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Sent via e-mail and facsimile

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US Army Corps of Engineers
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Dear Mr. Wycko and Mr. Smith,

This office represents the Alameda Creek Alliance and the Center for Biological Diversity in regards to the Calaveras Dam Replacement Project Draft Environmental Impact Report (“DEIR”).

For the reasons below, this DEIR is inadequate under CEQA, and thus prevents informed public participation and decision making. Because of these inadequacies it would not be proper for the Army Corps to rely on the DEIR in preparing its draft Environmental Impact Statement until and unless these inadequacies have been corrected.

Please continue to include both this office, the Alameda Creek Alliance (P.O. Box 2626, Niles, CA 94536) and the Center for Biological Diversity (351 California Street, Suite 600, San Francisco, CA 94104-2404) in any further communications to the public on the proposed Calaveras Dam Replacement Project (“project”). In particular, please provide us with a copy of the Final Environmental Impact Report for this project. Thank you for your careful consideration of these comments.

Sincerely yours,

Brian Gaffney

cc: Jeff Miller

I. THE DRAFT EIR VIOLATES CEQA

A. California Environmental Quality Act (CEQA) Requirements

“The foremost principle under CEQA is that the Legislature intended the act “to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language. It is, of course, too late to argue for a grudging, miserly reading of CEQA. The Legislature has emphasized that ‘It is the intent of the Legislature that all agencies of the state government which regulate activities . . . which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage. . . . The Legislature has made clear that an EIR is an informational document and that the purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project. . . . Before approving the project, the agency must also find either that the project’s significant environmental effects identified in the EIR have been avoided or mitigated, or that unmitigated effects are outweighed by the project’s benefits.’” (*Laurel Heights Improvement Association v. University of California* (1988) 47 Cal.3d 376, 390 - 391 [citations and internal quotes omitted].)

An EIR is an environmental alarm bell whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return. The EIR is also intended to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action. Because the EIR must be certified or rejected by public officials, it is a document of accountability. If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees. The EIR process protects not only the environment but also informed self-government. (*Id.* at 392.)

These principles must guide the EIR in order for it to be legally valid. Specifically, the EIR must analyze (a) significant environmental effects of the proposed project, (b) significant environmental effects which cannot be avoided if the proposed project is implemented, (c) significant irreversible environmental changes which would be involved in the proposed project should it be implemented, (d) growth-inducing impact of the proposed project, (e) the mitigation measures proposed to minimize the significant effects, (f) alternatives to the proposed project. *See* Appendix A attached hereto.

B. The DEIR Fails to Include an Adequate Project Description.

An EIR must include “a general description of the project’s technical, economic and environmental characteristics, considering the principal engineering proposals if any and supporting

public service facilities.” (CEQA Guideline 15124(c).)¹ An EIR must include an “accurate” project description of the project’s technical and environmental characteristics. (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193; CEQA Guideline 15124.) The “project” is the “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” (Pub. Res. Code § 21065; CEQA Guideline 15378(a).) All phases of a project must be considered when evaluating its impact on the environment: planning, acquisition, development, and operation.

The Draft EIR’s project description does not specify if the Calaveras Reservoir will be drained during the construction phase.

The Draft EIR’s project description contains no disclosure of the volume and timing of operation-phase water diversions that will be split between the Sunol Valley Water Treatment Plant, the San Antonio Reservoir, or released into Calaveras Creek, or on what criterion the SFPUC will make such decisions. Therefore, the DEIR does not analyze how impacts will change based on where water is sent.

The DEIR’s project description states (DEIR p. 3-65) that there would be a decrease in average annual diversions from Alameda Creek compared to diversions under current DSOD-restricted operations, but does not disclose the volume of the diversions.

The DEIR project description vaguely claims (DEIR p. 3-65) that additional releases from Calaveras Reservoir will support native fishes pursuant to the 1997 MOU, but this is a conclusion that is not supported by DEIR analysis. Nor does the project description provide the dates when such releases would commence, nor what are the “periods when colder water is needed in Alameda Creek,” nor “when flows are not available at the ACDD.”

The DEIR should define how much of the flow releases will come from the ACDD bypass tunnel and how much will come from the Calaveras Dam to meet flow and temperature requirements, particularly in summer. The DEIR vaguely offers that the flow releases will be consistent with the MOU, but doesn’t state exactly what the flow releases will be.

The DEIR does not disclose the location of the new roads that will be created for the DEIR construction phase. Haul roads that would be used for two-way traffic will be 30 to 40 feet wide (DEIR p. 3-54), and yet the DEIR fails to disclose where these roads will be. Without this information the DEIR can not fully analyze project impacts to terrestrial plant and animal species. For example, the location of the west haul road is disclosed and that road may impact nesting bald eagles. In addition, disclosure of the location of the new roads is necessary to analyze the water quality impacts of proposed submergence of roads when the reservoir is filled. (DEIR p. 1-22.) The absence of such project description is startling given that the Army Corps’ Notice No. 29997S claims that the SFPUC has worked closely with the Corps of Engineers, the U.S. Fish and Wildlife

¹ The CEQA Guidelines are located in Title 14, California Code of Regulations. Great weight must be afforded the CEQA Guidelines. (*Laurel Heights Improvement Assn v. Regents of University of California* (1988) 47 Cal.3d 376, 391, fn.2.)

Service, the California Department of Fish and Game, and the San Francisco Bay Regional Water Quality Control Board to locate and design roads to avoid or minimize potential impacts to wetlands and other waters.

The Army Corps' Public Notice No. 29997S describes three gradient control structures being included as part of the proposed project, apparently in conjunction with the discharge channel. The DEIR does not include "gradient control structures" as part of the project description, and thus there is no analysis of the impacts of such structures on fish and fish migration.

