



Forest Service Cyanobacteria Bloom Monitoring in Oregon

March 4, 2014

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USDA Forest Service**

Direction for National Forests in Oregon and Washington

- Emphasis of monitoring will be on high use developed recreation sites
- On affected waterbodies, educational posters will be placed at public access points prior to the recreational use season
- When visual assessment of a water body indicates a potentially toxic bloom may be present, a Forest Service approved caution sign will be posted.
- If samples are collected for laboratory analysis, results will be shared with state and local health authorities.
- If OHA issues a public health advisory the Forest Service will promptly post the appropriate notices. Removal will follow establish procedures.

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 suppliers including taste and odor problems and water filtration difficulties



How can I help prevent a HAB?

- Be sparing in fertilizer and pesticide application
- Don't leave animal waste on the ground — pick up after your pet
- Regularly check and maintain septic tanks
- Maintain native plants along shorelines or ponds when possible



How can I keep my family and pets safe?

- Do not wade, swim or water ski in waters that have signs of an algae bloom
- Never drink lake or river 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 AUTHORITY
Oregon Health Division
Oregon Health Division
Oregon Health Division

Learn more about HABs at healthoregon.org/hab or call 971-673-0400.

Dog safety alert

Algae are common in fresh waters.

One type, blue-green algae, sometimes grows into a large bloom that may contain dangerous toxins.



If you arrive at a lake or river and find thick, brightly colored foam or scum, do not let your pet drink or swim in the water!

Dogs have become very sick and even died after swimming in and swallowing bloom-affected water.

If your dog goes into the water:

- Don't let your pet lick his fur
- Wash your pet with clean water as soon as possible.

If your dog has symptoms such as drooling, weakness, vomiting, staggering and convulsions and has been in bloom-affected water, call your veterinarian immediately.

Improper disposal of pet waste can contribute to algae problems. Pick up after your dog!

For more information visit www.oregon.gov/DHS/ph/hab/ or call toll free 1-877-290-7676 or e-mail us at Hab.health@state.or.us.

Caution sign used on some national forests in Oregon in 2013 when potentially toxic blooms were present

CAUTION

TOXIC ALGAE MAY BE PRESENT
Lake may be unsafe for people and pets

Until further notice:

• **Do not swim or water ski in areas of scum.**
No nade o practique el esquí acuático en áreas con espuma o verdín.



• **Do not drink lake water.**
No tome el agua del lago.

• **Keep pets and livestock away.**
Mantenga alejados las mascotas y el ganado.



• **Clean fish well and discard guts.**
Limpie bien el pescado y deseche las tripas.

• **Avoid areas of scum when boating.**
Evite las áreas con espuma o verdín cuando ande en lancha.

• **Toxins may be present even when there is no visible scum.**
Toxinas pueden estar presentes aunque no haya espuma visible.

Call your doctor or veterinarian if you or your animals have sudden or unexpected sickness or signs of poisoning.

