

Hello friends of Muriel Lake:

Spring is finally here and it seems like it is a good spring for Muriel Lake! Spring runoff has been strong, and the lake level is up. Last week the level (as measured by the government monitor near Gurneyville) reached 556.0 meters above sea level. The lake hasn't been at this level since 2008! It isn't up much, but it is not down. Hopefully the trend continues.

Below you will find news on upcoming MLBMS events and information on what your society has been up too. There's lots to tell you about. Of course, if you want to hear more just contact us, attend one of our events or better yet join our executive for one of our meetings, in person or electronically (our meetings are accessible by Skype etc.) Mark these dates in your calendar: **Saturday May 18 at 10AM** (Highway cleanup) and **Saturday July 20** at 3 PM (Annual General Meeting).

Some big news is that last year we partnered with some fishing enthusiasts to form the Muriel Lake Restoration Team (MLRT), with a focus to restore Muriel Lake to support recreational fishing again. So far we have several organizations involved, including Alberta Fish & Game Zone 5, Beaver River Fish & Game, Sherwood Park Fish & Game and St. Paul Fish & Game, our local watershed stewards LICA, with financial support pledged from MLBMS and several of these organizations. MLRT has been in contact with many other stakeholders, with interest from local industry (thanks CNRL for your donation!) and Kehewin Cree Nation, and we are corresponding with municipal and Alberta governments. Restoring Muriel Lake to support fish again likely requires increasing water level as a first step, and may involve aeration or stocking.

Oxygen Monitoring

With an interest in fish habitat, some MLBMS volunteers decided we should check just how bad the lake is now. With the lower water level in the lake, one of the key factors that prevent fish from living in the lake is the oxygen levels in the water. Oxygen levels are lowest in winter, so 4 times this winter our volunteers bundled up and took an oxygen monitor out on the lake. Thanks to LICA, from whom we borrowed the measurement equipment. Measured oxygen levels were quite low - probably too low for fish to survive. We need more water in the lake!

Last summer we again measured flow in the south creek, measured its water quality and checked on aquatic species living in the creek bed. We hope to do this again this year, and add sampling for pollutants like phosphates and nitrates.

This spring some dead fish have been observed in the creek from Garnier Lake, and we are investigating if this is related to winterkill or something else.

Highway Cleanup:

Our next big fundraising event is Saturday May 18 at 10AM. Again this year we will be picking up trash along Gurneyville Road on the west side of the lake near Gurneyville. Please come out and help - we need more people involved. "Many hands make light work" You can bring your kids - this is a positive character-building activity! You will be teamed up and assigned a section of highway to walk along and pick up any trash you see. There is a pre-job tailgate meeting with the program supervisor from the MD at 10AM on Elk Road (at #56). Dress for the weather, leather gloves recommended, no open toe shoes, a visibility vest and garbage bags are provided. Should only take 1 to 1.5 hours. Millie will once again treat us to a wonderful lunch after the cleanup so stop in at #44 Elk Rd for good food and company. Thanks again Millie. **Please join us!**

Website and Facebook:

We are working on the website and hope to add some new material soon. Check it out <http://www.savemuriellake.com/> The DONATE NOW button on the website works - try it out! Tax receipts available.

We have over 700 followers on our Facebook page and our recent post on this spring's water level "went viral" -Facebook's statistics say it reached over 11,500 people and had 5,600

engagements (i.e. the post was clicked on 5,600 times)! So either a lot of people care about Muriel Lake, or one of you can't believe it and keeps revisiting the post...

Digital elevation / Drainage / Surface Water Flow model

We are currently seeking funding to hire a consultant to build a drainage model of the entire basin based on Lidar data. The model will identify locations where drainage is impeded, and suggest remedial steps. Right now very little of the precipitation falling in the Muriel Lake basin reaches the lake. Natural (beaver dams) and man-made disruptions to surface water flow (culverts, roads, drainage changes, land use changes) are holding back the flow of water to the lake. By correcting these we can help the water level rise even without more rain! Hopefully our grant requests are approved but even if they are our society will need to contribute several thousand dollars to the project. If you like the idea of a science based study that would quantify the effects of drainage interruptions please think about donating to support the study. We think about 10% of the loss of level is due to this cause. Having a professional study documenting things will help us get these problems acted on.

Last fall we found a location where a beaver dam is blocking a culvert on an access road to a well site. The well site owner is out of business so the well (and road) are now the responsibility of the Orphan Well Association. We have asked them to address this and hope they will act soon. Stay tuned.

Beaver Deceiver Project:

Our beaver deceiver project has ended, with beaver deceivers installed in 4 locations in the beaver dams on the creek at Beaumieux. Beaver deceivers are basically pipes laid through the dam in a way that the beaver doesn't notice. The pipes are set at a height such that the beaver still has enough pond to live in, but prevents them from raising their dams and lets any additional water flow through the pipe to the lake. The work was done with a grant from the Environmental Damages Fund administered by Environment & Climate Change Canada, and installations were supervised by a professional biologist/beaver expert. Beaver dams are said to be an example of natural factors which can reduce surface water flow. We are still following up on how these installations work and could install more, so if you see beavers causing problems in the area let us know.

Bottle & Can Recycling program:

We desperately need a program manager for our bottle and can recycling project. This is an important fund raising program for us, raising about \$1500 per year. Friends of Muriel Lake drop off their recyclable bottles and cans at the south side waste transfer station, and we just need someone to pick them up and store them. We have an arrangement with a bottle recycling company who will come and pick them up when enough bottles have been collected. So you do need a secure shed or place to store them. No sorting is required, just transport them from the waste transfer station. Neighbours or other friends of Muriel Lake could probably fill in occasionally if you are away or busy. Without a volunteer to take this over we will have to cancel the program. We could also use someone on the east side to collect bottles from that area. We would like to thank Deanna who took care of this for many years before deciding to pass the torch this year.

Annual General Meeting Saturday July 20 at 3PM, Potluck Dinner at 5PM

This year we have scheduled the AGM for a Saturday afternoon, with a potluck dinner to follow. Same place - Bonnyville Fish & Game building. We changed the time from Sunday mornings as many people said that time wasn't convenient. Hope you can make this time! Join us to hear more details about the lake and what your society has been up to. Bring a dish and join us for dinner after the meeting. All are invited and this year you won't be going home hungry! We will also elect our board of directors for the next two years, and there is room for you to join.

Groundwater Monitoring:

We are still monitoring the water level and pressure in two aquifers that lie below Muriel Lake. The water pressure is still relatively high in these aquifers - higher than the level of the

lake, so groundwater is flowing up into the lake - the lake is not draining into the aquifers. Unfortunately we don't know what the aquifers were like many years ago, before all the seismic and fracking activity in the area occurred, so we may be getting much less groundwater than we used to. This information is vital for scientists to evaluate what effect new industrial wells into these aquifers would have. Thanks again to Baytex who covered the cost of the monitors back in 2015. We have to move the monitors to different wells from time to time, so we are looking for new locations to install them. The monitor is easy to install/remove, just sensors on the end of a line we drop down the well. If you have a well you are not using and would let us use it, please let us know and we will check your well out.

This email is from the Muriel Lake Basin Management Society. You are on our membership list as someone who is concerned about the environmental health of this lake and has given us your email address. If you don't want to receive emails from us in future just reply and we will take you off our email list.

Hope to see you soon - at the lake or at an MLBMS event. And we are always looking for people who want to get more involved!

Muriel Lake Basin Management Society