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Temperance Flat Dam Not Economically Justified

Economic costs of the proposed dam are at least twice as high as its benefits.

An independent analysis of the government's feasibility report for the proposed Temperance Flat Dam on the San Joaquin River Gorge has found that the dam is not economically justified because its costs are at least twice as high as its benefits. The analysis of the Bureau of Reclamation's draft feasibility report for the dam was commissioned by Friends of the River and conducted by Dr. Jeffrey Michael, Associate Professor in the Eberhardt School of Business and Director of the Business Forecasting Center at the University of the Pacific in Stockton, CA. The Bureau is accepting public comments in response to its draft feasibility report today.

In its draft report, the Bureau concluded that the proposed dam is economically justified and financially feasible, and would return up to $1.35 for every dollar invested. But Dr. Michael's economic analysis found that the Bureau used "extremely exaggerated" estimates for the dam's alleged ecosystem and emergency water supply benefits. When more reasonable valuation of these benefits are used, "…it is clear that constructing the Temperance Flat dam has a benefit-cost ratio below one and is not economically justified."

The proposed Temperance Flat Dam would be located on the San Joaquin River Gorge directly upstream of the existing Millerton Reservoir and Friant Dam, about 20 miles northeast of Fresno. As currently envisioned by the Bureau, the Temperance Flat Dam would be 665 feet high and store more than 1.3 million acre feet of water. Despite its size, the dam would produce only 76,000 acre-feet of water annually on for downstream farms and cities. The Bureau estimates that the dam would cost nearly $2.6 billion to build and incur annual operating costs of up to $121 million.

Boosting water supplies for thirsty cities and farms is the most common reason cited by supporters for building the Temperance Flat Dam. But the Bureau's own feasibility report admits that the dam will boost water deliveries from the Central Valley Project by a paltry 1%.

"A private investor would never consider building this money-losing dam project," said Ron Stork, Senior Policy Advocate for Friends of the River. "It is only feasible as a taxpayer-subsidized project with highly inflated and entirely speculative non-water supply benefits," he added.

The Bureau's feasibility report admits that the water supply benefits of the proposed dam will not cover its cost. Despite the ability to generate hydroelectricity, the dam is also a net power loser because its reservoir would flood two existing PG&E powerhouses. So the alleged value of its ecosystem and emergency water supply benefits are key to the dam's supposed economic feasibility.

The dam's alleged ecosystem benefits are based on the Bureau's projected boost in salmon downstream in the San Joaquin River as a result of the new dam providing cold water. Dr. Michael's economic analysis found that the economic valuation of the salmon benefits "is deeply flawed" and it points out that "Many scientists disagree with the conclusion that the dam benefits salmon," noting that "benefits to salmon abundance many not be scientifically justified." A more reasonable valuation of ecosystem benefits would result in a benefit-cost ratio of less than one. Spring run Chinook salmon have just recently been reintroduced into the river as a result of the San Joaquin River Restoration Program.

Similarly, Dr. Michael's analysis found the dam's supposed emergency water supply benefits "…are grossly overstated and a strong argument can be made that these benefits are zero" because hundreds of millions of dollars in Delta levee improvements have reduced the risk in Delta flooding disrupting north to south fresh water exports.

"When it comes to funding the Temperance Flat Dam, let the buyer beware," warned Steve Evans, consultant for Friends of the River. "Members of Congress have rushed to introduce bills to authorize the Temperance Flat Dam and Legislators in Sacramento will soon vote to revise a state water bond that could borrow billions of dollars from taxpayers to build this dead-beat dam," he said.

"These dam projects are supposed to be funded by those who benefit from them," Evans noted, "but instead, bogus public benefits will foist huge costs on the taxpayer for very few real benefits, while a handful of powerful water barons will reap the water supply benefits and pay nearly nothing."

At stake is not just a fair process to determine the true benefits the Temperance Flat Dam and who will pay for them, but also a river that provides outstanding scenic, recreational, and cultural/historical values for public enjoyment. The Temperance

Flat Dam would flood up to 5,000 acres of public land in the San Joaquin River Gorge managed by the Bureau of Land Management (BLM) for public recreation and wildlife habitat. Thousands of people visit this magnificent river gorge every year. The BLM has made a tentative recommendation to Congress to protect the San Joaquin River Gorge as a Wild & Scenic River, which would prevent the construction of the Temperance Flat Dam.

Other key findings in the economic analysis include:

Economic Benefits –

The feasibility study ignores the ecosystem loss from permanently inundating habitat with the new dam.

The salmon benefits of the project should be valued as the costs of reasonable alternatives that would achieve comparable increases in salmon abundance and/or reductions in water temperatures in the San Joaquin River in the absence of the new dam.

The benefits transfer approach used for valuing ecological benefits overstates these benefits by choosing a single study of a non-comparable scenario and incorrectly scaling the benefits to cold water benefits from Temperance Flat.

Emergency Water Supply Benefits –

Recent BDCP studies of the emergency water supply benefits of the proposed Delta tunnels show much smaller benefits.

Data on levees is outdated and inaccurate, and predicted flood probabilities (due to levee failure in the Delta) show much smaller emergency water supply benefits.

Costs allocated to emergency water supply benefits should be allocated to water uses, not to the state.

The opportunity cost of using the water for emergency purposes does not appear to be accounted for in the study.

Agricultural Water Supply Benefits –

The feasibility study uses an unconventional approach to valuing agricultural water supply benefits that greatly inflates the value of agricultural water and is at odds with other studies that values agricultural water reliability with the same models.

Exaggerated Need For Water –

The feasibility study greatly exaggerates the purpose and need for Temperance Flat dam by relying on outdated and exaggerated population growth projections and water supply shortages from the 2005 California Water Plan Update.

Discount Rate –

The combination of a 100-year life span for dam benefits and relatively low 3.75% discount rate are generous assumptions that support building the dam. There is considerable uncertainty surrounding many of the TFD's alleged benefits, which would make a higher discount rate appropriate.

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Visit www.friendsoftheriver.org to download the "Review of Economic Benefits and Costs in the January 2014 Draft Upper San Joaquin River Basin Storage Investigation Draft Feasibility Report" dated April 15, 2014 by Dr. Jeffrey Michael.

Visit the link below to review or download the Upper San Joaquin River Basin Storage Investigation Draft Feasibility Report, dated January 2014, from the Bureau of Reclamation.
http://www.usbr.gov/mp/sccao/storage/docs/Draft_Feasibility_Report_2014/USJRBSI_Draft_FR_2014_Full_Report.pdf

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Organized in 1973, Friends of the River is the voice of California's rivers. We work to protect and restore free flowing rivers and streams throughout the state by influencing public policy and inspiring citizen action.