

WATERLINE

DECEMBER 2008

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www.walpa.org

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Diving Into Lake Management Challenges at WALPA's 2008 Conference

by Beth Cullen, WALPA Past President

Peter Goldmark, then-candidate and now Lands Commissioner, kicked off WALPA's 2008 conference on September 30th with a speech that tackled difficult questions of interest to lake managers and residents, like who is responsible for land at the bottom of lakes and how past logging practices have contributed to major floods. He was a great speaker for a year full of political activity and elections, both within WALPA and elsewhere.

Starting off the first morning with a dose of science, some members earned pesticide license recertification credits at sessions about emerging aquatic plants, like phragmites, the susceptibility of milfoil (and its hybrids) to herbicide, and other aquatic plant issues. A popular session on Lake Modeling and Data covered everything from TMDL to eutrophication models. WALPA members took note of advances in lake science and the challenges that face us as we try to protect and restore our lakes.

Other well-attended sessions focused on new / student work and community activism. Conference attendees were treated to a presentation from 2007 WALPA scholarship winner and Western Washington University master's candidate Kelly Turner, who spent her summer in the North Cascades studying benthic macroinvertebrates in alpine lakes. Members were delighted to hear about student projects and meet scholarship winners.

Citizens directly involved in managing their lakes spoke to us about how their communities organized to face challenging management issues. Some of the lakes are battling noxious aquatic weeds; residents have come together to survey and manage the plants and educate residents. The community at Crystal Lake in Snohomish County is using timber harvest revenues to fund water quality monitoring and lake surveys.

The second day was filled with lake monitoring updates, toxicity in lakes and lake management issues. Lunch was the setting for a short but productive business meeting and introduction of the new WALPA board members and officers. WALPA's lobbyist Arlen Harris talked about our organization's work in Olympia (see related story p. 5 about our January lobby day!). WALPA is working hard to pass two bills this session – one that would ban



Eric Larson was the Nancy Weller Memorial Scholarship winner, announced at this fall's WALPA conference

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Hauser Lake: Past and Present

by John Wallis, Hauser Lake Watershed Coalition

Hauser Lake is located at the southernmost edge of the Selkirk Mountains, which extend from British Columbia southward to a point about halfway between Spokane, Washington and Coeur d'Alene, Idaho. Hauser Lake rests quietly in one of the shallow forested mountain valleys that ring the Mt. Spokane Complex straddling the Idaho-Washington border. The Hauser watershed covers about 20 square miles: 85% is dense private forest, 6% agricultural land, 5% rural suburban, 3% suburban and 1% wetlands. All of that wonderful topography leads down to Hauser Lake and the City of Hauser, population 668.

Like many water bodies in northern Idaho and eastern Washington, Hauser Lake was formed by the Great Spokane Floods that took place during the trailing edge of the Pleistocene epoch 20,000 years ago. Several dozen catastrophic glacial outburst floods inundated the area from Clark Fork, Montana, through Spokane, Pasco, Portland and eventually all the way to the Pacific Ocean. The floods carried and deposited massive amounts of glacial debris in and around the mountain valleys, damming streams and forming the lakes we enjoy today. Hauser, Twin, Spirit, Cocolalla, Hayden, Coeur d'Alene, Fernan, Newman and Liberty Lakes were all formed by these ancient floods.

Small and shallow like other lakes in the area, Hauser Lake is a mere 625 acres (less than one square mile) and 41 feet deep – about 47% of the lake is shallower than 18 feet. Unsurprisingly, it is experiencing symptoms of eutrophication; recent plant surveys show robust populations of Big Leaf and Fern Leaf pond weeds to depths of eighteen feet. Hauser Lake is at high risk for invasion by Eurasian watermilfoil, since many nearby lakes are already infested, and Hauser's nutrient-rich shallow water provides excellent conditions for the growth of non-native species.

To keep Hauser free of the invader, a group of citizens from the Hauser Lake Watershed Coalition (HLWC) applied for and received a grant from the Idaho Department of Agriculture to build a Eurasian watermilfoil (EWM) rinse station. This kind of facility, already in use to reduce milfoil spread in Maine's Cobscook Bay watershed, allows lake users to rinse their watercraft and equipment before launching. In May of 2007, Idaho's first rinse station opened at Hauser Lake; recent aquatic plant surveys show that the lake remains

free of Eurasian watermilfoil.

The HLWC has also initiated a LAKE*A*SYST (Lakeshore Assessment System) to improve water quality in the watershed. Key to Lake*A*Syst is a booklet that describes how land use practices can impact water quality, lists Best Management Practices (BMP's) to minimize those impacts, gives homeowners a system for rating their property, and provides agency contacts who can advise homeowners on putting BMP's in place. To learn more about the rinse station and the Lake*A*Syst program at Hauser Lake, visit www.hauserwatershed.org or contact John Wallis at (208) 777-6967.



