April 2, 2024

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Ms. Karla Nemeth, Director
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Mr. Charlton Bonham, Director
California Department of Fish and Wildlife
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Mr. Paul Souza, Regional Director
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Ms. Jennifer Quan, Regional Administrator
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Via email: kstock@usbr.gov; karla.nemeth@water.ca.gov; chuck.bonham@wildlife.ca.gov; paul_souza@fws.gov; jennifer.quan@noaa.gov

RE: Exceedances of Endangered Species Act Take Limits for Threatened and Endangered Fishes at State Water Project and Central Valley Project Water Export Facilities in the San Francisco Bay-Delta Estuary

Dear Mr. Stock, Ms. Nemeth, Mr. Bonham, Ms. Quan and Mr. Souza:

On behalf of Defenders of Wildlife, Golden State Salmon Association, San Francisco Baykeeper, The Bay Institute, and the California Sportfishing Protection Alliance, we are writing to urge you to act to address alarming levels of fish mortality at the Central Valley Project (CVP) and State Water Project (SWP) water pumping and intake facilities in the San Francisco Bay-Delta (Bay-Delta). Loss of Central Valley Steelhead and winter-run Chinook Salmon already exceeds maximum annual incidental take limits and is ongoing.[1] Given that these and other species in the Bay-Delta are at grave risk of extinction, we want to emphasize the need for urgent action and improved information sharing as we move forward.

[1] The CVP and SWP are still largely operating under rules of the 2019 Biological Opinions. Those rules ignored legal requirements and the best available science. Federal agencies are in the process of developing new rules, but the Trump-era rules remain largely in place through the Interim Operations Plan.

The U.S. Bureau of Reclamation (BOR) and the California Department of Water Resources (DWR) should act immediately, in coordination with NOAA Fisheries (NMFS), the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (USFWS) to prevent further damage to aquatic species, and especially imperiled fishes, that are harmed by CVP and SWP operations. At a minimum, BOR and DWR should reduce water export pumping to health and safety levels until such time as juvenile salmon and Steelhead complete their 2024 outmigration through the Bay-Delta.

First and foremost, BOR and DWR must immediately minimize take of endangered winter-run Chinook Salmon at CVP and SWP export pumps. Winter-run Chinook Salmon are listed under the California Endangered Species Act (CESA) and federal Endangered Species Act (ESA). Due to their very low abundance, low productivity, constricted geographic ranges, degraded life-history diversity and hatchery influence, winter-run Chinook Salmon are now at high risk of extinction in the near-term.[2]

It appears that BOR and DWR have already exceeded the brood year (BY)[3] 2023 annual take limit for winter-run Chinook Salmon. As of March 25, 2024, loss of winter-run Chinook Salmon is estimated to be 3,030 so far this year.[4] Under the ESA Incidental Take Limit (ITL), the allowable loss of winter-run Chinook Salmon at the CVP and SWP facilities in Water Year (WY)[5] 2024 is 1,776.[6] Loss of winter-run Chinook Salmon at CVP and SWP water export facilities has continued since BOR's latest weekly report. This is of grave concern as the take limit reflects NMFS' opinion regarding levels of mortality that should not be exceeded in order to avoid jeopardy to the continued existence of winter-run Chinook Salmon. **Without swift and decisive coordinated action, continued loss of winter-run Chinook Salmon is likely to continue into April.[7]**

Second, BOR and DWR must immediately minimize take of threatened Central Valley Steelhead at CVP and SWP export pumps. Central Valley Steelhead are another imperiled anadromous fish, the resident form is known as Rainbow Trout. The Central Valley

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[2] *See* Southwest Fisheries Science Center. 2023. Viability assessment for Pacific salmon and steelhead listed under the Endangered Species Act: Southwest. Southwest Fisheries Science Center (U.S.). NOAA Technical Memorandum NMFS SWFSC; 686. DOI : https://doi.org/10.25923/039q-q707 (SWFSC 2023).

