



LICA
ENVIRONMENTAL STEWARDS

Fall 2020

Newsletter

Education & Outreach

Summer Camps

Ten modified X-Stream Science sessions were provided to multiple summer day camps at lakes, ponds, and other wetlands. As participation was from younger age groups than what the program is designed for and accommodating COVID-19 guidelines, a modified version was used to teach kids about bioindicators, benthic macroinvertebrates, healthy water bodies, and ecosystems. By observing samples of benthic macroinvertebrates summer camp kids had an up-close look into what's living below the surface and how we can use those bugs to learn more about the health of the water.



Classroom Presentations

LICA assured teachers that environmental classroom presentations and programs are still being offered to schools and have been adapted to accommodate COVID-19 restrictions. Both virtual and physical environmental presentations are available to schools in the region with over 15 already being delivered. To receive more information, email outreach@lica.ca.

Keep Our Lake Blue

The Keep Our Lake Blue Campaign at Moose Lake received a total of 12 online and 8 in-person registrations this summer. Due to the inability to share the materials door to door, there was a decrease in overall participation. Although there were fewer people registered to participate, the campaign was viewed online by more than 6000 people in the region. The summer of 2021 will be a more accurate indicator of how much the campaign is shaping lakefront property management.

Bonnyville Community Garden & Compost Volunteer Day

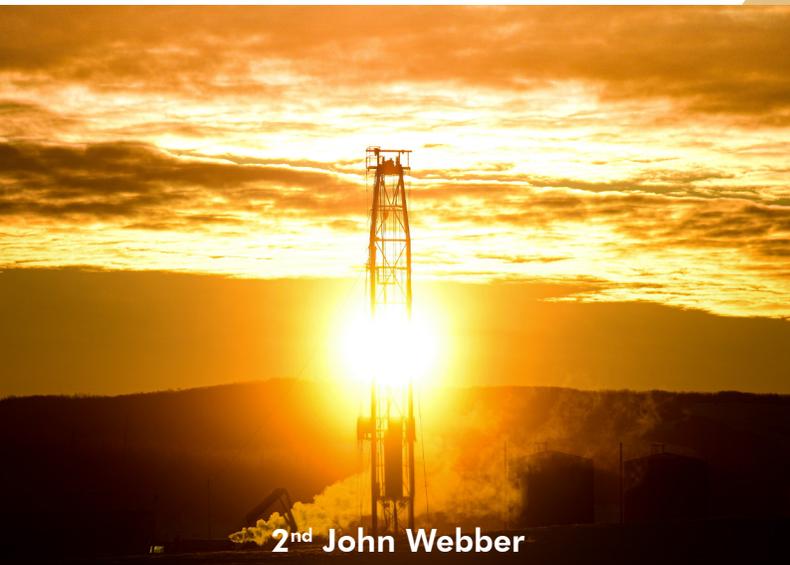
On September 25th, LICA hosted a volunteer day to begin the construction of the Bonnyville community garden and compost. There were over 30 volunteers who contributed to building the raised beds, spreading soil, and assembling the compost structures. With the overwhelming turnout of community members, work was completed in under two hours. LICA would like to especially thank Lakeland Co-op for donating lumber for the raised beds and Stephane, from GetRidOfIt Ltd., for donating a bobcat for moving soil.

This winter LICA will be hosting workshops to educate the public on topics such as composting, keeping seeds, environmentally-friendly gardening practices and other related subjects. The public can sign up to use one of the plots once registration for the garden opens before the spring growing season. For more information about the garden and compost or how to get involved, email outreach@lica.ca.

