



## OREGON

### 3rd in Beachwater Quality

3% of samples exceeded national standards in 2010

Polluted urban and suburban runoff is a major threat to water quality at the nation's coastal beaches. Runoff from storms and irrigation carries pollution from parking lots, yards, and streets directly to waterways. In some parts of the country, stormwater routinely causes overflows from sewage systems. Innovative solutions known as green infrastructure enable communities to naturally absorb or use runoff before it causes problems. The U.S. Environmental Protection Agency is modernizing its national rules for sources of runoff pollution and should develop strong, green infrastructure-based requirements.

Oregon has 91 beaches lining 186 miles of Pacific Ocean coastline. The state's beachwater quality monitoring program is administered by the Oregon Health Authority (OHA).

OHA officials work to inform the public about potential contamination sources. For example, the Ecola Court stormwater outfall, which flows across Cannon Beach in Clatsop County before emptying into the ocean, has a history of elevated fecal indicator bacteria levels. In March 2010, officials from the Oregon Beach Monitoring Program met with the Clatsop County Commissioner to explain the role of the program, to discuss the various

entities monitoring water quality at Cannon Beach, to address concerns about the consistently high bacteria levels found at the Ecola Court outfall, and to discuss possible educational signage to post above the outfall pipe.<sup>1</sup> Current signage is not particularly noticeable and difficult to read.

The city of Newport took steps to protect the public when monitoring revealed consistently high bacteria levels in stormwater discharges to Nye Beach in Lincoln County in 2006 and 2007. The city conducted smoke and dye testing of the stormwater and sewer lines and discovered that seven properties were discharging sewage directly to stormwater drains instead of to the city's sewage treatment system. In 2008, these cross-connections were rectified and a sign was posted above the stormwater discharge pipe warning the public not to play in the stormwater runoff or near the pipe.<sup>2</sup> Beachwater quality has improved, from 32% exceedances in 2007 to 7% in 2008 and 0% in 2009 and 2010.

### Monitoring Results

In 2010 Oregon reported 91 coastal beaches and beach segments. Of these, 6 (7%) were monitored once a week, 20 (22%) were monitored twice a month 65 (71%) were not monitored. For this section of the report, NRDC looked at the percent of monitoring samples that exceeded the state's daily maximum bacterial standards (all reported samples were used to calculate the 2010 percent exceedance rates, including duplicate samples and samples taken outside the official beach season, if any). In 2010, 2%\* of all reported beach monitoring samples exceeded the state's daily maximum bacterial standards. The only beaches reporting exceedances in 2010 were Sunset Bay State Park Beach in Coos County (10%); D River Beach in Lincoln County (9%); Battle Rock State Park Beach in Curry County (7%); Bastendorf Beach in Coos County (5%); Harris Beach State Park in Curry County (4%); and Hug Point State Park Beach (3%), Tolovana State Park Beach (2%), and Seaside Beach (1%) in Clatsop County.

Coos County had the highest exceedance rate (8%) in 2010, followed by Lincoln (3%), Curry (1%), and Clatsop (1%) counties. There were no exceedances in Douglas, Lane, and Tillamook counties.

### KEY FINDINGS IN OREGON

#### Beachwater Contamination

(% of samples exceeding state standards in 2010)

- Sunset Bay State Park Beach in Coos County (10%)
- D River Beach in Lincoln County (9%)
- Battle Rock State Park Beach in Curry County (7%)

#### Reported Sources of Beachwater Contamination

Statewide (number of closing/advisory days)

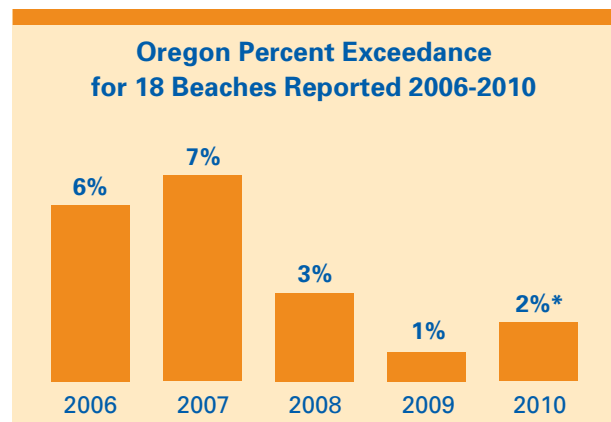
- 67 (100%) unknown sources of contamination

