

WATERLINE

JUNE 2009

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For information about the organization, call **1-800-607-5498** or visit the WALPA website

www.walpa.org

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Chicago conference focuses on enhancing lakeshores

Sally Abella of WALPA and King County's Water and Land Resources Division represented the Pacific Northwest this spring at the 22nd annual National Conference on Enhancing Lake Management Programs. Held April 14th-17th in Chicago, the conference theme was "On the Edge: Enhancing Ecological Integrity of Shorelines". A second conference highlight featured discussions about the purpose, methodology and "hot-off-the-presses" early results of the National Lakes Assessment Program. Begun in 2007, this effort represents the first comprehensive national assessment of lake health since the 1970's.

Conference keynote speaker and landscape ecologist Fred Rozumalski of Minneapolis discussed the needs of shoreline homeowners and suggested approaches for working with them to restore shoreline integrity for everyone's benefit. Other sessions addressed all aspects of restoration projects, social marketing efforts, and recent research on the ecological impacts of shoreline modification. Representatives from four different regions reported on shoreline protection and restoration efforts in their areas. Sally's presentation focused on how King County is implementing Washington State shoreline programs and policies.

The conference agenda, presentation abstracts, and many Power Point presentations can be viewed on-line at www.chicagolakes2009.org. The conference was co-sponsored by the Chicago Botanic Garden, the US EPA Region 5 Water Division, and NALMS (the North American Lake Management Society). More than 125 state, regional and federal lake managers, agency staff and statewide lake association leaders attended.



Over 125 attendees at the National Conference on Enhancing Lake Management Programs pose in the Chicago Botanic Garden

Walsh Lake milfoil removal for reconnection to Seattle's Cedar River water supply

by Josh Wozniak and Rob Zisette, Herrera Environmental Consultants

Walsh Lake is located in the Cedar River Municipal Watershed, which is protected for use as the primary water supply for the City of Seattle. The lake's aquatic plants exemplify a Puget Sound lowland lake plant community in a watershed rarely disturbed by public use, except for occasional trespassers trying to catch Kokanee salmon or smallmouth bass.

Seattle Public Utilities (SPU) is exploring the feasibility of reconnecting the Walsh Lake outlet stream to Rock Creek. Historically, the lake drained to Rock Creek, which discharges into the Cedar River upstream of Landsburg Dam, where water is withdrawn for Seattle's municipal water system.

When the water supply system and Landsburg Dam were built, the small town of Taylor, a brickworks, and other industries were located in the Walsh Lake watershed. To prevent their contamination of the municipal water supply, the Walsh Lake outlet stream was diverted into a constructed ditch that discharges to the Cedar River downstream of the Landsburg Dam. The town and other facilities were abandoned several decades ago.

The primary potential benefit of the reconnection would

be to improve fish habitat in the lower reaches of Rock Creek with the additional drainage from Walsh Lake. This habitat is of particular interest due to the Landsburg Dam fish passage project and the return of Chinook salmon to Rock Creek.

The 2001 detection of Eurasian watermilfoil (milfoil) by a collection team from the University of Washington Herbarium presents a potential problem with the stream reconnection. If the Walsh Lake outlet stream is diverted back into Rock Creek, milfoil fragments might colonize habitat in the Cedar River and Lake Youngs, which receives water from the Landsburg Dam and where SPU

has already worked hard to eradicate the nuisance plant.

In 2005, Herrera Environmental Consultants surveyed Walsh Lake's vegetation and mapped milfoil locations in the 74-acre lake. The plant community in and around Walsh Lake is robust, diverse, and primarily made up of native species. The survey found a total of 121 native plants in the lake and its adjacent wetlands, including 26 native floating and submerged species. A dense milfoil stand was observed growing in a 20- by 30-foot area



A dense milfoil stand growing along the Walsh Lake shoreline

Lake issues figure in last flurry of legislative activity in Olympia

There were a few last-minute developments in lake-related legislation as the session came to a close in Olympia. Senate Bill 5412, "Controlling saltwater algae" did not get a hearing in the House and so did not pass. The bill's provisions were included as a line item in the budget, though, which means that controlling saltwater algae will get \$140,000 of the freshwater algae money for the next budget biennium. This will affect the number and size of grants awarded for freshwater algae control in the future.

And while Senate Bill 5503/House Bill 1636, "Protecting lake water quality by reducing phosphorus from lawn fertilizers" did not pass the state legislature this year, the issue received significant attention in King County. On March 31,

King County Executive Ron Sims signed Ordinance 16392, which restricts the use of phosphorus fertilizers on residential lawns in unincorporated King County. The ordinance takes effect in 2011 and can be read at: <http://mkcclegisearch.kingcounty.gov/attachments/34475.pdf>.

