

2021

Fall

Newsletter



LICA
ENVIRONMENTAL STEWARDS

Caring For Our Watersheds



LICA is delighted to be a program partner for the Caring For Our Watersheds-Alberta contest! We are currently seeking teachers and teams of motivated students in grades 7-12 to mentor and guide through the project proposal process in our region.

What is Caring For Our Watersheds?

The Caring For Our Watersheds (CFOW) program is an environmental educational competition that encourages creativity and rewards students for the solutions they identify. CFOW partners with communities to create focused solutions to local watershed issues. Each year Nutrien invites students to submit proposals that answer the question: **“What Can You Do To Improve Your Watershed?”** This program rewards the students and the schools who submit the most creative, thought-provoking, and innovative ideas. Students who enter are

eligible to win cash prizes for themselves and their school, as well as implementation funding and mentorship to make sure their project succeeds!

How Does It Work?

1. Learn About Your Watershed. What’s Bothering You? What Needs To Change?

LICA’s Education and Outreach Coordinator is available for a Zoom call to your classroom or club for a presentation about our local watershed and the Caring for Our Watersheds contest. If students want to enter on their own rather than as part of a class or club, that’s okay, too! We can help individual groups who choose to participate independent of their class.

2. Tell Us What You Could Do To Improve Your Watershed.

Students prepare their 1,000-word project proposal answering the question: “What can I do to improve

my watershed?”. Students may work individually or in a team of up to four people. A Student Handbook is available from LICA to guide students through the proposal writing process. The E&O Coordinator will also review written proposals and provide feedback to each team prior to submission.

3. Submit Your Proposal

Submit your proposal in April of next year. All students who enter receive a prize! Submit your proposal at: caringforourwatersheds.com/contests. Entries will be accepted until March 22, 2022.

4. Judging Time

Community judges will mark all proposals using the Content Judging Guide and will provide quality feedback to improve your project proposal skills. The 10 proposals with the highest marks in Alberta will be invited to compete in the Final Competition and Awards Ceremony!



Caring For Our Watersheds

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5. Finalists Present Their Ideas

Students with the top 10 proposals will prepare a five-minute verbal presentation on their idea for the Final Competition Judging panel and Awards Ceremony at the end of April 2022. Friends, family, and classmates are invited to tune in to the Final Competition and Awards ceremony to support the students presenting. Every student at the finals wins a cash prize ranging from \$300 to \$1,000. Cheques to students and schools or registered clubs will be sent out immediately.

6. Make Your Idea Reality (Optional)

Everyone who entered the contest is eligible for up to \$1,000 of matched funding to implement their idea! Mentorship from the LICA E&O Coordinator is available to support students through the implementation phase of their project.

If you choose to implement this program, LICA will support your classroom throughout the entire duration. We will provide presentations, individualized support for student groups and a local point of contact between the provincial competition and student groups in our area. Schools will be awarded matching funds for any winning projects their students produce (up to \$1000). Additionally, every 10 entries your school submits makes your school eligible for a \$100 subsidy, meaning the more entries your school submits, the more funding your school will receive.

Teachers: What can CFOW do for your classroom?

The CFOW program encourages interdisciplinary thinking, creativity and teamwork skills. The contest specifically connects to the following curriculum topics:

Science: Interactions and ecosystems, freshwater ecosystems, biodiversity, environmental chemistry, energy and the environment

Math: Budgeting and financial management, analyzing statistics and data

Language Arts: Persuasive writing, writing conventions, context and organization of ideas

