Wastewater Treatment FAQ

DID YOU KNOW?

How much water do I use??

The average Canadian uses about 335L of water each day for domestic purposes (compared with the average American who uses 380L, the average Italian who uses 250L, and the average Swede who uses 200L of water each day). (Environment Canada: Every Drop Counts) You're probably thinking "I don't use THAT much water!" Here are some statistics about where the water is used:

- Globally, 69% of withdrawn water is for agriculture, 23% is for industrial purposes and 8% is for domestic purposes (2003 International Year of Freshwater Facts and Figures)
- Of residential water use in Canada, 35% is used for bathing and showering, 30% is used for flushing the toilet, 20% is used for laundry, 10% is used in the kitchen & drink and 5% is used for cleaning

County of VERMILION River

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How Does the Wastewater System Currently Work?

Wastewater flows through pipes and is delivered to the lagoon in a facultative cell

The wastewater is treated by the combination of algae, sun, wind and carbon dioxide to provide conducive conditions for treatment. The sludge settles to the bottom and is broken down

Wastewater remains in the lagoon undergoing the biochemical process

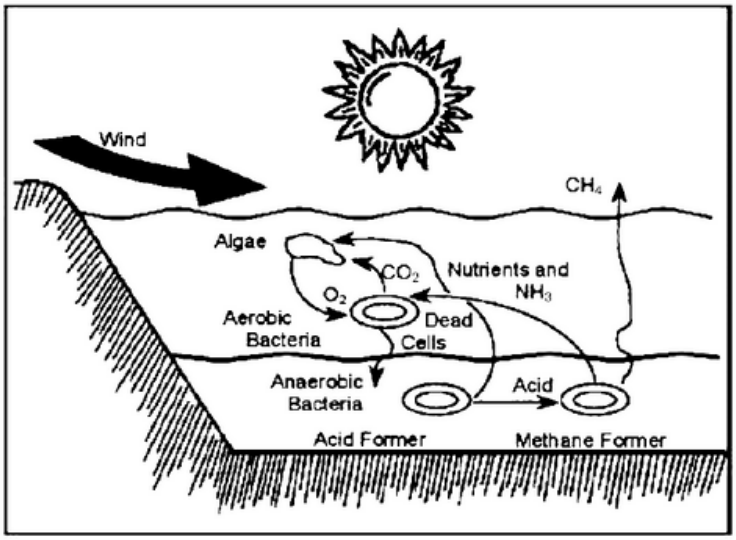
Is wastewater safe to be discharged into the environment?

Yes. A sewage lagoon system works to restore the natural aerobic ecosystem. Wastewater flows to a facultative lagoon, which provides both aerobic (at the surface) and anaerobic (at the bottom) conditions required for treatment. The algae plays an important role in the process to treat the wastewater. The algae uses the suns' energy, wind and carbon dioxide to produce oxygen that is used by aerobic/facultative bacteria in the wastewater to stabilize the organic matter in the upper layer of the lagoon.

The solids, or sludge, settle to the bottom of the cell. This bottom layer of sludge decomposes anaerobically. This process uses microorganisms to breakdown the sludge, grease and other solids that are in the lagoon.

Wastewater is annually dispelled from the lagoon and tested multiple times before being returned to the environment.

Additionally, the lagoon cells are lined to prevent sludge from entering into the ground and a fence is secured around the lagoon area to prevent people and animals from entering.



Source: Adapted from EPA (1977).

LAGOON HEALTH

LAGOON ODOR	DESCRIPTION
Faint pond smell when nearby	Indicating low lagoon dissolved oxygen (DO) - **SYSTEM IS HEALTHY**
Earthy Odor / brownish water	Mild earthy odor and minimal algae blooms - **SYSTEM IS GOOD**
Earthy or grassy odor / green water	Excessive algae bloom occurs in spring and summer - **MONITOR SYSTEM** for excessive algae growth
Fishy odor	Blue-green algae can create strong fishy odor - **SYSTEM IS UNHEALTHY**
Sulfurous odor	Rotten egg smell due to lack of oxygen - **SYSTEM IS STRESSED**
Septic sewage odor	Raw sewage odor - **SYSTEM FAILURE**