

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 5, 2007

David Smith
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Draft Environmental Impact Statement (DEIS) for the Success Dam Seismic Remediation Project (CEQ# 60478)

Dear Mr. Smith:

The U.S. Environmental Protection Agency (EPA) has reviewed the DEIS referenced above. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. Our detailed comments are enclosed.

The project is proposed to remediate structural deficiencies in Success Dam's foundation that increase the risk of failure from a Maximum Credible Earthquake (MCE) and Probable Maximum Flood (PMF) event. Currently, the dam is at risk of collapsing from these events due to unconsolidated sands and gravels at the foundation. In 2004, the Corps conducted an initial screening workshop for potential alternatives. After the screening workshop and 2005 studies, as well as a 2006 restriction on the level of the reservoir pool, the Army Corps of Engineers (Corps) is proposing construction of a new earthen dam, a new intake tower, and widening the existing spillway. The EIS considers in detail an alternative that provides an in-situ treatment or a replacement to the downstream dam section and an earthen embankment alternative. A discussion of in-situ variations to stabilize the foundation was considered and jet grouting was determined the most feasible.

Based on our review, we have rated the document as Environmental Concerns - Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions"). We note that Tulare County relies heavily on agriculture and has a high level of poverty. As a result of the project, there are noise and air impacts that may affect residents, relocation of residents during the construction phase of the project, and impacts to aquatic resources in Success Lake. Even with mitigation measures, there will be significant emissions of nitrous oxide (NOx) and particulate matter less than 10 microns in diameter (PM10). As the DEIS notes, Tulare County is in nonattainment for PM10. While there is a significant amount of mitigation proposed for air

quality impacts, EPA recommends that the FEIS include additional information related to the alternatives' analysis process, more information regarding the potential for environmental justice issues from relocations or noise and air quality impacts, and the planned mitigation measures for fishery impacts. EPA also recommends that the FEIS include additional information on the projected performance of the jet grout alternative, given the concerns regarding the stabilization of the soil matrix.

We appreciate the opportunity to review this DEIS and the measures the Corps has taken to mitigate the project's unavoidable impacts to wetlands, riparian resources, air quality, and vegetation. When the FEIS is released for public review, please send (1) copy to the address above (mailcode: CED-2). If you have any questions, please contact me at 415-947-4184 or Summer Allen, the lead reviewer for this project. Summer can be reached at 415-972-3847 or allen.summer@epa.gov.

Sincerely,

/S/
Paula Bisson, Manager
Environmental Review Office

Main ID # 4633

Enclosures: Summary of Rating Definitions
Detailed Comments

Alternatives Analysis

It isn't clear why there are only one or two viable alternatives for the project. An Alternative Selection Report was prepared in October 2004 but not much information from this report is carried forward in the DEIS. This process analyzed many potential alternatives, of which the DEIS carries forward four for analysis. However, two of these were eliminated leaving two alternatives, with one of those (the Jet Grout Alternative) potentially not viable due to foundation materials. The Downstream Overlay was eliminated due to conflicting Corps policy and the Roller Compacted Concrete Dam was eliminated because the foundation would not support it. Therefore, it seems that the Earthen Dam Alternative is the only feasible alternative.

Recommendations:

The FEIS should include additional summary information from the Alternative Selection Report regarding other potential alternatives and the reasons that they were not carried forward. It should also include a more detailed analysis of the Corps policies that would make the Downstream Overlay infeasible. It should also discuss additional analysis of the feasibility of the Jet Grout Alternative. The FEIS should establish that a less-damaging alternative is not feasible.

Impacts to Water Supply and Fisheries

Both the Earthen Dam Alternative and Upstream Jet Grout Alternative impact lake elevation over two irrigation seasons. The DEIS proposes managing this reduction in water supply through a water bank by adjacent farmers or by short-term groundwater overdraft (p. 3-81, 82). The document does not describe the willingness of adjacent farmers to fallow their land in order to create a viable water bank.

Normally, a water level of 577 feet is needed to protect the fishery in Success Lake, but this level has been dropping due to agricultural withdrawals. During construction, the reservoir will also be subject to draw-down. This could have an impact to the fishery in Success Lake by changing the temperature profile or the level of dissolved oxygen. Section 3.4.3 of the DEIS notes that the potential exists for a substantial fish die off unless mitigation actions are taken. The Fish and Wildlife Coordination Act Report lays out specific measures to be incorporated into a mitigation plan. However, it is not clear if these will be implemented.

Recommendation:

The FEIS should describe the willingness of adjacent farmers to fallow their land during construction to account for reduced water supply and the ability of the groundwater levels to recover from temporary overdraft.

The FEIS should include further information regarding the specific mitigation and monitoring measures for fishery impacts, especially during construction. It should clarify if the Corps will implement the mitigation recommendations from the Fish and Wildlife Coordination Act Report.