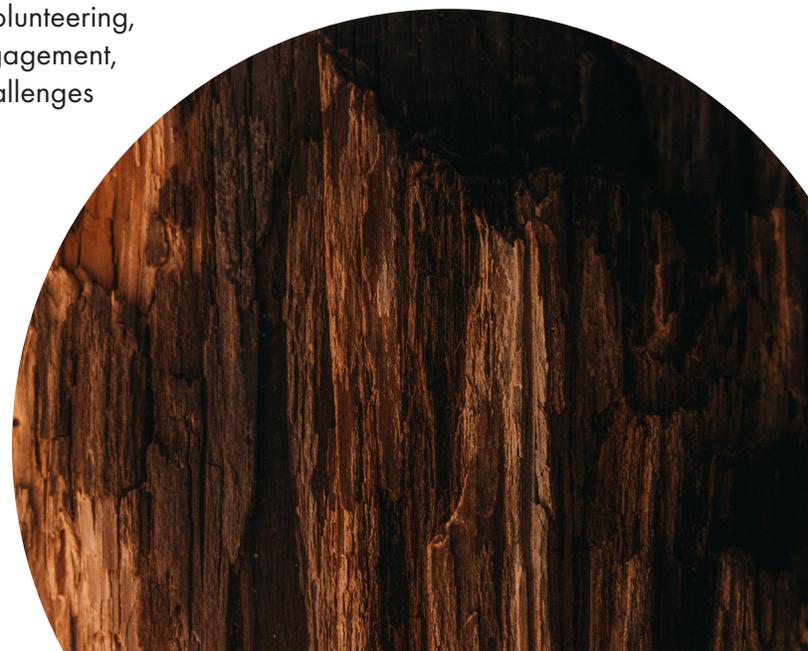
Social Studies: Geography, responding to change, political and economic systems, interdependence in provincial, national and global environments

Leadership: Communication, stewardship, volunteering, community engagement, confronting challenges



Contact Information

Please reach out to LICA's Education and Outreach Coordinator at outreach@lica.ca or (780) 812-2182 if you have any questions about this program and how to implement it in your classroom. We are here to support you!



Meet Our Board

An Interview with Shareena Wilkins

At LICA, we are grateful for the continued support of our volunteers, especially our board members. While they are often working behind-the-scenes to ensure LICA is running smoothly, we feel our board deserves to share the spotlight with us! In this segment of our newsletter, we will be sharing interviews with board members so you can get to know them better and inspire you to join us in volunteering for local organizations in our community.

Without further ado, meet Shareena!

What sector do you represent on the Board of Directors?

I currently hold the Board member seat representing the local community and sit as Chair of the Education and Outreach committee

Where did you grow up? If you are not from the Lakeland region, how long have you been here? What made you choose to make the Lakeland region your home? What do you enjoy doing in your free time?

I am from the east coast! More specifically, Bridgewater, Nova Scotia. My father was in the military so we moved around quite a lot and eventually made Wainwright, Alberta home when he retired around 2003. My partner (a born and raised local to the area) and I

have called the Lakeland home for 8 years and look forward to many more. In our free time you'll find us hunkered down at a table playing obscure and uncommon board games, walking our pups, or cooking together in the kitchen!



What got you interested in the environment?

I was lucky enough to have crossed paths with amazing teachers, friends, and mentors over the years

"We are currently learning how to grow food year-round and are constantly working on lowering our garbage output."

who were not afraid to discuss the sometimes-controversial topics of climate change and our personal ecological footprints. They constantly

challenged the system and challenged individuals to take steps for a better tomorrow. On top of that, recent worldly events have my husband and I actively discussing what we can do to make more of a difference (locally and globally), live more sustainably, and help others do the same. We are currently learning how to grow food year-round and are constantly working on lowering our garbage output.

Tell us about your history at LICA – when did you get involved and what positions did you fill? Why did you become a board member?

I have a funny history with LICA in that... I don't! My husband and I registered as LICA members this year and have enjoyed exploring and learning about this wonderful association and the people surrounding it. A year ago, we had no idea what LICA was or that there were even environmental stewardship programs in the area (let alone what environmental stewardship programs were). I have been searching for an opportunity to get involved with the community in a way that aligned with my passions. After speaking with LICA's Executive Director, it felt like the perfect fit! There happened to be an open community member seat on the board this year and it was the right time and place to get involved this way. I have much to learn but am loving every minute of it!



Meet Our Board

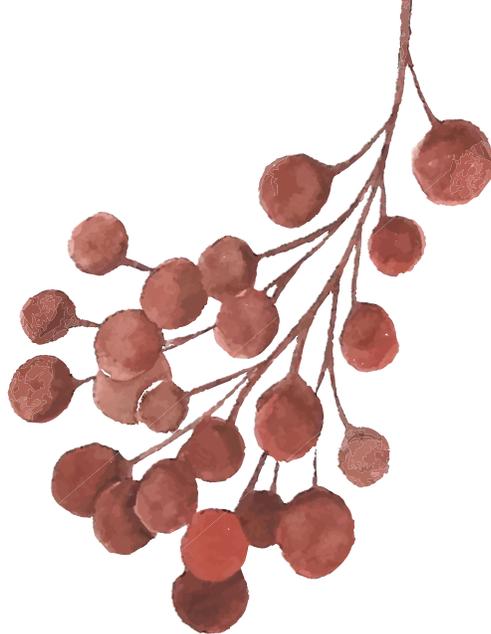
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What qualities do you think are important for a great volunteer?