C. The Baseline for Analysis of Environmental Impacts is Too Limited

An EIR must present an accurate, complete description of the environmental setting in the vicinity of the project as it existed before commencement of the project. (*San Joaquin Raptor/Wildlife Resource Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722.) A complete description of the "pre-existing environment" (*id.* at 723) is critical to establish a baseline for analyzing whether the project's impacts are significant. (*County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952; CEQA Guidelines 15125 & 15126.2(a).) The environment consists of the "physical conditions which exist within an area which will be affected" by a project. (Pub. Res. Code §21060.5.) As the *County of Amador* court reasoned, "the question is whether the EIR contains a sufficient description of the baseline environment to make further analysis possible." (*Id.* at 954.)

The DEIR claims that "the existing *interim* lowered water level is the baseline (existing condition) for impact assessment." (DEIR p. 1-8, emphasis added.) However, the DEIR does not *consistently* use the existing interim lowered water level as the environmental setting. For example, the DEIR changes the baseline to pre-DSOD conditions in analyzing impacts of channel-forming flows (DEIR p. 4.5-65), sediment sluicing (DEIR p. 4.5-66), effects below Calaveras Dam (DEIR p. 4.5-71), and spill events (DEIR p. 4.5-75). The DEIR also uses "the approximate 70-year period prior to DSOD restrictions" in analyzing the ACDD's 1) diversion rate, 2) injury/mortality, 3) summary, and 4) impact conclusion. (DEIR pp. 4.5-67 through 4.5-70.)² Notably, in abandoning the DSOD restricted baseline (2002 to present) the DEIR reasons that this period is "likely too short and too variable." (DEIR p. 4.5-65.)

Because the DSOD restricted baseline is "likely too short and too variable," the proper environmental setting for analyzing impacts to fisheries and to water quality should also include pre-DSOD conditions and pre-dam conditions. Such comparisons would give the public, responsible agencies and decision makers the proper bases for comparison of project impacts, particularly in regards to the impacts on native resident fish of 1) various flow regimes, 2) barriers to movement,

² Likewise, when explaining the project purpose, the DEIR states that it is to "to replace the existing dam with a new dam to accommodate a public water supply reservoir of the same size as the original plans (96,850 AF). However, the existing dam has a capacity of 38,100 AF; it has not had a capacity of 96,850 AF for over 80 years. (DEIR p. 3-6.) Even before the DSOD restrictions, the existing dam capacity was 92,000 AF.

and 3) water quality changes.³ Only in this way can the DEIR fulfill its function of demonstrating “that the significant environmental impacts of the proposed project were adequately investigated and discussed” and “permit the significant effects of the project to be considered in the full environmental context.” (CEQA Guideline 15125(c).)

D. The DEIR Fails to Adequately Analyze Impacts.

The DEIR must discuss “*all* significant effects on the environment.” (Pub. Res. Code §21100(b)(1), emphasis added.) Both direct and *indirect* effects “shall be clearly identified and described, giving due consideration to both the short-term and long-term effects . . . including relevant specifics of the area, the resources involved, physical changes, and alterations to ecological systems.” (CEQA Guideline 15126.2(a); 15064 (d).)

The DEIR sets a criteria (p 4.5-52) that the project would have a significant effect if it would have a substantial adverse effect on any sensitive, or special-status species. The native rainbow trout are such sensitive species. Yet, as discussed below, the DEIR fails to properly analyze the construction impacts within the Calaveras Reservoir on these species.

The DEIR sets a significance criteria (p 4.5-52) that the project would have a significant effect if it conflicts with any local policies or ordinances protecting fisheries or aquatic resources. Under CEQA, the DEIR should also discuss all inconsistencies between the proposed project and applicable general plans and regional plans, including water quality control plans. (CEQA Guideline 15125(d).)

- The DEIR fails to analyze whether and how the project conflicts with Fish & Game Code section 5901.
- The DEIR fails to analyze whether and how the project conflicts with Fish & Game Code section 5937, summarily concluding that “[f]lows established in a 1997 agreement between CDFG and the SFPUC, and as implemented through the proposed project, are intended to comply with this requirement.”
- The DEIR fails to analyze whether and how the project conflicts with protective rules under section 4(d) of the Endangered Species Act governing take for listed Central California Coast steelhead trout. (65 FR 42422; and 70 FR 37160.)
- The DEIR fails to analyze whether and how the project conflicts with the SFPUC Watershed Stewardship Policy.
- The DEIR fails to analyze whether and how the project conflicts with Water Code sections 6500, 5933, and 6020 through 6028.
- The DEIR doesn’t analyze if the construction shutdowns of the Reservoir outlet works violate the 1991 MOU minimum cold water pool requirement of 30,000 AF in the reservoir

³ Using an environmental baseline before DSOD restrictions were put into place in 2002 would not be technically difficult. The SFPUC has all the relevant data. For example, Figure 4.6.15a presents flow in Alameda Creek downstream of the Calaveras Creek confluence from 1920 through 1959. Figure 4.6.11b presents Calaveras Reservoir Storage and Releases to Calaveras Creek from 1960 through 2002. Figure 4.6.16 details the predicted changes in flow in Alameda Creek at the Niles gage over an 8-year period extending back to 2000. (DEIR p. 4.5-78.)

from July through late October.

The DEIR sets a criteria (DEIR p. 4.5-52) that the project would have a significant effect if it interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The DEIR fails to analyze how the proposed project interferes with movement of native rainbow trout. This is important as the project will need California Department of Water Resources, Division of Safety of Dams construction approval, including referral to the Fish and Game Commission per Water Code Section 6500 regarding the need for fish ladders or screens in accordance with Fish & Game Code sections 5933, 6020 – 6028. The DEIR also fails to analyze how the proposed project interferes with use of native wildlife nursery sites.

