



2020  
Winter  
Newsletter



**LICA**  
ENVIRONMENTAL STEWARDS

# School Programs



The fall and spring are our busiest times for visiting classrooms and running X-Stream Science Programs. This fall, we visited 62 classrooms throughout the LICA region to teach students about the local watershed, 15 classrooms to teach them about the local airshed, and 9 classrooms to deliver the X-Stream Science Program. We were pleased to provide these programs at the following schools:

- École Saint Dominic Elementary School
- École des Beaux-Lacs
- Iron River School
- Cold Lake High School
- Aurora Middle School
- LeGoff School
- H.E. Bourgoin School
- Bonnyville Centralized High School
- Notre Dame High School
- Assumption Junior Senior High School
- Ashmont Elementary School
- Nelson Heights Middle School
- Duclos School
- Onchaminahos School
- École Notre Dame Elementary School
- Art Smith Aviation Academy
- Cold Lake Middle School
- Mallaig School
- J.F. Dion School
- Cold Lake Elementary School
- École Holy Cross Elementary School

# Little Green Thumbs &



# Sprouts

LICA is pleased to have expanded its Little Green Thumbs program to include gardens in six schools, in five different communities in the LICA region. In 2018, LICA started the program in two schools, and the program has grown since then. LICA hosted a teacher training session on Oct 26, 2019 for the four new teachers and has been busy delivering vermicomposting lessons in the classrooms where gardens have been installed. LICA's six gardens are now installed in the following schools and communities:

- École des Beaux-Lacs (Bonnyville)
- Ardmore School (Ardmore)
- Iron River School (Iron River)
- St. Dominic Elementary School (Cold Lake)
- Artsmith Aviation Academy (Cold Lake)
- J.F. Dion School (Fishing Lake)

LICA has expanded its gardening program to include Little Green Sprouts. Ten applications were received in the fall of 2019, and the following schools will receive gardens for this year's program:

1. Kikino Elementary
2. Light of Christ Catholic School
3. Dr. Bernard Brosseau School
4. Holy Cross Elementary
5. Notre Dame Elementary
6. Kehewin Community Education Centre



# LICA Events



## Annual General Meeting

On October 9, 2019 LICA held its 19th Annual General Meeting (AGM) with over 50 people in attendance. We greatly appreciated the participation of our committed returning members, and we were thrilled to have new members attend for the first time. After enjoying delicious hors d'oeuvres, members settled in for a quick overview of what LICA has been up to since our last AGM, followed by Board elections. This year there were two seats up for election. The seat of the forestry/trapping director went to Amanda Avery-Bibo. Our second seat for election was the community member seat, which went to Richard Bourgeois.

This year's Officers we elected by the Board as follows:

Chairperson: Andrea Woods  
Vice-Chairperson: Amanda Avery-Bibo  
Secretary-Treasurer: Tanya Hintz

Thank you to everyone who ran for elections and to those who support LICA throughout the year. Our organization would not be what it is today without the hard work of its members.



# Lac La Biche Vermicomposting Workshop

On October 23 LICA partnered with Lac La Biche County to deliver a vermicomposting workshop during Lac La Biche's Waste Reduction Week. Fifteen keen community members came out to build their own vermicomposting bins. Participants learned about how to compost with red wiggler worms and the environmental benefits of doing so.



## Ground Water Presentation

On November 14, Alex Oiffer and Tom Renic from Alberta Environment and Parks delivered two presentations that included an introduction to groundwater science and groundwater policy. They provided an overview of groundwater in the Beaver River watershed, including distributions of major aquifers, groundwater movement, groundwater yield, and groundwater quality. The presentations received great feedback and LICA looks forward to hosting similar events in 2020.