While it may seem that WALPA had little success in Olympia this year, we laid important groundwork for future action. We made it clear that WALPA is an active and passionate group looking out for our state's lakes and working tirelessly to protect them. We'll be back in Olympia next year with the phosphorus bill and strategic lakes management bill – and we'll be watching for other bills we need to take a stand on.

Walsh Lake milfoil removal

Continued from previous page

along the southeast shoreline (see photo).

A milfoil removal plan specified hand removal by divers based on the amount of milfoil and watershed policies prohibiting herbicides. A 100-foot-long turbidity curtain was installed around the dense milfoil to contain fragments (see photo) and divers removed the milfoil by hand inside the curtain. Isolated plants outside the curtain were also hand-pulled. More than 580 pounds of milfoil were removed over two days in late summer 2005.

Milfoil survey and removal continued each summer thereafter, and generally included three separate one-day surveys of the infestation area and one day to survey the lake's remaining plant habitat. Removal amounts declined each year from 91 pounds in 2006 to 55 pounds in 2007 and 0.2 pounds

(five small plants) in 2008.

Milfoil survey and removal was complicated by backwaters in the adjoining wetland complex and, apparently, by beaver transport of milfoil fragments. Small milfoil plants were removed from shallow pools in dense cattail stands, which increased the survey effort throughout the lake. Beaver canals and impoundments were discovered in the wetland complex, with a couple of robust milfoil plants decorating beaver lodge entrances. In 2007, a new infestation site was found in pools next to the beaver-built lake outlet dam, showing that beavers carried fragments across the lake from the original infestation site. Survey efforts will continue in 2009 with the goal of eradication, and the hope of outsmarting the beavers!



A 100-foot-long turbidity curtain was installed to contain milfoil.

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Join WALPA at the Spokane conference this September

Mark your calendars now for the 2009 WALPA conference, *Healthy Watersheds and Clean Lakes-Working for a Sustainable Future*, to be held at the Doubletree Hotel-Spokane City Center on September 22nd and 23rd. Come one day early for a free seminar from Hach Environmental on September 21st!

The conference proper kicks off at 8:30AM on the 22nd with a plenary lecture, after which participants choose from an array of concurrently running sessions. The full group reconvenes for lunch on the 23rd, followed by a chance to "Stump the Experts" with your burning limnology questions.

The conference offers something for every WALPA member. Do you need to know more about Lake Restoration and Management Plans, Aquatic Invasive Species, Fisheries Research, Cyanobacteria and Algae, Lakescaping and Shoreline Restoration or Legislative Activities? You'll be in the right place. Unwind after all that input with a free networking session in the evening, complete with no-host bar and refreshments, where we'll hear informal presentations on a range of lake issues. Meet and greet your fellow WALPA members to get the most out of the conference.

Register by September 1, and the conference cost for two days, including lunch, is only \$130! After that date, registration costs \$150. Mention the conference when reserving your room at the Doubletree, and you pay only \$83/night, a great value for a premium riverside location in downtown Spokane! To reserve

your room, call (509) 455-9600 or visit their website at <http://doubletree1.hilton.com> and search for hotels in Spokane.

What are you waiting for? Make your arrangements now and we'll see you in Spokane!

Call for presentations:

Send abstracts to Jacob McCann at jmccann@spokanecounty.org. If you have any questions, please call Jacob at 509-477-7262.

Special note:

Participants can receive two continuing education credits through the Washington Department of Agriculture if they attend both Session 1B, Aquatic Invasive Species, and 2B, Lakescaping and Shoreline Restoration, on Tuesday morning.



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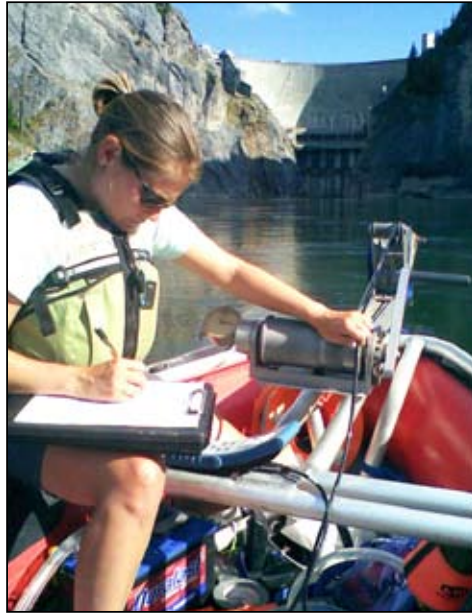


Boundary Dam relicensing effort includes two years of hard work assessing environmental impacts

by Shannon Brattebo

Recently I completed more than two years of hard work as one of a study team assisting Seattle City Light in its Federal Energy Regulatory Commission (FERC) hydroelectric relicensing efforts for Boundary Dam. Boundary Dam is on the Pend Oreille River near the US-Canadian border and Metaline Falls; it supplies more than a third of Seattle City Light's power. The beauty of the landscape and the river was a huge perk that made up for the extended efforts required by the project's scope.

