Maine Healthy Beaches

a unique partnership to keep Maine beaches clean

Status & Trends 2005-2010

Contents

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www.mainehealthybeaches.org

Funding provided by US EPA.

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.

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.

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.

Maine Healthy Beaches 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.

Maine Healthy Beaches Program

Maine Healthy Beaches Program

M. Bailey

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.

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

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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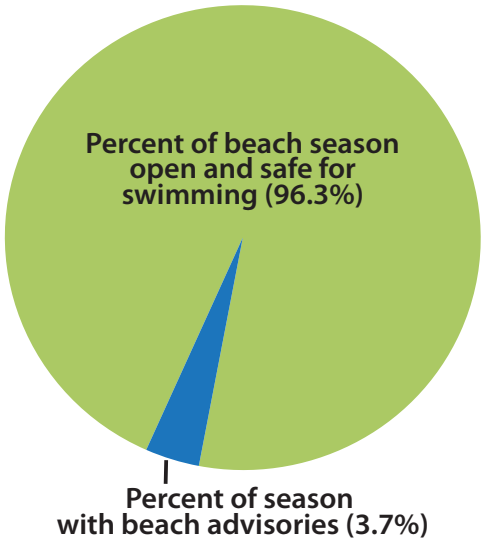
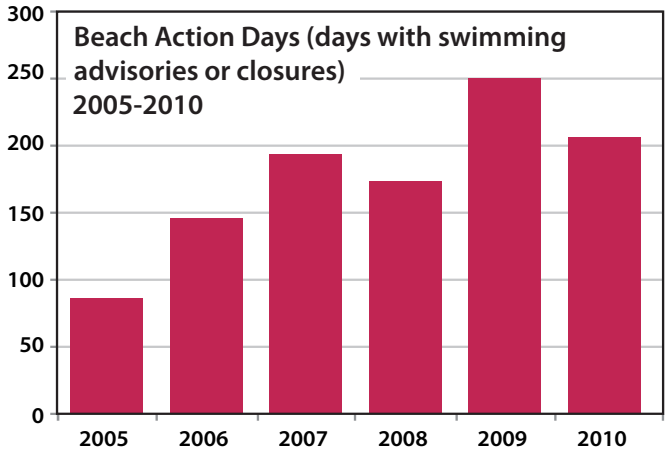


US EPA

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)

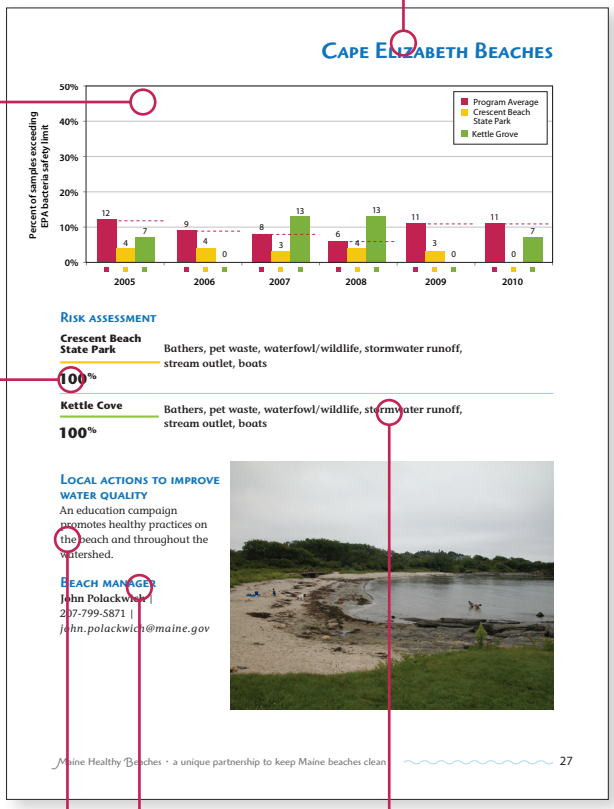
Beaches participating in the Maine Healthy Beaches Program include coastal beaches (public or privately owned) with adequate public access and medium to high public usage. Eligible beaches have a management entity (municipality, park, private beach association, etc.) and a plan for monitoring, assessment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

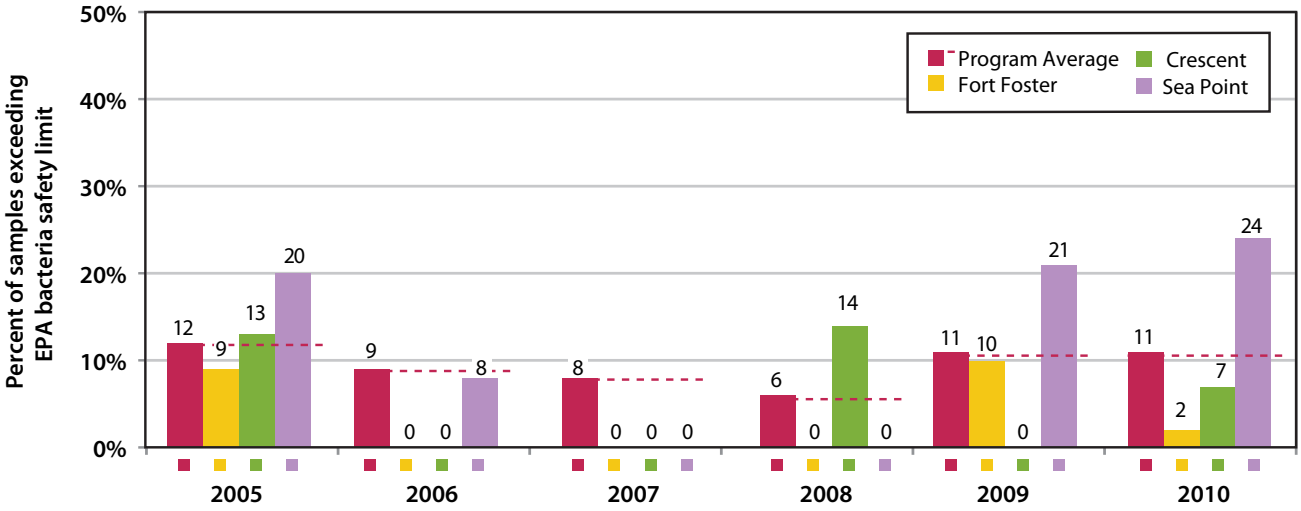
Local actions to improve water quality

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*

Kittery



Risk assessment

Beach	Known or potential pollution sources
Fort Foster — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, salt marsh
Crescent — **75%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff
Sea Point — **58%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff

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 |
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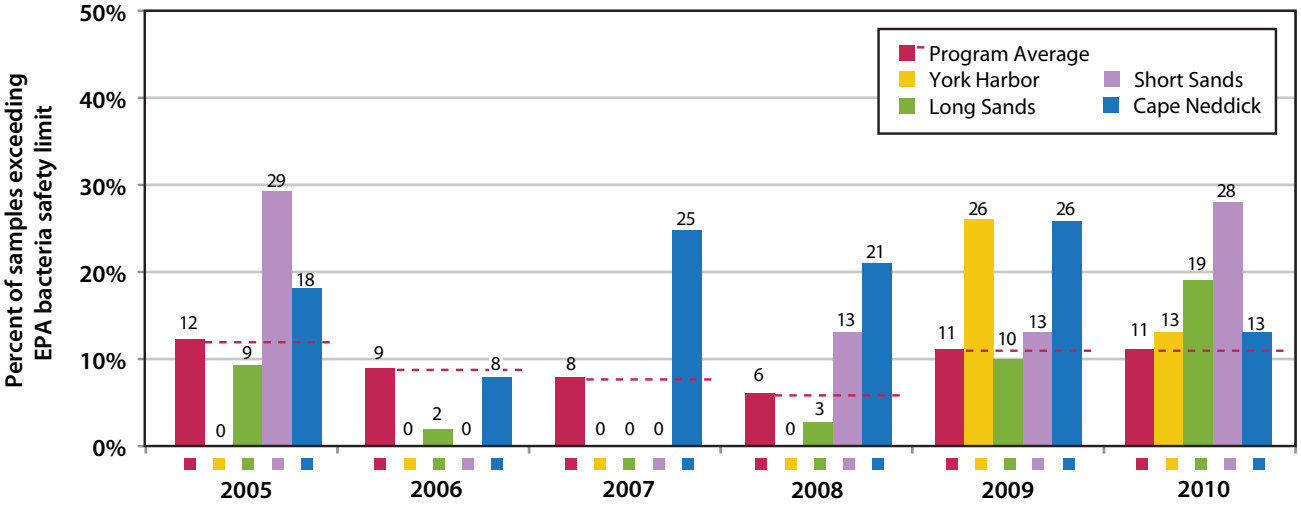
York



