

Center for Prevention and Health Promotion

Harmful Algae Blooms



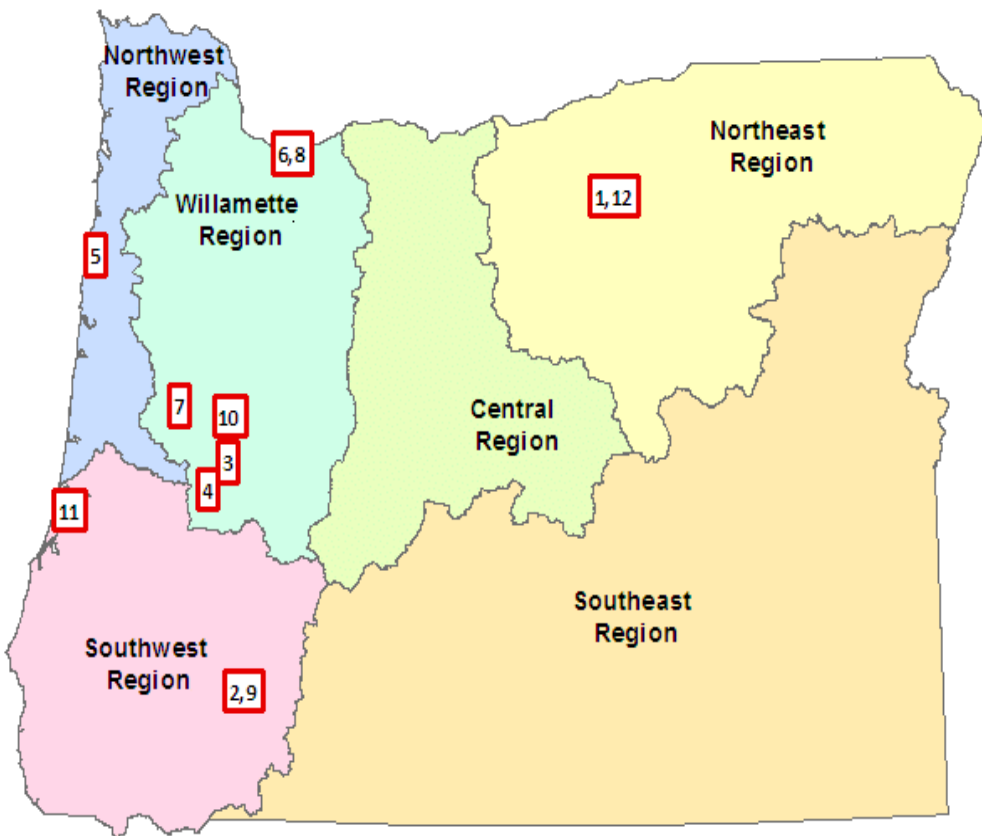
Rebecca Hillwig

Environmental Health Specialist

Healthy Waters Section

HABs Stakeholders Meeting
March 4, 2014

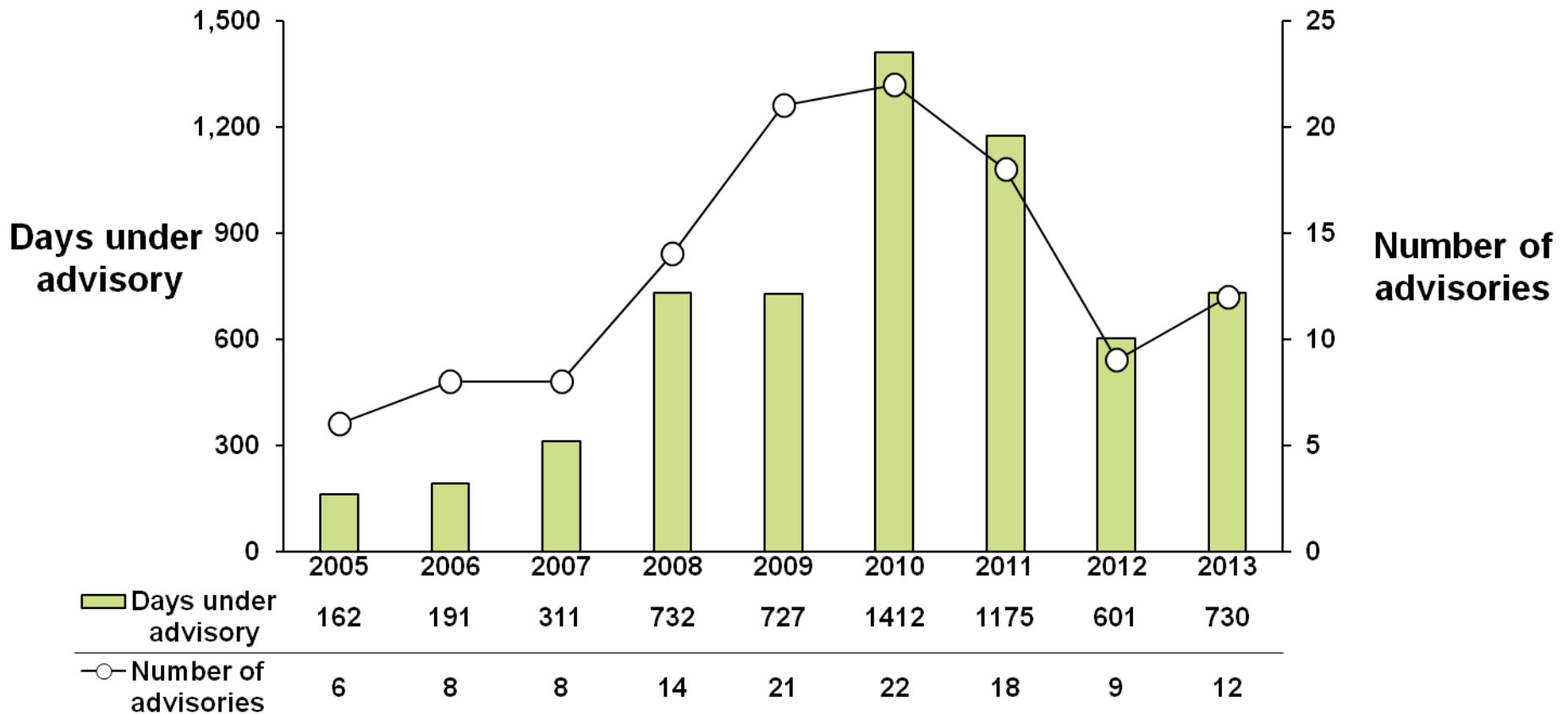
2013 HAB Health Advisories



#	Waterbody	Species	Start	End	Days
1	Willow Creek Res	Anabaena f-a	6/18	8/13	56
2	Lost Creek Lake	Anabaena f-a	6/20	7/05	15
3	Dexter Res	Anabaena f-a	7/03	9/19	78
4	Dorena Res	Anabaena f-a	7/25	9/24	61
5	Devils Lake	Microcystis	8/01	11/21	112
6	Blue Lake	Visible scum	8/06	8/09	3
7	Fern Ridge Res	Microcystis	8/15	12/18	125
8	Blue Lake	Visible scum	9/09	9/13	4
9	Lost Creek Lake	Anabaena f-a	9/13	12/30	108
10	Walterville Pond	Microcystis	9/13	10/03	20
11	Tenmile Lake	Microcystis	10/04	12/03	60
12	Willow Creek Res	Anabaena f-a	10/25	1/21	88
		Species	Total		730

