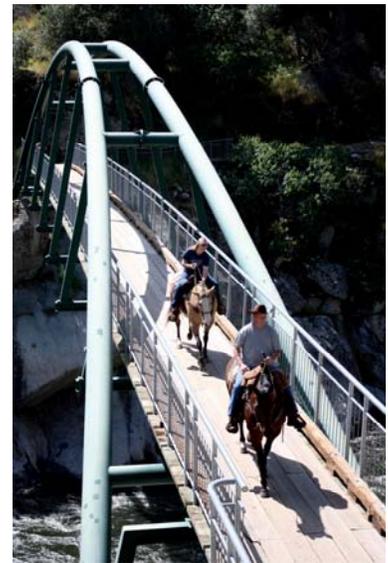


# The Temperance Flat Dam Is Costly And Produces Little Water

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The U.S. Bureau of Reclamation (Reclamation) has completed a draft feasibility report and an environmental impact statement for the proposed Temperance Flat Dam (TFD) just upstream of Millerton Reservoir on the San Joaquin River Gorge. The proposed dam would be 665 foot-high dam with a capacity to store 1.33 million acre-feet (MAF) of water. Four and then five different operational scenarios were under study. But regardless of the scenario, it is clear that the proposed dam produces very little water and could cost state and federal taxpayers billions of dollars. In addition, there are significant environmental impacts to the scenic San Joaquin River Gorge. Key issues concerning the Temperance Flat project include:



**Water Capacity and Yield** – Although the TFD could store up to 1.33 MAF of water, its modeled average annual yield is a paltry 61,000-94,000 acre-feet of water (depending on the emphasis of the operational scenario). The potential front runner was modeled to produce 70,000 acre-feet, 21,000 in a dry or critically dry year. (Reclamation’s Central Valley Project [CVP] produces 7 million acre-feet annually and statewide water use is 42 million acre-feet.) The annual yield from this new dam is relatively low because eight large dams and reservoirs and two large canals already capture and divert most of the flow of the San Joaquin River, which is often dry northwest of Fresno.

**Can the Project Operate Legally?** – The San Joaquin River is a fully appropriated river, meaning the State Water Resources Control Board presumes that no more water rights are available here. Although Reclamation is free to challenge this determination, a recent UC Davis study found that the state has over-allocated water rights in the San Joaquin River by an astounding 861%.

**Cost & Economics** – Reclamation’s most recent estimate for the capital cost of TFD was \$2.6 billion. To compare, the unpaid reimbursable costs being borne by the entire CVP are \$1.4 billion. The TFD price tag does not include environmental mitigation costs, and it is unclear whether PG&E has agreed with Reclamation’s rather vague explanation on how it will be compensated for the loss of two major powerhouses. It is unclear whether the final feasibility report will update the estimate.

**Benefits** – Depending on which of the five alternative operating plans is chosen, the TFD provides a small volume of water for agricultural and municipal consumption, as well as some reserved storage to provide emergency water supplies in case of a catastrophic disruption in Delta water exports. No actual beneficiaries have been identified, but in all but one of Reclamation’s dam scenarios, the TFD would export water to the municipal and industrial customers of the State Water Project (SWP), which would require a controversial expansion of the place of use (where water is delivered) of the CVP. Contrary to Reclamation’s expectations, the California Department of Water Resources has declined to prepare an environmental impact report for this project, perhaps a signal of the Department’s view of its importance to the SWP, which it serves. In an attempt to be eligible for California Water Bond and federal taxpayer funding, Reclamation alleged salmon enhancement benefits account for 49% or \$1.3 billion of the project cost.

**Critiques of Benefits** – The draft feasibility report and environmental impact statements received uncomfortable critical reviews of its benefit assumptions by state and federal natural resources agencies, NRDC et. al., Friends of the River et. al., and by University of the Pacific economist Jeff Michaels, and others. To summarize Dr. Michaels, Reclamation’s draft reports for the TFD

overestimated the value of agricultural benefits by two or three times and “extremely exaggerated” ecosystem and emergency water supply benefits of the proposed dam in order to provide a modeled positive cost-benefit ratio.

**Environmental/Cultural Impacts and the San Joaquin River Gorge** – The Bureau admits that the TFD will have long-term unavoidable adverse impacts on riverine habitat, botanical resources and wetlands, wildlife and wildlife habitat, cultural resources, and scenery. Up to 5,000 acres of public land would be flooded by the dam, adversely impacting 24 sensitive, threatened, or endangered wildlife species. The reservoir will also drown several miles of trails popular for public recreation and used for Native American cultural interpretation and outdoor education in the scenic San Joaquin River Gorge. In December of 2014, the U.S. Bureau of Land Management Bakersfield field office issued a Record of Decision recommending this reach of the Joaquin River Gorge for National Wild & Scenic River protection by the Bureau of Land Management (BLM) in recognition of the river’s outstanding scenic, recreational, and historical/cultural values. In addition, the dam will drown the unique Millerton Cave System, perhaps the world’s best example of a granite cave carved by a year round flowing underground stream.

**Power Loss** – Although TFD would have a 160-megawatt power plant, the loss of PG&E’s powerhouses would make the project a net energy loser.

**Risks, Uncertainties, & Unresolved Issues** – The potential for and magnitude of climate change impacts on TFD performance is uncertain. Water supply reliability and demands are widely variable. Future water system operations are subject to change and difficult to predict. Predicting salmon survival is difficult due to limited data and many other influencing factors. Models used to predict salmon habitat improvements for this project contain assumptions with varying levels of uncertainty. Cost estimates are based on material and unit costs with varying uncertainties. Non-federal partners and other beneficiaries willing to pay for their share of the TFD costs have not yet been identified. Consultation is ongoing with Native American tribes in regard to cultural resources that will be adversely impacted. Details about potential offsite mitigation opportunities for biological impacts loss of existing power generation are not yet available. Coordination with the BLM and the Dept. of Interior about BLM’s Wild & Scenic recommendation for the San Joaquin River Gorge is needed. Reclamation will have to seek new water rights to build the TFD and operate it. It will require additional new rights if it deliver supplies to the State Water Project.

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#### Some Sources:

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