# **Testing the Waters**

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### EXECUTIVE SUMMARY



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### TESTING THE WATERS: A GUIDE TO WATER QUALITY AT VACATION BEACHES

#### **EXECUTIVE SUMMARY**

NRDC's annual analysis of water quality data at 3,485 coastal U.S. beaches monitored in 2013 found that 10 percent of all monitoring samples exceeded the Environmental Protection Agency's most protective benchmark for assessing swimmer safety, known as the Beach Action Value, or BAV. Contamination levels at the nation's beaches remained essentially unchanged from last year; if one were to assess the monitoring data from 2013 according to the previous (weaker) national standards, 7 percent of beach water samples would have failed to meet those prior standards, the same percentage as in 2012.

NRDC and public health advocates continue to push for improvements in beach water quality standards and test methods. In that respect, NRDC's report this year analyzes water quality in reference to the BAV for two central reasons. First, the national standards NRDC and many individual states used in prior years have been replaced and are thus no longer relevant. Second and more important, because the U.S. Environmental Protection Agency (EPA) considers the BAV to be a precautionary benchmark for making swimming safety decisions and because NRDC believes it is critical to communicate the best available information about the risks to public health from pathogens in beach water, this report uses the BAV as a gauge of how beach water quality compares to public health objectives. The report does not rely on the EPA's November 2012 beach water standards because they leave the public inadequately protected from unsafe levels of disease-causing bacteria and viruses, deeming it acceptable for 36 of every 1,000 beachgoers to become ill with gastroenteritis—including vomiting, nausea, or stomachache—from swimming in waters that just meet its criteria values.

Although protective beach water quality standards are critical, ultimately the most important long-term action to protect beachgoers is to adopt policies that address the sources of beach water pollution, particularly stormwater runoff. The greatest opportunity to make progress today in this regard is for people concerned with beach pollution to provide input on the proposed Clean Water Protection Rule from the EPA and the U.S. Army Corps of Engineers; that initiative proposes to restore pollution control safeguards to a host of streams, wetlands, and other waters that are not clearly protected today, even though they can help protect our beaches by filtering pollution and absorbing stormwater. In addition, improving beach water quality depends on policies to incentivize and implement green infrastructure in our cities—such as green roofs, porous pavement, and street plantings—which stop rain where it falls. Green infrastructure effectively reduces the amount of runoff that makes its way into beach water or triggers harmful sewage overflows, transforming a source of beach pollution into a tremendous local water resource.

### POLLUTED BEACH WATER MAKES SWIMMERS SICK AND HURTS COASTAL ECONOMIES

The EPA has estimated that up to 3.5 million people become ill from contact with raw sewage from sanitary sewer overflows each year. Many public health experts believe the number of illnesses caused by untreated sewage and other beach pollution sources may be much higher than is currently recognized because people who get sick from swimming in polluted recreational waters are not always aware of the cause of their illness and do not report it to doctors or local health officials.

Illnesses associated with polluted beach water include stomach flu, skin rashes, pinkeye, respiratory infections, meningitis, and hepatitis. Children are especially vulnerable, perhaps because they tend to submerge their heads more often than adults and are more likely to swallow water when swimming. The Centers for Disease Control and Prevention concluded that the incidence of infections associated with recreational water use has steadily increased over the past several decades.<sup>2</sup> One study found that swimmers at polluted beaches in the Great Lakes region were more likely to have gastrointestinal illnesses than nonswimmers; another study found that fecal contamination at Los Angeles and Orange County beaches caused between 627,800 and 1,479,200 excess gastrointestinal illnesses each year.<sup>3,4</sup>

Our coasts provide more than just local recreation—approximately 85 percent of all U.S. tourism revenue is generated in coastal states. According to a report by the National Ocean Economics Program, the nation's shoreline-adjacent counties contributed more than \$6 trillion to the nation's gross domestic product and more than 47 million jobs in 2011. With respect to beaches specifically, economists have estimated that a typical swimming day is worth approximately \$35 (in year 2000 dollars) to each individual, so depending on the number of potential visitors to a beach, the "consumer surplus" loss on a day that the beach is closed or under advisory for water quality problems can be quite significant. For example, one study estimated that economic losses as a result of closing a Lake Michigan beach due to pollution could be as high as \$37,030 per day. Similarly, the Los Angeles/Orange County study mentioned above concluded that the public health cost of the excess gastrointestinal illnesses caused by poor water quality was \$21 million to \$51 million per year.

#### **BEACH WATER MONITORING FOR 2013**

In 2013, 10 percent of all monitoring samples exceeded the health-protective EPA Beach Action Values. Ohio, Alaska, Mississippi, Maine, and Louisiana had the highest percentage of samples exceeding this benchmark (see Table ES-1: Rank of States by Percentage of Beach Water Samples Received Exceeding the BAV in 2013).

Table ES-1:	Table ES-1: Rank of States by Percentage of Beach Water Samples Received Exceeding the BAV in 2013							
Rank	Percent Exceedance	State	2013 Total Samples	Beaches with Reported Monitoring Results				
1	3%	Delaware	549	24				
2	3%	New Hampshire	1,041	16				
3	3%	New Jersey	4,084	288				
4	4%	Maryland	772	68				
5	4%	North Carolina	6,836	240				
6	5%	Virginia	1,085	46				
7	6%	Michigan	9,704	237				
8	7%	Hawaii	2,432	109				
9	8%	Minnesota	1,212	53				
10	8%	Georgia	980	27				
11	9%	California	25,364	501				
12	10%	Connecticut	2,100	70				
13	10%	Florida	8,729	265				

Rank	Percent Exceedance	State	2013 Total Samples	Beaches with Reported Monitoring Results
14	10%	Massachusetts	8,132	566
15	10%	Illinois	4,358	49
16	10%	Texas	6,895	62
17	11%	Alabama	940	25
18	12%	Oregon	391	16
19	12%	Washington	2,795	60
20	13%	New York	10,189	360
21	13%	Indiana	2,905	32
22	14%	Pennsylvania	1,042	10
23	14%	Wisconsin	3,512	101
24	15%	South Carolina	2,327	23
25	16%	Rhode Island	1,600	69
26	19%	Louisiana	836	25
27	19%	Maine	1,340	55
28	21%	Mississippi	1,249	22
29	24%	Alaska	117	7
30	35%	Ohio	2,726	60

The percent exceedances shown in this table are rounded to the nearest whole number, but state ranks are based on percent exceedances carried to two decimal places.

Regionally, the Great Lakes had the highest exceedance rate (13 percent) in 2013, followed by the Gulf Coast (12 percent), New England (11 percent), the West (9 percent), the New York–New Jersey region (7 percent), the Southeast (7 percent), and the Delmarva region (4 percent).

In 2013, the list of beaches exceeding the Beach Action Value more than 25 percent of the time included 245 beaches in 26 states. Seventeen beach areas in 8 states (California, Indiana, Massachusetts, Maine, New Jersey, New York, Ohio, and Wisconsin) not only had more than 25 percent of samples exceed the BAV in 2013, but also had more than 25 percent of samples exceed the national standard then in effect each year from 2009 to 2012 (see Table ES-2: Repeat Offenders: Designated Beach Areas with More than 25 Percent of Samples Worse than the Relevant Public Health Benchmarks Each Year, 2009–2013. Note that Beaches with fewer than 12 monitoring samples reported during the year are excluded from this list). Chronically high bacteria counts indicate that beach water is probably contaminated with human or animal waste. An important caveat about this list: using the more stringent and health-protective value for 2013 led to the inclusion of a beach that would not have made the list if the 2013 results had been evaluated according to the previous (now replaced) national standards. That beach is identified in table ES-2 below.

It is important to note that while a high percent exceedance rate is a clear indication of contaminated coastal recreational waters, it is not necessarily an indication that the state's beach water quality monitoring program is deficient or fails to protect public health when beach water quality is poor. For example, many states always or almost always close a beach or issue an advisory when a sample exceeds the recommended standard. That is, they do not wait for the results of a resample or check additional conditions first, as some other states do. Similarly, states commonly will prioritize monitoring near suspected pollution sources, which can lead to higher exceedance rates. Identifying locations with high contamination levels is a responsible practice that helps local authorities protect swimmers from exposure to pathogens.

State	County	Beach	Would be included if 2013 were evaluated against prior (weaker) national standard?		
CA	Los Angeles	Malibu Pier, Malibu, 50 yards east of the pier	No		
IN	Lake	Jeorse Park Beach I	Yes		
IN	Lake	Jeorse Park Beach II	Yes		
MA	Barnstable	Cockle Cove Creek	Yes		
ME	Knox	Goodies Beach	Yes		
NJ	Ocean	Beachwood Beach West (Beachwood)	Yes		
NY	Chautauqua	Main Street Beach	Yes		
NY	Chautauqua	Wright Park - East	Yes		
NY	Monroe	Ontario Beach	Yes		
ОН	Ashtabula	Lakeshore Park	Yes		
ОН	Cuyahoga	Arcadia Beach	Yes		
ОН	Cuyahoga	Euclid State Park	Yes		
ОН	Cuyahoga	Noble Beach	Yes		
ОН	Cuyahoga	Sims Beach	Yes		
ОН	Cuyahoga	Villa Angela State Park	Yes		
ОН	Erie	Edson Creek	Yes		
WI	Milwaukee	South Shore Beach	Yes		

Beaches with fewer than 12 monitoring samples reported during the year are excluded from this list.

For 2013, the NRDC data set includes monitoring results for 116,230 samples at 3,485 beaches and beach segments (most state and local officials divide longer beaches into manageable sections for monitoring). This is a 6 percent decrease from 2012 in both the number of samples and the number of monitored beaches.

For 2013, NRDC highlights "Superstars"—35 popular beaches in 14 states (Alabama, California, Delaware, Florida, Georgia, Hawaii, Massachusetts, Maryland, North Carolina, New Hampshire, New Jersey, New York, Virginia, and Washington) that exceeded by no more than 2 percent the national standard in place during 2009–2012, and also exceeded the BAV safety threshold by no more than 2 percent in 2013 (see Table ES-3; beaches with fewer than 12 monitoring samples during the year are excluded from this list). The list of "popular" beaches that NRDC drew upon was compiled over several years in consultation with state officials.

Table ES-3: Beaches with 2% or Less Exceedance of the Previous National Standard in 2009–2012 and 2% or Less Exceedance of the BAV in 2013										
State	County	Beach	2013% Exceeding BAV	2012 % Exceeding National Standards	2011 % Exceeding National Standards	2010 % Exceeding National Standards	2009 % Exceeding National Standards			
AL	Baldwin	Gulf Shores Public Beach	2.0%	0.0%	0.0%	0.0%	0.0%			
AL	Baldwin	Gulf State Park Pavilion	2.0%	0.0%	0.0%	0.0%	0.0%			
AL	Mobile	Dauphin Island Public Beach	0.0%	0.0%	0.0%	0.0%	0.0%			
CA	Orange	Newport Beach, 38th St.	0.0%	1.2%	2.0%	0.0%	2.0%			

Table ES-3: Beaches with 2% or Less Exceedance of the Previous National Standard in 2009–2012 and 2% or Less Exceedance of the BAV in 2013

State	County	Beach	2013% Exceeding BAV	2012 % Exceeding National Standards	2011 % Exceeding National Standards	2010 % Exceeding National Standards	2009 % Exceeding National Standards
DE	Sussex	Dewey Beach - Swedes	0.0%	0.0%	0.0%	0.0%	0.0%
FL	Lee	Bowman's Beach	0.0%	0.0%	0.0%	0.0%	1.9%
FL	Manatee	Coquina Beach South	0.0%	0.0%	0.0%	0.0%	0.0%
FL	Pinellas	Fort Desoto North Beach	0.0%	0.0%	0.0%	0.0%	0.0%
GA	Chatham	Tybee Island North	0.0%	0.0%	1.9%	0.0%	1.9%
HI	Big Island	Hapuna Beach St. Rec. Area	0.0%	0.0%	0.0%	0.0%	0.0%
HI	Kauai	Po'ipu Beach Co. Park	0.0%	0.0%	1.2%	1.3%	1.1%
HI	Maui	Wailea Beach Park	1.6%	0.0%	1.5%	0.0%	1.3%
MA	Essex	Singing	0.0%	0.0%	0.0%	0.0%	0.0%
MD	St Mary's	Point Lookout State Park	0.0%	0.0%	0.0%	0.0%	0.0%
MD	Worcester	Assateague State Park	0.0%	0.0%	0.0%	0.0%	0.0%
NC	Brunswick	Ocean Pier at Main St. and Sunset Blvd.	0.0%	0.0%	0.0%	0.0%	0.0%
NC	Dare	Beach at Cape Hatteras Lighthouse	0.0%	0.0%	0.0%	0.0%	0.0%
NC	New Hanover	Ocean Pier at Salisbury Street in Wrightsville Beach	0.0%	0.0%	0.0%	0.0%	0.0%
NC	Pender	Ocean Pier at Ocean Blvd. and Crews Ave. in Topsail Beach	0.0%	0.0%	0.0%	0.0%	0.0%
NH	Rockingham	Hampton Beach State Park	0.0%	0.0%	0.6%	0.0%	0.0%
NH	Rockingham	Wallis Sands Beach at Wallis Rd.	0.0%	1.2%	0.0%	1.0%	0.8%
NH	Rockingham	Wallis Sands State Park	1.2%	0.0%	0.0%	0.0%	0.0%
NJ	Atlantic	Washington (Margate)	0.0%	0.0%	0.0%	0.0%	0.0%
NJ	Cape May	40th St. (Avalon)	0.0%	0.0%	0.0%	0.0%	0.0%
NJ	Cape May	40th St. (Sea Isle City)	0.0%	0.0%	0.0%	0.0%	0.0%
NJ	Cape May	Stone Harbor at 96th St.	0.0%	0.0%	0.0%	0.0%	0.0%
NJ	Cape May	Upper Township at Webster Rd.	0.0%	0.0%	0.0%	0.0%	0.0%
NJ	Cape May	Wildwood Crest at Orchid	0.0%	0.0%	0.0%	0.0%	0.0%
NJ	Ocean	Broadway (Pt. Pleasant Beach)	0.0%	0.0%	0.0%	0.0%	0.0%
NY	Nassau	Long Beach City	0.0%	0.0%	0.0%	0.0%	0.0%
VA	Virginia Beach	Virginia Beach at 28th St.	0.0%	0.0%	0.0%	0.0%	0.0%
VA	Virginia Beach	Virginia Beach at 45th St.	0.0%	0.0%	0.0%	0.0%	0.0%
VA	Virginia Beach	Back Bay Beach	0.0%	0.0%	0.0%	0.0%	0.0%
VA	Virginia Beach	Virginia Beach - Little Island Beach North	0.0%	0.0%	0.0%	0.0%	0.0%
WA	Grays Harbor	Westhaven State Park, South Jetty	0.0%	0.0%	0.0%	0.0%	0.0%

Beaches with fewer than 12 monitoring samples reported during the year are excluded from this list.

### METHODS BEACH OFFICIALS USE TO SAMPLE, MONITOR, AND/OR PREDICT BEACH WATER QUALITY

Beach officials in all states continue to use traditional, EPA-approved methods that take about 24 hours to quantify bacterial indicator levels in beach water samples. Because of this time requirement, beachgoers who swim on a given day generally do not know until the next day if the water they swam in was contaminated. Also because of this delay, beaches may be closed even after water quality improves and meets standards. There is a great deal of interest in technologies that can provide sameday beach water quality results.

Beach water quality generally depends on many complex factors, but for some beaches, predictions of water quality can be calculated fairly accurately on the basis of measurements of a few physical conditions. Some states have taken advantage of this by creating computer models that rely on data such as rainfall level, wind speed and direction, tides, wave height, and currents. These models rapidly prepare predictions of beach water quality and allow officials to close beaches or place them under advisory on the day that bacterial levels are expected to be high, rather than 24 hours later.

Because the water quality at many beaches is adversely impacted by contaminated stormwater runoff, another means of protecting public health—less sophisticated, but often effective—is to preemptively close beaches or issue advisories after rainfall events when indicator bacteria levels are expected to be high. Many states report that they have developed standards for issuing preemptive rainfall advisories based on rainfall intensity or some other rain-related factor for at least some of their beaches. Some states also issue standing advisories warning the public to avoid beach water contact after heavy rainfall or when storm drains are running.

#### RECOMMENDATIONS FOR IMPROVING BEACH WATER QUALITY

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands, which benefit beach water quality in two important ways, filtering out harmful contaminants and minimizing polluted runoff. State and federal officials can start using the ample legal tools they have today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool—the health-protective Beach Action Value—to make swimming advisory decisions that more fully safeguard public health.

### Require Pollution Controls for Discharges into All Tributary Streams, and Protect Pollution-Filtering Wetlands

The most immediate and high-priority action that must be taken to address water pollution at the nation's beaches and in water bodies throughout the country is to adopt updated national rules that ensure important surface waters are protected from pollution by the Clean Water Act. Specifically, the Obama administration should complete its proposed rulemaking to restore pollution control safeguards for small, seasonal, and rain-dependent streams and for a variety of wetlands. All beachgoers should make themselves heard in support of this rule.

By removing various pollutants from water that passes through them and by retaining stormwater that often causes pollution problems, wetlands and small streams help ensure that larger water bodies within the watershed are safe for various uses. Headwater, seasonal, and rain-dependent tributaries can affect beach water quality for the same reason. Because small streams and wetlands perform critical functions, it is important to prevent them from being polluted to the point of losing their effectiveness or being destroyed altogether.

For decades after Congress passed the Clean Water Act in 1972, that federal law worked to prevent unregulated pollution from entering all kinds of surface waters. However, Supreme Court decisions in 2001 and 2006 undermined this bedrock environmental legislation by creating uncertainty about what types of waters were protected by the law. Agency policies issued under former president George W. Bush further limited the ability of pollution control officials to protect our waters,

making implementation of the law difficult, time-consuming, and expensive. As a result, it became more unclear whether the law protected a variety of waters, especially those that are geographically isolated from others or that lack permanent flow. Over the past decade, tens of millions of wetland acres, which provide crucial flood protection as well as wildlife habitat, and about 2 million miles of streams, which provide drinking water for 117 million people, have been in legal limbo.

To address this problem, the EPA and the U.S. Army Corps of Engineers recently proposed a new rule, the Clean Water Protection Rule, to better protect critical waters in a way that will be consistent with the Clean Water Act's history and purpose. If finalized, the rule will reestablish full protections for tributary streams and nearby waters. The proposed rule also provides an opportunity for the public to weigh in to support protections for waters outside of the tributary network, which perform significant functions for downstream waters. As proposed, the rule would only likely protect a small fraction of these water bodies. Americans should stress their support for protecting the critical aquatic resources that help keep beach water and other waterways clean. The agencies are accepting public comment on the rule until October 20, 2014.

**Cleaning Up Polluted Runoff:** As NRDC has reported over many years, stormwater runoff is the most frequently identified source of beach closings and advisory days, and the EPA estimates that more than 10 trillion gallons of untreated stormwater make their way into our surface waters each year.<sup>10</sup>

Often, the best way of avoiding runoff-related pollution is to reduce the volume of stormwater flowing into the storm drains that carry it to nearby water bodies or, in some cases, into sewage systems that can overflow. Green infrastructure, which restores or mimics natural conditions, allows rainwater to infiltrate into the soil or return to the atmosphere, thereby reducing the volume of runoff. Green infrastructure includes the use of porous pavement, green roofs, parks, roadside plantings, and rain barrels to stop rain where it falls. This keeps stormwater runoff from overloading sewage systems and triggering overflows or from carrying pollutants into natural bodies of water.

These smarter water practices on land not only prevent pollution at the beach but also beautify neighborhoods, cool and cleanse the air, reduce asthma and heat-related illnesses, save on heating and cooling energy costs, boost economies, and support American jobs. Many cities and states have embraced green infrastructure practices.

Although the EPA promised several years ago to reform the national stormwater regulations and evaluate performance-based retention standards for various kinds of stormwater sources, the agency recently acknowledged that it has shelved this initiative, even while it continued to express concern about polluted runoff. The EPA's failure to lead on this issue does not diminish its importance or the need to develop broad-scale solutions to the nation's polluted runoff problems. The agency should reconsider its retreat on national rules; in the meantime, the EPA and the states should fully enforce the existing requirements governing runoff pollution.

The Clean Water Act provides citizens with the opportunity to petition the EPA for "residual designation" of stormwater sources that are causing pollution problems. If granted, a residual designation petition would lead to requirements that problem-causing sites take steps to reduce their pollution impacts. The EPA can also exercise this authority on its own initiative. Unfortunately, the EPA has not yet aggressively used its residual designation authority, and it refused to act in response to petitions NRDC, American Rivers, the Conservation Law Foundation, and several regional watershed groups filed last summer with three EPA regional offices. The agency must more fairly evaluate future residual designation petitions, especially where requiring pollution controls at existing sites will help address identified pollution problems associated with stormwater runoff. In addition, the agency should work to identify watersheds where this tool is particularly needed and should designate sources in such watersheds for pollution controls.

Likewise, federal, state, and municipal leaders must use existing authorities—such as Clean Water Act permitting, development of sewage overflow control plans, and local planning responsibilities—to promote green infrastructure and reduce runoff-related contamination problems. NRDC's 2011 report Rooftops to Rivers II (together with a 2013 update) spotlights how numerous cities around the country are embracing green infrastructure to address runoff pollution and improve the health of our communities. Leaders in these cities have demonstrated the feasibility of green infrastructure solutions and are paving the way for policies that advance green infrastructure nationally.

### **Enforce Effective Standards to Protect Beachgoers**

The EPA is responsible for ensuring that recreational waters are safe for people. One element of this responsibility is establishing criteria for contaminants in the water, which are supposed to be set at a level sufficient to protect public health. Unfortunately, in issuing its 2012 Recreational Water Quality Criteria, the EPA missed a critical opportunity to better protect the public from the dangers of swimming in polluted water. In fact, in some respects the new criteria for allowable levels of bacteria in recreational waters are even less protective than the 25-year-old standards they replace. Ironically, as the EPA developed this weak approach, the agency also identified a precautionary beach action value (BAV) that would far better protect public health than would the EPA bacteria criteria if it were used as the basis of swimming advisories. Although use of the BAV is not required, local beach managers and state officials responsible for beach policies should rely on it to provide important safety information to the public.

The EPA needs to correct the 2012 Recreational Water Quality Criteria so that the multiple flaws in the agency's approach are addressed. In the meantime, beach managers and public health officials can better protect public health by using the Beach Action Value, which the EPA recognizes as a "conservative, precautionary tool for making beach notification decisions." In addition, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would condition states' eligibility for BEACH Act funding on those states using the BAV to trigger beach notifications. NRDC strongly encourages state officials to pursue this approach and to use the more protective BAV.

#### **ENDNOTES**

- 1 U.S. Environmental Protection Agency (EPA), Notice of Proposed Rulemaking, NPDES Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows, January 4, 2001, withdrawn January 20, 2001.
- J.S. Yoder et al., Surveillance for Waterborne Disease and Outbreaks Associated with Recreational Water Use and Other Aquatic Facility— Associated Health Events, United States, 2005–2006, Centers for Disease Control and Prevention, September 12, 2008/57(SS09), pp. 1-29, available at www.cdc.gov/mmwr/pdf/ss/ss5709.pdf.
- T.J. Wade et al., "Rapidly Measured Indicators of Recreational Water Quality Are Predictive of Swimming-Associated Gastrointestinal Illness," Environmental Health Perspectives 114, No. 1, January 2006, pp. 24-28.
- 4 S. Given et al., "Regional Public Health Cost Estimates of Contaminated Coastal Waters: A Case Study of Gastroenteritis at Southern California Beaches," *Environmental Science and Technology* 40, 2006, p. 4851.
- 5 National Ocean Economic Program, Market Data, Coastal Economy Data, Shore Adjacent Coastal Zone Counties, available at noep.mbari.org/ Market/coastal/coastal/coastalEcon.asp.
- 6 S.J. Rabinovici et al., "Economic and Health Risk Trade-Offs of Swim Closures at a Lake Michigan Beach," *Environmental Science and Technology* 38, No. 10, 2004, p. 2742.
- 7 Ibid.
- 8 Given et al., "Regional Public Health Cost Estimates."
- 9 Beginning with our 2012 report, NRDC began to count each managed beach segment of longer beaches in California as individual beaches themselves. This was prompted by California's update of the beach identification system it uses to report beach monitoring and notification data to the EPA. For purposes of comparison with previous years, however, NRDC used the older beach identification/counting system.
- 10 U.S. Environmental Protection Agency, *Report to Congress: Impacts and Control of CSOs and SSOs*, April 26, 2004, EPA 833-R-04-001, pp. 4-29, available at cfpub.epa.gov/npdes/cso/cpolicy\_report2004.cfm.
- 11 Natural Resources Defense Council, *Rooftops to Rivers II: Green Strategies for Controlling Stormwater and Combined Sewer Overflows*, November 2011, available at www.nrdc.org/water/pollution/rooftopsII/default.asp.
- 12 U.S. EPA Office of Water, Recreational Water Quality Criteria, 820-F-12-058, at 44 (Nov. 26, 2012).

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### PLAN OF ACTION



### **TESTING THE WATERS: PLAN OF ACTION**

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands, which benefit beach water quality in two important ways, filtering out harmful contaminants and minimizing polluted runoff. State and federal officials can start using the ample legal tools they have today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool—the health-protective Beach Action Value—to make swimming advisory decisions that more fully safeguard public health.

# REQUIRE POLLUTION CONTROLS FOR DISCHARGES INTO ALL TRIBUTARY STREAMS, AND PROTECT POLLUTION-FILTERING WETLANDS

The most immediate and high-priority action that must be taken to address water pollution concerns at the nation's beaches and in water bodies throughout the country is to adopt updated national rules that ensure important surface waters are protected from pollution by the Clean Water Act. Specifically, the Obama administration should complete its proposed rulemaking to restore pollution control safeguards for small, seasonal, and rain-dependent streams, as well as a variety of wetlands. All beachgoers should weigh in on this rule.

### **Small and Seasonal Streams and Wetlands Perform Critical Pollution-Reducing Functions**

By removing different pollutants from water that passes through them and by retaining stormwater that often causes pollution problems, wetlands and small streams help ensure that larger water bodies within the watershed are safe for various uses. EPA scientists documented these and other important functions in enormous detail, in a September 2013 draft scientific assessment that examined more than 1,000 pieces of peer-reviewed literature regarding the connectivity of small or non-perennial streams and wetlands to downstream waters. According to this assessment, tributary streams, regardless of their size or how frequently they flow, and wetlands that are near rivers, lakes, and other waters are "physically, chemically, and biologically connected to downstream rivers." Further, even wetlands outside of riparian areas "provide numerous functions that can benefit downstream water quality and integrity."2 According to the EPA's scientific assessment, wetlands and streams "affect the amounts and types of materials that are or are not delivered to downstream waters, ultimately contributing to the structure and function of those waters."3

Headwater, seasonal, and rain-dependent tributaries can affect beach water quality. As the scientific assessment explains, "the fundamental way in which streams and wetlands affect river structure and function is by altering fluxes of materials to the river."4 All streams are inherently connected to their downstream waters.5 There is substantial evidence of specific physical, chemical, and biological connections between headwater streams including even those with ephemeral or intermittent flows and downstream bodies of water, in part through the movement of organisms and the transport of water and associated materials.6 Most terrestrial organic matter entering these small headwater tributaries is transported downstream, often as dissolved organic matter or as fine particulate matter.<sup>7,8</sup> And small streams are so numerous that they can make up the majority of a river network (when drainage areas and stream lengths of headwater streams are combined), which allows them to have a significant impact on downstream waters.9

Wetlands may play an important role in beach water quality, whether they are natural or created specifically to absorb and treat stormwater runoff. Stormwater is one of the most significant sources of beach water pollution, and natural and stormwater wetlands are among the most effective management tools for pollutant removal and stormwater absorption. A single acre of wetland can store 1 million to 1.5 million gallons of water. And since stormwater is frequently highly polluted, upstream absorption that prevents it from running to coastal and Great Lakes beaches is helpful to beach water quality.

Wetlands remove and transform pollutants such as nitrogen and phosphates, which fuel harmful algal blooms. <sup>12</sup> In one study, water containing various contaminants was applied to forested wetlands, which removed more than 95 percent of all phosphorus, nitrate, ammonium, and total nitrogen during the study period of several years. <sup>13</sup> In fact, wetlands can be so effective at pollutant control that numerous artificial wetlands have been constructed as an alternative to traditional mechanical secondary treatment processes for municipal wastewater. <sup>14</sup>

Just as wetlands connected to larger water bodies can benefit downstream water quality, "isolated" wetlands can perform similar functions. Specifically, these waters can help reduce contamination by disease-causing organisms, which often live in human and animal waste. Geographically isolated wetlands (those lacking a surface connection to downstream waters), with their water-absorbing and flood-averting properties, can decrease the spread of dangerous pathogens by separating dangerous organisms from solids, such that many of the remaining pathogens are then rendered nonviable by predators or natural ultraviolet irradiation. <sup>15,16</sup>

In addition to removing pathogens, these isolated bodies act to reduce the flow of materials between water system components, and this can have "important positive effects on the condition and function of downstream waters." As the EPA assessment notes, "even in cases where... wetlands lack a connection to other water bodies, they can influence downstream water through water storage and mitigation of peak flows (flood reduction/attenuation)." 18

### Many Small and Seasonal Streams and Wetlands Lack Clear Protection from Pollution Today

Because small streams and wetlands perform critical functions, it is important to prevent them from being polluted to the point of losing their effectiveness or being destroyed altogether. And for decades after Congress passed the Clean Water Act in 1972, that federal law worked to prevent unregulated pollution of all kinds of surface waters. However, Supreme Court decisions in 2001 and 2006 undermined this bedrock environmental legislation by creating uncertainty about what types of waters were protected by the law. Agency policies issued under former president George W. Bush further limited the ability of pollution control officials to protect our waters, making implementation of the law difficult, time-consuming, and expensive. As a result, it became unclear whether the law protected a variety of waters, especially those that are geographically isolated from others or that lack permanent flow. Over the past decade, tens of millions of wetland acres, which provide crucial flood protection as well as wildlife habitat, and about 2 million miles of streams, which provide drinking water for 117 million people, have been in legal limbo.

According to *The New York Times*, EPA regulators reported that in a four-year period, more than 1,500 major pollution investigations involving oil spills, carcinogenic chemicals, and dangerous bacteria in lakes, rivers, and other water bodies had been suspended or dropped. <sup>19</sup> As a consequence of the legal morass, the EPA acknowledged that law enforcement has been hamstrung: "EPA enforcement managers have indicated that enforcement efforts are shifting from protecting small streams high in the watershed where jurisdiction is a potential issue. In short, EPA is focusing efforts on larger streams and rivers, where there is more certainty of establishing jurisdiction."<sup>20</sup>

To address this problem, the EPA and the U.S. Army Corps of Engineers recently proposed a new rule—the Clean Water Protection Rule—to better safeguard critical waters in a manner that is consistent with the Clean Water Act's history and purpose. Although the Obama administration's Clean Water Protection Rule is based on reams of scientific evidence, legal analysis, and additional technical support, it is very simple. The initiative has four components:

- It slightly increases the amount of waters nationwide protected by the Clean Water Act (by about 3 percent). That is less inclusive than policies in place under President Reagan.
- It enormously improves clarity about which waters are covered and which are not, making implementation and enforcement of the law far more efficient and predictable.
- It maintains existing exemptions for agricultural producers, codifies a number of exemptions that have been followed only as a matter of agency policy, and reduces coverage for ditches.
- It is paired with a ruling that 56 different agricultural/ conservation practices are generally exempt from Corps permitting.

The rule certainly can be—and should be—made stronger. In particular, the rule must provide clearer protections for those waters that are not part of a tributary network because they perform significant functions for downstream waters. As discussed above, the agencies have a wealth of information revealing that at least some categories of these more isolated waters have important impacts on the physical, chemical, and biological condition of other waters. But it is heartening that the EPA and the Corps have taken the initiative to

propose the rule and seek public input about which waters warrant protection because of their functions. The agencies are accepting public comment on the rule until October 20, 2014, and Americans should weigh in to stress their support for protecting the critical aquatic resources that help keep beach water and waterways clean.

### ENFORCE EFFECTIVE CONTROLS ON POLLUTED RUNOFF ACROSS THE UNITED STATES

Contaminated stormwater is one of the most significant sources of pollution to our nation's beaches, rivers, streams, and lakes and is a primary cause of flooding and sewer overflows that threaten the health and safety of our communities. Nationwide, the EPA estimates that urban stormwater runoff is the primary source of water quality impairment for 13 percent of all rivers and streams, 18 percent of all lakes, and 32 percent of all estuaries. Polluted stormwater runoff has historically been the leading known source of closures and swimming advisory days at coastal and Great Lakes beaches. It is the leading pollution problem affecting Puget Sound and myriad waterways and beaches in California, and it is the only growing major source of nitrogen pollution to the Chesapeake Bay. All of these impairments and closings have direct and significant economic impacts for communities and businesses.

Conservation groups have long called for major improvements to national regulations that pertain to polluted runoff management. Advocates especially support the widespread use of natural green infrastructure solutions such as green roofs, rain barrels and cisterns, rain gardens, pocket wetlands, and permeable pavements—to prevent stormwater from becoming pollution by retaining it onsite. This approach parallels the findings of a landmark National Research Council report calling for major reforms in national stormwater policy.<sup>21</sup> In 2009, the EPA promised to reform the national stormwater regulations and evaluate performance-based retention standards for various kinds of stormwater sources; the agency committed to act "no later than November 19, 2012."22 The agency missed that date, as well as several subsequent targets, but consistently expressed its commitment to developing these needed improvements.

Unfortunately, the EPA recently acknowledged that it has shelved this initiative, even though the agency continues to express concern about polluted runoff. In stopping work on the rule, the EPA stated:

EPA is updating its stormwater strategy to focus now on pursuing a suite of immediate actions to help support communities in addressing their stormwater challenges and deferring action on rulemaking to reduce stormwater discharges from newly developed and redeveloped sites or other regulatory changes to its stormwater program. EPA will provide incentives, technical assistance, and tools to communities to encourage them to implement strong stormwater programs; leverage existing requirements to strengthen municipal stormwater permits; and continue to promote green infrastructure as an integral part of stormwater management. EPA believes this approach will achieve significant, measurable, and timely results in reducing stormwater pollution and provide significant climate resiliency benefits to communities.<sup>23</sup>

The EPA's failure to lead on this issue does not diminish its importance or the need to develop broad-scale solutions to the nation's polluted runoff problems. The agency should reconsider its retreat on national rules; in the meantime, the EPA and states should fully enforce the existing requirements governing runoff pollution.

### Require Pollution Controls on Runoff Pollution Sources on a Regional Scale

The Clean Water Act provides citizens with the opportunity to petition the EPA for "residual designation" of stormwater sources that are causing pollution problems. If granted, a residual designation leads to requirements for problem-causing sites to take steps to reduce their pollution impacts. The EPA can also exercise this authority on its own initiative. Especially given the agency's stalled efforts to improve the national rules, it should fully implement this existing authority.

To date, the EPA has not aggressively used its residual designation authority. The agency refused to act in response to petitions NRDC, American Rivers, the Conservation Law Foundation, and several regional watershed groups filed last summer with EPA Region 1 (New England), Region 3 (Mid-Atlantic), and Region 9 (Southwest and California), even though the agency acknowledged that stormwater runoff from commercial, industrial, and institutional properties contains the same pollutants that are fouling our waters. For example, Region 1 stated, "The Region finds that there is a likelihood of pollutant exposure, and therefore presence in stormwater discharges from CII [commercial, industrial, and institutional] sites generally," even going so far as to discuss specific waterways that are polluted by runoff from

these sites. Region 3 said, "EPA accepts that many CII sites have significant amounts of impervious surface, which are exposed to a variety of pollutants that can discharge." And Region 9 affirmed, "EPA agrees that it is reasonable to expect that the pollutants identified in the petition may be exposed to precipitation at CII sites with impervious cover."

Yet the agency decided to avoid taking any action to reduce polluted runoff for various reasons, none of which hold up to scrutiny. For example, the agency claimed that current state and federal regulatory programs are "adequately" addressing stormwater pollution. That simply is not true; the programs EPA cites have proved ineffective at stemming runoff pollution over the past several decades. What's more, existing requirements aren't even being properly implemented or enforced, as the EPA's own documentation of permit violations shows.

By deciding not to grant these petitions, the EPA not only backed away from authority that it could use to solve major pollution problems across broad regions of the country, but also missed an opportunity to more fairly allocate the costs and responsibilities of cleaning up stormwater pollution. In giving a free pass to the developers and strip mall owners whose runoff contributes to making our waters unsafe for swimming and fishing, the EPA is leaving municipalities, which may lack the clear regulatory authority to hold these polluters responsible, in a difficult spot. Indeed, the National Association of Clean Water Agencies, a group representing municipal wastewater utilities, sent a letter to the EPA stating that it supported the concept of residual designation (while offering suggestions for how it should best be implemented) because it would ease the burden on struggling municipalities and place more responsibility for managing runoff on the large property owners who are responsible for creating it.24

Small businesses involved in the design, manufacture, installation, and maintenance of stormwater management practices supported last summer's petitions. Nearly 70 businesses sent a joint letter to the EPA last fall that stated: "We also support the recent initiative insisting that EPA require certain stormwater sources in polluted watersheds to obtain pollution-limiting permits. These petitions present an important opportunity to reduce the currently uncontrolled, permanent discharges from already built areas in our communities, discharges which if left unabated will continue to undermine environmental health and economic prosperity." <sup>25</sup>

Accordingly, the EPA must more fairly evaluate future residual designation petitions, especially where requiring pollution controls on existing sites will help address identified pollution problems associated with stormwater runoff. In addition, the agency should work to identify watersheds where this tool is particularly needed and should designate sources in such watersheds for pollution controls.

### Follow Legal Requirements to Establish Strong Municipal Stormwater Permit Conditions and Slash Sewage Pollution

As noted above, the EPA has failed to update its stormwater pollution control requirements. Consequently, it is critical that pollution control officials take advantage of their authority under existing law to reduce the amount and the impacts of stormwater pollution in our communities. Current Clean Water Act rules require most stormwater discharges to be covered by a pollution-limiting permit. For municipal separate stormwater systems, such permits must reduce pollutants to the "maximum extent practicable" and must require controls sufficient to meet water quality standards in local water bodies. Those cities with combined stormwater and sewage systems must develop long-term combined sewer overflow control plans that similarly contain requirements sufficient to meet water quality standards.

Although the existing requirements have not been vigorously or evenly enforced, they have spurred a number of communities to incorporate the types of controls that ultimately need to be adopted at the national level including quantitative limits on stormwater retention volume for new development and redevelopment sites, and requirements to improve the existing built environment to reduce runoff volume and pollution levels. State pollution control officials and municipal sewer system operators must enforce these requirements, especially in view of the EPA's failure to develop improved national rules and its reluctant approach to residual designation. NRDC works with states, municipalities, businesses, and citizens in many communities to promote these principles. Here are some examples of cities and states taking steps to meet clean water requirements with green infrastructure:

**California:** Clean Water Act permits in the San Francisco Bay region, Los Angeles and Orange Counties, the San Diego region, and smaller communities statewide all require new development and redevelopment projects to retain the runoff produced by the 85th percentile storm event. Stormwater permits in California have also begun to promote stormwater capture as a means of increasing local water supplies, something that is critical to the state's well-being, highlighting the ability of local permits to adapt to specific conditions in the region they cover. Although the 85th percentile standard is not as stringent as requirements in some other parts of the country, California's Central Coast region in some cases now requires retention of the 95th percentile storm event based on regional predevelopment hydrology and the feasibility of meeting the standard.

Cleveland: A federal consent decree with the Northeast Ohio Regional Sewer District (NEORSD) to address the flow of untreated sewage into Cleveland's waterways and Lake Erie requires NEORSD to invest at least \$42 million in green infrastructure projects to annually capture 44 million gallons of CSO discharges. The decree also enables NEORSD to look for opportunities to propose additional green infrastructure in exchange for reducing the scope of conventional, or "gray," infrastructure projects.

#### **Metropolitan Water Reclamation District of Greater**

**Chicago:** Compared with the green infrastructure investments many other cities and utilities are making to meet clean water requirements, a consent decree settlement between the EPA and the Metropolitan Water Reclamation District of Greater Chicago (MWRD) is a disappointment.<sup>26</sup> For example, the consent decree contains a generally stated requirement that MWRD develop 10 million gallons in retention capacity using green infrastructure by 2015. But without robust modeling and targeting of specific green infrastructure measures—neither of which is required in the development of MWRD's green infrastructure plan—there is no basis for assuming that the overall retention capacity requirement will actually be implemented strategically where needed to achieve the district's goal "to reduce CSO discharges, localized flooding and stormwater impacts."27 Nor does the consent decree require—as do other cities' decrees—post-construction monitoring to assess its effectiveness.

**Milwaukee:** The Milwaukee Metropolitan Sewerage District (MMSD) considers green infrastructure to be a key component of its 2035 Vision for zero basement backups, zero overflows, and improved water quality. In 2013, MMSD released a regional green infrastructure plan with a goal to capture 740 million gallons of rainwater per storm event, the equivalent of capturing the first 0.5 inch of rain. In addition, MMSD's 2012 clean water permit requires the district to add 1 million gallons of green infrastructure capacity to the region on an annual basis. In 2013, MMSD reported that it worked with partners to install 4.3 million gallons' worth of non-sewer storage capacity, more than four times the mandated capacity.<sup>28</sup>



Installation of porous pavers at the Energy Exchange (November 2009).



Bio-retention swales for stormwater treatment along Grange Avenue in the Village of Greendale, Milwaukee.

New York: In a 2012 state consent order, New York City committed to investing more than \$1 billion in green infrastructure—based controls to reduce combined sewer overflows. Importantly, the consent order includes a requirement that the city use green infrastructure retrofits to manage 1 inch of runoff from 10 percent of the impervious acreage in its combined sewer service area by 2030, with interim targets for 2015, 2020, and 2025. Runoff can be managed using either retention, which is a superior means of addressing stormwater issues, or detention, with delayed release to the sewer system. These commitments have been incorporated into Clean Water Act permits, even as the city continues comprehensive planning efforts to reduce its sewer overflows and to establish long-term green infrastructure and water quality goals.

New York State's general statewide stormwater permit refers to a stormwater design manual that calls for development projects to retain on-site the 90th percentile storm. The manual, however, sets a less stringent standard for redevelopment sites, and the permit does not unambiguously require that the manual's standards be met. Also notable is that the statewide permit requires some municipalities discharging runoff to severely polluted waterways to develop "retrofit plans" to reduce pollution from existing developed areas. However, for other municipalities discharging to similarly polluted waters, the permit does not require a decrease in current pollution levels. In sum, the New York State requirements are progressive in many respects but should be strengthened to ensure protection of local waters.



Porous concrete sidewalk Paerdegat Basin, CSO Detention Facility, Brooklyn, New York.



Although schools represent only 2 percent of impervious cover in the combined sewer area, Philadelphia's Water Department believes the high visibility and educational opportunities associated with schools make them important places to showcase green infrastructure.

Philadelphia: To address chronic pollution problems related to combined sewer overflows, Philadelphia has established the "Green City, Clean Waters" program, an ambitious effort focused on green infrastructure solutions that will require the retrofit of nearly 10,000 acres of impervious surface on public and private property over the next 25 years. Enforceable targets—both for acres of green infrastructure retrofits and for measurable reductions in sewage overflow pollution—are embodied in a state consent order and will be incorporated into the city's Clean Water Act permits. As part of this program, the city has established a requirement that new development and redevelopment projects infiltrate the first 1 inch of runoff on-site. The city has also adopted a stormwater fee structure providing a substantial credit (up to nearly 80 percent) for nonresidential property owners who install retrofits that manage the first inch of rainfall over their entire parcel on-site, with no discharge.

Portland, Oregon: To comply with its National Pollution Discharge Elimination System (NPDES) permit, Portland established a comprehensive stormwater management program that includes design standards for source control devices as well as best management practices for reducing stormwater pollution. Portland's runoff retention standard prioritizes the use of green infrastructure over all other control measures for new and redevelopment projects involving as little as 500 square feet of impervious area. The city also requires the development of a retrofit plan for existing impervious areas and is implementing programs to replace city-owned impervious areas along streets and on municipal building roofs.



The City of Portland is taking a holistic approach toward improving the health of the local watershed with the Brooklyn Creek Basin Program. The program introduces the first prototype for "green" main streets in the country, manages more than 1 million gallons of stormwater runoff, and creates 126 jobs during construction.

Prince George's County, Maryland: The county's new stormwater permit requires it to retrofit 20 percent of its impervious surfaces, or about 8,000 acres, to control stormwater runoff over the next five years. To meet this requirement, the county is establishing an innovative publicprivate partnership (P3) program. A private company will fund, implement, and maintain the retrofit projects, with costs to be repaid over time using revenues from the county's stormwater fee. This approach allows implementation to be completed at less cost and on a faster schedule than would be possible if the county were to install the retrofits itself. P3 programs have been used previously for transportation and housing projects, but never before for stormwater retrofits. Provided that the program is structured to ensure that the county remains accountable for meeting its permit requirements, the Prince George's County approach could be used as a model in other jurisdictions subject to retrofit mandates.

**Seattle:** The City of Seattle Stormwater Management Plan was developed to comply with its NPDES permit; it specifically requires that green stormwater infrastructure be used to the maximum extent feasible for single-family residential and parcel-based projects.<sup>29</sup> To help sites meet the requirement, a range of best management practices are identified, including bioretention, use of permeable paving, retention of existing trees, rainwater harvesting, and installation of green roofs. In June 2014, Seattle Public Utilities is expected to release a plan identifying how city departments will work together to achieve Seattle's goal of managing 700 million gallons of stormwater runoff annually using green infrastructure.

Washington, D.C.: The city operates a separate storm sewer system that conveys stormwater runoff independently from sewage over much of the city. Its stormwater permit requires new development and redevelopment projects to retain 1.2 inches of rainfall from each storm event. Recently adopted regulations to implement the permit's requirements established a first-of-its-kind program that sets retention standards and a volume credit system that allows some of the retention obligation to be met off-site. This program contains some loopholes that may threaten its ability to fully implement the requirements of the Clean Water Act, but it could be used to target critical sources of runoff and pollution entering the region's waters.



To help incentivize privately financed green roofs, Washington, D.C.'s Department of the Environment initiated a green roof subsidy program. The Department provides a rebate of \$3 per square foot for installed green roofs; as a result, more than 50,000 square feet of green roof projects are under construction. The rebate has since grown to \$5 per square foot.

These local and state efforts, although surely in need of further improvement, are critical to advancing stormwater pollution control efforts. They help serve as a platform for development of broader policies, and they ensure that important runoff sources are addressed.

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### MAINTAIN CORE CLEAN WATER ACT REQUIREMENTS FOR SEWAGE TREATMENT, AND INCREASE FINANCIAL ASSISTANCE FOR NEEDED REPAIRS TO AGING SEWER SYSTEMS

One of the core requirements of the Clean Water Act is that municipal sewage receive, at a minimum, both primary treatment (mainly to remove solids) and secondary treatment (which today typically involves using microbes to break down organic material and kill harmful bacteria, viruses, and protozoa) before the treated wastewater is discharged to waterways. These basic requirements, coupled with substantial federal funding for modern wastewater treatment infrastructure in the 1970s and 1980s, are responsible for huge improvements in water quality nationwide over the past four decades.

Some municipal wastewater utilities, however, have pushed to weaken the law to create routine exemptions from these requirements whenever rainwater enters poorly maintained sewer systems that were designed to handle only sanitary sewage, overwhelming the capacity of collection systems and treatment facilities. The resulting discharges of untreated sewage from sewer pipes are called sanitary sewer overflows; when sewage receives partial treatment and is diluted with other treated sewage before release into waterways, the practice is known as blending. Current law requires that wastewater utilities remedy these deficiencies in their infrastructure to ensure that partially treated or untreated sewage—which commonly contains high levels of harmful bacteria, viruses, and other pathogens—is not released into waterways, except under extraordinary conditions when there is "no feasible alternative."

A decade ago, when the EPA attempted to roll back these requirements and allow the routine discharge of partially treated sewage during rain events, more than 98,000 public comments were submitted in opposition, and the U.S. House of Representatives voted overwhelmingly to reject the proposal. Today, Congress and the EPA should similarly refuse any calls by wastewater utilities to weaken the existing rules. Instead, the EPA should continue to hold municipalities accountable for making the necessary repairs to their aging, failing sewer systems, and Congress should increase federal financial assistance to speed those efforts.

### IMPROVE PUBLIC HEALTH PROTECTIONS BY MAKING PRECAUTIONARY SWIMMING ADVISORY DECISIONS

The EPA is the government agency responsible for ensuring that recreational waters are safe. Unfortunately, in late 2012 the agency adopted allowable bacteria levels—called "criteria" in the Clean Water Act—that miss a critical opportunity to better protect the public from the dangers of swimming in polluted water. Ironically, as the EPA developed this weak approach, the agency also identified a precautionary Beach Action Value (BAV) that would far better protect public health than would the EPA bacteria criteria, if it were used as the basis of swimming advisories. Although the BAV is not required, local beach managers and state officials responsible for beach policies should rely on it to provide important safety information to the public.

### **Risk of Swimming in Polluted Waters**

Illnesses associated with swimming or otherwise recreating in polluted water include gastrointestinal upset, skin rashes, conjunctivitis, upper respiratory tract infections, meningitis, and hepatitis. Children are especially vulnerable, in part because they tend to submerge their heads more often than adults and are more likely to swallow water in large volumes when swimming. The most common health complaint is gastrointestinal illness, which typically involves symptoms such as vomiting, fever, stomach pain, and diarrhea.

In 2000, Congress enacted the Beaches Environmental Assessment and Coastal Health (BEACH) Act, requiring the EPA to modernize criteria for water quality that would protect beach users from illnesses caused by pathogens such as viruses and bacteria. The criteria were to be based on, among other things, the results of public health studies also required by the BEACH Act. The EPA updated these criteria in 2012, but the revisions are inadequate and fail to protect public health in at least three ways. The industrial in 2012 is a second control of the industrial in 2012 in the revisions are inadequate and fail to protect public health in at least three ways.

First, the EPA's criteria do not protect against single-day exposures to pathogens. The EPA allows water quality averaging over a period of 30 days and permits periodic exceedances of what was once defined as a single-sample maximum for allowable pollution. This approach allows bacterial levels to repeatedly exceed pathogen exposure limits that the EPA has determined are unsafe. Swimmers using beaches vulnerable to dangerous but short-lived

fluctuations in water quality—caused, for example, by sewer overflows after rainstorms—are especially at risk. These swimmers do not swim on an "average" day as measured over a 30-day period, nor are they aware that they may be swimming on a day when a periodic exceedance is allowed; they swim on the single day they choose, and on that day they risk greater or lesser degrees of exposure to a variety of illnesses. The EPA's criteria ignore the health risks faced by swimmers from daily exposures to pathogens.

Second, the EPA's allowable risk rate for illness is unacceptably high. The agency's 2012 criteria include a set of values corresponding to a risk rate for gastrointestinal illness of 36 illnesses per 1,000 swimmers in marine and fresh waters. In other words, the EPA has deemed it acceptable for 36 of every 1,000 beachgoers to become ill with gastroenteritis—including vomiting, nausea, or stomachache—from swimming in waters that just meet its criteria values. The EPA's only apparent justification for the 36/1,000 illness rate is that a comparable value was included in its 1986 criteria and therefore had a "history of acceptance by the public." But the fact is that most people have no idea what level of risk they are taking when swimming in waters that are supposed to be safe. The EPA's reliance on the public's so-called acceptance of this risk is misguided.

Third, the EPA fails to adequately address the risk of non-gastrointestinal illnesses that result from recreating in contaminated waters. Non-gastrointestinal effects of pathogen exposure include rashes; upper respiratory illness; and ear, eye, and sinus infections, all of which are commonly contracted by recreational swimmers. The EPA did not properly account for swimmers' risks of contracting non-gastrointestinal illnesses in preparing the 2012 criteria. Instead, it simply assumed that non-gastrointestinal illnesses would occur at a lower rate than gastrointestinal illnesses, and that a measurement of one could therefore be a proxy for the other. Whatever incidental protection the EPA's approach may offer is insufficient to guard against the non-gastrointestinal effects of pathogen exposure.

The EPA must correct the 2012 Recreational Water Quality Criteria so that the above issues are addressed. In the meantime, beach managers and public health officials have an important new tool to better protect public health: the Beach Action Value. The EPA's new Recreational Water Quality Criteria document for beach water quality recognizes the BAV as a "conservative, precautionary tool for making beach notification decisions." In addition, the EPA's proposed National Beach Guidance and Required Performance Criteria

for Grants would condition states' eligibility for BEACH Act funding on their use of the BAV to trigger beach notifications. NRDC strongly encourages state officials to pursue this approach and to use the more protective BAV.

# ENSURE ADEQUATE FUNDING FOR STATE MONITORING AND NOTIFICATION PROGRAMS

The Obama administration should maintain funding for coastal and Great Lakes states to monitor beach water quality and inform the public about health risks. States' monitoring and notification efforts are critical safeguards that protect more than 100 million beachgoers and swimmers across the nation from waterborne diseases. Monitoring programs help states determine whether there are bacteria in the water that can make people sick; notification programs let the public know when beaches are closed or present potentially dangerous swimming conditions. Both types of programs are needed to keep families safe and healthy.

States do not have the financial resources to run these programs entirely on their own, without federal assistance. Historically, the EPA's BEACH Act grant program has provided nearly \$10 million each year to help states keep their monitoring and notification programs and up and running. Though these small grants are less than Congress authorized, they represent critical investments in safeguards for our nation's \$90 billion coastal tourism economy, which supports nearly 2 million jobs at more than 100,000 businesses each year. The safeguards for our nation's \$90 billion coastal tourism economy, which supports nearly 2 million jobs at more than 100,000 businesses each year.

However, the president's budget proposals for the past three years have suggested the elimination of all federal funding for the BEACH Act grant program. Congress has twice rejected the president's ill-advised proposal, but the program is at risk again this year. If BEACH Act grants are eliminated, many states will have to reduce their beach monitoring and notification efforts, and those states whose programs are funded solely by federal grants may be forced to shut them down entirely.

With beach pollution still commonly threatening public health, now is not the time to stop monitoring beach water and notifying the public of danger. The administration should not jeopardize the health of millions of people, billions of dollars in economic activity, and millions of jobs in order to shave a tiny fraction off the EPA's budget. The administration should restore EPA funding of the BEACH Act grant program at least at the previous level of \$9.8 million.

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# **Testing the Waters**

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### **GREAT LAKES SUPPLEMENT**



### TESTING THE WATERS: A GUIDE TO WATER QUALITY AT VACATION BEACHES

The people of the Great Lakes region are justifiably proud of their beautiful lakeshore beaches. However, these beaches are threatened by pollution and major environmental stresses that can contaminate beach water and make people sick. In 2013, the Great Lakes region had the highest exceedance rate of regions with coastal and Great Lakes beaches, 13 percent, of the Environmental Protection Agency's most protective benchmark for assessing swimmer safety, known as the Beach Action Value, or BAV.

### PROTECTING SMALL AND SEASONAL STREAMS AND WETLANDS

By removing pollutants from water that passes through them, and by retaining stormwater that often causes pollution problems, wetlands and small streams help ensure that the Great Lakes remain safe for swimming and fishing. For years the Clean Water Act protected all wetlands and tributaries in the Great Lakes region—those by lakeshores and those inland. As detailed elsewhere in this report, those protections were cast in doubt as a result of Supreme Court decisions in 2001 and 2006 and subsequent agency guidance issued by former President George W. Bush. The Obama administration recently released a draft rule to address this lack of clarity and ensure that important surface waters are protected from pollution by the Clean Water Act.

Unfortunately, the Great Lakes region has already lost approximately 66 percent of its historic wetlands. Ohio has lost 90 percent, the second-highest loss rate in the nation; Illinois has lost 85 percent of its wetlands. Moreover, an estimated 90 percent of the wetlands remaining in the Great Lakes are at increased risk due to the uncertainty over whether they are subject to Clean Water Act safeguards. Because about 50 percent of the streams in Ohio, Michigan, Illinois, Wisconsin, and Minnesota do not flow all year, they too have been at risk of increased pollution and destruction because of a lack of clarity about their status under the law.

This uncertainty has taken its toll, slowing permitting decisions for responsible development and reducing protections for drinking water supplies and critical habitat.

Protecting these water bodies is not only important to beach water quality, but also critical to the goals of the Great Lakes Regional Collaboration Strategy and the Great Lakes Restoration Initiative. The former's goals, to restore a million acres of high-quality wetlands in the region and increase natural buffers for rivers and streams, would be significantly undermined by leaving the region's remaining intact wetlands and streams at risk. The Great Lakes Restoration Initiative has successfully invested hundreds of millions of dollars across the basin to restore degraded habitats. Those investments depend on healthy upstream waters.

### THE TOLL OF CLIMATE CHANGE

According to the National Climate Assessment, "climate change will exacerbate a range of risks to the Great Lakes, including changes in the range and distribution of certain fish species, increased invasive species and harmful blooms of algae, and declining beach health."

The impacts of climate change on water systems—changes in precipitation patterns and intensity, greater incidence of drought, increasing evaporation and water temperatures, reductions in lake and river ice, changes in soil moisture and runoff—are increasingly evident in the Great Lakes region.<sup>2</sup> These shifts are magnified by other factors, including aging and failing infrastructure, runoff pollution, and invasive species.

The National Climate Assessment finds that the frequency of extreme storms—those delivering more than 3 inches of precipitation in 24 hours—will continue to increase in both number and intensity.<sup>3</sup> In southern Wisconsin, extreme precipitation events are projected to become 10 to 40 percent stronger; in Illinois, heavy downpours are already twice as frequent as they were a century ago; and Ohio is projected to have 30 percent more winter and spring precipitation, which could increase flooding risks to floodplain communities.<sup>4,5,6</sup>

Water levels in the Great Lakes are expected to return to almost normal levels in 2014, due to the near-record ice cover caused by below-normal winter temperatures. But lower water levels remain a long-term concern because of the irregular weather patterns over the past decade. The average annual maximum ice coverage from 2003 to 2013 was less than 43 percent, far lower than the 1962–2013 average of 52 percent.<sup>7</sup>

Reduced ice cover can have large impacts on the health of the Great Lakes. Less ice means more light penetration, which promotes algae growth and the survival of invasive species. Without ice and snow coverage, the lakes also suffer from water loss due to increased evaporation. Stable ice that once prevented shoreline and wetland erosion is disappearing—and, with it, parts of our beaches. Known for its signature perched dunes, Michigan's Sleeping Bear Dunes National Lakeshore is one of many Great Lakes parks vulnerable to increased erosion. The loss of winter ice and snow cover renders the dunes' sands more vulnerable to wind and exposes the bluffs to undercutting waves.

### **FAILING INFRASTRUCTURE**

The Great Lakes region also faces threats from outdated and failing infrastructure. The American Society of Civil Engineers' 2013 Report Card for America's Infrastructure gave the nation's aging wastewater system a grade of D-plus. In the eight Great Lakes states, the report says, \$100.6 billion in wastewater infrastructure investment is needed over the next 20 years to achieve a basic level of functionality. This infrastructure is especially susceptible to the impacts of climate change because its design is based on historical patterns of precipitation and streamflow, which are no longer reliable indicators of future needs.

Crumbling and outmoded infrastructure causes several problems that can pollute Great Lakes beaches. For one, aging sanitary sewer systems can leak or allow stormwater to infiltrate, causing overflows or treatment facility bypasses. These system failures often lead to human waste in our waterways. Beyond that, many cities have stormwater systems that simply dump polluted runoff from buildings, streets, and parking lots into nearby water bodies; this stormwater commonly picks up fecal matter, pesticides, and other pollutants before flowing into the sewers. As high-intensity storm events occur more frequently, heavy rainfall will flush even more pollutants into waterways.<sup>12</sup>

In addition, there is the problem of combined sewer systems. In dry weather and small storms, combined sewers collect sanitary sewage and stormwater runoff within a single pipe system and route the mixture to sewage treatment plants. When heavier rainfall overwhelms these systems, they are designed to discharge untreated wastewater from outfall locations into local waterways. Although this approach can prevent sewage from flooding homes and businesses, it also causes serious contamination problems that can threaten public health. More than 70 percent of all combined sewers in the United States are located in the Great Lakes region. Of the five states with the highest number of outfall locations, four of them—Ohio, Indiana, Pennsylvania, and Illinois—have Great Lake shorelines. In 2010, these outfalls, along with those in Michigan, Wisconsin, Minnesota, and New York, released 18.7 billion gallons of combined sewage and storm runoff into the Great Lakes.

Unless infrastructure improvements are made to capture stormwater, the instances of combined sewer overflows will increase with increased extreme rainfall event frequency. <sup>16</sup> In southern Wisconsin, the frequency of combined sewer overflows is expected to rise 50 to 120 percent by the end of the century. <sup>17</sup> The problem of increasing volumes of combined sewage is so acute in Chicago that runoff has caused the Chicago River to reverse its flow. In the past six years, the river has reversed eight times, sending more than 20 billion gallons of contaminated water into Lake Michigan. <sup>18</sup>

### THREATS TO HUMAN HEALTH

Despite the size of the Great Lakes, pollution pouring into lake waters is a threat to human health. Untreated sewage can contain more than 120 viruses, two of which, giardia and cryptosporidium, can cause intestinal illnesses and even death. <sup>19</sup> These viruses and pollutants don't simply disappear under the lakes' surface. For example, in a study of four Ohio beaches, researchers frequently found *Arcobacter*, a pathogen associated with human and animal fecal contamination, at each beach. *Arcobacter* is known to cause gastrointestinal disease in humans. <sup>20</sup>

Pollutants released into surface waters in the Great Lakes Basin increased by 12 percent from 2010 to 2011. Most of these were nitrates and pesticides from municipal wastewater treatment plants and agricultural sources. Primary metals facilities—such as iron and steel mills and smelters—and food and beverage manufacturers can also contribute nitrate pollution.<sup>21</sup>

As increasing temperatures reduce water levels and increasing storm events dump more pollutants into the Great Lakes, it is expected that climate change will increase the concentration of pollutants in the Great Lakes as well as instances of beach contamination and closings in the future.<sup>22</sup>

### **INVASIVE SPECIES AND ALGAE**

The National Climate Assessment identifies increasing numbers of invasive species as one of three primary threats to the Great Lakes Basin's natural ecosystems. More than 180 invasive plants and animals are in the basin; the Aquatic Nuisance Species (ANS) Task Force estimates that the 15 most recent introductions of invaders could cost the United States \$134 billion by 2050. The fight to limit zebra mussels in the 1990s took \$4.9 billion from the regional economy. But far more costly are the potential threats to the lakes themselves. There is growing evidence that broad changes in the freshwater environment of the Great Lakes brought about by invasive species are promoting conditions that nurture bacteria, including *E. coli*, thereby deepening the threat. But the species are promoting conditions that nurture bacteria, including *E. coli*, thereby

Healthy lakes are often murky, but efficient filter feeding by quagga and zebra mussels have eliminated so much phytoplankton and other microorganisms that they have quite literally cleared the water in many Great Lakes. Though that sounds good, it has allowed sunlight to penetrate to the bottom of the lakes, encouraging aquatic plant growth on formerly barren lake beds.

The most public invasive species threat to arrive in the region comes from Asian carp, which could reach the lakes from the Mississippi River Basin via Chicago's waterways and other connected bodies of water. Asian carp feed in a fashion similar to quagga and zebra mussels. Millions of dollars have been spent to keep the fish at bay, but at this time an electric barrier in the suburbs outside Chicago stands as the Great Lakes' last defense, despite a troubling and ineffective history.<sup>27</sup>,<sup>28</sup> Researchers are concerned that populations of Asian carp could establish themselves in portions of the Great Lakes, decimating native fish populations and compounding the ecological damage already inflicted by quagga and zebra mussels.<sup>29</sup> There is also the safety threat posed by 60-pound fish prone to jumping out of the water when startled.<sup>30</sup>

Temperature increases associated with climate change, including both rising overall temperatures and more extreme temperature fluctuations, also contribute to nutrient-fueled algal growth in the Great Lakes. Cladophora, a green alga found in the Great Lakes, thrives in warmer temperatures. When toxic clumps of *Cladophora* wash onto beaches, they become smelly breeding grounds for bacteria such as *E. coli*, enterococcus, and type-B *botulinum*, creating high pathogen counts and triggering beach closures. Cladophora is also a threat to wildlife that depends on the Great Lakes. In the fall of 2012, nearly 900 loons died while migrating south across Lake Michigan. Scientists believe that botulism fostered by the algae-rich environment worked its way up the food chain from tiny worms and invertebrates to the loons. Low water levels and high temperatures intensify these botulism outbreaks.

Cyanobacteria (blue-green algae), which produce the hepatoxin microcystin, pose another health threat. Acute exposure to the toxin can lead to gastrointestinal illness, while chronic exposure can result in liver disease and damage and possible tumor promotion.

Unfortunately, monitoring harmful algal blooms and their toxins is difficult, and methods for doing so are still under development.<sup>34</sup> None of the Great Lakes states currently have harmful algal bloom monitoring in place to protect swimmers.<sup>35</sup>

### **GREAT LAKES BEACH WATER MONITORING FOR 2013**

13%

13%

14%

14%

35%

20

21

22

23

30

the BAV safety threshold in 2013								
National Rank (of 30 States)			2013 Total Samples	Beaches with Reported Monitoring Results				
7	6%	Michigan	9,704	237				
9	8%	Minnesota	1,212	53				
15	10%	Illinois	4,358	49				

New York

Indiana

Pennsylvania

Wisconsin

Ohio

10.189

2,905

1,042

3,512

2,726

360

32

10

101

60

Table GL-1: How Great Lakes States Compare Nationally by Percentage of Beach Water Samples Received Exceeding

In 2013, Great Lakes states reported 902 coastal beaches. Across the region, 13 percent of all reported beach monitoring samples exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were in Ohio: Lakeview Beach in Lorain County (76%), Bay View West in Erie County (70%), Whites Landing in Erie County (62%), Edgecliff Beach in Ohio County (62%), Clarkwood Beach in Cuyahoga County (61%), and Sims Beach in Cuyahoga County (61%). Other beaches with exceedance rates of at least 50% included two beaches in New York, Wright Park East Beach in Chautauqua County (50%) and Copiague Harbor Beach in Suffolk County (50%); and one in Indiana, Jeorse Park Beach I in Lake County (52%).

### **GREAT LAKES WATER QUALITY TREND 2009-2013**

Table GL-2 below illustrates the general beach water quality exceedance trend in the eight Great Lakes states over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the table. Percent exceedance rates in 2009–2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 freshwater that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* bacteria cfu/100 ml freshwater, as well as on the EPA's new Beach Action Value of 190 *E. coli* bacteria cfu/100 ml freshwater.

Table GL-2: Gr	eat Lakes Water O	tuality Exceedance	ces 2009-2013				
STATE	# of common beaches	2009 % Exceeding National Standards	2010 % Exceeding National Standards	2011 % Exceeding National Standards	2012 % Exceeding National Standards	2013 % Exceeding Former National Standards	2013 % Exceeding BAV
IL	48	16%	14%	13%	9%	8%	10%
IN	27	14%	17%	11%	12%	11%	14%
MI	156	11%	14%	8%	6%	5%	6%
MN	46	5%	5%	9%	12%	7%	8%
NY	336	10%	9%	10%	9%	9%	12%
ОН	58	15%	22%	22%	20%	32%	35%
PA	9	6%	6%	7%	10%	9%	13%
WI	96	8%	10%	10%	13%	12%	15%

#### **ECONOMIC IMPACTS**

If the Great Lakes St. Lawrence River region (including the United States and Canada) were a country, it would have the fourth-largest economy in the world. More than 1.5 million jobs in the United States are directly tied to the Great Lakes, with 200,000 jobs supported by recreation and tourism. Clearly, any damage inflicted on the Great Lakes has not only severe environmental and human health impacts, but wide-reaching economic effects as well. Closing all the beach sites on Lake Michigan alone could cost local economies as much as \$2.7 billion. Blion.

Spending on boats and boating activities in the Great Lakes states totaled nearly \$16 billion and directly supported 107,000 jobs in 2003. Yet, in 2012 and 2013, increased evaporation due to early springs and hot summers lowered lake levels to a point where the recreational boating industry felt the impact of climate change. Low water levels made it difficult to move ships from deeper lake waters to shallow ports. They also shortened the boating season, impacting the livelihood of those who depend on Great Lakes recreation. 40

Low water also has serious implications for Great Lakes–St. Lawrence Seaway shipping, a \$34 billion industry that affects commodity and manufacturing costs as well as consumer prices. To cope with low water levels, ship owners are forced to lighten the loads on their boats, making each shipment less efficient and less profitable. In December and January, extreme drought reduced water levels on the Mississippi River and nearly halted the shipment of \$7 billion worth of grain, coal, crude oil, and other products moving between the Great Lakes and the Gulf of Mexico. An extreme drought reduced water levels on the Mississippi River and nearly halted the shipment of \$7 billion worth of grain, coal, crude oil, and other products moving between the Great Lakes and the Gulf of Mexico.

Failing infrastructure, algal blooms, and climate change threaten more than regional and national economies—the Great Lakes are the source of 20 percent of the world's freshwater and the drinking water source for more than 30 million people in the United States alone.

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### The Impacts of Beach Pollution

Polluted beach water makes swimmers sick and hurts coastal economies. Illnesses associated with polluted beach water include stomach flu, skin rashes, pinkeye, respiratory infections, meningitis, and hepatitis. In addition to the health effects of polluted beach water, there may be deep financial impacts as well. Economists have estimated that a typical swimming day is worth approximately \$35 for each beach visitor, so the economic loss for each day on which a beach is closed or under advisory for water quality problems can be quite significant.

### **HEALTH RISKS**

### **Diseases Caused by Pathogens in Bathing Waters**

Polluted waters may contain disease-causing organisms called pathogens. The most common types of pathogens—bacteria, viruses, and protozoa—are those associated with human and animal waste. For instance, giardiasis is caused by the protozoan *Giardia lambia*, North America's leading reported intestinal parasite.¹ Swimmers in sewage-polluted water can contract any illness that is spread by fecal contact, including stomach flu, respiratory infection, and ear and skin infections. Most swimming-related illnesses last from a few days to several weeks, but in some cases pathogens may cause severe, long-term illness or even death.

Sensitive populations such as children, the elderly, or those with a weakened immune system are particularly at risk for long-term effects. For example, research has shown that children under the age of nine have more reports of diarrhea and vomiting from exposure to waterborne pathogens than any other age group, with at least a twofold increase occurring over the summer swimming months.<sup>2</sup> There is usually a delay of several days to two weeks between contact with contaminated water and expression of symptoms, and most people who get sick from swimming are not aware of the link. Beachgoers can even become ill without going in the water. A 2009 study found a positive association between beach sand contact and the risk of gastrointestinal illness at beaches near a sewage treatment plant outfall.<sup>3</sup>



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Jon Devine jdevine@nrdc.org (202) 289-6868 switchboard.nrdc.org/ blogs/jdevine www.nrdc.org/policy www.facebook.com/nrdc.org www.twitter.com/nrdc On the basis of beach visitation rates and monitoring data, researchers have estimated that 689,000 to 4,003,000 instances of gastrointestinal illness and 693,000 instances of respiratory illness occurred each year between 2000 and 2004 at Southern California beaches. While these estimates are subject to a great deal of uncertainty, they provide insight into the potential for underreporting of such illnesses.

#### **Contaminated Runoff and Incidence of Disease**

Discharges of polluted urban runoff result in elevated bacteria levels and increased illness rates among swimmers, and the association between heavy precipitation (leading to increased runoff) and waterborne disease outbreaks is well documented. For instance, a 2012 California study investigated surfers' risk of contracting gastrointestinal illness during dry weather and in post-storm conditions in the coastal waters of Southern California based on enterococcus and fecal coliform concentrations in the water. The researchers found that "at most beaches, there are higher GI risks after rainfall than during dry condition[s]" and that "some beaches have significantly elevated health risks for surfers after a storm event."

A large-scale 1995 epidemiological study, also in California, investigated possible adverse health effects of swimming in ocean waters contaminated by urban runoff.<sup>7</sup> The study found an increased risk of illness associated with swimming near flowing storm drain outlets in Santa Monica Bay, compared with swimming more than 400 yards away. Swimmers near storm drains were found to have a 57 percent greater incidence of fever, for instance, than those swimming farther away.

NRDC supports a variety of solutions to beach pollution from contaminated runoff—including the use of permeable pavement and the installation of rain gardens to reduce runoff volume. To learn more, see "Community Measures to Prevent Beach and Ocean Pollution" on our <a href="Smarter Living">Smarter Living</a> <a href="page">page</a>.

### **Climate Change and Incidence of Disease**

Climate change is expected to increase the incidence of diseases contracted by swimmers. Recreational waters located in areas where climate change causes increased precipitation and runoff are more likely to become contaminated with pathogens such as Cryptosporidium parvum and *Giardia lambia*, which are associated with polluted runoff and combined sewer overflows. An article in *Climate Research* notes that, although there are uncertainties, "a wetter climate in the [mid-Atlantic region] could lead to higher [*Cryptosporidium*] loads in water." A major cryptosporidiosis outbreak in Milwaukee in 1993 killed 54 people and sickened more than 400,000 after stormwater compromised the performance of a drinking water treatment plant.9

The bacterium *Vibrio cholerae*, which causes cholera, is another pathogen that presents an increased threat to humans as a result of climate change. Extreme weather events and warmer waters can foster growth of the bacterium; one study found that *V. cholerae* was nearly 20

times more likely to occur at a temperature of 66.2°F or higher than at lower temperatures. <sup>10</sup> Increased freshwater runoff, high in nutrients and low in salinity, also may favor the growth of *V. cholerae*. As one study of Chesapeake Bay concluded, "Increased climate variability, accompanied by higher stream flow rates and warmer temperatures, could favor conditions that increase the occurrence of *V. cholera* in Chesapeake Bay." <sup>11</sup>

### **Threats to Swimmers from Harmful Algal Blooms**

Harmful algal blooms (HABs), often called red tides, are a growing problem in surface waters where nutrientrich pollution can spur algal growth. Several species of phytoplankton produce potent toxins that can make people sick if they are exposed to contaminated water or if they eat contaminated fish or shellfish. These organisms are a natural part of the ocean ecosystem, but when conditions are right, they experience a rapid growth in number, resulting in a "bloom." HABs can last for days, weeks, or months and cause serious and potentially life-threatening symptoms in humans, including diarrhea, nausea, vomiting, abdominal cramping, chills, diminished temperature sensation, muscle aches, dizziness, anxiety, sweating, seizures, numbness and tingling of the mouth and digits, paralysis, and cardiovascular and respiratory ailments.12 Approximately 10 percent of all food-borne disease outbreaks in the United States are caused by eating seafood contaminated by algal toxins.<sup>13</sup> And because they can aerosolize, toxins produced by harmful algae can cause respiratory distress even in beach visitors who do not enter the water.14,15

The incidence of HABs has increased dramatically over the past 30 years. Indeed, analyzing data spanning nearly 50 years from the southwest coast of Florida, researchers at the University of Miami determined that *Karenia brevis* red tides are occurring with greater frequency, closer to shore, and during more months of the year. They attribute this to greater inputs of nutrients into coastal waters from increased agricultural runoff and sewage discharges in the watershed over that time period. <sup>16</sup> In 2011, the Great Lakes suffered one of the worst algae blooms in decades—so large, in fact, that the slimy green cyanobacteria were visible from space. <sup>17</sup>

As is the case with pathogens, warmer waters may result in expanded ranges for some harmful algae species. <sup>18</sup> According to a 2009 Chesapeake Bay Foundation report:

Climate change might be expanding the range of a few new toxic species of algae into the estuary, and causing others to bloom earlier, according to a 2008 report by a scientific advisory committee of the U.S. EPA Chesapeake Bay Program. For example, a toxic alga normally associated with Florida and the Gulf Coast, *Alexandrium monilatum*, in 2007 was believed to have been responsible for killing whelks (a species of sea snail) in the York River in Virginia. It was the first known bloom in this area, and it represented a potential shift northward, according to the EPA committee report. A large bloom of a toxic alga normally found in the Caribbean Sea, *Cochlodinium polykrikoides*, killed young fish and oysters in the lower Chesapeake Bay in August 2007.<sup>19</sup>

Efforts to deal with red tides have focused on mitigating the effects of these events, primarily through improved systems to monitor for harmful algal blooms and to educate and communicate the risks to the general population. Techniques to prevent HABs involve restricting the movement of harmful algal species via the shellfish market and in ship ballast water. For example, ballast water may be heated or chemically treated to prevent the introduction of invasive species, and trade may be restricted in shellfish from areas experiencing red tides. However, significantly reducing the number of red tide events will require strong efforts to control nitrogen and phosphorus pollution from sources such as sewage systems, urban and suburban stormwater, septic tanks, and agricultural runoff.<sup>20</sup>

To learn more about the health impacts of HABs as well as how to protect your family, please see NRDC's "Tides of Trouble: Increased Threats to Human Health and Ecosystems from Harmful Algal Blooms."

### **ECONOMIC IMPACTS**

Each year, Americans take more than 900 million trips to coastal areas. <sup>21</sup> In fact, beaches, rivers, and lakes constitute the top vacation destinations in the nation. <sup>22</sup> Yet our waters provide more than just recreation—vacationers spend approximately \$44 billion annually during these coastal trips. <sup>23</sup> In 2010, the nation's shoreline-adjacent counties contributed an estimated \$6 trillion toward the nation's gross domestic product and 47 million jobs. <sup>24</sup> Economic activity directly associated with the ocean pumped more than \$222 billion into the U.S. economy in 2009. <sup>25</sup>

Polluted water puts these revenues at risk. Fouled beaches result in a loss of utility for those who have planned to visit and swim in the water; this impacts local economies in the form of lost tourist dollars and the jobs they support.

Coastal tourism, attributable in part to clean beaches, generates substantial revenues for state and local governments as well as for businesses lining the coasts. Economists estimate that a typical swimming day is worth approximately \$35 for each individual. Economist on the number of potential visitors to a beach, the loss of beach days due to warnings or closures can be quite significant. For example, one study estimated economic losses as a result of closing a Lake Michigan beach due to pollution could be as high as \$37,030 per day.

Other economic impacts come in the form of medical costs to stricken beachgoers. Some areas either do not monitor their beaches or do not close them when water quality fails to meet standards. This can result in lower short-term losses for local businesses, but it also means that those who get sick will incur medical costs and lost workdays as a result. A Southern California study, for instance, concluded that each year, fecal contamination at Los Angeles and Orange County beaches caused between 627,800 and 1,479,200 excess gastrointestinal illnesses, with a public health cost of \$21 million to \$51 million. According to the Centers for Disease Control and Prevention, hospitalizations



for three common waterborne diseases—Legionnaires' disease, cryptosporidiosis, and giardiasis—cost the health care system as much as \$539 million annually.<sup>29</sup>

Another example of the potential for economic harm from beach pollution is found in Florida. One analysis of southeast Florida estimated that there were more than 18 million "person-days" of visits to natural reefs in four counties, leading to \$2.7 billion in spending and supporting more than 40,000 full- and part-time jobs.<sup>30</sup> Yet coral reefs are being adversely impacted not only by rising water temperatures and increasing nutrient loads, but also by pathogen pollution from sources such as untreated or inadequately treated sewage. Fecal contamination from sewage in the Florida Keys is thought to be a major source of disease in coral.<sup>31</sup>

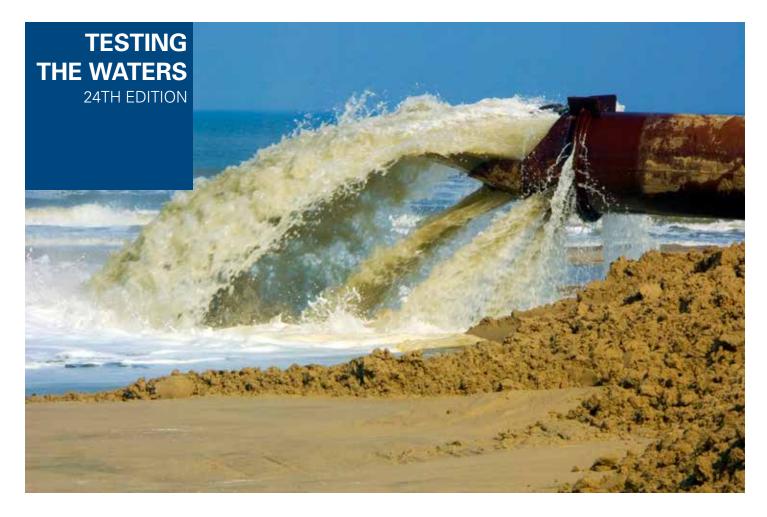
Investments in improving water quality result in greater economic returns. For instance, a 2007 Brookings Institution study concluded that the \$26 billion Great Lakes Regional Collaboration Strategy to clean and preserve the Great Lakes would result more than \$50 billion in long-term economic benefits and between \$30 and \$50 billion in short-term "multiplier benefits." A 2007 study by the National Oceanic and Atmospheric Administration found that an improvement in water quality in Long Beach, California, to the healthier standards of Huntington City Beach would create \$8.8 million in economic benefits over a 10-year period.33 A 2001 study of the Chesapeake Bay compared the 1996 water quality of the bay with the quality it would have had if legislation to clean the waters had not been passed. The study estimated that the water quality improvements increased annual boating, fishing, and swimming revenue by \$357.9 million to \$1.8 billion.34

Cleaning up the sources of pollution so that beach water does not pose a risk to bathers is the optimal solution to the challenges described here. In the meantime, protecting public health will require improved beach water monitoring and the closing of beaches when contamination is detected or suspected, rather than allowing people to swim and get sick. Given the large number of people who visit our coastal waters and the substantial economic value of coastal tourism, the cost of monitoring programs is well justified.

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### **Sources of Beach Water Pollution**

Most beach closings and advisories are issued because beach water monitoring has detected the presence of pathogens—microscopic organisms from human and animal wastes that pose a threat to human health. Key contributors of these contaminants include stormwater runoff, untreated or partially treated discharges from sewage treatment systems, discharges from sanitary sewers and septic systems, and wildlife.

### STORMWATER RUNOFF

Stormwater runoff starts as rain or snowmelt. As it washes over roads, rooftops, parking lots, construction sites, and lawns, it becomes contaminated with oil and grease, pesticides, litter, and pollutants from vehicles. On its way to storm drains, it also can pick up fecal matter from dogs, cats, pigeons, other urban animals, and even humans. Human waste may also find its way into storm drain systems from leaking sewage pipes or from businesses or residences that have illegally connected their sewage discharge to the storm drains. Illicit discharges also occur when people empty holding tanks from recreational vehicles and trailers into storm drains.

The amount of pollution present in urban runoff tends to correlate with the amount of impervious cover, such as roads, sidewalks, parking lots, and buildings. A study conducted in North Carolina found that a watershed that was 22 percent covered by impervious surfaces had an average fecal coliform count more than seven times higher than a watershed that was 7 percent covered by impervious surfaces.¹ However, even in less developed areas, uncontrolled runoff can foul beaches.



