

Lakescape

newsletter of the



WABAMUN WATERSHED
MANAGEMENT COUNCIL

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No. 27

Fall 2022

A Busy Summer

by Sue Styles, WWMC Chair

The beautiful weather we are experiencing in our watershed has made it very pleasant to complete necessary fall tasks and chores, and simply enjoy the quiet magnificence of the lake and its surroundings. I hope you all get a chance to enjoy the beauty of the lake this fall.

In this newsletter the WWMC shares news and activities of the mid-summer and fall. Beginning with board governance matters:

- the WWMC launched its 2022 fundraising campaign
- the WWMC 2022 Bylaws were registered with Alberta Registries on July 29/2022 and as such, these new Bylaws are now in effect
- in mid-August, the WWMC submitted an application to become a registered charity to the Canada Revenue Agency (CRA); the application is currently being reviewed by the CRA.

The following initiatives undertaken by WWMC during the last couple of months are directly related to advancing the four overarching goals of the [Wabamun Watershed Management Plan \(2- page summary\)](#). The overarching goals are—good water quality, healthy aquatic ecosystems and biodiversity, wise land use, and engaged stewardship.

The WWMC

1. Helped the Alberta Lake Management Society (ALMS) conduct its 2022 [LakeWatch](#) Water Sampling of Wabamun Lake. The water sampling events this summer provided an opportunity for the WWMC to invite collaborative partners to join us and gain knowledge about the lake and watershed, as well as to learn more about lake water sampling. Special thanks to Kurstyn Cappis (ALMS LakeWatch Technician), and Stan Franklin and Neil Fleming of the WWMC for their ongoing commitment to executing the LakeWatch program. Also, thank you to all who generously provided their boats to complete the water sampling work (including Stan F, Neil F, Jim McCoy, and Sunshine Bay Yacht Club).
2. In collaboration with TransAlta, further engaged Dr. David Chanasyk (hydrology, soils and reclamation expert) to undertake an independent review of the hydrological components and features of the Highvale Mine Reclamation as well as enhanced understanding of the Reclaimed Ash Project impact on the watershed.
3. Engaged with TransAlta to obtain updates about the repair and operation of the Sundance Water Treatment Plant.
4. Participated in the Parkland County Whitewood Sands—Riparian Restoration workshop (see p. 4).



Kurstyn Cappis of ALMS sampling the fauna in the water during the September water-sampling trip.

...2

5. Participated with Alberta Environment and Parks (AEP) to eradicate purple loosestrife (an aquatic invasive species) on the lakeshore at the south end of the Summer Village of Seba Beach (see p. 3).
6. Endorsed the [Decibel Coalition](#) and their concerns for noise on lakes.
7. Attended the Ridge Water Resort September 15th open house—the WWMC awaits additional information specific to a potential application(s) to Parkland County.
8. Engaged with Parkland County to obtain updates related to the Sundance/South Shore Boat Launch.
9. Hosted several watershed education outreach events, including:
 - a pop-up aquatic invasive species inspection (with canine unit) at the Wabamun Boat Launch in July, and
 - information booths in August at the Wabamun Lake Provincial Park and at the Seba Beach Senior's Centre 'Living Well in Your Community' event.
10. Initiated a process to develop a WWMC Land / Indigenous Peoples Acknowledgement statement and to further WWMC engagement with Indigenous communities.

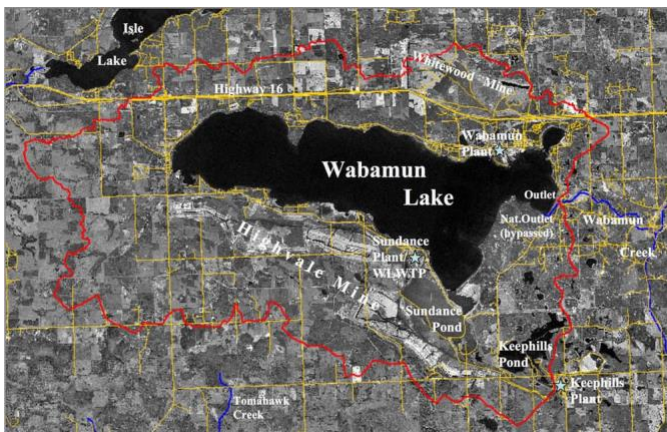
Within navigating the post-COVID new normal (be cautious, the virus continues to circulate), it has been a privilege for myself and fellow WWMC board members to interact this summer/fall with stakeholders and collaborative partners (municipal Councillors, North Saskatchewan Watershed Alliance [NSWA], ALMS, industry, community members and lake visitors) **in-person** at the various aforementioned events. There is an important reciprocal exchange of information when we get out to chat in person—we are always open to learning and hearing from all the lake and watershed community.

