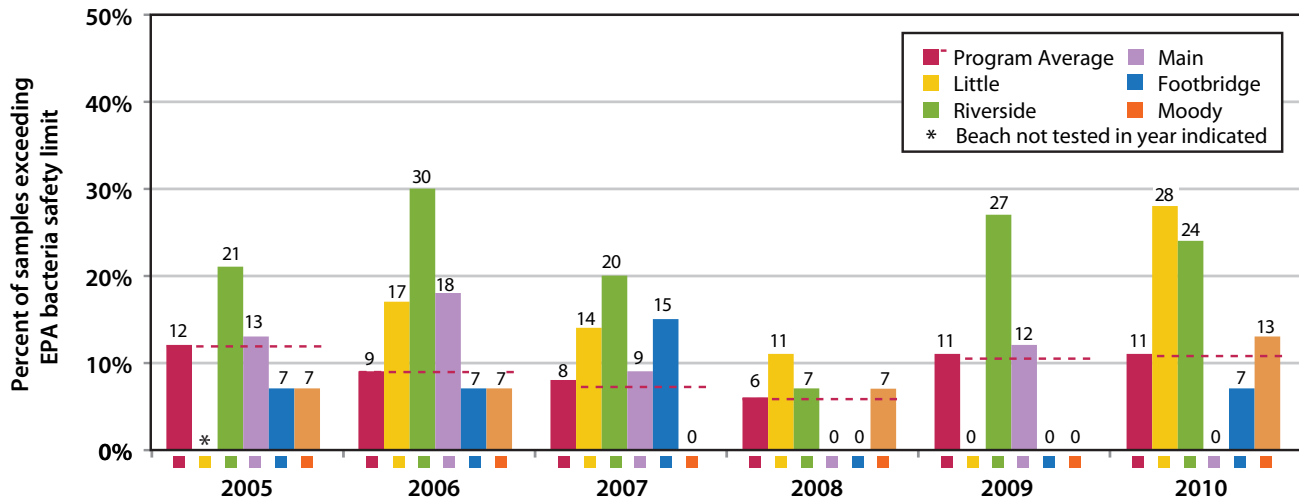


Cape Neddick / L. Scotland



Short Sands / Maine Healthy Beaches Program





RISK ASSESSMENT

Beach

Known or potential pollution sources

Little Beach

73% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems

Riverside

81% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems

Main Beach

90% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems

Footbridge

83% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, sanitary sewer outfall

Moody

100% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, sanitary sewer outfall

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

The Maine Geological Survey conducted a Circulation Study to determine the fate and transport of pollutants leaving the Ogunquit River. Additional data analysis has also been completed to understand *Enterococci's* relationship to multiple parameters including wave height, tidal stage, etc.



Footbridge / Maine Healthy Beaches Program

Additional work includes intensified beach and watershed monitoring, a fluorometry study, an *Enterococci* and rainfall study, an *Enterococci* and beach sand study, assessment of multiple fecal indicator bacteria and analyses in sediments and surface water, and risk assessment modeling.

Workshops brought together towns within the watershed and local and state agency partners to share data and remediation strategies. The Town of Ogunquit and agency partners have conducted sanitary survey work, created sanitary survey technical reports and developed a watershed management plan. Ogunquit has made improvements to the stormwater infrastructure and has completed a stormwater mapping project, including development of Geographical Information System (GIS) data layers. The Ogunquit Sewer District has investigated illicit discharges in the municipal sewer network, and Ogunquit implemented water ordinances to protect water quality, such as a septic system pump-out ordinance, an ordinance prohibiting horses on beaches, and an ordinance establishing the Ogunquit Streams Protection District including 75-foot setback requirements.

BEACH MANAGER

Tom Fortier | 207-646-6211 | townmanager@townofogunquit.org



Little Beach / Maine Healthy Beaches Program



Main Beach / Maine Healthy Beaches Program

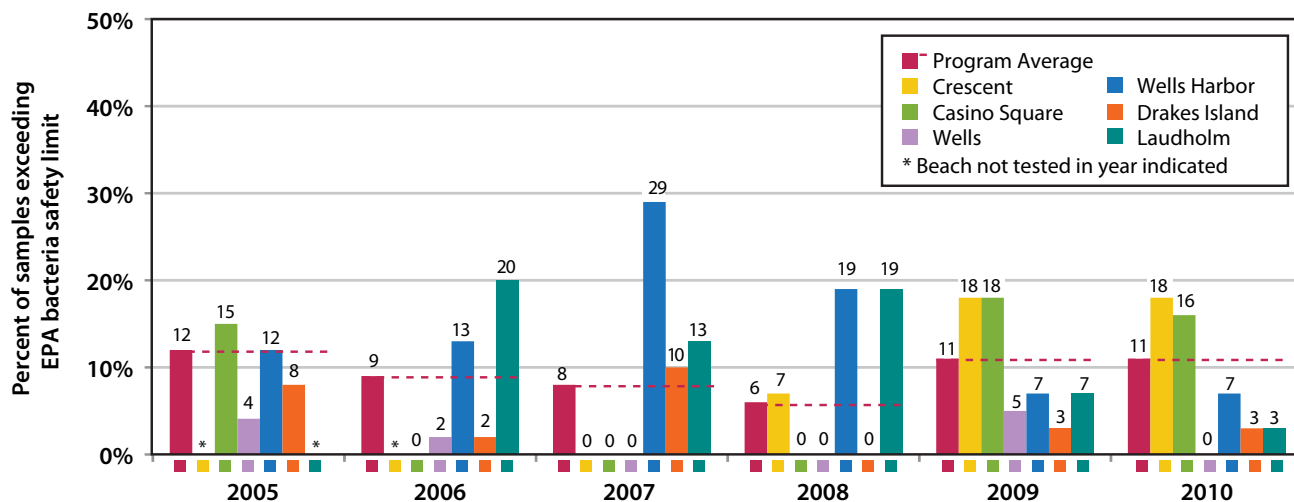


Moody Beach / Maine Healthy Beaches Program



Riverside / Maine Healthy Beaches Program





RISK ASSESSMENT

Beach Known or potential pollution sources

Crescent

86% of resamples reported as clean Bathing, pet waste, waterfowl/wildlife, stormwater runoff, boats

Casino Square

92% of resamples reported as clean Bathing, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, boats

Wells Beach

100% of resamples reported as clean Bathing, pet waste, waterfowl/wildlife, stormwater runoff, boats

Wells Harbor

79% of resamples reported as clean Bathing, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet, marina, boats

Drakes Island

90% of resamples reported as clean Bathing, pet waste, waterfowl/wildlife, stormwater runoff, boats

Laudholm

79% of resamples reported as clean Bathing, waterfowl/wildlife, stormwater runoff, river/stream outlet

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

On Wells and Drakes Island beaches, we studied the relationship between *Enterococci* and beach sand.

On Wells Harbor beach, we are using fluorometry to determine if human-sourced pollution is impacting water quality.

