



October 5, 2020

David Brick
Bureau of Reclamation
CGB-152
2800 Cottage Way
Sacramento, CA 95825

RE: Comments on Draft Supplemental Environmental Impact Statement for Shasta Lake Water Resources Investigation

Dear Regional Director Conant and Mr. Brick:

On behalf of the Natural Resources Defense Council (“NRDC”), Defenders of Wildlife, Golden State Salmon Association, Sierra Club California, California Sportfishing Protection Alliance, The Bay Institute, San Francisco Baykeeper, and Friends of the River, we are writing to provide comments on the Draft Supplemental Environmental Impact Statement (“DSEIS”) for the Shasta Lake Water Resources Investigation (“SLWRI”) released by the Bureau of Reclamation (“Reclamation”) on August 6, 2020. We appreciate that Reclamation extended the deadline for public comments to October 5 and provided NRDC with additional modeling results that have not been publicly disclosed.¹ Reclamation asserts it prepared the DSEIS to provide information needed to apply section 404(r) of the Clean Water Act for the SLWRI, to “update operations and modelling to the latest regulatory requirements,” and to revise the 2015 Final Environmental Impact Statement for the SLWRI (“2015 FEIS”) Chapter 25 on the Wild and Scenic River Considerations for the McCloud River. Regardless of its stated purpose, the DSEIS must also

¹ On August 24, 2020, NRDC and other groups requested that Reclamation provide all the modeling data and results to the public, and they requested that Reclamation extend the public comment period on the DSEIS in light of the failure to provide the modeling results. On September 8, 2020, Reclamation emailed NRDC staff and provided NRDC with “the modeling results associated with the Draft EIS.” See email from Derya Sumer to Ashley Cooper dated Sept. 8, 2020, which is attached as part of Exhibit A. Reclamation did not provide requested biological modeling, which suggests that no such modeling was performed. Reclamation also extended the public comment period to October 5, 2020.

meet the requirements of the National Environmental Policy Act (“NEPA”), and, based on our review, the DSEIS fails to do so.

First, the DSEIS fails to present the public and Congress with the necessary information to comply with section 404(r) of the Clean Water Act and allow Congress to consider waiving certain permitting requirements, including failing to properly consider the Clean Water Act section 404(b)(1) Guidelines.² As a result, the DSEIS does not meet NEPA’s public disclosure and hard look requirements, and the document must be substantially revised before it could be submitted to Congress pursuant to section 404(r) of the Clean Water Act.

Second, the DSEIS fails to meet NEPA’s public disclosure requirements and to take the necessary hard look at the environmental impacts of enlarging Shasta Dam and Reservoir in light of changed circumstances since the Final EIS in 2015. Reclamation states that one of the purposes of the DSEIS is to update modeling and information relating to meeting the “latest regulatory requirements,” which include changes to the operation of Shasta Dam to meet the requirements of the 2019 Biological Opinions for the Long-Term Operations of the Central Valley Project (“CVP”) and State Water Project (“SWP”) issued by the United States Fish and Wildlife Service and the National Marine Fisheries Service (“2019 Biological Opinions”), and the 2018 Addendum to the Coordinated Operation Agreement (“COA Addendum”). However, the DSEIS wholly fails to make updated findings and conclusions regarding potential environment impacts of the proposed project and alternatives in light of these changed circumstances, and the DSEIS presents misleading and inaccurate modeling data that does not reflect the likely impacts of operating an enlarged Shasta Dam in light of changes to operations of the CVP. In addition, there is substantial new information, including information related to the impacts of climate change on California’s hydrology and water resources, that has been released since the issuance of the 2015 FEIS, and the DSEIS entirely fails to address this new information. To satisfy its duties under NEPA, Reclamation must revise the DSEIS and update its analysis of environmental impacts to fully account for these changed circumstances and new information.

Third, the DSEIS fails to accurately assess and take a hard look at the impacts of enlarging Shasta Dam to the McCloud River, wrongly asserts that NEPA does not require evaluation of consistency of the proposed project and alternatives with provisions of State law that protect the McCloud River, and fails to accurately assess the consistency of the proposed project and alternatives with provisions of State law that protects the McCloud River.

Each of these issues is addressed in turn below. Included as Exhibit B to these comments is a separate letter explaining that Reclamation must also circulate for public review and comment an updated Feasibility Report regarding the Shasta Dam enlargement project.

² The 404(b)(1) Guidelines are found at 40 C.F.R. §§ 230 *et seq.*

I. Reclamation’s DSEIS Does Not Meet the Requirements of 404(r) of the Clean Water Act, and Therefore Cannot Excuse Reclamation from Complying with the Permit Requirements of Section 404 of the Clean Water Act

Reclamation prepared the DSEIS to, in part, provide the information it asserts is necessary to apply Clean Water Act section 404(r) to the enlargement of Shasta Dam and obtain Congressional authorization for the project. Section 404(r) of the Clean Water Act provides

[t]he discharge of dredged or fill material as part of the construction of a Federal project specifically authorized by Congress, [...], is not prohibited by or otherwise subject to regulation under this section, or a State program approved under this section, or section 1311(a) [CWA § 301(a)] or 1342 [CWA § 402] of this title (except for effluent standards or prohibitions under section 1317 of this title), if information on the effects of such discharge, including consideration of the guidelines developed under subsection (b)(1) of this section, is included in an environmental impact statement for such project pursuant to the National Environmental Policy Act of 1969 and such environmental impact statement has been submitted to Congress before the actual discharge of dredged or fill material in connection with the construction of such project and prior to either authorization of such project or an appropriation of funds for such construction.

33 U.S.C. § 1344(r).

In other words, three basic requirements must be met for the 404(r) exemption to apply. First, the agency must submit a final EIS to Congress that satisfies NEPA and that includes an analysis conducted under 404(b)(1); second, the EIS must be submitted before discharges from construction begin and before Congress has authorized the project or appropriated funds for its construction; and third, the project must be specifically authorized by Congress. *See Bd. of Mississippi Levee Comm'rs v. U.S. E.P.A.*, 674 F.3d 409, 418 (5th Cir. 2012). The EIS that Reclamation submits to Congress must comply with NEPA.

Courts evaluating the applicability of section 404(r) have found that:

[t]o be free of the Section 404(a) permit requirement, the sponsor of such a project must have submitted to Congress an “adequate” environmental impact statement “including consideration of the guidelines developed under” Section 404(b)(1). Of central importance in the House debates was the assurance that consideration and acceptance of the environmental impact statement by Congress would be “equivalent to” review under the Section 404(b)(1) guidelines.

Monongahela Power Co. v. Marsh, 809 F.2d 41, 51 (D.C. Cir. 1987) (internal citations and footnotes omitted).

One of NEPA’s fundamental purposes is “to guarantee relevant information is available to the public.” *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1072 (9th Cir.

2011). In addition, Reclamation is required by NEPA to take a “hard look” at the potential impacts of the proposed project and alternatives, which includes a “thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms.” *Nat’l Parks & Conservation Ass’n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1072 (9th Cir. 2010); *Nat’l Audubon Soc’y v. Dep’t of Navy*, 422 F.3d 174, 187 (4th Cir. 2005) (“hard look” requires “thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms” before irretrievable commitment of resources). To ensure it takes a “hard look,” Reclamation must rely on “high quality information” and ensure scientific integrity of the discussions and analyses in its EIS. *See* 40 C.F.R. §§ 1500.1(b), 1502.24. These requirements must be met in order to allow for “[a]ccurate scientific analysis, expert agency comments, and public scrutiny.” *Id.*

In addition, in order to meet the requirements of the 404(b)(1) Guidelines, the DSEIS must include factual determinations regarding specific disposal sites where dredge and fill material will be discharged, as well as the effects of such discharges on the “on the physical, chemical, and biological components of the aquatic environment in light of subparts C through F.”³ 40 C.F.R. § 230.11(a)-(h). The 404(b)(1) Guidelines require an analysis – based on site-specific factual determinations – that demonstrates the proposed discharges: (a) are the least environmentally damaging practicable alternative (“LEDPA”), 40 C.F.R. § 230.10(a); (b) will not jeopardize endangered species, 40 C.F.R. § 230.10(b)(3); and (c) will not cause or contribute to a violation of state water quality standards, 40 C.F.R. § 230.10(b)(4). The 404(b)(1) Guidelines contemplate that these factual determinations will be made by the permitting agency, which in most instances is the United States Army Corps of Engineers.

However, here Reclamation seeks to bypass this permitting requirement by going straight to Congress. Bypassing the Army Corps does not loosen the mandate to ensure all the requirements of the 404(b)(1) Guidelines are satisfied, however. *See Monongahela Power*, 809 F.2d at 51. As the D.C. Circuit explained, “Section 404 transmits a crisp and unwavering message: all significant discharges, whether or not exempt from the permit requirement, must be subjected to Section 404(b)(1) scrutiny or its equivalent.” *Id.*

Even when 404(r) is invoked, “both the Regional Administrator(s) and District Engineer(s) shall be consulted” concerning “(a) whether the [EIS] contains the requisite information on the proposed discharges, and (b) whether the proposal is consistent with the [404(b)(1) Guidelines].” *See* Guidance on Applying Section 404(r) of the Clean Water Act to Federal Projects Which Involve the Discharge of Dredged or Fill Materials into Waters of the U.S., Including Wetlands, Council on Environmental Quality, Memorandum for Heads of Agencies, November 17, 1980 (“CEQ 404(r) Guidance”).⁴ The CEQ 404(r) Guidance further directs that “[i]n all cases, the

³ “Subpart C describes the physical and chemical components of a site and provides guidance as to how proposed discharges of dredged or fill material may affect these components. Subparts D through F detail the special characteristics of particular aquatic ecosystems in terms of their values, and the possible loss of these values due to discharges of dredged or fill material.” 40 C.F.R. § 230.4.