# Calendar Contest



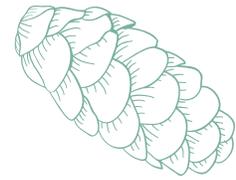
## Winners

Thank you to all of those who submitted artwork for the 2020 calendar contest. We received 152 beautiful and heartfelt pieces of artwork. Thirteen winners were selected and put into the 2020 Youth Calendar. The 2020 Calendars are available for free at our office: 5107W 50 Street, Bonnyville, Alberta. *Congratulations to the winners!*

- Claira Krawchuck, Dr. Brosseau
- Ryland Lamoureux, École des Beaux-Lacs
- Ashlyn Tkachuk, Iron River
- Chloe Jacob Fischer, Le Goff
- Summer Janvier Cardinal, Le Goff
- Aspen Sales, Holy Cross
- Emmett Brosseau, École des Beaux-Lacs
- Mikhail Cardinal, Le Goff
- Kate Mielke, Iron River
- Tatum Houle, Le Goff
- Zada Campbell, Notre Dame
- Kathryn Graham, École des Beaux-Lacs
- Jada Amyotte, École des Beaux-Lacs



# Moose Lake Internal Phosphorus Loading Study



Moose Lake is a recreational center for boating, fishing, and swimming and has been the Town of Bonnyville's source of drinking water for many years. Recently, residents have expressed a growing concern for the water quality of Moose Lake, in particular, the increasing intensity of algae blooms in the lake. In order to learn more about the potential cause of these algae blooms the Moose Lake Watershed Society requested funding from the MD of Bonnyville to collect core sediment samples of Moose Lake. These core sediment samples were taken from the bottom of the lake and can tell us how much phosphorus is "trapped" within Moose Lake. Phosphorus is measured because it is the limiting nutrient for algae. This means the more phosphorus available in the water, the more frequent and intense the algae blooms will be.

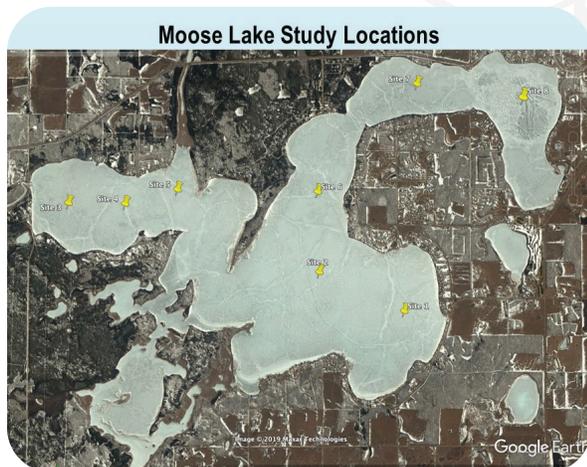
With the approved funds from the MD of Bonnyville, these sediment core samples were collected in

July of 2019 from eight sites across Moose Lake. The samples were sent to specialized labs in the United States to determine the amount of phosphorus being released from the collected sediment. Within a year, it is estimated an average of 2633 kilograms of phosphorus is being released into Moose Lake from the sediment alone.

The data collected provides some much-needed information in understanding the amount of phosphorus "trapped" within Moose Lake, also referred to as internal loading. In order to best manage the phosphorus levels in Moose Lake, we need to know if the majority of the phosphorus is coming from inside the lake (internal) or from outside the lake (external). This can be determined by completing a phosphorus budget. A phosphorus budget will take the internal load data collected from the sediment core samples and calculate the estimated external load of

phosphorus entering the lake. External loading of phosphorus can come from local runoff, leaking septic tanks, animal waste, and fertilizers.

The process of managing phosphorus levels requires a lot of research to ensure the best management practices are being implemented for the greatest effect. However, in the meantime, as a local resident you can help improve water quality by reducing the amount of external phosphorus entering Moose Lake by taking part in the Keep Our Lake Blue Campaign. To learn more about the Keep Our Lake Blue Campaign please visit the LICA website ([www.lica.ca/watershed](http://www.lica.ca/watershed)) or read about it on page #6. To learn more about the efforts of the Moose Lake Watershed Society on phosphorus loading visit their Facebook page [@MooseLakeWatershed](https://www.facebook.com/MooseLakeWatershed)



