Joint report supporting the resumption of Trinity River Restoration Program supported recreational fisheries monitoring on the lower Trinity and lower Klamath rivers.

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Monitoring of the recreational fishery is an integral component of a comprehensive assessment which evaluates progress towards long-term goals for the TRRP. As summarized in the TRRP's Refinements Program Document these goals include "[to] restore and sustain natural production of anadromous fish populations in the Trinity River to pre-dam levels"; and "to facilitate full participation by dependent tribal, commercial, and sport fisheries through enhanced harvest opportunities."

In both FY2021 and FY2022, the TMC acted to eliminate funding for monitoring of both the lower Trinity and lower Klamath River recreational fisheries, which had been implemented since the early-1990s. The decision to defund these projects was due to reduced funding availability at the time, but they were to remain on the list of TRRP projects for subsequent funding cycles. In 2021, HVTFD and CDFW were able to continue recreational fishery monitoring activities on the lower Trinity and lower Klamath rivers by internally reallocating funds from other projects, but this emergency funding strategy is not a viable long-term solution for either agency. As of the writing of this report, neither HVTFD or CDFW have identified a sustainable funding source for non-Tribal recreational fisheries monitoring in the lower Trinity and Klamath rivers for 2022 and beyond. The purpose of this document is to present supporting information in the interest of reinitiating TRRP funding support necessary to implement these important monitoring activities.

It is not surprising that the central goals of the TRRP hinge upon the demonstrated benefits of restored naturally produced salmonid populations to dependent fisheries. Indeed, the foundation of the TRRP is built upon several congressional acts including the Central Valley Project Improvement Act (CVPIA, 1992) which required the Secretary to identify flow requirements which would lead to the protection of the fishery resources of the Hoopa Valley Tribe. The Trinity River Basin Fish and Wildlife Management Act (as amended 1996) similarly mandated restoration of "the basin's fish and wildlife populations to those that existed prior to construction of the TRD and implement measures to restore fish and wildlife habitat in the Trinity River, as measured by

returning adult anadromous fish spawners and the ability of dependent tribal, commercial, and sport fishers to enjoy the benefits of restoration through a harvestable fishery resource."

As hundreds of millions of dollars shall be invested during the anticipated three to four decades of TRRP implementation presently envisioned under the Program's refinements document, recent TMC budget actions to compromise the ability to accurately gauge program success should be re-evaluated. The TMC should also be aware that more than $1.5M are being spent annually by the states of California and Oregon to monitor the contribution of Trinity fall Chinook to marine fisheries. Hence, TRRP's support for continued monitoring of the recreational fall Chinook fishery should be viewed in context of the overall funds being invested to complete a comprehensive assessment of TRRP's goals.

The expectation that dependent fisheries will be restored to pre-dam levels through the restoration of natural fish production in the Trinity River through TRRP actions needs to be validated. The Science Document of the TRRP Refinements process currently recommends that the TRRP's Objectives and Targets Summary (1 June 2021) be adopted by TMC. Notably, the first objective within the fishery section of this summary document is to "increase naturally produced fall-run Chinook Salmon adult production to the extent necessary to meet or exceed escapement objectives and facilitate expanded harvest opportunities." Associated targets for this objective are the quantified achievement of both escapement and harvest levels.

Attainment of these quantified targets implies comprehensive status and trend monitoring. To this end, the annual monitoring of harvest, partitioned into naturally and hatchery produced fall Chinook Salmon is necessary. Lower Trinity and Klamath River recreational harvest monitoring, together with other monitoring projects such as spawner escapement, enumeration, and estimation of the contribution of Trinity River origin fish to other harvest sectors (i.e., Tribal and ocean fisheries), provides the TRRP with important data on the recruitment of and fishery impacts on Trinity River origin fall Chinook.

Collectively, these investigations, when coupled with marine fishery monitoring, provide an organizing framework necessary for Trinity River specific cohort reconstructions of both naturally- and hatchery-produced fish. A Trinity specific cohort reconstruction was identified by Bradford and Hankin (2012) as an important tool for "separation of ocean, fishery and freshwater effects on cohort survival" and would enable the TRRP to evaluate whether contributions of naturally produced Trinity River Chinook Salmon to both river and ocean harvest are achieving target levels and if their adult spawning escapements are trending towards the TRRP goal.

Presently, TRRP strategies are not in place for completing similar assessments for contributions of Trinity naturally-produced spring Chinook, Coho and steelhead. Since the signing of the Trinity River Record of Decision, status and trend monitoring has progressively been reduced in scope to where today, the priority remains a singular focus on fall Chinook. The TRRP has set the naturally produced adult escapement goal of 62,000 fall Chinook and a target harvest level of 131,750 adult fall Chinook. While targets for spring Chinook, Coho and steelhead have also been partially completed, work remains to be done to establish harvest targets for all species expected to contribute to fisheries in the future.

In order to retain this single species (fall Chinook) indicator of program goal attainment, it is all the more important that all aspects of harvest and escapement monitoring be completed to estimate a representative cohort reconstruction of this single stock.

In summary, it is strongly urged that monitoring of the lower Trinity and Klamath River recreational fisheries be continued as it is essential to the ability to accurately assess TRRP fish production and harvest targets for fall Chinook as well as the overarching goals of the Program. This is consistent with the recommendations made by Bradford and Hankin (2012). They also suggest that recreational and other fishery monitoring projects in the Trinity and Klamath rivers be expanded in order to estimate the harvest of all priority taxa, including both fall and spring Chinook, coho, and steelhead (Bradford and Hankin, 2012). Without monitoring contributions to harvest for all species, the TRRP will be missing critical data needed to thoroughly evaluate its performance in moving towards accomplishing program goals.

References

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The Trinity River Basin Fish and Wildlife Management Act. (PL-98-541) as amended in 1996 (PL 104-143).

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