

Where Does Our Wastewater Go?



BIOSOLIDS
Strategy

Tailings Pond at Abandoned Mines
Biosolids can be applied to old tailings ponds to rehabilitate the land and restore valuable organics and nutrients.

Agricultural Land Application of Biosolids
Biosolids contains things plants need to grow, like nitrogen and phosphorus, so it can be used as a fertilizer for crops.

Landfill
Biosolids can be disposed of at the landfill.

START

Screening
Screens filter out trash in the wastewater.

Blower Building
Blowers force air into the bottom of the secondary treatment tanks, where it bubbles up to provide oxygen to microscopic bugs.

Secondary Treatment
Microscopic bugs in an aeration tank clean the water by eating the dissolved organics. The next tank allows them to settle out.

Transport Truck
Biosolids products are transported from the Region's wastewater treatment plants for use on agricultural land, or mine tailings pond reclamation, and disposal in regulated landfills.

Primary Treatment
Some solids in the wastewater that get through to this stage settle to the bottom of a tank. Dissolved organics in the wastewater sewage flows to the next treatment step.

UV Disinfection
Ultraviolet lights shine through the water to disinfect it, killing microscopic bugs from the treatment plant.

Digester
Settled material is processed through an anaerobic digester that contains more microscopic bugs (but these ones don't need air). The left over material is called Biosolids. The anaerobic digesters also produce methane – a renewable source of energy.

Biogas
Biogas is a fuel generated in digesters that is mainly methane (like natural gas), and carbon dioxide. The biogas is collected and currently used as fuel to heat the digesters.

Dewatering
Biosolids still suspended in water are spun like a giant salad spinner in a centrifuge, squeezing out more water to reduce volume, making it easier to transport. The Biosolids now resemble a soil called a cake.

The Grand River Watershed
Treated wastewater that meets Provincial standards is returned to the Grand, Speed and Nith rivers.

Pump Station
Moves wastewater when it can no longer flow on its own.

Network of Underground Collection Pipes

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