Scott River's 2023 Coho Salmon Returns Above Average —Population Resilience Calls into Question State's Emergency Water Regulation

Contact: Theodora Johnson, Spokesperson, Scott Valley Agriculture Water Alliance <u>theo@scottvalleyagwa.org</u> - (530) 598-3081

Etna and Fort Jones, CA – January 11, 2024 — Unprecedented emergency regulations on a small ranching community in the Klamath River watershed are being called into question as state data shows that coho salmon populations continue to improve in the Scott River. The Scott, a major tributary of the Klamath River, continues to produce an increasing number of coho salmon, a threatened species listed under the state and federal endangered species acts. According to a <u>preliminary report</u> by the California Department of Fish and Wildlife issued on December 28, 2023, at least 913 adult coho salmon have returned to the Scott River this fall of 2023. This number is a minimum estimate, due to the fact that the video counting weir was removed on December 27th in light of high flow forecasts.

This conservative estimate of 913 is above the 15-year average (703) for returning spawners (see graph below). The success of this particular brood year is significant, as protection of this generation of coho was cited as a primary reason for the State Water Resource Control Board's adoption of <u>unprecedented</u> <u>emergency regulations that curtailed 100 percent of local irrigation water</u> in September of 2021. Similar regulations remain in place to this day: when "emergency flow" levels are not met in the Scott River, irrigation water is curtailed.

Coho salmon "disaster" was primary impetus for unprecedented irrigation regulations

Earlier in 2021, the Department of Fish and Wildlife had requested the emergency regulation be adopted by the Water Board, citing a near "migration disaster" for coho in 2020 causing "almost complete cohort failure." Today's adult coho count should put to rest those fears, as should the near-record-breaking number of juvenile coho that exited the Scott River in spring of 2022 (see timeline, below).

In addition to coho, the agencies cited Chinook salmon and steelhead protection as further reason to adopt the emergency regulation. Chinook, a commercially harvested fish that migrates to the Scott earlier than coho, has had below-average adult counts in recent years due to late fall rains limiting full access to upstream spawning grounds. However, recent juvenile Chinook production has been stronger than average despite access problems. Steelhead, meanwhile, are not officially counted, so accurate numbers are not available.

But in their letters and press releases, both the Department of Fish and Wildlife and the Water Board placed greater emphasis on protecting the "imperiled coho salmon," since "dry conditions [were] endangering coho fry" (see the Water Board's <u>August 17, 2021 press release</u>).

Irrigation curtailments not a large factor in 2023 brood year success

While the Scott's emergency regulation has been in place almost constantly since September of 2021, a closer look at the 2023 brood year's life history reveals that irrigation and stockwater curtailments likely did not play a significant role in that generation's success. During the severe drought of 2020, with no curtailments in effect, the 2020 adult spawners (the parents of the 2023 adults in question) nonetheless

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had the second-highest return on record at 1,766. The progeny of those 2020 adults then hatched and reared in the upper tributaries, which were largely unaffected by curtailments. They outmigrated without curtailments in effect in Spring of 2022 (flows were adequate to prevent the triggering of a curtailment). And finally, this brood year returned in fall 2023, when there was (temporarily) no regulation in place. The detailed timeline below demonstrates that curtailments had little relevance to the 2023 brood year's success.

The above-average 2023 adult count marks the continuation of an upward trend in the Scott that has been recorded by the Department of Fish and Wildlife since 2007, when the agency officially began conducting annual adult coho salmon counts. In 2008, six generations ago for the 2023 brood-year, only 82 adults were counted. The two other brood years of coho (coho have a three-year life cycle, and thus are counted in three separate brood years) have generally trended upward, as well, as demonstrated in Department of Fish and Wildlife <u>annual salmon reports</u>.

While concern over coho populations during prolonged drought is understandable, the Department of Fish and Wildlife's own data should serve to alleviate the panicked calls for unprecedented curtailments on local agriculture—curtailments that local farmers say will soon collapse the local economy, community and culture. Consider the following timeline of the current (2023) generation:

- <u>Late Fall 2020</u>: Adult coho spawners the parents of the current adults are the second-highest return on record at 1,766 adults. Spawning surveys showed that they were able to reach their preferred spawning habitat in the upper watershed tributaries—despite below average flows caused by drought conditions.
- <u>Spring Summer 2021</u>: The current generation hatches under poor habitat conditions due to drought. No emergency curtailments have yet been adopted.
- <u>September 2021</u>: The fry are now about 6 months into their 18-month sojourn near their natal spawning grounds. With the irrigation season largely over, the State Water Board issues a curtailment of all surface and groundwater. The fry are in upper tributaries largely unaffected by the curtailments.
- <u>October 2021</u>: Fall stockwater diversions, which tend to be quite small, are curtailed until Feb. 1, 2022. The effects of these curtailments on the brood year in question would have been minimal.
- <u>Spring 2022</u>: The juveniles begin migrating out to the ocean, traveling 142 miles down the Klamath River, known for its poor water quality. An estimated 68,616 juveniles leave the Scott River—the second highest amount recorded since counting began in 2007. Freshwater production was at a ratio of 77.7 smolts produced per adult female—more than double the "zero" growth rate of 32.8 (as stated in Department of Fish and Wildlife's "2022 Scott River Salmon Studies Report".) Emergency flow levels were being met during this outmigration period, so there were no curtailments in place. Thus, the emergency regulation had minimal effect on this successful outmigration.
- <u>Fall 2023</u>: The progeny of the 2020 adult spawners return at above-average numbers (913). They have survived their out-of-basin life stages, including traveling down and back up the Klamath River, and enduring challenging ocean conditions while maturing into adults. Furthermore, due to a lapse in the emergency regulations, no stockwater curtailments were in effect during the fall/winter of 2023. Once again, curtailments cannot be credited with aiding in the 2023 generation's success.

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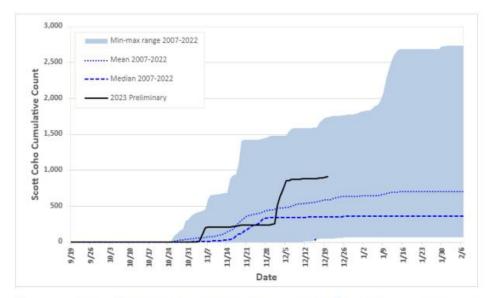


Figure 6. 2023-2024 in-season preliminary Coho Salmon observations at the Scott River adult fish counting facility compared with 2008-2022 (**913** adult Coho Salmon have been observed through December 20, 2023).

[As excerpted from Klamath River Project Adult Fish Counting Facility In-season Update, December 28, 2023, California Department of Fish and Wildlife]