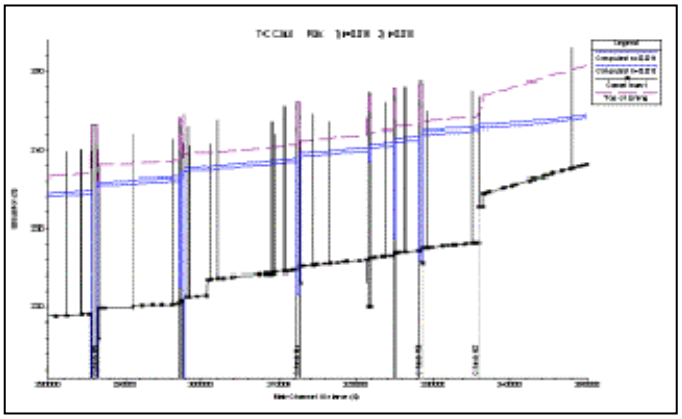
# Tehama-Colusa Canal

Working with Jonas & Associates, WEST Consultants, Inc. was contracted by the U.S. Bureau of Reclamation (USBR) to develop a numerical hydraulic model of the Tehama-Colusa Canal, near Willows, CA, in the northern part of the Central Valley. The Tehama-Colusa Canal can deliver a current capacity of 2,100 cfs from the Sacramento River, to a downstream balancing reservoir and various irrigation districts. The Tehama-Colusa Canal Authority wanted to increase the capacity of the canal to 4,000 or 5,000 cfs. They also wanted to determine how much additional capacity could be developed from the existing canal configuration.

A numerical hydraulic model of the Tehama-Colusa Canal was developed for approximately 66 miles of canal downstream from the Sacramento River. The model was calibrated to observed conditions in the canal, and also to the original USBR design specifications. The model was then used to determine how much additional capacity was available from the existing canal (perhaps by raising the concrete lining and over-crossing structures, such as bridges and over chutes). The model determined that an additional 600 cfs could be developed in the canal, and this information was passed on to the estimators to determine the cost of raising the various over-crossing structures.



Alternatives 2 and 3 considered what increase in canal bottom width (by design reach) would be needed to increase the capacity to 4,000 and 5,000 cfs respectively. This evaluation considered adjustments needed at local in-water crossing structures, such as wash siphons, to meet a project criterion of two feet of freeboard below the top of the concrete lining everywhere along the canal.

***Project Owner:***

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