

CASE STUDY / PLUM CREEK WATER PURIFICATION FACILITY ADVANCED TREATMENT

TAKING A PROACTIVE APPROACH TO SUSTAINABLE WATER

Municipal leaders are continually on the hunt for new ways to protect precious resources, like water. Castle Rock, Colorado, is one community that took proactive steps to provide a sustainable water supply for its customers. This meant developing a water supply system capable of meeting demands using renewable sources.



UTILIZING A TRUSTED PARTNER FOR NEW GOALS

The Town of Castle Rock turned to the original designer of the facility to help meet its water goals.

CHALLENGE

Castle Rock Water wanted to take a proactive approach to developing a sustainable, long-term water supply for its customers. Part of this approach included developing a raw water supply and treatment system that meets demands using renewable sources.

The town's strategy to meet these goals involved both planned indirect and direct potable reuse sources from the water reclamation facility. The project also needed to include additional systems to remove giardia, viruses and cryptosporium, while also targeting reductions in emerging contaminants.

SOLUTION

As the original designer of the Plum Creek Water Purification Facility, our team planned for the addition of advanced treatment systems that will help the town meet its renewable source goals. Services included leading the piloting and design efforts, as well as collaborating closely with Garney Construction.

We provided design services for the addition of raw water blending, biological filtration, advanced oxidation, UV, granular activated carbon and residuals handling.

The role of the granular activated carbon system is to target emerging contaminants such as pharmaceuticals and personal care products, in addition to providing a polishing step for total organic carbon. The system includes eight adsorption vessels, each filled with 40,000 pounds of granular activated carbon.

RESULTS

The project is using the same guaranteed maximum price collaborative delivery method that was used for design and construction of the original facility. Like for the original facility, the construction of the project was divided into multiple work packages to expedite the schedule.

With the new systems, the water purification facility can successfully remove giardia, viruses and cryptosporium, and reduce contaminants of concern. As a result of the project, the town is better able to meet its renewable source goals.

PROJECT STATS

CLIENT

Town of Castle Rock

LOCATION

Castle Rock, Colorado

COMPLETION DATE

2020

\$30M
IN PROJECT COSTS

6M
GALLONS-PER-DAY
CAPACITY