Risk assessment

Beach	Known or potential pollution sources
York Harbor — **86%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, marina, boats, river/stream outlet
Long Sands — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains/ marsh outlet, boats
Short Sands — **69%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, zoo
Cape Neddick — **72%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, boats

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

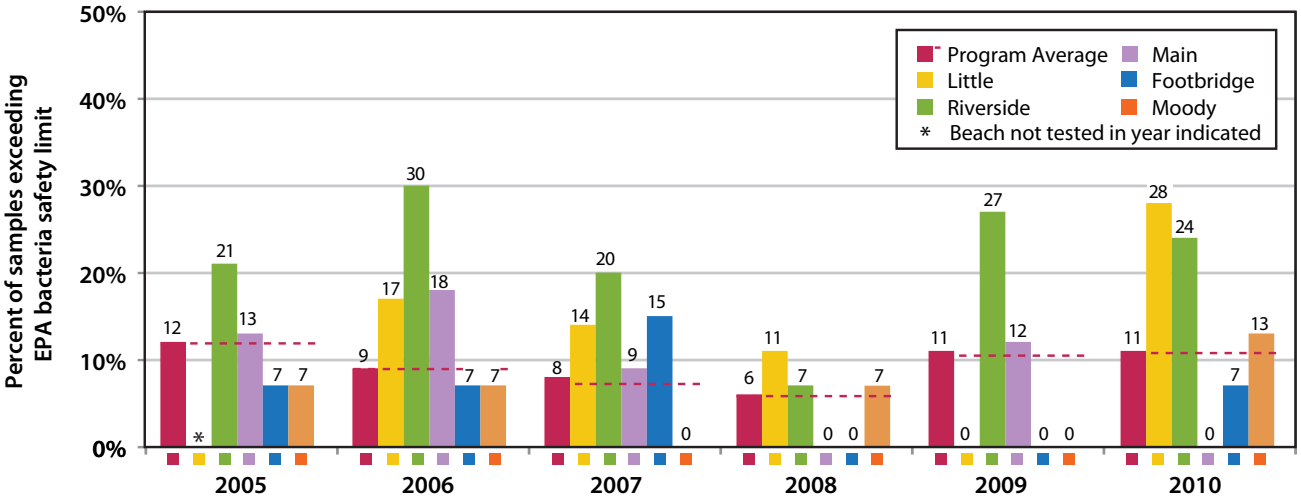
Mike Sullivan | 207-363-1040 | *msullivan@yorkmaine.org*

York Harbor / Maine Healthy Beaches Program

Cape Neddick / L. Scotland

Short Sands / Maine Healthy Beaches Program

Ogunquit



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*

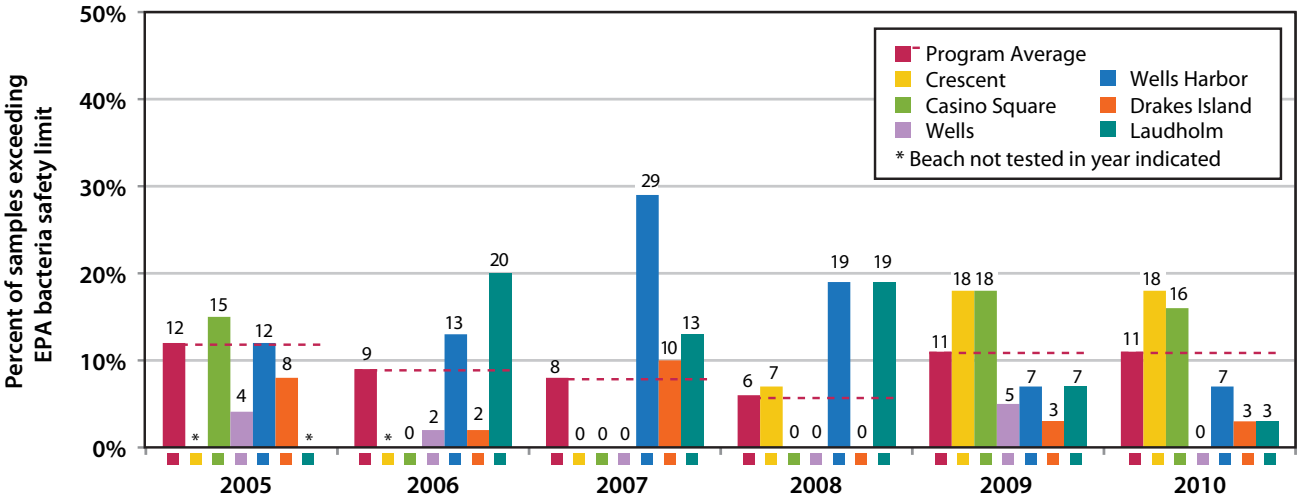
Little Beach / Maine Healthy Beaches Program

Main Beach / Maine Healthy Beaches Program

Moody Beach / Maine Healthy Beaches Program

Riverside / Maine Healthy Beaches Program

Wells



Risk assessment

Beach	Known or potential pollution sources
Crescent — **86%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats
Casino Square — **92%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, boats
Wells Beach — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats
Wells Harbor — **79%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet, marina, boats
Drakes Island — **90%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats
Laudholm — **79%** of resamples reported as clean	Bathers, 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*

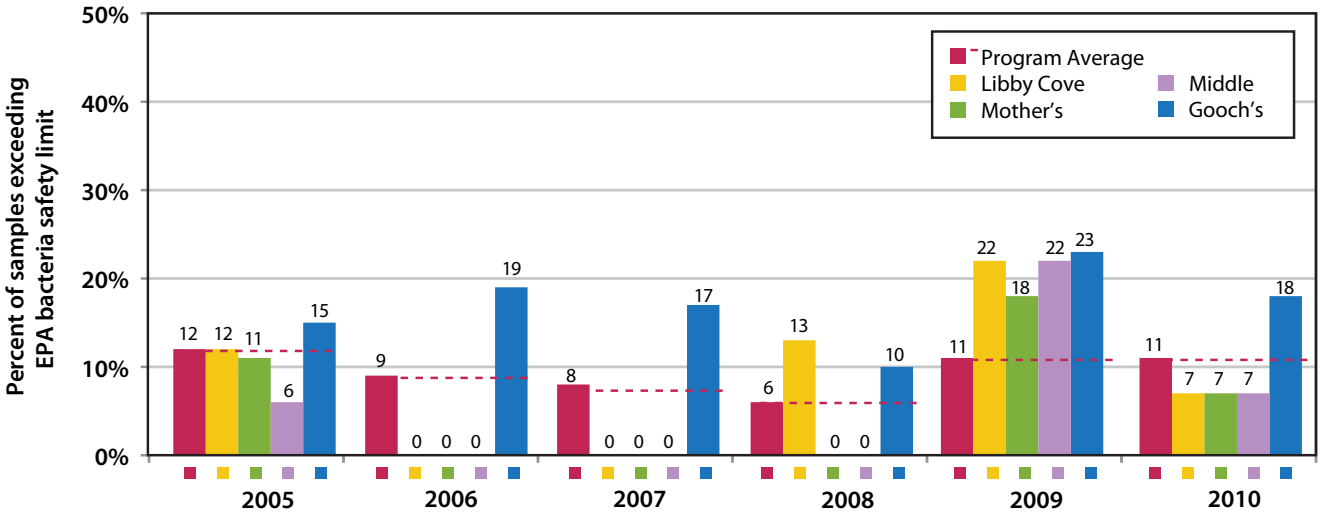
Crescent Beach / Maine Healthy Beaches Program

Drakes Island / Maine Healthy Beaches Program

Wells Harbor / Maine Healthy Beaches Program

Wells Beach / Maine Healthy Beaches Program

Kennebunk



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.