## Results

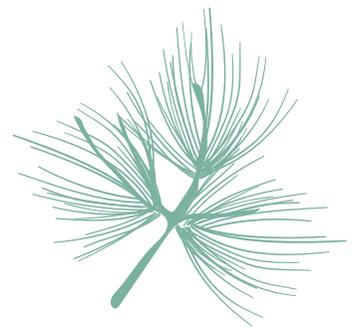
### Phosphorus Release

Site	mg P/m <sup>2</sup> /d
1	3.29
2	1.62
3	3.65
5	2.50
7	2.85
8	7.16
<b>Average</b>	<b>3.51</b>

**Estimated Annual Internal Load** = (Average Release Rate) X (Area Below 9m) X (Days of Anoxia)  
 = (3.51 mg/m<sup>2</sup>/d) X (10,000,000 m<sup>2</sup>) X (75 d)  
 = 2,633 kg/yr = 5,804 lb/yr



# Keep Our Lake Blue



## Taking Action to Improve Moose Lake's Water Quality

In the summer of 2019, LICA-Environmental Stewards led an initiative to help improve Moose Lake's water quality. LICA partnered with the Moose Lake Watershed Society to launch a campaign encouraging people to take action to reduce runoff and pollutants, such as phosphorus, from entering the lake.

Residents around Moose Lake were

invited to take one new action to reduce runoff and pollutants on their properties. Households that signed up to Keep Our Lake Blue received a lawn sign to display their commitment to clean water, and they were provided with a list of 52 actions they could take to reduce runoff and pollutants. From this list, the average household implemented 2 new actions this summer, took 31 actions in

previous years, and did not take 17 of the actions. Upon receiving the campaign information, one resident changed his plan to install an asphalt driveway to a driveway with a permeable surface.

The actions most commonly taken during this summer's campaign are summarized in the table below.

<b>Reducing Runoff</b>	Water lawn in morning or evening to minimize evaporation.
	Mow the lawn higher (2-3" is best).
	Use a broom instead of a hose to clean driveways and sidewalk.
<b>Reducing Pollutants</b>	Skip chemical fertilizers all together or use compost.
	Use pesticides sparingly, and only when needed. Do not apply chemicals as part of a routine maintenance plan.

LICA looks forward to partnering with the Moose Lake Watershed Society in the summer of 2020 to expand the Keep Our Lake Blue campaign.



Reduce  
**Runoff &  
Pollutants**



# Stop Needless Idling



**60 SECONDS**  
OR LESS IS BEST

Turn off your vehicle if you're  
parked for longer than 60 seconds



ALBERTA AIRSHEDS  
COUNCIL



## Keep the Air Healthy



Excessive **idling**  
increases emissions of pollutants,  
such as  
**particulate matter**

that negatively affect air quality.

## health problems

Particulate matter can aggravate many  
particularly among people with heart or  
lung conditions, older adults and children.

If all drivers reduced needless idling by

**3 Minutes**

a day, we would save

**\$630,000,000** per year,

equal to taking 320,000 cars off the road for a year.

## Save Fuel & Money



## Drive Smarter

Instead of  
needless idling,  
use a timer to  
switch on a block  
heater

**~2 Hours** before you  
plan to leave.

At **-20°C**

block heaters can improve overall fuel  
economy by as much as **10%.**



## Do Your Part Pledge Now

To Stop Needless Idling

Alberta's Airsheds

# Stop Needless Idling



**60 Seconds or  
Less is Best**

LICA is a member of the Alberta Airsheds Council (AAC) and has been working collaboratively with AAC to develop an Alberta-wide Stop Needless Idling campaign. This educational campaign describes two major benefits of stopping needless idling, including keeping the air healthy and saving fuel and money. Drivers are asked to pledge to idle for 60 seconds or less when they are parked. For more information about the campaign, and to do your part and PLEDGE to Stop Needless Idling please visit

<https://www.albertairshedsCouncil.ca/60-seconds>.

