



## **Notice of Petition for Reconsideration of the State Water Resources Control Board’s May 6, 2022 Approval of the Shasta Temperature Management Plan**

Pursuant to sections 1122 and 1126 of the California Water Code, section 769 of title 23 of the California Code of Regulations, and related authorities, the Natural Resources Defense Council, Golden State Salmon Association, Save California Salmon, the Bay Institute, Pacific Coast Federation of Fishermen’s Associations, Institute for Fisheries Resources, and California Sportfishing Protection Alliance hereby petitions the State Water Resources Control Board (“Board”) to reconsider the Executive Director’s May 6, 2022 approval of the Shasta Temperature Management Plan (“Shasta TMP”).

NRDC et al respectfully requests that the Board withdraw the approval of the Shasta TMP because the approval is arbitrary and capricious, contrary to law, and is not supported by substantial evidence. In particular, approval of the Shasta TMP has caused and will cause unreasonable impacts to the salmon fishery and results in unreasonable use of water under the State Constitution, results in water temperatures in the Sacramento River that violate the Basin Plan, and fails to require Reclamation to take actions within its reasonable control to maintain adequate water temperatures in the Sacramento River to protect the salmon fishery.

Petitioners are harmed by this action because the approval of the Shasta TMP will increase the risk of extinction of winter-run Chinook salmon and cause substantial mortality of spring-run Chinook salmon and fall-run Chinook salmon, causing irreparable environmental harm and loss of fish and wildlife beneficial uses and harming the livelihoods of thousands of people who fish for salmon and the businesses that depend on the salmon fishery. The issues presented in this petition were presented to the Board before the Executive Director approved the Shasta TMP, except for new information that was not available to Petitioners at the time of the Executive Director’s approval of the Shasta TMP, which therefore constitutes relevant evidence that could not have been produced with reasonable diligence.

As required, a copy of this petition has been transmitted to the U.S. Bureau of Reclamation and California Department of Water Resources.

**1. Name and Address of Petitioners (23 Cal. Code Regs., § 769(a)(1)):**

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Please direct communications to Petitioners regarding this petition to:

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**2. The specific board action of which petitioner requests reconsideration (23 Cal. Code Regs., § 769(a)(2)):**

The Executive Director's May 6, 2022 Approval of the Shasta Temperature Management Plan submitted by the U.S. Bureau of Reclamation pursuant to Water Rights Order 90-5<sup>1</sup> ("Approval Letter").

**3. The date on which the order or decision was made by the board (23 Cal. Code Regs., § 769(a)(3)):**

The Executive Director approved the Shasta TMP on May 6, 2022.

**4. The reason the action was inappropriate or improper (23 Cal. Code Regs., § 769(a)(4)):**

As discussed in the attached petition, approval of the Shasta TMP is contrary to law and is not supported by substantial evidence. In particular, approval of the Shasta TMP has and will cause unreasonable impacts to the salmon fishery, results in water temperatures in the Sacramento River that flagrantly violate the Basin Plan, results in water supply allocations to federal wildlife refuges that violates federal law, and fails to require Reclamation to take actions within its reasonable control to maintain adequate water temperatures in the Sacramento River to protect the salmon fishery as required by Water Rights Order 90-5, Article X, § 2 of the State Constitution, and the Public Trust doctrine.

**5. The specific action which petitioner requests (23 Cal. Code Regs., § 769(a)(5)):**

Disapproval of the Shasta TMP and enforcement of the requirements of Water Rights Order 90-5, including requiring Reclamation to take the following actions within its reasonable control to maintain adequate water temperatures in the Sacramento River to protect the salmon fishery:

- 1) Provide updated modeling and analysis by NMFS's Southwest Fishery Science Center comparing the Shasta TMP with operations that limit Keswick releases to 4,000 cfs, considering the effects on water temperatures, temperature-dependent mortality, and reservoir storage for fall-run Chinook salmon, spring-run Chinook salmon, and winter-

