



January 6, 2020

You Chen (Tim) Chao, PhD, PE, CFM  
Executive Division  
California Department of Water Resources  
PO Box 942836  
Sacramento, CA, 94236-0001

**RE: Comments on the Draft Environmental Impact Report for Operations of the State Water Project**

Dear Mr. Chao:

On behalf of the Natural Resources Defense Council, The Bay Institute, Defenders of Wildlife, San Francisco Baykeeper, California Sportfishing Protection Alliance, and Golden State Salmon Association, we are writing to provide comments on the Department of Water Resources (“DWR”) Draft Environmental Impact Report (“DEIR”) regarding Operations of the State Water Project (“SWP”). Unfortunately, as discussed in detail on the pages that follow, the DEIR fails to comply with requirements of the California Environmental Quality Act (“CEQA”), and recirculation of a revised DEIR is required to comply with CEQA. In particular, the DEIR:

- Fails to provide an accurate and consistent project description;
- Fails to consider a reasonable range of alternatives;
- Fails to adequately analyze the effects of implementing the addendum to the Coordinated Operating Agreement, notwithstanding DWR’s Notice of Preparation;
- Fails to adequately disclose likely environmental impacts during droughts, including by failing to consider the effects of climate change;
- Fails to consider the whole of the action under CEQA, because it fails to analyze the effects of coordinated operations of the SWP and Central Valley Project (“CVP”) upstream of the Delta; and,
- Fails to adequately analyze environmental impacts and fails to disclose the significant adverse impacts of the proposed project.

DWR must substantially revise the DEIR to comply with CEQA, and DWR must recirculate the revised DEIR for public comment. *See* Cal. Code Regs., tit. 14, §§ 15088.5(a)(1)-(3), 15090.

In addition, DWR appears to have already prejudged the outcome of the CEQA process before the conclusion of the public comment period. Subsequent to release of the DEIR, DWR has asserted that it is “committed to ensuring that the Final EIR is certified and the Notice of Determination is filed with the State Clearinghouse by February 28, 2020.” *See* Department of Water Resources, Request for Minor Amendment to Extend Incidental Take Permit Term to March 31, 2020 or until the issuance of an incidental take permit (“ITP”) covering all CESA-listed species is issued, Dec. 2, 2019, at 2. DWR cannot lawfully commit to a date for the conclusion of this CEQA process, and thereby determine that recirculation is not required, before it considers comments from the public and other state agencies. DWR’s comments appear to unlawfully prejudice the outcome of this CEQA process. In addition, DWR has repeatedly delayed submitting an application for an ITP to the California Department of Fish and Wildlife for more than 18 months, and DWR’s failure to submit a timely application does not justify rushing this critically important process.

Finally, DWR’s preferred alternative in the DEIR plainly would jeopardize the continued existence of species listed under the California Endangered Species Act (“CESA”), in violation of CESA’s requirements. DWR’s preferred alternative appears nearly identical to the proposed operations authorized by the Trump Administration’s recent biological opinions,<sup>1</sup> despite the repeated objections and concerns raised by the California Department of Fish and Wildlife (“DFW”) and the State of California’s announcement of its intention to file litigation to invalidate those biological opinions. The DEIR is wholly inadequate for use by DFW in its consideration of an ITP under CESA.

These issues are discussed in further detail on the pages that follow. Please let us know if you have questions about these comments or would like to discuss this matter further.

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<sup>1</sup> As discussed in more detail below, the proposals use nearly identical CalSim modeling assumptions, identical annual limits on fish salvage, and generally describe the same coordinated operations with respect to Delta operations and summer/fall outflow, except that in the DEIR, DWR proposed that: (1) DFW would have the final say on SWP operations; (2) Old and Middle River flows (“OMR”) during storm events would not exceed -6,250 cfs; (3) OMR storm waivers could be used any time the Delta is in excess conditions under D-1641; and (4) the SWP would only provide a proportional share of required measures, such as outflow or OMR, to protect fish and wildlife. *See also* DEIR, Vol. 2 at H-1-8-2 (“The modeling completed for this CEQA/CESA process assumes that the SWP and CVP operate to consistent regulatory criteria, i.e., the resulting OMR would be the same requirement for the SWP as for the CVP”). In addition, while the Trump Administration incorporated climate change in its hydrologic modeling, DWR excluded all consideration of climate change from the modeling.

Thank you for consideration of our views.

Sincerely,



Doug Obegi  
Natural Resources Defense Council



Jonathan Rosenfield, Ph.D.  
San Francisco Baykeeper



Gary Bobker  
The Bay Institute



Rachel Zwillinger  
Defenders of Wildlife



John McManus  
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Chris Shutes  
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**Enclosures**

**I. The DEIR Violates CEQA Because it Fails to Provide an Accurate Project Description**

The DEIR violates CEQA because it fails to provide an accurate description of the project. First, DWR's public statements make clear that the preferred alternative in the DEIR is not their proposed project, misleading the public and decision-makers about the scope and nature of the proposed project. Second, the DEIR violates CEQA because its description of the project is internally inconsistent and misleading, and as a result the DEIR inaccurately models and assesses potential environmental impacts from the project. In particular, the DEIR: (1) inconsistently describes whether the coordinated operations of the CVP and SWP are the proposed project; (2) whether the coordinated operations would actually achieve the proposed environmental flows, or only a proportional share of those flows; and (3) fails to accurately model the measures that are proposed for project. Each of these fundamental flaws is discussed below.

It is black letter law that, "[a]n accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR." *County of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 193 (1977). CEQA requires that a DEIR identify a preferred alternative. *Washoe Meadows Community v. Department of Parks and Recreation*, 17 Cal.App.5th 277, 285-87 (2017). That preferred alternative must give a clear explanation of the nature and scope of the proposed project, otherwise it "is fundamentally inadequate and misleading." *See Communities for a Better Environment v. City of Richmond*, 184 Cal.App.4th 70, 84-85 (2010).

DWR has violated these requirements here.

First, DWR's proposed project in the DEIR is inconsistent with DWR's description of the proposed project in their press release announcing the DEIR. For instance, DWR's press release for the release of the DEIR claims that the proposed project "does not seek to increase SWP exports."<sup>2</sup> In addition, the Department of Natural Resources spokeswoman Lisa Lien-Mager publicly claimed that, "the plan would set aside 200,000 acre-feet of water to offset the additional pumping impacts in the Delta, which when combined with other factors 'does not result in a net increase in exports.'"<sup>3</sup> However, the DEIR shows that the preferred alternative would increase SWP exports on average by 222,000 acre feet per year. DEIR at 4-17; *id.* at 4-18; *see id.*, Vol. 2 at pdf pages 666, 676. Indeed, it appears from DWR's press release that their proposed project is not the preferred alternative, but instead some other alternative in the DEIR, as the press release explains that, "DWR's draft proposal...includes multiple alternatives that

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<sup>2</sup> Department of Water Resources, DWR Moves to Strengthen Protections of Fish, Improve Real-Time Management of State Water Project, Nov. 21, 2019, available online at: <https://water.ca.gov/News/News-Releases/2019/November/Long-Term-Operations-of-State-Water-Project>.

<sup>3</sup> Associated Press, *California to sue over federal rules governing water*, Adam Beam, November 21, 2019, available online at: <https://apnews.com/810c41b719a84ca19eb9bb60aaa7739a>. This media story is hereby incorporated by reference.

provide a block of environmental water that can be used to offset pumping impacts in the Delta, with adjustments made over time as new information is learned.” The proposed project in the DEIR does not include such a “block of environmental water.”

Moreover, in DWR’s application for an ITP under CESA for operations of the SWP that it subsequently submitted to DFW, DWR did not propose to operate the SWP consistent with the proposed project in this DEIR, but instead proposed to operate the SWP similar to Alternative 2B in the DEIR. Thus, the proposed project in the CEQA document is inconsistent with the proposed project under CESA, even though DWR’s ITP application specifically relies on the DEIR to meet obligations under CEQA for issuance of the ITP. *See* DWR, Incidental Take Permit Application for Long-Term Operation of the California State Water Project (“ITP Application”), December 13, 2019, at 1-3.

These wholly inconsistent descriptions of the proposed project are grossly misleading to the public and decisionmakers in violation of CEQA. *See, e.g., San Joaquin Raptor Rescue Center v. County of Merced*, 149 Cal.App.4th 645, 655-56 (2007) (holding that the project description was inconsistent as to whether the project would increase mining production and violated CEQA, in part based on statements in public hearings on the CEQA document that demonstrated such inconsistencies); *Communities for a Better Environment*, 184 Cal.App.4th at 83-84 (holding project description violated CEQA because of inconsistent statements whether the objectives of the project were to increase processing of heavier crudes at the refinery, relying in part on contradictory statements made by Chevron in a 10-K filing).

Therefore, the DEIR violates CEQA because DWR’s preferred alternative is not DWR’s proposed project as publicly described. The DEIR must be revised to provide a consistent and stable project description that is the project that DWR intends to implement, and thereafter recirculated for public comment.

Second, the project description violates CEQA because it inconsistently describes whether the Bureau of Reclamation’s (“Reclamation”) operations of the CVP are part of the proposed project. As a result, the DEIR provides wholly inconsistent analyses of potential environmental effects of the proposed project.

On the one hand, the Notice of Preparation (“NOP”) claims that the proposed project is operations of the SWP, and the DEIR repeatedly describes the proposed project as DWR’s operations of the SWP. *See, e.g.,* DEIR at 1-3 (“The Proposed Project would continue DWR’s ongoing, long-term SWP operations consistent with applicable laws, contractual obligations, and agreements.”); *id.* at 1-5 (“The Proposed Project would consist of multiple elements that are expected to characterize future operations of SWP facilities...”); *id.* at 3-1 (“The objective of the Proposed Project is to continue the long-term operation of the SWP consistent with applicable laws, contractual obligations, and agreements.”). The DEIR likewise describes SWP facilities and SWP water contracts. *Id.* at 3-1 to 3-9.

