

SEND DIRTY WATER TO BE CLEANED

The MWRD is the wastewater treatment and stormwater management superhero (agency) for the City of Chicago and 128 suburban communities throughout Cook County. The MWRD owns and operates seven water reclamation plants that treat (clean) wastewater from homes and businesses throughout our 882.1-square-mile service area, as well as stormwater from combined sewer communities. We work every day to reduce flooding and transform wastewater into valuable resources like clean water, phosphorus, biosolids and natural gas.

Water from your drains and faucets, as well as water after a storm, goes into the sewer system. This wastewater and stormwater drain through local municipal sewers and down into our interceptors before flowing to water reclamation plants. The MWRD cleans the water and recovers resources using a combination of physical, biological, and sometimes chemical treatment processes.

The MWRD prides itself on protecting the waterways and improving the quality of water in its service area.

CONGRATULATIONS!

YOU MADE IT TO THE LOCAL WATERWAYS!



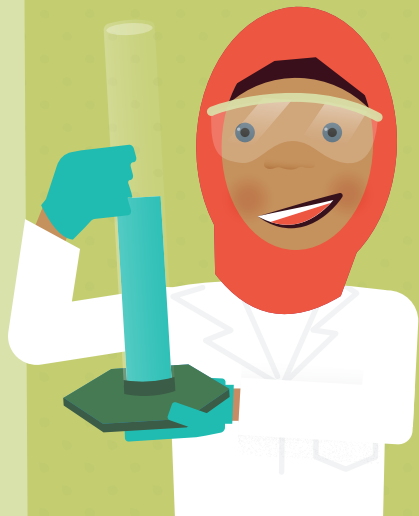
CLEAN ME UP AND GET ME TO THE LOCAL WATERWAYS!



HI, MY NAME IS GINELLA.

As a microbiologist at the MWRD, I monitor and research water quality to support wastewater treatment operations and protect public health. Our wastewater is mostly cleaned by good microbes (tiny microscopic "bugs") who like to eat the organic waste (poop!) from our sewage.

I monitor the treatment process with microscopes and other laboratory instruments that help me view the microbes up close. If I find the cleaned water still contains harmful bacteria, I identify the adjustments needed to improve the wastewater treatment process.



Metropolitan Water Reclamation District of Greater Chicago

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HOW IS DIRTY WATER CLEANED?



Metropolitan Water Reclamation District of Greater Chicago



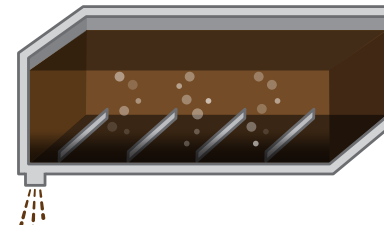
6. DISINFECTION

During disinfection, the MWRD uses a variety of measures at different WRPs to add a final layer of treatment before water is released into neighboring waterways. The DNA of microbes are deactivated using a chlorination/dechlorination application process or an ultraviolet (UV) light disinfection system that prevents them from reproducing or growing. These disinfection processes drastically improve the quality of the water produced by the MWRD.



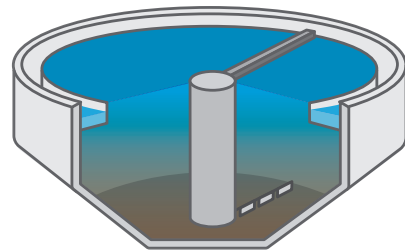
1. COARSE SCREEN

Wastewater entering the WRP passes through coarse screens that filter large objects ranging from trash to tree limbs to possums.



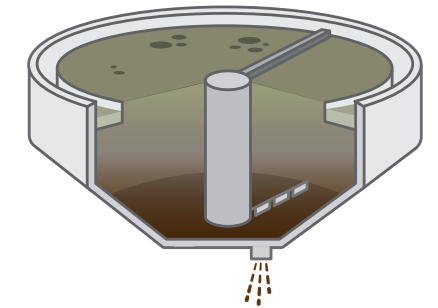
2. AERATED GRIT TANK

Next, pumps move water to aerated grit tanks. The air bubbles keep lighter materials suspended, while grit, sand and gravel sink to the bottom. A conveyor scrapes the larger material on the bottom into a drain. It is then taken to a landfill.



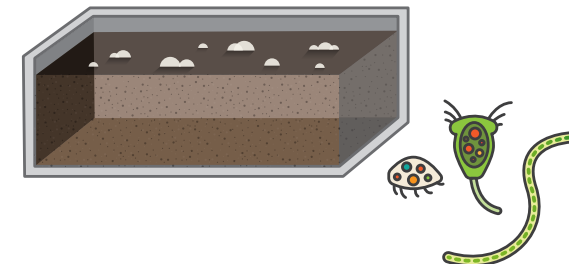
5. FINAL SETTLING TANK

In the final settling tanks, solids sink to the bottom where revolving blades scrape them into a drain. The water at the top of the tank is now clean.



3. PRIMARY TREATMENT

The water flows into primary settling tanks. A revolving conveyor with slats skims off the floating fats and oils while solids settle to bottom. The floating fats and oils are moved to a drain and then they are sent to a landfill.



4. SECONDARY TREATMENT

Water enters the aeration tanks with pumped, filtered air and a population of microorganisms that break down the remaining suspended solids.

O'BRIEN WATER RECLAMATION PLANT
3500 Howard St, Skokie, IL 60076