ISSUE
07

Weekly Newsletter
from Agresource Inc.
for turning waste into
opportunity

Whole Cycle Tuesday

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share." — Lady Bird Johnson

Why It Matters

Proper wastewater treatment protects public health, preserves ecosystems, and helps manage our water resources more sustainably. With water scarcity becoming a growing concern, some advanced facilities even treat wastewater to drinking water standards—an approach known as water recycling or water reuse.

Understanding this process helps us appreciate the systems that keep our communities safe and clean.

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Wastewater Treatment 101: What Happens After You Flush

Step 1: Collection

Wastewater from homes, businesses, and industries travels through a network of pipes to a treatment plant. This water contains everything from soap and food particles to human waste and chemicals.

Step 2: Primary Treatment

At the plant, wastewater first goes through primary treatment, where large solids like plastic, rags, and sand are filtered out. Then the water enters a settling tank where heavier solids sink to the bottom as sludge, and oils float to the top and are skimmed off.

Step 3: Secondary Treatment

Next, the water moves to secondary treatment, which uses bacteria to break down organic matter. This stage often involves aeration tanks, where air is pumped in to help bacteria digest pollutants more efficiently.

Afterward, the water goes into another settling tank to separate the remaining solids.

Step 4: Disinfection

To kill any remaining harmful bacteria and viruses, the water is disinfected—typically with chlorine or ultraviolet (UV) light. Once treated, the clean water is released into rivers, lakes, or even used for irrigation and industrial cooling.

Step 5: Sludge Treatment

What about the leftover sludge? It's treated separately, often through digestion (where more bacteria break it down) and then it's thickened or dewatered. Treated sludge can be disposed of in landfills, incinerated, or used as nutrient rich soil amendment by direct land application or composting, depending on regulations and treatment quality.