What makes a good volunteer is someone who shows up, has a good attitude, and can do the work needed. A great volunteer has the qualities of the former, along with a passion for the cause. Passion is the fuel of greatness.

What do you hope for the future of the environment in the Lakeland region?

I hope to continue working towards lessening humans' impact on the land, water, and sky where we reside. I hope to see the work and research LICA has put into watershed and airshed make meaningful improvements to the Lakeland. Lastly, the future of the Lakeland resides in the hands of members in the community and industries. I truly hope to see an increase in education and awareness of our personal impact on the environment.



“What makes a good volunteer is someone who shows up, has a good attitude, and can do the work needed. A great volunteer has the qualities of the former, along with a passion for the cause. Passion is the fuel of greatness.”

If you had to live the rest of your life as a plant or animal native to Alberta, what species would you be and why?

I would have to say a mountain goat solely because of their ability to climb mountains (so cool!). I don't think they get enough credit. Sure, it must be tough to do, but it would be worth it for the astounding views!

“Lastly, the future of the Lakeland resides in the hands of members in the community and industries.”



Canadian Ambient Air Quality Standards

Canadians enjoy a good level of outdoor air quality. Emissions of air pollutants that cause smog and acid rain have decreased significantly during the past decades. These reductions have contributed to the decrease of the air pollutants that Canadians breathe every day – pollutants that can contribute to health issues such as asthma and cardiovascular diseases.



2012 Canadian ministers of the environment agreed to implement a new Air Quality Management System (AQMS) to guide work on air emissions across Canada. AQMS is a comprehensive and collaborative approach by federal, provincial and territorial governments to reduce the emissions and ambient concentrations of various pollutants of concern. Canadian Ambient Air Quality Standards (CAAQS) are being developed as a key element of the Air Quality Management System to drive improvement of air quality across Canada. CAAQS have been developed for nitrogen dioxide (NO₂), sulphur dioxide (SO₂), fine particulate matter (PM_{2.5}), and ozone (O₃). Ongoing reviews of the CAAQS help ensure they reflect the latest scientific information.

helps ensure that CAAQS are not treated as pollute-up-to levels and actions will be taken to keep clean areas clean. The management levels are represented by the colours green, yellow, orange, and red. Each management level has an air quality objective. See Figure 1 on next page.



While significant progress has been made to reduce air pollution, poor air quality remains a serious issue in some areas of Canada. Canadians living in heavily populated and industrialized areas of the country may be exposed to potentially harmful levels of outdoor air pollutants at concentrations that exceeded established standards. In order to better protect human health and the environment. In



Across the country, air quality is assessed in individual air zones. Alberta air zones are based on the Land-use Framework Regions. If the amount of a pollutant within an air zone increases, the management actions become more stringent. This



Canadian Ambient Air Quality Standards Continued

Figure 1:

Air quality management levels	Air Quality Objective
Red	To reduce pollutant levels below the CAAQS through advanced air management actions.
Orange	To improve air quality through active air management and prevent exceedance of the CAAQS.
Yellow	To improve air quality using early and ongoing actions for continuous improvement.
Green	To maintain good air quality through proactive air management measures to keep clean areas clean.

The ambient monitoring data for each air zone is assessed annually to make sure they meet the national air quality standards and management levels. Monitoring data collected by Alberta's Airshed Zones (including LICA) play a important role in the ongoing assessment of air quality against the CAAQS.

The most recent CAAQS to be released is nitrogen dioxide (NO₂). Nitrogen dioxide is produced

during fossil fuel combustion; common sources of nitrogen dioxide include vehicles, power plants, industrial emissions, and home heating. Health effects of short-term exposure to NO₂ can elicit a range of adverse respiratory effects including decreased lung function and airway inflammation. Long-term exposure to NO₂ may contribute to asthma development and increased susceptibility to respiratory infections. The environmental effects of NO₂

can affect ecosystems both directly and indirectly and contributes to the formation of ozone and acid rain.