BEACH MANAGER

Daniel Moore | work-207-646-7912 | dmoore@wellstown.org



Crescent Beach / Maine Healthy Beaches Program



Drakes Island / Maine Healthy Beaches Program

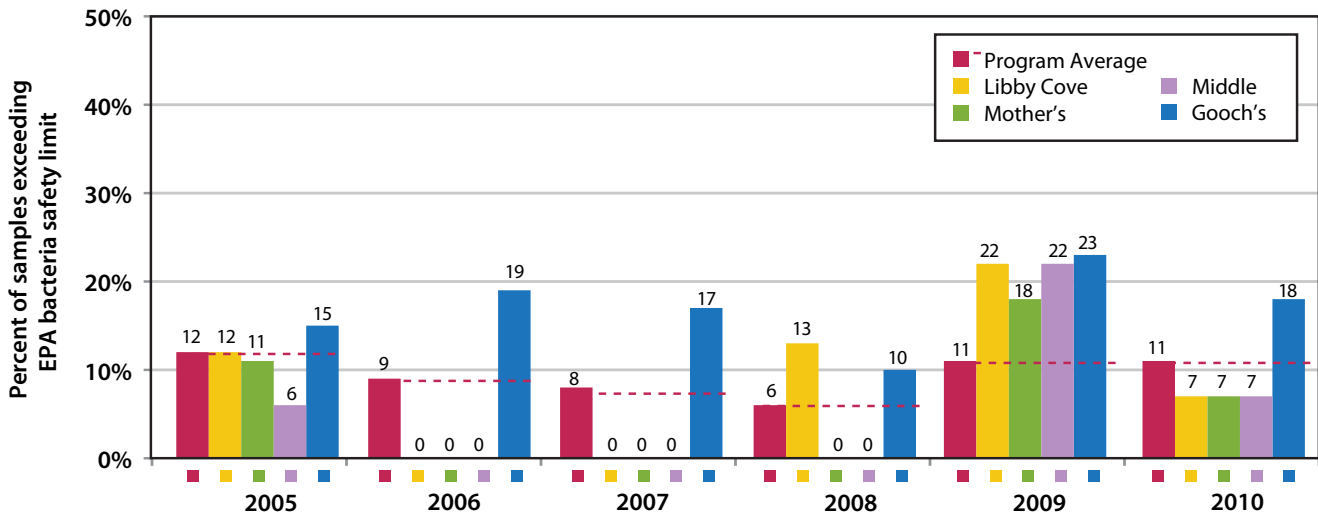


Wells Harbor / Maine Healthy Beaches Program



Wells Beach / Maine Healthy Beaches Program





RISK ASSESSMENT

Beach

Known or potential pollution sources

Libby Cove

82% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, marina, boats, sanitary sewer outfall, animal farms

Mother's

89% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats, sanitary sewer outfall, animal farm

Middle

83% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, marina, boats, sanitary sewer outfall, animal farm

Gooch's

72% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains, river/stream outlet, septic systems, marina, boats, sanitary sewer outfall, overboard discharge systems, animal farms

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

On Gooch's Beach, the Maine Geological Survey conducted a Circulation Study to determine the fate and transport of pollutants leaving the Kennebunk River. Additional data analysis was also completed to determine *Enterococci's* relationship to multiple parameters including wave height, tidal stage, etc.

Other studies conducted include intensified monitoring throughout the Kennebunk River watershed, a fluorometry study, an *Enterococci* and rainfall study, and risk assessment modeling. Workshops brought together towns within the watershed and local and state agency partners to share data and remediation strategies.

Kennebunk has expanded the number of properties serviced by municipal sewer and has made improvements to the stormwater infrastructure, including installation of Ultra Urban Filters to treat stormwater before it empties onto Gooch’s Beach.

The Kennebunk River Action Committee has helped locate a boat sewage pump-out barge in the Kennebunk River, conducted a Boater’s Education Campaign, and hosted water quality workshops.

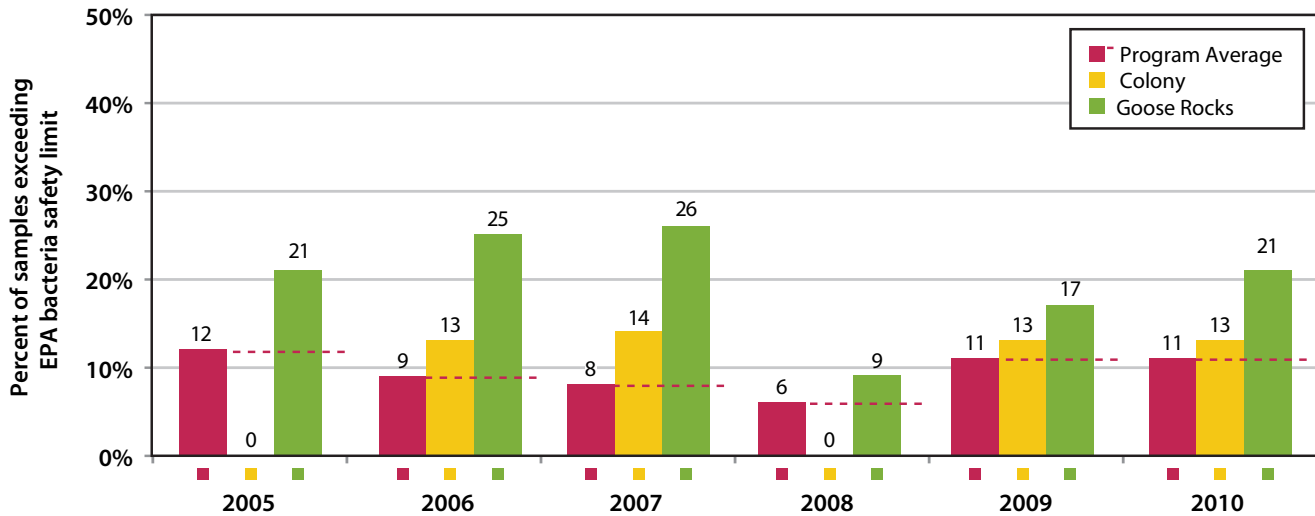
Kennebunkport has held “septic socials,” and their Lawn to Lobsters campaign promotes best practices throughout the town.

BEACH MANAGER

Brian Costello | 207-985-2102 | bcostello@kennebunkmaine.us



Gooch’s Beach / Maine Healthy Beaches Program



RISK ASSESSMENT

Beach

Known or potential pollution sources

Colony

75% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, marina, boats, sanitary sewer outfall, overboard discharge systems, animal farms

Goose Rocks

68% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, overboard discharge systems, animal farms

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

On Goose Rocks Beach, the Maine Geological Survey conducted a Circulation Study to determine the fate and transport of pollutants leaving the Smith/Batson and Little rivers. Additional data analysis was also completed to determine *Enterococci's* relationship to multiple parameters, including



Colony Beach / Maine Healthy Beaches Program

wave height, tidal stage, etc. We also conducted intensified monitoring throughout the Goose Rocks Beach watershed, a fluorometry study, and an *Enterococci* and rainfall study.

A workshop brought together multiple towns within the watershed and local and state agency partners to share data and remediation strategies. Kennebunkport, Biddeford, and agency partners

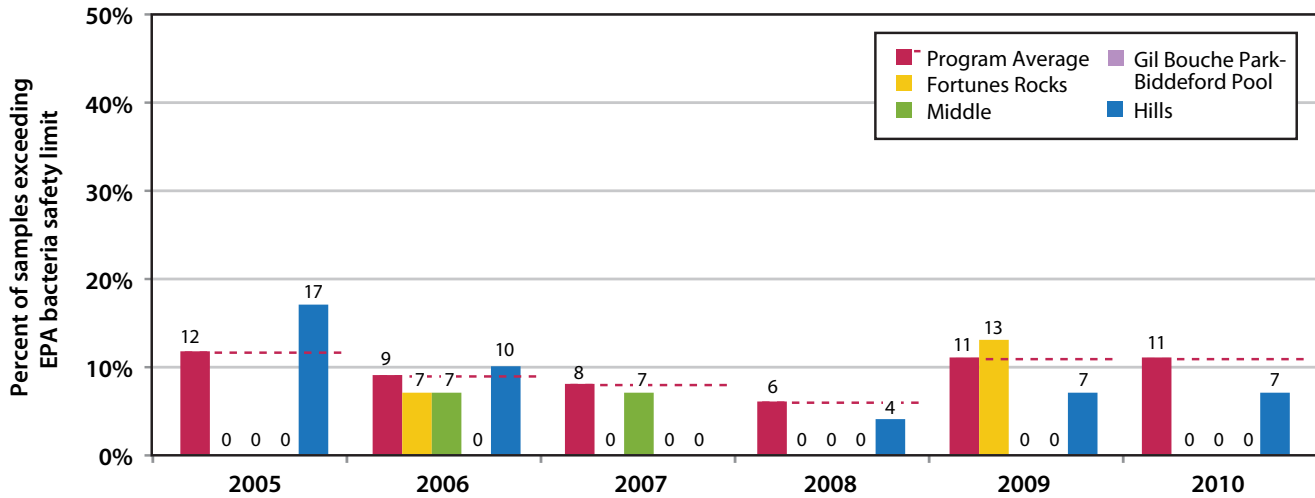
conducted sanitary survey work. Additionally, the Town of Kennebunkport contracted with environmental consultants to expand monitoring efforts and has posted supplemental signage.

The Kennebunk River Action Committee has helped locate a boat sewage pump-out barge in the Kennebunk River, conducted a Boater's Education Campaign, and hosted water quality workshops.

Kennebunkport has held "septic socials," and their Lawn to Lobsters campaign promotes best practices throughout the town.

