

APPENDIX G
COMMENTS AND RESPONSES



Department of Energy
Western Area Power Administration
Sierra Nevada Region
114 Parkshore Dr.
Folsom, CA 95630-4710

APR 13 2001

Mr. Mark Capik
Acting Chief, Planning Division
U.S. Army Corps of Engineers
1525 J Street
Sacramento, CA 95814-2922

RE: Environmental Assessment/Initial Study (EA/IS) and Finding of No Significant Impact/Negative Declaration for the American River Project - Folsom Dam Modifications.

Dear Mr. Capik:

The Western Area Power Administration is pleased to provide you comments on the proposed project. We support the goals of the American River Project, including providing additional flood control, levee improvements and other related improvements.

As you are aware, the current California energy crisis is of great concern. The U.S. Bureau of Reclamation (Reclamation) has provided emergency energy capacity from Folsom Dam during times of critical need (stage 3 emergency). We are concerned about the potential impacts the proposed modifications may have on power production at a time when maximum capacity is needed. We are also concerned about long-term effects of the modifications on hydroelectric operations and ongoing issues (temperature) concerning Reclamation's ability to meet flow requirements under their existing biological opinion.

The document does not address potential impact to the hydroelectric generation from the proposed modifications. We would like to see the following issues discussed and evaluated in the Final EA/FONSI:

1. Given the current state of power resources in the state and particularly the importance of Folsom Dam to the Sacramento area, the document should include any short-term power impacts referring to the energy crisis. 1-1
2. Power plant outages should be addressed. It is likely that there could be construction-related power plant outages during the construction period. The document should describe any planned construction-related power plant outages, including a schedule of such outages. 1-2
3. The dredging operation will cause significant silt, sediment and other solid materials to be sucked into the water intake conduits to the power plant during period of power plant releases. The silt, sediment, and other solid materials going through the power plant turbines could cause expensive premature wear-and-tear on the turbines themselves, and if severe 1-3

Letter 1: Western Area Power Administration

Response to Comment 1-1

Power use during the construction period would be incidental—no significant power use is planned. No interruption in power generation activities at Folsom Dam are expected due to the construction of project facilities.

Response to Comment 1-2

No power plant outages are expected due to the construction of project facilities.

Response to Comment 1-3

The EA/IS, in Section 3.7.2, describes the potential water quality impacts associated with dredging near the dam face. Damage to existing facilities, such as the power plant turbines, was not addressed.

Best Management Practices will be used to ensure compliance with water quality requirements and to minimize resuspension of sediments at the excavation site. The pre-dredge sediment sampling and coring data, water depth of dredging operations, and distance to disposal site will generally determine the mechanical properties of a dredging system that will adequately remove the sediments from the defined dredging area within reasonable time restraints. The general types of dredging plant being considered at this time include specialized "air lift or pneuma systems," submerged centrifugal pump systems similar or equal to "toyo pump systems," and modified sealed bucket dredges with devices to ensure that the bucket is totally closed before a bucket of

sediment is brought through the 250-300 foot water column. The preferred system (if sediments are not really compacted) is probably the pneuma system since this operation is more efficient at these deep depths and since it can pump materials at almost in-situ densities without the entrainment of additional waters that would have to be later returned to the lake after proper settling in the disposal area. This operation has been used in many parts of the world for deep reservoir dredging operations due to its abilities to provide the most environmentally friendly dredging system that inherently does not resuspend sediments back into the water column at the site of excavation and has less decanted waters at the disposal site that must be returned to the waterway. If the sediments are found to be predominantly fine or coarse sands covered with a small layer of silts, a sealed bucket dredge with special sensors installed to ensure a closed-bucket condition before lifting or a portable submerged pump attached to a crane line may be adequate to remove the materials without reintroducing sediment back into the water column during the dredging operation. Such control requirements are described in Section 3.7.3 under the project's water quality mitigation requirements.

Because of the concerns regarding turbidity and uncertainty regarding specific construction plans, the project's water quality mitigation requirements, as described in Section 3.7.3, include monitoring sediment and turbidity levels. In addition to the monitoring described in the Draft EA/IS (which is consistent with expected monitoring requirements of the Central Valley Regional Water Quality Control Board), an additional monitoring station will be placed in the vicinity of both the penstocks and the urban water intake, in coordination with Western and the urban water users, to ensure that sandy (erosive) materials are not entrained into the intakes. The

