

## Slocan Lake Stewardship Society Newsletter

Box 322, New Denver, BC V0G 1S0 Web: [www.slocanstewardship.org](http://www.slocanstewardship.org)

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### WHAT IS A LAKE MANAGEMENT PLAN?

A lake management plan is a legal document, agreed upon by the various governmental agencies that have jurisdiction over lakes and their foreshores.

A lake management plan is an environmental document, identifying just how a lake keeps itself and the natural world around it alive and healthy. As an environmental document, it pays particular attention to areas that are sensitive or in need of restoration.

A lake management plan is a social values document developed in concert with the residents of an area. As a social record, it recognizes the community's relationship to and customary use of the lake, as well as its desires for future relationship.

A lake management plan is a scientific document. Based on studies of water quality, foreshore classifications, fish populations, spawning areas, sensitive habitats, the dependence of terrestrial population on the lake, and the like, a lake management plan assesses both the unique qualities and the overall health of a lake.

A lake management plan is an economic document, taking into account the fact that communities need a

healthy economic structure to stay alive. Lake management plans also acknowledge that some jobs are more appropriate to an area than others.

With ever-increasing recreational use and growing populations residing near and along waterways, lakes can no longer manage themselves. Small or large, human actions accumulate and impact water: whether within the lake, along its shorelines, in the lake's watershed or in its drainage basin, human behavior can permanently change the ecology of a lake over time.

A Lake Management Plan, as both a planning process and a strategy to preserve and protect the quality and health of a given watershed, should provide long-term direction to government entities, local landowners and residents, and stewardship groups. This direction helps everyone understand which activities are appropriate to any given area at any given time.

### WHY A LAKE MANAGEMENT PLAN FOR SLOCAN LAKE?

If you look around the southern interior of BC, you'll find many lakes that have experienced development in the past 20 years. In the East Kootenay, over 90% of the shoreline around some lakes is now altered. Changes in water temperature, clarity, and quality have been noted; a significant increase in boating accidents and fatalities has occurred across BC; and there are permanent and irreversible changes in water and terrestrial ecosystems.

Slocan Lake has experienced development, but to an appreciably smaller degree. Yet to the east, Kootenay Lake is undergoing major development, while on the west, Christina Lake is considerably altered. Lake management plans have been developed, or are being developed, for many lakes in our area. But such plans are usually implemented only after significant—even irreversible damage has been done and restoration is required.

Here on Slocan Lake, we want to preserve and protect the health of the lake; we hope that we can engage in planning and prevention, rather than engaging in costly restoration. Before our lake suffers from diminished quality and clarity, before we have boating deaths, before we unknowingly alter the habitat of the Kokanee salmon or elk or osprey, we hope to develop a plan that will sustain the health of lake, the wildlife, and the people who live around the lake.

Because of this, the Slocan Lake Stewardship Society formed in 2007. We have spent the past five years obtaining funds to establish baseline science about our lake. We have also begun to educate our communities about the lake. Now we are working with our communities to talk about values—our values for this place where we live and for this lake which is central to our life here. When we have completed a values process for residents of the area—by the beginning of 2013—we will present it to the village governments, the First Nations, the Regional District, the Ministry of Environment, Ministry of Transportation, Fisheries and Oceans Canada, and other pertinent groups, working with them to craft a plan that will give us all long-term direction.

Our goal is a lake management plan that supports the health and beauty of this lake and our communities.

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#### DID YOU KNOW....

