



# Water Treatment Plant Improvements

## Gateway Regional Water Company

### Sandoval, Illinois

#### Client Need ...

Twelve rural municipalities and rural water systems were experiencing aging, deteriorating water treatment systems for many years. They were facing various water quality/quantity limitations, and increasing regulatory compliance issues. There was a lack of funding individually for the necessary improvements, so the twelve entities decided to pool resources, and to form a regional partnership for the \$20 million required in project funding.



#### HA Engineered Solution ...

HA partnered with the twelve water systems to spearhead the formation of a new regional entity - "Gateway Regional Water Company". HA utilized its funding ingenuity to capture millions of dollars in grants, coupled with low-interest, fixed-rate loan financing from the State of Illinois, USDA Rural Development, and Congressional discretionary funding. HA designed the system to intake raw water at Carlyle Lake, then pumping many miles through new transmission main to a regional water treatment plant in Sandoval, and ultimately, delivering finished water through a new transmission main to the various partners. A number of innovative treatment and distribution alternatives were assessed to overcome the wide-ranging hydraulic demand variables with the multiple systems and vast geographic distances involved. The preferred water treatment solution consisted of a Clari-Cone treatment system, on-site chlorine generation, geothermal heating and cooling, bulk chemical-feed tanks, and a state-of-the-art SCADA system which allows monitoring of all partner systems from the central plant.



#### Results of HA/Client Partnership ...

The new regional treatment plant has a 3.4 MGD capacity, expandable for future needs. Gateway has already obtained two additional bulk water customers, bringing their total membership to fourteen entities serving an estimated 20,000 water customers. The project was a huge success in terms of political cooperation among municipalities and water districts, cooperation among multiple funding agencies, as well as meeting water treatment/distribution goals. The project has enabled an entire region of Illinois to consistently provide safe drinking water and to maintain user-rates that are consistent and affordable. In addition to HA's efforts in begin a major driver in the formation of Gateway RWC, HA was acknowledged for its technical capabilities with multiple awards begin granted to the project - IRWA Plant of the Year, ASCE Outstanding Civil Engineering Achievement Award, and ACEC Illinois Engineering Excellence Award.