BEACH MANAGER

Judy Barrett | 207-967-4401 | jbarrett@kennebunkportme.gov



RISK ASSESSMENT

Beach

Known or potential pollution sources

Fortunes Rocks

100% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet

Middle Beach

100% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff

Biddeford Pool

N/A no resamples due to consistently acceptable bacteria levels

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, boats

Hills

93% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet, septic systems, combined sewer outflow, overboard discharge systems, marinas, boats

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

We have conducted intensified monitoring and sanitary surveys to identify and eliminate pollution sources. A workshop brought together multiple town departments and local and state agency partners to share data and remediation strategies. The City of Biddeford created watershed-specific Geographical Information System (GIS) data layers, and made improvements to the sanitary sewer and stormwater infrastructure. The city has abated



Hills Beach / Maine Healthy Beaches Program

combined sewer overflows, removed illicit discharges on Basket Island, and removed an overboard discharge system.

BEACH MANAGER

Carl Walsh | 207-283-0841 | cwalsh@biddefordmaine.org



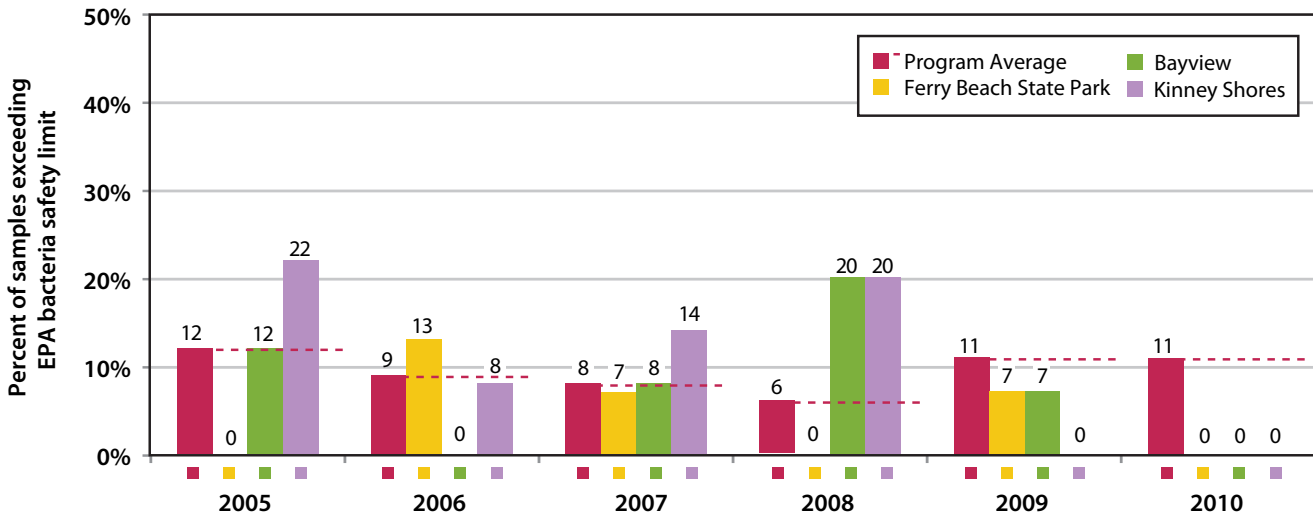
Gil Bouche Park / Maine Healthy Beaches Program



Fortunes Rocks / Maine Healthy Beaches Program



Middle Beach / Maine Healthy Beaches Program



RISK ASSESSMENT

Beach Known or potential pollution sources

Ferry Beach

100% of resamples reported as clean
 Bathing, pet waste, waterfowl/wildlife, stormwater runoff

Bay View

75% of resamples reported as clean
 Bathing, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, sanitary sewer outfall, boat

Kinney Shores

82% of resamples reported as clean
 Bathing, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, sanitary sewer outfall, boats

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

At Ferry Beach, state park staff have collected additional water samples to determine the influence of the neighboring Saco River on surf zone water quality.

At Bay View and Kinney Shores, we have conducted intensified monitoring and a fluorometry study in Goosefare Brook and on the beaches to help identify pollution sources. The City of Saco, in partnership with Old Orchard Beach, has posted signs at the mouth of Goosefare Brook alerting people to avoid water contact until bacteria levels are consistently within acceptable limits. The Maine Geological Survey has conducted a preliminary Circulation Study to determine the fate and transport of contaminants leaving the mouth of Goosefare Brook.



Ferry Beach State Park / Maine Healthy Beaches Program

BEACH MANAGERS

Ferry Beach State Park: Bob Crocker | 207-283-0067

Bay View, Kinney Shores: John Sherman | 207-283-3139 | jsherman@sacomaine.org

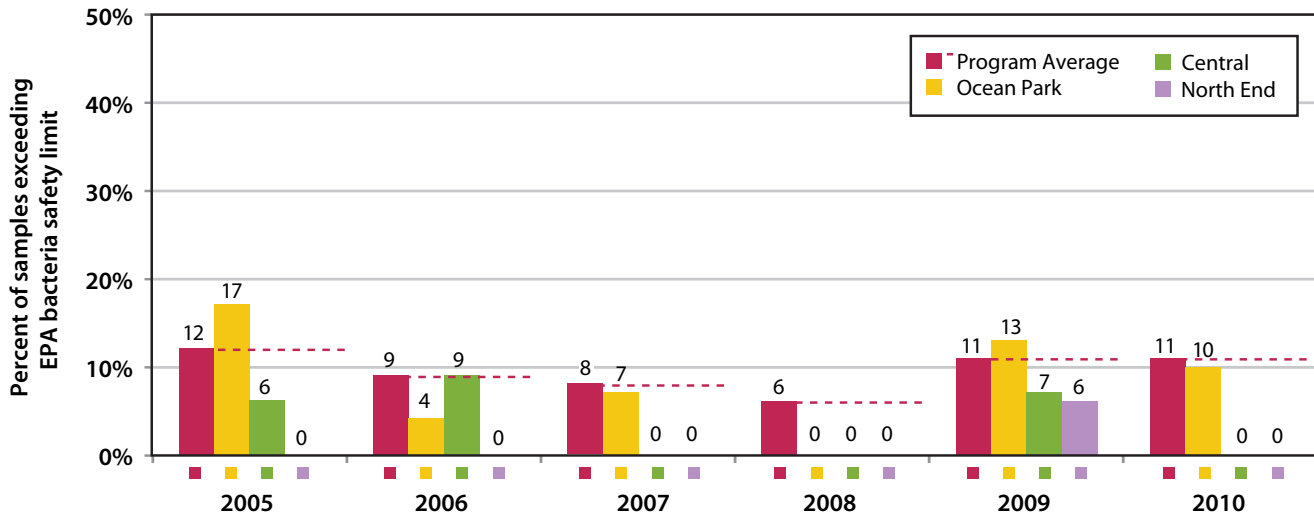


Bayview Beach / Maine Healthy Beaches Program



Kinney Shores / Maine Healthy Beaches Program





RISK ASSESSMENT

Beach

Known or potential pollution sources

Ocean Park

100% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, sanitary sewer outfall, boats

Central Beach

82% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, sanitary sewer outfall, boats

North End

100% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, sanitary sewer outfall, boats



