

KLAMATH RIVERKEEPER

An Affiliate of the Waterkeepers Alliance

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Chair Tam Doduc and Members of the State Water Board
c/o Song Her, Clerk to the Board
State Water Resources Control Board
Executive Office
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Official Request of the Klamath Riverkeeper and allies for regulation of toxic algae in the Klamath River Watershed, and supporting comments asserting that toxic algae should be listed as a pollutant on the Klamath River.

This is the official request of the Klamath Riverkeeper, Klamath-Siskiyou Wildlands Center, Klamath Restoration Council, The Center for Biological Diversity, Earth Justice, Water Watch of Oregon, Siskiyou Project, Sandy Bar Ranch, Environmental Justice Coalition for Water, Russian Riverkeeper, California Sportfishing Protection Alliance, Raritan Riverkeeper, St. John Riverkeeper, Cascadia Wildlands Project, Mid-Klamath Watershed Council, Salmon River Restoration Council, North Coast Environmental Center, Institute for Fisheries Resources, the Pacific Coast Federation of Fishermen, Environmental Commons, Redwood Chapter Sierra Club, California Coastkeepers Alliance, Colorado Riverkeeper, Living Rivers, Friends of the River, Environment California, Grand Riverkeeper from Labrador, Coast Action Group, Conservation Northwest, Albion River Water Shed Protection, Community Clean Water Institute, Votes the Coast, Ramona Mason, Emila Berol, Cindy Warr, Barbra Lee Norman of the Karuk Tribe, Jessica Rojas, Mark Miller, Richard Craig, Ann Marie Fitzell, and Jennifer Lance for the North Coast Water Quality Control Board to create numeric standards, and to adhere to the current narrative standard for toxic algae, including but not limited to, *Microcystis aeruginosa*, and *Anabaena flos-aquae* within the Klamath River Watershed, and more specifically in the Klamath and Shasta River reservoirs, in the interest of public health. Furthermore we request that toxic algae should be listed as a pollutant in the Klamath River.

The clear purpose of the Clean Water Act and the Basin Plan is to regulate water quality to support waterways' beneficial uses and to make the waterways of the United States swimmable and fishable. The beneficial uses of the Klamath River include recreational

use and fishing, along with tribal subsistence and ceremonial uses. All of these are threatened by the current levels of toxic algae in the Klamath River.

For the past two years, water samples taken from Klamath reservoirs exhibited some of the highest levels of the toxic blue green algae *Microcystis aeruginosa* in the world. In some samples, the level of toxins exceeded the World Health Organization (WHO) moderate health risk guideline by 4000 times. However, no action beyond occasional posting of signs has been taken to protect the public or to regulate this toxin. The WHO does not publish a numerical standard for what constitutes a 'high health risk' instead stating that a high risk is when algal scums are visible on the water's surface. Scums were clearly visible when samples were taken and where photo documented occurred. Blooms have been so bad in the last two years, that they have turned the color of the reservoirs to anti-freeze green. The toxin created by *M. aeruginosa* is microcystin. Microcystin is a known liver and kidney toxin, and has been shown to be a tumor promoter in laboratory tests.

In addition, a separate toxic algae, *Anabaena flos-aquae* with neurotoxin effects and may be affecting drinking water supplies in Lake Shastina, was not regulated as part of the Shasta River TMDL. Regulatory action on toxic algae in the Klamath River is needed immediately so that toxin levels in the Klamath River can be addressed in full by the time blooms begin next summer.

The rationale for this request is justified by but not limited to the following:

- 1) The toxin produced by this algae, microcystin, is known to cause liver and kidney failure;
- 2) Microcystin has been shown to be a tumor promoter in laboratory studies;
- 3) The health affects of microcystin are known to be cumulative and manifest over time with repeated and prolonged exposure to the toxin;
- 4) For the past two years, toxin levels have far exceeded the WHO standard for a moderate health risk at several sample sites;
- 5) The toxic algae, *Anabaena flos-aquae*, in Lake Shastina, has not been properly studied and may be effecting the City of Monique's drinking water supply, along with lake users;
- 6) The effects of toxic alga to fish species has not yet been properly studied, therefore subsistence fishermen and the general fish consuming public could be in jeopardy;
- 7) A toxic alga in public waterways is a growing problem worldwide and is not going away. The North Coast Water Quality Control Board may only have one opportunity to get ahead of the curve on this issue before people start to get sick.

Currently, there is no greater issue threatening safety of recreational users of the Klamath River more then toxic algae. Under the Clean Water Act, waterways need to remain swimmable and fishable. It is the job of the North Coast Regional water board to regulate pollutants within the Klamath River. Although the Klamath TMDL process does attempt to address the issues that lead to algal blooms, establishing TMDLs is a lengthy process, which will not put toxic algae standards in place in a timely manner. Meanwhile

the public remains in danger of toxic exposure. As stated earlier, the beneficial uses of the Klamath include recreation and fishing. These beneficial uses are obviously jeopardized by inaction on this important health issue, as are the many people and industries in the Klamath that are economically affected by poor water quality.

Klamath Riverkeeper supports amending the Basin Plan to allow regulation of the toxic alga through a numeric standard, or the enforcement of the narrative standard, in order to protect human health along the Klamath. A prompt timeline describing this process to act on this issue needs to be available to the public. At the time that this resolution is passed the owner of the Iron Gate and Copco Dams, PacifiCorp, should be notified that they need to develop a toxic algae control plan or face enforcement actions and measures and/or further studies to protect the citizens of Monique should be adopted. We also support listing toxic algae as a pollutant on the Klamath River through the 303d list revisions.

If a toxic alga standard is not adopted soon nor the narrative standard enforced, and the board continues to attempt to deal with these serious issues through the nutrient listing on the Klamath, then a nutrient reduction strategy to minimize algal growth needs to be enacted immediately. In the Neuse River, the Neuse Rules applied this strategy, which called for a 30% reduction of nutrients, mandatory buffers watershed wide, storm water reductions, wastewater treatment plant reductions, and agriculture run off reductions. However a toxic algae standard would more likely be easier. This is the only case we have been able to find where dealing with nutrients aided in solving toxic algae problems.

In the interim, measures to deal with this threat need to be taken to protect the public health. Other areas that this is a problem, such as Lake Ontario, the Potomac River, the Charles River, the Puget Sound, have been closed to the public until blooms subside. Cities in Australia, the United States, India and Canada have had to bypass town water supplies or create complex filtration systems due to toxic algae problems in drinking water supplies. Though controversial, steps like these may be warranted to protect public health. In closing we wish to state that the presence of the microcystin and other algae in the Klamath watershed is not only a general health threat, but also a tribal trust and environmental justice issue. Tribal members are exposed more than most of the citizens of the Klamath due to fishing and ceremonial practices. However, unlike most of the other citizens of the Klamath, the tribes cannot simply choose to avoid the river without, giving up their main food source and practicing their religious ceremonies.

We trust that the North Coast Regional Water Quality Control Board will do what is best for the American public and regulate toxic algae in the Klamath Basin.

Thank you,

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