⁴ The CEQ 404(r) Guidance is attached hereto as Exhibit C.

proponent agency shall ensure that the written conclusions of EPA or the Corps are included in or attached to the environmental impact statement, clearly identified, circulated with the statement, and submitted to the Congress prior to requesting either authorization or appropriation of funds and prior to actual discharge.” *Id.*

Therefore, in order to meet the requirements of Clean Water Act section 404(r), Reclamation must prepare and provide Congress with an EIS that meets the requirements of NEPA and contains the information necessary to satisfy all the requirements of the 404(b)(1) Guidelines. The DSEIS does not do so. As explained below, the DSEIS does not present the necessary site-specific factual determinations regarding potential short-term or long-term effects of the discharges of dredge and fill material; it does not demonstrate that the proposed discharges meet the least environmentally damaging practicable alternative (LEDPA) requirement; it does not demonstrate the discharges will not jeopardize endangered species; and it fails to demonstrate the discharges will not cause or contribute to violation of water quality standards.

A. The DSEIS Does Not Provide the Necessary Site-Specific Analysis and Factual Determinations Regarding the Short-Term and Long-Term Effects of Discharges of Dredge and Fill Material Required by the 404(b)(1) Guidelines

The DSEIS first fails to meet the 404(b)(1) Guidelines by failing to provide the necessary site-specific details and information on the short-term and long-term effects of the discharges associated with Shasta Dam enlargement. The factual determinations required include determinations regarding physical substrate at the disposal site, the effect of the discharge on water circulation and fluctuation, the effect of the discharge on structure and function of the aquatic ecosystem and organisms, cumulative effects on the aquatic ecosystem, and secondary effects on the aquatic ecosystem (including those that “do not result from the actual placement of dredge or fill material” and including effects from “fluctuating water levels in an impoundment and downstream associated with operation of a dam.”). 40 C.F.R. § 230.11(a)-(h). Courts have concluded that, “[t]he entire regulatory scheme requires full evaluation of the effect which the dredging and disposal may have on a given area. The findings on compliance or non-compliance with the requirements entails a comprehensive analysis of each proposed site.” *Surf & Env’t Conservation Coal. v. Dep’t of the Army*, 322 F. Supp. 2d 126, 132 (D.P.R. 2004). Reclamation’s DSEIS fails to meet these requirements, and it therefore fails to meet the requirements of section 404(r) of the Clean Water Act or NEPA’s public disclosure and hard look requirements.

In Chapter 1.2 of the DSEIS (Scope of the Supplemental Environmental Impact Statement), Reclamation asserts that the “[2015] FEIS was developed with consideration of the 404(b)(1) guidelines.” DSEIS at 1-3. The DSEIS goes on to state that “in order to apply 404(r), Reclamation has prepared this supplement to provide [among other things] an updated and adequate description of the discharges to wetlands and other Waters of the U.S. (WOTUS) resulting from the relocations and infrastructure and recreational structures.” DSEIS at 1-3; *see also* DSEIS Appendix A at A-1 (acknowledging that additional “detailed analyses and documentation” beyond that in the 2015 FEIS and 2015 Feasibility Report “would be required,” and claiming that the additional required analyses “are presented” in the DSEIS). However,

review of the DSEIS and 2015 FEIS demonstrate that the site-specific factual determinations required by the 404(b)(1) Guidelines are not provided.

First, though the DSEIS asserts that the 2015 FEIS was “developed with consideration of the 404(b)(1) Guidelines,” it does not provide any citation to any particular section of the 2015 FEIS to demonstrate this to be the case. A review of the 2015 FEIS clearly demonstrates it was not prepared to fully meet the 404(b)(1) Guidelines. In fact, there is no specific mention of the 404(b)(1) Guidelines in the 2015 FEIS. Nor is there any discussion or factual determinations of site-specific effects of the discharge of dredge or fill material in the 2015 FEIS; instead, the 2015 FEIS did not even identify specific sites or locations where dredge and fill material would be discharged. *See, e.g.*, 2015 FEIS at 12-118 (explaining that “final relocation area planning and designs are incomplete”). Absent identification of specific locations of discharges, it is impossible for the 2015 FEIS to have made the **site-specific** factual determinations regarding the short-term and long-term effects of the proposed discharges as required.⁵

Second, the DSEIS does not provide the site-specific factual determinations that are absent from the 2015 FEIS. Though the DSEIS does estimate the acreage of Waters of the United States that will likely be impacted by various dredge and fill due to project relocations and infrastructure and recreational structures, it does not identify the specific locations where specific discharges will occur. For some proposed discharges, it does not even attempt to estimate the acreage impacted and instead identifies the impacts to Waters of the United States as “TBD.” *See* DSEIS, Appendix B at B-1 and B-2. The DSEIS even admits that the “exact type and acreage of wetlands to be mitigated and the type of compensatory mitigation to be used, cannot be known until final engineering plans for project relocations have been developed.” DSEIS at 2-10.⁶ This does not meet Reclamation’s obligations to identify and evaluate specific disposal sites. *See Surf & Env’t Conservation Coal.*, 322 F. Supp. 2d at 132. As a result, the analysis fails to meet Reclamation’s obligations under section 404(r) as well. *Monongahela Power*, 809 F.2d at 51.

Likewise the DSEIS does not make factual determinations regarding the short-term or long-term effects of the discharges on the physical substrate at the disposal site, the effect of the discharge on water circulation and fluctuation, the effect of the discharge on structure and function of the

⁵ The 2015 FEIS does contain discussion of the effects to the physical, chemical, biological, and human use characteristics of the aquatic environment that may result from discharges of dredge and fill material associated with enlargement of Shasta Dam. However, these discussions are not the result of, or based on, site-specific analysis that is required by the 404(b)(1) Guidelines.

⁶ The DSEIS also unlawfully defers the identification of mitigation to wetlands to a subsequent proceeding. Under the 404(b)(1) Guidelines, mitigation for impacts to Waters of the United States must be identified with specificity and consideration of mitigation must “must assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project,” among other things. 40 C.F.R. § 230.93(a); *see also* 40 C.F.R § 230.91-95. The DSEIS and its appendices fail to provide the necessary detail and specificity needed to demonstrate consideration of the 404(b)(1) Guidelines as required by section 404(r) of the Clean Water Act or by NEPA. *See* DSEIS at 2-3 to 2-6, 2-9.

aquatic ecosystem and organisms, cumulative effects on the aquatic ecosystem, or secondary effects on the aquatic ecosystem.

Not only does the DSEIS not provide site-specific information and factual determinations relevant to discharges of dredge and fill material associated with the 18.5 foot dam raise, it also fails to even discuss the site-specific information and factual determinations that would be associated with any of the other alternatives for the Shasta Dam enlargement presented in the 2015 FEIS.

As a result, the DSEIS (even when combined with the 2015 FEIS) fails to present the factual determinations related to the effects of the discharge of dredge and fill material required by the 404(b)(1) Guidelines, and thus the DSEIS and 2015 FEIS fail to include necessary information for Reclamation to seek a Congressional waiver under Clean Water Act section 404(r) to its project. *See Monongahela Power*, 809 F.2d at 51.

B. The DSEIS Does Not Demonstrate that the Proposed Project Is the Least Environmentally Damaging Practicable Alternative as Required by the 404(b)(1) Guidelines

The DSEIS also fails to present analysis equivalent to that required by the 404(b)(1) Guidelines by failing to demonstrate that the proposed action is the least environmentally damaging practicable alternative (“LEDPA”). The 404(b)(1) Guidelines provide that,

Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.

40 C.F.R. § 230.10(a). The 404(b)(1) Guidelines further provide that the “factual determinations [required by 40 C.F.R. § 230.11] shall be used ... in making findings of compliance or non-compliance with the restrictions on discharge in § 230.10.” 40 C.F.R. § 230.11. In other words, to make the required showing that the discharges are the LEDPA, the DSEIS must provide the necessary site-specific details and information on the short-term and long-term effects of the discharges associated with Shasta Dam enlargement. Reclamation’s DSEIS fails to meet these requirements, and therefore also fails to meet NEPA’s public disclosure and hard look requirements.

