



How else can households reduce nutrient loading?

Maintain your sewage system!

1) Reduce water use:

- Excess water flowing into your septic tank can disturb sludge at the bottom, causing it to clog the disposal field. Untreated sewage may appear on the ground surface or your system could back-up into your house.
- A good way to reduce water flow is to install a low-flow or dual flush toilet!



2) Pump out your septic tank:

- Your septic tank still needs a periodic pump-out to remove built-up sludge. Pump out your tank every one to three years, unless it's undersized.
- While your tank is being pumped, have your contractor check the condition of the system.

3) Avoid septic additives:

- Products marketed as septic tank "cleaners" or "enhancers" are unnecessary, expensive and may shorten the life of your disposal field.

4) Feed it a healthy diet:

- Septic systems thrive on human waste, but almost everything else is taboo! Also, use phosphate and ammonia free cleaning products only.

5) Protect your disposal field:

- Keep all animals, people and vehicles off your disposal field both in summer and in winter.

Other things to know:

- Don't flush facial tissues, paper towels, coffee grounds, tea leaves, fats/greases, cigarette butts, filters, sanitary napkins, newspaper, disposable diapers, condoms or metal. All of these items can clog your tank and field.
- Don't use a garburator. It adds solids which can fill up your tank and be flushed into your disposal field.
- Don't use disinfectants or caustic toilet bowl and drain cleaners that may kill beneficial bacteria in your tank - also minimize bleach.
- Don't use cleaning products containing phosphorus or ammonia (a nitrogen source).
- Never pour chemicals like paint, solvents, thinners, antifreeze, gas or oil down drain - sewage systems cannot break down these materials.

"Grey water" from basins, bathtubs, laundry and kitchen must be directed to your sewage system.

- Don't plant trees or shrubs too close to your field or tank (as roots can damage or clog the field), but do maintain or plant grass, trees and shrubs downhill of your drain field.

Sewage system information in this brochure has been summarized from *On the Living Edge - Your Guide for Waterfront Living* by Sarah Kipp & Clive Callaway. For more visit [info www.fanweb.ca](http://info.www.fanweb.ca)



How to improve water quality at Lake Wabamun:

Sewage System Care and Maintenance



What is the “big” issue?

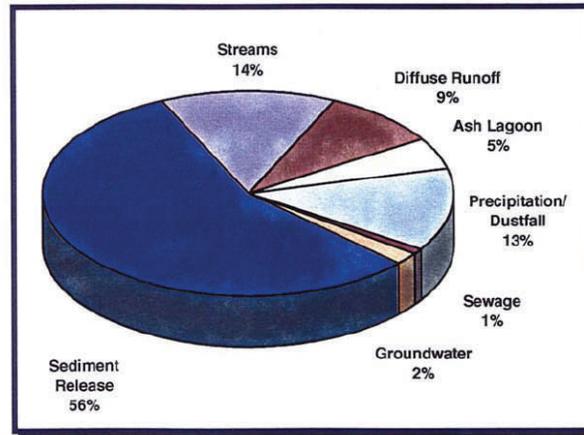
- Nutrients are the “building blocks” of life, however, when we allow too many nutrients to enter a lake undesired amounts of aquatic vegetation and algae will occur.
- Shallow, nutrient-rich lakes can either be in a clear-water state, dominated by aquatic plants (like Lake Wabamun) or a turbid water state, dominated by algae.
- Switching between states can occur due to increased nutrient loading or other stresses like large removals of aquatic vegetation.



What is the “state” of nutrients in Lake Wabamun?

- Currently, Wabamun is considered a slightly “Eutrophic” lake, meaning it is relatively high in nutrients and productivity.
- Sediment records indicate faster deposition rates for phosphorus in recent times, with a slight decrease since inputs of water from the Water Treatment Plant started in 1998.
- The release of phosphorus built up in lake sediments (called internal loading) now accounts for as much as 56% of total phosphorus releases annually.
- To prevent a possible change in stable state, further inputs of nutrients must be reduced.

What are the sources of nutrients in the lake?



Based on total phosphorus loading data for Wabamun Lake (1980 and 1981):

- 56% of phosphorus releases per year originate from nutrients already deposited in sediment. This could be reduced over time if external nutrient inputs decrease.
- The remaining 44% of annual phosphorus releases come from sources outside the lake, i.e. external loading.

How do sewage systems add to external nutrient loading?

It depends what you have

- An out-house, sited in gravel or sandy sub-soil, can act like a “pipeline to the lake” introducing bacteria, viruses, phosphorus and nitrogen into ground or surface water.
- An older, sub-standard or poorly maintained sewage system (e.g. with septic tank, distribution box & disposal field) can do the same thing.
- A holding tank, that requires pump outs, ensures all materials are taken elsewhere for disposal & not contributing nutrients to the lake.

What should homeowners do?

- If you have an outhouse, consider replacing it with a better system, i.e. a holding tank.
- If you are installing a sewage system, make sure you have a permit from your municipality and site it as far from the lake as possible. The **Alberta Private Sewage Systems Standard of Practice 1999** requires disposal fields to be at a minimum:
 - 90 m (300 ft) from lake, river or stream others suggest 150 m (500 ft) or greater.
 - 15 m (50 ft) from a well or water course, others suggest 30 m (100 ft).
 - 9 m (30 ft) from house with basement.
 - 1 m (3.25 ft) from buildings without basements and from septic tank.
 - 1.5 m (5 ft) from property line.
 Note: other distances apply for other types of disposal systems - see Standards.
- Also note that disposal fields must be properly sized for soil type and sewage volume. Where lot size and site conditions do not allow conventional systems other alternatives may work.
- If you have a sewage system - maintain it as described on the next page. This will help you save thousands of dollars in repairs, protect drinking water, reduce nutrients entering the lake, and protect water quality for swimming.
- Consider upgrading to a holding tank and if you have one already, ensure it is in good repair.

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