- **THE SLOCAN LAKE STEWARDSHIP HAS RECEIVED OVER \$200 000 IN GRANTS TO HAVE THE SCIENCE OF SLOCAN LAKE STUDIED?**
- **COLIFORM TESTING (FECAL MATTER!) HAS SHOWN SLOCAN LAKE TO BE VERY CLEAN... TODAY!**
- **THERE ARE STURGEON IN SLOCAN LAKE, BUT THEY ARE NOT REPRODUCING?**
- **SLOCAN LAKE'S DEEPEST SPOT IS 298M**
- **SLOCAN LAKE'S TOTAL SHORELINE IS 88KM**
- **91% OF THE FORESHORE OF SLOCAN LAKE REMAINS NATURAL**

## SLOCAN LAKE STEWARDSHIP HOSTING PROVINCIAL CONFERENCE

It is confirmed. The Slocan Lake Stewardship Society will be co-hosting the British Columbia Lakes Stewardship Society's ([www.bclss.org](http://www.bclss.org)) 15th annual provincial conference.

The conference, dubbed *Deep, Dark and Blue; Exploring the Mysteries of Lakes*, runs from Friday, June 8th to Sunday June 10th.

For out of town guests, billeting is available to defray costs. Contact Sally Hammond at [randycofer@earthlink.net](mailto:randycofer@earthlink.net).

Conference registration cost \$65 for SLSS or BCLSS members. This fee includes attendance at all of the relevant and timely items on the conference's agenda, all day Saturday and Sunday morning. In addition, registration includes a 'free' wine and cheese Friday evening at Heart's Rest in New Denver. Friday evening will feature organic wines from the Summerhill Pyramid Winery. Three fully catered meals will be fit into Saturday's outstanding agenda of speakers and panelists. A Sunday breakfast precedes the morning field trips choices.

On Saturday, June 9th we have an exciting line up of topics being covered, including Zebra & Quagga Mussels, Vancouver Island Lakes Classification Project, the Shuswap Watershed Mapping Project, Devon Lakes: the successful removal of non-native trout from an alpine lake, and the Cariboo Regional District Shoreland Management Policy. We will also have an open, panel-style discussion on lake management plans and processes.

Saturday will also present a whale of an evening of local humor, storytelling, and *surprise* local musicians. The evening kicks off with keynote speaker John Pollack, recent author and underwater archaeologist of the National Geographic article *Ghost Ship of the Yukon Project*.



Mr. Pollack will bring tales of shipwrecks in our local lakes.

Two Sunday field trips will be offered to attendees. A northeast option led by renown local biologist Wayne McCrory will include a tour of Fish and Bear Lakes and vulnerable flora and fauna. The south option to the mouth of the Slocan River spawning areas and restoration sites will be led by Jennifer Yeow of Passmore Labs and Slocan City village counselor Hillary Elliot. Ms. Yeow is also a local Streamkeepers Director.

A detailed conference agenda can be found on page 4 and updates can be viewed on the BCLSS website and the Slocan Stewardship Society's website at [www.slocanstewardship.org](http://www.slocanstewardship.org).



### EARLY BIRD REGISTRATIONS HAVE BEEN EXTENDED!!!

The early bird registration deadline for the BCLSS Conference 2012 has been extended! We will honour early bird registration rates until **MAY 30th, 2012**.

visit [www.bclss.org/newsevents/events/186-conference-2012.html](http://www.bclss.org/newsevents/events/186-conference-2012.html).

## VOLUNTEERING CAN BE FUN!

I volunteer with the Slocan Lake Stewardship Society's nearshore water testing program. We test for coliform, a bacteria found in the intestines and feces of humans and other vertebrates. Testing for coliform bacteria is a commonly used indicator of the sanitary quality of food and water. We test at seven sites: Hills Beach, near the mouth of Wilson Creek, near the mouth of Carpenter Creek, in front of the hospital, near the mouth of Silverton Creek, in front of the Silverton Hotel and off the dock in Slocan. We first tested in the fall of 2008. In the fall of 2010, we began a three year testing cycle, funded by CBT, which provides for both nearshore and deep lake testing.

My first job each year is to borrow canoes in Silverton, New Denver, Rosebery and Hills. Fortunately, we have a faithful group of supporters who willingly lend us their equipment each year.