First, though Reclamation asserts that “the 2015 SLWRI Feasibility Report determined the least environmentally damaging practicable alternative for the dam raise construction” (DSEIS, Appendix A at A-1), the 2015 Feasibility Report made no such determination. Instead, the 2015 Feasibility Report concluded that “it is anticipated that CP4A [the preferred alternative] *will be identified* as the [LEDPA] pursuant to Section 404 of the Clean Water Act, which is ultimately subject to determination by USACE.” 2015 Feasibility Report at 5-30 and 8-2. Moreover, the DSEIS does not provide any additional detail or information, nor any specific factual

determinations, to support a finding that CP4A is the LEDPA for dam construction. There is no evidence in the DSEIS or the 2015 Feasibility Report that Reclamation or the USACE made the LEDPA determination for the dam construction as required by the 404(b)(1) Guidelines.

Moreover, neither the 2015 FEIS nor the DSEIS makes the factual determinations that alternative CP4A, including analysis of the other discharges associated with dam construction – which Reclamation refers to as “project relocations” – is the LEDPA. Instead, the DSEIS claims to provide a “programmatic approach” to the LEDPA determination for project relocations. DSEIS at 1-3. The discussion of LEDPA for project relocations in the DSEIS is presented on pages 2-3 and 2-4 and, after identifying the standard for determining a “practicable” alternative, states that “Reclamation will follow a procedure for identifying project relocation alternatives that prioritize avoidance. Any impact that cannot be completely avoided will be minimized to the extent practicable. All impacts to wetlands and other WOTUS will be mitigated.” These statements of future plans to evaluate alternatives and identify the alternative with the least impact is not a finding based on factual determinations that a particular alternative is the LEDPA. Instead, it is a promise to engage in the required analysis and make the determination in the future. This does not meet the requirements of NEPA, Clean Water Act section 404(r), or the 404(b)(1) Guidelines. The DSEIS’s presentation of a “programmatic approach” to its LEDPA obligations imposed the 404(b)(1) Guidelines does not provide detail and analysis that Congress demanded in any environmental impact statement developed in an effort to apply 404(r). *See Monongahela Power*, 809 F.2d at 51.

For these reasons, the DSEIS does not present and make the required findings regarding the LEDPA – based on required factual determinations – as required by the 404(b)(1) Guidelines. Reclamation’s DSEIS therefore also fails to meet NEPA’s public disclosure and hard look requirements.

C. The DSEIS Does Not Demonstrate that the Proposed Project Will Not Result in Jeopardy to or Adverse Modification of Critical Habitat of Threatened or Endangered Species as Required by the 404(b)(1) Guidelines

The DSEIS also fails to meet the 404(b)(1) Guidelines by failing to demonstrate that the proposed action will not jeopardize or adversely modify critical habitat of endangered species. The 404(b)(1) Guidelines provide that “no discharge of dredged or fill material shall be permitted if it: ... jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, or results in likelihood of the destruction or adverse modification of ... critical habitat” for those species. 40 C.F.R. § 230.10(b)(3). The 404(b)(1) Guidelines further provide that the “factual determinations [required by 40 C.F.R. § 230.11] shall be used ... in making findings of compliance or non-compliance with the restrictions on discharge in § 230.10.” 40 C.F.R. § 230.11. Of particular relevance here are impacts from specific discharges as well as secondary effects including impacts from fluctuating water levels and changes in flow associated with dam operations.

The DSEIS does not provide any information, analysis, or conclusions regarding whether the discharges of dredge and fill material will jeopardize or adversely modify critical habitat of endangered or threatened species. Chapter 4.3 of the DSEIS discusses impacts to only three species –winter-run Chinook salmon, Central Valley steelhead, and Western Yellow-Billed Cuckoo – that will be caused by anticipated flow changes that will result from the proposed project, but this analysis does not constitute or provide factual determinations on whether the action will jeopardize the species or adversely modify the species’ critical habitat. *See* DSEIS at 4-6 to 4-8.⁷ Likewise, the DSEIS fails to even mention or provide required factual determinations regarding numerous threatened or endangered species that are likely to be adversely affected by the project, including gray wolf, northern spotted owl, valley elderberry longhorn beetle, Shasta crayfish, pacific fisher, California red-legged frog, Delta Smelt, and green sturgeon.

Moreover, based on publicly available information, Reclamation has not completed Endangered Species Act consultation with either the United States Fish and Wildlife Service or the National Marine Fisheries Service to determine whether the proposed action will jeopardize listed species or adversely modify their critical habitat.⁸ In addition, as explained in Section II(A) below, the 2019 Biological Opinions do not analyze the impacts of operation of an enlarged Shasta Dam on listed species, and therefore cannot satisfy Reclamation’s duties. Absent completion of such consultation, the factual determinations and conclusions regarding whether the action will jeopardize or adversely modify the critical habitat of threatened and endangered species required by the 404(b)(1) Guidelines cannot be made.

For each of these reasons, the DSEIS fails to provide the information required by the 404(b)(1) Guidelines for the public and Congress to consider the effects of the discharge of dredge and fill material on threatened and endangered species. As a result, the DSEIS does not meet Reclamation’s obligations under section 404(r) of the Clean Water Act, and the DSEIS violates NEPA’s public disclosure and hard look requirements.

D. The DSEIS Does Not Demonstrate that the Proposed Project Will Not Cause or Contribute to Violations of Any State Water Quality Standards as Required by the 404(b)(1) Guidelines

In addition, the DSEIS fails to meet the 404(b)(1) Guidelines by failing to demonstrate that the proposed action will not cause or contribute to violations of state water quality standards. The 404(b)(1) Guidelines provide that “no discharge of dredged or fill material shall be permitted if it: causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State water quality standard.” 40 C.F.R. § 230.10(b)(1). The 404(b)(1) Guidelines further provide that the “factual determinations [required by 40 C.F.R. § 230.11] shall

⁷ *See* also Section II(A), *infra*.

⁸ *See* Exhibit D (copy of correspondence between Reclamation and wildlife agencies concerning status of ESA consultation). According to these documents and the Bureau of Reclamation’s draft biological assessment dated April 2, 2019, consultation regarding the impacts of constructing an enlarged Shasta Dam is still ongoing with respect to several species.

be used ... in making findings of compliance or non-compliance with the restrictions on discharge in § 230.10.” Reclamation’s DSEIS fails to meet these requirements, and therefore fails to meet NEPA’s public disclosure and hard look requirements.

Appendix A of the DSEIS provides “Reclamation will follow California state water quality standards by following the permit requirements outlined within the general permits, as described [in Chapter 3].” DSEIS Appendix A at A-1.⁹ Chapter 3 of the DSEIS does not include factual determinations based on site-specific analysis of measures that Reclamation will take to ensure all state water quality standards will be met. Instead, Chapter 3 identifies two permits – the Construction Storm Water Permit and the Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Waters – that Reclamation proposes to use “as a guideline to describe the effects of the proposed discharges.” DSEIS at 3-1. It also asserts that it will take action to develop pollution control measures required by these two permits to control discharges. DSEIS at 3-2 to 3-4.

Referencing permits that it promises to use as guidelines to control pollutants is not equivalent to the “factual determinations” regarding the effects of the discharges required by the 404(b)(1) Guidelines. Likewise, reciting the requirements of those permits is not a site-specific analysis of potential threats to water quality and a discussion of specific actions that will be taken to prevent impacts that could result from those threats. In fact, the DSEIS itself acknowledges that future analyses of the potential impacts of discharges and development of measures to reduce these impacts will be necessary. DSEIS at 3-2.

In essence, the DSEIS provides nothing more than promises to take as-yet-undetermined action to ensure impacts from its uncharacterized and undefined discharges do not cause or contribute to violations of state water quality standards. This is not the equivalent of “factual determinations” regarding the effects of discharges that are required by the 404(b)(1) Guidelines.

⁹ The exemption in section 404(r) applies only to discharges of dredge and fill materials. 33 U.S.C. § 1344(r) (specifying “discharge of dredged or fill material as part of the construction”); *see S.C. Wildlife Fed’n v. Alexander*, 457 F. Supp. 118, 128 (D.S.C. 1978) (requiring section 402 permit for any discharges beyond those caused by dredge and fill in construction). Thus, even if Congress authorizes an exemption pursuant to Section 404(r), Reclamation remains required to meet all state and federal laws beyond this limited exception, including but not limited to permits required by section 402 of the Clean Water Act and the California Water Code for project elements that are not the discharge of dredge and fill materials. As such, and contrary to Reclamation’s position in the DSEIS, Reclamation is required to seek Clean Water Act section 402 permits and all applicable State-law based Waste Discharge Requirements from the State of California in order to complete the proposed enlargement of Shasta Dam. The failure of the DSEIS to fully and adequately disclose Reclamation’s obligation to obtain these permits, as well as to explain and analyze the actions it will take to comply with these permits, is a failure to comply with NEPA. 40 C.F.R. § 1502.16(c). We also note that the State of California is precluded by Public Resources Code section 5093.542 from granting these permits to Reclamation.

As a result, the DSEIS fails to consider the 404(b)(1) Guidelines as required, and therefore fails to meet NEPA's public disclosure and hard look requirements.

E. The DSEIS Fails to Analyze and Ensure Compliance with State Law Requirements Governing the Discharge of Dredge and Fill Material

Regardless of whether Clean Water Act section 404(r) can be invoked to avoid having to obtain a Clean Water Act section 404 permit for the enlargement of Shasta Dam, Clean Water Act section 404(t) requires Reclamation to comply with all State laws that govern the discharge of dredge and fill material to waters of the United States. 33 U.S.C. § 1344(t). As a result, to comply with NEPA, the DSEIS must consider and evaluate whether the project is consistent with these State law-based regulations governing discharges of dredge and fill material to waters of the State. *See* 40 C.F.R. § 1502.16(c);¹⁰ *see id.* at § 1506.2(d).