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<sup>1</sup> The Approval Letter is available online at:  
[https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/drought/sacramento\\_river/docs/20220506-final-tmp-response.pdf](https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/sacramento_river/docs/20220506-final-tmp-response.pdf). This document and all other specific webpages cited herein are incorporated by reference.

run Chinook salmon, and in light of the updated modeling and analysis consider limiting reservoir releases to 4,000 cfs;

- 2) Strictly limit releases from Shasta and Keswick Dams as specified in the Shasta TMP, prohibiting releases from Shasta or Keswick to exceed the flows specified in the Shasta TMP, and instead require DWR to increase reservoir releases from Oroville as necessary in order to meet increased demands downstream and/or Delta water quality;
- 3) Reduce water supply allocations to other CVP and SWP contractors, including San Joaquin River Exchange Contractors and DWR's Feather River Settlement Contractors, sufficient to provide a 75% allocation (Level 2) to wildlife refuges North of the Delta without increasing reservoir releases from Shasta or Keswick;
- 4) Provide notice to the San Joaquin River Exchange Contractors of Reclamation's intent to renegotiate the terms of the San Joaquin River Exchange Contract, pursuant to Article 13 of the Second Amended Contract for Exchange of Waters;
- 5) Reduce water diversions from the Trinity River in order to comply with Order 90-5; and,
- 6) Model the effect of hydropower bypass operations at Shasta Reservoir in the late summer and fall to evaluate effects on water temperatures and the tradeoff in terms of electricity generation.

**6. A statement that copies of the petition and any accompanying materials have been sent to all interested parties (23 Cal. Code Regs., § 769(a)(6)):**

This petition and accompanying materials have been emailed to the U.S. Bureau of Reclamation and California Department of Water Resources at the following addresses:

Kristin White, [knwhite@usbr.gov](mailto:knwhite@usbr.gov)

Amy Aufdemberge, [Amy.Aufdemberge@sol.doi.gov](mailto:Amy.Aufdemberge@sol.doi.gov)

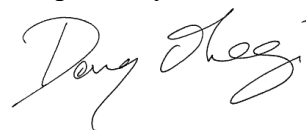
James Mizell, [james.mizell@water.ca.gov](mailto:james.mizell@water.ca.gov)

**Conclusion**

For the reasons set forth above and in the attached materials, Petitioners respectfully request that the Board grant reconsideration of the May 6, 2022 approval of the Shasta TMP and immediately set aside that approval.

Date: May 31, 2022

Respectfully submitted,



Doug Obegi

Natural Resources Defense Council

## MEMORANDUM OF POINTS AND AUTHORITIES

Contrary to the requirements of Order 90-5, approval of the Shasta TMP will result in water temperatures and resulting impacts to the salmon fishery that are neither reasonable nor lawful, will result in water temperatures that adversely affect salmon in the Trinity River, and does not require the implementation of all actions within Reclamation's reasonable control that would improve and maintain water temperatures in the Sacramento River to protect the salmon fishery this year. In addition, approval of the Shasta TMP results in water supply allocations to wildlife refuges North of the Delta that violate federal law.

As a result, the Executive Director's approval of the Shasta TMP is contrary to law and not supported by substantial evidence, and it violates the requirements of Water Rights Order 90-5 and constitutes an unreasonable use of water under Article X, section 2 of the State Constitution because the Shasta TMP as approved: (1) results in water temperatures that will cause unreasonable impacts to the salmon fishery; (2) fails to require Reclamation to take actions within its reasonable control to maintain adequate water temperatures in the Sacramento River to protect the salmon fishery as required by Water Rights Order 90-5, particularly water allocations to Sacramento River Settlement Contractors, San Joaquin River Exchange Contractors, Feather River Settlement Contractors, and State Water Project contractors, and the statements in the Approval Letter regarding the implementation of actions with Reclamation's control are not supported by substantial evidence; (3) results in water temperatures that adversely affect salmon spawning and egg incubation in the Trinity River; and (4) results in only an eighteen percent water supply allocation (Level 2) to wildlife refuges North of the Delta, contrary to the express requirements of section 3406(d)(3) of the 1992 Central Valley Project Improvement Act.