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4. enough, can cause unplanned power plant outages. The document should discuss appropriate measures will be taken to minimize this possibility.
5. After construction, the new higher release rate (115,000 cfs) on the enlarged river outlets represent almost a four-fold increase in velocity over the present rate (30,000 cfs). This much higher release rate could cause silt and sediment to not have time to settle and instead accumulate behind the dam and power plant intake conduits causing higher maintenance that could affect power plant operations and reliability. The document should discuss appropriate measures will be taken to minimize this possibility.
6. There may be long term power impacts, particularly in dry or below normal year impacts when Folsom is drawn down more using the new outlets and does not recover the storage released because the year is drier than expected at the time of the flood control releases. The document should describe these potential impact and any long term impacts to water storage under dry and below normal water criteria.
7. The document should better describe how you increase flood protection by enlarging spillway outlet capacity.
8. The document should describe the relationship between this action and CALFED actions, including any cumulative impacts.
9. A clarification of the surcharge storage is needed. The document does not describe this so that a non-technical person could understand.

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1-5

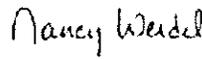
1-6

1-7

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Thank you for the opportunity to comment on the document. If you have any questions concerning our comments, please call me on 916-353-4537.

Sincerely,



Nancy Wendel
Environmental Manager

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monitoring station will be placed at a location that will allow corrective action. Monitoring results will be discussed with Western during construction.

Project mitigation also includes configuring the penstock temperature control shutters in a manner that would reduce the potential for sediment entrainment, to the extent that this reconfiguration can be accomplished without adversely altering the temperature of outflows. This additional distance buffer is expected to further reduce the potential for sediment entrainment.

With the mitigation requirements described above and in the Final EA/IS, the potential for damage to the turbines is expected to be negligible.

Response to Comment 1-4

As described in the EA/IS, flows between 30,000 and 115,000 cfs would occur during 2- to 10-year flood events. Flows below the 2-year event and above the 10-year event would be the same with or without the project. The proposed 60% rule restriction would further limit increases in outflow relative to the No Action Alternative. Fundamentally, sedimentation in the reservoir is a function of the sediment load in incoming water and the amount of time it takes for that water to pass through the reservoir. The limited extent of changes in outflow under the Proposed Action is not expected to change siltation patterns behind Folsom Dam.

Response to Comment 1-5

The amount of water stored in the reservoir is set according to an existing water control manual, or rule curve. There is no change to the rule curve as a result of this project, and therefore no reduction in the amount of water available for water supply or

power generation is expected. As described in Section 5.1 (Cumulative Impacts), the water control manual is proposed to be revised following completion of the outlet modification and surcharge storage projects. Additional environmental evaluation will occur for that action.

The potential for the scenario described in the comment to occur would be similar under both the No Action Alternative and the Proposed Action. Operations with the enlarged river outlets provides the ability to bypass flows faster than the existing outlets, but Folsom Dam would continue to be operated according to the 400-670 TAF flood control diagram. In addition, the proposed 60% rule restriction would guard against unnecessarily high releases into the lower American River if conditions do not warrant such releases, and would help maintain the power pool in Folsom Reservoir.

Response to Comment 1-6

Additional text has been added to Section 1.1 of the EA/IS to describe the flood control benefits of the project.

Response to Comment 1-7

The CALFED process addresses the health of the Bay-Delta system, and is focused on water supply reliability, ecosystem restoration, water quality improvement, and levee stability. The proposed project does not affect the items of CALFED's focus, and to date flood control in upstream reservoirs is not addressed by CALFED.

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Response to Comment 1-8

Additional text has been added to Section 1.1 of the EA/IS to describe surcharge storage.

CITY OF FOLSOM

50 Natoma Street
Folsom, California 95630



Public Works Department
Administration/Engineering

April 3, 2001

Ms. Patricia Roberson
Corps of Engineers
1325 J Street
Sacramento, CA 95814-2992

SUBJECT: AMERICAN RIVER PROJECT - FOLSOM DAM MODIFICATIONS

Dear Ms. Roberson:

We have reviewed the draft Environmental Assessment/Initial Study (EA/IS) and Finding of No Significant Impact/Negative Declaration (FONSI/NEG DEC) for the subject project and offer the following comments:

1. On page 43, the document states that up to sixteen weekend closures would occur during the Outlet Modification project, with another eight during the Surchage Project. Folsom Dam Road experiences significant weekend, recreational traffic during the late Spring through early Fall period. To the extent possible, weekend closures should be minimized or avoided during this period of the year.
2. On page 45, the proposed mitigation measure to temporarily re-stripe existing two-lane roads to four lanes is vague and insufficient. The EA/IS should state specifically which roadways/intersections are proposed for modification, and whether such improvements are feasible. Until it can be demonstrated that this mitigation measure can be implemented with the desired effects, this impact should be considered significant and unmitigated.
3. On page 45, the proposed communication program should be expanded to include a system of changeable message signs, placed in advance of Folsom Dam Road approaches, to provide motorists with information regarding road closures and delays. The existing signs placed by the Bureau are somewhat effective, but changeable message signs would command greater attention and provide more flexibility in messaging. It is recommended that the Bureau consider replacing their existing signs with permanent changeable message signs for both construction and long-term use.