[3] Brood Year (BY) means the year in which the adult fish spawn. Brood year is important to determine the expected number of fish to enter the Bay-Delta during a given water year (WY), in this case WY 2024, which is called the juvenile production estimate (JPE). The JPE is calculated annually for natural origin and hatchery winter-run Chinook salmon and is used to determine the authorized level of incidental take for winter-run Chinook salmon, under Section 7 of the Endangered Species Act (ESA), while operating the CVP/SWP Delta pumping facilities in a given water year. *See* C. Marcinkevage (NMFS) 1/12/2024 letter to K. White (BOR).

[4] *See* BOR's "Weekly Fish and Water Operations Outlook 3/26/2024 – 4/1/2024", Table 2a, p. 3.

[5] Water Year (WY) refers to California's Water Year, which begins on October 1st, the beginning of the rainy season, and ends on September 30th of the following year.

[6] BOR's "Weekly Fish and Water Operations Outlook 3/26/2024 – 4/1/2024" identifies winter-run Chinook Salmon take limits of 2748 (1.17% of JPE) and 4698 (2% of JPE). These numbers are both internally inconsistent and incorrect. The maximum anticipated annual incidental take level for winter-run Chinook Salmon under the 2019 Biological Opinion is 1.3% of the three-year rolling average of the JPE or 2.0% of the JPE in any single year, *whichever is lower*. For BY 2023, the three-year rolling average loss limit is controlling (C. Marcinkevage (NMFS) 1/12/2024 letter to K. White (BOR)).

[7] It is important to note that BOR and DWR have been aware that "75-94% of juvenile natural winter-run Chinook Salmon from brood year (BY) 2023 are estimated to be present in the Delta" since March 5, 2024. *See* "Weekly Assessment of CVP and SWP Delta Operations on ESA-listed Species 3/5/2024-3/12/2024", p. 1.

Steelhead distinct population segment has been listed as threatened under the ESA since 1998. NMFS recently concluded that the population is at "moderate" risk of extinction.[8]

Since December 1, 2023, loss of naturally-spawned Central Valley Steelhead at the CVP and SWP pumps is estimated to be 2,919 fish.[9] This estimate exceeds the loss limit for wild Steelhead that is authorized by NMFS under the ESA between December 1 to March 31.[10] We are aware of speculation that some of the unclipped Steelhead were actually hatchery fish (which would not be counted towards the loss limit for naturally spawned Steelhead); however, this is unconfirmed and there is no real-time genetic or micro-chemical analysis at the export facilities that would allow determination of the provenance of the fish that have been killed. Essentially, BOR and DWR are continuing to kill large numbers of protected Central Valley Steelhead, despite an underlying lack of information, and with no foreseeable plan for determining the origin of these fish.

Additionally, BOR and DWR should coordinate with and incorporate fishery agency technical recommendations into operational management to protect ESA-listed species. Despite likely exceedance of the ESA annual take limit for winter-run Chinook Salmon and Central Valley Steelhead, BOR and DWR have not sufficiently changed operations to decrease take. Initially, BOR and DWR disregarded the recommendations of NFMS to reduce pumping to health and safety levels for at least five days to reduce impacts to Central Valley Steelhead.[11] Instead, BOR and DWR maintained Old and Middle River (OMR) flows of -500 cfs and combined exports continued to exceed health and safety limits (generously estimated to be 1,500 cfs; Figure 1).[12]

We acknowledge and appreciate the fact that DWR and BOR temporarily changed OMR in response to the increase in Central Valley Steelhead loss at the export facilities. However, as of March 25, 2024, Steelhead loss began to increase again, corresponding to increased exports rates (Figure 1).[13] More recently, DWR and BOR increased combined exports by DWR and BOR have degraded OMR flow conditions to -1,500 cfs. **This is contradictory to CDFW's recommendation that OMR remain more positive than -500 cfs "in order to minimize subsequent loss" of winter-run Chinook Salmon.[14]** This means that further changes in operations are critical in order to avoid and minimize take of Central Valley Steelhead going forward.

