

VIA ELECTRONIC MAIL

August 17, 2016

U.S. Army Corps of Engineers Sacramento District
Nancy H. Sandburg, Sr. Biological Sciences Environmental Manager
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Email: Nancy.H.Sandburg@usace.army.mil

RE: Draft Supplemental Environmental Assessment (SEA) #5 regarding dams and spillway design refinements on the Isabella Lake Dam Safety Modification Project

Dear Ms. Sandburg:

The Kern-Kaweah Chapter of the Sierra Club, Sequoia ForestKeeper®, and the Center for Biological Diversity (“Center”) (collectively “conservation groups”) thank you for this opportunity to submit comments on the Draft Supplemental Environmental Assessment (DSEA) #5 Isabella Lake¹ Dam Safety Modification Project. Our groups have participated in the public review process and attended meetings for the U.S. Army Corps of Engineers

¹ A semantic issue concerning denominating this body of water “Lake Isabella” (see, e.g., Section 1.2 sentence 1 & 2). The body of water should be referred to as Isabella Reservoir not lake. A lake is perceived by the public as a natural body of water with a naturally fluctuating shoreline. The body of water in the Kern River Valley is wholly unnatural with a human determined pool level.

("Corps" or "ACOE") Isabella Lake Dam Safety Modification Project and submitted comments at various stages of the project including comments: on the DEIS on May 21, 2012; supplemental comments on the DEIS providing new information to the Corps on January 7, 2015 (attaching our comment letter of December 1, 2014 to the U.S. Fish and Wildlife Service on the listing of the Yellow-billed Cuckoo (western DPS) (*Coccyzus americanus*); on December 28, 2015 concerning the FSEA for the Real Estate Acquisition and Relocation; and on 16 March 2016 concerning the DSEA Phase III Real Estate Easement Acquisition of Borel Canal at Isabella Lake Auxiliary Dam without Replacement. Those comments are incorporated by reference herein as though fully set forth.

Background: DSEA #5

The DSEA #5 relates primarily to project refinement, and states it is intended to update, discuss, and disclose potential effects, beneficial or adverse, that may result from the proposed design refinements. Chapter 2 of the DSEA #5 discusses the Alternatives for the proposed design refinements. Chapter 3 assesses the existing environment, affected environment and consequences expected by implementing the proposed alternatives. Chapter 4 of the DSEA #5 addresses cumulative and growth inducing effects created by the proposed alternatives.

A single Preferred Alternative (Proposed Action) is considered, which DSEA #5 states reflects design refinements to the DSM project in accordance with 33 CFR 230.10. Other modifications and changes to the DSM Projects have been evaluated through prior NEPA documents as described in Section 1.7. The Proposed Action consists of specific design details that have been refined since the FEIS, and also design changes the Corps states will best accomplish engineering challenges with reduced effects on resources and project costs. The DSEA #5 states that the design refinements were presented to the USFS, a cooperative partner, for preliminary assessment in early April 2016.

COMMENTS

1. The Proposed Height of the Spillway Must Be Clarified.

Critically, *the Corps must clarify what the proposed final height of the main spillway will be after project completion of the project.* We are troubled by the staff response to a question at the meetings of Wednesday, February 24, 2016 and Tuesday, July 26, 2016 about the height of the main spillway after project completion. Staff stated that the main spillway would rise to be level with the emergency spillway designed to be at the height of the current dam structure.

This response, that the height of the existing spillway would increase by sixteen feet at the February meeting and then twenty-eight feet at the July meeting, via the response that the height of the spillway would increase to the height "of the current dam structures" from 2,609' to 2,637' is confusing and contradicts the ROD from December 2012 which states

the current spillway height will not rise. We have asked for clarification via email but have received no assurances from the engineering staff that this was truly stated in error.