On the other hand, the DEIR also states that the proposed project is the operations of the SWP and CVP, stating that, “The Long-Term Operation of the Central Valley Project and State Water Project (Proposed Project), which is the preferred alternative in this Draft Environmental Impact Report (DEIR)...” *Id.* at 1-2; *see id.* at 2-2 (“As the lead agency for the Long-Term Operation of the Central Valley Project and State Water Project (Proposed Project)...”).<sup>4</sup>

Thus, the DEIR claims both that the proposed project includes the operations of the CVP and that the proposed project does not include the operations of the CVP. These inconsistencies infect the analyses in the DEIR, misleading the public as to the effects of the project. For instance, the DEIR repeatedly claims that DWR and Reclamation will coordinate operations to meet Old and Middle River flow requirements:

- “DWR, **in coordination with Reclamation**, will operate to an OMR index that is no more negative than a 14-day moving average of -5,000 cfs unless a storm event occurs (described below).” DEIR at 3-18 (emphasis added).
- “From December 1 through February 28, DWR, **in coordination with Reclamation, will ensure that the OMR flow 14-day running average is no more negative than -5,000 cfs** unless....” *Id.* at 3-20.
- “During the year, if SWP and CVP operations exceed 50% of the annual loss threshold, **DWR, in coordination with Reclamation, would restrict OMR to a 14-day moving average OMR index that is no more negative than -3,500 cfs**, unless DWR, in coordination with Reclamation, determines that further OMR restrictions are not required to benefit fish movement because a risk assessment shows that the risk is no longer present based on real-time information.” *Id.* at 3-27.
- **DWR, in coordination with Reclamation, may operate to a more negative OMR flow but no more negative than -6,250 cfs** to capture excess flows in the Delta.” *Id.* at 3-28.

The modeling and analyses in the DEIR assume that DWR and Reclamation would jointly operate to achieve these requirements. *See, e.g.*, DEIR, Vol. 2, at H-1-2-6 to H-1-2-7 (pdf pages 1652-53) (OMR modeling assumptions and Fall X2 modeling assumptions, showing that OMR and Fall X2 requirements would be fully implemented).

However, the DEIR demonstrates that DWR’s proposed project would not ensure that these OMR requirements are achieved, but it would instead only ensure that DWR’s “proportional share” of such requirements would be implemented. *See, e.g., id.* at 3-21 (“DWR will ensure that its proportional share of the OMR flow requirements described herein is satisfied.”); *see also id.*

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<sup>4</sup> The DEIR also fails to note that the contractual obligations of DWR and its SWP contractors are currently being renegotiated and could be modified in that process to reduce the water delivery obligations of DWR, increase water efficiency requirements, increase requirements to comply with state policy to reduce diversions from the Delta, and a host of other protective measures that could vastly reduce the unsustainable volumetric delivery amounts included in historic SWP contracts. These are connected actions that contribute to the Project’s cumulative impact. *See* Cal. Code Regs., tit. 14, § 15355.

at 3-22, 3-23, 3-24, 3-25, 3-27, 3-29. The same is true for other environmental flows, such as fall outflow. *See id.* at 3-31 (“In the event that Reclamation does not meet its share of the Delta outflow to meet 80 km X2, DWR will implement its share of this action.”). Equally important, Reclamation’s final biological assessment for SWP/CVP operations and 2019 National Marine Fisheries Service (“NMFS”) and U.S. Fish and Wildlife Service (“USFWS”) biological opinions do not include this -6,250 cfs OMR limit, and impose no limit on the magnitude of reverse OMR flows, contradicting the assertions in the DEIR.

As a result, the analyses and modeling in the DEIR are inconsistent with the actual proposed project, and fail to analyze the likely environmental impacts of the project. For instance, if DFW determined that OMR must be -3,500 cfs because SWP and CVP operations exceed 50% of the annual loss threshold, then the language on page 3-20 suggests, and modeling in the DEIR assumes, that OMR would be -3,500 cfs. However, the language on page 3-21 indicates that if Reclamation refused to comply, the coordinated operations of the CVP and SWP could result in significantly more negative OMR than -3,500 cfs, as the State Water Project would only provide its proportional share of such requirements. Like the unlawful CEQA documents in *San Joaquin Raptor Rescue Center and Communities for a Better Environment*, the DEIR here inconsistently claims on the one hand that OMR and outflow requirements will be achieved and ensured, and on the other hand that DWR will only ensure that a proportion of such OMR and outflow requirements will be achieved.<sup>5</sup>

Finally, the project description in the DEIR is inconsistent with the modeling and analyses of the project in the DEIR. Most obviously, the project description allows DWR to operate to an OMR flow of -6,250 cfs any time that the Delta is in excess conditions under D-1641, *see* DEIR at 3-28, but the DEIR never models an OMR flow of -6,250 cfs or models the extent of reverse OMR flows permitted under the proposed project. Under D-1641, the Delta is in “excess conditions” any time that OMR is controlling operations in the Delta, because otherwise water quality standards under D-1641 would be controlling. *Id.* (“Excess flows occur typically from storm-related events and are defined as flows in excess of that required to meet water quality control plan flow and salinity requirements and other applicable regulations.”). As such, -5,000 cfs OMR would never be required if OMR is controlling operations in the Delta, instead allowing OMR of -6,250 cfs any time that OMR is controlling operations. However, that is not the project that DWR modeled in the DEIR. Instead, the DEIR modeling assumes that OMR is more positive

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<sup>5</sup> In addition to failing to provide an accurate project description, the failure to ensure that these operational requirements will be achieved appears to violate CEQA’s requirements that mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. Cal. Code Regs., tit. 14, § 15126.4(a)(2). This proportional share approach clearly would violate CESA, since it does not ensure that these measures are successfully implemented, nor does it prevent the coordinated operations of the CVP and SWP from jeopardizing the continued existence of CESA-listed fish species. *Id.* §§ 783.4(a)(2), (b), (c). Because the SWP is operated by the State of California, which has a duty to conserve listed species, CESA’s general requirement of rough proportionality does not apply. Cal. Fish and Game Code §§ 2052, 2052.1.

than -5,000 cfs from January 1 to June 30, with very limited exceptions for storm events (7 days of -6,000 cfs OMR in January and February of Above Normal and Below Normal years, and 7 days of -6,000 cfs OMR in either January or February of Dry years). *See* DEIR, Volume 2 at H-1-2-6 (PDF page 1652); *id.* at H-1-4-13 (PDF page 1691). The DEIR also models OMR of -3,500 cfs in March and April, *id.* at H-1-2-6, even though this is not required by the proposed project.<sup>6,7</sup> The DEIR never models OMR of -6,250 cfs, even though that flow level is explicitly allowed in the proposed project. The DEIR also never models OMR of -6,000 cfs in wet or critically dry years, and never models OMR more negative than -3,500 cfs in March and April, even though these are permissible operations under the proposed project.<sup>8</sup> As a result, the modeling in the DEIR is inconsistent with the proposed project, misleading the public and decision makers as to the impacts of the proposal.

Because the DEIR is wholly inconsistent as to whether the coordinated operations of the CVP are part of the proposed action, because the DEIR's modeling and analysis are inconsistent with Reclamation's proposed operations of the CVP, and because the DEIR's modeling and analyses are inconsistent with the proposed project's limitation to providing a "proportional share" of the modeled flows, the DEIR violates CEQA. DWR must revise the DEIR and recirculate to address these fundamental flaws.

## **II. The DEIR Violates CEQA Because it Fails to Consider a Reasonable Range of Alternatives**

CEQA requires that a reasonable range of alternatives to the proposed project be considered in the environmental review process, including a no project alternative. Cal. Pub. Res. Code §§ 21002, 21061, 21100; tit. 14, Cal. Code Regs. ("CEQA Guidelines") § 15126.6. The DEIR states that the objective of the proposed project is the continued operation of the SWP consistent with applicable laws, contractual obligations, and agreements. DEIR at 3-1. Compliance with CESA is clearly one of those applicable laws, and indeed DWR's application for an ITP is the intended

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<sup>6</sup> The proposed project also provides that OMR may not be reduced to -3,500 cfs even after the 50% annual salvage limit is exceeded, if "DWR and Reclamation determines that further OMR restrictions are not required to benefit fish movement because a risk assessment shows that the risk is no longer present based on real-time information." DEIR at 3-27. Thus, reductions in OMR to -3,500 cfs even after salvage thresholds are exceeded are not reasonably certain.

<sup>7</sup> The proposed project would end OMR management for salmonids when 95% of winter run and spring run have passed through the Delta, with no consideration of steelhead. DEIR at 3-29. While the modeling assumes that OMR is reduced to -3,500 cfs in March and April because of exceeding the 50% annual salvage threshold, it appears that OMR management for salmonids would likely end in May, precluding OMR restrictions, even after the 75% annual salvage threshold for steelhead is exceeded in June, as would have occurred in 2011 and 2013. *See* DEIR, Vol. 2 at H-1-4-16.

<sup>8</sup> Even though the DEIR does not analyze or model OMR of -6,250 cfs in March, April or May, the DEIR admits that there would be significant numbers of days on average when these OMR provisions would be possible. *See* DEIR, Vol. 2, at H-1-4-14 to H-1-4-15 (pdf page 1691-92).

use of this document. *Id.* at 2-2 (“This document also may be used by CDFW, as a responsible agency as defined by CEQA, in its discretionary approval process and consideration to issue an ITP for the proposed long-term SWP operations.”).

The DEIR fails to provide a reasonable range of alternatives because while the best available science demonstrates that existing protections need to be strengthened to comply with CESA (which will likely result in reduced diversions from the Delta), the DEIR fails to consider any alternatives that would increase protections for endangered fish species and reduce water exports from the Delta compared to today. In addition, the DEIR fails to provide a reasonable range of alternatives because it fails to include any alternative that would require increased winter-spring Delta outflows, despite the findings of numerous state and federal agencies that such measures are necessary to protect native species and their habitats.

First, none of the alternatives included in the DEIR would strengthen protections for endangered fish and wildlife compared to today. The DEIR excludes consideration of any alternatives that provide increased restrictions on Delta exports and reduces water diversions in order to reduce entrainment and salvage of fish, that propose habitat restoration in addition to that which was required previously, or that propose other measures to improve the survival and abundance of listed species. As the Secretary of the Interior explained to President Obama in August 2016, reinitiation of consultation on the 2008 and 2009 biological opinions was required under the federal Endangered Species Act in order to strengthen protections in the existing biological opinions, which would likely reduce water supply south of the Delta. *See* Secretary of the Interior Sally Jewell, Memorandum for the President, Update on California Water Issues, August 30, 2016, at 2 (“The reinitiation process will likely lead to new or amended biological opinions that will increase protections for these species.”). However, all of the alternatives considered in the DEIR would increase or maintain current SWP water diversions and allow for increased CVP water diversions; none of the alternatives would impose additional limits on OMR, require additional habitat restoration, or increased instream flows.

