



**Alberta
Emerald
Foundation**

Emerald Youth Grants

Study Guides

Pigeon Lake Watershed Association



30th Annual Emerald Award Recipient

Water

Synocrude

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About the Alberta Emerald Foundation



We're Alberta's environmental good-news storytellers!

The Alberta Emerald Foundation (AEF) is nonprofit organization that showcases and inspires our province's environmental achievements through the annual Emerald Awards. Through our Sharing Stories Communications Strategy, the incredible work of Emerald recipients is highlighted and celebrated year-round. What began as the Emerald Awards in 1992 has evolved into an ongoing conversation.

The AEF empowers the next generation by providing grants to youth-led and youth-targeted environmental initiatives in our province. The Emerald Educational Engagement Grants Program funds up to 30 groups a year for their dream environmental project inspired by the Emerald Documentary Series, What On EARTH Can We Do? Podcast, and Emerald Speakers Series. After finding inspiration from this content featuring Emerald recipients, submit your pitch to us online. If it's accepted, you will receive \$750, thanks to our sponsor Syncrude Canada Ltd., to make your project a reality.

We encourage you to use this study guide as a resource to help you along in your project's journey. For more information, please visit

www.emerald.foundation.ca

Overview

What they're all about

Project: Pigeon Lake Watershed Management Plan

The Pigeon Lake Watershed Association (PLWA) is a leader in **watershed** management planning in Alberta. In 2006 and subsequent years, Pigeon Lake experienced **blue green algae blooms**, fish kills and public health advisories— leaving local residents and politicians looking for answers. It was quickly acknowledged that **collaboration**, across all 12 municipalities, was essential to executing effective watershed management. The development of the Plan progressed over several years with foundational work to diagnose the issues and build consensus. The resulting 2018 Plan was built on extensive **consultation** and driven by **volunteers**, the Plan recommends action-oriented watershed policies and **beneficial practices** targeted for implementation by regional stakeholders.

The plan takes into account the priorities and concerns of all the communities around Pigeon Lake: 10 Summer Villages, Wetaskiwin Counties, County of Leduc, Maskwacis Four Nations, Provincial Parks, Residents, Business Community, Producers, Villages, and Visitors.



Together with local partners, PLWA released the **science-based** Pigeon Lake Watershed Management Plan in 2018. An important driver of this plan is algal blooms that have become noticeably more severe and frequent, especially since 2002. Algae are naturally present and are a foundation for the lake's food web and fishery. However, when algae are excessive they form blooms. Blooms and related health advisories can cause significant economic and social impacts.

PLWA believes in taking a balanced approach to lake and **watershed sustainability** by considering the environment, economy, community, and government. The Pigeon Lake Watershed Management Plan calls for all individuals and organizations to:

- Seek out information and **beneficial practices** relevant to their situation.
- Assess their own properties and operations.
- Make beneficial changes incrementally.
- Encourage others and councils to make appropriate changes.
- Support volunteer watershed groups such as the PLWA.

Key Terms

Know your lingo



Beneficial Practices: doing things in a way that reduces or eliminates environmental risk. Sometimes this may be a more difficult way to do things, but it is better for the environment.

Blue Green Algae Bloom: also called "Cyanobacteria", blue-green algae is a photosynthetic bacteria that lives naturally in water. It is not actually a type of true algae. It often forms in warm, calm conditions which allows it to multiply and form blooms. Some bloom-forming types of blue-green algae produce toxins. The toxins can cause health effects in humans, pets and livestock. In extreme cases it can result in death. Some blooms don't contain toxins, but you can't tell if a bloom is harmful or not from how it looks.



If you see a bloom, always take precautions as if it is toxic.

Collaboration: when people work together to complete a task. Collaboration involves co-operation and teamwork, and sharing ideas, knowledge, and skills to reach the same goal.



Consulation: when you seek out information, advice, and/or the opinion of someone else or a group. This can be done through reading a book, listening to the advice of others, or talking things over with someone else.

Municipalities: the government of a town or city.

Science-based: a decision, policy, or program that is grounded in the best available research and information that is known to be true and driven by fact.

Sustainability: meeting our needs and using natural resources in a way that we could keep doing for a long time. This can be done through reducing the amount of resources that we use.

Volunteer: spending some of your free time helping others, without being paid.

Watershed: A watershed is a piece of land that drains surface water into a larger water body, like a river or lake. This provides water for drinking, farming, industry, leisure, and wildlife

Conversation Questions

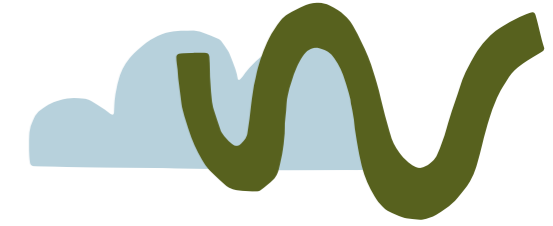
Let's talk about it

- What problems do the PLWA address? How do they address these problems?
- Why is blue green algae harmful?
- What types of places would you like to volunteer at?
- Can you think of something that is a beneficial practice? Would something like recycling be a beneficial practice?
- What do you think you should do if you notice a possible blue green algae bloom?
- What types of animals do you think benefit from the Pigeon Lake Watershed Management Plan?



