

The Conservator

A Newsletter of the Loon Lake Land Conservancy

Clean Boats Save Lakes

The 12th Annual Regional Lakes Conference held February 9, 2013 at Spokane Community College scheduled a lineup of speakers from Washington and Idaho who presented a variety of issues. Chief among them were presentations about the effects of non-native and invasive plants and species in area lakes and rivers.

Of special concern is the spread of zebra and quagga mussels across the country. These tiny, invasive freshwater mussels are native to Eastern Europe and came on commercial ships brought to the Great Lakes in the late 1980s. Since then quagga mussels have been spread by boats from the Great Lakes area to many other lakes and rivers. In 2007 they were first detected in the Lake Mead Recreational Area. They have since spread throughout the Colorado River



Zebra & Quagga Mussels (<http://begreen.botw.org>)

system and are now found in several western states – California, Arizona, Nevada, Utah, Colorado and New Mexico.

Zebra and quagga mussels multiply rapidly and in great numbers, and can attach to all parts of a boat including compartments, bilge, trailer, and any equipment, gear, ropes or anchors. The larval stage is

free floating, carried with the currents, and might be found in ballast water and live wells. Adult mussels attach to hard surfaces, and can stay alive for several days out of water. As filter feeders, they deplete food and nutrients necessary to sustain native aquatic species. They clog pipes, ruin boat motors, and damage (continued on page 2)

What is a Conservation Easement?

A conservation easement is a legal agreement between a landowner and a land trust that permanently limits certain uses of the land in order to protect its conservation values. It allows landowners to continue to own and use their land while protecting it from development and commercial use.

An easement is flexible, and can apply to all or a portion of the property. It goes with the land when it is sold or passed on to heirs. If a conservation easement donated to a land trust benefits the public by permanently protecting important conservation resources and meets other federal tax

code requirements, it may qualify as a tax-deductible charitable donation.



Volume 3, Issue 1
Spring 2013

Special points of interest:

These properties are under the stewardship of the Conservancy:

- Old Just Farm—15.29 acres
- Little Loon West—one-half acre
- Historic Morgan Wood—43.1 acres
- Pearson Meadow Wetland—11 acres
- Walter & Betty Davis Wetland—1.5 acres
- Loon Lake Park—one-tenth acre

Inside this issue:

Clean Boats (continued)	2
Little Loon Lake	2
Financial Report 2012	2
Loon Lake Recovery Planning	3
Update on Properties	3
A Reminder	4

Clean Boats Save Lakes (continued from page 1)

recreational equipment. There are no natural predators in North America, although some fish and diving ducks have been known to eat them.

So far zebra and quagga mussels have not been found in Washington and Idaho waters, but, "...they are only a day's drive away," says the Washington Invasive Species Council. "If someone uses a boat in an infected lake and then launches the boat in Washington waters, they could be introduced here."

The Idaho Department of Agriculture has opened mandatory boat inspection stations

across the state to stop mussel-contaminated boats from entering. Boats found with zebra or quagga mussels are washed in hot water with pressure hoses, drained, dried and held for thirty days to be sure no living mussels remain. Once established, zebra and quagga mussels are impossible to remove and management costs become enormous.

Prevention is the key. Boaters who trailer their boats to and from other lakes and rivers, especially in other states, must be diligent and responsible.

What can we do? Each time a boat is re-

trieved from the water ...

- Remove all aquatic plants, animals and mud from everything that came in contact with the water.
- Drain all water including bilges, live wells, and cooling water from the motor.
- Clean and dry everything that came in contact with the water.
- Dispose of any live bait.

Help keep Loon Lake free of invasive Zebra and Quagga mussels.

Little Loon Lake and BNSF

The removal of ties from Little Loon Lake is a project that began over a year ago.

In past years rail crews discarded old creosote-laden ties into Little Loon Lake thus polluting the waters for wildlife and negatively impacting water quality. Little Loon Lake drains directly into Loon Lake via a culvert system expanding the problem. Our goal is to have these ties removed.

The process has been rather bumpy with

personnel and company changes. With the assistance of Stevens County Water Quality Coordinator, Charlie Kessler, we are back on track.

The BNSF Railroad remains on board with this removal project.

Ray Wilson of Sandry Construction is the contracted manager of the project.

It is our understanding that we must start the permitting process over again. We

need signatures from several government agencies for a JARPA/Hydraulic Project Approval permit.

We expect all agencies will sign off as this is a fairly simple project.

The big wheels of the BNSF and the government grind slowly but we are in 'til the end. Stay tuned.

Bob & Nancy French

Contact Us

The Loon Lake Land Conservancy is a non-profit 501(c)3 corporation registered with the State of Washington and the IRS. Its mission is to protect the environment of Loon Lake, its waters, shore lands and watershed for future generations.

Would you like more information about conservation easements and the Conservancy's protected lands?

On the Web:

**http://
loonlakelandconservancy.wordpress.com**

E-mail: loonlakelandconservancy@hotmail.com

If you would like to help the Conservancy's efforts with a contribution, please send your tax-deductible donations to:

**Loon Lake Land Conservancy
PO Box 153, Loon Lake, WA 99148.**

Thank you for your support.



Loon Lake Recovery Planning

The Loon Lake Property Owners Association is investigating the need for a lake restoration project involving the use of an oxygenation system. To do this we need to understand why it is needed and how it will work to resolve Loon Lake's problems.

