

Finished Water

A PHOTOGRAPHIC PROFILE



Individual lengths of PVC pipe (inset, left) were fused to form a seamless raw water transmission main (foreground). Softening filters (inset, right) were installed in the new ion-exchange water treatment plant.



ALLUVIAL WELL FIELD SOLVES SOURCE WATER PROBLEMS

Relying on surface water for its supply, the city of Pittsfield, Ill., was faced with inadequate capacity and inconsistent water quality conditions. Regulatory compliance was becoming more difficult, and public health was at risk.

After exploring various options, city personnel chose an alluvial well field, which now supplies a new 1,000-gpm ion-exchange plant. Raw water transmission mains connect the well field to the plant, and new finished water transmission mains connect to the distribution system. A backup generator and supervisory control and data acquisition (SCADA) system complete the project. The well field increased operational capacity and

reliability, improved cost efficiency, enhanced functionality and ease of operability, and now provides a supply of safe drinking water to Pittsfield customers.

PROJECT SPECIFICS

Project Name: City of Pittsfield Water System Improvements Project

Owner/Operator: City of Pittsfield, Ill.

Contractor: Bleigh Construction

Designer: MECO Engineering

Completion Date: January 2011

Water Source: Alluvial well field (two 1,000-gpm wells)

Technology: 1,000-gpm ion-exchange water treatment plant; SCADA; 4 miles of 14-in. polyvinyl chloride (PVC) fused pipe and

10 miles of PVC push-on-joint pipe make up a 14-mile raw water transmission main.

Project Cost: \$9.5 million financed through 2009 American Recovery and Reinvestment Act and Illinois Environmental Protection Agency funds

Service: 450,000 gpd, 750 gpm from wells

Staff Size: Old treatment processes required round-the-clock operations with two full-time licensed operators and two part-time workers. The new system requires one operator for a maximum of 2 hours/day.

Special Features: Fully automated operation with data logging for all facets of operation, including groundwater trending status.