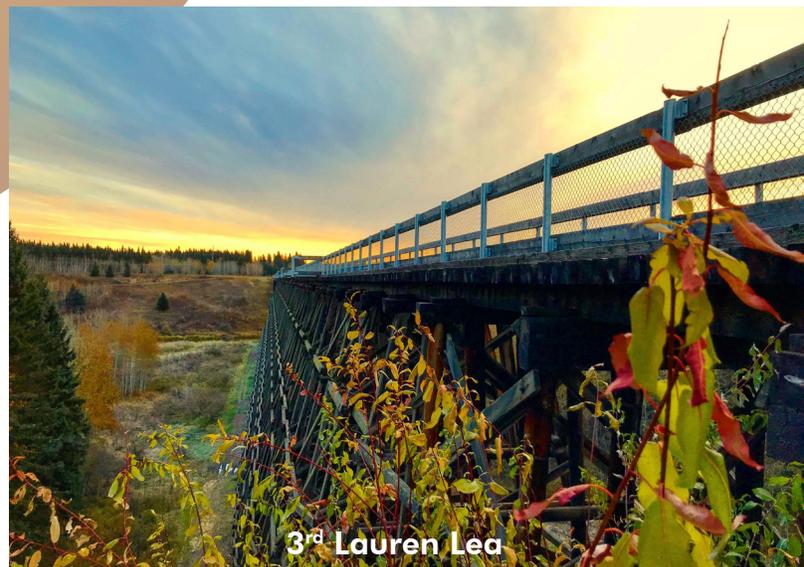


2020 Nature Photography Contest *Winners!*

Advanced



Beginner



Having a Beef with Fences

Fencing & Off-Site Watering System Initiative

Riparian areas are defined as the transitional zone between water and land, where the water-loving vegetation and soil conduct special functions that support surrounding ecosystems. Riparian areas quietly defend aquatic health and biodiversity from the clutches of droughts, floods, unwanted substances, and erosion, making them Watershed Ninjas!!! They are essential to watershed health, protection of the realm, and thus, must be safeguarded. Four main riparian management techniques include: streambank fencing, off-site watering of livestock, bank stabilization, and tree planting. In addition to the tree planting initiatives covered in the Spring Newsletter, LICA's streambank fencing and off-site watering initiative is now underway!

"Cattle are healthier when they keep their feet dry and have more pristine water sources, benefiting cattle welfare, product quality, and economic return."

Traditionally, cattle have frequented riparian areas to access water for consumption. However, allowing cattle access to riparian areas is an extremely damaging action on riparian health and has negative health implications for cattle and other species. Although cattle are large animals, their weight is only distributed on four cloven, or divided, hoofs placing extreme pressure on wet soil and vegetation in riparian areas. This force can cause bank erosion, loss of biodiversity and prevent normal riparian functions. Additionally, urine, fecal matter and sediment disposed in waterbodies as a result of cattle access decreases water quality for use by cattle, fish, humans, and other species. Cattle are healthier when they keep their feet dry and have more pristine water sources, benefiting cattle welfare, product quality, and economic return. Thus, restricting cattle access to waterbodies is essential for riparian, herd, and ecosystem health.



Having a Beef with Fences *Continued*

Preventing cattle access to riparian areas is only part of the equation, since cattle still require water. Off-site watering systems are practical tools to fill this need. Essentially, off-site watering systems use a water line, pump and trough to deliver water away from sensitive riparian areas. The watering systems can be mobile, which also facilitates rotational grazing and other preferable land management techniques.

LICA has partnered with a farmer North of La Corey to fence cattle out of the riparian area along the Jackfish Creek and provide an offsite watering system. LICA will be partnering with additional farmers in 2021 to conduct similar projects.



Help Guide Our Region's Future

A watershed is the area of land where all runoff from rain and snowmelt drain to a common source, which is the Beaver River for the majority of the LICA region. Watersheds are about more than just water, with watershed health involving many separate and connected parts.

A Healthy Watershed Supports...

Interdependent human, animal, and ecosystem (aquatic and terrestrial) health

Human health involves individual and community physical, mental and social well-being, including the ability to express one's culture.

Domestic and production animal health involves physical and psychological well-being that supports productivity, reproduction, and expressions of innate characteristics.

Wildlife health involves resiliency under changing environmental conditions and the ability to sustain their ecological, social and cultural roles.

Ecosystem health involves, the ability to maintain and improve organizational structure and function, resilience under stress, and to continuously provide quality ecosystem services.

Help Guide Our Region's Future *Continued*

As part of the Alberta Government's Water for Life strategy, LICA is currently developing an Integrated Watershed Management Plan for the Beaver River Watershed. This Plan will be a guidance document for use by landowners, governments, planners, Indigenous communities and all other stakeholders in the watershed. The document identifies overall goals for improving and/or maintaining watershed health, provides recommendations on how to reach those goals, and monitors and evaluates the effectiveness of plan implementation. This plan can influence how residents will live in and interact with the environment for years to come, for example, impacting land use planning, climate action, and economic development.

