

Colorado's Southern Delivery System Offers Promise of Water Availability to Match Population Growth

Beginning in the late 1980s, Colorado Springs Utilities began contemplating a new water delivery system to match forecasts of sustained population growth in the area. By 1996, Colorado Springs Utilities and its partner districts in Fountain, Security, and Pueblo West envisioned a more fully developed concept through their water resources planning effort.

As part of the planning effort, the Southern Delivery System (SDS) was conceived. "It's a regional project; it's not just to serve Colorado Springs," said SDS Public Involvement Manager Janet Rummel. "Rather than have communities build separate projects, multiple communities came together."

Design and permitting began in 2002, and National Environmental Policy Act compliance activities began the next year. This permitting process took nearly six years and \$17 million to complete, and construction did not ultimately begin until 2010.

Project construction will be completed in two phases. At an estimated \$1 billion, SDS Phase I involves piping Arkansas River water stored in the Pueblo Reservoir to Colorado Springs via a nearly 60-mile pipeline consisting of polyurethane-coated and cement-mortar-lined AWWA steel water transmission pipe. Project components include a connection to Pueblo Dam that will act as a straw to pump water from the reservoir, as well as three pumping stations and a water treatment plant. Operating pressures of the pipeline are in excess of 500 psi near the dam. SDS Phase I is scheduled to be completed by 2016.

SDS Phase II could begin as early as 2020 and involves the construction of two new reservoirs that will allow for more efficient water use in the region. The Williams Creek Reservoir will have a 28,500 acre-foot capacity and the Upper Williams Creek Reservoir will have a 30,500 acre-foot capacity.

The goal of SDS Phase II is to limit the necessity of importing water from the West Slope. "Our project has been designed to maximize existing transmountain diversions and, by



improving the efficiency of our exchanges with agriculture [water users], we won't need to bring additional water from the West Slope," said Keith Riley, the SDS deputy program director.

In 2011, nearly 37,000 acre-feet of water are imported from the West Slope, though the annual amount of imports varies. Completion of SDS Phase II will ultimately limit the need for these transfers as the new reservoirs will provide greater water delivery flexibility.

"Today, we have reusable return flows flowing down the creek," said Riley. "In the future, if we can take that out of the creek and store it, we will be more efficient in our use."

As scheduled, SDS Phase II will be completed by 2025. In addition to reservoir construction, it will include expanding the capacity of the water treatment plant constructed as part of SDS Phase I, as well as that of the pumping stations. The project is contributing millions of dollars to the local economy. To date, more than \$350 million in construction contracts have been awarded. SDS construction is anticipated to employ an average of up to 780 workers per year.

For more information on the Southern Delivery System, visit its website at www.sdswater.org.



66" diameter polyurethane coated and cement-mortar-lined steel water pipe produced to AWWA standards from American steel by the Northwest Pipe Company for the SDS project.