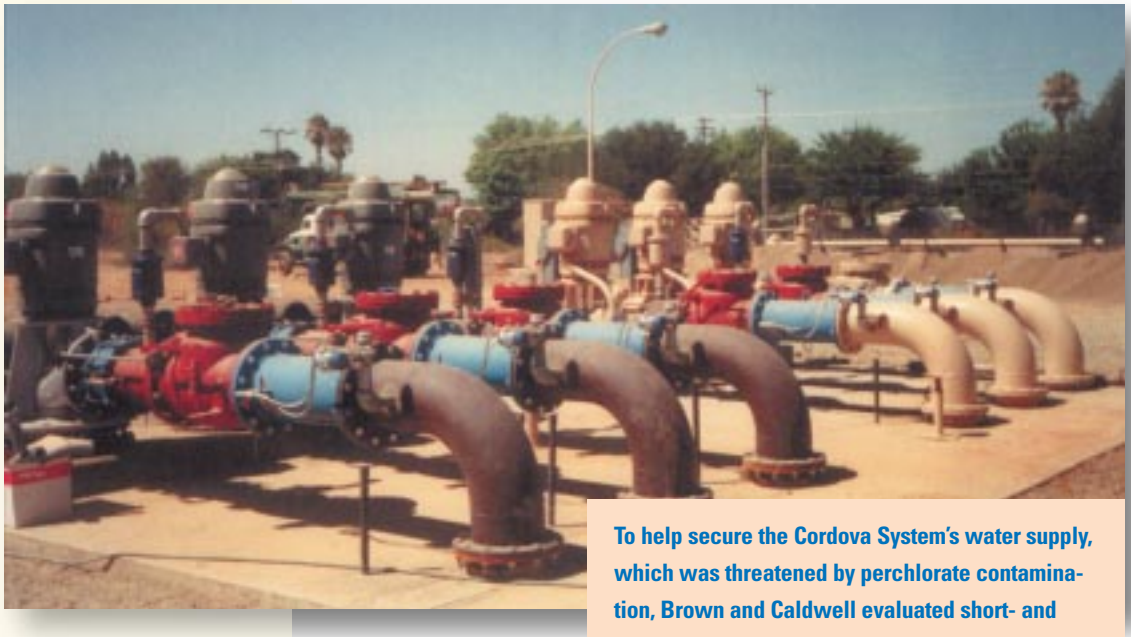
Rapid Planning and Design Saves Water Supply

When the Southern California Water Company had to deal with perchlorate contamination of its wells, Brown and Caldwell found the way to do it fast.

BROWN AND CALDWELL



To help secure the Cordova System's water supply, which was threatened by perchlorate contamination, Brown and Caldwell evaluated short- and long-term solutions and recommended actions that would quickly compensate for the substantial lost capacity. The repiping of Well #20 was one of the short-term improvements that helped the Cordova System secure its water supply and meet summertime water demands.

BACKGROUND

The Cordova System supplies water to 12,000 connections in Rancho Cordova, Calif. The system, an asset of the investor-owned Southern California Water Company (SCWC), is supplied by 19 wells and a 7.5-mgd treatment plant.

When perchlorate was detected in well samples, three wells were taken offline in February 1997, and three more were offline by April. The six wells had provided 35 percent of the total well supply. When another five wells began to show trace levels of perchlorate, a total of 55 percent of the well capacity had become contaminated.

The loss of the wells jeopardized the Cordova System's ability to meet its summer water demands. In April 1997, SCWC contracted with Brown and Caldwell to quickly plan and design system improvements to secure the community's water supply.

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Solutions

To help SCWC safeguard the community's water supply and meet summer water demands, Brown and Caldwell evaluated short- and long-term strategies, then planned and designed system improvements. The first step involved identifying and evaluating alternatives to quickly make up for the lost capacity.

We assessed these options:

- Creating interconnections with neighboring water utilities
- Constructing a new well
- Increasing capacity of the Coloma Water Treatment Plant
- Repiping an existing well
- Constructing a storage reservoir
- Implementing measures to manage water demand
- Constructing a new treated-water pipeline

Then we made these recommendations in April 1997:

- Improvements to and utilization of City of Folsom interconnections
- Repiping a major well
- Constructing a two-million-gallon reservoir
- Implementing short-term demand-management measures
- Enlarging the capacity of the Coloma Water Treatment Plant
- Constructing a new water supply well before summer 1998

Construction of a two-million-gallon reservoir was one of the short-term improvements designed and implemented by Brown and Caldwell for the Cordova System.

Performance

Using the report's recommendations, SCWC focused on the short-term improvements, asking Brown and Caldwell to quickly design the repiping of the existing well and to construct a new pipeline and reservoir.

Implementation was completed in July 1997, allowing SCWC to meet its customers' summer water needs.

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