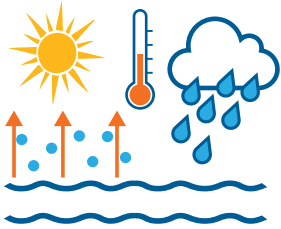
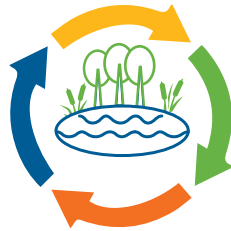


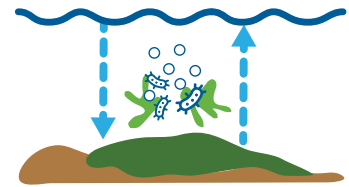
Water quality in lakes is impacted by natural and human factors. Natural factors include:



Natural climatic fluctuations through temperature, evaporation, and precipitation



Natural waterbody lifecycle changes over time

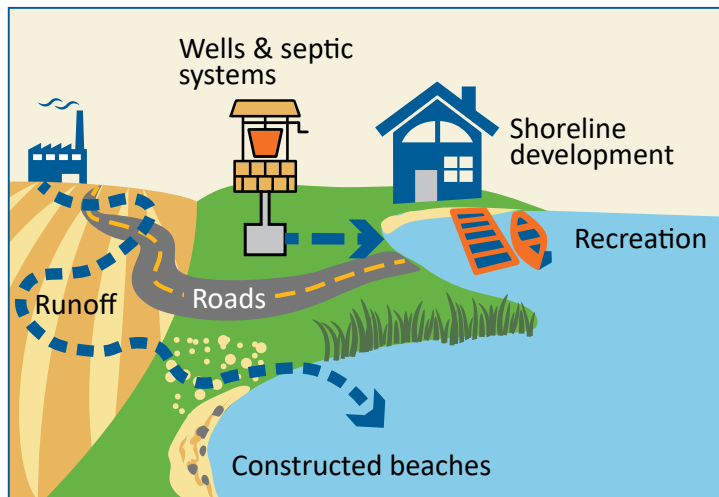


Naturally occurring biological productivity and nutrients from decomposition

Human land-use impacts on lakes

What happens on land is as important as what happens in the water.

Water quality is reflective of surrounding land use and watershed health. Some of these impacts are explained in more detail below.



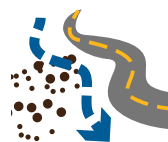
DID YOU KNOW?

Many shallow Alberta lakes lose more water each year through evaporation than they gain through precipitation. This can lead to increased salinity.

- Natural salinity is compounded by road salts, agricultural, and industrial activities
- Some aquatic life and vegetation will not thrive or survive in a more saline water system
- Chlorides seem to decrease the biodiversity of aquatic animals and plants but favour the growth of algae, especially cyanobacteria



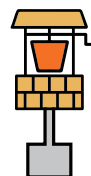
Shoreline development & constructed beaches: Most of Alberta's beaches are human-made, as few lakeshores are naturally sandy. When sand is added, the excess sediment makes water turbid. Sand, along with the loss of shoreline plants, decreases water filtration and damages fish and waterfowl habitat.



Roads & Runoff: Runoff picks up whatever crosses its path. This can include: dirt and debris from erosion, nutrients and chemicals, and contaminants from development activities. Debris from tire wear and road salts from snow management activities can enter surface water from roadways and cause aquatic health issues.

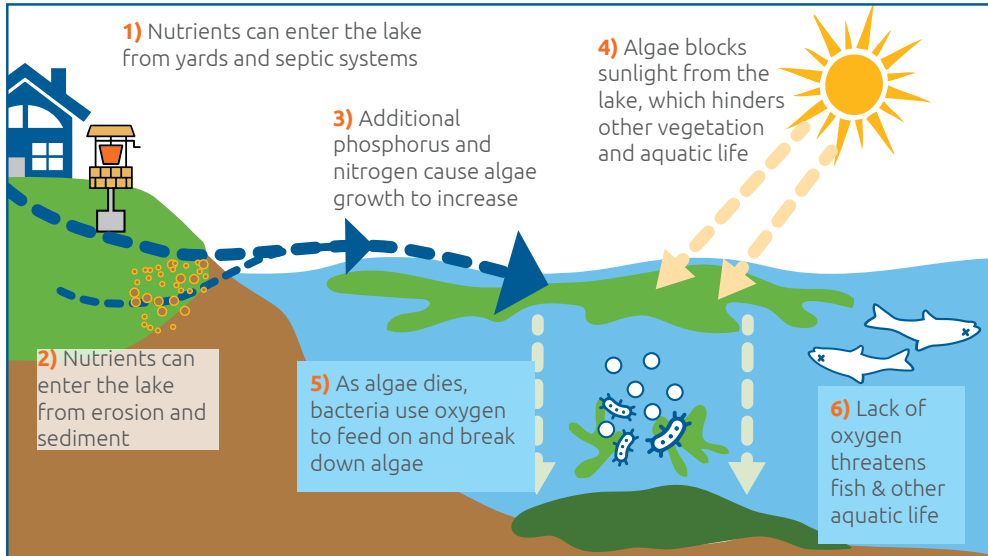


Recreational activities: Motorized watercrafts can release unburned oil & fuel into lakewater and stir up sediment & nutrients near shorelines. Debris from improperly removed ice fishing huts can impact human and fish health.



Septic systems & wells: Old or unmaintained wells and septic systems can leach nutrients, viruses, bacteria or parasites into groundwater, which can eventually end up in waterbodies.

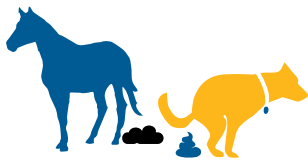
Trophic status classification & water quality



Trophic status refers to how fertile a lake is for plant and algae production. Most Alberta lakes are **eutrophic** or **hypereutrophic**. This means the lake is rich in nutrients and supports abundant growth. While some of this is naturally occurring, other nutrient inputs through runoff or leaching can alter the trophic status of lakes. A lake that is highly productive can impair both water quality and human health and activities.

Water quality: How you can help

There are numerous ways lake visitors and residents can help with lakeshore water quality. Some Beneficial Management Practices (BMPs) include:



Remove animal waste or keep it away from waterbodies to prevent nutrients and bacteria from getting into the water



Keep shorelines natural and as intact with native vegetation as their roots support water filtration and prevent shoreline erosion



Drive motorized watercraft slowly near shorelines to avoid disrupting sediment, aquatic plants, and waterfowl habitat



Clear and thoroughly remove ice fishing huts and debris for the benefit of aquatic and human health

To get involved in a local lake stewardship group, go to: www.nswa.ab.ca/about-us/watershed-stewardship-groups

Find out more: Water quality resources



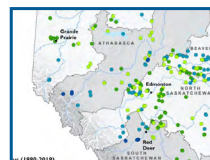
To read water quality reports from Alberta Lake Management Society (ALMS), see *ALMS' Lakewatch Program*: <https://alms.ca/reports/>



Datastream: A hub for water quality data (which includes the NSWA) can be found at: <https://lakewinnipegdatastream.ca/>



For a variety of lake stewardship tips and resources, including the "Respect our Lakes" brochures, go to: <https://www.alberta.ca/lake-stewardship.aspx>



Learn more about trophic status classification for a lake near you: <https://www.alberta.ca/water-indicators-lake-trophic-status.aspx>

