

Fwd: Comments on Reclamation's draft Sac River Temperature Management Plan

From: Justin Ly - NOAA Federal (justin.ly@noaa.gov)

To: tstokely@att.net; summerchum@yahoo.com

Date: Wednesday, April 27, 2022, 03:29 PM PDT

Hi Tom and Joe,

Thanks for the productive meeting a couple of weeks ago on the Trinity River water temperature needs. We weren't able to present to the SWB last week, but sent them our comments earlier today. We also emailed comments to Reclamation and cced the SRTTG.

Thanks,

----- Forwarded message -----

From: **Justin Ly - NOAA Federal** <justin.ly@noaa.gov>

Date: Wed, Apr 27, 2022 at 12:14 PM

Subject: Comments on Reclamation's draft Sac River Temperature Management Plan

To: <Eileen.Sobeck@waterboards.ca.gov>

Cc: <bay-delta@waterboards.ca.gov>, <Diane.Riddle@waterboards.ca.gov>, Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>, Seth Naman <seth.naman@noaa.gov>, Roman Pittman - NOAA Federal <roman.pittman@noaa.gov>, Howard Brown - NOAA Federal <howard.brown@noaa.gov>

Dear Ms. Sobeck,

Reclamation provided a draft Sacramento River Temperature Management Plan (Draft TMP) in April 2022 to regulatory agencies as part of its water right requirement under Water Order 90-05 (WRO 90-5), as well as the requirements under RPM 1.a. of the 2019 National Marine Fisheries Service (NMFS) Biological Opinion, and the Interim Operations Plan, ordered by the US District Court on March 14, 2022. NMFS provides the following comments to the State Water Resources Control Board (Board) as part of Reclamation's requirement under water order 90-05 for your consideration in approving a final Temperature Management Plan for this year, as well as in development of new water temperature requirements on the Trinity River in the future. NMFS understands Reclamation is faced with exceptional water management challenges in this third year of critically dry water yield in the Trinity and Sacramento river basins. Our comments address operational considerations and Trinity Reservoir cold water pool management that will reduce the amount and extent of incidental take of threatened Southern Oregon/Northern California Coasts coho salmon:

In the first four weeks of spawning in November of 2021, approximately 75% of coho salmon eggs at Trinity River Hatchery (TRH) perished (Clifford 2022; Figure 1). Because water temperatures in the Trinity River were similar to that of TRH, a similar proportion of ESA listed wild SONCC coho salmon eggs likely perished. This occurred because low Trinity Reservoir storage resulted in high water temperatures released from Lewiston Dam which continued to climb in temperature until finally peaking in November, as the water released from Trinity Reservoir remained unseasonably warm.

Water temperatures in the Trinity River are known to be problematic when Trinity Reservoir reaches storages less than 1.2 MAF (million acre feet), as the main outlet begins to entrain warmer waters in the water column (Asarian et al. in prep). Projected Trinity Reservoir end-of-September (EOS) storage in 2022 will be less than 500 TAF (thousand acre feet), which is at least 250 TAF less than 2021 (EOS 750 TAF). In addition, Reclamation's draft plan includes the diversion of 91 TAF after October 1 2022 (Attachment 1 in the draft TMP). Complete loss of cold water less than 50°F may occur, and mortality of coho salmon could be even greater than 2021 this coming fall.

While Reclamation's Draft TMP for Water Year 2022 outlines several goals for the Sacramento River as it relates to compliance with WRO 90-5, the Draft TMP makes no mention of meeting the water temperature objectives in the Trinity River in order to comply with WRO 90-5. Reclamation's draft plan results in a Lewiston release temperature of 56.9°F in October from Lewiston Dam (Attachment 2 in the plan), which would exceed the Board's 56°F degree objective even without any downstream warming at both Douglas City and above the North Fork Trinity River (Figure 2).

WRO 90-5 states that "Permittee shall not operate its Trinity River Division 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...." Please note that Reclamation is already using the Trinity River for water temperature control on the Sacramento, despite the model results indicating it will not meet the 90-05 criteria for the Trinity River.

