

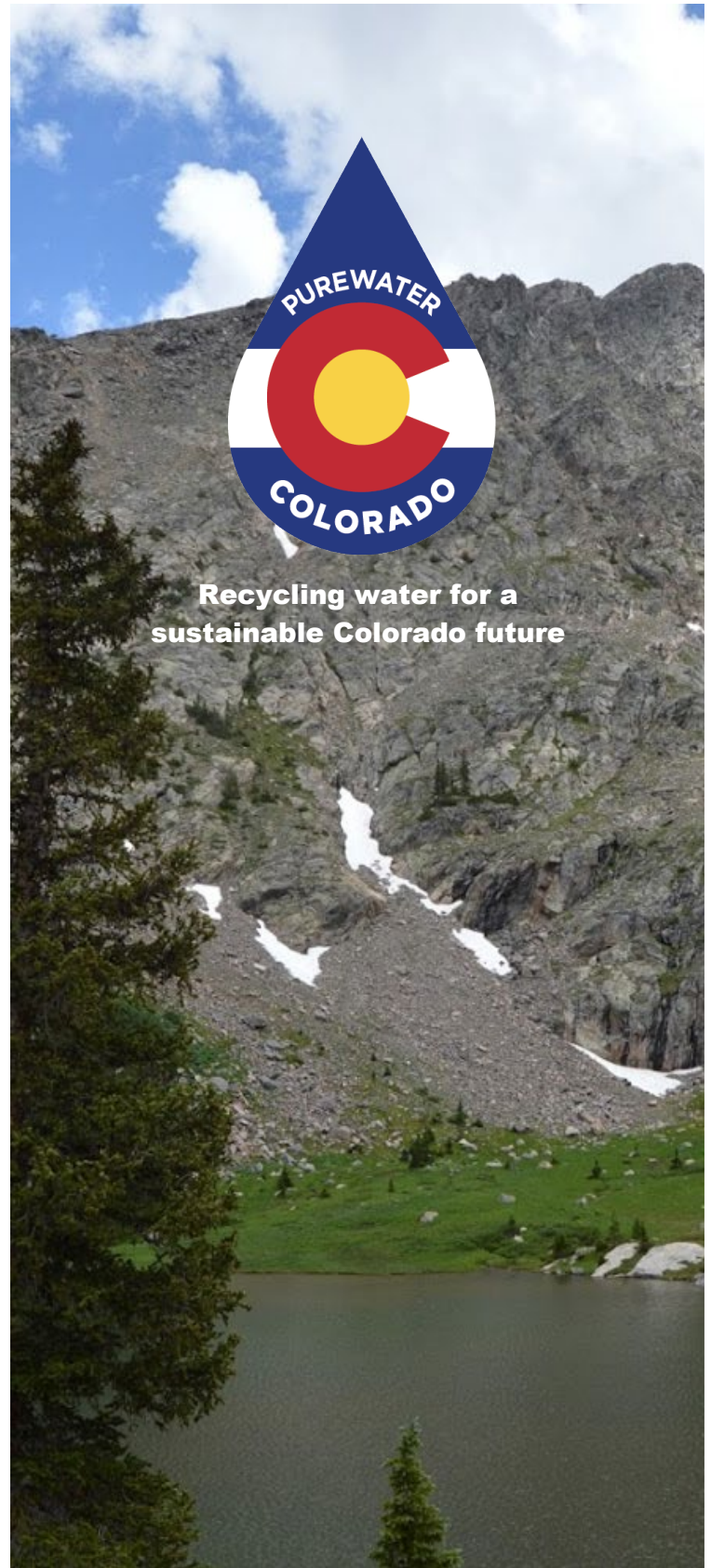
Water supply in Colorado

Colorado is one of the driest states in the U.S. It is critical to start planning new ways to meet future water demands, especially amid a quickly growing population, limited local water supplies and the impacts of a variable climate.

Innovation for Colorado's future

The PureWater Colorado Demonstration project uses advanced treatment technologies to produce safe, reliable and sustainable drinking water. This purified water is locally controlled and may be a wise way to manage our water resources in the most effective manner.

The project aligns with Colorado Springs Utilities' commitment to environmental stewardship and reuse of our water supplies. What we learn will help us continue to plan for and provide cost-effective, reliable, good quality water for our customers.


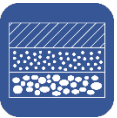






**Take a PureWater Colorado
Mobile Demonstration tour**

csu.org/Pages/DirectPotableReuse.aspx

The water purification process

Purified water begins with water that's been used in the community and cleaned at a water reclamation facility. The water purification process used by the PureWater Colorado Mobile Demonstration is a multi-barrier approach of consecutive treatment steps that work together to remove or destroy contaminants. The process includes water quality monitoring and safeguards to ensure the produced water is safe to drink.

<p>Step 1:</p> <p>Ozonation</p> 	<p>Ozone is a gas produced by subjecting oxygen molecules to high electrical voltage. This strong oxidant degrades organic matter and pathogens, then breaks down into dissolved oxygen.</p>
<p>Step 2:</p> <p>Biofiltration</p> 	<p>Water flows through carbon filters covered with beneficial bacteria which thrive in the presence of oxygen. This process removes both bulk and trace organics in the water.</p>
<p>Step 3:</p> <p>Microfiltration</p> 	<p>The water is then pushed through membranes with tiny pores to filter out suspended solids, bacteria, and protozoa. Membrane pores are 100x smaller than the width of a human hair!</p>
<p>Step 4:</p> <p>Granular Activated Carbon</p> 	<p>During this step, water flows through activated carbon granules like the filters in Step 2 (without the beneficial bacteria) or a kitchen sink filter. The large surface area of the activated carbon absorbs additional bulk, organics and trace chemicals.</p>
<p>Step 5:</p> <p>UV/Advanced Oxidation</p> 	<p>This step generates high energy ultraviolet light for disinfection. When combined with hydrogen peroxide, it can create high energy radicals that further inactivate pathogens and degrade trace chemicals.</p>
<p>Step 6:</p> <p>Chlorination</p> 	<p>Dosing the water with chlorine at the end of the treatment process further inactivates pathogens and provides a residual disinfectant to ensure the water remains safe to drink on its way to homes and businesses.</p>

This project is brought to you by:



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