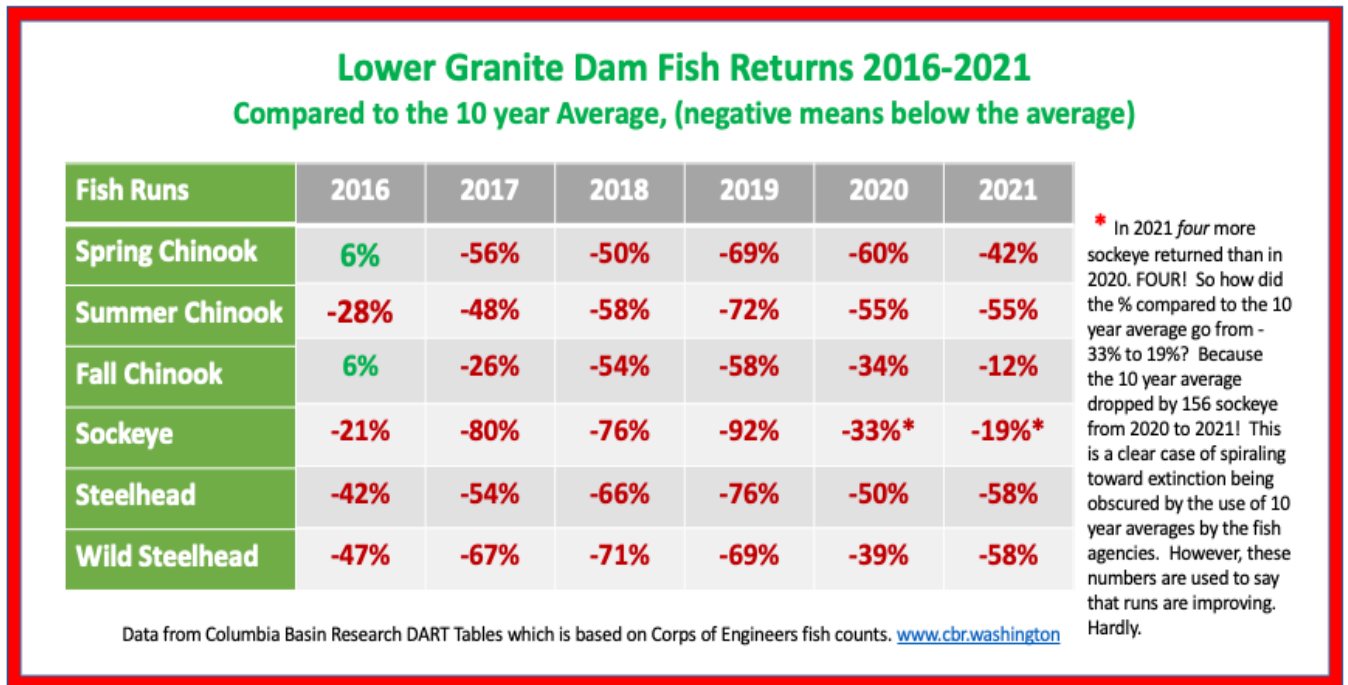
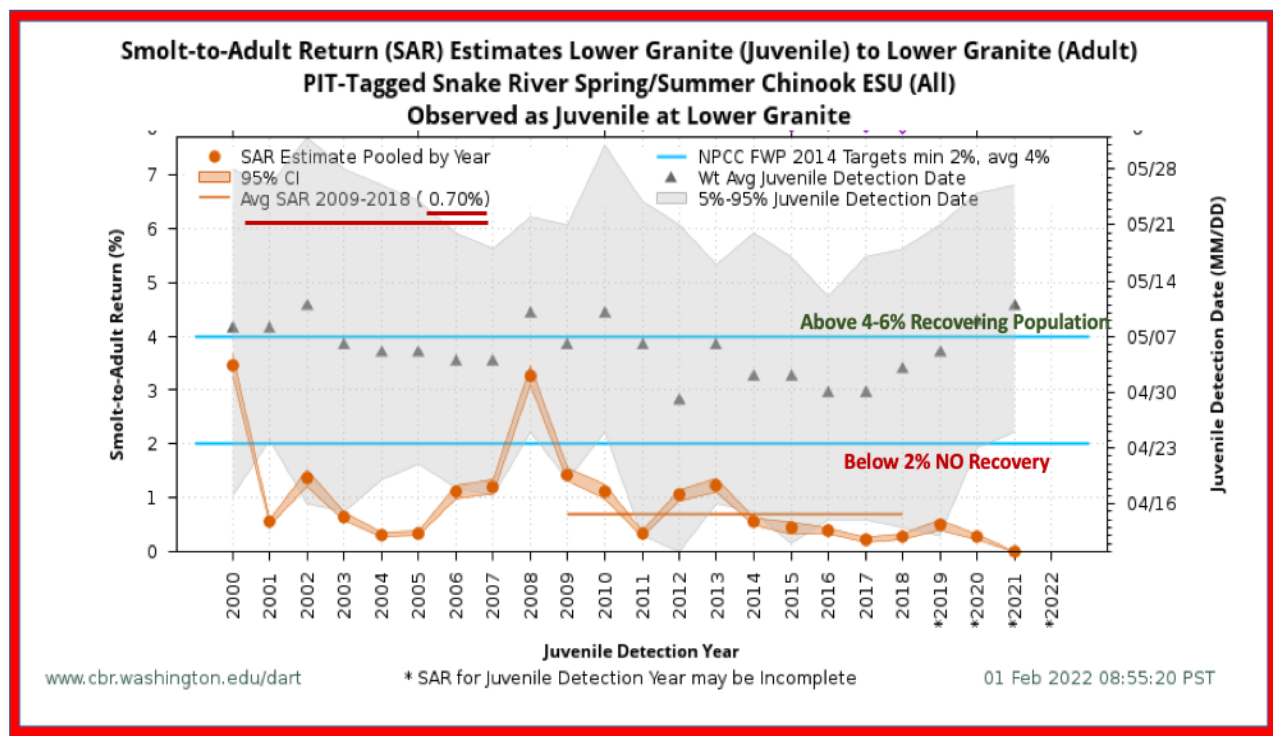


