

# MISSOURI AMERICAN WATER RAW WATER INTAKE AND PUMP STATION JEFFERSON CITY, MISSOURI



## Project Description

Reynolds constructed a new raw water intake and pump station on an existing site for an existing Water Treatment Plant. The purpose of the project was to replace the current raw water intake and pump station that was originally built and placed into service in the 1800s. We increased capacity and provided future capacity of 8.5 MGD in the new raw water intake. The wet well is approximately 19' in diameter and 75' deep with a divider wall in the middle to allow complete dewatering of either side. Once the wet well, or shaft, was completed, we built a 7'x7' horseshoe shaped tunnel approximately 200' through bedrock to a point underneath the river. This tunnel houses the 20" ductile iron intake lines, 4" stainless steel hydroburst lines, and 1" stainless steel chemical lines. Prior to the tunnel reaching the river, our marine crews installed two 48" diameter vertical shafts in the location of the intake screens. The progression of the tunnel ran into these 48" shafts to complete the route from the wet well to the river. The tunnel method of construction was determined to be necessary due to the Union Pacific railroad track that is within 40' from the existing pump station. Reynolds installed the process equipment, including four vertical turbine pumps (200 HP with Variable Frequency Drives), two sludge pumps, one

## At a Glance

Contract Amount:  
\$7.8M

Notice to Proceed:  
August 10, 2010

Completion Date:  
May 7, 2012

MGD:  
8.5

Owner:  
American Water Company

Engineer Contact Info:  
Black & Veatch

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hydroburst system, and two wedgewire intake screens (located in the river). There was extensive site work performed prior to starting the wet well construction. Approximately 10,000 CY of material was excavated, loaded, and hauled off site to make room for the new pump station facility.