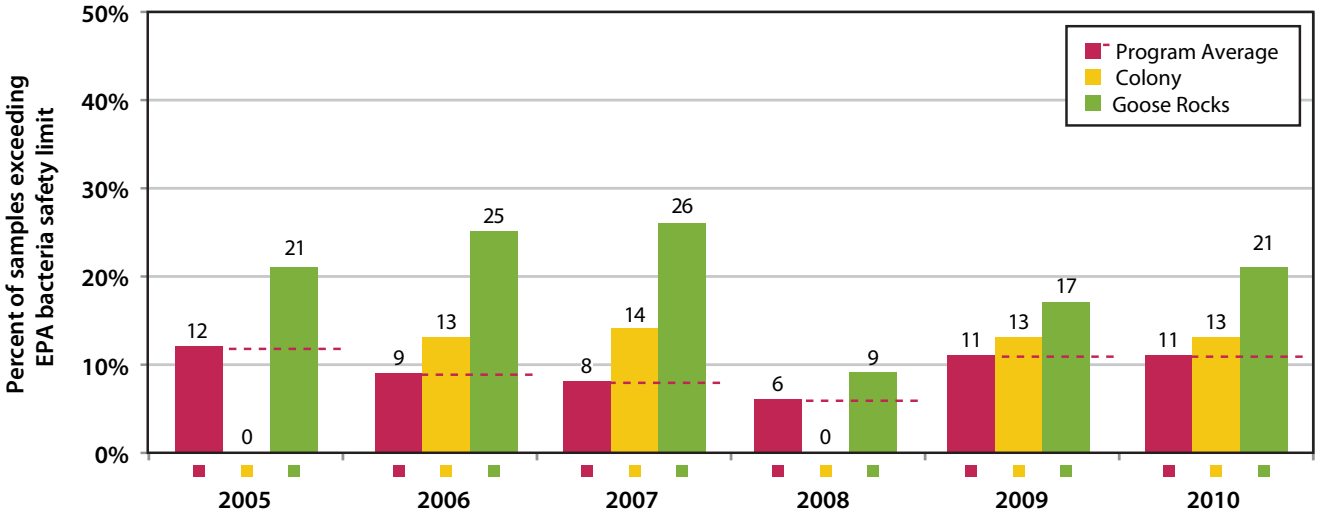
Kennebunkport has held "septic socials," and their Lawn to Lobsters campaign promotes best practices throughout the town.

Beach Manager

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

Gooch's Beach / Maine Healthy Beaches Program

Kennebunkport



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 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.

Colony Beach / Maine Healthy Beaches Program

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.

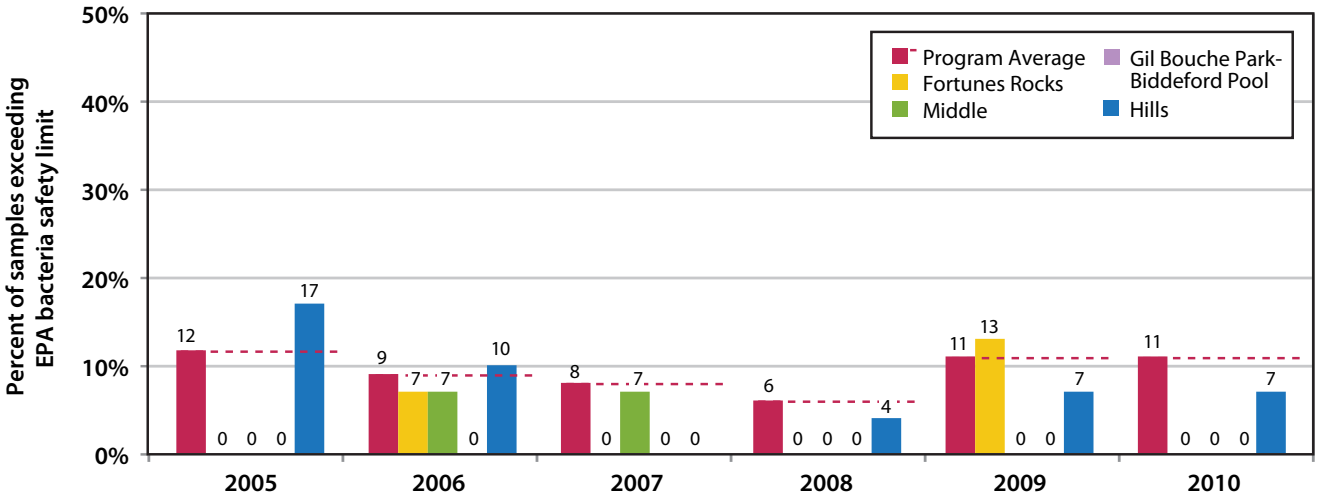
The Kennebunk River Action Committee has helped locate a boat sewage pump-out barge in the Kennebunk River, conducted a Boater's Education Campaign, and hosted water quality workshops.

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*

Biddeford



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

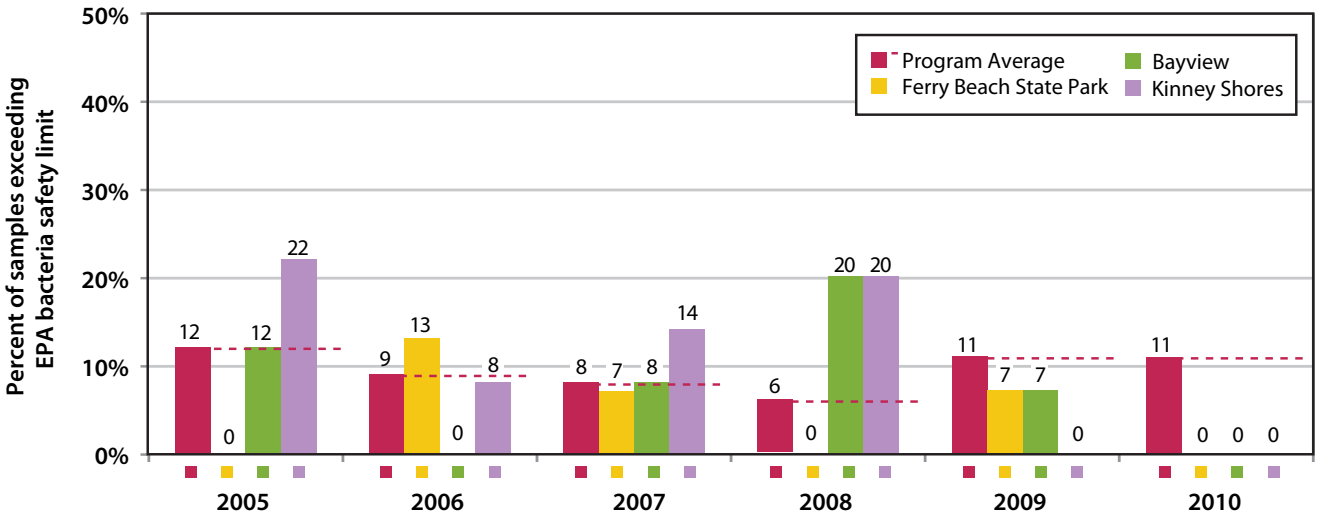
Carl Walsh | 207-283-0841 | cwalsh@biddefordmaine.org

Gil Bouche Park / Maine Healthy Beaches Program

Fortunes Rocks / Maine Healthy Beaches Program

Middle Beach / Maine Healthy Beaches Program

Saco



Risk assessment

Beach	Known or potential pollution sources
Ferry Beach — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff
Bay View — **75%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, sanitary sewer outfall, boat
Kinney Shores — **82%** of resamples reported as clean	Bathers, 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.