The goal of the project, whose total budget was more than \$15 million, was to get a new FERC license for Boundary Dam that adequately mitigates its environmental and societal impacts while keeping ratepayer costs reasonable and maintaining operational flexibility.



Shannon Brattebo works to assess environmental impact at Boundary Dam

As we worked to identify the environmental impacts of the dam's hydroelectric operations, the study team conducted 26 technical studies, many of which were complex and required cross-study coordination. We also worked collaboratively with stakeholders (including Ecology, WDFW, USFW, USFS, USBR, and EPA) and tribal nations (Kalispell and Colville) to develop science-based protection, mitigation, and enhancement measures.

The unique and highly manipulated nature of the Boundary Reservoir created significant logistical and safety challenges for the study team. More than 85 meters deep at its deepest point, and with water velocities of 1-8 ft/s along its 17 miles, Boundary Reservoir exhibits some of the characteristics

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Boundary Dam relicensing effort

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and behavior of a big river. At times during the project, the study team had eight boats on the reservoir and more than 30 staff recording data. Field work required constant contact between dam operators and field staff, and special safety procedures were necessary when field crews were working in the tailrace or near the dam. Some field work required low pool conditions to inventory all available habitat for fish, macroinvertebrates, macrophytes, and other aquatic species. Seattle City Light staff and dam operators were critical to securing these low pool conditions as well as boat moorage, since boat ramps were unusable at those times.

The project began in December 2006, with the first full season of field work the following summer. Most of the technical studies field work was completed by the winter of 2007, but some studies required additional field work through summer 2008. All study

reports were submitted to FERC in March 2009 and the Final License Application for Boundary Dam will be submitted to FERC in September 2009.

The technical studies included hydraulic modeling, peak flood flow analysis, erosion, total dissolved gas monitoring, toxics assessment, water quality monitoring, continuous pH and DO monitoring with respect to macrophytes, aquatic habitat modeling, sediment transport and tributary delta monitoring, fisheries, a productivity assessment, wildlife and waterfowl surveys, bat surveys, cultural resources and recreational assessments, and bathymetry.

For more information about the Boundary Dam Relicensing Project, visit www.seattle.gov/light/News/Issues/BndryRelic or contact Shannon Brattebo at Shannon.brattebo@tetrattech.com.



The team's technical studies covered everything from sediment transport to bat surveys.

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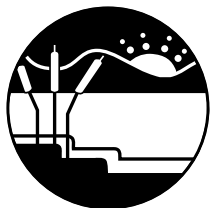
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Mute swans harm Washington’s wetlands and crowd out native waterfowl

A European waterfowl introduced to North America in the late 1800’s, the mute swan (*Cygnus olor*) has created problems for native ecosystems and bird species in Washington and elsewhere. Brought to the U.S. as a decorative bird for parks, zoos and estates, mute swans invade wetland habitats and can harm native fish and wildlife and damage commercial crops. They can eat as much as eight pounds of wetland vegetation a day, and often excavate large craters in wetlands as they search for food. Aggressive and sometimes territorial, mute swans compete directly with native species for critical habitat and have attacked and harmed people in defending nest and brood sites. On the East Coast and in the Great Lakes, populations have grown dramatically, leading to expensive, controversial, and often ineffective eradication programs by state fish and wildlife agencies.

To control mute swan populations in our state, the Washington Department of Fish and Wildlife (WDFW) added the mute swan to the list of Deleterious Exotic Wildlife in 1991. Under this rule, it is unlawful to bring into the state, hold, possess, propagate, sell,

transfer, or release live specimens. Mute swans in captivity before 1991 could be kept by owners under conditions that required registration, confinement, and controls on reproduction. The only exceptions to this rule are for accredited zoos and research projects approved by WDFW. Violations can incur a large penalty and, depending on circumstances, can be punished as a class C felony.

In spite of the mute swan’s listing as deleterious exotic wildlife, WDFW still gets requests to allow their release or holding, and continues to remove birds released or held illegally. While people may view mute swans as pets and/or deterrents to resident Canada geese, the geese are in

fact protected by State and Federal migratory bird laws. For better (and legal) ways to control Canada geese, visit WDFW’s web site at http://wdfw.wa.gov/wlm/canada_geese.htm. To help WDFW maintain healthy habitat for Washington’s diverse native fish and wildlife resources, please report observations of mute swans in Washington lakes or other wetlands. Call WDFW at (360) 902-2515 or email wildthing@dfw.wa.gov with the date, location, and number of birds observed.



Mute swan populations have grown dramatically, crowding out native waterfowl.