

DOMESTIC WASTEWATER



Domestic wastewater, also called sanitary sewage, is the used water discharged from homes. It comes from everyday human activities such as bathing, dishwashing and toilet flushing. More than a billion gallons of wastewater leaves homes, schools and businesses every day in Florida. Safe management of wastewater is essential for protecting public health, natural resources, recreation and Florida's economy.

Two-thirds of Florida's population is served by wastewater facilities, which are permitted by the Florida Department of Environmental Protection. The remainder of Floridians rely on septic tanks to treat and dispose of their wastewater. These systems are permitted through the Florida Department of Health.

More than 3,700 wastewater facilities are regulated by DEP. Nearly 1,800 of these collect and treat sewage from residential and commercial buildings. Additionally, there are nearly 1,900 industrial wastewater facilities as well as agricultural sites throughout Florida.

Because wastewater contains nutrients, bacteria, viruses and household chemicals, it must be properly managed and treated. Pretreatment to remove harmful pollutants is required for wastewater discharged from many commercial and industrial businesses to sanitary sewers.

Wastewater Treatment Process

- » The basic function of a domestic wastewater treatment facility is to speed up the natural water-purification process.
- » In **primary treatment**, screens, settling tanks and skimming devices remove sand, grit and larger solids from the wastewater.
- » In **secondary treatment**, air is supplied to support the growth of organisms that consume most of the remaining waste materials.
- » In **advanced treatment**, an additional level of treatment such as filtration, is sometimes provided to further reduce nutrients and impurities.
- » **Disinfection**, the final stage of treatment, removes disease-causing organisms such as bacteria before the water is discharged or reused.
- » Wastewater treatment produces a solids-byproduct called biosolids that may be disposed of or may be treated and used beneficially as a soil amendment or fertilizer.

Wastewater facilities that discharge to surface waters are subject to National Pollution Discharge Elimination System program requirements, which require treatment technology and surface water quality standards.

Reclaimed Water

- » Reclaimed water is highly treated wastewater that can be used for groundwater recharge, industrial processes, and irrigation of lawns, golf courses and agricultural fields. Using reclaimed water conserves drinking water supplies and reduces disposal into water bodies.
- » As Florida's population grows, so does the demand for fresh, clean water. Many communities are turning to reclaimed water as a way to conserve water resources and manage wastewater.
- » Water reuse facilities are monitored to ensure that only high-quality reclaimed water is distributed.
- » **Florida leads the nation in water reuse.** Approximately 738 million gallons per day of reclaimed water was used for beneficial purposes in 2015.

Wastewater Infrastructure Funding

- » DEP works to protect water resources through programs that provide grants and loans to local governments to improve their wastewater and reuse infrastructure.
- » The Clean Water State Revolving Fund Program has awarded more than **\$4 billion** in loans for wastewater and stormwater improvement projects since its inception in 1989, including approximately **\$1.1 billion** for nearly **120 projects** in the past five years.