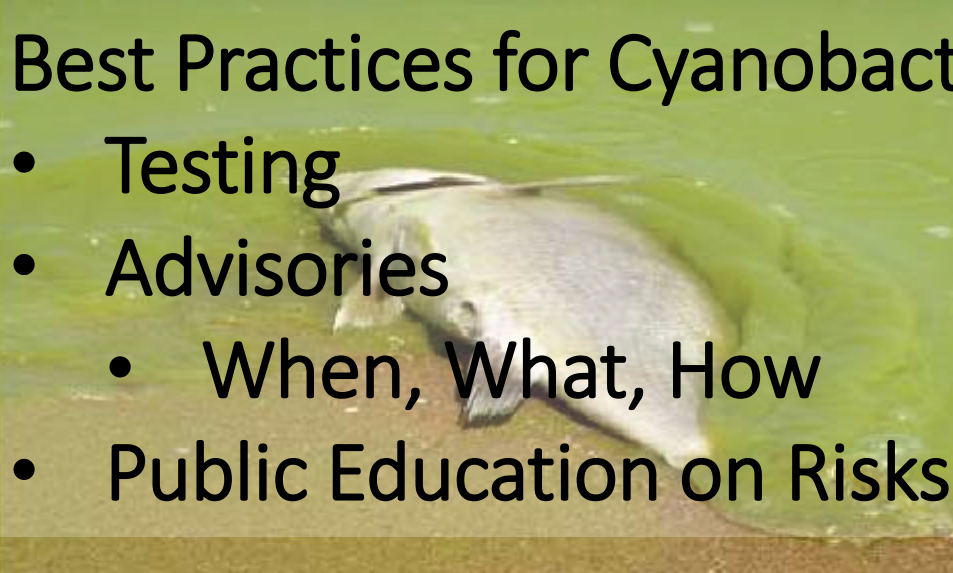


Best Practices for Cyanobacteria Blooms

- Testing
- Advisories
 - When, What, How
- Public Education on Risks



When does it become a public health concern?
What do we tell the public to avoid?
How do we inform the public?



Is the public getting the message?
Does the public understand the risks?



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.

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

Report new algae blooms to Department of Ecology
360-407-6000

Call your local health department:
(253) 798-6470



<http://ehp.wa.gov/ehp/algae/>
programs/wq/plants/algae/index.html

Example

Recreational use health advisory for Detroit Lake (June 28, 2018)

“Water monitoring has confirmed the presence of cyanotoxins at levels above Oregon Health Authority recreational guideline values...At measured levels cyanotoxins can be harmful to humans and animals. Oregon health officials advise recreational visitors to always be alert to signs of cyanobacteria...and avoid areas with visible scum that looks foamy, thick like paint, pea-green, blue-green or brownish-red, or where small bright-green clumps are floating in the water...”

“...People should avoid swimming and high-speed water activities, such as water skiing or power boating, in areas where blooms are identified. Although toxins are not absorbed through the skin, people who have skin sensitivities may experience a puffy red rash at the affected area...”

“...Drinking water directly from Detroit Lake at this time is especially dangerous... cyanotoxins cannot be removed by boiling, filtering or treating water with camping-style filters...”

“... to eat fish...remove all fat, skin and organs before cooking, as cyanotoxins are more likely to collect in these tissues. Fillets should also be rinsed with clean water. Public health officials also advise people to not eat freshwater clams or mussels...”

“... With proper precautions to avoid activities during which water can be ingested, people are encouraged to visit Detroit Lake and enjoy activities such as canoeing, fishing, camping, hiking, biking, picnicking, and bird watching. Boating is safe as long as speeds do not create excessive water spray. Although inhalation risk is much lower than ingestion, it can present a risk.”

Public Health issues algae advisory at Vancouver Lake - July 23, 2018

Clark County Public Health has posted caution signs at Vancouver Lake due to the possible bloom of cyanobacteria, also known as blue-green algae.

A blue-green algae bloom has not been detected at the Vancouver Lake swim beach area but suspected blooms were identified at the Burnt Bridge Creek inlet and the flushing channel near the swim beach. Public Health is currently awaiting sample results from these two locations to determine if toxins are in the water.

Public Health is advising people to watch for other blooms when recreating in the lake and to avoid direct contact with lake water in areas of floating blue-green-colored scum. Blue-green algae produce toxins that can be harmful to people and deadly for small pets that drink the water.

Health officials are recommending:

- No swimming or water skiing in areas of scum.
- No drinking lake water.
- No water contact for animals in areas of scum.
- Avoid areas of scum when boating.
- Clean fish well and discard organs.

Caution signs were posted at the lake this afternoon and will remain at the lake as long as the bloom is active and present. Public Health will continue to monitor the lake throughout the summer, and signs will be updated as conditions change. Additional information and current advisories are posted on the Public Health public beach website. Vancouver Lake Regional Park remains open. Water in park restrooms and shelters is not affected by lake water and remains safe to drink.

CYANOBACTERIA (BLUE-GREEN ALGAE) BLOOMS

When in doubt, it's best to keep out!

What are cyanobacteria?

