

WASTEWATER TREATMENT FOR DUMMIES

The Cliff Notes of the wastewater treatment process, written by Ayanna Bronner, Public Relations Coordinator, City of Chattanooga, Wastewater Department, Moccasin Bend Environmental Campus:

1. Catching the Big Trash

When all that dirty water from our toilets, sinks, and showers first arrives at our campus, it passes through giant strainers. Think of it like a huge colander that catches all the big things that come down the pipes—especially those "flushable" wipes (which are actually terrible for pipes and shouldn't be flushed at all!), plastics, and other garbage.

2. Sifting the Sand

Next, the water goes through smaller, finer screens. This step catches the tiny, gritty stuff that washes down our drains, like sand, pebbles, and dirt.

3. Settling Down

The water then flows into large, quiet pools and takes a long break. Because the water is sitting still, the heavy solid stuff (yes, this includes bowel movements and toilet paper!) sinks to the bottom, while the lighter stuff floats to the top. This makes it really easy for us to just scoop the solid waste right out of the water!

4. Mixing It Up

After that, the remaining water is stirred together in giant mixing bowls so that it is completely blended and even.

5. A Breath of Fresh Air

We pump pure oxygen into the water. We do this to get it ready for our little helpers in the very next step!

6. The "Good Bugs" Go to Work

This is the coolest part! We introduce helpful, microscopic bugs (called microbes) into the water. The oxygen we just added helps them breathe, and they go to work "eating" up all the tiny bits of invisible human waste that are still left over. They are nature's tiny cleaners!

7. Zapping the Germs

Once the bugs have done their job, we want to make absolutely sure the water is safe. We add a special cleaner (similar to household bleach) to zap any bad germs and bacteria that might still be hanging around from the dirty water.

8. Making it Fish-Friendly

We can't send bleach into the river, so right before the water leaves our campus, we add a special neutralizer. This acts like a magic eraser, completely removing the cleaner so the water is perfectly safe for the fish, plants, and wildlife.

9. Back to Nature

Finally, what started as dirty toilet water is now sparkling clean! It flows right back out into the Tennessee River and Nickajack Lake, ready for nature to use all over again.