Ferry Beach State Park / Maine Healthy Beaches Program

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.

Beach managers

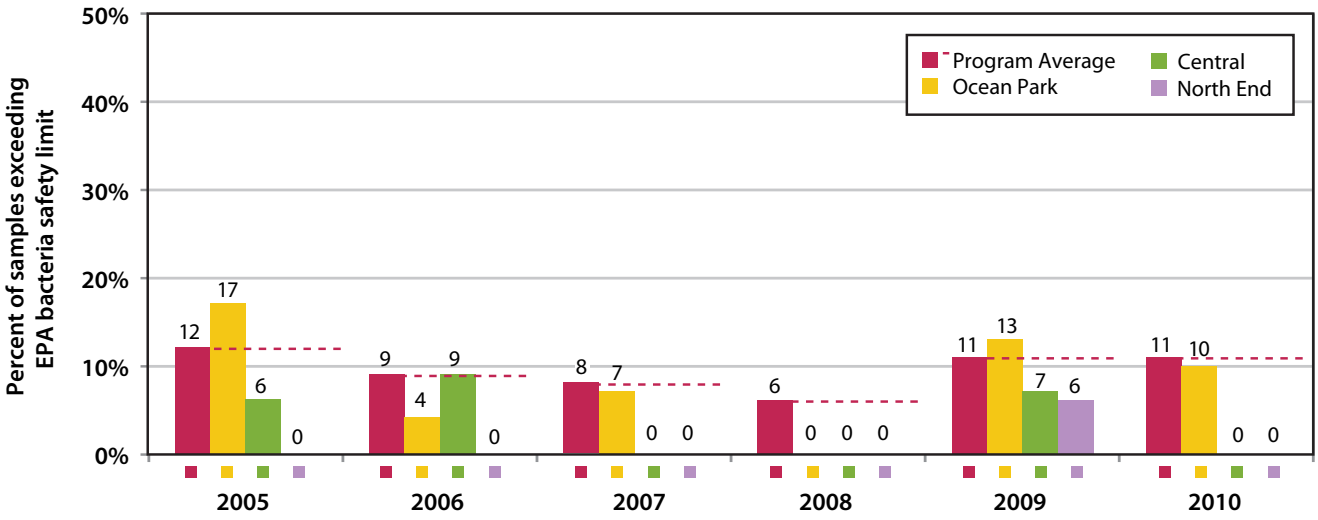
Ferry Beach State Park: Bob Crocker | 207-283-0067

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

Bayview Beach / Maine Healthy Beaches Program

Kinney Shores / Maine Healthy Beaches Program

Old Orchard



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.

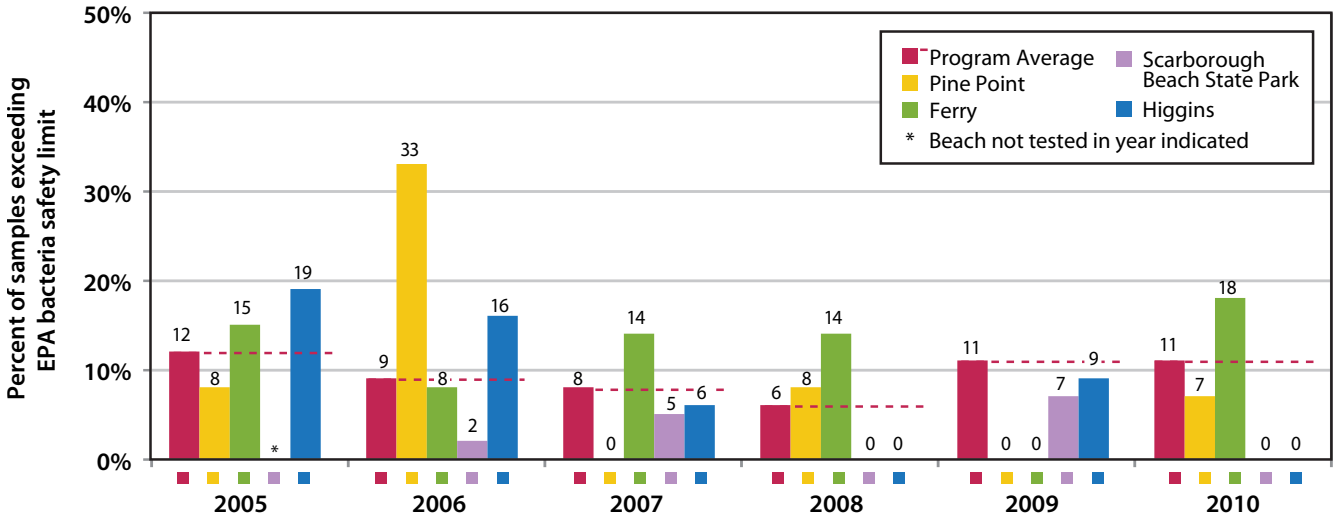
At Ocean Park and in Goosefare Brook, intensified monitoring and a fluorometry study helped identify pollution sources. The town of Old Orchard Beach, in partnership with Saco, has posted signs at the mouth of Goosefare Brook alerting people to avoid water contact until bacteria levels

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*

Scarborough



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*

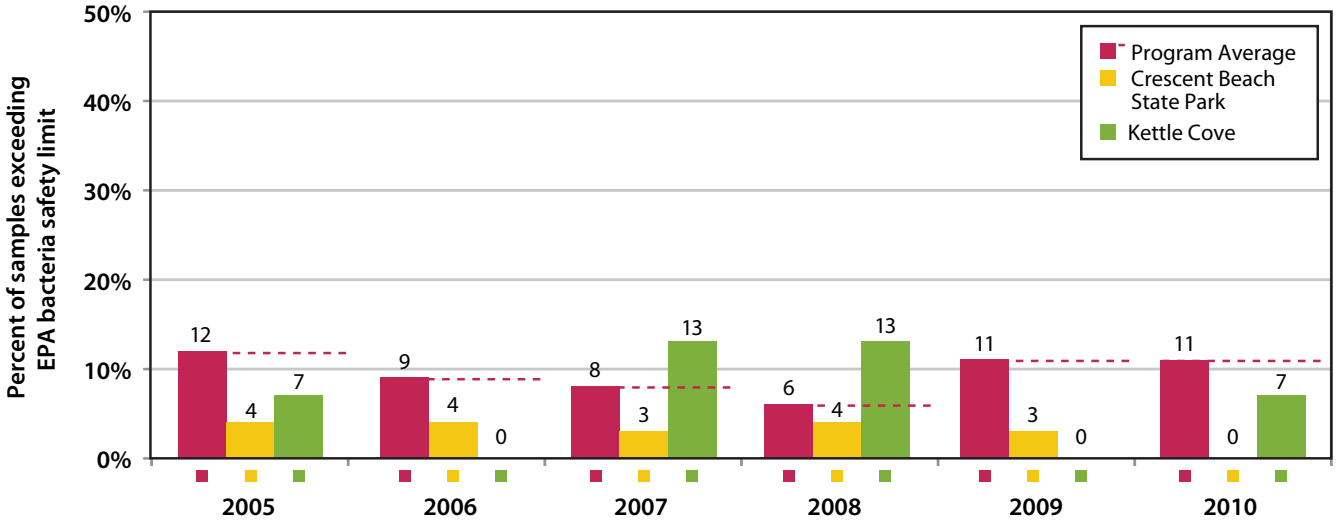
Scarborough Beach State Park: Greg Wilfert | 207-883-2416 | *beachmaine@aol.com*