Old Orchard Beach / Maine Healthy Beaches Program

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

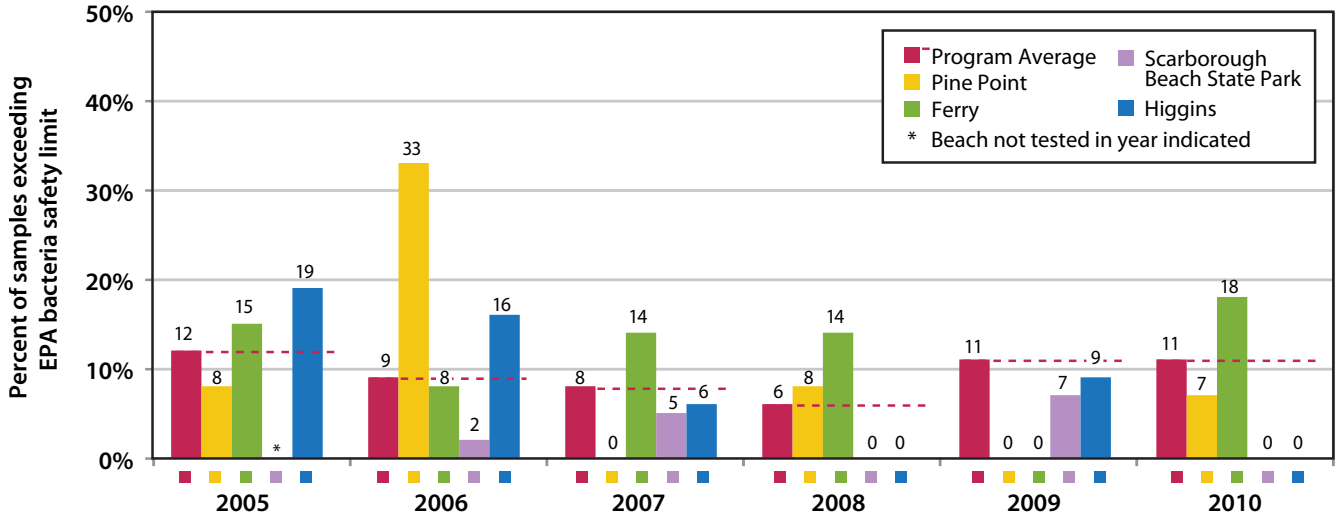
At Ocean Park and in Goosefare Brook, intensified monitoring and a fluorometry study helped identify pollution sources. The town of Old Orchard Beach, in partnership with Saco, has posted signs at the mouth of Goosefare Brook alerting people to avoid water contact until bacteria levels

are consistently within acceptable limits. The Maine Geological Survey has conducted a preliminary Circulation Study to determine the fate and transport of contaminants leaving the mouth of Goosefare Brook.

BEACH MANAGER

John Glass | 207-934-4911 | jglass@psafety.oobmaine.com





RISK ASSESSMENT

Beach

Known or potential pollution sources

Pine Point

88% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, salt marsh, septic systems, boats

Ferry Beach

90% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, salt marsh, septic systems, boats

Scarborough Beach State Park

100% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, salt marsh

Higgins

93% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains, river/stream outlet, septic systems, sanitary sewer outfall, boats, animal farm



Higgins Beach / Maine Healthy Beaches Program

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

At Scarborough Beach State Park, we collected additional samples at the marsh outlet to determine its influence on surf zone water quality.

At Higgins Beach, intensified monitoring and a fluorometry study in the Spurwink River helped identify

pollution sources. The Higgins Beach Association posted signs at the mouth of the Spurwink River alerting people to avoid water contact until bacteria levels are consistently within acceptable limits.

BEACH MANAGERS

Pine Point, Ferry Beach: Bill Reichl | 207-730-4150 | breichl@ci.scarborough.me.us

Scarborough Beach State Park: Greg Wilfert | 207-883-2416 | beachmaine@aol.com

Higgins Beach: Glennis Chabot | 207-883-3925 | chabot1@maine.rr.com

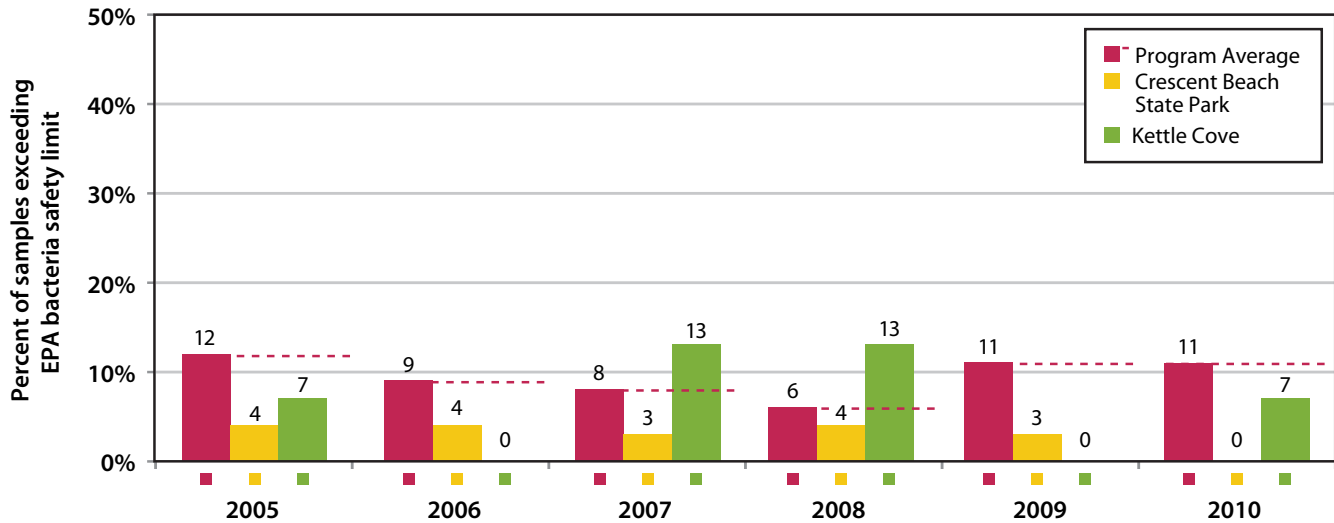


Scarborough Beach State Park / Maine Healthy Beaches Program



Ferry Beach / Maine Healthy Beaches Program

CAPE ELIZABETH



RISK ASSESSMENT

Beach

Known or potential pollution sources

Crescent Beach State Park

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, boats

100% of resamples reported as clean

Kettle Cove

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, boats

100% of resamples reported as clean

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

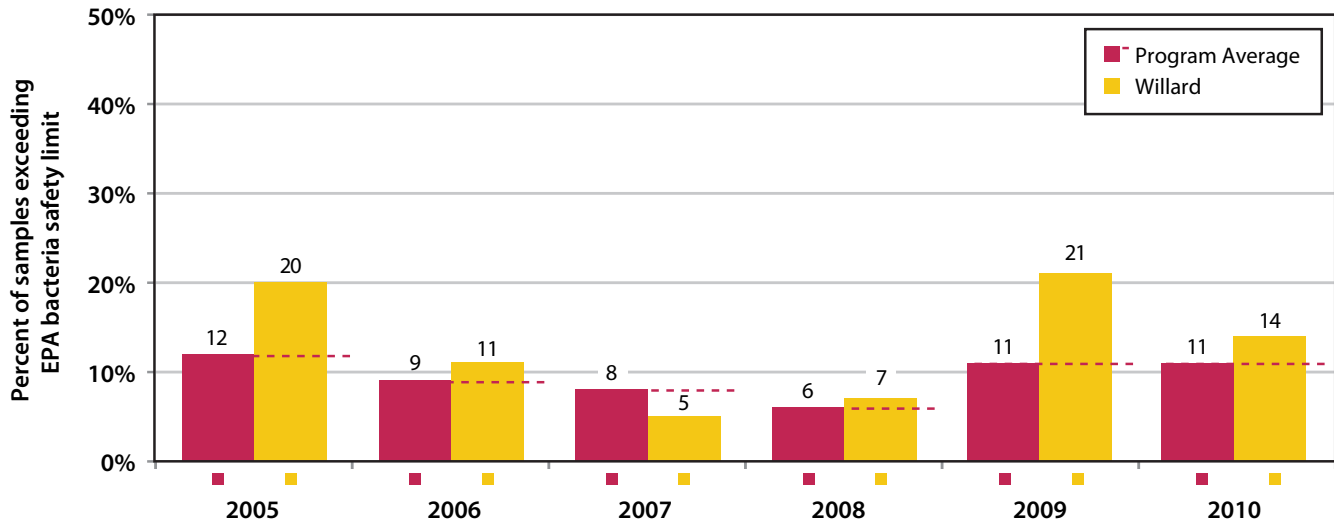
BEACH MANAGER

John Polackwich |
207-799-5871 |
john.polackwich@maine.gov



Kettle Cove / Maine Healthy Beaches Program

SOUTH PORTLAND



RISK ASSESSMENT

Beach

Known or potential pollution sources

Willard Beach

90% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains, boats



Willard Beach / Maine Healthy Beaches Program

together multiple town departments and local and state agency partners to share data and remediation strategies.