Cyanobacteria, also called blue-green algae, are microscopic organisms found naturally in all types of water. These single-celled organisms live in fresh, brackish (combined salt and fresh water), and marine water. These organisms use sunlight to make their own food. In warm, nutrient-rich (high in phosphorus and nitrogen) environments, cyanobacteria can multiply quickly, creating blooms that spread across the water's surface. The blooms might become visible.

How are cyanobacteria blooms formed?

Cyanobacteria blooms form when cyanobacteria, which are normally found in the water, start to multiply very quickly. Blooms can form in warm, slow-moving waters that are rich in nutrients from sources such as fertilizer runoff or septic tank overflows. Cyanobacteria blooms need nutrients to survive. The blooms can form at any time, but most often form in late summer or early fall.

What does a cyanobacteria bloom look like?

You might or might not be able to see cyanobacteria blooms. They sometimes stay below the water's surface, they sometimes float to the surface. Some cyanobacteria blooms can look like foam, scum, or mats, particularly when the wind blows them toward a shoreline. The blooms can be blue, bright green, brown, or red. Blooms sometimes look like paint floating on the water's surface. As cyanobacteria in a bloom die, the water may smell bad, similar to rotting plants.

Why are some cyanobacteria blooms harmful?

Cyanobacteria blooms that harm people, animals, or the environment are called cyanobacteria harmful algal blooms. Harmful cyanobacteria blooms may affect people, animals, or the environment by:

- blocking the sunlight that other organisms need to live. Cyanobacteria blooms can steal the oxygen and nutrients other organisms need to live.
- making toxins, called cyanotoxins. Cyanotoxins are among the most powerful natural poisons known. They can make people, their pets, and other animals sick. Unfortunately, there are no remedies to counteract the effects.
- You cannot tell if a bloom has toxins by looking at it.

How can people and animals come in contact with cyanobacteria and cyanotoxins in the environment?

People and animals can come in contact with cyanobacteria and cyanotoxins that are in the environment by:

- drinking water that comes from a lake or reservoir that has a cyanobacteria bloom.
- Swimming or doing other recreational activities in or on waters that have cyanobacteria blooms.

How do I protect myself, my family, and my pets from cyanobacteria blooms?

To protect yourself, your family and your pets from cyanobacteria blooms:

- Don't swim, water ski, or boat in areas where the water is discolored or where you see foam, scum, or mats of algae on the water's surface.
- Do not allow children or pets to play in or drink scummy water.
- If you do swim in water that might contain harmful cyanobacteria, rinse off with fresh water as soon as possible afterward.

- Don't let pets or livestock swim in or drink from areas where the water is discolored or where you see foam, scum, or mats of cyanobacteria on the water's surface.
- If pets, especially dogs, swim in scummy water, rinse them off immediately. Do not let them lick the cyanobacteria off their fur.
- Report any "musty" smell or taste in your drinking water to your local water utility.
- Follow any water-body closures announced by local public health authorities.

Why do dogs get sick more often than people from cyanobacteria blooms?

Dogs will get in a body of water even if it looks or smells bad, including when it contains cyanobacteria. Dogs are also more likely to drink the contaminated water.

How are people or animals that have been exposed to cyanobacteria toxins treated?

If you or your pet comes in contact with a cyanobacteria, wash yourself and your pet thoroughly with fresh water.

- If you or your pet swallow water from where there is a harmful algae bloom, call your doctor, a Poison Center, or a veterinarian.
- Call a veterinarian if your animal shows any of the following symptoms of cyanobacteria poisoning: loss of appetite, loss of energy, vomiting, stumbling and falling, foaming at the mouth, diarrhea, convulsions, excessive drooling, tremors and seizures, or any other unexplained sickness after being in contact with water.

How can you help reduce cyanobacteria blooms from forming?

To help reduce cyanobacteria from forming:

- Use only the recommended amounts of fertilizers on your yard and gardens to reduce the amount that runs off into the environment.
- Properly maintain your household septic system.
- Maintain a buffer of natural vegetation around ponds and lakes to filter incoming water.

Is there testing for cyanobacteria toxins?

Yes, but the testing is specialized and can only be done by a few laboratories. Scientists are working to develop toxin test kits for water resource managers and others.

What is CDC doing to address concerns about cyanobacteria blooms?

The Centers for Disease Control and Prevention (CDC) is working to understand and prevent the health effects associated with cyanobacteria blooms by:

- Conducting surveillance on human and animal illnesses that are associated with exposures to cyanobacteria blooms in recreational and drinking waters.

For more information on cyanobacteria, visit <https://www.cdc.gov/nceh/habs/general.html>

For information on animal health and safety:

Veterinarian reference card - https://www.cdc.gov/habs/pdf/habsveterinarian_card.pdf

Animal Alert flyer - https://www.cdc.gov/habs/pdf/algal_bloom_tall_card.pdf

Animal Alert poster - https://www.cdc.gov/habs/pdf/algal_bloom_poster.pdf

For information on human health and safety:

Physician reference card - https://www.cdc.gov/habs/pdf/habsphysician_card.pdf

For more information on cyanobacteria blooms:

Call CDCInfo: 800-CDC-INFO (800-232-4636)

or Contact your local or state health department <https://www.cdc.gov/mmwr/international/relres.html>

or Call the Poison Information Center (800-222-1222)