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As the population along the U.S. coast grows and sprawling development continues, more land is converted to impervious surfaces that deflect rather than absorb falling rain. More than half of the people in the United States live in coastal counties, which occupy only 17 percent of the nation's land mass (excluding Alaska). Between 1970 and 2010, the coastal population grew by 50.9 million, and it is expected to increase by nearly 15 million more by 2020.<sup>2</sup> At the current rate, by 2025 more than one-fourth of all of our coastal acreage will be developed.<sup>3</sup>

### **HUMAN WASTE FROM SEWAGE SYSTEMS**

Sewage overflows from aging sanitary and combined sewer systems, leaking sewage pipes, and malfunctioning sewage treatment plants and pump stations have always been a major cause of pollution at ocean, bay, and Great Lakes beaches. Malfunctions at a wastewater plant can quickly spill millions of gallons of partially treated sewage into coastal waters and result in no-swimming advisories along miles of beaches. In Florida's Miami-Dade County, for instance, at least 65 ruptures spewed more than 47 million gallons of untreated human waste into county waterways and streets from 2009 to 2011.4 Fixing these aging and malfunctioning sewage systems comes at a hefty cost. Repairing and rebuilding its wastewater and stormwater systems could cost Miami-Dade County more than \$12 billion over the next 15 years.<sup>5</sup> On the national level, it is estimated that \$298 billion in capital investments will be needed to repair our wastewater and stormwater systems over the next 20 years.6

#### **Combined Sewer Overflows**

Combined sewer systems, concentrated in the Great Lakes region and the northeastern United States, carry both raw sewage from homes and businesses and stormwater runoff from streets to sewage treatment plants. Although they are most prevalent in urban areas, combined sewer systems serve around 40 million people in 772 communities nationwide.<sup>7</sup>

Treating stormwater before releasing it to surface waters is desirable, but during periods of heavy rainfall or snowmelt, the volume of the combined wastewater can become too great for the treatment plant to handle. In such circumstances, the excess flow is diverted to outfall points that discharge it—and the pollutants it carries, including raw sewage, trash, and toxic industrial waste—into the nearest stream or coastal waterway. This is known as a combined sewer overflow, or CSO.

CSOs are a major cause of pathogen contamination in marine and Great Lakes waters near urban areas. In 2002 it was estimated that some 43,000 CSO events were occurring per year nationwide, discharging 850 billion gallons of raw sewage and stormwater annually.<sup>8</sup> Although an EPA policy that aims to reduce these overflows has been in effect since 1994, virtually all combined sewer systems continue to overflow in storms. A significant number of communities with CSOs still have not submitted plans for controlling them, and even where plans are in place, it will be years before they are fully implemented.

### **Sanitary Sewer Overflows and Discharges** from Sewer Line Breaks

Sanitary sewer systems carry human and industrial waste from buildings to sewage treatment plants for treatment. These sewer systems can discharge untreated sewage when the treatment plants malfunction or are overwhelmed or when sewer lines break, posing a threat to bathing beach safety. Separate sanitary sewers serve approximately 164 million people nationwide.<sup>9</sup>

Although most of these systems were built more recently than combined sewer systems, they are aging and deteriorating rapidly. A nationwide survey of 42 treatment plants found some system components that have been in use for as long as 117 years; the average is 33 years. <sup>10</sup> As populations and sewer loads increase and rehabilitation and maintenance schedules lag, pipes can deteriorate and break, spilling sewage directly onto streets or into waterways.

The EPA has estimated that 23,000 to 75,000 sanitary sewer overflows (SSOs) occur annually, discharging a total of 3 billion to 10 billion gallons per year. Nearly 70 percent of sewage overflows from lines carrying human waste are due to obstructions such as tree roots or grease clogs, line breaks, and mechanical failures.<sup>11</sup>

Wet weather places demands on sanitary sewer systems even though these systems do not carry stormwater runoff. Rainwater can enter the system by seeping through manholes and by falling onto the surface of the treatment units during rain events; this can lead to the discharge of raw sewage from manholes, overflowing pipes, and treatment plant bypasses. According to an EPA report, although only 26 percent of sanitary sewer overflows nationwide were caused by wet weather events and related inflow and infiltration between January 2001 and December 2003, these events accounted for nearly 75 percent of the total SSO volume discharged.<sup>12</sup>

In January 2001, the EPA proposed SSO regulations that would have required improved capacity, operation, and maintenance as well as public notification when overflows occur. The Bush administration shelved this initiative, but the Obama administration's EPA announced in June 2010 that it would consider a suite of actions to address SSOs. During several "listening sessions," participants encouraged the EPA to update regulations with respect to SSOs. However, staff and budget limitations kept the agency from doing so. <sup>13</sup>

#### **Inadequately Treated Sewage**

Sewage plants near coastal waters tend to serve densely populated, rapidly growing urban areas. When too many homes and businesses are hooked up to a sewage treatment plant, the plant is prone to more frequent bypasses and inadequate treatment. Moreover, sewage treatment plants can and do malfunction as the result of human error, failure of old equipment, or unusual conditions in the raw sewage. When that happens, raw or partially treated sewage may be discharged into coastal waterways and their tributaries. Some sewage systems also bypass all or a portion of their treatment plants when flows exceed capacity during rain events.

# HUMAN SEWAGE FROM SEPTIC SYSTEMS AND BOATING WASTE

#### **Septic Systems**

About one-third of new construction and 23 percent of U.S. dwellings overall use some kind of septic tank or on-site waste disposal system.14 If not sited, built, and maintained properly, septic systems near the coast can leach wastewater into recreational waters, contaminating bathing beaches. Malfunctioning septic systems at just a few nearshore properties can result in beach water contamination that is significant enough to trigger a beach closure. Even when a failing septic system is located inland, runoff can carry bacteria into streams that empty into recreational waters. Unfortunately, homeowners often do not adequately maintain their septic systems. Studies reviewed by the EPA cited failure rates of 10 percent to 20 percent. 15 Despite this, there is no federal regulatory program to control waste from septic systems, and local governments and states rarely inspect these systems sufficiently to prevent failures.

#### **Boating Waste**

Marinas are generally located in areas that are naturally sheltered or where a breakwater has been constructed. This shelter results in reduced circulation of clean water around the docks, which allows boating waste to accumulate and pose a serious health threat. Waste may also be discharged improperly from boats that are in use, posing a health and aesthetic threat to bathing beaches.

Federal law requires boats with onboard toilets either to treat the waste with chemicals before discharging it or to hold the waste and later pump it out into a sewage treatment plant. Also, the federal Clean Vessel Act (CVA) of 1992 provides federal grant money to states for building pumpout and dump stations in marinas so boaters can dispose of human waste in an environmentally sound manner. However, a government watchdog report from 2004 found limited oversight of the adequacy of pump-out facilities in many areas. <sup>16</sup>

# AGRICULTURAL DISCHARGES AND AGRICULTURAL RUNOFF

Agricultural pollution affects nearly 40 percent of the country's tainted rivers and streams. <sup>17</sup> The production of farm animals has increasingly shifted toward huge, industrial-scale operations where large numbers of animals are confined together. These concentrated animal feeding operations (CAFOs) can produce vast quantities of manure that far exceed the assimilation capacity of crops and pastures. Runoff from farms and animal feeding operations may contain high concentrations of pathogenic animal waste.

# CLIMATE CHANGE AND ITS EFFECT ON WATER QUALITY

Beach water quality is generally adversely affected by increased rainfall. Scientists agree that in many regions of the United States, climate change will increase the frequency and magnitude of rain and large storms; will cause more runoff, coastal flooding, and coastal erosion; and will bring warmer water and air temperatures. These changes will exacerbate the existing causes of beach water pollution that threaten public health. In fact, the Intergovernmental Panel on Climate Change found that "[w]aterborne diseases and degraded water quality are very likely to increase with more heavy precipitation."<sup>18</sup>

In particular, global climate change is expected to increase the amount of rainfall in some regions where combined sewer systems are concentrated. In the Great Lakes region, climate modeling predicts that the regional average annual CSO frequency between 2060 and 2099 will increase by 13 percent to 70 percent.<sup>19</sup>

Even in areas that have separate sewer systems, like much of the West, an increase in extreme rainfall events can lead to more pollution in coastal waters via increased stormwater runoff. For instance, in California, warmer temperatures can mean more winter precipitation that falls as rain and less that falls as snow, leading to more winter runoff. More winter runoff over saturated soils will result in larger sediment flows and more bacteria in beach water.

In the Great Lakes region, warmer temperatures can lead to another source of pollution: algal blooms. *Cladophora*, a green alga that grows on the bottom of the Great Lakes, thrives in warmer temperatures.<sup>20</sup> Filter-feeding invasive species, such as quagga mussels, also contribute to the proliferation of algae by clearing the normally murky waters of phytoplankton and other microorganisms. Sunlight that is able to penetrate to the lake floor encourages the growth of large mats of algae.<sup>21</sup> These foul-smelling mats can break free and eventually accumulate on beaches, becoming breeding grounds for *E. coli* and enterococci.<sup>22</sup> As temperatures increase, the Great Lakes states are seeing an abundance of algae growth and subsequent beach closings earlier in the year.<sup>23</sup>

Nitrogen and phosphorus pollution from stormwater runoff, agricultural runoff, water treatment plants, and CSOs also spur the growth of algae. Large, harmful algal blooms (HABs), such as blooms of cyanobacteria (blue-green algae), produce toxins that accumulate in the body and pose a health threat to humans and wildlife.<sup>24</sup> Acute exposure to the hepatotoxin microcystin can lead to skin irritation and gastrointestinal illness, and chronic exposure can result in increased liver disease and even death.<sup>25</sup>

#### **BEACHGOERS**

In the 2005 study "Outbreaks Associated with Recreational Water in the United States," researchers found that bathers themselves are an important localized source of contamination leading to illness outbreaks. <sup>26</sup> All swimmers release fecal organisms when they enter the water in a process called bather shedding. Fecal accidents are also a source of pathogens, as are diaper-age children if care isn't taken to ensure that their wastes are kept from entering the water. The presence of *E. coli* and coliform bacteria has been shown to correlate with the number of visitors and periods of high recreational use (generally the summer and weekends).<sup>27</sup>

#### **WILDLIFE AND PET WASTE**

Municipalities sometimes list waterfowl as the cause of beach closings or advisories. During migration season, excessive populations of waterfowl can gather at beaches or in suburban areas where their waste can be carried by runoff into recreational waters. Pet waste deposited on or near the beach also contains pathogens that can wind up in beach water when pet owners do not pick up and properly dispose of it. The fecal matter from these animals can overload the capacity of a beach to absorb wastes, particularly if there is no vegetation around the beach.



#### MARINE DEBRIS AND PLASTIC POLLUTION

Although not monitored as part of the BEACH Act, solid waste, particularly plastic items, can heavily affect beaches and beach water quality. Waste litters the landscape, and much of it ends up on our shores and in our lakes, rivers, and oceans, where it kills marine life, poses navigational hazards, and impacts local economies and potentially human health. While marine debris includes a range of man-made waste, the vast majority of marine debris is plastic.<sup>28</sup> In August 2013, NRDC published *Waste in Our Waterways*,<sup>29</sup> which reported data received from 95 local governments in California. The report showed that cities, towns, and taxpayers are shouldering significant costs to stop litter from becoming pollution that harms the environment as well as tourism and other economic activity.

The most effective way to stop plastic pollution in our oceans is to make sure it never reaches the water in the first place. NRDC is helping to stop plastic pollution<sup>30</sup> by advancing policies that encourage the switch to reusable or recyclable packaging, especially phasing out the use of single-use plastic bags. NRDC is also working to incentivize producers to use less plastic packaging or design fully recyclable packaging, helping to improve recycling infrastructure, and supporting other activities that prevent plastic waste from polluting our oceans and beaches.

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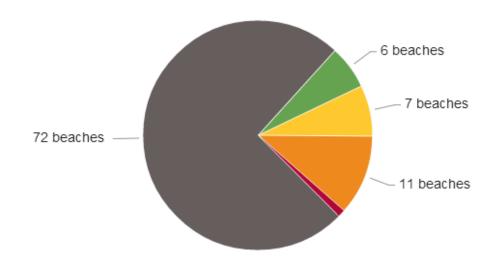
## **State Summary: Alabama**

Ranked 17th in Beach Water Quality (out of 30 states)
11% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Alabama 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 72 beaches (74%) were not monitored or had a limited number of samples (fewer than 12)
- 6 beaches (6%) did not have any samples exceed the national BAV safety threshold
- 7 beaches (7%) had >0-10% of their samples exceed the national BAV safety threshold
- 11 beaches (11%) had >10-20% of their samples exceed the national BAV safety threshold
- 1 beach (1%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local

officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Alabama has 97 coastal beaches stretching along 50 miles of the Gulf of Mexico coast and 70 miles of bay and island shoreline. The Alabama Department of Environmental Management (ADEM) administers the state's beach water quality monitoring program. The majority of testing occurs during the May–September swim season, with some additional monitoring occurring during the cooler months. ADEM posts beach advisory data on its website.

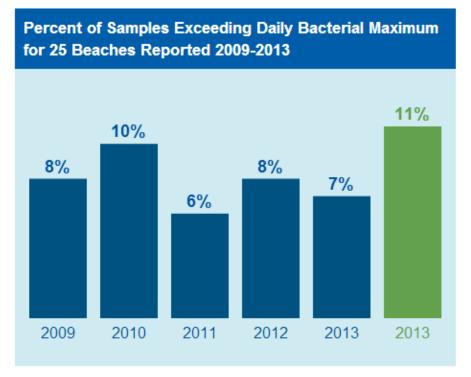
### What Does Beach Water Monitoring Show?

In 2013, Alabama reported 97 coastal beaches. Of all reported beach monitoring samples, 11% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were May Day Park in Baldwin County (19%), Fowl River at Highway 193 in Mobile County (19%), Pirate's Cove in Baldwin County (19%), Volanta Avenue in Baldwin County (19%), Orange Beach Waterfront Park in Baldwin County (18%), and Spanish Cove in Baldwin County (18%).

## Alabama Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Alabama over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009–2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Alabama 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Baldwin	5Th Street Access	0	n/a	-
Baldwin	6Th Street Access	0	n/a	-
Baldwin	7Th Street Access	0	n/a	-
Baldwin	10Th Street Access	0	n/a	-
Baldwin	13Th Street Access	0	n/a	-
Baldwin	Alabama Point (Gulf Of Mexico)	28	0%	view
Baldwin	Alabama Point (Perdido Pass)	0	n/a	-
Baldwin	Anderson Street	0	n/a	-
Baldwin	Barklay Ave.	0	n/a	-
Baldwin	Battles Rd	0	n/a	-

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Baldwin	Bay Ave.	0	n/a	-
Baldwin	Bay Front Park (Daphne)	0	n/a	-
Baldwin	Bay Side Drive	0	n/a	-
Baldwin	Bayou Drive	0	n/a	-
Baldwin	Bear Point Civic Association	18	11%	<u>view</u>
Baldwin	Belrose Ave. Daphne	0	n/a	-
Baldwin	Bernard Court	0	n/a	-
Baldwin	Boggy Point	0	n/a	-
Baldwin	Bon Secour National Wildlife Refuge	17	0%	view
Baldwin	Boykin Street Access	0	n/a	-
Baldwin	Buchanan Street Access	0	n/a	-
Baldwin	Cabana Beach Association	0	n/a	-
Baldwin	Camp Baldwin	0	n/a	-
Baldwin	Camp Beckwith	59	17%	view
Baldwin	Camp Dixie	53	6%	<u>view</u>
Baldwin	Cedar St.	0	n/a	-
Baldwin	Cedar St. E	0	n/a	-
Baldwin	Choctaw Road North	0	n/a	-
Baldwin	Cotton Bayou	51	0%	view
Baldwin	Cypress Ave.	0	n/a	-
Baldwin	Escambia Avenue	20	10%	view
Baldwin	Fairhope Public Beach	55	16%	view
Baldwin	Fish Trap Access	0	n/a	-
Baldwin	Florida Point	51	0%	<u>view</u>
Baldwin	Fort Morgan National Park	0	n/a	-
Baldwin	Fort Morgan Public Beach	17	0%	<u>view</u>
Baldwin	Gore Road	0	n/a	-
Baldwin	Gulf Coast Remainder	0	n/a	-
Baldwin	Gulf Shores Public Beach	50	2%	view
Baldwin	Gulf State Park - Pavilion	51	2%	<u>view</u>
Baldwin	Haupt Road	0	n/a	-
Baldwin	Holly Ave.	0	n/a	-
Baldwin	Josaphine Park	0	n/a	-
Baldwin	Kee Avenue	59	14%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Baldwin	Koa Campground	0	n/a	-
Baldwin	Lafite Road	0	n/a	-
Baldwin	Laine Court Park	0	n/a	-
Baldwin	Little Lagoon Pass Beach	28	4%	view
Baldwin	Live Oak	0	n/a	-
Baldwin	Marjon Lane	0	n/a	-
Baldwin	Mary Ann Nelson Beach	32	44%	view
Baldwin	May Day Park	36	19%	<u>view</u>
Baldwin	Mcdonald Ave.	0	n/a	-
Baldwin	Mobile Ave.	0	n/a	-
Baldwin	Montgomery Ave.	0	n/a	-
Baldwin	Morgantown Park	0	n/a	-
Baldwin	Mullet Dr.	0	n/a	-
Baldwin	Murphy Lane	0	n/a	-
Baldwin	N. Mobile St/Perdido Ave.	0	n/a	-
Baldwin	Navy Cove	0	n/a	-
Baldwin	North Road	0	n/a	-
Baldwin	Oak St. #91	0	n/a	-
Baldwin	Orange Beach Waterfront Park	33	18%	view
Baldwin	Orange Street Pier/Beach	33	12%	view
Baldwin	Our Road	0	n/a	-
Baldwin	Palmetto Ave.	0	n/a	-
Baldwin	Pelican Pt.	0	n/a	-
Baldwin	Pensacola Ave.	0	n/a	-
Baldwin	Perdido Bay Rec. Beach	0	n/a	-
Baldwin	Pinewood Ave.	0	n/a	-
Baldwin	Pirate'S Cove	57	19%	view
Baldwin	Ponce De Leon Annex	0	n/a	-
Baldwin	Ponce De Leon Court Lot 35	0	n/a	-
Baldwin	Ponce De Leon Court Lot 50	0	n/a	-
Baldwin	Ponce De Leon Court Lot 51	0	n/a	-
Baldwin	Ponce De Leon Dr Access East	0	n/a	-
Baldwin	Ponce De Leon Dr Public Access	0	n/a	-
Baldwin	Randolf Rd.	0	n/a	-

County	Beach	Total Samples	% of samples exceeding BAV	View
Baldwin	Rester St.	0	n/a	-
Baldwin	Romar Beach	0	n/a	-
Baldwin	Sea Cliff Dr.	0	n/a	-
Baldwin	Seabright Ave.	0	n/a	-
Baldwin	Sibley St/Steadmans Landing	0	n/a	-
Baldwin	South Wilson Blvd	0	n/a	-
Baldwin	Spanish Cove	33	18%	view
Baldwin	Sunset Dr.	0	n/a	-
Baldwin	Village Pt. Foundation	0	n/a	-
Baldwin	Volanta Avenue	37	19%	view
Baldwin	Wolf Bay Lodge	0	n/a	-
Baldwin	Wydell St.	0	n/a	-
Baldwin	Yupon Ave.	0	n/a	-
Baldwin	Zundall Lane	0	n/a	-
Mobile	Bay Front Park	0	n/a	-
Mobile	Dauphin Island East End	30	7%	<u>view</u>
Mobile	Dauphin Island Public Beach	29	0%	<u>view</u>
Mobile	Dog River, Alba Club	32	3%	<u>view</u>
Mobile	Fowl River At Hw 193	31	19%	<u>view</u>

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

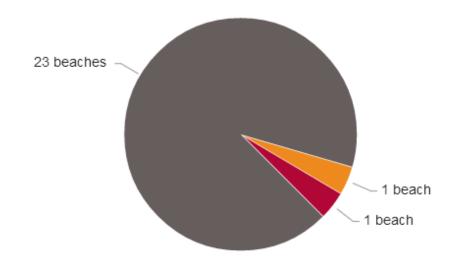
## **State Summary: Alaska**

Ranked 29th in Beach Water Quality (out of 30 states) 24% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Alaska 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 23 beaches (92%) were not monitored or had a limited number of samples (fewer than 12)
- 0 beaches (0%) did not have any samples exceed the national BAV safety threshold
- 0 beaches (0%) had >0-10% of their samples exceed the national BAV safety threshold
- 1 beach (4%) had >10-20% of their samples exceed the national BAV safety threshold
- 1 beach (4%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Alaska has nearly 44,000 miles of coastal shoreline. Although cold water temperatures discourage swimming, recreational shoreline activities such as fishing, kayaking, and beachcombing are popular. The Alaska Department of Environmental Conservation administers the state's <u>beach water guality program</u>.

### What Does Beach Water Monitoring Show?

In 2013, Alaska reported 25 coastal beaches, 7 of which were monitored. Of all reported beach monitoring samples, 24% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were South Kenai Beach in Kenai Peninsula County (59%), North Kenai Beach in Kenai Peninsula County (19%), and Lena Cove Beach in Juneau (9%). According to the state, North and South Kenai fecal numbers are associated with wildlife. Microbial source tracking analysis reports birds as the bacteria source.

## **Alaska 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Bristol Bay	Kanakanak Beach in Dillingham	0	n/a	<u>view</u>
Bristol Bay	King Salmon Beach (No. Naknek)	0	n/a	view
Bristol Bay	Naknek River	0	n/a	view
Bristol Bay	Scandinavian Beach	0	n/a	view
Bristol Bay	Snag Point	0	n/a	view
Haines	Letnikof Cove	0	n/a	view
Haines	Lutak Inlet in Haines	10	0%	view
Haines	Portage Cove in Haines	10	0%	view
Juneau	Ann Coleman Road Beach in Juneau	11	0%	view
Juneau	Auke Recreation Area Beach in Juneau	11	18%	view
Juneau	Harris and Aurora Harbors	0	n/a	view
Juneau	Lena Cove Beach in Juneau	11	9%	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Juneau	Sandy Beach 5, Douglas	0	n/a	<u>view</u>
Kenai Peninsula	Anchor Point	0	n/a	<u>view</u>
Kenai Peninsula	Anchor Point to Happy Valley Creek (Whiskey Gulch) in Homer	0	n/a	view
Kenai Peninsula	Bishop's Beach in Homer	0	n/a	<u>view</u>
Kenai Peninsula	Homer Spit Land's End	0	n/a	<u>view</u>
Kenai Peninsula	Homer Spit Mariner Park	0	n/a	<u>view</u>
Kenai Peninsula	North Kasilof Beach	0	n/a	<u>view</u>
Kenai Peninsula	North Kenai Beach	32	19%	<u>view</u>
Kenai Peninsula	South Kenai Beach	32	59%	<u>view</u>
Nome	West Beach	0	n/a	<u>view</u>
Wrangell	City Park	0	n/a	<u>view</u>
Wrangell	Petroglyph Beach	0	n/a	<u>view</u>
Wrangell	Sandy Beach Park	0	n/a	<u>view</u>

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

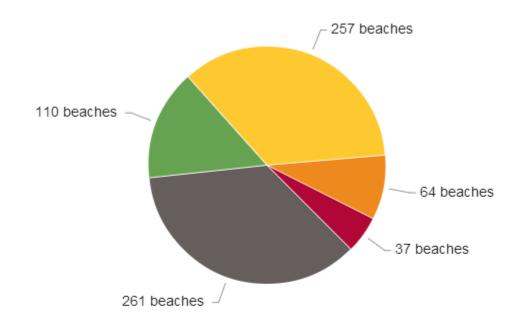
## **State Summary: California**

Ranked 11th in Beach Water Quality (out of 30 states) 9% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### California 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 261 beaches (36%) were not monitored or had a limited number of samples (fewer than 12)
- 110 beaches (15%) did not have any samples exceed the national BAV safety threshold
- 257 beaches (35%) had >0-10% of their samples exceed the national BAV safety threshold
- 64 beaches (9%) had >10-20% of their samples exceed the national BAV safety threshold
- 37 beaches (5%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

California has beaches along more than 700 miles of coastline on the Pacific Ocean and San Francisco Bay. Historically, the California Department of Health Services administered the BEACH Act grant. Starting in 2012, the California State Water Resources Control Board provided \$1 million in funding and began administering the state's beach monitoring program, as well as the BEACH Act grant. Beachgoers can access information about water quality on the state's "Is It Safe to Swim in Our Waters?" website.

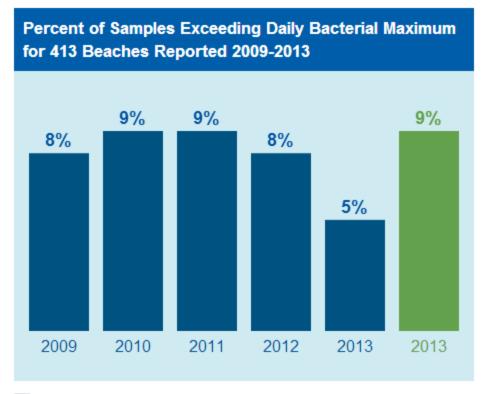
### What Does Beach Water Monitoring Show?

In 2013, California reported 729 coastal beaches and beach segments, 501 of which were monitored. Of all reported beach monitoring samples, 9% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Aquatic Park in San Mateo County (64%); Lakeshore Park in San Mateo County (48%); Candlestick Point, Windsurfer Circle in San Francisco County (47%); Inner Cabrillo Beach, San Pedro in Los Angeles County (44%); and Newport Bay, Newport Boulevard Bridge in Orange County (44%).

## California Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in California over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **California 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Alameda	Alameda Point Encinal Beach-middle	0	n/a	view
Alameda	Alameda Point Encinal Beach-north	41	7%	view
Alameda	Alameda Point Encinal Beach-south	41	2%	view
Alameda	Crown Beach, 2001 Shoreline Dr.	46	15%	view
Alameda	Crown Beach, Bath House	42	5%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Alameda	Crown Beach, Bird Sanctuary	44	11%	view
Alameda	Crown Beach, Crab Cove	43	9%	view
Alameda	Crown Beach, Sunset Rd.	41	7%	view
Alameda	Crown Beach, Windsurfer Corner	41	2%	view
Contra Costa	Keller Beach-north	42	2%	view
Contra Costa	Keller Beach-south	43	9%	view
Del Norte	Beachfront Park	0	n/a	view
Del Norte	Clifford Kamph Memorial Park	0	n/a	view
Del Norte	Crescent Beach	0	n/a	view
Del Norte	Enderts Beach	0	n/a	view
Del Norte	High Bluff Beach	0	n/a	view
Del Norte	Kellogg Beach	0	n/a	view
Del Norte	Lake Earl Wildlife Area Beaches	0	n/a	view
Del Norte	Pebble Beach	0	n/a	view
Del Norte	Pelican Bay State Beach	0	n/a	view
Del Norte	Point St. George	0	n/a	view
Del Norte	South Beach	0	n/a	view
Del Norte	Wilson Creek Beach	0	n/a	view
Humboldt	Agate Beach	0	n/a	view
Humboldt	Baker Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Humboldt	Big Lagoon	0	n/a	view
Humboldt	Black Sands Beach	0	n/a	view
Humboldt	Carruthers Cove Beach	0	n/a	view
Humboldt	Centerville Beach	0	n/a	view
Humboldt	Clam Beach Co. Park, Clam Beach near Strawberry Creek	37	43%	view
Humboldt	College Cove	0	n/a	view
Humboldt	Crab Co. Park	0	n/a	view
Humboldt	Dead Man's Beach	0	n/a	view
Humboldt	Dry Lagoon	0	n/a	view
Humboldt	Eel River State Wildlife Area	0	n/a	view
Humboldt	Freshwater Lagoon	0	n/a	view
Humboldt	Gold Bluffs Beach	0	n/a	view
Humboldt	Hidden Beach	0	n/a	view
Humboldt	Little Black Sands Beach	0	n/a	view
Humboldt	Little River State Beach	0	n/a	view
Humboldt	Luffenholtz Beach near Luffenholtz Creek	32	9%	view
Humboldt	Mattole River Beach	0	n/a	view
Humboldt	Moonstone Beach near Little River	33	18%	view
Humboldt	North Mad River Mouth, Clam Beach near Mad River	31	0%	view
Humboldt	Old Home Beach (formerly Indian Beach)	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Humboldt	Redwood Creek Beach	0	n/a	view
Humboldt	Samoa Dunes Rec. Area	0	n/a	view
Humboldt	Shelter Cove	0	n/a	view
Humboldt	South Spit	0	n/a	view
Humboldt	Stone Lagoon	0	n/a	view
Humboldt	Trinidad Beach near Mill Creek	33	9%	view
Los Angeles	26610 Latigo Shore Dr, Malibu in front of monitoring well discharge	54	13%	view
Los Angeles	26610 Latigo Shore Dr, Malibu in front of Trivola Bay Villa treatment plant	0	n/a	view
Los Angeles	Abalone Cove, Rancho Palos Verdes	52	0%	view
Los Angeles	Alamitos Bay Beach	55	9%	view
Los Angeles	Armarillo Beach	0	n/a	view
Los Angeles	Avalon Beach 50 feet east of the Green Pleasure Pier	31	19%	view
Los Angeles	Avalon Beach 50 feet west of the Green Pleasure Pier	30	23%	view
Los Angeles	Avalon Beach 100 feet east of the Green Pleasure Pier	31	6%	view
Los Angeles	Avalon Beach 100 feet west of the Green Pleasure Pier	29	14%	view
Los Angeles	Avalon Beach East of the Casino Arch at the steps	32	31%	view
Los Angeles	Basin H	0	n/a	view
Los Angeles	Big Rock Beach, Malibu in front of storm drain	56	21%	view
Los Angeles	Bluff Cove, Palos Verdes Estates	53	2%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Los Angeles	Broad Beach	0	n/a	view
Los Angeles	Carbon Beach, at Sweetwater Canyon	57	14%	view
Los Angeles	Castlerock in front Castlerock storm drain	25	4%	view
Los Angeles	Coral Beach	0	n/a	view
Los Angeles	Corral Creek, East end of Corral Beach (Puerco Beach?), Malibu	52	6%	view
Los Angeles	Dan Blocker County Beach at Solstice Creek	0	n/a	-
Los Angeles	Dockweiler State Beach at North Westchester storm drain	54	2%	view
Los Angeles	Dockweiler State Beach in front of Culver Blvd storm drain	48	8%	view
Los Angeles	Dockweiler State Beach in front of the Imperial Hwy storm drain	48	8%	view
Los Angeles	Dockweiler State Beach just south of Ballona Creek	198	17%	view
Los Angeles	Dockweiler State Beach, El Segundo 50 yards south of Grand Ave extended	0	n/a	view
Los Angeles	Dockweiler State Beach, El Segundo Grand Ave extended	54	6%	view
Los Angeles	Dockweiler State Beach, Playa del Rey in front of the Beaches and Harbors maintenance yard	52	2%	view
Los Angeles	Dockweiler State Beach, Playa del Rey opposite Hyperion Plant, at 1 mile marker	52	2%	view
Los Angeles	El Matador State Beach	0	n/a	-
Los Angeles	El Pescador State Beach	0	n/a	view
Los Angeles	Escondido State Beach at Escondido Creek	0	n/a	-

County	Beach	Total Samples	% of samples exceeding BAV	View
Los Angeles	Hermosa Beach 26th St extended in front of storm drain	53	4%	view
Los Angeles	Hermosa Beach 50 yards south of the Herosa Beach Pier	20	5%	view
Los Angeles	Inner Cabrillo Beach	252	39%	view
Los Angeles	Inner Cabrillo Beach, San Pedro in front of lifeguard tower	252	44%	view
Los Angeles	La Costa Beach	0	n/a	view
Los Angeles	La Piedra State Beach	0	n/a	view
Los Angeles	Las Flores State Beach, at Las Flores Creek	0	n/a	-
Los Angeles	Las Tunas County Beach, at Pena Creek	0	n/a	-
Los Angeles	Las Tunas County Beach, at Tuna Canyon	0	n/a	-
Los Angeles	Leo Carrillo State Beach, Malibu 50 yards east of Arroyo Sequit Creek	0	n/a	view
Los Angeles	Leo Carrillo State Beach, Malibu in front of Arroyo Sequit Creek	50	4%	view
Los Angeles	Long Beach, 2nd St Bridge & Bayshore	54	4%	view
Los Angeles	Long Beach, 5th Place Beach	57	21%	view
Los Angeles	Long Beach, 10th Place Beach	58	16%	view
Los Angeles	Long Beach, 55th Place Beach	61	21%	view
Los Angeles	Long Beach, 56th Place-On Bayside	58	14%	view
Los Angeles	Long Beach, 72nd Place-Beach	60	22%	view
Los Angeles	Long Beach, Colorado Lagoon-North	54	4%	<u>view</u>
Los Angeles	Long Beach, Colorado Lagoon-South	54	4%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Los Angeles	Long Beach, Coronado Ave Beach	57	18%	view
Los Angeles	Long Beach, Granada Ave Beach	61	21%	view
Los Angeles	Long Beach, Molino Ave Beach	57	16%	view
Los Angeles	Long Beach, Mothers' Beach	55	11%	view
Los Angeles	Long Beach, Prospect Ave Beach	56	21%	view
Los Angeles	Long Beach, West side of Belmont Pier	56	18%	view
Los Angeles	Long Point, Rancho Palos Verdes	55	5%	view
Los Angeles	Malaga Cove, Palos Verdes Estates	52	0%	<u>view</u>
Los Angeles	Malibu Lagoon State Beach	0	n/a	view
Los Angeles	Malibu Lagoon, Malibu in front of lifeguard tower	49	2%	view
Los Angeles	Malibu Pier, Malibu 50 yards east of the pier	56	28%	<u>view</u>
Los Angeles	Malibu Point	0	n/a	view
Los Angeles	Manhattan Beach 28th St extended in front of storm drain	54	6%	view
Los Angeles	Manhattan Beach 40th Street extended	20	5%	view
Los Angeles	Manhattan Beach 50 yards south of 28th St extended, in front of storm drain	0	n/a	view
Los Angeles	Manhattan Beach 50 yards south of the Manhattan Beach Pier	20	0%	view
Los Angeles	Mother's Beach, Marina del Rey in front of lifeguard tower	252	36%	view
Los Angeles	Nicholas Canyon County Beach, Malibu 100 yards west of Nicholas Creek	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Los Angeles	Nicholas Canyon County Beach, Malibu in front of Nicholas Creek	50	4%	view
Los Angeles	No Name	0	n/a	-
Los Angeles	Outer Cabrillo Beach, San Pedro	52	0%	view
Los Angeles	Palos Verdes Estates Arroyo Circle extended (Torrance Beach)	20	5%	view
Los Angeles	Paradise Cove, Malibu in front of Ramirez Creek	53	19%	view
Los Angeles	Paradise Cove, Malibu in front of Walnut Creek	0	n/a	-
Los Angeles	Portuguese Bend, Rancho Palos Verdes	52	0%	<u>view</u>
Los Angeles	Puerco Beach, at Marie Canyoon Storm Drain	0	n/a	-
Los Angeles	Puerco Beach, Malibu 50 yards east of creek	0	n/a	<u>view</u>
Los Angeles	Redondo Beach 50 yards north of the Herondo storm drain	0	n/a	view
Los Angeles	Redondo Beach 50 yards south of the Redondo Beach Pier	106	40%	view
Los Angeles	Redondo Beach at the Herondo storm drain	55	13%	view
Los Angeles	Redondo Beach Avenue I extended	20	5%	view
Los Angeles	Redondo Beach Topaz St extended, north side of jetty	55	15%	view
Los Angeles	Robert Meyer Memorial State Beach	0	n/a	view
Los Angeles	Santa Monica State Beach 50 yards south of Montana storm drain	0	n/a	view
Los Angeles	Santa Monica State Beach 50 yards south of Wilshire storm drain	0	n/a	view
Los Angeles	Santa Monica State Beach at the Santa Monica Pier	251	36%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Los Angeles	Santa Monica State Beach in front of Ashland storm drain	252	9%	view
Los Angeles	Santa Monica State Beach in front of Montana storm drain	53	8%	view
Los Angeles	Santa Monica State Beach in front of Pico/Kenter storm drain	251	20%	view
Los Angeles	Santa Monica State Beach in front of Santa Monica Canyon storm drain	252	13%	view
Los Angeles	Santa Monica State Beach in front of Wilshire storm drain	56	21%	view
Los Angeles	Santa Monica State Beach Strand St extended	53	9%	view
Los Angeles	Santa Ynez, at Santa Ynez storm drain	25	24%	view
Los Angeles	South Topanga State Beach	0	n/a	view
Los Angeles	South Will Rogers State Beach	0	n/a	<u>view</u>
Los Angeles	Surfrider Beach, Malibu at the breech or last known breech	261	24%	view
Los Angeles	Topanga County Beach in front of lifeguard headquarters	249	17%	view
Los Angeles	Topanga State Beach	0	n/a	view
Los Angeles	Trancas Beach (West Zuma Beach), Malibu 50 yards east of Trancas Bridge	0	n/a	view
Los Angeles	Trancas Beach (West Zuma Beach), Malibu in front of Trancas Bridge	51	10%	view
Los Angeles	Venice City Beach 50 yards south of Brooks Avenue storm drain	0	n/a	view
Los Angeles	Venice City Beach 50 yards south of Venice Pier	53	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Los Angeles	Venice City Beach in front of Brooks Avenue storm drain	53	8%	view
Los Angeles	Venice City Beach in front of Windward storm drain	48	0%	view
Los Angeles	Venice City Beach Topsail St extended	53	9%	view
Los Angeles	Westward Beach (East Zuma Beach), Malibu in front of Zuma Creek	52	10%	view
Los Angeles	Westward Beach just east of Zuma Creek on Point Dume County Beach	0	n/a	view
Los Angeles	White Point, San Pedro	55	7%	view
Los Angeles	Wilder Addition Park, San Pedro	52	2%	view
Los Angeles	Will Rogers State Beach 50 yards south of Temescal storm drain	0	n/a	view
Los Angeles	Will Rogers State Beach in front of Temescal storm drain	52	4%	view
Los Angeles	Will Rogers State Beach, 17200 Pacific Coast Hwy, Pacific Palisades at staircase	52	4%	view
Los Angeles	Will Rogers State Beach, Bel Air Bay Club, Pacific Palisades 50 yards south of chain link fence	0	n/a	view
Los Angeles	Will Rogers State Beach, Bel Air Bay Club, Pacific Palisades at chain link fence	54	9%	view
Los Angeles	Will Rogers State Beach, Pacific Palisades in front of Pulga storm drain	48	4%	view
Marin	Bolinas Beach	30	7%	view
Marin	Chicken Ranch Beach	31	13%	view
Marin	China Camp	29	0%	view
Marin	Dillon Beach	31	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Marin	Drake's Beach	25	0%	view
Marin	Drake's Estero	0	n/a	view
Marin	Fort Baker, Horseshoe Cove-Northeast	28	11%	view
Marin	Fort Baker, Horseshoe Cove-Northwest	28	7%	view
Marin	Fort Baker, Horseshoe Cove-Southwest	28	0%	view
Marin	Golden Hinde	0	n/a	view
Marin	Heart's Desire	31	3%	view
Marin	Kehoe Beach	0	n/a	view
Marin	Lawson's Landing	31	10%	view
Marin	Limantour Beach	25	4%	view
Marin	Marshall Beach	0	n/a	view
Marin	McClures Beach	0	n/a	view
Marin	McNears Beach	19	32%	view
Marin	Miller Point	31	3%	view
Marin	Millerton Point	23	4%	view
Marin	Muir Beach-Central	29	0%	view
Marin	Muir Beach-North	29	3%	view
Marin	Muir Beach-South	29	0%	view
Marin	Paradise Cove	0	n/a	view
Marin	Rodeo Beach (Chronkite)-Central	28	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Marin	Rodeo Beach (Chronkite)-North	28	4%	view
Marin	Rodeo Beach (Chronkite)-South	28	0%	view
Marin	Schoonmaker Beach	31	10%	view
Marin	Shell Beach	30	7%	view
Marin	Stinson Beach-Central	29	0%	view
Marin	Stinson Beach-North	29	0%	view
Marin	Stinson Beach-South	29	0%	view
Mendocino	Albion River	0	n/a	view
Mendocino	Anchor Bay	0	n/a	view
Mendocino	Arena Cove	0	n/a	view
Mendocino	Big River-Mendocino Bay Headlands SP	28	0%	view
Mendocino	Casper Headlands	25	4%	view
Mendocino	Chadbourne Gulch	0	n/a	view
Mendocino	Greenwood SB	0	n/a	view
Mendocino	Gualala River	0	n/a	view
Mendocino	Hare Creek	29	3%	view
Mendocino	Irish Beach	0	n/a	view
Mendocino	Jug Handle State Reserve	0	n/a	view
Mendocino	MacKerricher State Park	0	n/a	view
Mendocino	Manchester SB	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Mendocino	Navarro River Redwood SP	0	n/a	view
Mendocino	Noyo River	0	n/a	view
Mendocino	Pudding Creek Beach	28	0%	view
Mendocino	Russian Gulch SP	0	n/a	view
Mendocino	Schooner Gulch	0	n/a	view
Mendocino	Ten Mile River	0	n/a	view
Mendocino	Van Damme SP	28	0%	view
Mendocino	Virgin Creek	21	0%	view
Mendocino	Westport/Union Landing	0	n/a	view
Monterey	Andrew Molera State Beach	0	n/a	view
Monterey	Asilomar State Beach, Sunset at Asilomar	35	3%	view
Monterey	Carmel River State Beach	36	11%	view
Monterey	Del Monte Beach	36	25%	view
Monterey	Fort Ord Dunes State Beach	0	n/a	view
Monterey	Garrapata State Beach	0	n/a	view
Monterey	Heritage Harbor	0	n/a	view
Monterey	John Little State Beach	0	n/a	view
Monterey	Julia Pfeiffer Burns State Beach	0	n/a	view
Monterey	Limekiln	0	n/a	view
Monterey	Lovers Point	39	28%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Monterey	Maccabee Beach	0	n/a	view
Monterey	Marina State Beach	0	n/a	view
Monterey	Monastery Beach	0	n/a	view
Monterey	Monterey State Beach	36	3%	view
Monterey	Moss Landing State Beach	0	n/a	view
Monterey	Pacific Grove City Beaches	0	n/a	view
Monterey	Point Lobos State Reserve State Beach	0	n/a	view
Monterey	Point Sur SHP	0	n/a	view
Monterey	Salinas River State Beach	0	n/a	view
Monterey	San Carlos Beach	37	8%	view
Monterey	Seal Rock, Pebble Beach	0	n/a	view
Monterey	Seaside Beach	0	n/a	view
Monterey	Spanish Bay Beach	36	11%	view
Monterey	Stillwater Cove	39	31%	view
Monterey	Zmudowski State Beach	0	n/a	view
Orange	Aliso Beach - 9th St/1000 Steps Beach	100	0%	view
Orange	Aliso Beach - Camel Point	100	1%	view
Orange	Aliso Beach - Middle	100	12%	view
Orange	Aliso Beach - North	100	3%	view
Orange	Aliso Beach - South	101	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Aliso Beach - Table Rock	100	1%	view
Orange	Aliso Beach - Three Arch Bay	101	3%	view
Orange	Aliso Beach - Treasure Island Pier	100	2%	view
Orange	Aliso Beach - Treasure Island Sign	100	2%	view
Orange	Bolsa Chica Beach	51	0%	view
Orange	Bolsa Chica Reserve	51	4%	view
Orange	Bolsa Chica State Beach	4	0%	view
Orange	Capistrano Bay District	0	n/a	-
Orange	Capistrano Beach, 5000' South Outfall	79	11%	view
Orange	Capistrano Beach, 7500' South Outfall	76	9%	view
Orange	Capistrano Beach, 10000' South Outfall	75	5%	view
Orange	Crystal Cove State Park	5	20%	view
Orange	Crystal Cove State Park	6	17%	view
Orange	Crystal Cove State Park	51	2%	view
Orange	Crystal Cove State Park, Los Tancos	50	2%	view
Orange	Crystal Cove State Park, Muddy Creek Downcoast	43	5%	view
Orange	Crystal Cove State Park, Muddy Creek Upcoast	21	0%	view
Orange	Crystal Cove State Park, Pelican Point	5	0%	view
Orange	Crystal Cove State Park, Pelican Point Downcoast	43	0%	view
Orange	Crystal Cove State Park, Pelican Point Upcoast	5	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Dana Point Harbo	1	0%	view
Orange	Dana Point Harbor, Baby Beach - Bouy Line	38	18%	view
Orange	Dana Point Harbor, Baby Beach - East End	34	12%	view
Orange	Dana Point Harbor, Baby Beach - Swim Area	42	31%	view
Orange	Dana Point Harbor, Baby Beach - West End	37	11%	view
Orange	Dana Point Harbor, Fuel Dock	31	0%	view
Orange	Dana Point Harbor, Guest Dock	31	0%	view
Orange	Dana Point Harbor, Harbor Entrance	0	n/a	view
Orange	Dana Point Harbor, Harbor Patrol Dock	31	0%	view
Orange	Dana Point Harbor, M Dock (East Basin)	32	6%	view
Orange	Dana Point Harbor, North Beach Downcoast	40	18%	view
Orange	Dana Point Harbor, Pier	31	0%	view
Orange	Dana Point Harbor, Pilgrim Dock	31	0%	view
Orange	Dana Point Harbor, Youth Dock	31	3%	view
Orange	Dana Point, Dana Strands	100	3%	view
Orange	Dana Point, MSI Beach	76	3%	view
Orange	Dana Point, Salt Creek Beach	100	7%	view
Orange	Doheny State Beach, 1000' South Outfall	78	9%	view
Orange	Doheny State Beach, 2000' South Outfall	80	24%	view
Orange	Doheny State Beach, 3000' South Outfall	77	9%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Doheny State Beach, 4000' South Outfall	77	8%	view
Orange	Doheny State Beach, North Beach	10	30%	view
Orange	Doheny State Beach, North of San Juan Creek	78	18%	view
Orange	Doheny State Beach, San Juan Creek Mouth	0	n/a	view
Orange	Doheny State Beach, Surfzone at Outfall	76	9%	view
Orange	Doheny State Beach, Upper San Juan Creek	0	n/a	view
Orange	Emerald Bay (drain)	0	n/a	view
Orange	Huntington City Beach, 17th Street	51	6%	view
Orange	Huntington City Beach, Beach Hut	52	2%	view
Orange	Huntington City Beach, Bluffs	52	2%	view
Orange	Huntington City Beach, Jack's Snack Bar	51	0%	view
Orange	Huntington Harbour, 11th Street	33	9%	view
Orange	Huntington Harbour, Admiralty Drive	31	6%	view
Orange	Huntington Harbour, Anaheim Bay - Gas Dock	31	3%	view
Orange	Huntington Harbour, Anderson Street Marina	36	17%	view
Orange	Huntington Harbour, Clubhouse Marina	31	3%	view
Orange	Huntington Harbour, Coral Cay Beach	31	3%	view
Orange	Huntington Harbour, Davenport Beach	32	9%	view
Orange	Huntington Harbour, Harbour Channel	31	6%	view
Orange	Huntington Harbour, Humboldt Beach	33	15%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Huntington Harbour, Mothers Beach	32	9%	view
Orange	Huntington Harbour, Sea Gate	32	9%	view
Orange	Huntington Harbour, Sunset Aquatic Park	33	9%	view
Orange	Huntington Harbour, Trinidad Lane Beach	30	7%	view
Orange	Huntington State Beach, 50' N of Santa Ana River	102	7%	view
Orange	Huntington State Beach, Brookhurst Street	105	10%	view
Orange	Huntington State Beach, Magnolia Street	101	8%	view
Orange	Huntington State Beach, Santa Ana River - North	39	3%	view
Orange	Huntington State Beach, SCE Plant	102	5%	view
Orange	Laguna Beach, Blue Lagoon	100	1%	view
Orange	Laguna Beach, Bluebird Canyon	100	5%	view
Orange	Laguna Beach, Crescent Bay	46	2%	view
Orange	Laguna Beach, Emerald Bay	6	0%	view
Orange	Laguna Beach, Emerald Bay Downcoast	40	0%	view
Orange	Laguna Beach, Emerald Bay Upcoast	0	n/a	view
Orange	Laguna Beach, Hotel Laguna	101	5%	view
Orange	Laguna Beach, Laguna Main Bch Downcoast	40	5%	view
Orange	Laguna Beach, Laguna Main Beach	6	0%	view
Orange	Laguna Beach, Laguna Main Beach Upcoast	0	n/a	view
Orange	Laguna Beach, Victoria Beach	100	4%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Monarch Beach	35	9%	view
Orange	Newport Bay, 10th Street	52	4%	view
Orange	Newport Bay, 15th Street	53	4%	view
Orange	Newport Bay, 19th Street	52	0%	view
Orange	Newport Bay, 33rd Street	57	14%	view
Orange	Newport Bay, 38th Street	53	9%	view
Orange	Newport Bay, 43rd Street	53	6%	view
Orange	Newport Bay, Abalone Avenue	52	6%	view
Orange	Newport Bay, Alvarado/Bay Island	52	12%	view
Orange	Newport Bay, Back Bay Drive Drain Pipe	0	n/a	view
Orange	Newport Bay, Bayshore Beach	52	0%	view
Orange	Newport Bay, Bayside Drive Beach	56	13%	view
Orange	Newport Bay, Big Canyon Creek	0	n/a	view
Orange	Newport Bay, De Anza	53	4%	view
Orange	Newport Bay, Garnet Avenue	54	9%	view
Orange	Newport Bay, Grand Canal	54	9%	view
Orange	Newport Bay, Grant Street	33	9%	view
Orange	Newport Bay, Lancaster/62nd Street	31	0%	view
Orange	Newport Bay, Lido Yacht Club	52	6%	view
Orange	Newport Bay, N Street Beach	51	2%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Newport Bay, Newport Blvd Bridge	52	44%	view
Orange	Newport Bay, Newport Dunes East	58	10%	view
Orange	Newport Bay, Newport Dunes Middle	53	6%	view
Orange	Newport Bay, Newport Dunes North	53	2%	view
Orange	Newport Bay, Newport Dunes West	54	11%	view
Orange	Newport Bay, North Star Beach	54	9%	view
Orange	Newport Bay, Onyx Avenue	53	6%	view
Orange	Newport Bay, Park Avenue	52	0%	view
Orange	Newport Bay, Promontory Point	53	0%	view
Orange	Newport Bay, Rhine Channel	53	4%	view
Orange	Newport Bay, Rocky Point	52	0%	view
Orange	Newport Bay, Ruby Avenue	53	4%	view
Orange	Newport Bay, San Diego Crk at Campus Dr	0	n/a	view
Orange	Newport Bay, Santa Ana Delhi Channel	0	n/a	view
Orange	Newport Bay, Sapphire Avenue	53	4%	view
Orange	Newport Bay, Ski Zone	6	33%	view
Orange	Newport Bay, Vaughns Launch	20	15%	view
Orange	Newport Bay, Via Genoa	52	0%	view
Orange	Newport Beach, 15th/16th St.	50	4%	view
Orange	Newport Beach, 38th Street	50	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Newport Beach, 52nd/53rd Street	51	6%	view
Orange	Newport Beach, Balboa Pier	50	4%	view
Orange	Newport Beach, Corona Del Mar	50	2%	view
Orange	Newport Beach, Liittle Corona	12	8%	view
Orange	Newport Beach, Little Corona Downcoast	43	21%	view
Orange	Newport Beach, Little Corona Upcoast	42	12%	view
Orange	Newport Beach, Orange Street	50	6%	view
Orange	Newport Beach, Santa Ana River - South	0	n/a	view
Orange	Newport Beach, The Wedge	50	0%	view
Orange	Poche County Beach	83	20%	view
Orange	Salt Creek Beach Park	0	n/a	view
Orange	San Clemente City Beach, 450' North of Pier	79	4%	view
Orange	San Clemente City Beach, North Beach	79	11%	view
Orange	San Clemente City Beach, T-Street Beach Downcoast	37	0%	view
Orange	San Clemente City Beach, T-Street Beach Upcoast	0	n/a	view
Orange	San Clemente City Beach, Trafalgar Street Beach	6	0%	view
Orange	San Clemente State Beach, Avenida Calafia	77	3%	view
Orange	San Clemente State Beach, Las Palmeras	73	1%	view
Orange	Seal Beach Surfside, 1st Street	108	26%	view
Orange	Seal Beach Surfside, 8th Street	53	9%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Orange	Seal Beach Surfside, 14th Street	51	8%	view
Orange	Seal Beach Surfside, 100 yds South of Pier	51	4%	view
Orange	Seal Beach Surfside, San Gab R at 1st St Pk Lot	0	n/a	view
Orange	Seal Beach Surfside, Sea Way	52	2%	view
Orange	South Laguna, Laguna Lido Apartment	100	0%	view
Orange	Sunset Beach, Broadway	51	0%	view
San Diego	Agua Hedionda Lagoon	0	n/a	view
San Diego	Bayside Park	0	n/a	view
San Diego	Bird Rock (NR)	0	n/a	view
San Diego	Border Field State Park, Border Fence N side	54	11%	view
San Diego	Border Field State Park, Monument Rd.	56	7%	view
San Diego	Buccaneer Beach, 500'N. of Loma Alta outlet	52	2%	view
San Diego	Buccaneer Beach, Loma Alta Creek oultet	54	19%	view
San Diego	Cardiff State Beach, Cardiff/ San Elijo Lagoon	99	6%	view
San Diego	Cardiff State Beach, Charthouse parking	51	0%	view
San Diego	Cardiff State Beach, Las Olas (Georges)	51	2%	view
San Diego	Cardiff State Beach, Seaside State Park	51	2%	view
San Diego	Carlsbad City Beach, Buena Vista Lagoon outlet	1	0%	view
San Diego	Carlsbad Municipal Beach	0	n/a	-
San Diego	Carlsbad State Beach, Tamarack Av	48	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Diego	Carlsbad State Beach, Warm Water Jetty	28	0%	view
San Diego	Coronado Cays (NR)	0	n/a	view
San Diego	Coronado City beaches, Avd. del Sol	53	0%	view
San Diego	Coronado, Central beach	0	n/a	view
San Diego	Del Mar municipal beach other Sea Orbit Ln, 12th Street	0	n/a	view
San Diego	Dog Beach O.B. S.D. San Diego River outlet	96	8%	view
San Diego	Fletcher Cove outlet	51	4%	view
San Diego	Harbor Beach, San Luis Rey River outlet	87	1%	view
San Diego	Imperial Beach municipal beach, Camp Surf jetty	0	n/a	view
San Diego	Imperial Beach municipal beach, Carnation Ave.	58	3%	view
San Diego	Imperial Beach municipal beach, Cortez Ave	24	4%	view
San Diego	Imperial Beach municipal beach, End of Seacoast Dr	63	5%	view
San Diego	Imperial Beach municipal beach, Imperial Beach Boulevard	0	n/a	view
San Diego	Imperial Beach municipal beach, Imperial Beach Pier	52	2%	view
San Diego	Imperial Beach municipal beach, Palm Ave	0	n/a	view
San Diego	La Jolla Community Beach	0	n/a	view
San Diego	La Jolla Cove	34	6%	view
San Diego	La Jolla Shores Beach	24	4%	view
San Diego	La Jolla Shores Beach, Ave De La Playa	68	6%	view
San Diego	Leucadia	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Diego	Marine Street Beach	0	n/a	view
San Diego	Mission Bay, Bahia Point	29	0%	view
San Diego	Mission Bay, Campland On The Bay, Campland swimming beach	28	4%	view
San Diego	Mission Bay, Crown Point drain	29	0%	view
San Diego	Mission Bay, Crown Point Shores, Wildlife Refuge fence	29	0%	view
San Diego	Mission Bay, De Anza Cove, 1st drain east of swim area	30	7%	view
San Diego	Mission Bay, Fanuel Park	27	0%	view
San Diego	Mission Bay, Fiesta Island NW shore	0	n/a	view
San Diego	Mission Bay, Leisure Lagoon, comfort sta N of Leisure	38	21%	view
San Diego	Mission Bay, Leisure Lagoon, Leisure Lagoon swim area	30	7%	view
San Diego	Mission Bay, Mariners Basin, Bonita Cove eastern shore	30	3%	view
San Diego	Mission Bay, north pacific passage	0	n/a	view
San Diego	Mission Bay, Quivera Basin	0	n/a	view
San Diego	Mission Bay, Riviera Shores	0	n/a	view
San Diego	Mission Bay, Sail Bay, Whiting Ct Catamaran	0	n/a	view
San Diego	Mission Bay, San Juan Cove	0	n/a	view
San Diego	Mission Bay, Santa Barbara Cove	0	n/a	view
San Diego	Mission Bay, Tecolote playground	30	7%	view
San Diego	Mission Bay, Tecolote Shores swim area	30	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Diego	Mission Bay, Vacation Isle, Mission Bay Vacation Isle North Cove	28	7%	view
San Diego	Mission Bay, Vacation Isle, S side Vacation Isle	0	n/a	view
San Diego	Mission Bay, Vacation Isle, Ski Beach	28	0%	view
San Diego	Mission Bay, Ventura Cove	1	0%	view
San Diego	Mission Bay, Visitor's Center, drain S of Visitor's Cntr	36	19%	view
San Diego	Mission Beach, Belmont Park	62	2%	view
San Diego	Moonlight Beach, Cottonwood Creek outlet	96	10%	view
San Diego	non-accessible or restricted access shoreline, Point Loma Lighthouse	59	0%	view
San Diego	non-accessible or restricted access shoreline, Point Loma Treatment Plant	58	0%	<u>view</u>
San Diego	north Imperial Beach-Camp Surf jetty	0	n/a	<u>view</u>
San Diego	Ocean Beach	0	n/a	<u>view</u>
San Diego	Oceanside Harbor	0	n/a	view
San Diego	Oceanside municipal beach, Cassidy Street	52	2%	view
San Diego	Oceanside municipal beach, Forester Street	52	2%	view
San Diego	Oceanside municipal beach, St. Malo Beach	52	0%	view
San Diego	Oceanside municipal beach, Tyson Street	52	4%	view
San Diego	Oceanside Pier area	0	n/a	view
San Diego	Pacific Beach	0	n/a	view
San Diego	Powerhouse Park 15th Street	48	2%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Diego	San Diego Bay Chula Vista Bayside Park (J Street)	33	12%	view
San Diego	San Diego Bay Coronado Cays	0	n/a	view
San Diego	San Diego Bay Glorietta Bay	27	7%	view
San Diego	San Diego Bay, Lawrence St. outlet	31	3%	view
San Diego	San Diego Bay, Shelter Is Shelter Is shoreline park	30	3%	view
San Diego	San Diego Bay, Silver Strand (bayside)	0	n/a	view
San Diego	San Diego Bay, Spanish Landing	28	4%	view
San Diego	San Diego Bay, Sweetwater River (NR)	0	n/a	-
San Diego	San Diego Bay, Tidelands Park	30	20%	view
San Diego	San Dieguito River Beach	0	n/a	-
San Diego	San Dieguito River Beach, Del Mar, San Dieguito River outlet	92	5%	view
San Diego	San Elijo State Beach, Pipes	51	2%	view
San Diego	San Elijo State Beach, stairs near main entrance	51	2%	view
San Diego	San Onofre State Beach	0	n/a	view
San Diego	San Onofre State Beach Old Man's north SO	0	n/a	-
San Diego	Seascape Beach Park	28	0%	view
San Diego	Shell Beach, Bermuda Ave	64	3%	view
San Diego	Shell Beach, Newport Ave	64	2%	view
San Diego	Shell Beach, O.B. pier at Narrangaset	59	0%	view
San Diego	Shell Beach, Stub Jetty south side	65	5%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Diego	Silver Strand State Beach, Silver Strand N end (ocean)	55	0%	view
San Diego	Solana Beach City Beaches, Tide Beach center	51	2%	view
San Diego	South Carlsbad State Beach, Batiquitos Lagoon outlet	49	2%	view
San Diego	South Carlsbad State Beach, Cerezo Drive	52	2%	view
San Diego	South Carlsbad State Beach, Encina Creek outlet	52	0%	view
San Diego	South Carlsbad State Beach, Palomar Airport	52	0%	view
San Diego	South Carlsbad State Beach, Poinsettia Lane	52	0%	view
San Diego	South Carlsbad State Beach, Ponto Drive	52	0%	view
San Diego	South Casa Beach	63	14%	view
San Diego	South Casa Beach S.D.	27	0%	view
San Diego	Spanish Landing Park	0	n/a	view
San Diego	Sunset Cliffs Park, Ladera Street	59	3%	view
San Diego	Swami's Park, Swami's	27	0%	view
San Diego	Tecolote Shores	0	n/a	view
San Diego	Tide Beach Park	0	n/a	view
San Diego	Tijuana River	0	n/a	-
San Diego	Tijuana Slough National Wildlife Refuge, 3/4 mi. N of TJ River	54	2%	view
San Diego	Tijuana Slough National Wildlife Refuge, Tijuana Estuary mouth	85	24%	view
San Diego	Torrey Pines City Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Diego	Torrey Pines State Beach, Black's Beach	0	n/a	view
San Diego	Torrey Pines State Beach, Los Peasquitos Lagoon	112	19%	view
San Diego	Tourmaline Surfing Park (monitoring site EH-255)	27	4%	view
San Diego	Tourmaline Surfing Park (monitoring site FM-030)	46	0%	view
San Diego	USMC Camp Pendleton-Camp del Mar	0	n/a	view
San Diego	Whispering Sands Nicholson Pt., Coast Blvd gazebo	0	n/a	view
San Diego	Whispering Sands Nicholson Pt., Ravina south	41	0%	view
San Diego	WindanSea Beach, Playa Del Norte	47	0%	view
San Francisco	Aquatic Park, Hyde Street Pier	55	4%	view
San Francisco	Aquatic Park, Mid-beach	64	19%	view
San Francisco	Baker Beach, Lobos Creek at Lower Parking Lot	64	28%	view
San Francisco	Baker Beach, Opposite Seacliff 2 Pumping Station	56	7%	view
San Francisco	Baker Beach, Upper Parking Lot	64	3%	view
San Francisco	Candlestick Point, Jack Rabbit Beach	54	4%	view
San Francisco	Candlestick Point, Sunnydale Cove	63	22%	view
San Francisco	Candlestick Point, Windsurfer Circle	79	47%	view
San	China Beach, China Beach	51	2%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Francisco				
San Francisco	Crissy Field West	54	4%	view
San Francisco	Crissy Field, New Beach	59	17%	view
San Francisco	Ocean Beach at Vicente St.	4	75%	view
San Francisco	Ocean Beach, at Balboa St.	54	0%	view
San Francisco	Ocean Beach, at Lincoln Ave.	55	2%	view
San Francisco	Ocean Beach, at Pacheco St.	1	0%	view
San Francisco	Ocean Beach, at Sloat Blvd.	55	4%	view
San Francisco	Ocean Beach, Fort Funston	0	n/a	view
San Luis Obispo	Avila Beach - Halfway between San Luis Creek and pier	54	7%	view
San Luis Obispo	Avila Beach, 249 yds east of pier by last steps on rock wall	55	9%	view
San Luis Obispo	Cayucos Beach, Farthest swing set, near D street	53	6%	view
San Luis Obispo	Cayucos Beach, Half way between creek and pier	54	9%	view
San Luis Obispo	Cayucos Beach, Studio drive parking lot, south of Old Creek	53	2%	view
San Luis	Hearst Memorial State Beach, 100 feet east of the pier	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Obispo				
San Luis Obispo	Hearst Memorial State Beach, 100 feet west of the pier	0	n/a	view
San Luis Obispo	Leffingwell Beach	0	n/a	view
San Luis Obispo	Montana De Oro - Hazard Canyon	53	9%	view
San Luis Obispo	Moonstone Beach	0	n/a	view
San Luis Obispo	Morro Bay City Beach, 75 ft north of main parking lot	52	2%	view
San Luis Obispo	Morro Bay City Beach, Atascadero Ave	51	2%	view
San Luis Obispo	Morro Bay City Beach, Small parking lot south side of Morro Bay Creek	48	0%	view
San Luis Obispo	Morro Strand State Beach, Alva Paul-Beachcomber Dr & Luzon South	52	0%	view
San Luis Obispo	N Morro Strand State Beach	0	n/a	view
San Luis Obispo	Oceano Dunes State Rec Area Post 4	0	n/a	view
San Luis Obispo	Oceano Dunes State Rec Area, 350 yds north of Pier Ave	54	4%	view
San Luis Obispo	Oceano Dunes State Rec Area, 571 yds south of Pier Ave	52	2%	view
San Luis Obispo	Oceano Dunes State Rec Area, Pier Ave	54	6%	view
San Luis	Olde Port Beach-11	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Obispo				
San Luis Obispo	Olde Port Beach-12	61	20%	view
San Luis Obispo	Pismo State Beach, 40 ft south of pier	58	17%	view
San Luis Obispo	Pismo State Beach, 302 yds south of Pier-Sea Venture green roof-Ocean	53	6%	view
San Luis Obispo	Pismo State Beach, 338 yds north of pier-Edgewater Motel	48	6%	view
San Luis Obispo	Pismo State Beach, Oceano	0	n/a	view
San Luis Obispo	S Morro Strand State Beach	0	n/a	view
San Luis Obispo	San Simeon Beach	53	6%	view
San Luis Obispo	Sewers, Silver Shoals Drive	54	6%	view
San Luis Obispo	Shell Beach	0	n/a	view
San Luis Obispo	Spyglass Park	0	n/a	view
San Mateo	Ano Nuevo State Refuge	0	n/a	view
San Mateo	Aquatic Park	50	64%	view
San Mateo	Bean Hollow State Beach	39	0%	view
San Mateo	Capistrano Blvd. Beach	0	n/a	view
San Mateo	Coyote Point County Park	53	17%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Mateo	Dunes State Beach	53	4%	view
San Mateo	El Grandada	0	n/a	view
San Mateo	Elmar Beach	0	n/a	view
San Mateo	Fitzgerald Marine (Moss Beach)	50	2%	view
San Mateo	Francis State Beach	53	0%	view
San Mateo	Gazos Creek Access	40	3%	view
San Mateo	Gray Whale State Beach	0	n/a	view
San Mateo	Kiteboard Beach	43	23%	view
San Mateo	Lakeshore Park	52	48%	view
San Mateo	Manor Beach	0	n/a	view
San Mateo	Martin's Beach	0	n/a	view
San Mateo	Maverick's Beach	0	n/a	view
San Mateo	Miramar Beach	0	n/a	view
San Mateo	Montara State Beach	52	0%	view
San Mateo	Mori Point	0	n/a	view
San Mateo	Naples Beach	0	n/a	view
San Mateo	Oyster Point Marina	50	12%	view
San Mateo	Pacifica State Beach, Linda Mar Beach #5	52	12%	view
San Mateo	Pebble Beach	0	n/a	view
San Mateo	Pescadero State Beach	40	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Mateo	Pigeon Point Beach	0	n/a	view
San Mateo	Pillar Point-Capistrano	0	n/a	view
San Mateo	Pillar Point-Mavericks Parking lot	53	9%	view
San Mateo	Pillar Point-outer harbor	0	n/a	view
San Mateo	Pillar Point-surf-West Point Avenue	56	28%	view
San Mateo	Pomponio State Beach	40	3%	view
San Mateo	Poplar Beach	0	n/a	view
San Mateo	Redondo Beach	0	n/a	view
San Mateo	Rockaway Beach	52	2%	view
San Mateo	Roosevelt State Beach	53	2%	view
San Mateo	Ross's Cove	0	n/a	view
San Mateo	San Gregorio State Beach	25	0%	view
San Mateo	Sand Beach	0	n/a	view
San Mateo	Sharp Park Beach #3	53	0%	view
San Mateo	Sharp Park Beach #6	52	0%	view
San Mateo	Surfers Beach	51	2%	view
San Mateo	Thornton State Beach	0	n/a	view
San Mateo	Tunitas Beach	0	n/a	view
San Mateo	Vallejo Beach	0	n/a	view
San Mateo	Venice State Beach	53	9%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Santa Barbara	1000 Steps	0	n/a	view
Santa Barbara	Arroyo Burro	59	19%	<u>view</u>
Santa Barbara	Arroyo Quemado	0	n/a	<u>view</u>
Santa Barbara	Butterfly Beach	54	9%	<u>view</u>
Santa Barbara	Campus Pt.	0	n/a	view
Santa Barbara	Carpinteria City	0	n/a	<u>view</u>
Santa Barbara	Carpinteria State	53	11%	<u>view</u>
Santa Barbara	Coal Oil Point	54	7%	<u>view</u>
Santa Barbara	Depressions	0	n/a	view
Santa Barbara	Devereaux	0	n/a	<u>view</u>
Santa Barbara	East Beach Sycamore Creek	55	5%	<u>view</u>
Santa Barbara	East Beach- Mission Creek	56	18%	<u>view</u>
Santa Barbara	El Capitan State Beach	56	13%	<u>view</u>
Santa Barbara	Ellwood	0	n/a	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Santa Barbara	Gaviota State Beach	51	8%	view
Santa Barbara	Goleta Beach	55	7%	view
Santa Barbara	Guadalupe Dunes Beach	46	7%	view
Santa Barbara	Hammonds	53	2%	<u>view</u>
Santa Barbara	Haskell's	0	n/a	<u>view</u>
Santa Barbara	Hope Ranch Beach	54	13%	view
Santa Barbara	Isla Vista Beach	0	n/a	view
Santa Barbara	Jalama Beach	51	10%	<u>view</u>
Santa Barbara	Leadbetter	57	14%	view
Santa Barbara	Loon Point	0	n/a	view
Santa Barbara	Mesa Lane	0	n/a	<u>view</u>
Santa Barbara	Miramar	0	n/a	view
Santa Barbara	Ocean Beach	0	n/a	<u>view</u>
Santa Barbara	Padaro Lane	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Santa Barbara	Refugio State Beach	54	7%	view
Santa Barbara	Rincon at Bates Beach	0	n/a	view
Santa Barbara	Sands Beach at Coal Oil Point	0	n/a	view
Santa Barbara	Santa Claus Lane	0	n/a	view
Santa Barbara	Summerland Beach	55	9%	view
Santa Barbara	Surf Beach	0	n/a	view
Santa Barbara	West Beach	0	n/a	view
Santa Cruz	Beercan Beach	0	n/a	view
Santa Cruz	Capitola Beach east of Jetty	53	11%	view
Santa Cruz	Capitola Beach west of Jetty	61	33%	view
Santa Cruz	Corcoran Lagoon Beach	13	8%	view
Santa Cruz	Cowell Beach Stairs	54	9%	view
Santa Cruz	Cowell Beach west of Wharf	75	11%	view
Santa Cruz	Hidden Beach	11	0%	view
Santa Cruz	Hooper's Beach	0	n/a	view
Santa Cruz	Lighthouse Beach	12	0%	view
Santa Cruz	Main Beach at Boardwalk	55	15%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Santa Cruz	Main Beach at San Lorenzo	53	8%	view
Santa Cruz	Manresa State Beach	12	0%	view
Santa Cruz	Mitchells Cove Beach	12	42%	view
Santa Cruz	Moran Lake Beach	12	8%	view
Santa Cruz	Natural Bridges State Beach	52	4%	view
Santa Cruz	Neary Lagoon mouth	0	n/a	-
Santa Cruz	New Brighton State Beach	51	6%	view
Santa Cruz	Pajaro Dunes State Beach	11	0%	view
Santa Cruz	Pleasure Point Beach	13	0%	view
Santa Cruz	Rio del Mar Beach	51	10%	view
Santa Cruz	San Vicente Beach	11	0%	view
Santa Cruz	Schwan Lake	0	n/a	-
Santa Cruz	Scott Creek Beach	11	0%	view
Santa Cruz	Seabright State Beach	50	6%	view
Santa Cruz	Seacliff State Beach	52	2%	view
Santa Cruz	Seascape Beach	0	n/a	view
Santa Cruz	Sunny Cove Beach	13	8%	view
Santa Cruz	Sunset Beach	12	0%	view
Santa Cruz	Trestle Beach	0	n/a	view
Santa Cruz	Twin Lakes State Beach	52	4%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Santa Cruz	Waddell Creek Beach	11	0%	view
Sonoma	Black Point Regional Park Beach	30	0%	view
Sonoma	Campbell Cove State Beach	36	6%	view
Sonoma	Doran Regional Park Beach	29	7%	view
Sonoma	Goat Rock State Beach	30	0%	view
Sonoma	Gualala Regional Park Beach	30	0%	view
Sonoma	Salmon Creek State Beach	30	0%	view
Sonoma	Stillwater Regional Park Beach	36	8%	view
Ventura	County Line Beach	28	0%	view
Ventura	Deer Creek Beach	0	n/a	view
Ventura	Emma Wood State Beach	54	6%	view
Ventura	Faria County Park	52	4%	view
Ventura	Hobie Beach	45	9%	view
Ventura	Hobson County Park	29	0%	view
Ventura	Hollywood Bch-La Crescen.	28	0%	view
Ventura	Hollywood Bch-Los Robles	44	0%	view
Ventura	Kiddie Beach	56	16%	view
Ventura	La Conchita Beach	0	n/a	view
Ventura	Mandos Cove Beach	29	0%	view
Ventura	Marina Park Beach	28	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ventura	McGrath State Beach, station 2600	0	n/a	view
Ventura	McGrath State Beach, station 2700	1	0%	view
Ventura	McGrath State Beach, station 2800	0	n/a	view
Ventura	Mussel Shoals Beach	0	n/a	view
Ventura	Oil Piers Beach	53	4%	view
Ventura	Ormond Bch-Indust. Drain	35	0%	view
Ventura	Ormond Beach- J St.	52	2%	view
Ventura	Ormond Beach-Arnold Rd.	34	0%	view
Ventura	Oxnard Bch Pk-Falkirk Ave	41	0%	view
Ventura	Oxnard Bch Pk-Starfish Dr	41	0%	view
Ventura	Oxnard Bch-5th St.	28	0%	view
Ventura	Oxnard Bch-Outrigger Way	28	0%	view
Ventura	Peninsula Bch/Harbor Cove	29	3%	view
Ventura	Point Mugu Beach	28	0%	view
Ventura	Port Hueneme Beach Pk.	45	2%	view
Ventura	Promenade Pk-Calif. St.	28	4%	view
Ventura	Promenade Pk-Figueroa St.	54	4%	view
Ventura	Promenade Pk-Redwood Apts-15000	28	4%	view
Ventura	Promenade Pk-Redwood Apts-16000	0	n/a	view
Ventura	Rincon Beach-1000	54	4%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ventura	Rincon Beach-1050	29	7%	view
Ventura	Rincon Parkway North	0	n/a	view
Ventura	San Buenaventura State Beach, Dover Lane	29	0%	view
Ventura	San Buenaventura State Beach, Kalorama St.	28	0%	view
Ventura	San Buenaventura State Beach, San Jon Rd.	53	2%	view
Ventura	San Buenaventura State Beach, Weymouth Ln.	28	0%	view
Ventura	Seaside Wilderness Park Beach	0	n/a	view
Ventura	Silverstrand Beach, S. Paula	44	2%	view
Ventura	Silverstrand Beach, San Nic.	44	0%	view
Ventura	Silverstrand Beach, Sawtelle	44	0%	view
Ventura	Solimar Beach	54	6%	view
Ventura	South Jetty Beach	0	n/a	view
Ventura	Staircase Beach	26	0%	view
Ventura	Surfer's Knoll Beach	54	0%	view
Ventura	Surfer's Point at Seaside	53	0%	view
Ventura	Sycamore Cove Beach	28	0%	view
Ventura	Thornhill Broome Beach	28	0%	view
Ventura	Ventura River	0	n/a	-

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

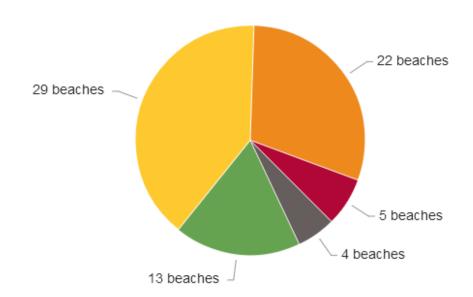
# **State Summary: Connecticut**

Ranked 12th in Beach Water Quality (out of 30 states) 10% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

## **Connecticut 2013 Beach Water Quality Summary**



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 4 beaches (5%) were not monitored or had a limited number of samples (fewer than 12)
- 13 beaches (18%) did not have any samples exceed the national BAV safety threshold
- 29 beaches (40%) had >0-10% of their samples exceed the national BAV safety threshold
- 22 beaches (30%) had >10-20% of their samples exceed the national BAV safety threshold
- 5 beaches (7%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Connecticut has 73 public beaches stretching along 15 miles of Long Island Sound coastline. The Connecticut Department of Public Health (CTDPH) administers the state's BEACH Act grant. Connecticut's monitoring season runs from Memorial Day to Labor Day. Water quality reports and swimming advisories are available on the Connecticut Department of Energy and Environmental Protection's website.

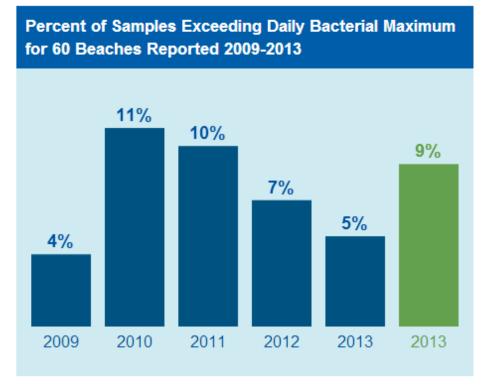
### What Does Beach Water Monitoring Show?

In 2013, Connecticut reported 73 coastal beaches, 70 of which were monitored. Of all reported beach monitoring samples, 10% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Town Beach (Clinton) in Middlesex County (27%), Clark Avenue Beach in New Haven County (26%), Byram Beach in Fairfield County (24%), Bransford Point Beach in New Haven County (23%), and Jacobs Beach (Town Beach) in New Haven County (23%).

## Connecticut Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Connecticut over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Connecticut 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Fairfield	Bell Island Beach	32	0%	view
Fairfield	Burying Hill Beach	14	14%	view
Fairfield	Byram Beach	51	24%	view
Fairfield	Calf Pasture Beach	51	12%	view
Fairfield	Compo Beach	57	19%	view
Fairfield	Cummings Beach	54	4%	view
Fairfield	East (Cove Island) Beach	51	2%	view
Fairfield	Great Captain'S Island Beach	28	0%	view
Fairfield	Greenwich Point Beach	54	15%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Fairfield	Hickory Bluff Beach	16	6%	view
Fairfield	Island Beach	28	7%	view
Fairfield	Jennings Beach	30	10%	view
Fairfield	Long Beach (Marnick'S)	14	0%	view
Fairfield	Long Beach (Proper)	28	0%	view
Fairfield	Marvin Beach	16	13%	view
Fairfield	Pear Tree Point Beach	26	8%	view
Fairfield	Penfield Beach	30	10%	view
Fairfield	Quigley Beach	17	0%	view
Fairfield	Rowayton Beach	16	0%	view
Fairfield	Sasco Beach	31	16%	view
Fairfield	Seaside Park Beach	67	7%	view
Fairfield	Shady Beach	68	9%	view
Fairfield	Sherwood Island State Park Beach	52	2%	view
Fairfield	Short Beach	44	11%	view
Fairfield	South Pine Creek Beach	15	13%	view
Fairfield	Southport Beach	30	13%	view
Fairfield	Weed Beach	18	0%	view
Fairfield	West Beach	57	16%	view
Middlesex	Harvey'S Beach	14	7%	view
Middlesex	Middle Beach/Stannard Beach	0	n/a	view
Middlesex	Town Beach (Clinton)	15	27%	view
Middlesex	Town Beach (Old Saybrook)	14	7%	view
Middlesex	Westbrook Town Beach/West Beach	0	n/a	view
New Haven	Altschuler Beach	15	7%	view
New Haven	Anchor Beach (Merwin Point) #1	14	7%	view
New Haven	Anchor Beach (Merwin Point) #2	14	0%	view
New Haven	Branford Point Beach	26	23%	view
New Haven	Clark Avenue Beach	23	26%	view
New Haven	Dawson Beach	15	13%	view
New Haven	East Haven Town Beach	40	3%	view
New Haven	East Wharf Beach	13	0%	view
New Haven	Fort Hale Park Beach	78	12%	view
New Haven	Gulf Beach	14	0%	view
New Haven	Hammonasset Beach State Park Beach	83	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
New Haven	Jacobs Beach (Town Beach)	48	23%	view
New Haven	Lighthouse Point Beach	118	8%	view
New Haven	Morse Beach	15	7%	view
New Haven	Oak Street A Beach	15	20%	view
New Haven	Oak Street B Beach	15	13%	view
New Haven	Pent Road Beach	13	15%	view
New Haven	Rock Street Beach	8	0%	view
New Haven	Seabluff Beach	15	13%	view
New Haven	Seaview Beach	15	13%	view
New Haven	Silver Sands State Park Beach	68	3%	view
New Haven	South Street Beach	15	13%	view
New Haven	Stony Creek Beach	20	5%	view
New Haven	Surf Club Beach	26	0%	view
New Haven	Walnut Beach	28	14%	view
New Haven	West Wharf Beach	13	8%	view
New Haven	Woodmont Beach	14	0%	view
New London	Dubois Beach	0	n/a	view
New London	Eastern Point Beach	15	7%	view
New London	Esker Point Beach	16	6%	view
New London	Green Harbor Beach	16	13%	view
New London	Hole-In-The-Wall Beach	17	18%	view
New London	Mccook Point Beach	15	7%	view
New London	Noank Dock	15	7%	view
New London	Ocean Beach Park	32	6%	view
New London	Pleasure Beach	15	0%	view
New London	Rocky Neck State Park Beach	91	14%	view
New London	Soundview Beach	17	6%	view
New London	Waterford Town Beach	15	7%	view
New London	White Sands Beach	17	6%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for

designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

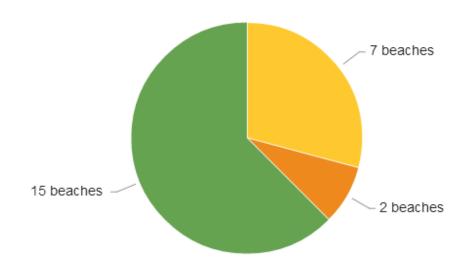
# **State Summary: Delaware**

Ranked 1st in Beach Water Quality (out of 30 states) 3% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### **Delaware 2013 Beach Water Quality Summary**



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 0 beaches (0%) were not monitored or had a limited number of samples (fewer than 12)
- 15 beaches (63%) did not have any samples exceed the national BAV safety threshold
- 7 beaches (29%) had >0-10% of their samples exceed the national BAV safety threshold
- 2 beaches (8%) had >10-20% of their samples exceed the national BAV safety threshold
- 0 beaches (0%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Delaware has 50 miles of Delaware Bay coastline, 25 miles of Atlantic Ocean coastline, and 115 miles of inland shoreline along Rehoboth Bay, Indian River Bay, and Little Assawoman Bay. The state's marine beach water monitoring program is administered by the Delaware Department of Natural Resources and Environmental Control (DNREC). In addition to testing for enterococcus bacteria, DNREC also tests for harmful algal blooms of the species *Karenia brevis* and *K. papilionacea*. The monitoring season in Delaware runs from mid-May to Labor Day. DNREC posts beach closing and advisory information on its website.

