

# WHAT NOT TO FLUSH & WHY



## What is the quality of water after being processed?

During normal processing, (apart from unusual events of nature), the quality of the water leaving the Wastewater Treatment Plant (WWTP) is statistically excellent, appropriate for the environment, and has been improved from when it was drawn from the river as source water for municipal use.

## Consumer Tips for Water Conservation & Cost Savings

**Repair Leaks & Dripping faucets:** Causing damage to your property and they're literally pouring money down the drain. One of the best ways to reduce your water bill cost in the long-term is to take care of these problems as soon as they arise.

**Look out for the Water Sense Label.** Products that carry the Water Sense label have been certified as meeting the EPA's water efficiency and performance standards. It covers a range of products, from sprinkler systems, showerheads, toilets and faucets are covered by this program.

**Use the Dishwasher:** A modern, efficient dishwasher uses around four gallons of water to clean a full load. You could go through a staggering 27 gallons of water to wash the same amount by hand. The energy saved by not heating all those gallons of water, you'll save money on your energy bills too.

**Ditch the Bath and Take a Shower:** Taking a bath uses up to 10 gallons more than the average shower. Be kind to your wallet and the environment by making the switch.

**Water your yard in the Morning:** Watering during cooler hours eliminates evaporation and aids for better absorption.

# BLACKWELL WASTEWATER TREATMENT PLANT

Spring 2020



## DID YOU KNOW?

-The Blackwell WWTP processes, on average between 1-1.5 million gallons per day.

-It holds about 300,000 gallons of water at anytime and operates 24 hours a day.

-Wastewater may be tested for up to 200 different things such as chemicals, metals, organics and much more !

-An Aeration Plant uses air pumped at a rate up to 20,000 cubic feet per minute, combined with healthy bacteria to do the job!

-The amount of water needed to fill our water plant from empty to full is comparable to the amount of water used if everyone in Blackwell took just one bath at the same time!

## WHAT WE DO?

Wastewater is water that has been previously used, and includes everything from sewage to water drained from baths and showers. This water can, with proper treatment, be recycled and reused for a variety of activities – watering crops, fighting fire, cooling industrial machinery and even human consumption.

*"We have the responsibility to not only the community of Blackwell, but the river's ecosystem as well as our sister cities downstream".*

*- Kent Turner*



Blackwell Waster Water Plant

## ABOUT THE PROCESS

Aero-Mod activated sludge process for biological nutrient removal from wastewater offers the benefits of sequencing aeration with the reliability of continuous clarification. The process results in consistent effluent quality with total nitrogen levels as low as 3 mg/L and phosphorus levels as low as 1 mg/L. The process incorporates the Clar-Ator Clarifier, allowing the process to handle up to 4:1 sustained peak flows with no bypassing of untreated wastewater.

The process is energy efficient and has a small footprint. Simple timers and controls perform much of the operation, allowing the operators to focus on more critical areas, such as testing. To achieve better settling solids, the process incorporates a selector tank to provide a preconditioning of raw wastewater that inhibits growth. Some test samples of waste water are heated to 1,120 degrees F.

### Blackwell Wastewater Treatment Plant

900 E. Stevens St  
Blackwell, OK 74631

P.O. Box 350  
Blackwell, OK 74631

## AERO-MOD TREATMENT

In 2017, The City of Blackwell replaced the main trickling filter treatment process with a new Aero-Mod package plant – one of the very first in Oklahoma. The City's commitment to handling environmental concerns resulted in costly investments to bring the WWTP to current standards, but results have brought dramatic improvements over past performance. We currently have extremely low concentrations of select heavy metals, our new plant is operating as expected, and the effects of our improvements are both solid and promising!

The Aero-Mod process and a new lab building were constructed within the current plant area, performing the same treatment operation in just 1/3 of the space and reducing heavy metals so much that the sludge can now be disposed of as regular landfill waste. The existing influent pump station and plant headworks building became apart of the new overall process. With more automation, the new plant requires less manpower to operate.

