Statement of the American Fisheries Society (AFS) and the Western Division AFS (WDAFS)
About the Need to Breach the Four Dams on the Lower Snake River

Formally adopted by WDAFS December 2022 and awaiting AFS approval

The Columbia River ecosystem was once a network of complex, interconnected habitats that supported the most prolific salmon habitat in the world. Its Snake River basin once supported nearly fifty percent of the Chinook salmon and steelhead in the entire Columbia River Basin. Now, decades after their initial Endangered Species Act listings, native fish populations in the Snake River basin including salmon, migratory trout, sturgeon, lamprey, and others have not recovered, and many are alarmingly low and trending towards extinction. The once free-flowing river has been transformed into reservoirs by a series of dams that impede the movement of these fishes and greatly decreases their survival. The four dams on the lower Snake River (Ice Harbor, Lower Monumental, Little Goose, and Lower Granite) significantly reduce access to the cold-water, high-quality spawning and nursery habitat that are essential for fish sustainability (Storch et al. 2022).

When the body of scientific evidence is considered (Williams et al. 1989; Nehlsen et al. 1991; Thurow 2000; NOAA 2017, 2022; Isaak et al. 2018; Storch et al. 2022; TU 2022), it is clear that breaching the four lower Snake River dams is necessary to (1) substantially improve the probability of recovering these cultural and ecological keystone species to healthy and harvestable populations and (2) safeguard those fishes from extinction.

Salmon and other anadromous fish move between the upriver spawning and rearing habitats and the ocean and back again. Today, only 1-2% of historic wild salmon and steelhead numbers return to the Snake River to spawn above the four lower dams. Climate change has (NWPCC 2015; Storch et al. 2022) and will continue to worsen the outlook for these coldwater species. Access to this habitat is the best opportunity to promote broad-scale population recovery and persistence in the face of climate-change induced warming.

Restoring healthy and harvestable salmon and steelhead populations will require a change in approach. Since the 1980s, many fisheries recovery strategies (e.g., supplementing with hatchery-raised fish, transporting fish, fish passage improvements, and rehabilitating habitat) have been attempted with little or no success. Despite spending billions on recovery, these species continue to decline, affecting both aquatic and terrestrial ecosystems, other imperiled species, tribal rights, and commercial and recreational fishing.

Scientific studies continue to show that breaching the four lower Snake River dams would provide greater certainty of achieving long-term survival and recovery of native wild fishes more than any other measure or combination of measures without dam breaching. Breaching the dams to restore riverine habitats in the lower Snake River will also benefit ecosystem processes, entire biological communities, and increase climate change resilience of anadromous fishes. Dam breaching has shown success towards recovering migratory fish species, notably in the Elwha River, WA (Hess et al. 2020; Storch et al. 2022) and Kennebec and Penobscot rivers, ME (Johnston et al. 2019; Kober 2019; Prosek 2020; Sharma and Waldman 2021; Wippelhauser 2021; NRCM 2022). Notably, the Penobscot River project was accomplished by a combination of breaching, fish passageways, and increased power production for different dams, such that total hydropower production was maintained while restoring diadromous fish runs.

Although the four lower Snake River dams and reservoirs provide hydroelectric energy for western states, irrigation water for agriculture, and allow commercial navigation to move grain and other goods efficiently, they have led to significant declines in fish populations. The best available science suggests that a significant portion of the lower Snake River must be returned to a free-flowing condition to restore Snake River salmon populations. Proposals to breach the four lower Snake River dams have a long history, but the subject has become more critical as these iconic fish populations approach extinction. The WDAFS unanimously passed a resolution in 2011 and a subsequent letter to Oregon Governor Kate Brown in 2020 saying that breaching these dams will be required if these runs are to be recovered. Likewise, U.S. Representatives Simpson (R.-Idaho) and Blumenauer (D-Ore.) have proposed breaching these dams while also addressing the needs of stakeholders and tribal rightsholders who depend on the river. In summer 2022, Washington Governor Jay Inslee and Senator Patty Murray (D-Wash.) released a final report for the government to move forward to provide replacements of these dams' benefits (e.g., wind and solar power production and truck and railway transportation of goods [SOS 2022]), so that breaching is a credible pathway for policymakers to consider. The Biden Administration is also working to develop a comprehensive salmon restoration plan to settle longstanding litigation with Tribes, the state of Oregon, and conservation organizations.

If Snake River basin salmon and steelhead are to be saved, then policymakers and stakeholders at all levels will need to implement appropriate processes and funding provisions to breach the four dams on the Lower Snake River, as well as implement all necessary habitat rehabilitation. There are other services that must be accounted for if dam breaching were to occur. Dam removals often take decades of comprehensive planning and implementation, and replacing those services provided by the dams will also take time. This will require Congress, the Biden Administration, regional rightsholders, and stakeholders, to negotiate an agreement soon for the dam removal to proceed expeditiously.

The AFS represents over 7,500 professional fishery scientists and resource managers across the world. The WDAFS includes US states west of the Mississippi River basin and Pacific Canada. Our common mission is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by (1) advancing fisheries and aquatic science and (2) promoting the development of fisheries professionals. Our members represent a holistic array of fisheries experts who are employed in academia, government agencies, nongovernmental organizations, and private consulting.

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