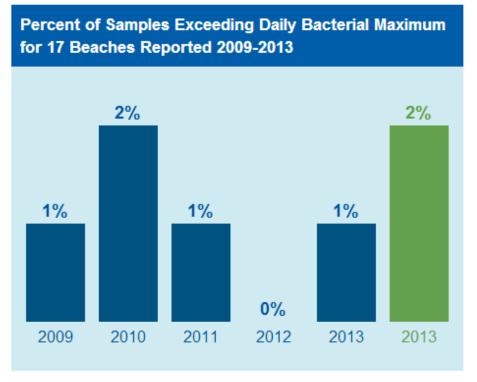
### What Does Beach Water Monitoring Show?

In 2013, Delaware reported 24 coastal beaches. Of all reported beach monitoring samples, 3% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Rehoboth-Virginia Ave. Beach in Sussex County (11%), Deauville Beach in Sussex County (11%), Slaughter Beach (Bay Beach) in Sussex County (8%), and Broadkill Beach in Sussex County (6%).

# Delaware Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Delaware over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009–2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

# **Delaware 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Sussex	3 R's	18	0%	<u>view</u>
Sussex	Atlantic Beach Near Gordons Pond	19	5%	<u>view</u>
Sussex	Bethany Beach	39	0%	<u>view</u>
Sussex	Broadkill Beach (Bay beach)	18	6%	<u>view</u>
Sussex	Cape Henlopen Beach	38	0%	<u>view</u>
Sussex	Cape Henlopen State Park - Herring Point	18	0%	<u>view</u>
Sussex	Conquest Rd.	18	0%	<u>view</u>
Sussex	Deauville Beach	19	11%	<u>view</u>
Sussex	Delaware Seashore State Park, Tower Road Ocean Site	18	0%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Sussex	Dewey Beach-Dagsworthy	38	5%	<u>view</u>
Sussex	Dewey Beach-Swedes	19	0%	<u>view</u>
Sussex	Fenwick Island State Park Beach	20	0%	<u>view</u>
Sussex	Key Box	18	0%	<u>view</u>
Sussex	Lewes Beach North	18	0%	<u>view</u>
Sussex	Lewes Beach South	18	0%	<u>view</u>
Sussex	North Indian River Inlet Beach, Delaware Seashore State Park	18	0%	view
Sussex	Prime Hook Beach (Bay beach)	19	5%	view
Sussex	Rehoboth-Queen St Beach	18	0%	<u>view</u>
Sussex	Rehoboth-Rehoboth Ave Beach	41	2%	view
Sussex	Rehoboth-Virginia Ave Beach	19	11%	<u>view</u>
Sussex	Slaughter Beach (Bay beach)	25	8%	view
Sussex	South Bethany Beach	18	0%	<u>view</u>
Sussex	South Indian River Inlet Beach	18	0%	view
Sussex	Town of Fenwick (State Line Beach)	37	5%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

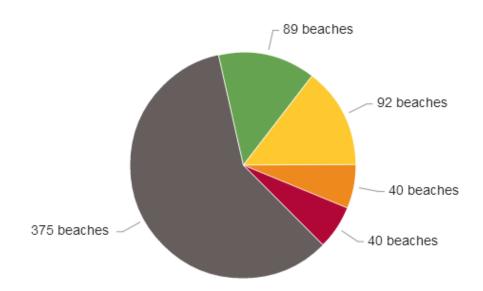
# **State Summary: Florida**

Ranked 13th in Beach Water Quality (out of 30 states) 10% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### Florida 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 375 beaches (59%) were not monitored or had a limited number of samples (fewer than 12)
- 89 beaches (14%) did not have any samples exceed the national BAV safety threshold
  - 92 beaches (14%) had >0-10% of their samples exceed the national BAV safety threshold
- 40 beaches (6%) had >10-20% of their samples exceed the national BAV safety threshold
- 40 beaches (6%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

With its year-round swim season and more than 1,000 miles of shoreline, Florida has the most coastal swimmers in the nation. The state has more than 600 public coastal beaches stretching along its Atlantic and Gulf of Mexico shores. The Florida Department of Health monitors beach water quality year-round; peak season is from April to mid-September. Beach closing and advisory notifications are available on the Florida Department of Health's <u>Healthy Beaches web page</u>.

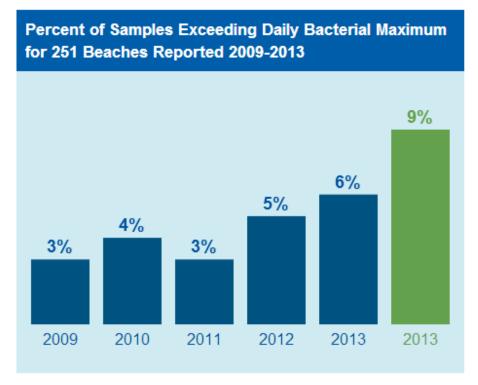
### What Does Beach Water Monitoring Show?

In 2013, Florida reported 636 coastal beaches. Of all reported beach monitoring samples, 10% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Garniers in Okaloosa County (83%), Roosevelt Bridge in Martin County (80%), Rocky Bayou (Fred Gannon State Park) in Okaloosa County (72%), Carl Gray Park in Bay County (72%), and Liza Jackson Park in Okaloosa County (67%).

## Florida Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Florida over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

### Florida 2013 Monitoring Results

County	Beach	Total Samples	% of samples exceeding BAV	View
Bay	8Th Street, Mexico Beach	0	n/a	view
Bay	Bahama Beach	0	n/a	-
Bay	Bay County Public Beach	0	n/a	-
Bay	Beach Drive	25	60%	<u>view</u>
Bay	Beckrich Road (Edgewater Gulf Beach)	21	19%	<u>view</u>
Bay	Belaire Beach	0	n/a	-
Bay	Bid-A-Wee Beach	20	15%	<u>view</u>
Bay	Carl Gray Park	29	72%	<u>view</u>
Bay	Delwood Beach	22	55%	<u>view</u>
Bay	Dupont Bridge	24	42%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Bay	East County Line (Mexico Beach)	0	n/a	<u>view</u>
Bay	El Centro Beach	0	n/a	-
Bay	Florida Beach	0	n/a	-
Bay	Gulf Lagoon Beach	0	n/a	-
Bay	Gulf Resort Beach	0	n/a	-
Bay	Hollywood Beach	0	n/a	view
Bay	Laguna Beach	21	33%	view
Bay	Long Beach	0	n/a	-
Bay	Lullwater Beach	0	n/a	-
Bay	Magnolia Beach	0	n/a	view
Bay	Miramar Heights Beach	0	n/a	-
Bay	Open Sands Beach	0	n/a	-
Bay	Panama City Beach Pier (Edgewater Beach)	21	24%	view
Bay	Rivera Beach	0	n/a	-
Bay	Santa Monica Beach	0	n/a	-
Bay	Seltzer Park (Silver Sands Beach)	19	5%	view
Bay	Shell Island Beach	0	n/a	view
Bay	Spy Glass Drive (Biltmore Beach)	19	5%	view
Bay	St. Andrews State Park Beach	0	n/a	view
Bay	Sunnyside Beach	0	n/a	view
Bay	Sunset Park	0	n/a	view
Bay	Suntime Beach	0	n/a	-
Bay	Tyndall Beach	0	n/a	view
Bay	West County Line (Carrilon Beach)	0	n/a	view
Brevard	Aquarina Beach	0	n/a	view
Brevard	Bicentennial Beach Park	0	n/a	view
Brevard	Bonsteel Park	0	n/a	view
Brevard	Canaveral National Seashore/Playalinda Beach	0	n/a	view
Brevard	Canova Beach Park	0	n/a	view
Brevard	Cherrie Down Park	0	n/a	view
Brevard	Cocoa Beach Minuteman Causeway	19	11%	view
Brevard	Cocoa Beach Pier	18	0%	view
Brevard	Coconut Point Park	0	n/a	view
Brevard	Fischer Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Brevard	Hightower Beach Park	0	n/a	view
Brevard	Indialantic Boardwalk	18	0%	<u>view</u>
Brevard	Jetty Park (Cape Canaveral)	19	16%	view
Brevard	Lori Wilson Park	0	n/a	<u>view</u>
Brevard	Main Entrance Beach (Pafb)	0	n/a	<u>view</u>
Brevard	Nco Club Beach (Pafb)	0	n/a	view
Brevard	North Area Beach (Pafb)	0	n/a	view
Brevard	Ocean Park	0	n/a	view
Brevard	Officers Club Beach (Pafb)	0	n/a	<u>view</u>
Brevard	Paradise Beach	18	0%	view
Brevard	Patrick Air Force Base (Pafb) North	0	n/a	view
Brevard	Pelican Beach Park	19	5%	view
Brevard	Robert P. Murkshe Memorial Park	0	n/a	view
Brevard	Seagull Park (Pafb)	0	n/a	view
Brevard	Sebastian Inlet North	18	0%	view
Brevard	Shepard Park	0	n/a	view
Brevard	Spessard Holland Beach Park (North)	18	0%	view
Broward	Bahia Mar	28	7%	view
Broward	Birch State Park	28	4%	view
Broward	Commercial Blvd	28	4%	view
Broward	Custer Street	28	4%	view
Broward	Dania Beach	28	4%	view
Broward	Deerfield Beach	29	7%	view
Broward	Deerfield Beach Se 10Th Street	0	n/a	view
Broward	George English Park	0	n/a	view
Broward	Hallandale Beach Blvd	28	7%	view
Broward	Harrison Street	29	7%	view
Broward	Hillsboro Inlet	0	n/a	view
Broward	John Lloyd State Park	28	4%	view
Broward	Minnesota Street	28	7%	view
Broward	Ne 16 Street, Pompano	28	4%	view
Broward	North Beach Park Intercoastal	0	n/a	view
Broward	Oakland Park Boulevard	0	n/a	view
Broward	Pompano Beach	29	10%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Broward	Sebastian Street	28	7%	view
Broward	Van Buren Street	0	n/a	view
Charlotte	Boca Grande	53	4%	view
Charlotte	Dotzler Beach	0	n/a	view
Charlotte	Englewood Mid Beach	54	6%	view
Charlotte	Englewood North	53	2%	view
Charlotte	Englewood South	52	0%	view
Charlotte	Palm Island North	52	2%	view
Charlotte	Palm Island South	52	0%	view
Charlotte	Ponce De Leon Beach	0	n/a	view
Charlotte	Port Charlotte Beach	0	n/a	view
Charlotte	Port Charlotte Beach East	54	9%	view
Charlotte	Port Charlotte Beach West	54	6%	view
Citrus	Fort Island Gulf Beach	0	n/a	view
Collier	1St Avenue North Beach	0	n/a	view
Collier	1St Avenue South Beach	0	n/a	view
Collier	2Nd Avenue North Beach	0	n/a	view
Collier	2Nd Avenue South Beach	0	n/a	view
Collier	3Rd Avenue North Beach	0	n/a	view
Collier	3Rd Avenue South Beach	0	n/a	view
Collier	4Th Avenue North Beach	0	n/a	view
Collier	4Th Avenue South Beach	0	n/a	view
Collier	5Th Avenue South Beach	0	n/a	view
Collier	6Th Avenue South Beach	0	n/a	view
Collier	7Th Avenue South Beach	0	n/a	view
Collier	8Th Avenue South Beach	0	n/a	view
Collier	10 Thousand Island	0	n/a	view
Collier	10Th Avenue South Beach	0	n/a	view
Collier	11Th Avenue South Beach	0	n/a	view
Collier	13Th Avenue South Beach	0	n/a	view
Collier	14Th Avenue South Beach	0	n/a	view
Collier	15Th Avenue South Beach	0	n/a	view
Collier	16Th Avenue South Beach	0	n/a	view
Collier	17Th Avenue South Beach	0	n/a	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Collier	18Th Avenue South Beach	0	n/a	view
Collier	32Nd Avenue Beach	0	n/a	view
Collier	Admiralty & Shores Beach	0	n/a	view
Collier	Barefoot Beach State Reserve	0	n/a	view
Collier	Broad Avenue Beach	0	n/a	view
Collier	Caxambas Park	0	n/a	view
Collier	Central Avenue	0	n/a	view
Collier	Clam Pass	24	8%	view
Collier	Clam Pass Park North	0	n/a	view
Collier	Clam Pass Park South	0	n/a	view
Collier	Cutlass Cove Beach & Club	0	n/a	view
Collier	Denor-Wiggins State Recreation Area	25	0%	view
Collier	Doctor'S Pass	25	4%	view
Collier	Gordon Pass Beach	0	n/a	view
Collier	Hideaway Beach	0	n/a	view
Collier	Horizon Way Beach (Aka Parkshore Beach)	21	0%	view
Collier	Keewaydin Island	0	n/a	view
Collier	Lely Barefoot Beach	0	n/a	view
Collier	Lowdermilk Park	23	4%	view
Collier	Naples Beach Club	0	n/a	view
Collier	Naples Lake Beach	0	n/a	view
Collier	Naples Pier	25	4%	view
Collier	Pelican Bay Beach North	0	n/a	view
Collier	Pelican Bay Beach South	0	n/a	view
Collier	Pelican Bay Restaurant And Club	0	n/a	view
Collier	Port Royal Beach & Club	0	n/a	view
Collier	Residence Beach	25	0%	view
Collier	Shore Drive Beach	0	n/a	view
Collier	South Marco Beach (Aka. Smb Access)	25	4%	view
Collier	The Moorings	0	n/a	view
Collier	Tigertail Beach	26	12%	view
Collier	Vanderbilt Beach	25	8%	view
Collier	Vedado Way Beach	0	n/a	view
Collier	Villa Mare Ln Beach	0	n/a	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Collier	Wiggins Pass North	0	n/a	view
Collier	Wiggins Pass State Park	0	n/a	view
Dixie	Shired Island	0	n/a	view
Duval	15Th Street Access	18	0%	view
Duval	19Th Street Access	18	0%	view
Duval	30Th Avenue Access	18	0%	view
Duval	Atlantic Blvd Acess	18	0%	view
Duval	Beach Blvd Access	18	0%	view
Duval	Hanna Park	18	0%	view
Duval	Hopkins Street Access	18	0%	view
Duval	Huguenot Park	18	11%	view
Duval	North Little Talbot Island	18	0%	view
Duval	South Little Talbot Island	18	0%	view
Escambia	Bayou Chico	24	42%	view
Escambia	Bayview Park	60	22%	view
Escambia	Big Lagoon State Park	19	5%	view
Escambia	County Park East	18	0%	view
Escambia	County Park West	19	5%	view
Escambia	Fort Mcree Area	0	n/a	view
Escambia	Fort Pickens	0	n/a	view
Escambia	Johnson Beach	0	n/a	view
Escambia	Johnson Beach Sound Side	0	n/a	view
Escambia	Navy Point (Bayou Grande)	23	30%	view
Escambia	Navy Point South	0	n/a	view
Escambia	Opal Beach	0	n/a	view
Escambia	Pensacola (Casino) Beach	17	6%	view
Escambia	Perdido Key State Park	18	0%	view
Escambia	Quietwater Beach (Santa Rosa Sound)	18	0%	view
Escambia	Quietwater Beach Picnic Area	0	n/a	view
Escambia	Sabine Yacht And Racket	0	n/a	<u>view</u>
Escambia	Sanders Beach	64	11%	view
Escambia	Santa Rosa Island	0	n/a	view
Flagler	Gamble Rogers State Park	26	0%	view
Flagler	Hammock	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Flagler	Marineland	1	0%	view
Flagler	North Flagler Pier	26	0%	view
Flagler	Picknickers (Beverly Beach)	26	0%	view
Flagler	South Beach	0	n/a	view
Flagler	South Flagler Pier	26	0%	view
Flagler	Varn Park	26	0%	view
Flagler	Washington Oaks State Park	26	0%	view
Franklin	Alligator Point	18	22%	view
Franklin	Carrabelle Beach	18	28%	view
Franklin	Peninsular Point Beach	0	n/a	view
Franklin	St. George Island 11Th Street East	18	6%	view
Franklin	St. George Island 11Th Street West	18	6%	view
Franklin	St. George Island Franklin Street	18	11%	view
Franklin	St. George Island State Park	0	n/a	-
Gulf	Beacon Hill Beach	16	25%	view
Gulf	Cape Palms Public Beach	15	0%	view
Gulf	Dixie Belle Beach	18	33%	view
Gulf	Highway 98 Beach	0	n/a	view
Gulf	Lookout Beach	18	28%	view
Gulf	Monument Beach	0	n/a	view
Gulf	No Data	11	18%	view
Gulf	St. Joe Beach	16	19%	view
Hernando	Pine Island	14	0%	view
Hillsborough	Apollo Beach	0	n/a	view
Hillsborough	Bahia Beach	52	6%	view
Hillsborough	Ben T. Davis North	51	25%	view
Hillsborough	Ben T. Davis South	50	12%	view
Hillsborough	Cypress Point North	52	13%	view
Hillsborough	Cypress Point South	51	16%	view
Hillsborough	Davis Island	51	14%	view
Hillsborough	Mcdill Air Force Base Beaches	0	n/a	view
Hillsborough	Picnic Island North	50	10%	view
Hillsborough	Picnic Island South	50	14%	view
Hillsborough	Simmons Park	51	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Indian River	Amber Sands Beach	0	n/a	view
Indian River	Coconut Point Sebastian Inlet	24	0%	view
Indian River	Conn Beach	0	n/a	<u>view</u>
Indian River	Flame Vine Beach	0	n/a	view
Indian River	Golden Sands Beach Park	0	n/a	view
Indian River	Humiston Beach	24	0%	view
Indian River	Jaycee Beach Park	0	n/a	view
Indian River	Riomar Beach	0	n/a	view
Indian River	Round Island Beach Park	24	0%	view
Indian River	Seagrape Beach	0	n/a	view
Indian River	Seahorse Beach	0	n/a	view
Indian River	Sebastian Inlet South Side	0	n/a	view
Indian River	Sexton Plaza	24	4%	<u>view</u>
Indian River	South Beach Park	24	0%	view
Indian River	Tracking Station Beach Park	0	n/a	<u>view</u>
Indian River	Treasure Shores Beach Park	0	n/a	<u>view</u>
Indian River	Turtle Trail Beach	0	n/a	<u>view</u>
Indian River	Wabasso Beach Park	24	0%	<u>view</u>
Lee	Boca Grande Light House/Seagrape Beach	85	0%	view
Lee	Bonita Beach Park	85	0%	view
Lee	Bowditch Point Beach	85	0%	view
Lee	Bowman'S Beach	85	0%	view
Lee	Cape Coral Yacht Club	91	4%	view
Lee	Cayo Costa State Park	0	n/a	view
Lee	Fulgar St Beach Access - Sanibel	0	n/a	view
Lee	Holiday Inn Public Beach Access Ft Myers Beach	0	n/a	view
Lee	Little Hickory Beach Park	84	0%	view
Lee	Lovers Key State Park	86	1%	view
Lee	Lynn Hall Memorial Park	85	2%	view
Lee	North Captiva Island	0	n/a	view
Lee	Public Access #34 - Ft Myers Beach	0	n/a	view
Lee	Public Beach Access #17 - Ft Myers Beach	0	n/a	view
Lee	Public Beach Access #23 - Ft Myers Beach	0	n/a	view
Lee	Sanibel Beach Access #4	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Lee	Sanibel Causeway Beach	82	1%	view
Lee	Sanibel Lighthouse Park Beach	85	0%	view
Lee	South Seas Captiva	0	n/a	view
Lee	South Seas Plantation Captiva - Redfish Pass	85	0%	view
Lee	Southern Tip Access Fort Myers Beach	0	n/a	view
Lee	Tarpon Bay Road Beach	84	0%	view
Lee	Turner Beach/Blind Pass Beach	85	2%	view
Levy	Cedar Key Beach	0	n/a	view
Levy	Yankeetown Beach	0	n/a	view
Manatee	Bay Front Park North	26	4%	view
Manatee	Bay Front Park South	0	n/a	view
Manatee	Bradenton Beach	26	0%	view
Manatee	City Of Anna Maria Access (Anna Maria Island)	0	n/a	view
Manatee	Coquina Beach North	26	0%	view
Manatee	Coquina Beach South	26	0%	view
Manatee	Emerson Point	0	n/a	view
Manatee	Longboat Key	0	n/a	view
Manatee	Manatee Public Beach North	26	0%	view
Manatee	Manatee Public Beach South	0	n/a	view
Manatee	Palma Sola North	0	n/a	view
Manatee	Palma Sola South	28	11%	view
Manatee	Whitney Beach	26	0%	view
Martin	Alex'S Beach	0	n/a	view
Martin	Bathtub Beach	34	12%	view
Martin	Bathtub Reef	0	n/a	view
Martin	Blowing Rocks	0	n/a	view
Martin	Bob Graham Beach	0	n/a	view
Martin	Bryan Mawr	0	n/a	view
Martin	Chastain Beach	0	n/a	view
Martin	Fletcher Beach	0	n/a	view
Martin	Glasscock	0	n/a	view
Martin	Hobe Sound Public Beach	32	6%	view
Martin	Hobe Sound Wildlife Refuge	30	7%	view
Martin	House Of Refuge	0	n/a	view
				-

County	Beach	Total Samples	% of samples exceeding BAV	View
Martin	Jensen Beach Causeway	0	n/a	view
Martin	Jensen Beach Causeway East	31	0%	<u>view</u>
Martin	Jensen Public Beach	31	3%	<u>view</u>
Martin	Roosevelt Bridge	49	80%	<u>view</u>
Martin	Saint Lucie Inlet State Park	0	n/a	<u>view</u>
Martin	Sandsprint Park	0	n/a	<u>view</u>
Martin	Stokes	0	n/a	<u>view</u>
Martin	Stuart Beach	32	3%	<u>view</u>
Martin	Stuart Causeway	33	18%	<u>view</u>
Martin	Tiger Shores Beach	0	n/a	<u>view</u>
Martin	Virginia Forest	0	n/a	<u>view</u>
Miami-Dade	53Rd Street - Miami Beach	57	14%	<u>view</u>
Miami-Dade	Cape Florida Park	54	4%	<u>view</u>
Miami-Dade	Collins Park-21St Street	54	2%	view
Miami-Dade	Crandon Park - South	58	14%	<u>view</u>
Miami-Dade	Crandon Park-Key Biscayne	59	17%	view
Miami-Dade	Golden Beach	52	0%	view
Miami-Dade	Haulover Beach	54	0%	view
Miami-Dade	Haulover Beach - North	52	0%	view
Miami-Dade	Hobie Beach (Aka. Dog Beach)	58	14%	<u>view</u>
Miami-Dade	Homestead Bay Front Park	0	n/a	view
Miami-Dade	Key Biscayne Beach	53	2%	view
Miami-Dade	North Shore Ocean Terrace	56	13%	view
Miami-Dade	Oleta State Park	53	2%	view
Miami-Dade	South Beach Park	54	2%	view
Miami-Dade	Sunny Isles Beach - Samson Park	55	9%	view
Miami-Dade	Sunny Isles Beach-Pier Park	1	0%	view
Miami-Dade	Surfside Beach - 93Rd Street	54	4%	view
Miami-Dade	Virginia Beach	53	0%	view
Miami-Dade	Windsurfer Beach	0	n/a	view
Monroe	18 Mile Stretch	0	n/a	view
Monroe	Anne'S Beach	0	n/a	view
Monroe	Atlanta Shores	0	n/a	view
Monroe	Bahia Honda Bayside	26	4%	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Monroe	Bahia Honda Oceanside	26	15%	view
Monroe	Bahia Honda Sandspur	26	12%	view
Monroe	Banana Bay Resort - Marathon	0	n/a	view
Monroe	Buccaneer	0	n/a	view
Monroe	Casa Clara	0	n/a	view
Monroe	Casa Marina	0	n/a	view
Monroe	Cheeca Lodge Beach	0	n/a	view
Monroe	Coco Plum Beach	0	n/a	view
Monroe	Craig Key Roadside	0	n/a	view
Monroe	Curry Hammock	0	n/a	view
Monroe	Dog Beach	0	n/a	view
Monroe	Dolphin Research Center	0	n/a	view
Monroe	Fiesta Key Campground	0	n/a	view
Monroe	Founder'S Park Beach	26	4%	view
Monroe	Ft. Zachary Taylor	26	0%	view
Monroe	Harry Harris County Park	26	8%	view
Monroe	Hawks Cay Resort	0	n/a	view
Monroe	Higgs Beach	26	8%	view
Monroe	Holiday Inn Beachside	0	n/a	view
Monroe	Islamorada Public Library	0	n/a	view
Monroe	John Pennecamp State Park Far Beach	0	n/a	view
Monroe	John Pennekamp State Park Cannon Beach	26	12%	view
Monroe	Kennedy Dr & N Roosevelt	0	n/a	view
Monroe	Key West Beach Club	0	n/a	view
Monroe	Long Key State Park	0	n/a	view
Monroe	Monroe County Beach	0	n/a	view
Monroe	N Roosevelt/Cow Key	0	n/a	view
Monroe	Reach Resort	0	n/a	view
Monroe	Rest Beach	0	n/a	view
Monroe	Sea Oats Beach	0	n/a	view
Monroe	Simonton Beach	0	n/a	view
Monroe	Smathers Beach	25	4%	view
Monroe	Smathers Beach East	0	n/a	view
Monroe	Sombrero Beach	26	19%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Monroe	South Beach	26	12%	view
Monroe	Sunset Park	0	n/a	view
Monroe	The Islander Beach Resort	0	n/a	view
Monroe	The Moorings	0	n/a	view
Monroe	Valhalla Beach Resort	0	n/a	view
Monroe	Veteran'S Beach	0	n/a	view
Monroe	Westin Beach	0	n/a	view
Nassau	Alachua Beach Access	0	n/a	view
Nassau	Allen Beach Access	0	n/a	view
Nassau	Amelia Island Plantation (Aip) Beach Club	18	0%	view
Nassau	American Beach	18	0%	view
Nassau	Bill Melton Beach Access	0	n/a	view
Nassau	Burney Park Beach Front	0	n/a	view
Nassau	Fort Clinch Beach	0	n/a	view
Nassau	Fort Clinch Riverside	0	n/a	view
Nassau	Hutchins Beach Access	0	n/a	view
Nassau	Jasmine Street	17	0%	view
Nassau	John Robas Beach Access	0	n/a	view
Nassau	Kissimmee Beach Access	0	n/a	view
Nassau	Main Beach	17	6%	view
Nassau	Manatee Beach Access	0	n/a	view
Nassau	Mizell Beach Access	0	n/a	view
Nassau	N. Casino Beach Access	0	n/a	view
Nassau	New York Beach Access	0	n/a	view
Nassau	North Beach Park	0	n/a	view
Nassau	Ocean Street	17	0%	view
Nassau	Ozello Beach Access	0	n/a	view
Nassau	Peter'S Point	18	11%	view
Nassau	Piper Dunes (Aip Beach)	18	6%	view
Nassau	S. Casino Beach Access	0	n/a	view
Nassau	Sadler Road	17	6%	<u>view</u>
Nassau	Scott Road Beach Access	0	n/a	<u>view</u>
Nassau	Simmons Road	17	0%	view
Nassau	South End	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Nassau	South End Bridge	0	n/a	view
Nassau	Summer Beach	0	n/a	view
Nassau	Suwannee Beach Access	0	n/a	view
Okaloosa	Bay Drive	0	n/a	view
Okaloosa	Beasley State Park	0	n/a	-
Okaloosa	Bluewater Beach	0	n/a	view
Okaloosa	Brackin Wayside	36	39%	view
Okaloosa	Camp Timpoochee	0	n/a	view
Okaloosa	Cinco Food	0	n/a	<u>view</u>
Okaloosa	Clement-Taylor	36	47%	view
Okaloosa	Dana Point	0	n/a	<u>view</u>
Okaloosa	East Pass	36	36%	<u>view</u>
Okaloosa	El Matador	0	n/a	<u>view</u>
Okaloosa	Eldridge Park	0	n/a	<u>view</u>
Okaloosa	Emeralde Promenade	36	33%	view
Okaloosa	Florida Park	0	n/a	<u>view</u>
Okaloosa	Garniers	36	83%	<u>view</u>
Okaloosa	Gulf Island National Seashore	34	56%	view
Okaloosa	Henderson State Park Beach	36	17%	view
Okaloosa	Holiday Isle Aegean	0	n/a	<u>view</u>
Okaloosa	Hurlburt Campground	0	n/a	view
Okaloosa	Hurlburt Marina	0	n/a	<u>view</u>
Okaloosa	James Lee Park Beach	36	19%	view
Okaloosa	Joes Bayou	0	n/a	view
Okaloosa	Laguana Park	0	n/a	view
Okaloosa	Landing	0	n/a	-
Okaloosa	Lincoln Park	36	58%	view
Okaloosa	Lions Park	0	n/a	-
Okaloosa	Liza Jackson Park	36	67%	view
Okaloosa	Longwood Park	0	n/a	<u>view</u>
Okaloosa	Marlers Park	36	33%	view
Okaloosa	Maxwell-Gunter	0	n/a	view
Okaloosa	Meigs Park	0	n/a	view
Okaloosa	Nco Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Okaloosa	Norreigo Point	0	n/a	view
Okaloosa	Okaloosa Island Beach Access #1	0	n/a	<u>view</u>
Okaloosa	Okaloosa Island Beach Access #2	0	n/a	<u>view</u>
Okaloosa	Okaloosa Island Beach Access #3	0	n/a	<u>view</u>
Okaloosa	Okaloosa Island Beach Access #4	0	n/a	view
Okaloosa	Okaloosa Island Beach Access #5	0	n/a	view
Okaloosa	Okaloosa Island Beach Access #6	0	n/a	view
Okaloosa	Parrish Point	0	n/a	view
Okaloosa	Pocahantas Drive	0	n/a	<u>view</u>
Okaloosa	Poquito Park	36	56%	view
Okaloosa	Postal Point	0	n/a	view
Okaloosa	Rickey Avenue	0	n/a	view
Okaloosa	Rocky Bayou (Fred Gannon State Park)	36	72%	view
Okaloosa	Rocky Creek Campground	0	n/a	view
Okaloosa	Seashore Beachwalk	0	n/a	-
Okaloosa	Seaview	0	n/a	view
Okaloosa	Star Drive	0	n/a	view
Okaloosa	Us Army Rec Center	0	n/a	view
Okaloosa	Valparaiso Blvd	0	n/a	view
Okaloosa	Walk Edge	0	n/a	view
Okaloosa	Weekley Bayou	0	n/a	view
Okaloosa	White Point	0	n/a	view
Palm Beach	Boynton Beach Municipal	27	0%	view
Palm Beach	Carlin Park	27	0%	view
Palm Beach	Coral Cove	0	n/a	view
Palm Beach	Delray Beach (Aka Sandoway Park)	26	0%	view
Palm Beach	Dubois Park	29	10%	view
Palm Beach	Gulfstream Park	0	n/a	view
Palm Beach	John D. Mcarthur	0	n/a	view
Palm Beach	Juno Beach Park	0	n/a	view
Palm Beach	Jupiter Beach Park	27	4%	view
Palm Beach	Lake Worth (Aka Kreusler)	27	0%	view
Palm Beach	Lantana Municipal	27	0%	view
Palm Beach	Loggerhead Park	0	n/a	view

Palm Beach         Ocean Inlet Park         28         4%         view           Palm Beach         Ocean Reef Park         0         n/a         view           Palm Beach         Palm Beach         27         4%         view           Palm Beach         Palm Beach         27         4%         view           Palm Beach         Palm Beach         0         n/a         view           Palm Beach         Peanut Island         0         n/a         view           Palm Beach         Peanut Island         0         n/a         view           Palm Beach         Peanut Island         0         n/a         view           Palm Beach         Phipps         0         n/a         view           Palm Beach         Red Reef Park         0         n/a         view           Palm Beach         Red Reef Park         0         n/a         view           Palm Beach         South Inlet Park         27         0%         view           Palm Beach         South Inlet Park         27         0%         view           Palm Beach         Spanish River         27         0%         view           Palm Beach         Spanish River         27	County	Beach	Total Samples	% of samples exceeding BAV	View
Palm Beach         Palm Beach         27         4%         yiew           Palm Beach         Palm Beach Shores         0         n/a         yiew           Palm Beach         Peanut Island         0         n/a         yiew           Palm Beach         Phil Foster Park         30         10%         yiew           Palm Beach         Phipps         0         n/a         yiew           Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         South Island         0         n/a         yiew           Palm Beach         South Island         27         0%         yiew           Palm Beach         South Island         27         0%         yiew           Palm Beach         Spanish River         27         0%         yiew           Palm Beach         Spanish River         27         0%         yiew           Pasco         Brasher Park Beach         18	Palm Beach	Ocean Inlet Park	28	4%	view
Palm Beach         Palm Beach Shores         0         n/a         yiew           Palm Beach         Peanut Island         0         n/a         yiew           Palm Beach         Phil Foster Park         30         10%         yiew           Palm Beach         Phipps         0         n/a         yiew           Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         Riviera Beach         28         7%         yiew           Palm Beach         South Beach         0         n/a         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Pasco         Anciote River Park Beach         18         6%         yiew           Pasco         Guif Harbors Beach </td <td>Palm Beach</td> <td>Ocean Reef Park</td> <td>0</td> <td>n/a</td> <td>view</td>	Palm Beach	Ocean Reef Park	0	n/a	view
Palm Beach         Peanut Island         0         n/a         yiew           Palm Beach         Phil Foster Park         30         10%         yiew           Palm Beach         Phipps         0         n/a         yiew           Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         Riviera Beach         28         7%         yiew           Palm Beach         South Beach         0         n/a         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Palm Beach         Spanish River         27         0%         yiew           Pasco         Anclote River Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Energy And Marine Center         0         n/a         yiew           Pasco         Gulf Harbors Beach         17         0%         yiew           Pasco         Golsner Park Beach	Palm Beach	Palm Beach	27	4%	view
Palm Beach         Phil Foster Park         30         10%         yiew           Palm Beach         Phipps         0         n/a         yiew           Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         Riviera Beach         28         7%         yiew           Palm Beach         South Beach         0         n/a         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Palm Beach         Spanish River         27         0%         yiew           Pasco         Anclote River Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Gulf Harbors Beach         17         0%         yiew           Pasco         Robert J. Strickland         20         35%         yiew           Pasco         Robert K. Rees Park Beac	Palm Beach	Palm Beach Shores	0	n/a	view
Palm Beach         Phipps         0         n/a         yiew           Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         Riviera Beach         28         7%         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Palm Beach         Spanish River         27         0%         yiew           Pasco         Anclote River Park Beach         18         6%         yiew           Pasco         Anclote River Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Benergy And Marine Center         0         n/a         yiew           Pasco         Energy And Marine Center         0         n/a         yiew           Pasco         Gulf Harbors Beach         17         0%         yiew           Pasco         Gulf Harbors Beach         17         0%         yiew           Pasco         Robert J. Strickland         20         35%         yiew           Pasco         Robert K. Rees P	Palm Beach	Peanut Island	0	n/a	view
Palm Beach         Red Reef Park         0         n/a         yiew           Palm Beach         Riviera Beach         28         7%         yiew           Palm Beach         South Beach         0         n/a         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Palm Beach         Spanish River         27         0%         yiew           Pasco         Anclote River Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Energy And Marine Center         0         n/a         yiew           Pasco         Gulf Harbors Beach         17         0%         yiew           Pasco         Gulf Harbors Beach         17         0%         yiew           Pasco         Gelsner Park Beach         0         n/a         yiew           Pasco         Robert J. Strickland         20         35%         yiew           Pinellas         Baleair Beach	Palm Beach	Phil Foster Park	30	10%	view
Palm Beach         Riviera Beach         28         7%         view           Palm Beach         South Beach         0         n/a         view           Palm Beach         South Inlet Park         27         0%         view           Palm Beach         Spanish River         27         0%         view           Pasco         Anclote River Park Beach         18         6%         view           Pasco         Brasher Park Beach         18         6%         view           Pasco         Brasher Park Beach         18         6%         view           Pasco         Brasher Park Beach         18         6%         view           Pasco         Gulf Harbors Beach         18         6%         view           Pasco         Gulf Harbors Beach         17         0%         view           Pasco         Gulf Harbors Beach         0         n/a         view           Pasco         Gulf Harbors Beach         0         n/a         view           Pasco         Gulf Harbors Beach         0         n/a         view           Pasco         Robert J. Strickland         20         35%         view           Piseco         Robert J. Strickland	Palm Beach	Phipps	0	n/a	view
Palm Beach         South Beach         0         n/a         yiew           Palm Beach         South Inlet Park         27         0%         yiew           Palm Beach         Spanish River         27         0%         yiew           Pasco         Anclote River Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Brasher Park Beach         18         6%         yiew           Pasco         Gulf Harbors Beach         18         6%         yiew           Pasco         Gulf Harbors Beach         17         0%         yiew           Pasco         Gulf Harbors Beach         0         n/a         yiew           Pasco         Robert J. Strickland         20         35%         yiew           Pinellas         Belach         Nor	Palm Beach	Red Reef Park	0	n/a	view
Palm Beach         South Inlet Park         27         0%         view           Palm Beach         Spanish River         27         0%         view           Pasco         Anclote River Park Beach         18         6%         view           Pasco         Brasher Park Beach         18         6%         view           Pasco         Energy And Marine Center         0         n/a         view           Pasco         Gulf Harbors Beach         17         0%         view           Pasco         Gulf Harbors Beach         0         n/a         view           Pasco         Robert K. Rese Park Beach         0         n/a         view           Pinellas         Belleair Beach - Morgan Drive         0         n/a         view           Pinellas         B	Palm Beach	Riviera Beach	28	7%	view
Palm Beach         Spanish River         27         0%         view           Pasco         Anclote River Park Beach         18         6%         view           Pasco         Brasher Park Beach         18         6%         view           Pasco         Energy And Marine Center         0         n/a         view           Pasco         Gulf Harbors Beach         17         0%         view           Pasco         Oelsner Park Beach         0         n/a         view           Pasco         Robert J. Strickland         20         35%         view           Pasco         Robert J. Strickland         20         35%         view           Pasco         Robert K. Rees Park Beach         16         6%         view           Pasco         Robert K. Rees Park Beach         16         6%         view           Pinellas         Belleair Beach - Morgan Drive         0         n/a         view           Pinellas         Belleair Beach - Morgan Drive         0         n/a         view           Pinellas         Belleair Causeway-Intercoastal         0         n/a         view           Pinellas         Clearwater Beach (3Rd St)         0         n/a         view	Palm Beach	South Beach	0	n/a	view
Pasco Brasher Park Beach 18 6% view Pasco Brasher Park Beach 18 6% view Pasco Brasher Park Beach 18 6% view Pasco Energy And Marine Center 0 n/a view Pasco Gulf Harbors Beach 17 0% view Pasco Oelsner Park Beach 0 n/a view Pasco Robert J. Strickland 20 35% view Pasco Robert K. Rees Park Beach 16 6% view Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Crystal Beach 0 n/a view Pinellas Crystal Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view View Pinellas Fort Desoto North Beach 0 n/a view View Pinellas Fort Desoto North Beach 0 n/a view View View Pinellas Fort Desoto North Beach 0 n/a view View View View Pinellas Fort Desoto North Beach 0 n/a view View View View View View View View V	Palm Beach	South Inlet Park	27	0%	view
Pasco Brasher Park Beach 18 6% view Pasco Energy And Marine Center 0 n/a view Pasco Gulf Harbors Beach 17 0% view Pasco Oelsner Park Beach 0 n/a view Pasco Oelsner Park Beach 0 n/a view Pasco Robert J. Strickland 20 35% view Pasco Robert K. Rees Park Beach 16 6% view Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 26 0% view Pinellas Fort Desoto North Beach 0 n/a view Pinellas Pinellas Pinellas Pinellas Pinellas Pinellas Pinel	Palm Beach	Spanish River	27	0%	view
Pasco Energy And Marine Center 0 n/a view Pasco Gulf Harbors Beach 17 0% view Pasco Oelsner Park Beach 0 n/a view Pasco Robert J. Strickland 20 35% view Pasco Robert K. Rees Park Beach 16 6% view Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Dunedin Marina Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view	Pasco	Anclote River Park Beach	18	6%	view
Pasco Gulf Harbors Beach 17 0% view Pasco Oelsner Park Beach 0 n/a view Pasco Robert J. Strickland 20 35% view Pasco Robert K. Rees Park Beach 16 6% view Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view View Pinellas Fort Desoto North Beach 0 n/a view View Pinellas Fort Desoto North Beach 0 n/a view View View Pinellas Fort Desoto North Beach 0 n/a view View View View View View View View V	Pasco	Brasher Park Beach	18	6%	view
Pasco Oelsner Park Beach 0 n/a view Pasco Robert J. Strickland 20 35% view Pasco Robert K. Rees Park Beach 16 6% view Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view	Pasco	Energy And Marine Center	0	n/a	view
Pasco Robert J. Strickland 20 35% view Pasco Robert K. Rees Park Beach 16 6% view Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view Pinellas	Pasco	Gulf Harbors Beach	17	0%	view
Pasco Robert K. Rees Park Beach 16 6% view Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 0 n/a view Pinellas	Pasco	Oelsner Park Beach	0	n/a	view
Pinellas Bay Vista Park 0 n/a view Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Dunedin Marina Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 26 0% view Pinellas Fred Howard Beach 0 n/a view	Pasco	Robert J. Strickland	20	35%	view
Pinellas Belleair Beach - Morgan Drive 0 n/a view Pinellas Belleair Causeway-Intercoastal 0 n/a view Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Dunedin Marina Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 26 0% view Pinellas Fred Howard Beach 0 n/a view Pinellas Fort Desoto North Beach 26 0% view Pinellas Fred Howard Beach 0 n/a view	Pasco	Robert K. Rees Park Beach	16	6%	view
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Pinellas Bermuda Bay Beach 0 n/a view Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Dunedin Marina Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 26 0% view Pinellas Fred Howard Beach 0 n/a view	Pinellas	Belleair Beach - Morgan Drive	0	n/a	view
Pinellas Clearwater Beach (3Rd St) 0 n/a view Pinellas Clearwater Beach - Carlouel Park 0 n/a view Pinellas Clearwater Beach - Rockaway 0 n/a view Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Dunedin Marina Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 26 0% view Pinellas Fred Howard Beach 0 n/a view	Pinellas	Belleair Causeway-Intercoastal	0	n/a	view
PinellasClearwater Beach - Carlouel Park0n/aviewPinellasClearwater Beach - Rockaway0n/aviewPinellasCourtney Campbell Causeway264%viewPinellasCrystal Beach0n/aviewPinellasDunedin Marina Beach0n/aviewPinellasFort Desoto 1/2 Way B/N Fort & N. Beach0n/aviewPinellasFort Desoto - East Beach0n/aviewPinellasFort Desoto North Beach260%viewPinellasFred Howard Beach0n/aview	Pinellas	Bermuda Bay Beach	0	n/a	view
PinellasClearwater Beach - Rockaway0n/aviewPinellasCourtney Campbell Causeway264%viewPinellasCrystal Beach0n/aviewPinellasDunedin Marina Beach0n/aviewPinellasFort Desoto 1/2 Way B/N Fort & N. Beach0n/aviewPinellasFort Desoto - East Beach0n/aviewPinellasFort Desoto North Beach260%viewPinellasFred Howard Beach0n/aview	Pinellas	Clearwater Beach (3Rd St)	0	n/a	view
Pinellas Courtney Campbell Causeway 26 4% view Pinellas Crystal Beach 0 n/a view Pinellas Dunedin Marina Beach 0 n/a view Pinellas Fort Desoto 1/2 Way B/N Fort & N. Beach 0 n/a view Pinellas Fort Desoto - East Beach 0 n/a view Pinellas Fort Desoto North Beach 26 0% view Pinellas Fred Howard Beach 0 n/a view	Pinellas	Clearwater Beach - Carlouel Park	0	n/a	view
PinellasCrystal Beach0n/aviewPinellasDunedin Marina Beach0n/aviewPinellasFort Desoto 1/2 Way B/N Fort & N. Beach0n/aviewPinellasFort Desoto - East Beach0n/aviewPinellasFort Desoto North Beach260%viewPinellasFred Howard Beach0n/aview	Pinellas	Clearwater Beach - Rockaway	0	n/a	view
PinellasDunedin Marina Beach0n/aviewPinellasFort Desoto 1/2 Way B/N Fort & N. Beach0n/aviewPinellasFort Desoto - East Beach0n/aviewPinellasFort Desoto North Beach260%viewPinellasFred Howard Beach0n/aview	Pinellas	Courtney Campbell Causeway	26	4%	view
Pinellas         Fort Desoto 1/2 Way B/N Fort & N. Beach         0         n/a         view           Pinellas         Fort Desoto - East Beach         0         n/a         view           Pinellas         Fort Desoto North Beach         26         0%         view           Pinellas         Fred Howard Beach         0         n/a         view	Pinellas	Crystal Beach	0	n/a	view
Pinellas         Fort Desoto - East Beach         0         n/a         view           Pinellas         Fort Desoto North Beach         26         0%         view           Pinellas         Fred Howard Beach         0         n/a         view	Pinellas	Dunedin Marina Beach	0	n/a	view
PinellasFort Desoto North Beach260%viewPinellasFred Howard Beach0n/aview	Pinellas	Fort Desoto 1/2 Way B/N Fort & N. Beach	0	n/a	view
Pinellas Fred Howard Beach 0 n/a <u>view</u>	Pinellas	Fort Desoto - East Beach	0	n/a	view
	Pinellas	Fort Desoto North Beach	26	0%	view
Pinellas Ft Desoto Park - Pier/Fort 0 n/a <u>view</u>	Pinellas	Fred Howard Beach	0	n/a	view
	Pinellas	Ft Desoto Park - Pier/Fort	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pinellas	Gandy Boulevard	0	n/a	view
Pinellas	Gulfport - East Beach	0	n/a	<u>view</u>
Pinellas	Gulfport - Osgood Beach	0	n/a	<u>view</u>
Pinellas	Gulfport - West Beach	0	n/a	<u>view</u>
Pinellas	Honeymoon Island Beach	26	0%	<u>view</u>
Pinellas	Honeymoon Island Causeway (South)	0	n/a	<u>view</u>
Pinellas	Indian Rocks Beach	26	0%	<u>view</u>
Pinellas	Indian Rocks Beach - Central Ave	0	n/a	view
Pinellas	Indian Shores Beach	0	n/a	view
Pinellas	Lassing Park - 19Th Ave Se	0	n/a	view
Pinellas	Madeira Beach	27	4%	view
Pinellas	Madeira Beach - 129Th Ave	0	n/a	view
Pinellas	Maximo Park - East Beach	0	n/a	view
Pinellas	Maximo Park - West Beach	0	n/a	view
Pinellas	Mobbly Bayou Preserve	0	n/a	view
Pinellas	North Redington Beach - 169Th Ave	0	n/a	view
Pinellas	North Shore - North Beach	0	n/a	view
Pinellas	North Shore Beach	0	n/a	view
Pinellas	Pass-A-Grille - 19Th Ave	0	n/a	view
Pinellas	Pass-A-Grille Beach	26	0%	<u>view</u>
Pinellas	R.E. Olds Park	0	n/a	view
Pinellas	Redington Beach - 158Th Ave	0	n/a	<u>view</u>
Pinellas	Redington Shores - 175Th Ave	0	n/a	<u>view</u>
Pinellas	Redington Shores - 182Nd Ave	27	4%	<u>view</u>
Pinellas	Safety Harbor Pier	0	n/a	<u>view</u>
Pinellas	Sand Key	26	0%	view
Pinellas	St Pete Beach - 34Th Ave (The Don)	0	n/a	view
Pinellas	St Pete Beach - 46Th Ave (Park)	0	n/a	view
Pinellas	Sunset Beach (Ti) - 82Nd Ave	0	n/a	view
Pinellas	Sunset Beach (Ti) - 89Th Ave	0	n/a	<u>view</u>
Pinellas	Sunset Beach - Tarpon Springs	26	0%	view
Pinellas	Treasure Island - 103Rd Ave	0	n/a	<u>view</u>
Pinellas	Treasure Island Beach	27	4%	<u>view</u>
Santa Rosa	Floridatown Park	0	n/a	<u>view</u>
		-		

County	Beach	Total Samples	% of samples exceeding BAV	View
Santa Rosa	Garcon Point Location 3	0	n/a	view
Santa Rosa	Homeport	0	n/a	view
Santa Rosa	Juana'S Beach	20	25%	<u>view</u>
Santa Rosa	Navarre Beach Pier	21	14%	<u>view</u>
Santa Rosa	Navarre Beach West	19	11%	view
Santa Rosa	Navarre Park	27	59%	view
Santa Rosa	Redfish Point	0	n/a	view
Santa Rosa	Shoreline Park	22	36%	view
Santa Rosa	Woodlawn Beach	0	n/a	view
Sarasota	Avenida Del Mare Access #11	0	n/a	view
Sarasota	Avenida Messina Access #2	0	n/a	view
Sarasota	Avenida Navarra Access #14	0	n/a	view
Sarasota	Blackburn Point Park	0	n/a	view
Sarasota	Blind Pass Beach	48	2%	view
Sarasota	Brohard Beach	49	2%	view
Sarasota	Calle De La Siesta, Access #7	0	n/a	view
Sarasota	Calle Del Inverno Access #10	0	n/a	view
Sarasota	Caspersen Public Beach	48	0%	view
Sarasota	Lido Casino Beach	53	4%	view
Sarasota	Longboat Access #1	0	n/a	view
Sarasota	Longboat Access #2	0	n/a	view
Sarasota	Longboat Access #3	0	n/a	view
Sarasota	Longboat Key Access	55	4%	view
Sarasota	Manasota Beach	49	0%	view
Sarasota	Nokomis Public Beach	52	2%	view
Sarasota	North Jetty Park Beach	54	6%	view
Sarasota	North Lido Beach	52	4%	view
Sarasota	Ocean Blvd Access #5	0	n/a	view
Sarasota	Palmer Point Beach	0	n/a	<u>view</u>
Sarasota	Plaza De Las Palmas 1, Access #8	0	n/a	view
Sarasota	Plaza De Las Palmas #9	0	n/a	view
Sarasota	Point O' Rocks	0	n/a	view
Sarasota	Quick Point	0	n/a	view
Sarasota	Ringling Causeway	52	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Sarasota	Service Club Park	49	0%	view
Sarasota	Shell Road Access #1	0	n/a	view
Sarasota	Siesta Key Public Beach	52	6%	view
Sarasota	South Jetty Beach	0	n/a	view
Sarasota	South Lido Beach	46	2%	view
Sarasota	Stickney Point Access #12	0	n/a	view
Sarasota	Turtle Beach	49	0%	view
Sarasota	Venice Fishing Pier	52	4%	view
Sarasota	Venice Public Beach	50	2%	view
St Johns	Anastasia State Park (St. Augustine Beach)	18	0%	view
St Johns	Crescent Beach	18	0%	view
St Johns	Matanzas Inlet	0	n/a	view
St Johns	Mickler'S Landing	18	0%	view
St Johns	Solano (Ponte Vedra Beach)	0	n/a	view
St Johns	St. Augustine Beach A Street	18	0%	view
St Johns	St. Augustine Beach Ocean Trace	18	0%	view
St Johns	Vilano Beach	18	0%	view
St Lucie	Avalon Park	0	n/a	view
St Lucie	Blind Creek	0	n/a	view
St Lucie	Blind Creek Park	0	n/a	view
St Lucie	Blue Heron Blvd Access	0	n/a	view
St Lucie	Coconut Drive Access	0	n/a	view
St Lucie	F Douglass Memorial Park	26	8%	view
St Lucie	Fort Pierce Inlet/North Jetty Park	27	19%	view
St Lucie	Gulfstream Beach	0	n/a	view
St Lucie	Hermans Bay	0	n/a	view
St Lucie	Inlet State Park At Ocean	0	n/a	view
St Lucie	Inlet State Park At River	0	n/a	view
St Lucie	Jaycee Park	27	11%	view
St Lucie	John Brooks Park	0	n/a	view
St Lucie	K Bergalis Memorial Park	0	n/a	view
St Lucie	Little Jim Bridge	0	n/a	view
St Lucie	Middle Cove	0	n/a	view
St Lucie	Normandy Beach	0	n/a	view

St Lucie         Pepper Park         25         4%         yiew           St Lucie         Porpoise Beach         0         n/a         yiew           St Lucie         South Beach Boardwalk         0         n/a         yiew           St Lucie         South Causeway At Boat Ramp         27         11%         yiew           St Lucie         South Jetty Park Beach         0         n/a         yiew           St Lucie         Surfside Park         0         n/a         yiew           St Lucie         Walton Rocks Beach         26         8%         yiew           St Lucie         Waveland Beach         0         n/a         yiew           St Lucie         Waveland Beach         0         n/a         yiew           Taylor         Cedar Island         0         n/a         yiew           Taylor         Dark Island         0         n/a         yiew           Taylor         Hagen'S Cove         0         n/a         yiew           Volusia         27Th Street, New Smryna Beach         26         0%         yiew           Volusia         Bicentennial Park, Ormond Beach         26         0%         yiew           Volusia         Bicent	County	Beach	Total Samples	% of samples exceeding BAV	View
St Lucie         South Beach Boardwalk         0         n/a         yiew           St Lucie         South Causeway At Boat Ramp         27         11%         yiew           St Lucie         South Jetty Park Beach         0         n/a         yiew           St Lucie         Surfside Park         0         n/a         yiew           St Lucie         Walton Rocks Beach         26         8%         yiew           St Lucie         Walton Rocks Beach         26         8%         yiew           St Lucie         Walton Rocks Beach         0         n/a         yiew           Taylor         Cedar Island         0         n/a         yiew           Taylor         Dark Island         0         n/a         yiew           Taylor         Dekle Beach         0         n/a         yiew           Taylor         Hagen'S Cove         0         n/a         yiew           Volusia         26         0%         yiew           Volusia         Beach Street         1         0%         yiew           Volusia         Bicentennial Park, Ormond Beach         26         0%         yiew           Volusia         Flagler Avenue, New Smryna Beach         0	St Lucie	Pepper Park	25	4%	view
St Lucie         South Causeway At Boat Ramp         27         11%         yiew           St Lucie         South Jetty Park Beach         0         n/a         yiew           St Lucie         Surfside Park         0         n/a         yiew           St Lucie         Waveland Beach         26         8%         yiew           St Lucie         Waveland Beach         0         n/a         yiew           Taylor         Cedar Island         0         n/a         yiew           Taylor         Dark Island         0         n/a         yiew           Taylor         Dekle Beach         0         n/a         yiew           Taylor         Hagen'S Cove         0         n/a         yiew           Taylor         Keaton Beach         0         n/a         yiew           Yolusia         27Th Street, New Smryna Beach         26         0%         yiew           Volusia         Beach Street         1         0%         yiew           Volusia         Bicentennial Park, Ormond Beach         26         0%         yiew           Volusia         Dunlawton, Daytona Beach Shores         26         4%         yiew           Volusia         Flagler Ave	St Lucie	Porpoise Beach	0	n/a	<u>view</u>
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	Walton	Blue Mountain Beach Access	41	27%	view
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	Walton	Choctaw Beach County Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Walton	County Park	39	21%	view
Walton	Dune Allen Beach Access	44	39%	view
Walton	Eastern Lake Beach Access	40	23%	view
Walton	Eastern Lake Outfall	0	n/a	view
Walton	Grayton Beach Access	45	38%	view
Walton	Grayton Beach State Recreation Area	0	n/a	view
Walton	Holly Street Beach Access	39	21%	view
Walton	Inlet Beach Access (Tdc Beach Access)	42	21%	view
Walton	Legion Park (Class Ii)	0	n/a	view
Walton	Rosemary Beach	0	n/a	view
Walton	Santa Rosa Beach Access	0	n/a	-
Walton	South Wall Street Beach	0	n/a	view
Walton	Western Lake Outfall	0	n/a	view
Walton	Wheeler Point	0	n/a	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

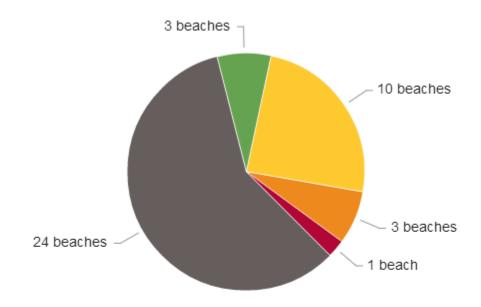
# **State Summary: Georgia**

Ranked 10th in Beach Water Quality (out of 30 states) 8% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Georgia 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 24 beaches (59%) were not monitored or had a limited number of samples (fewer than 12)
- 3 beaches (7%) did not have any samples exceed the national BAV safety threshold
- 10 beaches (24%) had >0-10% of their samples exceed the national BAV safety threshold
- 3 beaches (7%) had >10-20% of their samples exceed the national BAV safety threshold
- 1 beach (2%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Georgia has 41 public beaches along 118 miles of Atlantic coast and barrier island shores. The Coastal Resources Division of the Georgia Department of Natural Resources administers Georgia's beach monitoring and notification program. Most monitored Georgia beaches are tested year-round. Beach closing and advisory information is available on the Coastal Resources Division <u>website</u>.

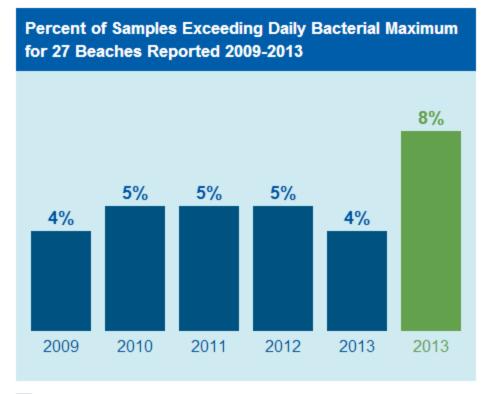
#### What Does Beach Water Monitoring Show?

In 2013, Georgia reported 41 coastal beaches, 27 of which were monitored. Of all reported beach monitoring samples, 8% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were St. Andrews Picnic Area (Jekyll) in Glynn County (31%), St. Simons Island Lighthouse in Glynn County (16%), Jekyll Clam Creek in Glynn County (15%), Tybee Island Polk Street in Chatham County (15%), 5th Street Crossover (SSI) in Glynn County (9%), and 12th St. Gould's Inlet (SSI) in Glynn County (9%).

### Georgia Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Georgia over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Georgia 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Camden	Cumberland	0	n/a	view
Camden	Little Cumberland	0	n/a	<u>view</u>
Chatham	Bradley (Ossabaw)	6	0%	view
Chatham	Kings Ferry	4	75%	<u>view</u>
Chatham	Little Tybee Island	0	n/a	<u>view</u>
Chatham	Middle Ossabaw	0	n/a	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Chatham	Skidaway Narrows	7	0%	view
Chatham	South Ossabaw	6	0%	view
Chatham	Tybee Island Middle	51	2%	view
Chatham	Tybee Island North	51	0%	view
Chatham	Tybee Island Polk St.	62	15%	view
Chatham	Tybee Island South	51	0%	view
Chatham	Tybee Island Strand	51	4%	view
Chatham	Wassaw Island	0	n/a	view
Chatham	Williamson Island	0	n/a	view
Glynn	4H Camp (Jekyll)	51	6%	view
Glynn	5Th St. Crossover (Ssi)	53	9%	view
Glynn	12 St. Goulds Inlet (Ssi)	55	9%	view
Glynn	Blythe Island Regional Park Sandbar	7	0%	view
Glynn	Capt. Wylly (Jekyll) Near Beachview	51	4%	view
Glynn	Convention Center (Jekyll)	51	2%	view
Glynn	East Beach Old Coast Guard (Ssi)	53	6%	view
Glynn	Jekyll Clam Creek	54	15%	view
Glynn	Jekyll North At Dexter Lane	51	4%	view
Glynn	Little St. Simons	0	n/a	view
Glynn	Massengale (Ssi)	53	6%	view
Glynn	Pelican Spit (Off Sea Island)	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Glynn	Rainbow Bar (Little Ssi)	0	n/a	view
Glynn	Reimolds Pasture (Little Ssi)	7	0%	view
Glynn	Sea Island North	7	0%	view
Glynn	Sea Island South	7	0%	view
Glynn	South Dunes (Jekyll)	51	0%	view
Glynn	St. Andrews Picnic Area (Jekyll)	70	31%	view
Glynn	St. Simons Island Lighthouse	56	16%	view
Liberty	St. Catherines Island	0	n/a	view
Mcintosh	Blackbeard Island	0	n/a	view
Mcintosh	Cabretta (Sapelo)	0	n/a	view
Mcintosh	Contentment Bluff Sandbar	7	0%	view
Mcintosh	Dallas Bluff Sandbar	7	0%	view
Mcintosh	Nanny Goat (Sapelo)	0	n/a	view
Mcintosh	Wolf Island	0	n/a	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

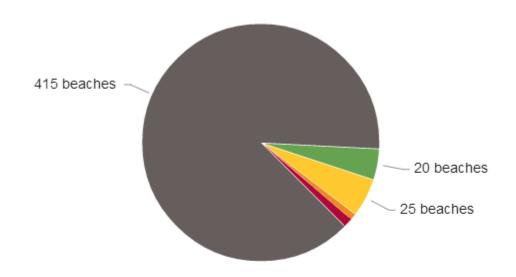
# **State Summary: Hawaii**

Ranked 8th in Beach Water Quality (out of 30 states) 7% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Hawaii 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 415 beaches (88%) were not monitored or had a limited number of samples (fewer than 12)
- 20 beaches (4%) did not have any samples exceed the national BAV safety threshold
- 25 beaches (5%) had >0-10% of their samples exceed the national BAV safety threshold
- 4 beaches (1%) had >10-20% of their samples exceed the national BAV safety threshold
- 6 beaches (1%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Hawaii has hundreds of public beaches stretching along nearly 300 miles of Pacific Ocean coastline. The beach water monitoring program is administered by the Clean Water Branch of the Hawaii Department of Health, and beach closing and advisory notifications can be found on its <u>website</u>.

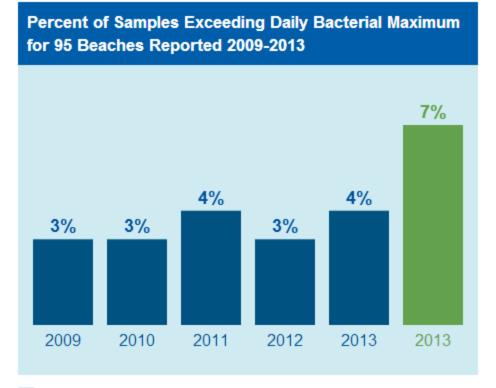
#### What Does Beach Water Monitoring Show?

In 2013, Hawaii reported 470 coastal beach segments. Of all reported beach monitoring samples, 7% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Waimea Rec. Pier State Park in Kauai County (44%), Kahanamoku Beach in Honolulu County (36%), Hanalei Beach Co. Park in Kauai County (34%), Lumaha'i Beach in Kauai County (33%), and Analani Pond (Puala'a) in Hawaii County (30%).

## Hawaii Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Hawaii over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

# **Hawaii 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Hawaii	2nd Beach (Next to Mahaiula)	13	8%	view
Hawaii	Anaeho'omalu Bay	69	3%	view
Hawaii	Analani Pond (Puala'a)	27	30%	view
Hawaii	Apua	0	n/a	-
Hawaii	Banyan's Surfing Area	10	0%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Hawaii	Cape Kumukahi	0	n/a	-
Hawaii	Coconut Island Park	0	n/a	view
Hawaii	Green Sand Beach	0	n/a	-
Hawaii	Hakalau Co. Pk.	0	n/a	view
Hawaii	Halape Shelter	0	n/a	-
Hawaii	Hapuna Beach St. Rec. Area	22	0%	view
Hawaii	Hawaiian Beaches Co. Park	0	n/a	-
Hawaii	Hawaiian Paradise Co. Pk.	0	n/a	-
Hawaii	Heeia	0	n/a	view
Hawaii	Hilo Bay (Boat Landing)	0	n/a	view
Hawaii	Hilo Bayfront	48	10%	view
Hawaii	Ho'okena	10	0%	view
Hawaii	Holoholokai Beach	11	0%	view
Hawaii	Honaunau Bay	10	0%	view
Hawaii	Honokane Iki	0	n/a	-
Hawaii	Honokane Nui	0	n/a	-
Hawaii	Honokea	0	n/a	-
Hawaii	Honokohau Beach	0	n/a	view
Hawaii	Honoli'i Beach Co. Park	24	13%	view
Hawaii	Honolulu Landing	0	n/a	-

County	Beach	Total Samples	% of samples exceeding BAV	View
Hawaii	Honomalino Bay	0	n/a	view
Hawaii	Honopue	0	n/a	-
Hawaii	Ice Pond (single point)	0	n/a	view
Hawaii	Isaac Hale Beach Co. Pk.	0	n/a	view
Hawaii	James Kealoha Park	25	8%	view
Hawaii	Ka Lae (South Point)	0	n/a	view
Hawaii	Kaʻaluʻalu Bay	0	n/a	-
Hawaii	Ka'iliki'i	0	n/a	-
Hawaii	Ka'upulehu	0	n/a	view
Hawaii	Kahalu'u Beach Co. Pk.	69	3%	view
Hawaii	Kahuwai Bay	0	n/a	-
Hawaii	Kailua Bay	80	0%	view
Hawaii	Kalahiki Beach	0	n/a	view
Hawaii	Kalapana Beach (new) (Harry K. Brown Beach Co. Pk.)	0	n/a	view
Hawaii	Kalu'e Pt.	0	n/a	-
Hawaii	Kaluhika'a Beach	0	n/a	-
Hawaii	Kamakaokahonu	70	4%	view
Hawaii	Kamehame Hill	0	n/a	-
Hawaii	Kamoa Pt.	0	n/a	view
Hawaii	Kapa'a Beach Co. Pk.	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Hawaii	Kapoho Bay	0	n/a	view
Hawaii	Kapoho Beach Lots	0	n/a	<u>view</u>
Hawaii	Kapoho Tidepools (Vacationland)	27	4%	view
Hawaii	Kapu'a Bay	0	n/a	view
Hawaii	Kauhako Bay - Hookena	0	n/a	-
Hawaii	Kauna'oa Beach	11	0%	view
Hawaii	Kawa Bay	0	n/a	view
Hawaii	Kawaihae Harbor	11	0%	view
Hawaii	Ke'ei	0	n/a	view
Hawaii	Kea'au	0	n/a	-
Hawaii	Keahou Bay (Kona)	12	8%	view
Hawaii	Kealakekua Bay	0	n/a	view
Hawaii	Kealia Beach	0	n/a	view
Hawaii	Keaukaha Beach Park	0	n/a	view
Hawaii	Keawaiki	0	n/a	view
Hawaii	Kehena	0	n/a	view
Hawaii	Keokea Beach Co. Pk.	0	n/a	view
Hawaii	Keone'ele Cove	0	n/a	view
Hawaii	Kiholo Bay	0	n/a	view
Hawaii	Kolekole Beach Co. Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Hawaii	Kuki'o	0	n/a	view
Hawaii	Lapakahi St. Hist. Park	0	n/a	<u>view</u>
Hawaii	Laupahoehoe Beach Co. Park	0	n/a	view
Hawaii	Lehia Beach Co. Pk.	0	n/a	<u>view</u>
Hawaii	Leleiwi Beach Co. Pk.	26	0%	view
Hawaii	MacKenzie State Rec. Area	0	n/a	-
Hawaii	Mahai'ula Bay	0	n/a	view
Hawaii	Mahukona Beach Co. Pk.	0	n/a	view
Hawaii	Makalawena	0	n/a	view
Hawaii	Makole'a Beach	0	n/a	view
Hawaii	Manini Point Co. Pk.	0	n/a	view
Hawaii	Manini'owali	12	0%	view
Hawaii	Manuka Bay	0	n/a	view
Hawaii	Mau'umae Beach	0	n/a	view
Hawaii	Mauna Lani (Kalahuipua'a)	11	0%	view
Hawaii	Miloli'i Beach	10	10%	view
Hawaii	Nanawale Co. Park	0	n/a	-
Hawaii	Napo'apo'o Beach Co. Pk.	0	n/a	view
Hawaii	Ninole	0	n/a	view
Hawaii	Niumalu Beach Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Hawaii	Ohai'ula Beach	0	n/a	view
Hawaii	Old Kona Airport (Pawai)	0	n/a	view
Hawaii	Old Kona Airport St. Rec. Area	1	0%	view
Hawaii	Onekahakaha Beach Co. Pk.	50	8%	view
Hawaii	Onomea	0	n/a	-
Hawaii	Pahoehoe Beach Co. Pk.	0	n/a	view
Hawaii	Paiahaa	0	n/a	-
Hawaii	Papa'i (King's Landing)	0	n/a	-
Hawaii	Pelekane Bay	10	10%	view
Hawaii	Pine Trees	12	17%	view
Hawaii	Pohoiki Beach	0	n/a	view
Hawaii	Pohue Bay	0	n/a	view
Hawaii	Pololu Valley	0	n/a	view
Hawaii	Pu'u Hou	0	n/a	-
Hawaii	Pu'uhonua Pt. (Pu'u o Honaunau)	0	n/a	view
Hawaii	Puako	69	3%	view
Hawaii	Pueo Bay	0	n/a	view
Hawaii	Punalu'u	0	n/a	view
Hawaii	Radio Bay	0	n/a	view
Hawaii	Reeds Bay Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Hawaii	Road to the Sea	0	n/a	-
Hawaii	Spencer Beach Co. Pk.	13	23%	view
Hawaii	Wai'ahukini	0	n/a	view
Hawaii	Waialea Bay	0	n/a	view
Hawaii	Waimanu Bay	0	n/a	-
Hawaii	Waipi'o Bay	0	n/a	view
Hawaii	Waiulaula	0	n/a	view
Hawaii	Wawaloli Beach	0	n/a	view
Hawaii	White Sands Beach Co. Pk. (Magic Sands)	39	3%	view
Hawaii	Whittington Beach Co. Pk.	0	n/a	view
Honolulu	Ala Moana Beach Co. Park, Ewa	0	n/a	view
Honolulu	Ala Moana Park, Center	16	0%	view
Honolulu	Ala Moana Park, D.H.	16	0%	view
Honolulu	Aukai Beach Co. Park	0	n/a	view
Honolulu	Banzai	0	n/a	view
Honolulu	Barbers Point Beach Co. Pk.	0	n/a	view
Honolulu	Bellows Field Beach Co. Pk.	0	n/a	view
Honolulu	Camp Harold Erdman	0	n/a	view
Honolulu	Chun's Reef	0	n/a	view
Honolulu	Diamond Head	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Honolulu	Diving area east of Reef Runway	0	n/a	-
Honolulu	Ehukai Beach Co. Pk.	0	n/a	view
Honolulu	Ewa Beach	0	n/a	view
Honolulu	Ewa Beach Co. Park	0	n/a	view
Honolulu	Ewa Plantation Beach	0	n/a	-
Honolulu	Fort DeRussy Beach	0	n/a	view
Honolulu	Fort DeRussy Beach Park	0	n/a	view
Honolulu	Fort Hase Beach	0	n/a	view
Honolulu	Fort Kamehameha Beach	0	n/a	view
Honolulu	Gray's Beach	0	n/a	view
Honolulu	Hale'iwa Ali'i Beach Co. Pk.	0	n/a	<u>view</u>
Honolulu	Hale'iwa Beach Co. Pk.	0	n/a	view
Honolulu	Halona Blowhole	0	n/a	view
Honolulu	Hanaka'ilio Beach	0	n/a	view
Honolulu	Hanauma Bay	6	0%	view
Honolulu	Hau'ula Beach Co. Park	0	n/a	view
Honolulu	Hawaiian Electric Beach Park	0	n/a	view
Honolulu	He'eia	0	n/a	view
Honolulu	Hickam Harbor Beach	0	n/a	-
Honolulu	Ihilani Honu	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Honolulu	Ihilani Kohola	0	n/a	view
Honolulu	Ihilani Naia	0	n/a	view
Honolulu	Ihilani Ulua	0	n/a	view
Honolulu	Iroquois Pt.	0	n/a	view
Honolulu	Ka'a'awa Beach Co. Park	0	n/a	view
Honolulu	Ka'alawai Beach	0	n/a	view
Honolulu	Ka'ena Pt.	0	n/a	view
Honolulu	Kahala	0	n/a	view
Honolulu	Kahala Hilton Beach	0	n/a	view
Honolulu	Kahana Bay	0	n/a	view
Honolulu	Kahanamoku Beach	14	36%	view
Honolulu	Kahanamoku Lagoon	0	n/a	-
Honolulu	Kahe Pt. Beach Co. Pk.	0	n/a	view
Honolulu	Kahuku Golf Course	0	n/a	view
Honolulu	Kaiaka	0	n/a	view
Honolulu	Kaihalulu Beach	0	n/a	view
Honolulu	Kailua Beach	0	n/a	-
Honolulu	Kailua Beach Middle	0	n/a	view
Honolulu	Kailua Beach Pk.	6	0%	view
Honolulu	Kaiona Beach Co. Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Honolulu	Kaipapa'u Beach	0	n/a	view
Honolulu	Kakaako Waterfront	0	n/a	view
Honolulu	Kalae'o'io Beach Co. Park	0	n/a	view
Honolulu	Kalama Beach	0	n/a	view
Honolulu	Kalaniana'ole Beach	0	n/a	-
Honolulu	Kaloko (Queens) Beach	0	n/a	view
Honolulu	Kaluahole Beach	0	n/a	view
Honolulu	Kaluanui Beach	0	n/a	view
Honolulu	Kane'ohe Bay	0	n/a	view
Honolulu	Kanenelu Beach	0	n/a	view
Honolulu	Kapaeloa Beach	0	n/a	view
Honolulu	Kapi'olani Park	0	n/a	view
Honolulu	Kaunala Beach	0	n/a	view
Honolulu	Kaupo Beach Co. Park	0	n/a	view
Honolulu	Kawaiku'i Beach Park	0	n/a	view
Honolulu	Kawailoa Beach	0	n/a	view
Honolulu	Kawela Bay	0	n/a	view
Honolulu	Ke'ehi Lagoon	0	n/a	view
Honolulu	Kea'au Beach Co. Park	0	n/a	view
Honolulu	Kealia Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Honolulu	Koke'e Beach Park	0	n/a	view
Honolulu	Koko Kai Beach Park	0	n/a	view
Honolulu	Kokololio Beach	0	n/a	view
Honolulu	Kualoa Co. Regional Park	0	n/a	view
Honolulu	Kualoa Sugar Mill Beach	0	n/a	view
Honolulu	Kuhio Beach Park	15	13%	view
Honolulu	Kuilei Cliffs Beach Park	0	n/a	view
Honolulu	Kuilima Cove	0	n/a	view
Honolulu	Kuli'ou'ou	0	n/a	view
Honolulu	Laenani Beach Co. Park	0	n/a	view
Honolulu	Laie Beach Co. Park	0	n/a	view
Honolulu	Laniakea Beach	0	n/a	view
Honolulu	Lanikai	0	n/a	view
Honolulu	Laniloa Peninsula (Beach)	0	n/a	view
Honolulu	Laukinui Beach	0	n/a	view
Honolulu	Lualualei Beach Co. Park	0	n/a	view
Honolulu	Ma'ili Beach Co. Park	0	n/a	view
Honolulu	Magic Island Beach	16	0%	view
Honolulu	Magic Island East	0	n/a	-
Honolulu	Maipalaoa Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Honolulu	Makaha Beach Co. Park	0	n/a	view
Honolulu	Makao Beach	0	n/a	view
Honolulu	Makapu'u Beach Co. Park	6	0%	view
Honolulu	Makaua Beach Co. Park	0	n/a	view
Honolulu	Makua Beach	0	n/a	view
Honolulu	Malaekahana Bay	0	n/a	view
Honolulu	Manner's Beach	0	n/a	view
Honolulu	Mauna Lahilahi Beach Co. Pk.	0	n/a	view
Honolulu	Maunalua Bay	0	n/a	view
Honolulu	Maunalua Bay Beach Park	0	n/a	view
Honolulu	Mokule'ia Beach	0	n/a	view
Honolulu	Mokule'ia Beach Park	0	n/a	view
Honolulu	Nanaikapono Beach	0	n/a	view
Honolulu	Nanakuli Beach Co. Pk.	0	n/a	view
Honolulu	Nimitz Beach	0	n/a	view
Honolulu	Niu	0	n/a	view
Honolulu	North Beach	0	n/a	view
Honolulu	Ohikilolo Beach(Barking Sands)	0	n/a	view
Honolulu	One'ula Beach Co. Park	0	n/a	view
Honolulu	Oneawa Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Honolulu	Outrigger Canoe Club Beach	0	n/a	view
Honolulu	Pahipahi'alua Beach	0	n/a	view
Honolulu	Paiko Lagoon	0	n/a	view
Honolulu	Papa'iloa Beach	0	n/a	view
Honolulu	Papaoneone Beach	0	n/a	view
Honolulu	Pearl Harbor - Middle Loch	0	n/a	-
Honolulu	Piliokahe Beach	0	n/a	-
Honolulu	Pipeline, The	0	n/a	view
Honolulu	Point Panic Beach Park	0	n/a	view
Honolulu	Poka'i Bay Beach Co. Pk.	0	n/a	view
Honolulu	Pounders Beach	0	n/a	view
Honolulu	Pu'uiki	0	n/a	view
Honolulu	Pu'uohulu Beach	0	n/a	view
Honolulu	Punalu'u Beach Co. Park	0	n/a	view
Honolulu	Pupukea Beach Co. Pk.	0	n/a	view
Honolulu	Queen's Surf Beach Park	15	0%	view
Honolulu	Royal-Moana Beach	4	0%	view
Honolulu	Sand Island	0	n/a	view
Honolulu	Sandy Beach Co. Park	6	0%	view
Honolulu	Sans Souci St. Rec. Area	15	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Honolulu	Sunset Beach	0	n/a	view
Honolulu	Swanzy Beach Co. Park	0	n/a	view
Honolulu	Tongg's Beach	0	n/a	view
Honolulu	Turtle Bay	0	n/a	view
Honolulu	Ulehawa Beach Co. Park	0	n/a	view
Honolulu	Wai'alae Beach Co. Park	0	n/a	view
Honolulu	Wai'anae Kai Military Reservation Beach	0	n/a	view
Honolulu	Wai'anae Regional Park	0	n/a	view
Honolulu	Waiahole Beach Co. Park	0	n/a	view
Honolulu	Waiale'e	0	n/a	view
Honolulu	Waikiki Beach Center	0	n/a	view
Honolulu	Wailupe Beach Park	0	n/a	view
Honolulu	Waimanalo Bay St. Rec. Area	0	n/a	view
Honolulu	Waimanalo Beach	0	n/a	-
Honolulu	Waimanalo Beach Co. Park	6	0%	view
Honolulu	Waimea Bay Beach Co. Pk.	0	n/a	view
Honolulu	War Memorial Natatorium	0	n/a	-
Honolulu	Wawamalu Beach Park	0	n/a	view
Honolulu	White Plains Beach	0	n/a	view
Honolulu	Yokohama Bay	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kauai	(Honopuwaiakua) Honopu Valley	0	n/a	-
Kauai	Ahukini Rec. Pier St. Pk.	0	n/a	view
Kauai	Aliomanu Beach	0	n/a	view
Kauai	Anahola Beach	0	n/a	view
Kauai	Anahola Beach Co. Park	15	7%	view
Kauai	Anini Beach	18	6%	view
Kauai	Anini Beach Park	0	n/a	view
Kauai	Barking Sands	0	n/a	-
Kauai	Beach House Beach	0	n/a	view
Kauai	Black Pot Beach Park	0	n/a	view
Kauai	Brennecke Beach	15	0%	view
Kauai	Donkey Park	0	n/a	view
Kauai	Gillin's Beach	0	n/a	view
Kauai	Glass Beach	0	n/a	view
Kauai	Ha'ena Beach Co. Park	21	10%	view
Kauai	Hanakapi'ai Beach	0	n/a	-
Kauai	Hanalei Beach Co. Park	169	34%	view
Kauai	Hanama'ulu Beach Co. Park	0	n/a	view
Kauai	Hanapepe Bay	0	n/a	view
Kauai	Haula Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kauai	Kahili Beach	0	n/a	view
Kauai	Kalalau Beach	0	n/a	-
Kauai	Kalapaki Beach	62	6%	view
Kauai	Kalihiwai Bay	18	6%	view
Kauai	Kapa'a Beach Co. Park	15	0%	view
Kauai	Kaupea Beach (Secret Beach)	0	n/a	view
Kauai	Kawailoa Beach	0	n/a	view
Kauai	Ke'e Beach	21	5%	view
Kauai	Kealia	0	n/a	view
Kauai	Kekaha Beach Co. Pk.	0	n/a	view
Kauai	Kepuhi Beach	0	n/a	view
Kauai	Kikiaola Beach	0	n/a	view
Kauai	Kilauea Pt. Nat. Wildlife Ref.	0	n/a	view
Kauai	Kipu Kai	0	n/a	view
Kauai	Koloa Landing	0	n/a	view
Kauai	Kukui'ula Bay	0	n/a	view
Kauai	Larsens Beach	0	n/a	view
Kauai	Lawa'i Kai	0	n/a	view
Kauai	Lucy Wright Beach Co. Park	0	n/a	view
Kauai	Lumaha'i Beach	21	33%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kauai	Lydgate State Park	61	2%	view
Kauai	Maha'ulepu Beach	0	n/a	-
Kauai	Miloli'I	0	n/a	-
Kauai	Moloa'a Bay	0	n/a	view
Kauai	Na Pali Coast State Park	0	n/a	view
Kauai	Nawiliwili Harbor	0	n/a	view
Kauai	Nawiliwili Harbor-Coast Guard Pier	0	n/a	view
Kauai	Ninini Pt.	0	n/a	view
Kauai	Niumalu Beach Park	0	n/a	view
Kauai	Nu'alolo	0	n/a	-
Kauai	Nukoli'l Beach Park	0	n/a	view
Kauai	Pacific Missile Range Facility	16	0%	view
Kauai	Pakala (Makaweli)	0	n/a	view
Kauai	Palama Beach (Nomilu)	0	n/a	view
Kauai	Papa'a Bay	0	n/a	view
Kauai	Pila'a Beach	0	n/a	view
Kauai	Po'ipu Beach Co. Park	63	0%	view
Kauai	Polihale State Park	0	n/a	view
Kauai	Port Allen	0	n/a	view
Kauai	Prince Kuhio Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kauai	Princeville	0	n/a	<u>view</u>
Kauai	Salt Pond Beach Co. Park	63	0%	view
Kauai	Sheraton Beach	16	0%	view
Kauai	Shipwreck Beach	0	n/a	view
Kauai	Spouting Horn Beach Co. Park	0	n/a	view
Kauai	Tunnels Beach	0	n/a	view
Kauai	Wahiawa Bay	0	n/a	view
Kauai	Wai'ohai Beach	0	n/a	view
Kauai	Wai'oli Beach Park	40	5%	view
Kauai	Waiakalua Iki Beach	0	n/a	view
Kauai	Waiakalua Nui Beach	0	n/a	view
Kauai	Waikoko Bay	0	n/a	view
Kauai	Wailua Beach	0	n/a	view
Kauai	Waimea Rec. Pier St. Pk.	16	44%	view
Kauai	Wainiha Bay	0	n/a	view
Kauai	Waipouli	0	n/a	view
Maui	Ahihi-kina'u Natural Area Reserve	0	n/a	view
Maui	Alaeloa Beach	0	n/a	view
Maui	Awahua Beach	0	n/a	view
Maui	Awalua Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Maui	Fagans Beach	0	n/a	view
Maui	Father Jules Papa	0	n/a	view
Maui	Fleming Beach North	3	0%	view
Maui	H-Poko Papa	0	n/a	view
Maui	H.P. Baldwin Beach Co. Pk.	3	0%	view
Maui	Halawa Beach Park	0	n/a	view
Maui	Halena Beach	0	n/a	view
Maui	Halepalaoa Beach	0	n/a	view
Maui	Hamoa	0	n/a	view
Maui	Hana Bay	0	n/a	view
Maui	Hanaka'o'o Beach Co. Pk.	64	14%	view
Maui	Hata's	3	0%	view
Maui	Ho'okipa Beach Co. Pk.	3	0%	view
Maui	Honokeana Bay	0	n/a	view
Maui	Honokohau Bay	0	n/a	view
Maui	Honokowai Beach Co. Pk.	5	0%	view
Maui	Honolua Bay	3	67%	view
Maui	Honomanu Bay	0	n/a	view
Maui	Honouli Malo'o	0	n/a	view
Maui	Honouli Wai	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Maui	Huakini Bay	0	n/a	view
Maui	Hulopo'e Beach Park	0	n/a	view
Maui	Iliopi'i Beach	0	n/a	view
Maui	Ka'anapali	12	0%	view
Maui	Ka'ili'ili Beach	0	n/a	view
Maui	Kahalepohaku Beach	0	n/a	view
Maui	Kahalui Harbor	66	3%	view
Maui	Kahana	6	0%	view
Maui	Kahemano Beach	0	n/a	view
Maui	Kaihalulu Bay	0	n/a	view
Maui	Kakahai'a Beach Park	0	n/a	view
Maui	Kalae, South Point	0	n/a	-
Maui	Kalama Beach Co. Park	20	0%	view
Maui	Kalepolepo Beach	2	0%	view
Maui	Kama'ole Beach 1	72	1%	view
Maui	Kama'ole Beach 2 (Ili'iliholo Beach)	3	0%	view
Maui	Kama'ole Beach 3	66	0%	view
Maui	Kamaka'ipo Beach	0	n/a	view
Maui	Kanaha Beach Co. Park	72	6%	view
Maui	Kanaio Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Maui	Kanalukaha Beach	0	n/a	view
Maui	Kapalua (Fleming's) Beach	3	0%	view
Maui	Kapoli Beach Co. Park	0	n/a	view
Maui	Kapukahehu Beach	0	n/a	view
Maui	Kapukuwahine Beach	0	n/a	view
Maui	Kaunala Beach	0	n/a	view
Maui	Kaunolu Bay	0	n/a	view
Maui	Kaupoa Beach	0	n/a	view
Maui	Kawa'aloa Bay	0	n/a	view
Maui	Kawakiu Bay (Nui)	0	n/a	view
Maui	Ke'anae	0	n/a	view
Maui	Kea'a Beach	0	n/a	view
Maui	Keawakapu Beach	6	0%	view
Maui	Keomuku Beach	0	n/a	view
Maui	Keonenui Beach	0	n/a	view
Maui	Kepuhi Beach	0	n/a	view
Maui	Kiowea Park (Kamehameha Coconut Grove)	0	n/a	view
Maui	Koki Beach Park (VFW)	0	n/a	view
Maui	Kolo Wharf	0	n/a	view
Maui	Ku'au Bay	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Maui	Kuiaha Bay	0	n/a	view
Maui	La Perouse Bay	0	n/a	view
Maui	Lahaina Beach	3	33%	view
Maui	Launiupoko St. Wayside	59	0%	view
Maui	Leho'ula Beach	0	n/a	view
Maui	Lighthouse Beach	0	n/a	view
Maui	Lopa Beach	0	n/a	view
Maui	Lower Pa'ia	3	0%	view
Maui	Ma'alaea Beach	68	0%	view
Maui	Mai Poina Oe lau Beach Co. Pk.	9	0%	view
Maui	Maka'alae Pt.	0	n/a	view
Maui	Makena Landing Beach	3	0%	view
Maui	Maliko Bay	7	1%	view
Maui	Malu'aka Beach	3	0%	view
Maui	Manele Bay	0	n/a	view
Maui	Mantokuji Bay	0	n/a	view
Maui	McGregor Pt.	0	n/a	view
Maui	Mo'omomi Beach	0	n/a	view
Maui	Mokapu Beach Park	3	0%	view
Maui	Mokulau	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Maui	Mokule'ia Beach	3	0%	view
Maui	Murphy Beach Park	0	n/a	view
Maui	Naha Beach	0	n/a	view
Maui	Nahiku	0	n/a	view
Maui	Napili Bay	3	0%	view
Maui	Nu'u Bay	0	n/a	view
Maui	Olowalu	6	17%	view
Maui	Oneali'l Beach Park	0	n/a	view
Maui	Oneloa Bay Beach	3	0%	view
Maui	Oneloa Beach (Big Beach)	3	0%	view
Maui	Oneuli Beach	3	0%	view
Maui	Palauea Beach Park	3	0%	view
Maui	Papalaua	3	0%	view
Maui	Papaloa Beach	0	n/a	view
Maui	Papohaku Beach	0	n/a	view
Maui	Paukukalo Beach	0	n/a	view
Maui	Pelekunu	0	n/a	view
Maui	Pepeiaolepo Bay	0	n/a	view
Maui	Po'olau Beach	0	n/a	view
Maui	Po'olenalena Beach	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Maui	Po'olenalena Beach Park	0	n/a	-
Maui	Pohaku Mauliuli Beach	0	n/a	view
Maui	Polihua Beach	0	n/a	view
Maui	Polo Beach Park	2	0%	view
Maui	Pu'u ola'i (Small Beach)	3	0%	view
Maui	Pu'u Pehe Cove	0	n/a	view
Maui	Pu'unoa Beach	3	0%	view
Maui	Puamana Beach Co. Park	3	0%	view
Maui	Puko'o	0	n/a	view
Maui	Punalau	0	n/a	view
Maui	Sandy Beach	0	n/a	view
Maui	Shipwreck Beach	0	n/a	view
Maui	Spreckelsville	68	3%	view
Maui	St. Theresa's	72	3%	view
Maui	Ukumehame Beach Co. Pk.	3	0%	view
Maui	Ulua Beach Park	3	0%	view
Maui	Wahikuli State Wayside Park	2	0%	view
Maui	Wai'anapanapa State Park	0	n/a	view
Maui	Waiehu Beach Co. Park	7	28%	view
Maui	Waihe'e Beach Co. Park	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Maui	Waikoloa Beach	0	n/a	view
Maui	Wailau	0	n/a	view
Maui	Wailea Beach Park	64	2%	view
Maui	Waimaha'ihai Beach	0	n/a	view
Maui	Waipulani	3	0%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

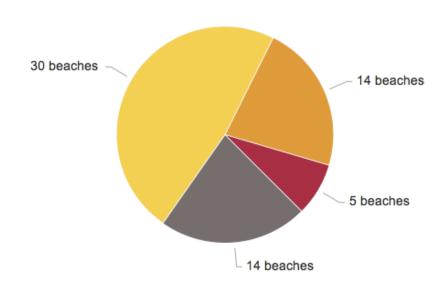
# **State Summary: Illinois**

Ranked 15th in Beach Water Quality (out of 30 states)

10% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms. State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

Illinois 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

14 beaches (22%) were not monitored or had a limited number of samples (fewer than 12)

0 beaches (0%) did not have any samples exceed the national BAV safety threshold

30 beaches (48%) had >0-10% of their samples exceed the national BAV safety threshold

14 beaches (22%) had >10-20% of their samples exceed the national BAV safety threshold

5 beaches (8%) had more than 20% of their samples exceed the national BAV safety threshold

Illinois has public swimming beaches along approximately 60 miles of Lake Michigan shoreline. The Illinois Department of Public Health administers the state's coastal beach monitoring program. Beachgoers can find advisory information on the <u>Chicago Park District website</u>.

