

GET THE FACTS



WASTEWATER & WATER QUALITY

Wastewater refers to any water that is used and disposed of through the drains in your home including sinks, toilets, washers, garbage disposals and bathtubs. If you are on sewer, this water is taken to a wastewater treatment facility like Franklin's Water Reclamation Facility. What happens in a wastewater treatment plant is essentially the same decomposition process that occurs naturally in a stream or lake. A treatment plant simply helps speed up this process.

REGULATORY ENVIRONMENT

When the U.S. Clean Water Act was enacted in 1972, it ushered in an era of strict wastewater regulation; prior to the CWA, most of the wastewater in America was released into waterways without being properly treated. Few people realize how complex today's wastewater treatment processes are.

Touring a modern wastewater treatment plant is a short course in environmental engineering, chemistry, biology, microbiology, and public policy. Each plant is a collection of the industry's efforts to control water pollution, and the cycle that occurs each day at these facilities is a vivid illustration of the Clean Water Act in motion. As a result, public health, water quality, and the environment are all enhanced and protected better today than ever before.

REMOVING POLLUTANTS

As its name implies, "wastewater" is mostly water. In fact, wastewater typically averages 99.94% water by weight; only a small 0.06% is actually waste material. Concentrations of waste materials substances are usually referred to in milligrams of pollutants per liter of water (mg/l) or parts per million (ppm).


To put these terms in perspective, one ppm is equal to one milligram per liter, which is equivalent to one minute of time in 1.9 years or one inch in 16 miles. These statistics emphasize that wastewater treatment processes, which are designed to remove a few milligrams per liter of a pollutant, are similar to sifting through a haystack to remove a tiny needle; however, the balance of nature depends on our ability to do just that—and modern wastewater treatment plants accomplish this continuously 24 hours a day, 365 days a year.

THE IMPORTANCE OF MONITORING

Wastewater treatment plants constantly monitor the water. In a typical treatment plant, numerous sampling points and laboratory tests are used to monitor the health of the water. Some sampling is done by hand: bottles are lowered into the flow to collect samples for analysis at a laboratory; and some is automatic: devices measure the various properties of the wastewater flow, reporting electronically to a computer. Each step in the treatment process has its own sampling and monitoring requirements, and each is important to protecting public health and the environment.

MEETING WATER QUALITY STANDARDS

In the U.S., many of a plant's monitoring requirements are laid out in what is called a discharge permit. These permits also specify the plant's pollutant discharge limits. Since 1972, every treatment plant that discharges directly into a body of water has been required to have a permit issued by an approved state agency like TDEC or by the U.S. EPA. The system under which the permits are administered is called the National Pollutant Discharge Elimination System, or NPDES for short.



NPDES permits tell the plant how often they need to sample and report on the quality of the water they are discharging back into the environment. Permits are based on each particular wastewater treatment plant and its processes, with the minimum for treatment being set at the level required to meet the water quality standards of receiving water bodies like the Harpeth River.

The City of Franklin is proud that in recent years, our wastewater utility has received NO notices of violation from state or federal regulators and there are NO situations of ongoing noncompliance.

THE HARPETH RIVER: A PRECIOUS RESOURCE

Sections of the Harpeth River are indeed on the state's list of water quality limited streams, which makes them a priority for water quality improvement efforts. ***In fact, the river is impaired before it reaches the City of Franklin.***

The Harpeth River is a precious resource and we are ever-mindful of the importance of stewardship of this vital community asset. That's just one of the reasons we take pride in the fact that our Water Reclamation Facility consistently outperforms the regulatory limits set on it by the Tennessee Department of Environment and Conservation (TDEC). The state's permit establishes constituent levels for waters discharged from the Water Reclamation Facility that – even if the levels were reached – would be protective of the Harpeth River.

Our City and our Water Management Department are run by professionals committed to openness and transparency. If you have any issues or concerns, they will be happy to address them. The facts matter, and we are committed to making sure our community has and understands them.

Sources:

Tennessee Department of Environment & Conservation
U.S. Environmental Protection Agency
Water Environment Federation