If true that the spillway height would be increased by either sixteen feet (16') or twenty-eight feet (28'), the Project would add millions of acre-feet of increased storage to the pool in the event of a flood and would flood all property, habitat, and infrastructure to a minimum of 2,637-feet, which is 28-feet above the current maximum pool height of 2,609-foot. However this flooding of additional property has never been analyzed; the impacts to the people and environmental resources upstream of the dam must be identified and analyzed.

From the FEIS 2012 pages 3-4:

Alternative Base Plan

Existing Spillway pdf page 251-252

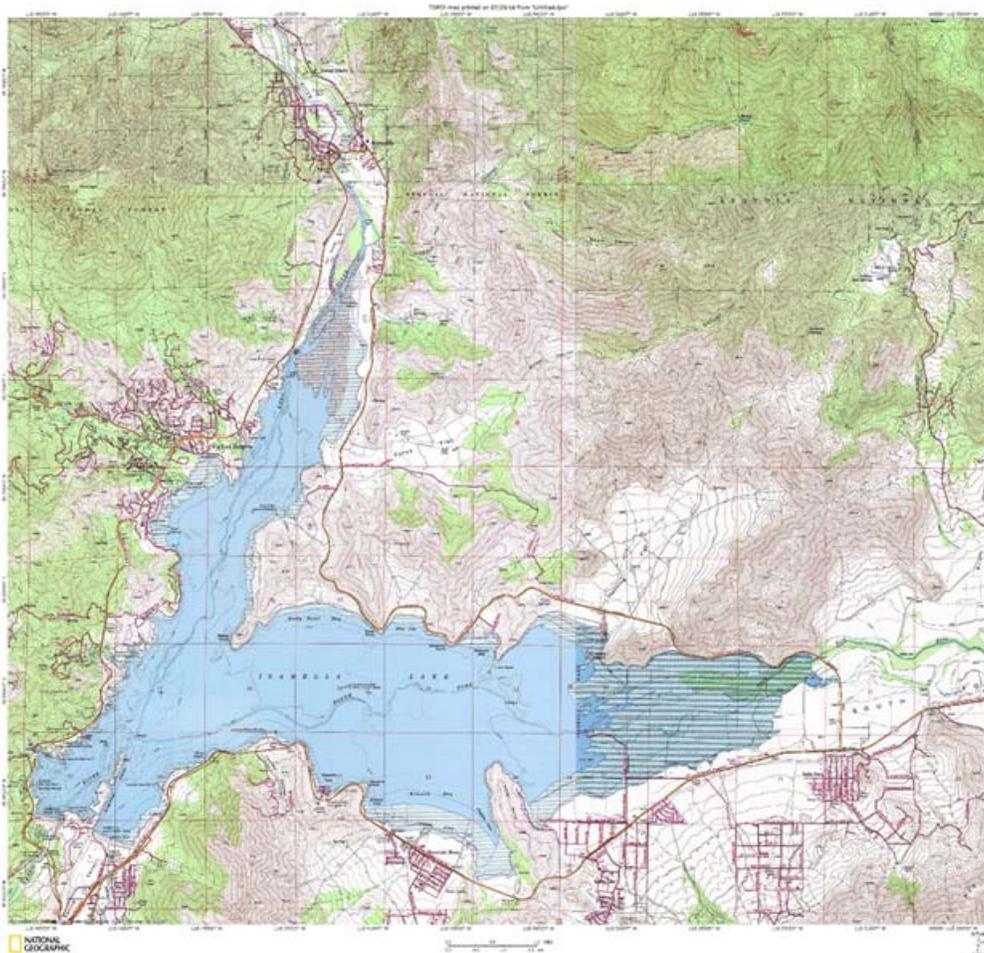
“Included in this alternative would be remediation of the deficiencies identified for the existing spillway. The remediations include: (a) select concrete placement and surface treatment of the existing spillway chute to guard against erosion undermining of the right wall; (b) addition of rock anchors along the right wall to increase seismic stability; and (c) construction of a 4-foot high retaining wall added to the crest along the right wall (closest to the Main Dam) to protect against potential erosion of the Main Dam during high outflows. The concrete needed for all remediation measures on the existing spillway would be supplied by the ready-mix plant located in the South Lake area along SR 178.”