### What Does Beach Water Monitoring Show?

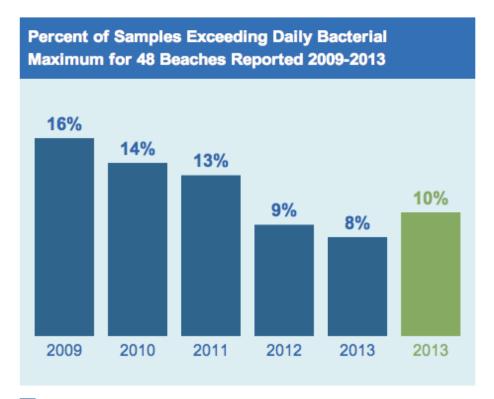
In 2013, Illinois reported 63 coastal beaches and beach segments, 49 of which were monitored. Of all reported beach monitoring samples, 10% exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Montrose Beach in Cook County (31%), South Shore Beach in Cook County (31%), North Point Marina Beach in Lake County (23%), Winnetka Elder Park Beach in Cook County (22%), and Rainbow Beach in Cook County (21%).

## Illinois Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Illinois over the past five years. Note that only samples from a common set of 27 beaches monitored each year from 2009-2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* 

bacteria cfu/100 ml water, as well as on the EPA's new Beach Action Value of 190 *E. coli* cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Illinois 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Cook	12th Street	80	18%	<u>view</u>
Cook	31st Street Beach	79	14%	view
Cook	49th Street Beach	0	n/a	<u>view</u>
Cook	57th Street Beach	77	8%	view
Cook	Calumet South Beach	79	16%	view
Cook	Chase Ave Park And Beach (private property; not sampled by government agency)	0	n/a	-
Cook	Evanston Church Dog Beach (dogs only in the water; no	101	5%	<u>view</u>

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
	swimming allowed)			
Cook	Evanston Clark Beach	100	4%	view
Cook	Evanston Greenwood Beach	101	4%	view
Cook	Evanston Lee Beach	101	6%	view
Cook	Evanston Lighthouse Beach	101	5%	view
Cook	Evanston South Beach	101	8%	view
Cook	Foster Avenue Beach	68	10%	view
Cook	Fullerton (Theater On The Lake) (not a designated swimming area)	0	n/a	-
Cook	Glencoe Park Beach	92	11%	view
Cook	Glenlake Ave. Park & Beach (private property; not sampled by government agency)	0	n/a	-
Cook	Hartigan Beach (also called Columbia, North Shore, Pratt and/orTobey Prinz)	69	6%	view
Cook	Howard Street Park Beach	69	3%	view
Cook	Jackson Park Beach (63rd/64th St Beach)	72	18%	view
Cook	Jarvis Beach (Also called Fargo and/or Sherwin Ave.)	68	4%	view
Cook	Juneway Terrace Park Beach	68	1%	view
Cook	Kathy Osterman Beach (Also called Osterman, Lane and/orHollywood)	68	12%	view
Cook	Kenilworth Beach	88	7%	view
Cook	Leone Beach (Also called Loyola Ave.)	68	6%	view
Cook	Montrose Beach	77	31%	view
Cook	Montrose Dog Beach (dogs only in water; no swimming allowed)	0	n/a	view
Cook	Munson Beach (State officials do not recognize this area as a beach)	0	n/a	view
Cook	North Avenue Beach	68	7%	view
Cook	Northwestern University Beach	55	7%	view
Cook	Oak Street Beach	69	3%	view
Cook	Oakwood Beach	78	6%	view
Cook	Ohio Street Beach	68	15%	view
Cook	Rainbow Beach	70	21%	view
Cook	Rogers Avenue Park Beach	68	1%	view
Cook	Rosemont Ave. Beach	0	n/a	view
Cook	South Shore	74	31%	view
Cook	Wilmette Gillson Park Beach	376	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cook	Wilmette Gillson Park Dog Beach (dogs only in water; no swimming allowed)	55	11%	view
Cook	Wilmette Langdon Beach	76	4%	view
Cook	Winnetka Centennial Dog Beach (dogs only in water; no swimming allowed)	73	16%	view
Cook	Winnetka Elder Park Beach	65	22%	view
Cook	Winnetka Lloyd Park Beach (boating only; no swimming allowed)	80	6%	view
Cook	Winnetka Maple Park Beach	72	7%	view
Cook	Winnetka Tower Beach	77	6%	view
Lake	Fort Sheridan North Beach (not a designated swimming area)	0	n/a	view
Lake	Fort Sheridan South Beach (not a designated swimming area)	0	n/a	view
Lake	Great Lakes Navel Nunn Beach (not a designated swimming area)	0	n/a	view
Lake	Highland Park Avenue Boating Beach	52	19%	view
Lake	Highland Park Moraine Park Dog Beach (dogs only in water; no swimming allowed)	15	13%	view
Lake	Highland Park Rosewood Beach	160	6%	view
Lake	Illinois Beach State Park Camp Logan Beach (not a designated swimming area)	0	n/a	view
Lake	Illinois Beach State Park North Beach	110	9%	view
Lake	Illinois Beach State Park Resort Beach	108	12%	view
Lake	Illinois Beach State Park Sailing Beach (not a designated swimming area)	0	n/a	view
Lake	Illinois Beach State Park South Beach	110	10%	view
Lake	Lake Bluff Dog Beach (dogs only in water; no swimming allowed)	13	8%	view
Lake	Lake Bluff Sunrise Beach	55	2%	view
Lake	Lake Forest Forest Park Beach	154	13%	view
Lake	North Chicago Foss Park Beach (not a designated swimming area)	0	n/a	view
Lake	North Point Marina Beach	110	23%	view
Lake	Waukegan North Beach	160	11%	view
Lake	Waukegan South Beach	160	10%	view
Lake	Zion Hosah Park Beach (not a designated swimming area)	0	n/a	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act

funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

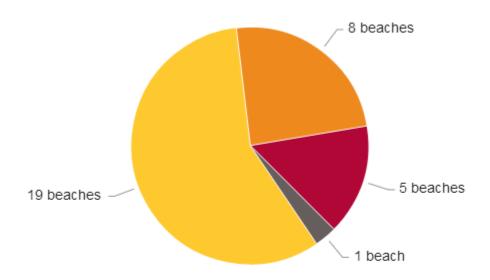
# **State Summary: Indiana**

Ranked 21st in Beach Water Quality (out of 30 states) 13% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Indiana 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 1 beach (3%) were not monitored or had a limited number of samples (fewer than 12)
- 0 beaches (0%) did not have any samples exceed the national BAV safety threshold
- 19 beaches (58%) had >0-10% of their samples exceed the national BAV safety threshold
- 8 beaches (24%) had >10-20% of their samples exceed the national BAV safety threshold
- 5 beaches (15%) had more than 20% of their samples exceed the national BAV safety threshold

Indiana has beaches stretching along 45 miles of Lake Michigan shoreline in three counties. The Indiana Department of Environmental Management (IDEM) administers the state's beach monitoring and notification program, which is voluntary for beaches that are not federally owned. The beaches participating in IDEM's Lake Michigan Beaches Monitoring and Notification Program post all advisories and closures on the IDEM BeachGuard website.

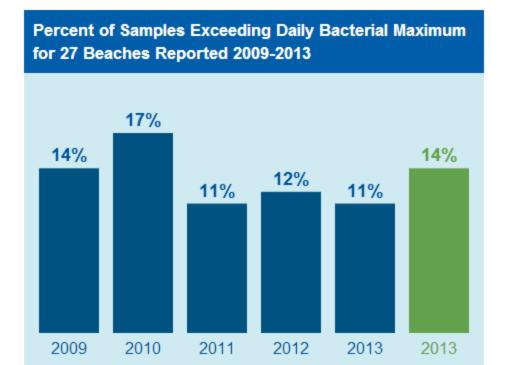
#### What Does Beach Water Monitoring Show?

In 2013, Indiana reported 33 Great Lakes beaches, 32 of which were monitored. Of all reported beach monitoring samples, 13% exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Jeorse Park Beach I (52%), Jeorse Park Beach II (40%), Hammond Marina East Beach (30%), and Buffington Harbor Beach (29%), all in Lake County; and Indiana Dunes National Lakeshore—Portage Lakefront in Porter County (22%).

#### Indiana Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Indiana over the past five years. Note that only samples from a common set of 27 beaches monitored each year from 2009–2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* bacteria cfu/100 ml water, as well as on the EPA's new Beach Action Value of 190 *E. coli* cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Indiana 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
La Porte	Duneland Beach - Stop 31, Shoreland Hills Beach	42	2%	view
La Porte	Duneland Beach - Stop 34	42	5%	view
La Porte	Indiana Dunes National Lakeshore - Central Avenue Beach	17	12%	view
La	Indiana Dunes National Lakeshore - Dunbar Beach	16	13%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Porte				
La Porte	Indiana Dunes National Lakeshore - Mount Baldy	12	8%	view
La Porte	Indiana Dunes National Lakeshore - State Park Road/Kemil Avenue Beach	16	6%	view
La Porte	Long Beach Stop 20	42	7%	view
La Porte	Long Beach Stop 24	42	7%	view
La Porte	Michiana Shores Stop 37	42	10%	view
La Porte	Sheridan Beach Stop 2	297	7%	view
La Porte	Sheridan Beach Stop 7	99	2%	view
La Porte	Washington Park Beach	297	12%	view
Lake	Buffington Harbor Beach	99	28%	<u>view</u>
Lake	Hammond Marina East Beach	99	30%	view
Lake	Hammond Marina West Beach	99	18%	view
Lake	Jeorse Park Beach I	99	52%	view
Lake	Jeorse Park Beach li	99	40%	view
Lake	Lake Street Beach	142	8%	view
Lake	Marquette Park Beach	284	5%	view
Lake	Wells Street Beach	71	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Lake	Whihala Beach East	99	12%	view
Lake	Whihala Beach West	99	12%	view
Porter	Broadway Beach	99	10%	view
Porter	Drexwood Beach	0	n/a	view
Porter	Indiana Dunes National Lakeshore - Lakeview Beach	17	12%	view
Porter	Indiana Dunes National Lakeshore - Portage Lakefront	18	22%	view
Porter	Indiana Dunes National Lakeshore - Porter Beach	16	6%	view
Porter	Indiana Dunes National Lakeshore - West Beach	16	6%	view
Porter	Indiana Dunes State Park East Beach	99	11%	view
Porter	Indiana Dunes State Park West Beach	99	8%	view
Porter	Ogden Dunes East Beach	144	7%	view
Porter	Ogden Dunes West Beach	144	8%	view
Porter	Shore Avenue Beach	99	8%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

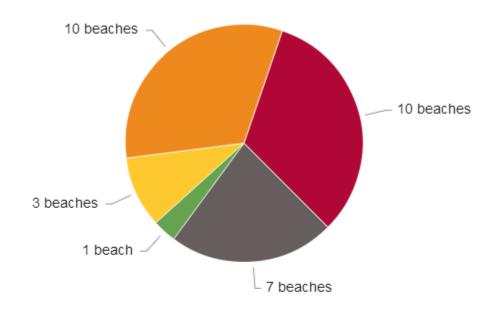
# **State Summary: Louisiana**

Ranked 26th in Beach Water Quality (out of 30 states)
19% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Louisiana 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 7 beaches (23%) were not monitored or had a limited number of samples (fewer than 12)
- 1 beach (3%) did not have any samples exceed the national BAV safety threshold
- 3 beaches (10%) had >0-10% of their samples exceed the national BAV safety threshold
- 10 beaches (32%) had >10-20% of their samples exceed the national BAV safety threshold
- 10 beaches (32%) had more than 20% of their samples exceed the national BAV safety threshold

While most of Louisiana's coastline consists of wetlands, beaches line nearly 30 miles of Gulf of Mexico and estuarine shoreline, including beaches on the Grand Isle barrier island, as well as some near the Texas border and on the shore of the Lake Pontchartrain estuary. The state's coastal monitoring program is administered by the Louisiana Department of Health and Hospitals (LDHH). Beachgoers can learn about beach advisories at the <u>LDHH beach advisory website</u>.

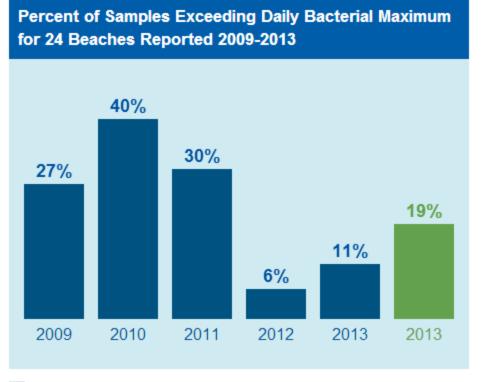
#### What Does Beach Water Monitoring Show?

In 2013, Louisiana reported 31 coastal beaches, 25 of which were monitored. Of all reported beach monitoring samples, 19% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Grand Isle State Park 2 in Jefferson Parish (42%), Cypremort Point State Park in St. Mary Parish (31%), Rutherford Beach in Cameron Parish (27%), Holly Beach 5 in Cameron Parish (26%), and South Beach & Rabbit Island in Calcasieu Parish (25%).

### Louisiana Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Louisiana over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

### **Louisiana 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Calcasieu	North Beach - Lake Charles	33	18%	view
Calcasieu	South Beach & Rabbit Island	36	25%	view
Cameron	Constance Beach	35	23%	view
Cameron	Gulf Breeze	37	22%	view
Cameron	Hackberry Beach	0	n/a	view
Cameron	Holly Beach 1	34	12%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Cameron	Holly Beach 2	33	18%	view
Cameron	Holly Beach 3	36	25%	view
Cameron	Holly Beach 4	39	21%	view
Cameron	Holly Beach 5	34	26%	view
Cameron	Holly Beach 6	37	16%	view
Cameron	Little Florida	34	15%	view
Cameron	Long Beach	33	18%	view
Cameron	Martin Beach	33	21%	view
Cameron	Rutherford Beach	37	27%	view
Jefferson	Elmer's Island	32	19%	view
Jefferson	Elmer's Island-East	0	n/a	view
Jefferson	Grand Isle Beach 1	34	6%	view
Jefferson	Grand Isle Beach 2	34	3%	view
Jefferson	Grand Isle Beach 3	33	0%	view
Jefferson	Grand Isle State Park 1	36	8%	view
Jefferson	Grand Isle State Park 2	33	42%	view
Jefferson	Grand Isle State Park 3	32	19%	view
Jefferson	Grand Isle State Park 4	40	18%	view
Lafourche	Fourchon 1	4	50%	view
Lafourche	Fourchon 2	0	n/a	view
Lafourche	Fourchon 3	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Lafourche	Fourchon 4	0	n/a	<u>view</u>
Orleans	Pontchartrain Beach	0	n/a	view
St Mary	Cypremort Point State Park	32	31%	view
St Tammany	Fontainebleau State Park	35	11%	<u>view</u>

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

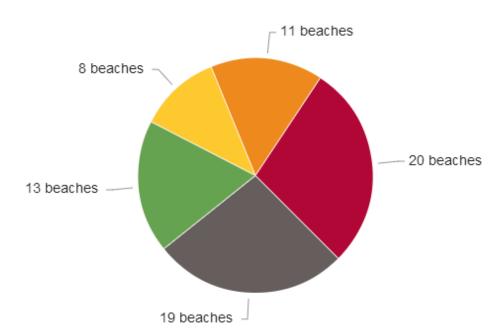
# **State Summary: Maine**

Ranked 27th in Beach Water Quality (out of 30 states)
19% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### Maine 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 19 beaches (27%) were not monitored or had a limited number of samples (fewer than 12)
- 13 beaches (18%) did not have any samples exceed the national BAV safety threshold
- 8 beaches (11%) had >0-10% of their samples exceed the national BAV safety threshold
- 11 beaches (15%) had >10-20% of their samples exceed the national BAV safety threshold
- 20 beaches (28%) had more than 20% of their samples exceed the national BAV safety threshold

There are more than 30 miles of public-access beaches stretching along Maine's Atlantic waters, including bays, sounds, and estuaries. The coastal beach water quality monitoring program, Maine Healthy Beaches (MHB), is managed by the Maine Department of Environmental Protection (DEP) and coordinated by the University of Maine Cooperative Extension. Beachgoers can learn about beach advisories on the Maine Healthy Beaches website.

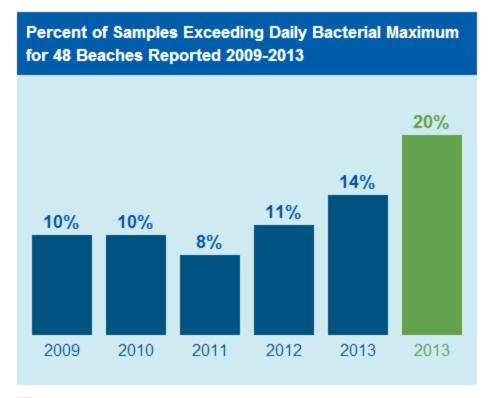
#### What Does Beach Water Monitoring Show?

In 2013, Maine reported 71 coastal beaches, 55 of which were monitored. Of all reported beach monitoring samples, 19% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Wells Harbor Beach in York County (57%), Laite Beach in Knox County (44%), Goodies Beach in Knox County (43%), Cape Neddick Beach in York County (42%), and Gooch's Beach in York County (38%).

### Maine Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Maine over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Maine 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Cumberland	Crescent Beach	31	19%	view
Cumberland	East End Beach	42	24%	<u>view</u>
Cumberland	Ferry Beach (Scarborough)	14	21%	<u>view</u>
Cumberland	Higgins Beach	54	19%	view
Cumberland	Kettle Cove Beach	14	14%	<u>view</u>
Cumberland	Pine Point	14	14%	view
Cumberland	Scarborough Beach	42	0%	view
Cumberland	Willard Beach	27	37%	view
Cumberland	Winslow Park	6	17%	<u>view</u>
Hancock	Emery Cove Beach	0	n/a	<u>view</u>

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Hancock	Hadley Point	15	7%	view
Hancock	Hulls Cove	15	20%	view
Hancock	Lamoine (Lamoine State Park)	0	n/a	view
Hancock	Sand Beach	15	0%	view
Hancock	Seal Harbor	15	20%	view
Hancock	Town Beach	30	13%	view
Knox	Clam Cove	0	n/a	view
Knox	Goodies Beach	21	43%	view
Knox	Laite Beach	18	44%	view
Knox	Sandy Beach	16	6%	view
Lincoln	Pemaquid Beach	14	0%	view
Sagadahoc	East Beach	0	n/a	view
Sagadahoc	Half Mile Beach	6	0%	view
Sagadahoc	Lagoon Beach	13	0%	view
Sagadahoc	Mile Beach	26	0%	view
Sagadahoc	Popham - Center Beach	12	0%	view
Sagadahoc	Popham - East Beach	23	0%	view
Sagadahoc	Popham - West Beach-Morse River	27	4%	view
Waldo	Ducktrap River	0	n/a	view
Waldo	Lincolnville Beach	17	18%	view
Waldo	Lincolnville Beach (Ferry Terminal)	0	n/a	view
Washington	Roque Bluffs (Roque Bluffs State Park)	0	n/a	view
York	Bay View	17	28%	view
York	Biddeford Pool (Ocean-Side)	0	n/a	view
York	Cape Neddick Beach	19	42%	view
York	Casino Square	36	22%	view
York	Colony Beach	18	33%	view
York	Crescent Beach (Kittery)	14	0%	view
York	Crescent Beach (Wells)	15	7%	view
York	Drakes Isl Beach	52	25%	view
York	Ferry Beach (Saco)	17	18%	view
York	Footbridge (Ogunquit)	0	n/a	view
York	Fort Foster - Horn Point	28	0%	view
York	Fort Foster - Pier Beach	14	0%	view
York	Fort Foster - Scuba Beach	14	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
York	Fortunes Rocks Beach	14	0%	view
York	Gil Bouche Park-Biddeford Pool	14	7%	view
York	Goochs Beach	40	38%	view
York	Goose Rocks	79	30%	view
York	Hills Beach	11	18%	view
York	Kinney Shores	19	37%	view
York	Laudholm Beach	35	26%	view
York	Libby Cove Beach	0	n/a	view
York	Little Beach	0	n/a	view
York	Long Sands Beach - North	65	22%	view
York	Long Sands Beach - South	26	15%	view
York	Main (Ogunquit)	0	n/a	view
York	Middle Beach (Biddeford)	14	0%	view
York	Middle Beach (Kennebunk)	0	n/a	view
York	Moody (Ogunquit)	0	n/a	view
York	Mothers Beach	19	37%	view
York	Oob - Central	49	10%	view
York	Oob - North End	16	6%	view
York	Oob - Ocean Park	38	34%	view
York	Parson'S Beach	0	n/a	view
York	Riverside (Ogunquit)	0	n/a	view
York	Sea Point Beach	14	0%	view
York	Short Sands Beach	20	30%	view
York	Wells Beach	59	22%	view
York	Wells Harbor	21	56%	view
York	York Harbor Beach	16	19%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For

historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

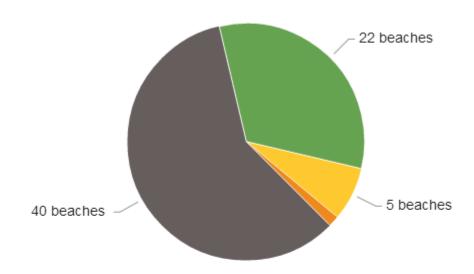
# **State Summary: Maryland**

Ranked 4th in Beach Water Quality (out of 30 states) 4% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

## Maryland 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 40 beaches (59%) were not monitored or had a limited number of samples (fewer than 12)
- 22 beaches (32%) did not have any samples exceed the national BAV safety threshold
- 5 beaches (7%) had >0-10% of their samples exceed the national BAV safety threshold
- 1 beach (1%) had >10-20% of their samples exceed the national BAV safety threshold
- 0 beaches (0%) had more than 20% of their samples exceed the national BAV safety threshold

Maryland has coastal beaches lining 19 miles of the Atlantic Ocean and the Chesapeake Bay. Beach water quality is monitored through a program administered by the Maryland Department of the Environment (MDE). Beachgoers can learn about beach advisories and closings on the Maryland Healthy Beaches website.

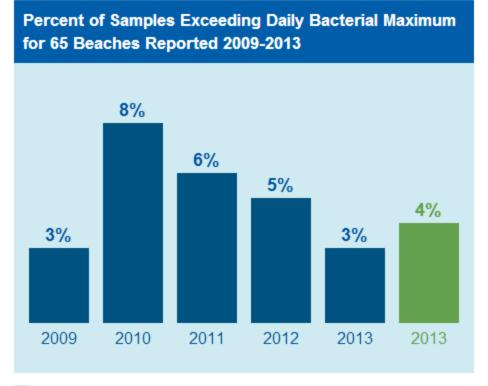
#### What Does Beach Water Monitoring Show?

In 2013, Maryland reported 68 coastal beaches, all of which were monitored. Of all reported beach monitoring samples, 4% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Sandy Point State Park South Beach in Anne Arundel County (13%), Mayo Beach Park in Anne Arundel County (7%), North Beach in Calvert County (7%), and Cedar Cove Community Beach in St. Mary's County (7%).

## Maryland Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Maryland over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Maryland 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Anne Arundel	Annapolis Sailing	13	0%	view
Anne Arundel	Arundel on the Bay	8	0%	view
Anne Arundel	Atlantic Marina Resort	8	13%	view
Anne Arundel	Bay Ridge at Bay Dr.	13	0%	view
Anne Arundel	Bay Ridge at River Dr.	13	0%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Anne Arundel	Bayside Beach	8	13%	view
Anne Arundel	Beverly Beach	11	27%	view
Anne Arundel	Cape Anne	4	0%	view
Anne Arundel	Cape St. Claire at Persimmon Point	8	13%	view
Anne Arundel	Cedarhurst	8	0%	view
Anne Arundel	Fairhaven	9	11%	view
Anne Arundel	Franklin Manor	8	0%	view
Anne Arundel	Highland Beach	9	11%	view
Anne Arundel	Idlewilde on the Bay	4	0%	view
Anne Arundel	Mason's Beach	4	0%	view
Anne Arundel	Mayo Beach Park	14	7%	view
Anne Arundel	Mountain Point at Gibson Island	8	0%	view
Anne Arundel	Oyster Harbor	10	20%	view
Anne Arundel	Rose Haven	8	0%	view
Anne Arundel	Round Bay Main Beach	14	0%	view
Anne Arundel	Sandy Point State Park East Beach	15	0%	view
Anne Arundel	Sandy Point State Park South Beach	16	13%	view
Anne Arundel	Saunders Point	8	0%	view
Anne Arundel	Town Point at Arkhaven	4	0%	view
Anne Arundel	Turkey Point at Cloud Beach	9	22%	view
Anne Arundel	Venice on the Bay	9	11%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Baltimore	GunPowder SP Hammerman	14	0%	view
Baltimore	Hart Miller Island	14	0%	view
Baltimore	Miami Beach (closed during 2012)	10	10%	view
Baltimore	Rocky Point Park	9	0%	view
Calvert	Breezy Point	14	0%	view
Calvert	Brownie's Beach	14	0%	view
Calvert	Chesapeake Station	4	25%	view
Calvert	Driftwood	7	0%	view
Calvert	Flag Harbor	9	0%	view
Calvert	Flag Ponds	8	0%	view
Calvert	North Beach	14	7%	view
Calvert	Scientists Cliffs	4	0%	view
Calvert	Seahorse	7	0%	view
Calvert	Windward Keys	4	0%	view
Cecil	Crystal Beach Manor	9	11%	view
Cecil	Elk Neck State Park North East River	14	0%	view
Cecil	Grove Point Camp	5	20%	view
Cecil	Red Point Beach	5	20%	view
Cecil	West View Shores	5	0%	view
Kent	Boy Scout Beach (Eliason)	3	0%	view
Kent	Echo Hill Camp (Youth Camp)	8	13%	view

County	Beach	<b>Total Samples</b>	% of samples exceeding BAV	View
Kent	Ferry Park	10	20%	view
Kent	Tolchester Estates Beach	8	0%	view
Kent	Tolchester Marina and Beach	9	11%	view
Kent	YMCA Camp Tockwogh (Youth Camp)	8	13%	view
Queen Anne'S	Camp Wright	16	6%	view
Queen Anne'S	Matapeake	16	6%	view
Somerset	Janes Island	4	0%	view
Somerset	Wellington	4	0%	view
St Mary'S	Cedar Cove Community Beach	15	7%	view
St Mary'S	Elm's Beach - Public Beach	15	0%	view
St Mary'S	Point Lookout State Park	15	0%	view
Worcester	Assateague State Park	15	0%	view
Worcester	North Beach Site #1 (State Park Boundary)	15	0%	view
Worcester	North Beach Site #2 (Ranger Station)	15	0%	view
Worcester	Ocean City Beach 1	28	0%	view
Worcester	Ocean City Beach 2	28	0%	view
Worcester	Ocean City Beach 3	28	0%	view
Worcester	Ocean City Beach 4	28	0%	view
Worcester	Ocean City Beach 5	28	0%	view
Worcester	Ocean City Beach 6	28	0%	view
Worcester	Oceanside #3	15	0%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

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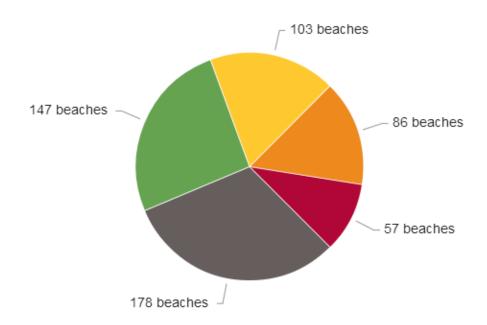
# **State Summary: Massachusetts**

Ranked 14th in Beach Water Quality (out of 30 states) 10% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### Massachusetts 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 178 beaches (31%) were not monitored or had a limited number of samples (fewer than 12)
- 147 beaches (26%) did not have any samples exceed the national BAV safety threshold
- 103 beaches (18%) had >0-10% of their samples exceed the national BAV safety threshold
- 86 beaches (15%) had >10-20% of their samples exceed the national BAV safety threshold
- 57 beaches (10%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Massachusetts has more than 500 public and semipublic marine beaches along 204 miles of sandy shore lining Atlantic waters. The monitoring program is a collaborative effort between local boards of health and the Massachusetts Department of Public Health (MDPH) and is administered by MDPH. Beachgoers can find information about sampling practices and advisories on the MDPH/Bureau of Environmental Health's website

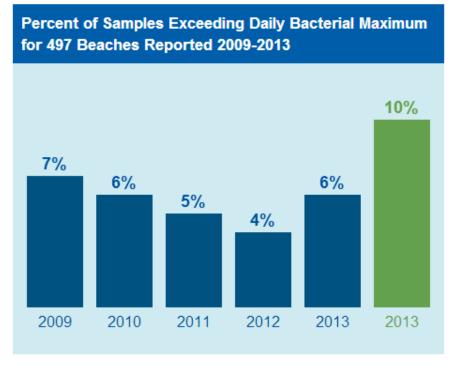
### What Does Beach Water Monitoring Show?

In 2013, Massachusetts reported 571 coastal beaches and beach segments, 566 of which were monitored. Of all reported beach monitoring samples, 10% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Cockle Cove Creek Parking Lot in Barnstable County (77%), Pond at Lucy Vincent Beach in Dukes County (70%), Bassing's (Sailing Club) in Norfolk County (60%), Moses Smith Creek Beach in Bristol County (54%), and Leisure Shores Beach in Plymouth County (50%).

#### Massachusetts Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Massachusetts over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Massachusetts 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	29 Commercial Street	13	0%	<u>view</u>
Barnstable	333 Commercial Street	13	15%	view
Barnstable	451 Commercial Street	15	20%	view
Barnstable	593 Commercial Street	14	14%	view
Barnstable	637 Commercial Street	15	13%	<u>view</u>
Barnstable	Acapesket Improvement Association	14	7%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Allen Harbor (dormant for 2013)	0	n/a	view
Barnstable	Andrew Harding Lane Beach	13	0%	view
Barnstable	Atkins Lane	15	20%	view
Barnstable	Atlantic Avenue in Harwich	4	0%	view
Barnstable	Atlantic Avenue in Provincetown	14	7%	view
Barnstable	Ballston	4	0%	view
Barnstable	Bank Street - Bayview Rd	4	0%	view
Barnstable	Barlows Landing	13	0%	view
Barnstable	Bass River - East	15	0%	view
Barnstable	Bass River - West	15	0%	view
Barnstable	Baxter Avenue	15	0%	view
Barnstable	Bay Road	15	20%	view
Barnstable	Bayshore Homeowners Association	13	15%	view
Barnstable	Bayview Street	17	18%	view
Barnstable	Bikepath Beach (Trunk River)	13	0%	view
Barnstable	Bikepath Beach (Trunk River)	13	0%	view
Barnstable	Boat Meadow	13	0%	view
Barnstable	Bowerman Beach Club	13	15%	view
Barnstable	Breakwater Landing	14	7%	view
Barnstable	Brewster Dunes	13	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Briarwood Marine and Science (dormant for 2013)	0	n/a	view
Barnstable	Bristol - East	14	7%	view
Barnstable	Bristol - West	14	7%	view
Barnstable	Brooks	4	0%	view
Barnstable	Bucks Creek	20	30%	view
Barnstable	Burton Baker	13	0%	view
Barnstable	Cahoon Hollow	4	0%	view
Barnstable	Callies Beach	4	0%	view
Barnstable	Campground	14	7%	view
Barnstable	Cape Cod Sea Camps (Bay)	14	14%	view
Barnstable	Carltow	13	0%	view
Barnstable	Cataumet Harbor	15	27%	view
Barnstable	Cedar Point Association	13	15%	view
Barnstable	Chapin Memorial	15	27%	view
Barnstable	Chapoquoit	15	20%	view
Barnstable	Chapoquoit Associates - Front Beach	13	8%	view
Barnstable	Chapoquoit Associates - Little Beach	14	14%	view
Barnstable	Chatham Bars Inn	11	0%	view
Barnstable	Chequesset Yacht and Country Club	10	0%	view
Barnstable	Clipper Lane	16	19%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Coast Guard (National Seashore)	22	0%	view
Barnstable	Coast Guard Town	4	0%	view
Barnstable	Cockle Cove	13	8%	view
Barnstable	Cockle Cove Creek - Parking Lot	13	77%	view
Barnstable	Cockle Cove Creek - Ridgevale	15	47%	view
Barnstable	Cold Storage	14	14%	view
Barnstable	Cold Storage/Pond Village	13	0%	view
Barnstable	Cole Road	13	0%	view
Barnstable	Colonial Acres	15	7%	view
Barnstable	Colonial Acres - East	15	0%	view
Barnstable	Columbus Avenue	20	20%	view
Barnstable	Cook's Brook	13	8%	view
Barnstable	Corn Hill	4	0%	view
Barnstable	Corporation	16	6%	view
Barnstable	Cotuit Bay Shores Association	14	14%	view
Barnstable	Court Street	13	0%	view
Barnstable	Covell's	15	0%	view
Barnstable	Craigville	16	13%	view
Barnstable	Craigville Beach Club	12	0%	view
Barnstable	Cranberry Hill	10	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Crosby Landing	13	0%	view
Barnstable	Cross Street	13	0%	view
Barnstable	Crow's Nest (496 Shore Rd)	13	0%	view
Barnstable	Dennis Bayview	14	14%	view
Barnstable	Dowses	15	0%	view
Barnstable	Duck Harbor	4	0%	view
Barnstable	Dune's Colony (648 Shore Rd)	13	0%	view
Barnstable	Dyer Prince	13	0%	view
Barnstable	Earle Road	13	0%	view
Barnstable	East (Town) Beach	13	0%	view
Barnstable	East Sandwich	10	10%	view
Barnstable	Electric Avenue	4	0%	view
Barnstable	Ellis Landing	13	0%	view
Barnstable	Ellis Landing Park Condominiums	13	0%	view
Barnstable	Englewood	15	0%	view
Barnstable	Falmouth Associates - 564 Surf Drive	12	0%	view
Barnstable	Falmouth Heights - East	14	7%	view
Barnstable	Falmouth Heights - West	14	7%	view
Barnstable	Falmouth Yacht Club	13	0%	view
Barnstable	First Encounter - Beach	13	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	First Encounter - Spit River	13	0%	view
Barnstable	Fisher	4	0%	view
Barnstable	Follins Pond in Dennis	14	21%	view
Barnstable	Follins Pond in Yarmouth	16	6%	view
Barnstable	Forest Street Beach	13	0%	view
Barnstable	Glendon Road	14	14%	view
Barnstable	Glendon Road	14	7%	view
Barnstable	Gray Gables	4	0%	view
Barnstable	Gray's Beach	15	13%	view
Barnstable	Great Hollow	4	0%	view
Barnstable	Grey Neck	4	0%	view
Barnstable	Haigis	14	7%	view
Barnstable	Halliday Acres	13	0%	view
Barnstable	Harborview	16	19%	view
Barnstable	Hardings - East	13	0%	view
Barnstable	Hardings - West	13	0%	view
Barnstable	Hawthorne	13	0%	view
Barnstable	Head of the Meadow (National Seashore)	22	0%	view
Barnstable	Head of the Meadow (Town)	4	0%	view
Barnstable	Herring Cove (National Seashore)	22	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Hideaway Village Association	13	0%	view
Barnstable	Howes Street	14	14%	view
Barnstable	Indian Neck	4	0%	view
Barnstable	Inman Road	15	27%	view
Barnstable	Jacknife Harbor	13	0%	view
Barnstable	Jetty Lane	16	25%	view
Barnstable	Johnson Street	13	8%	view
Barnstable	Kalmus Ocean	16	6%	view
Barnstable	Kalmus Yacht	15	0%	view
Barnstable	Kendal Lane	13	15%	view
Barnstable	Kennedy Memorial	15	7%	view
Barnstable	Keyes Beach	15	20%	view
Barnstable	Kingsbury	13	0%	view
Barnstable	Lighthouse	13	0%	view
Barnstable	Linnell Landing	13	0%	view
Barnstable	Little Inn at Pleasant Bay	14	14%	view
Barnstable	Little Island Beach Preserve	15	13%	view
Barnstable	Longnook	4	0%	view
Barnstable	Lookout Bluff	13	0%	view
Barnstable	Loops	13	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Maguires Landing	4	0%	view
Barnstable	Malfa Road	15	7%	view
Barnstable	Mants	14	7%	<u>view</u>
Barnstable	Marconi (National Seashore)	17	0%	<u>view</u>
Barnstable	Mashpee Neck Road (Town Landing)	13	8%	view
Barnstable	Maushup Village	13	8%	<u>view</u>
Barnstable	Mayflower	17	24%	<u>view</u>
Barnstable	Mayo	11	9%	view
Barnstable	Megansett Yacht Club	13	0%	view
Barnstable	Megansett, North	13	8%	view
Barnstable	Megansett, South	13	0%	view
Barnstable	Menauhant - East	13	0%	view
Barnstable	Menauhant - West	13	0%	view
Barnstable	Merkel Beach (Snow Inn Road)	4	0%	view
Barnstable	Mill Road	13	0%	view
Barnstable	Millway	15	13%	view
Barnstable	Monument	4	0%	view
Barnstable	Nauset	13	0%	<u>view</u>
Barnstable	Nauset Light (National Seashore)	22	0%	view
Barnstable	Neel Road	4	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	New Seabury Inn	14	7%	view
Barnstable	New Silver (Silver Beach Improvement Association)	13	8%	view
Barnstable	Newcomb Hollow	4	0%	view
Barnstable	Nobska Beach Association	13	0%	view
Barnstable	Noon's Landing	13	0%	view
Barnstable	Ocean Club	2	0%	view
Barnstable	Ocean Edge	13	8%	view
Barnstable	Ocean Mist Hotel	13	0%	view
Barnstable	Old Mill Point Association - Right of Jetty	13	8%	view
Barnstable	Old Silver 1 - Central	13	8%	view
Barnstable	Old Silver 2 - North	14	7%	view
Barnstable	Old Silver 2 - South	14	7%	view
Barnstable	Old Silver Beach Estates Assoc.	13	0%	view
Barnstable	Omaha Road	4	0%	view
Barnstable	Oregon (dormant for 2013)	0	n/a	view
Barnstable	Oyster Harbors Club	13	0%	view
Barnstable	Oyster Pond	13	0%	view
Barnstable	Paines Creek	13	0%	view
Barnstable	Pamet Harbor	15	13%	view
Barnstable	Parkers River East	16	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Parkers River West	15	0%	view
Barnstable	Patiusset Beach	7	0%	view
Barnstable	Pilgrim Pine Acres	10	0%	view
Barnstable	Pinelands Park (uses a surrogate monitoring location)	0	n/a	view
Barnstable	Pleasant Bay in Harwich	13	0%	view
Barnstable	Pleasant Road	4	0%	view
Barnstable	Pleasant Street	14	14%	view
Barnstable	Pocasset Beach Improvement Association	13	0%	view
Barnstable	Point of Rocks	13	0%	view
Barnstable	Popponesset	13	0%	view
Barnstable	Popponesset Spit	13	0%	view
Barnstable	Powers Landing	4	0%	view
Barnstable	Provincetown Inn Rotary	13	0%	view
Barnstable	Quanset Harbor Club Association	15	13%	view
Barnstable	Quisset Beach Association	11	0%	view
Barnstable	Race Point (National Seashore)	22	0%	view
Barnstable	Racing Beach Association	11	0%	view
Barnstable	Raycroft	15	20%	view
Barnstable	Red River - East	13	0%	view
Barnstable	Red River - Middle	13	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Red River - West	13	8%	view
Barnstable	Ridgevale	13	8%	view
Barnstable	Robbins Hill	13	8%	view
Barnstable	Ropes	14	7%	view
Barnstable	Ryder	4	0%	view
Barnstable	Ryder Street - Middle	39	8%	view
Barnstable	S. Sunken Meadow	13	0%	view
Barnstable	Saconessett Hills Association	14	7%	view
Barnstable	Sagamore	4	0%	<u>view</u>
Barnstable	Salt Pond	13	0%	view
Barnstable	Sandy Neck	15	0%	view
Barnstable	Scraggy Neck Recreation Association	11	9%	view
Barnstable	Scusset (DCR - DSPR)	15	0%	view
Barnstable	Sea Pines	13	0%	view
Barnstable	Sea Street (Dennisport)	14	7%	view
Barnstable	Sea Street (East Dennis)	14	14%	view
Barnstable	Seabreeze	4	0%	view
Barnstable	Seacoast Shores Associates, Inc.	12	8%	view
Barnstable	Seacrest Resort	15	20%	view
Barnstable	Seagull (Center)	16	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Seagull (Left)	13	0%	view
Barnstable	Seagull (Right)	15	0%	view
Barnstable	Seaside Park Improvement Association	13	0%	view
Barnstable	Seaview Ave. Beach	15	0%	view
Barnstable	Seconsett Island Causeway	13	8%	view
Barnstable	Shearwater Association	10	0%	view
Barnstable	Silver Springs Association	14	14%	view
Barnstable	Sippewissett Highlands Trust	13	0%	view
Barnstable	Skaket Beach	13	0%	view
Barnstable	Skaket Beach Condominiums	13	0%	view
Barnstable	South Cape Beach (DCR - DSPR)	15	7%	view
Barnstable	South Middle	15	0%	view
Barnstable	South Village	13	0%	view
Barnstable	Stone Horse Yacht Club	10	0%	view
Barnstable	Stoney Beach (MBL)	13	0%	view
Barnstable	Sullivan (Depot St.)	15	13%	view
Barnstable	Sunset	13	0%	view
Barnstable	Sunset Village (379 Shore Rd)	13	0%	view
Barnstable	Surf Drive - 1	14	7%	view
Barnstable	Surf Drive - East	13	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	Surf Drive - Pool	14	7%	view
Barnstable	Tahanto Associates, Inc.	13	8%	view
Barnstable	Thatcher Town Park	15	0%	view
Barnstable	The Belmont	13	8%	view
Barnstable	The Gut (Great Island)	4	0%	view
Barnstable	Thumpertown	13	0%	view
Barnstable	Tides Hotel - Falmouth	13	0%	view
Barnstable	Torrey Beach Community Association	13	8%	view
Barnstable	Town Cove	14	7%	view
Barnstable	Town Landing - Breakwater	14	14%	view
Barnstable	Town Landing - Snail Road	15	13%	view
Barnstable	Town Landing Beach Point	13	0%	view
Barnstable	Town Landing West of Coast Guard	14	7%	view
Barnstable	Town Neck (Horizons)	10	10%	view
Barnstable	Town Neck-End of Boardwalk	10	10%	view
Barnstable	Town Neck-Mill Creek	10	10%	view
Barnstable	Trotting Park	15	27%	view
Barnstable	Vernon St.	16	6%	view
Barnstable	Wah Wah Taysee Road	4	0%	view
Barnstable	Wequasett Inn Resort	13	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Barnstable	West Dennis - Residential	18	17%	view
Barnstable	West Dennis - Snack Bar	17	12%	view
Barnstable	West Dennis - West	15	0%	view
Barnstable	West End Lot	14	7%	view
Barnstable	White Crest	4	0%	view
Barnstable	Wianno Club (Salt-107 Seaview)	13	0%	view
Barnstable	Wilbur Park	15	0%	view
Barnstable	Wild Harbour Estates	15	20%	view
Barnstable	Windmill	15	0%	view
Barnstable	Wings Neck Trust Association (North Beach)	13	8%	view
Barnstable	Wings Neck Trust Association (South Beach)	13	0%	view
Barnstable	Winston Ave	15	33%	view
Barnstable	Wood Neck Beach	15	13%	view
Barnstable	Wood Neck River	14	7%	view
Barnstable	Wychmere Beach Club	13	0%	view
Barnstable	Zylpha	4	0%	view
Bristol	400 Beach	30	7%	view
Bristol	Anthony's	13	8%	view
Bristol	Apponagansett Town Beach	12	8%	view
Bristol	Baker's Beach	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Bristol	C & K Club	12	0%	view
Bristol	Cedar Cove	6	0%	view
Bristol	Cherry & Webb	3	0%	view
Bristol	Coles River Club off Harbor Rd	12	8%	view
Bristol	Dartmouth Bayview	13	8%	view
Bristol	Davy's Locker	16	13%	view
Bristol	Demarest Lloyd (DCR - DSPR)	16	6%	view
Bristol	East Beach	3	0%	view
Bristol	Elephant Rock	3	0%	view
Bristol	Fort Phoenix (DCR - DSPR)	19	26%	view
Bristol	Fort Phoenix - Town Beach	11	9%	view
Bristol	Hidden Bay	13	15%	view
Bristol	Horseneck (DCR - DSPR)	15	0%	view
Bristol	J. Beach	15	7%	view
Bristol	Jones Town Beach North	7	0%	view
Bristol	Jones Town Beach South	11	18%	view
Bristol	Kids Beach	15	0%	view
Bristol	Knollmere (Weeden Road)	11	0%	view
Bristol	Leeside (dormant for 2013)	0	n/a	view
Bristol	Manhattan Avenue	17	18%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Bristol	Moses Smith Creek	13	54%	view
Bristol	Nonquitt	13	15%	view
Bristol	O'Tools	15	0%	view
Bristol	Oak Hill Shores	12	0%	view
Bristol	Pierce	14	43%	view
Bristol	Raymond Street	12	8%	view
Bristol	Round Hill	13	15%	view
Bristol	Salter's Point East	12	0%	view
Bristol	Salter's Point South	12	0%	view
Bristol	Seaview	11	0%	view
Bristol	Spindle Rock	3	0%	view
Bristol	Squid	16	19%	view
Bristol	Swansea Sandy Beach	12	17%	view
Bristol	Tabor Park South	15	0%	view
Bristol	Tower Beach	30	0%	view
Bristol	Town Beach in Swansea	13	8%	view
Bristol	Town Beach in Westport	3	0%	view
Bristol	West Island Causeway	11	9%	view
Bristol	West Island Town Beach	11	0%	view
Dukes	Bend in the Road	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Dukes	Chappy Beach Club	3	0%	view
Dukes	Chappy Point Beach	4	0%	view
Dukes	East Beach (Chappy)	3	0%	view
Dukes	Eastville Town Beach - Drawbridge	12	17%	view
Dukes	Eastville Town Beach - Harbor	4	0%	view
Dukes	Edgartown Joseph Sylvia State Beach	3	0%	view
Dukes	Fuller Street	3	0%	view
Dukes	Great Rock Bight	4	0%	view
Dukes	Hilman's Point	4	0%	view
Dukes	Joseph Sylvia State Beach - Little Bridge	3	0%	view
Dukes	Joseph Sylvia State Beach - Sound	3	0%	view
Dukes	Lambert's Cove Beach - North	12	8%	view
Dukes	Lobsterville	3	0%	view
Dukes	Madera Cove	12	17%	view
Dukes	Makonikey Roads and Beach Trust	9	0%	view
Dukes	Marinelli (Jetty) Beach	3	0%	view
Dukes	Menemsha	4	0%	view
Dukes	Mink Meadows	11	0%	view
Dukes	Moshup Beach	4	0%	view
Dukes	Naushon Beach (Makonikey Roads and Beach)	9	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Dukes	Norton Point Beach	3	0%	view
Dukes	Ocean at Chilmark Pond Preserve	13	0%	view
Dukes	Ocean at Edgartown Great Pond	4	0%	view
Dukes	Ocean at Long Point - East	14	0%	view
Dukes	Ocean at Lucy Vincent Beach	17	0%	view
Dukes	Ocean at Squibnocket Beach	12	0%	view
Dukes	Owen Little Way	12	8%	view
Dukes	Owen Park	3	0%	view
Dukes	Pay Beach	11	9%	view
Dukes	Pay Beach - Inkwell	11	9%	view
Dukes	Philbin Beach	8	0%	view
Dukes	Pond at Lucy Vincent Beach	23	70%	view
Dukes	Red Beach	3	0%	view
Dukes	Seven Gates Beach	9	0%	view
Dukes	Seven Gates Beach	9	11%	view
Dukes	Sound at Wilfred's Pond Reserve	4	0%	view
Dukes	South Beach State Park - Middle	3	0%	view
Dukes	South Beach State Park - West	3	0%	view
Dukes	South Beach State Park, east	3	0%	view
Dukes	Tashmoo Beach	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Dukes	Tashmoo Cut	11	0%	view
Dukes	Tisbury Great Pond	4	0%	view
Dukes	Vineyard Harbor Motel	11	9%	view
Dukes	Wasque Swim Beach	3	0%	view
Essex	Back	11	18%	view
Essex	Black	20	25%	view
Essex	Brackenbury	12	17%	view
Essex	Camp Naumkeag	12	8%	view
Essex	Canoe	18	17%	view
Essex	Cape Hedge	3	0%	view
Essex	Children's Island - Back	7	0%	view
Essex	Children's Island - Dock	7	0%	view
Essex	Children's Island - Wally	7	0%	view
Essex	Clammer's Beach	4	0%	view
Essex	Clark	16	6%	view
Essex	Collins Cove	12	0%	view
Essex	Crane	4	0%	view
Essex	Cressy's	5	0%	view
Essex	Crocker Park	13	8%	view
Essex	Dane Street	14	28%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Essex	Danvers Sandy Beach	15	33%	view
Essex	Dead Horse	6	0%	view
Essex	Devereux	13	8%	view
Essex	Eisman's	12	8%	view
Essex	Essex Front Beach	4	0%	view
Essex	Fisherman's	13	15%	view
Essex	Forest River Point	6	0%	view
Essex	Forty Steps Beach	16	19%	view
Essex	Gas House	16	25%	view
Essex	Goat Hill	13	23%	view
Essex	Good Harbor	17	0%	view
Essex	Good Harbor Creek	16	0%	view
Essex	Grace Oliver	17	28%	view
Essex	Half Moon	5	20%	view
Essex	Independence Park	14	21%	view
Essex	Juniper Point	13	15%	view
Essex	Kings	13	15%	view
Essex	Kings	234	27%	view
Essex	Little Neck	16	13%	view
Essex	Long - Gloucester	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Essex	Long - North	3	0%	view
Essex	Lynch Park	12	0%	view
Essex	Magnolia	30	10%	view
Essex	Mingo	18	44%	view
Essex	Nahant Beach	68	15%	view
Essex	Nahant Black Rock	15	13%	view
Essex	Nahant Short Beach	15	7%	view
Essex	Niles	5	0%	view
Essex	Obear Park	6	0%	view
Essex	Ocean Avenue	14	28%	view
Essex	Old Garden	3	0%	view
Essex	Osgood	11	9%	view
Essex	Pavillion	4	0%	view
Essex	Pavillion Beach	6	17%	view
Essex	Pebble	3	0%	view
Essex	Phillips	12	0%	view
Essex	Pioneer	13	23%	view
Essex	Plum Cove	18	6%	view
Essex	Plum Island	4	0%	view
Essex	Plum Island - End of Island 1	15	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Essex	Plum Island - End of Island 2	15	7%	view
Essex	Plum Island, 55th Street	15	13%	view
Essex	Plum Island, Plum Island Point	15	13%	view
Essex	Preston	12	17%	view
Essex	Rice	12	17%	view
Essex	Rockport Front Beach	10	20%	view
Essex	Salisbury (DCR - DSPR)	14	0%	view
Essex	Salisbury - North Beach	15	0%	view
Essex	Sandy Point	10	10%	view
Essex	Singing	30	0%	view
Essex	Steep Hill	4	0%	view
Essex	Steps	6	0%	view
Essex	Stramski	16	25%	view
Essex	Tuck's Point	17	18%	view
Essex	Tudor	15	7%	view
Essex	West	6	17%	view
Essex	West Manchester	18	28%	view
Essex	Whales	12	8%	view
Essex	White	15	7%	view
Essex	Willow Avenue	13	23%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Essex	Willows Pier	6	33%	view
Essex	Wingearsheek	16	6%	view
Essex	Winter Island (Waikiki)	6	0%	view
Essex	Woodbury	14	36%	view
Nantucket	40th Pole 1	12	0%	view
Nantucket	Children's	13	23%	view
Nantucket	Cisco	3	0%	view
Nantucket	Cliffside	3	0%	view
Nantucket	Cliffside Motel	4	0%	view
Nantucket	Dionis	12	0%	view
Nantucket	Jetties	13	8%	view
Nantucket	Madaket	12	0%	view
Nantucket	Miacomet	12	0%	view
Nantucket	Sconset 1	3	0%	view
Nantucket	Sewerbeds	12	0%	view
Nantucket	Surfside 1	3	0%	view
Nantucket	Surfside 2	3	0%	view
Nantucket	Warren's Landing	13	8%	view
Nantucket	Washing Pond	12	8%	view
Nantucket	Washington Street	13	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Nantucket	Wauwinet Bayside	8	0%	view
Nantucket	Wauwinet Oceanside	9	11%	view
Norfolk	Avalon	14	28%	view
Norfolk	Bassing's (Sailing Club)	15	60%	view
Norfolk	Broady (Baker)	14	21%	view
Norfolk	Chikatawbot	14	21%	view
Norfolk	Cohasset Black Rock	14	14%	view
Norfolk	Cohasset Sandy Beach	14	28%	view
Norfolk	Delano Ave.	17	41%	view
Norfolk	George E. Lane	14	7%	view
Norfolk	Germantown Firestation	12	8%	view
Norfolk	Heron	13	15%	view
Norfolk	Merrymount	14	28%	view
Norfolk	Mound	14	21%	view
Norfolk	Nickerson	15	33%	view
Norfolk	Orchard Street	13	23%	view
Norfolk	Parkhurst	13	15%	view
Norfolk	Quincy Edgewater	12	17%	view
Norfolk	Rhoda	12	25%	view
Norfolk	Smith Beach	14	36%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Norfolk	Wessagusett (Old Wessagussett)	14	7%	view
Norfolk	Wollaston, Channing Street	80	26%	view
Norfolk	Wollaston, Milton Street	81	17%	view
Norfolk	Wollaston, Rice Road	81	15%	view
Norfolk	Wollaston, Sachem Street	80	15%	view
Plymouth	A Street Bay Side	13	15%	view
Plymouth	A Street Ocean	12	8%	view
Plymouth	Antasawomak - 1	11	45%	view
Plymouth	Antasawomak - 2	10	0%	view
Plymouth	Aucoot	12	17%	view
Plymouth	Belair	12	17%	view
Plymouth	Beverly Yacht	12	0%	view
Plymouth	Brant Beach	10	0%	view
Plymouth	Brant Rock	11	0%	view
Plymouth	Briarwood	18	33%	view
Plymouth	Converse Point	12	0%	view
Plymouth	Crescent	11	9%	view
Plymouth	Darcy's	3	33%	view
Plymouth	Dexter Lane	12	0%	view
Plymouth	Duxbury Beach at Bath House	12	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Plymouth	East Boulevard	15	13%	view
Plymouth	Egypt	13	31%	view
Plymouth	Fieldston - Hartford Rd	11	9%	view
Plymouth	Fieldston - Sunrise	11	0%	view
Plymouth	Forbes	16	31%	view
Plymouth	Gray's	11	0%	view
Plymouth	Green Harbor	12	8%	view
Plymouth	Gunrock	3	0%	view
Plymouth	Hamilton Beach	16	13%	view
Plymouth	Harbor 1	11	9%	view
Plymouth	Harbor 2	11	9%	view
Plymouth	Hingham Town Beach	12	17%	view
Plymouth	Hollywoods - 1	10	0%	view
Plymouth	Hollywoods - 2	10	0%	view
Plymouth	Hull Edgewater	13	23%	view
Plymouth	Humarock	11	27%	view
Plymouth	Indian Mound Beach	15	0%	view
Plymouth	Island Wharf	6	0%	view
Plymouth	James Ave.	12	0%	view
Plymouth	Kenburma	6	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Plymouth	Kimball	11	9%	view
Plymouth	Land Trust Reservation	13	23%	view
Plymouth	Landing Road	12	8%	view
Plymouth	Leisure Shores	14	50%	view
Plymouth	Little Harbor	16	6%	view
Plymouth	Martin's Cove	12	25%	view
Plymouth	Mattapoisett Shores Association	10	0%	view
Plymouth	Mattapoisett Town Beach	13	31%	view
Plymouth	Minot	12	17%	view
Plymouth	Nantasket	60	3%	view
Plymouth	Ned's Point	15	33%	view
Plymouth	Newport	3	0%	view
Plymouth	North	12	8%	view
Plymouth	North Boulevard	16	13%	view
Plymouth	Oakdale Avenue	12	17%	view
Plymouth	Onset	8	0%	view
Plymouth	Parkwood	15	13%	view
Plymouth	Peases Point	10	0%	view
Plymouth	Peases Point (West)	10	0%	view
Plymouth	Peggotty	14	14%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Plymouth	Pinehurst	15	0%	view
Plymouth	Piney Point	12	0%	view
Plymouth	Planting Island	3	0%	view
Plymouth	Plymouth	12	0%	view
Plymouth	Plymouth	12	0%	view
Plymouth	Plymouth	12	8%	view
Plymouth	Point Connett	10	0%	view
Plymouth	Point Independence	8	13%	view
Plymouth	Residents Beach (Duxbury Beach)	12	0%	view
Plymouth	Rexhame	15	13%	view
Plymouth	Riverside Avenue	8	0%	view
Plymouth	Rocky Nook	10	0%	view
Plymouth	Sand Hills	11	18%	view
Plymouth	Scituate Lighthouse	11	18%	view
Plymouth	Seal Cove	14	36%	view
Plymouth	Shell Point	8	0%	view
Plymouth	Shipyard Lane	12	0%	view
Plymouth	Silver Shell	24	0%	view
Plymouth	Swift's	9	11%	view
Plymouth	Swift's Neck	8	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Plymouth	Tabor Academy	24	0%	view
Plymouth	Wampatuck	11	9%	view
Plymouth	West End	12	0%	view
Plymouth	White Horse, Full Sail	12	0%	view
Plymouth	White Horse, Hill Top	12	8%	view
Plymouth	XYZ	3	0%	view
Plymouth	Yacht Club	11	0%	view
Suffolk	Carson Beach	154	3%	view
Suffolk	City Point Beach (DCR)	79	0%	view
Suffolk	Constitution	237	6%	view
Suffolk	Donovans	12	33%	view
Suffolk	Grandview	12	0%	view
Suffolk	Halford	12	8%	view
Suffolk	Lovell's Island (DCR - DUPR)	10	0%	view
Suffolk	M Street Beach at M Street (DCR - DUPR)	78	1%	view
Suffolk	Malibu (DCR - DUPR)	18	39%	view
Suffolk	Pico	12	8%	view
Suffolk	Pleasure Bay	237	6%	view
Suffolk	Revere	64	14%	view
Suffolk	Revere Short Beach	17	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Savin Hill (DCR - DUPR)	15	20%	<u>view</u>
Suffolk	Spectacle Island	10	0%	view
Suffolk	Tenean (DCR - DUPR)	81	28%	view
Suffolk	Winthrop (DCR - DUPR)	17	6%	view
Suffolk	Yirrell	12	0%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

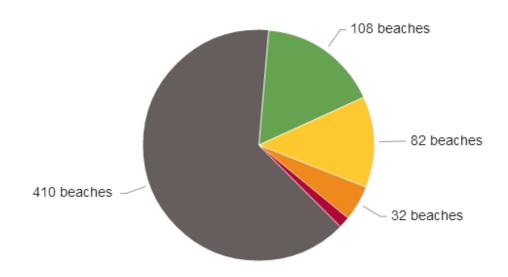
# **State Summary: Michigan**

Ranked 7th in Beach Water Quality (out of 30 states) 6% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### Michigan 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 410 beaches (64%) were not monitored or had a limited number of samples (fewer than 12)
- 108 beaches (17%) did not have any samples exceed the national BAV safety threshold
- 82 beaches (13%) had >0-10% of their samples exceed the national BAV safety threshold
- 32 beaches (5%) had >10-20% of their samples exceed the national BAV safety threshold
- 10 beaches (2%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Michigan has more than 600 public beaches stretching along more than 3,200 miles of Great Lakes coastline. The Michigan Department of Environmental Quality (DEQ) administers the state's BEACH Act grant. Beachgoers can learn about beach closures and advisories on the Michigan BeachGuard website.

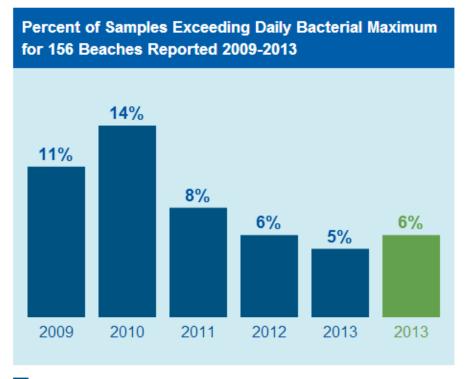
#### What Does Beach Water Monitoring Show?

In 2013, Michigan reported 642 coastal beaches, 237 of which were monitored. Of all reported beach monitoring samples, 6% exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Singing Bridge Beach (50%), Hammel Beach Road Access (45%), Bessinger Road Beach (31%), and Whites Beach, all in Arenac County (30%); and South Haven South Beach in Van Buren County (29%).