In the fall, cooling surface waters become more dense, sink and displace the water beneath. This continues until the density is the same from top to bottom. In the spring, surface waters warm. The temperature differential is substantial at the point where warming can go no further and the deeper water stays cold. Once the process is complete, usually in late May, the lake is said to be stratified. The abundant nutrients in the warm and sunny surface waters, augmented by nutrient rich spring runoff prompts the growth of large plants in the shallows and microscopic plants all over the lake. As they grow aquatic plants take up nutrients and carbon dioxide and release oxygen.

Algae are short lived. Many blooms and die offs occur during the growing season. When algae die they sink to the bottom and become food for bacteria. Bacteria use oxygen. This is the mechanism that removes dissolved oxygen (DO) from the depths. In the absence of dissolved oxygen the sediments release phosphorus (P). Fall

turnover again distributes P to the water column thereby fostering more plant life in the spring. The solution to the problem lies in the removal or dramatic reduction of P. Less P means less algae, less algae means less dead algae, less dead algae means less bacteria, less bacteria means more DO, more DO means less P released from the sediments, etc. Other positives are cleaner, clearer water, an improved fishery, eliminating the squeeze to our cold water kokanee and mackinaw between uncomfortably warm surface waters and the lack of DO in the colder depths.

There are several known methods of removing P. One is to spread alum (aluminum oxide) in powder form over the surface of the lake. As it sinks it reacts with any P it encounters forming a compound that becomes a part of the sediments. It takes multiple treatments to achieve a minimally acceptable level of success. Each treatment is expensive and has some undesirable side effects on fish and fish prey populations.

Another method is aeration. This process employs several large volume or many small volume anchored, floating air pumps. Air is pumped through tubes from the surface to the bottom. Pumps can be powered by internal combustion, solar or wind en-

ergy sources. This method has proven effective in small, shallow, lakes and ponds. Loon Lake is too large, too deep and has too much recreational traffic during the aeration season to consider this method.

Air is only 20% oxygen. Pure oxygen, which is five times more effective than air, can be delivered to the deepest part of the lake via a single pipe or hose anchored on the bottom and connected to a storage tank or oxygen generation system on the shore. Oxygen is delivered or generated in liquid form. It creates its own pressure making it easy to distribute as a gas. It very readily combines with P. This is the method that is recommended by the WSU study and has been successful at North Twin Lake on the Colville reservation and at Newman Lake in Spokane County.

Plans for how and when, how much money and from what sources, project management choices and many other matters pertaining to this subject are being worked on by the LLPOA Board of Directors. Stay tuned. *Jim Davies, LLPOA President*

Read the full WSU Water Quality report on the Conservancy website:

<http://loonlakeandconservancy.wordpress.com>

Update on Properties

Volunteer work parties are underway on Conservancy properties this spring for maintenance and repair.

A new gate is being constructed on the Old Just Farm property to replace a sagging structure. Owl boxes have been cleaned and moved nearer the tree line. Evidence shows that kestrels, also hunters of mice and voles, have nested in them. Reconstruction of the water system is also being completed on Just Farm with the addition of

a frost free hydrant. Knapweed on the property will be mowed before the plants bloom to try to prevent new growth.

Fence and sign repair are underway in Morgan Wood, along with tree trimming up to six feet from the ground for fire suppression, especially along the road.

Loon Lake Park's meadow has a new layer of topsoil and peat, and has been reseeded with fescue. Trees and plants are coming

back and budding out after a long winter.

Little Loon West will have an additional Conservancy sign placed at the south end to further identify the property.

Pearson Meadow ponds are holding water this spring, functioning as wetlands should by allowing the water to seep slowly through the wetland into the lake aquifer.

*A Newsletter of the Loon Lake
Land Conservancy*



PO Box 153
Loon Lake, WA 99148

E-mail:
loonlakelandconservancy@hotmail.com



Loon Lake Land Conservancy

a non-profit corporation



A Reminder

The season to BE AT THE LAKE is upon us. As we look forward to enjoying the lake, it is a good time to take a moment to think about what WE can do for our lake.

1. Maintenance

Pick up trash around the lake. Organize a community cleanup day to remove litter and illegal dumps in the neighborhood that might impact water quality.

2. Clean up after your pets promptly. Pet waste can contribute significant fecal contamination to the lake, even if it is just from rain or sprinklers washing over it.

3. Clean up your yard. Old equipment, machinery or debris lying around can leach contaminants into the soil, impacting water quality.

4. Keep a lid on it. Something as simple as securing your trash can lid will prevent

litter from accidentally being blown into the lake on windy days.

5. Monitor public access points. Report vandalism, destruction or maintenance needs to the county or state agency responsible for the right of way.

6. Manage domestic livestock manure. Get assistance in developing management plans to protect water quality.

7. Clean up after beach fires. After fires are extinguished and the ash has cooled, move the ash away from the lake and any area that may drain into lake water. Beach fire ash adds to the lake's overload of phosphorus. Every little bit helps with this serious problem.

Items Around the House

1. Use non-toxic dock preservative. Avoid harming water and the critters in it while

protecting your dock.

2. Research and choose alternative, environmentally-friendly maintenance materials before treating lumber.

3. Wash your car at a car wash. Washing it in your driveway sends harmful car oil and residue right into your lake and yard.

4. Install a rain barrel. Collecting water from your rain gutters is a great source for watering your yard and reducing utility bills.

5. Take a canoe or rowboat. It's good exercise and you are quiet and closer to the water.

Remember, WE are the stewards of our lake. WE, each of us, can do our part to make Loon Lake a clean and happy lake.

Bill Shawl