Surface runoff generally has a higher coliform count. There is more surface runoff after a rain, so we wait until after a rain to do our water tests. It takes two of us. We have to haul our canoe into the water and paddle to the relevant testing site. We try to test at exactly the same location each time to keep results accurate. One volunteer holds the canoe in place while the other dips the sterile plastic bag as far under the water as we can manage. Then it's on to the next site. After we've completed six sites at the north end of the lake, it's down to Slocan for the final test and on to Passmore Lab where the samples have to be processed within 24 hours..

The two things I like least about nearshore water testing are hauling the canoes into the water and driving to Passmore. We try to coordinate our testing to times when

Continued on page 3

## WHAT'S SO IMPORTANT ABOUT RIPARIAN AREAS?

What are riparian areas? We often confuse riparian areas with foreshore. Foreshore begins at the water's edge and includes the beach area up to the high water mark where bushy plants begin to grow. The foreshore is crown land, not private property. It is illegal to modify the foreshore in any way.

Riparian areas are the land areas extending from the foreshore to approximately 30 meters above the high water boundary, measured horizontally. If the riparian area is on a floodplain, it may extend farther. These are zones—in lakes, wetlands, creeks and rivers—that are influenced by, and have influence on, fish and the aquatic environment. Riparian areas can be privately owned.

Riparian areas are vitally important for fish, terrestrial wildlife and the health of adjacent creeks and lakes. Natural vegetation holds the soil together to stop erosion and acts as a filter for water runoff. Natural vegetation absorbs contaminants, excess nutrients and provides shade to keep the water cool. Natural riparian areas help protect against erosion by wind and waves and provide homes for birds and woodland creatures.

If you own property along a shoreline where the riparian buffer is already in its natural state, please leave it as it is. Landscaping is best done on the land above the riparian buffer. If changes in the riparian buffer seem necessary, check with your local jurisdiction to see if you are required to apply for a permit to make those changes. Always choose the alternatives which will reduce the risk of impact to riparian functions!

The Slocan Lake Stewardship Society is sponsoring an informational brochure on riparian areas and their importance. It will be available this summer through the Slocan Lake Stewardship Society or in village offices.



## Description of Water Quality Testing on Slocan Lake

The Slocan Lake Stewardship Society monitors the water quality of Slocan Lake. A water quality analysis was conducted in 2008 to establish a data baseline because very little data on the water quality of this lake exists in public literature.

The SLSS is now in the third year of a three year water quality study to determine if there are trends. The sampling of the lake is done in two different ways. A “near shore testing” program is conducted five times over a four week period in the summer to determine if there are significant coliform bacteria being introduced into the lake from human activity. The “deep water testing” program, designed to measure the amount of nutrient in the lake and the plant and animal volumes that this nutrient supports, is conducted monthly from May to October.

The near shore testing consists of sampling sites adjacent to population centers on Slocan Lake. The same seven sites that were used in the 2008 study are sampled each year as part of the three year trend analysis study. Samples are caught in sterile bags and delivered to Passmore labs for analysis for coliform bacteria counts.

The deep water testing consists of taking water samples from four sites along the midline of the lake spaced along the length of the lake. These are the same sites that were used in the 2008 baseline

study. Samples of water are taken from depths of 5 meters and 50 meters. The water samples are analyzed for chlorophyll (live plant material) and nutrient (phosphorus and nitrogen). Once a year a second set of water samples are taken and analyzed for mineral and ion content, to watch for changes in these parameters.

While at each sample site, readings are taken of pH, conductivity, total dissolved solids, dissolved oxygen and temperature at 5 meter intervals down to 50 meters depth. Also a Wisconsin net is used to catch zooplankton from a column of water from 60 meters deep to the surface. The tiny “bugs” caught in the net are identified and the total volume (biomass) is extrapolated to estimate the “fish food” in the lake.