Emergency Spillway -

“The Corps has determined that the existing spillway along the east side of the Main Dam cannot safely pass extreme storm events (such as the PMF). Therefore, this alternative includes the construction of a new “Emergency Spillway” that will be located about 100 feet east of the existing spillway. The additional spillway would be required to remediate the hydrologic deficiency (undersized capacity of the existing spillway) that could lead to overtopping of the dams.

This Emergency Spillway would function independently from the existing spillway, and would begin to function around elevation 2,620.76 feet (11.5 feet higher than existing spillway) for outflows associated with storm events greater than a 1-in-400-year frequency. Outflows associated with more frequent storm events would be handled by the existing spillway. The new spillway would have a labyrinth type weir with four v-shaped concrete baffles and a concrete apron. It would be designed to dissipate energy and control the rate of outflow through the spillway channel.”

From the Preferred Alternative #4 FEIS 2012 pages 8-9:



Existing Spillway pdf page 256-257:

“Addition of anchors along the ogee crest (as well as the anchors along the right wall), for additional head during operation and to increase seismic stability. Construction of an approximate 16-foot high retaining wall (instead of 4-feet) added to the crest along the right and left walls to protect against potential erosion of the Main Dam during high outflows and to accommodate the crest raise.

The concrete needed for all remediation measures on the existing spillway would be supplied by the ready-mix plant located in the South Lake area along Hwy 178.”

Emergency Spillway

“The 900-foot-wide Emergency Spillway would begin to function around elevation 2,637.26 feet (instead of the 2,620.76 in the Alternative Base Plan because of the 16-foot crest raise), which is 28.0 feet higher than the existing spillway. The annual probability of the reservoir rising to the elevation that the Emergency Spillway would operate is approximately 1-in-4,700.”

Increasing the height of the spillway from the height analyzed in the FEIS is a major change that would increase the pool by orders of magnitude and threaten upstream interests. The 1 in 4,700-year flood will be more dangerous to a sizable population upstream as escape routes will be underwater and high ground inaccessible by Army Corps of Engineers design.

Shouldn't protecting lives also include those in the upper Kern River Valley since many would be completely under water in this flood event?

Increasing the height of the spillway from the height analyzed in the FEIS would exacerbate the over-allocation of the water that flows into the Kern River via the dam discharge, which means most of the natural aquifers of the southern San Joaquin Valley will no longer be flooded. The flood water that is held behind the Isabella dam has caused loss of recharge to groundwater resources where nature intended, in the natural valley lakes and marshes, which in turn is causing overdraft, subsidence, and infrastructure damage. The revised DSEA must analyze this impact.

If the spillway remains the same height, but with the buttressed sides to match the height of the raised flanks, then the spillway would be 44' below the height of the emergency spillway, which seems to be exposing the narrowest dam segment to an extremely high pressure before the emergency spillway could protect it.

If the spillway is raised from the current spillway height of 2,609' in elevation to the current elevation of the main and auxiliary dams at 2,637' elevation, shouldn't the Corps, in its EIS, analyze the impacts to the thousands of acres of private and county property, farmlands, roadways, and airport, as well as the riparian habitat areas around the reservoir, including the Audubon Kern River Preserve, that would be flooded before water breaches the new spillway?

If the Corps has decided to change this critical aspect that would affect so many aspects of the Kern River Valley and make the minimal mitigation on wetlands and uplands far less than the actual impact, it would seem that an SEA would be wholly inadequate and a new EIS would be required.

2. Specific Comments and Concerns with DSEA #5

The DSEA #5 States that it is evaluating various design refinements to the preferred action.

a. The DSEA #5 concludes that there will be no fine materials that could contribute to water pollution from the bulldozer activity and blasting, but then it contradicts itself with additional statements that conclude that rain (not heavy equipment) could cause sediment flows that can lead to increased runoff and erosion.