In 2019, the State of California adopted regulations governing the discharge of dredge and fill material to waters of the State, which includes waters of the United States.¹¹ Though the DSEIS does generally address dredge and fill necessary to complete the proposed project, it does not evaluate or analyze whether the discharges of dredge and fill material that will occur as a result of enlarging Shasta Dam will be consistent with the requirements of these State law-based regulations. Nor does it address or explain how the mitigation or other requirements of these regulations will be met. As a result of these failures, the DSEIS fails to comply with NEPA's public disclosure requirements and fails to ensure Reclamation takes a hard look at the environmental impacts of its proposed action and alternatives.

II. The DSEIS Violates NEPA by Failing to Adequately Analyze and Disclose Potentially Significant Adverse Environmental Impacts from Updated CVP Operations and Relevant New Information Regarding Climate Change

To satisfy NEPA, Reclamation must prepare an EIS that takes a "hard look" at the potential impacts of the proposed project and alternatives. This "hard look" demands a "thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms." *Nat'l Parks & Conservation Ass'n*, 606 F.3d at 1072. In addition, Reclamation must "guarantee relevant information is available to the public." *N. Plains Res. Council*, 668 F.3d at 1072. In its EIS, Reclamation must rely on "high quality information" and ensure scientific integrity of the discussions and analyses in its EIS in order to allow for

¹⁰ This requirement is renumbered in forthcoming regulatory changes as section 1502.16(a)(5) and the text is slightly modified, but this analysis of consistency with state laws and policies for the area is still required under the forthcoming version of the regulations.

¹¹ These regulations were adopted by the State Water Resources Control Board on April 2, 2019 and are referred to as the "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State." A copy of these regulations is available online at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2019/040219_10_procedures_clean_v032219_conformed_final.pdf and is incorporated by reference.

“[a]ccurate scientific analysis, expert agency comments, and public scrutiny.” 40 C.F.R. §§ 1500.1(b), 1502.24.¹²

Despite Reclamation approving significant changes in its operations of the CVP, including operations of Shasta Dam, since the publication of the 2015 FEIS, the DSEIS fails to analyze and disclose the full range of potential adverse environmental effects of enlarging Shasta Dam in light of those significant changes to operations. Reclamation’s failure to analyze the potential adverse environmental effects of enlarging Shasta Dam as a result of these significant changes in operations plainly violates NEPA. In addition, since release of the 2015 FEIS, significant new information is available that is relevant to the assessment of environmental impacts of the proposed project and its alternatives, including scientific reports on the effects of climate change, scientific studies on the effects of water temperatures and flow on salmon, new information on the increased seismic risks from enlarging Shasta Dam, and recent litigation that resulted in a state court order enjoining the Westlands Water District from participating in enlarging Shasta Dam. Yet the DSEIS fails entirely to discuss or address any of this information as required by NEPA. As explained below, Reclamation must recirculate a revised DSEIS that provides the required analyses of impacts of the proposed action and alternatives in the 2015 FEIS in light of this new information and updated CVP operations to ensure all resource topics and considerations relevant to the impacts of enlarging Shasta Dam are disclosed to the public and are subject to the hard look required by NEPA.

A. The DSEIS Violates NEPA by Failing to Adequately Analyze and Disclose Potentially Significant Adverse Environmental Impacts from Updated CVP Operations

Reclamation approved significant changes in its operation of the CVP, including Shasta Dam operations, since Reclamation published the 2015 FEIS, including executing the COA Addendum in 2018 and issuing its Record of Decision for Reinitiation of Consultation on the Coordinated Long-Term Modified Operations of the Central Valley Project and State Water Project in 2020 (“Reinitiation of Consultation”). These changes have altered the timing and amount of flow released from Shasta Dam downstream, in addition to affecting reservoir storage and elevation.

Reclamation has never analyzed or disclosed the potential environmental impacts, including cumulative effects, of an enlarged Shasta Dam in light of these significant changes in operations

¹² NEPA’s regulations also impose a continuing duty on Reclamation to supplement an existing EIS when there are “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” See *Idaho Sporting Cong., Inc. v. Alexander*, 222 F.3d 562, 566 n.2 (9th Cir. 2000) (quoting 40 C.F.R. § 1502.9(c)(1)(ii)). A supplemental EIS “is required ... if changes, new information, or circumstances may result in significant environmental impacts in a manner not previously evaluated and considered,” *N. Idaho Cmty. Action Network v. U.S. Dep’t of Transp.*, 545 F.3d 1147, 1157 (9th Cir. 2008) (internal quotation marks omitted). As noted below, there is significant new information and changed circumstances that compel preparation of a supplemental EIS that addresses this new information and changed circumstances.

of the CVP. Reclamation's Final EIS for the Reinitiation of Consultation did not include modeling of an enlarged Shasta Dam; instead, that EIS admitted that modeling of "Facilities" for Alternative 1 are the "Same as the No Action Alternative," *see* Modeling Appendix at 16,¹³ and the size of the reservoir was unchanged at 4.552 million acre feet maximum capacity in the modelling (identical to the No Action Alternative), *see id.* at 52 and 147. The National Marine Fisheries Service concluded in its 2019 Biological Opinion that it could not assess whether the proposed Shasta Dam raise would have adverse or beneficial effects on winter-run Chinook salmon and other listed species, and did not evaluate the effects of enlarging Shasta Dam in the biological opinion, stating that:

The proposed action proposes that operational criteria with the Shasta Dam Raise will be the same as operational criteria for the current dam and integrated CVP/SWP operations. Reclamation has advised NMFS that therefore the BA analyses suffice for purposes of consultation. There are no operational scenarios in the BA to evaluate to confirm beneficial or adverse effects of a raised Shasta Dam and NMFS therefore cannot further evaluate the Shasta Dam raise in this opinion.

NMFS 2019 Biological Opinion at 203 and n. 8.¹⁴ Indeed, enlarging Shasta Dam was not included as part of the final project in Appendix 1 to the Record of Decision.¹⁵

However, it is abundantly clear that the effects of a Shasta Dam raise in conjunction with the changes in CVP operations could cause significant adverse environmental impacts, including cumulative effects. Indeed, in its Final EIS for Reinitiation of Consultation, Reclamation admitted that, "Of the water supply and water quality projects that have not been completed, those most likely to have cumulative effects related to the flow and water temperature effects of Alternative 1 are the Shasta Lake Water Resources Investigation." Reclamation, Reinitiation of Consultation Final EIS at 5-126. The DSEIS also admits that the proposed project would result in a greater than 5 percent reduction in flows in the Sacramento River in certain months and water year types, *see* DSEIS at 4-3 to 4-5. The DSEIS also admits that a reduction in flows could adversely affect adult winter-run Chinook salmon, *id.* at 4-6. Despite these acknowledgements, the DSEIS fails to disclose and take a hard look at the full range of impacts as required by NEPA, including by: (1) failing to disclose the full range of modeling results; (2) failing to analyze the potential environmental impacts to the full range of species, cultural resources,

¹³ Reclamation's modeling appendix from the 2020 Final EIS for Reinitiation of Consultation is available online at: https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=41744 and is incorporated by reference.

¹⁴ The 2019 NMFS Biological Opinion is available online at: <https://repository.library.noaa.gov/view/noaa/22046> and is incorporated by reference.

¹⁵ The Record of Decision is available online at: https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=42306 and is incorporated by reference.

geology, environmental justice, and other affected resource categories in light of environmental conditions under current operations and the effects of climate change; and, (3) failing to analyze the impacts for the full range of alternatives analyzed in the 2015 FEIS.

1. The DSEIS Fails to Disclose the Full Range of Modeling Results

The operation of Shasta Dam dictates storage and release of water from Shasta Reservoir and thus modeling of these operations and their impacts on storage levels and downstream flows and temperature form the foundation for analyses and evaluation of the upstream and downstream direct, indirect, and cumulative impacts of the project on the environment. Reclamation asserts that it prepared Chapter 4 of the DSEIS to “describe the effects of the alternatives [in the 2015 FEIS] operating under the 2019 [BiOps].” DSEIS at 4-2. Despite this stated purpose, the DSEIS falls far short of providing information regarding the modeling performed or the results of the modeling to satisfy NEPA’s disclosure and hard look requirements.

First, Chapter 4 of the DSEIS only presents a few cherry-picked model results, and it fails to disclose all of the modeling results that are the basis for the text in the DSEIS. For instance, the DSEIS asserts the proposed project would result in a greater than 5 percent reduction in flows in the Sacramento River in certain months and water year types, but inexplicably fails to present any information on the results for all months or all water year types. *See* DSEIS at 4-3 to 4-5. In addition, the entire discussion of the effects on Delta outflow states that, “Reclamation modeled Delta outflow for all months in all water year types. In all months for all water year types, Delta outflow results for the 2019 scenario and 2015 scenario were within 2% of one another.” DSEIS at 4-5. But the DSEIS fails to provide any of the modeling results to corroborate these statements. By providing only cherry-picked modeling results, the DSEIS deprives the public and decisionmakers from being able to independently assess any statements or conclusions made in the DSEIS.

