



RECLAMATION

Managing Water in the West

Upper San Joaquin River Basin Storage Investigation

STUDY UPDATE | JUNE 2009

About the Upper San Joaquin River Basin Storage Investigation

The Upper San Joaquin River Basin Storage Investigation (USJRBSI) is a joint feasibility study by the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR). The USJRBSI is one of five surface water storage studies recommended in the CALFED Bay-Delta Program (CALFED) Programmatic Environmental Impact Statement/Report (PEIS/EIR) Record of Decision (ROD) of August 2000. The purpose of the USJRBSI is to determine the type and extent of Federal, State, and regional interests in a potential project in the upper San Joaquin River watershed to improve water supply reliability and flexibility of the water management system for agricultural, urban, and environmental uses; and enhance San Joaquin River water temperature and flow conditions to support anadromous fish restoration efforts.

In this Update:

- Temperance Flat RM 274 Reservoir Site Benefits and Features
- Outreach Activities Planned for 2009 and 2010
- Next Steps
- 2008 Geological Drilling Activities Completed



U.S. Department of the Interior
Bureau of Reclamation



State of California
Department of Water Resources

Temperance Flat River Mile 274 Dam and Reservoir Site Selected for Detailed Study

Reclamation and DWR selected the dam site at San Joaquin River Mile (RM) 274 for detailed evaluation because of its potential for improving water supply reliability and flexibility — a key benefit in light of increasing uncertainties and recent constraints on south-of-Delta water supplies. The site is located in the upstream portion of Millerton Lake, as shown on Figure 1.

In May 2009, Reclamation and DWR released a Plan Formulation Report (PFR) for the USJRBSI that describes the alternative formulation, evaluation, and comparison activities that led to selection of Temperance Flat RM 274 Reservoir for detailed feasibility-level evaluation. The report is a milestone planning document that describes the progress of the study to date and includes additional information on the economics, operations, and costs of USJRBSI alternatives. The PFR also defines a set of alternative plans to be considered in the study's Feasibility Report and Environmental Impact Statement/Environmental Impact Report (EIS/EIR). The PFR can be downloaded at www.usbr.gov/mp/sccao/storage.

If constructed, the Temperance Flat RM 274 Reservoir (see Figure 1) would overlap a portion of Millerton Lake and create up to 1.26 million acre-feet of additional storage capacity. At nearly double the storage capacity of the other reservoir alternatives also evaluated in the PFR, the selected site would provide greater flexibility in improving water supply reliability and enhancing San Joaquin River ecosystem conditions downstream from Friant Dam.

A series of public and stakeholder outreach activities planned for 2009 and 2010 will help refine designs, operations plans, costs, and benefits for alternatives at the Temperance Flat RM 274 Reservoir site.

