

Siskiyou County Comments on the U.S. Fish and Wildlife Service Biological Opinion for the Lower Klamath Decommissioning Project.

The U.S. Fish and Wildlife Service (USFWS) states that, regarding genetic differentiation among the Klamath sucker species, there are potentially thousands of genetic markers for species and population differentiation that could be conserved to enhance recovery efforts for Lost River suckers and shortnose suckers, citing Smith et al. 2020. However, we have reviewed that report and determined that it shows that there is strong genetic similarity between Klamath largescale and shortnose suckers that has not been resolved. We also determined that the report does not allude to potential contributions to enhancing recovery efforts.

USFWS states that Lost River and shortnose suckers will be captured prior to reservoir drawdown and transported to the Klamath Tribes' sucker rearing facility, but there is no indication as to what will happen with these fish or if the fish will survive the effort to translocate them to an artificial rearing facility. The USFWS anticipates about 600 suckers will be translocated.

The range-wide distribution of the Upper Klamath Lake (UKL) population of Lost River and shortnose suckers includes UKL down to the mouth of the Klamath River. The USFWS status review states that a substantial reduction in the number of Lost River suckers in the UKL would put the Lost River sucker close to extinction and that the shortnose sucker could become extinct within the next 30 to 40 years. Recognizing the dire outlook for these two unique species, which do not occur anywhere else on the planet, USFWS is taking a position that would allow for the complete loss of these two sucker species that are known to exist in J.C. Boyle Reservoir, as well as the loss of the shortnose sucker in Copco and Iron Gate Reservoirs that could aid in conservation of these fish. The USFWS has identified the lower river populations as a sink population to allow for the destruction of their habitat to make way for salmon passage that has questionable chance of successfully reestablishing in the upper Klamath River.

USFWS states that "landscape-scale improvements that reduce nutrient loads in UKL are necessary to achieve full recovery of both sucker species." However, elimination of the dams located below UKL will not resolve that issue, suggesting certain doom for these species regardless of any efforts listed as conservation measures.

The USFWS states that the Lost River suckers and shortnose suckers that exist in the Klamath River Management Unit (the flowing water or reservoirs between Keno Dam and Iron Gate Dam) are considered sink populations because they are "not able to re-access the three upstream management units and interact with the populations in Lake Ewauna/Keno Reservoir or Upper Klamath Lake." The USFWS goes on to declare that there is no connectivity with upstream populations because of both the steep channel gradient in the river between J.C. Boyle and Keno Dam and the lack of fish passage for suckers at Keno Dam. However, this finding has not been backed up with data. The USFWS, in fact, admits that they have no documentation or evidence that shortnose or Lost River suckers spawn in the J.C. Boyle peaking reach even though "unknown" suckers have been observed there. It seems it would be prudent to determine with certainty that the suckers residing in the Klamath River Management Unit are not viable rather than assume and risk losing a potential metapopulation that could bolster the effort to protect and restore the two populations of endangered suckers. Instead, the USFWS believes the best action is to

attempt to capture and relocate suckers in the Klamath River Management Unit. The USFWS's Opinion identifies that shortnose, Klamath smallscale, Klamath largescale, and Lost River sucker have been observed or captured in the J.C. Boyle and Copco No. 1 Reservoirs and that 'unidentified' sucker larvae have been observed or captured in Iron Gate Reservoir. Klamath sucker larvae are difficult to identify and must be reared to the juvenile stage of development before they can be positively identified. However, it is not appropriate to assume these larvae are not one of the endangered sucker species.

The USFWS estimates 500 adult shortnose suckers reside in the J.C. Boyle Reservoir, 2,000 adult shortnose suckers and Lost River suckers reside in Copco No. 1 Reservoir, and 200 adult suckers reside in Iron Gate Reservoir. Therefore, endangered suckers are present in the Klamath River Management Unit and should be treated according to Endangered Species Act precautionary principles.

In recent population estimates (2018–2020), sampling captured 5 'potential' hybrid suckers in J.C. Boyle Reservoir, 96 shortnose suckers, 1 Lost River sucker, and 2 'potential' hybrids in Copco No. 1 Reservoir. Fifteen of the shortnose suckers captured in 2020 were less than 15 inches, suggesting a cohort of younger suckers that were not sampled during 2018 and 2019. Sampling efforts in Iron Gate Reservoir captured 25 adult shortnose suckers and 5 'potential' hybrids. There is no indication as to why some of the fish were identified as hybrids and what, if anything, was done to further identify them. A non-parametric bootstrap method estimated that a total of 5,540 adult listed suckers reside in the Klamath Hydroelectric Reach, and all are at risk of extermination when the dams are removed. In addition, an estimated 365,229 larvae and 2,825 juvenile suckers reside in the Klamath Hydroelectric Reach. The USFWS claims these larvae and juvenile suckers are drift from Keno Dam but does not provide scientific proof that this has occurred.

The USFWS makes an interesting declaration in the Incidental Take Permit for the Klamath Habitat Conservation Plan: "Were it not for the reservoirs that are part of the Klamath Hydropower Project, habitat for the Lost River Sucker and shortnose sucker would likely not exist below Keno Dam." So why does it make sense to the Service to destroy that habitat as it exists today? To quote the USFWS's Effects analysis, "...all Lost River and shortnose suckers in the reservoirs of any life stage, will experience a range of insignificant, discountable, or adverse effects during capture and translocation. During the drawdown and dam removal phase, any individuals remaining in the reservoirs and the Klamath River will die."

LITERATURE CITED

- National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS). 2021. Formal consultation for the surrender and decommissioning of the Lower Klamath Hydroelectric Project No. 14803-001. Klamath County, Oregon and Siskiyou County, California. December 17, 2021.
- Smith, M., J. Von Bargen, C. Smith, M. Miller, J. Rasmussen, and D.A. Hewitt. 2020. Characterization of the genetic structure of four sucker species in Klamath River. Final Report. U.S. Fish and Wildlife Service. 34 pp.