Therefore, we provide the following recommendations:

- We ask that the Board ensure the protection of the limited Trinity Reservoir cold water pool for salmon spawning success this fall, as provided in WRO 90-5.
- We recommend the Board require Reclamation to significantly curtail all diversions to the Central Valley until at which time in water year 2023, it can be determined that the Trinity Reservoir will recover to a projected EOS storage of at least 1.2 MAF in 2023.
- We recommend that the auxiliary outlet for Trinity Reservoir be used only following coordination with Trinity River basin stakeholder, managers, and Tribes. Unless significant impacts to Trinity River adult Chinook salmon are expected or observed in September and October of 2022, the auxiliary outlet should only be used after November 1 to reduce take of ESA listed coho salmon adults and eggs.
- WRO 90-5's water temperature criteria for 56°F at the Douglas City Bridge between Sept 15 and Oct 1 and at the confluence of the North Fork Trinity River between Oct 1 and Dec 31 are not sufficiently cold to prevent mortality of Chinook salmon and coho salmon eggs in the Trinity River. Therefore, NMFS recommends Reclamation meet water temperatures of 53.5°F (12°C) daily max and 50°F (10°C) daily average, or less after November 1.
- Finally, we recommend that the Board begin work to condition Reclamation's water right permit to include new water temperature requirements for the protection of all adult salmonids and their embryo on the Trinity River, including ESA listed SONCC coho salmon.

Thank you.