The DEIR fails to properly analyze the extent of project impacts to fish. The DEIR states that its analysis of impacts on fisheries and aquatic habitat focuses on the primary study area. (DEIR p. 4.5-52.) The primary study area in the Alameda Creek corridor terminates downstream at the Arroyo de la Laguna confluence. The extended study area includes the segment of the Alameda Creek main stem from the Arroyo de la Laguna confluence downstream to San Francisco Bay. However, the DEIR provides no rationale for limiting analysis to the primary study area, and downplaying impacts in the extended study area. The DEIR states (DEIR p. 4.5-57) that all fish species present in waterways downstream of construction activities could be adversely affected by construction-related impacts on water quality, but doesn't disclose how far downstream this impact will reach. Defining the extent of the impact is particularly important as the impact of increased temperature and reduced DO (dissolved oxygen) concentrations related to turbidity in the warm low-flow season would be particularly stressful for over-summering fish, including resident rainbow trout.

The DEIR also does not analyze impacts to fish as a result of the fact that the construction phase will last 4 years, plus one to several year period to refill the Reservoir. Analysis of potential impacts that takes into account the duration of the construction phase will guide formulation of mitigations and evaluation of mitigation feasibility.

The DEIR discloses that construction of barge-related facilities in the reservoir (e.g., possible piles, mooring structures) associated with Haul Route Option 2 would "harass and displace" (DEIR p. 4.5-58) fish present during construction, but the DEIR doesn't disclose if this will be a significant impact, thus avoiding use of the EIR's own significance threshold. Instead, the DEIR impermissibly avoids this analysis by stating that impacts will be temporary and mitigated. Without analysis of the extent of the impacts, the public and decision makers can not evaluate proposed relevant mitigations.

The DEIR concludes that water quality impacts to fish from excavation and placement of material for construction of the new dam "is not likely to be significant for individuals nor result in a significant adverse impact on fish populations." (DEIR p. 4.5-60.) However, the DEIR does not explain how it reached this conclusion given its statements that 1) "excavation and placement of material for construction of the new dam, including soil from borrow areas, would result in contamination of fish habitat if the material contains any contaminants or elevated substances that could be toxic to fish," 2) contaminants or hazardous naturally occurring asbestos (NOA) in

sufficient concentrations “could be harmful to sensitive fish and aquatic species,” and 3) “exposure of fish to natural asbestos fibers in the water related to project construction could potentially have adverse effects on [fish] health.” (DEIR p. 4.5-59.)

The DEIR (DEIR p. 1-18) states that operation of the ACDD bypass would be the primary means of providing flow releases for fish, when sufficient flows are present in Alameda Creek. The DEIR must define what constitutes sufficient flow and also analyze impacts when sufficient flows are not present.

In discussing construction impacts to fish downstream of the Calaveras Reservoir in the extended study area, the DEIR concludes that “impacts in the extended study area are anticipated to be less than significant.” (DEIR p. 4.5-60.) However, there is no analysis to support this conclusion. The DEIR avoids any analysis of construction impacts to fish in the extended area. DEIR section 4.5.8 is limited to the effects of project *operations* on native fish in Alameda Creek in the extended study area, not construction impacts. Moreover, there is no analysis to support the DEIR’s assertion that construction impacts over a 5-plus year construction phase will be “relatively localized” or why localized impacts will not have adverse potentially significant impacts in the extended study area. In addition, the DEIR treats the extended study area as solely occurring 9.3 miles miles downstream from the construction area, when this is only the terminus of the extended study area.

In discussing DEIR flow as compared to existing conditions, the DEIR is vague as to whether claimed “greater” or “increased” refers to flow volume or flow frequency, thus impairing understanding impacts of the proposed DEIR.⁴

The DEIR concludes that the “project is expected to have a less than-significant impact on water quality within Alameda Creek with respect to all water quality parameters,” but does not disclose how this conclusion was reached. (DEIR p. 4.5-64.) Elsewhere, the DEIR acknowledges that the project would affect water quality parameters in Calaveras Reservoir, including temperature, DO, and nutrient levels. (DEIR p. 4.7-61.) Likewise, regarding settleable materials, suspended materials, and turbidity, the DEIR notes that operations would result in slightly higher sediment loads in Alameda Creek during dry years, and from March to June of all other years, because of bypass flows from the ACDD. (DEIR p. 4.5-64.) The DEIR does not explain why it claims that project “releases are expected to contribute only minimally to overall suspended sediment load and turbidity,” given that “[d]uring dry and critical years as well as from March through June of all year

⁴ Compare DEIR p. 4.5-61 (The post-2002 flows in Alameda Creek downstream of the ACDD, while extremely variable depending on whether or not diversions were being made, have generally been *greater* than they were prior to the DSOD restrictions (2002)) with DEIR p. 4.5-62 (Diversions from Alameda Creek to Calaveras Reservoir during the baseline period, at times, eliminated the low and moderate (1 to 650 cfs) flows in Alameda Creek downstream of the ACDD and did not include any predictable bypass flows for fish species) and DEIR p. 4.5-62 (The proposed bypass flows would ensure that the flows in Alameda Creek downstream of the ACDD would either be increased or remain unchanged for purposes of supplying adequate fish spawning habitat for resident rainbow trout.)

types, more water would be bypassed through the ACDD to Alameda Creek, which could result in short-term increases in settleable materials, suspended materials, and turbidity. (*Ibid.*; DEIR p. 4.7-67.) The absence of an explanation violates CEQA as the DEIR sets a criteria that water quality impacts will be significant, *inter alia*, if water quality 1) violates any water quality standards or waste discharge requirements, or 2) otherwise substantially degrades water quality.