### **I. Approval of the Shasta TMP is Contrary to Law and not Supported by Substantial Evidence Because it Results in Unreasonable Impacts to the Salmon Fishery**

The Shasta TMP would result in unreasonable impacts to winter-run Chinook salmon, spring-run Chinook salmon, and fall-run Chinook salmon that spawn and migrate in the Sacramento River as a result of water temperatures released from Shasta Dam that will cause very substantial temperature dependent mortality of salmon, that violate the Basin Plan, and that are detrimental to the fishery.<sup>2</sup>

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<sup>2</sup> In addition, we are unaware of any permit issued pursuant to the California Endangered Species Act that would authorize the incidental take of winter-run Chinook salmon or spring-run Chinook salmon that will result from the Board's approval of the Shasta TMP. In past water rights decisions, the Board has recognized that CESA requires the Board to act to conserve listed species: "Thus, in exercising authority over water rights in the lower Yuba River, the California Endangered Species Act **requires** the SWRCB to seek to conserve spring-run Chinook salmon." SWRCB Decision 1644 at p. 27 (emphasis added). It appears that the Board's approval of the Shasta TMP is causing unlawful take of listed species in violation of CESA. *See also Strahan v. Coxe*, 127 F.3d 155 (1st Cir 1997).

The Approval Letter admits that “NMFS modeling indicates an estimated winter-run Chinook salmon egg (stage independent) temperature dependent mortality (TDM) range of 52 to 58 percent” under the Shasta TMP. *See* Approval Letter at 3. This means that more than 5 in 10 of the endangered winter-run Chinook salmon eggs are likely to be killed this year from lethal water temperatures alone. In contrast, the National Marine Fisheries Services’ (“NMFS”) 2017 proposed amendment to the Shasta Reasonable and Prudent Alternative identified a maximum of 30% temperature dependent mortality of winter-run Chinook salmon in critically dry years like 2021, and warned that it was not clear that the species could avoid extinction even at that rate of temperature dependent mortality. January 19, 2017 letter from NMFS to Reclamation regarding Proposed Amendment to the Reasonable and Prudent Alternative of the 2009 Opinion, available online at [https://media.fisheries.noaa.gov/dam-migration/nmfs\\_s\\_draft\\_proposed\\_2017\\_rpa\\_amendment\\_-\\_january\\_19\\_2017.pdf](https://media.fisheries.noaa.gov/dam-migration/nmfs_s_draft_proposed_2017_rpa_amendment_-_january_19_2017.pdf).<sup>3</sup> The Shasta TMP approved by the Board will result in far greater temperature dependent mortality than NMFS has previously determined would be necessary to avoid jeopardizing the continued existence of this species.

In addition, the Shasta TMP does not even include a single mention of “fall-run Chinook salmon” or “spring-run Chinook salmon” despite the fact that Water Rights Order 90-5 requires protection of the salmon fishery, which the Board has previously acknowledged includes protections for other salmon runs, including fall-run Chinook salmon. *See, e.g.*, April 3, 2020 letter from the Board to Reclamation regarding Order 90-5 Sacramento River Temperature Planning. Yet the modeling included in the Shasta TMP demonstrates that the plan is likely to cause very substantial temperature dependent mortality of spring-run and fall-run Chinook salmon; NMFS modeling (Attachment 4 to the Shasta TMP) anticipates that daily water temperatures in the Sacramento River at Clear Creek will likely exceed 60 degrees in October and November. These water temperatures are likely to cause devastating impacts to fall-run and spring-run Chinook salmon, causing even greater temperature mortality than what is estimated for winter-run Chinook salmon this year. Yet that mortality is not even considered in the Shasta TMP or the Approval Letter. The Board’s failure to consider an important aspect of Reclamation’s legal obligations under Order 90-5 renders the approval of the Shasta TMP arbitrary and capricious.