Consistent with the 2016 findings of the Secretary of the Department of the Interior, the State Water Resources Control Board (“SWRCB”), and other state and federal agencies, it is clear that increased protections for endangered fish and wildlife in the Bay-Delta is necessary to meet the requirements of state and federal law including CESA. In 2008 the Supreme Court upheld the failure to consider a reduced export alternative in the final EIR for CALFED, stating that,

Bay–Delta ecosystem restoration to protect endangered species is mandated by both state and federal endangered species laws, and for this reason water exports from the Bay–Delta ultimately must be subordinated to environmental considerations. The CALFED Program is premised on the theory, as yet unproven, that it is possible to restore the Bay–Delta's ecological health while maintaining and perhaps increasing Bay–Delta water exports through the CVP and SWP. If practical experience demonstrates that the theory is unsound, Bay–Delta water exports may need to be capped or reduced.

*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings*, 43 Cal. 4th 1143, 1168 (2008). Practical experience over the past many years, including the 2016 findings of the Secretary of the Interior, has demonstrated that theory is unsound; indeed, the DEIR (and recent federal biological opinions) demonstrate that the proposed project and alternatives are likely to result in continued declines in the survival and abundance of CESA-listed fish species in the Bay-Delta watershed. Thus, the failure to consider an alternative in this DEIR that reduces water diversions from the Delta in order to improve environmental conditions for fish and wildlife violates CEQA.

Second, numerous state and federal agencies have identified the need to increase winter-spring outflow to protect fish and wildlife, including endangered species. In contrast, the DEIR fails to even consider any alternatives that would increase winter-spring outflow, and only the no action alternative would maintain existing outflow.

For instance, in 2018 the SWRCB released its Framework for updating the Bay-Delta Water Quality Control Plan (“SWRCB Framework”),<sup>9</sup> which proposed that Delta outflow should be significantly increased from today, finding that:

- “Existing regulatory minimum Delta outflows are too low to protect the ecosystem, and without additional regulatory protections, existing flows will likely be reduced in the future as new storage and diversion facilities are constructed, and as population growth continues.” SWRCB Framework at 6.
- “The Science Report also documents the needs for new and modified Delta outflow requirements to protect estuarine species and to contribute to protection of species in the Bay and near shore ocean. The survival and abundance of many of these native species is closely related to Delta outflows. The dramatic declines in population size of these species, like longfin smelt, indicate that current Delta outflows are not sufficient to protect the ecosystem.” *Id.* at 8.

As a result, the Framework proposes Delta outflow requirements of 55% of unimpaired flow from the Sacramento River and tributaries, within an adaptive management range up to 65% of unimpaired flow, and 40% of unimpaired flow from the San Joaquin River and tributaries, within an adaptive range of up to 50% of unimpaired flow, which would significantly increase Delta outflows in many years as compared to today. *See* SWRCB Framework at 14-18.

Similarly, the Resources Agency has repeatedly claimed that Voluntary Agreements would increase Delta outflows compared to today, such as in the December 12, 2018 presentation to the SWRCB. Relatedly, a 2017 document obtained by NRDC from the Resources Agency pursuant to the California Public Records Act includes several different scenarios to increase Delta

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<sup>9</sup> This report is available online at: [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/docs/sed/sac\\_delta\\_framework\\_070618%20.pdf](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/sed/sac_delta_framework_070618%20.pdf). It is hereby incorporated by reference.

outflow in the winter and spring months.<sup>10</sup> And in August 2019, DFW warned Reclamation that its nearly identical proposed project could harm Longfin smelt and suggested “adding an alternative or mitigation measure in the form of increased Delta outflow during the January – June time period to minimize impacts.” Letter from California Department of Fish and Wildlife to U.S. Bureau of Reclamation, Comments on the Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project Draft Environmental Impact Statement, August 21, 2019.

Despite the repeated recognition of the need to increase Delta outflow in the winter and spring months, none of the alternatives in the DEIR would increase Delta outflow in the winter and spring months,<sup>11</sup> and only the no action alternative would even maintain existing Delta outflows. This failure to consider one or more alternatives that increase Delta outflow from January to June is even more problematic because, as discussed *infra*, the DEIR’s conclusion that the reduction in Delta outflow would not cause a significant impact is clearly erroneous and is the result of statistical manipulation in contravention of sound science.

Because the DEIR fails to consider a reasonable range of alternatives in violation of CEQA, it must be revised and recirculated.

### **III. The DEIR Violates CEQA Because it Fails to Analyze the Effects of the 2018 Addendum to the Coordinated Operating Agreement**

Contrary to DWR’s representations in its NOP, the DEIR fails to analyze the effects of DWR’s execution and implementation of the 2018 Addendum to the Coordinated Operating Agreement (“COA”).

The Notice of Preparation states that the DEIR will analyze potential impacts associated with “... Updates to the COA including the COA Addendum that was executed on December 12, 2018.” NOP at 4. The NOP also identifies the Project Area to include upstream areas, such as Lake Oroville and Shasta Dam and Reservoir. NOP at 4 (“The CEQA project encompasses SWP water diversion, storage, and conveyance facilities and SWP service areas throughout the state, as shown in Figure 1, attached.”); *id.* at Fig. 1 (map showing the CEQA project area including Lake Oroville).

However, the DEIR ignores the potential adverse effects of implementing the Addendum to the COA at Lake Oroville and other areas upstream of the Delta, and rather than evaluating these potential effects, instead includes the Addendum to the COA in the environmental baseline.

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<sup>10</sup> This document is available online at: [https://assets.nrdc.org/sites/default/files/media-uploads/delta\\_outflow\\_4.18.18.pptx](https://assets.nrdc.org/sites/default/files/media-uploads/delta_outflow_4.18.18.pptx). It is hereby incorporated by reference.

<sup>11</sup> For instance, the DEIR admits that, “[u]nder Alternative 2A, April-May Delta outflow would be less than the No Project Alternative but greater than the Proposed Project.” DEIR at 5-7.

DEIR at 4-2; *see* DEIR, Modeling Appendix at B-5.<sup>12</sup> This is unlawful, because it is inconsistent with the NOP and because there is a fair argument that implementation of the COA Addendum would cause significant adverse environmental impacts under CEQA.

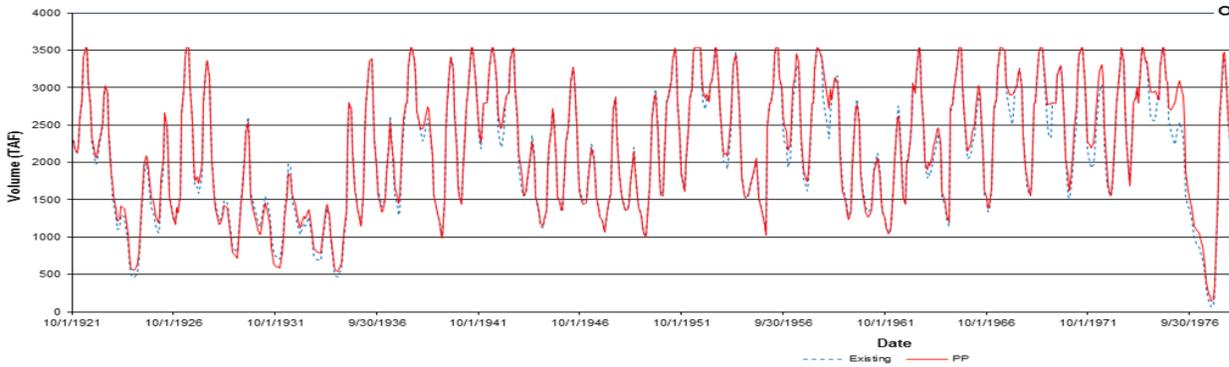
Reclamation's Environmental Assessment found that implementing the COA Addendum would cause storage in Lake Oroville to be lower in below normal (1% decline), dry (2.9% decline), and critically dry water year types (6.5% decline). *See* Bureau of Reclamation, Environmental Assessment, Addendum to the Coordinated Operating Agreement, Central Valley Project/State Water Project, December 2018.<sup>13</sup> Similarly, staff with the USFWS have indicated that CalSim modeling shows that implementing the Addendum to the COA contributes to storage in Lake Oroville dropping to unmanageable and unrealistically low levels during droughts. *See* email from Derek Hiltz to Doug Obegi dated March 29, 2019, which is attached hereto as Exhibit 1. Oroville storage has never historically been drawn below 882,000 acre feet, yet this modeling shows that Oroville storage would be drawn far below this level.<sup>14</sup> While the DEIR fails to include modeling of upstream effects generally, DWR's CalSim modeling outputs for the proposed project that were provided to NRDC show that reservoir storage in Lake Oroville is drawn to dramatically low levels in most major droughts, as shown in the figure below.

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<sup>12</sup> "The Appendix considers whether implementation of the 2018 COA Addendum affected flows entering and exiting the Delta by assessing the operational and hydrologic conditions that occurred under the 1986 COA and the 2018 COA Addendum. This assessment was done for the purpose of determining whether the baseline conditions, as described in the EIR, sufficiently represent Delta conditions before execution of the 2018 COA Addendum as well as the existing physical conditions in the Delta. This Appendix also discusses how the 2018 COA Addendum relates to a wide range of resource areas for public information purposes only." (DEIR, Modeling Appendix, at B-5)

<sup>13</sup> This document is available online at: [https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc\\_ID=36503](https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=36503). It is hereby incorporated by reference.

<sup>14</sup> It appears that DWR could not release water from Oroville Reservoir at the rates and amounts modeled by CalSim at these low storage levels. Moreover, DWR's implementation of the COA Addendum would contribute to significant adverse environmental impacts, such as impacts on salmon and other fish species in the Feather River caused by high temperature of water released from Oroville under such storage levels. None of these impacts are analyzed in the DEIR.



These modeling results, which are not disclosed or discussed in the DEIR, are consistent with the analysis by staff from the USFWS.