Furthermore, the DSEIS fails to adequately describe the baseline that is being used, and whether it is the baseline used in the 2015 FEIS, or if the baseline accounts for the changes in operations since the 2015 FEIS. For instance, the DSEIS states that maximum releases from Keswick Dam in February would be reduced by 7.49 under the 2019 scenario, whereas the 2015 scenario would decrease flows by 0.01 percent. DSEIS at 4-3. In contrast, the 2015 FEIS concluded that average flows below Shasta Dam would decrease by 3 percent-5 percent in February under the various alternatives. 2015 FEIS at Table 6-4. It is unclear from the DSEIS how these assertions in the DSEIS relate to the findings in the 2015 FEIS and to the findings in the 2020 Final EIS for Reinitiation of Consultation, but they appear inconsistent with Reclamation’s prior findings, and it is unclear from the DSEIS whether this is due in part to a change in the environmental baseline.

As noted in footnote 1, Reclamation subsequently provided NRDC with “the modeling results associated with the Draft SEIS.” These documents purport to include the results of CalSim modeling for two alternatives: (1) the Reinitiation of Consultation Proposed Action (“ROC

Proposed Action (ROC Pav23)”), and (2) “Shasta Dam Raise, CP4A, with ROC Proposed Action.” The modeling of the Reinitiation of Consultation Proposed Action should be the same as the modeling results of Alternative 1 in Reclamation’s 2020 FEIS for the reinitiation of consultation,¹⁶ since they purport to model identical operational parameters and identical facilities. However, contrary to our expectation, the modeling results from the DSEIS are wholly inconsistent with the modeling results in Reclamation’s 2020 Final EIS for the Reinitiation of Consultation, with significant differences in reservoir storage at Shasta, flows downstream of Shasta, and other operational parameters. *See* email from Doug Obegi to Derya Sumer dated Sept. 10, 2020, included in Exhibit A.

It appears that Reclamation’s modeling in the DSEIS uses a different environmental baseline that excludes the effects of climate change, resulting in completely inconsistent modeling results. In a subsequent email, Reclamation (Derya Sumer) explained that, “this is a sensitivity analysis on what was analyzed in 2015, we ran the ROC PA model with **historic hydrology and current sea level conditions** to achieve a consistent comparison of with and without project conditions. **So, it is expected that the model results the SEIS reflect those inputs and differ from those in the ROC FEIS.**” *See* email from Derya Sumer to Doug Obegi dated Sept. 11, 2020, included in Exhibit A (emphasis added). Because of these changes to the environmental baseline, it is impossible to compare the modeling results here with Reclamation’s modeling results of the reinitiation of consultation from earlier this year. Providing inconsistent modeling results prevents the public and decisionmakers from understanding the likely effects of enlarging Shasta Dam, in violation of NEPA.

Equally important, the failure to model the effects of climate change means that the DSEIS fails to accurately assess the likely impacts of enlarging Shasta Dam on the environment, because it excludes Reclamation’s assessment of the likely effects of climate change that are already occurring as compared to historic hydrology and sea levels, let alone the longer term effects of climate change for a dam expected to be operated for decades.¹⁷ Earlier this year in the 2020 Final EIS for the Reinitiation of Consultation, Reclamation included the effects of climate change to model the effects of **current** operations of the CVP and SWP, including Shasta Dam operations. Using historic hydrological data and sea levels inaccurately assesses environmental impacts, given the magnitude of changes that have already occurred as compared to the 82-year CalSim period of record (1922-2003), as Reclamation recognized in including the effects of climate change in the modeling for the reinitiation of consultation. The failure to accurately model and assess the effects of enlarging Shasta Dam in light of climate change and significant changes to Reclamation’s operations of the CVP violates NEPA.

¹⁶ Reclamation’s modeling appendix from the 2020 Final EIS for Reinitiation of Consultation is available online at: https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=41744 and is incorporated by reference.

¹⁷ Additional flaws in Reclamation’s evaluation and treatment of information related to climate change is discussed below.

2. *The DSEIS Fails to Disclose and Take a Hard Look at Impacts to Species and Other Biological Resources, Cultural Resources, or Environmental Justice*

Not only does the DSEIS fail to present the full range of modeling results, it fails to present the results of analyzing the full range of potential environmental impacts that would result from enlarging Shasta Dam in light of changed circumstances and new information since the 2015 FEIS. The 2015 FEIS found that enlarging and operating Shasta Dam under the 2008/2009 Biological Opinions would cause significant and unavoidable impacts to several resources – including botanical resources and wetlands, wildlife resources that depend on aquatic or riparian habitats, and cultural resources – as well environmental justice concerns. And while Chapter 4 of the DSEIS includes a cherry-picked and limited discussion of impacts of enlarging and operating Shasta Dam under the 2019 Biological Opinions on some species and resources, it fails to take a hard look at those resources it does discuss and fails entirely to discuss impacts to the full range of resources that could be impacted.

First, Chapter 4 of the DSEIS only includes a brief discussion of potential impacts to three species: winter-run Chinook salmon, Central Valley Steelhead, and Western Yellow-billed Cuckoo. DSEIS at 4-6. This discussion is premised on an entirely incomplete presentation of modeling results and impacts to storage, flow, and temperature that provide the basis for assessing impacts the new CVP operations would have on these species, and therefore deprives the public and decisionmakers of the hard look at the impacts required.

Second, the DSEIS completely ignores potential impacts to all other species that were previously considered, including fall-run Chinook salmon, spring-run Chinook salmon, green sturgeon, Delta Smelt, and other fish, birds, and wildlife, either a result of higher reservoir elevations upstream of the dam or as a result of changes in flows downstream of the dam.¹⁸ Analyses of impacts to a full range of species, not just a select few, was considered in the 2015 FEIS and there is no justification or explanation for failing to include analyses of impacts to a full range of species in the DSEIS. The resource topics and impacts presented in the 2015 FEIS that require supplementation as a result of the operational changes include the following:

- Analysis of botanical resources and wetlands: These resources that occur upstream of Shasta Dam are directly, indirectly, and cumulatively impacted by the water storage levels. These resources that occur downstream of Shasta Dam are directly, indirectly, and cumulatively impacted by the timing and flow of releases from Shasta Dam (as regulated by Keswick Dam). The 2015 FEIS identified significant and unavoidable impacts to many of these resources upstream and downstream of Shasta Dam based on analysis of operations under the old operational rules. *See* 2015 FEIS Table S-3. Both the context and the intensity of the impacts to these resources may change as a

¹⁸ Species not discussed in the DSEIS, but potentially impacted by the project include: fall-run Chinook salmon, spring-run Chinook salmon, green sturgeon, Delta Smelt, gray wolf, northern spotted owl, valley elderberry longhorn beetle, Shasta crayfish, Shasta salamander, pacific fisher, bald eagle, and California red-legged frog,

result of the new operational rules, but nowhere has Reclamation disclosed or taken a hard look at the impacts to these resources under the new operational rules.

- Analysis of wildlife resources that depend on aquatic or riparian habitats: The wildlife resources that occur upstream of Shasta Dam are directly, indirectly, and cumulatively impacted by the water storage levels. Wildlife resources that occur downstream of Shasta Dam are directly and indirectly affected by the timing and flow of releases from Shasta Dam (as regulated by Keswick Dam). The 2015 FEIS identified significant and unavoidable impacts to many wildlife resources based on analysis of operations under the old operational rules. *See* 2015 FEIS Table S-3. It also identified significant and less than significant impacts to other species and habitats. *Id.* Both the context and the intensity of the impacts to these wildlife resources may change as a result of the new operational rules. However, other than the insufficient evaluation of impacts to winter-run chinook salmon, Central Valley Steelhead, and Western Yellow-Billed Cuckoo discussed above, nowhere has Reclamation disclosed or taken a hard look at the impacts to these wildlife resources under the new operational rules.

In addition to failing to analyze impacts to these resources based on modeling of the new CVP Operations, the DSEIS completely ignores significant new scientific information regarding impacts to species. For example, in November 2015 the Fish and Wildlife Service issued a Fish and Wildlife Coordination Act Report (“CAR”) that identified significant adverse impacts to rare and special status species in the vicinity of Shasta Lake, riparian habitat along the Sacramento River, and aquatic habitat in the Delta that could result from the Shasta Dam enlargement.¹⁹ The FWS found “[r]aising Shasta Lake would inundate a portion of the limited habitat of the following six rare, but not federally-listed, species each of which is endemic to the vicinity of Shasta Lake: Shasta snow-wreath (*Neviusia cliftonii*), Shasta salamander (*Hydromantes shastae*), Shasta sideband snail (*Monadenia trogiocjytes trogiocjytes*), Wintu sideband snail (*Monadenia trogiocjytes wintu*), Shasta chaparral snail (*Triobopsis ropert*), and Shasta hesperian snail (*Vespericoia shasta*).” CAR at xi. The DSEIS does not address or disclose any of this information or the opinion of this expert agency despite the clear relevance of this information to the potential adverse impacts of the project. Reclamation must explain in the SEIS how it has considered the information from the CAR in its analysis and explain why it does not agree with the agency’s expert opinion. *See Alliance to Save the Mattaponi v. U.S. Army Corps of Eng’rs*, 606 F.Supp.2d 121, 132 (D.D.C.2009) (finding “The Corps ... must demonstrate that it has considered significant comments and criticisms by explaining why it disagrees with them; it may not dismiss them without adequate explanation.”)

