In response to declining groundwater levels in Denver Basin aquifers, communities in the southeastern Denver metro area are actively seeking alternative water supplies. To meet this challenge, we are designing the first, large-scale potable water treatment facility in the United States to use ceramic membrane filter technology.

The new Rueter-Hess Water Treatment Facility, designed for the Parker Water and Sanitation District in Parker, CO, will treat a combination of local surface water, alluvial water, and water recycled from reclamation plants. In addition, the facility will use an innovative recirculating powdered activated carbon (PAC) system to efficiently remove dissolved organic carbon compounds prior to filtration. This system will be one of the first of its kind in the nation.

3-D Technology Reveals Potential Conflicts

In designing a new reclaimed water distribution system for the Noman M. Cole, Jr. Pollution Control Plant, we used the latest 3-D civil engineering technology to model the project’s five-mile pipeline corridor. Evaluating existing conditions and elements such as bridge foundations, existing utilities and topography allowed us to better mitigate potential conflicts. The new system allows water to be reused at the Covanta Energy/Resource Recovery Facility—one of the largest waste-to-energy facilities in the country.

At Dewberry, our engineers design water supply and treatment systems in support of communities nationwide. We take pride in providing practical and cost-effective solutions for clients, and develop long-term relationships to meet organizations’ changing needs. Our comprehensive approach to water planning and wastewater treatment helps ensure clean water for generations to come.

Groundbreaking Ceramic Filter Technology

Our water/wastewater infrastructure design experience, combined with our security engineering and emergency planning expertise, brings state-of-the-art techniques to critical infrastructure protection needs. Our professionals address environmental concerns in all aspects of development, planning, engineering design, and construction administration. We also produce high-quality spatial database and mapping products and are particularly proficient in developing spatial databases for municipal infrastructure such as resource identification, stormwater management, storm sewer, and water supply systems.

Detailed here are some recent examples of how we are dedicated to applying the latest tools, trends, and technologies in support of our clients’ program goals and objectives.
Comprehensive Design Service Compatibility

For nearly two decades, we have been providing planning and design services for the development, expansion, and upgrading of the infrastructure at the 9,000-acre MidAmerica Industrial Park, near Pryor, Oklahoma.

A master plan included designs for new, large-diameter transmission lines for raw and treated water, water treatment plant improvements, a 10-million-gallon water storage facility, increased treated water pumping capabilities and roadway improvements.

The high-quality infrastructure is credited with attracting industry giants such as Google and PepsiCo.

Optimizing Available Resources

The Parker Water & Sanitation District Regional Well Facility in Parker, CO, is an indispensable part of the district’s near-term water supply. The new $5.5-million, 2-MGD regional well facility added deep well capacity and the capability to blend alluvial water with cleaner deep-well water to produce a potable product.

Declining well production and high radionuclide levels in existing wells resulted in a water supply shortage. The project enabled the use of previously unusable wells by blending multiple supplies to meet drinking water regulations.

With water resources running short, the entire project was planned, designed, and constructed—start to finish—in only 18 months and went on-line in May 2009, just in time to meet summer irrigation demands.

Despite the very aggressive schedule, the project was completed with only 1.1 percent change orders.