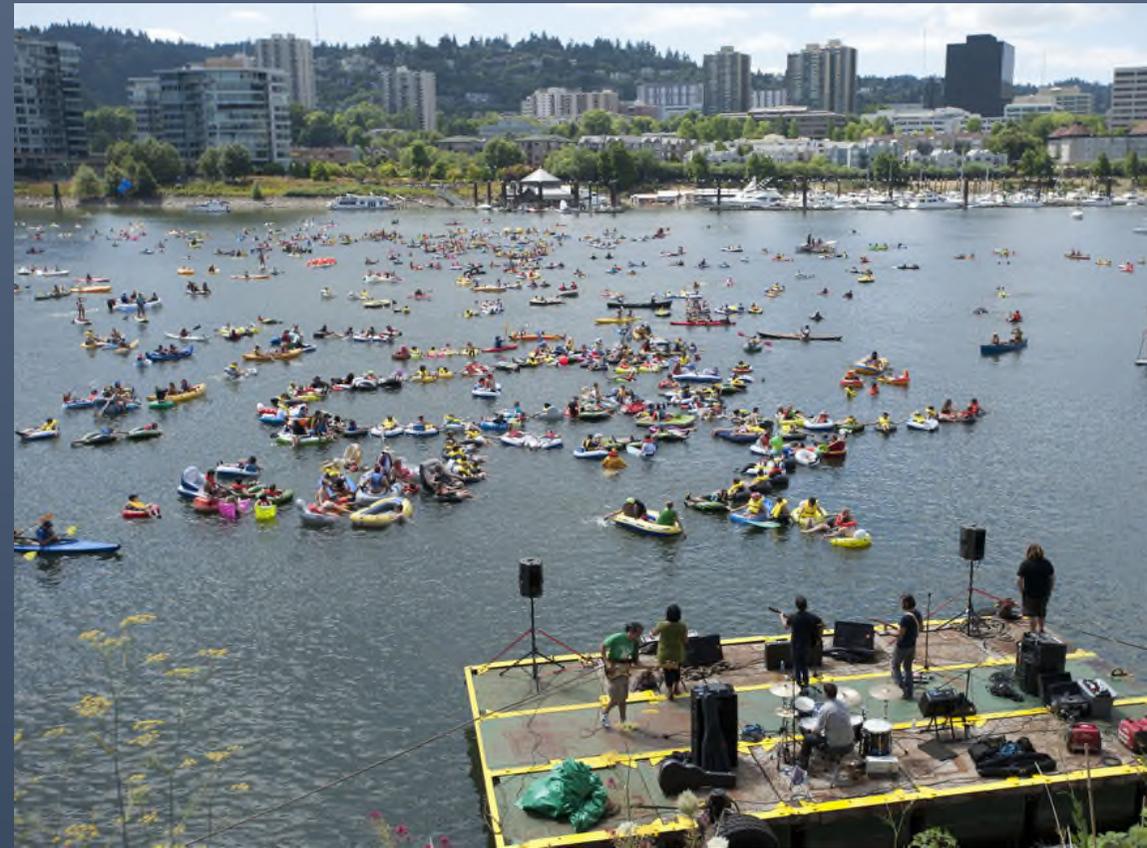


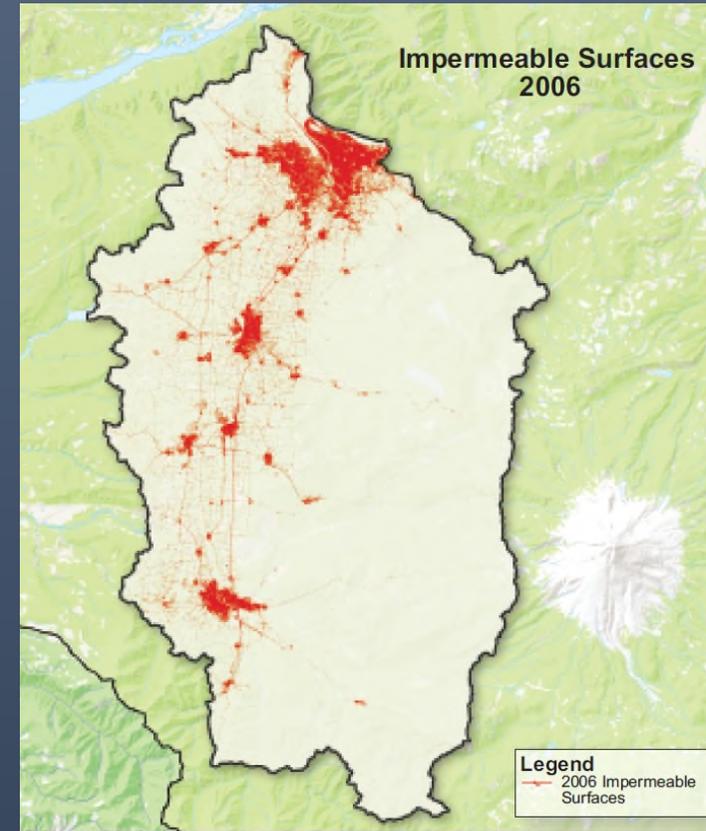
Promoting Recreation in the Willamette River Post CSO Control by Peter Abrams