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 — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, boats
Kettle Cove — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, boats

Local actions to improve water quality

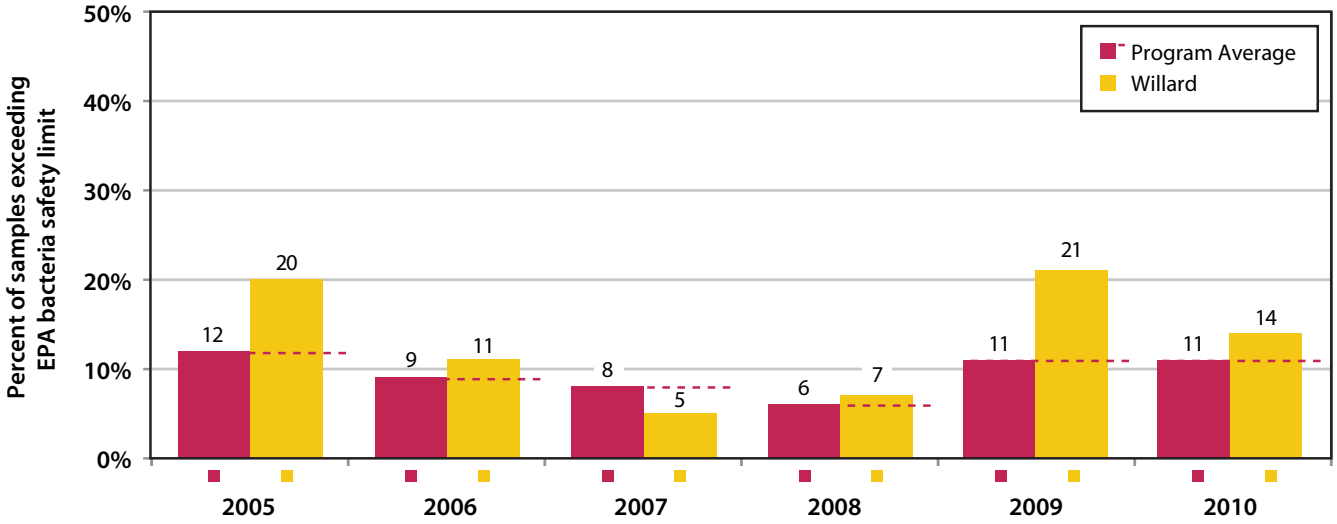
An education campaign promotes healthy practices on the beach and throughout the watershed.

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

Local actions to improve water quality

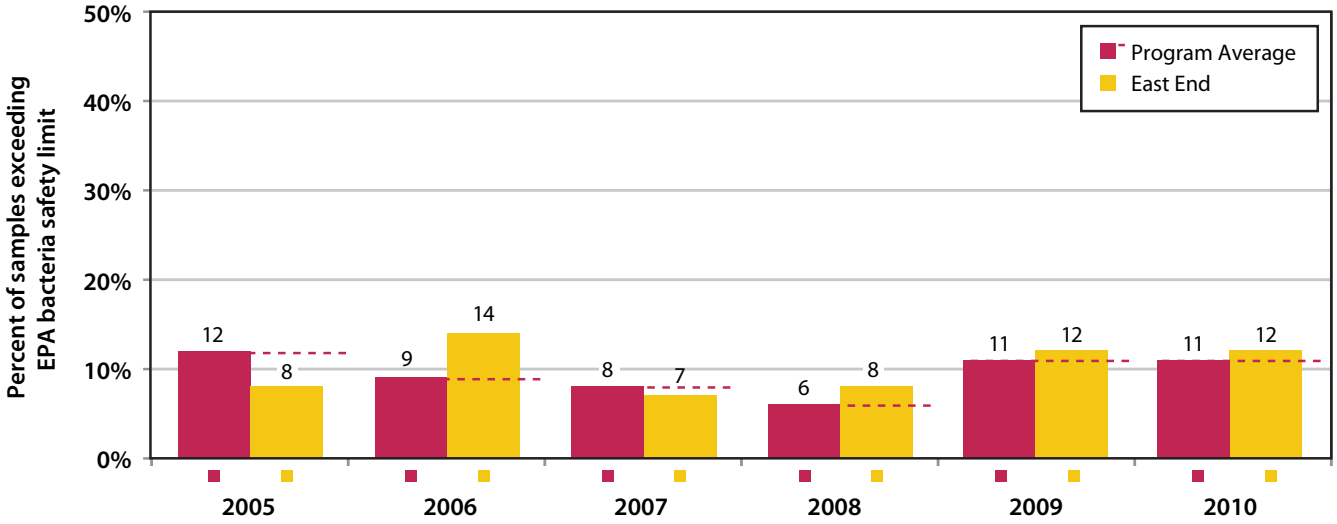
An education campaign promotes healthy practices on the beach and throughout the watershed.

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

Beach manager

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

Portland



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.

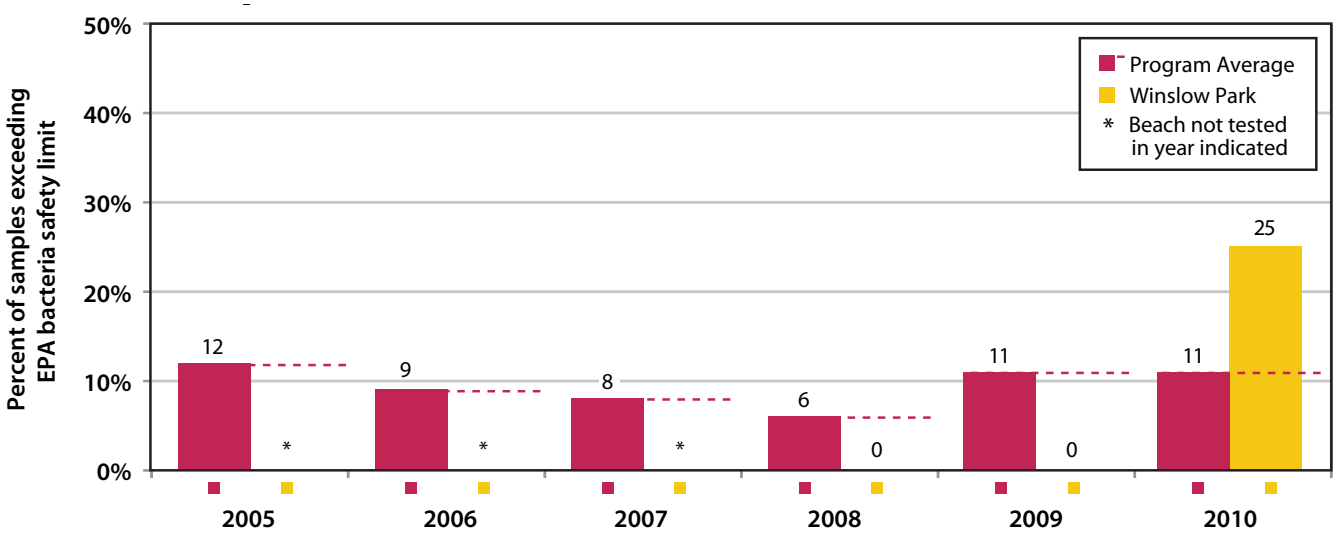
Additionally, the City of Portland issues precautionary rainfall advisories and is undergoing combined sewer overflow abatement.