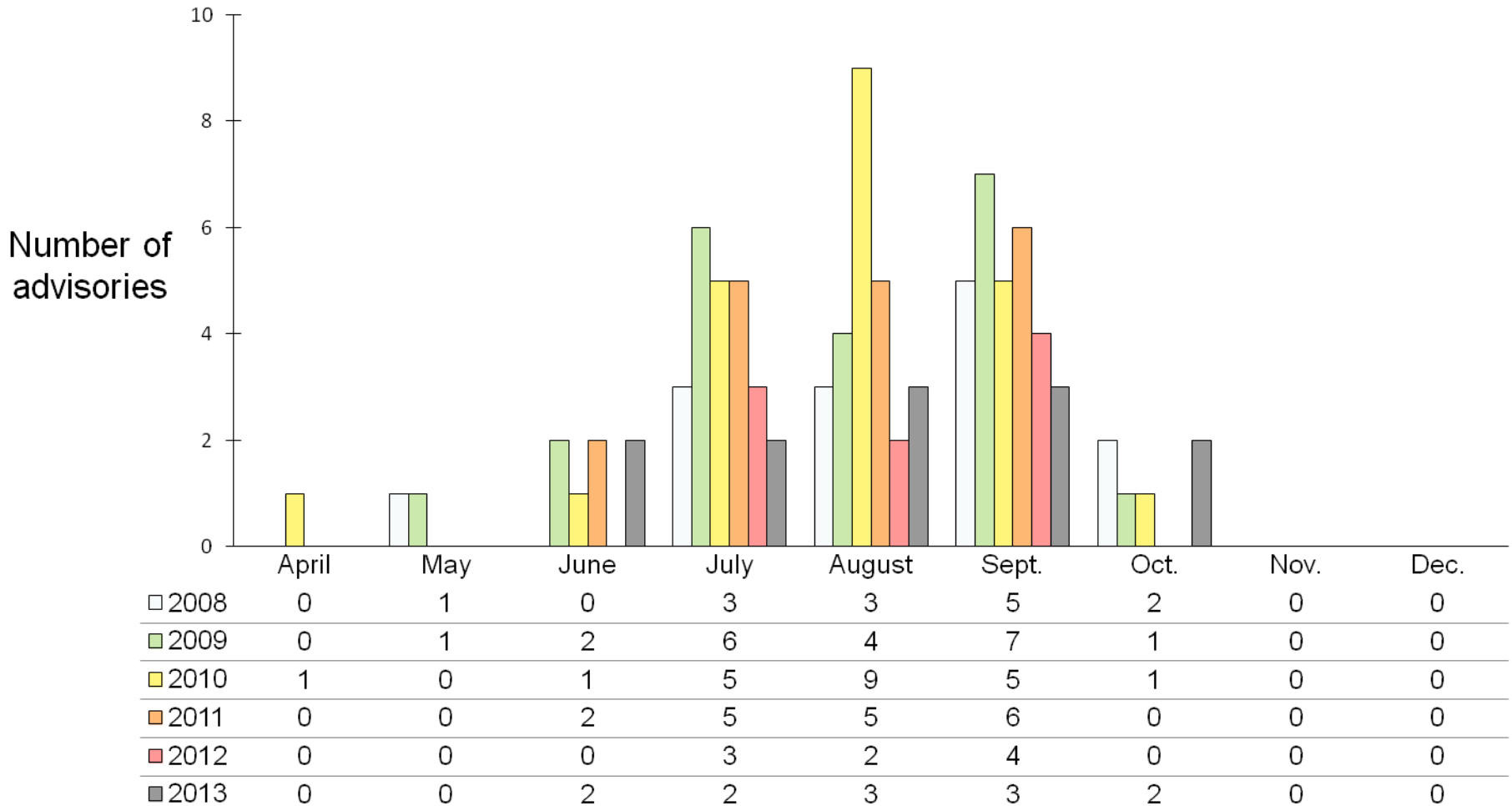
Status and Trends

Number of advisories and days under advisory, by year



Status and Trends

Advisories by month: 2008 - 2013

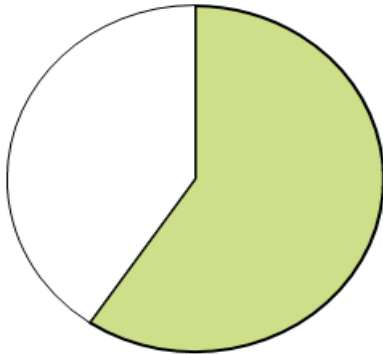


Status and Trends

Season from June 2013 through January 2014

2013

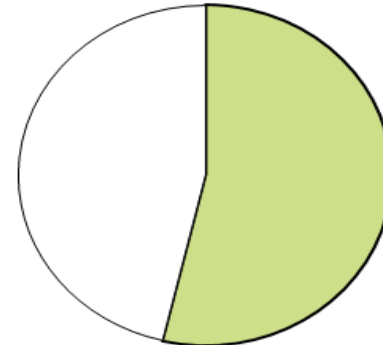
40% of the year without advisories
(148 days)



60% of the year with advisories
(217 days)