The construction and ongoing operation of SWP facilities have resulted in significant temperature impairment of the Feather River below Oroville Dam, which regularly results in temperatures that can be damaging or lethal to salmon eggs and juveniles. As a result of the design and operation of the SWP's facilities, approximately half of the spawning habitat on the Feather River is unusable by Chinook salmon and steelhead. By further lowering reservoir storage, particularly in dry years, the proposed project, including the COA amendments, would further degrade the Feather River below Oroville Dam in several ways. First, by reducing water storage in Lake Oroville, particularly in drier water year types, the COA Addendum would further degrade temperature conditions in the Feather River, resulting in increased temperature dependent mortality and reduced survival of salmon and steelhead eggs and fry. The Bureau of Reclamation's final Biological Assessment shows that the proposed project would further increase water temperatures in September and in drier Octobers. These temperature impacts could affect not only the high flow channel, but also the low flow channel below Oroville Dam, which provides important refugia for steelhead, salmon and green sturgeon. Second, by reducing SWP storage (again, particularly in drier water year types), the COA Addendum would increase the likelihood that DWR will seek to weaken or waive environmental protections in future droughts.

DWR has a duty to disclose the effects of the Addendum to the COA, including these significant adverse effects. DWR has not complied with its NOP, and DWR must revise the NOP and/or revise the DEIR to analyze the effects of implementing the addendum to the COA.

#### **IV. The DEIR Fails to Adequately Analyze and Disclose the Significant Adverse Environmental Impacts that the Proposed Project is Likely to Cause during Droughts**

The DEIR fails to analyze or disclose the adverse environmental effects of water project operations during droughts. It is reasonably foreseeable that operational and other protective measures for fish and wildlife (such as water temperature standards, Old and Middle River flow restrictions, and Delta outflow requirements) including measures considered in the DEIR will not

be implemented during future droughts. The DEIR fails to disclose the likely adverse impacts that will result from less protective operations during droughts, and it fails to identify mitigation measures that could reduce or avoid these impacts.

During California's recent drought, DWR and Reclamation repeatedly and consistently proposed to waive or weaken numerous water quality standards (including minimum Delta outflow) and ESA requirements under the 2008 and 2009 biological opinions, and failed to meet water temperature standards. The SWRCB and fishery agencies generally concurred in these proposals, which gravely weakened protections for fish and wildlife in the drought, resulting in water project operations that were not analyzed in the 2008 and 2009 biological opinions or in the SWRCB's 1995 Bay-Delta Water Quality Control Plan and Water Right Decision 1641. *See, e.g.,* Water Rights Order 2014-0029 (September 24, 2014);<sup>15</sup> Water Rights order dated February 3, 2015;<sup>16</sup> April 6, 2015 Revised Order;<sup>17</sup> July 3, 2015 order conditionally approving petition for temporary urgency change.<sup>18</sup> For instance, in 2015 the waivers of water quality standards reduced Delta outflows and increased water deliveries by approximately 800,000 acre feet.

These waivers of required operations contributed to devastating impacts to winter-run Chinook salmon, spring-run Chinook salmon, Delta smelt, Longfin smelt, and other native fish species, including:

- Greater than 95% mortality of endangered winter-run Chinook salmon eggs and juveniles above Red Bluff Diversion Dam in 2014 and 2015, including temperature dependent mortality of 77% in 2014 and 85% in 2015 due to lethal and chronically adverse water temperatures below Keswick Dam;
- Greater than 95% mortality of fall-run Chinook salmon eggs and juveniles that spawned in the mainstem Sacramento River above Red Bluff Diversion Dam in 2014;
- Record low abundance indices for Delta smelt in the 2014 Fall Midwater Trawl, 2015 Spring Kodiak Trawl, and other surveys;
- Near record low abundance of Longfin smelt in the 2014 Fall Midwater Trawl survey and a new record low abundance in the 2015 Fall Midwater Trawl survey;
- Increases in the abundance of nonnative species like Black bass in the Delta; and,
- Increases in harmful algal blooms like *Microcystis*.

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<sup>15</sup> This order is available online at:

[http://www.waterboards.ca.gov/waterrights/board\\_decisions/adopted\\_orders/orders/2014/wro2014\\_0029.pdf](http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/2014/wro2014_0029.pdf) and is hereby incorporated by reference.

<sup>16</sup> This order is available online at:

[http://www.waterboards.ca.gov/waterrights/board\\_decisions/adopted\\_orders/orders/2014/wro2014\\_0029.pdf](http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/2014/wro2014_0029.pdf) and is hereby incorporated by reference.

<sup>17</sup> This order is available online at:

[http://www.waterboards.ca.gov/waterrights/water\\_issues/programs/drought/docs/tucp/2015/tucp\\_order040615.pdf](http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/tucp/2015/tucp_order040615.pdf) and is hereby incorporated by reference.

<sup>18</sup> This order is available online at:

[http://www.waterboards.ca.gov/waterrights/water\\_issues/programs/drought/docs/tucp/2015/tucp\\_order070315.pdf](http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/tucp/2015/tucp_order070315.pdf) and is hereby incorporated by reference.

See, e.g., Water Rights Order 2014-0029; Water Rights order dated February 3, 2015; April 6, 2015 Revised Order; July 3, 2015 order conditionally approving petition for temporary urgency change; Protest to TUCP filed by the NRDC dated February 13, 2015, available online at: [http://www.waterboards.ca.gov/waterrights/water\\_issues/programs/drought/comments\\_tucp2015/docs/nrdc\\_obegi021315.pdf](http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/comments_tucp2015/docs/nrdc_obegi021315.pdf); March 24, 2015 Petition for Temporary Urgency Change, Attachment A, available online at: [http://www.waterboards.ca.gov/waterrights/water\\_issues/programs/drought/docs/tucp/2015/apr2015\\_req032415.pdf](http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/tucp/2015/apr2015_req032415.pdf).

The DEIR briefly admits that operations of the SWP that are modeled in the DEIR are not likely to be implemented in future droughts, but wholly fails to model, analyze or consider the grave impacts of such drought waivers:

Under extreme hydrologic and operating conditions where not enough water supply exists to meet all requirements, CalSim II uses a series of operating rules to reach a solution, to allow continuation of the simulation. These operating rules are recognized to be a simplified version of the very complex decision processes that CVP and SWP operators use in actual extreme conditions. Therefore, model results and potential changes under these extreme conditions should be evaluated on a comparative basis between alternatives and are an approximation of extreme operating conditions. For example, CalSim II model results show simulated occurrences of extremely low storage conditions at CVP and SWP reservoirs during critical drought periods,<sup>19</sup> when storage is at dead-pool levels, at or below the elevation of the lowest level outlet. Simulated occurrences of reservoir storage conditions at dead-pool levels may occur coincidentally with simulated impacts that are determined to be potentially significant. **When reservoir storage is at dead-pool levels, instances may occur in which flow conditions fall short of minimum flow criteria, salinity conditions may exceed salinity standards, diversion conditions may fall short of allocated diversion amounts, and operating agreements may not be met.**

DEIR at 4-5 (emphasis added). In its 2016 final EIR for the California WaterFix project, which included language similar to that excerpted above, DWR concluded that it was “reasonably foreseeable” that protective measures would be waived in future droughts, including Temporary Urgency Change Petitions to reduce Delta outflow requirements and other water quality standards and more negative Old and Middle River flows. Moreover, droughts are an entirely foreseeable and predictable aspect of California’s hydrology, and more frequent and severe

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<sup>19</sup> Despite this admission that the modeling shows extremely low reservoir storage in drought conditions, the DEIR wholly fails to consider environmental impacts from water project operations upstream from the Delta, including reservoir storage and related water temperature conditions. *See infra*.

droughts are anticipated as a result of climate change.<sup>20</sup> The DEIR must be revised and recirculated to model and analyze the effects of SWP operations during droughts, including waivers of protective measures, that are reasonably foreseeable.

As noted *supra*, modeling that is not disclosed in the DEIR shows that Lake Oroville reservoir storage during droughts will be far below the minimum water storage ever observed historically, which DWR admits is likely to result in changes to water project operations during future droughts that includes not meeting minimum flow conditions and violating salinity standards. These and similar operational responses are likely to cause significant adverse effects on fish and wildlife, including adverse water temperatures in the Feather River and the significant adverse effects observed in 2014-2015. However, these reasonably foreseeable adverse effects are not considered in the DEIR. In addition, the DEIR's analysis and modeling improperly assumes that the proposed operational measures would be implemented in future droughts, when the text indicates otherwise. *See* CEQA Guidelines § 15126.4(a)(2).

Because waivers of protective operations in future drought conditions are reasonably foreseeable, and because such waivers are likely to result in significant adverse impacts that are not disclosed in the DEIR, DWR must identify feasible mitigation measures to reduce or avoid these significant impacts. CEQA Guidelines §§ 15126, 15126.4. DWR must recirculate a revised DEIR that includes such mitigation measures. CEQA Guidelines § 15088.5(a)(1)-(3).

#### **V. The DEIR Fails to Adequately Analyze and Consider Environmental Impacts from the Whole of the Action**

CEQA requires that the DEIR analyze the effects of the whole project on the environment. CEQA Guidelines § 15378 (definition of “project” means “the whole of an action”). The definition of a project is broadly construed in order to maximize protection of the environment. *Nelson v. County of Kern*, 190 Cal.App.4th 252, 271 (2010). Additionally, the entire project being proposed must be described in the EIR, and the project description must not minimize project impacts. *City of Santee v. County of San Diego* (1989) 214 CA3d 1438, 1450.

DWR's NOP states that, “The CEQA project encompasses SWP water diversion, storage, and conveyance facilities and SWP service areas throughout the state, as shown in Figure 1, attached.” NOP at 4. Figure 1 in the NOP identifies Lake Oroville as one of the State Water Project facilities upstream of the Delta that is included in the Project location. The DEIR likewise states that,

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<sup>20</sup> *See, e.g.*, DWR, ITP Application, at 2-9. However, DWR chose to omit the effects of sea level rise and climate change from the CalSim modeling in the DEIR. *See, e.g.*, DEIR at 4-3; *id.*, Vol. 2 at F-1 (pdf page 1599) (“The scenario with historical climate (Q0) did not include any sea level rise.”); *id.*, Vol. 2 at H-1-2-1. As a result, the DEIR's analysis of salinity intrusion and surface water quality in the Delta is inaccurate and understates likely violations of water quality standards, including violations during droughts. Such water quality violations would constitute a significant adverse effect under CEQA. *See* DEIR at 4-26.

