



WATERLINE

March 2005

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A message from the president

By Barry C. Moore, Ph.D.

Last summer, toxic bacteria blooms (TBB) in Steilacoom Lake in Pierce County led to the poisoning death of a local pet. TBB are caused by blue-green bacteria ("algae") and have occurred in various lakes throughout the state. The root cause of TBB is eutrophication, resulting from excessive nutrients, particularly phosphorus. Fortunately, TBB poisonings are relatively rare. However, the Steilacoom Lake incident is an unfortunate demonstration that water quality restoration is still a pressing need for many Washington lakes.

At one time, Washington was a national leader in all aspects of lake restoration, including legal, fiscal, and in science and technology. Competitive state restoration grants to lakes were provided under Referenda 26 and 39; then, beginning in 1986, under the Centennial Clean Water Fund. Ten percent of CCWF (supported by tobacco taxes) was dedicated to lakes. The Washington State Department of Ecology Lakes Program was highly successful; an average of seven lake restoration projects were conducted annually with CCWF and local monies. However in 1995, the dedicated lakes funding was dropped from CCWF, leaving the burden of lake restoration and protection entirely on local residents and users. Since about

1997, no new state lake projects have been funded. Consequently, the number of Washington lakes with water quality problems, including TBB, has grown.

Today when lake supporters seek help in dealing with water quality problems, they soon realize that restoration costs typically far exceed fiscal capabilities of local communities, despite that lake waters are state resources serving all citizens, not just local residents. During this legislative session, WALPA has been working with state legislators making proposals to restore dedicated funding within the CCWF and to help concerned citizens such as those at Lake Steilacoom. It is my hope that, by the time you read this, the dedicated CCWF lake category will have been instituted, although that is far from certain.

What can you do to help? First, join WALPA. Our voices united carry more weight. Second, tell your legislators that lakes are important to you and ask that they support dedicated Centennial lakes funding. Lastly, attend the annual conference; this is a great chance to learn and network, and to show your support. Your support for clean lakes and for WALPA is needed more than ever to ensure the future of these treasured resources.

Spokane hosts WALPA conference

By Sally Abella, president-elect, conference organizer

"Lake Stewardship in the Northwest," WALPA's 17th annual conference on lakes, reservoirs and surrounding watersheds, will be held in Spokane at the newly renovated Mirabeau Park Hotel from March 30 to April 1. The conference focuses on lakes east of the Cascades and water quality issues for the communities within those watersheds. Several sessions will cover Idaho lakes.

Presentations at the conference will include topics of interest for people with a wide range of expertise in lakes and water quality, from interested citizens and activists to managers, researchers, and policy makers. Sessions are planned on successful educational newsletters, the nature and history of hydrology in eastern Washington, how to present and use public input in the planning and SEPA process, the nature of TMDLs on Washington lakes, the history and current status of NPDES aquatic weed permits, case histories of aquatic weed work in the area, updates on restoration work in Newman and Liberty Lakes, dam relicensing and water quality issues in Coeur d'Alene Lake, and new research from regional universities.

Guest speakers include Washington State Department of Ecology Regional Director Rene-Marc Mangin speaking in the plenary session on "Stewardship, Yes But Not That! The Connection between Perspective and Meaning," and WSU emeritus Professor Bill Funk, Ph.D., speaking on "Thirty Years of Work on Lakes in the Northwest" at the Thursday luncheon. At Friday's lunch, retiring Ecology staffer Allen Moore will award the second annual WALPA scholarships, including a newly established scholarship to honor the late Nancy Weller who worked at Ecology.

A poster session will be held on Thursday afternoon, concurrent with a no-host social event. Lake groups, agencies, students and consultants are encouraged to present posters of their work. To submit a poster, contact Peter de Arteaga at peter.dearteaga@seattle.gov or Tricia Shoblom at tsho461@ecy.wa.gov.

A Friday afternoon panel entitled 'Stump the Experts' will lead a group discussion on the incidence and danger of toxic blue green blooms in lakes across the region and brainstorm ways to deal with them in the future.

Two free, preliminary seminars on field instrumentation and software will be held consecutively on Wednesday, March 30, organized by Electronic Data Solutions in the morning and by Hach Environmental in the afternoon. The companies will handle registration. For the morning seminar, visit the EDS Web site at <http://store.elecdata.com/seminars>. For afternoon, contact T.J. Sisson at 208-543-6697 or by e-mail at tsisson@hach.com.

