Monitoring and Prediction of Cyanobacteria to Protect Public Health in Oregon



Richard Whitman, Director Oregon Department of Environmental Quality





Future of blue-green algae in Willamette River still uncertain; users frustrated

My Fortland!

Most Rend

News posted by

Portlanders, about

Christmas came early: In-N-Out tooking to open its first

Dregon outpost in Medford

29-year-citd cancer patient apends last days advocating



s for the Chapter (Nualth Authority have put up common agree to Williamartia, Gallacon), Websitions, and Chell Steen Explainable paints. These rights caulitis may cover appetral chroming or country with the visitor fac to histo-great above

Algae Bloom In Willamette Swimming In Portland Tria PS-1 Sept. TR, 2014 (2:31 p.m.) (species Sept. 19: 2514 3 43 g.m.) P

Like (2) The Portland Triathlon has been toxic scum floating around in the

Tweet 7 State: 78

Event organizers decided Friday Portland health officials announ dret. blue and green algae bloom betw

OPS News Blog.

Capital Press

THE WEST THAT WEST, FINCE 1925. - JULY 18, 7018

"The city and state Willamette Ri definitive safe to swim informati Because the information is inco side of safety for all our athletes.

As OFB's Kristian Fodes-Vencil types of algae can create a numb, lead to difficulty breathing or he-

Instead of swimming to running a mile run followed by the bicycl designated swimmer will now run

POWERLAN HERITAGE PAR

City of Salem issues drinking water advisory



ate this afternoon, the city of Salem issued the following press release regarding a "Do Not Drink" notice for tap water in the cities of Salem, Turner, Suburban East Salem Water District, and Orchard Heights Water Association. The city is recommending that vulnerable people including infants, children under six, people with compromised

immune systems, people receiving dialysis treatment, people with pre-existing liver conditions, pets, pregnant women or nursing mothers, or other sensitive populations should follow this advisory

Everyone may use tas water for showering, balling, washing hands, washing dishes; flushing toilets; cleaning and doing laundry.

Please see the full press release below for more information or visit cityofsalem.net.







DRINKING WATER ADVISORY

City of Salem: MAY 29, 2018,

CYANOTOXINS PRESENT IN DRINKING WATER DO NOT DRINK THE TAP WATER --INFANTS, YOUNG CHILDREN AND OTHER VULNERABLE INDIVIDUALS

Applies to City of Salem, City of Turner, Suburban East Salem Water District, and Orchard Heights Water Association.

WHY IS THERE AN ADVISORY? Low levels of cylindrospurmopsin and microcystin. (cyanotoxins) have been found in treated drinking water. These toxins are created by algaiblooms in the source of City of Salem drinking water. Detroit Reservoir

To ensure the greatest quality of drinking water, City of Salem voluntarity samples for such oxns during algal events. Samples were collected on May 23, 2018, and May 25, 2018.

Two more dogs die from blue-green algae in South Umpqua River

Updated Aug 17, 2011; Posted Aug 17, 2011











By Lynne Terry, Iterry@oregonian.com



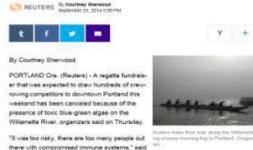
Oregon Department

of Environmental QualityPools of water in the Myrtle Creek area of the South Umpqua River tested positive for blue-green algae.

Two dogs died in July after playing with their owners around the South Umpqua River, marking what officials believe is yet another summer of dog deaths due to blue-green algae.

Two other dogs died -- one in 2009 and another in 2010 -- after playing near the river in southern Oregon. Veterinarians confirmed that they were killed by toxins produced by blue-green algae in the river

Toxic algae forces cancellation of Portland regatta







A blue-green olgan blace in a Lake County, One , your bified 23 salds. Though not all blaces are boss.

erchart and others around repair any outbreaks as they can be seems.



HAB in downtown Portland, Oregon. Credit: Photo courtesy of the Oregon Public Hea



Salem Cyanotoxin Incident

- 33 days of Do Not Drink Advisory for vulnerable population.
- Local emergency response with State support.
- City, County and National Guard operated bulk water distribution sites, some operated 24/7.
- City engineering consultants installed powdered activated carbon pretreatment within weeks.
- New OHA cyanotoxin emergency rules adopted within 3 weeks.





Advisory Levels

Oregon Health Authority

Recreational Use Guidance Values:

Table 2. Health advisory RUVs for cyanotoxins in Oregon recreational waters (µg/L)

| RUVs* | Microcystin | Anatoxin-a | Saxitoxin | Cylindrospermopsin |
|-------|-------------|------------|-----------|--------------------|
| | 8 | 15 | 8 | 15 |

^{*}See Appendix B for the detailed rationale behind these RUVs.

Drinking water:

EPA and Oregon have established Health Advisory Levels for:

| Cyanotoxin | For Vulnerable People (ppb) | For Age 6 and Above (ppb) |
|--------------------|-----------------------------|---------------------------|
| Total Microcystins | 0.3 | 1.6 |
| Cylindrospermopsin | 0.7 | 3 |



Monitoring for OHA's Drinking Water Rule OAR 333-061-0510 to 333-061-0580

- 60 facilities with cyanotoxins risk
- Bi weekly raw water sampling and analysis at DEQ Lab
 - Total microcystins and cylindrospermopsin by ELISA
 - Cylindrospermopsin confirmation by LC/MS/MS
- Raw water detections:
 - 24 hour confirmation sample
 - Weekly sampling of raw and finished water at entry point
- Finished water detections: Daily sampling finished in distribution system
- All costs covered by the State for analysis by DEQ Lab