There is a significant lowering of the NO₂ objective between 2020 and 2025; in most cases the objective becomes at least 50% more stringent. The following table outlines the CAAQS effective dates and management levels for nitrogen dioxide:

Figure 2:

Air quality management levels	Management Levels for the 1-hour Nitrogen Dioxide CAAQS (parts per billion)		Management Levels for the Annual Nitrogen Dioxide CAAQS (parts per billion)	
	2020	2025	2020	2025
Red	>60	>42	>17.0	>12.0
Orange	32 to 60	32 to 42	7.1 to 17.0	7.1 to 12.0
Yellow	21 to 31		2.1 to 7.0	
Green	≤20		≤2.0	

Canadian Ambient Air Quality Standards

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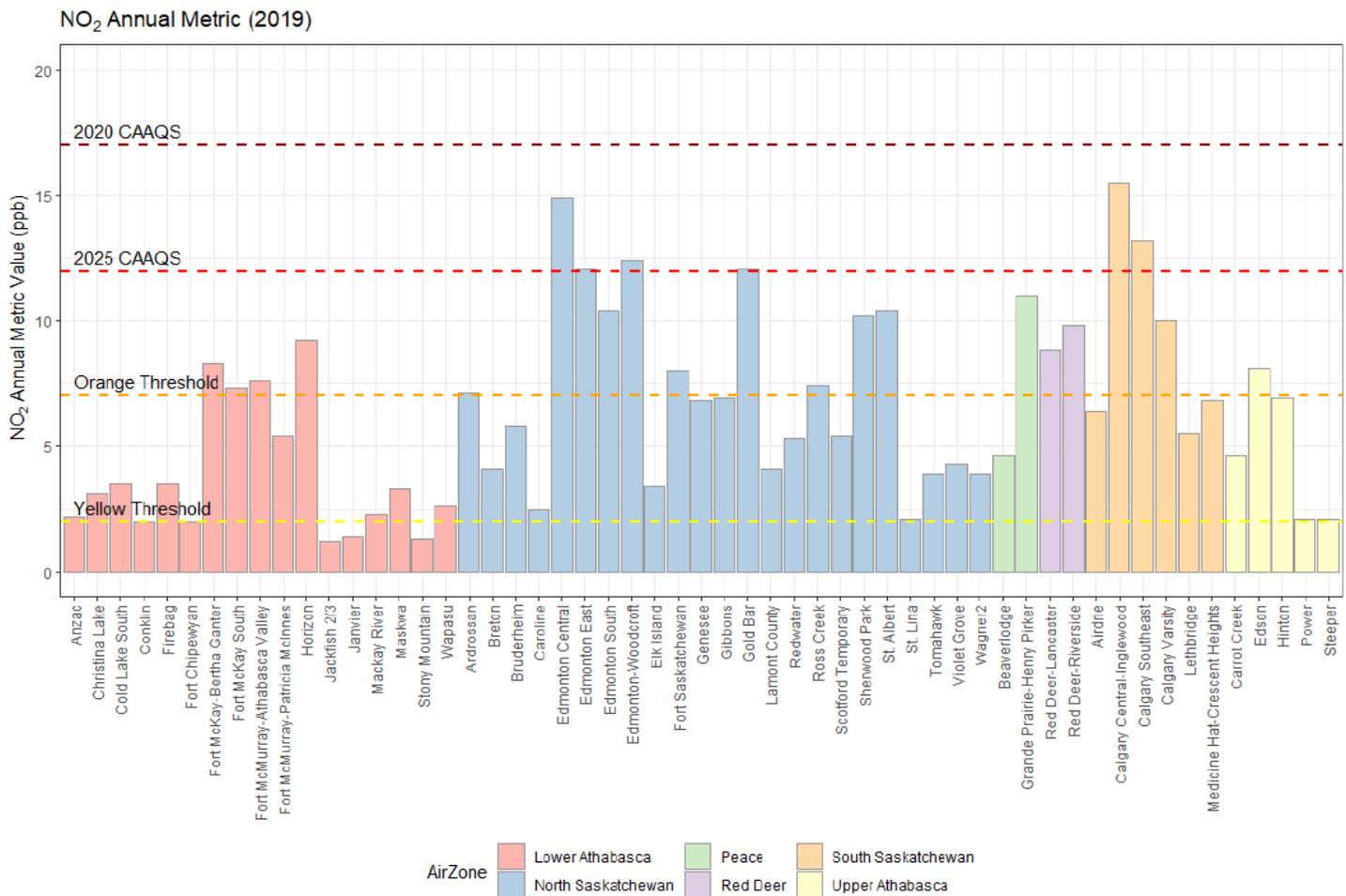


