

MECHANICAL TREATMENT

Mechanical systems enhance the natural processes that are used in a lagoon to treat wastewater. Air is pumped into the wastewater and then mixed to allow microbes to consume the wastewater in the same process that occurs in lagoon systems.

There are many types of mechanical systems, but they all by operate the same basic principles of using the microbes in the wastewater to remove pollution causing material.



Primary screening system in Iqaluit waste water treatment plant

Odours

Odour is managed in a mechanical treatment system with a heating and ventilation system that diffuses or filters the air from the parts of the process where disagreeable odours are generated.

Mechanical Plants in Cold Climates

Mechanical treatment plants successfully operate at diamond mines across the Canadian north and in communities such as Fort Simpson, Northwest Territories and, Fairbanks and Juneau, Alaska. A mechanical plant has operated in Carmacks, YT for over 30years.

How does the system deal with seasonal flow?

Mechanical plants require monitoring and frequent adjustment of equipment in order to adapt to changes in wastewater flow and characteristics.

LOCATION CONSIDERATIONS

The mechanical plant would be located next to the existing sewage screening facility. The size of the plant would depend on the shape, size and configuration of the process equipment enclosed inside the building.

OPERATION AND MAINTENANCE

A mechanical treatment system is a complex process that includes moving parts, such as pump and process controls. Operators are trained and certified to operate and monitor system processes and mechanical equipment.

COSTS

The Request for Proposals process will close March 5. The proposals will be assessed by the City of Dawson and the Yukon government and compared to existing lagoon assessments. A thorough cost analysis will be presented to Dawson citizens.