The Shasta TMP also results in ongoing violations of the Basin Plan’s water temperature objectives for the Sacramento River, which prohibit water temperatures greater than 56 degrees Fahrenheit whenever it would be detrimental to the salmon fishery.<sup>4</sup> The approved water

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<sup>3</sup> This and other documents that are cited herein are incorporated by reference.

<sup>4</sup> *See* Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region, Revised May 2018, at Table 3-7, available online at: [https://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/sacsjr\\_201805.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf) (“The temperature shall not be elevated above 56°F in the reach from Keswick Dam to Hamilton City nor above 68°F in the reach from Hamilton City to the I Street Bridge during periods when temperature increases will be detrimental to the fishery.”).

temperatures, which are estimated to kill more than 50% of the endangered winter-run Chinook salmon eggs this year, and even higher proportions of spring-run and fall-run Chinook salmon that spawn in the Sacramento River later in the year, plainly are detrimental to the salmon fishery.

The Shasta TMP's expected temperature dependent mortality of eggs is especially unreasonable given the additional mortality risks salmon face throughout the rest of their life stages. For instance, CDFW's juvenile production estimate ("JPE") spreadsheet this year estimated that only 45% of the salmon eggs that survive to the fry life stage will successfully migrate downstream to Red Bluff Diversion Dam as smolts, and estimates that only one third of those smolts will survive the migration downstream from Red Bluff Diversion Dam to the Delta. *See* January 20, 2022 letter from NMFS to Reclamation, available online at <https://media.fisheries.noaa.gov/2022-01/jpe-letter-2021.pdf>.<sup>5</sup> And of course, there is substantial additional mortality as winter-run Chinook salmon migrate through the Delta and San Francisco Bay, before they finally reach the ocean. Given these levels of mortality, the temperature dependent mortality anticipated in the Shasta TMP is not sustainable and fails to protect the salmon fishery.

Moreover, as the Shasta TMP and Approval Letter acknowledge, there are significant concerns that water temperatures and temperature dependent mortality will be even higher than anticipated in the Shasta TMP, given uncertainties regarding this year's operations. Because Reclamation's temperature model is unreliable and biased, particularly during the fall months,<sup>6</sup> the Board should not rely on the water temperatures and estimated temperature-dependent mortality using Reclamation's model, and should instead rely on NMFS's estimates.

In contrast to the excessive and unsustainable mortality that will be caused by the Shasta TMP, modeling by NMFS (attached hereto as Exhibit A) has estimated that CVP operations that limit Keswick Reservoir releases to 4,000 cfs (instead of 4,500 cfs as in the approved Shasta TMP) resulted in lower temperature dependent mortality of winter-run Chinook salmon, colder water temperatures in October and November that reduce mortality of fall-run Chinook salmon, and higher Shasta Reservoir storage at the end of September. *Compare* Exhibit A *with* Exhibit B. The Approval Letter fails to provide a reasoned explanation why these levels of mortality and impacts to the salmon fishery are reasonable, nor does it explain whether and how the Board

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<sup>5</sup> The U.S. Environmental Protection Agency has concluded that river temperatures between 57.2 degrees Fahrenheit and 62.6 degrees Fahrenheit – within the range the Shasta TMP estimates will occur during September through November, when winter-run Chinook Salmon fry are rearing – are associated with “elevated disease risk.” *See* EPA 2003. EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards, available online at: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1004IUI.PDF?Dockey=P1004IUI.PDF>. In addition, increased water temperatures also increase the activity and metabolism of salmon predators.

<sup>6</sup> The Shasta TMP admits that the HEC-5Q model that Reclamation used in the Shasta TMP “does not perform well after mid-September under low storage conditions. Water temperatures may be warmer than these targets and HEC-5Q results.” *See* Shasta TMP at 8.

balanced its obligations under the Public Trust, particularly in light of the lower mortality that would occur if Reclamation took actions within its reasonable control to increase Shasta reservoir storage and reduce reservoir releases this year.