Continuing Work

Inspiration for your Emerald Youth Grant



- Talk to your family about ways that you could volunteer in your community. Discuss which causes are most important to each of you.
- Take a day trip to a local lake, and try to count all of the different animals and plants that you see.
- Hire an expert to conduct an analysis of your local lake to ensure that there are not any harmful toxins in it, including blue green algae blooms.
- Host a recycling and waste awareness fair. Get each participating class, group, or individual to do a presentation or poster board to showcase an aspect of waste.
- Under proper direction or paired with a local nature conservation group, volunteer wrapping trees that are susceptible to beaver damage at a nearby site. Demonstrate the benefit of wrapping trees in regards to the impact on the organisms and their ecosystem.
- Attend a workshop or event through PLWA! Find out about upcoming events [here](#).



Resources

Click to discover

[Pigeon Lake Watershed Association Website](#)

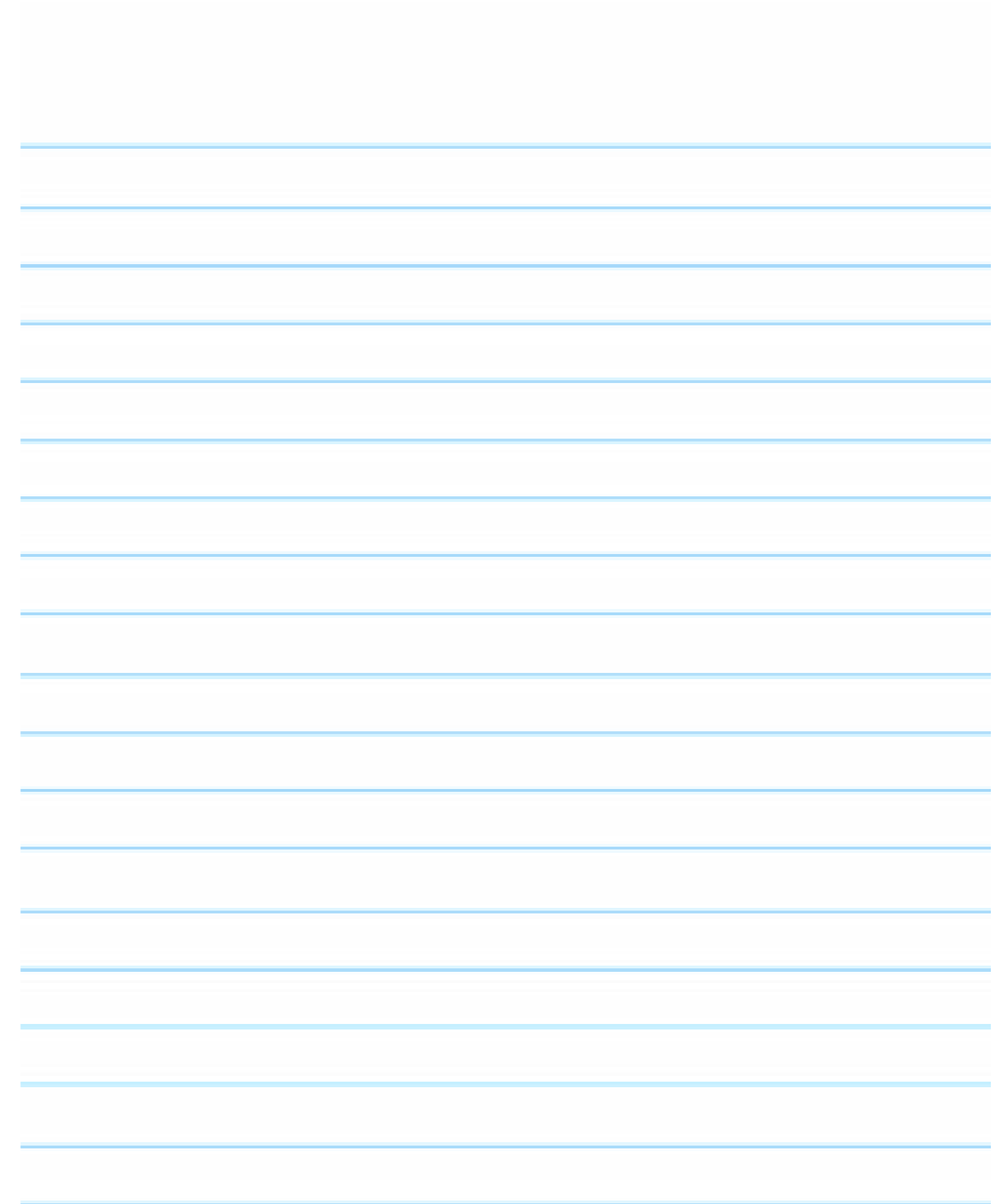
[PLWA Events Page](#)

[Watershed Map of Alberta](#)

[Britannica Kids](#) (used for Key Terms)

[36 environmental project ideas that you could get funding for!](#)

Notes





Emerald Youth Grants

The AEF would like to thank Syncrude Canada Ltd. for their sponsorship of the Emerald Youth Grants Program. As well, we'd like to thank Hoopla Media for their work on the Emerald Documentary Series.

This study guide was created and written by AEF Summer Student, Katherine Rogers.

[Click to apply for an Emerald Youth Grant!](#)

