

Wastewater treatment is a process used to remove **contaminants** from **wastewater** and convert it into an **effluent** that can be returned to the **water cycle**. Once returned to the water cycle, the effluent creates an acceptable impact on the environment or is reused for various purposes (called **water reclamation**).^[1] The treatment process takes place in a wastewater treatment plant. There are several kinds of wastewater which are treated at the appropriate type of wastewater treatment plant. For domestic wastewater (also called municipal wastewater or **sewage**), the treatment plant is called a **sewage treatment plant**. For industrial wastewater, treatment either takes place in a separate **industrial wastewater treatment plant**, or in a sewage treatment plant (usually after some form of pre-treatment). Further types of wastewater treatment plants include **agricultural wastewater treatment plants** and **leachate treatment plants**.



Sewage treatment plant (a type of wastewater treatment plant) in Cuxhaven, Germany

Processes commonly used in wastewater treatment include phase separation (such as sedimentation), biological and chemical processes (such as oxidation) or polishing. The main by-product from wastewater treatment plants is a type of sludge which is usually treated in the same or another wastewater treatment plant.^{[2]:Ch.14} **Biogas** can be another by-product if anaerobic treatment processes are used. Treated wastewater can be reused a

reclaimed water. The main purpose of wastewater treatment is for the treated wastewater to be able to be disposed or reused safely. However, before it is treated, the options for disposal or reuse must be considered so the correct treatment process is used on the wastewater.