# FACT SHEET

## Klamath River Dams Toxic Algae

## Public Health Dangers Fact Sheet

- Klamath reservoir water samples contained toxic microcystis algae concentrations thousands of times greater than the standard set by the World Health Organization.[i]
- A joint release from the federal EPA and California Water Quality Control Board warns that an adult who ingests just four ounces of water from the Klamath reservoirs could be exposed to *Microcystis aeruginosa* at 100 times the standard. A child's exposure would be nearly 400 times the standard.[ii]
- Concentrations of the algae *Microcystis aeruginosa* are so great that even breathing vapors caused by water skiing could cause illness, officials said, and swallowing even a few ounces of lake water could bring effects as severe as organ failure.[iii]
- A record bloom of toxic algae in Klamath River reservoirs prompted health warnings in early August 2006 from state and federal officials.[iv]
- Recent studies by the California State Water Resources Control Board and California Department of Fish and Game reveal that during algal blooms, fillets of a popular game fish, yellow perch, contain high levels of the algal toxin. In addition, fresh water mussels in the reservoir and river downstream also contain dangerously high levels of the toxin.[v]
- Some of the highest levels of toxic algae ever recorded in North America have been observed in Klamath reservoirs. In response, the Karuk Tribe, the North Coast Regional Water Board, and the U.S. Environmental Protection Agency (EPA) are joining other local, state and federal agencies in warning residents and recreational users of the river to use caution when near such algal blooms. "This algae produces toxins that pose a significant potential public health concern," said Alexis Strauss, Water Division director of the EPA's regional office in San Francisco. "We advise people to avoid all direct contact with Klamath River water while the bloom is occurring."[I]
- Exposure to blue-green algae can cause rashes, skin and eye irritation, allergic reactions, gastrointestinal upset, and other effects. At high levels, exposure can result in serious illness or death. Depending on the particular cyanobacterium, and the amount to which one is exposed, blue-green algae have the potential to cause a variety of adverse health effects, including liver toxicity (*e.g., Microcystis aeruginosa*) and neurotoxicity (*e.g., Anabaena circinalis*). Microcystin toxins may also promote tumor growth. Destruction of cyanobacteria cells may release the toxins into surrounding waters, so care must be taken in dealing with blue-green algae blooms. [vii]

---

[i] Summary of 2006 Toxic Microcystis aeruginosa and Microcystin Trends in Copco and Iron Gate Reservoirs, CA (June 2007). http://www.karuk.us/dnr/documentation.php

# FACT SHEET

---

[ii] Weiser, Matt. "Algae Prompts Warnings" Sacramento Bee (August 15, 2006)
[iii] Ibid.
[iv] Ibid. And Geniella, Mike. "River's Rebirth." *Santa Rosa Press Democrat* ( January 21, 2007).
[V] Microcystin Bioaccumulation in Klamath River Fish and Freshwater Mussel Tissue: Preliminary 2007 Results. Aquatic Ecosystem Sciences (April 2008). http://www.karuk.us/dnr/documentation.php
[vii] State of California, Division of Drinking Water and Environmental Management. http://www.waterboards.ca.gov/bluegreenalgae/index.html