Moreover, the unreasonably limited analyses in the DSEIS fails to consider scientific information related to fish species that occupy effected habitat downstream of Shasta Dam that

¹⁹ The CAR is included in Exhibit E. It is also available online at: https://www.friendsoftheriver.org/wp-content/uploads/2019/07/USFWS_SLWRI-FWCAR_2015-ocr-compressed.pdf and is incorporated by reference.

post-dates the 2015 FEIS. Such more recent scientific information strongly demonstrates that reductions in flows in the Sacramento River downstream of an enlarged Shasta Dam would significantly harm winter-run Chinook salmon, spring-run Chinook salmon, and fall-run Chinook salmon by reducing the survival of juvenile salmon migrating downstream in the winter and spring months.²⁰ The DSEIS wholly ignores the potential adverse impacts to juvenile salmon from reduced flows in the Sacramento River. The DSEIS likewise wholly ignores the adverse impacts to Longfin Smelt and Delta Smelt from reduced Delta outflow in the winter and spring months. For instance, in its final biological opinion, the U.S. Fish and Wildlife Service identified potential adverse effects from raising the height of Shasta Dam including reduced Delta inflow in the winter and spring, reduced habitat downstream from the dam (floodplain, channel margin, and riparian habitat). FWS 2019 Biological Opinion at 405.²¹ Scientific studies continue to demonstrate that reductions in winter-spring Delta outflow significantly reduce the survival and abundance of Longfin Smelt. *See, e.g.,* Nobriga and Rosenfield 2016. *Population Dynamics of an Estuarine Forage Fish: Disaggregating Forces Driving Long-Term Decline of Longfin Smelt in California's San Francisco Estuary*, Transactions of the American Fisheries Society, 145:1,44-58, DOI: 10.1080/00028487.2015.1100136. Reclamation must update the analysis of environmental impacts to fish and wildlife to account for this more recent scientific data and studies, and the failure to do so violates NEPA.

Third, the DSEIS fails to analyze whether increased reservoir elevation as a result of changes in operations, in combination with an enlarged Shasta Dam, would result in more frequent inundation of Native American sacred sites or increase the duration of inundation and/or the impacts of such inundation. As a result, the DSEIS fails to adequately analyze the likely impacts to cultural resources and environmental justice as follows:

- Analysis of cultural resources: The 2015 FEIS identifies significant and unavoidable impacts to “Traditional Cultural Properties” as a result of inundation by water stored behind an enlarged Shasta Dam. *See* 2015 FEIS Table S-3. Under the old operational rules, inundation would be expected to occur at certain times of year and for certain

²⁰ *See, e.g.,* Stuart Munch et al 2020. *Science for integrative management of a diadromous fish stock: interdependencies of fisheries, flow and habitat restoration*, Can. J. Fish. Aquat. Sci. 77: 1487–1504 (2020) dx.doi.org/10.1139/cjfas-2020-0075; Michel, Cyril 2019. *Decoupling outmigration from marine survival indicates outsized influence of streamflow on cohort success for California's Chinook salmon populations*, Can. J. Fish. Aquat. Sci. 76: 1398–1410 (2019) dx.doi.org/10.1139/cjfas-2018-0140; Friedman, W. R. et al. 2019. *Modeling composite effects of marine and freshwater processes on migratory species*. Ecosphere 10(7):e02743. 10.1002/ecs2.2743; Mark Henderson et al, 2018. *Estimating spatial-temporal differences in Chinook salmon outmigration survival with habitat and predation related covariates*. Can. J. Fish. Aquat. Sci. 76(9): 1549-1561, <https://doi.org/10.1139/cjfas-2018-0212>; Notch, Jeremy et al 2020. *Outmigration survival of wild Chinook salmon smolts through the Sacramento River during historic drought and high water conditions*. Environ Biol Fish, <https://doi.org/10.1007/s10641-020-00952-1>. A copy of these peer reviewed studies is included in Exhibit E.

²¹ The FWS 2019 Biological Opinion is available online at: https://www.fws.gov/sfbaydelta/cvp-swp/documents/10182019_ROC_BO_final.pdf and is incorporated by reference.

lengths of time. Under the new rules, the times of year and length of time of inundation may change, and the context and intensity of the impacts to these resources will likewise change. However, nowhere has Reclamation disclosed or taken a hard look at the impacts to these resources under the new operational rules.

- Analysis of environmental justice: The 2015 FEIS stated the enlargement of Shasta Dam could have significant and unavoidable “cumulative impacts from disproportionate placement of environmental impacts on Native American populations, leading to disturbance or loss of resources associated with locations considered by the Winnemem Wintu and Pit River Madesi Band members to have religious and cultural significance in the vicinity of Shasta Lake.” See 2015 FEIS Table S-3. The context and intensity of these disproportionately inflicted cumulative impacts are influenced by the time of year and length of time that water is stored behind Shasta Dam and inundates resources with religious and cultural significance to these tribes. Changes to the impacts to Native American populations resulting from the new rules has not been analyzed, disclosed, or scrutinized as required by NEPA.

Not only does the DSEIS fail to disclose and take the required hard look at the impacts to cultural resources and environmental justice, the limited analysis it does provide is inconsistent with previous discussions in the 2015 FEIS. For example, the DSEIS falsely claims that, “Sacred sites important to Native Americans have not been specifically identified.” DSEIS at 5-29. Yet in the 2015 FEIS, Reclamation admitted that,

The Winnemem Wintu have identified important localities within the study area, many of which are locations where ceremonies are regularly conducted. Along the McCloud River, these include Children’s Rock, Coyote Rock, Dekkas Rock, doctoring pools near Nawtawaket Creek, Eagle Rock and Samwel Cave, Hirz Bay, *Kaibai* village, North Gray Rocks, Puberty Rock, Saddle Rock, and *Watawacket* village and spiritual area.

2015 FEIS at 24-4. The 2015 FEIS concluded that more frequent inundation of Puberty Rock in the McCloud River caused by raising Shasta Dam would result in a disproportionately high and adverse impact. *Id.* at S-129, 24-17, 24-20, 24-23, 24-25 to 24-26, 24-29, 24-32. The DSEIS purports to include updated modeling of lake elevations, but it fails to consider the effects of enlarging Shasta Dam in light of updated operations on the frequency or duration of the inundation of Puberty Rock or other sacred sites.

Fourth, the DSEIS fails to update the analysis of geologic impacts from enlarging Shasta Dam (GEO-1) in light of recent information from Reclamation regarding increased seismic risks of enlarging Shasta Dam that was not discussed in the 2015 FEIS. In response to Earthjustice’s FOIA request, Reclamation has disclosed records that indicate a significantly increased seismic

risk from enlarging Shasta Dam.²² Although there are substantial redactions in these documents, a number of significant seismic concerns were identified that have not been publicly disclosed, including:

- Estimated seismic loads are significantly higher (200-300 percent higher) than the seismic loads used by Reclamation in its prior risk assessment in 2014. *See* email from Robert Pike (USBR) to Thomas Luebke et al, re: Background Information for Shasta Call, Feb. 11, 2019; *see also* Reclamation, Shasta Dam and Reservoir Enlargement Project (SDREP) – Dam Raise Final Design Status Report, August 2019. As a result, the analysis of GEO-1 in the 2015 FEIS likely underestimates impacts and is not consistent with Reclamation’s current understanding of seismic risks.
- Raising the dam is likely to increase the loss of life expected as a result of a dam failure (“Life loss under existing conditions is less than under raised conditions”). *See* email from Sheena Barnes (USBR) to Anastasia Johnson et al, re: Shasta RCEM Draft Report, Feb. 8, 2019 (Attaching draft Tech. Memo No. SV-86-68130-2018-1), at 121
- There are significant concerns regarding cavitation damage and failure from an enlarged spillway associated with the dam enlargement. *See* Bureau of Reclamation, Alternatives for Preventing Cavitation Damage on the Shasta Dam Spillway, Hydraulic Laboratory Report HL-2019-06, December 2019.

While it appears from these documents that Reclamation ceased design work on enlarging Shasta Dam without resolving these significant seismic concerns, there is no question that Reclamation has not analyzed or disclosed these risks pursuant to NEPA or accounted for them in the 2015 Final Feasibility Report. Reclamation must update the analysis of geologic and seismic impacts (GEO-1) to account for these seismic risks.

Finally, the DSEIS fails to update the analysis of cumulative impacts given these significant changes to Shasta Dam operations and changes to other water projects being considered that would affect flows in the Sacramento River and would affect Delta outflow, including Sites Reservoir.