The figure below provides a comparison of Alberta’s 2017–2019 annual NO₂ levels against the 2020 and 2025 annual CAAQS. All regions of the province are estimated to reach the orange management level for the 2020 Annual NO₂ CAAQS. In 2019, the highest annual average NO₂ concentrations were

measured at the Calgary Central-Inglewood and Edmonton Central stations, with metric values of 15.5 ppb and 14.9 ppb, respectively, which places these stations close to the NO₂ Annual CAAQS for 2020. The 2025 Annual NO₂ CAAQS (12.0 ppb), is projected to be exceeded in both the North

Saskatchewan Air Zone and the South Saskatchewan Air Zone at Edmonton area stations (Central, East, Woodcroft, and Gold Bar) and Calgary stations (Central-Inglewood and Southeast). In this chart, the stations operated by LICA are Cold Lake South, St. Lina, and Tamarack (previously Maskwa).

Figure 3: Approaches and Solutions for Canadian Ambient Air Quality Standards (CAAQS) Achievement in Alberta, Clean Air Strategic Alliance. 2021.



LICA and other airshed partners are actively engaged in the “CAAQS Achievement” process. Achievement of CAAQS means that the measured air pollutant concentration in an air zone does not exceed the

CAAQS numerical value. Being engaged in the process will help LICA understand new air quality assessments as more current data becomes available, how air quality in the LICA region compares to the

CAAQS, and if required, what role LICA can play in developing an air quality management plan to address CAAQS not achieved.

Upcoming Events

January-February

More events for January and February are being planned! Please check out the LICA website or email outreach@lica.ca for more information on committee meetings, additional workshops and more.

December 27-31, 2021
LICA Office Closed

February 2, 2022
Street to Stream Workshop
Gardening-Focused Session
7:00PM-8:30PM

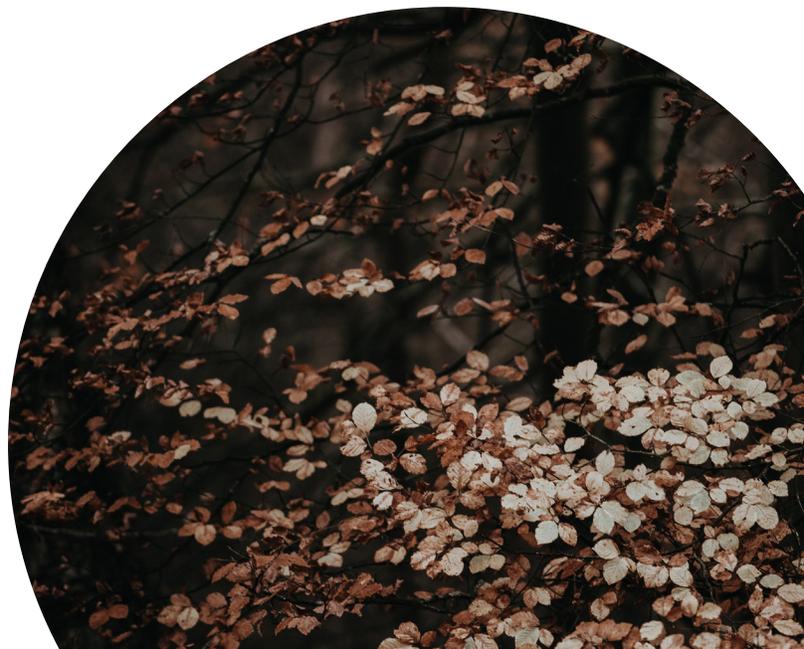
January 12, 2022
Vermicomposting Workshop – in person
LICA Office, 7:00PM-8:30PM

February 8, 2022
Street to Stream Workshop
Lakefront Property-Focused Session
7:00PM-8:30PM

January 22, 2022
Young Water Speaks Youth Storytelling Workshop
Ages 13-18, 1:00PM-3:30PM

February 21, 2022
LICA Office Closed

February 2, 2022
Street to Stream Workshop – Municipal Session
9:00AM-12:00PM



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and Parks