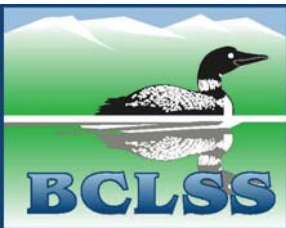
## Volunteering continued from page 2

someone is going down the valley and is willing to drive to the lab but sometimes it just doesn't work out.

Testing is fun and encourages me to get out on the water at times I wouldn't normally do so. I love being on the lake in the early morning or evening with my plastic bag, sometimes when it's so calm and occasionally when it's stormy and wavy. We have had a couple of exciting trips, in late fall with the whitecaps encouraging us to paddle STRONGLY!

If you are interested in the results of our three Nearshore Coliform Sampling studies, they are available on our website, [www.slocanlakestewardship.org](http://www.slocanlakestewardship.org). Under Research, go to Lake Quality and scroll down towards the bottom of the page.





# 15th Annual BC Lake Stewardship Society Conference

New Denver & Silverton, BC

June 8 - 10, 2012

## DEEP, DARK AND BLUE: EXPLORING THE MYSTERIES OF LAKES

### Friday, June 8

7:00 - 9:00 pm **Welcome Wine & Cheese Social and Pre-Registration** (Heart's Rest, New Denver, BC)

### Saturday, June 9 Presentations

- 7:30 - 8:00      **Registration and sign in** (Silverton Memorial Hall, Silverton, BC)
- 8:00 - 8:45      Breakfast
- 8:50 - 9:10      Welcome, Opening Remarks & BCLSS Intro - Norm Zirnhelt
- 9:15 - 9:30      Slokan Lake Stewardship Society: Who We Are, Where We've Come From, Where We Are, and Where We're Going - TBD
- 9:30 - 9:55      Vancouver Island Lakes Classification Project - Deb Epps
- 9:55 - 10:45     **Networking Break**
- 10:45 - 11:10    Cariboo Regional District Shoreland Management Policy - Norm Zirnhelt
- 11:15 - 11:40    Zebra and Quagga Mussels: A Looming Threat to BC Lakes - Rick Nordin
- 11:45 - 12:10    Shuswap Watershed Mapping Project - TBD
- 12:10 - 1:15     **Lunch**
- 1:15 - 1:30      Volunteer Award Presentation
- 1:30 - 1:55      The Devon Lakes: The Successful Removal of Non-Native Trout - TDB
- 2:00 - 2:15      LAKE MANAGEMENT PLAN PANEL: Introduction & general discussion - Norm Zirnhelt (facilitator)
- 2:15 - 2:35      Brief introduction from each panelist - 5 experienced panelists representing stewardship group, provincial and local government perspectives
- 2:40 - 3:00      Open panel-style discussion on lake management planning , including current projects and past successes
- 3:00 - 3:30      **Networking Break**
- 3:30 - 4:20      Open panel discussion (continued...)
- 4:25              Summary
- 6:00 - 7:00      **Dinner**
- 7:00 - 8:00      **Keynote: "Big Lakes, Old Ships, and Historical Archaeology" - John Pollack** (Underwater Archeological Society of BC)
- 8:00              Informal Social, including local entertainment

**Please note: this agenda is subject to change. Presentation titles are listed by topics covered and may be altered.**

### Sunday, June 10

- 8:00 - 8:45      **Breakfast**
- 9:00 - 11:45    Two field trip options (choose one) - The northeast to Bear and Fish Lakes with local biologist Wayne McCrory or South to Slokan River and Slokan Streamkeepers restoration site with Jennifer Yeow and Hillary Elliot. Please dress appropriately for the weather. Topics covered: wetlands, spawning sites, vulnerable species and aquatic plants.

For more information & registration please visit [www.bclss.org/newsevents/events/186-conference-2012.html](http://www.bclss.org/newsevents/events/186-conference-2012.html) or contact [mlesnik@hotmail.ca](mailto:mlesnik@hotmail.ca)

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