ENVIRONMENTAL SERVICES
CITY OF PORTLAND

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Willamette River Watershed



Working River 1880 - 1910



Combined Sewer System Constructed



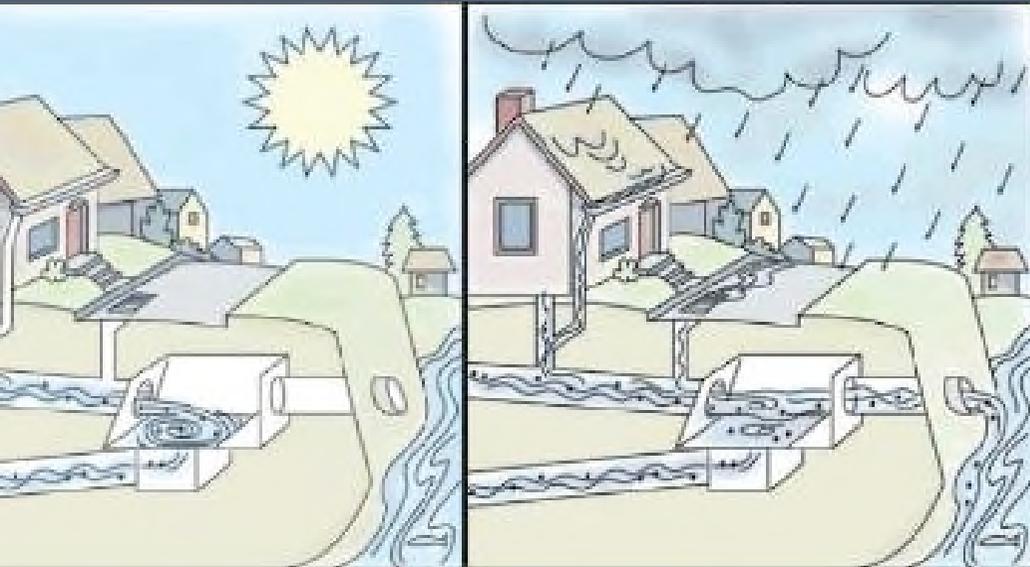
938 Mayor Joseph Carson and 4,000 Children at City Hall