In addition, the following mitigation measures should also be included to avoid impacts to traffic using Folsom Dam Road during the construction of this project:

1. Construct a new edit in the face of the auxiliary spillway to remove and deliver equipment and materials. Access to the edit would be from a staging area on the south abutment adjacent to the auxiliary spillway.

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Public Works (916) 358-7272 / Fax (916) 351-0525

Responses to Letter 2

Response to Comment 2-1

Pursuant to this comment, additional opportunities to avoid weekend closures have been explored. Construction of the outlet modifications is now expected to result in a total of about 14 weekend closures. Four of these weekend closures would extend from late Friday night to early Monday morning, while the remaining 10 closures would take place during the daylight portions of Saturday and Sunday. To the extent possible, weekend closures will be scheduled to occur outside of the primary recreation season at Folsom Lake. However, we anticipate that several of these weekend closures will need to occur during the summer. The Corps will work with the City of Folsom to schedule this weekend work around holidays or special events in Folsom.

2-1

2-2

2-3

Road closures related to the Surchage Storage project have been reduced due to traffic-friendly changes in the construction plan. Weekend closures have been reduced to six weekends in Year 6 of construction because an opportunity was identified to combine a Bureau of Reclamation project for seismic retrofit with surcharge project activities. To the extent possible, the project proponents will work with the Bureau of Reclamation to schedule this work outside of the primary recreation season.

2-4

Response to Comment 2-2

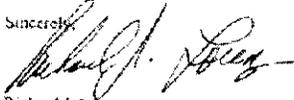
The commentor refers to mitigation requirements that were developed in response to part-day, mid-week closures. Pursuant to this comment, additional

2. Utilize a floating barge for placement of the required bulkheads, instead of using a crane located on the Dam Road.
3. Limit the blasting operation to non-commute hours. Allow a maximum of two blasts per day outside of commute traffic with each not to exceed a period of less than 30 minutes.

The City's primary concern with the proposed project is impact to traffic circulation during construction. In particular, impacts to traffic during peak commute hours should be avoided.

Thank you for the opportunity to review and provide comments on this document. If you have any questions or need additional information, please call our Traffic Engineer, Mark Rackovan, at 355-7379.

Sincerely,



Richard J. Lorenz
Public Works Director/City Engineer

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c: City Manager
City Attorney
Traffic Engineer
Chris Fife

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cont.

opportunities to avoid closures have been explored. As a result of modifications to the construction plan, part-day, mid-week closures have been reduced to a maximum of 12 off-peak closures. These closures will take place in the summer of 2001. The Final EA/IS includes this change. Because the number of closures has been substantially reduced and the closures will take place this year, we have determined that the need for mitigation has been eliminated.

Response to Comment 2-3

Pursuant to this comment, the project proponents will include the installation of temporary changeable message signs as part of the project. The project proponents recognize the benefit that would be provided by permanent changeable message signs, and commit to working with the City and the Bureau of Reclamation to install permanent signs.

Response to Comment 2-4

The following responses are provided:

- The project has been changed to include this new addit. This will substantially reduce the number of night closures required (currently estimated at 50 total nights).
- The project has been changed to include placement of the bulkheads from floating barges. This will reduce the extent of weekend impacts (see Response 2-1), but weekend closures will still be necessary for spotting the placement of the bulkheads.

- Clarification has been added to the document regarding blast delays. Blast delays will occur during non-peak times. Blast closures would be limited to two per day, and are expected to occur for 15 to 30 minutes. Up to 250 non-peak day and night delays can be expected over the life of the project.



San Juan Water District

P.O. Box 2157 • Granite Bay, California 95746 • 916.791.0115
 9935 Auburn Folsom Road • Granite Bay, California 95746
 FAX 916.791.7261 • www.sjwd.org

General Manager
 James R. English
 ▲
 Director
 Kimberly R. Johnson
 Edward J. Tuck, Executive Assistant
 (916) 791-0115
 Glenn A. Miller
 Executive Assistant
 ▲

April 12, 2001

Ms. Patricia Roberson
 Department of the Army
 U.S. Army Engineer District, Sacramento
 Corps of Engineers
 1325 J Street
 Sacramento, CA 95814-2922

Subject: Comments on the Draft Environmental Assessment/Initial Study
 American River Watershed, California
 Folsom Dam Modification Project

Dear Ms. Roberson:

Thank you for the opportunity to provide comments on the Environmental Assessment/Initial Study for the Folsom Dam Modification Project.

