

Summer Newsletter 2018



LICA
ENVIRONMENTAL STEWARDS



AIRSHED

VISION: The environment in the LICA region is ecologically healthy & sustainable.

Air Quality Health Index

With the fire burning all across British Columbia, we had an eventful summer concerning air quality. It is hard to ignore the incoming smoke from the west with the hazy orange sky making it look like the end of the world. Not only could you see the impact of the smoke you could feel the effects on your lungs after a couple of days.

LICA has two permanent air monitoring stations, Cold Lake and St. Lina, which continuously monitors the air quality. Normally these areas sit comfortably in the 0-3 low-risk range on the Air Quality Health Index (AQHI) scale, but by mid-August, it was not unusual to be in the 7-10 high-risk range.

It is a concern to be outdoors when the AQHI is in the high-risk range because of fine pieces of debris in the smoke, called particulate matter. Forest fires are a major source of fine particulate matter and can have a major impact on air quality, visibility and

human health. Minor smoke conditions do not typically cause health concerns in healthy individuals. However, at high concentrations, like we had this summer, particulate matter can cause irritation of the eyes, throat and shortness of breath.

Luckily for us the monitoring results from Cold Lake & St. Lina are constantly being shared on our website and with Environment Canada to make sure the public remains aware and safe.

LICA has an additional monitoring station in Maskwa, focusing on particular matter during the forest fire season for all of those who work in the area. To learn more about the current air quality and about LICA's airshed visit our website www.lica.ca/airshed



In August, LICA test-deployed one of the four meteorology stations for the first phase of LICA's Beaver River Valley air monitoring study. The first phase of the study involves collecting meteorology data (wind speed, wind direction, temperature, relative humidity) to determine the frequency and conditions under which air pollutants may be transported into and along the Valley.

Anecdotal evidence from the community suggests that air emissions from different sources are degrading air quality in the Beaver River Valley. There is concern that atmospheric emissions may be draining into the valley, accumulating, and then flowing down-valley.

If necessary, phase two will be achieved by supplementing the meteorology instrumentation with appropriate air quality instrumentation to simultaneously measure meteorology and air pollutants of concern. LICA expects this project to last 2-4 years.



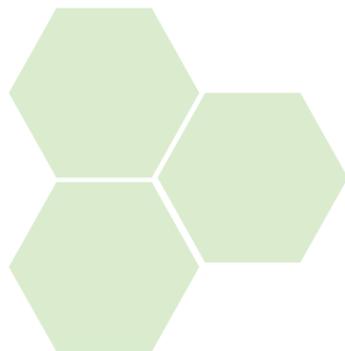
Beaver River Valley

To see a video of our new monitoring station visit our Facebook Page @infoLICAonline

Jessie Lake Shoreline Cleanup & Weed Pull

Thank you to everyone who came out to help with our Jessie Lake Shoreline Clean-up & Weed Pull this past July. Industry, Town and Community worked hard picking up garbage and pulling weeds (let's be honest it was 99% Canadian Thistle) to help prepare Jessie Lake for riparian restoration.

A big shout out to Town of Bonnyville, ATCO Electric, B&R Eckel's Transport Ltd., & Community Members you are all awesome Environmental Stewards!



EVENTS

This workshop had speakers from the Government of Alberta and other professions to present on aquatic invasive species & whirling disease. Tanya Rushcall from the Government of Alberta gave a presentation about the many different types of aquatic invasive species in Alberta. She spoke on why preventing the spread of invasive species is the best way to keep our watershed healthy and how they are managed.

Kellie Nichiporik from Lakeland Agricultural Research Association presented on invasive plants, how to identify them and best management practices. Emily Drystek from the Government of Alberta spoke on Whirling Disease which is now present in our neighbouring watershed, the North Saskatchewan.

She covered how whirling disease spreads to different water bodies via humans and explained the complex life cycle of whirling disease. With greater knowledge on the subject it is clear to see how preventative measures are the best way to protect our watershed.

