

HABITAT COMMITTEE REPORT ON KLAMATH DAM REMOVAL UPDATE

Jim Simondet, National Marine Fisheries Service (NMFS) Klamath Branch Supervisor, provided an update on Klamath River Dam removal. Here we review some of the key habitat effects associated with this process. Anticipated short-term habitat impacts are primarily related to sediment movement, with an anticipated maximum fish mortality rate of 17 percent in the immediate vicinity of Iron Gate dam and a five percent estimated population impact. Smothering of redds in year one is estimated at 13 percent and is not expected to extend into a second year. Long-term benefits include access to key cold-water tributaries upstream for coho salmon, Chinook salmon and steelhead. Chinook salmon will be able to access the Williamson, Sprague, and Wood Rivers, adding 300+ miles of quality habitat. Increased flow variability, restored water temperature patterns, increased dissolved oxygen, increase in wood debris mobilization, increased sediment transport and reduced blue-green algae will all directly contribute to fish health and migration behavior, and will reduce *Ceratomyxa shasta* disease exposure, which currently reaches infection rates as high as 85 percent. There is a high degree of certainty based on available science for increased long-term health and abundance of Chinook salmon following dam removal.

Keno and Link River dams are not slated for removal as part of this project. Keno Dam has a fish ladder, though it has challenges, especially with regard to attraction flows. There are water quality concerns and a lack of screening in the Keno reach. The National Marine Fisheries Service (NMFS) will re-consult with the Bureau of Reclamation (BOR) in fall 2024 for water operations and potentially consideration of Keno Dam removal. A new compliance plan will also be developed. The future of Keno Dam is uncertain, as ownership is transferring from PacifiCorp to BOR. The HC notes that artificial barriers in the Klamath Basin as they relate to essential fish habitat (EFH) designations will be evaluated during the next EFH Review, which is expected to begin in 2024.

As noted in California Department of Fish and Wildlife's supplemental report (E.5.a, Supplemental CDFW Report 1), dam removal will result in greater uncertainty in assessment of spawner numbers, and by extension, greater uncertainty in population assessment of Fall run Chinook salmon. In situations like this, risk assessment approaches that provide additional context of population status can help address increased uncertainty. The HC notes that the habitat indicators developed as part of the Klamath rebuilding plan could serve this function, and perhaps be supplemented with additional indicators targeting habitat changes resulting from dam removal.

PFMC
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