Infamous 1940 Willamette River Pollution Video

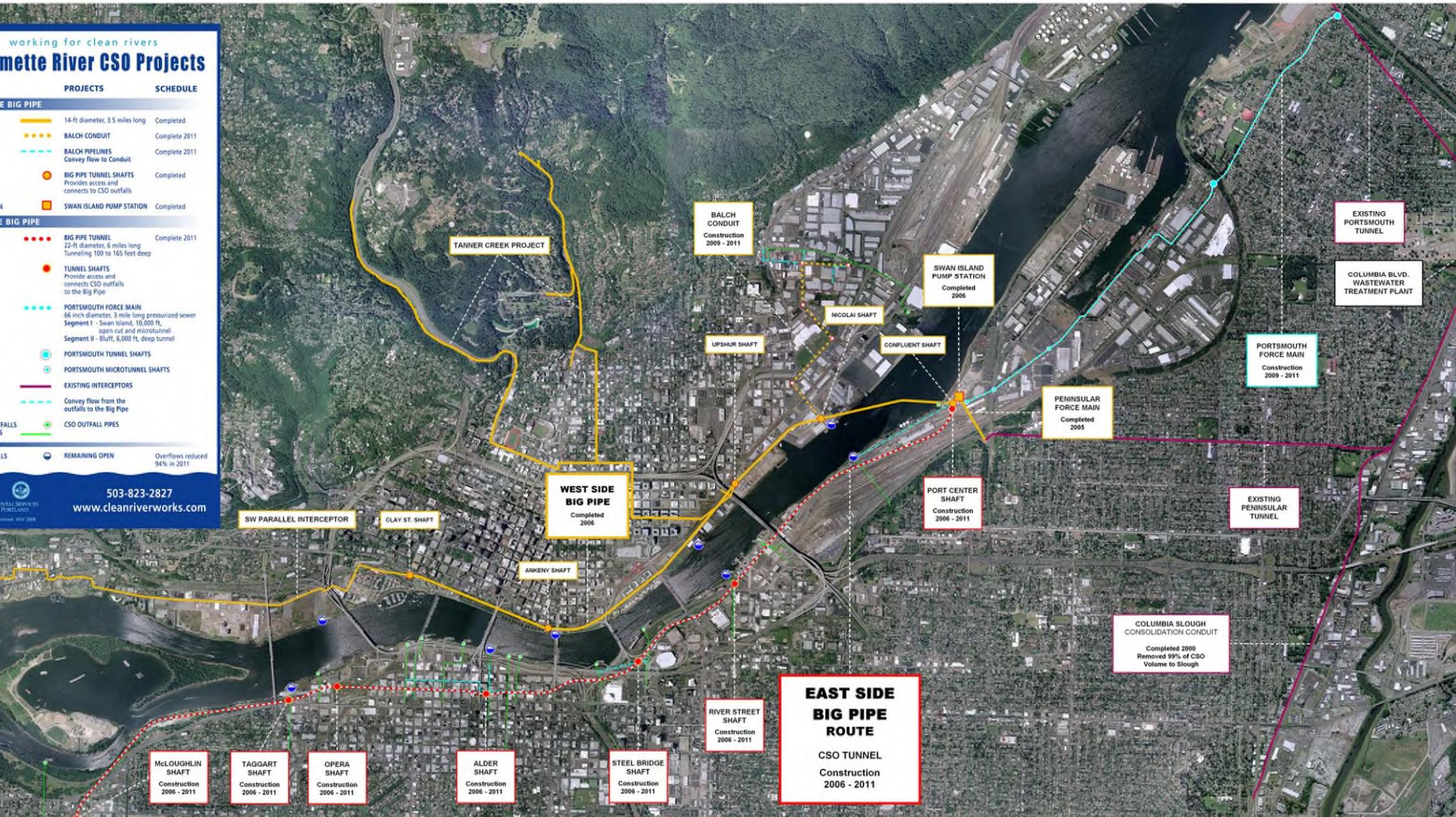


1952 Dedication of the Columbia Boulevard Wastewater Treatment Plant



SEWAGE DISPOSAL 10-
Treatment Plant Dedicati
Wendel - Peterson - Lee - Bowes
Northcutt - Averill - Morrow