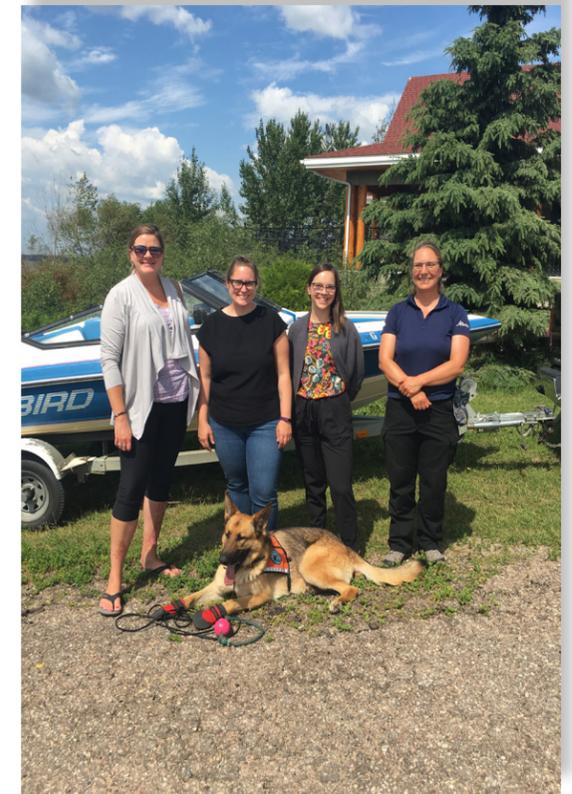
To finish off the day we had Hannah McKenzie from the K-9 Conservation Unit demonstrated with her partner, Seuss, on how they sniff out invasive zebra and quagga mussels on boats to protect Alberta's watersheds.

Thank you to all of our presenters for teaching us about aquatic invasive species in Alberta and educating citizens is the best line of defence in stopping the spread of invasive species.

Invasive Species Workshop

To see a video of Sues in action visit our Facebook Page @infoLICAonline

Left to Right: Kellie Nichipork, Tanya Rushcall, Emily Drystek, Hannah McKenzie, & Sues



Youth & Community Events

This summer was filled with great community events and community programs across the LICA region. This summer LICA has had great success with presenting to libraries in the area to talk about our Airshed and how our actions affect our air quality and what we can do to help improve it.

LICA was thrilled to once again take part in the Mad About Science program around Lac La Biche County. LICA also had the pleasure of attending summer camps and talking all about our watershed. Along with Canada Day, Aqua Days, Alberta Park Day, and Bio Blitz, LICA joined the Crane Lake Eco Days to help children explore and learn about the different kinds of bugs living in our water!

LICA presents for schools and youth programs in our area throughout the entire year. If you wish to invite LICA to an event or program please contact outreach@lica.ca



INVITE US TO YOUR NEXT EVENT
CONTACT US AT WWW.LICA.CA



School Programs

LICA—*Environmental Stewards* teaches students about our Airshed & Watershed and all about those who live in it. We give students an inside look on how we use the environment and how we can help protect it. Each module is designed to provide hands-on learning while promoting environmental awareness. Each program links specifically to the Alberta curriculum.

These FREE programs are available year round!

Contact outreach@lica.ca or call (587) 201-4345 to book your classroom presentation. To learn more about LICA's programs visit www.lica.ca

Kindergarten-Grade 1: Wildlife Discovery—Students are introduced to animals who live within our watershed and what they need to live in the wild. This program includes an interactive hands-on activity with skulls and pelts.

Grade 2-3: Creepy Crawlies—Students will learn about different types of creepy crawlies and how their adaptations help them survive in the wilderness, learning about the different types of life cycles in the insect world. Students will have the chance to interact with live red-wiggler worms and learn why they are important to our environment. LICA can provide worms to build a vermicompost for the classroom upon request (*while supplies last*).

Grade 4: Waste Water—Students learn about the Beaver River Watershed and how we deal with our waste water. Students learn what waste water is, where it ends up and how we create waste water through an interactive watershed in a bowl activity.

Grade 4: Boreal Forest—Students are introduced to animals within the boreal forest. They are given a presentation on the importance of the boreal forest for wildlife and water quality, teaching students about cool adaptations of species in the boreal forest. It also includes an interactive hands-on portion involving skulls and pelts.

Grade 4-5: Airshed—Students will learn all about air. What makes up air and what affects air. Learning about sources and effects of greenhouse gases. Student will get to collect real time air quality data with our Airbeam.

Grade 5: Wetland Ecosystems—Students are given a presentation on wetland ecosystems and their role and importance in our ecosystem. Students watch a wetland in a box demonstration and make a food web with an emphasis on how wetlands function.

Grade 6: Trees and Forests—Students learn about the importance of trees and forests in relation to our watershed and to local animal species with a hands-on activity with pelts and skulls. Students also have a chance to investigate and learn about tree cookies.

