



# BLUE GREEN ALGAE

(Cyanobacteria)

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## What are algae?

Algae are microscopic plants that are a natural part of any aquatic environment, fresh and marine waters alike. When temperatures and water conditions are favorable algae “blooms” may turn the water green and smelly. Also, algae blooms may contribute to fish kills. While many algae can turn the water green, a river or lake with a blue-green bloom may look like “pea soup,” or even like there’s green paint floating on the surface.



Photo: Vermont Dept. of Health



Feather River at Oroville Lake  
Photo: Calif. Dept. of Water Resources

In Wisconsin in 2002, five 17-year old males became ill after swimming in a blue-green algae-laden pond. One died. In California, since 2001, 9 dog deaths in Humboldt and Mendocino Counties have been associated with contaminated pond water. In cattle, 7 deaths and 10 toxic illnesses in Sonoma County have been reported due to contaminated pond water.



## What is the concern?

Most algae are harmless but a certain type of algae, “**blue-green**” algae (also called cyanobacteria) can produce a toxin. People or animals who contact toxic blue-green algae can become sick. Cases have been reported for many years where animals have become ill or have died from exposure to blue-green algae.

## **Blue-green algae growth characteristics**

Blue-green algae can become very abundant in some sections of lakes/rivers once the water warms up in mid-summer. Under calm conditions, blue-green algae can accumulate in thick layers at the surface or along the shoreline. These accumulations are called “**blooms**” or “**scums**.” While blue-green algae toxins have been detected at many locations, the highest concentrations are usually found in blooms and shoreline scums. These dense accumulations pose the greatest risk to people and pets.

Weather influences where blue-green algae will accumulate in a given location. During extended periods of calm and sunny days, blooms can accumulate at the surface in any location. Wind and waves may cause them to form along shorelines or in protected areas. Shifts in wind direction can move a bloom from one location to another. Periods of cool rainy weather can often lead to the disappearance of a bloom altogether. Environmental factors favoring algae blooms are:

- Warm water temperature (68° - 95° F)
- Lots of sunlight
- Calm weather patterns with low turbulence

### **Recognize the hazard**

Often, the first sign that an algae bloom has become toxic is a sick dog that has been swimming in or drinking from an algae-filled pond. Although effects on humans are less frequently reported, children are at higher risk than adults because of more likelihood of ingestion and less body mass than adults. Swallowing water with a blue-green algae bloom may cause symptoms such as vomiting, diarrhea, nausea, headache, throat irritation, or muscle pain.

### **What to do if exposure occurs**

It is recommended that humans not ingest, swim or wade in water with blue-green algae. If contact does occur, the algae should be washed off thoroughly.

If your pet comes in contact with a bloom, wash your pet’s coat thoroughly. If you suspect your pet is sick from the algae, call a veterinarian.



Photo: Minnesota Interagency Working Group on Blue Green Algae

### **Regulatory status**

- EPA has placed cyanobacteria and other fresh water algae on the Drinking Water Contaminate Candidate List
- State Water Board and the Department of Public Health have requested reports of historical and new algae blooms statewide in 2006
- California Interagency Working group is developing statewide guidance for recreational water bodies. Drafts are currently being revised.

For updates and to read more on this issue please see:

Drinking Water and Environmental Management:  
[www.dhs.ca.gov/ps/ddwem/bluegreenalgae/index.htm](http://www.dhs.ca.gov/ps/ddwem/bluegreenalgae/index.htm)

State Water Control Board:  
[www.swrcb.ca.gov/bluegreenalgae/index.html](http://www.swrcb.ca.gov/bluegreenalgae/index.html)