2012

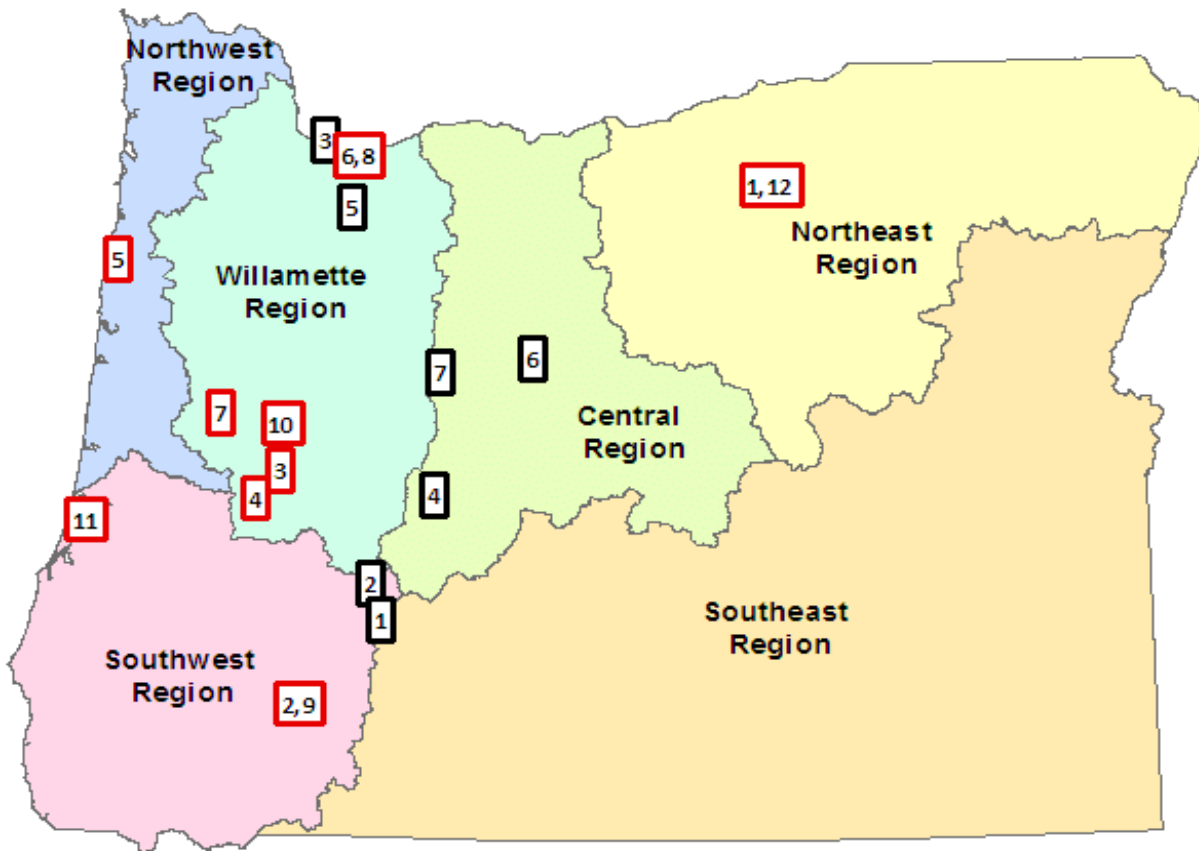
46% of the year without advisories
(169 days)



54% of the year with advisories
(190 days)