## Michigan Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Michigan over the past five years. Note that only samples from a common set of 27 beaches monitored each year from 2009–2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* bacteria cfu/100 ml water, as well as on the EPA's new Beach Action Value of 190 *E. coli* cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Michigan 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Alcona	Black River Public Access	30	10%	view
Alcona	Greenbush Township	27	7%	view
Alcona	Harrisville Public Access	0	n/a	view
Alcona	Harrisville State Park	30	17%	view
Alcona	Negwegon State Park	30	10%	view
Alcona	Sturgeon Point State Park	0	n/a	view
Alcona	Trask Lake Road Beach	30	10%	view
Alger	Au Train Beach	0	n/a	view
Alger	Bay Furnace Recreation Area Beach	0	n/a	view
Alger	Christmas Beach	0	n/a	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Alger	Grand Marais Harbor Beach	0	n/a	view
Alger	Grand Marais Township Beach	0	n/a	view
Alger	Grand Portal Point-Public Shoreline	0	n/a	view
Alger	Munising Beach	0	n/a	view
Alger	Pictured Rocks National Lakeshore-Chapel Beach	0	n/a	-
Alger	Pictured Rocks National Lakeshore-Hurricane Campground Beach	0	n/a	view
Alger	Pictured Rocks National Lakeshore-Miners Beach	0	n/a	view
Alger	Pictured Rocks National Lakeshore-Mosquito Beach	0	n/a	-
Alger	Pictured Rocks National Lakeshore-Sand Point	0	n/a	view
Alger	Pictured Rocks National Lakeshore-Twelvemile Beach	0	n/a	<u>view</u>
Alger	Public Shoreline Beach-Au Train Bay	0	n/a	view
Alger	Public Shoreline Beach-Au Train to Five Mile Pts	0	n/a	view
Alger	Public Shoreline Beach-East County Border area	0	n/a	view
Alger	Public Shoreline Beach-Grand Sable Dunes	0	n/a	view
Alger	Rathfoot Park Beach	0	n/a	view
Alger	Roadside Park	0	n/a	view
Alger	Sand Point to Miners Castle Point-Public Shoreline	0	n/a	view
Alger	Sullivans Landing	0	n/a	view
Allegan	Castle Park	0	n/a	view
Allegan	Douglas Beach	45	7%	view
Allegan	Laketown Township	0	n/a	-
Allegan	Oval Beach	45	0%	view
Allegan	Pier Cove Beach	50	12%	view
Allegan	Saugatuck Dunes State Park Shoreline Beach	45	0%	view
Allegan	West Side County Park Beach	48	6%	view
Alpena	Bay View Park	0	n/a	<u>view</u>
Alpena	Blair Street Park	39	5%	<u>view</u>
Alpena	Elcajon Bay	0	n/a	<u>view</u>
Alpena	Issineke Hardwood Point	0	n/a	view
Alpena	Michekewis Beach	30	0%	view
Alpena	Negwegon State Park-Ossineke South Point	0	n/a	<u>view</u>
Alpena	Ossineke Beach	30	0%	<u>view</u>
Alpena	Ossineke Campground	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Alpena	Ossineke State Park	0	n/a	view
Alpena	Partridge Point	0	n/a	view
Alpena	Rock Port Beach	0	n/a	view
Alpena	Starlite Beach	36	3%	view
Alpena	Thompson Park	30	0%	view
Alpena	Whitefish Bay	0	n/a	view
Antrim	Antrim County Day Park North	0	n/a	view
Antrim	Antrim County Day Park South	30	0%	view
Antrim	Antrim Creek Natural Area	0	n/a	view
Antrim	Banks Township. Park	31	6%	view
Antrim	Barnes Park	30	0%	view
Antrim	Elk Rapids	30	0%	view
Antrim	Elk Rapids Park	0	n/a	view
Antrim	Erickson Road	0	n/a	view
Antrim	Lore Road End Beach	0	n/a	view
Antrim	Michigan Trail	0	n/a	view
Antrim	Nature Preserve	0	n/a	view
Antrim	North Bay Shore (Conservancy)	0	n/a	view
Antrim	O'Dell Road	0	n/a	view
Antrim	Petobego Pond Area	0	n/a	view
Antrim	Road Crossing near Winters Road	0	n/a	view
Antrim	Veterans Memorial Park	30	3%	view
Arenac	16th Street Beach	39	8%	view
Arenac	28th Street Beach	39	8%	view
Arenac	Arenac County Park	39	13%	view
Arenac	Au Sable State Forest- Greens Point	0	n/a	view
Arenac	Augres Township Park Beach	0	n/a	view
Arenac	Bessinger Road Beach	39	31%	view
Arenac	Booth Road Beach	0	n/a	view
Arenac	Cemetery Beach	39	21%	view
Arenac	City of Augres Public Access	0	n/a	view
Arenac	Dime Drain-Harmon Cty Hghts Beach (monitoring site only, no access)	15	27%	view
Arenac	Dyer Road Beach	39	0%	view
Arenac	Foster Road Beach	36	17%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Arenac	Gordon Road Beach	0	n/a	view
Arenac	Hammel Beach Road Access	42	45%	view
Arenac	Pump Station	0	n/a	view
Arenac	Singing Bridge Beach	84	50%	view
Arenac	Terrace Road	0	n/a	view
Arenac	Twining Road Beach	39	10%	view
Arenac	Whites Beach	56	30%	view
Arenac	Whites Beach- Isle Rd Ramp	1	0%	view
Arenac	Whites Beach-LaFave Rd (monitoring site only, no access)	1	0%	view
Arenac	Whites Beach-Point Rd-Culvert	1	0%	view
Arenac	Whites Beach-Wenonah Rd-West Ramp	1	0%	view
Baraga	Arvon Township Park	0	n/a	view
Baraga	Baraga State Park	0	n/a	view
Baraga	First Sand Beach	0	n/a	view
Baraga	Keweenaw Bay Village Public Roadside Park	0	n/a	view
Baraga	L'Anse Township Park	0	n/a	view
Baraga	L'Anse Waterfront Park	27	0%	view
Baraga	Mouth of the Huron River	0	n/a	view
Baraga	Public Shoreline Beach-Cooper Country Huron Bay	0	n/a	view
Baraga	Public Shoreline Beach-Northwest Abbaye Peninsula	0	n/a	view
Baraga	Public Shoreline Beach-Point Abbaye	0	n/a	view
Baraga	Public Shoreline Beach-Sand Point	0	n/a	view
Baraga	Public Shoreline Beach-SE End of Huron Bay	0	n/a	view
Baraga	Second Sands Beach	0	n/a	view
Bay	Bay City State Recreation Area	123	2%	view
Bay	Brissette Beach Township Park	45	7%	view
Bay	Nayanquing Point Wildlife Area	0	n/a	view
Bay	North Linwood Beach	0	n/a	view
Bay	North Pinconning Beach	0	n/a	view
Bay	Pinconning Park	45	2%	view
Bay	South Linwood Beach Township Park	45	0%	view
Bay	South Pinconning Beach	0	n/a	view
Bay	Wenona Beach	123	1%	view
Benzie	Alberta Village Beach & Bluffs	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Benzie	County Road # 669	0	n/a	view
Benzie	Esch Road/Otter Creek	0	n/a	view
Benzie	Frankfort: Anchor Road Beach	39	0%	view
Benzie	Platte River Point	0	n/a	view
Benzie	Point Betsie Lighthouse Beach	0	n/a	view
Benzie	Zettenberg Preserve	0	n/a	view
Berrien	Bethany Beach area	0	n/a	view
Berrien	Cherry Beach	51	16%	view
Berrien	Galien River Park	0	n/a	view
Berrien	Gordon Beach	0	n/a	view
Berrien	Grand Beach	48	2%	view
Berrien	Grand Mere State Park- Rosemary Beach	0	n/a	view
Berrien	Grand Mere State Park- Shoreline Beach	0	n/a	view
Berrien	Grand Mere State Park- Waverland Beach	0	n/a	view
Berrien	Hagar Township Park	48	0%	view
Berrien	Harbert Beach	12	0%	view
Berrien	Jean Klock Park	48	6%	view
Berrien	Lincoln Township Park	48	0%	view
Berrien	Lions Park	51	6%	view
Berrien	Michiana Village	48	0%	view
Berrien	Mizpah Park	0	n/a	view
Berrien	New Buffalo City	48	2%	view
Berrien	Rocky Gap	51	6%	view
Berrien	Silver Beach	51	8%	<u>view</u>
Berrien	Tiscornia Park	48	0%	view
Berrien	Warren Dunes Beach	48	8%	view
Berrien	Warren Dunes State Park North	0	n/a	view
Berrien	Weko Beach	57	18%	view
Charlevoix	Beaver Island Public Beach	0	n/a	view
Charlevoix	Bill Wagner Memorial Campground Beach	0	n/a	view
Charlevoix	Depot Beach	33	0%	view
Charlevoix	Donegal Bay	0	n/a	view
Charlevoix	East Jordan Tourist Park	27	0%	view
Charlevoix	Elm Point Beach	27	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Charlevoix	Ferry Beach	29	0%	view
Charlevoix	Fisherman's Island State Park	30	0%	view
Charlevoix	Glenwood Beach	31	0%	view
Charlevoix	Harbor Beach	0	n/a	view
Charlevoix	Hayes Township Park	30	0%	view
Charlevoix	Iron Ore Bay Beach	0	n/a	view
Charlevoix	Lake Michigan Beach	31	0%	view
Charlevoix	Mt. McSauba Beach	0	n/a	view
Charlevoix	Norwood Park	32	0%	view
Charlevoix	Peninsula Beach	31	0%	view
Charlevoix	Tannery Park	31	0%	view
Charlevoix	Washington Street Beach	30	0%	view
Charlevoix	Whiting Park Beach	30	0%	view
Charlevoix	Young State Park Beach	30	0%	view
Cheboygan	Alexander Henry Park	0	n/a	view
Cheboygan	Cheboygan City Park	30	3%	view
Cheboygan	Cheboygan State Park Duncan Bay	30	10%	view
Cheboygan	Cheboygen State Park- Lighthouse Point	0	n/a	view
Cheboygan	Ditta Park	0	n/a	view
Cheboygan	Huron Street Beach	0	n/a	view
Cheboygan	Mackinaw City Beach	0	n/a	view
Cheboygan	Mackinaw City Lighthouse Park	30	0%	view
Cheboygan	Mill Creek Public Access	0	n/a	view
Cheboygan	Pinewood Circle Road End Beach	0	n/a	view
Cheboygan	Roadside Park MDOT, US-23	0	n/a	view
Cheboygan	Stoney Point Road End Beach	0	n/a	view
Cheboygan	Wawatam City Park	30	0%	view
Chippewa	Bass Cove Beach-Drummond Island	0	n/a	view
Chippewa	Bayview Campground	24	0%	view
Chippewa	Betsey Seaman Memorial Park-Drummond Island	0	n/a	view
Chippewa	Big Pines Beach	24	0%	view
Chippewa	Big Shoal Cove Beach	0	n/a	view
Chippewa	Brimley State Park	81	17%	view
Chippewa	De Tour State Park Shoreline Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Chippewa	Detour Albany Beach	0	n/a	view
Chippewa	Drummond Island Township Park	0	n/a	view
Chippewa	Dunbar Park	0	n/a	view
Chippewa	Four Mile Beach	72	4%	view
Chippewa	Hiawatha National Forest- Nodoway Point Area	0	n/a	view
Chippewa	Hiawatha National Forest- North of Big Pine Picnic	0	n/a	view
Chippewa	Hiawatha National Forest- North Pond	0	n/a	view
Chippewa	Hiawatha National Forest- Pendills Bay	0	n/a	view
Chippewa	Hiawatha National Forest- Pendills Lake	0	n/a	view
Chippewa	Hiawatha National Forest- Point Iroquois Light	0	n/a	view
Chippewa	Hiawatha National Forest- Tahquamenon Bay	0	n/a	view
Chippewa	Hiawatha National Forest- Waiska Bay	0	n/a	view
Chippewa	Hiawatha National Forest- West of Salt Point	0	n/a	view
Chippewa	Hiawatha National Forest-Government Island	0	n/a	view
Chippewa	Lake Superior State Forest- Munuscong Lake	0	n/a	view
Chippewa	Public Shoreline Beach-Browns Creek Area	0	n/a	view
Chippewa	Public Shoreline Beach-Brush Point	0	n/a	view
Chippewa	Public Shoreline Beach-Marsh Lake Area	0	n/a	view
Chippewa	Public Shoreline Beach-Northwest of Two Mile Lake	0	n/a	view
Chippewa	Public Shoreline Beach-Point Aux Frenes	0	n/a	view
Chippewa	Public Shoreline Beach-Raber Bay stretch	0	n/a	view
Chippewa	Public Shoreline Beach-Weatherhog Lake East Area	0	n/a	view
Chippewa	Public Shoreline Beach-Weatherhog Lake West	0	n/a	view
Chippewa	Public Shoreline Beach-West of Whitefish Point	0	n/a	view
Chippewa	Sand Bay Beach-Drummond Island	0	n/a	view
Chippewa	Sherman Park	78	21%	view
Chippewa	Sugar Island Township Park	18	17%	view
Chippewa	Tahquamenon Falls State Park-River Mouth Unit	0	n/a	view
Chippewa	Whitefish Point	0	n/a	view
Chippewa	Wilderness Beach	0	n/a	view
Delta	Big Bay De Noc/ Fishdam River Public Access	0	n/a	view
Delta	Camp Harstad	0	n/a	view
Delta	Escanaba Bathing Beach	51	2%	view
Delta	Fayette State Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Delta	Fuller Park	0	n/a	view
Delta	Gladstone Bathing Beach/Van Cleve Park	51	0%	view
Delta	Little Bay De Noc Public Beach Access	0	n/a	view
Delta	Portage Bay Forest Campground	0	n/a	view
Delta	Public Shoreline Beach-Charboneau Point	0	n/a	view
Delta	Public Shoreline Beach-County Road 481	0	n/a	view
Delta	Public Shoreline Beach-East Wilsey Bay	0	n/a	view
Delta	Public Shoreline Beach-Fishdam River	0	n/a	view
Delta	Public Shoreline Beach-Gilnet Haven	0	n/a	view
Delta	Public Shoreline Beach-Indian Point	0	n/a	view
Delta	Public Shoreline Beach-Indian Town Lake USFS	0	n/a	view
Delta	Public Shoreline Beach-Jacks Bluff	0	n/a	view
Delta	Public Shoreline Beach-Martin Bay	0	n/a	view
Delta	Public Shoreline Beach-Nahma	0	n/a	view
Delta	Public Shoreline Beach-North End of Kregg Bay	0	n/a	view
Delta	Public Shoreline Beach-North of Stonington	0	n/a	view
Delta	Public Shoreline Beach-Ogontz Bay	0	n/a	view
Delta	Public Shoreline Beach-Peninsula Point	0	n/a	view
Delta	Public Shoreline Beach-Point Detour	0	n/a	view
Delta	Public Shoreline Beach-Portage Bay	0	n/a	view
Delta	Public Shoreline Beach-Portage Peninsula	0	n/a	view
Delta	Public Shoreline Beach-St. Vital's Island	0	n/a	view
Delta	Public Shoreline Beach-USFS West Wilsey Bay	0	n/a	view
Delta	Public Shoreline Beach-West Side of Kregg Bay	0	n/a	view
Delta	Sac Bay County Park	0	n/a	view
Delta	Sac Bay County Park	0	n/a	view
Delta	Twin Springs Campground and Bathing Beach	0	n/a	view
Emmet	Bliss Township Beach	0	n/a	view
Emmet	Church Beach	0	n/a	view
Emmet	Colonial Michilimamackinac State Park	0	n/a	view
Emmet	Cross Village Beach	30	0%	view
Emmet	Forest Beach	0	n/a	view
Emmet	Mackinaw City Beach #1	31	0%	view
Emmet	Mackinaw City Beach #2	30	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Emmet	Magnus Park	30	0%	view
Emmet	Middle Village Park	30	0%	view
Emmet	Petoskey Harbor	0	n/a	view
Emmet	Petoskey State Park	30	0%	view
Emmet	Readmond Township Beach	30	0%	view
Emmet	Sturgeon Bay Township Beach	33	0%	view
Emmet	The Headlands County Park	0	n/a	view
Emmet	Thorne Swift Preserve	0	n/a	view
Emmet	Wilderness State Park	30	0%	view
Emmet	Wilderness State Park-East of the Beach	0	n/a	view
Emmet	Wilderness State Park-Sturgeon Bay	0	n/a	view
Emmet	Wilderness State Park-West of Beach	0	n/a	view
Emmet	Zoll Street Beach	30	0%	view
Emmet	Zorn Park - Harbor Springs	30	0%	view
Gogebic	Black River Harbor Beach	0	n/a	view
Gogebic	Little Girls Point Park	0	n/a	view
Gogebic	Mouth of the Montreal River	0	n/a	view
Gogebic	Porcupine Mountain State Park-North	0	n/a	view
Gogebic	Presque Isle Beach	0	n/a	view
Gogebic	Presque Isle State Campground	0	n/a	view
Gogebic	Public Shoreline Beach-West of Black River	0	n/a	view
Grand Traverse	Acme Roadside Park & Beach MDOT	0	n/a	view
Grand Traverse	Acme Roadside Park (DNR)	0	n/a	view
Grand Traverse	Archie Park	0	n/a	view
Grand Traverse	Bayside Acme Township Park	44	14%	view
Grand Traverse	Bowers Harbor Public Access	0	n/a	view
Grand Traverse	Bryant Park Beach	42	14%	view
Grand Traverse	Clinch Park	39	0%	view
Grand Traverse	Deep Water Point	0	n/a	view
Grand	DNR Launch/Beach Center Road	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Traverse				
Grand Traverse	East Bay Park (Milliken Park)	42	2%	view
Grand Traverse	East Bay Township Four Mile Road	0	n/a	view
Grand Traverse	Haserot Beach	0	n/a	view
Grand Traverse	Kroupa Road Access M-22 South of Crain Hill Road	0	n/a	view
Grand Traverse	Leffingwell Point Beach	0	n/a	view
Grand Traverse	Mouth of Boardman	0	n/a	view
Grand Traverse	Old Mission - Center Road Natural Area	0	n/a	view
Grand Traverse	Old Mission - MDOT Right of Way-South of M-37	0	n/a	view
Grand Traverse	Old Mission - Old Mission Point State Park	0	n/a	view
Grand Traverse	Old Mission Lighthouse	0	n/a	view
Grand Traverse	Old Mission Peninsula Twp Park-East of Light House	0	n/a	view
Grand Traverse	Old Mission Peninsula Twp Park-West of Light House	0	n/a	view
Grand Traverse	Old Mission Road	0	n/a	view
Grand Traverse	Peninsula Volunteer Fire Station Point #2	0	n/a	view
Grand Traverse	Power Island Bay Park	0	n/a	view
Grand Traverse	Rose Street Access at Peninsula Drive	0	n/a	view
Grand Traverse	Sayler Park	0	n/a	view
Grand Traverse	Senior Center	0	n/a	view
Grand Traverse	Sunset Park	0	n/a	view
Grand Traverse	Swaney Road	0	n/a	view
Grand Traverse	Traverse City State Park	39	10%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Grand Traverse	West End Beach	42	10%	view
Grand Traverse	Yuba Beach	0	n/a	view
Houghton	Agate Beach	27	0%	view
Houghton	Calument Waterworks Beach	0	n/a	view
Houghton	Chassell Beach	27	0%	view
Houghton	Hancock City Beach	21	0%	view
Houghton	Houghton City Beach	21	0%	view
Houghton	Hubbell Park	27	0%	view
Houghton	Lake Linden Campground Beach	21	0%	view
Houghton	McLain State Park Beach	21	0%	view
Houghton	Mink Farm	0	n/a	view
Houghton	Public Shoreline Beach-Le Chance Creek	0	n/a	view
Houghton	Public Shoreline Beach-Mc Lain State Park	0	n/a	view
Houghton	Public Shoreline Beach-S. of Portage Entry	0	n/a	view
Houghton	Public Shoreline Beach-Southwest County Border	0	n/a	view
Houghton	Sandy Bottom Beach/ Dollar Bay	27	0%	view
Houghton	White City	0	n/a	view
Huron	Bird Creek County Park	39	8%	view
Huron	Caseville County Park	39	0%	view
Huron	County Road End	0	n/a	view
Huron	Geiger Road Public Access	0	n/a	view
Huron	Grindstone Public Access	0	n/a	view
Huron	Harbor Beach City Park	39	3%	view
Huron	Harbor Beach Marina	0	n/a	view
Huron	Helena Road End	0	n/a	view
Huron	Jenks County Park	39	5%	view
Huron	Kinch Road End	0	n/a	view
Huron	Larned Road End	0	n/a	view
Huron	Lighthouse County Park	39	3%	view
Huron	Lighthouse County Park-South	0	n/a	view
Huron	McGraw County Park	39	8%	view
Huron	Mud Creek Public Acess	0	n/a	view
Huron	Oak Beach County Park	39	3%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Huron	Philp County Park	42	0%	view
Huron	Port Crescent State Park - Camping Area	48	21%	view
Huron	Port Crescent State Park - Day Use	27	0%	view
Huron	Sleeper State Park	39	0%	view
Huron	Stafford County Park	0	n/a	view
Huron	Thompson Park	39	0%	view
Huron	Veterans Park	42	10%	view
Huron	Wagener County Park	0	n/a	view
losco	Alabaster Township	27	0%	view
losco	Alabaster Township Douglas Drive Beach Use Area	0	n/a	-
losco	Au Sable Point Beach	0	n/a	view
losco	Au Sable Township Park	27	0%	view
losco	County Road End.	27	0%	view
losco	East Tawas City Park	27	15%	view
losco	Gateway Park	30	10%	view
losco	Huron National Forest North-Public Shoreline Beach	0	n/a	view
losco	Huron National Forest South-Public Shoreline Beach	0	n/a	view
losco	Lake To Lake Road	30	0%	view
losco	MDOT Roadside Park	27	7%	view
losco	Oscoda Township Beach	27	0%	view
losco	Tawas City Park	27	4%	view
losco	Tawas Point State Park Campground	30	10%	view
losco	Tawas Point State Park-Central	0	n/a	view
losco	Tawas Point State Park-Day Use area	27	0%	view
losco	Tawas Point State Park-North	0	n/a	view
Keweenaw	Bete de Gris Beach	0	n/a	view
Keweenaw	Brunette Park	0	n/a	view
Keweenaw	Cat Harbor Beach	0	n/a	view
Keweenaw	Cooper Harbor Lighthouse Complex	0	n/a	view
Keweenaw	Eagle Harbor Beach	27	0%	view
Keweenaw	Eagle River Beach	0	n/a	view
Keweenaw	Fort Wilkins State Park	0	n/a	view
Keweenaw	Fort Wilkins State Park-East	0	n/a	view
Keweenaw	Fort Wilkins State Park-West	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Keweenaw	Great Sands Bay Beach	0	n/a	view
Keweenaw	Mouth of the Gratiot River Beach	0	n/a	view
Keweenaw	Point Isabelle Beach	0	n/a	view
Keweenaw	Public Shoreline Beach-Big Traverse Bay	0	n/a	view
Keweenaw	Public Shoreline Beach-Gay Park	0	n/a	view
Leelanau	Bay Front Park	0	n/a	view
Leelanau	Boughy Park & Beach	0	n/a	view
Leelanau	Cathead Bay, Leelanau State Park	0	n/a	view
Leelanau	Cedar Street Beach	0	n/a	view
Leelanau	Christmas Cove	0	n/a	view
Leelanau	Elmwood/Greilikville Park & Beach	39	8%	view
Leelanau	Empire Municipal Beach	39	5%	view
Leelanau	G. Marsten Dame Marina	0	n/a	view
Leelanau	Gils Pier	0	n/a	view
Leelanau	Glen Arbor/Manitou Boulevard Beach	0	n/a	view
Leelanau	Graham Green Park	0	n/a	view
Leelanau	Hendryx County Roadside Park	0	n/a	view
Leelanau	Lake Street Beach, Glen Arbor	0	n/a	view
Leelanau	Leelanau State Park, Lighthouse	0	n/a	view
Leelanau	Leland Harbor	0	n/a	view
Leelanau	M-22 at M-72 Public Access	0	n/a	view
Leelanau	MDOT Roadside Park & Beach	0	n/a	view
Leelanau	MDOT Roadside Park & Beach M-22 N of Cherry Bend D	0	n/a	view
Leelanau	North Bar	0	n/a	view
Leelanau	North Street Beach	0	n/a	view
Leelanau	Northport 4th Street Beach	0	n/a	view
Leelanau	Northport 5th Street Beach	0	n/a	view
Leelanau	Northport 7th Street Beach	0	n/a	view
Leelanau	Northport Bay Marina	39	5%	view
Leelanau	Northport Haserot Beach, Rose Street	0	n/a	view
Leelanau	Omena Beach & Park	0	n/a	view
Leelanau	Peterson Park	0	n/a	view
Leelanau	Reynolds Street Beach	0	n/a	view
Leelanau	Sleeping Bear Dunes-CR 651 Good Harbor Bay	27	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Leelanau	Sleeping Bear Dunes-CR 669 Good Harbor Bay	24	13%	view
Leelanau	Sleeping Bear Dunes-DH Day Campground	23	4%	view
Leelanau	Sleeping Bear Dunes-Esch Road Beach	30	3%	view
Leelanau	Sleeping Bear Dunes-Glen Haven Beach	30	23%	view
Leelanau	Sleeping Bear Dunes-North Bar Lake MI Beach	27	0%	view
Leelanau	Sleeping Bear Dunes-Peterson Road Beach	30	0%	view
Leelanau	Sleeping Bear Dunes-Platte Point Bay	30	0%	view
Leelanau	Smith Street Beach Northport	0	n/a	view
Leelanau	Stoney Point County Roadside Park	0	n/a	view
Leelanau	Suttons Bay Marina Park & Beach South	39	5%	view
Leelanau	Suttons Bay Park	39	10%	view
Leelanau	Suttons Bay Public Launch and Beach	0	n/a	view
Leelanau	Suttons Bay South Shore Park	0	n/a	view
Leelanau	Thompson Stree Beach	0	n/a	view
Luce	Blind Sucker River # 1	0	n/a	view
Luce	Blind Sucker River # 2	0	n/a	view
Luce	Crisp Point Light House	0	n/a	view
Luce	Lake Superior Campground Beach	0	n/a	view
Luce	Mouth of the Two Hearted River Campground	0	n/a	view
Luce	Muskallonge Lake State Park Beach	0	n/a	view
Luce	Public Shoreline Beach-Blind Sucker Flooding Area	0	n/a	view
Luce	Public Shoreline Beach-Coast Guard Line Road	0	n/a	view
Luce	Public Shoreline Beach-County Rd 407	0	n/a	view
Luce	Public Shoreline Beach-County Rd 412 and Crisp Pt	0	n/a	view
Luce	Public Shoreline Beach-Little Sucker/Two Hearted R	0	n/a	view
Luce	Public Shoreline Beach-Three Mile Creek Area	0	n/a	view
Luce	Public Shoreline Beach-West County Border Beach	0	n/a	view
Luce	Unnamed Road End #1	0	n/a	view
Luce	Unnamed Road End #2	0	n/a	view
Luce	Unnamed Road End #3	0	n/a	view
Mackinac	American Legion Memorial Park	0	n/a	view
Mackinac	Antoine Road End	0	n/a	view
Mackinac	Best Western Lakefront	0	n/a	view
Mackinac	Big Knob State Forest Campground	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Mackinac	Black River State Forest Campground	0	n/a	view
Mackinac	Boot Island	0	n/a	view
Mackinac	Coast Guard Pier Boat Launch and City Park	0	n/a	view
Mackinac	Epoufette Bay Campground	0	n/a	view
Mackinac	Foley Creek Campground	0	n/a	view
Mackinac	Harbour Light	0	n/a	view
Mackinac	Hazelton Road End	0	n/a	view
Mackinac	Hiawatha National Forest- Carp River Access	0	n/a	view
Mackinac	Hog Island Campground	0	n/a	view
Mackinac	Horseshoe Bay Wilderness-North	0	n/a	view
Mackinac	Horseshoe Bay Wilderness-South	0	n/a	view
Mackinac	K Royale	0	n/a	view
Mackinac	Kewadin Inn	0	n/a	view
Mackinac	Kiwanis Beach	30	3%	view
Mackinac	MDOT Overlook	0	n/a	view
Mackinac	MDOT Roadside Park on US 2	0	n/a	view
Mackinac	Miller's Hog Island Subdivision Beach	0	n/a	view
Mackinac	Mouth of Cut River Roadside Beach	0	n/a	view
Mackinac	Naubinway Bay Access	0	n/a	view
Mackinac	Public Shoreline Beach #2-Little Hog Island area	0	n/a	view
Mackinac	Public Shoreline Beach #2-Manitou Paymen Highbanks	0	n/a	view
Mackinac	Public Shoreline Beach #3-Little Hog Island area	0	n/a	view
Mackinac	Public Shoreline Beach #4-Little Hog Island area	0	n/a	view
Mackinac	Public Shoreline Beach #5-Little Hog Island area	0	n/a	view
Mackinac	Public Shoreline Beach-Epoufette Bay	0	n/a	view
Mackinac	Public Shoreline Beach-Fox Point Area	0	n/a	view
Mackinac	Public Shoreline Beach-Little Hog Island area	0	n/a	view
Mackinac	Public Shoreline Beach-Manitou Paymen Highbanks	0	n/a	view
Mackinac	Public Shoreline Beach-MDNR Matrix Point Area	0	n/a	view
Mackinac	Public Shoreline Beach-Morean Township, Section 25	0	n/a	view
Mackinac	Public Shoreline Beach-Naubinway Area	0	n/a	view
Mackinac	Public Shoreline Beach-Pointe Aux Chenes Bay	0	n/a	view
Mackinac	Public Shoreline Beach-Seiners Point	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Mackinac	Public Shoreline Beach-South of Brevort River	0	n/a	view
Mackinac	Public Shoreline Beach-State Forest Matrix Point	0	n/a	view
Mackinac	Sand Point	0	n/a	view
Mackinac	State Roadside Park Beach	0	n/a	view
Mackinac	State Street Road End	0	n/a	view
Mackinac	Straits State Park	0	n/a	view
Mackinac	US 2 Roadside East of Brevort	30	10%	view
Mackinac	US 2 Roadside/Campground	0	n/a	view
Mackinac	Wetland Shoreline-St. Martin Point	0	n/a	view
Macomb	H.C.M.A Metropolitan Beach Metropark	420	4%	view
Macomb	H.C.M.AHuron Point	0	n/a	view
Macomb	New Baltimore Park Beach	210	12%	view
Macomb	St. Clair Shores Blossom Heath Beach	0	n/a	view
Macomb	St. Clair Shores Memorial Park Beach	209	8%	view
Manistee	Arcadia Park	30	0%	view
Manistee	Bar Lake Outlet	30	0%	view
Manistee	Fifth Avenue Beach	36	19%	view
Manistee	First Street Beach	30	0%	view
Manistee	Magoon Creek	33	0%	view
Manistee	Onekama Township Beach	30	0%	view
Manistee	Orchard Beach State Park	30	0%	view
Manistee	Pierport Township Beach	33	9%	view
Manistee	Portage Park	0	n/a	view
Manistee	Sundling Park	30	0%	view
Marquette	Marquette South Beach	109	6%	view
Marquette	McCarty's Cove	75	0%	view
Marquette	North Beach	72	7%	view
Marquette	North of Picnic Rocks	69	4%	view
Marquette	Picnic Rocks	0	n/a	view
Marquette	Public Shoreline Beach-Big Huron River	0	n/a	view
Marquette	Public Shoreline Beach-Little Presque Isle	0	n/a	view
Mason	Bass Lake Outlet Beach	33	12%	view
Mason	Buttersville Park Beach	30	3%	view
Mason	Ludington State Park Campground Beach	33	12%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Mason	Ludington State Park Public Shoreline Beach North	0	n/a	view
Mason	Ludington State Park Public Shoreline Beach South	0	n/a	view
Mason	Manistee National Forest Campground Beach	0	n/a	view
Mason	Manistee National Forest-Public Shoreline Beach N	0	n/a	view
Mason	Manistee National Forest-Public Shoreline Beach S	0	n/a	view
Mason	Pere Marquette Harbor	0	n/a	view
Mason	South Pier Beach	30	0%	view
Mason	South Summit Beach - Sunset Boulevard Beach	30	0%	view
Mason	Sterns Park Beach	30	0%	view
Mason	Summit Township Beach	33	12%	view
Menominee	Airport Park	0	n/a	view
Menominee	Fox Park	0	n/a	view
Menominee	Henes Park	114	8%	view
Menominee	Klienke Park	0	n/a	view
Menominee	Memorial Beach	114	4%	view
Menominee	Public Shoreline Beach-Cedar River	0	n/a	view
Menominee	Public Shoreline Beach-Fox village	0	n/a	view
Menominee	Wells State Park	0	n/a	view
Monroe	Avalon Beach	0	n/a	view
Monroe	Bolles Harbor	0	n/a	view
Monroe	Detroit Beach	0	n/a	view
Monroe	Estral Beach	51	0%	view
Monroe	LaSalle Township-Toledo Beach	0	n/a	view
Monroe	Lost Peninsula	0	n/a	view
Monroe	Luna Pier City Beach	60	20%	view
Monroe	North Cape Yacht Club	0	n/a	view
Monroe	Point Aux Peaux	0	n/a	view
Monroe	Sterling State Park	51	0%	view
Monroe	Stoney Point	0	n/a	view
Monroe	Woodland Beach	57	12%	view
Montmorency	East Twin Beach/Albert Township Park	0	n/a	view
Muskegon	Bronson/Kruse Park	36	3%	view
Muskegon	Duck Lake Channel Beach	39	8%	view
Muskegon	Lake Harbor Park	36	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Muskegon	Lighthouse/Sylvan Beach	39	13%	view
Muskegon	Medbury Park Beach	36	0%	view
Muskegon	Meinert County Park	45	18%	view
Muskegon	Muskegon State Park	36	3%	view
Muskegon	Muskegon State Park-Shoreline Beach North	36	3%	view
Muskegon	Old Channel Beach	36	0%	view
Muskegon	P.J. Hoffmaster State Park - Campground	39	13%	view
Muskegon	P.J. Hoffmaster State Park - Public Beach Area	36	3%	view
Muskegon	Pere Marquette Park	36	0%	view
Muskegon	Pioneer County Park	39	3%	view
Oceana	Cedar Point County Park	0	n/a	view
Oceana	Claybanks Township Park	30	3%	view
Oceana	Lighthouse Beach at Silver Lake State Park	33	15%	view
Oceana	Mears State Park	30	0%	view
Oceana	Silver Creek Channel	0	n/a	view
Oceana	Silver Lake State Park	0	n/a	view
Oceana	Stony Lake Channel	30	13%	view
Oceana	Whiskey Creek	33	15%	view
Ontonagon	Green Park	0	n/a	view
Ontonagon	Gull Point Beach	0	n/a	view
Ontonagon	Mouth of the Big Iron River Beach	0	n/a	view
Ontonagon	Ontonagon Township Park and Campground	27	0%	view
Ontonagon	Porcupine Mountain State Park	0	n/a	view
Ontonagon	Porcupine Mountains State Park- Union Bay	27	0%	view
Ontonagon	Porcupine Mountains Wilderness State Park-West	0	n/a	view
Ontonagon	Public Shoreline Beach-Misery Bay	0	n/a	view
Ontonagon	Public Shoreline Beach-Sleeping Bay	0	n/a	view
Ontonagon	Public Shoreline Beach-Wolf Point	0	n/a	view
Ontonagon	Union Bay Beach	0	n/a	view
Ottawa	Grand Haven City Beach	18	6%	view
Ottawa	Grand Haven State Park	18	6%	view
Ottawa	Holland State Park-Lake Michigan Beach	18	0%	view
Ottawa	Kirk Park	18	6%	view
Ottawa	Kouw Park	18	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ottawa	Mountain Beach	0	n/a	view
Ottawa	North Beach Park	18	0%	view
Ottawa	P.J. Hoffmaster State Park- Shoreline Beach	0	n/a	view
Ottawa	Rosy Mound Recreation Area	18	0%	view
Ottawa	Tunnel Park	18	0%	view
Ottawa	Windsnest Park	18	0%	view
Presque Isle	40 Mile Point Park	0	n/a	view
Presque Isle	Ball Diamond Park	0	n/a	view
Presque Isle	Bell Bay	0	n/a	view
Presque Isle	Evergreen Beach	0	n/a	view
Presque Isle	Golden Beach	0	n/a	view
Presque Isle	Grace Access Site	0	n/a	view
Presque Isle	Hammond Bay Access Site	0	n/a	view
Presque Isle	Hammond Bay Harbor	0	n/a	view
Presque Isle	Hoeft State Park-North	27	0%	view
Presque Isle	Hoeft State Park-South	0	n/a	view
Presque Isle	Lakeside Park Beach	0	n/a	view
Presque Isle	Lakeside Park in Rogers City	30	0%	view
Presque Isle	Lakeview Park Beach	0	n/a	view
Presque Isle	Manitou Beach	0	n/a	view
Presque Isle	New Lighthouse Park	0	n/a	view
Presque Isle	Presque Isle Harbor	0	n/a	view
Presque Isle	Presque Isle Harbor Beach	27	0%	view
Presque Isle	Public Shoreline Beach-False Presque Isle Harbor	0	n/a	view
Presque Isle	Seagull Point Park	0	n/a	view
Presque Isle	Thompson's Harbor State Park	0	n/a	view
Presque Isle	US 23 Hammond Bay	0	n/a	view
Presque Isle	US 23 Roger City	0	n/a	view
Sanilac	Birch Beach	0	n/a	view
Sanilac	Birch Beach Middle #2	0	n/a	view
Sanilac	Birch Beach North #3	0	n/a	view
Sanilac	Delaware Park	0	n/a	view
Sanilac	Forester County Park	48	6%	view
Sanilac	Forestville Beach	51	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Sanilac	Great Lakes Beach	0	n/a	view
Sanilac	Lexington Beach	52	4%	view
Sanilac	Lexington County Park	39	8%	view
Sanilac	Port Sanilac Park	40	3%	view
Sanilac	Sanilac County Park #4	0	n/a	view
Sanilac	Sanilac County Roadside Park #1	0	n/a	view
Schoolcraft	Doyle Township Park	0	n/a	view
Schoolcraft	Lakeview Park	0	n/a	view
Schoolcraft	Manistique Township Park	42	10%	view
Schoolcraft	Public Shoreline Beach-Goudreou's Harbor	0	n/a	view
Schoolcraft	Public Shoreline Beach-S. of McDonald Lake	0	n/a	view
Schoolcraft	Public Shoreline Beach-Thompson	0	n/a	view
Schoolcraft	Public Shoreline Beach-Thompson Village	0	n/a	view
Schoolcraft	Roadside Park Beach	9	0%	view
Schoolcraft	Rogers Beach	51	12%	view
St Clair	Burtchville Township Park	48	0%	view
St Clair	Chrysler Park Beach	48	2%	view
St Clair	Conger-Lighthouse Beach	51	6%	view
St Clair	Fort Gratiot County Park	48	0%	view
St Clair	Holland Road Beach	54	11%	view
St Clair	Jeddo Road Beach	48	2%	view
St Clair	Keewadhin Road Beach	51	12%	view
St Clair	Krafft Road Beach	48	0%	view
St Clair	Lakeport State Campground	48	0%	view
St Clair	Lakeport State Park	48	0%	view
St Clair	Lakeside Beach	51	12%	view
St Clair	Marine City Beach	48	0%	view
St Clair	Marine City Diving Area	48	0%	view
St Clair	Metcalf Road Beach	48	0%	view
St Clair	Washington Street Park	48	4%	view
Tuscola	Tuscola County Shoreline	0	n/a	view
Van Buren	Covert Township Park Beach	21	5%	view
Van Buren	South Haven North Beach	42	14%	view
Van Buren	South Haven South Beach	42	28%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Van Buren	Van Buren State Park Beach	39	13%	<u>view</u>
Wayne	Belle Isle Beach	0	n/a	<u>view</u>
Wayne	Crescent Sail Yacht Club	0	n/a	view
Wayne	Elizabeth Park	0	n/a	<u>view</u>
Wayne	Pier Park	92	17%	<u>view</u>
Wayne	Southern Wayne County Border	0	n/a	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

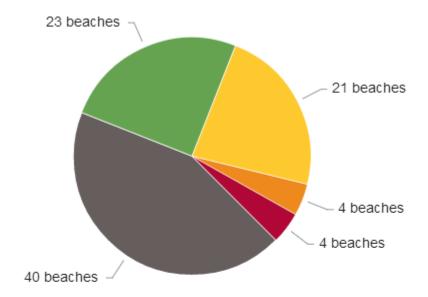
## **State Summary: Minnesota**

Ranked 9th in Beach Water Quality (out of 30 states) 8% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Minnesota 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 40 beaches (43%) were not monitored or had a limited number of samples (fewer than 12)
- 23 beaches (25%) did not have any samples exceed the national BAV safety threshold
- 21 beaches (23%) had >0-10% of their samples exceed the national BAV safety threshold
- 4 beaches (4%) had >10-20% of their samples exceed the national BAV safety threshold
- 4 beaches (4%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Minnesota has public beaches along approximately 58 miles of Lake Superior coastline. There are also a number of Lake Superior beaches that belong to the Grand Portage Tribe, which was the first tribe in the country to have a beach water quality monitoring program. The Minnesota Lake Superior Beach Monitoring Program is fully administered by the Minnesota Department of Health; the Grand Portage Beach Monitoring Program is fully administered by the Grand Portage Tribe. Beachgoers can learn about beach advisories on the Minnesota Lake Superior Beach Monitoring Program website.

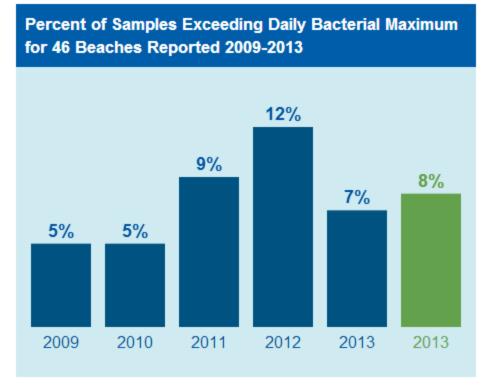
#### What Does Beach Water Monitoring Show?

In 2013, Minnesota reported 92 coastal beaches, 53 of which were monitored. Of all reported beach monitoring samples, 8% exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Agate Bay Beach in Lake County (39%), Park Point 20th Street/Hearding Island Canal Beach in St. Louis County (30%), Burlington Bay Beach in Lake County (28%), and Park Point Sky Harbor Parking Lot Beach (22%) and Boy Scout Landing Beach in St. Louis County (20%).

#### Minnesota Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Minnesota over the past five years. Note that only samples from a common set of 27 beaches monitored each year from 2009-2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* bacteria cfu/100 ml water, as well as on the EPA's new Beach Action Value of 190 *E. coli* cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Minnesota 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Cook	Butterwort Cliffs Beach	0	n/a	<u>view</u>
Cook	Cascade State Park Campground Beach	0	n/a	view
Cook	Cascade State Park West Beach	0	n/a	view
Cook	Chicago Bay Boat Launch Beach	15	0%	view
Cook	Coville Creek Beach	15	7%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Cook	Croftville Beach	0	n/a	view
Cook	Cutface Creek Wayside Rest Beach	15	7%	view
Cook	Durfee Creek Area Beach	15	7%	view
Cook	Grand Marais Campground Beach	19	16%	view
Cook	Grand Marais Downtown Beach	15	7%	view
Cook	Grand Portage Bay Monitoring Location 1	48	6%	view
Cook	Grand Portage Bay Monitoring Location 1.5	48	13%	view
Cook	Grand Portage Bay Monitoring Location 2	48	6%	view
Cook	Grand Portage Bay Monitoring Location 2.5	48	2%	view
Cook	Grand Portage Bay Monitoring Location 3	17	0%	view
Cook	Grand Portage Bay Monitoring Location 4	17	0%	view
Cook	Grand Portage Bay Monitoring Location 5	17	0%	view
Cook	Grand Portage Bay Monitoring Location 6	17	0%	view
Cook	Grand Portage Bay Monitoring Location 7	17	6%	view
Cook	Grand Portage Bay Monitoring Location 8	15	0%	view
Cook	Hollow Rock Resort Beach	17	0%	view
Cook	Horseshoe Bay Boat Launch Beach	0	n/a	view
Cook	Judge C.R. Magney State Park East Beach	0	n/a	view
Cook	Judge C.R. Magney State Park West Beach	0	n/a	view
Cook	Kadunce Creek Beach	15	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cook	Old Shore Road Beach Area	15	7%	view
Cook	Paradise Beach	15	7%	view
Cook	Ray Berglund Wayside Rest Beach	0	n/a	view
Cook	Red Cliff Beach	0	n/a	view
Cook	Red Rock Beach	17	0%	view
Cook	Reservation River beach	17	0%	view
Cook	Schroeder Town Park Beach	15	7%	view
Cook	Sugarloaf Cove Beach	15	7%	view
Cook	Temperance River State Park Beach	15	7%	view
Cook	Temperance River State Park East Beach	0	n/a	view
Lake	Agate Bay Beach	31	39%	view
Lake	Blueberry Hill Beach	0	n/a	view
Lake	Burlington Bay Beach	25	28%	view
Lake	Flood Bay Beach	33	18%	view
Lake	Gooseberry Falls State Park Beach	13	0%	view
Lake	Knife River Marina Beach	12	0%	view
Lake	Manitou River Beach	0	n/a	view
Lake	Palisade Beach	0	n/a	view
Lake	Silver Bay Marina Beach	13	0%	view
Lake	Silver Cliff Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Lake	Silver Creek Beach	0	n/a	view
Lake	Split Rock Lighthouse State Park / Corundum Point Beach	0	n/a	view
Lake	Split Rock Lighthouse State Park / Crazy Bay Beach	0	n/a	view
Lake	Split Rock Lighthouse State Park / Gold Rock Point Beach	0	n/a	view
Lake	Split Rock Lighthouse State Park / Split Rock Point Beach	0	n/a	view
Lake	Split Rock Lighthouse State Park Beach	13	0%	view
Lake	Split Rock River Beach	13	0%	view
Lake	Stewart River Beach	15	7%	view
Lake	Tettegouche State Park / Baptism River Beach	0	n/a	view
Lake	Tettegouche State Park / Crystal Bay Beach	0	n/a	view
Lake	Tettegouche State Park Beach	13	0%	view
Lake	Twin Points Public Access Beach	13	0%	view
Lake	Two Harbors City Park Beach	0	n/a	view
St Louis	42nd Avenue East Beach	13	0%	<u>view</u>
St Louis	Bayfront Park Beach	0	n/a	view
St Louis	Blatnik Fishing Pier Beach	0	n/a	<u>view</u>
St Louis	Bluebird Landing Beach	14	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
St Louis	Boy Scout Landing Beach	10	20%	<u>view</u>
St Louis	Brighton Beach	44	2%	<u>view</u>
St Louis	Clyde Avenue Boat Landing Beach	16	0%	view
St Louis	French River Beach	14	0%	view
St Louis	Glensheen Cemetary Beach	0	n/a	view
St Louis	Indian Point Campground Beach	0	n/a	view
St Louis	Lakewalk Beach	36	6%	view
St Louis	Lakewalk East / 16th Avenue East Beach	13	0%	<u>view</u>
St Louis	Lakewalk East / 26th Avenue East Beach	0	n/a	<u>view</u>
St Louis	Lakewood Pump Station Beach	0	n/a	view
St Louis	Leif Erikson Park Beach	29	3%	view
St Louis	Lester River Beach	16	6%	view
St Louis	McQuade Road Safe Harbor Beach	0	n/a	view
St Louis	Minnesota Point Harbor Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
St Louis	Morgan Park Beach	0	n/a	view
St Louis	North Shore Drive Wayside Rest / 72nd Avenue East Beach	0	n/a	view
St Louis	North Shore Drive Wayside Rest / Cant Road Beach	0	n/a	<u>view</u>
St Louis	Park Point 20th Street / Hearding Island Canal Beach	46	30%	<u>view</u>
St Louis	Park Point Beach House	33	0%	<u>view</u>
St Louis	Park Point Franklin Park / 13th Street South Beach	73	5%	view
St Louis	Park Point Lafayette Community Club Beach	36	3%	view
St Louis	Park Point New Duluth Boat Club / 14th Street Beach	43	16%	<u>view</u>
St Louis	Park Point Sky Harbor Parking Lot Beach	41	22%	<u>view</u>
St Louis	Park Point Southworth Marsh Beach	0	n/a	view
St Louis	Smithville Park Beach	0	n/a	view
St Louis	Stony Point Beach	14	0%	view
St Louis	Stony Point Wayside Rest Beach	0	n/a	view
St Louis	Waterfront Trail / Interlake Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
St Louis	Waterfront Trail / Radio Towers Beach	0	n/a	<u>view</u>
St Louis	Waterfront Trail / Riverside Beach	0	n/a	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

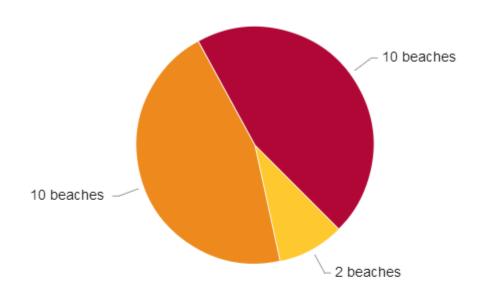
# **State Summary: Mississippi**

Ranked 28th in Beach Water Quality (out of 30 states) 21% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### Mississippi 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 0 beaches (0%) were not monitored or had a limited number of samples (fewer than 12)
- 0 beaches (0%) did not have any samples exceed the national BAV safety threshold
- 2 beaches (9%) had >0-10% of their samples exceed the national BAV safety threshold
- 10 beaches (45%) had >10-20% of their samples exceed the national BAV safety threshold
- 10 beaches (45%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Mississippi has beaches stretching along 43 miles of the Gulf of Mexico. The Mississippi Department of Environmental Quality (MDEQ) conducts the state's beach water quality monitoring program in conjunction with the State Beach Monitoring Task Force. Beachgoers can learn about beach closings and advisories on the MDEQ website.

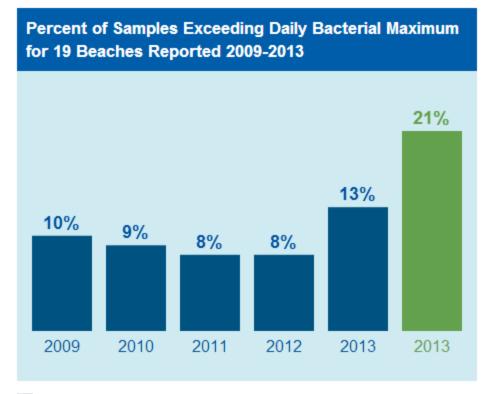
#### What Does Beach Water Monitoring Show?

In 2013, Mississippi reported 22 coastal beaches. Of all reported beach monitoring samples, 21% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in Mississippi in 2013 were Gulfport Central Beach in Harrison County (35%), Bay St. Louis Beach in Harrison County (32%), East Courthouse Road in Harrison County (31%), Biloxi Porter Ave. Beach in Harrison County (29%), and Long Beach in Harrison County (29%).

## Mississippi Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Mississippi over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

### Mississippi 2013 Monitoring Results

County	Beach	Total Samples	% of samples exceeding BAV	View
Hancock	Bay St. Louis Beach	63	32%	view
Hancock	Buccaneer State Park Beach	57	19%	view
Hancock	Lakeshore	59	15%	view
Hancock	Waveland Beach	60	27%	view
Harrison	Biloxi East Beach	51	16%	view
Harrison	Biloxi Porter Ave Beach	55	28%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Harrison	Biloxi West Central Beach	51	14%	view
Harrison	East Courthouse Road	61	31%	view
Harrison	Edgewater Beach	58	26%	view
Harrison	Gulfport Central Beach	63	35%	view
Harrison	Gulfport East Beach	58	22%	view
Harrison	Gulfport Harbor Beach	55	20%	view
Harrison	Gulfport West Beach	63	27%	view
Harrison	Long Beach	63	28%	view
Harrison	Pass Christian Central Beach	59	19%	view
Harrison	Pass Christian East Beach	52	13%	view
Harrison	Pass Christian West Beach	63	22%	view
Jackson	Front Beach	54	19%	view
Jackson	Pascagoula Beach East	51	8%	view
Jackson	Pascagoula Beach West	51	8%	view
Jackson	Shearwater Beach	51	12%	view
Jackson	St. Andrews Beach	51	18%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not

monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

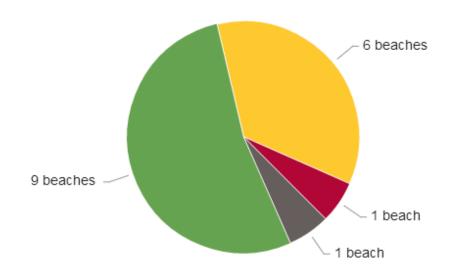
# **State Summary: New Hampshire**

Ranked 2nd in Beach Water Quality (out of 30 states) 3% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### **New Hampshire 2013 Beach Water Quality Summary**



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 1 beach (6%) were not monitored or had a limited number of samples (fewer than 12)
- 9 beaches (53%) did not have any samples exceed the national BAV safety threshold
- 6 beaches (35%) had >0-10% of their samples exceed the national BAV safety threshold
- 0 beaches (0%) had >10-20% of their samples exceed the national BAV safety threshold
- 1 beach (6%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

New Hampshire has 17 public coastal and estuarine beaches along 18 miles of Atlantic coastline. The state's beachwater quality monitoring program is administered by the New Hampshire Department of Environmental Services (DES). Beachgoers can learn about beach advisories through the <u>DES website</u>.

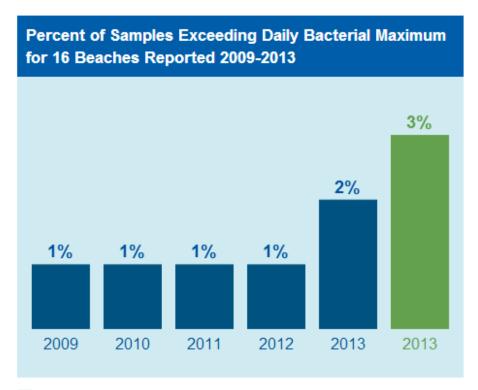
#### What Does Beach Water Monitoring Show?

In 2013, New Hampshire reported 17 coastal beaches, 16 of which were monitored. Of all reported beach monitoring samples, 3% exceeded the Beach Action Value (BAV) of 60 colony forming units (cfu) per 100 ml enterococcus. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in New Hampshire in 2013 were State Beach, North Hampton, in Rockingham County (22%); Northside Park, Hampton, in Rockingham County (6%); Bass Beach, North Hampton, in Rockingham County (4%); New Castle Town Beach in Rockingham County (2%); and North Beach, Hampton, in Rockingham County (1%).

## **New Hampshire Water Quality Trend 2009–2013**1

The bar chart below illustrates the general trend of beach water quality exceedance rates in New Hampshire over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **New Hampshire 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Rockingham	Bass Beach, North Hampton	47	4%	view
Rockingham	Foss Beach, Rye	39	0%	<u>view</u>
Rockingham	Hampton Beach State Park	135	0%	view
Rockingham	Hampton Harbor Beach	15	0%	view
Rockingham	Jenness Beach At Cable Road, Rye	83	1%	<u>view</u>
Rockingham	Jenness Beach State Park, Rye	89	0%	view
Rockingham	New Castle Town Beach	100	2%	<u>view</u>
Rockingham	North Beach, Hampton	70	1%	<u>view</u>
Rockingham	Northside Park, Hampton	18	6%	view
Rockingham	Sawyer Beach, Rye	91	0%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Rockingham	Seabrook Harbor Beach	36	0%	<u>view</u>
Rockingham	Seabrook Town Beach	39	0%	<u>view</u>
Rockingham	Star Island Beach, Rye	0	n/a	<u>view</u>
Rockingham	State Beach, North Hampton	92	22%	<u>view</u>
Rockingham	Sun Valley Beach, Hampton	12	0%	<u>view</u>
Rockingham	Wallis Sands Beach At Wallis Road, Rye	90	0%	<u>view</u>
Rockingham	Wallis Sands State Park, Rye	85	1%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

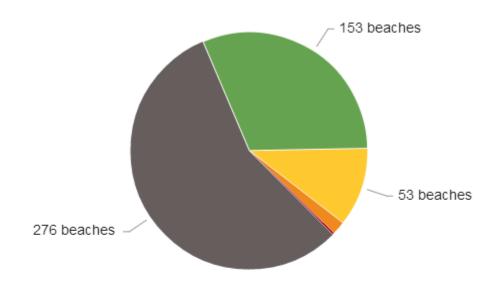
## **State Summary: New Jersey**

Ranked 3rd in Beach Water Quality (out of 30 states) 3% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### New Jersey 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 276 beaches (56%) were not monitored or had a limited number of samples (fewer than 12)
- 153 beaches (31%) did not have any samples exceed the national BAV safety threshold
- 53 beaches (11%) had >0-10% of their samples exceed the national BAV safety threshold
- 9 beaches (2%) had >10-20% of their samples exceed the national BAV safety threshold
- 1 beach (0%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local

officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

New Jersey has public beaches lining 127 miles of the Atlantic coast. The Cooperative Coastal Monitoring Program (CCMP), which is administered by the New Jersey Department of Environmental Protection, conducts quality monitoring from mid-May to mid-September. Beachgoers can find daily activity reports, including beach closings and advisories, on the CCMP website.

#### What Does Beach Water Monitoring Show?

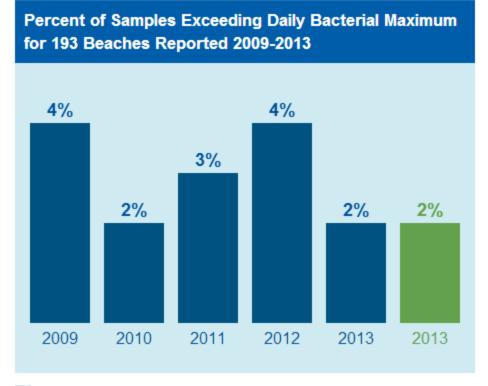
In 2013, New Jersey reported 492 coastal beaches and beach segments, 288 of which were monitored. New Jersey also has "bracket" beaches that are adjacent to regularly monitored beaches; if high bacteria concentrations are found at a regularly monitored station, sampling is conducted at bracket stations to determine the extent of the affected area.

Of all reported beach monitoring samples, 3% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in New Jersey in 2013 were Berkeley Township at Beachwood Beach West in Ocean County (52%), Neptune Township at Shark River Beach and Yacht in Monmouth County (20%), Berkeley Township at West Beach Avon Road in Ocean County (18%), and Brick Township at Windward Beach in Ocean County (17%).

#### New Jersey Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in New Jersey over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **New Jersey 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Atlantic	4th St. North (Brigantine)	0	n/a	<u>view</u>
Atlantic	5th St North (Brigantine City)	19	0%	view
Atlantic	7th St South (Brigantine City)	17	0%	<u>view</u>
Atlantic	10th St North (Brigantine City)	17	0%	<u>view</u>
Atlantic	10th St. South (Brigantine)	0	n/a	<u>view</u>

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Atlantic	11th St North (Brigatine)	0	n/a	view
Atlantic	11th St. (Longport)	0	n/a	view
Atlantic	12th St North (Brigantine City) (bracket beach)	1	0%	view
Atlantic	13th Ave (Longport Boro) (bracket beach)	20	0%	view
Atlantic	15th St South (Brigantine)	1	0%	view
Atlantic	16th St South (Brigantine City)	20	5%	view
Atlantic	17th St South (Brigantine City) (bracket beach)	1	0%	view
Atlantic	19th St. (Longport)	19	0%	view
Atlantic	25th St South (Brigantine City) (bracket beach)	1	0%	view
Atlantic	26th St (Brigantine)	17	0%	view
Atlantic	26th St. (Longport)	20	0%	view
Atlantic	26th St. South (Brigantine)	21	5%	view
Atlantic	27th St South (Brigantine City) (bracket beach)	1	0%	view
Atlantic	33rd St. (Longport)	19	0%	view
Atlantic	33rd St. South (Brigantine)	17	0%	view
Atlantic	43rd St. South (Brigantine)	17	0%	view
Atlantic	Albany Ave (Atlantic City) (bracket beach)	1	0%	view
Atlantic	Andover Ave (Margate City) (bracket beach)	1	0%	view
Atlantic	Annapolis (Atlantic City)	19	0%	view
Atlantic	Arkansas (Atlantic City)	24	4%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Atlantic	Austin Ave (Ventnor City)	18	6%	view
Atlantic	Austin Ave (Ventnor City) (bracket beach)	0	n/a	view
Atlantic	Bartram (Atlantic City)	20	0%	view
Atlantic	Bay Ave (Somers Point City) (bracket beach)	3	0%	view
Atlantic	Bramble Drive (Brigantine City) (bracket beach)	17	0%	view
Atlantic	Brant (Brigatine)	0	n/a	view
Atlantic	Caspian (Atlantic City)	21	5%	view
Atlantic	Chelsea (Atlantic City)	20	5%	view
Atlantic	Clermont Ave (Margate City)	21	5%	view
Atlantic	Clermont Ave (Margate City) (bracket beach)	0	n/a	view
Atlantic	Columbia Ave (Atlantic City) (bracket beach)	1	0%	view
Atlantic	Connecticut Ave (Atlantic City)	18	6%	view
Atlantic	Dorset (Ventnor)	17	0%	view
Atlantic	Elberon Ave (Atlantic City) (bracket beach)	1	0%	view
Atlantic	Franklin Ave (Margate City) (bracket beach)	1	0%	view
Atlantic	Georgia (Atlantic City)	21	5%	view
Atlantic	Gladstone Ave (Margate City)	19	5%	view
Atlantic	Gladstone Ave (Margate City) (bracket beach)	0	n/a	view
Atlantic	Granville (Margate)	0	n/a	view
Atlantic	Higbee Ave (Somers Point City) (bracket beach)	3	33%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Atlantic	Illinois (Atlantic City)	21	0%	view
Atlantic	Indiana Ave (Atlantic City) (bracket beach)	1	0%	view
Atlantic	Iowa (Atlantic City)	21	0%	view
Atlantic	Jackson (Atlantic City)	20	0%	view
Atlantic	Kentucky (Atlantic City)	22	5%	view
Atlantic	Lincoln (Atlantic City)	22	5%	view
Atlantic	Michigan (Atlantic City)	22	9%	view
Atlantic	Missouri (Atlantic City)	22	9%	view
Atlantic	New Hampshire (Atlantic City)	17	0%	view
Atlantic	New Haven (Ventnor)	18	0%	view
Atlantic	New Jersey Ave. (Somers Point)	21	14%	view
Atlantic	New York Ave (Atlantic City) (bracket beach)	1	0%	view
Atlantic	North Carolina (Atlantic City)	21	5%	view
Atlantic	Oakland (Ventnor)	0	n/a	view
Atlantic	Ohio Ave (Atlantic City) (bracket beach)	2	0%	view
Atlantic	Osborne (Margate)	19	0%	view
Atlantic	Pennsylvania (Atlantic City)	21	5%	view
Atlantic	Providence (Atlantic City)	19	0%	view
Atlantic	Rhode Island Ave (Atlantic City)	16	0%	view
Atlantic	Sandy Ln (Brigantine City)	18	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Atlantic	Sandy Ln (Brigantine City) (bracket beach)	0	n/a	view
Atlantic	Seaside (Brigantine)	0	n/a	view
Atlantic	South Beach (Brigantine)	0	n/a	view
Atlantic	South Carolina (Atlantic City)	19	5%	view
Atlantic	St. James (Atlantic City)	22	9%	view
Atlantic	States (Atlantic City)	21	5%	view
Atlantic	Tennesse Ave (Atlantic City) (bracket beach)	1	0%	view
Atlantic	Texas (Atlantic City)	22	5%	view
Atlantic	Washington (Margate)	20	0%	view
Atlantic	Washington (Ventnor)	17	0%	view
Cape May	1st Street (Ocean City)	0	n/a	view
Cape May	2nd & JFK (North Wildwood)	14	14%	view
Cape May	2nd & Ocean (North Wildwood City) (bracket beach)	1	0%	view
Cape May	2nd (Cape May City)	17	0%	view
Cape May	3rd Ave (North Wildwood City) (bracket beach)	1	0%	view
Cape May	3rd St (Ocean City) (bracket beach)	1	0%	view
Cape May	4th St (Ocean City) (bracket beach)	1	0%	view
Cape May	7th St (Ocean City) (bracket beach)	0	n/a	view
Cape May	8th St (Ocean City)	0	n/a	view
Cape May	9th (Avalon)	17	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cape May	9th Ave (North Wildwood City) (bracket beach)	1	0%	view
Cape May	9th St (Ocean City)	17	0%	view
Cape May	10th & JFK (North Wildwood)	19	11%	view
Cape May	10th St (Ocean City)	0	n/a	view
Cape May	11th Ave (North Wildwood City) (bracket beach)	1	0%	view
Cape May	14th St (Avalon Boro) (bracket beach)	0	n/a	view
Cape May	15th (Avalon)	17	0%	view
Cape May	15th St (Ocean City) (bracket beach)	0	n/a	view
Cape May	16th (Ocean City)	17	0%	view
Cape May	16th St (Avalon Boro) (bracket beach)	0	n/a	view
Cape May	17th Ave (North Wildwood City) (bracket beach)	2	0%	view
Cape May	17th St (Ocean City) (bracket beach)	0	n/a	view
Cape May	18th (North Wildwood)	19	5%	view
Cape May	19th Ave (North Wildwood City) (bracket beach)	2	0%	view
Cape May	20th Ave (North Wildwood City) (bracket beach)	1	0%	view
Cape May	21st Ave (North Wildwood City) (bracket beach)	1	0%	view
Cape May	21st St (Avalon)	17	0%	view
Cape May	22nd Ave (North Wildwood City) (bracket beach)	1	0%	view
Cape May	23rd Ave (North Wildwood City) (bracket beach)	2	0%	view
Cape May	23rd St (Ocean City) (bracket beach)	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cape May	24th (North Wildwood)	18	6%	view
Cape May	24th (Ocean City)	17	0%	view
Cape May	25th Ave (North Wildwood City) (bracket beach)	1	0%	view
Cape May	25th St (Ocean City) (bracket beach)	0	n/a	view
Cape May	27th St (Ocean City) (bracket beach)	0	n/a	view
Cape May	28th (Ocean City)	17	0%	view
Cape May	29th (Sea Isle City)	17	0%	view
Cape May	29th St (Ocean City) (bracket beach)	0	n/a	view
Cape May	30th (Avalon)	18	0%	view
Cape May	34th St (Ocean City)	18	0%	view
Cape May	34th St (Sea Isle City)	17	0%	view
Cape May	40th St (Avalon)	17	0%	view
Cape May	40th St (Sea Isle City)	18	0%	view
Cape May	48th (Ocean City)	17	0%	view
Cape May	48th St (Sea Isle City) (bracket beach)	0	n/a	view
Cape May	49th (Sea Isle City)	17	0%	view
Cape May	50th (Avalon)	17	0%	view
Cape May	50th St (Sea Isle City) (bracket beach)	0	n/a	view
Cape May	55th (Ocean City)	17	0%	view
Cape May	57th (Avalon)	17	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cape May	59th (Sea Isle City)	17	0%	view
Cape May	65th (Avalon)	17	0%	view
Cape May	65th (Sea Isle City)	17	0%	view
Cape May	76th (Avalon)	18	0%	view
Cape May	77th (Sea Isle City)	17	0%	view
Cape May	83rd St (Stone Harbor)	16	0%	view
Cape May	85th (Sea Isle City)	18	0%	view
Cape May	90th (Stone Harbor)	17	0%	view
Cape May	90th (Yacht Club) (Stone Harbor)	0	n/a	view
Cape May	96th (Stone Harbor)	17	0%	view
Cape May	103rd (Stone Harbor )	16	0%	view
Cape May	108th (Stone Harbor)	16	6%	view
Cape May	119th (Stone Harbor)	16	0%	view
Cape May	Atlantic (Ocean City) (bracket beach)	0	n/a	view
Cape May	Baker Ave (Wildwood City) (bracket beach)	1	0%	view
Cape May	Beesley's Point (Upper Twp)	18	6%	view
Cape May	Bennett (Wildwood)	18	6%	view
Cape May	Brainard (Cape May Point)	18	0%	view
Cape May	Broadway (Cape May City)	17	0%	view
Cape May	Brooklyn (Cape May City) (bracket beach)	1	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cape May	Buffalo Ave (Cape May City) (bracket beach)	1	0%	view
Cape May	Burk Ave (Wildwood City) (bracket beach)	0	n/a	view
Cape May	Cedar Ave (Wildwood City) (bracket beach)	2	0%	view
Cape May	Congress (Cape May City)	17	0%	view
Cape May	Corinthian YC (Cape May City)	17	0%	view
Cape May	Davis Ave (Wildwood City) (bracket beach)	1	0%	view
Cape May	Delancey (Ocean City)	0	n/a	-
Cape May	Forgetmenot (Wildwood Crest)	17	0%	view
Cape May	Garden (Ocean City) (bracket beach)	1	0%	view
Cape May	Glenwood Ave (Wildwood City) (bracket beach)	2	0%	view
Cape May	Grant (Cape May City)	18	0%	view
Cape May	Hildreth Ave (Wildwood City) (bracket beach)	1	0%	view
Cape May	Hollywood (Wildwood Crest)	17	0%	view
Cape May	Jefferson (Wildwood Crest)	18	0%	view
Cape May	Jefferson St (Cape May City) (bracket beach)	0	n/a	view
Cape May	Lavendar (Wildwood Crest)	17	0%	view
Cape May	Leaming Ave (Wildwood City) (bracket beach)	1	0%	view
Cape May	Lincoln Ave (Wildwood City) (bracket beach)	2	0%	view
Cape May	Madison Ave (Cape May City) (bracket beach)	0	n/a	view
Cape May	Maple (Wildwood)	19	11%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cape May	Miami (Wildwood Crest)	17	0%	view
Cape May	Montgomery (Wildwood)	19	5%	view
Cape May	Moorlyn Ter (Ocean City) (bracket beach)	0	n/a	view
Cape May	Morningside Rd (Ocean City) (bracket beach)	0	n/a	view
Cape May	North (Ocean City)	18	6%	view
Cape May	Ocean (Cape May Point)	17	0%	view
Cape May	Ocean Ave. (Cape May City)	17	0%	view
Cape May	Ocean City Yacht Club (Ocean City)	0	n/a	view
Cape May	Orchid (Wildwood Crest)	17	0%	view
Cape May	Park (Ocean City)	18	6%	view
Cape May	Perry St (Cape May City) (bracket beach)	0	n/a	view
Cape May	Philadelphia (Cape May City)	18	0%	view
Cape May	Pine Ave (Wildwood City) (bracket beach)	2	0%	view
Cape May	Pinnacle (Ocean City) (bracket beach)	2	0%	view
Cape May	Poverty (Cape May City)	18	6%	view
Cape May	Queen North (Cape May City)	17	0%	view
Cape May	Reading Ave (Cape May City) (bracket beach)	0	n/a	view
Cape May	Richmond Ave (Lower Township)	17	0%	view
Cape May	Saint James PI (Ocean City) (bracket beach)	0	n/a	view
Cape May	Schellenger (Wildwood)	20	10%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cape May	Seabright Rd (Ocean City) (bracket beach)	2	0%	view
Cape May	SIC Yacht Club (Sea Isle City)	0	n/a	view
Cape May	St. Charles (Ocean City)	0	n/a	view
Cape May	Stenton PI (Ocean City)	1	0%	view
Cape May	Surf (Ocean City)	19	11%	view
Cape May	Washington Ave (Wildwood Crest Boro) (bracket beach)	0	n/a	view
Cape May	Webster (Upper Twp)	17	0%	view
Cape May	Whildin (Cape May Point)	17	0%	view
Cape May	Wildwood Ave (Wildwood City) (bracket beach)	0	n/a	-
Cape May	Williard (Upper Twp)	18	0%	view
Cape May	WW Crest Yacht Club (Wildwood Crest)	0	n/a	view
Cape May	WW Gables Yacht Club (Wildwood Crest)	0	n/a	view
Cape May	Yacht Club (Avalon)	0	n/a	view
Monmouth	1st Avenue (Asbury Park)	18	0%	view
Monmouth	2nd Ave (Asbury Park City) (bracket beach)	0	n/a	view
Monmouth	2nd Ave (Bradley Beach Boro) (bracket beach)	0	n/a	view
Monmouth	3rd (Asbury Park)	17	0%	view
Monmouth	6th Ave (Belmar Borough) (bracket beach)	12	0%	view
Monmouth	7th (Asbury Park )	17	0%	view
Monmouth	7th Avenue (Belmar)	6	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Monmouth	12th (Belmar)	17	0%	view
Monmouth	19th Ave (Belmar Boro) (bracket beach)	0	n/a	view
Monmouth	20th Avenue (Belmar)	24	0%	view
Monmouth	Area C - Surf Beach (Sandy Hook)	17	0%	view
Monmouth	Area E - Visitor Center (Sandy Hook)	0	n/a	view
Monmouth	Army Rec. Beach (Sandy Hook)	0	n/a	view
Monmouth	Asbury Ave South (Asbury Park City) (bracket beach)	0	n/a	view
Monmouth	Baltimore (Sea Girt)	17	0%	view
Monmouth	Beacon (Sea Girt)	17	0%	view
Monmouth	Brielle Rd (Manasquan Boro) (bracket beach)	0	n/a	view
Monmouth	Broadway (Ocean Grove)	25	0%	view
Monmouth	Broadway South (Neptune Twp) (bracket beach)	0	n/a	view
Monmouth	Brown South (Spring Lake)	17	0%	view
Monmouth	Cedar (Allenhurst)	17	0%	view
Monmouth	Clinton PI (Neptune Township) (bracket beach)	3	0%	view
Monmouth	Clinton PI (Neptune Twp) (bracket beach)	0	n/a	view
Monmouth	Deal Casino (Deal)	18	0%	view
Monmouth	East Main (Manasquan)	17	0%	view
Monmouth	East Main North (Manasquan Boro) (bracket beach)	0	n/a	view
Monmouth	Elberon Bch Clb North (Long Branch City) (bracket beach)	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Monmouth	Elberon Bch Clb South (Long Branch City) (bracket beach)	0	n/a	view
Monmouth	Elberon Beach Club (Long Branch)	17	0%	view
Monmouth	Essex (Spring Lake)	17	0%	view
Monmouth	Evergreen South (Bradley Beach)	18	0%	view
Monmouth	Evergreen South South (Avon-By-The-Sea Boro) (bracket beach)	0	n/a	view
Monmouth	Fort Hancock (Sandy Hook)	17	0%	view
Monmouth	Garfield Ave (Avon-By-The-Sea Boro) (bracket beach)	0	n/a	view
Monmouth	Heck Ave (Neptune Twp) (bracket beach)	0	n/a	view
Monmouth	Highlands Rec Center East (Highlands Boro) (bracket beach)	0	n/a	view
Monmouth	Highlands Rec Center West (Highlands Boro) (bracket beach)	0	n/a	view
Monmouth	Ideal Beach (Middletown)	17	0%	view
Monmouth	Ideal East (Middletown Twp) (bracket beach)	0	n/a	view
Monmouth	Ideal West (Middletown Twp) (bracket beach)	0	n/a	view
Monmouth	Imperial House (LONG BRANCH CITY)	17	6%	view
Monmouth	Inlet Surfing Beach, Riverside Dr. (MANASQUAN)	25	4%	view
Monmouth	Joline (Long Branch)	17	0%	view
Monmouth	L Jetty, Washington Ave (AVON-BY-THE-SEA BORO)	24	0%	view
Monmouth	L Street Beach (Belmar)	18	6%	view
Monmouth	Laird (Long Branch)	17	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Monmouth	Lake Takanassee South (Long Branch City) (bracket beach)	0	n/a	view
Monmouth	Lorraine Ave (Spring Lake Boro) (bracket beach)	0	n/a	view
Monmouth	Lorraine Ave (Spring Lake Borough) (bracket beach)	1	0%	view
Monmouth	Ludlow Ave (Spring Lake Boro) (bracket beach)	0	n/a	view
Monmouth	Main (Ocean Grove)	17	0%	view
Monmouth	McCabe Ave (Bradley Beach Boro) (bracket beach)	0	n/a	view
Monmouth	Miller Beach (Highlands)	18	6%	view
Monmouth	Miller Beach North (Highlands Borough (bracket beach)	1	0%	view
Monmouth	Miller Beach South (Highlands Borough (bracket beach)	1	0%	view
Monmouth	Monmouth Beach Club (Monmouth Beach)	16	0%	view
Monmouth	Neptune (Sea Girt)	17	0%	view
Monmouth	New York (Sea Girt)	17	0%	view
Monmouth	North Bath (Long Branch)	18	6%	view
Monmouth	North Bath North (Long Branch City) (bracket beach)	0	n/a	view
Monmouth	North Bath North (Long Branch City) (bracket beach)	1	0%	view
Monmouth	North Bath South (Long Branch City) (bracket beach)	0	n/a	view
Monmouth	North Bath South (Long Branch City) (bracket beach)	1	0%	view
Monmouth	North Blvd (Belmar Boro) (bracket beach)	0	n/a	view
Monmouth	Ocean Beach Club (Long Branch)	16	0%	view
Monmouth	Ocean Park (Bradley Beach)	17	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Monmouth	Park Place Ave (Bradley Beach Boro) (bracket beach)	0	n/a	view
Monmouth	Philadelphia (Sea Girt Boro) (bracket beach)	0	n/a	view
Monmouth	Pitman Ave (Neptune Twp) (bracket beach)	0	n/a	view
Monmouth	Public Beach (Sea Bright)	17	0%	view
Monmouth	Rec Center (Highlands)	18	6%	view
Monmouth	Roosevelt Ave (Avon-By-The-Sea Boro) (bracket beach)	0	n/a	view
Monmouth	Seven President's Park (Long Branch)	24	0%	view
Monmouth	Shark River Beach & Yacht Club (Neptune Twp)	20	20%	view
Monmouth	Shark Rvr Bch & Yacht South (Neptune Township) (bracket beach)	3	0%	view
Monmouth	Shark Rvr Bch & Yacht South (Neptune Twp) (bracket beach)	0	n/a	view
Monmouth	South Bath (LONG BRANCH CITY)	18	6%	view
Monmouth	South Bath North (Long Branch City) (bracket beach)	0	n/a	view
Monmouth	South Bath South (Long Branch City) (bracket beach)	0	n/a	view
Monmouth	South Sternberger Ave (Long Branch City) (bracket beach)	0	n/a	view
Monmouth	Spray Ave. (NEPTUNE TWP)	17	0%	view
Monmouth	Spring Lake Borough at Ludlow Ave (Spring Lake Borough) (bracket beach)	1	0%	view
Monmouth	Sylvania (Avon)	17	0%	view
Monmouth	The Terrace (Sea Girt)	17	0%	view
Monmouth	Thompson (Leonardo)	17	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Monmouth	Union (Spring Lake)	17	0%	view
Monmouth	Village Beach Club (LOCH ARBOUR VILLAGE)	25	0%	view
Monmouth	Washington (Spring Lake)	17	0%	view
Monmouth	Webb Ave (Neptune Twp) (bracket beach)	0	n/a	view
Monmouth	Woodland Ave (Avon-By-The-Sea Boro) (bracket beach)	0	n/a	view
Monmouth	Worthington (Spring Lake)	19	5%	view
Monmouth	York Avenue (Spring Lake)	16	0%	view
Ocean	2nd St (Beach Haven Boro)	0	n/a	view
Ocean	4th (Dover)	16	0%	view
Ocean	5th (Seaside Park)	20	5%	view
Ocean	5th Ave North (Seaside Park Boro) (bracket beach)	0	n/a	view
Ocean	5th Ave South (Seaside Park Boro) (bracket beach)	0	n/a	view
Ocean	5th St (Beach Haven Boro)	0	n/a	-
Ocean	5th St (Surf City Boro)	0	n/a	view
Ocean	7th (Brick)	11	0%	view
Ocean	7th St (Ship Bottom Boro)	0	n/a	-
Ocean	9th St (Barnegat Light Boro)	0	n/a	-
Ocean	9th St (Surf City Boro)	0	n/a	view
Ocean	10th (Barnegat Light)	18	0%	view
Ocean	11th St (Ship Bottom Boro)	0	n/a	-

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	12th (Seaside Park)	18	0%	view
Ocean	12th St (Beach Haven Boro)	0	n/a	view
Ocean	13th St (Surf City Boro)	0	n/a	view
Ocean	14th (Ship Bottom), bay	19	0%	view
Ocean	14th (Ship Bottom), ocean	19	0%	view
Ocean	14th St North (Ship Bottom Boro) (bracket beach)	0	n/a	view
Ocean	14th St South (Ship Bottom Boro) (bracket beach)	0	n/a	view
Ocean	14th St. in Beach Haven (Long Beach Twp)	0	n/a	-
Ocean	15th St (Barnegat Light Boro)	0	n/a	view
Ocean	16th (Surf City)	19	0%	view
Ocean	16th St North (Surf City Boro) (bracket beach)	0	n/a	view
Ocean	16th St South (Surf City Boro) (bracket beach)	0	n/a	view
Ocean	17th St (Barnegat Light Boro)	0	n/a	-
Ocean	17th St (Long Beach Twp)	0	n/a	view
Ocean	17th St (Surf City Boro)	0	n/a	view
Ocean	19th St (Barnegat Light Boro)	0	n/a	view
Ocean	20th St (Ship Bottom Boro)	0	n/a	view
Ocean	21st St (Barnegat Light Boro)	0	n/a	-
Ocean	21st St (Long Beach Twp)	0	n/a	view
Ocean	21st St (Surf City Boro)	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	22nd St (Barnegat Light Boro)	0	n/a	-
Ocean	23rd (South Seaside)	18	0%	view
Ocean	23rd (Surf City)	17	0%	view
Ocean	23rd St (Ship Bottom Boro)	0	n/a	view
Ocean	24th (Barnegat Light)	18	6%	view
Ocean	24th St (Surf City Boro)	0	n/a	view
Ocean	25th South (Barnegat Light Boro) (bracket beach)	2	0%	view
Ocean	25th St (Barnegat Light Boro - bay)	21	14%	view
Ocean	25th St (Barnegat Light Boro - ocean)	0	n/a	-
Ocean	25th St (Long Beach Twp)	0	n/a	-
Ocean	25th St North (Barnegat Light Boro) (bracket beach)	2	0%	view
Ocean	26th St (Ship Bottom Boro)	0	n/a	view
Ocean	27th St (Barnegat Light Boro)	0	n/a	-
Ocean	29th St (Long Beach Twp)	0	n/a	view
Ocean	30th St (Barnegat Light Boro)	0	n/a	view
Ocean	30th St (Ship Bottom Boro)	0	n/a	view
Ocean	32nd St (Long Beach Twp)	0	n/a	view
Ocean	33rd St (Long Beach Twp)	0	n/a	-
Ocean	36th St (Long Beach Twp)	0	n/a	view
Ocean	40th St (Long Beach Twp)	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	44th St (Long Beach Twp)	0	n/a	view
Ocean	48th St (Long Beach Twp)	0	n/a	view
Ocean	52nd St (Long Beach Twp)	0	n/a	view
Ocean	55th St (Long Beach Twp)	0	n/a	view
Ocean	58th St (Long Beach Twp)	0	n/a	view
Ocean	68th St (Long Beach Twp)	0	n/a	view
Ocean	69th (Harvey Cedars Boro)	0	n/a	-
Ocean	73rd St (Harvey Cedars Boro)	0	n/a	view
Ocean	75th (Harvey Cedars), bay	19	0%	view
Ocean	75th (Harvey Cedars), ocean	17	0%	view
Ocean	77th St (Harvey Cedars Boro)	0	n/a	-
Ocean	80th St (Harvey Cedars Boro)	0	n/a	-
Ocean	83rd St (Harvey Cedars Boro)	0	n/a	view
Ocean	85 LB Blvd (Long Beach Twp)	0	n/a	-
Ocean	86th St (Harvey Cedars Boro)	0	n/a	view
Ocean	86th St (Long Beach Twp)	0	n/a	view
Ocean	110th St (Long Beach Twp)	0	n/a	-
Ocean	199 LB Blvd (Long Beach Twp)	0	n/a	-
Ocean	1005 LB Blvd (Long Beach Twp)	0	n/a	-
Ocean	1023 LB Blvd (Long Beach Twp)	0	n/a	-

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	1049 LB Blvd (Long Beach Twp)	0	n/a	-
Ocean	1065 LB Blvd (Long Beach Twp)	0	n/a	-
Ocean	1087 LB Blvd (Long Beach Twp)	0	n/a	-
Ocean	1119 LB Blvd (Long Beach Twp)	0	n/a	-
Ocean	Anglesea Avenue (Ocean Gate)	20	0%	view
Ocean	Anglesea East (Ocean Gate Boro) (bracket beach)	0	n/a	view
Ocean	Anglesea West (Ocean Gate Boro) (bracket beach)	0	n/a	<u>view</u>
Ocean	Avon Road in Pine Beach (Pine Beach)	22	18%	view
Ocean	Bay Beach (Barnegat)	20	0%	view
Ocean	Beachwood Beach (Beachwood)	31	52%	view
Ocean	Belvoir (Beach Haven Boro)	0	n/a	view
Ocean	Bergen (Harvey Cedars)	17	0%	view
Ocean	Berkeley Island (Berkeley)	0	n/a	view
Ocean	Berkeley Island East (Berkeley Twp) (bracket beach)	0	n/a	view
Ocean	Berkeley Island West (Berkeley Twp) (bracket beach)	0	n/a	view
Ocean	Brick Beach (Brick)	18	0%	view
Ocean	Brighton (Seaside Park)	18	0%	view
Ocean	Broadway (Pt Pleasant Beach)	21	0%	view
Ocean	Brooklyn Ave (Lavallette), bay	20	5%	view
Ocean	Brooklyn Ave (Lavallette), ocean	16	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	Brooklyn North (Lavallette Boro) (bracket beach)	0	n/a	view
Ocean	Brooklyn South (Lavallette Boro) (bracket beach)	0	n/a	view
Ocean	Bryn Mawr (Lavallette)	18	0%	view
Ocean	California Ave (Long Beach Twp)	0	n/a	view
Ocean	Cape May Ave (Harvey Cedars Boro)	0	n/a	view
Ocean	Center St (Beach Haven Boro)	0	n/a	view
Ocean	Central (Pt Pleasant Beach)	19	5%	view
Ocean	Coast Ave (Long Beach Twp)	0	n/a	-
Ocean	Colorado (Long Beach Twp)	0	n/a	view
Ocean	Dayton (Long Beach Twp)	0	n/a	-
Ocean	Dolphin (Long Beach Twp)	0	n/a	-
Ocean	Dune (Long Beach Twp)	0	n/a	-
Ocean	East Avon Rd (Pine Beach Boro) (bracket beach)	2	50%	view
Ocean	East Beach (Pine Beach)	21	10%	view
Ocean	East Beachwood Beach West (Beachwood Boro) (bracket beach)	11	91%	view
Ocean	East Tuna Way (Chadwick)	15	0%	view
Ocean	Elizabeth Ct (Long Beach Twp)	0	n/a	-
Ocean	Engleside (Beach Haven Boro)	0	n/a	view
Ocean	Essex (Beach Haven Boro)	0	n/a	view
Ocean	Fielder (Dover )	15	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	Guyer (Lavallette)	17	0%	view
Ocean	Hancock (Seaside Heights)	21	0%	view
Ocean	Hancock North (Seaside Heights Boro) (bracket beach)	0	n/a	view
Ocean	Hancock South (Seaside Heights Boro) (bracket beach)	0	n/a	view
Ocean	Harding Ave (Long Beach Twp)	0	n/a	-
Ocean	Herbert Ave (Long Beach Twp)	0	n/a	view
Ocean	Hudson Ave (Harvey Cedars Boro)	0	n/a	view
Ocean	Island Beach State Park 1 (Berkeley)	20	0%	view
Ocean	Island Beach State Park 2 (Berkeley)	17	0%	view
Ocean	Jacqueline (Long Beach Twp)	0	n/a	view
Ocean	Jeanette Ave (Long Beach Twp)	0	n/a	-
Ocean	Jennifer (Stafford)	20	0%	view
Ocean	Jennifer North (Stafford Twp) (bracket beach)	0	n/a	view
Ocean	Jennifer South (Stafford Twp) (bracket beach)	0	n/a	view
Ocean	Jersey City (Lavallette)	16	0%	view
Ocean	Joan (Long Beach)	17	0%	view
Ocean	Johnson (Bay Head)	15	0%	view
Ocean	Kansas Ave (Long Beach Twp)	0	n/a	view
Ocean	Lavenia Ave (Long Beach Twp)	0	n/a	view
Ocean	Leeward (Beach Haven)	17	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	Lincoln (Seaside Heights)	17	0%	view
Ocean	Loveladies (Lovelades)	17	0%	view
Ocean	Lyman (Mantoloking)	14	0%	view
Ocean	Maryland (Pt Pleasant Beach)	20	0%	view
Ocean	Maxon Avenue (Pt Pleasant)	20	5%	view
Ocean	Maxon East (Point Pleasant Boro) (bracket beach)	0	n/a	view
Ocean	Maxon West (Point Pleasant Boro) (bracket beach)	0	n/a	view
Ocean	Middlesex Ave (Harvey Cedars Boro)	0	n/a	-
Ocean	Mount (Bay Head)	16	0%	view
Ocean	N 1st (Surf City Boro)	0	n/a	view
Ocean	New Jersey Avenue, Beach Haven Terrace (Long Beach), bay	20	5%	view
Ocean	New Jersey Avenue, Beach Haven Terrace (Long Beach), ocean	18	0%	view
Ocean	New Jersey North (Long Beach Twp) (bracket beach)	1	0%	view
Ocean	New Jersey South (Long Beach Twp) (bracket beach)	1	1%	view
Ocean	North 10th (Surf City)	17	0%	view
Ocean	North Beach (Dover)	1	0%	view
Ocean	North Leeward St III (Beach Haven Boro)	0	n/a	-
Ocean	North Lincoln Ave I (Seaside Heights Boro) (bracket beach)	0	n/a	view
Ocean	North Stockton Ave I (Long Beach Township) (bracket beach)	1	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	O St (Seaside Park)	16	0%	view
Ocean	Oceanview Dr (Long Beach Twp)	0	n/a	-
Ocean	Osborn Ave (Long Beach Twp)	0	n/a	-
Ocean	Parkertown (Little Egg Harbor)	0	n/a	view
Ocean	Paulding (Long Beach Twp)	0	n/a	-
Ocean	Pearl (Beach Haven Boro)	0	n/a	view
Ocean	Pelham (Beach Haven Boro)	0	n/a	-
Ocean	Princeton (Mantoloking)	14	0%	view
Ocean	Ramapo Ave (Long Beach Twp)	0	n/a	view
Ocean	Reese (Lavallette)	20	5%	view
Ocean	Reese Ave North (Lavallette Boro) (bracket beach)	0	n/a	view
Ocean	Reese Ave South (Lavallette Boro) (bracket beach)	0	n/a	view
Ocean	Rhode Island Ave (Long Beach Twp)	0	n/a	view
Ocean	River Avenue (Pt Pleasant)	20	10%	view
Ocean	River East (Point Pleasant Boro) (bracket beach)	0	n/a	view
Ocean	River West (Point Pleasant Boro) (bracket beach)	0	n/a	view
Ocean	Rosemma (Long Beach Twp)	0	n/a	view
Ocean	S 2nd (Surf City Boro)	0	n/a	view
Ocean	Scott (Long Beach Twp)	0	n/a	view
Ocean	Seaview (Long Beach Twp)	0	n/a	-

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	Shelter Island (Dover)	20	0%	view
Ocean	Sheridan (Seaside Heights)	17	0%	view
Ocean	Sigsbee Ave (Long Beach Twp)	0	n/a	view
Ocean	South 3rd (Ship Bottom)	17	0%	view
Ocean	South 14th St III (Ship Bottom Boro)	0	n/a	-
Ocean	South Lincoln Ave I (Seaside Heights Boro) (bracket beach)	0	n/a	view
Ocean	South New Jersey Ave II (Long Beach Twp)	0	n/a	-
Ocean	South Stockton Ave I (Long Beach Township) (bracket beach)	1	0%	view
Ocean	Station Ave East (Pine Beach Boro) (bracket beach)	1	0%	view
Ocean	Station Ave West (Pine Beach Boro) (bracket beach)	1	0%	view
Ocean	Stockton (Beach Haven Crest)	19	5%	view
Ocean	Stockton (Brant Beach)	18	6%	view
Ocean	Stockton North (Long Beach Twp) (bracket beach)	0	n/a	view
Ocean	Stockton South (Long Beach Twp) (bracket beach)	0	n/a	view
Ocean	Summit (Island Heights)	21	10%	view
Ocean	Summit East (Island Heights Boro) (bracket beach)	1	0%	view
Ocean	Summit West (Island Heights Boro) (bracket beach)	1	0%	view
Ocean	Susan (Long Beach Twp)	0	n/a	view
Ocean	Taylor (Beach Haven)	18	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Ocean	Tennessee Ave (Long Beach Twp)	0	n/a	view
Ocean	Trenton (Lavallette)	16	0%	view
Ocean	Washington (Long Beach Twp)	0	n/a	view
Ocean	West Avon Rd (Pine Beach Boro) (bracket beach)	2	50%	view
Ocean	West Beachwood Beach West (Beachwood Boro) (bracket beach)	11	55%	view
Ocean	Wildwood Avenue (Ocean Gate)	21	5%	view
Ocean	Wildwood East (Ocean Gate Boro) (bracket beach)	1	0%	view
Ocean	Wildwood West (Ocean Gate Boro) (bracket beach)	1	0%	view
Ocean	Windward Beach (Brick)	24	17%	view
Ocean	Windward Beach East (Brick Twp) (bracket beach)	3	0%	view
Ocean	Windward Beach West (Brick Twp) (bracket beach)	3	0%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

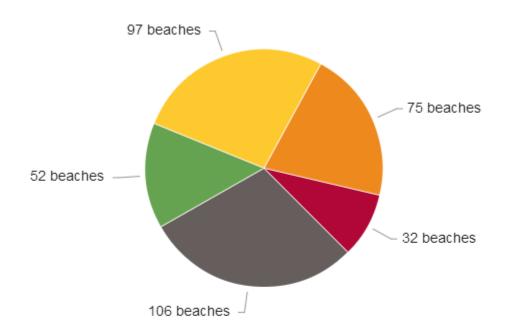
## **State Summary: New York**

Ranked 20th in Beach Water Quality (out of 30 states) 13% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### New York 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 106 beaches (29%) were not monitored or had a limited number of samples (fewer than 12)
- 52 beaches (14%) did not have any samples exceed the national BAV safety threshold
- 97 beaches (27%) had >0-10% of their samples exceed the national BAV safety threshold
- 75 beaches (21%) had >10-20% of their samples exceed the national BAV safety threshold
- 32 beaches (9%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

New York is the only state with both marine and Great Lakes coastlines. There are 127 miles of Atlantic Ocean coastline, 231 miles of shorefront on Long Island Sound, 548 miles of Long Island bayfront, and 83 miles of shorefront on islands off the Long Island coast. In addition to these marine coastlines, there are more than 200 miles of freshwater shoreline on Lake Erie and Lake Ontario. Nearly all of the state's coastal beaches are on Atlantic waters. The coastal beach monitoring program in New York is administered by the New York State Department of Health. The New York City Department of Health posts closings and advisories for beaches in the New York City area. Additionally, beachgoers can learn about advisories and closings in the Great Lakes areas on the BeachCast website.

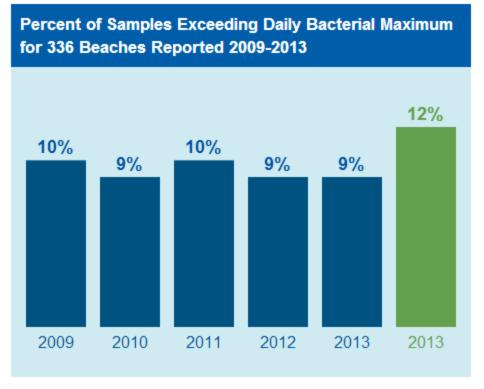
#### What Does Beach Water Monitoring Show?

In 2013, New York reported 362 beaches, of which 359 were monitored. Of all reported beach monitoring samples, 13% exceeded the Beach Action Values (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample and 190 *E. coli*bacteria cfu/100 ml for freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Wright Park East Beach in Chautauqua County (50%), Copiague Harbor Beach in Suffolk County (50%), Douglaston Homeowners Association Beach in Queens County (46%), Ontario Beach in Monroe County (40%), and Wright Park West Beach in Chautauqua County (38%).