“The Spillway excavated material would consist primarily of excess blasted rock with zero to no fines; 15 percent gravel and sand and 85 percent cobbles and boulders.” DSEA #5 page 12.

We remain concerned that 1.8 million cubic yards of material on 52-acres on top of a seismically active fault at Engineers Point may cause a reservoir tsunami in a moderate to severe tremor and may overtop the newly rebuilt dam.

“Areas with sufficient soil substrate would be seeded with native grasses to preclude erosion.” DSEA #5 page 16.

In this area of limited rainfall, how will grass seed germinate without irrigation? With no fine soils, where is this reseeded to take place? Why are no native shrubs being planned for Engineers Point and other scraped areas to further stabilize the soil and provide wildlife habitat?

“Rainfall prior to slope stabilization could lead to increased sediment runoff into the lake. Turbidity and DO levels could be temporarily impacted by sediment-laden runoff from Engineers Point. Any adverse effects during construction from the placement of material at engineers point would be reduced to less than significant through the use of Best Management Practices (BMPs). Post-construction stabilization BMPs would minimize adverse effects from this action.” DSEA #5 page 41.

Extreme eutrophication is already reducing dissolved oxygen levels causing annual algal blooms. Engineers Point is a very poor location to dump any excess material for multiple reasons: sedimentation is just one of many reasons.

“If the current level of mitigation does not provide for protection of aquatic resources, affecting work would be discontinued until measures are applied to ensure protection. Also, project work affecting any exceedance of CVRWQCB Section 401 thresholds would cease until resolution is conducted to ensure that the project can meet Section 401 Certification thresholds.” DSEA #5 pages 41-42.

Due to a blue-green algae (*Aphanizomenon flos-aqua*) bloom in 2005, thousands of fish and birds died from an undetermined poison. Eutrophication by human and livestock feces in the footprint of the reservoir was suspected to be a major cause of the historic bloom. Livestock and human waste should be excluded from the high water line to the minimum pool line to protect the water quality.

“Fugitive dust control measures are also included as part of the SWPPP. The contractor would be responsible for implementing, maintaining, and monitoring BMPs during material placement and stabilization.” DSEA #5 page 42.

“Surface disturbance can lead to increased runoff and erosion, which will

lead to the potential of increased sediment and contaminants in surface waters adjacent to the project.” DSEA #5 page 54.

Permanent PM2.5 monitors should be placed around the reservoir especially on the leeward side of the prevailing wind to determine if the airborne pollutants are exceeding safe levels. Additional monitors should be placed in areas that have high arsenic levels to determine if there is a hazard to local citizens from airborne dust from the exposed reservoir soils.

b. The DSEA #5 concludes that there will be no impacts to habitat of the southwestern willow flycatcher, the western yellow-billed cuckoo, or migrating birds from the dam and spillway design refinements, but this DSEA fails to address our concerns about impacts to these and other avian species from the overall dam modification project and the flooding of the reservoir bed where riparian habitat has matured since 2006 when the Operating Restriction reduced the reservoir elevation to 2,589.26 NAVD88 (356,700 acre-feet).

There is no mention of the federally endangered least bell’s vireo (*Vireo bellii pusillus*) which nested in the riparian forest along the South Fork Kern River in 2015. This species should be surveyed for and all of its habitat should be protected within the secondary riparian forest within the footprint of Isabella Reservoir.² Additionally, Barlow Road is a known foraging and breeding location for the Tricolored Blackbird, which is a candidate for listing under the California Endangered Species Act and must be protected.³ The removal of the dam seepage below the Auxiliary Dam may dry up important marshes along Barlow Road and negatively impact the Tricolored Blackbird and alkali mariposa lily, *Calochortus striatus*. These impacts must be analyzed.