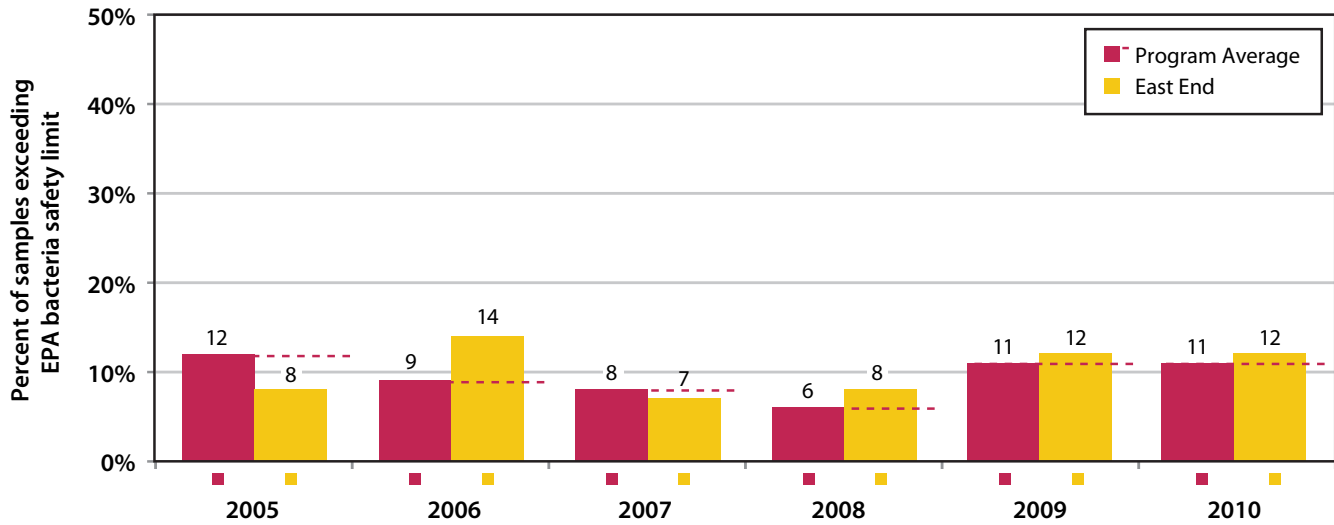
LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

We conducted intensified monitoring, a bacteria and rainfall study, and sanitary survey work to identify and eliminate pollution sources. South Portland Water Resources Protection conducts routine maintenance, cleaning and inspection of the storm drainage network. A workshop brought

BEACH MANAGER

Timothy Gato | 207-767-7650 | TGATO@southportland.org



RISK ASSESSMENT

Beach

Known or potential pollution sources

East End Beach

86% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains, combined sewer overflows, sanitary sewer outfall, marinas, boats

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

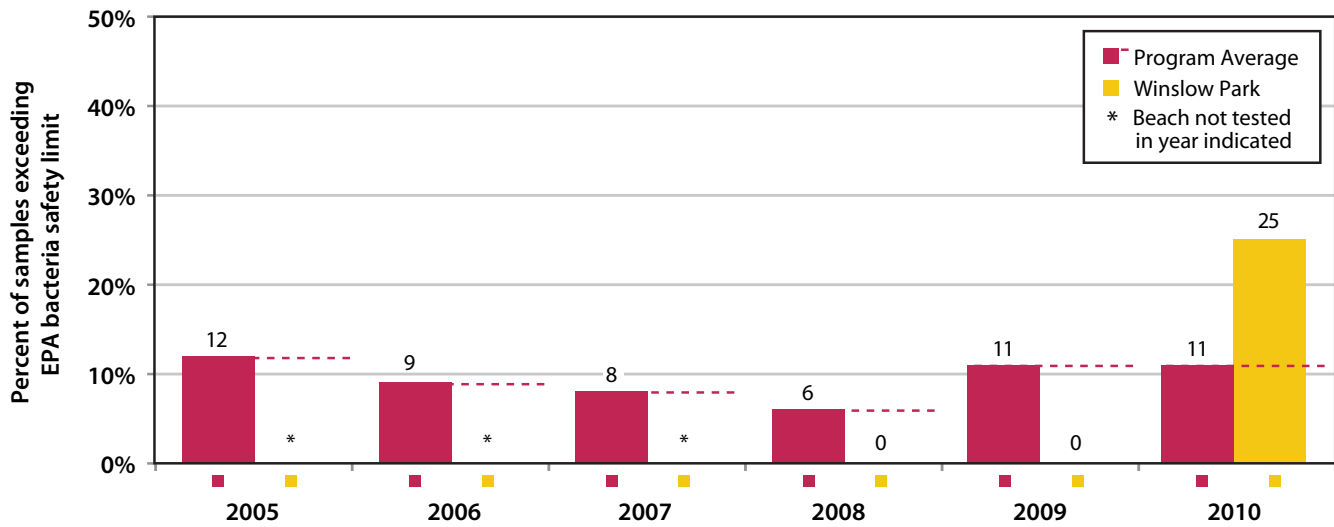
Additionally, the City of Portland issues precautionary rainfall advisories and is undergoing combined sewer overflow abatement.



East End / Maine Healthy Beaches Program

BEACH MANAGER

Joe Dumais | 207-874-8934 | jdumais@portlandmaine.gov



RISK ASSESSMENT

Beach

Known or potential pollution sources

Winslow Park

Bathers, pet waste, waterfowl/wildlife, stormwater runoff

100% of resamples reported as clean

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

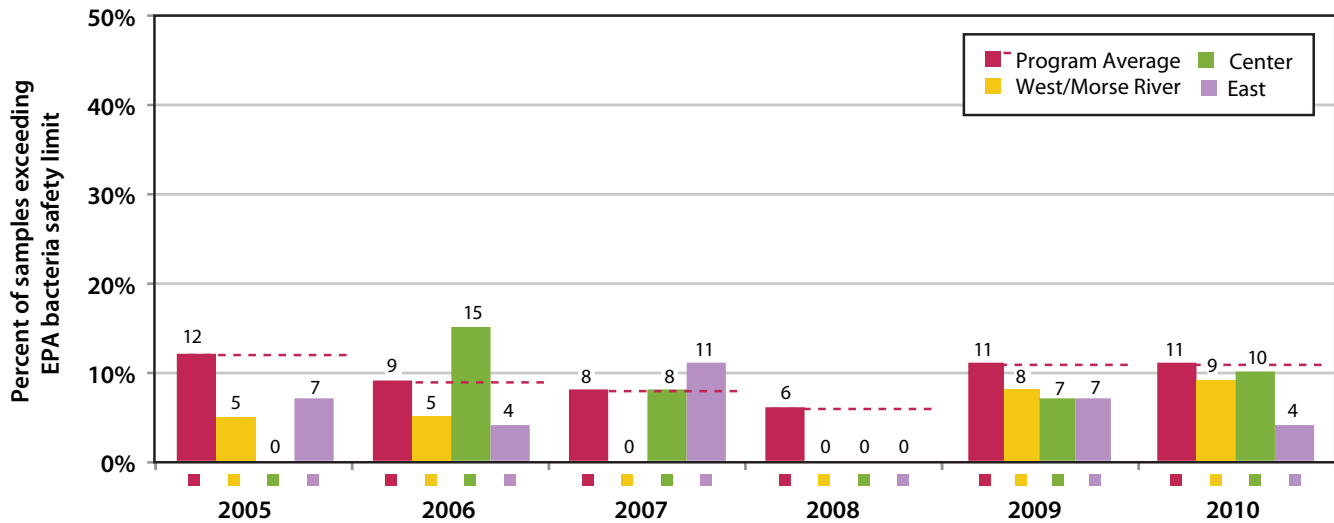
BEACH MANAGER

Bart Carhart | 207-865-9052 | mlcarhart@yahoo.com



Winslow Park / Maine Healthy Beaches Program

PHIPPSBURG (POPHAM BEACH STATE PARK)



RISK ASSESSMENT

Beach

Known or potential pollution sources

West Beach/ Morse River

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, boats

100% of resamples reported as clean

Center Beach

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, septic system, boats

100% of resamples reported as clean

East Beach

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats

89% of resamples reported as clean



West Morse / Maine Healthy Beaches Program

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

The Maine Geological Survey conducted a Circulation Study to determine the fate and transport of pollutants leaving the Kennebec and Morse rivers. We also completed additional data analysis to determine the relationship between *Enterococci* and parameters such as wave

height, tidal stage, etc. Intensified monitoring, a fluorometry study, and assessment of *Enterococci* levels in beach sand have been conducted to help identify pollution sources.

