

Reflections/Perspectives on what initially was called Idaho Governor Little's *Idaho Salmon Recovery Workgroup* and is now referred to as the *Idaho Salmon Workgroup*

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The robust fishery science literature— beginning with the “Plan for Analyzing and Testing Hypothesis” (Marmorek et al.1998) in the 1990s and continuing to the 2020 report “Achieving Productivity to Recover and Restore Columbia River Stream-type Chinook Salmon (Petrosky et al. 2020)—documents the necessity to achieve an average 4% smolt-to-adult return (SAR) survival in order to recover Snake River (Idaho) salmon and steelhead. Currently wild Snake River spring/summer chinook and steelhead SARs are 0.76% and 1.35% respectively. Prior to construction of the four lower Snake River dams (LSRD) in the 1960s, Snake River salmon and steelhead achieved 4% SARs and there were sufficient wild fish to satisfy both tribal and sport fisheries, with enough escapement remaining to adequately seed Idaho, eastern Washington and northeast Oregon spawning habitat.

After completion of the four LSRD, Snake River salmon and steelhead (hereafter referred to as “salmon”) had to pass through 8 reservoirs and dams and fish numbers declined precipitously, resulting in the requirement to construct multiple hatcheries to mitigate for the harvest losses caused by the LSRD. The John Day and Yakima rivers, which enter the Columbia River above only 3 and 4 dams respectively, but are downriver from the LSRD, have not suffered the same SAR decline, even though they have to endure the same ocean conditions and the lower Columbia River and ocean predation as do Snake River salmon.

With continued declines in wild salmon in the 1990s, Clearwater spring/summer and fall chinook and steelhead all became federally listed as “Threatened” species and sockeye became listed as “Endangered”. The largest recovery effort in the United States for imperiled species, i.e., for Columbia River system salmon, has cost nearly 18 billion dollars and yet all these species remain Federally listed because there has been no improvement in their status.

The Bonneville Power Administration (BPA) has been the largest financial contributor to these mitigation programs. Much of the money has been spent on hatcheries and natal (spawning and rearing) habitat restoration. Money has also been allocated to dam modifications and operations of the Columbia River Power System to increase smolt and adult survival as Snake River salmon migrate between Idaho and the Pacific Ocean.

Idaho hatcheries send 25 million smolts toward the sea annually, but because SARs are so low, in some years only 1 to 2 adults return for every 1,000 hatchery smolts released. During the last few years, so few adults returned that some Idaho fisheries had to be curtailed or foregone just to get enough adults back to the hatcheries to provide eggs for the next generation.

Some natal habitat restoration programs have done their job, but because the SARs are so low, there are almost no spawners taking advantage of the improved conditions. As an example, in the 1960s before any habitat restoration projects had occurred in the Lemhi River system, this drainage was home to nearly 2,000 spring chinook redds (spawning beds); in 2019, after millions of dollars had been spent to improve habitat and screen irrigation diversions, fewer than 200 redds could be found.

The Middle Fork Salmon River provides another demonstration that natal habitat in Idaho is not what limits recovery of Idaho's wild salmon. Most of this river lies within the Frank Church River of No Return Wilderness, with natal habitat in near pristine condition. In the 1960s there were 23,000 spring chinook redds; in 2019 there were less than 200 redds. Restoring natal habitat in Idaho will improve conditions for resident fish, such as cutthroat trout, whitefish and bull trout, and it will slow the wild salmon decline toward extinction in local areas, but natal habitat restoration will not, can not, recover Idaho salmon.

The recently authorized Columbia River Systems Operations (CRSO) plan will not increase SARs even sufficiently to remove Idaho salmon from the Endangered species list. It will not come anywhere close to achieving the goal of the Idaho Salmon Recovery Workgroup, which is to "restore abundant, sustainable, and well distributed populations of salmon in Idaho". The Pacific Fisheries Management Council's comments on the CRSO plan say this clearly.

So why has Idaho supported the CRSO plan? Is it because Idaho had signed a Columbia River Accord with the BPA that prevented Idaho from commenting negatively about their CRSO plans? Or are the regional benefits of barging important while the Idaho citizens and industries that benefit from Idaho salmon, the promises made to Indian tribes, and the Idaho ecosystem that depends on the marine derived nutrients of thousands of salmon carcasses less important? I believe the state's priorities are wrong. If Idaho wild salmon runs become strong, they will again be the goose that lays the golden egg for Idaho, and provide biological, social, economic and cultural benefits forever.

Almost all oral public comments presented to the Idaho Salmon Recovery Workgroup asked that we recommend LSRD breaching to the Governor. These

commenters were people from throughout Idaho who personally benefit from salmon or simply recognize the extraordinary importance of salmon to society, the economy and ecosystem. They testified that they want Idaho salmon restored and they want the lower Snake River dams breached because they realize this is the only way Idaho salmon can recover.

The Idaho Salmon Recovery Workgroup searched diligently for ways to recover Idaho salmon by measures that can be taken within Idaho, as Governor Little requested. We found none. Production of hatchery fish and restoration of natal habitat for wild fish are not enough to compensate for the meager SARS.

We also honored the Governor's request that policy recommendations would have consensus support. However, the makeup of the workgroup contained not only individuals who sincerely desired to provide realistic policies to recover Idaho salmon, but also with individuals whose higher priority was to protect the Lower Snake River dams. Thus we could not reach consensus on dam breaching.

I realize that Idaho does not have a magic wand to remove the LSRDs. However, by acknowledging where the problem lies for Idaho's salmon, Idaho can coordinate with the other regional states, tribal sovereigns and congressional members in the newly established Columbia Basin Collaborative to consider LSRD breaching, to find solutions that will protect Idaho wheat shippers from financial harm and ensure that the BPA's power sources remain adequate for regional needs. There is a better future with restored Idaho salmon and steelhead. Let's work toward that goal in a meaningful way.

Citations:

Marmorek, D.R. and C.N. Peters (editors) and 26 co-authors. 1998. Plan for Analyzing and Testing Hypotheses (PATH): Preliminary decision analysis report on Snake River spring/summer chinook. Draft report compiled and edited by ESSA Technologies Ltd., Vancouver, B.C. 92pp. and appendices.

Petrosky, C.E, H.A. Schaller, E.S. Tinus, T. Copeland and A.J. Storch. 2020. Achieving productivity to recover and restore Columbia River stream-type chinook salmon relies on increasing smolt-to-adult survival. North American Journal of Fisheries Management. Vol. 40, issue 3.