

## WHY TREAT WASTEWATER?

It's a matter of caring for our environment and for our own health. There are a lot of good reasons why keeping our water clean is an important priority:

**FISHERIES:** Clean water is critical to plants and animals that live in water. This is important to the fishing industry, sport fishing enthusiasts, and future generations.

**WILDLIFE HABITATS:** Our rivers and ocean waters teem with life that depends on shoreline, beaches and marshes. They are critical habitats for hundreds of species of fish and other aquatic life. Migratory water birds use the areas for resting and feeding.

**HEALTH CONCERNS:** If it is not properly cleaned, water can carry disease. Since we live, work and play so close to water, harmful bacteria have to be removed to make water safe.

**RECREATION AND QUALITY OF LIFE:** Water is a great playground for us all. The scenic and recreational values of our waters are reasons many people choose to live where they do. Visitors are drawn to water activities such as swimming, fishing, boating and picnicking.

## Protecting water resources in Guyana

In a bid to protect the water resources in Guyana, the EPA developed the Environmental Protection (Water Quality) Regulations 2000 which aims to protect Guyana's waters by managing and monitoring effluent discharges into coastal and inland waterways.

The Regulations encourage proper disposal of effluent, thereby minimizing potential contamination of water resources. They aim to reduce threats to public health as well as reduce or eliminate impacts on our natural environment.

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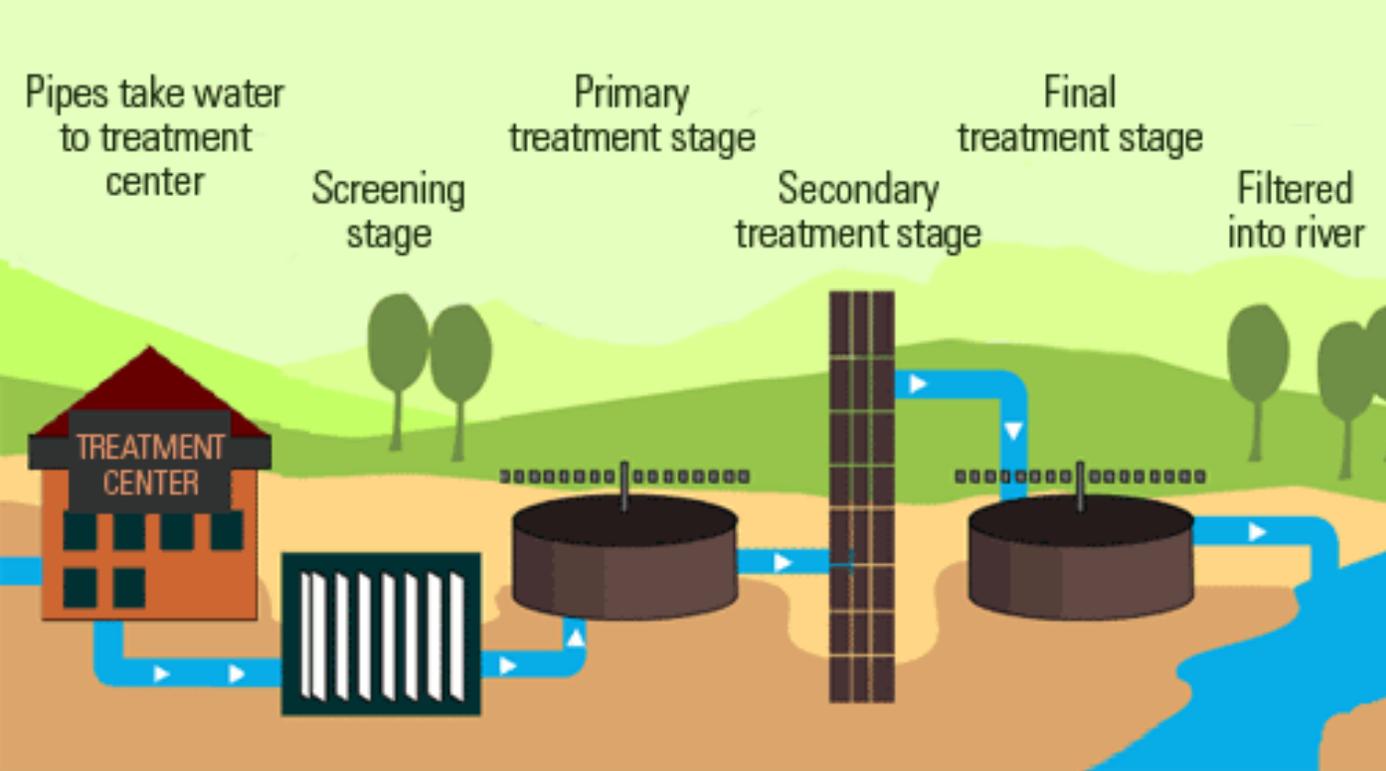
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WHAT YOU NEED  
TO KNOW ABOUT  
WASTEWATER



"Primary treatment" removes about 60 percent of suspended solids from wastewater. This treatment also involves aerating (stirring up) the wastewater, to put oxygen back in.

Secondary treatment removes more than 90 percent of suspended solids.



Wastewater treatment plant

## What is wastewater?

Wastewater is used water; it is the water we dispose of from our homes, offices, and industrial processes. Wastewater also includes storm run-off - rainwater that collects harmful substances as it washes off roads, parking lots, and rooftops, and can be harmful to our rivers and waterways.

Treating wastewater is important to protect our health and that of the natural environment.

## Wastewater treatment

If wastewater is not properly treated, then the environment and human health can be negatively impacted. These impacts can include harm to fish and wildlife populations, oxygen depletion, beach closures and other restrictions on recreational water use, restrictions on fish and shellfish harvesting and contamination of drinking water.

The major aim of wastewater treatment is to remove as much of the suspended solids as possible before the remaining water, called effluent, is discharged back to the environment. As solid material decays, it uses up oxygen, which is needed by the plants and animals living in the water.

Natural wastewater treatment systems are also called constructed wetlands, artificial wetlands, and biofilters. Natural systems both transform and absorb many of the common pollutants that are found in household wastewater.

The major processes occurring in natural systems include sedimentation (settling of solids), plant uptake, bacterial degradation, and chemical absorption (fixation). These processes help to remove physical, biological, and chemical contaminants from wastewater, and are generally man-made and controlled.