BEACH MANAGER

Brian Murray | 207-389-1335 | brian.j.murray@maine.gov



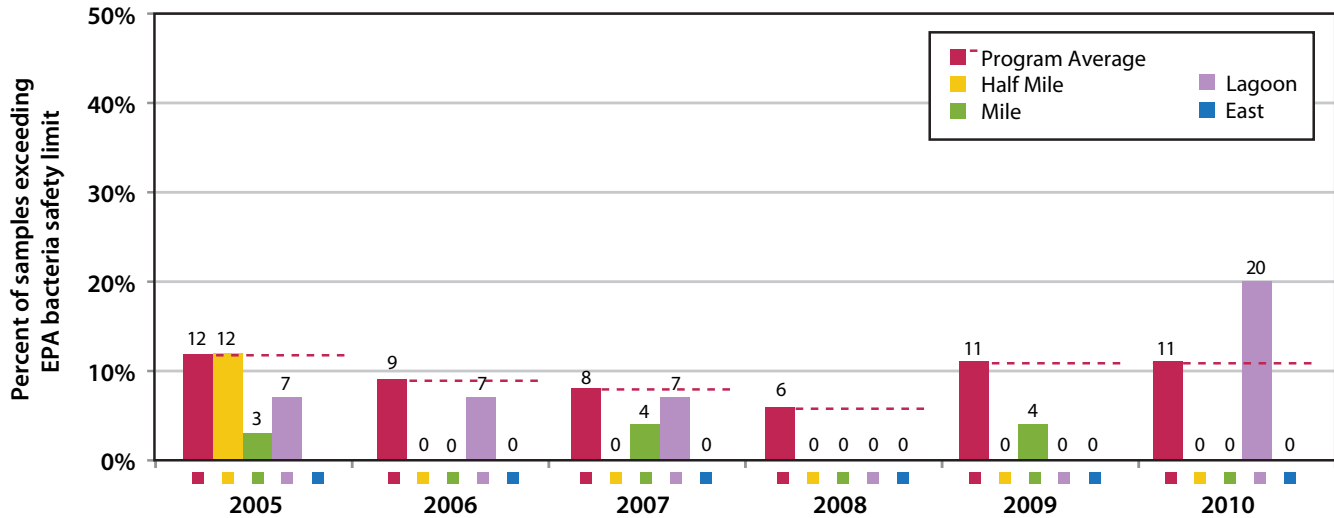
Popham State Park East / Maine Healthy Beaches Program



Popham State Park Central / Maine Healthy Beaches Program



GEORGETOWN (REID STATE PARK)



RISK ASSESSMENT

Beach

Known or potential pollution sources

Half Mile

100% of resamples reported as clean
 Bathing, pet waste, waterfowl/wildlife, stormwater runoff, stream outlet

Mile Beach

100% of resamples reported as clean
 Bathing, pet waste, waterfowl/wildlife, stormwater runoff

Lagoon

86% of resamples reported as clean
 Bathing, stormwater runoff, stream outlet, wildlife

East Beach

N/A no resamples due to consistently acceptable bacteria levels
 Bathing, pet waste, waterfowl/wildlife, stormwater runoff, boats

LOCAL ACTIONS TO IMPROVE WATER QUALITY

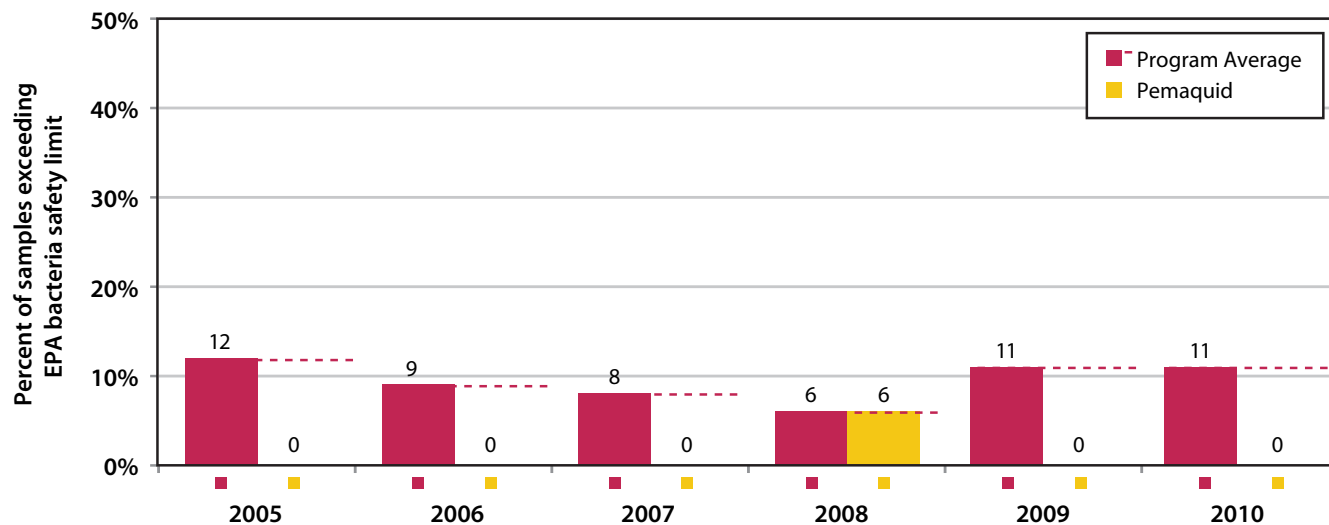
An education campaign promotes healthy practices on the beach and throughout the watershed.

BEACH MANAGER

Samantha Wilkinson | 207-371-2303 |
 Samantha.Wilkinson@maine.gov



Mile Beach / Maine Healthy Beaches Program



RISK ASSESSMENT

Beach

Known or potential pollution sources

Pemaquid Beach

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, septic system, salt marsh

100% of resamples reported as clean

LOCAL ACTIONS TO IMPROVE WATER QUALITY

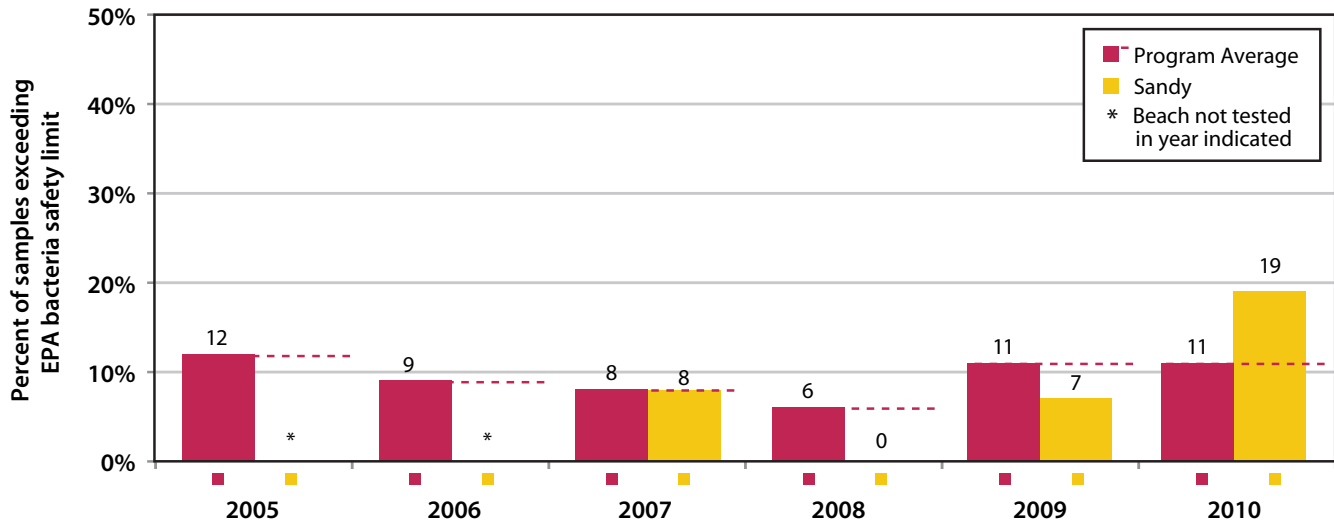
An education campaign promotes healthy practices on the beach and throughout the watershed.