Status and Trends

2013 - Lakes where TBM was performed, avoiding advisories

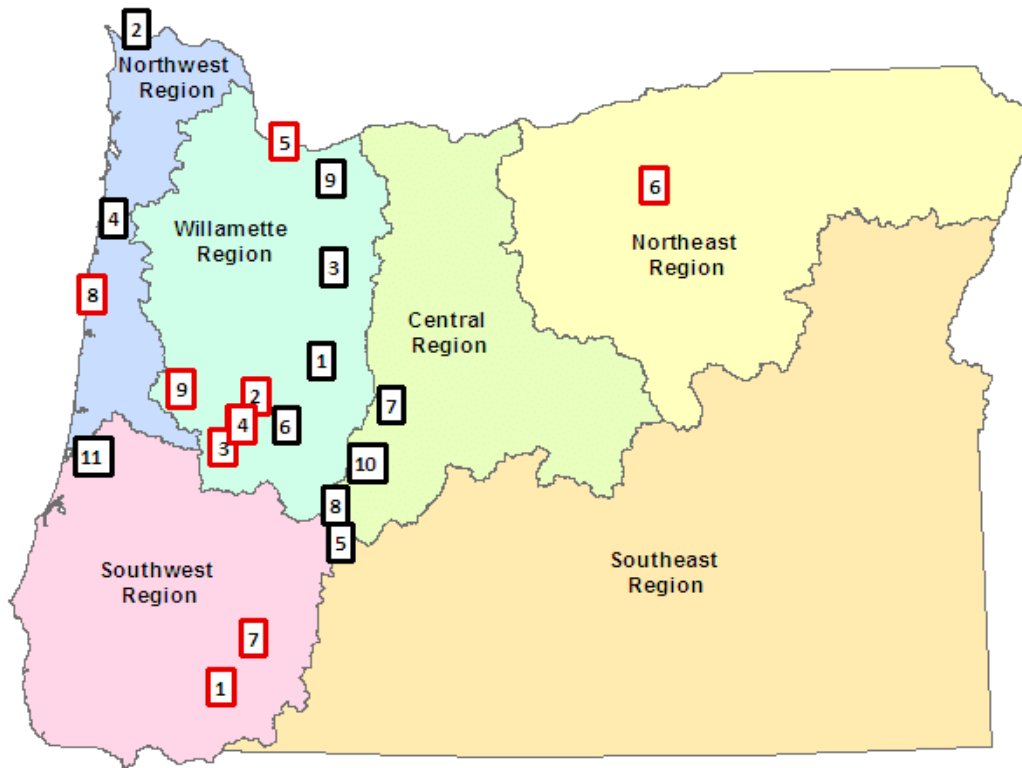


#	Waterbody
1	Diamond Lake
2	Lemolo Lake
3	Fairview Lake
4	Crane Prairie Reservoir
5	North Fork Reservoir
6	Haystack Reservoir
7	Suttle Lake