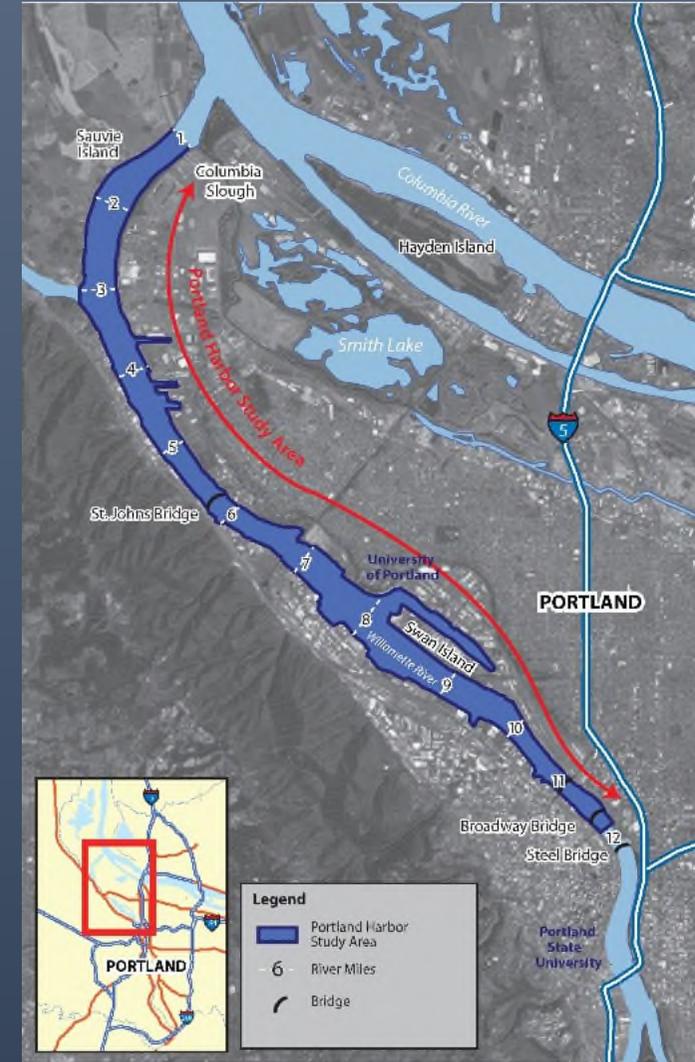
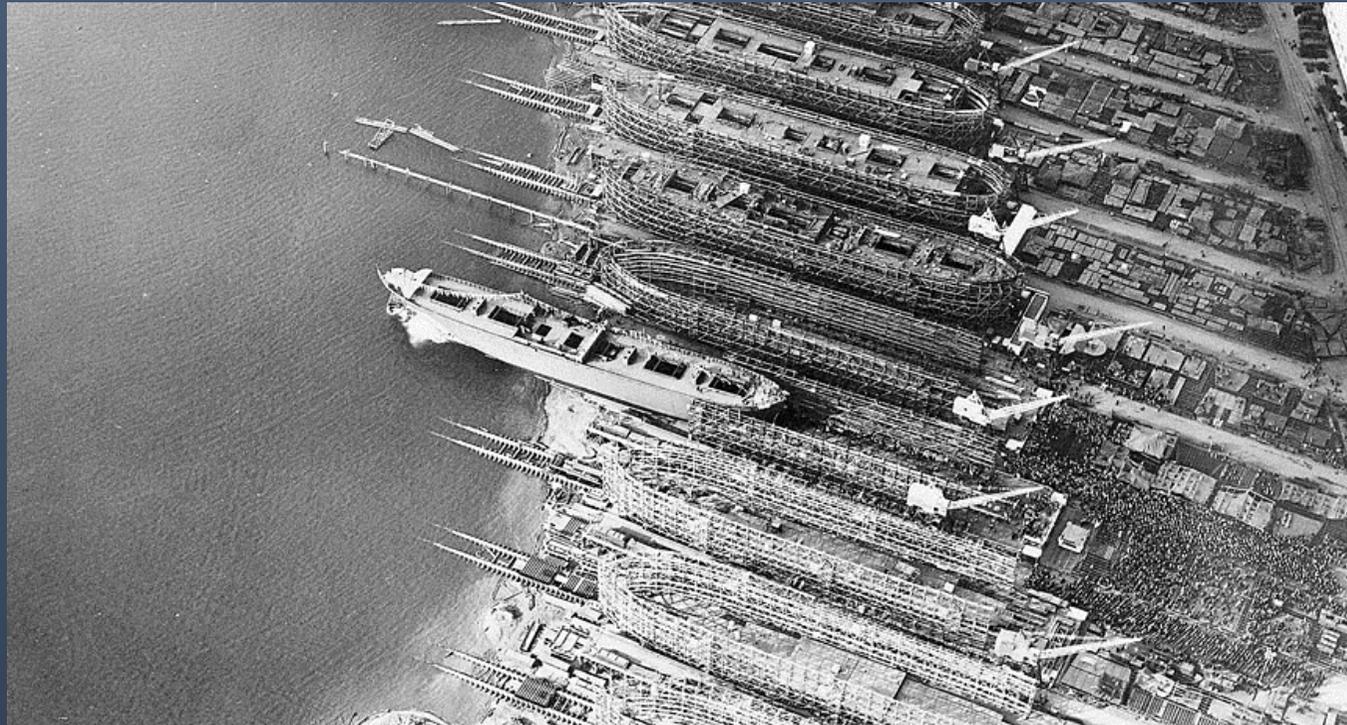
CSO Tunnel System Map



CSO Tunnel



Portland Harbor Superfund Site



Popular Summer Recreation



WARNING!
Sewage 
Avoid contact with river after rain.



Environmental Services City of Portland 503-823-2479



New Summer Swimming Events

123 days, 24 hours, 49 minutes

PORTLAND ORE. WILLAMETTE RIVER

NO. 4

THE BIG FLOAT | ABOUT | EVENT INFO | REGISTER NOW | VOLUNTEER | FAQ | SPONSORS | PHOTOS | VIDEO | CONTACT

Come on in – the water's fine!

Despite public perception (which we are trying to change), the Willamette River is approved for summer swimming, except in the now very rare instances when Combined Sewer Overflow (CSO) conditions are present.

With the Big Pipe project now complete, it's expected that a CSO will occur only once every two summers (but very likely never again). You are more likely to see a whale swim up the Willamette than see a CSO in summer! Oregon DEQ states that when CSO conditions are not present, "the Willamette River is safe for swimming and other recreational uses."

