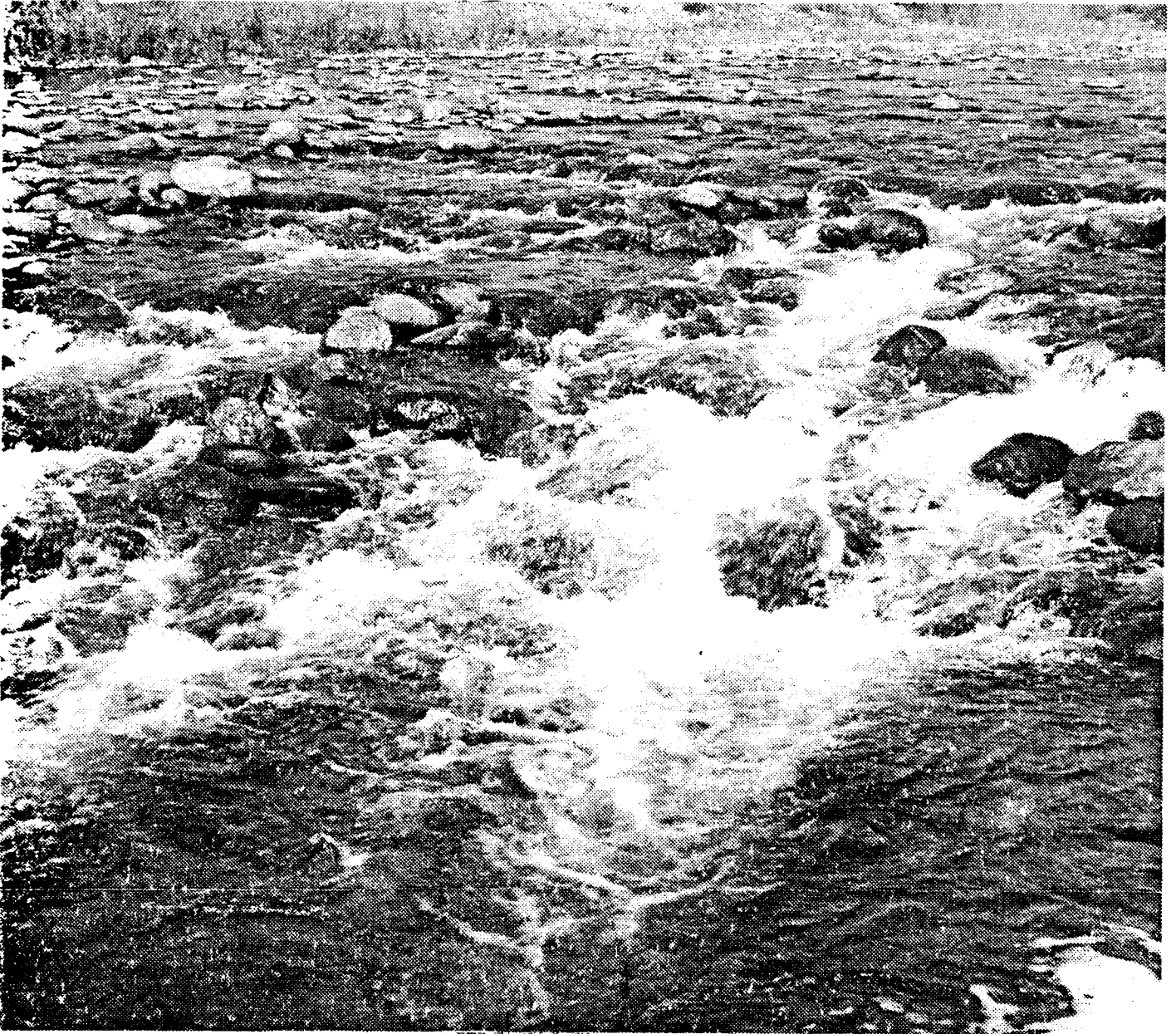


AUBURN DAM REPORT



Auburn Dam Alternative Study



United States Department of the Interior X-15

BUREAU OF RECLAMATION
MID-PACIFIC REGIONAL OFFICE
2800 COTTAGE WAY
SACRAMENTO, CALIFORNIA 95825-1898

IN REPLY
REFER TO:

MP-720

July 20, 1987

Members - State/Federal Auburn Dam Task Force
(See Attached List)

Attached for your consideration is a report which describes the results of various analyses of Auburn Dam alternatives. I would appreciate receiving any comments you would care to make by August 25, 1987.