# Stop Needless Idling

## Save Fuel & Money



Idling for 10  
seconds wastes  
more fuel than  
restarting your  
vehicle

Canadians would  
save \$630 million/  
year if all drivers  
reduced idling by  
3 mins/day

Idling strips  
oil from  
critical  
engine  
components



**60 SECONDS**  
OR LESS IS BEST

Turn off your vehicle if you're  
parked for longer than 60 seconds

## Keep the Air Healthy

Idling increases  
emissions of  
pollutants, such  
as particulate matter

Particulate  
matter can  
aggravate many  
health problems

Carpool, take public  
transit, or active  
transport to reduce  
emissions



## Do Your Part Pledge Now To Stop Needless Idling

## Drive Smarter



Use a timer to  
turn on a block  
heater ~2 hrs  
before driving  
(below -20°C)

The best  
way to  
warm up  
your vehicle  
is to drive

Limit warm-up  
times and  
remote car  
starter use to  
60 seconds

albertairshedsCouncil.ca



# Hydrocarbon Odours in Bonnyville



## Reinstating the Community Canister Sampling Program

If you were in Bonnyville on November 26th, you may have smelled strong hydrocarbon odours. The source was determined to be a facility on the north side of town. During the odour event, wind was blowing consistently from the north and as a result, data from LICA's Portable Air Monitoring System (a trailer with state-of-the-art air monitoring equipment located east of Bonnyville) did not detect the presence of any odorous compounds. During the odour event, LICA staff provided near real-time air monitoring and metrological data, diagrams, and maps to local Alberta Environment and Parks staff to assist in their investigation.

It is important to note that with the current design of the LICA regional air monitoring network, it is not possible to monitor all areas of the LICA region at all times. LICA's air monitoring instruments are not very portable however human noses are! Therefore, it is possible for area residents to detect odours at locations where LICA does not or cannot monitor air quality using traditional methods.

In response to this odour event, LICA has decided to re-instate its "Community Canister Sampling Program". LICA will maintain a small supply of air sampling canisters at our office in Bonnyville. These easy-to-use, highly portable canisters are about the size of a basketball. While they cannot provide real-time monitoring results, canisters collect a sample of air which can be analyzed at a laboratory; data from these analyses may provide quantification of short-term air quality issues, such as the one experienced in November in Bonnyville.

If you have an air quality concern and would like to find out if LICA's canister sampling program might improve your understanding of outdoor ambient air quality in your corner of the LICA region, please contact us. While inventories are limited, LICA will supply canisters and provide training on how to collect a good air sample. There is no charge to the public for this service.



# 2020 Nature Photography Contest

## Cash Prizes

1<sup>st</sup>: \$150

2<sup>nd</sup>: \$100

3<sup>rd</sup>: \$50

A Public  
Showcase

Two  
Categories

Beginner &  
Advanced

Professional  
Judges

Canvas  
Prints  
for the  
Winners

Deadline  
August 25<sup>th</sup>, 2020  
@ 4:00 p.m.

Presented by



**LICA**  
ENVIRONMENTAL STEWARDS

Online entry forms  
at [www.lica.ca](http://www.lica.ca)