For each of the resource categories described in this section, the environmental impacts of enlarging Shasta Dam and operating it under the new rules has not been disclosed to the public as required by NEPA. Likewise, Reclamation has not taken a hard look at the impacts to these resources considering the new operational rules, despite the fact that the context and intensity of each of these impacts is different under the new rules. As a result, Reclamation must revise the DSEIS to supplement the 2015 FEIS as required by NEPA.

²² A copy of these documents that are cited in this paragraph are included in Exhibit F.

3. *The DSEIS Fails to Disclose and Take a Hard Look at the Full Range of Alternatives Under the New CVP Operations*

Chapter 4 of the DSEIS also fails to consider the full range of alternatives in the 2015 FEIS, and instead it only considers potential impacts from an undefined 18.5-foot dam raise and an unclear no action alternative. The 2015 FEIS evaluated several different alternatives that included an 18.5 foot dam raise, but Chapter 4 of the DSEIS fails to identify which of these alternatives it analyzes (even though those alternatives included different operations), and it excludes analyses of potential impacts from the other alternatives presented in the Final EIS.²³ While the range of alternatives considered in the 2015 FEIS was itself inadequate, the failure of the DSEIS to provide a full analysis of the impacts of new operations for each of the alternatives considered in the 2015 FEIS is a violation of NEPA.

Taken together, Chapter 4 of the DSEIS fails to demonstrate that Reclamation took a “hard look” at the potential adverse impacts of enlarging Shasta Dam in light of the significant changes in CVP operations since the 2015 FEIS and in light of the more recent scientific information and data on the environmental impacts of reductions in instream flow downstream of Shasta Dam. The DSEIS must be completely revised to provide the public with the modeling and data that is relied upon and to analyze potential adverse impacts from all of the alternatives to all of the impact categories, and Reclamation must recirculate the DSEIS for public comment after so doing.

B. The DSEIS Violates NEPA by Failing to Address and Adequately Analyze and Disclose New Scientific Information Regarding the Impacts of the Project in Light of Climate Change

In addition to changes in CVP Operations, there is substantial new scientific data and information on climate change that is relevant to the environmental impacts of the project, and must be addressed in the DSEIS to satisfy NEPA.²⁴ The findings from numerous scientific reports, including those discussed below, uniformly indicate that over the coming decades California’s climate will be more volatile, with longer and more frequent droughts, less snowpack, and shifting flow regimes with higher flows in the wet season and lower flows in the dry season. As explained below, changes in precipitation amounts and timing will have profound

²³ In contrast, Chapter 5 of the DSEIS purports to analyze impacts from all of the alternatives considered in the 2015 Final EIS.

²⁴ See Climate Change Risk Faced by the California Central Valley Water Resource System, Schwarz, et al (2018) (included in Exhibit G and available at https://www.energy.ca.gov/sites/default/files/2019-12/Water_CCCA4-EXT-2018-001_ada.pdf); Dettinger et al, *Climate Change and the Delta* (October 2016) at 12-16 (included in Exhibit G and available online at <https://escholarship.org/uc/item/2r71j15r>.); Grantham et al, *Sensitivity of streamflow to climate change in California* (July 11, 2018) (included in Exhibit G and available online at <https://doi.org/10.1007/s10584-018-2244-9>).

effects on the amount and timing of water stored in Shasta Reservoir that will in turn directly, indirectly, and cumulatively impact the natural resources and environment impacted by Shasta Dam and Reservoir.

As explained in the Statewide Summary Report for the State of California's Fourth Climate Change Assessment,²⁵ which was published in 2018,

a decline in performance of storage and conveyance systems is expected, including a decline in reservoir carryover storage (amount of water available in the reservoirs before the start of the wet season in October), reduced Delta water exports, and diminished drought resilience and operational control to meet future downstream river flow temperature requirements. [...] On average in ten climate models under 3 RCP 4.5 and RCP 8.5 scenarios, carryover storage in the largest reservoirs (*i.e.*, Shasta and Oroville) is projected to decline markedly, by roughly one-third over the course of this century. This stored water will not be available to use during dry years.²⁶

Dettinger, et al (2018) explained that the bulk of the scientific data and analysis indicates that the availability of water in conservation facilities will continue to decline, and that the amount of water retained in these facilities will become increasingly inconsistent and more volatile.²⁷

Grantham et al (2018) summarized the likely impacts of climate change on the availability of water in California's reservoirs as follows:

Shifts in streamflow regimes towards higher flow magnitudes in the wet season and lower flow magnitudes in the dry season present a major challenge to California's water storage, flood control, and conveyance systems. Because most of California's large reservoirs are also managed for flood control, it is unlikely that managers can take advantage of increased winter flows for storage. Coupled with flow declines in the spring and early summer, predicted shifts in hydrology are likely to reduce the state's managed water supplies.²⁸

None of this information, or any discussion of the context or intensity of the impacts that these changes in storage in Shasta Reservoir will have on the environment in, around, and downstream

²⁵ All technical reports published in conjunction with California's Fourth Climate Change Assessment are available online here:

<https://www.climateassessment.ca.gov/techreports/water.html>.

²⁶ Statewide Summary Report for the State of California's Fourth Climate Change Assessment at 57, available online at: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf and incorporated by reference.

²⁷ Dettinger et al, *Climate Change and the Delta* (October 2016) at 12-16.

²⁸ Grantham et al, *Sensitivity of streamflow to climate change in California* (July 11, 2018).

of Shasta Reservoir are disclosed or addressed in the 2015 FEIS or the DSEIS.²⁹ Until Reclamation supplements the 2015 FEIS and evaluates all the alternatives in light of this information, it will not have taken the required hard look at the environmental impacts of the proposed enlargement of Shasta Dam and its alternatives.

III. The DSEIS Fails to Accurately Assess Impacts to the McCloud River and Consistency With State Law

Chapter 5 of the DSEIS plainly violates NEPA because it falsely asserts that Reclamation need not consider compliance with state laws under NEPA, wholly misstates the requirements of state law (section 5093.542 of the California Public Resources Code), and fails to accurately assess impacts to the McCloud River, its free-flowing condition, its wild trout fishery, and consistency with state laws and policies regarding the McCloud River.

First, the DSEIS incorrectly asserts that “Reclamation has no obligation to analyze state law requirements under the California Wild and Scenic Rivers Act, and this section is therefore being revised to reflect and re-focus the analysis on the federal requirements.” DSEIS at 5-3. However, NEPA’s implementing regulations specifically require that the agency evaluate “[p]ossible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.” 40 C.F.R. § 1502.16(c);³⁰ *see id.* at § 1506.2(d) (“statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.”). Section 5093.542 of the California Public Resources Code clearly falls within the requirements of these

²⁹ The appropriate method for addressing this information would be to model Shasta Dam operations taking into account reasonably foreseeable climate conditions based on best available science regarding changes to hydrology and temperatures as a result of climate change. Reclamation is familiar with this concept, and did so (albeit insufficiently) in its Environmental Impact Statement for the Reinitiation of Consultation on the Long-Term Operations of the Central Valley Project. *See supra* note 13 at 1-2 (“The No Action Alternative includes projected climate change and sea level rise assumptions corresponding to the Year 2030. Change in climate results in the changes in the reservoir and tributary inflows included in CalSim II. The sea level rise changes result in modified flow-salinity relationships in the Delta.”). Neither modeling done for the 2015 FEIS nor modeling done for the DSEIS followed appropriate methods to effectively model the long-term environmental impacts resulting from the enlargement of Shasta Dam in light of predicted climatic conditions. Not only is this a flaw in the 2015 FEIS, it demonstrates the need to supplement the 2015 FEIS to disclose this information to the public and ensure it takes the required hard look at the impacts of the proposed action and alternatives.

³⁰ This requirement is renumbered in forthcoming regulatory changes as section 1502.16(a)(5) and the text is slightly modified, but this analysis of consistency with state laws and policies for the area is still required under the forthcoming version of the regulations.

regulations, and as a result, NEPA requires that Reclamation consider consistency with Section 5093.542 of the California Public Resources Code.³¹

Second, the DSEIS plainly misinterprets the requirements of section 5093.542 of the California Public Resources Code, advancing an interpretation of this section of state law that is inconsistent with the plain language of the statute, with the State of California's consistent interpretation of the statute, with orders and decisions of the California courts, and with Reclamation's prior interpretations of this section of law. Reclamation now appears to assert in the DSEIS that this section of state law does not prohibit the enlargement of Shasta Dam:

However, the legislature separately addressed DWR's participation in the feasibility of enlarging Shasta Dam, authorizing DWR to participate in technical and economic feasibility studies while directing that the agency could not assist or cooperate with planning of any other projects involving construction of a dam, reservoir, diversion, or other water impoundment facility that could have an adverse effect on the free-flowing condition of the McCloud River or on its wild trout fishery (PRC Section 5093.542(c)). In other words, the legislature specifically excepted enlargement of Shasta Dam from the prohibition on assisting or cooperating in projects such as the facilities identified in PRC Section 5093.542(b).