East End / Maine Healthy Beaches Program

Beach manager

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

Freeport



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

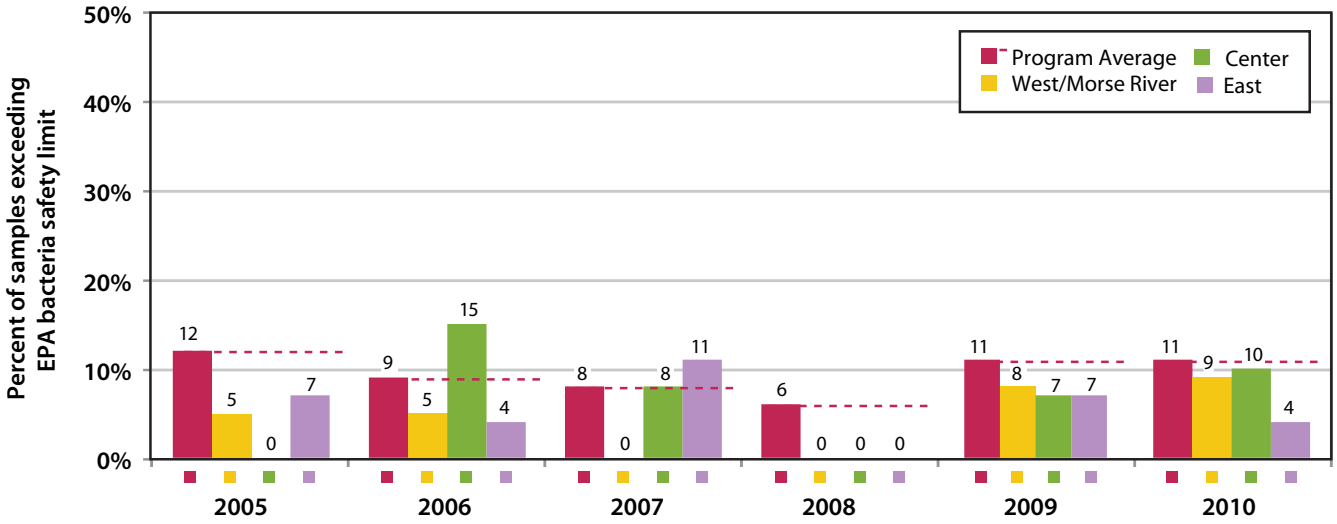
An education campaign promotes healthy practices on the beach and throughout the watershed.

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 — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, river/stream outlet, septic systems, boats
Center Beach — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, septic system, boats
East Beach — **89%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats

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.

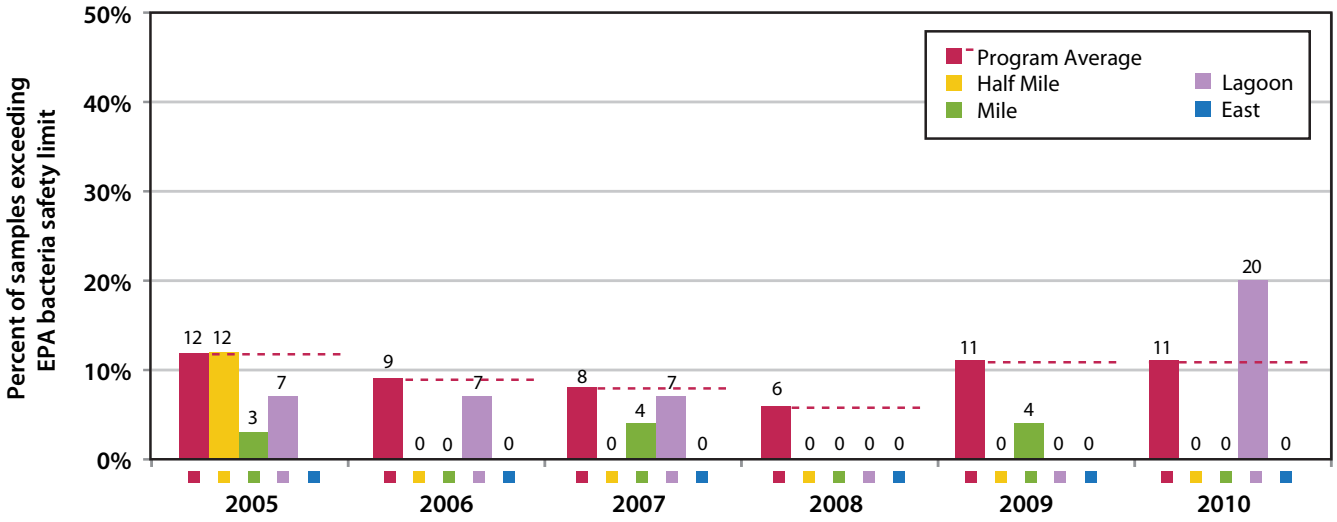
Beach manager

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	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, stream outlet
Mile Beach — **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff
Lagoon — **86%** of resamples reported as clean	Bathers, stormwater runoff, stream outlet, wildlife
East Beach — **N/A** no resamples due to consistently acceptable bacteria levels	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats

Local actions to improve water quality

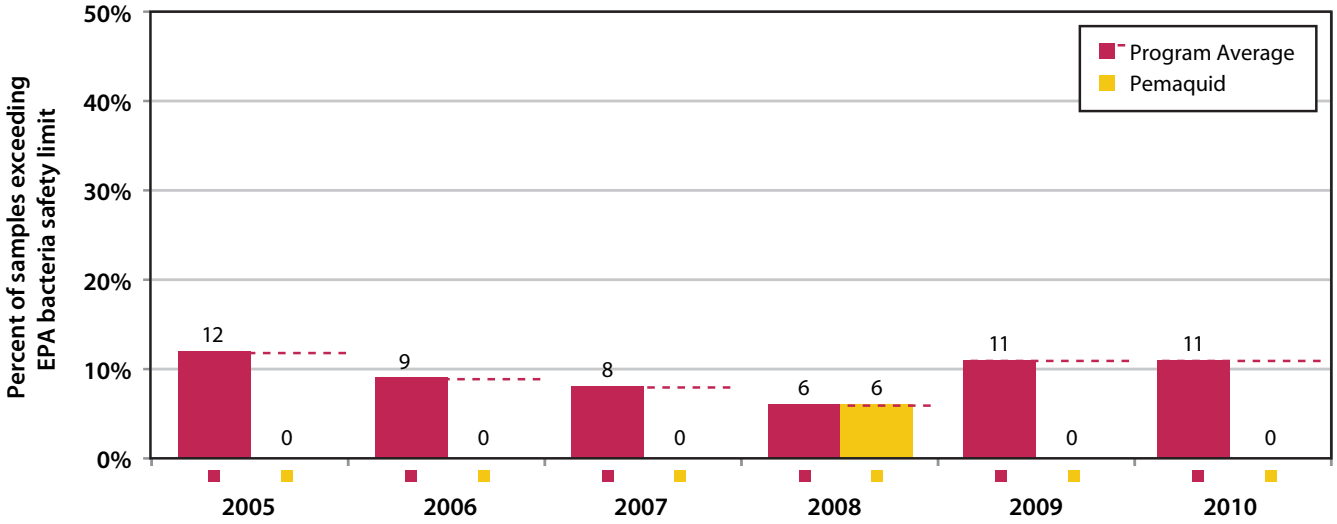
An education campaign promotes healthy practices on the beach and throughout the watershed.