This report presents the analyses of various alternatives for upstream storage facilities on the American River, with emphasis on storage at the Auburn site, which could provide various levels of flood protection for the Sacramento metropolitan area, as well as other benefits, such as electric power generation, municipal and industrial water supplies, fisheries resource enhancement, and general recreation.

Ensuring adequate flood protection for the Sacramento metropolitan area is a critical issue facing the city's residents and civic leaders. The alternatives considered in this report are skewed toward providing that protection, as well as the locally desired instream flows in the Lower American River. Concern for flood protection is a result of the February 1986 flood, which tested both Folsom Reservoir and the American River levees beyond their design capacities, and the Corps of Engineers' March 1987 flood study, which reported that the current level of flood protection in the American River system is inadequate.

This report is designed to help local leaders make informed judgments on the level of flood protection they desire and can afford. The report also presents the costs of providing various levels of instream flow in enough detail to allow the local beneficiaries and potential sponsors to judge the value of these costs as a factor in their decisionmaking process.

The local desire for high flows in summer months in the Lower American River results from the substantial financial investment in the American River Parkway, lower river recreation, fisheries resources, and the dependence on flows that have existed over the past 31 years as a result of Folsom Reservoir. The cost of providing such sustained flows has not previously been allocated. In the absence of some additional upstream storage, or control over the river, these incidental instream benefits cannot be maintained.

Future needs for water supply and power exist, but are not required as immediately as flood protection to prevent the probability of a catastrophic flood event. The potential need for water and power, however, is included in the analysis. Cost analyses of the various potential alternatives have been made using the standard methods from the Principles and Guidelines (P&G) and a modified P&G method. These two procedures were used in order to quantify costs for the instream flows in the American River Basin requested by local interests and to establish a tangible cost for those benefits.

The analysis recognizes State Water Resources Control Board Decision 893 as the legal standard for downstream releases from Folsom Reservoir, but includes cost comparisons of releases for the proposed Decision 1400 (the 1972 decision of the State Water Resources Control Board for minimum flows in the Lower American River associated with completion of Auburn Dam) and H.R. 1605 (the bill introduced on March 12, 1987, by Congressman Shumway, amending the 1965 authorizing legislation to specify increased minimum flows in the Lower American River below Nimbus Dam).

The report has assumed that sunk cost and any future Federal investment would be considered in any "Federal share" of the project. Reclamation is cognizant of the reality, however, that non-Federal interests may see an opportunity for a lesser project cost by using sunk costs to their advantage. In an effort to objectively address the potential that Federal agencies have an incentive to recapture sunk costs while non-Federal interests have an incentive to avoid sunk costs, Reclamation made the comparisons in Addendum A to provide a combined analysis of multiple options.

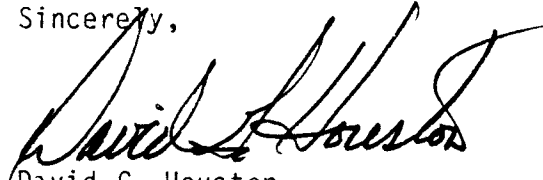
This report provides various options but makes no particular assumptions as to who will finance or construct the project. Regardless of who the local sponsors or beneficiaries are, the matrix display provides information as to the costs, benefits, and dis-benefits of the options. For example, construction undertaken by the State could be totally separate from the authorized Auburn Project. Or, if the 850,000-acre-foot multi-purpose reservoir at Mile 19.0 were the non-Federal choice, sponsors would likely have no need for all or any of those existing site facilities or the sunk costs. The exception may be land that has already been acquired and roads and bridges that are in place. The Corps is presently completing a 1-year analysis of flood control potential on the Lower American River, assuming Auburn Dam, as authorized, would not be built. The Corps' analysis could recommend further study for a single-purpose alternative upstream of Folsom Reservoir similar to the 315,000-acre-foot (100-year protection) or the 650,000-acre-foot (250-year protection) options described herein.

