



## FACTSHEET

# San Luis Drainage Feature Re-evaluation Project

May 2002

### Introduction

*This factsheet introduces the Bureau of Reclamation's (Reclamation) plan to re-evaluate options for providing drainage service to the San Luis Unit of the Central Valley Project (CVP). The CVP provides irrigation water to agricultural lands in many areas of California's Central Valley.*

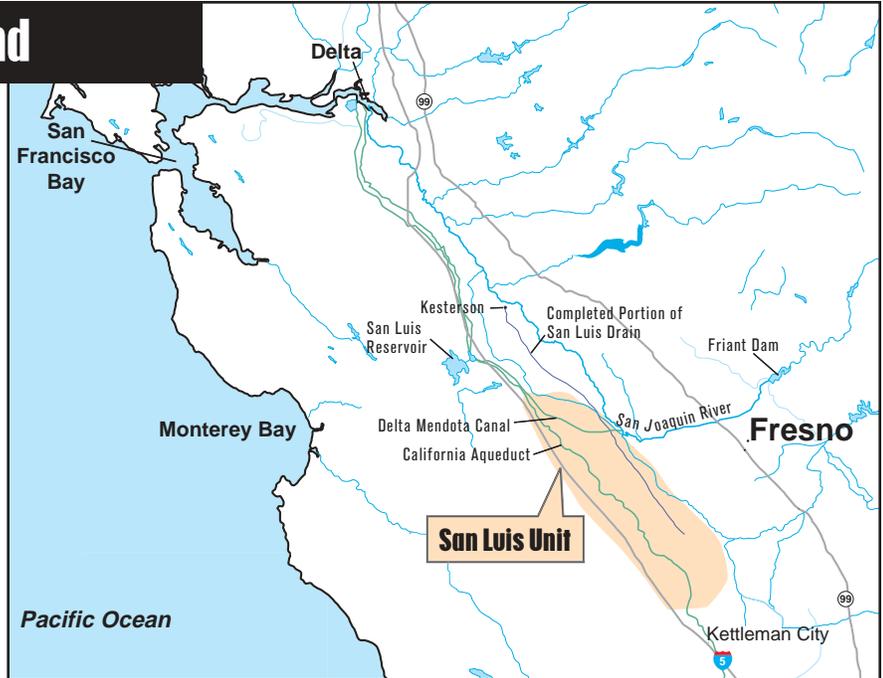
*Since the closure of the Kesterson Reservoir in the mid-1980's, adequate drainage service has not been available for irrigation waters from agricultural lands served by the San Luis Unit. Reclamation is now working to develop implementable drainage service solutions while also protecting the environment.*

*By court order (Sumner Peck Ranch v. Reclamation) Reclamation is re-evaluating options for providing drainage service to the San Luis Unit. The re-evaluation focuses on previous studies and recent technologies. The objective is to formulate and implement a plan to provide agricultural drainage service to achieve long-term, sustainable salt and water balance in the root zone of irrigated lands in the San Luis Unit.*

### Background

The San Joaquin Valley has some of the world's most productive agricultural lands. It is a region with little rainfall, a mean annual temperature of 62°F, and an average frost-free growing season of 280 days.

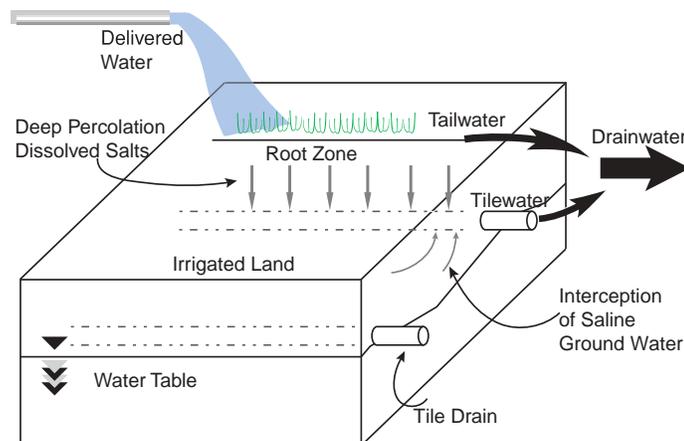
However, because drainage service is not available, much of the west side of the Valley is plagued by poor subsurface drainage conditions that affect crop production. Clay soils beneath the fields prevent irrigation water from percolating deeper into the soil and away from crop roots, causing irrigation water to accumulate in the shallow root zone. Over time, shallow water tables have formed and risen so that by 1990 nearly 330,000 acres (nearly 47 percent of



the land area) have water tables within 20 feet of the ground surface.

### The Challenge

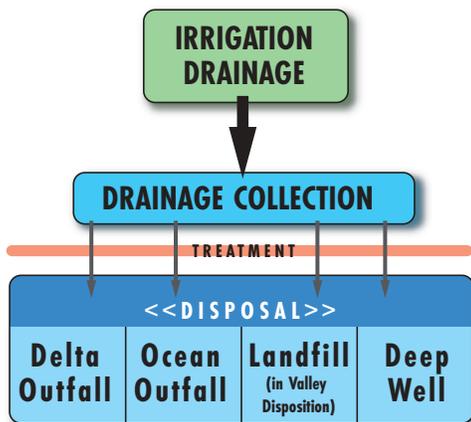
Methods exist for collecting and removing shallow ground water from the root zone. The drainwater that is collected, however, contains concentrations of naturally occurring elements (salt, selenium, boron) that pose a threat to the environment and drinking water supplies. The challenge is disposing of the drainwater and its constituents while avoiding or mitigating such impacts.



*An illustration of how water that drains from irrigated fields is collected and removed to maintain long-term, sustainable salt and water balance in the root zone of irrigated lands.*

# Potential Solutions

Since the 1960's, Reclamation has investigated ways to provide drainage service to the western San Joaquin Valley. From the 1980's to present, while in-valley and out-of-valley options were being studied, Reclamation has worked with other Federal agencies, California State agencies, growers, water districts, and other stakeholders to develop effective, affordable, and feasible drainage service and drainage management solutions. Several of these efforts have resulted in innovative techniques, and Reclamation continues to support development of these approaches. However, to date, the only proven technologies identified to provide large-scale, long-term drainage service and achieve sustainable salt balance on drainage-affected, irrigated lands in the San Luis Unit are disposal of salts out-of-valley or disposal to in-valley evaporation ponds. The final range of alternatives will likely include a combination of water treatment (evaporation, chemical, biological, other) and in-valley or out-of-valley disposal.



## Contact us!

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## Preliminary Alternatives

Reclamation developed preliminary alternatives initially as broad conceptual processes organized around the disposal method: **Ocean Outfall, Delta Outfall, Landfill/In-Valley Disposition, and Deep Well Injection**. Reclamation composed sub-alternatives under each conceptual disposal method by combining treatment and disposal options. Through 2002, Reclamation will refine the preliminary alternatives and identify a preliminary preferred alternative.