The SWP includes water, power, and conveyance systems, moving an annual average of 2.9 million acre-feet of water. The principal facilities of the SWP are the Oroville Reservoir and related facilities, San Luis Dam and related facilities, facilities in the Sacramento–San Joaquin Delta (Delta), the Suisun Marsh Salinity Control Gates, the California Aqueduct (including its terminal reservoirs), and the North and South Bay Aqueducts.

DEIR at 2-1; *see id.* at 3-1. Figure 1-1 of the DEIR also shows the Project Area as including Oroville Reservoir and upstream areas, as well as the service area of SWP contractors. *Id.* at 1-4. There can be no question that SWP operations in the Delta are affected by, and affect, storage in Oroville Reservoir.

However, the DEIR generally fails to provide any modeling or analysis of upstream effects at SWP facilities such as Lake Oroville, or from the coordinated operations of CVP and SWP reservoirs upstream of the Delta pursuant to the COA (as modified by the 2018 Addendum). This is unlawful.

The DEIR simply asserts that the proposed project would not cause any significant impacts upstream, so the DEIR excludes analyses of the effects of SWP operations upstream of the Delta. *See* DEIR at 5-84 (“As described in Section 1.4 Summary of Environmental Consequences and discussed in detail in Appendix A, Initial Study, implementing the Proposed Project is not expected to result in a change in hydrologic conditions (i.e. reservoir storage and river flows) to such a degree that would result in an impact on the environment.”); *id.* at 5-94. In contrast to these unsupported assertions:

1. The DEIR asserts that Alternative 4 would cause significant adverse impacts upstream of the Delta, and as a result DWR weakens the protective measures proposed in Alternative 4. DEIR at 5-94 (“The potential impacts to surface water quality would be potentially significant under Alternative 4 due to the reduced availability of cold water and reservoir storage needed to meet water quality criteria during years following below normal water years.”); *id.* at 5-134.<sup>21</sup> Yet the DEIR otherwise omits meaningful analysis of upstream effects in the proposed project and most of the alternatives. Because the DEIR must consider one or more alternatives that increase Delta outflow in the winter and spring months, and because DWR has asserted that increased outflow would affect upstream reservoir storage and could cause a significant impact, the DEIR must evaluate upstream effects in a revised DEIR.

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<sup>21</sup> These and other potential environmental impacts could be mitigated by reducing water diversions and deliveries by the SWP to its contractors, which would better protect fish and wildlife. DWR failed to even consider such an alternative mitigation measure that would retain the protections for fish and wildlife.

2. Reclamation's modeling shows that implementation of the COA Addendum does result in reduced storage in Lake Oroville in dry and critically dry years, and that storage in Oroville is drawn below dead-pool in all major droughts, which will cause significant impacts that are not disclosed in the DEIR. *See supra*.
3. DWR has previously concluded that under a similar no project alternative there would be significant adverse impacts under CEQA from the coordinated operations of the CVP and SWP, including adverse effects on fish from water temperatures below upstream reservoirs, in the final EIR for the California WaterFix project. *See infra*.
4. In order to evaluate DWR's application for an ITP under CESA, DFW must consider upstream effects of coordinated SWP and CVP operations in order to ensure that the effects (including cumulative effects) will not jeopardize listed species, such as temperature impacts on salmon and steelhead below upstream SWP and CVP dams.<sup>22</sup>

In addition, while the DEIR inconsistently describes whether operations of the CVP are part of the project description, there is no question that "DWR operates the SWP in coordination with the CVP, under the Coordinated Operation Agreement (COA) between the federal government and the State of California (authorized by Public Law 99-546)." DEIR at 1-3.<sup>23</sup>

For all of these reasons, the DEIR must analyze and disclose to the public the potential impacts from the coordinated operations of CVP and SWP upstream of the Delta, including impacts from operations of Shasta and Keswick dams. DWR's failure to do so is unlawful, and the DEIR must be revised and recirculated.

In addition, the CEQA guidelines also require that the DEIR consider "both the short-term and long-term effects." *Id.* at § 15126.2(a). There is no question that DWR anticipates operations of the SWP long into the future, well beyond the year 2030. However, the DEIR's analysis is limited to a 10-year period to the year 2030, and fails to consider longer term impacts, particularly in light of the longer-term effects of climate change, which DWR has previously concluded would be significant. *See infra*. The failure to consider the potential environmental impacts from operations after 10 years violates CEQA.

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<sup>22</sup> The NOP also states that "activities that occur outside the Delta and are unrelated to SWP operations (in the remainder of the area shown in Figure 1) will not be addressed in the application for CESA coverage." NOP at 4. Therefore, in order to be excluded from the CESA application consistent with the NOP, activities must be unrelated to SWP operations **and** outside of the Delta. In contrast, SWP operations at Lake Oroville and the coordinated operations of upstream CVP and SWP reservoirs pursuant to the Addendum to the COA plainly are related to SWP operations, even if they are outside of the Delta.

<sup>23</sup> At a minimum, the cumulative impacts from coordinated operations of the CVP and SWP must be considered under CEQA. However, as discussed *infra*, the DEIR fails to adequately disclose and consider cumulative impacts.

**VI. The DEIR Fails to Accurately Assess Environmental Impacts, and the DEIR Fails to Disclose Significant Environmental Impacts of the Proposed Project**

CEQA requires that the DEIR accurately assess potential environmental impacts from the proposed project and alternatives, using credible methods of analysis. *See, e.g.,* Cal. Code Regs., tit. 14, § 15151; *Laurel Heights Improvement Assn. v. Regents of University of Cal.*, 47 Cal.3d 376, 409 (1988). The DEIR fundamentally fails this essential function, and it fails to disclose environmental impacts that are significant. The DEIR must be revised and recirculated.

*A. The Flawed Modeling in the DEIR, including Baseline Modeling, Results in Inaccurate Assessment of Environmental Impacts*

First, as discussed *supra*, the CalSim modeling in the DEIR is deeply flawed. Because this CalSim modeling is used as an essential input to the biological models and analyses that are used to assess potential environmental impacts, the flawed hydrological modeling infects the DEIR's assessment of environmental impacts, leading the DEIR to report misleading and erroneous conclusions regarding significant impacts.

As discussed in Section 1 of this letter, the project description in the DEIR is inconsistent with the CalSim modeling and analyses of the project in the DEIR. As a result, the DEIR fails to model the more negative OMR conditions authorized by the project description, including:

- OMR of -6,250 cfs (the CalSim modeling never results in OMR more negative than -6,000 cfs, *see* DEIR, Vol. 2 at H-1-2-6 (PDF page 1652));
- OMR of -6,000 cfs lasting for longer than 7 days (*id.*);
- OMR of -6,000 cfs in a wet or critically dry water year type (*id.*);
- OMR of -6,000 cfs occurring more frequently than once per month in January or February of an Above Normal or Below Normal water year type, or more frequently than once in either January or February in a dry year (*id.*);
- Monthly average OMR more negative than -3,500 cfs in March or April, more negative than -4,061 cfs in May, or more negative than -5,000 cfs in June (DEIR, Vol. 2, at Table 7-1 (pdf page 471)).

More negative OMR is likely to increase entrainment and reduce survival and abundance of fish species, including Delta smelt, Longfin smelt, winter-run Chinook salmon, spring-run Chinook salmon, fall-run Chinook salmon, and Central Valley Steelhead. These modeling flaws significantly underestimate the environmental impacts of the proposed project and alternatives. As a result, the failure to accurately model the proposed project results in biased and inaccurate assessment of environmental impacts of the project and alternatives.<sup>24</sup>

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<sup>24</sup> In addition, the DEIR's modeling also fails to account for the fact that the proposed project only requires a proportional share of OMR, Delta outflow, or other protective measures. *See* Section 1, *supra*. As a result, the DEIR overestimates the protective and/or mitigation measures

Second, the CalSim modeling fails to account for low upstream reservoir storage conditions during droughts and the reasonably foreseeable waivers of protective measures including OMR and Delta outflow requirements. *See* Section 4, *supra*. During California's recent drought, there is no question that the waiver of OMR and Delta outflow requirements contributed to significant adverse impacts on fish species in the Delta, yet the DEIR fails to consider and incorporate the effects of more negative OMR and reduced Delta outflow in future droughts. As a result, the DEIR fails to analyze and disclose likely significant environmental impacts.

In addition, DWR has significantly revised modeling of baseline conditions under the 2008/2009 biological opinions, resulting in more negative OMR conditions under the baseline than in prior modeling, such as the final EIR for the California WaterFix project. *See* DEIR, Vol. 2 at H-1-4-6 to H-1-4-10. The new baseline used in CalSim modeling results in OMR that is more negative than historic conditions actually implemented under the biological opinions in all or part of the years of 2009, 2011, 2012, 2013, and 2016. In other words, this new baseline assumes less protective OMR than actually occurred in these years. By changing the environmental baseline to have more negative OMR values than previously modeled or historically implemented, the DEIR biases the effects analysis by diminishing the difference between the proposed project and the environmental baseline.

Finally, the DEIR's significance conclusions appear inconsistent with DWR's prior conclusion under CEQA that a nearly identical No Action Alternative<sup>25</sup> would cause significant adverse impacts on fish and wildlife in the Delta, including significant impacts caused by upstream water temperatures for spawning and egg incubation, water operations in the Delta on rearing habitat, and effects of water operations on migration habitat for covered fish species. *See* Department of Water Resources, Bay Delta Conservation Plan / California WaterFix, Final Environmental Impact Report / Environmental Impact Statement, December 2016, at ES-67 to ES-68; *id.*, Chapter 11, at 11-273 to 11-275. In this DEIR, however, even though the proposed project would increase entrainment, reduce survival of salmon migrating into and through the Delta, and reduce winter-spring Delta outflow and abundance of Longfin smelt as compared to the same No Action Alternative, DEIR now concludes that these impacts would be less than significant. Because DWR has previously concluded under CEQA that the same No Action Alternative would cause significant impacts, a proposed project that worsens conditions compared to the same no project alternative should result in a conclusion that the proposed project would cause significant impacts. At a minimum, DWR must provide a reasoned explanation for the different conclusions regarding significance, and it has not done so here.

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that are certain to be implemented and underestimates the likely environmental impacts of the proposed project and alternatives, as well as the cumulative impacts.

<sup>25</sup> While DWR has changed the modeling of the baseline in this DEIR, as of today the no action alternative has not substantially changed since the final WaterFix EIR was issued in December 2016.