### New York Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in New York over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standards for designated beach areas of 104 enterococcus bacteria cfu/100 ml marine or estuarine water and 235 *E. coli* bacteria cfu/100 ml freshwater that were in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standards of 104 enterococcus bacteria cfu/100 ml marine or estuarine water and 235 *E. coli* bacteria cfu/ml freshwater as well as on the EPA's new Beach Action Values of 60 enterococcus bacteria cfu/100 ml marine or estuarine water and 190 *E. coli* bacteria cfu/100 ml freshwater.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

### **New York 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Bronx	American Turners	60	22%	<u>view</u>
Bronx	Danish American Beach Club	60	7%	<u>view</u>
Bronx	Locust Point Yacht Club	60	7%	view
Bronx	Manhem Beach Club	57	11%	view
Bronx	Morris Yacht And Beach Club	69	7%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Bronx	Orchard Beach	57	0%	view
Bronx	Schuyler Hill Civic Association	57	0%	view
Bronx	Trinity Danish Young People'S Society	57	12%	view
Bronx	West Fordham Street Association	66	23%	view
Bronx	White Cross Fishing Club	63	22%	view
Cayuga	Fair Haven Beach State Park	54	6%	view
Chautauqua	Blue Water Beach	55	35%	view
Chautauqua	Main Street Beach	23	30%	view
Chautauqua	Point Gratiot Beach - East	42	33%	view
Chautauqua	Point Gratiot Beach - West	10	30%	view
Chautauqua	Sheridan Bay Park (Dormant In 2012)	23	13%	view
Chautauqua	Sunset Bay Beach Club	44	18%	view
Chautauqua	Town Of Hanover Beach	41	17%	view
Chautauqua	Wright Park - East	40	50%	view
Chautauqua	Wright Park - West	68	38%	view
Erie	Bennett Beach	97	25%	view
Erie	Evangola State Park Beach	13	15%	view
Erie	Evans Town Park	98	35%	view
Erie	Hamburg Bathing Beach	98	32%	view
Erie	Lake Erie Beach	98	27%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Erie	Pioneer Camp	68	22%	view
Erie	Point Breeze Camp (Dormant In 2012)	0	n/a	view
Erie	St. Vincent Depaul Beach	63	13%	view
Erie	Wendt Beach	98	31%	view
Erie	Woodlawn Beach - Woodlawn Beach State Park	103	37%	view
Jefferson	Bedford Creek Marina And Campground Beach	57	23%	view
Jefferson	Chaumont Village Beach	60	18%	view
Jefferson	Crescent Yacht Club Beach	24	13%	view
Jefferson	Henderson Harbor Yacht Club Beach	60	0%	view
Jefferson	Southwick Beach State Park	13	23%	view
Jefferson	Westcott Beach - Main	23	13%	view
Jefferson	Willows On The Lake Beach	24	4%	view
Kings	Coney Island Beach - Brighton 6Th - Ocean Parkway	23	9%	view
Kings	Coney Island Beach - Brighton 15Th - 6Th	20	5%	view
Kings	Coney Island Beach - Ocean Parkway - W. 8Th	21	5%	view
Kings	Coney Island Beach - W. 8Th St. To Pier	23	9%	view
Kings	Coney Island Beach - W. 16Th - 27Th	25	4%	view
Kings	Gerritsen/Kiddie Beach	60	15%	view
Kings	Kingsborough Community College	66	20%	view
Kings	Manhattan Beach	60	5%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kings	Seagate Beach - 38Th Street	60	10%	view
Kings	Seagate Beach - 42Nd Street	60	3%	view
Kings	{'beach_id': 'NY399671', 'name': 'Coney Island Beach - W. 28th - W. 37th'}	25	8%	view
Monroe	Durand Beach	84	21%	view
Monroe	Hamlin Beach - Area 4	91	27%	view
Monroe	Hamlin Beach State Park - Area 3	92	13%	view
Monroe	Ontario Beach	248	40%	view
Nassau	Atlantic Beach Club	11	0%	view
Nassau	Atlantic Beach Estates	19	0%	view
Nassau	Bar Beach	39	13%	view
Nassau	Beekman Beach	44	27%	view
Nassau	Biltmore Beach	44	18%	view
Nassau	Catalina Beach	11	0%	view
Nassau	Centre Island Bay Beach	55	7%	view
Nassau	Centre Island Sound Beach	57	11%	view
Nassau	Clearwater Cabana Beach	11	0%	view
Nassau	Crescent Beach	189	17%	view
Nassau	Dutchess Boulevard Beach	11	0%	view
Nassau	East Atlantic Beach	19	0%	view
Nassau	Eldorado Beach	11	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Nassau	Genessee Boulvard Beach	12	8%	view
Nassau	Harbor Isle Beach	44	9%	view
Nassau	Hempstead Harbor Beach Park	37	3%	view
Nassau	Hewlett Beach	47	11%	view
Nassau	Inc. Village Of Laurel Hollow	61	20%	view
Nassau	Inwood Beach Club	11	0%	view
Nassau	Island Park Beach	46	7%	view
Nassau	Jefferson Boulevard Beach	11	0%	view
Nassau	Jones Beach - Zach'S Bay	38	21%	view
Nassau	Jones Beach State Park-Central	51	8%	view
Nassau	Lattington Beach	55	11%	view
Nassau	Lawrence Beach	11	0%	view
Nassau	Lido Beach - Towers Condo	9	0%	view
Nassau	Lido Beach Park District	28	0%	view
Nassau	Lido Beach West	19	0%	view
Nassau	Long Beach City	58	0%	view
Nassau	Manor Haven Beach	35	6%	view
Nassau	Merrick Estates Civic Association	29	3%	view
Nassau	Montgomery Boulevard Beach	12	8%	view
Nassau	Morgan Memorial Beach	56	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Nassau	Nassau Beach Central Terrace	19	0%	view
Nassau	Nassau Beach East Terrace	13	0%	view
Nassau	Nassau Beach West Terrace	14	14%	view
Nassau	Ocean Club Beach	11	0%	view
Nassau	Pebble Cove Homeowners' Association	11	0%	view
Nassau	Phillip Healey	44	7%	view
Nassau	Piping Rock Beach	55	9%	view
Nassau	Plaza Beach	11	0%	view
Nassau	Plaza Beach Club	11	0%	view
Nassau	Plaza West	12	8%	view
Nassau	Point Lookout Park District	19	0%	view
Nassau	Prybil Beach	55	2%	view
Nassau	Putnam Beach	11	0%	view
Nassau	Ransom Beach	55	9%	view
Nassau	Sands At Atlantic	11	0%	view
Nassau	Seacliff Beach	38	5%	view
Nassau	Silver Point Beach Club	19	0%	view
Nassau	Soundside Beach	56	9%	view
Nassau	Stehli Beach	54	9%	view
Nassau	Sun And Surf Beach	11	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Nassau	Sunny Atlantic Beach	11	0%	view
Nassau	Tappan Beach	39	13%	view
Nassau	The Creek Beach	52	4%	view
Nassau	The Shores West	10	0%	view
Nassau	Theodore Roosevelt Beach	56	9%	view
Nassau	Tobay Beach - Bay	31	0%	view
Nassau	Tobay Beach - Marina	31	0%	view
Nassau	Tobay Beach - Ocean	32	9%	view
Nassau	Town House Apartments At Lido	13	8%	view
Nassau	Town Park - Area D Sands/Lido/Anchor	19	0%	view
Nassau	Town Park Camp Anchor	9	0%	view
Nassau	Town Park Point Lookout	47	0%	view
Nassau	Vernon Avenue Beach	19	0%	view
Nassau	Village Club At Sands Point	37	8%	view
Nassau	West Harbor Memorial Beach	55	4%	view
Nassau	Westbury Beach Club	11	0%	view
Niagara	Camp Kenan	19	5%	view
Niagara	Krull Park	29	24%	view
Niagara	Wilson - Tuscarora State Park Beach	45	18%	view
Oswego	Brennan'S Beach	12	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Oswego	Chedmardo	12	0%	view
Oswego	Dowie Dale	12	0%	view
Oswego	Mexico Point State Park (Town)	12	0%	view
Oswego	Rainbow Shores	12	0%	view
Oswego	Sandy Island Beach	15	7%	view
Queens	Breezy Point - 219Th Street	25	0%	view
Queens	Breezy Point - Reid Ave.	25	4%	view
Queens	Douglaston Homeowners Association	78	46%	view
Queens	Rockaway Beach - 9Th - 13 Th	10	0%	view
Queens	Rockaway Beach - 15Th - 22Nd	10	0%	view
Queens	Rockaway Beach - 23Rd - 59Th	10	0%	view
Queens	Rockaway Beach - 59Th - 80Th	10	0%	view
Queens	Rockaway Beach - 80Th - 95Th	10	0%	view
Queens	Rockaway Beach - 95Th - 116Th	10	0%	view
Queens	Rockaway Beach - 116Th St. To 126Th	10	0%	view
Queens	Rockaway Beach - 126Th - 149Th	9	0%	view
Queens	Whitestone Booster Civic Association	63	16%	view
Richmond	Cedar Grove	72	17%	view
Richmond	Midland Beach	57	2%	view
Richmond	South Beach	60	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Richmond	Wolfe'S Pond Park	63	19%	view
Suffolk	Alberts Landing Beach	3	0%	view
Suffolk	Amagansett Beach Association	3	0%	view
Suffolk	Amityville Beach	40	8%	view
Suffolk	Asharoken Beach	49	20%	view
Suffolk	Atlantic Avenue Beach	4	0%	view
Suffolk	Atlantique Beach - Bay	14	0%	view
Suffolk	Atlantique Beach - Ocean	3	0%	view
Suffolk	Bath And Tennis Hotel	4	0%	view
Suffolk	Bathing Corp Of Southampton	4	0%	view
Suffolk	Bay Hills Poa	45	13%	<u>view</u>
Suffolk	Bayberry Beach And Tennis Club	37	0%	<u>view</u>
Suffolk	Bayberry Cove Beach	30	23%	view
Suffolk	Baycrest Association Beach	44	7%	view
Suffolk	Bayport Beach	37	14%	view
Suffolk	Bayview Beach	20	10%	view
Suffolk	Beech Road Beach	35	17%	view
Suffolk	Belle Terre Beach	32	0%	view
Suffolk	Bellport Beach	3	0%	view
Suffolk	Benjamins Beach	50	36%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Bridgehampton Club	4	0%	view
Suffolk	Bridgehampton Tennis And Surf	4	0%	view
Suffolk	Brightwaters Beach	38	3%	view
Suffolk	Broadway Beach	35	17%	view
Suffolk	Callahan'S Beach	46	15%	view
Suffolk	Camp Baiting Hollow	16	19%	view
Suffolk	Camp Blue Bay	3	33%	view
Suffolk	Camp Dewolfe	18	6%	view
Suffolk	Camp Quinipet	9	0%	view
Suffolk	Cedar Beach	3	0%	view
Suffolk	Cedar Beach - East (Mt. Sinai)	34	6%	view
Suffolk	Cedar Beach - West	33	6%	view
Suffolk	Centerport Beach	45	4%	view
Suffolk	Centerport Yacht Club (Dormant In 2012)	42	24%	view
Suffolk	Clearwater Beach	3	33%	view
Suffolk	Club At Point O'Woods - Ocean	3	0%	view
Suffolk	Cold Spring Harbor Beach Club	45	16%	view
Suffolk	Coopers Neck Beach	4	0%	view
Suffolk	Copiague Harbor	58	50%	view
Suffolk	Corey Creek Beach	39	3%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Cornell Co-Operative Extension Marine Center	17	6%	view
Suffolk	Crab Meadow Beach	45	13%	view
Suffolk	Crescent Beach - Shelter Island	9	0%	view
Suffolk	Crescent Beach - Suffolk	44	9%	view
Suffolk	Culloden Shores	4	0%	view
Suffolk	Cupsogue County Park	4	0%	view
Suffolk	Davis Park Beach	3	0%	view
Suffolk	Devon Yacht Club, Inc.	3	0%	view
Suffolk	Ditch Plains Beach	4	0%	view
Suffolk	Dorothy P. Flint Camp	21	10%	view
Suffolk	Dune Deck Hotel	4	0%	view
Suffolk	Dunewood Beach	3	0%	view
Suffolk	Dunewood Poa Beach - Bay	14	7%	view
Suffolk	Eagle Dock Community Beach	41	12%	view
Suffolk	East Islip Beach	37	22%	view
Suffolk	East Lake Drive Beach	4	0%	view
Suffolk	Fair Harbor - Ocean	3	0%	view
Suffolk	Fair Harbor Community Association - Bay	14	0%	view
Suffolk	Fiddlers Green Association	44	7%	view
Suffolk	Fifth Street Park Beach	17	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Fisher'S Island Country Club	2	0%	view
Suffolk	Fleets Cove Beach	49	18%	view
Suffolk	Fleets Neck Beach	17	6%	view
Suffolk	Flying Point	4	0%	view
Suffolk	Foster Memorial	14	14%	view
Suffolk	Founder'S Landing	18	6%	view
Suffolk	Friendship Drive Beach	30	20%	view
Suffolk	Georgica Beach	3	0%	view
Suffolk	Gilgo Beach	3	0%	view
Suffolk	Gold Star Battalion Beach	44	7%	view
Suffolk	Goose Creek	17	6%	view
Suffolk	Grantland Beach	16	13%	view
Suffolk	Great Gun Beach	3	0%	view
Suffolk	Gurney'S Inn Resort And Spa	4	0%	view
Suffolk	Haven'S Beach	15	0%	view
Suffolk	Hay Harbor Club	2	0%	view
Suffolk	Head Of The Bay Club	46	13%	view
Suffolk	Heckscher - Overlook Beach	11	27%	view
Suffolk	Heckscher State Park - West Beach	15	27%	view
Suffolk	Hither Hills State Park Beach	17	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Hobart Beach - Bay	47	13%	view
Suffolk	Hobart Beach - Inlet	45	2%	view
Suffolk	Holiday Beach	15	0%	view
Suffolk	Huntington Beach Community Assoc.	45	11%	view
Suffolk	Indian Field Beach	28	11%	view
Suffolk	Indian Wells Beach	3	0%	view
Suffolk	Iron Pier Beach	17	0%	view
Suffolk	Island People'S Project	2	0%	view
Suffolk	Islip Beach	36	6%	view
Suffolk	Kenny'S Beach	16	0%	view
Suffolk	Kirk Park Beach	4	0%	view
Suffolk	Kismet Beach - Ocean	3	0%	view
Suffolk	Knollwood Beach	45	7%	view
Suffolk	Laronde Beach Club, Inc.	4	0%	view
Suffolk	Lashley Pavillion	4	0%	view
Suffolk	Little Bay Beach	20	30%	view
Suffolk	Lloyd Harbor Estates	45	11%	view
Suffolk	Lloyd Harbor Village Park	45	7%	view
Suffolk	Lloyd Neck Bath Club	45	4%	view
Suffolk	Long Beach	32	3%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Maidstone Beach	4	50%	view
Suffolk	Maidstone Club, Inc.	3	0%	view
Suffolk	Main Beach	3	0%	view
Suffolk	Mattituck Breakwater Beach	18	11%	view
Suffolk	Mccabe'S Beach	17	6%	view
Suffolk	Mecox Beach	4	0%	view
Suffolk	Meschutt Beach	13	0%	view
Suffolk	Miller Beach Surf Club	36	8%	view
Suffolk	Miller Place Park Beach	35	9%	view
Suffolk	Nassau Point Causeway	16	0%	view
Suffolk	Nathan Hale Beach Club	41	5%	view
Suffolk	New Suffolk Beach	17	0%	view
Suffolk	Nick'S Beach	4	0%	view
Suffolk	Nissequogue Point Beach	31	6%	view
Suffolk	Norman Klipp Park	17	0%	view
Suffolk	Ocean Beach - Bay	14	0%	view
Suffolk	Ocean Beach - Ocean	3	0%	view
Suffolk	Old Field Club	34	12%	view
Suffolk	Orient Beach State Park	12	8%	view
Suffolk	Overlook Beach	3	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Patchogue Village Pool And Beach Club	29	3%	view
Suffolk	Peconic Dunes Camp - Sound	18	6%	view
Suffolk	Perlman Music Camp	9	0%	view
Suffolk	Pikes Beach	4	0%	view
Suffolk	Point O'Woods Association - Bay	14	0%	view
Suffolk	Ponquogue Beach	3	0%	view
Suffolk	Port Jefferson Beach - East (Dormant In 2012)	15	0%	view
Suffolk	Port Jefferson Beach - West	33	0%	view
Suffolk	Prices Bend Beach	45	16%	view
Suffolk	Pridwin Hotel	9	0%	view
Suffolk	Quantuck Beach Club	4	25%	view
Suffolk	Quogue Beach Club	4	0%	view
Suffolk	Quogue Village Beach	4	0%	view
Suffolk	Reeves Beach	18	11%	view
Suffolk	Robert Moses State Park Beach - Suffolk County	64	2%	view
Suffolk	Rogers Pavillion	4	0%	view
Suffolk	Sagg Main Beach	4	0%	view
Suffolk	Saltaire Beach - Bay	14	7%	view
Suffolk	Saltaire Beach - Ocean	3	0%	view
Suffolk	Sandspit Beach (Dormant In 2012)	9	11%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Sayville Beach	35	0%	view
Suffolk	Sayville Marina Park	41	5%	view
Suffolk	Schubert Beach	32	16%	view
Suffolk	Scotts Beach	37	14%	view
Suffolk	Seaview - Ocean	3	0%	view
Suffolk	Seaview Beach Association - Bay	14	14%	view
Suffolk	Shelter Island Heights Beach Club	9	0%	view
Suffolk	Shirley Beach	39	21%	view
Suffolk	Shoreham Beach	33	3%	view
Suffolk	Shoreham Shore Club	33	9%	view
Suffolk	Shoreham Village Beach	32	0%	view
Suffolk	Short Beach	32	3%	view
Suffolk	Silver Sands Motel	18	6%	view
Suffolk	Smith Point County Park	3	0%	view
Suffolk	Sound Beach Poa - East (Dormant In 2012)	0	n/a	view
Suffolk	Sound Beach Poa - West	35	14%	view
Suffolk	Sound View Beach Association	32	13%	view
Suffolk	South Jamesport Beach	17	0%	view
Suffolk	Southampton Bath And Tennis	4	0%	view
Suffolk	Southampton Peconic Beach And Tennis Club	14	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	Southold Beach	19	11%	view
Suffolk	Steers Beach	49	20%	view
Suffolk	Stony Brook Beach	34	3%	<u>view</u>
Suffolk	Stony Brook Yacht Club	35	17%	view
Suffolk	Sunken Meadow State Park Beach	22	9%	view
Suffolk	Surf Club Of Quogue	4	0%	view
Suffolk	Swordfish Club	4	0%	view
Suffolk	Tanner Park	43	16%	view
Suffolk	Terraces On The Sound	30	3%	<u>view</u>
Suffolk	Tiana Beach	3	0%	<u>view</u>
Suffolk	Tiana Shores Association	14	0%	<u>view</u>
Suffolk	Tides Property Owners Association	38	16%	<u>view</u>
Suffolk	Two-Mile Hollow Beach	3	0%	view
Suffolk	Valley Grove Beach	46	13%	view
Suffolk	Venetian Shores	40	18%	<u>view</u>
Suffolk	Veteran'S Memorial Park	17	12%	<u>view</u>
Suffolk	W. Scott Cameron	4	0%	view
Suffolk	Wades Beach	9	0%	view
Suffolk	Wading River Beach	17	12%	view
Suffolk	Water Mill Beach Club	4	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Suffolk	West Islip Beach	38	8%	view
Suffolk	West Meadow Beach	34	12%	view
Suffolk	West Neck Beach	46	11%	view
Suffolk	West Oaks Recreation Club	31	3%	view
Suffolk	Westhampton House	4	0%	view
Suffolk	Wiborg Beach	3	0%	view
Suffolk	Wildwood State Park Beach	11	9%	view
Suffolk	Wincoma Beach	43	7%	view
Suffolk	Woodcliff Park Poa	17	12%	view
Suffolk	Woodhull Landing	35	14%	view
Suffolk	Yardarm Condominium South	4	0%	view
Wayne	Pultneyville Mariners Beach (Dormant In 2012)	0	n/a	view
Wayne	Sodus Point - Bayside	7	0%	view
Wayne	Sodus Point - Lake Side	6	0%	view
Westchester	American Yacht Club	19	0%	view
Westchester	Beach Point Club	17	0%	view
Westchester	Beckwithe Pointe	17	6%	view
Westchester	Coveleigh Beach Club	17	0%	view
Westchester	Davenport Club	18	11%	view
Westchester	Echo Bay Yacht Club	16	19%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Westchester	Glen Island Park	18	6%	view
Westchester	Greentree Club	17	0%	view
Westchester	Harbor Island Beach	17	0%	view
Westchester	Hudson Park	36	8%	view
Westchester	Larchmont Manor Park	18	11%	view
Westchester	Larchmont Shore Club	17	0%	view
Westchester	Mamaroneck Beach And Cabana Club	18	11%	view
Westchester	Manunsing Island Club	17	6%	view
Westchester	New Rochelle Rowing Club	16	13%	view
Westchester	Orienta Beach Club	17	0%	view
Westchester	Rye Playland Beach	15	0%	view
Westchester	Rye Town Park - Oakland Beach	17	0%	view
Westchester	Shenorock Shore Club	18	6%	view
Westchester	Shore Acres Club	19	16%	view
Westchester	Surf Club	18	11%	view
Westchester	Vip Club	19	11%	view
Westchester	Westchester Country Club Beach	18	6%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

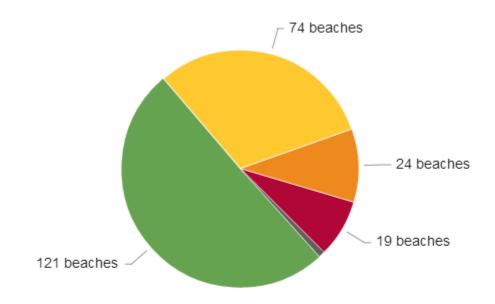
# **State Summary: North Carolina**

Ranked 5th in Beach Water Quality (out of 30 states) 4% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

## North Carolina 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 2 beaches (1%) were not monitored or had a limited number of samples (fewer than 12)
- 121 beaches (50%) did not have any samples exceed the national BAV safety threshold
- 74 beaches (31%) had >0-10% of their samples exceed the national BAV safety threshold
- 24 beaches (10%) had >10-20% of their samples exceed the national BAV safety threshold
- 19 beaches (8%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Most of North Carolina's 240 public coastal beaches, which stretch along 320 miles of Atlantic waters, are located on barrier islands. The North Carolina Department of Environment and Natural Resources (NCDENR) administers the state's BEACH Act grant. North Carolina's swim season runs from April 1 to October 31. Monitoring occurs year-round but is less frequent during the off-season, and alerts and advisories are not issued during the off-season. Monitoring is conducted in the off-season so that bacteriological problems can be found and corrected before the swim season begins. Beachgoers can learn about beach advisories in North Carolina on the NCDENR website.

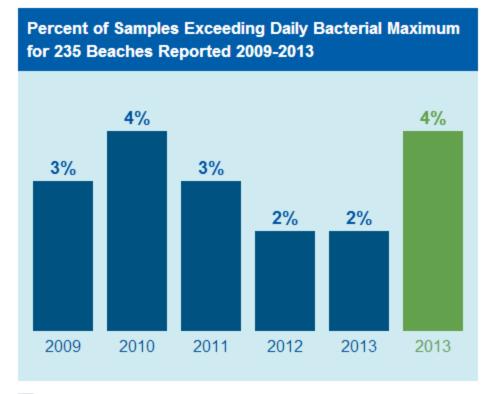
#### What Does Beach Water Monitoring Show?

In 2013, North Carolina reported 240 coastal beaches, all of which were monitored. Of all reported beach monitoring samples, 4% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in North Carolina in 2013 were Waterway Park in Brunswick County (40%); Swanquarter Bay, end of docks on SR 1136 in Hyde County (38%); Dutchman Creek Park on Fish Factory Road near Southport in Brunswick County (35%); Fort Fisher, beach adjacent to NCWRC ramp in New Hanover County (32%); and New River, Wilson Park in Onslow County (30%).

#### North Carolina Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in North Carolina over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **North Carolina 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Beaufort	E Shore of Blounts Bay- Pamlico River	19	5%	<u>view</u>
Beaufort	Pamlico River- City Park	19	16%	view
Beaufort	Pamlico River- Junction of Upper Goose Creek and Dinah's Landing	18	11%	<u>view</u>
Beaufort	Pamlico River- Maul's Point	19	5%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Beaufort	Pamlico River- Ragged Point SW im Area	34	9%	view
Beaufort	Pamlico River- Tripp Point Recreational Area	19	5%	view
Beaufort	Pamlico River- Washington- Railroad Trestle	19	16%	view
Beaufort	SE of Austin Pt- Pamlico River	19	5%	view
Beaufort	Sound Access at The Intersection of E. Main St. and Tooley St. Belhaven	34	6%	view
Beaufort	W of Hills Point- Pamlico River	19	5%	view
Bertie	Boat Ramp at the Intersection of SR 1500 and Vincent St.	19	11%	view
Brunswick	Beach Access Between Bald Head Harbor Entrance & Bald Head Cr.	26	0%	view
Brunswick	Beach Access Near Capt. Jack's On Holden Beach	33	0%	view
Brunswick	Cape Fear River, Beach Area Adjacent To Southport Municipal Pier	20	25%	view
Brunswick	Caswell Beach Public Access of f Caswell Beach Rd.	33	0%	view
Brunswick	Dutchman Creek Park On Fish Factory Road Near Southport	20	35%	view
Brunswick	East Beach Area- Beach Access #42	26	0%	view
Brunswick	Ferry Road Public Access	33	6%	view
Brunswick	Greensboro St. Emergency Vehicle Access/ Stormwater Outfall Pipe	33	6%	view
Brunswick	ICW, Marker #59 Near Holden Beach	20	15%	view
Brunswick	ICW, Soundside Access at E. end of Ocean Isle Beach.	19	0%	view
Brunswick	Intracoastal Waterway, Beach Area Adjacent To	20	15%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
	Howells Pt Wildlife Boat Ramp			
Brunswick	Intracoastal Waterway, Beach Area Between Marker #28 & Marker #29	19	21%	view
Brunswick	Intracoastal Waterway, Marker#67 Near Holden Beach	19	11%	view
Brunswick	Intracoastal Waterway, Shoreline Adjacent To Ocean Isle Wildlife Boat Ramp	19	5%	view
Brunswick	Intracoastal Waterway, Waterfront Park at End of NE 52nd St.	19	11%	view
Brunswick	Lighthouse Park, Caswell Beach Rd., Caswell Beach	33	6%	view
Brunswick	Middleton Public Access - Oak Island	33	0%	<u>view</u>
Brunswick	Oak Island Wildlife Ramp of f Fish Factory Rd.	19	11%	view
Brunswick	Ocean Pier at 30th Place West and Beach Dr.	33	3%	view
Brunswick	Ocean Pier at Causeway and First St.	33	6%	view
Brunswick	Ocean Pier at Main St. and Sunset Blvd.	33	0%	view
Brunswick	Ocean Pier at Ocean Blvd. and Durham St.	33	0%	view
Brunswick	Ocean Pier Between 14th and 15th Place East and Beach Dr.	33	0%	view
Brunswick	Public Access at 40th and Main St.	33	0%	view
Brunswick	Public Access at Dawson Street - Ocean Isle Beach	33	3%	view
Brunswick	Public Access at Dolphin Street Holden Beach	33	0%	view
Brunswick	Public Access at Driftwood Street - Ocean Isle Beach	34	6%	view
Brunswick	Public Access at First and Chadbourn St.	34	9%	view
Brunswick	Public Access at Ocean Dr. and Keziah St.	33	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Brunswick	Public Access Just West of Mile Marker #1	33	0%	view
Brunswick	Public Access, 46th St/Se and E. Beach Drive - Oak Island	33	0%	view
Brunswick	Public Access, 58th St/Se and E. Beach Drive - Oak Island	33	0%	view
Brunswick	Public Access, East End Holden Beach	33	3%	view
Brunswick	Public Access, East End Sunset Beach	33	0%	view
Brunswick	Public Access, West End of Oak Island Drive - Oak Island	19	26%	view
Brunswick	South Beach Area- Beach Access # 17	26	0%	view
Brunswick	SW Side, Holden Beach Bridge	19	11%	view
Brunswick	Waterway Park	20	40%	view
Brunswick	Wildlife Ramp East of Sunset Beach Bridge	19	26%	view
Camden	Canal Boat Ramp On Sr 1153	19	21%	view
Camden	Sound Access On Sr 1153	19	26%	view
Carteret	1/2 Mile W of Mile Marker 10, Oceanside	34	3%	view
Carteret	2 1/4 Miles North of Cape Pt Near Barden Inlet	99	0%	view
Carteret	100 Yds. NE Gallant's Channel Bridge By Shore	19	0%	view
Carteret	400 Yds Se of Bean Island of f Core Banks	19	11%	view
Carteret	Adams Creek of f Silver Dollar Rd	18	6%	view
Carteret	AO- Public Beach Access, Inlet Rd., West Side Junction of Coast Guard and Inlet Dr.	34	6%	view
Carteret	Beach Access at Ocean Blvd	35	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Carteret	Bogue Inlet Mouth of Coast Guard Channel	19	0%	view
Carteret	Bogue Sound- Archer Point	19	0%	view
Carteret	Bogue Sound- Boat Landing Tourist Center	19	0%	view
Carteret	Bogue Sound- Canal Leading To Moonlite Bay	19	0%	view
Carteret	Bogue Sound- E Side of Mouth of Gales Creek	19	0%	view
Carteret	Bogue Sound- Goose Creek, of f Campground	19	5%	view
Carteret	Bouge Sound- W Salter Path, ~200 Yds of f of Wam Squam Ln	19	0%	view
Carteret	Brown's Island Public Beach In Core Sound Near Harkers Island	19	0%	view
Carteret	Cape Lookout Coast Guard Dock	19	0%	view
Carteret	CCC- Aquatic Education Location	19	0%	view
Carteret	Cedar Is - Bch Area Se of Wildlife Ramp Adjacent To Ferry Landing	18	6%	view
Carteret	Core Sd Shell Point of f Harkers Island	19	0%	view
Carteret	Core Sound White Point	19	5%	view
Carteret	Deer Crk - Public Access End of Bogue Sound Dr	19	0%	view
Carteret	Fort Macon, Park Access	34	0%	view
Carteret	Harker's Island Bridge at SW imming Area	19	5%	view
Carteret	Headen Ln. Salter Path- Soundside ~200 Yds. of f Shore	19	0%	view
Carteret	ICW, Marker #44	19	5%	view
Carteret	ICW, Ski Beach, Channel To Bogue Inlet	19	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Carteret	Indian Beach - Public Beach Access at Mile Marker 12	34	0%	view
Carteret	Knob Island- N Side	19	0%	view
Carteret	Lennoxville Boat Ramp	19	5%	view
Carteret	Mile Marker 7 1/2, Oceanside	34	0%	view
Carteret	Mile Marker 15, Oceanside	34	0%	view
Carteret	Mile Post 4 1/2, Oceanside of Pelican Dr.	34	6%	view
Carteret	Mile Post 19 1/2, Oceanside	34	3%	view
Carteret	Morehead City - Drain Pipe at 16th Street	19	0%	view
Carteret	Mouth of Back Creek - Left Side By Beach	18	11%	view
Carteret	N End of Old Ferry Rd., Soundside	19	0%	view
Carteret	Newport River- Public Access Nw of Bridge	19	0%	view
Carteret	North River- at Hwy 70 Bridge	20	25%	view
Carteret	North Side Mouth of Town Creek In Beaufort	96	8%	view
Carteret	Ocean End of Henderson Blvd, AO	34	3%	view
Carteret	Ocean End of New Bern St., AO	34	3%	view
Carteret	Park Service Dock	99	0%	view
Carteret	Pine Knoll Shores - Just East of Mile Marker 8 1/2 - Hwy 58 East	34	0%	view
Carteret	Public Access Near Fawn Drive In Emerald Isle	34	0%	view
Carteret	Public Beach Access Adjacent To The Islander	34	3%	view
Carteret	Radio Island Public Beach Access	99	11%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Carteret	Shackelford Banks- By Restrooms	19	0%	view
Carteret	Shackelford Banks- Nun Buoy #2	19	0%	view
Carteret	Spoils Island of f Salty Shores	19	0%	view
Carteret	Taylor's Creek at Post of fice Dock	19	0%	view
Carteret	W Side of Mouth of South River	18	0%	view
Carteret	West End of Sugarloaf Island, Morehead City	19	5%	view
Carteret	Western Tip of Bird Shoals On Rachel Carson Reserve	19	0%	view
Chowan	Chowan River Wildlife Ramp, East Side of Bridge	19	11%	view
Craven	Hancock Creek Dock at Wildlife Ramp	19	21%	view
Craven	Mouth of Slocum Creek, North Side Beach	19	5%	view
Craven	Neuse River- 200 Yds. N of Mouth of North West Creek	19	5%	view
Craven	Neuse River- Flanner's Beach	19	0%	view
Craven	Neuse River- Great Neck Point	18	0%	view
Craven	Neuse River- Green Spring SW im Area	23	4%	view
Craven	Neuse River- Pine Cliff Recreation Area	19	5%	view
Craven	Neuse River- Union Point	19	5%	view
Currituck	100 Yrds of fshore In Sound Near Intersection of Hwy 12 and Albacore St. Corolla	19	5%	view
Currituck	AO- 2.8 Miles N of Corolla Ramp	34	0%	view
Currituck	Corolla Lighthouse Beach Access	34	0%	view
Currituck	Corolla Ramp, End of Paved Rd.	34	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Currituck	Corolla, Albacore St. Beach Access	34	0%	view
Currituck	Currituck S Beach Access at Pine Island	34	3%	view
Currituck	Park On Woodhouse Dr. Grandy, Nc	21	28%	view
Currituck	Sound Park of f Caratoke Hwy In Point Harbor	19	21%	view
Currituck	SW imming Area at End of Sr 1142	15	20%	view
Dare	1 1/2 Mi SW of Ro Plant	21	0%	view
Dare	1/4 Mi E of Ems Station	34	0%	view
Dare	2Mi SW of Frisco Vol Fire Dept	21	10%	view
Dare	3/4 Miles N. of Sound Access Across From Ramp #23	21	0%	view
Dare	100 Ft- North of Jennettes Pier	34	0%	view
Dare	100 Yrds Ene of Little Bridge, Causeway, Nags Head	19	11%	view
Dare	100 Yrds of fshore at Island Creek Ct Avon, Nc	21	0%	view
Dare	100 Yrds of fshore at North Holiday Rd Rodanthe	21	0%	view
Dare	100 Yrds of fshore at Sunset Strip Dr Frisco, Nc	21	0%	view
Dare	100 Yrds. of fshore of 7517 S. Va. Dare Trail, Nags Head	19	5%	view
Dare	500 Yds. of fshore, 100 Yrds. S of E. Side of Wright Memorial Bridge	19	0%	view
Dare	500 Yrds of f Sandyridge Rd Currituck Sd.	19	5%	view
Dare	500 Yrds of f Spy Glass Rd Currituck Sd.	19	5%	view
Dare	750 Yrds of f Ocean Bay Blvd Currituck Sd.	19	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Dare	800 Yrds of f Sr 1425	19	5%	view
Dare	Bath House at Ocean Bay Blvd	34	0%	view
Dare	Bath House On Sr 1206, Kitty Hawk	34	0%	view
Dare	Beach Access 1 1/2 Mile N of Kitty Hawk Pier	34	0%	view
Dare	Beach Access at 3Rd St	34	0%	view
Dare	Beach Access at Conch Street / Drain Pipe	34	6%	view
Dare	Beach Access at Sportsman Dr.	34	0%	view
Dare	Beach Access at Sprigtail Dr.	34	0%	view
Dare	Beach Access S of Refuge of fices	34	0%	view
Dare	Beach at Cape Hatteras Lighthouse- Buxton	34	0%	view
Dare	Canadian Hole	21	10%	view
Dare	Colingtpon Harbour SW imming Beach	102	9%	view
Dare	Drain Pipe at Curlew Street	34	0%	view
Dare	Drain Pipe at Lake Dr Beach Access	34	6%	view
Dare	Drain Pipe at Martin Street	34	0%	view
Dare	Drain Pipe at Mile Post 10.5	34	3%	view
Dare	Drain Pipe at Mile Post 12.5	34	6%	view
Dare	Drain Pipe at Mp 8 3/4	34	6%	view
Dare	Drain Pipe at Oregon St	34	0%	view
Dare	Drain Pipe at S Nags Head/Federal Park Border	34	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Dare	Federal Campground- Frisco	34	0%	view
Dare	Frisco Bath House	34	0%	view
Dare	Hillcrest Dr. Access	34	0%	view
Dare	Jockey's Ridge Soundside Access	102	0%	view
Dare	Kitty Hawk Bay Wildlife Ramp In Jet Ski Riding Area	19	5%	view
Dare	Nags Head Bath House	34	0%	view
Dare	New Inlet Sound Access	21	0%	view
Dare	Northernmost Beach Access	34	0%	view
Dare	Ocean Ramp #30	34	0%	view
Dare	Oregon Inlet Coastguard Station	19	0%	view
Dare	Oregon Inlet Federal Campground	34	0%	view
Dare	Ramp #23 and access	6	0%	view
Dare	Ramp #34 and access	6	0%	view
Dare	Ramp #38 and access	34	0%	view
Dare	Ramp #55 and access	34	0%	view
Dare	Roanoke Sound, Dunube St D/P South Nags Head	19	11%	view
Dare	S-Turns' just north of Rodanthe	34	0%	view
Dare	Shallowbag Bay - SW im Platform Manteo Bridge	19	0%	view
Dare	Sound Access Across From Ramp #23	21	0%	view
Dare	Southeast Side of Mann's Harbor Bridge	19	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Dare	The SW imming Hole	19	0%	view
Dare	Wanchese Seafood Industrial Park	19	5%	view
Dare	Washington Baum Bridge Boat Ramp	19	0%	view
Hyde	AO- 5 Miles SW of Ocracoke State Ferry	32	0%	view
Hyde	Beach Access By Airport Ramp	32	0%	view
Hyde	Federal Campground- Ocracoke	32	0%	view
Hyde	Ocracoke- 1St Public Access SW of State Ferry	32	0%	view
Hyde	SW anquarter Bay- End of Docks On Sr 1136	21	38%	view
New Hanover	Area Behind The Northern End of Masonboro Island	19	0%	view
New Hanover	Banks Channel - Waynick Blvd Between Snyder and Seashore Streets	102	3%	view
New Hanover	Banks Channel - Waynick Blvd Between Taylor and Bellamy Streets	102	4%	view
New Hanover	Banks Channel - Waynick Blvd. Approx. 150 Yds N of Iula St.	102	5%	view
New Hanover	Banks Channel, SW imming Beach South of Coast Guard Station	34	6%	view
New Hanover	Beach Access at Periwinkle Lane In Carolina Beach	33	0%	view
New Hanover	Cama Access, Corner of Waynick & Sunset Blvd Wrightsville Beach	102	3%	view
New Hanover	Cape Fear River, W. End of Snows Cut	20	15%	view
New	Carolina Beach Inlet- N. End of Carolina Beach	19	21%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Hanover				
New Hanover	Fort Fisher Beach State Park Access of f Loggerhead Rd.	34	3%	view
New Hanover	Fort Fisher- Beach Adjacent To Nowro Ramp	19	32%	view
New Hanover	N. End of Wrightsville Beach at Public Access #2 of f Lumina Dr.	33	0%	view
New Hanover	Ocean Pier at K. Ave.	34	3%	view
New Hanover	Ocean Pier at Nathan St. and S. Lumina Dr.	33	0%	view
New Hanover	Ocean Pier at Salisbury Street in Wrightsville Beach	33	0%	view
New Hanover	Public Access at The Hanby Beach Storm Drain	33	3%	view
New Hanover	Public Bch On Masonboro Sd - End of Florida Ave In Carolina Beach	19	26%	view
New Hanover	Public Beach Access at Hemlet Ave.	33	3%	view
New Hanover	Stone Street Public Access - Ocean Side Wrightsville Beach	33	0%	view
New Hanover	Trails End Public Access On Masonboro Loop	19	26%	view
New Hanover	Vehicle Access, 600 Yds. N. Carolina Beach Pier at Dune Mark	33	0%	view
Onslow	AO- ~1 Mile S of Bogue Inlet	35	9%	view
Onslow	AO- ~2Miles S of Brown's Inlet	34	3%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Onslow	Bogue Sd 1/2 Mile S of Bear Inlet, Soundside	19	11%	view
Onslow	N. Topsail Bridge - Wildlife Ramp	20	10%	view
Onslow	N. Topsail, Emergency Vehicle Access	34	0%	view
Onslow	New River at Mouth of Southwest Creek	19	16%	view
Onslow	New River, Wilson Park	20	30%	view
Onslow	Onslow Beach - Public Access ~1/4 Mile South of Onslow Beach Bridge	19	0%	view
Onslow	Public Access at Mile Marker #19 of f New River Inlet Rd On North Topsail	34	0%	view
Onslow	Public Access, Mouth of NE Creek - New River	19	11%	view
Onslow	Regional Public Access at Mile Marker 12 On New River Inlet Rd.	34	0%	view
Onslow	Regional Public Access at Mile Marker 17 On New River Inlet Rd.	35	6%	view
Onslow	Sanders Creek at Bear Creek	19	0%	view
Onslow	Sound Side Bear Island	19	5%	view
Onslow	Stump Sound Just East of Dixon Point	20	15%	view
Onslow	Wards Shore Public Access of f South Waters St SW ansboro	19	5%	view
Pamlico	Dawson Crk., 100 Yds N of Bridge	19	0%	view
Pamlico	Just E of The Mouth of Beard Ck	19	0%	view
Pamlico	Just E of Wilkinson Pt	19	0%	view
Pamlico	Kennals Beach	19	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pamlico	Near Mouth of Gatlin Crk	19	0%	view
Pamlico	Neuse River- End of State Rd 1310	19	0%	<u>view</u>
Pamlico	Public Beach S Side of Dawson Crk Bridge	19	0%	view
Pamlico	Public Beach SW Mouth of Whittaker Creek N of Marker #3	19	5%	view
Pamlico	Vandemere Creek	19	0%	view
Pasquotank	Pasquotank River- E.C. Coast Guard Station Beach	19	21%	view
Pender	ICW, Hwy. 210 Bridge at Surf City	20	10%	view
Pender	Ocean Pier at Ocean Blvd and Crews Avenue in Topsail Beach	34	0%	view
Pender	Public Access #O-3 at Mile Marker 3	34	0%	view
Pender	Public Access #S-1 at End of Shoreline Dr. (Soundside Station)	34	6%	<u>view</u>
Pender	Public Access at Broadway St. & N. Shore Dr.	34	0%	view
Pender	Public Access at S. Shore Dr. and Kinston Ave.	36	11%	view
Perquimans	Albemarle Sd. at End of Holiday Lane Rd.	19	11%	view
Tyrell	Albemarle Sd Bull Bay SW imming Area 4H Camp	19	5%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not

have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

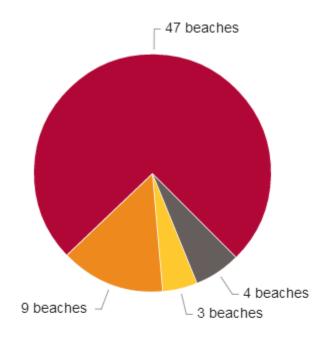
# **State Summary: Ohio**

Ranked 30th in Beach Water Quality (out of 30 states) 35% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

#### Ohio 2013 Beach Water Quality Summary



- 4 beaches (6%) were not monitored or had a limited number of samples (fewer than 12)
- 0 beaches (0%) did not have any samples exceed the national BAV safety threshold
- 3 beaches (5%) had >0-10% of their samples exceed the national BAV safety threshold
- 9 beaches (14%) had >10-20% of their samples exceed the national BAV safety threshold
- 47 beaches (75%) had more than 20% of their samples exceed the national BAV safety threshold

Ohio monitors public and semipublic beaches along nearly 53 miles of Lake Erie shoreline. The state's beachwater quality monitoring program is administered by the Ohio Department of Health (ODH). Beachgoers can learn about beach advisories and closings on the <a href="Ohio BeachGuard">Ohio BeachGuard</a> website.

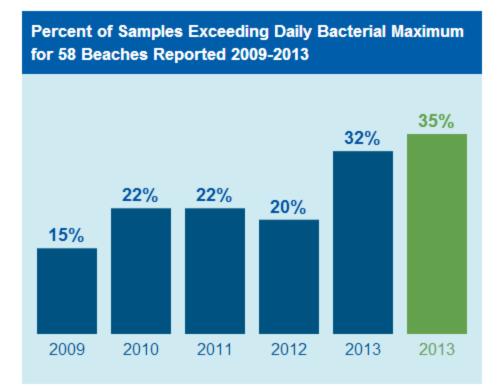
#### What Does Beach Water Monitoring Show?

In 2013, Ohio reported 63 coastal beaches, 60 of which were monitored. Of all reported beach monitoring samples, 35% exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Lakeview Beach in Lorain County (76%), Bay View West in Erie County (70%), Whites Landing in Erie County (62%), Edgecliff Beach in Cuyahoga County (62%), Clarkwood Beach in Cuyahoga County (61%), and Sims Beach in Cuyahoga County (61%).

# Ohio Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Ohio over the past five years. Note that only samples from a common set of 27 beaches monitored each year from 2009-2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* bacteria cfu/100 ml water, as well as on the EPA's new Beach Action Value of 190 *E. coli*cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

### **Ohio 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Ashtabula	Conneaut Township Park	42	26%	view
Ashtabula	Geneva State Park	41	28%	view
Ashtabula	Lakeshore Park	42	60%	view
Ashtabula	Walnut Beach	43	19%	view
Cuyahoga	Arcadia Beach	15	40%	view
Cuyahoga	Bay Park Beach	16	25%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Cuyahoga	Clarkwood Beach	18	61%	view
Cuyahoga	Clifton Beach	27	26%	view
Cuyahoga	Columbia Park Beach	16	25%	view
Cuyahoga	Edgecliff Beach	13	62%	view
Cuyahoga	Edgewater State Park	104	19%	view
Cuyahoga	Euclid State Park	102	51%	view
Cuyahoga	Huntington Beach	59	32%	view
Cuyahoga	Moss Point Beach	17	53%	view
Cuyahoga	Noble Beach	16	50%	view
Cuyahoga	Parklawn Beach	16	19%	view
Cuyahoga	Royal Acres Beach	16	56%	view
Cuyahoga	Shoreby Club Beach	14	21%	view
Cuyahoga	Shorehaven Beach	0	n/a	-
Cuyahoga	Sims Beach	18	61%	view
Cuyahoga	Utopia Beach	14	36%	view
Cuyahoga	Villa Angela State Park	104	56%	view
Cuyahoga	Wagar Beach	17	24%	view
Erie	Battery Park	53	4%	view
Erie	Bay View East	53	40%	view
Erie	Bay View West	53	70%	view
Erie	Cedar Point Chausee	53	19%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Erie	Chappel Creek	53	42%	view
Erie	Cranberry Creek	53	28%	view
Erie	Crystal Rock	53	13%	view
Erie	Darby Creek	53	47%	view
Erie	Edson Creek	53	53%	view
Erie	Fichtel Creek	53	30%	view
Erie	Hoffman Ditch	53	28%	view
Erie	Huron River East	53	26%	view
Erie	Huron River West	53	40%	view
Erie	Kiwanis	53	34%	view
Erie	Lion's Park	53	40%	view
Erie	Old Womans Creek East	53	21%	view
Erie	Old Womans Creek West	52	28%	view
Erie	Pickerel Creek	53	17%	view
Erie	Sawmill Creek	52	33%	view
Erie	Sherod Creek	52	42%	view
Erie	Showse Park	53	30%	view
Erie	Sugar Creek	53	47%	view
Erie	Vermilion River East	53	40%	view
Erie	Vermilion River West	53	43%	<u>view</u>
Erie	Whites Landing	53	62%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Lake	Fairport Harbor	96	31%	view
Lake	Headlands State Park (E)	94	30%	view
Lake	Headlands State Park (W)	94	21%	<u>view</u>
Lorain	Century Beach	54	17%	view
Lorain	Lakeview Beach	92	76%	view
Lorain	Miller Beach	0	n/a	-
Lorain	Veteran's Beach	0	n/a	-
Lucas	Maumee Bay State Park (ERIE)	49	41%	view
Ottawa	Camp Perry	13	15%	view
Ottawa	Catawba Island State Park	11	0%	view
Ottawa	East Harbor State Park	35	3%	view
Ottawa	Kelleys Island State Park	13	31%	view
Ottawa	Lakeside Beach	35	3%	view
Ottawa	Port Clinton (Deep\Lakeview)	34	35%	view
Ottawa	South Bass Island State Park	14	14%	view

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national

single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

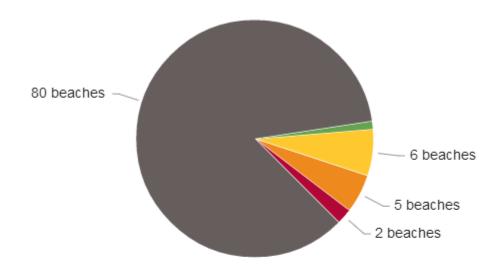
# **State Summary: Oregon**

Ranked 18th in Beach Water Quality (out of 30 states)
12% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Oregon 2013 Beach Water Quality Summary



- 80 beaches (85%) were not monitored or had a limited number of samples (fewer than 12)
- 1 beach (1%) did not have any samples exceed the national BAV safety threshold
- 6 beaches (6%) had >0-10% of their samples exceed the national BAV safety threshold
- 5 beaches (5%) had >10-20% of their samples exceed the national BAV safety threshold
- 2 beaches (2%) had more than 20% of their samples exceed the national BAV safety threshold

Oregon has beaches lining 197 miles of Pacific Ocean coastline. The state's beach water quality monitoring program is administered by the Oregon Health Authority (OHA), which monitors beaches with historically higher bacteria levels and recreational use during the peak season, from Memorial Day to Labor Day. Oregon beachgoers can learn about beach advisories on the OHA website.

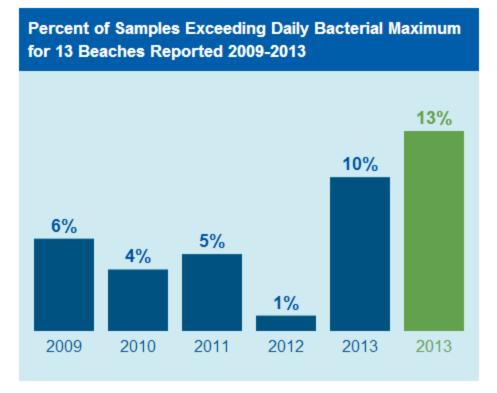
#### What Does Beach Water Monitoring Show?

In 2013, Oregon reported 94 coastal beaches, 16 of which were monitored. Of all reported beach monitoring samples, 12% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Sunset Bay State Park Beach in Coos County (35%), Harris Beach State Park in Curry County (25%), Short Sand Beach in Tillamook County (18%), Hubbard Creek Beach in Curry County (16%), and Cannon Beach in Clatsop County (12%).

#### Oregon Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Oregon over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Oregon 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Clatsop	Arcadia State Park Beach	0	n/a	<u>view</u>
Clatsop	Cannon Beach	26	12%	view
Clatsop	Del Rey Beach State Recreation Site	0	n/a	view
Clatsop	Fort Stevens State Park Beach	0	n/a	view
Clatsop	Hug Point State Park Beach	0	n/a	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Clatsop	Indian Beach At Ecola State Park	0	n/a	view
Clatsop	Seaside Beach	39	5%	view
Clatsop	Sunset Beach State Rec Site	0	n/a	view
Clatsop	Tolovana State Park Beach	39	3%	view
Coos	Bandon South Jetty County Park	0	n/a	view
Coos	Bandon State Natural Area	0	n/a	view
Coos	Bastendorf Beach	24	8%	view
Coos	Cape Arago State Park - North Cove	0	n/a	view
Coos	Cape Arago State Park - South Cove	0	n/a	view
Coos	Seven Devils State Recreation Site	0	n/a	view
Coos	Sunset Bay State Park Beach	23	35%	view
Coos	Whiskey Run Beach	0	n/a	view
Curry	Arizona Beach State Recreation Site	0	n/a	view
Curry	Battle Rock State Park Beach	0	n/a	view
Curry	Buena Vista Ocean Wayside State Park	0	n/a	view
Curry	Bullards Beach	0	n/a	view
Curry	Cape Blanco State Park-Sixes River Beach	0	n/a	view
Curry	Crissey Field State Recreation Site	0	n/a	view
Curry	Face Rock State Scenic Viewpoint	0	n/a	view
Curry	Gold Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Curry	Harris Beach State Park	32	25%	view
Curry	Hubbard Creek Beach	19	16%	view
Curry	Humbug Mountain State Park	0	n/a	view
Curry	Hunter Creek Beach	0	n/a	view
Curry	Mcvay Rock State Recreation Site	0	n/a	view
Curry	Meyers Beach	0	n/a	view
Curry	Mill Beach	19	11%	view
Curry	Mill Creek Beach	0	n/a	-
Curry	Nesika Beach	0	n/a	view
Curry	Ophir Beach	0	n/a	view
Curry	Otter Point State Recreation Site	0	n/a	view
Curry	Paradise Point State Recreation Site	0	n/a	view
Curry	Pistol River State Scenic Viewpoint	0	n/a	view
Curry	Port Point Beach	0	n/a	view
Curry	Samuel H. Boardman State Scenic Corridor - China Beach	0	n/a	view
Curry	Samuel H. Boardman State Scenic Corridor - Lone Ranch Beach	0	n/a	view
Curry	Samuel H. Boardman State Scenic Corridor - Whaleshead Beach	0	n/a	view
Curry	Sporthaven Beach	0	n/a	view
Douglas	Umpqua Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Lane	Baker Beach	0	n/a	view
Lane	Carl G. Washburne Memorial State Park	0	n/a	view
Lane	Devils Elbow State Park	0	n/a	view
Lane	Florence North Jetty Beach	0	n/a	view
Lane	Heceta Beach	19	5%	view
Lane	Muriel O. Ponsler Memorial State Scenic Viewpoint	0	n/a	view
Lane	Neptune Beach	0	n/a	view
Lane	Oregon Dunes National Rec Area - Horsfall Beach	0	n/a	view
Lane	Oregon Dunes National Rec Area - South Jetty	0	n/a	view
Lane	Oregon Dunes National Rec Area - Umpqua Dunes	0	n/a	view
Lane	Rock Creek Campground - Roosevelt Beach	0	n/a	view
Lane	Stonefield Beach State Recreation Site	0	n/a	view
Lincoln	Agate Beach	7	0%	view
Lincoln	Alsea Bay Beach	0	n/a	-
Lincoln	Alsea River Recreation Area Beach	19	5%	view
Lincoln	Beachside State Park Beach	0	n/a	view
Lincoln	Beverly Beach	0	n/a	view
Lincoln	D River Beach	21	0%	view
Lincoln	Devils Punch Bowl State Natural Area	0	n/a	view
Lincoln	Driftwood Beach State Recreation Site	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Lincoln	Fogarty Creek Beach	0	n/a	view
Lincoln	Gleneden Beach	0	n/a	view
Lincoln	Governor Patterson State Park Beach	0	n/a	view
Lincoln	Lost Creek State Recreation Site	0	n/a	view
Lincoln	Moolack Beach	0	n/a	view
Lincoln	Nelscott Beach	0	n/a	view
Lincoln	Nye Beach	27	11%	view
Lincoln	Ona Beach	0	n/a	view
Lincoln	Otter Rock Beach	0	n/a	view
Lincoln	Roads End Beach	0	n/a	view
Lincoln	Seal Rock State Recreation Site	0	n/a	view
Lincoln	Siletz Bay Beach	0	n/a	view
Lincoln	Smelt Sands State Recreation Site	0	n/a	view
Lincoln	South Beach	0	n/a	view
Lincoln	Tillicum Beach	0	n/a	view
Lincoln	Yachats Wayside Beach	0	n/a	view
Lincoln	Yaquina Bay State Park Beach	0	n/a	view
Tillamook	Barview County Park Beach	0	n/a	view
Tillamook	Bob Straub State Park Beach	0	n/a	view
Tillamook	Cape Kiwanda State Park Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Tillamook	Cape Lookout State Park Beach	0	n/a	view
Tillamook	Cape Mears Beach	0	n/a	view
Tillamook	Manhattan Beach State Park	0	n/a	view
Tillamook	Manzanita Beach	0	n/a	view
Tillamook	Nehalem Bay State Park Beach	0	n/a	view
Tillamook	Neskowin Beach	0	n/a	view
Tillamook	Oceanside Beach State Wayside	0	n/a	view
Tillamook	Rockaway Beach	14	7%	view
Tillamook	Short Sand Beach	56	18%	view
Tillamook	Twin Rocks Beach	7	14%	<u>view</u>

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

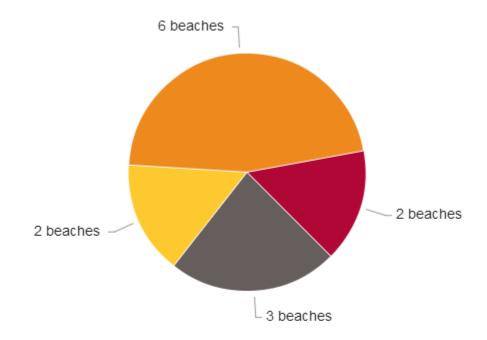
# **State Summary: Pennsylvania**

Ranked 22nd in Beach Water Quality (out of 30 states)
14% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

## Pennsylvania 2013 Beach Water Quality Summary



- 3 beaches (23%) were not monitored or had a limited number of samples (fewer than 12)
- 0 beaches (0%) did not have any samples exceed the national BAV safety threshold
- 2 beaches (15%) had >0-10% of their samples exceed the national BAV safety threshold
- 6 beaches (46%) had >10-20% of their samples exceed the national BAV safety threshold
- 2 beaches (15%) had more than 20% of their samples exceed the national BAV safety threshold

Pennsylvania has 40 miles of Lake Erie coastline, all within Erie County. Under Pennsylvania law, public swimming is allowed only at beaches operated by an individual or organization that has a valid permit from the Pennsylvania Department of Health. There are eight miles of permitted public bathing beaches, including nine beaches at Presque Isle State Park; one, Freeport Beach, in North East Township; and one at Camp Fitch in Springfield Township. The coastal beach monitoring program is administered by the Erie County Department of Health (ECDH). Beachgoers can learn about beach advisories on the ECDH website.

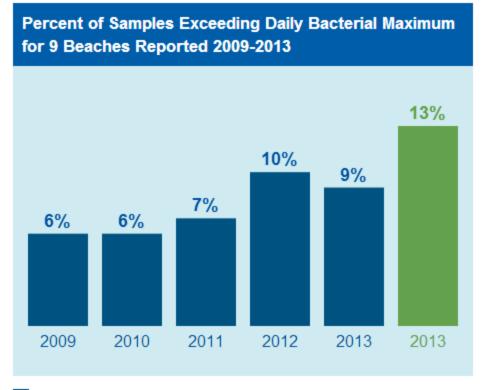
#### What Does Beach Water Monitoring Show?

In 2013, Pennsylvania reported 13 coastal beaches, 10 of which were monitored. Of all reported beach monitoring samples, 14% exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Freeport Beach (34%), Beach 11 (22%), Beach 8 (Pettinato Beach) (16%), Beach 1 East (15%), and Mill Road Beaches (14%), all in Erie County.

### Pennsylvania Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Pennsylvania over the past five years. Note that only samples from a common set of 27 beaches monitored each year from 2009–2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* bacteria cfu/100 ml water, as well as on the EPA's new Beach Action Value of 190 *E. coli* cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

### **Pennsylvania 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Erie	Barracks Beach	105	13%	view
Erie	Beach 1 East	117	15%	view
Erie	Beach 1 West	0	n/a	-
Erie	Beach 1 West Extension	0	n/a	-
Erie	Beach 10 (Budny Beach)	90	3%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	<b>Total Samples</b>	% of samples exceeding BAV	View
Erie	Beach 11	117	22%	view
Erie	Beach 2	0	n/a	view
Erie	Beach 6	111	13%	<u>view</u>
Erie	Beach 7 (Water Works Beach)	128	14%	view
Erie	Beach 8 (Pettinato Beach)	127	16%	<u>view</u>
Erie	Beach 9 (Pine Tree Beach)	89	3%	<u>view</u>
Erie	Freeport Beach	47	34%	view
Erie	Mill Road Beaches	111	14%	view

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

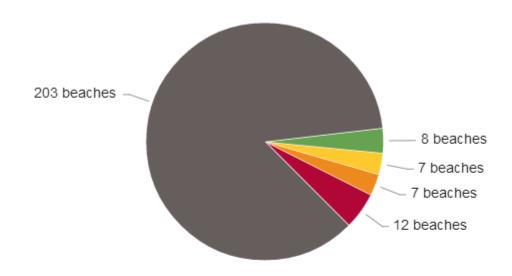
# State Summary: Rhode Island

Ranked 25th in Beach Water Quality (out of 30 states)
16% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Rhode Island 2013 Beach Water Quality Summary



- 203 beaches (86%) were not monitored or had a limited number of samples (fewer than 12)
- 8 beaches (3%) did not have any samples exceed the national BAV safety threshold
- 7 beaches (3%) had >0-10% of their samples exceed the national BAV safety threshold
- 7 beaches (3%) had >10-20% of their samples exceed the national BAV safety threshold
- 12 beaches (5%) had more than 20% of their samples exceed the national BAV safety threshold

Rhode Island has more than 200 beach access points along about 400 miles of Atlantic Ocean and Narragansett Bay waters. The Rhode Island Department of Health is responsible for beach water monitoring and water quality notifications. The regular monitoring season runs from Memorial Day through Labor Day. Beachgoers can learn about beach advisories and closures on the <a href="Rhode Island">Rhode Island</a> Department of Health's website.

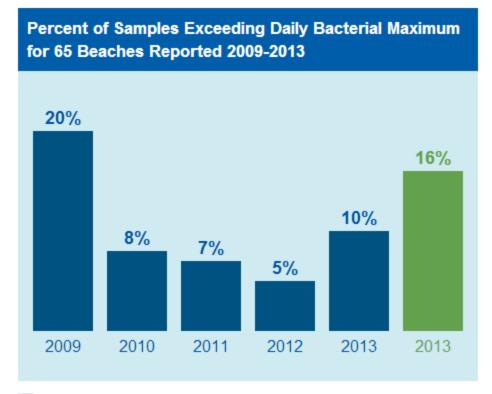
#### What Does Beach Water Monitoring Show?

In 2013, Rhode Island reported 237 coastal beaches, 69 of which were monitored. Of all reported beach monitoring samples, 16% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Oakland Beach in Kent County (41%), Fogland Beach in Newport County (37%), Conimicut Point Beach in Kent County (35%), Hazard's Beach in Newport County (33%), and Scarborough State Beach South in Washington County (28%).

# Rhode Island Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Rhode Island over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Rhode Island 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Bristol	Annawamscutt Beach	0	n/a	<u>view</u>
Bristol	Baia Beach	0	n/a	view
Bristol	Barrington Beach	98	15%	view
Bristol	Barrington Unnamed #1	0	n/a	view
Bristol	Barrington Unnamed #2	0	n/a	<u>view</u>

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Bristol	Barrington Unnamed #3	0	n/a	-
Bristol	Barrington Unnamed #4	0	n/a	view
Bristol	Bristol Town Beach	66	5%	view
Bristol	Bristol Unnamed #1	0	n/a	view
Bristol	Bristol Unnamed #2	0	n/a	view
Bristol	Camp St. Dorothy	5	20%	view
Bristol	Hopeworth Beach	0	n/a	view
Bristol	Juniper Beach	0	n/a	view
Bristol	Latham Park	0	n/a	view
Bristol	Rumstick Point	0	n/a	view
Bristol	Touisset Beach	0	n/a	view
Bristol	Warren Town Beach	33	15%	view
Bristol	Warren Unnamed #1	0	n/a	view
Bristol	Warren Unnamed #2	0	n/a	view
Kent	Buttonwoods Beach	0	n/a	view
Kent	Cedar Tree Point	0	n/a	view
Kent	Chepiwanoxet	0	n/a	view
Kent	City Park Beach	35	20%	view
Kent	Cole Farm Beach	0	n/a	view
Kent	Conimicut Point Beach	66	35%	view
Kent	Gaspee Point	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kent	Goddard Memorial State Park	129	26%	view
Kent	Longmeadow	0	n/a	view
Kent	Mill Cove Beach	0	n/a	view
Kent	Oakland Beach	96	41%	view
Kent	Potowomut	0	n/a	view
Kent	Rocky Point	0	n/a	view
Kent	Warwick Unnamed #1	0	n/a	view
Kent	Warwick Unnamed #2	0	n/a	view
Newport	Atlantic Beach Club	31	23%	view
Newport	Briggs Beach	10	0%	view
Newport	Collins Beach	0	n/a	view
Newport	Easton'S Beach	98	22%	view
Newport	Easton'S Point	0	n/a	view
Newport	Elm Street Pier	0	n/a	view
Newport	Fogland Beach	27	37%	view
Newport	Fort Adams State Park	39	23%	view
Newport	Fort Getty	0	n/a	view
Newport	Fort Weatherill	0	n/a	view
Newport	Gooseberry Beach	10	0%	view
Newport	Goosewing Beach	10	0%	view
Newport	Grinells Beach	18	11%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Newport	Hazard'S Beach	12	33%	view
Newport	Island Park	0	n/a	view
Newport	Jamestown Unnamed #1	0	n/a	view
Newport	Jamestown Unnamed #2	0	n/a	view
Newport	Jamestown Unnamed #3	0	n/a	view
Newport	Jamestown Unnamed #4	0	n/a	view
Newport	King Park Main Beach	44	5%	view
Newport	Kings Beach	0	n/a	view
Newport	Little Compton Unnamed #1	0	n/a	view
Newport	Little Compton Unnamed #2	0	n/a	-
Newport	Little Compton Unnamed #3	0	n/a	-
Newport	Little Compton Unnamed #4	0	n/a	view
Newport	Little Compton Unnamed #5	0	n/a	view
Newport	Little Compton Unnamed #6	0	n/a	view
Newport	Little Compton Unnamed #7	0	n/a	view
Newport	Little Compton Unnamed #8	0	n/a	view
Newport	Little Compton Unnamed #9	0	n/a	view
Newport	Little Compton Unnamed #10	0	n/a	view
Newport	Little Compton Unnamed #11	0	n/a	view
Newport	Mackerel Cove Beach	15	0%	view
Newport	Marine Avenue Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Newport	Mccorrie Point	0	n/a	view
Newport	Middletown Unnamed #1	0	n/a	-
Newport	Middletown Unnamed #2	0	n/a	view
Newport	Newport Unnamed #1	0	n/a	view
Newport	Newport Unnamed #2	0	n/a	view
Newport	Ochre Point (Ruggles)	0	n/a	view
Newport	Patience Island Unnamed #1	0	n/a	view
Newport	Peabodys Beach	28	4%	view
Newport	Portsmouth Unnamed #1	0	n/a	view
Newport	Portsmouth Unnamed #2	0	n/a	view
Newport	Portsmouth Unnamed #3	0	n/a	view
Newport	Portsmouth Unnamed #4	0	n/a	view
Newport	Portsmouth Unnamed #5	0	n/a	view
Newport	Portsmouth Unnamed #6	0	n/a	view
Newport	Portsmouth Unnamed #7	0	n/a	-
Newport	Portsmouth Unnamed #8	0	n/a	view
Newport	Portsmouth Unnamed #9	0	n/a	view
Newport	Portsmouth Unnamed #10	0	n/a	view
Newport	Portsmouth Unnamed #11	0	n/a	view
Newport	Portsmouth Unnamed #12	0	n/a	view
Newport	Portsmouth Unnamed #13	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Newport	Portsmouth Unnamed #14	0	n/a	view
Newport	Prudence Island Unnamed #1	0	n/a	view
Newport	Prudence Island Unnamed #2	0	n/a	view
Newport	Prudence Island Unnamed #3	0	n/a	view
Newport	Prudence Island Unnamed #4	0	n/a	view
Newport	Prudence Island Unnamed #5	0	n/a	<u>view</u>
Newport	Prudence Island Unnamed #6	0	n/a	view
Newport	Prudence Island Unnamed #7	0	n/a	view
Newport	Prudence Island Unnamed #8	0	n/a	view
Newport	Prudence Island Unnamed #9	0	n/a	view
Newport	Prudence Island Unnamed #10	0	n/a	view
Newport	Prudence Island Unnamed #11	0	n/a	view
Newport	Rocky Beach	0	n/a	-
Newport	Sachuest Beach	30	13%	view
Newport	Sandy Point Beach	18	22%	view
Newport	Sapowet Beach	0	n/a	view
Newport	Seaside Beach	0	n/a	view
Newport	South Shore Beach	10	0%	view
Newport	Spouting Rock Beach Association	15	13%	view
Newport	Teddys Beach	0	n/a	view
Newport	Third Beach	62	5%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Newport	Tiverton Unnamed #1	0	n/a	view
Newport	Tiverton Unnamed #2	0	n/a	view
Newport	Tiverton Unnamed #3	0	n/a	view
Newport	Tiverton Unnamed #4	0	n/a	view
Newport	Tiverton Unnamed #5	0	n/a	view
Newport	Tiverton Unnamed #6	0	n/a	view
Newport	Tiverton Unnamed #7	0	n/a	view
Newport	Tiverton Unnamed #8	0	n/a	view
Newport	Tiverton Unnamed #9	0	n/a	view
Newport	Tiverton Unnamed #10	0	n/a	view
Newport	Tiverton Unnamed #11	0	n/a	view
Newport	Tiverton Unnamed #12	0	n/a	view
Newport	Vanzandt Pier	0	n/a	view
Newport	Warrens Point Beach Club	5	0%	view
Newport	West Beach	0	n/a	view
Providence	Bullocks Neck	0	n/a	view
Providence	Cranston Unnamed #1	0	n/a	view
Providence	Cranston Unnamed #2	0	n/a	view
Providence	Crescent Beach	0	n/a	view
Providence	East Providence Unnamed #1	0	n/a	view
Providence	East Providence Unnamed #2	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Providence	Fields Point-Center	0	n/a	-
Providence	Rose Larisa Beach	0	n/a	view
Providence	Sabins Point (Unlicensed Beach)	0	n/a	view
Providence	Sabins Point - Center (Unlicensed Beach)	0	n/a	view
Washington	Alfies	5	0%	view
Washington	Andrea Hotel	5	0%	view
Washington	Atlantic Beach Casino Resort	4	0%	view
Washington	Atlantic Beach Park	4	0%	view
Washington	Atlantic Pizza And Grill	5	0%	view
Washington	Ballards Inn	0	n/a	view
Washington	Block Island Unnamed #1	0	n/a	view
Washington	Block Island Unnamed #2	0	n/a	view
Washington	Block Island Unnamed #3	0	n/a	view
Washington	Block Island Unnamed #4	0	n/a	view
Washington	Block Island Unnamed #5	0	n/a	view
Washington	Block Island Unnamed #6	0	n/a	view
Washington	Block Island Unnamed #7	0	n/a	view
Washington	Block Island Unnamed #8	0	n/a	view
Washington	Block Island Unnamed #9	0	n/a	view
Washington	Block Island Unnamed #10	0	n/a	view
Washington	Block Island Unnamed #11	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Washington	Block Island Unnamed #12	0	n/a	view
Washington	Blue Shutters Beach	10	0%	view
Washington	Bonnet Shores Beach Club	18	0%	view
Washington	Breezeway Inn	2	0%	view
Washington	Cafe Pasture Beach	0	n/a	view
Washington	Camp Fuller-Ymca Beach	5	0%	view
Washington	Camp Grosvenor	24	4%	view
Washington	Capt Roger Wheeler	40	10%	view
Washington	Charlestown Beach	0	n/a	view
Washington	Charlestown Breachway	6	0%	view
Washington	Charlestown Town Beach	10	0%	view
Washington	Charlestown Unnamed #1	0	n/a	view
Washington	Charlestown Unnamed #2	0	n/a	-
Washington	Deep Hole Beach	0	n/a	view
Washington	Dunes Club	22	0%	view
Washington	Dunes Park	5	0%	view
Washington	East Beach	9	0%	view
Washington	East Matunuck State Beach	9	0%	view
Washington	Fred Benson Town Beach	0	n/a	view
Washington	Galilee Beach Club Associat	3	0%	view
Washington	Greenhill	5	20%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Washington	Jims Trailer Park	2	0%	view
Washington	Kelly Beach	0	n/a	view
Washington	Matunuck Town Beach	15	0%	view
Washington	Misquamicut Club	9	0%	view
Washington	Misquamicut Fire District Beach	15	0%	view
Washington	Misquamicut State Beach	15	0%	view
Washington	Moonstone Beach	0	n/a	view
Washington	Napa Tree Point Beach	0	n/a	view
Washington	Narragansett Town Beach	27	22%	view
Washington	Narragansett Unnamed #1	0	n/a	view
Washington	Narragansett Unnamed #3	0	n/a	view
Washington	Narragansett Unnamed #4	0	n/a	view
Washington	Narragansett Unnamed #5	0	n/a	view
Washington	Narragansett Unnamed #6	0	n/a	view
Washington	Narragansett Unnamed #7	0	n/a	view
Washington	Narragansett Unnamed #8	0	n/a	view
Washington	Narragansett Unnamed #9	0	n/a	view
Washington	Narragansett Unnamed #10	0	n/a	view
Washington	Narragansett Unnamed #11	0	n/a	view
Washington	Narragnasett Unnamed #2	0	n/a	-
Washington	North Kingstown Town Beach	32	16%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Washington	North Kingstown Unnamed #1	0	n/a	view
Washington	North Kingstown Unnamed #2	0	n/a	view
Washington	North Kingstown Unnamed #3	0	n/a	view
Washington	North Kingstown Unnamed #4	0	n/a	view
Washington	North Kingstown Unnamed #5	0	n/a	view
Washington	North Kingstown Unnamed #6	0	n/a	view
Washington	North Kingstown Unnamed #7	0	n/a	view
Washington	North Kingstown Unnamed #8	0	n/a	<u>view</u>
Washington	North Kingstown Unnamed #9	0	n/a	view
Washington	North Kingstown Unnamed #10	0	n/a	view
Washington	North Kingstown Unnamed #11	0	n/a	view
Washington	North Kingstown Unnamed #12	0	n/a	view
Washington	North Kingstown Unnamed #13	0	n/a	view
Washington	Ocean House	12	0%	view
Washington	Paddy'S Beach	5	0%	view
Washington	Pleasant View Inn	5	0%	view
Washington	Plum Beach Club	8	0%	<u>view</u>
Washington	Quonochotaug Beach	0	n/a	view
Washington	Roy Carpenter'S Beach	6	0%	view
Washington	Salty Brine Beach	3	0%	view
Washington	Sam'S Beach	5	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Washington	Sandy Shore Motel	5	0%	view
Washington	Saunderstown Yacht Club	8	13%	view
Washington	Scarborough State Beach North	105	21%	view
Washington	Scarborough State Beach South	72	28%	view
Washington	Seaside Beach Club	3	0%	view
Washington	South Kingstown Unnamed #1	0	n/a	view
Washington	South Kingstown Unnamed #2	0	n/a	view
Washington	South Kingstown Unnamed #3	0	n/a	view
Washington	South Kingstown Unnamed #4	0	n/a	view
Washington	South Kingstown Unnamed #5	0	n/a	view
Washington	Surf Hotel	0	n/a	view
Washington	Trustom Beach	0	n/a	view
Washington	Watch Hill Carousel	3	0%	view
Washington	Weekapaug Fire District	15	7%	view
Washington	Westerly Town Beach-New	7	0%	view
Washington	Westerly Town Beach-Old	12	0%	view
Washington	Westerly Unamed # 1	0	n/a	view
Washington	Westerly Unamed # 2	0	n/a	view
Washington	Westerly Unamed # 3	0	n/a	view
Washington	Westerly Unamed # 4	0	n/a	view
Washington	Westquage Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Washington	Willow Dell Beach Club	10	0%	view

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

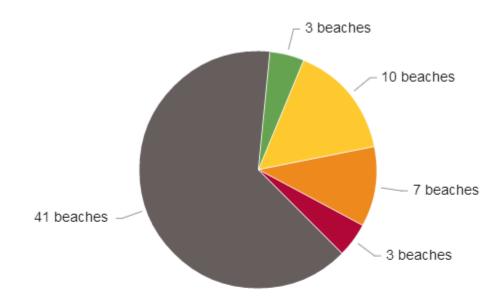
# **State Summary: South Carolina**

Ranked 24th in Beach Water Quality (out of 30 states)
15% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### South Carolina 2013 Beach Water Quality Summary



- 41 beaches (64%) were not monitored or had a limited number of samples (fewer than 12)
- 3 beaches (5%) did not have any samples exceed the national BAV safety threshold
- 10 beaches (16%) had >0-10% of their samples exceed the national BAV safety threshold
- 7 beaches (11%) had >10-20% of their samples exceed the national BAV safety threshold
- 3 beaches (5%) had more than 20% of their samples exceed the national BAV safety threshold

South Carolina has beaches lining 180 miles of Atlantic coastline—102 miles on the mainland coast and 78 miles on islands without bridges from the mainland's barrier islands or on sandbars. The state's beach water quality monitoring program is administered by the Department of Health and Environmental Control (DHEC). The monitoring season in South Carolina runs from May 15 to October 15. Beachgoers can learn about beach advisories on the <u>DHEC website</u>.

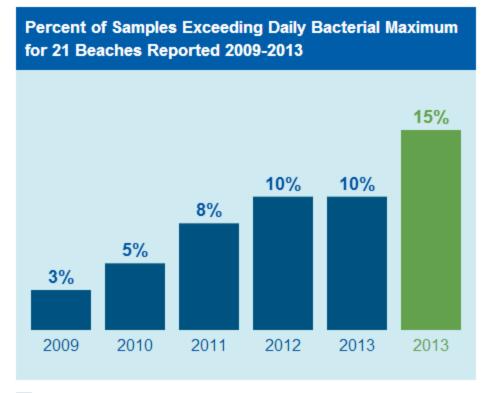
#### What Does Beach Water Monitoring Show?

In 2013, South Carolina reported 64 coastal beaches, 23 of which were monitored. Of all reported beach monitoring samples, 15% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in South Carolina in 2013 were Briarcliff Acres Beach (45%), Horry County Beaches South Carolina Campgrounds (32%), Myrtle Beach (23%), Arcadia Beach (20%), North Myrtle Beach (15%), and Surfside Beach (15%). All were in Horry County.

# South Carolina Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in South Carolina over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

# **South Carolina 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Beaufort	Bay Pointe - North End	0	n/a	-
Beaufort	Bay Pointe - South End	0	n/a	-
Beaufort	Beaufort River Sandbar	0	n/a	-
Beaufort	Dafuskie Island - North East End Of Island	0	n/a	-
Beaufort	Fripp Island	50	0%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Beaufort	Harbor Island	31	6%	view
Beaufort	Hilton Head Island	121	2%	view
Beaufort	Hunting Island	51	0%	view
Beaufort	Hunting Island And Fripp Island Sandbar	0	n/a	-
Beaufort	Lands End - North End	0	n/a	-
Beaufort	Lands End - South End	0	n/a	-
Beaufort	May River Sandbar	0	n/a	-
Beaufort	The Sands At Port Royal - Across From Landing	0	n/a	-
Beaufort	The Sands At Port Royal - Beach Area	0	n/a	-
Beaufort	Trenchards Inlet (Bull Point)	0	n/a	-
Charleston	Bird Key	0	n/a	-
Charleston	Botany Bay	0	n/a	-
Charleston	Cape Romain - Key Inlet	0	n/a	-
Charleston	Capers Inlet - North End Dewees Island	0	n/a	-
Charleston	Capers Inlet - South End Capers Island	0	n/a	-
Charleston	Capers Island - North End	0	n/a	-
Charleston	Deveaux Banks - North Side	0	n/a	-
Charleston	Dewees Inlet - North End Of Isle Of Palms	0	n/a	-
Charleston	Dewees Island - South End	0	n/a	-
Charleston	Folly Beach	82	7%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Charleston	Isle Of Palms	104	5%	view
Charleston	Kiawah - North End	0	n/a	-
Charleston	Kiawah Island	53	2%	view
Charleston	Lighthouse Inlet - Morris Island South End	0	n/a	-
Charleston	Morris Island - Sandbar On North End	0	n/a	-
Charleston	Prices Inlet	0	n/a	-
Charleston	Privateer Point	0	n/a	-
Charleston	Raccoon Key	0	n/a	-
Charleston	Seabrook Island	20	0%	view
Charleston	Stono River - Limehouse Sandbar	0	n/a	-
Charleston	Stono River - Wolf Island	0	n/a	-
Charleston	Sullivans Island	31	13%	view
Colleton	Edisto Island	141	3%	view
Colleton	Otter Island	0	n/a	-
Georgetown	Debordieu - South End	0	n/a	-
Georgetown	Debordieu Beach	23	13%	view
Georgetown	Garden City Beach	0	n/a	view
Georgetown	Huntington Beach State Park	21	5%	view
Georgetown	Litchfield Beach	31	3%	view
Georgetown	Murrells Inlet - North Side	0	n/a	-

County	Beach	Total Samples	% of samples exceeding BAV	View
Georgetown	Murrells Inlet - South Side	0	n/a	-
Georgetown	North Island - North End	0	n/a	-
Georgetown	North Island - South End	0	n/a	-
Georgetown	North Santee River - South End Of South Island	0	n/a	-
Georgetown	Pawleys Island Beach	30	7%	view
Georgetown	Sandbar Off Shore Of South End Of Cedar Island	0	n/a	-
Georgetown	South Island - North End	0	n/a	-
Georgetown	South Santee River - South End Of Cedar Island	0	n/a	-
Horry	Arcadia Beach	115	20%	view
Horry	Briarcliffe Acres Beach	49	45%	view
Horry	Garden City Beach	45	11%	view
Horry	Horry County Beaches South Carolina Campgrounds	66	32%	view
Horry	Horry County Beaches South Carolina State Park	22	14%	view
Horry	Little River Inlet - North Side	0	n/a	-
Horry	Little River Inlet - South Side	0	n/a	-
Horry	Myrtle Beach	769	23%	view
Horry	North Myrtle Beach	297	15%	view
Horry	Springmaid Beach	22	9%	view
Horry	Surfside Beach	153	15%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

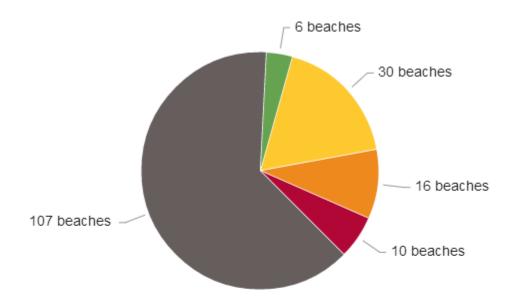
# **State Summary: Texas**

Ranked 16th in Beach Water Quality (out of 30 states) 10% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

# Texas 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 107 beaches (63%) were not monitored or had a limited number of samples (fewer than 12)
- 6 beaches (4%) did not have any samples exceed the national BAV safety threshold
- 30 beaches (18%) had >0-10% of their samples exceed the national BAV safety threshold
- 16 beaches (9%) had >10-20% of their samples exceed the national BAV safety threshold
- 10 beaches (6%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Texas has 169 public beaches. Out of approximately 2,500 miles of coastal, bay, and estuarine shoreline in Texas, 336 miles are covered by the monitoring and notification program under the BEACH Act. The Texas General Land Office (GLO) administers the Texas Beach Watch Program. Beachgoers can learn about beach advisories on the <u>Texas Beach Watch website</u>.