These are important issues for everyone, which is why your input is important to help make the Plan inclusive of residents' viewpoints, priorities and needs. LICA expects Plan development will take approximately three years to complete. During this time, LICA will have several opportunities for feedback and input on Plan development.



*Please be on
the lookout for
engagement sessions
in your area and
GET INVOLVED!*

Monitoring for the Potential Effects of Acid Deposition

Acid rain, or acid deposition, is a broad term that includes any form of precipitation with acidic components such as sulfuric or nitric acid. These acidifying substances may fall to the ground from the atmosphere in wet or dry forms. This can include rain, snow, fog, hail or even dust that is acidic. Forests, streams, and lakes may be negatively impacted by acid deposition. These impacts happen when soils cannot buffer the acid deposition by neutralizing the acidity in the water flowing through and over it.

In our region, there are known sources of acidifying substances such as industrial emissions of sulphur dioxide; there are also known areas of acid sensitive soils. LICA's long-term soil acidification monitoring began in 2010 program and is designed to detect changes in soil chemistry caused by acid deposition. The LICA program consists of three soil monitoring plots: in Moose

Lake Provincial Park, in Whitney Lakes Provincial Park, and in the Tucker Lake Forest reserve. Soil at all sampling locations is sandy; sandy soil types are the first to show a chemical response to acid deposition and therefore act as an early warning for potential changes in the ecosystem. The sites are also spatially distributed to relate changes in soil chemistry to variability in deposition of acidifying substances over our region.

In October 2020, scientists and LICA staff collected samples at the Tucker Lake soil monitoring location; laboratory analysis will be completed before the end of the calendar year. Interpretation and trending of data from these samples as well as those collected since 2010 will be included in a multi-year report that LICA expects to release in 2021.

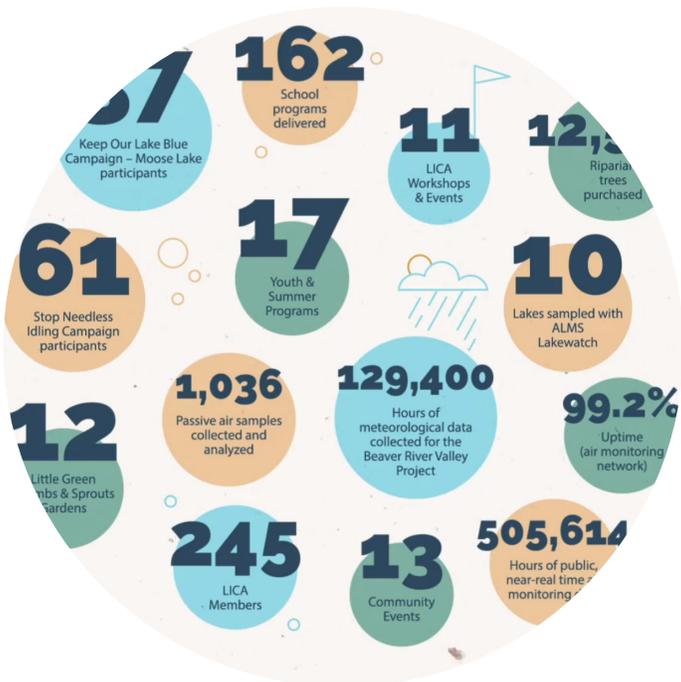


20 Years of Environmental Stewardship

LICA's 2020 Annual General Meeting

On Thursday, October 8th, LICA hosted its Annual General Meeting online and with a limited in-person gathering. Although this is LICA's 20th year of environmental stewardship in the region, it was a first for the online format. To accompany such a monumental year, LICA debuted a short, animated video highlighting recent accomplishments and directing people to learn more from the annual report.

LICA would like to thank the Board Members, community members, and staff who have contributed to caring for the region's ecological health since the inception of the organization. Click the screenshots below if you would like to watch the video or read the annual report.



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ENVIRONMENTAL STEWARDS

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