*B. The DEIR's conclusions that the project will not cause significant impacts to fish is clearly erroneous and is not based on credible analyses*

In addition to the inaccurate modeling preventing accurate assessment of impacts, the analyses that are presented are scientifically flawed, and the DEIR fails to disclose significant environmental impacts of the proposed project.

Most notably, the DEIR's analysis of modeled effects of reduced Delta outflow on Longfin smelt is fundamentally flawed in several ways that obscure meaningful differences between project alternatives. There is no question that the proposed project would significantly reduce winter-spring outflow, particularly in the months of April and May. *See* DEIR, Vol. 2, at pdf page 509. There is also no question that increases and decreases in Longfin smelt population abundance in this estuary correspond very strongly to Delta outflow rates (or their inverse correlate,  $X_2$ ) during the winter and spring. *See, e.g.,* Stevens and Miller 1983; Jassby et al. 1995; Kimmerer 2002; Rosenfield and Baxter 2007; Sommer et al. 2007; Kimmerer et al. 2009; MacNally et al. 2010; Thomson et al. 2010; Nobriga and Rosenfield 2016. The DEIR relies on a stock-recruitment model to predict outcomes for Longfin smelt under different alternative flow scenarios. Delta outflow from December-May is the only environmental input variable that affects population growth from year-to-year in this model (because that is the only environmental variable that had a significant effect on Longfin smelt population dynamics); other variables, including density dependence and survival of juveniles to adults, are not flow-dependent in the model. This model is intended to reproduce one designed originally by Nobriga and Rosenfield (2016) to screen alternative conceptual models of Longfin smelt population dynamics. The original model was not designed as a predictive tool; converting it into a predictive tool ought to have involved adjustments to the model's architecture and parameterization consistent with the findings of Nobriga and Rosenfield (2016).<sup>26</sup>

The DEIR analyzes outputs from this version of the Nobriga and Rosenfield model in a manner that is not appropriate to the DEIR's purpose, which is to reveal differences among alternative operational scenarios that produce different Delta outflows ("flow scenarios"<sup>27</sup>). Indeed, the entire analysis of the model output is seriously flawed, misleading, and not credible. Comparing flow scenarios run through the same model requires comparing the *differences* in model outputs among those flow scenarios with respect to the variance in those *differences* – variance is estimated by studying deviations in the differences between flow scenarios across a set of model runs ("replicates") in which non-treatment variables are allowed to vary randomly within

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<sup>26</sup> For example, to account for density dependence they detected, Nobriga and Rosenfield (2016) incorporated a strong density-dependent term (a Ricker model); however, they made no effort to explore different density-dependent terms (e.g., a Beverton-Holt stock-recruit relationship) because such an investigation was beyond the scope of their research. In the end they concluded (on page 54) that the model they constructed was "too strongly density dependent." The model used for the DEIR made no effort to correct or study this problem or to consider a range of stock-recruit alternatives.

<sup>27</sup> Statisticians might refer to the different flow scenarios as "treatments."

prescribed boundaries. Nobriga and Rosenfield (2016) found a very strong and highly significant effect of Delta outflow on juveniles per adult (“recruits-per-spawner”). As a result, in almost all years, the model will generate more Longfin smelt recruits-per-spawner in scenarios with higher December-May outflows.<sup>28</sup> Given that survival from Age 0 (recruits) to Age 2 (spawner) fish is not related to flow in the Nobriga and Rosenfield model, the model will almost always predict higher abundance of Longfin smelt in flow scenarios with higher December-May Delta outflow, all other parameters being equal. This result is consistent with findings made by TBI et al. (2010) and SWRCB (2010; 2017) of very strong correlations between inter-generation population growth and winter-spring Delta outflows. The most important result of running different flow scenarios through the Nobriga and Rosenfield model is that scenarios with higher flows will consistently produce higher Longfin smelt abundance in almost every year – this result is completely obscured by DWR’s invalid analysis.

The current modeling effort does not analyze the variance in differences among flow scenarios; rather it appears to confound variance due to differences in the flow scenarios with a population trend across years (which results, in part, from a “survival” term that is not flow related), and randomization of certain model elements across model runs. The effect of this analytical error is to make the differences between flow scenarios look small relative to the highly inflated variance. The DEIR’s comparison of results across year types mixes years at the beginning and end of a long time series during which Longfin smelt populations varied by several orders of magnitude; for example, the estimated abundance of Longfin smelt in wet years like 1982, 1995, 2006 are lumped together, even though the abundance of Longfin smelt preceding those years (stock) varied by orders of magnitude (see Table 4.4.-10). This approach ignores the best available science that shows that abundance in any one year is influenced by abundance (stock) in prior years. This DEIR’s approach buries large and significant differences among flow scenarios in variance that has nothing at all to do with the flow scenarios.

There are numerous ways in which DEIR’s use of the water-year type median for each flow scenario is an inappropriate and misleading representation of the effect of these alternatives. For instance, there is no argument that the Longfin smelt time series is experiencing a prolonged declining trend. Medians (and means) are measures of central tendency; if there is a trend in the population, there is no central tendency and the means and medians depend entirely on the year’s incorporated into the modeling or sampling. Thus, the DEIR misrepresents the “average” difference between flow scenarios by focusing on medians, which are likely to be years in the middle of a time series that displays a long-term population decline. Also, by presenting median

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<sup>28</sup> The exception to the otherwise universal increase in recruits-per-spawner predicted by the model in response to increasing winter-spring Delta outflows occurs during exceptionally wet conditions, when the model’s estimate of recruits-per-spawner may decline. This potential for decline is based on 1-2 years of data in the original time series. Other wet years do not show declining recruits-per-spawner. Thus, it is very possible that the model’s potential to reduce recruits-per-spawner at the highest flows is simply a sampling artifact; more years of data collected in very wet years would be required to determine whether there is any reduction in recruits-per-spawner under such conditions and, if so, how much of a decline occurs.

values by water year type, the DEIR ignores a key finding of Nobriga and Rosenfield (2016) that abundance in one year has an effect on abundance in subsequent years. Differences detected in a single year (a) would affect recruitment and overall abundance in subsequent years and (b) would be compounded across years.

All of the problematic approaches described above notwithstanding, the DEIR finds that the proposed project will lead to a 4-11% reduction in the median abundance of this critically endangered species. Even if this comparison of results across alternatives were valid, the DEIR erroneously suggests that the difference between the baseline and proposed project is best represented by dividing the resulting value by the confidence interval. DEIR at 4-178 to 4-180. The DEIR states that,

Difference is absolute difference between median estimates, with values in parentheses representing mean % difference based on difference between Proposed Project and Existing in each year, divided by the Existing 95% confidence interval, which is an indicator of signal to noise. Specifically, the value represents the percentage of the median change in relation to the 95% confidence intervals of the abundance estimates.

*Id.* at 4-179; *see id.* at 4-180. In this way too, DWR's analysis of the relative effect of population changes under proposed operations is statistically invalid, not credible, and represents an arbitrary view of the scale of differences among alternatives.<sup>29</sup>

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<sup>29</sup> This procedure does not allow one to determine whether the difference in modeled outcomes is statistically significant. It is not even clear what it means to "divide[] by the Existing 95% confidence interval;" an interval is not a point value that can serve in the denominator. It appears that "dividing by the confidence interval" was accomplished by using the midpoint of the confidence interval as a denominator. But the 95% confidence interval is asymmetric around the mean of the non-log-transformed units (because it was based on log values), and, as a result, the midpoint of the confidence interval is much larger than the median and thus makes the median (and differences between two medians) look small. Furthermore, this approach of dividing the difference between median results by the 95% confidence interval has not been used previously by DWR and is not used for other analyses in the DEIR, further indicating that this method is inappropriate. For instance, when DWR re-ran the Nobriga and Rosenfield model in its July 2, 2018 testimony to the SWRCB in the WaterFix proceeding, DWR did not divide the difference in median results by the confidence interval. *See* DWR-1352 at 7, available online at: [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/california\\_waterfix/exhibits/docs/petitioners\\_exhibit/dwr/part2\\_rebuttal/dwr\\_1352.pdf](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/petitioners_exhibit/dwr/part2_rebuttal/dwr_1352.pdf). Nor does the DEIR use this statistically flawed methodology for assessing the impacts of reduced Delta outflow on the abundance of *Eurytemora affinis*; instead, the DEIR simply presents the differences in mean results from the proposed project and baseline scenarios by water year type without dividing by the 95% confidence interval, even though it claims there is substantial uncertainty in the *E. affinis* model results based on the 95% confidence intervals, DEIR at 4-145 to 4-146, similar to the DEIR's assertions of model uncertainty with respect to Longfin smelt. This inconsistency in

After performing the invalid division of the mean by the confidence interval, the DEIR suggests that the effect of the proposed project will be only a 1-2% reduction in abundance. This is a completely invalid interpretation. Furthermore, the DEIR claims, without any supporting evidence, that a 1-2% reduction in abundance is not significant.<sup>30</sup> *Id.* at 4-179 to 4-180; *see id.* at 4-124.

**Table 4.4-10. Predicted Median Longfin Smelt Fall Midwater Trawl Index Averaged by Water Year Type, Based on Nobriga and Rosenfield (2016) Assuming Poor (Post-1991) Juvenile Survival**

Water Year Type	Existing (95% Confidence Interval)	Proposed Project (95% Confidence Interval)	Proposed Project vs. Existing <sup>1</sup>	Proposed Project vs. Existing <sup>2</sup>
Wet	2,916 (86-54,509)	2,729 (82-51,692)	-187 (-7%)	-187 (-1%)
Above Normal	948 (37-11,658)	851 (33-10,654)	-97 (-11%)	-97 (-1%)
Below Normal	197 (9-3,963)	179 (8-3,707)	-18 (-10%)	-18 (0%)
Dry	152 (6-2,333)	141 (6-2,215)	-11 (-8%)	-11 (0%)
Critical	83 (3-1,398)	80 (3-1,374)	-3 (-4%)	-3 (0%)

Notes: <sup>1</sup> Difference is absolute difference between median estimates, with values in parentheses representing % difference in median.  
<sup>2</sup> Difference is absolute difference between median estimates, with values in parentheses representing mean % difference based on difference between Proposed Project and Existing in each year, divided by the Existing 95% confidence interval, which is an indicator of signal to noise. Specifically, the value represents the percentage of the median change in relation to the 95% confidence intervals of the abundance estimates.