In concluding that DEIR operations would have a less-than significant effect on channel-forming flows in the reach of Alameda Creek between the ACDD and the Calaveras Creek confluence, the DEIR fails to compare the project to the stated environmental baseline. Instead, the DEIR abandons the environmental baseline period of DSOD-regulated operations claiming, perhaps legitimately, that this period is “likely too short and too variable.” (DEIR p. 4.5-65.) Moreover, the DEIR does not explain how it reached this conclusion of insignificance given its statement that “[p]roject-related diversions and bypasses at the ACDD would also alter the frequency and magnitude of channel-forming flows that support geomorphic processes within the creek.” Most importantly, the DEIR fails to analyze what the impact on fish will be from the DEIR’s change in channel forming flow.

In discussing effects of sediment sluicing, the DEIR acknowledges that the DEIR “would result in increased diversion of sediments (entrained in the water) to Calaveras Reservoir” and that “the proposed diversion of flows from the ACDD would maintain the potential to transport large volumes of sediment in large storm events.” (DEIR p. 4.5-65 to -66.) However, the DEIR omits any analysis of these DEIR changes to fish, including but not limited to native rainbow trout in the Calaveras Reservoir.

The DEIR fails to analyze the impacts to native fish *in the Reservoir* during the two shutdowns planned to occur over seven month periods in two consecutive years (approximately mid-April to mid-November in either 2011 and 2012 or 2012 and 2013). This is particularly important as the rainbow trout juvenile rearing periods are from March through November/December each year. Stranded fish, particularly juveniles, would be exposed to predators and increasing water temperatures, poor water quality, or the drying out of these areas. They would inevitably die from lack of water.

Effects on native fish *below Calaveras Dam*, also suffers from a lack of analysis. The DEIR states that during construction the flow release schedule would not change substantially, *except* “as diminished by water quality” and “two planned shutdown periods.” (DEIR p. 4.5-72.) However, there is no analysis of impacts to native fish or geomorphic processes during these shutdown periods or “as diminished by water quality.” Nor is there any analysis of impacts in the extended study area during these shutdown periods.

The DEIR states that during periods when there would be no releases, “all flow in Calaveras Creek downstream of the dam would come from Calaveras Dam seepage” and that such seepage alone “would provide hydrologic conditions that sustain the fish community” and thus there would be no significant impact. This conclusion may well be correct, but there is insufficient explanation of how the DEIR reached this bald conclusion. The DEIR does not disclose what is the CFS from such seepage during various times of the year, whether these seepages will last through the 4-plus year construction period, and what mitigations are available if the seepage does not sustain the fish

community.

The DEIR states that operation period cone valve testing “events would occur at a similar or slightly increased frequency, duration, and magnitude” (DEIR p. 4.5-75), but doesn’t disclose the frequency, duration, and magnitude of such events, thus impairing its analysis of fish impacts and the public’s understanding of the proposed DEIR.

While the DEIR states (DEIR p. 4.5-79) that specifics regarding the frequency, magnitude, and duration of future ACWD diversions are unknown, the DEIR has a duty to include information regarding future ACWD diversions that is reasonably available and to provide reasonable estimates if possible.

The DEIR states that during construction, the “water quality conditions in the reservoir created by the low water levels are not ideal for some fish species” (DEIR p. 4.5-76), but fails to disclose if such impacts will be adverse or significant, or which fish species will be affected.

The DEIR states that “[d]uring project construction, no change from the existing condition would occur (i.e., project related operation reservoir surface elevations would not change the extent to which the drawdown condition creates fish passage limitations)” (DEIR p. 4.5-77), but does not include the two 7-month shutdown periods as part of its analysis.

The DEIR states that diversions by ACWD would further affect flows in the portion of Alameda Creek within the extended study area (i.e., at the mouth of Niles Canyon and lower Alameda Creek), but doesn’t disclose if these affected flows will be adverse or significant. (DEIR p. 4.5-80.) Likewise, the DEIR states that these predicted changes in the flow regime could result in associated small changes in habitat, but doesn’t disclose if these changes are adverse or significant. Instead, the DEIR reasons that these changes would be diminished by operations of other water entities, but doesn’t discuss what these other operations are or by whom. (DEIR p. 4.5-80.)

The DEIR discloses that “Borrow Area E, Disposal Site 5, access roads, and biological mitigation areas would be located on SFPUC lands in Santa Clara County on lands designated as “Other, Public Lands” under the *Santa Clara County General Plan*.” (DEIR p. 4.5-80.) However, the DEIR does not discuss whether the DEIR conflicts with the *Santa Clara County General Plan*, including Policy R-RC 19 protection of areas of areas of functioning, intact natural ecosystems as well as areas known to support special-status species. For example, there is no discussion of DEIR impact on “functioning, intact natural ecosystems.” Likewise, the DEIR does not analyze potential conflict with the proposed HCP for incidental take of listed species that may result from SFPUC operations in the watershed. These omissions violate CEQA as the DEIR has set a criteria that the project would have a significant effect if it conflicts with any local policies or ordinances protecting fisheries or aquatic resources.

The DEIR’s discussion of conflicts with local policies and ordinances concludes that with implementation of mitigations, the potential impacts on fisheries and aquatic habitat would be less than significant (DEIR p. 4.5-82), but this approach is wrong. Under CEQA the DEIR must first determine if the impacts are significant and why, and then formulate appropriate mitigations.