Questions? Click on the links below for official explanations of Willamette River water quality from the Oregon Department of Environmental Quality (DEQ), City of Portland Bureau of Environmental Services and City of Portland Office of Healthy Working Rivers. Additionally visit the Bureau of Environmental Services [Willamette River Water Quality](#) Page to check in on weekly monitoring results at eight sites May-October.



PORTLAND TRIATHLON

Event | Participate | About | Results

Welcome to The City of Roses!
Thank you to the 1000+ registered athletes in the 2013 Portland Triathlon, our 200 volunteers, and sponsors!

September 21, 2014
7:30 a.m. start

Olympic and

Athletes Lounge welcomes you to the only major triathlon held in Portland, Oregon which limits the number annual Portland Triathlon. Set



PORTLAND BRIDGE SWIM

A New View of the Bridges of Portland

A river level view of the Sellwood, Ross Island, Marquam, Hawthorne, Morrison, Burnside, Steel, Broadway, Freemont, Burlington Northern & St. John's

11 MILES | 11 BRIDGES | SELLOWOOD TO ST. JOHN'S

The Course | 2014 Important Dates



Willamette River Recreation Index Web Page



Environmental Services

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PHONE: 503-823-7740

FAX: 503-823-6995

1120 SW 5th Avenue, Suite 1000, Portland, OR 97204

Test Results

E. Coli Information

Willamette River Sampling

Questions and Answers

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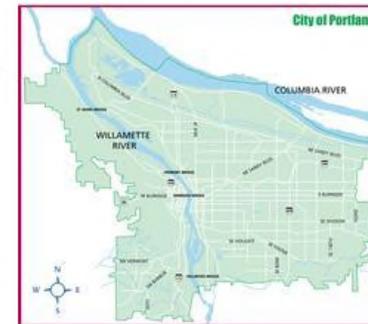
Planning Some River Recreation?

In November 2011, Environmental Services completed a 20-year program to control combined sewer overflows (CSOs) and today the Willamette River is cleaner than it's been in decades.

Environmental Services collects water samples monthly at three locations on the Willamette River to track long-term water quality trends.

From May to October, bureau staff also collect weekly samples at five river recreational areas to track E. coli bacteria and temperature at public access points.

[Get the latest](#) bacteria and temperature test results.



Test Results

Results from eight sampling locations

E. Coli Information

Sampling and analysis

Willamette River Sampling

Monitoring river health in Portland

Questions and Answers

More information about Willamette River water quality in Portland



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- What We Do
- Customer Services
- Programs
- Library

What We Do > Combined Sewer Overflow Control > Willamette River Recreation Index

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E. Coli Information

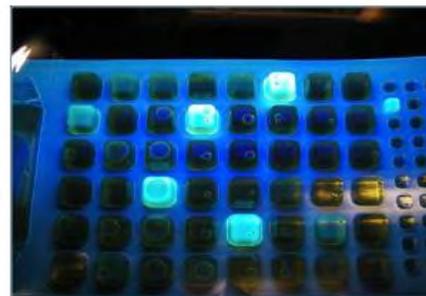
Escherichia coli (*E. coli*) are bacteria that indicate fecal contamination and potential human health risks. *E. coli* indicate the presence of fecal matter from birds, rodents, pets, livestock, humans and other warm-blooded animals.

E. coli and other bacteria are natural inhabitants of the lower intestine of warm-blooded animals. A few strains of *E. coli* can cause serious illness in humans. Their presence in water can indicate the presence of fecal matter from warm-blooded animals.

Researchers used studies at Great Lakes swimming beaches with known human sources of fecal contamination to establish safe levels of fecal bacteria based on an accepted risk of eight occurrences of gastrointestinal (GI) illnesses per 1,000 swimmers. These GI illnesses are most likely caused by a variety of bacteria, viruses and parasites present in fecal matter and not by *E. coli* alone.

According to the Oregon Department of Environmental Quality, no single surface water sample may exceed 406 *E. coli* colonies per 100 milliliters (colonies/100 mL) and the logarithmic mean of five water samples collected within 30 days may not exceed 126 colonies/100 mL.

The City of Portland regularly collects water samples from various locations in the Willamette River and delivers them within six hours to the city's Water Pollution Control Laboratory for analysis. Lab technicians use the Colilert QT method (IDEXX Quanti-Tray) to analyze samples. Results are typically available within 24 hours.





Test Results

E. Coli Information

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Willamette River Sampling

The City of Portland began monitoring Willamette River water quality in the city limits in 1949 and periodically monitored the river for the next 40 years. In 1992, the Bureau of Environmental Services began regular water quality sampling. Environmental Services switched from monitoring fecal coliform to the *E. coli* standard in 1996 to comply with changes in state regulations.