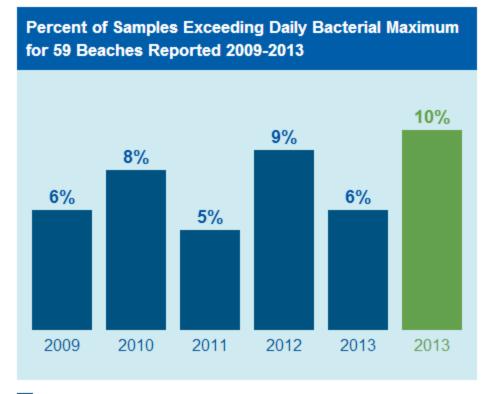
## What Does Beach Water Monitoring Show?

In 2013, Texas reported 169 coastal beaches, 62 of which were monitored. Of all reported beach monitoring samples, 10% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Ropes Park (62%), Cole Park (38%), and Poenisch Park, (31%) all in Nueces County; Sylvan Beach Park in Harris County (26%); Palacios Pavilion Park in Matagorda County (26%); and Laguna Shores in Nueces County (26%).

## Texas Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Texas over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

# **Texas 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Aransas	12Th Street	0	n/a	<u>view</u>
Aransas	Copano Bay Bridge	0	n/a	view
Aransas	Copano Bay State Fishing Pier	0	n/a	view
Aransas	Copano Causeway - North	0	n/a	view
Aransas	Copano Causeway - South	0	n/a	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Aransas	Goose Island State Park	0	n/a	view
Aransas	Highway 188 At Port Bay North	0	n/a	view
Aransas	Highway 188 At Port Bay South	0	n/a	view
Aransas	Rockport Beach Park	162	12%	view
Brazoria	Bryan Beach	43	7%	view
Brazoria	County Road 257A	0	n/a	view
Brazoria	Follets Island	200	6%	view
Brazoria	Peach Point Wma	0	n/a	view
Brazoria	Quintana	82	11%	view
Brazoria	San Luis Park	0	n/a	view
Brazoria	Seidler'S Landing	0	n/a	view
Brazoria	Southwest Brazoria	0	n/a	view
Brazoria	Surfside	321	3%	view
Brazoria	Swan Lake	0	n/a	view
Calhoun	Bauer Road	0	n/a	view
Calhoun	Bayfront Park	0	n/a	view
Calhoun	Boggy Bayou Row	0	n/a	view
Calhoun	Indianola Beach	0	n/a	view
Calhoun	King Fisher Park	0	n/a	view
Calhoun	Lighthouse Beach & Bird Sanctuary	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Calhoun	Magnolia Beach Park	0	n/a	view
Calhoun	Matagorda Island State Park - Backside 1	0	n/a	view
Calhoun	Matagorda Island State Park - Backside 2	0	n/a	view
Calhoun	Matagorda Island State Park - Backside 3	0	n/a	view
Calhoun	Matagorda Island State Park - Backside 4	0	n/a	view
Calhoun	Matagorda Island State Park - Gulf	0	n/a	view
Calhoun	Olivia Haterius Park	0	n/a	view
Calhoun	Point Comfort City Park	0	n/a	view
Calhoun	Port Alto Public Park	0	n/a	view
Calhoun	Six Mile Road	0	n/a	view
Calhoun	State Highway 35	0	n/a	view
Calhoun	Swan Point Park	0	n/a	view
Cameron	Access Point #3	43	0%	view
Cameron	Access Point #4	36	0%	view
Cameron	Andy Bowie Park	79	3%	view
Cameron	Atwood Park	80	1%	view
Cameron	Boca Chica State Park	232	0%	view
Cameron	Isla Blanca Park	80	1%	view
Cameron	N Cameron County - Bayside	0	n/a	view
Cameron	Park Road 100 Bay Access #1	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Cameron	Park Road 100 Bay Access #2	42	0%	view
Cameron	South Padre Island (Town Of South Padre Island)	353	0%	view
Cameron	South Padre Island -North	0	n/a	view
Cameron	South Padre Island Access Point #6	80	1%	<u>view</u>
Chambers	Chambers County	0	n/a	view
Chambers	Mccollum Park	0	n/a	<u>view</u>
Galveston	25Th St.	191	10%	<u>view</u>
Galveston	45Th St.	235	9%	view
Galveston	61St St.	159	17%	view
Galveston	Appfel Park	80	9%	view
Galveston	Caplen	0	n/a	view
Galveston	Caplen/Crystal Beach	0	n/a	view
Galveston	Clara St.	152	5%	view
Galveston	Crystal Beach - O'Neill Road	39	5%	view
Galveston	Dellanera Park	81	12%	view
Galveston	East Beach	0	n/a	view
Galveston	Erman Pilsner Boat Ramp	0	n/a	view
Galveston	Frank Carmona Beach	0	n/a	view
Galveston	Galveston Island State Park	77	8%	view
Galveston	Galveston Island State Park Backside	41	20%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Galveston	Gilchrist East	0	n/a	view
Galveston	Gilchrist West	0	n/a	view
Galveston	Gulf Shores	76	7%	view
Galveston	Haney Park	0	n/a	view
Galveston	High Island East	0	n/a	view
Galveston	High Island West	0	n/a	view
Galveston	Holiday	0	n/a	view
Galveston	Indian Beach	41	12%	view
Galveston	Pirates Beach	191	7%	view
Galveston	Port Bolivar - Rettilon Road	41	22%	view
Galveston	Rollover Pass East	148	5%	view
Galveston	Rollover Pass West	39	15%	view
Galveston	San Luis Pass	78	8%	view
Galveston	Seadrift	38	8%	view
Galveston	Skyline Drive	0	n/a	view
Galveston	Skyline Park	0	n/a	view
Galveston	Spanish Grant/Bermuda Beach	116	5%	view
Galveston	Stewart Beach	125	12%	view
Galveston	Texas City Dike	39	21%	view
Galveston	West End	115	8%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Galveston	West End Galveston - Jamaica Beach	43	14%	view
Galveston	West End Galveston - Sea Isle	78	9%	view
Harris	Bayland Park	0	n/a	view
Harris	Clear Lake Park	0	n/a	view
Harris	Evergreen Road	0	n/a	view
Harris	Lynchburg Row	0	n/a	view
Harris	Miramar Street	0	n/a	view
Harris	Pine Gully Park	0	n/a	view
Harris	River Terrace Park	0	n/a	view
Harris	Sylvan Beach Park	80	26%	view
Jefferson	Mcfaddin Nwr	235	0%	view
Jefferson	Sea Rim State Park	102	5%	view
Kleberg	Cr 1140 North	0	n/a	view
Kleberg	Cr 1140 South	0	n/a	view
Kleberg	Kaufer-Hubert #1	0	n/a	view
Kleberg	Kaufer-Hubert #2	0	n/a	view
Kleberg	Kaufer-Hubert #3	0	n/a	view
Kleberg	North Padre Island	0	n/a	view
Kleberg	Riviera Beach Pier	0	n/a	view
Matagorda	East Bay	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Matagorda	East Matagorda Peninsula	0	n/a	view
Matagorda	East Sargent Beach	0	n/a	view
Matagorda	Fm 1095	0	n/a	<u>view</u>
Matagorda	Foley Reserve Park	0	n/a	<u>view</u>
Matagorda	Jenson'S Point	0	n/a	view
Matagorda	Jetty Park	171	8%	<u>view</u>
Matagorda	Lookout Point	0	n/a	<u>view</u>
Matagorda	Oyster Lake Road	0	n/a	<u>view</u>
Matagorda	Palacios - Palacios Pavillion	97	26%	<u>view</u>
Matagorda	Sargent Beach	132	12%	view
Matagorda	South Bay Boat Ramp	0	n/a	<u>view</u>
Nueces	Cole Park	203	38%	view
Nueces	Corpus Christi Beach - Main	159	4%	view
Nueces	Corpus Christi Beach - North	0	n/a	<u>view</u>
Nueces	Corpus Christi Beach - South	0	n/a	view
Nueces	Corpus Christi Marina	118	19%	<u>view</u>
Nueces	Doddridge Park	0	n/a	view
Nueces	Emerald Beach	47	21%	view
Nueces	Hans & Pat Sutter Wildlife Refuge	0	n/a	view
Nueces	Jfk Causeway - Ne	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Nueces	Jfk Causeway - Nw	0	n/a	view
Nueces	Jfk Causeway - Se	0	n/a	view
Nueces	Jfk Causeway - Sw	37	14%	view
Nueces	Jp Luby Park	166	10%	view
Nueces	Laguna Shores	43	26%	view
Nueces	Lighthouse Lakes Kayak Trail #1	45	11%	view
Nueces	Mcgee Beach	85	22%	view
Nueces	Mustang Island	44	5%	<u>view</u>
Nueces	Mustang Island State Park	191	5%	view
Nueces	Mustang Island State Park - Backside	0	n/a	view
Nueces	Ocean Drive - East	0	n/a	view
Nueces	Ocean Drive - West	0	n/a	view
Nueces	Packery Channel Park	37	5%	view
Nueces	Padre Bali Park	324	11%	view
Nueces	Palmetto Park	0	n/a	view
Nueces	Philip Dimitt Municipal Fishing Pier	0	n/a	view
Nueces	Poenisch Park	52	31%	view
Nueces	Port Aransas - Jetty	0	n/a	<u>view</u>
Nueces	Port Aransas - South	77	8%	view
Nueces	Port Aransas Park	171	6%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Nueces	Port Street	0	n/a	view
Nueces	Redhead Pond Wma	0	n/a	<u>view</u>
Nueces	Roberts Point Park	0	n/a	<u>view</u>
Nueces	Ropes Park	131	62%	<u>view</u>
Nueces	Sh 361 Row - Ne	0	n/a	view
Nueces	Sh 361 Row - Nw	0	n/a	view
Nueces	Sh 361 Row - Se	0	n/a	view
Nueces	Sh 361 Row - Sw	0	n/a	view
Nueces	Spi Drive - Ne	0	n/a	<u>view</u>
Nueces	Spi Drive - Nw	0	n/a	view
Nueces	Spi Drive - Se	0	n/a	<u>view</u>
Nueces	Spi Drive - Sw	0	n/a	view
Nueces	Swantner Park	0	n/a	<u>view</u>
Nueces	University Beach	54	20%	view
Refugio	Tpwd Boat Ramp - Refugio	0	n/a	view
San Patricio	Highway 1069 Row	0	n/a	view
San Patricio	Indian Point Park	0	n/a	view
San Patricio	Nueces Bay Causeway #1	0	n/a	view
San Patricio	Nueces Bay Causeway #2	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Patricio	Nueces Bay Causeway #3	38	16%	view
San Patricio	Nueces Bay Causeway #4	0	n/a	view
Willacy	Fred Stone Park	0	n/a	view
Willacy	Mansfield Cut/County Line	0	n/a	view
Willacy	Placement Area #8	0	n/a	<u>view</u>

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

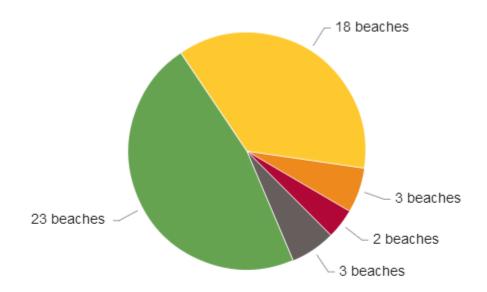
# **State Summary: Virginia**

Ranked 6th in Beach Water Quality (out of 30 states) 5% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. Everyone can now support a long-awaited rule to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

## Virginia 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 3 beaches (6%) were not monitored or had a limited number of samples (fewer than 12)
- 23 beaches (47%) did not have any samples exceed the national BAV safety threshold
- 18 beaches (37%) had >0-10% of their samples exceed the national BAV safety threshold
- 3 beaches (6%) had >10-20% of their samples exceed the national BAV safety threshold
- 2 beaches (4%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Virginia has 49 public beaches stretching along 70 miles of Atlantic and Chesapeake Bay waters. The state's beach water quality monitoring program is administered by the Virginia Department of Health (VDH). Beachgoers can learn about beach advisories on the <u>VDH beach advisory website</u>.

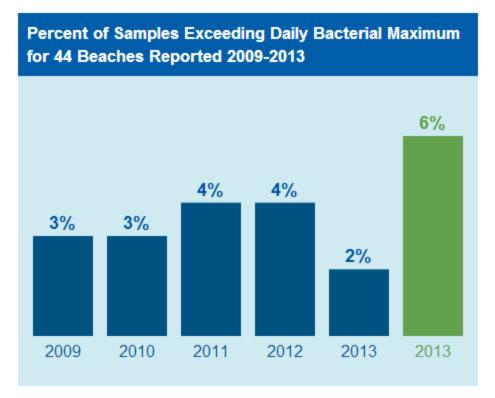
#### What Does Beach Water Monitoring Show?

In 2013, Virginia reported 49 coastal beaches, 46 of which were monitored. Of all reported beach monitoring samples, 5% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in 2013 were Hilton Beach in Newport News County (43%), Fairview Beach in King George County (27%), Huntington Beach in Newport News County (18%), Sea Gate Beach in Virginia Beach County (16%), and King/Lincoln Park Beach in Newport News County (14%).

# Virginia Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Virginia over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Virginia 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Accomack	Assateague Island National Seashore	0	n/a	-
Accomack	Guard Shore	34	6%	<u>view</u>
Gloucester	Gloucester Point Beach	17	0%	view
Hampton	Buckroe Beach	54	2%	view
Hampton	Fort Monroe	18	0%	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Hampton	Salt Ponds	18	6%	view
King George	Fairview Beach	48	27%	view
Mathews	Festival Beach	17	0%	view
Newport News	Anderson'S Beach	21	5%	view
Newport News	Hilton Beach	28	43%	view
Newport News	Huntington Beach	22	18%	view
Newport News	King/Lincoln Park	21	14%	view
Norfolk	5th Bay St., North End	24	4%	view
Norfolk	10th View Beach Access	23	0%	view
Norfolk	13th View, North End	24	4%	view
Norfolk	21st Bay St., North End Behind Ships Captain Restaurant	25	8%	view
Norfolk	Capeview Ave., North End	24	4%	view
Norfolk	Captains Quarters	24	4%	view
Norfolk	East Community Beach, End Of East Ocean View Ave.	25	8%	view
Norfolk	North Community Beach	22	0%	view
Norfolk	Ocean View Park, East Side Of Parking Lot	23	0%	view
Norfolk	Sara Constance Park, East End	23	0%	view
Northampton	Kiptopeke State Park	51	4%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Northampton	Town Of Cape Charles Public Beach	68	1%	view
Virginia Beach	15th Street	19	0%	<u>view</u>
Virginia Beach	28Th Street	19	0%	<u>view</u>
Virginia Beach	45Th Street	19	0%	<u>view</u>
Virginia Beach	63Rd Street	20	10%	view
Virginia Beach	78Th Street	19	0%	<u>view</u>
Virginia Beach	Back Bay Beach	19	0%	<u>view</u>
Virginia Beach	Camp Pendleton	19	0%	<u>view</u>
Virginia Beach	Cape Henry Light House	0	n/a	-
Virginia Beach	Chesapeake Beach	19	0%	view
Virginia Beach	Chick'S Beach	20	10%	view
Virginia Beach	Croatan	19	0%	view
Virginia Beach	Dam Neck Middle	16	0%	<u>view</u>
Virginia Beach	Dam Neck North	16	0%	view
Virginia	Dam Neck South	16	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Beach				
Virginia Beach	First Landing State Park	19	5%	<u>view</u>
Virginia Beach	Fort Story East	0	n/a	-
Virginia Beach	Fort Story South	19	5%	view
Virginia Beach	Fort Story West	19	0%	view
Virginia Beach	Lesner Bridge East	21	10%	view
Virginia Beach	Little Island Beach North	19	0%	view
Virginia Beach	Little Island Beach South	19	0%	view
Virginia Beach	Sandbridge North	18	0%	view
Virginia Beach	Sandbridge South	19	0%	view
Virginia Beach	Sea Gate	19	16%	view
York	Yorktown Beach	19	5%	view

NOTE: Data and state-specific information for this summary were collected from the U.S. EPA, direct conversations with beach managers in the state, state grant reports to the EPA for BEACH Act funding, and the state water quality website. The information in this state summary reflects current data as of June 2, 2014.

1. If the 2013 percent exceedance values in this summary don't match, why not? The value at the top of the page reflects the proportion of samples exceeding the Beach Action Value (BAV) for designated beach areas. Additionally, only samples from a common set of beaches monitored

each year from 2009 to 2013 are included in the bar chart. Because some beaches were not monitored in each of those years, the percent exceedance for this subset of beaches may not have the same value as the percent exceedance for all of the beaches monitored in 2013. For historical reasons, the percent exceedance values shown here are based on the national single-sample daily maximum standard that was in place from 2009 to 2012. In assessing 2013 beach water quality, this analysis is based on EPA's new BAV of 60 cfu/100ml enterococcus for marine beaches and 190 cfu/100 ml *E. coli* for Great Lakes beaches, in order to best protect beachgoers from water quality health risks.

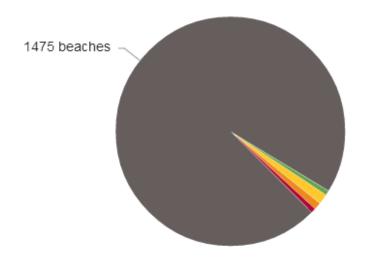
# **State Summary: Washington**

Ranked 19th in Beach Water Quality (out of 30 states)
12% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

### Washington 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 1475 beaches (96%) were not monitored or had a limited number of samples (fewer than 12)
- 10 beaches (1%) did not have any samples exceed the national BAV safety threshold
- 23 beaches (1%) had >0-10% of their samples exceed the national BAV safety threshold
- 16 beaches (1%) had >10-20% of their samples exceed the national BAV safety threshold
- 10 beaches (1%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Washington State has over 1,000 publicly accessible beaches along the Pacific Ocean and Puget Sound. The state's beach monitoring program is administered by the Washington State Department of Ecology and the Washington State Department of Health's BEACH Program and runs from Memorial Day through Labor Day. Beachgoers can learn about beach advisories and closures on the Department of Ecology's website.

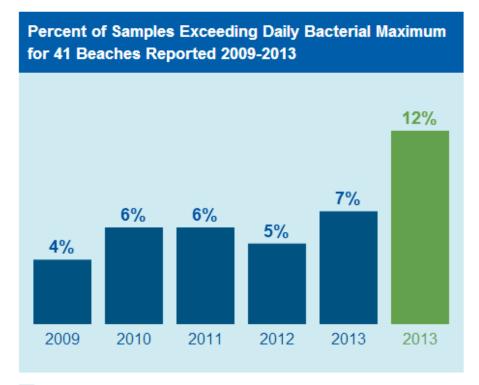
## What Does Beach Water Monitoring Show?

In 2013, Washington reported 1,534 coastal beaches, 60 of which were monitored. Of all reported beach monitoring samples, 12% exceeded the Beach Action Value (BAV) of 60 enterococcus bacteria colony forming units (cfu) per 100 ml marine or estuarine water in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in Washington in 2013 were Little Squalicum Park Beach in Whatcom County (47%), Bayview State Park in Skagit County (41%), Allyn Waterfront Park in Mason County (41%), Waterfront Dock/Ruston Way in Pierce County (35%), and Larrabee State Park, Wildcat Cove in Whatcom County (25%).

# Washington Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Washington over the past five years. Note that only samples from a common set of beaches monitored each year from 2009 to 2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 104 enterococcus bacteria cfu/100 ml water as well as the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

# **Washington 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Clallam	Agate Bay, Beach 420	0	n/a	<u>view</u>
Clallam	Agate Bay, Beach 421	0	n/a	<u>view</u>
Clallam	Brandt Point	0	n/a	<u>view</u>
Clallam	Cape Flattery	0	n/a	<u>view</u>
Clallam	Cape Flattery Trail Lookout	0	n/a	<u>view</u>
Clallam	City Pier	0	n/a	<u>view</u>
Clallam	Clallam Bay Campground	0	n/a	<u>view</u>
Clallam	Clallam Bay County Tidelands	0	n/a	<u>view</u>
Clallam	Clallam Bay Marina	0	n/a	view
Clallam	Clallam Bay Spit Community Beach	0	n/a	<u>view</u>

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Clallam	Clallam Bay State Park	0	n/a	view
Clallam	Clallam County Parcel	0	n/a	view
Clallam	Cline Spit	0	n/a	view
Clallam	Cline Spit Boat Launch	0	n/a	view
Clallam	Cline Spit County Park	46	7%	view
Clallam	Crescent Beach	0	n/a	view
Clallam	Diamond Point, Beach 410	0	n/a	view
Clallam	Dry Creek, Beach 414	0	n/a	view
Clallam	Dungeness Bay Boat Launch	0	n/a	view
Clallam	Dungeness National Wildlife Refuge	0	n/a	view
Clallam	Dungeness Recreation Area	0	n/a	view
Clallam	Dungeness Tidelands	0	n/a	view
Clallam	East Haven Boat Launch	0	n/a	-
Clallam	Ediz Hook Park	0	n/a	view
Clallam	First Beach, Neah Bay	0	n/a	view
Clallam	Freshwater Bay Boat Launch	0	n/a	view
Clallam	Freshwater Bay, Beach 416	0	n/a	view
Clallam	Freshwater Bay, Beach 417	0	n/a	view
Clallam	Front Street Beach, East	0	n/a	view
Clallam	Gibson Spit, Beach 411	0	n/a	view
Clallam	Highway 112 Waysides	0	n/a	-
Clallam	Hobuck Beach	0	n/a	view
Clallam	Hoko River, Beach 428	0	n/a	view
Clallam	Hollywood Beach	46	13%	view
Clallam	James Island, La Push	0	n/a	view
Clallam	Jamestown Beach	0	n/a	view
Clallam	Jim Creek , Silver King Resort	0	n/a	view
Clallam	John Wayne Marina	0	n/a	view
Clallam	La Push First Beach	0	n/a	view
Clallam	La Push Marina #1	0	n/a	view
Clallam	La Push Second Beach, Olympic National Park	0	n/a	view
Clallam	Larrabee State Park	0	n/a	-
Clallam	Lees Creek	0	n/a	view
Clallam	Low Point Community Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Clallam	Lyre River Campground	0	n/a	view
Clallam	Mains Farm	0	n/a	view
Clallam	Makah Marina	0	n/a	view
Clallam	Mcdonnel Creek	0	n/a	view
Clallam	Miller Peninsula State Park	0	n/a	view
Clallam	Monterra Scenic Overlook	0	n/a	view
Clallam	Mora	0	n/a	-
Clallam	Mouth Of Elwha River	0	n/a	view
Clallam	N Sequim Bay Sp	0	n/a	view
Clallam	Neah Bay Waterfront, East (Dakwas Park Beach)	0	n/a	view
Clallam	North Olympic National Park	0	n/a	view
Clallam	Old Town	0	n/a	view
Clallam	Olsen'S Marina	0	n/a	view
Clallam	Ozette Beach Access, Olympic National Park	0	n/a	view
Clallam	Ozette Indian Reservation	0	n/a	view
Clallam	Ozette Island	0	n/a	view
Clallam	Panorama Vista County Park	0	n/a	view
Clallam	Paridise Cove	0	n/a	view
Clallam	Pillar Point County Park	0	n/a	view
Clallam	Pillar Point, Beach 424	0	n/a	view
Clallam	Pillar Point, Beach 425	0	n/a	view
Clallam	Pioneer Memorial Park	0	n/a	view
Clallam	Pitship Point	0	n/a	view
Clallam	Point Of Arches, Olympic National Park	0	n/a	view
Clallam	Port Angeles Boat Haven	0	n/a	view
Clallam	Port Angeles Ferry And Waterfront	0	n/a	view
Clallam	Port Angeles Waterfront Trail	0	n/a	view
Clallam	Port Williams Boat Launch	0	n/a	view
Clallam	Port Williams Tidelands	0	n/a	view
Clallam	Quillayute River Shoreline	0	n/a	view
Clallam	Railroad Bridge Park	0	n/a	view
Clallam	Rialto Beach, Olympic National Park	0	n/a	view
Clallam	S Pitship Point	0	n/a	view
Clallam	Sail & Paddle Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Clallam	Salt Creek Recreation Area	46	13%	view
Clallam	Seashore Conservation Area	0	n/a	view
Clallam	Second Beach, Neah Bay	0	n/a	view
Clallam	Sekiu Point, Beach 427	0	n/a	view
Clallam	Sekiu Public Area	0	n/a	view
Clallam	Sekiu River Access	0	n/a	view
Clallam	Sekiu River, Beach 429A	0	n/a	view
Clallam	Sequim Bay Boat Launch	0	n/a	view
Clallam	Sequim Bay State Park	0	n/a	view
Clallam	Shi Shi Beach, Olympic National Park	0	n/a	<u>view</u>
Clallam	Shipwreck Point Natural Resource Conservation Area	0	n/a	view
Clallam	Shipwreck Point, Beach 429	0	n/a	view
Clallam	Slip Point, Beach 426	0	n/a	view
Clallam	Snow Creek Boat Launch	0	n/a	view
Clallam	Sooes Beach	0	n/a	view
Clallam	South Diamond Point	0	n/a	view
Clallam	South Sooes	0	n/a	<u>view</u>
Clallam	Striped Peak Recreation Area	0	n/a	view
Clallam	Striped Peak, Beach 419	0	n/a	view
Clallam	Sunny Shores Beach	0	n/a	view
Clallam	Third Beach	0	n/a	view
Clallam	Travis Spit, Beach 411A	0	n/a	view
Clallam	Twin Rivers, Beach 422	0	n/a	view
Clallam	Twin Rivers, Beach 423	0	n/a	view
Clallam	Twin Rivers, Beach 423A	0	n/a	view
Clallam	Valley Creek Estuary Park	0	n/a	view
Clallam	W Kydaka Point	0	n/a	<u>view</u>
Clallam	Waadah Island	0	n/a	view
Clallam	Warmhouse Beach	0	n/a	-
Clallam	West Boat Haven Boat Launch	0	n/a	view
Clallam	West Dnr 414	0	n/a	view
Clallam	West Green Point	0	n/a	view
Clallam	West Old Town	0	n/a	view
Clallam	Whiskey Creek Campground	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Grays Harbor	9Th Street Landing And Rayonier Point	0	n/a	view
Grays Harbor	28Th Street Boat Launch	0	n/a	view
Grays Harbor	Bonge Road Beach Access	0	n/a	view
Grays Harbor	Bottle Beach State Park	0	n/a	view
Grays Harbor	Bottle Beach Tidelands	0	n/a	view
Grays Harbor	Bowerman Basin	0	n/a	view
Grays Harbor	Cascade Land Conservancy	0	n/a	view
Grays Harbor	Cascade Land Conservancy - Aberdeen	0	n/a	view
Grays Harbor	Chance A La Mer / Ocean Shores Main Entrance	0	n/a	view
Grays Harbor	City Of Hoquiam, Moon Island Road, Airport Way	0	n/a	view
Grays Harbor	Copalis Beach	0	n/a	view
Grays Harbor	Damon Point State Park, Protection Island	0	n/a	view
Grays Harbor	Dnr Grays Harbor County	0	n/a	-
Grays Harbor	Grayland Beach	0	n/a	view
Grays Harbor	Grayland Beach Access	0	n/a	view
Grays Harbor	Grays Harbor Audubon Society, Raft River	0	n/a	view
Grays Harbor	Grays Harbor Audubon, Humptulips, Chenois Creek	0	n/a	view
Grays Harbor	Grays Harbor City	0	n/a	view
Grays Harbor	Grenville Bay	0	n/a	view
Grays Harbor	Griffith-Priday State Park	0	n/a	view
Grays Harbor	Halfmoon Bay - City Of Westport	0	n/a	view
Grays	Harms Field	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Harbor				
Grays Harbor	Hogsboack And Little Hogsback	0	n/a	view
Grays Harbor	Iron Springs	0	n/a	view
Grays Harbor	Johns River Bridge	0	n/a	view
Grays Harbor	Johns River, Wra Boatlaunch	0	n/a	view
Grays Harbor	Moclips, Sunset Beach, Pacfic Beach	0	n/a	view
Grays Harbor	N Cape Elizabeth	0	n/a	view
Grays Harbor	Ocean City Beach Access	0	n/a	view
Grays Harbor	Ocean City State Park	0	n/a	view
Grays Harbor	Ocean Lake Way Beach Access	0	n/a	view
Grays Harbor	Ocean Shores	0	n/a	view
Grays Harbor	Ocean Shores Bulkhead	0	n/a	view
Grays Harbor	Ocean Shores Marina	0	n/a	view
Grays Harbor	Ocean Shores, Marina View Drive Beach Access	0	n/a	view
Grays Harbor	Ocean Shores, North Jetty	0	n/a	view
Grays Harbor	Oyhut And Illahee Beach Access	0	n/a	view
Grays Harbor	Oyhut And Illahee Beach North	0	n/a	view
Grays Harbor	Oyhut State Wildlife Area	0	n/a	view
Grays Harbor	Pacific Beach State Park	0	n/a	view
Grays Harbor	Pacific Beach, Ocean Groove, Roosevelt Beach	0	n/a	view
Grays Harbor	Pacific Blvd Ocean Shores	0	n/a	view
Grays Harbor	Point Grenville	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Grays Harbor	Point Grenville Islands	0	n/a	view
Grays Harbor	Port Of Grays Harbor	0	n/a	view
Grays Harbor	Port Of Grays Harbor Hoquiam River	0	n/a	view
Grays Harbor	Raft River	0	n/a	view
Grays Harbor	Roosevelt Beach Access	0	n/a	view
Grays Harbor	S Cape Elizabeth	0	n/a	view
Grays Harbor	Sampson	0	n/a	view
Grays Harbor	South Bay Bridge	0	n/a	view
Grays Harbor	South Oyhut And Illahee Beach	0	n/a	view
Grays Harbor	South Queets River, North Raft River	0	n/a	view
Grays Harbor	South Raft River	0	n/a	view
Grays Harbor	Southwest South Bay	0	n/a	view
Grays Harbor	Taholah, North Point Grenville	0	n/a	view
Grays Harbor	Taholah, Quinault River Mouth	0	n/a	view
Grays Harbor	Taurus Blvd Beach Access	0	n/a	view
Grays Harbor	Tunnel Island	0	n/a	view
Grays Harbor	Twin Harbors State Park	0	n/a	view
Grays Harbor	Unknown (Bidn 990013)	0	n/a	view
Grays Harbor	Unknown (Bidn 990014)	0	n/a	view
Grays Harbor	Unknown (Bidn 990015)	0	n/a	view
Grays Harbor	Unknown (Bidn 990016)	0	n/a	view
Grays	Unknown (Bidn 990019)	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Harbor				
Grays Harbor	Westhaven State Park, Half Moon Bay	46	0%	view
Grays Harbor	Westhaven State Park, South Jetty	47	0%	view
Grays Harbor	Westport - The Groynes	46	0%	view
Grays Harbor	Westport Airport	0	n/a	view
Grays Harbor	Westport Beaches	0	n/a	view
Grays Harbor	Westport Light State Park	0	n/a	view
Grays Harbor	Westport Marina, Westhaven Cove	0	n/a	view
Island	Admiralty Bay, Beach 124A	0	n/a	<u>view</u>
Island	Ala Spit County Park	0	n/a	<u>view</u>
Island	Baby Island	0	n/a	view
Island	Beachcombers Community Club Beach	0	n/a	<u>view</u>
Island	Blowers Bluff	0	n/a	<u>view</u>
Island	Borgman Road End	0	n/a	<u>view</u>
Island	Bush Point	0	n/a	view
Island	Bush Point - Sandpiper Rd End	0	n/a	view
Island	Bush Point Boat Launch	0	n/a	view
Island	Bush Point, Beach 101	0	n/a	view
Island	Cama Beach State Park	0	n/a	view
Island	Camano Island Country Club Lagoon	0	n/a	view
Island	Camano Island State Park	0	n/a	view
Island	Cavalero Beach County Park	0	n/a	view
Island	Cavelaro Beach	0	n/a	view
Island	Clinton Ferry Terminal	0	n/a	view
Island	Cornet Bay County Dock	0	n/a	view
Island	Cornet Bay Marina	0	n/a	view
Island	Coupeville	0	n/a	view
Island	Coupeville Town Park	0	n/a	view
Island	Coupeville Wharf	0	n/a	view
Island	Cultus Bay Recreation Site	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Island	Dave Mackie Memorial County Park	0	n/a	view
Island	Deception Pass State Park (Island)	0	n/a	view
Island	Deer Lagoon	0	n/a	view
Island	Double Bluff Park	0	n/a	view
Island	Driftwood Beach	0	n/a	view
Island	Driftwood County Park	0	n/a	view
Island	Dugualla Bay Dike Access	0	n/a	view
Island	Dugualla Bay, Dnr-145	0	n/a	view
Island	Dugualla Park	0	n/a	view
Island	E East Point	0	n/a	view
Island	East San De Fuca	0	n/a	view
Island	Ebey'S Landing National Historical Reserve	0	n/a	view
Island	English Boom Park & Preserve	0	n/a	view
Island	Flintstone Park	0	n/a	view
Island	Fn Camano Head	0	n/a	view
Island	Fn Onamac Point	0	n/a	view
Island	Fort Casey State Park	0	n/a	view
Island	Fort Casey State Park Tidelands	0	n/a	view
Island	Fort Ebey State Park (Dnr-140)	0	n/a	view
Island	Fox Trot Way Road End	0	n/a	view
Island	Freeland County Park / Holmes Harbor	77	21%	view
Island	Fs Mabana	0	n/a	view
Island	Glendale Road End	0	n/a	view
Island	Glendale, Dnr-100	0	n/a	view
Island	Glendale, Dnrr-99	0	n/a	view
Island	Grasser'S Lagoon	0	n/a	view
Island	Harrington Lagoon	0	n/a	view
Island	Hastie Lake Road Boat Launch	0	n/a	view
Island	Hidden Beach	0	n/a	view
Island	High Road End	0	n/a	view
Island	Holmes Harbor Private Beach	0	n/a	view
Island	Indian Beach	0	n/a	view
Island	Joseph Whidbey State Park	0	n/a	view
Island	Keystone Ferry Terminal	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Island	Keystone Spit State Park	0	n/a	view
Island	Lagoon Point North (Westcliff Drive)	0	n/a	view
Island	Lagoon Point South	0	n/a	view
Island	Langley Boat Harbor & Fishing Pier	0	n/a	view
Island	Langley Seawall Park	0	n/a	view
Island	Langley Waterfront Park, The Inn At Langley	0	n/a	view
Island	Ledgewood Beach Access / Admiralty Bay Beach	0	n/a	view
Island	Libbey Beach County Park	0	n/a	view
Island	Limpet Lane Road End	0	n/a	view
Island	Livingston Bay Beach Tidelands	0	n/a	view
Island	Long Point Beach	0	n/a	view
Island	Mabana	0	n/a	view
Island	Mabana Port District Beach Access	0	n/a	view
Island	Madrona Beach, Camano Island	0	n/a	view
Island	Maple Grove Boat Launch	0	n/a	view
Island	Mariner'S Cove Boat Launch	0	n/a	view
Island	Monroe Landing, East	0	n/a	view
Island	Monroe Landing, West	0	n/a	view
Island	Moran'S Beach	0	n/a	view
Island	Mutiny Bay Boat Launch (Road End)	0	n/a	view
Island	Mutiny Bay Vista	0	n/a	view
Island	N Bush Point	0	n/a	view
Island	N Onamac Point	0	n/a	view
Island	N Point Partridge	0	n/a	view
Island	N Randal Point	0	n/a	view
Island	Ne Cultus Bay	0	n/a	view
Island	North Penn Cove	0	n/a	view
Island	Oak Harbor (Windjammer) Lagoon	43	2%	view
Island	Oak Harbor City Beach (Windjammer) Park	45	22%	view
Island	Oak Harbor City Marina	0	n/a	view
Island	Oak Harbor City Park Tidelands	0	n/a	view
Island	Onamac Point Reef	0	n/a	view
Island	Penn Cove / Madrona	0	n/a	view
Island	Penn Cove Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Island	Phil Simon Memorial Park	0	n/a	view
Island	Pioneer Way East	0	n/a	view
Island	Possession Point Park	0	n/a	view
Island	Possession Point State Park	0	n/a	view
Island	Rockaway Beach	0	n/a	view
Island	S Point Susan	0	n/a	view
Island	S Rocky Point	0	n/a	view
Island	S Sandy Point	0	n/a	view
Island	S Strawberry Point	0	n/a	view
Island	S Useless Bay	0	n/a	view
Island	San De Fuca	0	n/a	view
Island	Saratoga Pass Tidelands	0	n/a	view
Island	Scatchet Head / Cultus Bay	0	n/a	view
Island	Scenic Avenue Rd End	0	n/a	view
Island	Snatelum Point	0	n/a	view
Island	South Ebey'S Landing	0	n/a	view
Island	South Whidbey State Park	0	n/a	view
Island	Strawberry Point North, Dnr 142	0	n/a	view
Island	Strawberry Point, Dnrr-142	0	n/a	view
Island	Sunlight Beach Road End, East	0	n/a	view
Island	Sunlight Beach Road End, West	0	n/a	view
Island	Sunlight County Parcles	0	n/a	view
Island	Sunrise Beach	0	n/a	view
Island	Sunset Beach Public Access Point	0	n/a	view
Island	Tillicum Beach	0	n/a	view
Island	Tillicum Boat Launch	0	n/a	view
Island	Town Boat Launch	0	n/a	view
Island	Town Park	0	n/a	view
Island	Unknown (Bidn 260134)	0	n/a	view
Island	Useless Bay Tidelands	0	n/a	view
Island	Utsalady County Park	0	n/a	view
Island	W Beach Rd Public Beach Access	0	n/a	view
Island	W Elgar Bay	0	n/a	view
Island	W Penn Cove	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Island	W Penn Cove Beach	0	n/a	view
Island	Whidbey Island Naval Air Station	0	n/a	view
Island	Winas Maylor Pt-East	0	n/a	-
Island	Winas-Maylor Point - West	0	n/a	view
Jefferson	Adelma Beach	0	n/a	view
Jefferson	Admirals Row Association Parcel	0	n/a	view
Jefferson	Admiralty Condo'S	0	n/a	view
Jefferson	Aladdin Motor Inn Beach Access	0	n/a	view
Jefferson	Bay Vista Condo'S	0	n/a	view
Jefferson	Bayview At Chevy Chase	0	n/a	view
Jefferson	Beach 1, Olympic National Park	0	n/a	view
Jefferson	Beach 2, Olympic National Park	0	n/a	view
Jefferson	Beach 3, Olympic National Park	0	n/a	view
Jefferson	Beach 4, Olympic National Park	0	n/a	view
Jefferson	Beach 5, Olympic National Park	0	n/a	view
Jefferson	Beach 6, Olympic National Park	0	n/a	view
Jefferson	Beach 7, Olympic National Park	0	n/a	view
Jefferson	Beckett Point Fishermen'S Club	0	n/a	view
Jefferson	Bolton Peninsula, Beach 56	0	n/a	view
Jefferson	Bridgehaven Community	0	n/a	view
Jefferson	Brinnon Tidelands	0	n/a	view
Jefferson	Brinnonwold	0	n/a	view
Jefferson	Broad Spit	0	n/a	view
Jefferson	Broad Spit, Coast	0	n/a	view
Jefferson	Brown Point, Beach 57B	0	n/a	view
Jefferson	Camp Parsons Boy Scout Brinnon Camp	18	0%	view
Jefferson	Cape George Colony Club	0	n/a	view
Jefferson	Cape George, Beach 407	0	n/a	view
Jefferson	Cape George, Dnrr-409	0	n/a	view
Jefferson	Case Shoal, Beach 59A	0	n/a	-
Jefferson	Central Olympic National Park	0	n/a	view
Jefferson	Chetzeomka Park	0	n/a	view
Jefferson	Chimacum Creek Park	46	9%	view
Jefferson	Coast Dabob East	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Jefferson	Dabob Cove Community	0	n/a	view
Jefferson	Discovery Bay Camp	0	n/a	view
Jefferson	Dosewallips State Park	0	n/a	view
Jefferson	Downtown Port Townsend Business District	0	n/a	view
Jefferson	Duckabush	0	n/a	view
Jefferson	Duckabush Tidelands	0	n/a	view
Jefferson	East Beach County Park	0	n/a	view
Jefferson	East Beach County Park, Mystery Bay	0	n/a	view
Jefferson	Edgewater Condo'S	0	n/a	view
Jefferson	Fisherman'S Point	0	n/a	view
Jefferson	Flapjack Cove Tidelands, Beach 54	0	n/a	-
Jefferson	Fort Flagler State Park	0	n/a	view
Jefferson	Fort Worden State Park	49	4%	view
Jefferson	Gardiner Public Boat Launch	0	n/a	view
Jefferson	H.J. Carroll State Park	0	n/a	-
Jefferson	Hadlock Boat Launch	0	n/a	view
Jefferson	Hadlock Lions Park	0	n/a	view
Jefferson	Herb Beck Marina	27	4%	view
Jefferson	Hicks County Park	0	n/a	view
Jefferson	Hoh Indian Reservation	0	n/a	view
Jefferson	Home Port Marina	0	n/a	view
Jefferson	J.B. Pope Marina Park	0	n/a	view
Jefferson	Jackson Cove, Beach 55	0	n/a	view
Jefferson	Kala Point Beach Community	0	n/a	view
Jefferson	Kalaloch Beach & Campground, Olympic National Park	0	n/a	view
Jefferson	Kinney Point, Beach 404A	0	n/a	view
Jefferson	La Push Third Beach, Olympic National Park	0	n/a	view
Jefferson	Ludlow Bay Village Parcels	0	n/a	view
Jefferson	Ludlow Beach Community	0	n/a	view
Jefferson	Ludlow Beach Tracts #1	0	n/a	view
Jefferson	Marshall Add Community Club	0	n/a	view
Jefferson	Mats Mats Bay Boat Launch	0	n/a	view
Jefferson	Meydenbauer Bay Yacht Club	0	n/a	view
Jefferson	Mystery Bay State Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Jefferson	N Tabook Point	0	n/a	view
Jefferson	Norland Community Beach	0	n/a	view
Jefferson	North Beach County Park	0	n/a	view
Jefferson	North Chetzeomka	0	n/a	view
Jefferson	North Mcdaniel Cove	0	n/a	view
Jefferson	North Quilcene Bay Tidelands	0	n/a	view
Jefferson	North Quilicene Harbor	0	n/a	view
Jefferson	North Squamish Harbor	0	n/a	view
Jefferson	North Triton Cove	0	n/a	view
Jefferson	North Triton Cove Access	0	n/a	view
Jefferson	Northeast Quilcene Bay Tidelands Access	0	n/a	view
Jefferson	Northwest Maritime Center	0	n/a	view
Jefferson	Northwest School Of Wooden Boat Builders	0	n/a	view
Jefferson	Oak Bay	0	n/a	view
Jefferson	Oak Bay County Park	0	n/a	view
Jefferson	Ocean Grove	0	n/a	view
Jefferson	Old Fort Townsend State Park	0	n/a	view
Jefferson	Pleasant Harbor Marina	0	n/a	view
Jefferson	Pleasant Harbor Park	0	n/a	view
Jefferson	Pleasant Harbor State Marine Park	0	n/a	view
Jefferson	Pleasant Tides	0	n/a	view
Jefferson	Point Hudson Marina	0	n/a	view
Jefferson	Point Whitney Tidelands	0	n/a	view
Jefferson	Port Hadlock Yacht Club	0	n/a	view
Jefferson	Port Ludlow Associates Parcels	0	n/a	view
Jefferson	Port Ludlow Condos	0	n/a	view
Jefferson	Port Ludlow Marina	0	n/a	view
Jefferson	Port Of Port Townsend	0	n/a	view
Jefferson	Port Townsend Boat Haven	0	n/a	view
Jefferson	Port Townsend Ferry Docks	0	n/a	view
Jefferson	Port Townsend North Pier And Beach	0	n/a	
Jefferson	Port Townsend Railroad	0	n/a	view
Jefferson	Port Townsned Plaza	0	n/a	view
Jefferson	Protection Island National Wildlife Refuge	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Jefferson	Queets River Mouth	0	n/a	view
Jefferson	Quilcene Bay Tidelands	0	n/a	view
Jefferson	Quilcene Bay Tidelands Access	0	n/a	view
Jefferson	Right Smart Cove State Park	0	n/a	view
Jefferson	Ruby Beach, Olympic National Park	0	n/a	view
Jefferson	Scow Bay	0	n/a	view
Jefferson	Se Dabob Bay	0	n/a	view
Jefferson	Seal Rock Campground	0	n/a	view
Jefferson	Seamount Estates Community Club	0	n/a	view
Jefferson	Seven Sisters Beach, Point Hannon	0	n/a	view
Jefferson	Shine Tidelands	0	n/a	view
Jefferson	Snake And Colvos Rocks	0	n/a	view
Jefferson	South Bay Community Association Parcels	0	n/a	view
Jefferson	South Bay Master Association Parcels	0	n/a	view
Jefferson	South Beach, Olympic National Park	0	n/a	view
Jefferson	South Indian Island County Park	0	n/a	view
Jefferson	South Mcdaniel Cove	0	n/a	view
Jefferson	South Old Port Townsend State Park	0	n/a	view
Jefferson	South Tala Point Public Access	0	n/a	view
Jefferson	Squamish Harbor, Beach 59	0	n/a	view
Jefferson	Tabook Point, Beach 57	0	n/a	view
Jefferson	Tala Shore	0	n/a	view
Jefferson	The Landing Condo'S	0	n/a	view
Jefferson	Toandos Tidelands State Park	0	n/a	view
Jefferson	Triton Cove State Park	0	n/a	view
Jefferson	W Quilcene Bay	0	n/a	view
Jefferson	West Bay, Port Ludlow Associates	0	n/a	<u>view</u>
Jefferson	West Fort Flagler Bridge	0	n/a	view
Jefferson	West Hood Canal Bridge	0	n/a	view
Jefferson	Wolfe Property State Park	0	n/a	view
King	1St Avenue South Bridge Boat Launch	0	n/a	view
King	16Th Avenue West Access	0	n/a	view
King	20Th Place Sw Road End	0	n/a	view
King	30Th St. Road End	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
King	101 Avenue Sw Road End	0	n/a	view
King	146Th Avenue Sw Road End	0	n/a	view
King	Alki Beach Park	46	2%	view
King	Alki Point Light Station	0	n/a	view
King	Anthony'S Home Port Public Access	0	n/a	view
King	Arroyos Natural Area	0	n/a	view
King	Ballard Elks Public Access	0	n/a	view
King	Bell Harbor Marina	0	n/a	view
King	Boeing Creek Reef	0	n/a	-
King	Burton Acres Church Camp	0	n/a	view
King	Burton Acres County Park	0	n/a	view
King	Camp Kilworth	0	n/a	view
King	Camp Sealth	0	n/a	view
King	Camp Sealth South	0	n/a	view
King	Carkeek Beach South	0	n/a	view
King	Carkeek Park	46	7%	view
King	Colman Dock (Seattle Main Terminal)	0	n/a	view
King	Cormorant Cove	0	n/a	view
King	Cove Park	0	n/a	view
King	Dash Point State Park	0	n/a	view
King	Des Moines Fishing Pier	0	n/a	view
King	Des Moines Marina	0	n/a	view
King	Des Moines Marina City Beach Park	0	n/a	view
King	Diagonal St South Pacific Access	0	n/a	view
King	Discovery Park	0	n/a	view
King	Dnr - Seattle Art Museum	0	n/a	view
King	Dockton County Park	0	n/a	view
King	Don Armeni Park	0	n/a	view
King	Dumas Bay Park Wildlife Sanctuary	0	n/a	view
King	Duwamish Public Access, Terminal 105	0	n/a	view
King	Duwamish Waterway Park	0	n/a	view
King	East Vashon Island, Beach 85	0	n/a	view
King	Elliot Bay Marina	0	n/a	view
King	Elliot Bay Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
King	Emma Schmitz Me-Kwa Mooks Park	0	n/a	view
King	Fauntleroy Ferry Dock	0	n/a	view
King	Fern Cove Park	0	n/a	view
King	Fidalgo Street Road End	0	n/a	view
King	Fisherman'S Terminal	0	n/a	-
King	Gilman Ave W End	0	n/a	view
King	Golden Gardens	46	13%	view
King	Harbor Island Marina	0	n/a	view
King	Harbor Marina Corporate Center	0	n/a	view
King	Harbor Vista Park	0	n/a	-
King	Herrings House Park / Terminal 107 Park	0	n/a	view
King	Hiram M. Chittendon Locks	0	n/a	view
King	Jack Block Park	0	n/a	view
King	Jack Perry Memorial Viewpoint	0	n/a	view
King	Lincoln Park	46	11%	view
King	Lisabuela Park	0	n/a	view
King	Lost Lake Park	0	n/a	view
King	Lowman Beach	0	n/a	view
King	Magnolia Park	0	n/a	view
King	Magnolia Tidelands Park	0	n/a	view
King	Magnolia Tidelands Park	0	n/a	-
King	Maury Island Marine Park	0	n/a	view
King	Maury Island, Beach 83	0	n/a	view
King	Myrtle Edwards Park	0	n/a	view
King	Normandy Beach Park/Marine View Park	0	n/a	view
King	Northeast Vashon County Park	0	n/a	view
King	Nw 57Th Street End	0	n/a	view
King	Pier 48 Viewpoint	0	n/a	-
King	Pier 66, Seattle Bell Street Pier	0	n/a	view
King	Pier 69, Seattle	0	n/a	view
King	Pier 69, Seattle Waterfront	0	n/a	view
King	Piers 62 And 63	0	n/a	view
King	Point Heyer 'Kvi' Beach	0	n/a	view
King	Point Robinson County Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
King	Portland St & 8Th Ave. Road End	0	n/a	view
King	Poverty Bay County Park	0	n/a	view
King	Quartermaster Marina	0	n/a	view
King	Quartermaster Yacht Club	0	n/a	view
King	Redondo City Beach	0	n/a	view
King	Redondo County Park	46	20%	view
King	Richey Viewpoint	0	n/a	view
King	Richmond Beach Saltwater Park	0	n/a	view
King	Saltwater State Park	46	11%	view
King	Seacrest Park	0	n/a	view
King	Seahurst County Park	46	2%	view
King	Seattle Aquarium	0	n/a	view
King	Seattle Waterfront Park	0	n/a	view
King	Shilshole Bay Marina	0	n/a	view
King	Smith Cove Park	0	n/a	view
King	South 239Th Beach Access	0	n/a	-
King	Southeast Vashon Island, Beach 79	0	n/a	view
King	Southworth Ferry Dock, Vashon Island	0	n/a	view
King	Spring Beach County Park	0	n/a	view
King	Sw 98Th St End	0	n/a	view
King	Sw Andover St End	0	n/a	view
King	Sw Brace Point Drive Road End	0	n/a	view
King	Sw Bronson Way End	0	n/a	view
King	Sw Caroll St End	0	n/a	view
King	Sw Lander St End	0	n/a	view
King	Sw Spokane St A End	0	n/a	view
King	Sw Spokane St B End	0	n/a	view
King	Sw Spokane St C End	0	n/a	view
King	Terminal 18 Public Access Park	0	n/a	view
King	Terminal 115 Viewpoint	0	n/a	view
King	Three Tree Point	0	n/a	view
King	Three Tree Street Road End	0	n/a	view
King	Tramp Harbor	0	n/a	view
King	Tramp Harbor Fishing Pier	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
King	Tramp Harbor Tidelands	0	n/a	view
King	Vashon Beach Boat Launch	0	n/a	-
King	Vashon Highway Access Point	0	n/a	view
King	W Sheridan St End	0	n/a	view
King	Washington Street Boat Access	0	n/a	view
King	West Vashon Island, Beach 77	0	n/a	view
King	West Vashon Island, Beach 78	0	n/a	view
King	West Vashon Land Trust	0	n/a	view
King	Zenith Overlook & Beach Access	0	n/a	view
Kitsap	American Legion Park	0	n/a	view
Kitsap	Anderson Landing Reserve	0	n/a	view
Kitsap	Anderson Point County Park	0	n/a	view
Kitsap	Anna Smith Park	0	n/a	view
Kitsap	Annapolis Public Access Area	0	n/a	view
Kitsap	Arness County Park	30	7%	view
Kitsap	Aroydy Thai Cuisine	0	n/a	view
Kitsap	Bachmann Park	0	n/a	view
Kitsap	Bainbridge Condominiums	0	n/a	view
Kitsap	Bainbridge Island Land Trust	0	n/a	view
Kitsap	Blake Island State Park	0	n/a	view
Kitsap	Blake Island State Park	0	n/a	-
Kitsap	Blakely Harbor Park	0	n/a	view
Kitsap	Bloedel Reserve	0	n/a	view
Kitsap	Bremerton Ferry Terminal	0	n/a	view
Kitsap	Bremerton Waterfront Condos	0	n/a	view
Kitsap	Bremerton Yacht Club	0	n/a	view
Kitsap	Broom St Road End	0	n/a	view
Kitsap	Brownsville	0	n/a	view
Kitsap	Brownsville Elementary School	0	n/a	view
Kitsap	Brownsville Elementary School North Parcel	0	n/a	view
Kitsap	Camp Indianola	0	n/a	view
Kitsap	Chico Boat Launch	0	n/a	view
Kitsap	Clearwater Creek Trail	0	n/a	view
Kitsap	Colby Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kitsap	Country Club Of Seattle	0	n/a	view
Kitsap	Curley Creek	0	n/a	view
Kitsap	Dock St Road End	0	n/a	view
Kitsap	Dockside Sales And Service	0	n/a	view
Kitsap	Driftwood Cove Beach	0	n/a	view
Kitsap	Dyes Inlet Tidelands	0	n/a	view
Kitsap	Eagle Harbor Condos	0	n/a	view
Kitsap	Eagle Harbor Marina	0	n/a	view
Kitsap	Eagle Harbor Waterfront Park	45	11%	view
Kitsap	East Anderson Cove	0	n/a	view
Kitsap	East Dyes Inlet County Tideland Parcel	0	n/a	view
Kitsap	East Dyes State Tidelands	0	n/a	view
Kitsap	East Hood Canal Bridge	0	n/a	view
Kitsap	East Indianola	0	n/a	view
Kitsap	Eglon Boat Launch	0	n/a	view
Kitsap	Evergreen Park	45	2%	view
Kitsap	Fairy Dell Park	0	n/a	view
Kitsap	Fay Bainbridge State Park	45	0%	<u>view</u>
Kitsap	Ferncliff	0	n/a	view
Kitsap	Fort Ward State Park	0	n/a	view
Kitsap	Foulweather Bluff, Beach 64	0	n/a	view
Kitsap	Foulweather Reserve	0	n/a	view
Kitsap	Front Street Dock	0	n/a	view
Kitsap	Gamble Bay	0	n/a	-
Kitsap	Gilberton Tidelands	0	n/a	view
Kitsap	Gordon Dr Road End	0	n/a	view
Kitsap	Gowen Pl Road End	0	n/a	view
Kitsap	Grotle Dr Road End	0	n/a	view
Kitsap	Guillemot Cove Preserve	0	n/a	view
Kitsap	Hansville, Beach 69	0	n/a	view
Kitsap	Harborview Drive Trail	0	n/a	view
Kitsap	Harbour Marina	0	n/a	view
Kitsap	Harper County Park	0	n/a	view
Kitsap	Harper Public Fishing Pier	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kitsap	Hawley Cove Park	0	n/a	view
Kitsap	Hidden Cove Road End	0	n/a	view
Kitsap	Illahee Pier	0	n/a	view
Kitsap	Illahee Road Bridge	0	n/a	view
Kitsap	Illahee State Park	45	0%	view
Kitsap	Indianola Dock	48	6%	view
Kitsap	Island Seniors Community	0	n/a	<u>view</u>
Kitsap	Joel Pritchard Park	48	2%	view
Kitsap	Keyport Boat Launch	0	n/a	<u>view</u>
Kitsap	Keyport County Park	0	n/a	view
Kitsap	Keyport Marina	0	n/a	view
Kitsap	Kingston Ferry Terminal	0	n/a	view
Kitsap	Kingston Marina	0	n/a	view
Kitsap	Kitsap County Colsolidated Housing Authority	0	n/a	<u>view</u>
Kitsap	Kitsap County Fair Grounds	0	n/a	view
Kitsap	Kitsap Marina & Suldans Boatworks	0	n/a	<u>view</u>
Kitsap	Kitsap Memorial State Park	0	n/a	view
Kitsap	Kitsap Memorial State Park Tidelands	0	n/a	view
Kitsap	Lafayette Ave Road End	0	n/a	<u>view</u>
Kitsap	Lala Cove Country Club	0	n/a	view
Kitsap	Lents Landing	0	n/a	view
Kitsap	Leslie Landing - Winslow Way	0	n/a	view
Kitsap	Liberty Bay Marina	0	n/a	view
Kitsap	Liberty Bay Park	0	n/a	view
Kitsap	Liberty Bay Tidelands	0	n/a	view
Kitsap	Lions Field	51	14%	<u>view</u>
Kitsap	Little Norway Boardwalk	0	n/a	view
Kitsap	Lovell Avenue Road End	0	n/a	view
Kitsap	Lytle Road End - Community Park	0	n/a	<u>view</u>
Kitsap	Madrona Heights	0	n/a	view
Kitsap	Madrona Point Subdivisions	0	n/a	view
Kitsap	Manchester State Park	0	n/a	view
Kitsap	Manette Bridge	0	n/a	view
Kitsap	Manzanita Bay	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kitsap	Marine View Estates	0	n/a	view
Kitsap	Miller Bay Boat Launch	0	n/a	view
Kitsap	Miller Bay Tidelands	0	n/a	view
Kitsap	Misery Point Boat Launch	0	n/a	view
Kitsap	Mitchell Point	0	n/a	view
Kitsap	Murden Cove, Blue Heron Hill Homeowners	0	n/a	view
Kitsap	N Fletcher Bay	0	n/a	view
Kitsap	Nad Marine Park	0	n/a	view
Kitsap	Nelson Park	0	n/a	view
Kitsap	Nesika Bay	0	n/a	view
Kitsap	Net Shed Park	0	n/a	view
Kitsap	North Dyes Community	0	n/a	view
Kitsap	North Lebo	0	n/a	view
Kitsap	North Murden Cove (State)	0	n/a	view
Kitsap	North Oyster Bay	0	n/a	view
Kitsap	North Skiff Point	0	n/a	view
Kitsap	North Wing Point	0	n/a	view
Kitsap	Northeast Phinney Bay	0	n/a	view
Kitsap	Northwest Point White	0	n/a	view
Kitsap	Ocean Drive Road End	0	n/a	view
Kitsap	Olalla Bay Tidelands	0	n/a	view
Kitsap	Olalla Beach	0	n/a	view
Kitsap	Olalla Boat Launch	0	n/a	view
Kitsap	Old Man House Park	0	n/a	view
Kitsap	Olympic Terrace Water Association Tidelands	0	n/a	view
Kitsap	Oyster Bay	0	n/a	view
Kitsap	Oyster Bay Plaza	0	n/a	view
Kitsap	Oyster Plant Park	0	n/a	view
Kitsap	Pebble Beach Rd End	0	n/a	view
Kitsap	Point No Point County Park, Dnr-68	0	n/a	view
Kitsap	Point No Point Lighthouse Park	45	0%	view
Kitsap	Point White	0	n/a	view
Kitsap	Point White Dock	0	n/a	view
Kitsap	Pomeroy Park - Manchester Beach	60	33%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kitsap	Port Madison Water Company Open Space	0	n/a	view
Kitsap	Port Madison Yacht Club	0	n/a	view
Kitsap	Port Of Brownsville Marine Park And Marina	0	n/a	view
Kitsap	Port Of Waterman Beach	0	n/a	view
Kitsap	Port Orchard Boat Launch	0	n/a	view
Kitsap	Port Orchard Marina	0	n/a	view
Kitsap	Port Orchard Pier	0	n/a	view
Kitsap	Port Orchard Waterfront Businesses	0	n/a	view
Kitsap	Port Orchard Waterfront Park	0	n/a	view
Kitsap	Port Orchard Yacht Club	0	n/a	view
Kitsap	Port Washington Marina	0	n/a	view
Kitsap	Poulsbo Boat Launch And Marina	0	n/a	view
Kitsap	Poulsbo Yacht Club	0	n/a	view
Kitsap	President Point Beach	0	n/a	view
Kitsap	Prospect Point Beach	0	n/a	view
Kitsap	Queen City Yacht Club	0	n/a	view
Kitsap	Rich Passage Estates	0	n/a	view
Kitsap	Richcove Beach	0	n/a	view
Kitsap	Rockaway Beach Park	0	n/a	view
Kitsap	Rocky Point	0	n/a	view
Kitsap	Rolling Bay	0	n/a	view
Kitsap	Roosevelt Field	0	n/a	view
Kitsap	Ross Point Tidelands	0	n/a	view
Kitsap	S Agate Pass	0	n/a	view
Kitsap	S Driftwood Cove	0	n/a	view
Kitsap	Salisbury Point County Park	0	n/a	view
Kitsap	Salisbury Point County Park Tidelands	0	n/a	view
Kitsap	Sanwick Road End	0	n/a	view
Kitsap	Scenic Beach State Park	45	4%	view
Kitsap	Schel-Chelb Estuary	0	n/a	view
Kitsap	Seabeck Christian Conference Center	45	0%	view
Kitsap	Seabeck Land Trust	0	n/a	view
Kitsap	Seabold Road End	0	n/a	view
Kitsap	Seabold Tidelands	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kitsap	Seattle Yacht Club	0	n/a	view
Kitsap	Seaview Terrace Homeowners	0	n/a	view
Kitsap	Silverdale Waterfront Park	45	24%	view
Kitsap	Sinclair Inlet Wildlife Viewing Area	0	n/a	view
Kitsap	Skogen Lane Road End	0	n/a	view
Kitsap	South Beach Condominiums	0	n/a	view
Kitsap	South Brownsville	0	n/a	view
Kitsap	South Colby	0	n/a	view
Kitsap	South Eagle Harbor Tidelands	0	n/a	view
Kitsap	South Fay Bainbridge	0	n/a	view
Kitsap	South Murden Cove	0	n/a	view
Kitsap	South Oyster Bay	0	n/a	view
Kitsap	South Point Southworth	0	n/a	view
Kitsap	South Skiff Point	0	n/a	view
Kitsap	South Tekiu, Dnr-40	0	n/a	view
Kitsap	South Warren Bridge	0	n/a	view
Kitsap	South Waterman Point	0	n/a	view
Kitsap	Southeast Port Washington Narrows	0	n/a	view
Kitsap	Southwest Ostrich Bay	0	n/a	view
Kitsap	Southworth-Vashon Ferry	0	n/a	view
Kitsap	Stavis Bay Beach	0	n/a	view
Kitsap	Sun Day Cove	0	n/a	view
Kitsap	Sunny Cove Community Club	0	n/a	view
Kitsap	Suquamish (Old Man House)	0	n/a	view
Kitsap	T'Chookwop Park	0	n/a	view
Kitsap	Tacoma Christian	0	n/a	view
Kitsap	Taylor Ave Road End	0	n/a	view
Kitsap	Tekiu Point	0	n/a	view
Kitsap	Thorpe Road	0	n/a	view
Kitsap	Tracyton Boat Launch	0	n/a	view
Kitsap	Tyee Yacht Club	0	n/a	view
Kitsap	Ward Avenue Public Road End	0	n/a	view
Kitsap	Waterman Public Pier	0	n/a	view
Kitsap	West Dyes Inlet	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kitsap	West Madrona Point Subdivisions	0	n/a	view
Kitsap	West Point Jefferson	0	n/a	view
Kitsap	West Port Madison Park Nature Preserve	0	n/a	view
Kitsap	West Wing Point	0	n/a	view
Kitsap	Wharf St Road End	0	n/a	view
Kitsap	Wilson Creek	0	n/a	view
Kitsap	Winslow Ferry Terminal	0	n/a	view
Kitsap	Winslow Wharf Marina	0	n/a	view
Kitsap	Woodland Drive Road End	0	n/a	view
Kitsap	Woodlawn Memorial Parl	0	n/a	view
Kitsap	Wyndown Acres Community Beach	0	n/a	view
Kitsap	Wynn-Jones County Park	0	n/a	view
Kitsap	Yacht Club Broiler Tidelands	0	n/a	view
Mason	Alderbrook Resort	0	n/a	view
Mason	Allyn Waterfront Park	56	41%	view
Mason	Allyn Waterfront Park Tidelands	0	n/a	view
Mason	Arcadia Boat Launch	0	n/a	view
Mason	Belfair State Park	0	n/a	view
Mason	Cushman Park	0	n/a	-
Mason	Dewatto Bay Beach 44B	0	n/a	-
Mason	Dewatto Bay, Beach 44A	0	n/a	view
Mason	Eagle Creek Recreational Tidelands	0	n/a	view
Mason	End Of Twanoh State Park	0	n/a	view
Mason	Fudge Point	0	n/a	view
Mason	Grapeview	0	n/a	view
Mason	Grapeview Boat Launch	0	n/a	view
Mason	Grapeview Harbor Marina	0	n/a	view
Mason	Hartstene Bridge Boat Launch	0	n/a	view
Mason	Hartstene Island Bridge	0	n/a	view
Mason	Hartstene Island, Beach 33	0	n/a	view
Mason	Hartstene Pointe	0	n/a	view
Mason	Hood Canal Girl Scout Camp	0	n/a	view
Mason	Hood Canal Saltwater Park	0	n/a	view
Mason	Hood Canal, Beach 46	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Mason	Hood Canal, Beach 47	0	n/a	view
Mason	Hood Canal, Beach 48	0	n/a	view
Mason	Hoodsport Hatchery	0	n/a	view
Mason	Hoodsport Marina	0	n/a	view
Mason	Hoodsport, Beach 43 (N Hoodsport Hatchery)	0	n/a	view
Mason	Hope Island (Mason Co.)	0	n/a	view
Mason	Jacoby'S Shorecrest County Park	0	n/a	-
Mason	Jarrell Cove State Park	0	n/a	view
Mason	Jarrell Cove, Beach 34	0	n/a	view
Mason	Jorstad Creek Resort	0	n/a	view
Mason	Jorsted Creek Beach	0	n/a	-
Mason	Kennedy Creek Tidelands	0	n/a	view
Mason	Lilliwaup Public Beach	0	n/a	-
Mason	Lilliwaup Tidelands State Park	0	n/a	view
Mason	Little Skookum	0	n/a	view
Mason	Lynch Cove / Hood Canal Land Trust	0	n/a	view
Mason	Main St Rd End	0	n/a	view
Mason	Manke Lumber Company Access	0	n/a	view
Mason	Mason County - Unknown	0	n/a	view
Mason	Mcmicken Island State Park	0	n/a	view
Mason	Mcmicken Island, Beach 25	0	n/a	-
Mason	N Case Inlet	0	n/a	view
Mason	North Bay Kayak Park	0	n/a	view
Mason	North Bay Res Access	0	n/a	view
Mason	North Bay Res Tidelands	0	n/a	view
Mason	North Jorstad Creek	0	n/a	view
Mason	North Oakland Bay	0	n/a	view
Mason	Northeast Case Inlet Tidelands	0	n/a	view
Mason	Northshore Dock And Boat Launch	0	n/a	-
Mason	Northwest Case Inlet Tidelands	0	n/a	view
Mason	Oakland Bay	0	n/a	view
Mason	Oakland Bay & Chapman Cove Exclusive	0	n/a	view
Mason	Oakland Bay Recreational Tidelands	0	n/a	view
Mason	Oakland Bay Tidelands	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Mason	Octopus Hole	0	n/a	-
Mason	Olympia Yacht Club - Pickering Passgae	0	n/a	view
Mason	Olympic Beach Club	0	n/a	view
Mason	Pirates Cove Country Club	0	n/a	view
Mason	Port Of Allyn Public Boat Launch	0	n/a	view
Mason	Port Of Allyn Public Dock	0	n/a	view
Mason	Potlatch State Park	47	23%	view
Mason	Potlatch State Park Tidelands	0	n/a	view
Mason	Reach Island Bridge	0	n/a	view
Mason	Rendsland Creek	0	n/a	view
Mason	Seabrook Community Beach	0	n/a	view
Mason	Shelton Boat Launch And Marina	0	n/a	view
Mason	Shorecrest (Jacoby) County Park	0	n/a	view
Mason	Skokomish Tidelands	0	n/a	-
Mason	South Graham Point	0	n/a	view
Mason	South Jorsted Creek	0	n/a	view
Mason	South Of Lilliwaup Tidelands State Park	0	n/a	view
Mason	Squaxin Island State Park	0	n/a	-
Mason	Stretch Island Bridge	0	n/a	view
Mason	Stretch Island, Beach 20	0	n/a	view
Mason	Stretch Point State Park	0	n/a	view
Mason	Summer Tide Resort And Marina	0	n/a	view
Mason	Timberlake Community Beach	0	n/a	view
Mason	Twanoh State Park	48	8%	view
Mason	Union Public Boat Launch	0	n/a	view
Mason	Union River Wildlife Area (Theler Area)	0	n/a	view
Mason	Walker County Park	47	4%	view
Pacific	10Th Street Access	0	n/a	view
Pacific	Bay Avenue / Ocean Park Beach	0	n/a	view
Pacific	Bay Center Boat Channel	0	n/a	view
Pacific	Bolstead Beach Access	0	n/a	view
Pacific	Bone River	0	n/a	view
Pacific	Bruceport County Park	0	n/a	view
Pacific	Bush Pioneer Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pacific	Cape Disappointment Coast Guard Station	0	n/a	view
Pacific	Cape Disappointment State Park	0	n/a	view
Pacific	Cape Shoalwater	0	n/a	view
Pacific	Chinook County Park	0	n/a	-
Pacific	City Of South Bend Boat Haven	0	n/a	view
Pacific	Cranberry Road Beach Access	0	n/a	view
Pacific	Fort Columbia Historical State Park	0	n/a	-
Pacific	Grayland Beach State Park	0	n/a	view
Pacific	Hawks Point	0	n/a	view
Pacific	Highway 101 Bridge, South Willipa	0	n/a	view
Pacific	Hines	0	n/a	view
Pacific	Holman	0	n/a	view
Pacific	IIIwaco Marina	0	n/a	-
Pacific	Klipsan Beach Access	0	n/a	view
Pacific	Leadbetter Point State Park Beach	0	n/a	view
Pacific	Lewis And Clark Campsite State Park	0	n/a	-
Pacific	Lewis Unit, Willapa Nwr	0	n/a	view
Pacific	Long Beach	0	n/a	view
Pacific	Long Beach Boardwalk	0	n/a	view
Pacific	Long Island Unit, Willapa Nwr	0	n/a	view
Pacific	Loomis	0	n/a	view
Pacific	Loomis Lake	0	n/a	view
Pacific	Midway Beach Access	0	n/a	view
Pacific	Nacotta Tidelands	0	n/a	view
Pacific	Nahcotta Small Boat Basin	0	n/a	view
Pacific	Nemah	0	n/a	view
Pacific	Nemah Li	0	n/a	view
Pacific	Nemah River	0	n/a	view
Pacific	North Cove	0	n/a	view
Pacific	North Cove Beach Access	0	n/a	view
Pacific	North Klipsan	0	n/a	view
Pacific	North River Public Fishing Access	0	n/a	view
Pacific	North Willapa Bay - Cascade Land Conservancy	0	n/a	view
Pacific	North Willapa National Wildlife Refuge	0	n/a	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Pacific	Ocean Park	0	n/a	view
Pacific	Ocean Park North	0	n/a	view
Pacific	Old Highway 105 Beach Access	0	n/a	view
Pacific	Oysterville Beach Access	0	n/a	view
Pacific	Pacific Beach	0	n/a	view
Pacific	Pacific Pines State Park	0	n/a	view
Pacific	Palix River Boat Launch	0	n/a	view
Pacific	Pioneer Road End	0	n/a	-
Pacific	Rhodesia Beach	0	n/a	view
Pacific	Riekkola Unit, Willapa Nwr	0	n/a	view
Pacific	Sandy Point	0	n/a	view
Pacific	Seaview	0	n/a	view
Pacific	Seaview Beach Access	0	n/a	view
Pacific	South Bend Fishing Access And Boat Launch	0	n/a	view
Pacific	South Bend State Dock	0	n/a	view
Pacific	South Grayland Beach	0	n/a	view
Pacific	South Naselle River - State	0	n/a	view
Pacific	South Nemah River - State	0	n/a	view
Pacific	Southeast Wilson Point	0	n/a	view
Pacific	Tokeland Marina	0	n/a	view
Pacific	Tokeland Marina Tidelands	0	n/a	view
Pacific	Warrenton Cannery Road Beach Access	0	n/a	view
Pacific	Willapa Harbor Airport	0	n/a	view
Pacific	Willapa Landing	0	n/a	-
Pacific	Willapa National Wildlife Refuge Boat Launch	0	n/a	view
Pierce	36Th Street Nw Road End Boat Launch	0	n/a	view
Pierce	182Nd Avenue Kpn Road End	0	n/a	view
Pierce	All Saints Camp	0	n/a	view
Pierce	Amsterdam Bay	0	n/a	view
Pierce	Anderson Island Ferry Dock	0	n/a	view
Pierce	Anderson Island, Beach 8	0	n/a	view
Pierce	Andrew Anderson'S Marine Park, North	0	n/a	view
Pierce	Andrew Anderson'S Marine Park, South	0	n/a	view
Pierce	Arrbella'S Marina	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pierce	Austin Estuary Park	0	n/a	view
Pierce	Berg Drive Road End Boat Launch	0	n/a	view
Pierce	Browns Point Lighthouse Park	45	11%	view
Pierce	Camp Coleman	0	n/a	view
Pierce	Camp Gallagher	0	n/a	view
Pierce	Camp Seymour	0	n/a	view
Pierce	Cedrona Cove Marina	0	n/a	view
Pierce	Chambers Creek Properties	45	2%	view
Pierce	Chinook Landing Marina	0	n/a	view
Pierce	Commencement Bay North	0	n/a	view
Pierce	Cromwell	0	n/a	view
Pierce	Cutts Island State Park	0	n/a	view
Pierce	Dash Point County Park	46	13%	view
Pierce	Days Island	0	n/a	-
Pierce	Devils Head	0	n/a	view
Pierce	Devils Head, Beach 13	0	n/a	view
Pierce	Dickman Mill Park	0	n/a	view
Pierce	Eagle Island State Park	0	n/a	view
Pierce	East Devils Point	0	n/a	view
Pierce	East Ketron Island	0	n/a	view
Pierce	Fire Department # 5 Park	0	n/a	view
Pierce	Fireman'S Park	0	n/a	-
Pierce	Fort Lewis	0	n/a	view
Pierce	Fox Island Bridge	0	n/a	view
Pierce	Fox Island Bridge Boat Launch	0	n/a	view
Pierce	Fox Island Fishing Pier	0	n/a	view
Pierce	Fox Island Yacht Club-Cedrona Cove	0	n/a	view
Pierce	Gig Harbor City Park	0	n/a	view
Pierce	Gig Harbor Marina	0	n/a	view
Pierce	Gig Harbor Private Marina	0	n/a	view
Pierce	Gig Harbor Waterfront	0	n/a	view
Pierce	Green Point	0	n/a	view
Pierce	Haley State Park	0	n/a	view
Pierce	Hall Road End Boat Launch	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pierce	Hamilton Park	0	n/a	view
Pierce	Harbor Lights Restaurant	0	n/a	view
Pierce	Harborview Drive Road End Viewpoint	0	n/a	view
Pierce	Herron Ferry Terminal -Main Land	0	n/a	view
Pierce	Herron Island Ferry Dock	0	n/a	view
Pierce	Home Boat Launch	0	n/a	view
Pierce	Hylebos Marina	0	n/a	view
Pierce	Jack Hyde Park	0	n/a	view
Pierce	Jerisich Park And City Dock	0	n/a	view
Pierce	Joemma State Park	0	n/a	view
Pierce	Johnnys Dock & Marina	0	n/a	view
Pierce	Johnson South Sound Preserve	0	n/a	view
Pierce	Kamas Drive Road End	0	n/a	view
Pierce	Katie Downs Tavern	0	n/a	view
Pierce	Ketron Island Ferry Terminal/Dock	0	n/a	view
Pierce	Kopachuck State Park	51	2%	view
Pierce	Kpn Olman Vaugh Bay Sandspit, Beach 18	0	n/a	view
Pierce	Lakebay School	0	n/a	view
Pierce	Longbranch Boat Launch	0	n/a	view
Pierce	Longbranch Dock	0	n/a	view
Pierce	Luciano'S Italian Restaurant	0	n/a	view
Pierce	Maple Hollow Recreation Site	0	n/a	view
Pierce	Memorial Park	0	n/a	-
Pierce	Murphy'S Landing Marina	0	n/a	view
Pierce	N Amsterdam Bay	0	n/a	view
Pierce	N Fort Lewis	0	n/a	view
Pierce	N Fox Point	0	n/a	view
Pierce	N Green Point	0	n/a	view
Pierce	Narrows Park	0	n/a	view
Pierce	Narrows/Day Island Marina	0	n/a	view
Pierce	North Beach Dock, Herron Island	0	n/a	view
Pierce	North Beach, Herron Island	0	n/a	view
Pierce	North Pitt Pass	0	n/a	view
Pierce	North Steilacoom Beach	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pierce	North Sunrise Beach	0	n/a	view
Pierce	North Taylor Bay	0	n/a	view
Pierce	Northeast Narrows	0	n/a	view
Pierce	Northwest Gig Harbor	0	n/a	view
Pierce	Northwest Narrows	0	n/a	view
Pierce	Ocean Fish Co - Johnny'S Seafood	0	n/a	view
Pierce	Old Fox Island Ferry Terminal	0	n/a	view
Pierce	Old Fox Island Ferry Terminal South	0	n/a	view
Pierce	Old Town Dock	0	n/a	view
Pierce	Ole & Charlie'S Marina	0	n/a	view
Pierce	Oro Bay / Young Life Beach	0	n/a	view
Pierce	Owens Beach / Point Defiance Park	45	0%	view
Pierce	Penrose Point State Park	0	n/a	view
Pierce	Pioneer Orchard Park	0	n/a	-
Pierce	Pitt Passage, Beach 6	0	n/a	view
Pierce	Point Evans, Beach 36	0	n/a	view
Pierce	Point Fosdick, Beach 1	0	n/a	view
Pierce	Point Fosdick, Beach 1A	0	n/a	view
Pierce	Puget Creek Beach	0	n/a	view
Pierce	Purdy Sandspit County Park	46	13%	<u>view</u>
Pierce	Ram American Grill & Fishhouse	0	n/a	<u>view</u>
Pierce	Randall Drive Boat Launch	0	n/a	view
Pierce	Ruston Way Waterfront Park	0	n/a	view
Pierce	S Eagle Island, Anderson Island	0	n/a	view
Pierce	Salt Point / South Gordon Point	0	n/a	view
Pierce	Saltars Point Beach	0	n/a	view
Pierce	Shenanigan'S Restaurant	0	n/a	view
Pierce	Silver Cloud Inn/Tacoma	0	n/a	view
Pierce	Solo Point Boat Launch	0	n/a	view
Pierce	Soundview Camp	0	n/a	view
Pierce	South Anderson Island	0	n/a	view
Pierce	South Beach, Herron Island	0	n/a	view
Pierce	South Filucy Bay	0	n/a	view
Pierce	South Hale Passage	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pierce	South Maple Hollow	0	n/a	view
Pierce	South Nearns Point	0	n/a	view
Pierce	South Oro Bay	0	n/a	view
Pierce	South Otso Point	0	n/a	view
Pierce	Southeast Narrows	0	n/a	view
Pierce	Southwest Anderson Island	0	n/a	view
Pierce	Steilacoom Boat Launch	0	n/a	view
Pierce	Steilacoom Ferry Docks	0	n/a	view
Pierce	Steilacoom Marina	0	n/a	view
Pierce	Sunnyside Beach North	0	n/a	view
Pierce	Sunnyside Beach Park	45	0%	view
Pierce	Sunrise Beach Park	0	n/a	view
Pierce	Tacoma Demolay Boys Camp	0	n/a	view
Pierce	Taylor Bay	0	n/a	view
Pierce	Taylor Bay, Beach 16	0	n/a	view
Pierce	Thea Foss City Marina	0	n/a	view
Pierce	Thea Foss Waterway	0	n/a	view
Pierce	Thea'S Park	0	n/a	view
Pierce	Titlow Park	47	13%	view
Pierce	Totem Marina	0	n/a	view
Pierce	Treble Point	0	n/a	view
Pierce	Tyee Marina	0	n/a	view
Pierce	Waterfront Dock / Ruston Way	142	35%	view
Pierce	Wauna Boat Launch	0	n/a	view
Pierce	Wauna, Beach 35	0	n/a	view
Pierce	Wauna, Beach 35A	0	n/a	view
Pierce	West Gig Harbor	0	n/a	view
Pierce	West Horsehead Bay	0	n/a	view
Pierce	West Ketron Island	0	n/a	view
Pierce	West Oro Bay Beach	0	n/a	view
Pierce	Westshore Marina	0	n/a	view
Pierce	Windy Bluff	0	n/a	view
Pierce	Wollochet Bay - Tacoma Yacht Club	0	n/a	view
Pierce	Wollochet Bay Boat Launch	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Pierce	Wollochet Bay Estuary Park	0	n/a	view
Pierce	Wyckoff Shoal, Beach 39	0	n/a	-
San Juan	4Th Of July Beach, Dnr 326	0	n/a	view
San Juan	Agate Beach County Park	0	n/a	view
San Juan	Albert Jensen And Sons Marine Repair	0	n/a	view
San Juan	Aleck Bay, Dnr-308	0	n/a	view
San Juan	American Camp	0	n/a	view
San Juan	Andrews Bay	0	n/a	view
San Juan	Armitage Island, Beach 290	0	n/a	view
San Juan	Barnes Island, Beach 229	0	n/a	view
San Juan	Bartwood Lodge	0	n/a	view
San Juan	Bay Head Yacht Basin And Condominiums	0	n/a	view
San Juan	Bazalgette Point	0	n/a	view
San Juan	Beach Haven, Beach 238	0	n/a	view
San Juan	Blackie Brady Memorial Beach	0	n/a	view
San Juan	Blakely Island Marina	0	n/a	view
San Juan	Blakely Island, Beach 290	0	n/a	view
San Juan	Blakely Island, Beach 292	0	n/a	view
San Juan	Blakely Island, Beach 292A	0	n/a	view
San Juan	Blind Bay Dnr-260D	0	n/a	view
San Juan	Blind Island State Park	0	n/a	view
San Juan	Broken Point, Beach 260A	0	n/a	view
San Juan	Cactus Islands, Beach 353A	0	n/a	view
San Juan	Cactus Islands, Beach 353B	0	n/a	view
San Juan	Camp Orkila	0	n/a	view
San Juan	Canoe Island, Beach 296A	0	n/a	view
San Juan	Cape St. Mary, Dnr-311	0	n/a	view
San Juan	Castle Island State Park	0	n/a	-
San Juan	Cattle Point	0	n/a	view
San Juan	Cattle Point Lighthouse Recreation Site	0	n/a	view
San Juan	Cattle Point, Beach 326A	0	n/a	view
San Juan	Cayou Quay Marina	0	n/a	view
San Juan	Center Island Recreation Site	0	n/a	view
San Juan	Center Island, Beach 324A	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Juan	Channel Vista Shore Access	0	n/a	view
San Juan	Clark Island State Park	0	n/a	view
San Juan	Coon Island, Beach 245A	0	n/a	view
San Juan	Crane Island, Beach 250A	0	n/a	view
San Juan	Crane Island, Beach 250B	0	n/a	view
San Juan	Deadman Island	0	n/a	view
San Juan	Decatur Island, Beach 319A	0	n/a	view
San Juan	Decatur Island, Beach 323	0	n/a	view
San Juan	Decatur Island, Beach 324	0	n/a	view
San Juan	Decatur Island, Beach 325A	0	n/a	view
San Juan	Decatur Shores Community	0	n/a	<u>view</u>
San Juan	Decatur Shores Community Dock	0	n/a	view
San Juan	Deer Harbor Preserve	0	n/a	<u>view</u>
San Juan	Deer Harbor, Beach 240B	0	n/a	view
San Juan	Deer Harbor, Crane Island	0	n/a	view
San Juan	Deer Point, Beach 277	0	n/a	view
San Juan	Diamond Point, Beach 265	0	n/a	view
San Juan	Dnr-321	0	n/a	view
San Juan	Dnrr-299	0	n/a	view
San Juan	Doe Bay, Beach 281A	0	n/a	view
San Juan	Doe Island State Park	0	n/a	<u>view</u>
San Juan	Double Island, Beach 251	0	n/a	view
San Juan	Double Island, Beach 251A	0	n/a	<u>view</u>
San Juan	Eagle Cove	0	n/a	view
San Juan	Eagle Cove County Park	0	n/a	view
San Juan	East Sound, Beach 266	0	n/a	view
San Juan	East Sound, Beach 267	0	n/a	view
San Juan	East Sound, Beach 270	0	n/a	view
San Juan	East Sound, Beach 274	0	n/a	view
San Juan	East Sound, Beach 275	0	n/a	view
San Juan	Edwards Point Community	0	n/a	<u>view</u>
San Juan	English Camp Historic Park	0	n/a	view
San Juan	Ewing Island, Beach 367A	0	n/a	<u>view</u>
San Juan	Fish Creek Public Access	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Juan	Fisherman Bay	0	n/a	view
San Juan	Fisherman Bay Preserve	0	n/a	view
San Juan	Fishery Point, Beach 363	0	n/a	view
San Juan	Fishing Bay Public Dock	0	n/a	view
San Juan	Fishing Bay Waterfront Park	0	n/a	view
San Juan	Flat Point, Beach 295	0	n/a	view
San Juan	Flattop Island	0	n/a	view
San Juan	Flower Isle, Beach 266B	0	n/a	view
San Juan	Freeman Island State Park	0	n/a	view
San Juan	Friday Harbor Ferry Landing	0	n/a	view
San Juan	Friday Harbor Labs	0	n/a	view
San Juan	Frost Island, Beach 318	0	n/a	view
San Juan	Gibson'S North Beach Inn	0	n/a	view
San Juan	Goose Island	0	n/a	view
San Juan	Griffin Bay Recreation Site	0	n/a	view
San Juan	Gull Rock	0	n/a	view
San Juan	Hankin Point, Beach 264	0	n/a	view
San Juan	Harney Channel, Beach 262	0	n/a	view
San Juan	Henry Island, Beach 339A	0	n/a	view
San Juan	Hunter Bay County Dock	0	n/a	view
San Juan	Hunter Bay, Beach 313	0	n/a	view
San Juan	Hunter Bay, Beach 313A	0	n/a	view
San Juan	Hunter Bay, Beach 314	0	n/a	view
San Juan	Iceberg Island	0	n/a	view
San Juan	Indian Island, Beach 270A	0	n/a	view
San Juan	Island Marine Center	0	n/a	view
San Juan	Jackson Beach County Park	0	n/a	view
San Juan	James Island State Park	0	n/a	view
San Juan	Johns Island Lighthouse Reserve	0	n/a	view
San Juan	Johns Island, Beach 356	0	n/a	view
San Juan	Johns Island, Dnr 356	0	n/a	view
San Juan	Johns Point, Beach 307	0	n/a	view
San Juan	Jones Island State Park	0	n/a	view
San Juan	Justice Island	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Juan	Justice Island, Dnr-367C	0	n/a	view
San Juan	Kellett Bluff, Beach 341	0	n/a	view
San Juan	Lime Kiln Point State Park	0	n/a	view
San Juan	Lindsey Memorial Park	0	n/a	view
San Juan	Little Patos Island, Beach 366A	0	n/a	view
San Juan	Little Sucia	0	n/a	view
San Juan	Lopez Ferry Terminal	0	n/a	view
San Juan	Lopez Island Marina	0	n/a	view
San Juan	Lopez Island Tidelands	0	n/a	-
San Juan	Lopez Island, Beach 305	0	n/a	view
San Juan	Lopez Pass, Beach 312A	0	n/a	<u>view</u>
San Juan	Lopez Rd End	0	n/a	view
San Juan	Lopez Sound, Beach 315	0	n/a	<u>view</u>
San Juan	Lopez Sound, Beach 317	0	n/a	view
San Juan	Lover'S Cove, Beach 239	0	n/a	view
San Juan	Mackaye Harbor Boat Launch	0	n/a	view
San Juan	Matia Island State Park	0	n/a	view
San Juan	Mcardle Bay, Dnr-309	0	n/a	<u>view</u>
San Juan	Mcconnell Island, Beach 245	0	n/a	<u>view</u>
San Juan	Mccracken Point, Beach 340	0	n/a	view
San Juan	Mckaye Harbor, Beach 306	0	n/a	view
San Juan	Mitchell Bay Islet	0	n/a	view
San Juan	Moran State Park	0	n/a	view
San Juan	Mosquito Pass, Dnr 344	0	n/a	view
San Juan	Mt. Shadows Homeowners Beach	0	n/a	view
San Juan	Mud Bay Dock Road End	0	n/a	view
San Juan	Mud Bay Tidelands	0	n/a	view
San Juan	Mud Bay, Beach P1	0	n/a	view
San Juan	N Blakely Island	0	n/a	view
San Juan	N Spencer Spit	0	n/a	view
San Juan	Neck Point, Beach 259A	0	n/a	view
San Juan	Neil Tarte Memorial County Park	0	n/a	-
San Juan	North Beach Road End	0	n/a	view
San Juan	North Finger Island, Beach 367B	0	n/a	view