The following rare plants are documented by CalFlora.org within the footprint of the project area in DSEA #5: California androsace, *Androsace elongata* ssp. *acuta*; Alkali mariposa lily, *Calochortus striatus*; Great basin eriastrum, *Eriastrum sparsiflorum*; Kern river daisy, *Erigeron multiceps*; Inland gilia, *Gilia interior*; Sylvan scorzonella, *Microseris sylvatica*; Small leaved monkeyflower, *Mimulus microphyllus*; and Large-flowered nemacladus, *Nemacladus secundiflorus* var. *secundiflorus*.

The DSEA #5 concludes that there will be no impacts to habitat of the southwestern willow flycatcher, the western yellow-billed cuckoo, or migrating birds from the dam and spillway design refinements, but this DSEA fails to address our concerns about impacts to these and other avian species from the overall dam modification project and the flooding of the reservoir bed where riparian habitat has matured since 2006 when the Operating Restriction reduced the reservoir elevation to 2,589.26 NAVD88 (356,700 acre-feet). The DSEA’s

² http://www.blm.gov/ca/pdfs/cdd_pdfs/leastbells1.PDF

³ The USFWS also made a positive 90-day finding regarding the Tricolored Blackbird (80 Fed. Reg. 56423, 56430-31 (September 15, 2015)) and is now in the process of preparing a full 12-month status review.

conclusory statements do not suffice to comply with NEPA's requirements, additional environmental review must be prepared and recirculated to address all impacts to listed, rare, and imperiled species.

c. The DSEA #5 concludes that “The proposed design refinements do not present significant new circumstances or information regarding the nature and scope of effects to air quality and GHG associated with the DSM project that would change the analysis present in the 2012 Final EIS.” This DSEA statement is justified in the DSEA by stating that impacts to GHG’s were reduced with other changes to the plan, but only verbiage and no actual calculations of GHG emissions over the life of the project have been provided to substantiate the conclusion, which would be a violation of NEPA.

The scant GHG discussion in the DSEA states:

“Greenhouse gases (GHG) were assessed in the DEIS (Section 3.5.2) and within the FEIS (3.3.2). Substantial reductions in projected DSM project emissions and GHG from assessment in the DEIS have been afforded by removal of several proposed high emission producing actions including Highways 178 and 155 relocation, upstream Auxiliary Dam buttress fortification, and use of the South Fork Delta Area as a sand borrow source.” DSEA #5 page 28.

“The proposed design refinements do not present significant new circumstances or information regarding the nature and scope of effects to air quality and GHG associated with the DSM project that would change the analysis present in the 2012 Final EIS.” DSEA #5 page 29.

None of these statements actually provide GHG analysis for the project and certainly not over the life of the project. In order to comply with NEPA, additional environmental review must be prepared and recirculated to address these and other issues.

CONCLUSION

The lack of consistent statements about changes to the height of the spillway is a cause for concern for wildlife and plants, an additional 16 or 28 feet on the main spillway would cause an additional one to two-million acre-feet of water to be impounded behind the dam in exceptional flood events. This would flood: habitat set aside for endangered wildlife, public infrastructure, and private property with no compensation to land owners or businesses impacted by this additional storage. Additionally, the over-allocation of the water that flows into the Kern River via the dam discharge means that the natural aquifers of the southern San Joaquin Valley are no longer recharged causing loss of ground water

resources where nature intended, subsidence, and infrastructure damage. This too must be analyzed in a revised environmental document.

Given the above provided information we urge the Corps to reanalyze the impacts of the project on biological resources and revise the DSEA environmental review to fully analyze all impacts, include additional alternatives, and consider additional mitigation measures.

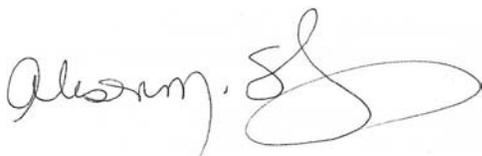
Respectfully submitted,



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