First Boat through Hauser Lake's Eurasian watermilfoil (EWM) rinse station

WALPA's 2008 Conference

Continued from front

the use of phosphorus in residential fertilizers and the other asking the state to assess the needs of a state-run lakes program. Both bills were introduced last year and will be reintroduced this session. Follow Arlen's advice and contact your legislators about these two important bills! (Learn more at www.walpa.org/legislation)

The conference closed with a bang, as members yet again packed the room for blue-green algae talks. Kathy Hamel of Washington's Department of Ecology discussed the state blue-green algae monitoring program and its successes in 2008, while Joan Hardy, Washington Department of Health, presented information on state recreational standards for algal toxins. Neil Harrington, from Jefferson County, and Ray Hanowell, Pierce County, talked about toxic blue-green algae's effects on their local lakes and management strategies. This session closed out an exciting and informative conference.

Congratulations to Jacob McCann, of Spokane County, who is WALPA's president-elect and next year's conference planner. According to top-secret planning documents, the 2009 conference will be on the east side, probably in the Spokane area. Stay tuned and we hope to see you all then!

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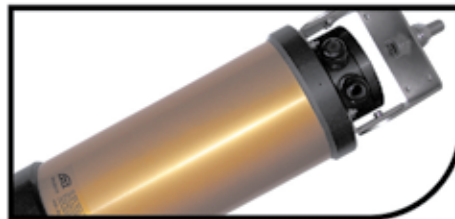


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WALPA needs you in Olympia!

Plan to attend WALPA Lobby Day January 28

It's an exciting election year, and although the votes are in, our work is not yet done. We are ready to move forward with the two bills we proposed in Olympia last year: a strategic lake management plan and a ban on phosphorus in residential fertilizer.

A key date for WALPA's legislative agenda is January 28th, when we are hosting a WALPA Lakes Day in Olympia. We're asking all our members to make appointments with their elected officials that day to discuss these two critical bills to protect lakes. Make appointments with your Representatives and Senators NOW so we can get as many meetings as possible. If there are several WALPA members from your part of the state hoping to meet with the same legislators, coordinate and arrange for one meeting. It speaks volumes if a

group shows up at the door!

Making an appointment is surprisingly easy. Locate your elected officials by clicking on <http://apps.leg.wa.gov/DistrictFinder/Default.aspx> and following the directions. From there, write an e-mail to your representatives asking for a 15 minute meeting on January 28th. Gather any other WALPA members in your district to come with you and take a trip to Olympia on the 28th!

We'll provide information packets you can drop off with your legislators, including talking points for you so that we all present a unified message. If you have questions about our legislative priorities or Lakes Day, please contact beth.cullen@kingcounty.gov

Let's keep the energy high and we'll see you in Olympia on the 28th!



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Ecology program identifies freshwater algae and tests bloom toxicity

by Kathy Hamel, Washington Department of Ecology

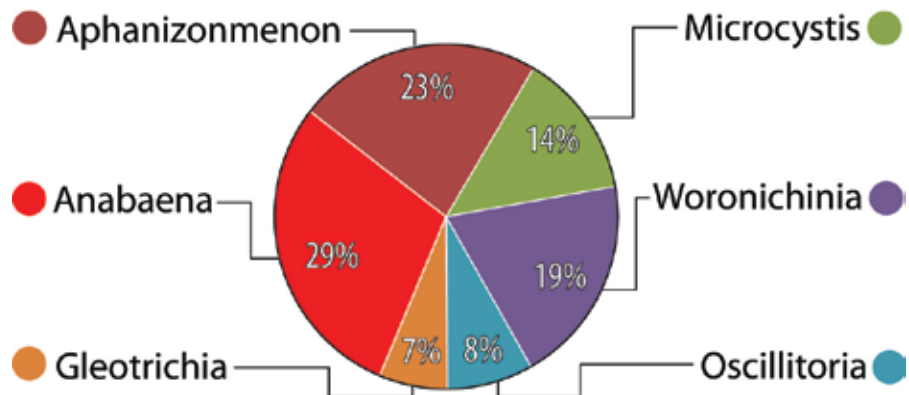
Many Washington lakes have problems with algae blooms. Some blue-green algae blooms (cyanobacteria) produce toxins that have poisoned pets and livestock and could potentially harm humans. There is no way to know if a blue-green bloom is producing toxins without testing it. The Washington Department of Ecology (Ecology)'s freshwater algae identification and toxicity testing program documents the occurrence and duration of blooms, the type of algae causing the bloom, and toxin concentrations. This information will help local health districts decide whether they need to close a lake to recreation to protect human and animal health.

Here's how the program works

Bloom samples are collected by staff at local health districts, lake managers and lake residents. We ask samplers to collect surface scum when possible. King County Environmental Laboratory has agreed to identify freshwater algae and test for cyanobacterial toxins, but samplers must coordinate

with Ecology before sending the lab a sample. See <http://www.ecy.wa.gov/programs/wq/plants/algae/monitoring/index.html> to learn how to participate.