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[8] *See* SWFSC 2023.
[9] *See* BOR's "Weekly Fish and Water Operations Outlook 3/26/2024 – 4/1/2024", Table 2a, p. 3.
[10] The maximum anticipated annual incidental take levels for naturally produced Central Valley Steelhead is loss of 1,571 juveniles as a three-year rolling average or total loss of 2,760 in any single year. *See* NMFS 2019 Biological Opinion at p. 810.
[11] Water Operations Management Team Notes 3/6/24, pp. 3-4. Available online: https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=Water-RiskAssessment&sub=WOMT_Notes_2024.
[12] BOR's "Weekly Fish and Operations Outlook 3/12/2024-3/18/2024", p. 1 that states, "Effective 3/11, CVP and SWP project operations will be limited to an OMRI of no more negative than –500 cfs beginning Monday 3/11, to protect steelhead based on the Proposed Action: Director's decision of 3/7."
[13] Data compiled from California Department of Fish and Wildlife's Salvage and Export website. https://apps.wildlife.ca.gov/Salvage *See also* BOR's "Weekly Assessment of CVP and SWP Delta Operations on ESA-listed Species 3/12/2024-3/18/2024", p. 15 Figure 4 Bottom Graph. This shows a particular increase in State Water Project pumping.
[14] BOR's "Weekly Assessment of CVP and SWP Delta operations on ESA-listed Species 3/26/2024-4/1/2024", p. 2.