For all of these reasons, the approval of the Shasta TMP will result in unreasonable impacts to the salmon fishery, and the Executive Director's approval of the Shasta TMP is arbitrary and capricious, contrary to law, and not supported by substantial evidence. As a result, the Board should grant Petitioners' motion for reconsideration.

**II. Approval of the Shasta TMP is Contrary to Law and Not Supported by Substantial Evidence Because it Fails to Require Reclamation to Take Actions Within its Reasonable Control to Maintain Adequate Water Temperatures in the Sacramento River to Protect the Salmon Fishery**

Approval of the Shasta TMP is also unlawful because the Shasta TMP does not require the implementation of all reasonable measures within Reclamation's control to maintain protective water temperatures for salmon in the Sacramento River. As we have discussed in numerous letters to the Board, and as the Board has admitted in letters to the Bureau of Reclamation, factors within the reasonable control of Reclamation include reducing water supply allocations to the CVP's water contractors, including settlement and exchange contractors:

**To the extent that Reclamation delivers water under its own water rights, Reclamation's obligation to deliver water to its contractors does not take precedence over its permit obligations.** Order WR 90-5 requires Reclamation to reduce releases to the extent reasonable and necessary to control water temperature. This permit condition is not and cannot be nullified by a contractual obligation. **Reclamation's water supply contractors are not entitled to more water under their contracts than Reclamation is authorized to deliver consistent with the terms and conditions of its water right permits and licenses.**

State Water Resources Control Board, June 1, 2020 letter to Reclamation (emphasis added).

And as modeling and analyses have demonstrated in recent years, reducing water supply allocations to the contractors of the CVP and SWP can reduce water temperatures and resulting temperature dependent mortality of salmon. The same is true this year, where further reductions in water supply allocations could reduce temperature mortality of salmon (including fall-run Chinook salmon) as well as increasing Shasta Reservoir carryover storage in order to comply with Order 90-5 next year.

We appreciate that for the first time ever, the Sacramento River Settlement Contractors are being required to substantially reduce their water diversions this year in order to improve water temperatures as required under Order 90-5. On April 14, 2022, Reclamation sent letters to the



Sacramento River Settlement Contractors, explaining that “The purpose of this letter is to inform you of the persistent conditions that are affecting hydrology and water available for diversion under your contract.” *See* Letter from Reclamation to Anderson-Cottonwood Irrigation District dated April 14, 2022.<sup>7</sup> The letter further explains that,

Water supply conditions this year do not allow for full diversions under the SRS Contracts. For all SRS Contractors, Reclamation estimates water available from Shasta Reservoir releases to be approximately 18% of the Contract Total, unless otherwise notified by Reclamation.

*Id.* Thus, pursuant to their contracts, Reclamation has reduced water deliveries to the Sacramento River Settlement Contractors to the equivalent of an eighteen percent allocation, which is an important precedent confirming that these water supply allocations are within Reclamation’s reasonable control under Order 90-5.<sup>8</sup>

However, Reclamation has failed to demonstrate in the Shasta TMP that further reductions to these allocations would not improve water temperatures for salmon, nor is there any consideration of reducing water supply allocations to other contractors, including DWR’s Feather River Settlement Contractors and San Joaquin River Exchange Contractors.

For instance, Reclamation is making a 75 percent allocation to the San Joaquin River Exchange Contractors this year, even though water released from Shasta contributes to these water deliveries. *See* email from DWR to the SWRCB dated April 16, 2022, regarding April 4, 2022 TUCO - Condition 1.d.iii. (Reclamation estimates that two thirds of the CVP’s water exports from the Delta in April and May will support the allocation for the Exchange Contractors).