Preliminary programs and registration forms were mailed in mid-February, but the program and additional registration forms can be obtained online at www.nalms.org/walpa/conference.htm. Registration includes a one-year membership in WALPA, luncheon and break refreshment costs for Thursday and Friday, and a Thursday late afternoon combining a no-host social event with posters and vendor exhibits. Pre-registration is encouraged to allow for an accurate lunch and seating estimates. However, registration will also be accepted at the door on Thursday and Friday mornings. For a discount on registration, the form must be postmarked by March 14.

Lake Focus on Moses Lake By Heidi Wachter

Circuitous Moses Lake is an important natural resource as it provides wildlife habitat, recreation and water supply to central and eastern Washington. The lake, located in Grant County, lies approximately 95 miles southwest of the City of Spokane. The two cities nearest to Moses Lake are Ephrata to the northeast and Moses Lake, which borders most of the lake's eastern shoreline. Potholes Reservoir can be found just to the south and the North Columbia Basin Wildlife Area exists within the lake's watershed to the north.

This large, shallow waterbody winds southward from Rocky Ford Creek to its three Horns on the southeastern end of the lake. At the southern end of the lake, Pelican, Parker

and Lewis Horns extend eastward into the City of Moses Lake, which borders a good portion of the shoreline along the three Horns. The main surface water sources for Moses Lake originate from Rocky Ford Creek at the lake's most northern point and Crab Creek, which flows into the northern tip of Parker Horn. At the lake's most southern end, a dam prevents the natural release of Moses Lake's waters.

Non-native settlers first came to the Moses Lake region in the 1870s and by 1910 most of the land around the lake was settled by homesteaders. In the early 1900s nearby farmers irrigated their fields by pumping water from the shallow Moses Lake. Until the 1930s it was a continual

battle to maintain the lake water level for irrigation. In 1928 local farmers created the Moses Lake Irrigation District to construct a dam to regulate the lake level; however, this dam washed out in 1941. Farmers rebuilt the dam and this dam exists today.

As one of the largest lakes in Washington state, Moses Lake's three main arms stretch over 18 miles long and one mile wide. Moses Lake has a surface area of 6,800 acres with just over 62 miles of shoreline. The lake's volume is estimated 131,000 acre-feet and its maximum depth is 38 feet, with a mean depth of 19 feet. The lake drains a 3,080 square mile watershed and has a surface elevation of 1,046 feet above mean sea level.

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Moses Lake is inhabited by a variety of fish, including rainbow trout, largemouth bass, walleye, whitefish, crappie, bluegill and perch. WashingtonLakes.com reports there is a decline in the warm water fishery for this lake. In response, intensive biological surveys are underway to learn more about this decline and develop possible management improvements.

According to the Washington State Department of Ecology (Ecology), Moses Lake has a long history of water quality problems. In 1998 the lake was reported to remain in eutrophic condition. However, water quality was assessed to have improved in response to restoration efforts in the watershed the past 20 years. Despite these restoration efforts, Moses Lake was found to exceed

Washington's surface water quality standards for phosphorus and nitrogen, which resulted "in the persistence of blue-green algae blooms." As a result, Moses Lake was placed on the 1996 303(d) list for total phosphorus (TP) and total nitrogen (TN). Historical studies indicated that TP was the nutrient to control in order to limit algal biomass, and thus it was proposed to de-list Moses Lake for TN and focus management actions and decisions on control of TP. During 2001 additional data was gathered and, together with past research, produced a draft report and recommendations for phosphorus TMDL, which can be found on Ecology's Web site at the Moses Lake TMDL page.

Despite the lakes water quality issues, Moses Lake continues to be a popular destination for outdoor recreational activities. Outdoor enthusiasts visit the lake for fishing, boating, water skiing and other

recreational activities. The area has public boat launches, parks, campgrounds and visitor facilities. The lake is located directly in the path of the Pacific Flyway, "the migratory path for countless waterfowl." The nearby Columbia National Wildlife Refuge provides water and habitat to a diverse and abundant bird population. In addition to recreational resources, the lake serves as an important source for irrigation of farmlands throughout the watershed.

Note: WALPA makes no guarantee to the accuracy of this information.

Want to recommend a lake for the next Lake Focus? Send suggestions and questions to Heidi Wachter at heidi@taylorassoc.net.

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Advertising lake-related products or services in the *Waterline* does not imply endorsement by WALPA or any of its officers.

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Sources for this article:

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