I wish to conclude with a message of immense gratitude to all the WWMC Board of Directors and representatives for the knowledge/expertise and sustained efforts you always bring to the work of the WWMC.

Water Level Update

by Neil Fleming

Because this summer's warm and dry weather further lowered the lake water level, it might be time to revisit what factors contribute to that level. In the Summer edition of *Lakescape*, I discussed the purpose and status of the TransAlta water treatment plant (WTP). We are happy to report that the WTP has been back in operation for over a month now and will continue to operate until the water reaching the lake from the Highvale Mine site is restored to pre-disturbance levels, possibly as late as 2046 or longer. While not an insignificant amount of water, the output from the WTP is a minor contributor to water level and is only designed to mimic what would have naturally flowed to the lake had the mine not existed. So, when operating as designed, the net effect of the WTP is actually zero.



What many people don't realize is that Wabamun Lake is classified as a "Prairie Headwaters Lake", meaning that unlike many BC lakes which are basically widening of river basins, the only water that flows into Wabamun is from the precipitation that falls on its immediate watershed, (outlined in red on the watershed map). Except for some ground water inflow, there are no tributaries from outside the watershed feeding the lake. As a result, water turnover in the lake can take up to 100 years, which is why it is critical that we minimize all nutrients and pollutants entering the lake. Someone said the other day, that if you peed in the lake as a kid, it is probably still in there!

The water level continues to be well below the level of the weir resulting in no outflow from the lake occurring for over a year now. In dry periods, like we are currently experiencing, evaporation results in water loss and greater nutrient concentrations which contribute to increased aquatic vegetative growth and algae blooms. The cyclical nature of water level is clearly displayed by the graph on the [Water Level page of our website](#) and emphasised by the fact that 2 years ago, many were complaining that the lake was too high!

Another noted concern is the prevalence of fish kills resulting from what is known as the "squeeze effect". Whitefish are extremely sensitive to warm temperatures and low oxygen levels. When the lake warms, the fish descend to lower levels where they perish from a lack of oxygen.

Clearly the lake is at a tipping point so it is critical that any new development must not add to its already stressed state and existing property owners must do their bit to reduce nutrient loading by stopping the use of fertilizers and herbicides, ensuring their wastewater does not enter the water table and restoring their shorelines to a natural state. Any measures which reduce the nutrient load will help to preserve the lake we all treasure so much.

For more information on what the WWMC is doing, please review the [Wabamun Watershed Management Plan](#) which we hope will act as a template for future development in the watershed.

Alberta Lake Management Society Annual Conference

On September 28 and 29, WWMC board members Stan Franklin and Sue Styles attended the ALMS conference in St. Albert, AB. The conference presentations included a variety of topics—low impact development, development of Lois Hole Provincial Park, updated monitoring of fecal bacteria, environmental information management, cyanobacteria in an urban lake and Indigenous awareness and engagement. Sue gave a presentation on the Wabamun Watershed Management Plan with a focus on the importance of strong leadership and collaborative partnerships in both the development and the implementation of the Plan. The approximately 100 attendees were from other Alberta watershed groups, Alberta Environment and Parks, provincial and municipal governments, and water quality and monitoring experts and researchers. Thank you to ALMS for providing this great local opportunity to learn and to network with people on matters related to our lake and watershed.

ALMS Volunteer(s) of the Year

Each year at their annual conference, ALMS announces their Volunteer of the Year Award and posts on their [Facebook page](#). This year they announced:

“We are so excited to announce this year's Volunteer(s) of the Year: from the Wabamun Watershed Management Council, Sue Styles, Stan Franklin, and Neil Fleming!

“These folks have shown outstanding dedication and enthusiasm in ALMS' programs and projects, and we thank them for all of their contributions!”

Eradication of Purple Loosestrife Timeline of a 2022 Event

This timeline briefly describes the eradication of an established purple loosestrife stand on the Wabamun Lake shore in the small bay at the south end of the Summer Village of Seba Beach. As the experts involved stated—this current eradication example is how the system should (and did) work.

[Purple loosestrife](#) is an aquatic invasive plant (Status: Prohibited). Its particular impact is as follows: “Overcrowds native plants and reduces wetland biodiversity. Encroachment in wetland habitat can alter wetland hydrology, disrupt waterflow, and eliminate open-water space needed by migratory waterfowl.” ([Aquatic invasive species pocket guide \[large PDF\]](#))

Aug. 17/2022—a knowledgeable and concerned local citizen provided information to the WWMC that purple loosestrife was at the above-described location—she astutely noticed the plant when boating along this lakeshore area.

