



The Flow

Springfield Water & Sewer
Commission

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More Information

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'SLUDGE' PROCESS

One major component of water treatment is the removal of minute particles through filtering and settling. These processes create a product commonly referred to as "sludge". This sludge is the accumulation of particles that are captured by the filter media and/or fall to the bottom of basins during the sedimentation process. Once the accumulation gets large enough to create inefficiencies with water treatment, it must be removed. To remove the sludge, filters are backwashed, and basins are drained.

When tanks are drained or filters backwashed, the water and sludge flow to the outside lagoon that is located at the treatment plant. Typically, a sludge removal process happens weekly and that sends up to 94,000 gallons to the lagoons.

For many years, the sludge from the lagoon has been pumped to the nearest sewer main and sent to the wastewater treatment plant (WWTP) along with the city's normal sewer flow and it has been treated there. Water sludge and sewer sludge are completely different and the mixture of each at WWTP disrupts efficient sewer treatment and the separation of this water sludge became necessary.

In partnership with Lebanon Water Works, the "In The Round" dewatering unit was purchased for shared use.



In The Round Dewatering uses polymers to get the raw wastewater to floc, separating the solids from the water. The water settles out of the drum through specially designed tiles that keep the solids inside the drum. When the drum is full, it is rotated at a rate of one revolution every two hours. After the drum runs overnight it can be loaded on a roll-off truck and taken to landfill or unloaded on site with NO free liquids. The end result of this process is efficiency and a large reduction in costs.

A standout feature of this system is its superior filtrate clarity. Unlike traditional dewatering units, which typically provide 85-95% solids removal, this system achieves a filtrate clarity of up to 99.5%. This exceptional clarity may result in the ability to return the "clean" water to the creek with no further treatment.



EMPLOYEE SPOTLIGHT: ANGELA CULVER

Angela is the Special Projects Administrator. She began her employment in 1992 as the secretary/treasurer and migrated to special projects in 2019. Angela is referred to as the unofficial historian for the Commission. She enjoys spending time with her grandchildren and gardening.

QUALITY EMPLOYEES

The SWSC water distribution crew responded to the May 30th tornado event in Washington County with rescue and cleanup assistance. Many thanks to them for their assistance.



EFFICIENT & HIGH QUALITY WATER SUPPLY

Water Efficiency at SWSC

Only so much freshwater is available for consumption. To keep up with population growth, greater competition of resources, and other considerations, drinking water suppliers need to adopt best industry practices for water efficiency, and new strategies that adjust for changes in water quantity and quality.

From source to tap to the quantity of water we must treat, it is important that we reduce the amount of water we use and manage our use of water more effectively. Drinking water system owners and operators can pursue best industry practices for water efficiency, such as:

o System-wide water loss accounting.

- SWSC maintains water loss accounting and it is higher than desirable. Much of that is attributable to very old infrastructure (in the city limits) and much of that is slated for replacement over the next 2-3 years. SWSC strives to limit water loss.

o Leak detection and repair.

- Many distribution leaks are obvious – water appears at the surface indicating a leak and it is repaired. Some leaks never surface and just leak water for years. SWSC is working toward a program with leak detection methods to locate and repair these types of leaks.

What can you do to be water efficient?

• Checking for Leaks

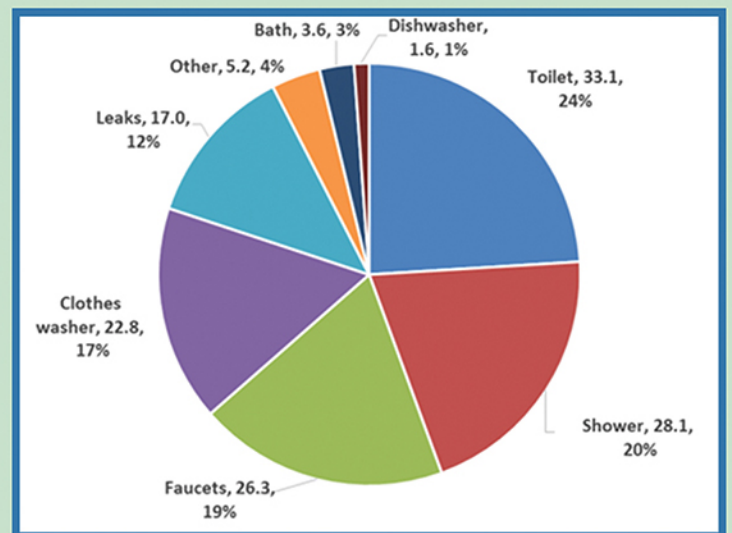
The average household's leaks can account for nearly 10,000 gallons of water wasted every year and ten percent of homes have leaks that waste 90 gallons or more per day. Common types of leaks found in the home are worn toilet flappers, dripping faucets, and other leaking valves. These types of leaks are often easy to fix, requiring only a few tools and hardware that can pay for themselves in water savings. Fixing easily corrected household water leaks can save homeowners about 10 percent on their water bills.

To check for leaks in your home, you first need to determine whether you're wasting water and then identify the source of the leak. Here are some tips for finding leaks:

- Take a look at your water usage during a colder month, such as January or February. If a family of four exceeds 12,000 gallons per month, there are serious leaks.
- Check your water meter before and after a two-hour period when no water is being used. If the meter changes at all, you probably have a leak.
- Identify toilet leaks by placing a drop of food coloring in the toilet tank. If any color shows up in the bowl after 10 minutes, you have a leak. (Be sure to flush immediately after the experiment to avoid staining the tank.)
- Examine faucet gaskets and pipe fittings for any water on the outside of the pipe to check for surface leaks.

This will begin a series of EPA articles related to typical household leaks and repairs, but if you want to jump ahead, please visit the following link: [Fix a Leak Week | US EPA](#)

Where is your household water used?



Serving the cities of Springfield, Mackville, Willisburg and surrounding communities since 1951.