The DEIR (p. 1-18) states that groundwater encountered during the excavation of the foundation would be treated as necessary, then discharged to Calaveras Creek. The DEIR also states that “[d]ewatering is expected to be necessary at Borrow Area E/Disposal Site 5, Disposal Site 3, and Disposal Site 7. Water produced during construction dewatering could contain sediments and contaminants that could degrade water quality if the water were discharged directly to surface water or if it infiltrated to groundwater.” (DEIR p. 4.7-37.) However, the DEIR must include analysis of these impacts; it is improper to defer the analysis – particularly where the EIR has adopted water quality significance criteria where the project 1) violates any water quality standards or waste discharge requirements, or 2) otherwise substantially degrades water quality.

The DEIR fails to analyze the indirect impacts of importing sand and gravel for construction from off-site areas. (DEIR p. 1-27.) Importing off-site materials (sand and gravel) for dam construction would start in winter 2012 and would last about 18 months. (DEIR p. 3-61.)

The DEIR fails to analyze project impacts from algae blooms and reduced DO (dissolved oxygen), despite the DEIR’s water quality significance criteria of 1) violations of any water quality standards or waste discharge requirements, and 2) otherwise substantially degrade water quality. This despite the DEIR acknowledging (p. 4.5-57) that reduced DO concentrations can be expected from the construction phase. This analysis is particularly important as a project objective is to “limit algal growth in the reservoir.” (DEIR p. 1-8.) Sediment plumes would add nutrients to the lowered reservoir pool and could thereby increase algal growth. (DEIR p. 4.7-28.) Low dissolved oxygen also is deleterious to fish. Under the right conditions, algae caused by dam conditions can create microcystin toxins from toxic cyanobacteria (blue-green algae) *Microcystis aeruginosa* (“MSAE”). Such toxins can represent a substantial threat to human and animal health, including potential impacts to nervous systems and/or liver damage. In the presence of adequate nutrients, this change from a riverine to a lake environment provides ideal growing conditions for toxigenic blooms of the bluegreen alga *Microcystis aeruginosa* (MSAE).

E. Inadequate Analysis of Cumulative Impacts.

An EIR must adequately analyze and discuss significant cumulative impacts of the project. (*Laurel Heights I, supra*, 47 Cal.3d at 394; CEQA Guideline 15130.) A mandatory finding of significance is required if the possible effects of a project are individually limited but “the incremental effects of an individual project are considerable when viewed *in connection with* the effects of past projects, the effects of other current projects, and the effects of probable future projects.” (Pub. Res. Code § 21083(b); CEQA Guideline 15065(c), emphasis added.)

The DEIR’s analysis of cumulative fish impacts appears to examine water quality, but not water volume nor fish passage.

In regards to consideration of past projects, the cumulative impacts analysis must at a minimum (1) “consider the proposed project in the context of a realistic historical account of relevant prior activities,” (2) actually discuss the combined effects of the project in combination with past, present and future projects and (3) not merely “catalogue current conditions.” (*Environmental Protection and Information Center v. California Department of Forest and Fire Protection* (2008) 44 Cal.4th 459.) One relevant activity that the DEIR conspicuously avoids considering is the

Calaveras Dam's non-compliance with the 1997 MOU. That non-compliance has resulted in 6,300 AF of water per year that has not released for the past twelve years (since 1997).

If "streamflows and the related fisheries habitat conditions in the extended study area are strongly influenced by operation of other water projects in the watershed including Del Valle Reservoir and water deliveries to the Alameda County Water District (ACWD) from the South Bay Aqueduct via Vallecitos Creek," as the DEIR claims (DEIR p. 4.5-2) then these related projects must be included in the cumulative impact analysis as present projects.

The DEIR must also analyze all reasonably foreseeable projects as part of its cumulative impact analysis including, but not limited to, the following:

- The proposed recapture facility, which is another project being considered downstream. The cumulative impact discussion should include impacts on Steelhead including whether the proposed recapture facility will adversely effect steelhead migration, breeding, feeding, and sheltering.
- Future increased water supply demands on flow rates must be included as part of this EIR's cumulative impact analysis, including the impact on species including but not limited to salmonids, steelhead and native rainbow trout. This is important given that the DEIR (p. 1-4 to 1-5) states that under the WSIP, the 2018 water supply is only an "interim mid-term planning horizon for its water supply strategy" and that the SFPUC will consider a decision regarding long-term water supply after 2018 and through 2030. Even if "the size and design" of the WSIP facility improvement projects would not change as a result of increased water supply demands, such reasonably foreseeable future expansion may impact flow releases and thus fish, water quality and geomorphic processes.
- Similarly, the cumulative impacts analysis must include impacts that may result from increases in deliveries from the SFPUC watersheds over the total average annual of 265 mgd in the event that conservation, recycled water, and groundwater projects are not completed prior to the increase in customers' demand. (DEIR p. I-5.)
- The cumulative impact analysis must also include that enlargement of the dam is a reasonably foreseeable project given that the DEIR' stated project objectives include constructing a new dam "that could accommodate potential enlargement by future generations." (DEIR p. 1-8, 1-13.)

F. The DEIR Fails to Adequately Analyze Mitigations

In addition to assessing a project's significant and cumulative impacts, an EIR is also required to set forth and analyze mitigation measures to eliminate or minimize each significant impact. (§§ 21002, 21002.1(a) & (b); CEQA Guidelines §§ 15126(e), 15126.4.) Mitigations must be designed to minimize, reduce, rectify or compensate for the project's impacts. (CEQA Guideline § 15370.) Analyzing "the manner in which [the] significant effects can be mitigated or avoided" is one of the main functions of an EIR. (§ 21002.1(a).) As with all aspects of an EIR, the discussion of mitigation measures must be "prepared with a sufficient degree of analysis to provide

decisionmakers with information which enables them to intelligently take account of environmental consequences. . . . The courts have looked. . . for adequacy, completeness and a good faith effort at full disclosure.” (CEQA Guideline § 15151.)

