



One Water and Stewardship Committee

Science Update – Salmon Update

Item 7b

May 8, 2023

Salmon Fishery Closure Draws Local and National Attention

“No California salmon: Fishery to be shut down this year”

-- Cal Matters, 3/15/2023

“Salmon fishing banned along California coast as population
plummets”

-- Los Angeles Times, 3/15/2023

“California Salmon Stocks Are Crashing. A Fishing Ban Looks Certain”

-- New York Times, 4/3/2023

Pacific Fishery Management Council

Council Develops Fishery Management Plan

- Council – state & tribal representatives, commercial & recreational fishing interests
- Management measures recommended to the National Marine Fisheries Service



Closure applies to Chinook salmon fishery south of Cape Falcon

California salmon stocks

Target stocks

- Klamath River Fall Chinook
 - declared overfished in 2018
- Sacramento River Fall Chinook
 - declared overfished in 2018; rebuilt in 2021

Protected stocks

- California Coastal Chinook
 - Threatened
- Sacramento River Winter Chinook
 - Endangered
- Central Valley Spring Chinook
 - Threatened



This map is for reference only and is not intended for use in navigation or fishery regulation.

2023 Preseason Conditions

Klamath River Fall Chinook

- 26,238 predicted potential spawners prior to fishing (goal 40,700)
- Max harvest rate of 10% when predicted spawners <54,267
- 3-year spawner abundance mean is 25,857 (<30,525 is considered overfished)

2023 Preseason Conditions

Sacramento River Fall Chinook

- Pre-season forecast of 169,000 salmon in ocean
- 122,000 – 180,000 target escapement
 - Escapement is the number of fish that "escape" the fishery to return to the rivers to spawn
- Spawner abundance below escapement floor of 122,000 in six of last eight years
- 3-year spawner abundance mean is 96,613 (<91,500 is considered overfished)

Chronic Forecast Bias

Sacramento River Fall Chinook

- Pre-season forecasts of salmon in the ocean have been higher than post-season estimates in 6 of the last 8 years by 41%
- Harvest rates estimated post-season higher than projected pre-season harvest rates by 31%
- Post-season estimates of escapement below pre-season forecasts in 7 of the last 8 years

Council Decision

Management alternatives

- Highly constrained fishery with risk of not meeting escapement goals and contributing to overfished status

OR

- Close fishery for 2023

"Given this information, both California & Oregon representatives from all sectors recommended a full closure of all Chinook directed fisheries before September 1."

– PFMC 03/06/23

Why were there so few salmon at sea this year?

Consecutive Years of Low Escapement & Poor Freshwater Conditions in Sacramento River

Spawning Escapement (t=0)	Incubation Temperature (Oct-Dec t=0)	February Median Flow (t+1)	Seabird Marine Predation Index (t+1)	Chinook Age in Fall 2023
2018: 71,689 (low)	11.7°C (poor)	21,700 cfs (high)	Near average	5
2019: 121,600 (met goal)	11.3°C (suboptimal)	6,030 cfs (very low)	Near average	4
2020: 100,100 (low)	11.5°C (poor)	6,015 cfs (very low)	Near average	3
2021: 73,230 (low)	13.0°C (very poor)	4,925 cfs (very low)	Near average	2

Table 3.2; 2022-2023 California Current Ecosystem Status Report

Salmon Recovery is Important

Build Capacity To Weather Future Droughts

- Sacramento and Klamath Chinook salmon stocks are in depressed state
- Drought is hard on salmon
- Little room for error
- Recovering salmon populations promotes reliability of the fishery, water supply, healthy waterways, and their cultural value