In particular, in six of the past 10 years the Bureau of Reclamation has allocated as much or more water to the San Joaquin River Exchange Contractors than the entire flow of the San Joaquin River, despite the fact that their contract provides water from the Delta to “substitute” for their unquantified rights to divert water from the San Joaquin River:<sup>9</sup>

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<sup>7</sup> This letter is available online at:

[https://www.andersoncottonwoodirrigationdistrict.org/uploads/3/4/0/2/34026618/bureau\\_of\\_reclamation\\_4-4-22.pdf](https://www.andersoncottonwoodirrigationdistrict.org/uploads/3/4/0/2/34026618/bureau_of_reclamation_4-4-22.pdf). It is hereby incorporated by reference.

<sup>8</sup> Reclamation also reduced or eliminated contract payment obligations for these contractors. *See id.*

<sup>9</sup> Of course, diverting 100% of the flow and dewatering the San Joaquin River would constitute an unreasonable use of water and violate the public Trust, as well as violating section 5937 of the Fish and Game Code.

Year	USBR Water Supply Allocation <sup>10</sup>	Full Natural Flow of the San Joaquin River <sup>11</sup>	Water Allocation as a Percentage of Full River Flows
2021	656,717 acre feet (75%)	521,853 acre feet	<b>126%</b>
2020	875,623 acre feet (100%)	886,706 acre feet	<b>99%</b>
2019	875,623 acre feet (100%)	2,734,772 acre feet	32%
2018	875,623 acre feet (100%)	1,348,979 acre feet	65%
2017	875,623 acre feet (100%)	4,395,400 acre feet	20%
2016	875,623 acre feet (100%)	1,301,252 acre feet	67%
2015	656,717 acre feet (75%)	327,437 acre feet	<b>201%</b>
2014	569,155 acre feet (65%)	509,635 acre feet	<b>112%</b>
2013	875,623 acre feet (75%)	856,626 acre feet	<b>102%</b>
2012	875,623 acre feet (75%)	831,656 acre feet	<b>105%</b>

Articles 7 and 8 of the Exchange Contract generally provide that Reclamation may reduce the water supply allocation by 25% in years with low inflow to Shasta Dam. Yet this shortage provision continues to result in deeply inequitable and unreasonable water supply for the Exchange Contractors, at the expense of the environment and other water contractors, except in very wet years. The terms of the Exchange Contract are unreasonable under Article X, section 2 of the California Constitution.

Similarly, under the Coordinated Operating Agreement, water released from Shasta contributes to water supply allocations for DWR’s State Water Project contractors and its Feather River Settlement Contractors. *See* 2019 Addendum to the Coordinated Operations Agreement at 2 (amending Article 6(c) of COA to specify that in critically dry years, Reclamation is responsible for 60% of storage withdrawals to meet Sacramento Valley in-basin uses, and DWR is responsible for 40%). Yet DWR has not reduced its discretionary water supply allocation to SWP contractors to zero (while still making deliveries necessary for human health and safety), and DWR has not required any additional reductions in water supply allocations to Feather River Settlement Contractors beyond what is provided for in their contract (which results in an approximately 25 percent reduction in their water supply, according to Western Canal Water District). *See* Letter from Western Canal Water District to Growers and Landowners dated April 19, 2022, available online at:

<https://static1.squarespace.com/static/56f3336d9f7266fac154ef8b/t/62609511ff07956ff0196b81/1650496785740/Drought.Allocation.April.20.22.pdf>.<sup>12</sup>

<sup>10</sup> *See* Bureau of Reclamation, Summary of Water Supply Allocations, online at: [https://www.usbr.gov/mp/cvo/vungvari/water\\_allocations\\_historical.pdf](https://www.usbr.gov/mp/cvo/vungvari/water_allocations_historical.pdf)

<sup>11</sup> *See, e.g.*, California Department of Water Resources, California Data Exchange Center, Basin Summary of Full Natural Flows – Acre Feet (AF) – Water Year 2021, online at: <https://cdec.water.ca.gov/reportapp/javareports?name=FNFSUM.2021>.

