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CASE STUDY

Erger's Pond Augmentation Station | Brighton, Colorado

BILCO Floor Doors Help Colorado Community Solve Water Challenges

With a surge in population and only about 15 inches of rainfall each year, the city of Brighton, Colorado faces a difficult challenge in water management for its more than 41,000 residents.

City officials designed an innovative solution with the construction of the Erger's Pond Augmentation Station. The \$5.4 million project, which was completed last year, included the construction of two raw water pump stations near a city-owned reservoir adjacent to the South Platte River. One pump is used to fill the reservoir, and the other is used to pump water back into the river.

The augmentation solution is a fairly new idea in Colorado, which has a vexing water issue. The state's Western Slope, defined as being west of the Continental Divide, receives about 80 percent of the state's water supply. But nearly 80 percent of the state's population resides on the much drier eastern side of the divide. The South Platte River is the main water resource for the state's eastern side, including Denver.

In 1969, the state established the Water Rights Determination and Administration act. It requires "junior" water users on over-appropriated streams (such as the South Platte) to replace water to offset depletions to "senior" users. The priority to water rights is based upon when water rights were acquired. Holders of senior rights have the first claim to withdraw water. Ownership of land is insufficient to convey a right to use water.

Brighton's primary water supply comes from alluvial groundwater wells, which have junior rights, and therefore the city must augment supply so senior water users downstream have sufficient water. "Water in the West," said Dawn Hessheimer, Water Resource Specialist for the City of Brighton, "is very different from water rights in the Eastern United States."

For the project, Brighton replaced temporary pumps that were costly and inefficient with a permanent solution. Teams from Aslan Construction installed nine submersible pumps in underground wet wells to move the water, along with a gravity line.

The wet wells are accessed by a series of floor access doors manufactured by The BILCO Company. The doors feature aluminum construction and type 316 hardware for corrosion resistance and an industry-leading 25-year warranty. They are equipped with BILCO's patented engineered lift assistance for easy, one-hand, counter-balanced operation and automatic hold open arms for added safety. Tim Bosworth of Dalco Industries procured the doors for Aslan.



Photos: Matthew Puckett

"The BILCO doors were preferred by the operations department and are used to access the wet wells," said Jake Hebert, a civil engineer who worked on the project. "They were installed directly above all of the submersible pumps to provide a way to pull the pumps from the wet wells for maintenance and future replacement."

Brighton's population has nearly doubled since 2000, straining many city services. The augmentation station will go a long way toward solving problems related to water management. "Construction of permanent infrastructure to facilitate pumping operations was necessary and beneficial to the city," Hebert said.

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