Sept. 11—identification of purple loosestrife further confirmed by WWMC with on-site observation by rowboat

Sept. 12—report of this purple loosestrife was entered into [EDDMapS](#) (Early Detection and Distribution Mapping System)



An earlier invasion of purple loosestrife, east of Fallis, removed by AEP.



Nicole Kimmel (AEP) digging out purple loosestrife

Sept. 13—EDDMapS reviewer verified purple loosestrife and forwarded EDDMapS report to persons responsible for invasive species at Parkland County ([James Leskiw jleskiw@parklandcounty.com](mailto:jleskiw@parklandcounty.com)) and Alberta Environment and Parks (AEP) (Nicole Kimmel Nicole.Kimmel@gov.ab.ca).

Sept. 20—Nicole Kimmel (AEP Aquatic Invasive Species specialist) connected with the WWMC to inform of a scheduled day for eradication.

Oct. 3—Nicole Kimmel and Michaela Seal (AEP technician) completed the eradication of the well-established purple loosestrife plant and several smaller individual purple loosestrife plants in the immediate area. To begin the eradication, first the flowers/seeds were snipped from the plants and bagged so as to minimize spread by seed. A shovel was then used to dig deeply all around the base/root of the plant. The intact root ball was bagged and removed from the site.

Going forward, the plan is to inform nearby residents (they were not home on removal day) and request that they monitor/act as watchdogs for evidence of further purple loosestrife in the area. AEP will do additional plant surveillance of the area in summer 2023. All boaters, rowers, paddle boarders, etc. are also encouraged to monitor this area (all areas) and report sightings of any aquatic invasive plants to [EDDMapS](#) and to info@wwmc.ca "Private citizens and government ministries all have a role in controlling aquatic invasive species in Alberta" ([Government of Alberta](#), 2022).

Whitewood Sands Shoreline Restoration

Restoring shoreline riparian function is a priority focus area of the [Wabamun Watershed Management Plan](#) (see p. 5 of full report). A 2021 Wabamun Lake Riparian Assessment (2022-NSWA Report-Riparian Health of Wabamun Lake, [Studies & Reports page](#)) indicated 46.5% of Wabamun Lake's riparian area was highly intact (healthy), and 28.7% was considered very low intactness (highly impaired).

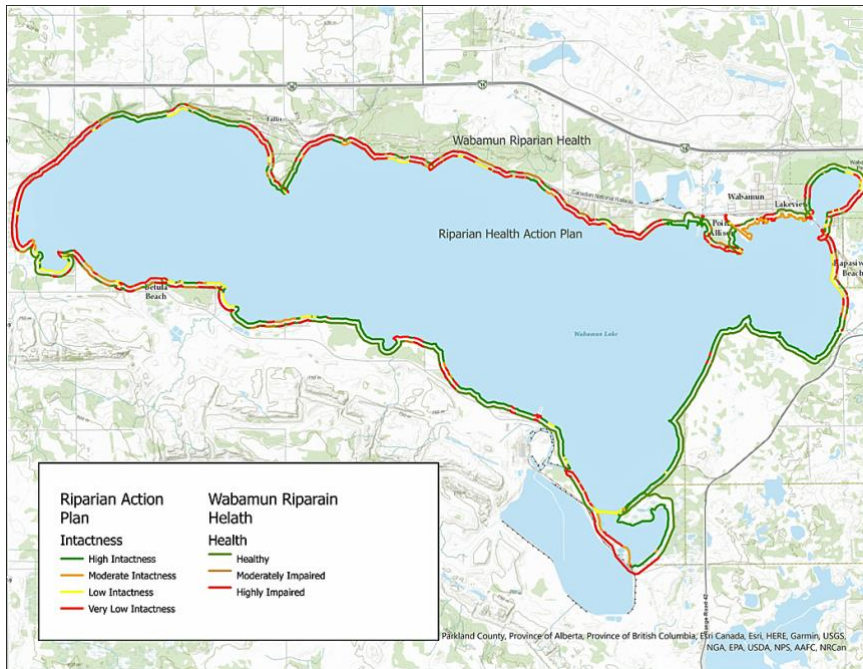
Experts suggest 65% of highly intact riparian area is needed to maintain the health of lakes for future generations (NSWA,2022). With this, it becomes clearer that a collective effort is needed to restore riparian areas on Wabamun Lake and we should aim at minimum to restore 20% of the highly impaired riparian area around our lake.

Parkland County, with local community input, is currently undertaking a [Whitewood Sands riparian/shoreline restoration project](#) (@south end Sunset Avenue) on the north shore of Wabamun Lake. At this location, there are eroding banks and unstable slopes along the Wabamun Lake shoreline.

Parkland County held an information session in June to engage the community and to describe soil bioengineering techniques that would be used in this project. On October 1st, an on-site riparian restoration workshop was held.

