

MISSOURI AMERICAN WATER  
CMAR 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. 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 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 hydroburst system, and two wedgewire intake screens. 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.

## At a Glance

Contract Amount:  
\$7.8 M

Notice to Proceed:  
August 10, 2010

Completion Date:  
May 7, 2012

MGD:  
8.5

Owner:  
American Water Company

Engineer:  
Black & Veatch