

ASCE | *The newspaper for members of the
American Society of Civil Engineers*

news

Water Supply Project Helps Pflugerville Handle Growth

By Mark Fitzgerald

Pflugerville, a growing town just north of Austin, Texas, recently carried out a \$47-million capital improvement project designed both to meet the needs of its more than 27,000 residents and to accommodate future growth. As one of the state's fastest growing communities, Pflugerville in recent years has been challenged to find sources of water to supplement what it draws from an aquifer. The 18-month project involved constructing a river intake and pump station, a 26 km pipeline, a 2.2 million m³ raw water reservoir, a water treatment plant, and transmission facilities for treated water.

The new pipeline takes water diverted from the Colorado River and brings it to the reservoir. From there it is pumped into the treatment plant before being distributed to the city's residents. "In Texas, water is gold," explains Kelly Kaatz, the vice president of project management for HDR Engineering, Inc., an architecture, engineering, and consulting firm headquartered in Omaha, Nebraska, who managed the project. "So we're seeing more and more of these kinds of water planning projects, but we're trying to get away from constructing large dams on rivers. With off-channel construction, which is the kind of project this was, we're pumping from a main river, but we're storing it off-channel in a smaller tributary. So this reduces the environmental impact."

Installing the pipeline, about half of which traverses private property, involved addressing numerous permitting and right-of-way land acquisition issues. According to Jerry R. Weathers, P.E., a senior principal of Kleinfelder, Inc., an engineering consulting firm based in San Diego, who supervised the geotechnical aspects of the project, creating the dam made heavy demands on expertise and quality assurance testing. "This was a

relatively large undertaking and the geotechnical design work was challenging,” Weathers says. “But it was a pretty good site for an earth dam; the geology was favorable for groundwater control and for putting in a core trench to prevent seepage from under the dam. You don't get a whole lot of dams in this area, so as a geotechnical engineer, when one comes along you're always proud to get to work on it.”

The new water system was built with a capacity to meet the water supply needs of Pflugerville through 2025 and is expected to generate (via municipal water rates) enough revenue to pay for itself before long. “This was a big undertaking for a small town,” adds Kaatz, who grew up in Pflugerville and remembers what it was like with only 600 residents. “But the community was behind it, and now that it's done, more and more people are getting excited about it.”