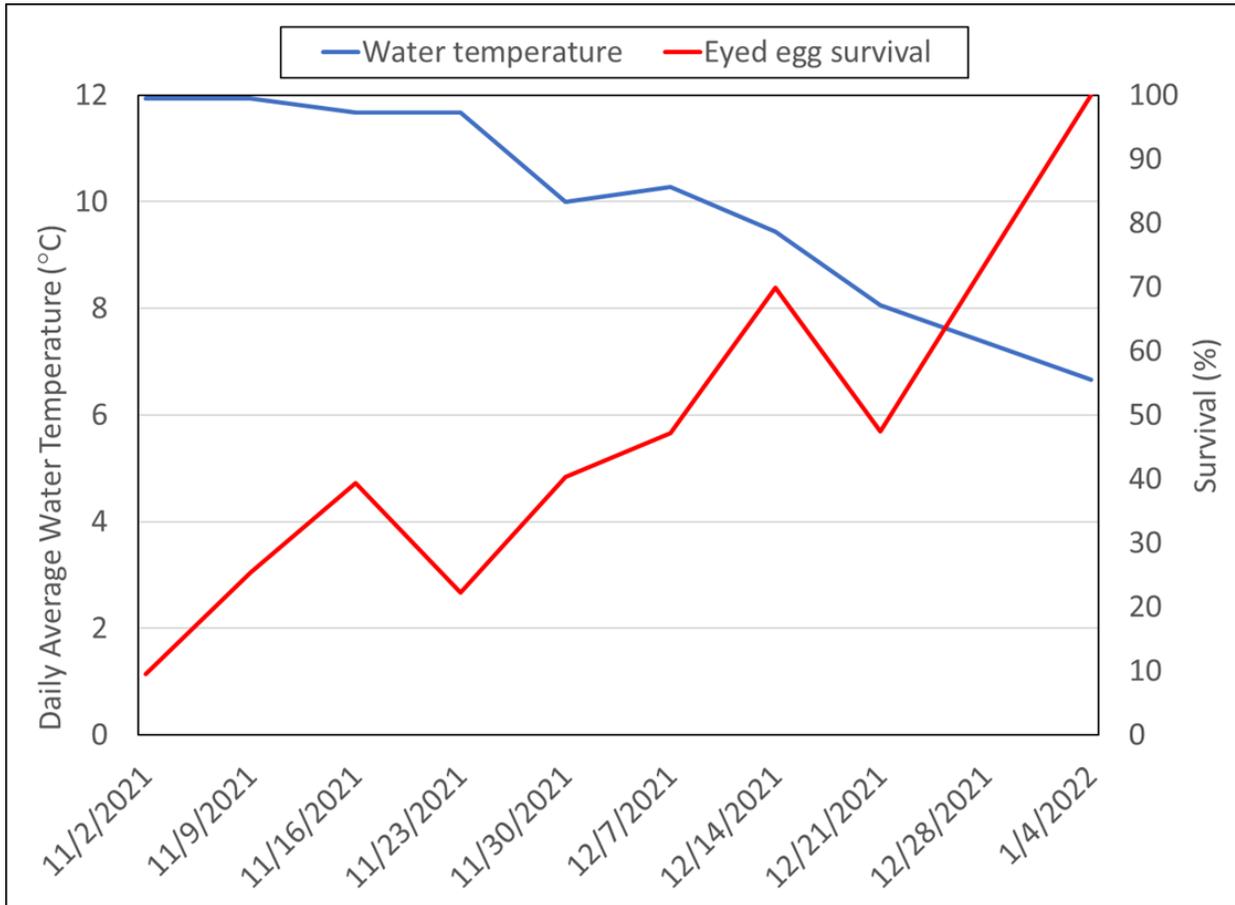


Figure 1. Coho salmon egg survival and Trinity River Hatchery water temperatures, 2021 (Clifford 2022)

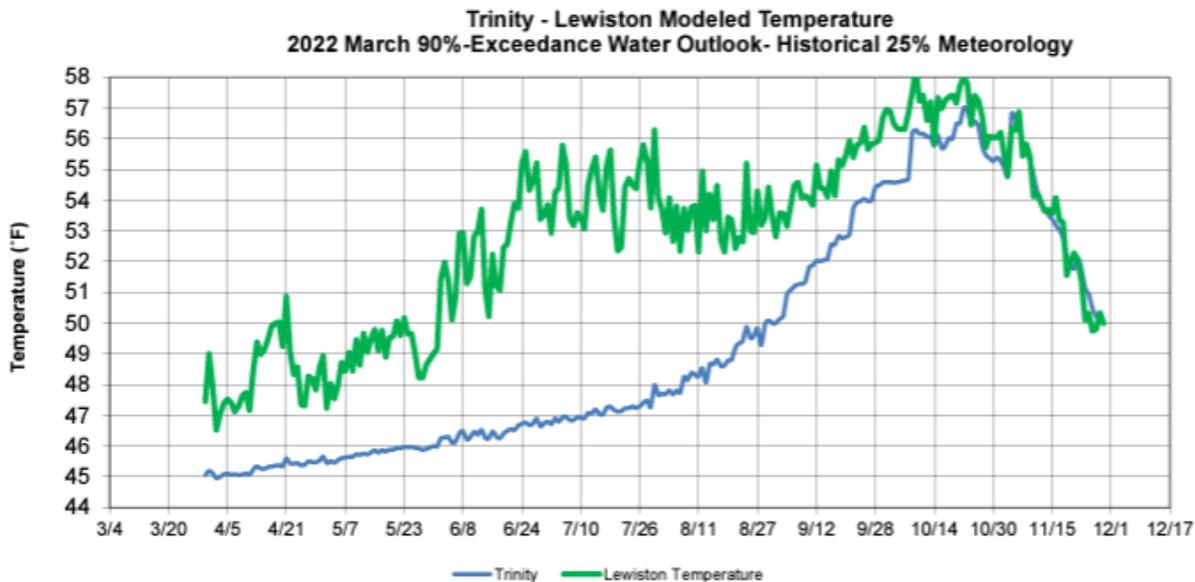


Figure 2. Projected Trinity River water temperatures at Lewiston (Reclamation 2022).

References:

Asarian, J.E., K. De Julio, D. Gaeuman, S. Naman, and T. Buxton. In prep. Synthesizing 87 years of

scientific inquiry into Trinity River water temperatures. Prepared for the Yurok Tribe Fisheries Program and Trinity River Restoration Program by Riverbend Sciences with assistance from the Yurok Tribe Fisheries Program, NOAA Fisheries, and U.S. Bureau of Reclamation.

Bureau of Reclamation. 2022. Draft Sacramento River Temperature Management Plan for Water Year 2022. April 6.

Clifford, M. 2022. Memo to Eric Jones regarding water temperature and coho salmon egg survival at Trinity River Hatchery in Brood Year 2021-2022. Northern Region Fisheries. CDFW. April 21

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