San Juan         Northeast Stuart Island, Beach 356         0         n/a         view           San Juan         Northwest Decatur Island         0         n/a         view           San Juan         Northwest Mcconnell Island Rock         0         n/a         view           San Juan         Oak Island, Beach 257A         0         n/a         view           San Juan         Obstruction Island Park         0         n/a         view           San Juan         Obstruction Pass Boat Launch         0         n/a         view           San Juan         Obstruction Pass County Park         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Orcas Island Fery Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island State Park	County	Beach	Total Samples	% of samples exceeding BAV	View
San Juan         Northwest Mcconnell Island Rock         0         n/a         yiew           San Juan         Oak Island, Beach 257A         0         n/a         yiew           San Juan         Obstruction Island Park         0         n/a         yiew           San Juan         Obstruction Pass Boat Launch         0         n/a         yiew           San Juan         Obstruction Pass Recreation Site         0         n/a         yiew           San Juan         Obstruction Pass Recreation Site         0         n/a         yiew           San Juan         Obstruction Pass Recreation Site         0         n/a         yiew           San Juan         Obstruction Pass Recreation Site         0         n/a         yiew           San Juan         Obstruction Pass Recreation Site         0         n/a         yiew           San Juan         Obstruction Pass Recreation Site         0         n/a         yiew           San Juan         Otga County Park         0         n/a         yiew           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         yiew           San Juan         Orcas Island Yacht Club         0         n/a         yiew           San Juan <t< td=""><td>San Juan</td><td>Northeast Stuart Island, Beach 356</td><td>0</td><td>n/a</td><td>view</td></t<>	San Juan	Northeast Stuart Island, Beach 356	0	n/a	view
San Juan         Oak Island, Beach 257A         0         n/a         view           San Juan         Obstruction Island Park         0         n/a         view           San Juan         Obstruction Pass Boat Launch         0         n/a         view           San Juan         Obstruction Pass County Park         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Oliga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 282	San Juan	Northwest Decatur Island	0	n/a	view
San Juan         Obstruction Island Park         0         n/a         view           San Juan         Obstruction Pass Boat Launch         0         n/a         view           San Juan         Obstruction Pass Recreation Site         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Odlin County Park         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Orcas Island Stach Park         0         n/a         view           San Juan         Orcas Island Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view	San Juan	Northwest Mcconnell Island Rock	0	n/a	view
San Juan         Obstruction Pass Boat Launch         0         n/a         view           San Juan         Obstruction Pass County Park         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Odlin County Park         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Olga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Yacht Club         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 279         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Orts Perkins Day Park         0         n/a         view           San Juan         Patos Island State Park         0 <t< td=""><td>San Juan</td><td>Oak Island, Beach 257A</td><td>0</td><td>n/a</td><td>view</td></t<>	San Juan	Oak Island, Beach 257A	0	n/a	view
San Juan         Obstruction Pass Recreation Site         0         n/a         view           San Juan         Obstruction Pass Recreation Site         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Odlin County Park         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Olga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island State Park         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 279         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Otis Perkins Day Park         0         n/a         view           San Juan         Patos Island State Park         0	San Juan	Obstruction Island Park	0	n/a	view
San Juan         Obstruction Pass Recreation Site         0         n/a         view           San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Odlin County Park         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Olga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Seach 266B         0         n/a         view           San Juan         Orcas Island, Beach 279         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Ortas Island, Beach 283         0         n/a         view           San Juan         Patos Island State Park         0         n/a         view           San Juan         Point Colville         0	San Juan	Obstruction Pass Boat Launch	0	n/a	view
San Juan         Obstruction Pass, Beach 276         0         n/a         view           San Juan         Odlin County Park         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Olga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Perry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Perry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Perry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Perry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Perry Portic Beach 283         0         n/a         view           San Juan         Poi	San Juan	Obstruction Pass County Park	0	n/a	view
San Juan         Odlin County Park         0         n/a         view           San Juan         Olga County Park         0         n/a         view           San Juan         Olga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Perry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Perry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Perry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 279         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Patos Island State Park         0         n/a         view           San Juan         Point Colville         0         n/a         view           San Juan         Point Doughty Recreation Site </td <td>San Juan</td> <td>Obstruction Pass Recreation Site</td> <td>0</td> <td>n/a</td> <td>view</td>	San Juan	Obstruction Pass Recreation Site	0	n/a	view
San Juan         Olga County Park         0         n/a         view           San Juan         Olga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island, Feach 266B         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 279         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Otis Perkins Day Park         0         n/a         view           San Juan         Patos Island State Park         0         n/a         view           San Juan         Pear Point, Beach 332         0         n/a         view           San Juan         Point Colville         0         n/a         view           San Juan         Point Doughty, Recreation Site         0         n/a         view           San Juan         Point Lawrence Recreation Site         0         n/	San Juan	Obstruction Pass, Beach 276	0	n/a	view
San Juan         Olga Marine State Park         0         n/a         view           San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Yacht Club         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 279         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Otis Perkins Day Park         0         n/a         view           San Juan         Patos Island State Park         0         n/a         view           San Juan         Pear Point, Beach 332         0         n/a         view           San Juan         Point Colville         0         n/a         view           San Juan         Point Doughty Recreation Site         0         n/a         view           San Juan         Point Lawrence Recreation Site         0         n/a         view           San Juan         Point Lawrence Tidelands         0	San Juan	Odlin County Park	0	n/a	view
San Juan         Orcas Island Ferry Terminal Picnic Area         0         n/a         view           San Juan         Orcas Island Yacht Club         0         n/a         view           San Juan         Orcas Island, Beach 266B         0         n/a         view           San Juan         Orcas Island, Beach 279         0         n/a         view           San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Otis Perkins Day Park         0         n/a         view           San Juan         Patos Island State Park         0         n/a         view           San Juan         Pear Point, Beach 332         0         n/a         view           San Juan         Point Colville         0         n/a         view           San Juan         Point Doughty Recreation Site         0         n/a         view           San Juan         Point Lawrence Recreation Site         0         n/a         view           San Juan         Point Lawrence Tidelands         0         n/a         view           San Juan         Point Thompson, Beach 234         0	San Juan	Olga County Park	0	n/a	view
San Juan Orcas Island Yacht Club 0 n/a view San Juan Orcas Island, Beach 266B 0 n/a view San Juan Orcas Island, Beach 279 0 n/a view San Juan Orcas Island, Beach 282 0 n/a view San Juan Orcas Island, Beach 283 0 n/a view San Juan Orcas Island, Beach 283 0 n/a view San Juan Otis Perkins Day Park 0 n/a view San Juan Patos Island State Park 0 n/a view San Juan Pear Point, Beach 332 0 n/a view San Juan Point Colville 0 n/a view San Juan Point Doughty Recreation Site 0 n/a view San Juan Point Doughty, Beach 236 0 n/a view San Juan Point Hammond, Beach 362 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Island 0 n/a view San Juan Point Fiday Harbor 0 n/a view San Juan Poto of Friday Harbor 0 n/a view San Juan Posey Island 1 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Olga Marine State Park	0	n/a	view
San Juan Orcas Island, Beach 266B 0 n/a view San Juan Orcas Island, Beach 279 0 n/a view San Juan Orcas Island, Beach 282 0 n/a view San Juan Orcas Island, Beach 283 0 n/a view San Juan Orcas Island, Beach 283 0 n/a view San Juan Otis Perkins Day Park 0 n/a view San Juan Patos Island State Park 0 n/a view San Juan Pear Point, Beach 332 0 n/a view San Juan Point Colville 0 n/a view San Juan Point Doughty Recreation Site 0 n/a view San Juan Point Doughty, Beach 236 0 n/a view San Juan Point Hammond, Beach 362 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Potof Friday Harbor 0 n/a view San Juan Port Of Friday Harbor 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view View San Juan President'S Channel, Beach 240 0 n/a view View San Juan President'S Channel, Beach 240 0 n/a view View San Juan President'S Channel, Beach 240 0 n/a view View View San Juan President'S Channel, Beach 240 0 n/a view View View View San Juan President'S Channel, Beach 240 0 n/a view View View View View View View View V	San Juan	Orcas Island Ferry Terminal Picnic Area	0	n/a	view
San Juan Orcas Island, Beach 279 0 n/a view San Juan Orcas Island, Beach 282 0 n/a view San Juan Orcas Island, Beach 283 0 n/a view San Juan Otis Perkins Day Park 0 n/a view San Juan Patos Island State Park 0 n/a view San Juan Pear Point, Beach 332 0 n/a view San Juan Point Colville 0 n/a view San Juan Point Doughty Recreation Site 0 n/a view San Juan Point Doughty, Beach 236 0 n/a view San Juan Point Doughty, Beach 236 0 n/a view San Juan Point Hammond, Beach 362 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Potof Friday Harbor 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view View San Juan President'S Channel, Beach 240 0 n/a view View View San Juan President'S Channel, Beach 240 0 n/a view View View View View View View View V	San Juan	Orcas Island Yacht Club	0	n/a	view
San Juan         Orcas Island, Beach 282         0         n/a         view           San Juan         Orcas Island, Beach 283         0         n/a         view           San Juan         Otis Perkins Day Park         0         n/a         view           San Juan         Patos Island State Park         0         n/a         view           San Juan         Pear Point, Beach 332         0         n/a         view           San Juan         Point Colville         0         n/a         view           San Juan         Point Doughty Recreation Site         0         n/a         view           San Juan         Point Doughty, Beach 236         0         n/a         view           San Juan         Point Hammond, Beach 362         0         n/a         view           San Juan         Point Lawrence Recreation Site         0         n/a         view           San Juan         Point Lawrence Tidelands         0         n/a         view           San Juan         Point Thompson, Beach 234         0         n/a         view           San Juan         Pointer Island         0         n/a         view           San Juan         Pote Of Friday Harbor         0         n/a <t< td=""><td>San Juan</td><td>Orcas Island, Beach 266B</td><td>0</td><td>n/a</td><td>view</td></t<>	San Juan	Orcas Island, Beach 266B	0	n/a	view
San Juan Orcas Island, Beach 283 0 n/a view San Juan Otis Perkins Day Park 0 n/a view San Juan Patos Island State Park 0 n/a view San Juan Pear Point, Beach 332 0 n/a view San Juan Point Colville 0 n/a view San Juan Point Doughty Recreation Site 0 n/a view San Juan Point Doughty, Beach 236 0 n/a view San Juan Point Hammond, Beach 362 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Fisland 0 n/a view San Juan Point Fisland 0 n/a view San Juan Pote Island 0 n/a view San Juan Pote Island 0 n/a view San Juan Pote Island 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Orcas Island, Beach 279	0	n/a	view
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San Juan Patos Island State Park 0 n/a view San Juan Pear Point, Beach 332 0 n/a view San Juan Point Colville 0 n/a view San Juan Point Doughty Recreation Site 0 n/a view San Juan Point Doughty, Beach 236 0 n/a view San Juan Point Hammond, Beach 362 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Pointer Island 0 n/a view San Juan Point Flaland 0 n/a view San Juan Potr Of Friday Harbor 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Orcas Island, Beach 283	0	n/a	view
San Juan Pear Point, Beach 332 0 n/a view  San Juan Point Colville 0 n/a view  San Juan Point Doughty Recreation Site 0 n/a view  San Juan Point Doughty, Beach 236 0 n/a view  San Juan Point Hammond, Beach 362 0 n/a view  San Juan Point Lawrence Recreation Site 0 n/a view  San Juan Point Lawrence Tidelands 0 n/a view  San Juan Point Thompson, Beach 234 0 n/a view  San Juan Pointer Island 0 n/a view  San Juan Pole Island 0 n/a view  San Juan Potof Friday Harbor 0 n/a view  San Juan Posey Island State Park 0 n/a view  San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Otis Perkins Day Park	0	n/a	view
San Juan Point Colville 0 n/a view  San Juan Point Doughty Recreation Site 0 n/a view  San Juan Point Doughty, Beach 236 0 n/a view  San Juan Point Hammond, Beach 362 0 n/a view  San Juan Point Lawrence Recreation Site 0 n/a view  San Juan Point Lawrence Tidelands 0 n/a view  San Juan Point Thompson, Beach 234 0 n/a view  San Juan Point Thompson, Beach 234 0 n/a view  San Juan Pointer Island 0 n/a view  San Juan Pole Island 0 n/a view  San Juan Port Of Friday Harbor 0 n/a view  San Juan Posey Island State Park 0 n/a view  San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Patos Island State Park	0	n/a	view
San Juan Point Doughty Recreation Site 0 n/a view  San Juan Point Doughty, Beach 236 0 n/a view  San Juan Point Hammond, Beach 362 0 n/a view  San Juan Point Lawrence Recreation Site 0 n/a view  San Juan Point Lawrence Tidelands 0 n/a view  San Juan Point Thompson, Beach 234 0 n/a view  San Juan Pointer Island 0 n/a view  San Juan Pole Island 0 n/a view  San Juan Port Of Friday Harbor 0 n/a view  San Juan Posey Island State Park 0 n/a view  San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Pear Point, Beach 332	0	n/a	view
San Juan Point Doughty, Beach 236 0 n/a view San Juan Point Hammond, Beach 362 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Pointer Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Potof Friday Harbor 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Point Colville	0	n/a	view
San Juan Point Hammond, Beach 362 0 n/a view San Juan Point Lawrence Recreation Site 0 n/a view San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Pointer Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Port Of Friday Harbor 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Point Doughty Recreation Site	0	n/a	view
San JuanPoint Lawrence Recreation Site0n/aviewSan JuanPoint Lawrence Tidelands0n/aviewSan JuanPoint Thompson, Beach 2340n/aviewSan JuanPointer Island0n/aviewSan JuanPole Island0n/aviewSan JuanPort Of Friday Harbor0n/aviewSan JuanPosey Island State Park0n/aviewSan JuanPresident'S Channel, Beach 2400n/aview	San Juan	Point Doughty, Beach 236	0	n/a	view
San Juan Point Lawrence Tidelands 0 n/a view San Juan Point Thompson, Beach 234 0 n/a view San Juan Pointer Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Port Of Friday Harbor 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Point Hammond, Beach 362	0	n/a	view
San JuanPoint Thompson, Beach 2340n/aviewSan JuanPointer Island0n/aviewSan JuanPole Island0n/aviewSan JuanPort Of Friday Harbor0n/aviewSan JuanPosey Island State Park0n/aviewSan JuanPresident'S Channel, Beach 2400n/aview	San Juan	Point Lawrence Recreation Site	0	n/a	view
San Juan Pointer Island 0 n/a view San Juan Pole Island 0 n/a view San Juan Port Of Friday Harbor 0 n/a view San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Point Lawrence Tidelands	0	n/a	view
San JuanPole Island0n/aviewSan JuanPort Of Friday Harbor0n/aviewSan JuanPosey Island State Park0n/aviewSan JuanPresident'S Channel, Beach 2400n/aview	San Juan	Point Thompson, Beach 234	0	n/a	view
San JuanPort Of Friday Harbor0n/aviewSan JuanPosey Island State Park0n/aviewSan JuanPresident'S Channel, Beach 2400n/aview	San Juan	Pointer Island	0	n/a	view
San Juan Posey Island State Park 0 n/a view San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Pole Island	0	n/a	view
San Juan President'S Channel, Beach 240 0 n/a view	San Juan	Port Of Friday Harbor	0	n/a	view
	San Juan	Posey Island State Park	0	n/a	view
San Juan Puffin Island 0 n/a <u>view</u>	San Juan	President'S Channel, Beach 240	0	n/a	view
	San Juan	Puffin Island	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Juan	Raccoon Point, Beach 233	0	n/a	view
San Juan	Ram Island, Dnr-312B	0	n/a	view
San Juan	Reads Bay, Beach 319	0	n/a	view
San Juan	Reads Bay, Beach 325	0	n/a	view
San Juan	Resort At Deer Harbor	0	n/a	view
San Juan	Reuben Tarte County Park	0	n/a	view
San Juan	Roche Harbor Marina	0	n/a	view
San Juan	Roche Harbor Resort	0	n/a	view
San Juan	Rock Point, Beach 303	0	n/a	view
San Juan	Rocky Bay, Beach 336	0	n/a	view
San Juan	Rosario Resort	0	n/a	view
San Juan	Rosario, Beach 272	0	n/a	view
San Juan	San Juan Channel, Beach 298	0	n/a	view
San Juan	San Juan Channel, Beach 334	0	n/a	view
San Juan	San Juan County Park	0	n/a	view
San Juan	San Juan Island, Beach 330	0	n/a	view
San Juan	San Juan Preservation Trust, Henry Island	0	n/a	view
San Juan	San Juan Preservation Trust, Stuart Island	0	n/a	view
San Juan	San Juan Preservation Trust, Waldron Island	0	n/a	view
San Juan	Sandy Point, Beach 364	0	n/a	view
San Juan	Satellite Island, Beach 358	0	n/a	view
San Juan	Sentinel Island Nature Preserve	0	n/a	view
San Juan	Shark Reef County Park	0	n/a	view
San Juan	Shark Reef, Beach 304	0	n/a	view
San Juan	Shaw Island County Park / Indian Cove	0	n/a	view
San Juan	Shaw Island County Park Tidelands (Dnrr-296)	0	n/a	view
San Juan	Shaw Island County Pier	0	n/a	view
San Juan	Shaw Island, Beach 258	0	n/a	view
San Juan	Shaw Island, Beach 260C	0	n/a	view
San Juan	Shaw Island, Dnr-260	0	n/a	view
San Juan	Shaw Landing	0	n/a	view
San Juan	Sheep Island, Beach 255A	0	n/a	view
San Juan	Ship Bay Beach	0	n/a	view
San Juan	Sisters Islets	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Juan	Skull Island State Park	0	n/a	view
San Juan	Smugglers Cove And Sunset Point Community	0	n/a	view
San Juan	Smugglers Cove Marina	0	n/a	view
San Juan	Snug Harbor Resort And Marina	0	n/a	view
San Juan	South Finger Island, Beach 367C	0	n/a	view
San Juan	Southeast Stuart Island, Beach 356B	0	n/a	view
San Juan	Spate Beach	0	n/a	-
San Juan	Spencer Spit State Park	0	n/a	view
San Juan	Sperry Road Access To Mud Bay	0	n/a	view
San Juan	Spieden Bluff, Beach 353	0	n/a	view
San Juan	Spieden Island, Beach 352	0	n/a	view
San Juan	Spieden Island, Beach 352A	0	n/a	view
San Juan	Spring Passage, Beach 240A	0	n/a	view
San Juan	Stuart Island State Park	0	n/a	view
San Juan	Stuart Island, Beach 359	0	n/a	view
San Juan	Sucia Island State Park	0	n/a	view
San Juan	Swirl Island	0	n/a	view
San Juan	Thatcher Pass, Beach 291	0	n/a	view
San Juan	Thatcher Pass, Beach 322	0	n/a	view
San Juan	Three Coves Community Beach	0	n/a	view
San Juan	Trump Island, Beach 320	0	n/a	view
San Juan	Turn Island State Park	0	n/a	view
San Juan	Turn Point Lighthouse	0	n/a	view
San Juan	Twin Rocks State Park	0	n/a	view
San Juan	Upright Channel Recreation Site	0	n/a	view
San Juan	Upright Head, Beach 294	0	n/a	view
San Juan	Victim Island, Beach 251B	0	n/a	view
San Juan	Waldron Island Boat Launch, Dnr-361A	0	n/a	view
San Juan	Waldron Island Preserve	0	n/a	view
San Juan	Waldron Island Preserve (Point Disney)	0	n/a	view
San Juan	Waldron Island, Beach 361	0	n/a	view
San Juan	Waldron Island, Beach 361A	0	n/a	view
San Juan	Wasp Passage, Beach 259	0	n/a	view
San Juan	Watmough Bay	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
San Juan	Weeks Point Way Access	0	n/a	view
San Juan	West Bay County Public Dock	0	n/a	view
San Juan	West Beach Resort	0	n/a	view
San Juan	West Beach Road End	0	n/a	view
San Juan	West Sound Marina	0	n/a	view
San Juan	Willow Island	0	n/a	view
San Juan	Yellow Island	0	n/a	view
Skagit	Alexander / Delmar	0	n/a	view
Skagit	Anacortes Ferry Terminal Beach	0	n/a	view
Skagit	Anacortes Marina Beach	0	n/a	-
Skagit	Bayview Boat Launch	8	63%	view
Skagit	Bayview State Park	29	41%	view
Skagit	Boat Harbor, East Guemes Island	0	n/a	view
Skagit	Burrows Bay, Far North	0	n/a	view
Skagit	Burrows Island East	0	n/a	view
Skagit	Burrows Island North	0	n/a	view
Skagit	Burrows Island State Park	0	n/a	view
Skagit	Burrows Island, Southeast	0	n/a	view
Skagit	Camp Kirby	0	n/a	view
Skagit	Cap Sante Marina	0	n/a	view
Skagit	Cap Sante Park	0	n/a	view
Skagit	Clark Point, North Guemes Island	0	n/a	view
Skagit	Community Of Christ Church Camp	0	n/a	view
Skagit	Cone Islands State Park	0	n/a	view
Skagit	Cypress Head Recreation Site	0	n/a	view
Skagit	Cypress Head, Beach 209	0	n/a	view
Skagit	Cypress Head, Beach 210	0	n/a	view
Skagit	Cypress Head, Beach 211	0	n/a	view
Skagit	Deception Pass State Park (Skagit)	0	n/a	view
Skagit	Deception Pass State Park Tidelands (Skagit)	0	n/a	view
Skagit	Dewey Beach	0	n/a	view
Skagit	Dirty Biter Park	0	n/a	view
Skagit	Eagle Cliff, Beach 286	0	n/a	view
Skagit	Eagle Harbor, Beach 212A	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Skagit	Fidalgo Bay	0	n/a	view
Skagit	Gilley Square Waterfront Access	0	n/a	view
Skagit	Goat Island	0	n/a	view
Skagit	Guemes Island, Peach Reserve	0	n/a	view
Skagit	Guemes Island, South	0	n/a	view
Skagit	Hat Island	0	n/a	view
Skagit	Hope Island (Skagit County)	0	n/a	view
Skagit	Huckleberry Island	0	n/a	view
Skagit	Jensen Access	0	n/a	view
Skagit	Kiwanis Waterfront Park	0	n/a	view
Skagit	La Conner Marina	0	n/a	view
Skagit	Larrabee State Park, Clayton Beach	0	n/a	view
Skagit	Lower Cap Sante Park	0	n/a	view
Skagit	March Point Recreational Beach	0	n/a	view
Skagit	March Point Recreational Beach	0	n/a	view
Skagit	Milltown Access	0	n/a	view
Skagit	North Beach, Guemes Island	0	n/a	view
Skagit	North Fork Access	0	n/a	view
Skagit	Northwest Island Marine Park	0	n/a	view
Skagit	Padilla Bay Dike Top Trail	0	n/a	view
Skagit	Padilla Bay National Estuarine Research Reserve	0	n/a	view
Skagit	Pelican Beach Recreation Site	0	n/a	view
Skagit	Pioneer Park	0	n/a	view
Skagit	Quaker Cove Camp & Retreat Center	0	n/a	view
Skagit	Rosario Beach	0	n/a	view
Skagit	Saddlebag Island State Park	0	n/a	view
Skagit	Salmon Beach	0	n/a	view
Skagit	Samish Island Recreation Area	0	n/a	view
Skagit	Seafarer Park	0	n/a	view
Skagit	Sharpe County Park	0	n/a	view
Skagit	Similk Beach	0	n/a	view
Skagit	Sinclair Island Dock	0	n/a	view
Skagit	Sinclair Island, Beach 213	0	n/a	view
Skagit	Sinclair Island, Beach 213A, North	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Skagit	Sinclair Island, Beach 213A, South	0	n/a	view
Skagit	Skagit Island State Park	0	n/a	view
Skagit	Skyline Marina	0	n/a	view
Skagit	Snee-Oosh Waterfront Park	0	n/a	-
Skagit	South Shore Drive Road End	0	n/a	view
Skagit	Strawberry Bay, Beach 287	0	n/a	view
Skagit	Strawberry Island Recreation Site	0	n/a	view
Skagit	Swinomish Channel Boat Launch	0	n/a	view
Skagit	Swinomish Park And Public Float	0	n/a	view
Skagit	Vendovi Island, Beach 214	0	n/a	view
Skagit	Washington Park	0	n/a	view
Skagit	Washington Street Public Dock	0	n/a	view
Skagit	Young County Park North Beach	0	n/a	view
Snohomish	10Th St Marine Park & Boat Launch	0	n/a	view
Snohomish	Brown Bay Rail	0	n/a	view
Snohomish	City Park Edmonds Marina Beach	0	n/a	-
Snohomish	Darlington Beach And Tidelands	0	n/a	view
Snohomish	Darlington Beach North, Rail	0	n/a	view
Snohomish	Ebey Island	0	n/a	view
Snohomish	Edmonds Marina	0	n/a	view
Snohomish	Edmonds Underwater Park	47	2%	view
Snohomish	Forest Park	0	n/a	view
Snohomish	Harborview Drive	0	n/a	-
Snohomish	Hat/Gedney Island Reef	0	n/a	-
Snohomish	Howarth Park	45	4%	view
Snohomish	Howarth Park South	0	n/a	view
Snohomish	Jetty Island	14	7%	view
Snohomish	Kayak Point County Park	47	6%	view
Snohomish	Leque Island	0	n/a	view
Snohomish	Marina Beach Park, Edmonds (No Dogs)	47	19%	view
Snohomish	Marina Beach, Edmonds (Dog Park)	0	n/a	view
Snohomish	Meadowdale County Park	0	n/a	view
Snohomish	Mission Beach Park	0	n/a	view
Snohomish	Mukilteo Fishing Pier	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Snohomish	Mukilteo Lighthouse Park	46	13%	view
Snohomish	Mukilteo Park South, Rail	0	n/a	view
Snohomish	Nakeeta Beach South, Rail	0	n/a	view
Snohomish	Nakeeta Beach Tidelands	0	n/a	view
Snohomish	North Marine View Park	0	n/a	view
Snohomish	Norton Avenue Boat Launch	0	n/a	-
Snohomish	Olympic Beach Park	0	n/a	view
Snohomish	Olympic View Rail	0	n/a	view
Snohomish	Otter Island	0	n/a	-
Snohomish	Park Avenue Street End	0	n/a	view
Snohomish	Picnic Point County Park	46	2%	view
Snohomish	Picnic Point North, Rail	0	n/a	view
Snohomish	Picnic Point South, Rail	0	n/a	<u>view</u>
Snohomish	Port Of Everett Marina	0	n/a	view
Snohomish	Port Susan Bay Preserve	0	n/a	view
Snohomish	Silver Cloud Pier	0	n/a	view
Snohomish	Skagit Wildlife Recreation Area	0	n/a	view
Snohomish	Soundview Drive Nw Road End	0	n/a	view
Snohomish	South Marine View Park	0	n/a	view
Snohomish	South Mulkiteo Park	0	n/a	view
Snohomish	South Terminal Viewpoint	0	n/a	-
Snohomish	Spencer Island County Park	0	n/a	view
Snohomish	Totem Beach	0	n/a	-
Snohomish	Tulalip Bay Marina	0	n/a	view
Snohomish	Warm Beach	0	n/a	view
Snohomish	Warm Beach Church Camp	0	n/a	view
Snohomish	Wells Point North	0	n/a	view
Snohomish	West Pass Access	0	n/a	view
Snohomish	West Pass Bridge	0	n/a	view
Thurston	4Th Ave Bridge	0	n/a	view
Thurston	81St St. Road End	0	n/a	view
Thurston	Bayview Market Public Access	0	n/a	view
Thurston	Beachcrest Community	0	n/a	view
Thurston	Boston Harbor Boat Ramp	0	n/a	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Thurston	Boston Harbor Marina	0	n/a	view
Thurston	Burfoot County Park	37	11%	view
Thurston	Buzz'S Tavern	0	n/a	view
Thurston	Capitol Land Trust, South Eld Inlet	0	n/a	view
Thurston	Carlyon Beach Country Club	0	n/a	view
Thurston	Evergreen State College Beach	0	n/a	view
Thurston	Fiddlehead Marina	0	n/a	view
Thurston	Forest Bay Acres Community	0	n/a	view
Thurston	Frye Cove County Park	0	n/a	view
Thurston	Green Park Community Club	0	n/a	view
Thurston	Hawks Prairie Estate	0	n/a	view
Thurston	Heritage Trail	0	n/a	view
Thurston	Highway 101 Bridge, Mud Bay	0	n/a	view
Thurston	Highway 101 Bridge, Oyster Bay	0	n/a	view
Thurston	Hogam Bay Land Trust	0	n/a	view
Thurston	Luhrs Boat Launch	0	n/a	-
Thurston	Martin Marina	0	n/a	view
Thurston	Mud Bay Bridge	0	n/a	view
Thurston	Nisqually Habitat Management Area	0	n/a	view
Thurston	Nisqually National Wildlife Refuge	0	n/a	view
Thurston	North Point Landing	0	n/a	view
Thurston	Old Olympic Highway Bridge, Oyster Bay	0	n/a	view
Thurston	Olympia Country & Golf Club	0	n/a	view
Thurston	Percival Landing North	0	n/a	view
Thurston	Port Plaza / Visitor Morage	0	n/a	view
Thurston	Priest Point Park	0	n/a	view
Thurston	Snug Harbor Community Beach	0	n/a	view
Thurston	South Budd Inlet Waterfront	0	n/a	view
Thurston	Southeast Budd Inlet	0	n/a	view
Thurston	Steamboat Island Bridge	0	n/a	view
Thurston	Swantown Marina	0	n/a	view
Thurston	Tamoshan Homeowners Park	0	n/a	view
Thurston	Thurston County Parcel (Indian Rd)	0	n/a	view
Thurston	Tolmie State Park	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Thurston	Urquhart Street Road End	0	n/a	view
Thurston	West Bay Park	0	n/a	view
Thurston	Westbay Marina	0	n/a	view
Thurston	Woodard Bay Natural Area	0	n/a	view
Thurston	Woodward Bay Road Bridge	0	n/a	-
Thurston	Zittel'S Marina	0	n/a	view
Whatcom	Birch Bay Beach & Tidelands Access	49	12%	view
Whatcom	Birch Bay Near Terrell Creek	0	n/a	view
Whatcom	Birch Bay Public Right Of Way 1	0	n/a	view
Whatcom	Birch Bay Public Right Of Way 2	0	n/a	view
Whatcom	Birch Bay Public Right Of Way 3	0	n/a	view
Whatcom	Birch Bay Public Right Of Way 5	0	n/a	view
Whatcom	Birch Bay Public Right Of Way 6	0	n/a	view
Whatcom	Birch Bay Public Right Of Way 7	0	n/a	view
Whatcom	Birch Bay State Park	0	n/a	view
Whatcom	Birch Bay Tidelands	0	n/a	view
Whatcom	Birch Bay Village	0	n/a	view
Whatcom	Birch Point, Beach 372	0	n/a	view
Whatcom	Blaine Harbor And Boat Launch	0	n/a	view
Whatcom	Blaine Rd. Bridge	0	n/a	view
Whatcom	Boulevard Park / Bayview Marine Park	0	n/a	view
Whatcom	Bumstead Spit South, Beach 223A	0	n/a	view
Whatcom	Bumstead Spit, Beach 223	0	n/a	view
Whatcom	Carter Point	0	n/a	view
Whatcom	Chuckanut Community Beach	0	n/a	view
Whatcom	Chuckanut Island	0	n/a	view
Whatcom	Chuckanut Point	0	n/a	view
Whatcom	Clarks Point	0	n/a	view
Whatcom	Cottonwood Beach County Park	0	n/a	view
Whatcom	Dakota Creek Shoreline Access	0	n/a	view
Whatcom	Devils Slide, Beach 220A	0	n/a	view
Whatcom	Drayton Harbor	0	n/a	view
Whatcom	Drayton Harbor Park	0	n/a	view
Whatcom	Drayton Harbor/Whatcom Land Trust	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Whatcom	Eliza Island	0	n/a	view
Whatcom	Fish Point Park	0	n/a	view
Whatcom	Jackson Road - Birch Bay Public Right Of Way 4	0	n/a	view
Whatcom	Larrabee State Park	0	n/a	-
Whatcom	Larrabee State Park, Wildcat Cove	51	25%	view
Whatcom	Lighthouse Marine County Park	0	n/a	view
Whatcom	Lily Point Marine Reserve	0	n/a	view
Whatcom	Little Squalicum Park	70	47%	view
Whatcom	Lummi Island Recreation Site	0	n/a	view
Whatcom	Lummi Island, Beach 220	0	n/a	view
Whatcom	Lummi Island, Beach 223B	0	n/a	view
Whatcom	Lummi Island, Beach 224	0	n/a	view
Whatcom	Lummi Island, Beach 283	0	n/a	view
Whatcom	Lummi Rocks	0	n/a	view
Whatcom	Maple Beach	0	n/a	view
Whatcom	Marine Drive Park	0	n/a	view
Whatcom	Marine Park, Bellingham	48	10%	view
Whatcom	Monument Park	0	n/a	view
Whatcom	Mud Bay, Chuckanut	0	n/a	view
Whatcom	Padden Creek Lagoon	0	n/a	view
Whatcom	Point Roberts Marina And Resort	0	n/a	view
Whatcom	Point Whitehorn	0	n/a	view
Whatcom	Point Whitehorn Marine Reserve	0	n/a	view
Whatcom	Ruby Street Road End	0	n/a	view
Whatcom	Semiahmoo County Park	0	n/a	view
Whatcom	Semiahmoo Resort & Marina	0	n/a	view
Whatcom	Smugglers Cove North, Beach 221A	0	n/a	view
Whatcom	Smugglers Cove Point, Beach 221	0	n/a	view
Whatcom	South Birch Point	0	n/a	view
Whatcom	South Drayton Harbor	0	n/a	view
Whatcom	South Semiahmoo Bay	0	n/a	view
Whatcom	South Side Boat Launch	0	n/a	-
Whatcom	Squalicum Harbor	0	n/a	view
Whatcom	Teddy Bear Cove	0	n/a	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Whatcom	Wildcat Cove Tidelands	0	n/a	view
Whatcom	Zuanich Park	0	n/a	view

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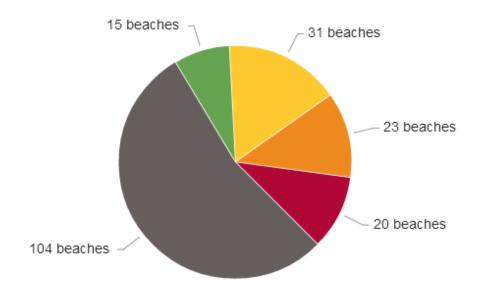
## **State Summary: Wisconsin**

Ranked 23rd in Beach Water Quality (out of 30 states)
14% of samples exceeded the national Beach Action Value for designated beach areas in 2013.

Summer 2014 is filled with opportunities to improve water quality throughout the United States and to better protect people's health in the process. <u>Everyone can now support a long-awaited rule</u> to enhance protections for small streams and wetlands—these waters can minimize polluted runoff that contributes to poor beach water quality, and can filter out contaminants that promote algae blooms.

State and federal officials have ample legal tools today to rein in stormwater pollution at the city and regional scale. And beach managers can use a new and important tool, the health-protective Beach Action Value developed by the EPA, to make swimming advisory decisions that more fully safeguard public health.

## Wisconsin 2013 Beach Water Quality Summary



Percent of samples exceeding the national Beach Action Value (BAV) safety threshold

- 104 beaches (54%) were not monitored or had a limited number of samples (fewer than 12)
- 15 beaches (8%) did not have any samples exceed the national BAV safety threshold
- 31 beaches (16%) had >0-10% of their samples exceed the national BAV safety threshold
- 23 beaches (12%) had >10-20% of their samples exceed the national BAV safety threshold
- 20 beaches (10%) had more than 20% of their samples exceed the national BAV safety threshold

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. The EPA recently issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the BAV in order to best protect beachgoers from water quality health risks.

Wisconsin has public beaches along 55 miles of Lake Superior and Lake Michigan coastline. The Wisconsin Department of Natural Resources (DNR) coordinates the state's beach monitoring program and administers BEACH Act grants. Beachgoers can learn about beach closings and advisories on the Wisconsin Beach Health website.

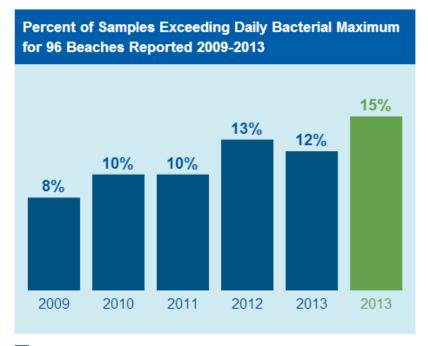
### What Does Beach Water Monitoring Show?

In 2013, Wisconsin reported 193 coastal beaches and beach segments, 101 of which were monitored. Of all reported beach monitoring samples, 14% exceeded the Beach Action Value (BAV) of 190 *E. coli* bacteria colony forming units (cfu) per 100 ml freshwater in a single sample. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and reported samples taken outside the official beach season, if any.

The beaches with the highest percent exceedance rates of the BAV in Wisconsin were Pennoyer Park Beach in Kenosha County (47%), South Shore Beach in Milwaukee County (42%), Red Arrow Park Beach Manitowoc in Manitowoc County (39%), Maslowski Beaches in Ashland County (35%), and Kohler-Andrae State Park North and South Picnic Beaches in Sheboygan County (32%).

## Wisconsin Water Quality Trend 2009–20131

The bar chart below illustrates the general trend of beach water quality exceedance rates in Wisconsin over the past five years. Note that only samples from a common set of 27 beaches monitored each year from 2009-2013 are included in the bar chart. Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 235 *E. coli* bacteria cfu/100 ml water that was in place during those years. For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard of 235 *E. coli* bacteria cfu/100 ml water, as well as on the EPA's new Beach Action Value of 190 *E. coli* cfu/100 ml water.



- % exceedance of national standard in place 2009-2012
- % exceedance of national BAV safety threshold

## **Wisconsin 2013 Monitoring Results**

County	Beach	Total Samples	% of samples exceeding BAV	View
Ashland	Bayview Park Beach	31	6%	<u>view</u>
Ashland	Big Bay State Park Beach	14	0%	<u>view</u>
Ashland	Big Bay Town Park Beach	0	n/a	<u>view</u>
Ashland	Casper Road Beach	0	n/a	<u>view</u>
Ashland	Kreher Park Beach	43	28%	<u>view</u>
Ashland	La Pointe Memorial Beach	0	n/a	<u>view</u>
Ashland	Maslowski Beaches	40	35%	<u>view</u>
Bayfield	Bark Bay Beaches	11	0%	<u>view</u>
Bayfield	Bono Creek Boat Launch Beach	10	0%	<u>view</u>
Bayfield	Broad Street Beach	22	0%	<u>view</u>
Bayfield	Herbster Beach	13	8%	<u>view</u>
Bayfield	Highway 13 Wayside Beach	0	n/a	view

<sup>\*</sup> Please note exceedance rates for 2013 are shown based on the new BAV safety threshold and the historical national standard for comparison purposes. Additionally, only samples from a common set of beaches monitored each year from 2009-2013 are included in the bar chart.

County	Beach	Total Samples	% of samples exceeding BAV	View
Bayfield	Little Sand Bay Beach	11	0%	view
Bayfield	Memorial Beach Bayfield	12	8%	view
Bayfield	Memorial Park Beach Washburn	10	0%	view
Bayfield	Port Wing Beach East	15	13%	view
Bayfield	Port Wing Beach West	13	15%	view
Bayfield	River Loop Road Beach	0	n/a	view
Bayfield	Sioux River Beach North	12	0%	view
Bayfield	Sioux River Beach South	12	0%	view
Bayfield	Siskiwit Bay Beach	13	8%	view
Bayfield	Thompson West End Park Beach	43	9%	view
Bayfield	Washburn Marina Beach	12	0%	view
Bayfield	Washburn Walking Trail Beach / BAB Beach	13	15%	view
Bayfield	Washington Avenue Beach	12	0%	view
Bayfield	Wikdal Memorial Boat Launch Beach	10	0%	view
Brown	Bay Beach	0	n/a	view
Brown	Bayshore Park Beach	11	0%	view
Brown	Communiversity Park Beach	0	n/a	view
Brown	Joliet Park	0	n/a	view
Brown	Longtail Beach	7	0%	view
Brown	Riverside Drive Beach	0	n/a	view
Brown	Town of Scott Park Beach	0	n/a	view
Brown	Van Lanen Beach	0	n/a	view
Brown	Volk's Landing Boat Launch Beach	0	n/a	view
Door	Anclam Park Beach	28	7%	<u>view</u>
Door	Arrowhead Lane Beach	0	n/a	<u>view</u>
Door	Baileys Harbor Ridges Park Beach	57	12%	<u>view</u>
Door	Bittersweet Lane Beach	0	n/a	view
Door	Braunsdorf Beach	0	n/a	view
Door	Chippewa Drive Beach	0	n/a	<u>view</u>
Door	Clay Banks Beach 1	0	n/a	<u>view</u>
Door	Clay Banks Beach 2	27	7%	view
Door	Cliff View Drive Beach	0	n/a	view
Door	County TT Beach	0	n/a	view
Door	Deer Path Lane Beach	0	n/a	<u>view</u>

County	Beach	Total Samples	% of samples exceeding BAV	View
Door	Egg Harbor Beach	53	2%	view
Door	Ellison Bay Town Park Beach	53	0%	view
Door	Ephraim Beach	55	7%	view
Door	Europe Bay Beach 1	27	4%	view
Door	Europe Bay Beach 2	29	10%	view
Door	Europe Bay Beach 3	27	7%	view
Door	Fish Creek Beach	54	9%	view
Door	Garrett Bay Boat Launch Beach	0	n/a	view
Door	Gislason Beach	12	0%	view
Door	Goldenrod Lane Beach	0	n/a	view
Door	Haines Park Beach	27	4%	view
Door	Hemlock Lane Beach	0	n/a	view
Door	Isle View Beach	0	n/a	view
Door	Jackson Harbor Ridges - WI	13	8%	view
Door	Kickapoo Drive Beach	0	n/a	view
Door	Lakeshore Drive Beach Door	0	n/a	view
Door	Lakeside Park Beach	27	4%	view
Door	Lily Bay Boat Launch Beach	15	13%	view
Door	Murphy Park Beach	55	16%	view
Door	Newport Bay Beach	53	0%	view
Door	Nicolet Beach	53	2%	view
Door	Otumba Park Beach	57	18%	view
Door	Pebble Beach Road Beach 1 Door	0	n/a	view
Door	Percy Johnson Memorial Park Beach	12	0%	view
Door	Portage Park Beach	27	0%	view
Door	Potawatomi State Park Beach 1	0	n/a	view
Door	Potawatomi State Park Beach 2	0	n/a	view
Door	Rock Island State Park Beach	12	0%	view
Door	Sand Bay Beach 1	28	7%	view
Door	Sand Bay Beach 2	0	n/a	view
Door	Sand Cove	0	n/a	view
Door	Sand Dune Beach	12	0%	view
Door	Sandy Bay Town Park Beach	27	4%	view
Door	School House Beach	12	0%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Door	Sister Bay Beach	54	6%	view
Door	Sturgeon Bay Canal Recreation Area Beach	0	n/a	view
Door	Sunset Beach Fish Creek	0	n/a	view
Door	Sunset Park Beach Sturgeon Bay	57	23%	view
Door	White Pine Lane Beach	0	n/a	view
Door	Whitefish Bay Boat Launch Beach	14	7%	view
Door	Whitefish Dunes Beach	52	2%	view
Door	Winnebago Drive Beach	0	n/a	view
Douglas	Allouez Bay Beach 1	0	n/a	view
Douglas	Allouez Bay Beach 2	0	n/a	view
Douglas	Allouez Bay Beach 3	0	n/a	view
Douglas	Amnicon River Beach	0	n/a	view
Douglas	Barker's Island Inner Beach	25	12%	view
Douglas	Barker's Island Outer Beach	0	n/a	view
Douglas	Brule River State Forest Beach 1	0	n/a	view
Douglas	Brule River State Forest Beach 2	0	n/a	view
Douglas	Brule River State Forest Beach 3	0	n/a	view
Douglas	Conners Point Beaches	0	n/a	view
Douglas	Middle River Beach	0	n/a	view
Douglas	Wisconsin Point Beach 1	0	n/a	view
Douglas	Wisconsin Point Beach 2	25	20%	view
Douglas	Wisconsin Point Beach 3	0	n/a	view
Douglas	Wisconsin Point Beach 4	0	n/a	view
Douglas	Wisconsin Point Beach 5	0	n/a	view
Iron	Oronto Bay Beach 1	8	13%	view
Iron	Oronto Bay Beach 2	8	13%	view
Iron	Oronto Bay Beach 3	8	13%	view
Iron	Saxon Harbor Beach East	10	30%	view
Iron	Saxon Harbor Beach West	8	13%	view
Kenosha	Alford Park Beach	27	22%	view
Kenosha	Eichelman Beach	42	31%	view
Kenosha	Lakeshore Drive Beach Kenosha	0	n/a	view
Kenosha	Melissa Beach	0	n/a	view
Kenosha	Pennoyer Park Beach	32	47%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Kenosha	Simmons Island Beach	37	30%	<u>view</u>
Kenosha	Southport Park Beach	24	8%	view
Kewaunee	9th Avenue Wayside Beach	0	n/a	view
Kewaunee	City Of Kewaunee Beach	14	21%	view
Kewaunee	Crescent Beach	45	16%	view
Kewaunee	Lighthouse Vista Beach	0	n/a	view
Kewaunee	Red River Park Beaches	0	n/a	view
Manitowoc	Fischer Park Beaches	0	n/a	view
Manitowoc	Hika Park Bay	35	23%	view
Manitowoc	Lincoln High School Beach	0	n/a	view
Manitowoc	Maritime Dr Boat Launch Beach	0	n/a	view
Manitowoc	Memorial Drive Wayside Beach Middle	0	n/a	view
Manitowoc	Memorial Drive Wayside Beach North	30	20%	view
Manitowoc	Memorial Drive Wayside Beach South	24	8%	view
Manitowoc	Neshotah Beach	52	19%	view
Manitowoc	Point Beach State Forest - Concession Stand Beach	51	6%	view
Manitowoc	Point Beach State Forest - Lakeshore Picnic Area Beach	52	8%	view
Manitowoc	Point Beach State Forest - Lighthouse Picnic Area Beach	51	14%	view
Manitowoc	Red Arrow Park Beach Manitowoc	54	39%	view
Manitowoc	Silver Creek Beach	0	n/a	view
Manitowoc	Two Creek Boat Launch Beach	0	n/a	view
Manitowoc	University Beach	0	n/a	view
Manitowoc	Warm Water Beach	0	n/a	view
Manitowoc	YMCA Beach	24	21%	view
Marinette	Michaelis Park Beach	0	n/a	view
Marinette	Peshtigo Harbor Boat Launch Beach	0	n/a	view
Marinette	Red Arrow Marinette 1 Beach	0	n/a	view
Marinette	Red Arrow Marinette 2 Beach	0	n/a	view
Marinette	Red Arrow Marinette 3 Beach	0	n/a	view
Marinette	Seagull Bar Wildlife Area Beach	0	n/a	view
Milwaukee	Atwater Park Beach	26	12%	view
Milwaukee	Bay View Park Beach	18	0%	view
Milwaukee	Bender Beach	31	16%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Milwaukee	Big Bay Park Beach	0	n/a	view
Milwaukee	Bradford Beach	51	22%	view
Milwaukee	Grant Park Beach	42	31%	view
Milwaukee	Klode Park Beach	27	15%	view
Milwaukee	McKinley Beach	51	18%	view
Milwaukee	Sheridan Park Beach	0	n/a	view
Milwaukee	South Shore Beach	52	42%	view
Milwaukee	South Shore Rocky Beach	0	n/a	view
Milwaukee	Tietjen Beach / Doctor's Park	25	8%	view
Milwaukee	Watercraft Beach	0	n/a	view
Oconto	Oconto City Park	0	n/a	view
Ozaukee	Cedar Beach Rd Beach	59	28%	view
Ozaukee	Concordia University	32	9%	view
Ozaukee	County Road D Boat Launch Beach	53	15%	view
Ozaukee	Harrington State Park Beach North	54	17%	view
Ozaukee	Harrington State Park Beach South	55	25%	view
Ozaukee	Jay Road Beach	0	n/a	view
Ozaukee	Lion's Den Gorge Nature Preserve	30	7%	view
Ozaukee	Pebble Road Beach	0	n/a	view
Ozaukee	Sandy Beach Road Beach	0	n/a	view
Ozaukee	Silver Beach Road Beach	0	n/a	view
Ozaukee	Upper Lake Park Beach	108	9%	view
Ozaukee	Virmond County Park	0	n/a	-
Racine	Michigan Boulevard Beach	0	n/a	view
Racine	Myers Park Beach	0	n/a	view
Racine	North Beach	276	14%	view
Racine	Parkway Beach	0	n/a	view
Racine	Shoop Park Beach	0	n/a	view
Racine	Wind Point Lighthouse Beach	0	n/a	view
Racine	Zoo Beach	201	19%	view
Sheboygan	3rd Street Beach	0	n/a	view
Sheboygan	Amsterdam Beach	0	n/a	view
Sheboygan	Blue Harbor Beach	30	17%	view
Sheboygan	Deland Park Beach	31	3%	view

County	Beach	Total Samples	% of samples exceeding BAV	View
Sheboygan	Foster Road Beach	0	n/a	<u>view</u>
Sheboygan	General King Park Beach	31	23%	<u>view</u>
Sheboygan	KK Road Beach	0	n/a	<u>view</u>
Sheboygan	Kohler Andrae State Park Nature Center Beach	42	19%	<u>view</u>
Sheboygan	Kohler Andrae State Park North Beach	26	27%	<u>view</u>
Sheboygan	Kohler Andrae State Park North Picnic Beach	28	32%	<u>view</u>
Sheboygan	Kohler Andrae State Park South Picnic Beach	28	32%	view
Sheboygan	Lakeview Park Beach	0	n/a	view
Sheboygan	Van Ess Road Beach	0	n/a	view
Sheboygan	Vollrath Park Beach	0	n/a	view
Sheboygan	Whitcomb Avenue Beach	0	n/a	view
Sheboygan	Wilson Lima Beach / White's Beach	0	n/a	view

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## **Superstar Beaches**

NRDC has dubbed these 35 popular beaches around the country as our Superstars! Out of a list of hundreds of popular beaches nationwide we developed over several years in consultation with state officials, NRDC's Superstar Beaches are those that did not exceed the previous national standard between 2009-2012 by more than 2% AND also did not exceed the EPA's new, more protective water quality threshold, the Beach Action Value (BAV), by more than 2% in 2013.

#### **Superstar Beaches**

#### Alabama: Gulf Shores Public Beach

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 2.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Alabama: Gulf State Park Pavilion

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 2.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Alabama: Dauphin Island Public Beach

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### California: Newport Beach, 38th Street

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 1.2%
- 2011 percent of exceeding national standard: 2.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 2.0%

#### **Delaware: Dewey Beach-Swedes**

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Florida: Bowman's Beach

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 1.9%

#### Florida: Coquina Beach South

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Florida: Fort Desoto North Beach

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### **Georgia: Tybee Island North**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 1.9%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 1.9%

#### Hawaii: Hapuna Beach St. Rec. Area

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Hawaii: Po'ipu Beach Co. Park

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 1.2%
- 2010 percent of exceeding national standard: 1.3%
- 2009 percent of exceeding national standard: 1.1%

#### Hawaii: Wailea Beach Park

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 1.6%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 1.5%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 1.3%

#### Massachusetts: Singing Beach

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### **Maryland: Point Lookout State Park**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Maryland: Assateague State Park

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### North Carolina: Ocean pier at Main St. and Sunset Blvd.

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### North Carolina: Beach at Cape Hatteras Lighthouse

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### North Carolina: Ocean Pier at Salisbury Street in Wrightsville Beach

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### North Carolina: Ocean Pier at Ocean Blvd and Crews Avenue in Topsail Beach

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### **New Hampsire:** Hampton Beach State Park

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.6%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### New Hampsire: Wallis Sands Beach at Wallis Road

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 1.2%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 1.0%
- 2009 percent of exceeding national standard: 0.8%

#### **New Hampsire: Wallis Sands State Park**

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 1.2%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### **New Jersey: Washington (Margate)**

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### New Jersey: 40th St. (Avalon)

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### New Jersey: 40th St. (Sea Isle City)

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### New Jersey: Stone Harbor at 96th St

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### New Jersey: Upper Township at Webster Rd.

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### **New Jersey: Wildwood Crest at Orchid**

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### **New Jersey: Broadway (Pt Pleasant Beach)**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### New York: Long Beach City

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Virginia: Virginia Beach at 28th Street

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Virginia: Virginia Beach at 45th Street

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Virginia: Back Bay Beach

#### MONITORING RESULTS

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Virginia: Virginia Beach - Little Island Beach North

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

#### Washington: Westhaven State Park, South Jetty

#### **MONITORING RESULTS**

- 2013 percent of samples exceeding BAV: 0.0%
- 2012 percent of exceeding national standard: 0.0%
- 2011 percent of exceeding national standard: 0.0%
- 2010 percent of exceeding national standard: 0.0%
- 2009 percent of exceeding national standard: 0.0%

Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standard for designated beach areas of 104 enterococcus bacteria colony forming units (cfu)/100 ml marine or estuarine water that was in place during those years. Exceedance rates for 2013 are based on the EPA's new Beach Action Value of 60 enterococcus bacteria cfu/100 ml marine or estuarine water. Beaches with fewer than 12 monitoring samples reported during the year are excluded from this list.

## **Understanding the State Summaries**

#### How to Read the State Summaries

The Beaches Environmental Assessment and Coastal Health (BEACH) Act helps states and local governments develop and fund monitoring programs to protect public health. Through these programs local officials test beach water for bacteria and issue closings or advisories when bacteria levels exceed a certain threshold. States report their data to the U.S. Environmental Protection Agency (EPA). Recently the EPA issued a new Beach Action Value (BAV), which is a more protective threshold than the national allowable bacteria levels used in previous years to trigger beach advisories. The EPA considers the BAV to be a "conservative, precautionary tool for making beach notification decisions." While the use of the BAV is currently optional, it is important for beach managers to use. Indeed, the EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV safety threshold to trigger beach notifications. In light of this information, in evaluating 2013 beach water quality, NRDC chose to use the BAV in order to best protect beachgoers from water quality health risks.

NRDC's *Testing the Waters* report includes beach water quality monitoring summaries for 30 states that participate in the BEACH Act program. To track water quality within the state over time, NRDC also provides information on the percent of monitoring samples taken at beaches monitored consistently from year to year over a five year period. The state summaries are organized into sections as described below.

#### Rank in the Nation

Each state's national ranking in percent exceedances is based on the percentage of reported samples that exceeded the EPA's Beach Action Value (BAV) safety threshold for designated beach areas in 2013. For marine and estuarine water, the BAV safety threshold is 60 enterococcus bacteria colony forming units (cfu) per 100 ml water in a single sample. For freshwater the BAV safety threshold is 190 *E. coli* bacteria cfu per 100 ml freshwater in a single sample. Rankings go from 1st for the state with the lowest percent exceedances to 30th for the state with the highest percent exceedances.

#### Percent of Samples Exceeding National Beach Action Value

This is the overall percentage of water quality samples in a given state that exceeded the BAV safety threshold for designated beach areas in 2013.

#### **2013 Beach Water Quality Summary**

The pie chart depicts the range of water quality monitored at the state's beaches. Beaches with 0% of samples exceeding the BAV safety threshold make up the green slice, beaches whose samples exceeded the BAV safety threshold between 0% to 10% of the time make up the yellow slice, beaches whose samples exceeded the BAV safety threshold between 10% to 20% of the time make up the orange slice, and beaches whose samples exceeded the BAV safety threshold more than 20% of the time make up the red slice. Beaches that were not monitored and beaches that were monitored fewer than 12 times in 2012 make up the grey slice.

#### What Does Beach Water Monitoring Show?

This section describes the number of beaches and beach segments monitored in the state and gives the percent of samples that exceeded the BAV safety threshold. For this section, NRDC calculated percent exceedance rates by taking the number of samples exceeding the BAV safety threshold and dividing that number by the total number of samples collected during the calendar year. NRDC considers all reported samples individually (without averaging) when calculating the percent exceedance rates in this analysis. This includes duplicate samples and samples taken outside the official beach season, if any. These exceedance determinations are used for tracking water quality over time. The list of beaches with highest exceedances in the state excludes beaches with less than 12 monitoring samples reported during the year.

#### State Water Quality Trend 2009-2013

This section illustrates trends in beach water quality exceedances from 2009 to 2013. When making year-to-year comparisons, NRDC only includes beaches that were sampled all five years.

Percent exceedance rates in 2009-2012 are based on the national single-sample maximum standards for designated beach areas in place at that time (104 enterococcus bacteria cfu/100 ml marine or estuarine water and 235 *E. coli* bacteria cfu/100 ml freshwater). For comparison purposes, exceedance rates for 2013 are shown based on the historical national standard as well as on EPA's new BAV threshold (60 enterococcus bacteria cfu/100 ml marine or estuarine water and 190 *E. coli* cfu/100 ml freshwater).

Note that each state summary has two 2013 percent exceedance rates that might not agree: one that was calculated based on the BAV safety threshold for all reported designated beach areas (to rank states for 2013 and to determine overall percent exceedances), and one that was calculated based on the BAV safety threshold for only the set of beaches with reported monitoring results in all five years from 2009 to 2013 (for the bar chart).

#### **State 2013 Monitoring Results**

This section includes a table listing all individual beaches and beach segments that the state reported to EPA in 2013. The table includes the beach name, the county in which it is located, total number of samples, the percent of samples exceeding the BAV safety threshold and a link to view the beach on a map.

## **Methodology for NRDC's Report**

#### **Sources of Information**

Our coastal and Great Lakes states have dedicated and talented individuals that work hard to improve their beach water quality and to protect public health when beach water quality is poor. States that do more than monitor their beach water and issue closings and advisories should be recognized for their extra efforts.

NRDC relies on the EPA's electronic reporting system for information collected under the federal BEACH Act. Information from the electronic reporting system has been

supplemented by NRDC surveys of state and local officials. Beach monitoring coordinators in nearly every state cooperated with NRDC with a great deal of patience and grace and provided interesting and meaningful information for this report. NRDC is thankful for their time and their openness.

Although greatly improved, the EPA's electronic data submission system continues to experience some technical problems, resulting in potential delays in data availability and incomplete data. Therefore, NRDC requested 2013 beach season monitoring data directly from the states. When states provided these data, NRDC used them; otherwise, we used monitoring data downloaded from the EPA's STORET website.

#### **Outreach to States**

NRDC first began contacting states in January, 2013, asking them when and if their annual report would be available and if they could provide NRDC with their monitoring data directly. Between January and May, every state was sent a survey about general management practices. Between February and mid-May, every state was sent a summary of monitoring data for their verification. NRDC sent each state a draft of their summary for review, verification, and comment. This draft contained NRDC's analysis of monitoring data as well as the narrative material for each state. Follow-up questions and additional data corrections were made into early June, when states and localities were contacted with specific questions. In some cases, NRDC indicated in communications with states that if they did not receive updates by a date certain, NRDC would use the information as shared with the states. A summary of contacts made with states to verify program information and monitoring data is available upon request.

## **State Monitoring and Notification Practices**

#### **Monitoring**

There is a considerable amount of variability among state beach water monitoring protocols. Some states perform additional monitoring after exceedances and when they expect beach water to be contaminated. Others adhere to a schedule that doesn't vary with circumstances. Some states take multiple samples that are composited before analysis, or analyze multiple samples and average the results before applying them to the water quality standard.

States also vary as to how often they sample. Some states monitor their high-priority beaches almost daily, while other states monitor their high-priority beaches less than once a week. Moreover, sampling techniques differ by state. The EPA recommends that samples be collected 12 inches below the surface in water that is three feet deep, but states report collecting samples at varying depths. Some states are particular about collecting samples at a particular time of day or tidal stage. Samplers in some states wade into the surf and hold the collection container in their hand to collect the sample, others use a telescoping golf ball retriever so samples are collected far from the sampler's body.

Sampling practices can have a major impact on whether or not an advisory or closing is issued. A study conducted at Hobie Beach in Florida found that samples taken at times of high solar radiation were less likely to exceed standards than samples taken when solar radiation was low. 1 Solar radiation varies with the time of year, the time of day, and the clarity

of the atmosphere; it is greatest at high noon near the summer solstice on a clear day. The same study found that enterococcus levels were higher in samples that were collected in knee-deep water than in samples taken in waist-deep water.

#### **Public Notification Practices**

Along with different standards for triggering an advisory or closure, states vary as to whether or not they issue a public health advisory or close a beach or both when sampling has found bacteria levels that exceed the standards. Some states wait until there have been two consecutive standard violations before an advisory is issued, and some take other factors into account when an exceedance occurs before deciding to issue a closing or advisory.

Methods for notifying the public of health advisories and beach closures are variable among states as well, and for some beaches it may be difficult for beachgoers to get complete information about any notifications. States make use of a variety of notification methods, including the Internet, toll-free phone lines, signs posted at beaches, electronic notifications, newspaper notices, and television and radio coverage in conjunction with the weather report. At a minimum, public notification for beach closings and advisories should include a sign or flag at the beach and an easily located website. Links to state websites with beach information can be found on the individual state summary pages and on the Guide to Finding a Clean Beach page.

 Vogel, LJ, AA Enns, AM Abdelzaher, HM Solo-Gabriele. Spatial and Temporal Variation in Indicator Microbe Sampling and its Effects on Beach Management Decisions. Poster at Beach Conference. Miami, FL. March 2011.



## **Guide to Finding a Clean Beach**

## HOW TO FIND OUT IF A BEACH IS TESTED FOR POLLUTION—AND WHAT AUTHORITIES DO IF THEY FIND IT

Wondering how clean the water is at your favorite beach? Finding an answer can be tricky, because there is no national protocol for communicating with the public about the risks from unsafe swimming water. Beach testing and closing/health advisory practices vary beach by beach and state by state. Some localities regularly test the water quality at their beaches, but others do not. Even when states and local authorities do perform tests, they don't always notify the public or close beaches when bacteria levels in the water exceed health standards.



#### FINDING HELP ONLINE

Here's how to investigate the safety of your favorite beach before heading out for a swim:

- Start by checking <u>Testing the Waters 2014</u>. This NRDC report will give you the details on beach water monitoring results for coastal and Great Lakes beaches in 2013.
- The Environmental Protection Agency's <u>Beaches</u> website is full of useful information, as is its <u>interactive database</u> of water quality testing, beach closures, and advisories. The agency's beach <u>Do's and Don't's</u> page also offers tips about how you can help to improve water quality at the beach.

#### FINDING HELP AT THE LOCAL OR STATE HEALTH DEPARTMENT

In most cases, staff members at your town or county health department will be able to answer your questions about local beach water monitoring. You also can contact your state's health department or environmental protection agency. The information for EPA regional beach contacts and state, tribe, and territory beach contacts can be found here.

When you contact local or state health officials, ask:

- What are the sources of pollution affecting the waters where I swim, and what is being done to make sure they're clean?
- Do you perform water quality monitoring for swimmer safety at these beaches? If so, how often?
- Do you always close beaches or notify the public when testing shows that bacteria levels are worse than the health-protective Beach Action Value identified by the EPA?
- What is the current status of these waters (are they closed or open?), and what warning signs should I look for that might indicate there are water pollution problems?

#### **AVOIDING POLLUTED BEACHES**

In some cases, beach water quality test results may be announced on local radio and TV, printed in the newspaper, or posted online. Most states have information about beach closings and swimming advisories available on a website. Below is a list of such states; click on one to visit its site. Also be on the lookout for posted signs at the beach before you swim.

<u>Alabama</u>	<u>Hawaii</u>	<u>Michigan</u>	New York State	Rhode Island
Alaska	<u>Illinois</u>	Minnesota	(Lake Ontario and Lake Erie beaches)	South Carolina
California	<u>Indiana</u>	Mississippi	North Carolina	<u>Texas</u>
Connecticut	Louisiana	New Hampshire	Ohio	<u>Virginia</u>
Delaware	Maine	New Jersey	Oregon	Washington
<u>Florida</u>	Maryland	New York Coastal	Pennsylvania	Wisconsin
Georgia	Massachusetts	<u>Beaches</u>	remisyivama	

Whenever possible, swim at beaches that your research shows have the cleanest water, are carefully monitored, and have strict closure and advisory procedures. If your beach is not monitored regularly, there are some things you can do to avoid swimming in polluted water:

- If possible, choose beaches that are on open waters and away from urban areas. They frequently have cleaner water than beaches in developed areas or in enclosed bays and harbors with little water circulation.
- Look for pipes along the beach that drain stormwater runoff from the streets, and don't swim near them. Avoid swimming in beach water that is cloudy or smells bad.
- Keep your head out of the water.
- Avoid swimming for at least 24 hours after it rains and 72 hours after heavy rains.
- Contact local health officials if you suspect beach water contamination so that others can be protected from exposure.



## **Frequently Asked Questions**

- 1. How widespread is beach pollution?
- 2. What are the major causes of beach pollution?
- 3. Could I get sick from swimming in contaminated beach water?
- 4. Could I get sick from swimming in water contaminated by animal waste?
- 5. Who is most at risk?
- 6. How many Americans get sick from swimming in contaminated beach water?
- 7. How can I protect myself from getting sick?
- 8. Aren't beaches tested to make sure that they are safe?
- 9. Why isn't beach water testing sufficient?
- 10. If states close beaches, won't they damage coastal economies?
- 11. What can be done to make swimming at our beaches safer?
- 12. What are red tides and are they dangerous to swim in?
- 13. How could climate change affect the health of the water at my beach?

## 1. How widespread is beach pollution?

Every coastal state has at least one beach with pollution problems. In 2013, more than 10 percent of beach water samples had water quality worse than the health-protective Beach Action Value that the Environmental Protection Agency has developed. At the nation's coastal and Great Lakes beaches, 13 percent of all samples taken were worse than that safety level. According to the most recent data available, 3,485 beaches were monitored in 2013—a six percent decrease from 2012.

## 2. What are the major causes of beach pollution?

As described in this report's <u>Sources of Beach Pollution</u> fact sheet, the most frequently identified pollution source that beach managers have historically blamed for beach closings and swimming advisories is stormwater, much more so than miscellaneous sources such as wildlife, boat discharges, and sewage spills and overflows.

Rain is often a factor contributing to beach water pollution. Heavy rain can overwhelm sewage systems, forcing raw sewage to bypass treatment plants and flow directly into coastal waters. And as rainwater washes over land, it picks up pollutants and carries them directly to coastal waters. Pollutants found in stormwater include trash, motor oil, pet waste, pesticides, fertilizer, animal droppings, and anything else that washes off developed land when it rains.

But in many cases, communities simply don't know the sources of their beach water pollution. NRDC has long advocated for a greater federal investment in local beach programs to enable officials to better identify and correct pollution sources.

## 3. Could I get sick from swimming in contaminated beach water?

Yes. Exposure to bacteria, viruses, and parasites in contaminated beach water can cause a wide range of diseases, including ear, nose, and eye infections; stomach flu; hepatitis; encephalitis; rashes; and respiratory illnesses. Most waterborne disease outbreaks in the United States occur during the summer, when Americans are most likely to be exposed to contaminated beach water.

## 4. Could I get sick from swimming in water contaminated by animal waste?

Yes. Although some pathogens in animal waste do not transfer to humans, others (such as *E. coli 0157*) can make humans ill. Additional scientific research needs to be done to determine the extent of the risk posed to humans by exposure to pathogens from animal waste. But until such research demonstrates otherwise, it is best to assume that it's not safe to swim in beach water that contains excessive levels of human or animal waste.

#### 5. Who is most at risk?

Young children, elderly people, pregnant women, cancer patients, and others with weakened immune systems are most likely to get sick from swimming in contaminated beach water. They also are the most likely to be hospitalized or die from exposure to waterborne illnesses. For instance, according to the Centers for Disease Control and Prevention, children under the age of 9 had more reports of diarrhea and vomiting from exposure to waterborne parasites than any other age group.

## 6. How many Americans get sick from swimming in contaminated beach water?

We do not have good national data on recreational waterborne disease outbreaks because most people treat the symptoms of their illness (for example, fever, headache, diarrhea, and vomiting) without ever finding out what caused them.

## 7. How can I protect myself from getting sick?

You can lessen your chances of getting sick at the beach by taking these precautions: 1) Swim only at beaches where authorities test the water frequently and close the beach or issue an advisory when it is polluted. 2) Stay out of the water when there are closings or advisories. 3) Avoid swimming at beaches with nearby discharge pipes or at urban beaches after a heavy rainfall. 4) Stay out of murky or foul-smelling water. 5) Avoid the water when you have an open wound or infection. 6) Swim without putting your head under water.

If you believe you have been exposed to contaminated water, rinse off well using soap and clean water, paying special attention to any skin abrasions. Use a mouthwash or clean water to gargle and spit out. Dry out your ears. Take a shower and wash swimsuits and towels (and other clothing that might have gotten wet) as soon as possible. If you start to feel sick, go to a doctor or another health care provider. Tell your doctor that you think you were exposed to contaminated water, and contact your county health department to report your illness.

## 8. Aren't beaches tested to make sure they are safe?

State and local health and environmental officials are responsible for monitoring water quality at our nation's beaches. When they find contaminated water, they may post warnings or close the beach.

Coastal beach monitoring has significantly improved in recent years due to passage of the Beaches Environmental Assessment and Coastal Health Act of 2000 (BEACH Act), which provides assistance to state and local governments to develop monitoring programs. But many beaches still are not monitored regularly, in part because Congress has never fully funded the BEACH Act. Even worse, the Obama administration has proposed to eliminate BEACH Act funding for states for the upcoming fiscal year. If adopted, this proposal would undoubtedly mean less monitoring and poorer notification of beach conditions.

## 9. Why isn't current beach water testing sufficient?

Even beach water that is regularly monitored for pollution is not necessarily safe on any given day. Most tests take 24 hours to produce results, and many officials will retest before closing a beach or issuing an advisory. Also, the tests are not designed to protect the public against the full range of waterborne illnesses or to protect sensitive populations.

In 2012 the EPA released new allowable bacteria levels in recreational waters (called "criteria") that missed a critical opportunity to better protect the public from the dangers of swimming in polluted water. In fact, in some respects the new criteria are even less protective than the 25-year-old ones they replaced. Most egregiously, the criteria are based on what the EPA has determined is an acceptable gastrointestinal illness risk of 3.6 percent. That is, the EPA believes it is acceptable for 36 in 1,000 swimmers (1 in 28) to become ill with gastroenteritis from swimming in water that just meets its proposed water quality criteria. Fortunately, the EPA also developed Beach Action Values (BAVs) that are more protective of public health. These BAVs are a "conservative, precautionary tool for making beach notification decisions." The EPA's proposed National Beach Guidance and Required Performance Criteria for Grants would require states receiving BEACH Act funding to use the BAV to trigger beach notifications. In light of this information, in assessing 2013 beach water quality NRDC has chosen to use the national BAV 60 cfu/100ml for enterococcus for marine beaches and 190 cfu/100 ml for *E.coli* for Great Lakes beaches in order to best protect beachgoers from water quality health risks.

## 10. If states close beaches, won't they damage coastal economies?

The primary purpose of beach closings is to protect public health. Although there may be short-term impacts to local economies from beach closings, public confidence is enhanced by the knowledge that effective beach protection and cleanup programs are in place. Ultimately, coastal economies will be bolstered if beach water pollution sources are cleaned up. One California study estimated that the annual health costs associated with gastroenteritis, also known as stomach flu, come to between \$21 million and \$51 million for Los Angeles and Orange County beaches alone.

## 11. What can be done to make swimming at our beaches safer?

Our beaches would be safer for swimming if they were cleaner. Federal, state, and local governments should make beach water pollution prevention a priority by requiring better controls on stormwater and sewage. Stormwater is the largest known source of pollution that causes beach advisories or closings. One of the best ways to curb stormwater pollution is by implementing green infrastructure techniques to retain and filter rainwater where it falls, and letting it soak back into the ground rather than allowing it to overflow into waterways. These techniques include strategically placed rain gardens in yards, tree boxes along city sidewalks, green roofs, and permeable pavement. By capturing and storing stormwater in rain barrels or cisterns, we can also reuse it for irrigation or other nonpotable purposes.

In addition, we must preserve the natural buffers that help prevent beach water pollution by absorbing stormwater. Wetlands retain stormwater and reduce polluted runoff; a single acre of wetland can store 1 million to 1.5 million gallons of water. Yet America is losing these natural protections; in the most recent national analysis, the Department of the Interior estimated that between 2004 and 2009 the continental United States experienced a net loss of 62,300 acres of wetlands. This trend is disturbing—but not surprising, because approximately 20 percent of the nation's wetlands are not being protected from destruction at all under the federal Clean Water Act, and many more lack full protection under the law. Fortunately, the Obama administration is acting to preserve our nation's water resources by clarifying what streams, wetlands, and other waters are covered under the Clean Water Act. The administration's Clean Water Protection Rule is out for public comment right now; please stand up for clean water and the wetlands that help preserve it by taking action to support this initiative.

Beach managers can help keep the swimming public safe by communicating the risks of swimming using the most health-protective guidelines for doing so. Adoption of rapid test methods is an important action beach managers can take to better protect the public. The use of the EPA's Beach Action Values is another good way to ensure the public is adequately protected from the risks of swimming in contaminated waters.

Individuals can also <u>help control water pollution by taking simple actions</u> such as picking up pet waste, putting swim diapers with plastic covers on babies, and keeping trash off the beach.

#### 12. What are red tides, and are they dangerous to swim in?

Red tides are massive blooms of certain species of microscopic algae that produce toxins dangerous to humans and marine life. Inhaling, swallowing, or coming into skin contact with these toxins can result in serious and potentially life-threatening human illnesses. Symptoms include diarrhea, nausea, vomiting, abdominal cramping, and chills, among many others. Red tides killed a record number of manatees in Florida in 2013 and are a suspected cause of sea turtle and whale deaths as well.

Red tides in Florida and elsewhere in the Gulf of Mexico are becoming more common. The tides can occur for a variety of reasons, but they appear to be made worse by an overload of nutrients in the water, brought on by inadequately treated sewage, farm waste, and fertilizer runoff.

## 13. How could climate change affect the health of the water at my beach?

Climate change will make beach water pollution worse. In some communities, it will lead to *more frequent and intense rainstorms, temperature increases, flooding, and sea level rise,* as well as increased stormwater pollution and sewer overflows—leading to more contamination and pathogens in your beach water. Climate change is also expected to increase pathogen populations that cause stomach flu and other, potentially life-threatening diseases in coastal waters.

## **Methodology for Beach Locations**

The EPA gathers beach locations from state and local officials and provides those data in  $\underline{a}$  central database.

The location data are provided in latitude and longitude format. For example, Long Beach, California is located at 33.757,-118.147. Learn more about latitude and longitude values.

The local or state officials in most cases have provided to the EPA with a "start" latitude/longitude and "end" latitude/longitude for each beach. There is a wide variety in the monitoring protocols for the different beaches, and we are unable to provide any information at present about the location of the monitoring locations. As a consequence, the icons are simply based on the mid-point of the latitudes/longitudes provided.

In some cases, the EPA database contained only a single point for the beach (not start and end points). In those situations we simply represented the beach as a single icon with no boundaries denoted.

When the EPA databases did not include a beach location, we requested additional information from state beach contacts and did a beach-by-beach inquiry using internet searches to attempt to find the beach location. Specifically, we ran several searches for missing beaches both using EPA's BEACON website and using Google searches for the beaches' attributes (name, beach ID, e.g.) to try to find location information.

### **Data Checking**

We compared the map generated from EPA's data to several state and local government maps of beaches we found online to see if there was general agreement between our map and these other sources of information. We found that there was good overall agreement between our map based on EPA data and these other sources, and also identified additional beaches to investigate in more detail as we continue to improve the map.

## We Are Committed to Improving the Map

We welcome suggestions that will help us implement improvements to the beach location information. If you notice a problem with a beach, simply click on its icon, then click the "Let us know" link at the bottom of the window. When you submit a report, we are notified about the beach and your feedback. We'll review all submissions we receive, and will work with state coordinators to make needed corrections.

Furthermore, as EPA or state officials provide us with improved information about the beach locations, we plan to evolve the beach location information.

# HOW NATURAL SOLUTIONS HELP KEEP OUR BEACHES CLEAN





STREAMS AND WETLANDS ARE ESSENTIAL FOR CLEAN BEACHES.
SUPPORT THE EPA'S CLEAN WATER PROTECTION RULE...
AND SWIM SAFER!