BEACH MANAGER

Gordon Benner |
207-380-5025



Pemaquid Beach / Pemaquid Watershed Association



RISK ASSESSMENT

Beach

Known or potential pollution sources

Sandy Beach

Bathers, boats, marinas, pet waste, wildlife, stormwater runoff

88% of resamples reported as clean

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

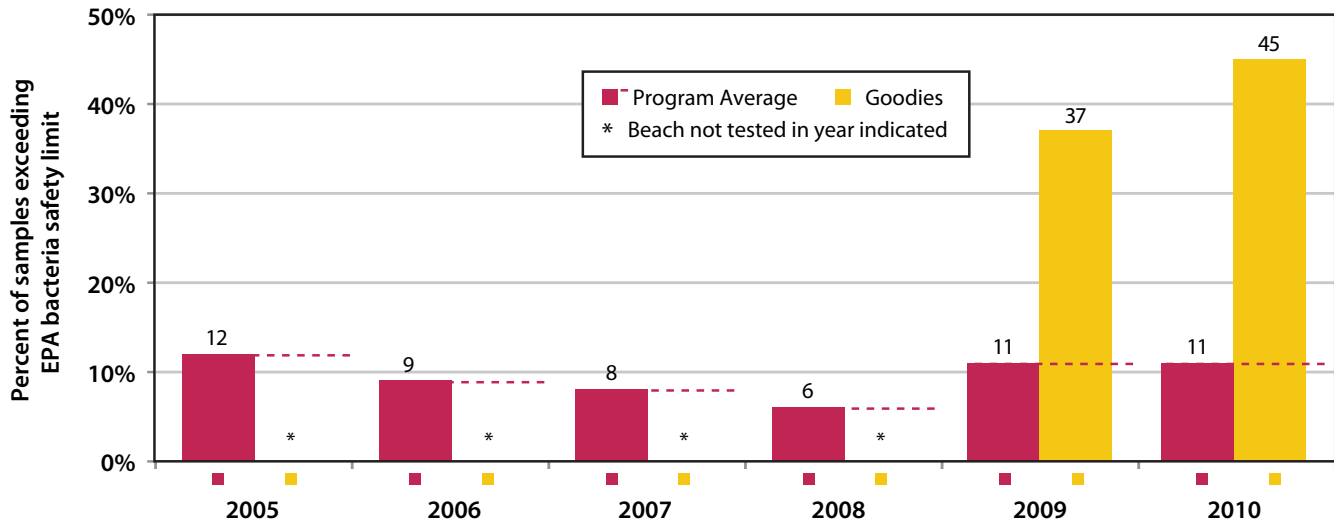
The Rockland Harbormaster’s Boater Education Campaign promotes responsible boat ownership, increases the use of pump-out facilities, and educates boaters about the recent No Discharge Area designation for West Penobscot Bay. The City of Rockland has also undergone combined sewer overflow abatement (no CSO events since 2004) and has partnered with Maine Department of Environmental Protection to eliminate sources of bacterial contamination in Lindsey Brook, which discharges to Lermond Cove.



Sandy Beach / City of Rockland

BEACH MANAGER

Terry Pinto | 207-594-0324 | tpinto@ci.rockland.me.us



RISK ASSESSMENT

Beach

Known or potential pollution sources

Goodies Beach

47% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet, septic systems, boats

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

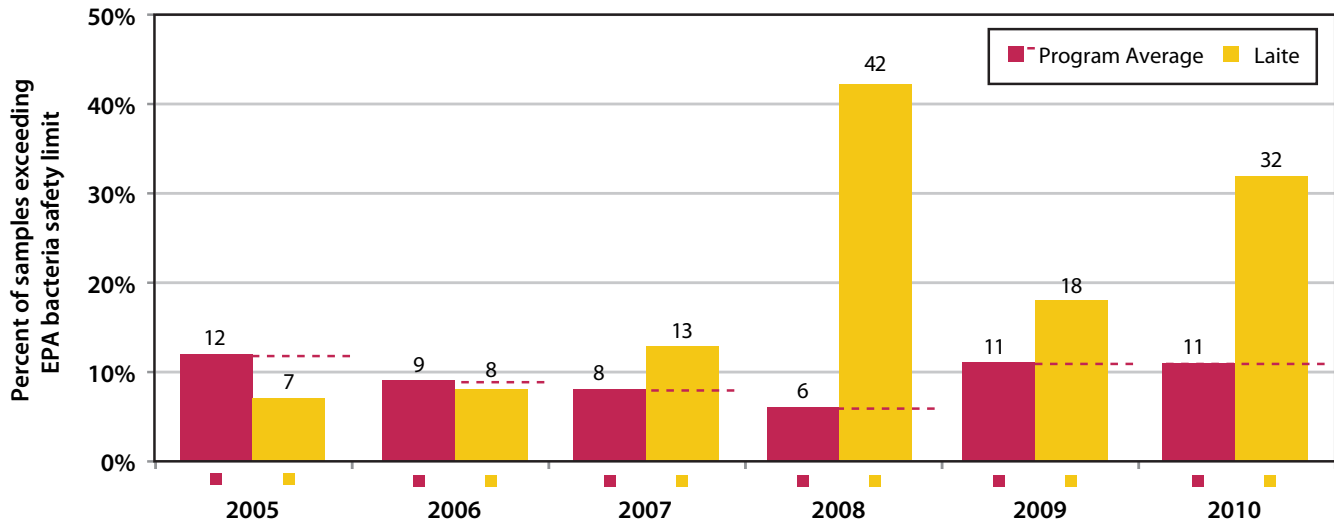
We have intensified monitoring of the storm drain adjacent to Goodies Beach, the Goose River and Lily Pond Stream, and conducted a fluorometry study to help identify pollution sources. The town has worked with homeowners to eliminate malfunctioning septic systems in the Goose River Watershed. The Town of Rockport and the Conservation Commission have launched a boater education campaign and a pet waste and water quality campaign to promote best practices offshore, on the beach, and throughout the watershed.

BEACH MANAGER

Tom Ford | 207-236-0989 | planner@town.rockport.me.us



Goodies Beach / Maine Healthy Beaches Program



RISK ASSESSMENT

Beach

Known or potential pollution sources

Laite Beach

73% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains, river/stream outlet, boats, illicit connections to the storm drain network.

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

In 2010, we obtained supplemental funding from US EPA to conduct The Camden Harbor Water Quality Project. This included intensified monitoring of the Megunticook River, Rock Brook, storm drains, and Camden Harbor; a fluorometry study; a boater education campaign; and a do-not-feed-waterfowl campaign. Workshops brought together multiple town departments and local and state agency partners to share data and remediation strategies.

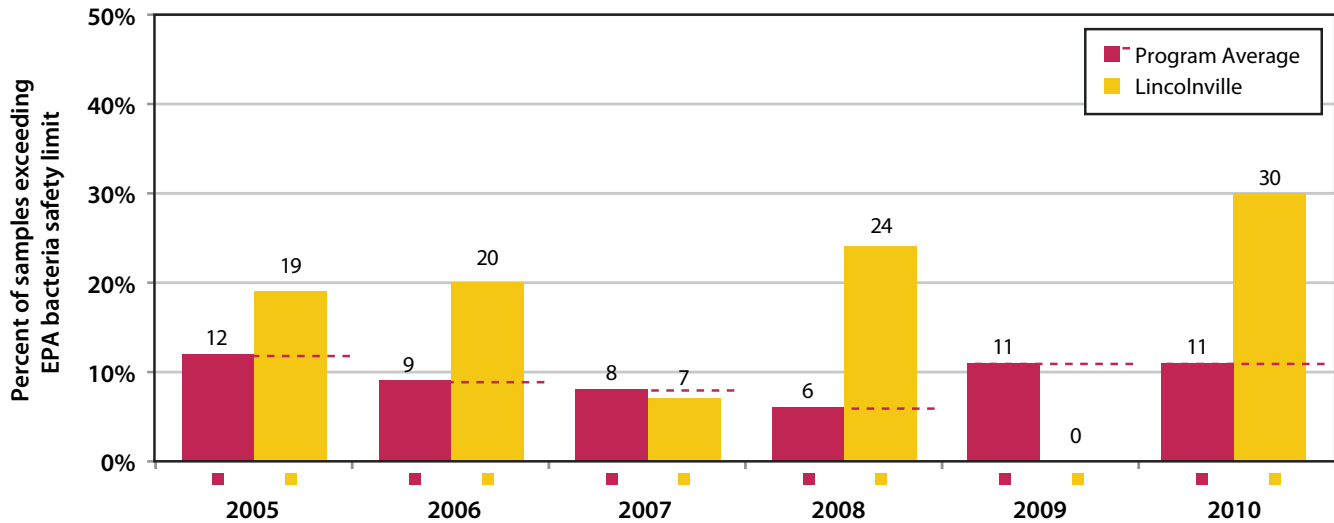


Laite Beach / Maine Healthy Beaches Program

The Town of Camden has a convenient, no-cost pump-out boat, and the sewage treatment facility has conducted an Illicit Discharge Detection and Elimination Study. The town has made improvements to the sanitary sewer infrastructure and storm drainage networks.