The DEIR fails to analyze the feasibility of Mitigation Measure 5.5.1, nor is there a performance standard to evaluate success. Further, the DEIR does not analysis impacts to native fish from the proposed mitigation’s capture, transport and relocation of fish.

The DEIR fails to define the standard that will trigger implementation of Measure 5.5.5b (Resident Rainbow Trout Adaptive Management). The DEIR only vaguely states that “[i]f monitoring indicates that this measure does not sustain the resident trout fishery in this reach, then the SFPUC shall implement” Measure 5.5.5b.

Measure 5.5.5b does not specify the quantities of water by which it will “modify the flow release schedules,” or what will be the “seasonal restrictions on Alameda Creek diversions” in order to protect the downstream resident trout fishery during the spawning period (December 1 through April 30).” The DEIR impermissibly defers this analysis.

The DEIR does not explain how or why Mitigation Measure 5.7.1 will 1) reduce construction turbidity impacts, and 2) mitigate displacement and harassment impacts, and 3) mitigate construction contaminant and NOA impacts on resident rainbow trout and the larger fish community to less than significant.

The DEIR fails to analyze the water quality impacts of applying water to roads for dust control.

The DEIR fails to properly mitigate construction phase water quality, hydrology and fish impacts.

APPENDIX A

OVERVIEW OF NATIONAL ENVIRONMENTAL POLICY ACT AND CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENTS FOR A LEGALLY SUFFICIENT EIS/EIR

I. PURPOSE OF NEPA AND CEQA.

The fundamental purpose of both NEPA and CEQA is to foster informed public participation and informed decisionmaking. To that end, NEPA regulations state that:

NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. . . . NEPA's purpose is not to generate paperwork . . . but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental policy. (40 C.F.R. § 1500.1(b) (emphasis added).)

Further, federal agencies must “use all practicable means . . . to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions on the quality of the human environment.” (40 C.F.R. § 1500.2(f).)

Similarly, a fundamental CEQA policy is to ensure that “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would avoid or substantially lessen the significant environmental effects of such projects.” (Cal. Pub. Res. Code § 21002.) CEQA also is designed to “ensure that fish and wildlife populations do not drop below self-perpetuating levels,” as well as to protect a host of other environmental values. (Cal. Pub. Res. Code § 21001(c).) To this end, CEQA procedures are designed to “assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.” (Cal. Pub. Res. Code § 21002; see also 14 Cal. Code Regs. § 15002(a).) The CEQA process is also designed to “demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.” (14 Cal. Code Regs. § 15003(d).) Importantly, CEQA must be interpreted in a manner which affords “the fullest possible protection to the environment within the reasonable scope of the statutory language.” (14 Cal. Code Regs. § 15003(f).)

II. GENERAL REQUIREMENTS FOR AN EIS/EIR.

The primary purpose of an EIS “is to serve as an action-forcing device” to insure that the policies and goals of NEPA “are infused into the ongoing programs and actions of the Federal Government.” (40 C.F.R. § 1502.1.) NEPA regulations also require an EIS to be supported “by evidence that the agencies have made the necessary environmental analysis.” (40 C.F.R. § 1500.2(b).) Similarly, the primary purposes of an EIR is to protect the environment, to demonstrate to the public that it is being protected, and to inform other governmental agencies and the public of the environmental impact of a proposed project. (14 Cal. Code Regs. § 15003.)

A. The EIS/EIR Must Include a Complete and Accurate Project Description.

NEPA requires an EIS to specify the “purpose and need” to which the agency is responding in proposing the federal action and alternatives to that action. (40 C.F.R. § 1502.12.) NEPA also requires an EIS to analyze actions that are connected to the proposed project. The regulations define “connected actions” as those that: (1) will automatically trigger other actions which may require an EIS; (2) cannot or will not proceed unless other actions are taken previously or simultaneously; or (3) are interdependent parts of a larger action and depend on the larger action for their justification. (40 C.F.R. § 1508.25(a)(1).)

Likewise, CEQA requires an EIR to include a complete and accurate project description. The project description must include: (1) the precise location and boundaries of the proposed project depicted on a detailed map; (2) a statement of the project’s objectives; (3) a general description of the project’s technical, economic, and environmental characteristics; and (4) a statement regarding the intended uses of the EIR. (14 Cal. Code Regs. § 15124.) An inaccurate, misleading, or curtailed project description prevents the public and the decisionmaking agency from adequately evaluating this project’s environmental effects. (See *County of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 192-193 (1977) (an “accurate, stable and finite project description is the sine qua non of an informative and legally sufficient” environmental analysis).)

Like NEPA, CEQA prohibits lead agencies from improperly “segmenting” the project into its component parts and subsequently distorting or underestimating the project’s effects. (See *City of Santee v. County of San Diego*, 214 Cal. App. 3d 1438, 1452 (1989) (CEQA requires the project description to include all phases of a proposed action and precludes segmentation); *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 393-399 (1988).) In *Laurel Heights*, 47 Cal. 3d at 396, the California Supreme Court stated that:

[w]e hold that an EIR must include an analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects.

