



1. Why Treat Wastewater?

1.1 Definition of Wastewater

Wastewater is human-polluted water from home and industries. This includes water from:

- Flushing toilets and urinals - blackwater.
- Bathing, showering, and washing clothes and dishes - greywater.
- Commercial and industrial activities.
- ...and often included is the storm water which contain pollutants washed off from inhabited areas - roads, parking lots, and rooftops.

1.2 Why Treat Wastewater

Although nature has an inherent capability to breakdown pollutants, given the quantity of wastewater generated from human activities, centralized wastewater treatment plants are required to treat the wastewater before releasing it back to the environment. Wastewater from homes, businesses, and industries are collected in sewers for delivery to the treatment plant and subsequently discharged to a water body like a lake, river or ocean, or land, or reused.

Wastewater treatment is designed to remove:

- organic matter
- inorganic pollutants including plant nutrients - nitrogen and phosphorous
- pathogenic (disease causing) organisms

1.3 Benefits of Treating Wastewater

Wastewater treatment protects:

- The environment