Beach manager

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

Mile Beach / Maine Healthy Beaches Program

Bristol



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

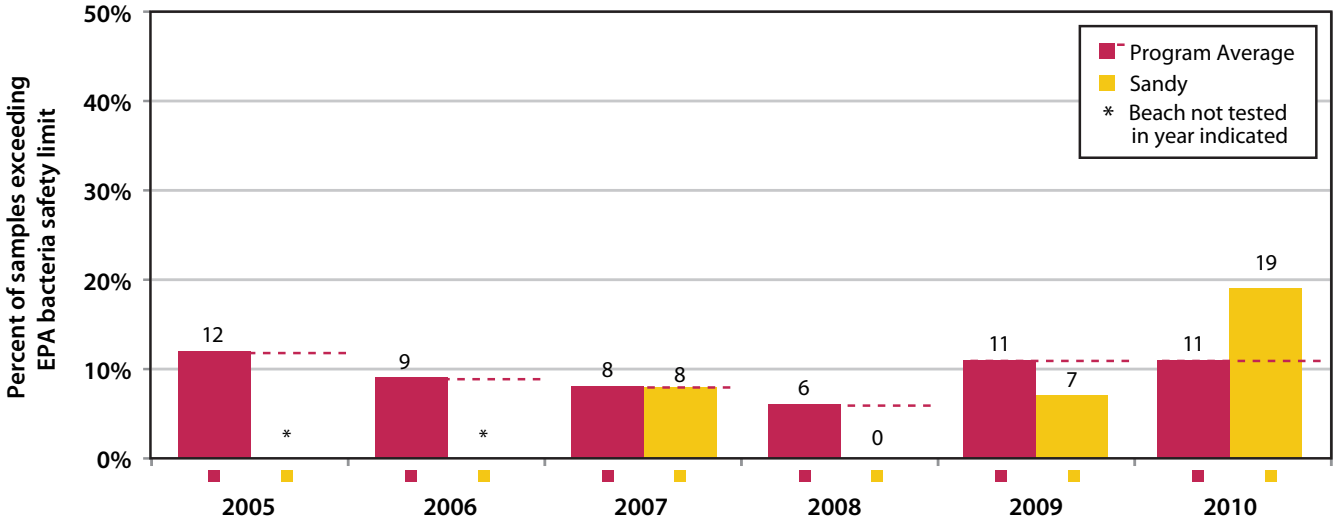
An education campaign promotes healthy practices on the beach and throughout the watershed.

Beach manager

Gordon Benner |
207-380-5025

Pemaquid Beach / Pemaquid Watershed Association

Rockland



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.

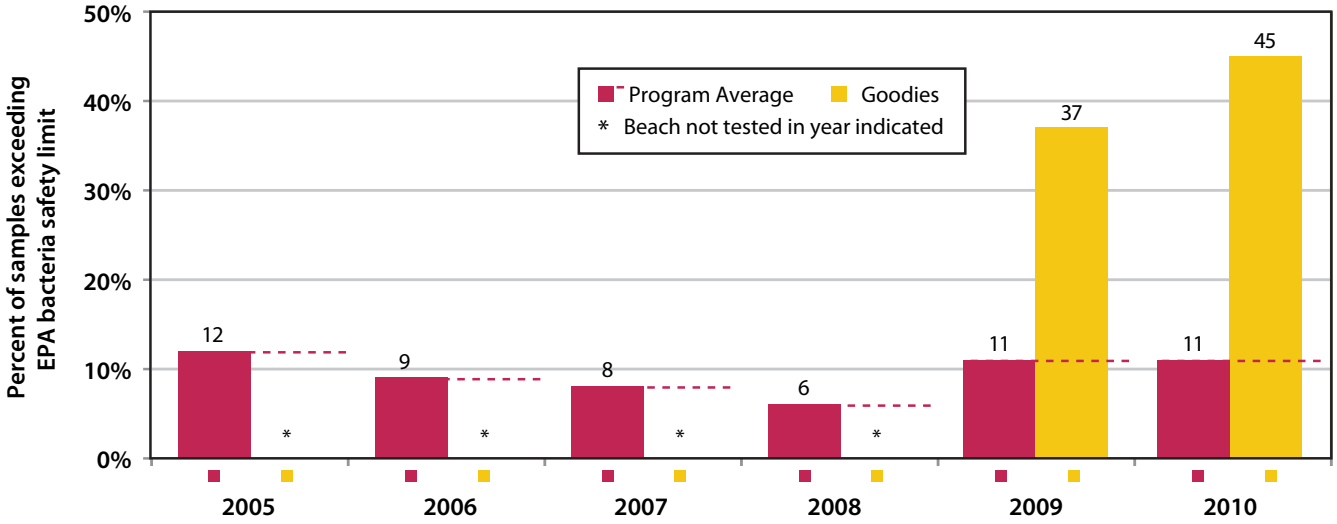
The Rockland Harbormaster's Boater Education Campaign promotes responsible boat ownership, increases the use of pump-out facilities, and educates boaters about the recent No Discharge Area designation for West Penobscot Bay. The City of Rockland has also undergone combined sewer overflow abatement (no 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*

Rockport



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.

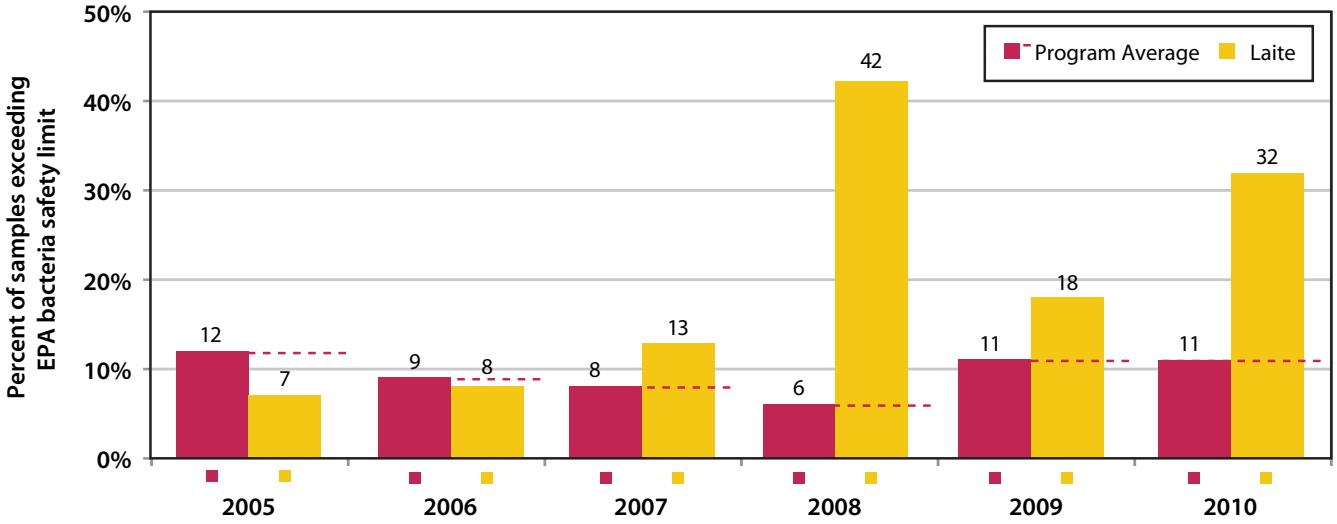
We have intensified monitoring of the storm drain adjacent to Goodies Beach, the Goose River and Lily Pond Stream, and conducted a fluorometry study to help identify pollution sources. The town has worked with homeowners to eliminate malfunctioning septic systems in the Goose River Watershed. The Town 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

Camden



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.

