



Biggs-West Gridley Water District Capacity Design and Canal Seepage Study

Biggs-West Gridley Water District (BWGWD) and the United States Bureau of Reclamation (USBR) entered into a contract in support of the Central Valley Project Improvement Act (CVPIA) Refuge Water Supply Program (RWS). The agreement provides for long term wheeling of federally provided water by BWGWD to the Gray Lodge Wildlife Management Area (Gray Lodge) and funding and implementation of facility improvements to the BWGWD conveyance system for dependable, reliable wheeling of water to Gray Lodge. The agreement also requires several planning studies, design and construction to cooperatively develop and implement the necessary facility improvements.

The goal of the contract is to deliver a firm reliable water supply of suitable quality to the boundary of Gray Lodge while preserving full flexibility, utility and effectiveness of BWGWD's use of its facilities to allow the use of capacity available from time to time, via the BWGWD's conveyance system. In addition, the BWGWD conveyance system will be modified so that the goals can be accomplished and the impacts to the BWGWD will be negligible.



Working with Davids Engineering, Inc., WEST Consultants, Inc. was contracted by BWGWD to critically review numerical hydraulic models of the Belding, Traynor, Schwind, and Rising River Canals, which are the canals that will be used to transport water to Gray Lodge. The purpose of the review was to independently verify the adequacy of the existing models and to re-calibrate the model during the summer months when there are a large number of weeds in the earthen canals that significantly increase the roughness of the conveyance system. Once this is accomplished, the models will be used to examine alternative modifications to BWGWD's conveyance system such that it will have sufficient capacity to deliver water to Gray Lodge as well as meet the demands of the district's members, avoid seepage impacts, and provide for a system that will not be subject to unreasonable maintenance expenses.

Some portions of farm fields already have problems from canal seepage, even without improvements and delivery of additional refuge water supply. Thus, there is concern that facility modification would directly cause increased seepage problems on the operations of the BWGWD. WEST will be involved in analyzing the impacts the potential modifications will have on canal seepage.

Project Owner:

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Completion Date: *Ongoing*