**Sampling Practices:** In 2010, sampling occurred from March to November, with more monitoring occurring during the peak season from May to September. Of the beaches that were monitored, some were sampled only during the nonpeak season (spring and fall), when they are frequented by surfers and wet weather commonly compromises water quality. Others were sampled only during peak season (Memorial Day to Labor Day).<sup>1</sup>

OHA determines sampling practices, locations, standards, and notification protocols and practices throughout the state. All samples are collected and processed by an Oregon Department of Environmental Quality employee who travels the coastline in a mobile lab.<sup>1</sup> Samples are collected in ankle- to knee-deep water in the middle of typical bathing areas. Beaches are prioritized for sampling on the basis of the number of people in the water, previous water quality data, known and suspected point and non-point pollution sources, and public comments.<sup>1</sup>

Water samples are taken near known or potential pollution sources. Following an advisory during the peak season, an additional sample is collected within 96 hours, if resources are available. The program also conducts follow-up monitoring after known sewage spills and major pollution events.<sup>1</sup> States that monitor more frequently after an exceedance is found and after pollution events will tend to have higher percent exceedance rates and lower total closing/advisory days than they would if their sampling frequency did not increase after an exceedance or after a pollution event.

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## Advisories

In 2010, total advisory days for 11 events lasting six consecutive weeks or less decreased to 67 days, a drop of 37% from 106 days in 2009. For prior years, there were 86 advisory days in 2008, 101 days in 2007, 66 days in 2006, and 117 days in 2005. In addition, there were no extended or permanent events in 2010. Extended events are those in effect more than six but not more than 13 consecutive weeks; permanent events are in effect for more than 13 consecutive weeks. For the 11 events lasting six consecutive weeks or less, all 67 advisory days in 2010 were due to monitoring that revealed elevated bacteria levels.



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**Children playing next to the Ecola Court outfall at Cannon Beach.**

**Standards and Procedures:** In Oregon, the public is guaranteed free and uninterrupted use of all beaches along the coastline. Therefore, beach advisories are issued, but not closings. Oregon uses a single-sample maximum enterococcus standard of 158 cfu/100 ml for beach advisory decisions in marine waters. This standard corresponds to the EPA's "Moderate Full Body Contact Recreation" standard. OHA says their use of a standard that is less strict than the EPA's "Designated Beach Area" standard is protective of public health, given the water temperature and frequency and duration of use by swimmers and other recreational users of coastal waters in Oregon.<sup>2</sup> The geometric mean of sampling results is calculated for tracking trends only, not for issuing advisories.

\* Why don't the 2010 percent exceedance values in this summary match? To get the value in the header (3%), beachwater monitoring samples were compared to EPA's single-sample maximum standard for designated beach areas. Oregon applies EPA's single-sample maximum standard for moderately used full body contact water recreation beaches, and the percent exceedance value in the "Monitoring Results" section (2%) compares beachwater monitoring samples to this less stringent single sample maximum standard.

Public notification of beach advisories occurs if a single sample result exceeds Oregon's action limit. Resampling, in lieu of public notification, is acceptable if there is reason to doubt the accuracy or certainty of the first sample, but to date, there have been no exceedances attributed to sampling or laboratory error that required resampling prior to the issuance of an advisory.<sup>1</sup>

The state does not have preemptive standards for rainfall but does issue preemptive advisories after a known sewage spill or major pollution event where the potential exists for bacteria indicator levels to exceed the state standard.<sup>1</sup>