A small, but mighty group of people (from Whitewood Sands, Osprey Bay, Seba Beach, Betula Beach, Camp Yowochas) interested in 'learning by doing' riparian restoration, participated in the Whitewood Sands Riparian Restoration workshop. This workshop was hosted by Parkland County and led by environmental scientist/bioengineering expert Kristen Andersen (Associated Environmental). The groups' work on this day focused on building a wattle fence as one part of the overall restoration project for this area. A drawing and detailed description of the entire restoration plan for this site may be found [here](#). The group built the wattle fence with live dormant native balsam poplar and willow vertical and horizontal stakes harvested earlier on this day. The wattle fence was built on a steeply eroding lakeshore bank. Using this soil bioengineering technique, it is expected the vertical and horizontal stakes will leaf out in the spring and develop a strong root system to stabilize the slope and help to minimize soil erosion at this site.





Parkland County plans to complete additional soil bioengineering restoration work at this Whitewood Sands location including live toe staking of the wattle fence, dense live staking of the lakeshore bank on the other side of the access road as well as a live silt fence to be built in a perpendicular fashion in the swale upland of the lakeshore (see [drawing](#)).

WWMC will share updates on the Whitewood Sands riparian restoration project at various time intervals in the future. If you are interested in undertaking a riparian restoration project, Parkland County may assist with information, required permits, potential access to harvesting material and project funding. Contact Krista Quesnel (Manager, Community Sustainability) krista.quesnel@parklandcounty.com.

Map of Wabamun Lake showing the two different riparian assessment results as color-coded segments around the shoreline. The outermost line represents the 2014 Health of Wabamun Lake assessment, and the inner line represents the 2021 Riparian Health Action Plan assessment (both reports are available in the [Studies & Reports](#) page). Color meanings are provided within the legend.

Using Curlex Blocks

Speaking of repairing shoreline, WWMC Director Denny Thomas recently undertook a project to protect his shoreline at Kapasiwin from erosion, using [Curlex Block technology](#). The blocks are made of biodegradable fibres and wrap that provide a growing medium for the planting of native vegetation. The blocks protect the shoreline while a root mass gets established.



The eroding shoreline at the Thomas property in July 2020



Curlex blocks installed 2022, planting in spring 2023

Reminder of WWMC AGM – October 19, 2022 @ 7:00 pm.

The AGM will be a hybrid this year, meeting both in-person and virtual (Zoom). A Final Notice of the AGM was sent to all members, including the access options. If you are a member and did not receive a notice, or you want to become a member, contact info@wwmc.ca.

2nd Notice re: WWMC 2022 Fundraising campaign

Sue Styles and Michelle Foster, Fundraising Committee

The [Wabamun Watershed Management Council](#) (WWMC) 2022 fundraising campaign is underway. The WWMC would appreciate your donation/sponsorship support and partnership in our efforts to 'Keep Wabamun Lake Clean and Clear'. If you have already given to this year's campaign, we thank you for supporting WWMC efforts to protect our lake and watershed. If not, once again we ask you to consider making a 2022 contribution to WWMC.

[Our sponsorship letter](#) contains information about how your contributions will be used and how you may process your WWMC contribution.

Thank you in advance for your consideration and support of WWMC initiatives.

Kind regards,
Sue and Michelle

Lake Tours

This summer, the WWMC helped with tours of the lake and watershed to ensure various decision makers are well informed about what's happening on the lake.



Left Photo: Parkland County Councillors Phyllis Kobasiuk (l) and Kristina Kowalski (r) with Stan Franklin (WWMC).

Right Photo: Watershed Management Plan Steering Committee Field Trip—(left to right) Krista Quesnel, Parkland County; Sue Styles, WWMC; Arin MacFarlane-Dyer, AEP; Brad Peter, ALMS; Kelsie Norton, NSWA; Kristina Kowalski, Parkland County.



Donations

The WWMC gratefully thanks the following people who have donated to the WWMC to continue our work protecting the health of Wabamun Lake: Kelly and Mary Aldridge, Margaret Bakker, Todd Baldwin, Rob Cowley, Sandy Drummond, Carol and Keith Epton, Neil Fleming, Colleen and David Judge, Kobylko Family, Doris Kent and John McIvor, Don Meredith, Julia and Tony Nelson, Cliff Richard, Robarts Family, Bill and Kate Russell, Denise and Bernie Wade.

Corporate Members

The WWMC thanks the following businesses, governments and organizations for joining the WWMC as corporate members and helping the council achieve its goals. Go to [Get Involved](#) for more information about Corporate Membership.

Gold Members



Wabamun



Silver Members



Bronze Members

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