



Respect Our Lakes

Agriculture Around
Alberta Lakes

Report it! For environmental complaints
or emergencies, call the environmental
hotline at 1-800-222-6514

For more information:

Search 'Respect our Lakes' on Alberta.ca
Contact us at rol@gov.ab.ca
Call 310-3773

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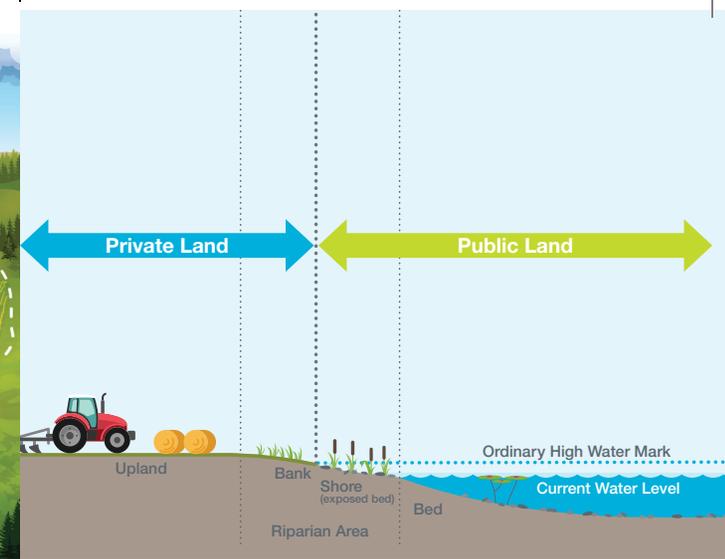
Agriculture has always been integral to Alberta's economy and agricultural producers are diligent stewards of more than half of Alberta's land. For many agricultural producers, lakes have long been reliable sources of water for livestock, water storage, water filtration, groundwater recharge and nutrient cycling.

In recent decades, human use of the land around many lakes has intensified. This, together with natural stressors such as climate variability, have made lake water quality vulnerable to deterioration.

All people living, working and playing in a watershed have a role to play in protecting water quality. By implementing best management practices, agricultural producers help address these growing pressures on Alberta's lakes.

Together we can ensure that our lakes can be enjoyed long into the future.

Everything that happens within the lake watershed will have an impact on water quality and quantity.



How can agriculture affect lake water quality?

■ Nutrient Loading

With increased water flow through or over an area, there is greater potential for erosion of sediment and nutrients, like phosphorus and nitrogen.

In an undeveloped watershed, phosphorus and nitrogen limit plant and algae growth. When even a small amount of these nutrients are added to the lake, it stimulates blue-green algae blooms which can produce toxins harmful to livestock and humans.

Under certain conditions, high nitrogen levels can also be toxic to fish and may harm the livestock and humans that drink it.

■ Pathogens

Manure that is carried into the lake can contaminate the water with disease-causing micro-organisms, like fecal coliform and *E. Coli*. These types of pathogens can lead to serious health concerns for humans and other animals.

How can you help?

Implementing best management practices on your property can keep sediment and nutrients out of our lakes.

- Maintain a riparian area along the lake shoreline and all streams flowing into the lake. Shoreline

In Alberta, the province owns most of the beds and shores of naturally occurring lakes, rivers and streams.

vegetation provides habitat for fish and wildlife, maintains water quality by filtering runoff and protects the shoreline against erosion. It is illegal to do any shoreline modifications below the bank without approval from Environment and Parks.

- Keep your livestock out of the water. Utilize offsite watering systems to maintain water quality and quantity. Cattle gain more weight when given access to clean water!
- Consider creating an environmental farm plan and have your riparian areas assessed.
- Remember that nutrients are a valuable resource, so preventing them from leaving your land is good for the environment and your pocketbook. Help reduce nutrient loss from your land by:
 - capturing nutrient-rich runoff using catch basins to reuse on crops.
 - testing soil for nutrient levels to determine manure and fertilizer application rates.
 - applying nutrients using the 4R stewardship principles – right source, right rate, right time and right place – add what you need, when required, where required and in the most suitable form.
 - avoid applying fertilizers or manure on frozen, snow-covered, saturated or heavily compacted soil.