B. The EIS/EIR Must Accurately Describe the Environmental Setting.

NEPA requires an EIS to “describe the environment of the area(s) to be affected or created by the alternatives under consideration.” The depth of the discussion must be commensurate with the importance of the impacts of the alternatives on various aspects of the environment. (40 C.F.R. § 1502.15.) “Environment” is interpreted comprehensively to include both the natural and physical environment as well as the relationship of humans to the environment. (40 C.F.R. § 1508.14.)

CEQA requires an EIR to describe the environmental setting or baseline of the project from both a local and regional perspective, with special emphasis being placed on resources that are rare or unique to the region. “Environment” is defined as the physical conditions which exist in the area that will be affected by the project, including land, air, water, minerals, flora, fauna, noise, and objects of aesthetic or historical significance. (Cal. Pub. Res. Code § 21060.5; 14 Cal. Code Regs. § 15360.) The description of environmental setting must also include a discussion of any

inconsistencies between the project and local or regional plans. (14 Cal. Code Regs. § 15125.) The environmental setting must be described in sufficient detail to allow the reader to understand how the project will affect the environment. (*San Joaquin Raptor/Wildlife Rescue Assn. v. County of Stanislaus*, 27 Cal. App. 4th 713 (1994).)

C. Requirements for Alternatives Analysis In An EIS/EIR.

NEPA regulations require an EIS to “rigorously explore and objectively evaluate all reasonable alternatives,” and to explain why alternatives not analyzed were eliminated from detailed consideration. (40 C.F.R. § 1502.14(a).) Consideration of alternatives is the “heart” of an EIS. (40 C.F.R. § 1502.14.) An EIS must evaluate a “reasonable range” of alternatives. The range is dictated by “nature and scope of the proposed action,” and must be sufficient to permit the agency to make a “reasoned choice.” (*Alaska Wilderness Recreation and Tourism v. Morrison*, 67 F.3d 723, 729 (9th Cir. 1995).)

The EIS must “devote substantial treatment to each alternative considered in detail so that reviewers may evaluate their comparative merits.” (40 C.F.R. § 1502.14(b).) It also must explain how each alternative will or will not achieve the policies of NEPA and other relevant environmental laws and policies. (40 C.F.R. § 1502.2(d).) The analysis must include the alternative of no action, as well as alternatives not within the federal lead agency’s jurisdiction. (40 C.F.R. § 1502.14(c), (d).) Finally, the analysis must identify the agency’s preferred alternative and include appropriate mitigation measures for each alternative analyzed in detail. (40 C.F.R. § 1502.14(e), (f).)

Similar to NEPA, CEQA requires EIRs to evaluate the “comparative merits” of a range of reasonable alternatives to the proposed project and/or to the location of the project. (14 Cal. Code Regs. § 15126(d).) The alternatives selected for analysis must focus only on those that would avoid or substantially reduce the project’s significant environmental effects, even if these alternatives would impede to some degree the attainment of project objectives or would be more costly. (14 Cal. Code Regs. § 15126(d)(1) and (5), emphasis added.) The range of alternatives selected must “foster meaningful public participation and informed decisionmaking.” (14 Cal. Code Regs. § 15126(d)(5).) As under NEPA, one of the alternatives analyzed must include the “no project” alternative. (14 Cal. Code Regs. § 15126(d)(4).)

The EIR must describe the rationale for selecting the alternatives to be discussed, and identify any alternatives that were rejected as infeasible during the scoping process and why. (14 Cal. Code Regs. § 15126(d)(2).) The EIR’s alternatives analysis must include “sufficient information about each alternative to allow meaningful evaluation, analysis and comparison with the proposed project.” (14 Cal. Code Regs. § 15126(d)(3) (emphasis added).) If an alternative would cause one or more significant effects in addition to the proposed project, the EIR must evaluate these impacts but in less detail than those of the proposed project. Finally, the analysis must select an “environmentally superior” alternative. (14 Cal. Code Regs. § 15126(d)(4).)

D. Requirements for Impact Analysis In An EIS/EIR.

1. Cumulative impacts.

An EIS must analyze “cumulative actions, which when viewed together have cumulatively significant impacts.” (40 C.F.R. § 1508.25(a)(2).) Thus, “[w]here several foreseeable similar projects in a geographical region have a cumulative impact, they should be evaluated in a single EIS.” (*Resources Ltd. v. Robertson*, 35 F.3d 1300, 1306 (9th Cir. 1993); see also 40 C.F.R. § 1508.25(a)(3).) “Cumulative impact” is defined in the NEPA regulations as the impact on the environment that results from “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” (40 C.F.R. § 1508.7.) A federal agency cannot ignore significant impacts by considering the environmental effects of individual projects in isolation from past and reasonably foreseeable future projects. (*Inland Empire Public Lands Council v. Schultz*, 992 F.2d 977, 981 (9th Cir. 1993).)

CEQA similarly requires EIRs to analyze the cumulative impacts of the project under consideration when added to other closely related past, present and reasonably foreseeable future projects producing related or cumulative impacts. (14 Cal. Code Regs. § 15130.) “Cumulative impact” is defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” (14 Cal. Code Regs. § 15355.) Cumulative impacts may result from “individually minor but collectively significant actions taking place over a period of time.” (*Id.*) Thus, the fact that a project or an aspect of a project may, in and of itself, have a relatively minor impact does not mean that the project will not have significant cumulative impacts. (See *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692, 722 (1991).) Such a conclusion was expressly repudiated by the court in *EPIC v. Johnson*, 170 Cal. App. 3d 604, 624-625 (1985):

An adequate cumulative impact analysis under NEPA and CEQA must include several basic components. First, it must list all past, present and reasonably foreseeable future projects (including projects outside of the agency’s control). (40 C.F.R. § 1508.7; 14 Cal. Code Regs. § 15130(b).) The projects discussed must include not only approved projects (whether or not under construction) but projects currently undergoing environmental review. The California Supreme Court held in *Environmental Protection and Information Center v. California Department of Forest and Fire Protection (EPIC)* (2008) 44 Cal.4th 459 that the cumulative impacts analysis must at a minimum (1) “consider the proposed project in the context of a realistic historical account of relevant prior activities,” (2) actually discuss the combined effects of the project in combination with past, present and future projects and (3) not merely “catalogue current conditions.”

