

# Planning for Reuse

OPEN HOUSE

Saturday, Feb. 23, 2019

10 a.m. - 2 p.m.

Plum Creek Water Purification Facility



## WHY REUSE WATER?

Water is too important to use just once. Reusing water is one of the most **cost-effective, environmentally sound and sustainable** methods of water supply that there is. Castle Rock currently gets water from underground aquifers and East Plum Creek. Reusing water will allow these sources to recharge. The Town also imports water, and while it is a great supply, this is expensive. The cost for reuse water is considerably less than many other sources. Reuse water will make up about 1/3 of all water supply for the Town beginning in 2020.



## WHAT IS REUSE WATER?

Reuse water involves producing safe drinking water from wastewater. After water is used in our homes and businesses, it goes down the drain and is sent to the wastewater treatment plant. There, contaminants are removed and the water is released, in our case, into East Plum Creek. This water will then be picked back up from the creek, and sent to Plum Creek Water Purification Facility where it will undergo traditional and Advanced Treatment processes. This purified drinking water will be distributed to homes and businesses throughout Castle Rock.



## HOW SAFE IS REUSE WATER?

All drinking water that is distributed to homes must meet strict local, state and federal regulations for drinking water standards, regardless of where the water originates.

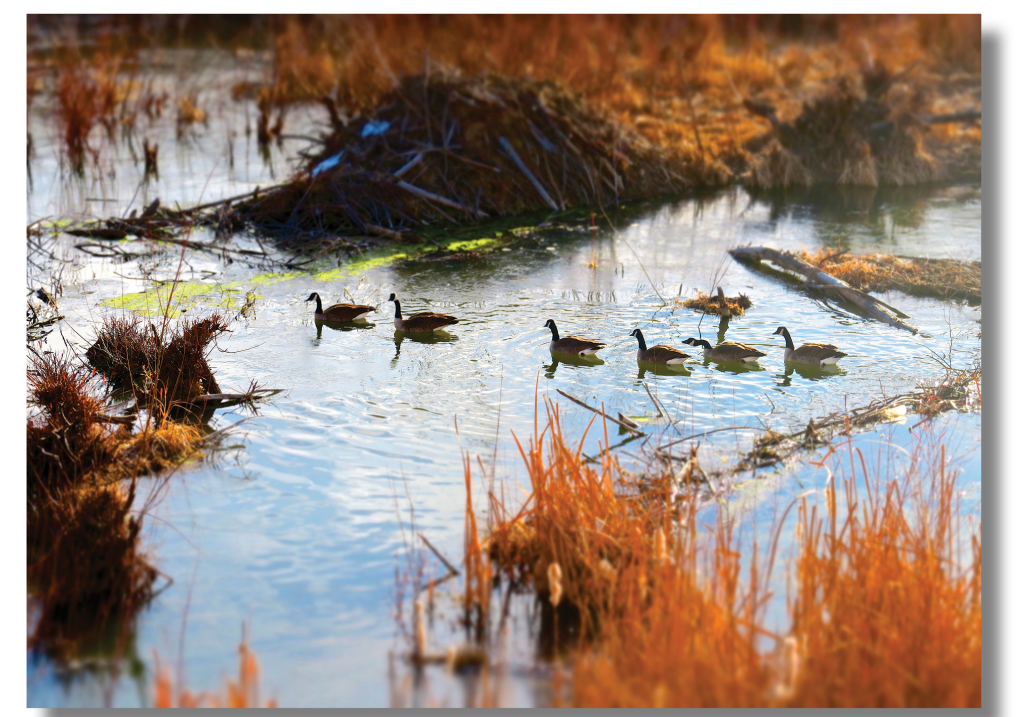
With reuse water becoming more common, additional scientifically-proven treatment processes, like Advanced Treatment, are put in place. Advanced Treatment addresses contaminants such as pharmaceuticals and personal care products that may get into local creeks and rivers. Advanced Treatment will make water more pure than current standards. Reuse water and all drinking water is tested daily to ensure it is safe to drink. Castle Rock Water conducted a pilot project to determine the ideal treatment options for Advanced Treatment.

## HOW IS REUSE WATER DIFFERENT THAN DOWNSTREAM WATER?

It isn't—water reuse already happens. Usually water that has been treated from the wastewater treatment plant is released into the nearby stream.

Communities downstream then pick that water up and transport it to a drinking water treatment plant, where it is treated, tested and then distributed for use within the home or business. To address water rights and concerns for biological and pharmaceutical contaminants, regulations and processes specifically for reuse water are being developed.

All water on earth is recycled in some way. Treatment processes just speed up and focus those natural purification processes.



## WHAT IS THE PLAN FOR CASTLE ROCK?

### 2018

After the pilot project was completed, design and construction for Advanced Treatment began at Plum Creek Water Purification Facility

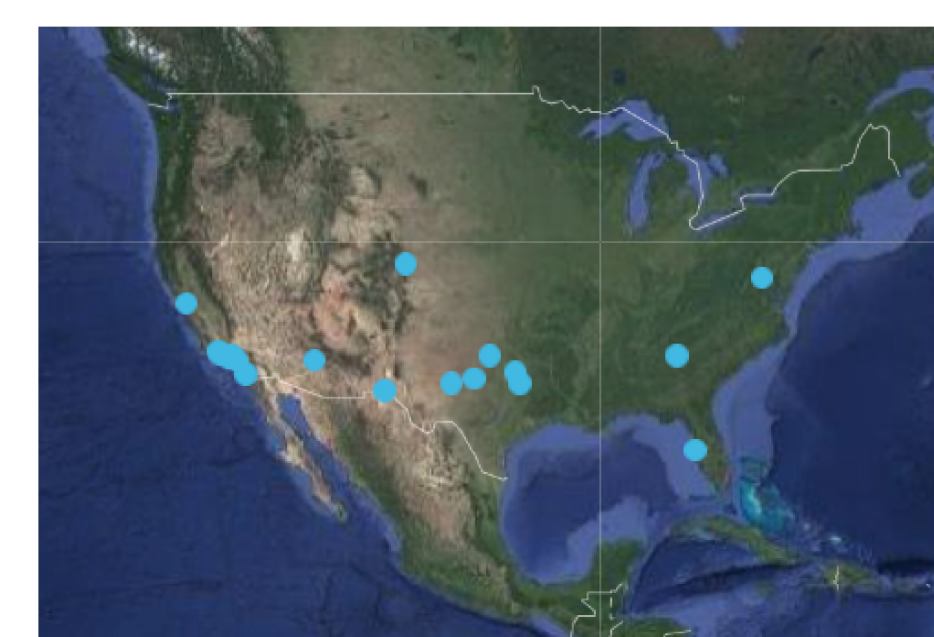
### 2019

Several large irrigation accounts are slated for non-potable reuse, including the municipal golf course

### 2020

Reuse water taken from Plum Creek will be purified to drinking water standards and mixed with other supply for Town-wide household and business consumption

## WHO ELSE IS USING REUSE WATER?



Water reuse purification facilities are popping up all over the world and some communities have used reuse water for more than four decades. Locally, Aurora began

using reuse water in 2010 with the installation of the **Prairie Water** project which supplies 50 million gallons of potable reuse water per day to Aurora and surrounding communities. (Some of Castle Rock's imported WISE water is from Prairie Waters.) It is estimated that by 2065 almost 30 percent of water consumed in all South Metro communities will be from reuse.