

# SOURCE CONTROL

## HOW CAN YOU DO YOUR PART?

You can adhere to the requirements of the Aquatera Utility Bylaw to reduce overstrength wastewater impacts on the various components of the Aquatera Wastewater Works System (Collection, Lagoon, Treatment Plant).

Additionally, proper maintenance of sumps and interceptors (such as grease interceptors, oil-water separators, solid traps, and grit sumps) by Industrial, Commercial, and Institutional (ICI) customers is critical in protecting wastewater systems.

When sumps/interceptors are cleaned/maintained as required, the waste stream shall be discharged at an approved facility. Your assistance will help avoid sewer backups, environmental incidents, odour issues, extend infrastructure lifespan and support compliance.



Your assistance will help avoid sewer backups, environmental incidents, odour issues, extend infrastructure lifespan and support compliance.

## CONTACT

**Aquatera Utilities Inc.**



[www.aquatera.ca/cross-connection-control](http://www.aquatera.ca/cross-connection-control)  
[www.aquatera.ca](http://www.aquatera.ca)



[riskcontrols@aquatera.ca](mailto:riskcontrols@aquatera.ca)

## Aquatera Utility Bylaws

[www.aquatera.ca/transparency-growth/regulations](http://www.aquatera.ca/transparency-growth/regulations)



# SOURCE CONTROL

Collect, dispose, and treat wastewater responsibly

# THE IMPACTS

Overstrength wastewater discharges can cause serious negative impacts on lagoon systems, wastewater collection systems, and wastewater treatment plants in terms of treatment performance and long-term lagoon/system health. Impacts may include:

**Fat, Oil, and Grease (FOG):** High FOG content can clog collection systems, foul pumps, and cause sewer backups or overflows, leading to environmental contamination.

**High Nutrient Loads:** Excess nitrogen and phosphorus can trigger algal blooms in lagoons, reducing dissolved oxygen at night and causing pH fluctuations, both of which impact effluent quality. Algal blooms also contribute to sludge buildup, clogging discharge screens and increasing maintenance needs.

**Increased Operations and Maintenance (O&M) Costs:** Overstrength wastewater leads to frequent sewer flushing, accelerated wear and tear on equipment, and higher labour and material costs.



**Infrastructure Corrosion:** High organic loads and sulfates can generate sulfides in anaerobic conditions, corroding concrete, steel, and mechanical equipment, particularly in lift stations, wet wells, and force mains. This leads to costly repairs or replacements.

**Odour Issues:** Anaerobic conditions from overstrength wastewater can produce  $H_2S$  and other odorous gases, affecting nearby areas. These odours are often noticeable at manholes, air release valves, and lift stations.

**Overloading of Organic Matter (BOD/COD):** Wastewater treatment systems rely on microorganisms to break down organic matter. Excessive Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) from overstrength wastewater can overwhelm the system, leading to poor effluent quality. In lagoon systems, this can create anaerobic conditions, causing odours ( $H_2S$ ) and sludge accumulation.

**Poor Effluent Quality:** Wastewater treatment facilities must meet regulatory discharge limits to protect the environment and public health. Overstrength wastewater can disrupt treatment processes, making compliance with Provincial and Federal Government regulations difficult.

**Sludge Accumulation:** Excessive organics and nutrients accelerate sludge formation, reducing lagoon capacity and treatment efficiency. This increases maintenance needs, including frequent dredging and sludge removal.

**Solids Deposition:** Excess solids can settle in low-velocity areas of the collection system, forming sludge banks that reduce carrying capacity and cause blockages.

**Toxicity to Biological Processes:** Industrial, Commercial, and Institutional (ICI) discharges may contain toxic substances (e.g., heavy metals, solvents, oils) that can inhibit or kill biological treatment processes, leading to system upsets and environmental harm. Recovery can take weeks or months, leaving the system unstable.



**Protect Your System:  
Control Overstrength  
Wastewater for Long-Term  
Health & Performance**