

# PUREWATER COLORADO DEMONSTRATION

## Frequently Asked Questions (FAQs)

### What is the PureWater Colorado Demonstration?

Colorado Springs Utilities, Colorado School of Mines, and Carollo Engineers are partnering on the PureWater Colorado Direct Potable Reuse Mobile Demonstration, which takes recycled water that's been used in homes and businesses, through a multi-step purification process to produce water that meets or exceeds all drinking water standards. This project will demonstrate how Colorado water providers can use existing technology to reuse water to provide safe, reliable and sustainable drinking water.

### What is direct potable reuse?

The process of using treated wastewater for drinking water is called potable water reuse. In Direct Potable Reuse (DPR), reclaimed water is first treated at a water reclamation facility, then continues to an advanced drinking water treatment plant and finally is distributed to customers. This water is also known as purified water and meets all state and federal drinking water quality regulations.

### Where does it fit in our water supply portfolio?

Colorado Springs Utilities collects surface water from three river basins (Arkansas, Colorado and South Platte) and transports a majority of it from 100 miles away in order to meet the water needs of our community. We currently reuse the water we are legally allowed to through exchanges, our non-potable system, ground water augmentation and water sharing/leases. We anticipate that in our long-term future, purified water will be an additional mechanism for leveraging the supplies we have.



### Why is the potable reuse project needed?

Colorado Springs is the largest city in Colorado that is not located on a major water source. Delivering water to our community is one of our biggest challenges and successes. Our planners have always looked ahead – 50 years in advance – to ensure our community has the water it needs when it needs it. Prolonged periods of drought and climate variability require our water supply planners to look at all available water management strategies.

The PureWater Colorado demonstration and advanced purified water technology fits with our commitment to environmental stewardship and reuse of our limited water supplies. What we learn will help us continue to plan for and develop cost-effective, reliable, high-quality water for our customers.

### What purpose will it serve?

Purified water is a sustainable water source that is locally controlled and may be a wise way to manage our water resources in the most cost-effective manner.

Purified water technology would provide Colorado Springs Utilities another efficient, cost effective and environmentally responsible means to ensure the continued ability to reuse 100% of our reusable water sources to meet future water demands.

## How safe is the water?

Purified water is safe for human consumption. Multiple layers of advanced treatment technologies ensure that the purified water created in this treatment demonstration meets all state and federal drinking water regulations. According to studies conducted by the WaterReuse Association, purified water is cleaner than bottled water and no adverse human health effects have been documented from the augmentation of drinking water supplies with purified water.

## How will it be monitored to ensure safety?

Purified water will be routinely tested, including grab samples and real time online sensor technology to confirm acceptable water quality. The results of the testing will be provided to the Colorado Department of Public Health and Environment, the regulatory agency tasked with ensuring safety for human consumption, to document that the purified water complies with or exceeds state and federal drinking water standards.



## How does the purified water treatment process compare to the water treatment process currently used at the Water Treatment Plants?

Our existing water treatment plants use a traditional water cleaning process that includes four main steps: coagulation/flocculation, sedimentation, filtration and disinfection. The PureWater Colorado Direct Potable Reuse Mobile Demonstration project uses an innovative, 6-step advanced water purification process without reverse osmosis to produce safe, high-quality drinking water. These steps include: ozonation, biofiltration, microfiltration, granular activated carbon, ultraviolet light/advanced oxidation, and chlorination resulting in the elimination of pathogens, near-total removal of trace organic constituents and the production of high-quality water that is protective of public health.

## How much will it cost?

Currently this is a long-term, potential solution, therefore it is impractical to estimate how this solution would impact water rates for our customers. The economic viability of the treatment technology utilized for purified water will continue to be evaluated against costs for pumping and treating water, especially as regulations become stricter and costs for water go up.

## When will it be implemented?

Evaluating the use of purified water is part of our 20-year planning horizon. The potential use of purified water will be monitored over time as the technology becomes more cost effective, regulations change, and the City's water demand grows.

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