The Environmental Services [Field Operations](#) section collects water samples each month at three locations on the Willamette River for long-term water quality trend analysis. Field staff usually collect samples in the first week of each month for nutrients, metals and bacteria.

From May to October, field staff also collect weekly samples from five recreational areas to give the public more frequent information about bacteria and temperature at Willamette River public access points.

Contact the [Investigations and Monitoring Services](#) section to request additional water quality data or for more information about Environmental Services water quality monitoring.



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Questions and Answers

Does Portland still have combined sewer overflows?

Yes. A large part of the city has a combined sewer system that carries sewage and stormwater runoff in the same pipes. All the combined sewage and stormwater drained directly to the Willamette River and Columbia Slough until the city built the [Columbia Boulevard Wastewater Treatment Plant \(CBWTP\)](#) in 1952.

Portland's first sewage treatment plant improved water quality. But when it rained, stormwater runoff filled combined sewers and caused [combined sewer overflows \(CSOs\)](#).

When Portland began its 20-year CSO control program in 1991, there were an average of 50 CSO events per year.

In October 2000, the city completed projects that reduce CSOs to the slough by more than 99%. In December 2011, the city completed the last in a series of projects that reduced CSO volume to the Willamette River by 94%. With the new system, there will typically be no more than an average of four Willamette River CSOs per winter and one every three summers.

Can I swim in the Willamette River?

Even though CSOs are less frequent now, there is still bacteria in the lower Willamette River from many sources, especially during wet weather when the river is high. You can check for current CSO alerts at www.portlandonline.com/bes/riveralert or 503-823-2479.

Since Portland completed its CSO control program in December 2011, more people are enjoying the river when the weather is good. The annual [Big Float](#) is a good example.

Even though Willamette River bacteria levels are low during dry weather, it's never safe to swallow water from urban rivers and streams.

[Click here](#) to read an Oregon Department of Environmental Quality fact sheet about Willamette River swimming safety.

How does the Portland Harbor Superfund site affect water





Environmental Services

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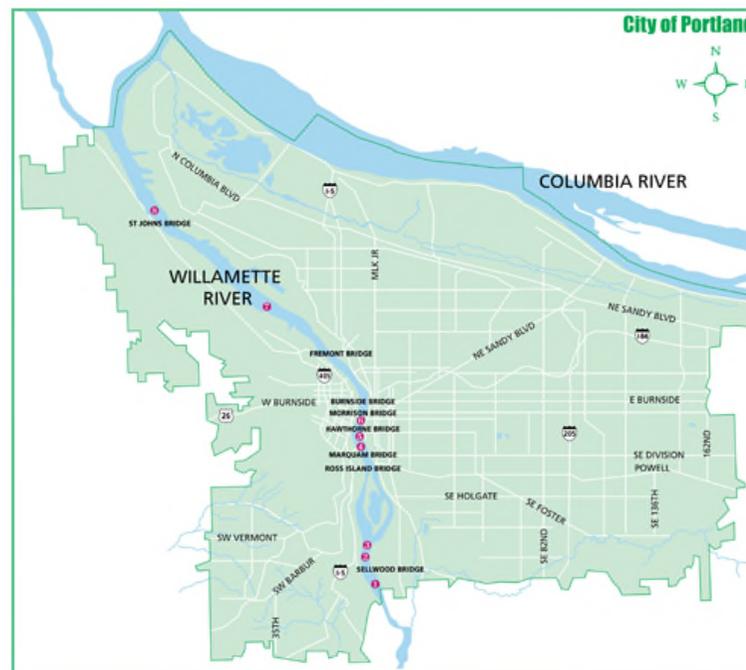
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FAX: 503-823-6995

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Environmental Services collects water samples from the river monthly at three locations to analyze long-term water quality trends for nutrients, metals and bacteria. From May to October, field staff also collect weekly samples from five Willamette River public access points to give recreational users more frequent information about bacteria levels.

1. [Waverly Country Club - River Mile 17.9](#)
Samples from this location tested monthly
2. [Sellwood Riverfront Park Dock - River Mile 16.4](#)
Samples from this location tested weekly from May to October
3. [Willamette Park Boat Launch - River Mile 15.7](#)
Samples from this location tested weekly from May to October
4. [Riverplace Marina Boat Dock - River Mile 13.2](#)
Samples from this location tested weekly from May to October
5. [Portland Boathouse Dock - River Mile 12.9](#)
Samples from this location tested weekly from May to October
6. [Morrison Bridge - River Mile 12.7](#)
Samples from this location tested monthly
7. [Railroad Bridge - River Mile 6.8](#)
Samples from this location tested monthly
8. [Cathedral Park Boat Launch - River Mile 5.6](#)
Samples from this location tested weekly from May to October



Public Outreach Handout

Combined Sewer Overflow Control

In 2011, the City of Portland completed a 20-year, \$1.4-billion program to control combined sewer overflows (CSOs).

