



Klamath River Carcass and Redd Surveys – 2019 Summary

Synopsis: Annual fall-run Chinook Salmon carcass and redd surveys on the mainstem Klamath River are conducted jointly by the USFWS Arcata Fish and Wildlife Office (AFWO), Karuk Tribe of California, and Yurok Tribal Fisheries Program (YTFP). Surveys in 2019 began the week of October 6 (calendar week 41) and concluded December 4. Weekly mark-recapture carcass surveys were conducted by AFWO and YTFP crews from Iron Gate Dam to the Shasta River confluence. Weekly redd surveys were conducted by AFWO and Karuk Tribe crews from the Shasta River confluence to Wingate Bar, about seven miles downstream of Happy Camp, California.

Captures of fresh carcasses (Figure 1), weekly pre-spawn mortality (Figure 2), and redd counts (Figure 3) are compared to previous years' surveys in the following charts. Note that the numbers presented in Figures 1 and 3 are actual cumulative counts that have not yet been expanded into escapement estimates. 'Fresh' carcass numbers in Figure 1 merely indicate relative yearly abundance. At the end of the survey season the carcass mark-recapture data will be used to estimate escapement above the Shasta River using a hierarchical latent variables model. Redd counts will be doubled (i.e., one redd represents one adult female and one adult male spawner) to estimate escapement below the Shasta River confluence. *The data presented here are preliminary in nature and subject to revision.*

If you have any questions regarding this summary, please contact Steve Gough at (707) 825-5197.



