

Oregon Harmful Algae Bloom Program

2012 Bloom Season Recap

Goals:

The Harmful Algae Bloom program is working to gain a better understanding about toxic algal blooms and their impact on human health. This program is funded by a grant from the Centers for Disease Control and Prevention (CDC).

Funding for this program ends 9/30/2013.

Highlights this year:

- Printed and distributed new “Algae Blooms in Oregon” posters for educational purposes at lake access points and recreational use areas and facilities.
- In partnership with Douglas County, posted permanent metal HABs signs on the Umpqua River to highlight the dangers of algae in bedrock pools.
- First season of toxin based monitoring (TBM) to determine actual vs. potential health risks from exposure to identified blooms.
- Advisories were avoided on 11 lakes where TBM was implemented, reducing the number of advisories from a potential of 20 to an actual of 9.
- First season blooms dominated only by *Aphanizomenon flos-aque* were excluded from calculation of combined cell counts of toxigenic species. Result; our first advisory at J. Herbert Stone Nursery lasted only five days.
- Based on further evaluation of toxicological research, the recreational advisory guideline value for Microcystin was updated from 8 to 10 µg/L.

Figure 1. 2012 Advisories, numbered chronologically

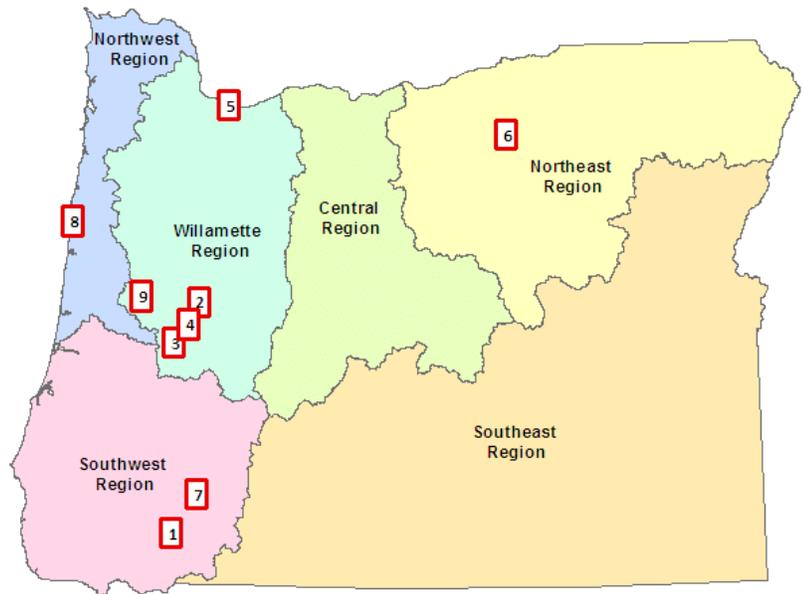
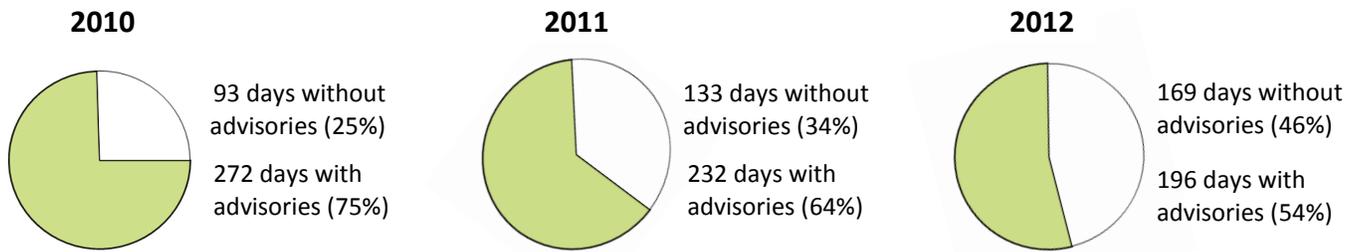


Table 1. 2012 Advisories by waterbody, region and date

#	Waterbody	Region	Start	End	Duration
1	Jackson Creek	Southwest	7/12	07/17/12	5
2	Walterville Pond	Willamette	7/27	08/23/12	27
3	Dorena Reservoir	Willamette	7/31	10/23/12	84
4	Dexter Reservoir	Willamette	8/13	11/16/12	95
5	Blue Lake	Willamette	8/28	09/14/12	17
6	Willow Creek Reservoir	Northeast	9/14	12/27/12	104
7	Lost Creek Lake	Southwest	9/18	01/24/13	128
8	Big Creek Reservoir	Northwest	9/18	12/14/12	87
9	Fern Ridge Lake	Willamette	9/21	11/14/12	54
Total					601

- Developed a cyanotoxins factsheet for drinking water system operators. Provided training for operators at various short schools.

Figure 2. Oregon HAB Season from July 12, 2012 to January 24, 2013



Although only nine advisories were issued during 2012, the total number of blooms ‘identified’ (20) was an average of those issued in 2010 and 2011. As illustrated by the data in Table 2, the updated HABs Advisory Guidance for *Aphanizomenon flos-aque* and TBM affected days under advisory, and significantly impacted the total number of advisories. Although blooms did not drop in number, managers using TBM were able to determine that toxin levels were too low to be harmful and therefore avoid advisories on those waterbodies. We expect values similar to 2012 with continued use of TBM in 2013, while implementation by additional agencies would show further reductions.

Table 2. HAB Advisories & Advisory-days

Year	Number of Advisories	Advisory-days
2005	6	162
2006	8	191
2007	8	311
2008	14	732
2009	21	727
2010	22	1,412
2011	18	1,175
2012	9	601

Note: Dominant species - *Anabaena flos-aquae*, all years.

Figure 3. HAB Advisories & Advisory-days