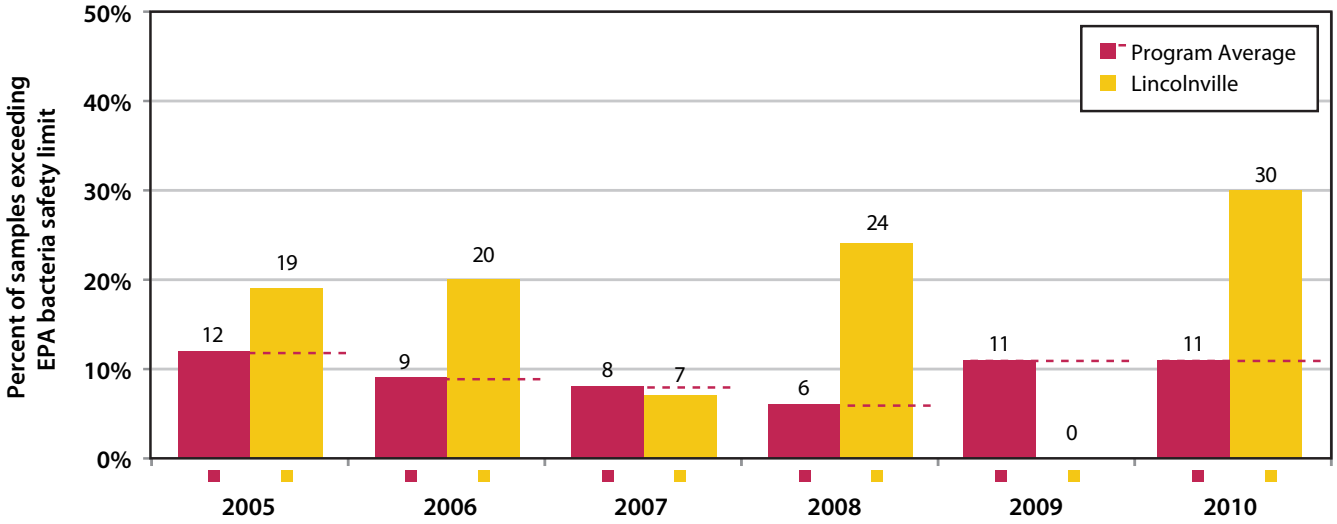
Laite Beach / Maine Healthy Beaches Program

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*

Lincolnville



Risk assessment

Beach	Known or potential pollution sources
Lincolnville Beach	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drains, overboard discharge system, sanitary sewer outfall, river/stream outlet, septic systems, boats

71% of resamples reported as clean

Local actions to improve water quality

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

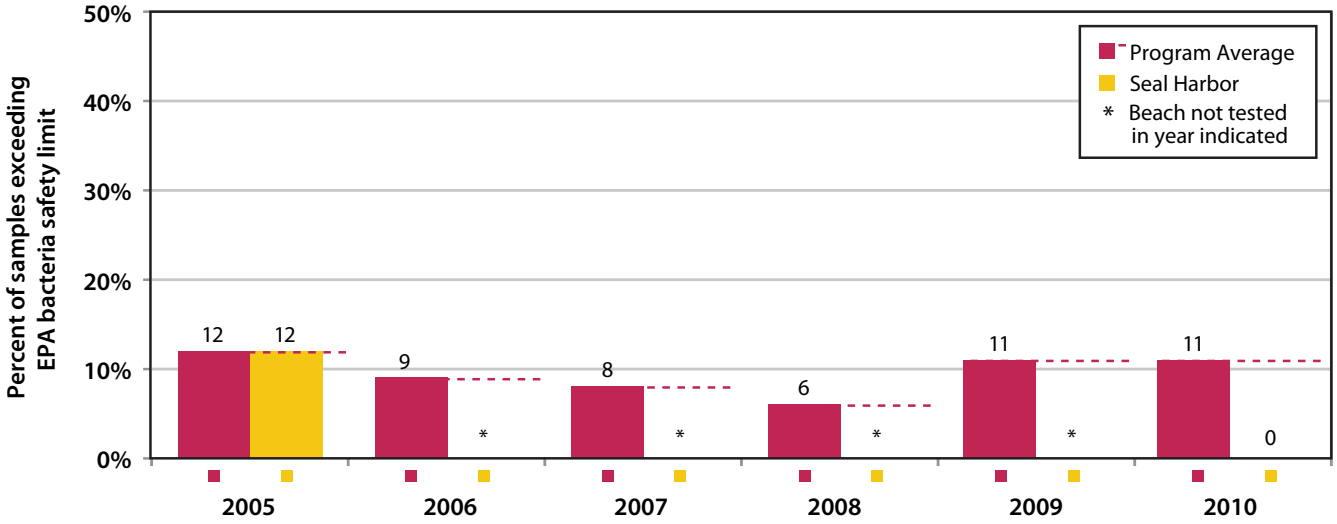
We conducted intensified monitoring of Frohock Brook and the storm drainage network and a fluorometry study to identify and eliminate pollution sources. The Town of Lincolnville and agency partners have conducted sanitary survey work and a technical report has been developed. The Town of Lincolnville 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.lincolnville.me.us*

Mount Desert



Risk assessment

Beach	Known or potential pollution sources
Seal Harbor Beach	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, overboard discharge system, sanitary sewer outfall, river/stream outlet, boats
49% of resamples reported as clean	

Local actions to improve water quality

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

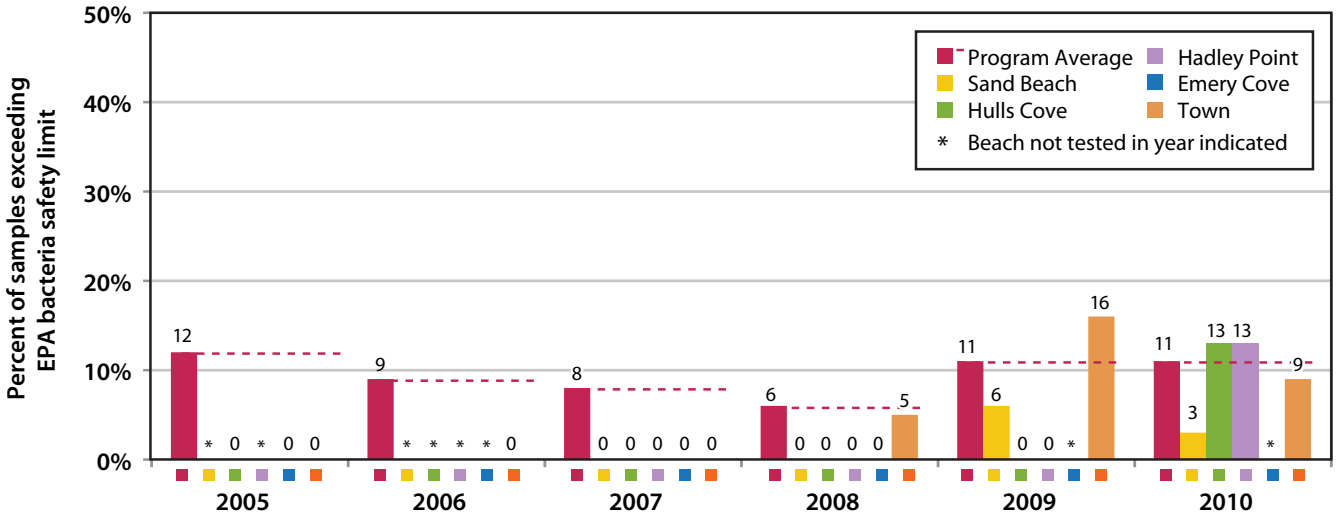
We conducted intensified monitoring in Stanley Brook and surveyed the Stanley Brook Watershed to help identify and eliminate pollution sources. The Town of Mount Desert has made improvements to the sanitary sewer infrastructure and voters passed an above-ground sewer inspection ordinance.

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) **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, marsh outlet
Hulls Cove **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet
Hadley Point **100%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, boats
Emery Cove **N/A** no resamples due to consistently acceptable bacteria levels	Bathers, pet waste, waterfowl/wildlife, stormwater runoff
Town Beach **85%** of resamples reported as clean	Bathers, pet waste, waterfowl/wildlife, stormwater runoff, storm drain, river/stream outlet

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.

MAINE Healthy Beaches

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