Grade 7-8: Ecosystems—Students learn about the boreal forest, local freshwater ecosystems, and human impacts affecting them. They learn about the importance of riparian areas and how ecosystems can change due to humans. The students will spend time testing the water quality of several different samples of water from local water bodies.

Grade 9: Biodiversity—Students learn about the different levels of biodiversity and the important role it plays using real world examples. Students will match up local animals to their pelts, skulls, tracks & scat by identifying adaptational features. Students will get to review what they learnt with a biodiversity game.

Grade 9-12: X-Stream Science—Stream Science is a citizen-science based educational program that gives participants a hands-on learning experience with their local stream by conducting real-world water quality monitoring. Scientific protocols will be used to collect aquatic benthic macro-invertebrates (water bugs), conduct water quality tests and collect site information for the analysis of their findings. LICA supplies all of the training, equipment and handouts needed for the program. Offered in early fall & late spring.

MISSION: LICA collects, shares, and acts upon credible data, traditional knowledge & information relevant to the environment. This will be achieved through scientific study, community engagement, & meaningful partnerships.

WATERSHED

Jessie Lake Restoration

ALMS

For the 11th year, LICA has been sampling ten lakes within the LICA region with the Alberta Lake Management Society (ALMS), LakeWatch Program. During the 2018 year, the following lakes have been sampled and the results will be analyzed and reported on this winter. Also, this is the first year LICA has funded ALMS to do summer sampling of Jessie Lake. It is too early to have the full results from the water sampling but our technician has commented that Jessie Lake has greater water clarity compared to Moose Lake. It will be very interesting to read the reports later this year to see this observation quantified. To read previous years' reports visit www.alms.ca/annual-lakewatch-summaries/



In conjunction with the Town of Bonnyville, LICA planted 5,200 seedlings along the riparian area of Jessie Lake. As part of the Jessie Lake Restoration program red osier dogwood, saskatoon and chokecherry seedlings were planted starting just past the memorial sign, and going all the way to the little causeway at the splash park.

The riparian area is a very important transitional ecotone between the water and the upland area. In addition to stabilizing the shoreline, riparian areas also trap sediments, build and maintain the banks of the lake, help filter and buffer the water, and maintain biodiversity. As well as, reduce the energy of water through overland flow.

The shoreline was prepared with our Jessie Lake Shoreline Clean-up & Weed Pull event and by trimming the tall grasses to allow the new seedlings to better establish themselves in their new environment.

The end goal for the restoration project is to improve the water and air quality for the Town of Bonnyville. It is theorized the algae blooms in Jessie Lake form the odour that comes from Jessie Lake in the summer, and we hope the restoration plan will have a positive effect.

We're trying to fix these long-term problems with long-term solutions of riparian restoration with woody vegetation.

- 1. MOOSE LAKE
- 2. BEAVER LAKE
- 3. CRANE LAKE
- 4. HILDA LAKE
- 5. JESSIE LAKE
- 6. LAUIRER LAKE
- 7. MINNIE LAKE
- 8. SKELETON LAKE NORTH
- 9. SKELETON LAKE SOUTH
- 10. VINCENT LAKE



VALUES: We connect stakeholders & promote community involvement. We provide timely, defensible & accessible data. We educate the community, advocating for environmental stewardship. We responsibly manage our resources to achieve our vision & mission.

Annual General Meeting

Join LICA for our 18th Annual General Meeting.

Elections will be held for the following seats: Community Director (1) and Non-Government Organization Director (1)

Starting at 6:00 pm with Hors d'oeuvres followed by a keynote speaker Darcy Shyry from Alberta Bat Community Program at 6:30 pm. We will move into our Board Elections at 7:00 pm with bylaw voting.

FREE memberships available in advance or at the meeting. Participants must hold a membership in order to vote.

Nominations for elected board seats can be submitted to the LICA office. Contact us for more information on sector endorsed seat requirements and / or the nomination process.

Ph: 780-812-2182
E: lica2@lica.ca



ANNUAL REPORT

Where to Get it:

LICA OFFICE
5107W - 50 St.
Bonnyville, AB
Office open
Mon - Thurs
8:30 a.m.
to 5 p.m.

ONLINE
Available for
electronic
download /
viewing at
www.lica.ca

LICA
ENVIRONMENTAL STEWARDS

2017 / 18
ANNUAL
REPORT

The 2017 / 2018 LICA Annual Report has just been released! Get your copy today and learn more about LICA's efforts in our region.

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UPCOMING