There can be little question that a 4-11% reduction in abundance of a critically endangered species, which is already declining in abundance under baseline conditions, would be a significant impact under CEQA. However, even using DWR’s unfounded and illegitimate methodology, a 1-2% reduction in abundance on an annual basis would be a significant environmental impact, because this effect could be compounded every year through its effect on spawning stock. Similar to the significant effects of entrainment and loss of Delta smelt on the species’ abundance over time, even a 1-2% reduction in abundance of Longfin smelt caused by the proposed project can be “simultaneously nearly undetectable in regression analysis, and devastating to the population.” *See also* Kimmerer 2011. The unavoidable facts are that the proposed project is expected to cause measurable reductions in the abundance of a critically imperiled species in every year type and, because of the relationship between spawning stock and subsequent population size (Nobriga and Rosenfield 2016), those negative effects would be compounded every year. It is also important to note that the Existing Project baseline is one in which Longfin smelt abundance has declined by more than 90% in the past eight years; baseline conditions are inadequate to protect this species, and the DEIR finds that the Proposed Project will exacerbate this decline.

Numerous state and federal agencies have concluded that the best available science shows that reductions in Delta outflow during the winter-spring months is likely to reduce the abundance of Longfin smelt. The California Department of Fish and Wildlife flagged this concern in their comments on Reclamation’s Draft Environmental Impact Statement, and the State Water

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the analyses further indicates the invalidity of the DEIR’s analysis of impacts to Longfin smelt from reduced winter-spring Delta outflow.

<sup>30</sup> The proposed project would result in even less Delta outflow, and greater reductions in abundance, if OMR were -5,000 cfs or -6,000 cfs in April and May, as allowed by the proposed project but never modeled in the DEIR.

Resources Control Board and other state agencies have reached similar conclusions in numerous scientific reports, including its 2017 Scientific Basis Report in Support of New and Modified Requirements for Inflows from the Sacramento River and its Tributaries and Eastside Tributaries to the Delta, Delta Outflows, Cold Water Habitat, and Interior Delta Flows.<sup>31</sup> A recent analysis by scientists with The Bay Institute also indicates that the Longfin smelt population is likely to drop below quasi-extinction thresholds in the next 10 years absent immediate actions to reverse the decline of the species, which is attached hereto as Exhibit 2.

DWR's conclusion appears to be based on manipulations and presentations of the data that have no statistical basis—they are inconsistent with the best available science,<sup>32</sup> and do not represent a credible scientific analysis. The DEIR must be revised to acknowledge that the proposed project would cause a significant adverse impact on Longfin smelt and to propose mitigation measures to address this significant impact, and the revised DEIR must thereafter be recirculated for public comment.

For other species, the modeling in the DEIR shows that the proposed project would increase entrainment and reduce survival. For instance, the DEIR shows that the proposed project would cause an increase of salvage and loss of spring-run Chinook salmon, *see* DEIR at 4-213 to 4-214, fall run Chinook salmon, *id.* at 4-229 to 4-230, juvenile Longfin smelt, *id.* at 4-185 to 4-186, and juvenile and larval Delta smelt, *id.* at 4-123.<sup>33</sup> Moreover, while the proposed annual salvage thresholds would not have been exceeded every year between 2008-2018 under the 2008 and 2009 biological opinions, *see* DEIR, Vol. 2 at H-1-4-16, the DEIR assumes that the 50% annual salvage thresholds are exceeded in every year except for critically dry years, *id.* at H-1-4-15 (“In March and April of wet, above-normal, below-normal and dry years, it is assumed that the 50% of the proposed single year loss thresholds for one or more of the species will be exceeded, which triggers an OMR flow requirement of -3,500 cfs.”). As a result, the DEIR assumes, and the modeling shows, that the proposed project will increase entrainment of most listed fish species on a persistent basis.

Similarly, the DEIR also finds that survival of salmon migrating through the Delta will be lower for most of the species. DEIR at 4-215 to 4-216 (spring-run); *id.* at 4-232 to 4-233 (fall-run). Even though these reductions in survival through the Delta may appear small, NMFS has repeatedly warned that, “[s]mall reductions across multiple life stages can be sufficient to cause

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<sup>31</sup> This peer reviewed report is available online at [https://www.waterboards.ca.gov/water\\_issues/programs/peer\\_review/docs/scientific\\_basis\\_phase\\_ii/201710\\_bdphaseII\\_sciencereport.pdf](https://www.waterboards.ca.gov/water_issues/programs/peer_review/docs/scientific_basis_phase_ii/201710_bdphaseII_sciencereport.pdf) and is hereby incorporated by reference.

<sup>32</sup> The DEIR wholly ignores scientific information from the USFWS that reductions in spring outflow also reduce the recruitment and abundance of Delta smelt, and the DEIR fails to consider whether the significant reduction in Delta outflow in April and May would cause significant impacts to Delta smelt.

<sup>33</sup> The DEIR only presents information regarding salvage from operations of the SWP in this section, instead of providing results from the coordinated operations of the SWP and CVP as the DEIR does in other sections, like results from the Delta Passage Model.

the extirpation of a population,” and in the WaterFix biological opinion concluded that a 1% reduction in survival observed in the Delta Passage Model “can impact the population to a greater degree,” and that a “1% to 2% mean reduction in survival is a notable reduction for an endangered species, especially if it occurs on a consistent (i.e., annual) basis.” NMFS, Final Biological Opinion, California WaterFix Project, NMFS Consultation No. WCR-2016-5506.

Relatedly, the life cycle modeling results presented in the 2019 biological opinions, which are not utilized or presented in the DEIR, also indicate that the nearly identical federal proposed project will result in continued declines in abundance of Delta smelt and winter-run Chinook salmon. Independent scientific peer reviews of the federal biological opinions also found that under the proposed project, winter-run Chinook salmon and Delta smelt are likely to continue declining towards extinction.

Indeed, DWR admits in the DEIR that OMR flows more negative than -5,000 cfs would exceed the “-5000 inflection point deemed protective of Delta smelt entrainment risk,” and that -5,000 cfs OMR is “the inflection point at which entrainment tends to sharply increase.” DEIR at 4-123. Given DWR’s finding that OMR more negative than -5,000 cfs is not protective of Delta smelt, it is unclear why the proposed project allows exceeding this threshold any time that the Delta is in excess conditions, and why the DEIR maintains that more negative OMR flows would not cause a significant environmental impact under CEQA.

Moreover, other elements of coordinated operations of the CVP and SWP as proposed clearly would cause significant environmental impacts, including:

- Reductions of instream flows in the Stanislaus River during the winter and spring months, and elimination of water temperature requirements on the Stanislaus River. This action is likely to cause a significant impact by reducing the survival and abundance of fall-run Chinook salmon, Central Valley steelhead, and spring-run Chinook salmon in that river. *See, e.g.,* DFW Comments to Reclamation 2018; SWRCB 2016, 2018; Zeug et al. 2014; Sturrock et al. 2019. In addition, these flows in the Stanislaus River (as well as instream flows in the lower San Joaquin River at Vernalis from April 15 to May 15) appear to violate water quality standards under the Bay-Delta Water Quality Control Plan, which would also constitute a significant impact under CEQA.<sup>34</sup>
- The DEIR fails to adequately consider the effects of eliminating the San Joaquin River inflow: export ratio under the 2009 NMFS biological opinion, as the 2016 six-year study report supports the conclusion that increased inflow, lower exports, and a higher inflow: export ratio increase survival of migrating steelhead. *See* Rebecca Buchanan, 2016 Six

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<sup>34</sup> In addition, the DEIR fails to analyze whether and how the proposed project and alternatives would affect achievement of the 1995 Bay-Delta Water Quality Control Plan's narrative salmon protection objective. To the extent that the proposed project or alternatives fails to provide flow and water quality conditions that are inconsistent with achievement of the salmon doubling objective, this would constitute a significant impact under CEQA because it would impede compliance with a water quality standard.

Year Acoustic Telemetry Steelhead Study: Statistical Methods and Results, Dec. 7, 2018, at 76 (“the prevailing conceptual model of how water project operations and river conditions influence survival through the Delta is that survival is higher during periods of higher Delta inflow, lower export rates, higher I:E, and lower water temperatures (SST 2017).<sup>35</sup> The survival estimates from the 2016 six-year study support the conceptual model regarding Delta inflow, exports, and the I:E ratio.”).<sup>36</sup> In addition, DWR’s findings in the DEIR appear inconsistent with NMFS’s July 1, 2019 jeopardy biological opinion and the findings of state and federal agencies in the WaterFix final Environmental Impact Statement/ Environmental Impact Report and CESA permits regarding the importance of this reasonable and prudent alternative action in the 2009 NMFS biological opinion.

Finally, the DEIR incorrectly concludes that the reduction in fall outflow under the proposed project would not cause a significant adverse impact on Delta smelt. However, the DEIR admits that the proposed project would result in a reduction in low salinity habitat meeting salinity, Secchi depth, and water temperatures criteria than the 74 km X<sub>2</sub> requirements of the 2009 USFWS biological opinion. *See* DEIR at 4-162. Numerous scientific studies and analyses have found a relationship between Delta outflow in the fall and the abundance of Delta smelt. *See, e.g.,* Feyrer et al. 2008; Feyrer et al. 2011; MAST 2015; Polansky et al. *in review*. Moreover, DFW has repeatedly rejected similar proposals to weaken the Fall X<sub>2</sub> requirement of the 2008 biological opinion and found that similar proposals fail to fully mitigate impacts under CESA. *See* Letter from DFW to DWR regarding Request for Consistency Determination for the Continued Operation of the State Water Project Incorporating 2017 Proposed Change to Action 4 of the 2008 Biological Opinion For the Coordinated Long-Term Operations of the Central Valley Project and State Water Project (2080-2017-009-03), October 17, 2017; Letter from DFW to Reclamation regarding Implementation of Fall X<sub>2</sub> Action in Fall of 2019, September 24, 2019. The DEIR’s conclusion is not supported by substantial evidence, and the DEIR demonstrates that the proposed project does not fully mitigate impacts under CESA. Additional scientific information regarding the effects of Fall X<sub>2</sub> on Delta smelt are enclosed.