While the report is based on appraisal-level data, the accuracy of the data and findings is such that a reasonable decision can be made as to which options should be selected and studied at the feasibility/design data level. If the State were to recommend the 850,000-acre-foot

reservoir and include staging, or provisions for future enlargement, and some level of instream flow, it would likely require the same feasibility study requirements. If the two sizes of single-purpose projects for flood control are the best options from the Corps' study, these too will require feasibility-level studies.

Completion of an Auburn Dam depends in large measure on the willingness of non-Federal entities to share in the project costs. If the benefits commonly associated with preserving the flows in the Lower American River are accepted and cost-sharing participants come forward, then a financially feasible multipurpose project could be built. Otherwise the costs of providing municipal and industrial water supplies and instream flows could make the project too costly for project beneficiaries, and the scope of the project would be reduced accordingly.

Sincerely,

A handwritten signature in black ink, appearing to read "David G. Houston". The signature is written in a cursive, flowing style with some loops and flourishes.

David G. Houston
Regional Director, Bureau of Reclamation
Sacramento, California

Attachment

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Continued participation by the U.S. Department of the Interior in the construction of a dam at the Auburn site is contingent upon the willingness and ability of non-Federal entities to share in the costs of completing the project.

Federal Cost-Sharing Criteria

Current and proposed cost-sharing criteria and guidelines have been applied to each of the five alternative reservoir sizes and the Restoration of the Damsite alternative. The Federal guidelines are described below, and the results of their application to the Auburn alternatives are presented and discussed later in this chapter. In light of the current budgetary constraints on new Federal expenditures, it is unknown to what extent Congress would be willing and able to appropriate additional funds in excess of the minimum Federal expenditures presented in Table 3 under options 2 and 3. Consequently, expeditious construction of one of the five alternative reservoir sizes will most probably require increased cost participation on the part of local, non-Federal entities.

Cost-Sharing Guidelines

Although total reimbursable project cost is ultimately dependent upon the type and size of the project selected by project beneficiaries, the non-Federal cost share of the total cost of the project will be guided by the cost-sharing principles enunciated in Title I of the Water Resources Development Act of 1986 (P.L. 99-662, based on H.R. 6) and the 1984 letter from the President to Senator Paul Laxalt on the subject of cost-sharing of new Reclamation projects.

Based on the guidelines enunciated in these two documents, the minimum non-Federal share of the Auburn Project can be expected to be as follows: 25 percent of the costs allocated to flood control; 50 percent of the costs for specific recreation facilities; 100 percent of the costs allocated to the municipal and industrial water supply purpose; 100 percent of the costs allocated to hydroelectric power generation; and 50 percent of the costs allocated to instream flows. P.L. 99-662 requires that these costs can be shared by the local, non-Federal entities through a combination of up-front funds during the construction of project facilities and/or the execution of long-term repayment commitments.

In the event that instream flow requirements over and above D-893 are adopted for the Auburn Project, it is expected that at a minimum, a pro rata share of the costs allocated to the M&I water supply purpose will be suballocated to the instream flow purpose. The actual dollar amount will most probably be based upon the reduction in the total project accomplishments (yield and power generation) of Auburn Reservoir which is directly attributable to the adoption of the higher instream flow standards.

Maximum Federal Participation

Three alternative cost sharing assumptions were examined during this analysis.

1. Based on the results shown in the tabulation preceeding Table 4, the minimum cost to the Federal government is about \$430 million. This includes the sunk cost expended to date of approximately \$295 million, plus \$127.5 million in modification work at Folsom Dam under the Safety of Dams Program. It