The California Salmon Fishery and the 2025 Season Prognosis

By Tom Cannon

There is a case building for a 2025 salmon fishing season because of what is anticipated as a strong showing of Central Valley hatchery smolt releases in wet years 2023 and 2024. With 30 million salmon smolts released per year with increasing numbers trucked to Bay and coastal acclimation pens, the expected 2025 fishable stock of age 2-4 salmon in coastal waters from Pt Arena south to Pt Sur including Monterey Bay is on the order of 300,000 salmon (about double the government estimate).

However, concern remains for wild/natural born stocks of endangered Central Valley winter and spring run salmon, recovering Klamath salmon, and the collapsing upper Sacramento in-river fall-run stock that would be caught up in a 2025 fishery. Brood years 2021-2023 of these salmon populations, the offspring of stressed parents in drought years 2021 and 2022 faced poor hatching and early rearing conditions in drought-stricken rivers. A 2025 fishery would increase stress on their populations as they likely have similar migration and residence patterns in the ocean as their hatchery counterparts. However, options to minimize the risks do exist.

The California salmon fishery has three major components – north coast, central coast, and inland Central Valley – divided on the coast by Pt Arena (Figure 1). The Central Valley fall run salmon coastal fishery is concentrated from Pt Arena south to Pt Sur from May-September (Figures 1-3). The Klamath River salmon do appear in numbers south of Pt Arena but mainly in June-July, with few in the Aug-Sep fishery¹. Winter and spring run salmon are primarily present in the area at age-2 as most of the adults are in spawning rivers, and these age-2 salmon can be avoided by setting harvest size regulations. Most Coleman Hatchery adults are caught in the coastal fishery from May-July, with most in the Sacramento River by September-October. Assuming the natural upper river stock has a similar pattern, limiting the coastal fishery to August-October and allowing no fishery in the Bay, Delta, and mainstem Sacramento River should minimize harvest of the upper river stock.

The above risk assessment indicates minimal risk to the rare-sensitive salmon stocks and the focus of harvest on strong hatchery stocks by limiting a fishery to the following:

- An August-October coastal Pt Arena to Pt Sur adult fishery.
- A September-October lower Sacramento River tributary (Feather, American, and Mokelumne) terminal adult and jack fishery.

¹ Tables of monthly harvest by location are available in the <u>RMIS database</u>.

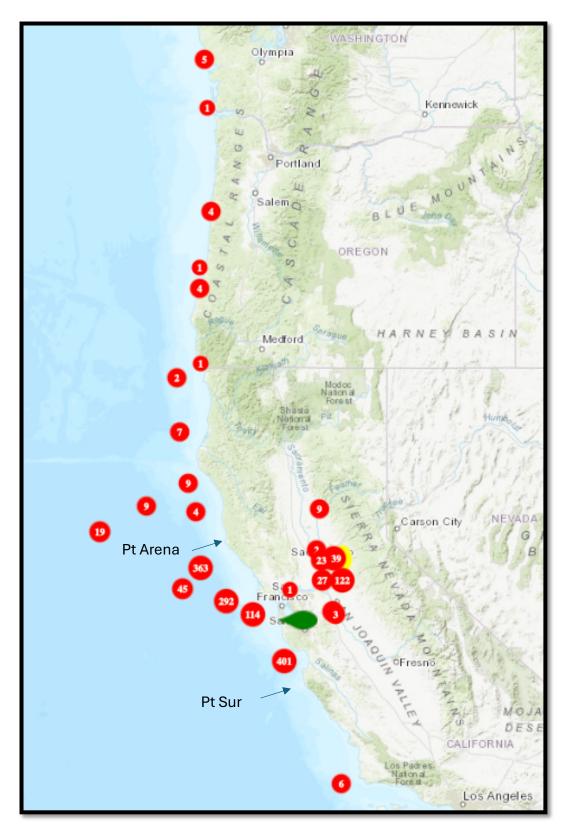


Figure 1. Returns of Mokelumne Hatchery release group #062058, 769,000 fall-run salmon brood year 2019 advancedsmolts, released in June 2020 to the coast in Half Moon Bay.



Figure 2. Returns of Mokelumne Hatchery release group #061484, 742,000 fall-run salmon brood year 2017, released in May 2018 to coast in Half Moon Bay.



Figure 3. Returns of Feather/Oroville Hatchery release group #061464, 388,000 fall-run salmon brood year 2017, released in June 2018 to coast at Fort Baker Minor Pt near Golden Gate.

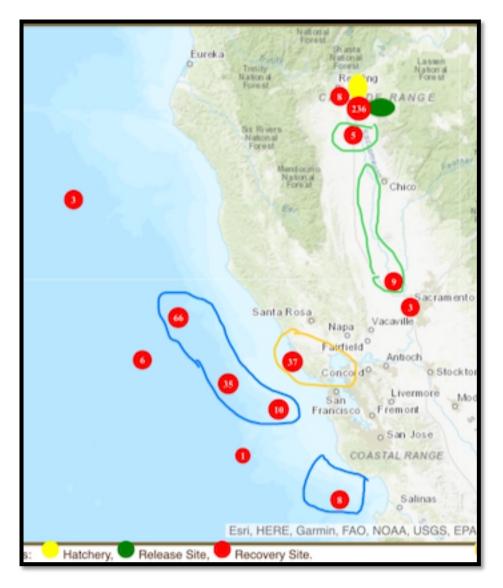


Figure 4. Coleman Hatchery release group #0562236, 453,000 fall-run salmon from brood year 2017, released in April 2018 at Coleman Hatchery. Main fishery harvest areas are circled.

Tom Cannon has degrees in fisheries and biostatistics from the University of Michigan. He is an fisheries population ecologist and biostatistician and has been involved in California fishery issues for more than 40 years. Over that period, Tom has been a consultant to the California Department of Fish and Wildlife, U.S. Bureau of Reclamation, National Marine Fisheries Service, US Fish and Wildlife Service, US Army Corps of Engineers, US Forest Service, State Water Contractors, Metropolitan Water District, CalFed Bay-Delta Program, State Water Resources Control Board, PG&E, California Striped Bass Association, California Water Information Network (C-WIN), Fisheries Foundation of California, Cal Trout, Karuk Tribe, California Sportfishing Protection Alliance, and NCGASA.

Tom has worked on East Coast, Great Lakes, Alaska, Pacific Northwest, and California fisheries projects and environmental assessments. He has worked on effects assessments on the Hudson River, Great Lakes, Missouri River, Columbia River, Klamath River, Puget Sound, Alaska, Central Valley rivers and Bay-Delta estuary.