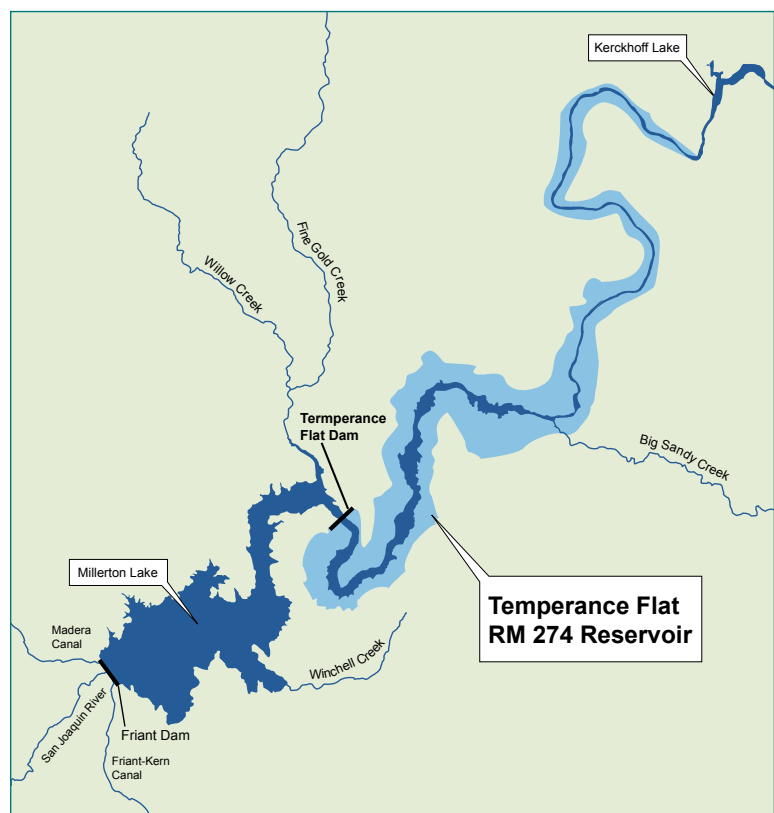


Figure 1: Potential Temperance Flat RM 274 Reservoir

At a Glance: Temperance Flat RM 274 Reservoir

Additional Storage Capacity	up to 1,260 TAF
Long-Term Average Annual Increase in Water Delivery	up to 180 TAF/year
Total Potential Annual Monetary Benefits	up to \$180 million/year
Estimated Annual Cost	up to \$169 million/year
Estimated Capital Cost	up to \$3.3 billion
Estimated Construction Cost	up to \$2.9 billion

TAF = thousand acre-feet

Note: Estimated benefits account for additional flow releases to the San Joaquin River associated with implementation of the San Joaquin River Restoration Program

Temperance Flat RM 274 Reservoir could provide a wide variety of benefits for California:



Agricultural Water Supply Reliability



Urban Water Supply Reliability



Emergency Water Supply



Ecosystem Enhancement



Urban Water Quality



Flood Damage Reduction



Hydropower



Recreation



Key Benefits of New Storage

The range of benefits that could be provided by different USJRBSI alternatives include agricultural and urban water supply reliability, emergency water supply, ecosystem enhancement, urban water quality, hydropower, recreation opportunities, and flood damage reduction. Temperance Flat RM 274 Reservoir's strategic location south of the Delta and its large storage capacity would provide both long-term and emergency water supply benefits for much of the state.

Long-Term Water Supply

Temperance Flat RM 274 Reservoir would capture surplus flows from the upper San Joaquin River basin. In 2006, for example, the reservoir could have stored more than 1 million acre-feet of water that instead were released at Friant Dam as flood releases.

The additional storage space in the new reservoir would also provide opportunities for water exchanges with other south-of-Delta water users by integrating storage operations with other Central Valley Project (CVP) and State Water Project (SWP) facilities. This would involve delivering water supplies to contractors within the Friant Division of the CVP in combination with water exchanges between the Friant Division of the CVP, and SWP or other CVP service areas. Figure 2 illustrates this operations integration concept. Future studies will incorporate changes in Delta operations and conveyance capacity in analyses of benefits for integrating Temperance Flat RM 274 Reservoir with other SWP and CVP facilities. Results will be addressed in the Feasibility Report and EIS/EIR.

Municipal, industrial, and agricultural water users would benefit from the additional surface water deliveries, which would increase south-of-Delta municipal water supply reliability, reduce reliance on groundwater supplies, and reduce aquifer drawdown.