Given the imperiled status of these species, the further reductions in abundance and survival caused by the proposed project constitute mandatory findings of significant impacts under CEQA. The populations of Delta smelt, Longfin smelt, winter-run Chinook salmon, and spring-run Chinook salmon already are not self-sustaining (particularly without hatchery supplementation of salmonids) and are declining in abundance, and the proposed project would further “cause a fish or wildlife population to drop below self-sustaining levels.” Cal. Code

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<sup>35</sup> This document is available online at:

<http://www.cbr.washington.edu/sites/default/files/papers/UW%206yr%20steelhead%20report%202016%20FINAL.pdf> and is hereby incorporated by reference.

<sup>36</sup> This report is available online at:

<http://www.cbr.washington.edu/sites/default/files/papers/UW%206yr%20steelhead%20report%202016%20FINAL.pdf>. It is hereby incorporated by reference.

Regs., tit. 14, § 15065(a)(1).<sup>37</sup> Because the DEIR fails to recognize these mandatory findings of significance, the document must be revised to acknowledge these significant impacts and propose necessary mitigation measures, and the revised DEIR must be recirculated for public comment.

*C. The DEIR Fails to Adequately Consider Cumulative Impacts*

The DEIR also fails to adequately consider and disclose cumulative impacts. The DEIR admits that “[t]he cumulative impact of these past projects has resulted in a baseline that has altered Delta outflows and degraded surface water quality in the Delta,” and that the impact of the proposed project in conjunction with these cumulative effects would be potentially significant. DEIR at 4-308. Yet despite these numerous projects that would increase upstream storage and reduce flows into the Delta,<sup>38</sup> the DEIR asserts that the SWP’s effects would not be cumulatively considerable. *Id.*

Similarly, the DEIR admits that, “The cumulative impact of these past projects has resulted in a baseline consisting of a trending decline of listed-species population within the Delta and other waterways used by anadromous fish populations in northern California. Despite these protections, the cumulative impact of past Delta modifications and other past and present projects has contributed to the continuing decline in Delta fish populations and habitat of protected species. **This overall cumulative impact is significant.**” *Id.* at 4-310 to 4-311 (emphasis added). Despite these findings, the DEIR concludes that, “The cumulative impact of the Proposed Project would therefore be Less Than Significant.” *Id.* at 4-315.

However, DWR reaches this conclusion in part by relying on the Bureau of Reclamation’s draft environmental impact statement:

In consideration of the conclusions in Section 5.9 of Reclamation (2019) and Section 4.4., above, the Proposed Project’s contribution to cumulative impacts associated with the Reinitiation of Consultation of the CVP and SWP would not be cumulatively considerable.

*Id.*; *see id.* at 4-312. DFW has already identified significant flaws in Reclamation’s draft environmental impact statement and likely significant impacts of the proposed action. *See* Letter from California Department of Fish and Wildlife to U.S. Bureau of Reclamation, Comments on the Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley

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<sup>37</sup> Moreover, any reductions in abundance and survival of listed species under the proposed project compared to the baseline demonstrates that the proposed project is not fully mitigating impacts as required by CESA, and thus that the proposed project is inconsistent with the project objectives.

<sup>38</sup> The DEIR’s list of cumulative projects includes the Sites Reservoir Project, Shasta Dam expansion, and Upper San Joaquin River Storage Investigation (Temperance Flat). Environmental review for these projects has shown that they would increase water storage and reduce flows into the Delta, modifying hydrology upstream of the Delta and causing significant adverse impacts to fish and wildlife.

Project and State Water Project Draft Environmental Impact Statement, August 21, 2019.<sup>39</sup> NRDC likewise raised concerns with the draft environmental impact statement, which are attached hereto as Exhibit 3. Similarly, the biological opinions demonstrate that the proposed project will reduce the abundance of winter run Chinook salmon, reduce survival of salmon and steelhead migrating through the Delta, increase entrainment of listed species, and result in ongoing declines in the abundance of Delta smelt. *See* Exhibit 4. DWR's reliance on the conclusions in Reclamation's draft environmental impact statement is inappropriate.<sup>40</sup>

Moreover, the coordinated operations of the SWP and CVP are responsible for a significant proportion of the water that is stored and diverted in the Bay-Delta system, and thus are responsible for a significant proportion of the adverse effects on fish and wildlife in the watershed including from changes in hydrology, water quality and temperature, entrainment, and habitat loss. More than half of the total water diversions in the Bay-Delta watershed are associated with the CVP and SWP in some years, and the decline in fish species has accelerated as the CVP and SWP increased diversions over the past several decades. The DEIR's conclusion that the impacts are cumulatively significant, but that the SWP's contribution to these problems is not cumulatively considerable, is not supported by substantial evidence.

## **VII. The proposed project violates the California Endangered Species Act, and the California Department of Fish and Wildlife Should Not Rely on the DEIR**

There is no question that the abundance of CESA-listed species including winter-run Chinook salmon, spring-run Chinook salmon, Delta smelt, and Longfin smelt has declined significantly under baseline conditions. There is also no question that the coordinated operations of the CVP and SWP have significantly contributed to the declines of these and other fish species, and the adverse effects of CVP and SWP operations have never been fully mitigated, including over the past decade when numerous requirements of the 2008 and 2009 biological opinions were waived, weakened, and/or not fully implemented.<sup>41</sup> The best available science demonstrates that increased protections are necessary to avoid jeopardizing the species and fully mitigate impacts,

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<sup>39</sup> Moreover, the DEIR also incorrectly asserts that the annual loss thresholds are not considered in the CalSim modeling, and therefore are not considered in the biological opinions, suggesting that this will improve protections for the species. DEIR at 4-134. In fact, the CalSim modeling in the biological opinions, which is identical to that used in this DEIR, assumes that the annual loss thresholds are triggered every year, resulting in more restrictive OMR conditions in the spring months.

<sup>40</sup> The operations of the CVP are also included in the DEIR's list of cumulative projects. There is no quantitative analysis of cumulative impacts from coordinated operations of the CVP and SWP, simply qualitative statements. The DEIR's conclusions as to the cumulative effects of the CVP operations are flawed for the reasons described herein.

<sup>41</sup> The federal CVP currently does not have an ITP under CESA, and to our knowledge DWR lacks an ITP under CESA for upstream operations of the State Water Project, including take resulting from SWP operations of Lake Oroville and in the Feather River. *See also* DEIR at 3-18 (stating that DWR is not seeking an ITP for Oroville Dam and Feather River operations, Coordinated Operation Agreement, or CVP facilities, operations and agreements).

as state and federal agencies have found. *See, e.g.*, Secretary of the Interior Sally Jewell, Memorandum for the President, Update on California Water Issues, August 30, 2016, at 2 (“The reinitiation process will likely lead to new or amended biological opinions that will increase protections for these species.”).

However, like the Trump Administration’s new biological opinions, DWR’s proposed project would eliminate many existing protections for these species and worsen conditions for many of these species, as well as for fall-run Chinook salmon, the backbone of the state’s salmon fishery. NMFS staff concluded on July 1, 2019 that the proposed project would jeopardize listed salmonids in violation of the federal ESA,<sup>42</sup> and independent scientific peer reviews of the draft biological opinions found that listed species are likely to continue declining in abundance and that the biological opinions failed to use the best available science.<sup>43</sup> As discussed herein, under the proposed project CESA-listed species are likely to continue declining in abundance, and that survival and abundance of CESA-listed species are lower under the proposed project than under baseline conditions, demonstrating that the effects of the proposed project are not fully mitigated<sup>44</sup> as required under CESA and are likely to jeopardize the continued existence of the species.

Moreover, the proposed project would not require that the protective measures modeled in the DEIR are fully implemented, instead providing numerous offramps and exceptions, including:

- only requiring that DWR implement a proportional share of these measures without requiring that the federal Central Valley Project also comply with CESA;
- allowing the agencies to decide not to reduce OMR even when salvage thresholds are exceeded;
- not requiring the fall X2 action to be implemented based on vague and uncertain future findings;
- Relying on purchases of water for Delta outflow, without identifying the funding needed to ensure that the action would be implemented. DEIR at 5-38; *id.* at 5-87.

The proposed project also fails to include any thresholds on the number of spring-run Chinook salmon or Delta smelt that can be salvaged at the pumps, despite DFW specifically

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<sup>42</sup> This biological opinion is available online at: <https://www.documentcloud.org/documents/6311822-NMFS-Jeopardy-Biop-2019-OCR.html>. It is incorporated here by reference.

<sup>43</sup> A copy of these independent scientific peer reviews, as well as other supporting documentation, will be provided separately to DFW and DWR.

<sup>44</sup> In addition, there is no credible scientific basis to conclude that tidal marsh habitat restoration would offset or mitigate for the adverse effects on Longfin smelt caused by the reduction in winter-spring Delta outflow, as proposed in DWR’s ITP application. The ITP application fails to provide a reasoned explanation for this approach, particularly given the improvements in scientific understanding in the past decade (*see, e.g.*, Herbold et al. 2014, Nobriga and Rosenfield 2016) and the continued decline in abundance of Longfin smelt over the past decade despite the habitat restoration required under the prior Longfin smelt ITP and other actions.

recommending salvage thresholds for those species, as well as recommending that the proposed project include salvage triggers like those included in the 2009 NMFS biological opinion. *See* DFW comments to Reclamation 2019.

In addition, while DWR purports to only seek an ITP under CESA for project operations in the Delta, we are unaware of any authority for SWP operations in the Feather River to incidentally take CESA-listed species. DFW must consider the whole of the operations of the CVP and SWP to ensure that the proposed project will not jeopardize listed species, in light of upstream impacts and other impacts on the species. Finally, as discussed *supra* the DEIR fails to use the best available science regarding the effects of the proposed project on CESA-listed fish species and fails to analyze effects upstream. Therefore, DFW should not rely on the DEIR in making its conclusions under CESA.

Because the modeling of the proposed project is the same as the Trump Administration's biological opinions, we have attached our 60-day notice letter to the Bureau of Reclamation regarding the flaws in those biological opinions, including information which demonstrates that the proposed project is likely to jeopardize listed species under the ESA, and therefore under CESA. *See* Exhibit 4. These comments are incorporated by reference regarding the effects of the proposed project in this DEIR under both CEQA and CESA.

It is abundantly clear that the proposed project is inconsistent with the requirements of CESA, and that the proposed project, alone and in combination with the Trump Administration's modification of CVP operations, will jeopardize the continued existence of species listed under CESA. Therefore, DWR must significantly revise the proposed project before submitting an application for an ITP under CESA, and DWR must recirculate a revised DEIR describing that revised project for public and agency review and comment.