<b>Oregon 2010 Monitoring Results and Closing or Advisory Days</b>					
<b>Beach</b>	<b>Tier</b>	<b>Assigned Monitoring Frequency</b>	<b>Total Samples</b>	<b>% of Samples Exceeding State Standards</b>	<b>Closing or Advisory Days</b>
<b>Clatsop County</b>					
Cannon Beach	1	1/wk	44	0%	0
Hug Point State Park Beach	1	1/wk	39	3%	2
Indian Beach at Ecola State Park	1	1/wk	44	0%	0
Seaside Beach	1	1/wk	68	1%	3
Tolovana State Park Beach	1	1/wk	45	2%	7
<b>Beaches in Clatsop County that were not monitored and that had no closing or advisory days in 2010:</b>					
Arcadia State Park Beach	Del Rey Beach State Recreation Site	Fort Stevens State Park Beach	Sunset Beach State Rec Site		
<b>Coos County</b>					
Bastendorf Beach	1	2/mo	58	5%	15
Sunset Bay State Park Beach	1	2/mo	60	10%	5
<b>Beaches in Coos County that were not monitored and that had no closing or advisory days in 2010:</b>					
Bandon State Natural Area	Cape Arago State Park– South Cove	Seven Devils State Recreation Site	Whiskey Run Beach	Bandon South Jetty County Park	
<b>Curry County</b>					
Battle Rock State Park Beach	1	2/mo	14	7%	2
Crissey Field State Recreation Site	1	2/mo	28	0%	0
Face Rock State Scenic Viewpoint	1	2/mo	14	0%	0
Gold Beach	1	None	2	0%	0
Harris Beach State Park	1	2/mo	28	4%	18
Hubbard Creek Beach	1	2/mo	43	0%	0
Sporthaven Beach	1	2/mo	21	0%	0
<b>Beaches in Curry County that were not monitored and that had no closing or advisory days in 2010:</b>					
Arizona Beach State Recreation Site	Hunter Creek Beach	Recreation Site	Samuel H. Boardman State Scenic Corridor– Lone Ranch Beach		
Buena Vista Ocean Wayside State Park	Mcvay Rock State Recreation Site	Paradise Point State Recreation Site	Samuel H. Boardman State Scenic Corridor– Whaleshead Beach		
Bullards Beach	Meyers Beach	Pistol River State Scenic Viewpoint			
Cape Blanco State Park– Sixes River Beach	Mill Beach	Port Point Beach			
Humbog Mountain State Park	Nesika Beach	Samuel H. Boardman State Scenic Corridor– China Beach			
	Ophir Beach				
	Otter Point State				
<b>Douglas County</b>					
Umpqua Beach	1	2/mo	21	0%	0

Beach	Tier	Assigned Monitoring Frequency	Total Samples	% of Samples Exceeding State Standards	Closing or Advisory Days
<b>Lane County</b>					
Florence North Jetty Beach	1	None	21	0%	0
Heceta Beach	1	2/mo	21	0%	0
<b>Beaches in Lane County that were not monitored and that had no closing or advisory days in 2010:</b>					
Carl G. Washburne Memorial State Park	Muriel O. Ponsler Memorial State Scenic Viewpoint	Oregon Dunes National Rec Area–South Jetty	Rock Creek Campground–Roosevelt Beach		
Devils Elbow State Park	Neptune Beach Oregon Dunes National Rec Area–Horsfall Beach	Oregon Dunes National Rec Area–Umpqua Dunes	Stonefield Beach State Recreation Site		
<b>Lincoln County</b>					
Agate Beach	1	2/mo	35	0%	0
D River Beach	1	2/mo	55	9%	15
Nye Beach	1	2/mo	56	0%	0
Otter Rock Beach	1	2/mo	28	0%	0
<b>Beaches in Lincoln County that were not monitored and that had no closing or advisory days in 2010:</b>					
Alea River Recreation Area Beach	Driftwood Beach State Recreation Site	Moolack Beach Nelscott Beach	Smelt Sands State Recreation Site		
Beachside State Park Beach	Fogarty Creek Beach Gleneden Beach	Ona Beach Roads End Beach	South Beach Tillicum Beach		
Beverly Beach	Governor Patterson State Park Beach	Seal Rock State Recreation Site	Yachats Wayside Beach		
Devils Punch Bowl State Natural Area	Lost Creek State Recreation Site	Siletz Bay Beach	Yaquina Bay State Park Beach		
<b>Tillamook County</b>					
Bob Straub State Park Beach	1	None	1	0%	0
Cape Kiwanda State Park Beach	1	2/mo	42	0%	0
Neskowin Beach	1	2/mo	21	0%	0
Oceanside Beach State Wayside	1	2/mo	21	0%	0
Rockaway Beach	1	2/mo	21	0%	0
Short Sand Beach	1	1/wk	88	0%	0
Twin Rocks Beach	1	2/mo	7	0%	0
<b>Beaches in Tillamook County that were not monitored and that had no closing or advisory days in 2010:</b>					
Barview County Park Beach	Cape Lookout State Park Beach Cape Mears Beach	Manhattan Beach State Park Manzanita Beach	Nehalem Bay State Park Beach		

## NOTES

1 Oregon Department of Human Services. Annual Performance Report for the Oregon Department of Human Services BEACH Monitoring Program (Agreement #CU96088101)—Activity Period October 1, 2009, through September 30, 2010. Not dated.

2 Jennifer Ketterman, Oregon Health Authority. Personal communication. April 2011.

*Testing the Waters 2011 reflects data as of June 27, 2011.*