More Information on  
the following page

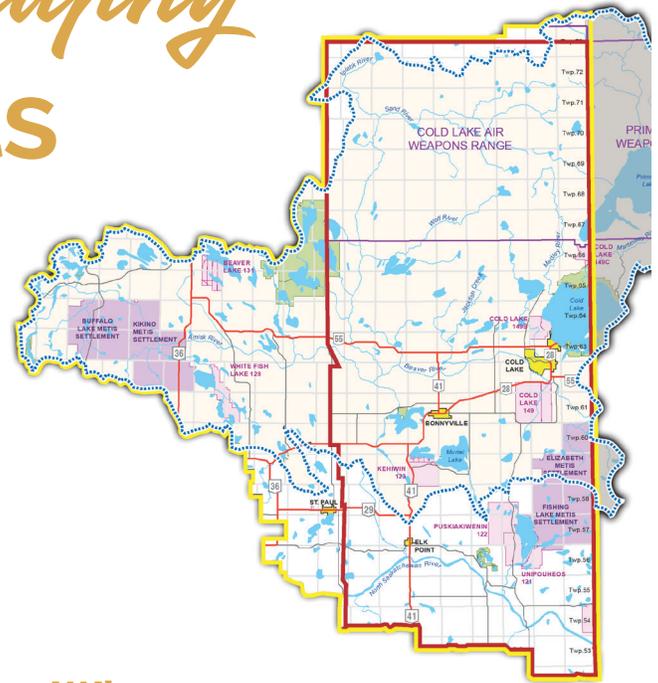


# 2020

# Nature Photography Contest Details

## Eligibility

- Open to all photographers that reside or work in the LICA region
- Open to all ages
- Advanced Category: 5 or more years of experience
- Beginner Category: Less than 5 years of experience
- **Photos must be within the LICA region**
- LICA Staff, Board & Committee members are not eligible to enter the contest



## Submission Specifications

- All entries must be received by **August 25<sup>th</sup>, 2020 @ 4:00 p.m.**
- Up to three (3) entries per person
- The online [entry form](#) must be completed
- E-mail entries as JPEG files
- Send entries to outreach@lica.ca with the subject line as "Photography Contest"
- The entry file name must be titled: Category-Name-Entry Number  
Ex. Beginner-Jane Doe#1  
Beginner-Jane Doe#2  
Beginner-Jane Doe#3
- Resolution: Min. 300 dpi / Max. 10 MB
- Do not digitally alter photos (beyond colour adjustments)
- Photo entries must be captured by the person entering the contest

## Publication

- LICA reserves the right to publish winners' names & photographs in any promotional material
- To be published, your prints & digital files must be of acceptable quality & resolution

## Winners

- 1<sup>st</sup>, 2<sup>nd</sup>, & 3<sup>rd</sup> place images from both categories will receive a cash prize, a print, and a public showcase around the LICA region
- The printed versions of the winning images will be held for two weeks while they are on display at indoor, public spaces

## Judging

- This year LICA is privileged to have Susie O'Connor from Images Studio in Cold Lake help with the judging. She is certified through the Professional Photographers of Canada to judge photography contests. This ensures the best photos submitted will be the ones that win!



**LICA**  
ENVIRONMENTAL STEWARDS

# Upcoming Events



**January 20: Cold Lake**  
**January 27: St Paul**  
**January 28: Lac La Biche**

Time: 4:30PM - 8:30PM

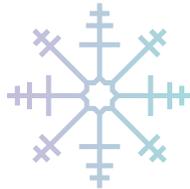
Alberta Fisheries Management Engagement Sessions, hosted by Alberta Environment and Parks. For more information, please visit <https://talkaep.alberta.ca/aep-fisheries-management>



**January 25: Bonnyville**  
**February 1: Cold Lake**

Time: 11:00AM - 5:00PM

Nature Photography Workshop. Presented by Mason Unrau Photography and hosted by LICA. Email outreach@lica.ca to register.



**February 6:**

Time: 12:00PM - 1:45PM

Lunch 'n Learn, hosted by LICA. Andrea Zabloski from CNRL will present on Carbon Capture and Storage.

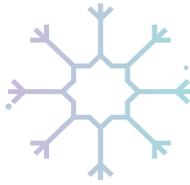
## Event and Social Media Interests Survey

**January 31:** This quick survey will help LICA share relevant information and bring in people to present on the topics you want to learn more about. Once you complete the survey you will be entered to win a LICA t-shirt! The survey will conclude on January 31<sup>st</sup>.

<https://www.surveymonkey.com/r/RFQT52K>



**February 15:** Family Expo, hosted by Lakeland Connect. LICA will have a booth at the C2 so come and say hello!



**February 27:** Rural Routes will be hosting a workshop on renewable energy for farms and sustainable farm management at the LICA office. Stay tuned for more details.



@infoLICA



**LICA**  
ENVIRONMENTAL STEWARDS

Alberta Environment and Parks

Thank you for your support!