



## Shawnee Cons. RWD 4 Dedicates New Treatment Plant

**S**hawnee Consolidated RWD 4 recently dedicated its new 3-million gallon per day (MGD) lime-softening groundwater treatment plant just northwest of Topeka. The plant is expandable to 6 MGD. This plant is unique in that it was constructed from pre-cast concrete panels that, for the first time being produced in Kansas. Project Consultant Louis Funk with Bartlett & West, Inc., Topeka, reports that Iowa Pre-cast Concrete recently opened a facility in Pleasanton, about 50 miles south of Kansas City. Prior to that facility, the closest facility was in Omaha.

The new treatment plant supplements the district's existing 1 MGD plant. Shawnee Cons. RWD 4 also has a connection with the city of Topeka. That connect is now being used only as an emergency interconnect. Nine new wells were also constructed, each producing 250 to 300 gpm. Also, three miles of 16-inch and 2.5 miles of 12-inch PVC pipeline were installed. Construction costs total \$10.7 million. The project is being funded through a loan from the Kansas Public Water Supply Loan Fund, administered by the Kansas Department of Health and Environment.

Directors and staff at the ribbon cutting: Alan Chapas, Joel Stuke, Ed Cline, Jim Ellis, Jim Cobler, Jerry Glasgow, Jack Mason (somewhat hidden), Alisa Grollmes, Don Bennett, Mike Weishaar, Stacey Calhoon, and Rick Schmidt.

The district embarked on the new plant following a long-range planning study in May 2007. Then, directors, staff and their consultant considered the future growth and options for meeting projected demands. The two options came down to an increased reliance on water purchase from Topeka versus a new treatment plant. Because of the history of rate increases by Topeka, the district concluded that the payment to Topeka would exceed the debt and production average water cost from a new plant in 2014 and thereafter.

"The investment recovery period was less than ten years, meaning the additional average cost of water produced from the new plant for the first four to five years would be offset by savings the next four to five years," says project consultant Louis Funk with Bartlett & West Engineers,

Inc., Topeka. After 2014, it is anticipated that the new plant will result in savings for the remaining 30 to 40 years of expected service life. The bottom line is that the district expects that constructing their own new plant will result in a 50 percent savings compared to purchasing water from Topeka. The



One of the solids contact basins in the new 3 MGD treatment plant recently dedicated by Shawnee Consolidated RWD 4

Photos, courtesy of Shawnee Cons. RWD 4 and Bartlett & West, Inc.



**Pipe chase connecting the solids contact basins to the filters**



**Above: The plant's chemical room administers coagulants, polymer, ammonium sulfate, and a phosphate.**



**Left: Lab where a variety of water quality tests are conducted.**

district's rates are low, relatively speaking at about \$30 for the average customer. The new plant will require an increase in rates of \$5 per month. The average water rate increase from the City of Topeka has been averaging about \$0.20 per 1,000 gallons annually, or roughly equal to \$1 per customer per month.

Shawnee Consolidated RWD 4 is the largest rural water district in Kansas, serving more than 4,500 customers. Shawnee Cons. RWD 4 is the result of consolidation of Shawnee RWD 3, RWD 4 and RWD 5 in 2005. The original project went into service in 1958 with 125 members on a project financed by with a \$180,000 loan from the Farmers Home Administration.

**Board members are:** Jerry Glasgow-Chairman; Rick Schmidt-Vice-Chairman; Ed Cline-Treasurer; Don Bennett-Secretary; and directors, Alan Chapas, Stacey Calhoun, James Cobler, James Ellis and Joel Stuke.

**Staff members are:** Mike Weishaar-District Manager; Jack Mason-Assistant Manager, Marlin Constant, Danny Hicks, and Nick Brady, operators; Alisa Grollmes-Office Manager, and Kay Colpitts-Office Assistant.

### Chronology in the development of Consolidated RWD 4, Shawnee County, KS

- ◆ 1956: 48 people contributed \$5 to \$50 to investigate forming North Hills Water Company; 125 members applied for a \$180,000 FmHA loan; they purchased a 75,000-gallon water storage tank
- ◆ 1958: North Hills Water Company began providing water service
- ◆ 1960: Members voted to reincorporate as a Rural Water District; started to provide water to Capital View RWD 5 (later Shawnee RWD 5)
- ◆ 1963: Initiated plans to construct a 150-gpm water plant at a cost of \$50,000
- ◆ 1964: Obtained loan from FmHA for \$312,000 to be used for a treatment plant, line extension and pay off other debts
- ◆ 1965: Treatment plant completed; entered negotiations with Jackson RWD 1 to provide water to that system
- ◆ 1966: Joined as a member of the Kansas Association of Rural Water Districts (now KRWA)
- ◆ 1972: New booster station installed to obtain additional water from Topeka
- ◆ 1974: Obtained additional FmHA loan for two new 100,000-elevated storage tanks
- ◆ 1977: Began plans for new treatment plant
- ◆ 1980 New 1 MGD treatment plant completed
- ◆ 1990: New 750,000-gallon storage tank constructed
- ◆ 2003: New 1 MGD booster station constructed to obtain more water from Topeka
- ◆ 2005: Shawnee RWDs 3, 4 and 5 consolidate to become Consolidated RWD 4
- ◆ 2007: Initiated long-range plan; decided to proceed with additional treatment plant
- ◆ 2008: Drilled test wells, acquired water right; purchased 60 acres of land; began construction of 4 MGD treatment plant and 1-million gallon clearwell; installed 3.5 miles of new 16-, 12-, and 8-inch pipeline
- ◆ 2010: District presently services more than 4,500 customers in a seven square-mile area, with more than 200 miles of distribution line; has seven full-time employees and three part-time meter readers; two operators hold Class IV and one holds Class I certification; district owns backhoes, trenchers and service trucks; has 2.3 million gallons of total storage