

Hi friend of Muriel Lake:

Another good spring for Muriel Lake! Once again the lake level has jumped this year with the spring runoff. Lake level is currently around 556.1 meters above sea level, up from about 555.9 last year. The level has come up slightly each of the last three years, by about 0.1 meters (100 cm or 4 inches) each year. Here is the link to the government website where you can check the latest change:

[https://wateroffice.ec.gc.ca/google\\_map/google\\_map\\_e.html?map\\_type=real\\_time&search\\_type=province&province=AB](https://wateroffice.ec.gc.ca/google_map/google_map_e.html?map_type=real_time&search_type=province&province=AB)

Zoom in on the map or look for station 06AC007.

Hopefully the trend continues.

Below you will find news on upcoming MLBMS events and information on what your society has been up to. 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) Mark this date in your calendar: **Saturday June 20 at 9AM** (Highway cleanup)

### **Highway Cleanup:**

Our next big fundraising event is coming up soon - Saturday June 20. Again this year we will be picking up trash along Gurneyville Road on the west side of the lake. 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 safety meeting with the program supervisor from the MD at 9:00 AM on Elk Road (at #54). Dress for the weather, bring your own gloves, no open toe shoes, a visibility vest and garbage bags are provided. Should only take 1 to 1.5 hours. **Please join us!**

### **Bottle & Can Recycling program:**

This is another important fund raising program for us. Friends of Muriel Lake can drop off their recyclable bottles and cans at either the south side waste transfer station or the Dove Center in Bonnyville. All bottles must be bagged. If you are using the Dove center there is no need to wait for bottles to be counted, just tell them the bottles are for donation, and label the bag "Donation Muriel Lake". There are new Covid-19 procedures to be aware of at the Dove Center.

### **Oxygen Monitoring**

This past winter, for the second consecutive year some MLBMS volunteers completed oxygen level monitoring of the lake. With the low water level in the lake, low oxygen levels are one of the key factors that prevent fish from living in the lake. 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 still low but were higher than last year - an encouraging trend. We need more water in the lake! MLBMS is working

with the Fish Habitat Restoration Project Committee, which coordinated oxygen monitoring on a number of lakes in northeast and central Alberta. 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.

### **Digital elevation / Drainage / Surface Water Flow model**

Last year we were successful in getting a grant from Alberta EcoTrust to fund this project. So far the technical consultant we hired has constructed a digital drainage model of the entire Muriel Lake drainage basin using Lidar data. A stream profile has been generated for each of the creeks which flow into Muriel Lake. We are currently looking into each of the sites where the creek bed appears to rise - potential obstructions to the flow of water to the lake. The model is also being used to evaluate locations where we see standing water, and identify where drainage could be improved. 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) may be holding back the flow of water to the lake. By correcting these we can help the water level rise even without more rain!

### **Website and Facebook:**

We have added some new material on the website. 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.

### **Beaver Deceiver Project:**

Our original beaver deceiver project has ended, but we continue to look for opportunities to use our know-how to solve beaver problems. In our project we installed beaver deceivers 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. Some of these dams washed out due to the heavy spring runoff last year. 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.

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. They have cleared the culvert, and have given us permission to install an exclusion fence to prevent the beavers from rebuilding. We are also looking at one more location where a local resident has problems with beavers. No date has been set yet, but when we are ready to proceed

we will be looking for volunteers to help us install exclusion fencing or beaver deceivers.

### **Groundwater Monitoring:**

We are still monitoring the water level and pressure in two groundwater 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 - but we are getting flow up into the lake. 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. We currently do not have a home for one of our monitors. 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.

### **Annual General Meeting**

Due to the public health issues related to Covid-19, we have not yet scheduled our Annual General Meeting. We will be scheduling it later in the year, as required by the Society's Act. In past we have held it at the Bonnyville Fish&Game building, but we are considering somewhere closer to get better attendance. we are also thinking about an on-line meeting, but that has technical challenges for us. Stay tuned for an invitation to the AGM. Everyone is invited, and we will update you on our projects and the latest news about the lake.

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. The email is addressed to your elected Board of Directors, other members email addresses are blind cc'd. 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