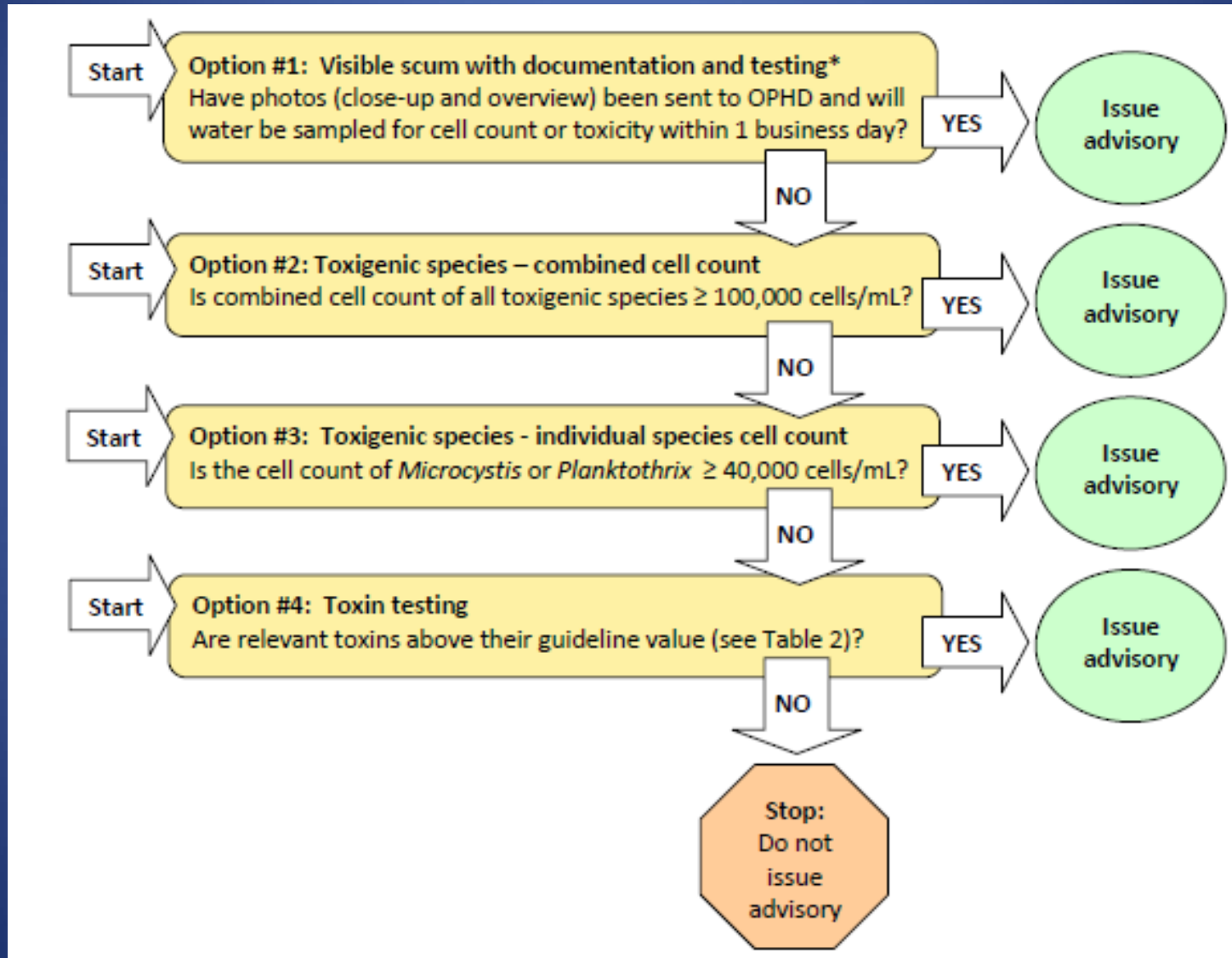
For health information contact the Oregon Health Authority at: 971-673-0400 or www.healthoregon.org/hab

Call your local health department:

For local information contact the Forest Service at:



OHA harmful algal bloom strategy for Issuing public health advisories for recreational waters



Anatoxin-a/Cylindrospermopsin/Microcystin/Saxitoxin Data Report
Project: US Forest Service
(Haystack Res.)

Sample Identification

Haystack Res. Boat Ramp

Sample Collection Date

9/4/13

Dominant Genera



Microcystis sp. at 400X

Summary of ANTX-A/CYN/MC/STX Results

<u>Sample</u>	<u>ANTX-A levels</u> (µg/L)	<u>CYN levels</u> (µg/L)	<u>MC levels</u> (µg/L)	<u>STX levels</u> (µg/L)
Haystack Res. Boat Ramp	ND	ND	3.3	ND

ND = Not detected above the LOD

LOD = 0.05 µg/L (ANTX-A & STX), 0.1 µg/L CYN, 0.15 µg/L MC

LOQ = 0.1 µg/L ANTX-A, 0.1 µg/L CYN, 0.15 µg/L MC, 0.05 µg/L STX

Submitted by:

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Date:

9/6/13

Forest Service Cyanobacteria Toxin Analysis 2013

Lake	Sample Date	Forest	Toxin Concentration (µg/L)			
			ANTX-A	CYN	MC	STX
Diamond Lake	July 1, 2013	Umpqua	ND	ND	ND	ND
	July 15, 2013				ND	
	August 7, 2013				ND	
	August 19, 2013				0.2	
	September 3, 2013		ND	ND	ND	ND
	September 16, 2013		ND	ND	0.3	ND
Lemolo Lake	July 1, 2013	Umpqua	ND	ND	ND	ND
	August 19, 2013				ND	
	September 3, 2013		ND	ND	ND	ND
Crane Prairie	July 23, 2013	Deschutes	ND	ND	ND	ND
Haystack	August 21, 2013	Ochoco	ND		4.3	
	September 4, 2013		ND	ND	3.3	ND
Suttle Lake	October 21, 2013	Deschutes	ND	ND	3.1	ND

ANTX-A = Anatoxin-a (neuro toxin)

CYN = Cylindrospermopsin (liver toxin)

MC = microcystin (liver toxin)

STX = saxitoxin (neuro toxin)

ND = Not detected at limit of detection