

BCLSS

September 2024 Newsletter

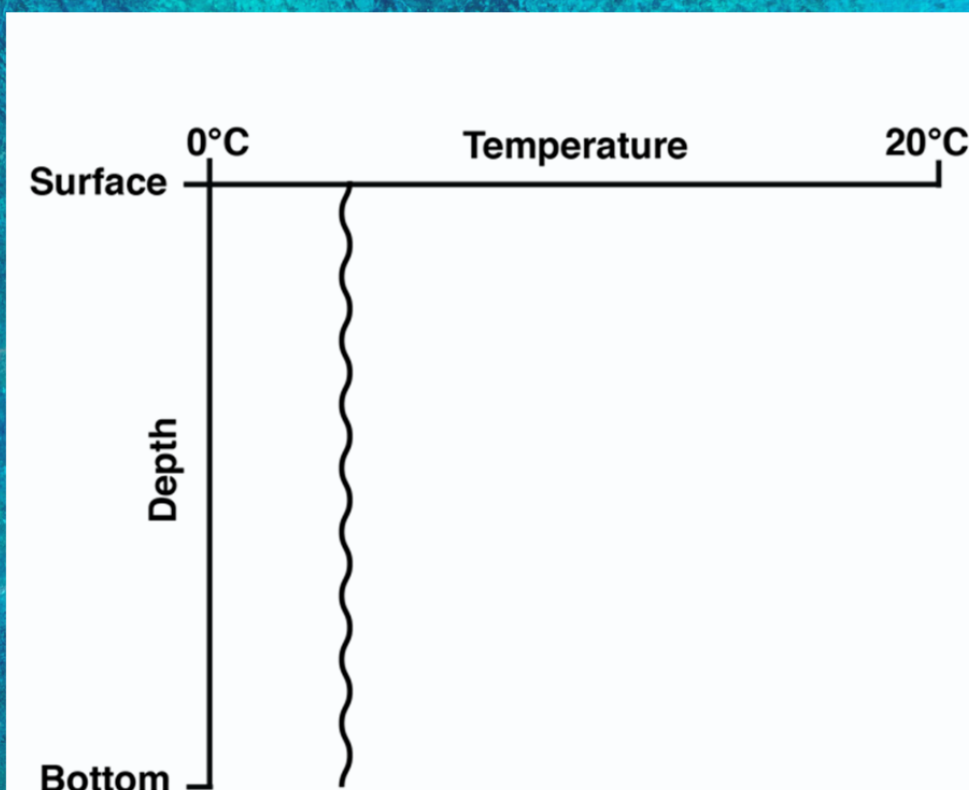


Ruth Lake - Photo by Marge Sidney

In This Newsletter

- Hello fall! When should you wrap up monitoring for the 2024 season?
- New lake report - Bednesti Lake
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Hello Fall! When should you wrap up monitoring for the 2024 season?



Typical Fall Temperature Profile



BCLSS

As we say goodbye to summer for another year, we often receive questions about when to wrap up lake monitoring for 2024. Though this will depend on the objectives of your monitoring program as well as the characteristics of the lake you monitor, you will find some tips below to help you decide when to pack in your monitoring gear for winter.

If you are collecting Level 1 BC Lake Stewardship and Monitoring Program (BCLSMP) data (clarity and surface temperature), we generally recommend continuing monitoring until approximately October 15th. However, if you are collecting dissolved oxygen and temperature profiles as well (Level 1+ BCLSMP), continued monitoring until fall overturn (or initial freeze up conditions if the lake

does not experience fall overturn) is important as long as weather and safety are on your side.

A lake has experienced turnover when the temperature profile of the lake is fairly uniform from top to bottom (see figure above), which allows wind and wave action to overcome any minor density difference remaining to mix the entire lake and replenish dissolved oxygen to the bottom waters. With climate warming, lakes are staying stratified longer and possibly not fully mixing and replenishing oxygen through the water column which has all kinds of implications. This is one reason we are encouraging Level 1+ data collection to obtain dissolved oxygen and temperature profiles. You can read more about lake turnover in the [LakeKeepers Manual](#), and more about the predicted impacts of climate change on BC lakes in [this article](#) written by BCLSS Director Ken Ashley (PhD).

Thank you for your time and commitment to monitoring BC Lakes!

Bednesti Lake Report 2018-2021 + 1998-2010



The BC Lake Stewardship Society (BCLSS) and the Ministry of Environment and Climate Change Strategy (ENV) partner with local volunteers and stewardship groups to characterize lake water quality through the *BC Lake Stewardship and Monitoring Program* (BCLSMP). The BCLSMP's focus is on understanding water clarity, temperature, oxygen, and nutrients as these provide a basic understanding of lake processes and influence biological productivity. Concerns about productivity are common, specifically because high productivity can affect recreation and drinking water due to harmful algal blooms and can also impact aquatic organisms, such as fish. For more information about the BCLSMP please visit www.gov.bc.ca/lakestewardshipmonitoring.