Black boxes indicate advisories avoided due to TBM

Status and Trends

2012 - Lakes where TBM was performed, avoiding advisories

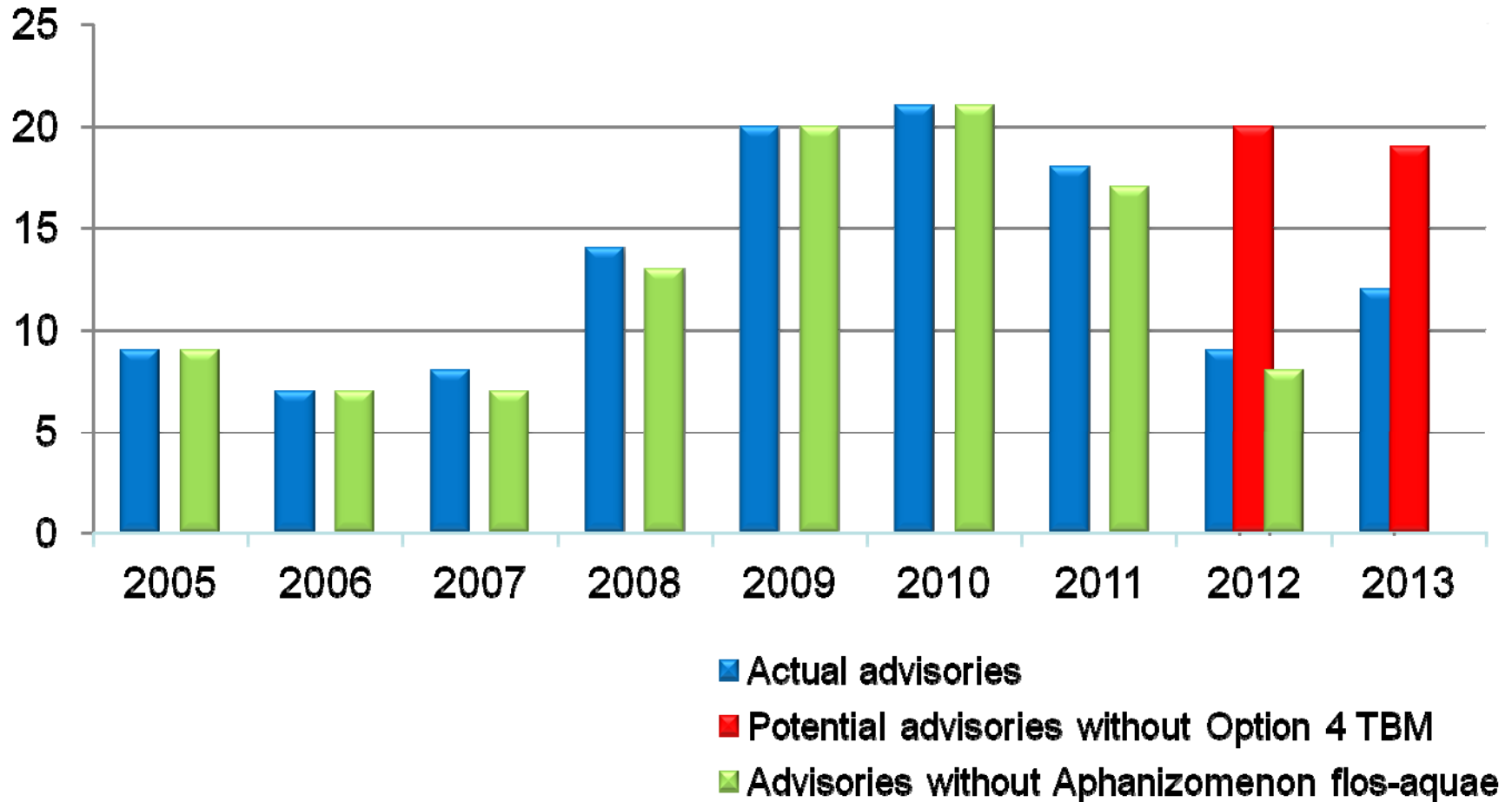


#	Waterbody (In alphabetical order)
1	Blue River Reservoir
2	Cullaby Lake
3	Detroit Lake
4	Devil's Lake
5	Diamond Lake
6	Fall Creek Reservoir
7	Lava Lake
8	Lemolo Lake
9	North Fork Reservoir
10	Odell Lake
11	Tenmile Lake

Black boxes indicate advisories avoided due to TBM

Status and Trends

The future of Toxin Based Monitoring (TBM)



2013 HABs Program Highlights

- ▶ 2012 successes using TBM encouraged other managers to implement TBM in 2013. Three lakes and one additional manager were added
- ▶ Advisories were avoided on 7 lakes where TBM was implemented, reducing the number of advisories from a potential of 19 to an actual of 12
- ▶ Updated sampling guidance to encourage expedited toxin analysis (3 business days), increased the level of protection from time of sampling to advisory issuance
- ▶ Streamlined advisory process to reduce staff time on future unfunded work while continuing to alert the public about HABs
- ▶ Integrated HABs data as an ongoing health/environmental indicator in the OHA Environmental Public Health Tracking System. This provides a sustainable way of storing and using past and future data
- ▶ Trained staff to address calls related to HAB *exposure and potential illnesses* through OHA's Tox Call system. Other calls to be referred

Monitoring Options

Why:

- ▶ The grant required that when information was known about HABs in Oregon, that the data would be analyzed and advisories issued if necessary
- ▶ The collecting of data and the advisory process was well received by many waterbody managers as a way to prevent certain liability due to lack of hazard communication

When:

- ▶ OHA has always agreed with the idea of monitoring lakes with the heaviest recreational use. It doesn't make sense to monitor all
- ▶ Sampling strategies the same as from 2012. Sampling for species/cell counts upon ID of bloom, or TBM out of the shoot
- ▶ Sampling has typically been done from spring to late fall

Monitoring Options

How:

- ▶ Sampling guidance on “how” to take a sample can be found on the HABs website:

https://public.health.oregon.gov/HealthyEnvironments/Recreation/HarmfulAlgaeBlooms/Pages/resources_for_samplers.aspx

(most up-to-date and will not change)

- ▶ Lab list will no longer be updated
- ▶ OHA Healthy Waters program discontinued seeking contract with LSSU for TBM

Messaging/Bloom Publicity:

- ▶ Messaging will need to be updated to reflect new responsibilities of WB managers (signs, voicemails, phone numbers for contacts, etc)
- ▶ OHA will continue to issue and lift advisories based on data received
(other activities OHA will continue/discontinue are outlined in slides 11-14)

Looking Ahead: Beyond 2013

OHA will continue to:

- ▶ Respond to calls/emails from public **related to health, exposures, illnesses**
- ▶ Respond to calls/emails from lake managers
- ▶ Respond to calls from new stakeholders, vets, others
- ▶ Receive and assess data (as submitted)
- ▶ Issue and lift advisories (news releases, emails, GovDelivery)
- ▶ Coordinate with bloom partners & drinking water staff on advisories and toxin based monitoring (TBM)
- ▶ Receive/collect human and animal illness reports (potential exposure to bloom affected water)
- ▶ Record blooms and illnesses in EPHT database and eventually NORS





Looking Ahead: Beyond 2013

OHA will continue to:

- ▶ Conduct 'selective' presentations for community and agency groups as requested
- ▶ Perform media interviews
- ▶ Maintain contact lists of partners and stakeholders (*ad hoc*)
- ▶ Maintain HABS website with advisories and include a "watch list" of lakes where TBM is being performed

Looking Ahead: Beyond 2013

OHA has discontinued:

- ▶ Responding to calls/emails from public on **lake conditions and bloom management** (sampling schedule, bloom data, sign posting, non-monitored lakes)
- ▶ Coordinating activities w/local, state, federal agencies
- ▶ Revising toxigenic species list
- ▶ Revising advisory and sampling guidance
- ▶ Calculating the risk index
- ▶ Providing data to stakeholders (except through the EPHT data portal)
- ▶ Updating monthly metrics in-house
- ▶ Program development
- ▶ Program evaluation activities

Looking Ahead: Beyond 2013

OHA will discontinue:

- ▶ Personnel processes/Narrative reporting
- ▶ Developing/Implementing public communications strategies
- ▶ Creation of general pre-season news releases
- ▶ Maintaining HABs lab list
- ▶ 'Improving' HABs website
- ▶ Facilitating/planning/hosting/funding stakeholder meeting (thank you OLA & OSU!)
- ▶ Creating/producing/publishing/purchasing and distribution of educational and advisory notification materials (from brochures to posters to metal signs)
- ▶ Creating and updating media/public Q&A talking points

HARMFUL ALGAE BLOOMS IN OREGON WATERS

What is this stuff?
Harmful algae blooms (HABs) are not algae at all. They're actually made of cyanobacteria, also called blue-green algae. Many cyanobacteria species create toxins that can make people and pets sick.

So, what's the problem? HABs can:

- Create toxins that can cause illness in humans and animals
- Pollute Oregon lakes and other fresh waters with scums
- Limit recreational activities in lakes, reservoirs, and rivers
- Cause challenges for public water supplies, including taste and odor problems and water treatment difficulties

Why are HABs a health concern?

- Direct contact can cause skin irritation or rash
- Inhaling water can result in diarrhea, vomiting and dizziness
- Skin severe reactions occur when large amounts of foam are inhaled
- Children and pets are at the greatest risk

How can I keep my family and pets safe?

- Do not walk, swim or wade in waters that have signs of an algae bloom
- Never drink, sip or sip water
- If you decide to eat fish from affected waters, remove all fat, skin and organs before cooking
- Never cook with natural water from areas suspected to have a harmful algae bloom
- If you or your pet becomes ill, seek medical or veterinary attention immediately

When in doubt, stay out!
Know the signs of an algae bloom. Don't go in water that is foamy, scummy, thick like paint, pea-green, blue-green or brownish red.

Oregon Health Department
Learn more about HABs at healthoregon.org/hab or call 1-877-290-6767.

HEALTH ADVISORY

AVOID WATER CONTACT
Do not use this water for drinking or cooking

HARMFUL CYANOBACTERIA (BLUE-GREEN ALGAE) LEVELS

Activities that don't involve water contact like canoeing

For more at 977

HEALTH ADVISORY

AVOID POOLS OF WATER IN BEDROCK ALONG THIS RIVER

Cyanobacteria (blue-green algae) has been found in these pools. This presents a serious health risk because cyanobacteria can produce toxins that cause serious illness in pets, animals and humans.

- Dogs have died after drinking water from these potholes. Autopsies showed they swallowed toxic algae.
- Stay out of rock formations along the shore.
- Avoid water contact. Do not drink the water.
- Children and pets are at greatest risk.

When in doubt, stay out: don't go in water that is scummy, thick like paint, pea-green or blue-green.

For more information contact Douglas County Health Department: 541-440-3574
OHA Harmful Algae Bloom Surveillance program: 1-877-290-6767 or www.healthoregon.org/HAB

Oregon Health Department