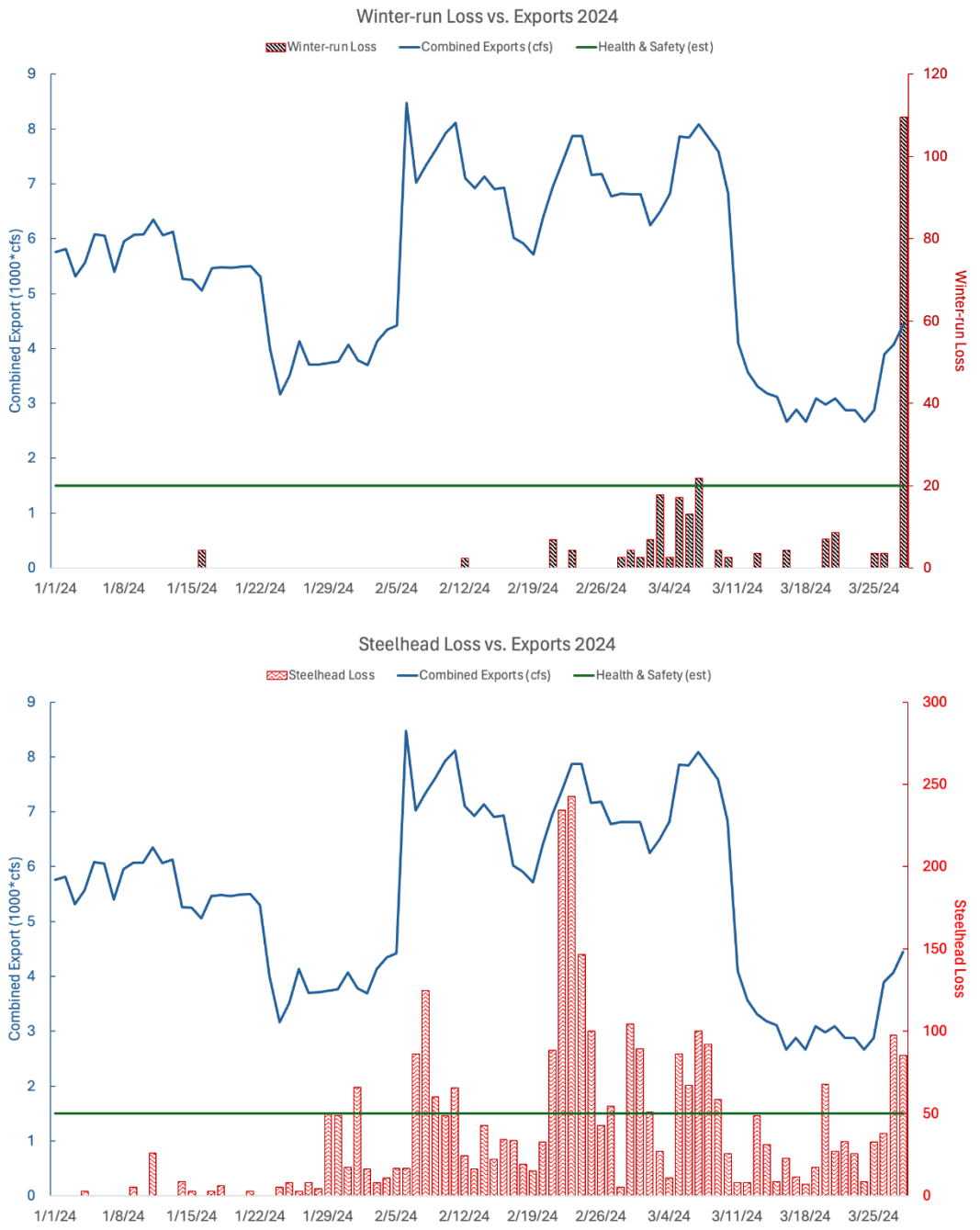

Figure 1: Water export rates and loss of federally endangered winter-run Chinook Salmon (top panel) and Central Valley Steelhead (bottom panel) at CVP-SWP water export facilities in 2024, thru March 28. Water exports have exceeded human health and safety levels every day of this calendar year.[15]

[15] Data compiled from California Department of Fish and Wildlife's Salvage and Export website. https://apps.wildlife.ca.gov/Salvage

The alarming downward trend of spring-run Chinook Salmon provides further reason to implement conservative Delta operations for the rest of the spring. Spawning populations of spring-run Chinook Salmon in the fall of 2023 were among the worst on record – these fish are now also on the brink of extinction in the wild. BY 2023 spring-run Chinook Salmon are just beginning to enter the Delta. Now is the time to protect them from excessive loss at the export facilities and low survival as they migrate through the Bay-Delta.

We are also concerned about the impacts of excessive mortality at the water export facilities for fall-run Chinook Salmon juveniles that are about to begin migrating through the Bay-Delta. The fall-run and late-fall run are listed as a species of special concern by CDFW[16] and also form the backbone of the ocean fishery for Chinook Salmon in California and coastal Oregon. Wild fall-run Chinook Salmon have declined precipitously. Project operations that are killing large numbers of listed Chinook Salmon and Central Valley Steelhead also represent a serious threat to the unlisted salmon species and to the survival of the California Salmon fishing industry. Such impacts to these unlisted runs are also inconsistent with BOR's and DWR's obligations under federal and state law.[17]

After a record setting wet year in WY 2023 and continued wet conditions so far in WY 2024, now is the ideal time to provide conditions that allow these declining fish populations to rebound. This is clearly not the case based on the present data and operations occurring at the CVP and SWP facilities. We also remind BOR, DWR, and the fisheries agencies that despite recent wet conditions, the Bay-Delta estuary is still on the brink of collapse due to inadequate ESA and water quality regulations, and a fundamental lack of sufficient freshwater flows through the Delta. Exacerbating the impacts of the declining Bay-Delta on these fish species through project operations brings us closer to disaster for a crucial biodiverse ecosystem, the heart of California's water management and the largest inland estuary on the Pacific Coast of the Americas. All the federal and state agencies that play a role in Bay-Delta management must work together to ensure that disaster does not happen.

In summary, we urge action to prevent additional loss of winter-run Chinook Salmon and Central Valley Steelhead at water project export facilities in the Bay-Delta, and to prevent unnecessary harm to spring-run and fall-run Chinook Salmon and other species. **We request that BOR and DWR immediately reduce water export pumping to health and safety levels until such time as juvenile Salmon and Steelhead complete their 2024 outmigration through the Bay-Delta.**

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[16] California Department of Fish and Wildlife. 2015. Fish Species of Special Concern in California. Sacramento: California Department of Fish and Wildlife. Prepared for CDFW by Moyle, P.B., R. M. Quiñones, J. V. Katz, and J. Weaver. www.wildlife.ca.gov

[17] *See* The Central Valley Project Improvement Act PL 102-575 (HR 429), Section 3406, Fish, Wildlife, Improved Water Management & Conservation (b)(1); the State Water Resources Control Board's doubling requirement for salmon populations, "Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary", 2006, Table 3, p. 14.

Sincerely,

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