My comment is in reference to Section 3.7, Water Quality. You have already identified the following:

"construction activities would result in suspending or discharging sediments, thereby increasing turbidity and the risk of releasing toxic materials associated with sediments"

In Section 3.6.3, Mitigation, you commit to use appropriate Best Management Practices to control construction related contamination and to reduce construction related impacts to less-than-significant levels, by consulting with our District to ensure that dredging activities on the upstream face of Folsom Dam occur during periods of low outflow. The District's concern relates to the quality of water during these low flow periods. The District must be able to treat water to a quality that meets regulatory requirements, while also meeting the water demands of the Fair Oaks Water District, Citrus Heights Water District, Orange Vale Water Company and the San Juan Water District retail area. If the raw water from Folsom Dam is of a low enough quality, the District may not be able to treat an adequate supply of water to meet these water demands, while still meeting all regulatory requirements.

The effects from the dredging activities must not be determined to be mitigated to a level that is less-than-significant unless the result is that the District will receive water that is of high enough quality to allow treatment of a sufficient quantity of water to meet the then current water demands.

3-1

Letter 3: San Juan Water District

Response to 3-1

The EA/IS, in Section 3.7.2, describes the potential water quality impacts associated with dredging near the dam face. The effect of dredging on operation of water treatment facilities was not addressed.

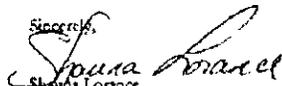
Subsequent analysis has shown that potential impacts to San Juan Water District's treatment system would be less-than-significant. Given the distance from the dredging area to the urban water intake (300 feet total, about 140 vertical feet) and the maximum expected diversion rate (400 cfs), it is possible for the intake to draw water from the dredging vicinity. However, the induced velocities would be very small and would not likely influence sediment transport. Under a worst-case scenario, the increased in turbidity caused by the dredging would be very small and likely within the range of natural fluctuations.

The project proponents recognize the concerns of the commentator, and remain committed to minimizing potential water quality impacts to the maximum extent possible. Best Management Practices will be used to ensure compliance with water quality requirements and to minimize resuspension of sediments at the excavation site. The pre-dredge sediment sampling and coring data, water depth of dredging operations, and distance to disposal site will generally determine the mechanical properties of a dredging system that will adequately remove the sediments from the defined dredging area within reasonable time restraints. The general types of dredging plant being considered at this

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If you have any questions, you can reach me on my direct line at 916-791-4119.

Sincerely,

 Shonda Lorraine
 Assistant General Manager

time include specialized "air lift or pneuma systems," submerged centrifugal pump systems similar or equal to "toyo pump systems," and modified sealed bucket dredges with devices to ensure that the bucket is totally closed before a bucket of sediment is brought through the 250-300 foot water column. The preferred system (if sediments are not really compacted) is probably the pneuma system since this operation is more efficient at these deep depths and since it can pump materials at almost in situ densities without the entrainment of additional waters which would have to be later returned to the lake after proper settling in the disposal area. This operation has been used in many parts of the world for deep reservoir dredging operations due to its abilities to provide the most environmentally friendly dredging system that inherently does not resuspend sediments back in the water column at the site of excavation and has less decanted waters at the disposal site that must be returned to the waterway. If the sediments are found to be predominantly fine or coarse sands covered with a small layer of silts, a sealed bucket dredge with special sensors installed to ensure a closed bucket condition before lifting or a portable submerged pump attached to a crane line may be adequate to remove the materials without reintroducing sediment back into the water column during the dredging operation. Such control requirements are described in Section 3.7.3 under the project's water quality mitigation requirements. In addition, completion of a Temperature Control Device on the urban water intake may provide additional opportunities for drawing water at a greater vertical distance from the dredging area.

Because of the concerns regarding turbidity and

uncertainty regarding specific construction plans, the project's water quality mitigation requirements, as described in Section 3.7.3, include monitoring sediment and turbidity levels. In addition to the monitoring described in the Draft EA/IS (which is consistent with expected monitoring requirements of the Central Valley Regional Water Quality Control Board), an additional monitoring station will be located in the vicinity of both the penstocks and the urban water intake, in coordination with the urban water users and Western, to ensure that turbidity levels do not exceed the criteria provided by the Regional Board. The monitoring station will be placed at a location that will allow corrective action. Monitoring results will be discussed with San Juan during construction.

With the mitigation requirements described above and in the Final EA/IS, the potential for turbidity-related impacts to San Juan's treatment capacity is expected to be negligible.