DSEIS at 5-4. Reclamation's novel interpretation of the requirements of California law³² in the DSEIS is grossly inconsistent with the plain language of section 5093.542 of the California

³¹ In addition to this analysis of impacts being required under NEPA's regulations, Reclamation also has a duty to analyze consistency with this section of the Public Resources Code in light of its legal obligation under the WIIN Act to obtain a cost-sharing partner to pay for at least 50 percent of the cost of construction. As discussed further below, the Shasta County Superior Court issued a preliminary injunction preventing Westlands Water District from conducting a CEQA analysis to allow it to act as a cost-sharing partner for the enlargement of Shasta Dam, finding that the California Attorney General had demonstrated a likelihood of success on the merits that Westlands' participation would violate section 5093.542 of the California Public Resources Code.

³² Reclamation's interpretation of state law is not entitled to deference. *See Garcia-Lopez v. Ashcroft*, 334 F.3d 840, 843 (9th Cir. 2003) (granting no deference to federal board's interpretation of state law); *see also Baber v. Schweiker*, 539 F. Supp. 993, 995 (D.D.C. 1982) (finding that deference does not attach to an agency's interpretation of state law); *see also Soliman v. Gonzales*, 419 F.3d 276, 281 (4th Cir. 2005) (holding that federal agency's interpretation of state law was not entitled to deference). Rather, it is the State's interpretation of the law which is entitled to deference. *See Lincoln Am. Corp. v. Victory Life Ins. Co.*, 375 F. Supp. 112, 118 (D. Kan. 1974) ("an interpretation of state law by a state agency delegated the responsibility of enforcing that law, is entitled to great weight.")

Public Resources Code,³³ which unambiguously prohibits participation by any agency of State (which would of course include DWR) in the planning or construction of any dam that could have an adverse effect on the free-flowing condition of the McCloud River, while providing a limited exception that allows DWR to participate in studies involving the technical and economic feasibility of Shasta Dam. Reclamation's interpretation improperly inserts the word "other" into the language of the statute to suggest that the statute prohibits DWR from cooperating or assisting "in the planning or construction of any other dam." But section 5093.5042 does not prohibit state agencies from cooperating or assisting the planning or construction of any "other" dam; rather, this section explicitly prohibits state agencies from cooperating or assisting in the planning or construction of any dam that could adversely affect the free flowing nature of the McCloud River.

In addition to being inconsistent with the plain language of the statute, Reclamation's new interpretation is wholly inconsistent with prior interpretations of this provision of state law by Reclamation. For instance, in the Final EIS Reclamation concluded that all of the 18.5-foot dam alternatives "would conflict with the State PRC," and thus constituted a significant and unavoidable impact under NEPA. 2015 FEIS at 25-40. Similarly, in the Final Feasibility Study, Reclamation determined that,

From discussions with the State, it is our understanding there has been a determination that the PRC protecting the McCloud River prohibits State participation in the planning or construction of enlarging Shasta Dam other than participating in technical and economic feasibility studies.

Final Feasibility Study at ES-44. Reclamation also repeatedly concluded that section 5093.542(c) includes an exception for the "participation by DWR in studies involving the feasibility of enlarging Shasta Dam." *Id.* at 2-34 to 2-35; *see id.* at 1-31 to 1-32 (asserting that the CALFED Record of Decision states that "the California Public Resources Code Section 5093.542 seeks to protect the free-flowing McCloud River but also provides for investigations for potential enlargement of Shasta Dam.").

Reclamation's misinterpretation of the requirements of section 5093.542 also conflicts with the interpretation of state law as expressed in multiple letters by agencies and departments of the State of California, including but not limited to the California Natural Resources Agency in 2018, the California Department of Fish and Game in 2008, the California Department of Fish

³³ "Except for participation by the Department of Water Resources in studies involving the technical and economic feasibility of enlargement of Shasta Dam, no department or agency of the state shall assist or cooperate with, whether by loan, grant, license, or otherwise, any agency of the federal, state, or local government in the planning or construction of any dam, reservoir, diversion, or other water impoundment facility that could have an adverse effect on the free-flowing condition of the McCloud River, or on its wild trout fishery." Cal. Pub. Res. Code § 5093.542.

and Wildlife in 2019, and the State Water Resources Control Board in 2019.³⁴ Reclamation's misinterpretation of the statute is also inconsistent with the orders of the Superior Court for the County of Shasta, which on July 29, 2019 issued a preliminary injunction preventing Westlands Water District from conducting a CEQA analysis to allow it to act as a cost-sharing partner for the enlargement of Shasta Dam, finding that the California Attorney General had demonstrated a likelihood of success on the merits that Westlands' participation would violate section 5093.542 of the California Public Resources Code.^{35,36}

Reclamation's interpretation of section 5093.542 is contrary to the plain language of the statute and is inconsistent with Reclamation's prior interpretations of the statute, the consistent interpretation of the statute by numerous agencies of the State of California, and with the rulings of the Shasta County Superior Court interpreting this section of state law. Reclamation's misinterpretation of the statute is clearly erroneous and misleads the public, and it must revise this section of the DSEIS.

Moreover, while the DSEIS grossly misstates the requirements of state law, the DSEIS does not purport to modify or rescind Reclamation's conclusion in the 2015 FEIS that all of the alternatives that propose to enlarge Shasta Dam would cause a significant environmental impact (WASR-4) as a result of adverse effects on the McCloud River's free-flowing conditions, as

³⁴ Copies of these letters from State agencies and departments are attached hereto as Exhibit H.

³⁵ In addition to recognizing that federal and state agencies had previously concluded that raising the height of Shasta Dam will have adverse effects on the free-flowing nature of the McCloud River and its wild trout fishery, the Superior Court found that:

The plain language of the statute prohibits departments or agencies of the State from financing, facilitating, or even cooperating with any other government agencies in the planning or construction of any water impoundment facility that could have an adverse effect on the free-flowing condition of the McCloud River, or on its wild trout fishery. The prohibition must be read in the context of the entire statute, whose stated policy objectives are to preserve the extraordinary scenic, recreational, fishery, or wildlife values of protected rivers in their free-flowing state; and, with respect to the McCloud River, to protect its wild trout waters by managing the river resources in its existing natural condition. See Pub. Resources Code §§ 5093.50, 5093.542.

People v. Westlands Water District, Case No. 192487, tentative ruling dated July 29, 2019, at 10. A copy of this ruling and related court documents is attached as Exhibit I.

³⁶ The lawsuit by the State of California and the orders of the Shasta County Superior Court represent significant new information that Reclamation must address in supplementing the 2015 FEIS. Reclamation has failed to satisfy its duty under NEPA, as the DSEIS entirely fails to address or discuss the State's lawsuit, this court ruling, and/or how Reclamation would reconcile its proposed action with the requirements of state law.

identified in California's Public Resources Code, Section 5093.542.³⁷ Reclamation has not provided the public with any notice or opportunity to comment on language purporting to modify finding WASR-4 in the 2015 FEIS, and it would violate NEPA if Reclamation acted to withdraw these findings of a significant environmental impact without first notifying the public and providing the public with an opportunity to comment on such changes.

In contrast to its misinterpretation of section 5093.542, in the DSEIS Reclamation reaffirms that all of the project alternatives would adversely affect the free flowing condition of the McCloud River and would result in significant adverse environmental impacts to the free flowing condition of the McCloud River and its eligibility as a Wild and Scenic River under federal law. DSEIS at 5-27, 5-31 to 5-33, 5-35 to 5-37. And as discussed in the attachments, numerous state agencies have repeatedly concluded that enlarging Shasta Dam would adversely affect the free-flowing condition of the McCloud River and adversely affect its wild trout fishery, which would violate section 5093.542 of the California Public Resources Code. Thus, the DSEIS does not change the findings regarding WASR-3 and WASR-4 in the 2015 FEIS, and any attempt to suggest these findings were overridden or withdrawn are inconsistent with the requirements of state law, the findings of state agencies, and Reclamation's own findings in this DSEIS.

IV. CONCLUSION

The DSEIS fails to fulfill Reclamation's obligations under NEPA and section 404(r) of the Clean Water Act. Reclamation must revise the DSEIS to provide the public with: (1) an accurate, site-specific analysis of impacts to Waters of the United States that complies with section 404(r) of the Clean Water Act and the 404(b)(1) Guidelines; (2) an updated analysis of the full range of potential environmental impacts from all of the alternatives for enlarging Shasta Dam that accounts for changed circumstances and new information since the 2015 FEIS, including significant changes in water project operations and new scientific information; and (3) an accurate assessment of the impacts to and consistency with state laws and policies protecting the McCloud River.

Thank you for consideration of our views.

Sincerely,

³⁷ The same is true with respect to WASR-3 in the 2015 Final EIS. State agencies have previously concluded that enlarging Shasta Dam would harm the wild trout fishery, in violation of section 5093.542 of the Public Resources Code. *See, e.g.*, Letter from the California Department of Fish and Wildlife to Westlands Water District dated January 14, 2019, included as part of Exhibit H.



Drevet Hunt
Natural Resources Defense Council



Rachel Zwillinger
Defenders of Wildlife



John McManus
Golden State Salmon Association



Brandon Dawson
Sierra Club California



Chris Shutes
California Sportfishing Protection Alliance



Gary Bobker
The Bay Institute



Jon Rosenfield, Ph.D.
San Francisco Baykeeper



Ron Stork
Friends of the River

Enclosures: Exhibits A through I