6,912 ultraviolet bulbs sit in specially designed quartz sleeves for the facility’s advanced ultraviolet oxidation system. UV is one of the most effective ways to remove pharmaceuticals from drinking water.

Owner:
Aurora Water
Aurora, Colorado

Ground Breaking:
July 2007

Completion:
October 2010

Initial Capacity:
10,000 acre feet per year
(3.3 billion gallons)

Project Cost:
$638,000,000

Treatment capacity:
50,000,000 gallons per day

Water Sources:
Aurora Reservoir
South Platte River

1 Water is pumped from wells near the South Platte River near Brighton.

2 Water is piped to a man-made basin, where it percolates through sand and gravel, much like a natural aquifer. The water is then piped 34 miles through three pumping stations to a treatment facility north of Aurora Reservoir.

3 At the treatment facility, the water is softened to remove excess calcium and magnesium.

4 Water is exposed to high-intensity ultraviolet light to kill remaining impurities by destroying their chemical bonds.

5 Water is filtered through coal and sand to remove remaining particulates.

6 The final step is called activated carbon absorption. This is a much larger version of water-purification systems many people use in their homes.
Prairie Waters is an innovative system that uses a sustainable water source by recapturing river water to provide drought insurance and as a cornerstone of a water supply plan that will help meet much of Aurora’s needs for decades. Prairie Waters uses both natural cleansing processes and state-of-the-art purification technology to deliver an additional 3.3 billion gallons of water per year.

Aurora owns rights to water in the South Platte River Basin which includes water from the Colorado and Arkansas River Basins, as well as agricultural rights in the South Platte purchased from willing sellers. In most cases, Aurora’s water rights in the South Platte allow the city to use the water “to extinction”. Essentially, this means that the water residents use for washing, laundry, showering, as well as some of the water from lawn watering, stays in the South Platte River Basin. Since this water is not native to the South Platte basin, we have the right to take an equivalent amount back out of the river.