The program reduced CSOs to the Willamette River from an average of 50 a year to no more than four times per winter and once every three summers. More information at www.portlandoregon.gov/bes/CSOControl

Today the Willamette River is cleaner than it's been in decades.



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Nick Fish, Commissioner • Dean Marriott, Director

www.portlandoregon.gov/bes

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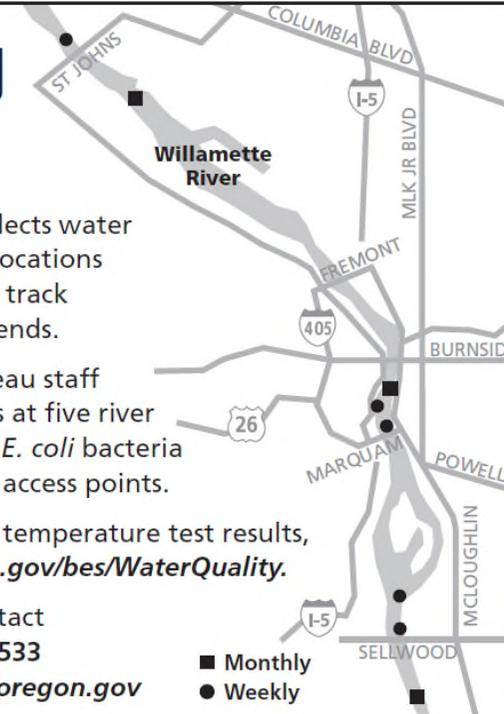
Monitoring Your River

Environmental Services collects water samples monthly at three locations on the Willamette River to track long-term water quality trends.

From May to October, bureau staff also collect weekly samples at five river recreational areas to track *E. coli* bacteria and temperature at public access points.

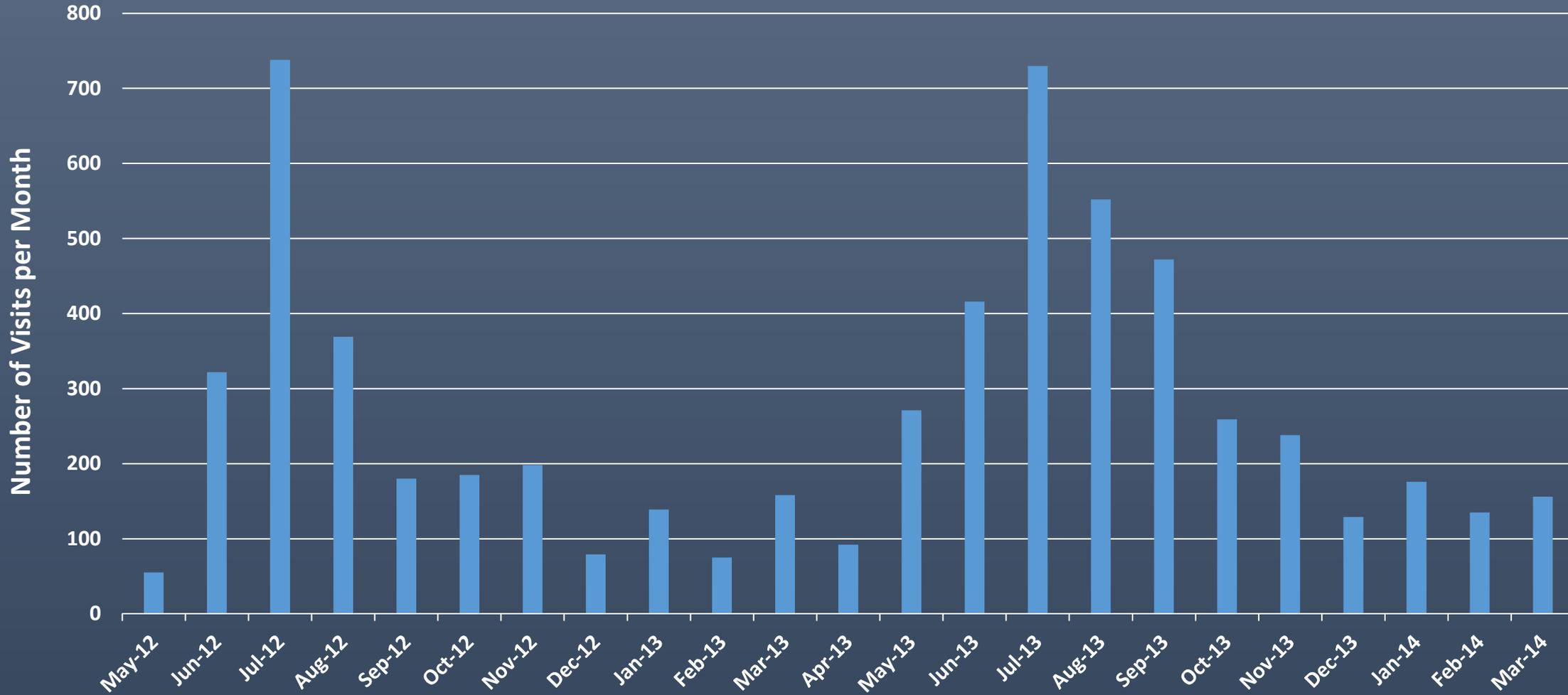
For the latest bacteria and temperature test results, visit www.portlandoregon.gov/bes/WaterQuality.