The lab identifies the algae to the genus level and tests for toxins. The two most commonly produced algal toxins are microcystins (liver toxin) and anatoxin-a (nerve toxin). In 2007, the blooms were tested for microcystin; this year, all blooms were tested for microcystin and some blooms were tested for anatoxin-a as well. The lab



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Freshwater algae and bloom toxicity

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reports results to Ecology staff, who immediately email the results to the sampler and post them in an on-line database (see <https://fortress.wa.gov/ecy/toxicalgae/InternetDefault.aspx>). If the bloom is toxic, Ecology notifies local health districts, who decide whether to post a lake or close it to recreation. Some local districts are very engaged with the program while others do not participate.

Results from 2008 Sampling

Surprisingly, blue-green blooms occur year-round. In 2007, dog deaths from algae blooms occurred in December. However, the majority of samples are taken in the late summer and fall months.

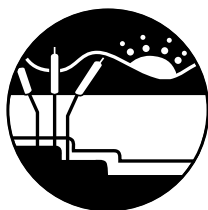
The pie chart on the previous page shows the blue-greens most commonly seen in the bloom samples. Most of these genera are known toxin producers, with some genera able to produce several types of toxin.

The table to the right shows the lakes that produced algal toxins in 2008 (January 2008-October 15, 2008). Be aware that not all blooms were sampled. The recreational guidelines for algal toxins established by the Washington Department of Health are 6 µg/l for microcystin and 1 µg/l for anatoxin-a. The recreational guidelines can be seen at <http://www.ecy.wa.gov/programs/wq/plants/algae/publichealth/RecreationalGuidelines.pdf>

In 2008, several dog deaths have been associated with algal toxins. Keep animals away from algal scums. If a lake is experiencing a widespread bloom, do not let animals drink the water.

If you have questions about the algae identification program, please contact Kathy Hamel at (360) 407-6562 or kham461@ecy.wa.gov

Lake	County	Microcystin-LR µg/l	Anatoxin-a µg/l
Ohop Lake	Pierce	4620	Not tested
Anderson Lake	Jefferson	3120	172,640
Waughop Lake	Pierce	1050	0.5
Tuck Lake	King	813	Not tested
Steilacoom Lake	Pierce	594	Not tested
Spanaway Lake	Pierce	587	0.43
Harts Lake	Pierce	334	0.33
Ketchum Lake	Snohomish	309	1
Leland Lake	Jefferson	191	22
Newman Lake	Spokane	191	Not tested
Fake Lake	Grays Harbor	119	0.71
Lone Lake	Island	107	Not tested
Bay Lake	Pierce	62.6	
Silver Lake	Pierce	34.8	Not tested
Cassidy Lake	Snohomish	20.1	0.15
Wapato Lake	Pierce	15.6	3.16
Kitsap Lake	Kitsap	8.62	5.56
Medical Lake	Spokane	5.13	Not tested
Hicks Lake	King	4.16	0.921
Cottage Lake	King	0.82	0.17
Gibbs Lake	Jefferson	0.815	1
Vancouver Lake	Clark	0.733	1.5
Sound County Park Lake	Lewis	0.732	Not tested
Hammonds Lake	Grant	0.59	Not tested
Palmer Lake	Pierce	0.5	0.9
Spring Lake	King	0.241	0.58
Roosevelt Lake	Okanogan	0.214	Not tested
Cranberry Lake	Island	0.152	Not tested
Liberty Lake	Spokane	0.071	Results not back
Horseshoe Lake	Cowlitz	0.055	Not tested
Silver Lake	Cowlitz	0.052	Not tested



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WALPA awards scholarships to graduate students studying invasive species

To recognize important work on invasive species and to provide more valuable awards to students, this year WALPA combined its traditional three scholarships into two: the Nancy Weller Memorial Scholarship of \$1000 and an additional scholarship of \$750.

This year's Nancy Weller Memorial Scholarship was

awarded to Eric Larson who is studying for his Ph.D. under Julian Olden at the University of Washington School of Fisheries. Eric's focus is the ecology and management of aquatic invasive species emphasizing the four stages of invasion across organizational scales. During the rest of 2008 and 2009, he plans to sample more than 200 randomly selected Washington lakes for invasive benthic invertebrates. Results of this survey will help him investigate the distribution

and potential spread of these invasive species as they relate to lake and landscape scale attributes. The goal of the project is to provide lake managers with guidelines as to where these invaders are likely to establish. The \$1000 will help offset Eric's costs for sampling equipment and travel to Washington's far-flung lakes.

Karoline Lambert, a master's candidate at the University of Idaho, won the \$750 scholarship. Karoline's work focuses on developing a reliable molecular procedure to identify cryptic invasive watermilfoil species. After work as an undergraduate research assistant and, after college, in a biotechnology and medical genetics lab, Karoline refocused on watermilfoil, determined to figure out a better way to separate the invasive Eurasian watermilfoil from native milfoil and the emerging hybrids. Her hope is to find a reliable, quick and inexpensive way to identify Eurasian and hybrid watermilfoil. By facilitating early identification, such a procedure would give lake managers a chance to eradicate invasive species quickly and efficiently. Karoline plans to buy reagents and lab equipment with her \$750 award.

The WALPA scholarship committee was pleased to award scholarships to these two exceptional students and looks forward to hearing about their progress at the 2009 conference.



*Karoline Lambert, \$750
WALPA scholarship winner*