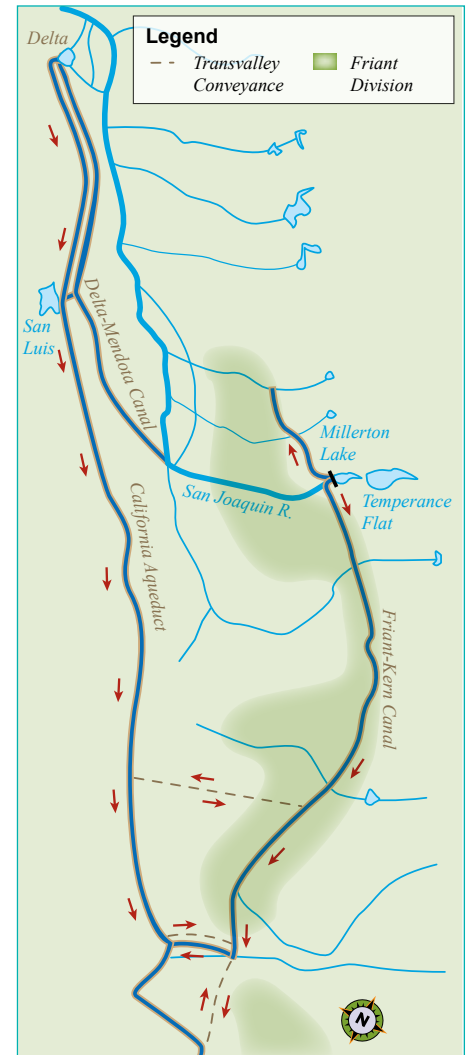


Figure 2: Temperance Flat and South-of-Delta Operations Integration

Under the operations integration concept, some SWP or CVP water supplies from the Delta that are diverted to San Luis Reservoir would instead be delivered to water users in the Friant Division of the CVP, while San Joaquin River water would be stored in the new reservoir. During wet periods this would increase the storage space available in San Luis Reservoir and allow capture of additional SWP and CVP supplies from the Delta. Accumulated San Joaquin River water would be supplied through exchange to SWP and/or CVP south-of-Delta water users.

Emergency Water Supply

It is a scenario no Californian would welcome, but one which many view as a genuine possibility in a seismically active region: water supply

deliveries for two-thirds of the state cease when multiple Delta island levees crumble following a major earthquake. Under such a scenario, as evaluated by State and Federal agencies in the 2007 Delta Risk Management Strategy, pumping plants near Tracy would shut down, halting Delta water exports vital for public safety and the State's economy. Temperance Flat RM 274 Reservoir could provide emergency

water supplies to be used either directly or through exchange in the constrained south-of-Delta system.

Ecosystem Enhancement

Temperance Flat RM 274 Reservoir has the potential to improve habitat conditions in the San Joaquin River by managing the temperature of flow releases and also by facilitating the release of additional flows in critically dry years.

Outreach Planned for 2009 and 2010

The USJRBSI study team will hold public and stakeholder meetings in 2009 and 2010 to solicit comments and input for the alternatives analyses and for preparation of the Draft Feasibility Report and EIS/EIR.



As in the past, future stakeholder briefings will be a combination of proactive outreach efforts by the USJRBSI study team and responses to requests for presentations from stakeholder groups.

Dates and locations of public and stakeholder meetings, along with related information and materials, will be posted on the USJRBSI Website:

www.usbr.gov/mp/sccao/storage.

Next Steps

Future studies will evaluate benefits of Temperance Flat RM 274 Reservoir alternatives accounting for revised Delta conveyance and operations scenarios, consistent with the operating assumptions included in the Bay Delta Conservation Plan (BDCP) and the Delta Habitat Conservation and Conveyance Program (DHCCP).

Additional upcoming major actions needed to complete the feasibility study include:

- Identifying potential effects, both beneficial and adverse, and mitigation features of the recommended plan
- Completing environmental studies, including a comparison of the environmental impacts of the alternative plans, and coordinating and documenting environmental compliance
- Developing detailed designs, cost estimates, potential benefits, and cost allocations for a recommended plan
- Explaining the rationale for selecting the recommended plan
- Identifying a non-Federal cost-share partner(s)
- Preparing a Federal decision document (Feasibility Report) and supporting EIS/EIR.

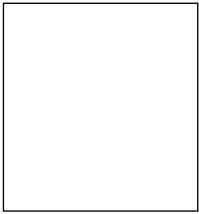


2008 Geological Drilling Completed

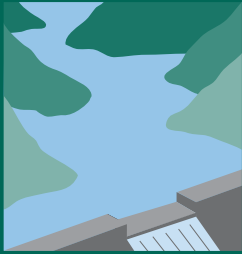
Reclamation staff completed four borings near the potential Temperance Flat RM 274 site in September 2008 to gather additional data for evaluating feasibility designs and cost estimates. Two of the holes were drilled near the dam site on the Madera County side, and the other two holes were drilled at potential powerhouse and intake locations on the Fresno County side. The drill rigs were airlifted to each location by helicopter. The geologic drilling followed archeological and biological permitting work completed in March 2008. Geologic drilling activities were also performed at the Temperance Flat RM 274 dam site in 2006.

For additional information, please visit www.usbr.gov/mp/sccao/storage





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CONTACT INFORMATION



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