“State of the Snake” 2021

As fish returned to spawning grounds on the Snake River this year, they passed through eight dams and were counted through a PIT tag detection system at Lower Granite Dam. Fish counted in 2021 reflect the enduring decline of salmonids in the river, with sustained negative implications for the food chain they are a part of, and the local economy. It has been 29 years since the spring, summer and fall chinook run were listed under the Endangered Species Act (ESA), 30 years for sockeye, and 24 years for steelhead, with no recovery in sight for any group. In 2021 Bonneville Power Administration continued status quo ratepayer funded salmon recovery through the Fish and Wildlife program and Snake River Compensation Plan, and failed to recommend dam breaching in a 2020 Environmental Impact Statement. Immediate breaching of the four lower Snake River dams is the only viable and remaining solution to save these species from impending extinction.



The chart above shows the number of adult fish returning over the last 5 years are well **below the ten-year average for all fish run types**. A trend of decreasing ten- year averages is especially concerning for steelhead whose 2020 ten-year average is 38% below what it was in 2010. This is in spite of hatchery supplementation and an inclusion of genetically diluted wild fish in wild fish counts. In reality, genetically wild Salmon entering the basin are below 1% of historical numbers.



The declining condition of these runs is further expressed in the graph above, showing Smolt to Adult Ratio (SAR) data over time. SAR values are the percentage of young pit-tagged fish that made it to Lower Granite Dam. The last dam before heading into Idaho and Washington spawning grounds. In 2020 this number was 0.06% for spring and summer chinook. Another way to describe this is that the percentage of young pit-tagged chinook returning as adults was well below one percent, only 6% of one percent. Years 2012 and 2013 were very good ocean conditions yet SARs did not get above 1.4 % as a result and dropped well below 1% in 2014. This indicates that downstream dam passage is the biggest factor in mortality, not the ocean.

The Northwest Power & Conservation Council's (NPCC) SAR goals are 2% for mere survival of the species and above 4-6% for recovery of the species. Snake River Chinook **SARs have only been above 2% in two of the past twenty years**. The 2017 recovery plan from NOAA states that the extensive list of actions in the plan “will *NOT* get us to recovery” (page 241). The downward trending curve seen in the graph, over the last 7 years, shows these actions are not only not leading to recovery but leading towards extinction.

National Marine Fisheries 2021 Juvenile passage report admits chinook passage mortality through the upper two lower Snake dams and reservoirs is about 36%. However, they conclude, that where passage data is weak for the lower two dams and reservoirs, survival is 101%!! This is of course impossible and based on faulty data gap assumptions. If, for example, the mortality for the lower two dams were similar to the upper two (very plausible), the passage mortality thru the LSRDs would be around 70%. And would be consistent with LOW adult returns and SARs noted above. However, the 101% survival number gets used by some to claim that LSRDs are safer than a free flowing river and that it is the ocean conditions that are killing salmon, not the LSRDs.

The time is now for federal agencies to face the reality of extinction, or act, and immediately breach the four dams on the lower Snake River. With only four dams instead of eight in a salmonids way, SAR’s have the best chance of reaching recovery standards, not unlike current SAR values for Mid and Lower Columbia fish that are 2.3 - 3.4 times higher.

DamSense.org, 501(c)(3). Published February 2022.