Background

Bednesti Lake is in the Omineca-Peace region near Hwy 16, 50 km west of Prince George, within the Traditional Territory of the Lheidli T'enneh First Nation. The lake is roughly 5 km long, has a maximum width of 1 km and a maximum depth of 20.7 m (**Figure 1**). Its surface area is 261 hectares, and it has a shoreline perimeter of 14.7 kilometers. The main inflow into Bednesti Lake is Kellogg Creek, located at the southwest end of the lake. There are also a few tributaries on the north and south side of the lake that drain into Bednesti Lake. All the tributaries, including Kellogg Creek have current or deactivated road crossings. Bednesti lake drains out at the southwest end into Berman Lake and into Tachintelachick Creek, which eventually flows into the Nechako River.



Photo 1: Photo of Bednesti Lake (provided by volunteer sampler Ayner Kersey).

Bednesti Lake has a watershed area of 81.6 km², which includes flat drier plateaus and wetter lowlands, that include treed and non-treed bogs and wetlands (**Figure 2**). The Bednesti watershed is relatively un-disturbed by direct human land use activities with approximately 75% of the total area considered "natural" forested or unforested lands. Of the remaining 25%, 16% is classed as disturbed which is largely associated with harvested area south of Bednesti Lake, 7.5% is waterbodies and <1% is developed land. Bednesti Lake has approximately 103 lakeshore residences, all of which are zoned for full time living, and one restaurant/motel/camping facility. A 139-hectare Ecological Reserve also borders the Bednesti Lake watershed. The Bednesti Ecological Reserve was established in 1978 to "preserve a representative wetland community and disjunct tamarack stands on the Interior Plateau" ([BC Parks website](#)).

New Lake Report! Volunteers on Bednesti Lake recently completed a Level 3 BC Lake Stewardship and Monitoring Program which provided current data to compare to historically collected level 3 data. Click the button below to read the report!

[Read the Report Here!](#)

Tru Earth Fundraiser

A promotional graphic for the Tru Earth Fundraiser. At the top, the words "TRU EARTH" are written in a large, stylized font, with "TRU" in blue and "EARTH" in green. Below the text, two hands are shown: the left hand holds a small green tree growing out of a mound of dark soil, and the right hand holds a small, realistic globe of the Earth. In the center, the text "Order your eco-friendly products using our Tru-Earth Fundraising link" is displayed. At the bottom left, there is a logo for the BC Lake Stewardship Society (BCLSS), featuring a black and white loon swimming in blue water. To the right of the logo, the letters "BCLSS" are written in a bold, blue, sans-serif font. At the bottom of the graphic, a paragraph of text encourages support for the BCLSS by shopping Tru Earth's eco-friendly, plastic-free products through their fundraiser, noting that the BCLSS will receive 20% of every purchase made through their fundraising link.

TRU EARTH®

Order your eco-friendly products
using our Tru-Earth Fundraising link



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Support the BC Lake Stewardship Society by
shopping Tru Earth's eco-friendly, plastic free
products through our fundraiser. The BCLSS
will receive **20%** of every purchase made
through our fundraising link!

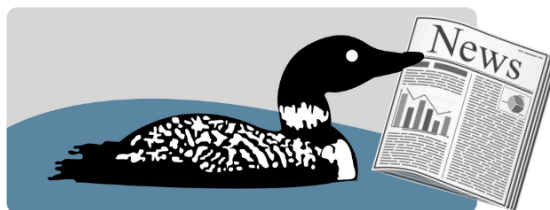
Did you know that over 700 million plastic laundry jugs are discarded in North America every year? This plastic can take hundreds of years to break down and often ends up in rivers, lakes, and the ocean through runoff and wind carrying microscopic plastic particles. These microplastics are even being found in lakes well away from developed areas.

We are fundraising with Tru Earth by promoting their great plastic free laundry alternatives that are also paraben- and phosphate-free, hypoallergenic, free of animal-based ingredients and biodegradable!

The BCLSS will earn 20% of each order purchased through our fundraising link! Stock up on all your eco-friendly laundry and cleaning essentials at the link below while supporting the BCLSS and our mission to preserve, protect, and restore lakes in British Columbia.

Shop our fundraiser here!

The Latest Freshwater News



- [One jellyfish arrived in B.C. decades ago. Thousands of clones spread to 34 waterways](#)
- [Record breaking return of sockeye salmon to Okanagan spawning grounds](#)
- [British Columbia buys land to expand Okanagan Lake Park](#)
- [LWA conclude two-year study on Lake Windermere](#)



Okanagan Lake by SM Jones

Not a member of the BCLSS yet? Please consider joining our network of lake stewards! For more information on the benefits of membership, visit our website.

Were you forwarded this newsletter? Subscribe today to get monthly updates on stewardship activities, lake science, and much more delivered to your inbox!

The BCLSS acknowledges that the lake stewardship activities of our staff, directors, and volunteers take place on the traditional, ancestral, and unceded lands of First Nations Peoples throughout British Columbia. We recognize that Indigenous Peoples have stewarded these lands and waters for generations and we are grateful to the Elders, Traditional Knowledge Keepers, and youth that implement their knowledge and traditional laws to preserve water and life for the benefit of all.



We gratefully acknowledge the financial support of the BC Conservation and Biodiversity Awards, and the Province of British Columbia through the Ministry of Municipal Affairs and the Ministry of Environment and Climate Change Strategy.



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