For more information, contact Peter Abrams at 503-823-5533 or peter.abrams@portlandoregon.gov

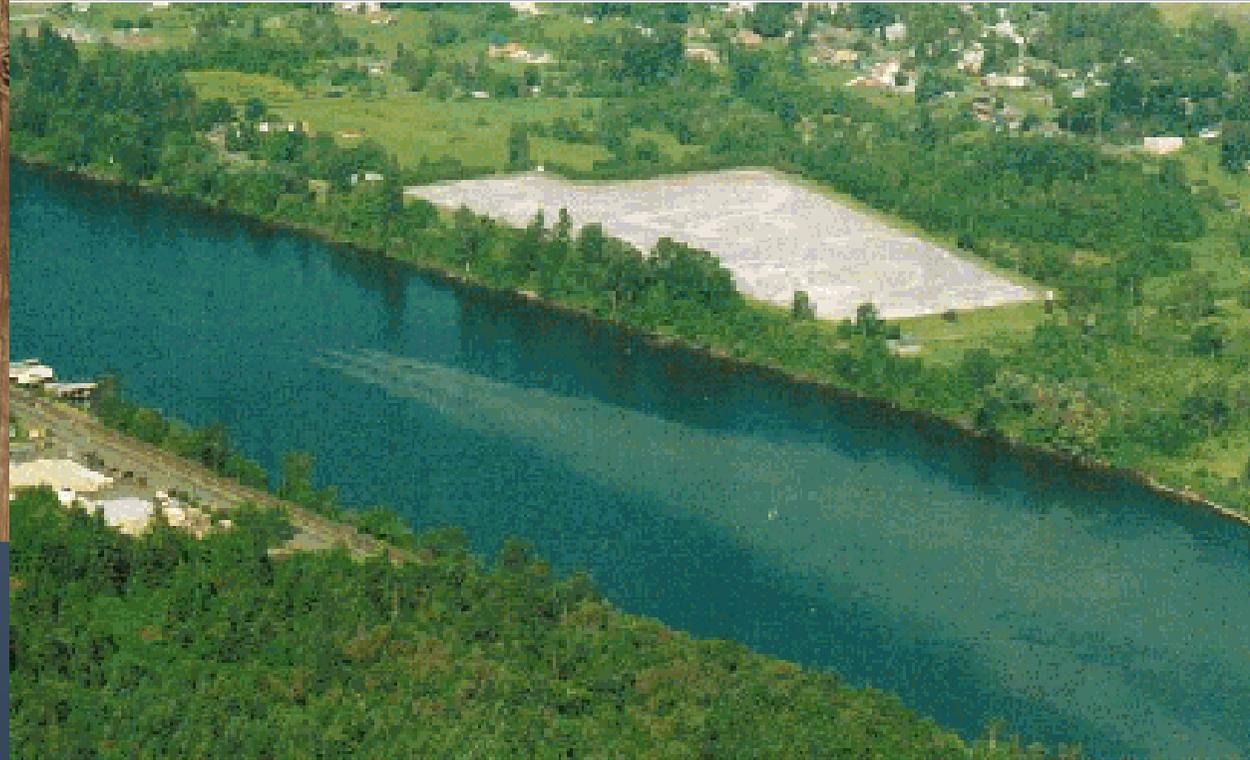


- Monthly
- Weekly

Willamette River Recreation Index Web Visits



Future Plans . . . What's Next?





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Questions?