BEACH MANAGER

Steve Wilson | 207-236-3353 | swilson@camdenmaine.gov



RISK ASSESSMENT

Beach

Known or potential pollution sources

Lincolnville Beach

71% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains, overboard discharge system, sanitary sewer outfall, river/stream outlet, septic systems, boats

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

We conducted intensified monitoring of Frohock Brook and the storm drainage network and a fluorometry study to identify and eliminate pollution sources. The Town of Lincolnville and agency partners have conducted sanitary survey work and a technical report has been developed. The Town of Lincolnville has worked with property owners to eliminate malfunctioning septic systems as well as address overboard discharge systems and lobster tanks in the vicinity of Lincolnville Beach. Lincolnville voters passed an *Act to Create the Lincolnville Sanitation District* and the Board of Trustees is investigating funding sources and options to extend sewer services.

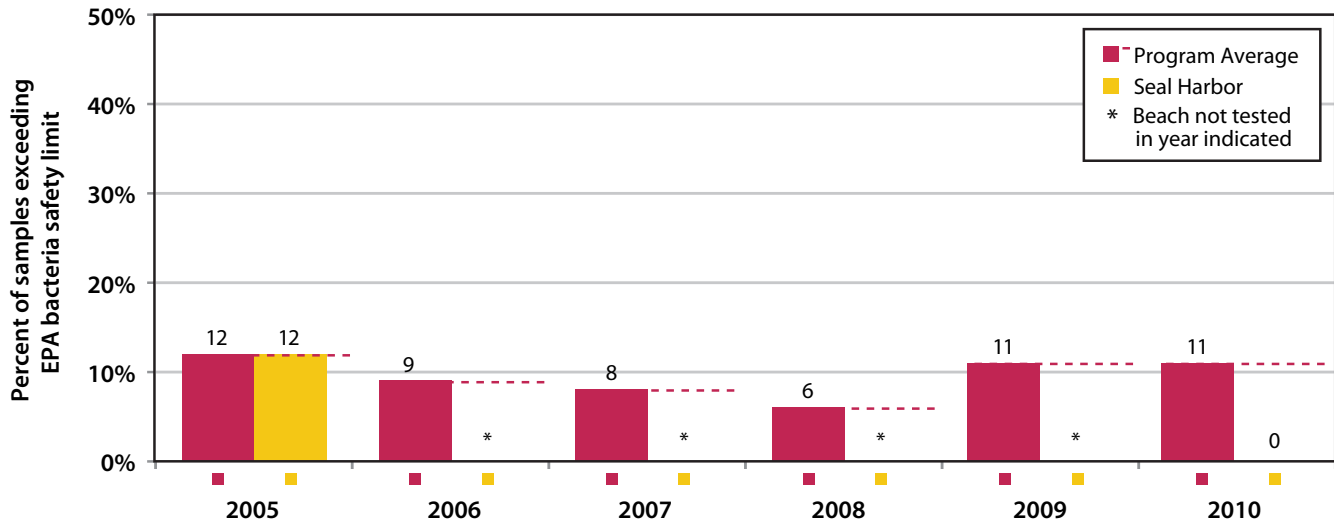


Lincolnville Beach / Maine Healthy Beaches Program

BEACH MANAGER

Frank Therio | 207-763-3601 | ceolpi@town.lincolnvill.me.us

MOUNT DESERT



RISK ASSESSMENT

Beach

Known or potential pollution sources

Seal Harbor Beach

49% of resamples reported as clean

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, overboard discharge system, sanitary sewer outfall, river/stream outlet, boats

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

We conducted intensified monitoring in Stanley Brook and surveyed the Stanley Brook Watershed to help identify and eliminate pollution sources. The Town of Mount Desert has made improvements to the sanitary sewer infrastructure and voters passed an above-ground sewer inspection ordinance.

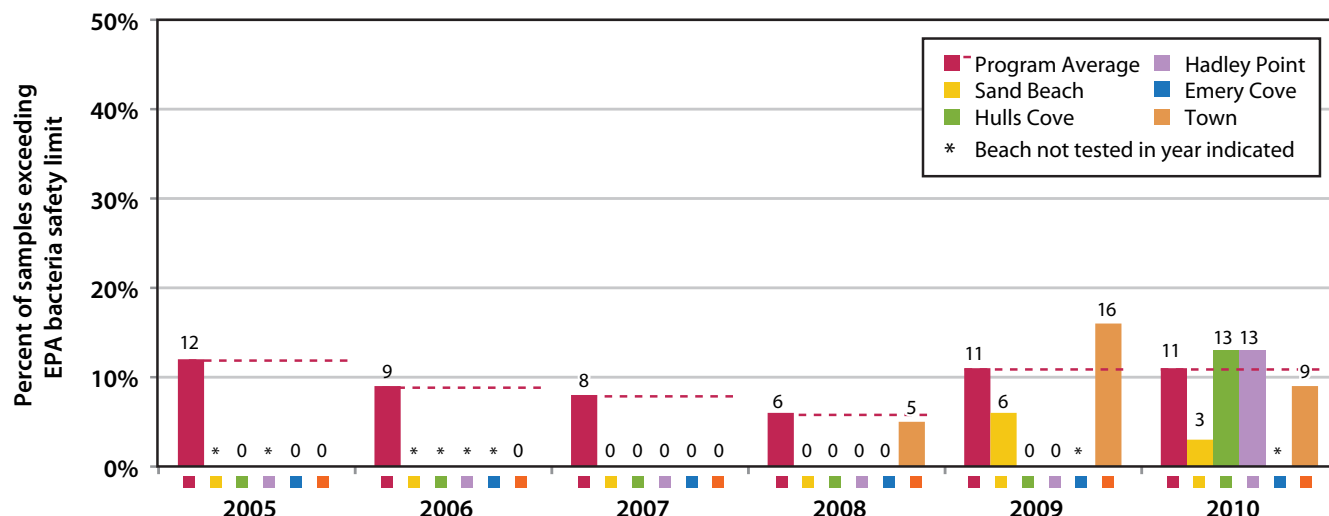
BEACH MANAGER

Durlin Lunt | 207-276-5531 |
manager@mtdesert.org



Seal Harbor / C. Schmitt

BAR HARBOR & ACADIA NATIONAL PARK



RISK ASSESSMENT

Beach

Known or potential pollution sources

Sand Beach (Acadia National Park)

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, marsh outlet

100% of resamples reported as clean

Hulls Cove

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet

100% of resamples reported as clean

Hadley Point

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats

100% of resamples reported as clean

Emery Cove

Bathers, pet waste, waterfowl/wildlife, stormwater runoff

N/A no resamples due to consistently acceptable bacteria levels

Town Beach

Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet

85% of resamples reported as clean

LOCAL ACTIONS TO IMPROVE WATER QUALITY

An education campaign promotes healthy practices on the beach and throughout the watershed.

At Sand Beach, Acadia National Park staff routinely monitor the lagoon/marsh outlet to determine the influence on surf zone water quality.

At Town Beach, the Community Environmental Health Laboratory at MDI Biological Laboratory conducts intensified monitoring around cruise ships.

BEACH MANAGERS

Sand Beach, Acadia National Park: Bill Gawley | 207-288-8723 | bill_gawley@nps.gov

Bar Harbor town beaches: Charlie Phippen | 207-288-5571 | bhhmaster@barharbormaine.gov



Hadley Point / Maine Healthy Beaches Program



PRACTICE HEALTHY BEACH HABITS:

Wash your hands.

Avoid swimming after heavy rainfall.

Don't swallow beach water.

Take children to the bathroom often & use swim diapers.

Don't swim if you have diarrhea or nausea.

Dispose of trash and pet waste properly.

Do not feed birds or wildlife.

Maintain & pump out your septic system.

Never discharge untreated boat sewage.

Plant buffers along waterways to trap polluted runoff.