Second, CEQA requires the EIR must summarize the expected environmental effects (14 Cal. Code Regs. § 15130(b).) Third, the EIS/EIR must contain a “reasonable analysis” of the anticipated environmental effects of the relevant (Id.) Fourth, CEQA also requires that cumulative impact analyses include “specific reference[s] to additional information” and state where that information is available. (14 Cal. Code Regs. § 15130(b)(2); see also *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692, 729 (1990) (holding that cumulative impact analysis must be supported by at least some hard data).) Finally, an EIS/EIR must examine “reasonable options” for avoiding or mitigating to insignificance any significant cumulative effects identified in the document. (40 C.F.R. § 1508.25; 14 Cal. Code Regs. § 15130.)

2. Discussion of impacts in general.

NEPA regulations require an EIS to “provide a full and fair discussion of significant environmental impacts” of the proposed action, as well as each alternative. (40 C.F.R. §§ 1502.1, 1502.14, 1502.16(d).) In addition to cumulative impacts, this discussion must address the direct and indirect impacts of the project. (40 C.F.R. § 1502.16(a), (b).) “Direct effects” are those which are immediately caused by the action; indirect effects are those which will be caused by the action at a later time, but which are nevertheless reasonably foreseeable. (40 C.F.R. § 1508.8.) The discussion must also include an analysis of possible conflict between the proposed action and federal, state, regional and local land use plans and policies. (40 C.F.R. § 1502.16(c).)

The discussion of environmental impacts must satisfy a “rule of reason” which requires a “reasonably thorough” discussion of impacts and mitigation measures. (*Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989).

CEQA similarly requires an EIR to clearly identify and describe the cumulative, direct and indirect environmental effects of the project, considering both short term and long term effects. The discussion must include: the relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution [and] concentration, human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resources base such as water, scenic quality, and public services. (14 Cal. Code Regs. § 15126(a).)

CEQA requires a lead agency to make a mandatory finding of significance whenever a project has the potential to reduce the number or restrict the range of a rare or endangered species, regardless of whether or not that species is formally listed under the federal and/or state Endangered Species Acts. (14 Cal. Code Regs. §§ 15065, 15380.)

Finally, CEQA requires information and studies regarding project impacts to be provided prior to project approval. (*Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296, 311 (1988).) In fact, the California Supreme Court has specifically held that, where an environmental review document contains no site-specific data regarding the presence of species, it is an abuse of discretion for an agency to approve the project in the absence of such data. (*Sierra Club v. Board of Forestry*, 7 Cal. 4th at 1236.)

E. Mitigation Measures.

NEPA and CEQA require EIS/EIRs to include measures to avoid or minimize each significant impact identified, including the impacts of alternatives. (40 C.F.R. § 1502.16(h), 1502.14(f); 14 Cal. Code Regs. § 15126(c).) This discussion must distinguish between measures proposed by the project proponent to be included in the project and others that are not included but could reduce adverse impacts if included as conditions of project approval. If several measures are identified to mitigate an impact, the EIS/EIR must discuss the basis for selecting a particular measure, if that is done. Finally, if a mitigation measure itself would cause one or more significant effects in addition to those caused by the proposed project, these effects must also be discussed but in less detail than for the proposed project. (14 Cal. Code Regs. § 15126(c).) In addition, CEQA requires a mitigation monitoring program to be included in the environmental documentation for the project. (Pub. Res. Code § 21081.6)

F. Other NEPA and CEQA Requirements.

1. Growth inducing impacts.

CEQA requires EIRs to “[d]iscuss the ways in which the proposed project could foster economic or population growth, or the construction of additional [development], either directly or indirectly, in the surrounding environment.” (14 Cal. Code Regs. § 15126(g).) NEPA requires a discussion of such growth-inducing impacts as part of its analysis of indirect environmental effects of the proposed action. (40 C.F.R. § 1508.8(b).) A project may have a growth-inducing impact if it may directly remove an obstacle to growth, or if it may encourage other activities that would significantly affect the environment, individually or cumulatively. The EIR must not assume that growth is necessarily beneficial, detrimental or of little significance to the environment. (14 Cal. Code Regs. § 15126(g).)

2. Unavoidable significant effects.

NEPA and CEQA require EIS/EIRs to include a discussion of significant adverse effects which cannot be avoided if the proposal is implemented. (40 C.F.R. § 1502.16.) CEQA further requires the discussion to identify both those effects which cannot be mitigated and those which can be mitigated, but not to a level of insignificance. (14 Cal. Code Regs. § 15126(b).) In addition, if certain significant impacts cannot be alleviated without requiring an alternative project design, the EIR must discuss the implications of the impacts and the reasons why the project is being proposed despite them. (Id.)

3. Effects found to be insignificant.

CEQA requires an EIR must discuss environmental effects that were found to be insignificant and why. (14 Cal. Code Regs. § 15128; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal. App. 4th 713 (1994).)

4. Irreversible and irretrievable commitments of resources.

Both NEPA and CEQA require an EIS/EIR to discuss any irreversible or irretrievable commitments of resources which would be involved if the proposal is implemented. (40 C.F.R. § 1502.16; 14 Cal. Code Regs. § 15126(f).)