<sup>12</sup> In addition, under the terms of DWR’s contract with the Feather River Settlement Contractors, DWR must make a 100% allocation to these contractors in each of the next 5 years, regardless of hydrologic conditions on the Feather River.

The Approval Letter, like the Shasta TMP, fails to provide any evidence to support a finding that Reclamation has taken all actions within its reasonable control to ensure water temperatures that protect the salmon fishery, including any finding that reducing these water supply allocations would not result in more protective water temperatures for salmon and compliance with Order 90-5, particularly given the earlier modeling by NMFS that demonstrates that further reductions in water supply allocations to these contractors would reduce temperature-dependent mortality of winter-run, spring-run, and fall-run Chinook salmon. Because Reclamation has not taken all reasonable measures under their control to meet the water temperatures required by Order 90-5, and because the Approval Letter fails to provide any analysis of whether Reclamation has taken all steps within its reasonable control, approval of the Shasta TMP violates Order 90-5 and is unreasonable. As a result, the Board should grant Petitioners' petition for reconsideration.

**III. Approval of the Shasta TMP Violates Order 90-5 and is Contrary to Law Because it Results in Water Temperatures that Adversely Affect Salmon Spawning and Egg Incubation in the Trinity River**

In addition, Order 90-5 prohibits Reclamation from operating "its Trinity River diversion for water temperature control on the Sacramento River in such a manner as to adversely affect salmonid spawning and egg incubation in the Trinity River," holding that daily average water temperatures that exceed 56 degrees Fahrenheit at specified locations are deemed to adversely affect salmon.

On April 27, NMFS notified the Board that Reclamation's ongoing use of the Trinity River diversion for temperature control on the Sacramento River is resulting in water temperatures on the Trinity River that adversely affect salmon. *See* Exhibit C. Moreover, NMFS's email notes that water temperatures of 56 degrees Fahrenheit are not adequately protective and colder water temperatures are necessary to provide reasonable protection of salmon in the Trinity River. *Id.* Yet the Shasta TMP would result in even greater temperature exceedances on the Trinity River than those identified in NMFS's April 27, 2022 email, with the Shasta TMP predicting monthly average temperatures at Lewiston would be 56.7 degrees Fahrenheit in September and 58.6 degrees Fahrenheit in October. *See* Shasta TMP at Table 4.

Despite the fact that Reclamation's operations of the Trinity River diversion for temperature control on the Sacramento River adversely affects salmonid spawning and egg incubation in the Trinity River, including exceeding the 56 degree Fahrenheit temperature objective, the Executive Director approved the Shasta TMP. While the Approval Letter includes a vague and generic requirement for Reclamation to coordinate with fisheries agencies and Tribal governments regarding feasible measures to avoid impacts to Trinity River fisheries, it does not include any specific measures to ensure that Reclamation's operations comply with Order 90-5 and meet existing water temperature objectives in the Basin Plan. As a result, approval of the Shasta TMP fails to comply with Order 90-5, and the Board should grant this petition for reconsideration.

**IV. The Shasta TMP Unlawfully Reduces Water Supply Allocations to Wildlife Refuges North of the Delta**

Finally, under the 1992 Central Valley Project Improvement Act, Reclamation is prohibited from reducing the water supply allocations for wildlife refuges by more than 25 percent of their level 2 water supplies. P.L. 102-575, § 3406(d)(4). However, the Shasta TMP admits that it assumes the equivalent of an 18 percent allocation to wildlife refuges North of the Delta. *See* Shasta TMP at 3. The reduction in water supply for wildlife refuges under the TMP is unlawful and will cause unreasonable effects on waterfowl and terrestrial species. The Approval Letter fails to consider or address Reclamation's violation of federal law and unreasonable effects on wildlife as part of the Shasta TMP, and the Board should grant this petition for reconsideration.

**V. Conclusion**

Because the Executive Director's May 6, 2022 approval of the Shasta TMP is arbitrary and capricious, is not supported by substantial evidence, and is contrary to law, the Board should grant this petition for reconsideration and set aside approval of the Shasta TMP.