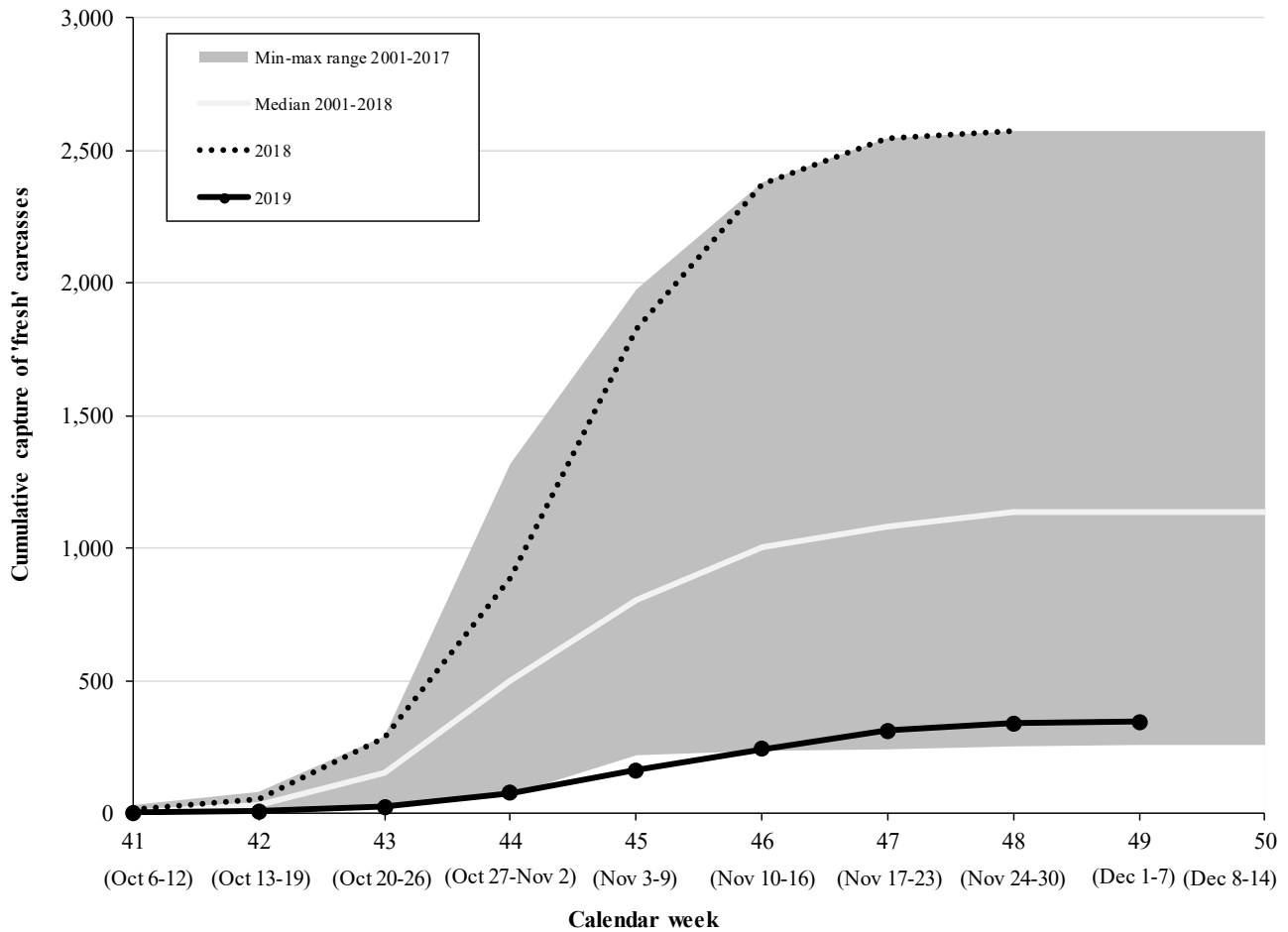


Figure 1. Cumulative count of ‘fresh’ (F₁- and D₂-condition) fall Chinook Salmon carcasses in the Klamath River from Iron Gate Dam to the Shasta River confluence in 2019 compared with 2001–2018. We use the number of fresh carcasses as a relative comparator of annual run size. These counts have not yet been expanded into an estimate of escapement. Note: Most of the carcass survey was completed during calendar week 48 but the survey was cut short due to extreme weather.

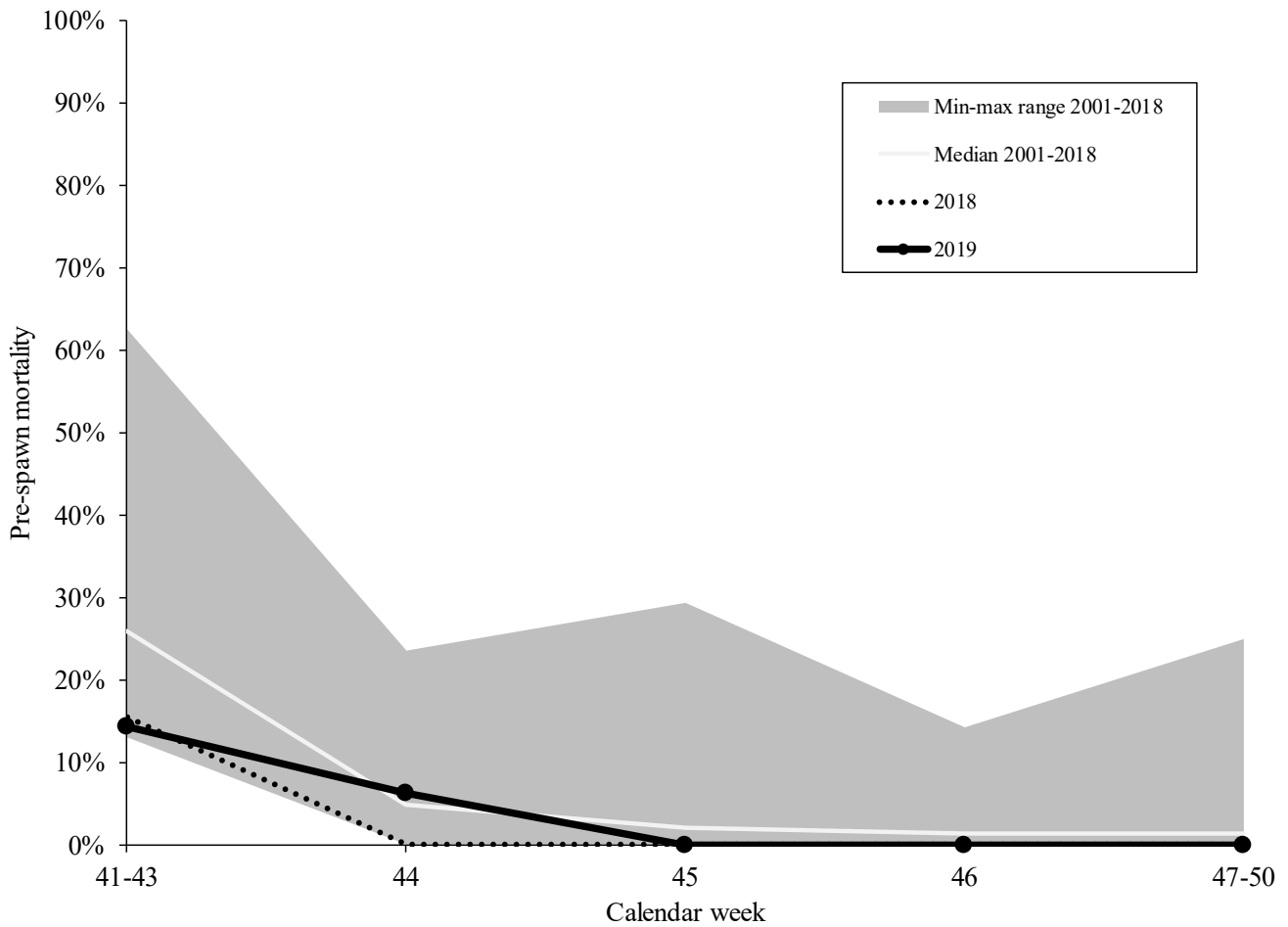


Figure 2. Weekly pre-spawn mortality from F1-condition female Chinook Salmon carcasses, Klamath River surveys in 2019 compared with 2001–2018. Calendar weeks 41–43 and 47–50 were combined since sample sizes were typically low in calendar weeks 41, 42, 48, 49, and 50, if surveyed. See Figure 1 for the dates defining this year’s calendar weeks.

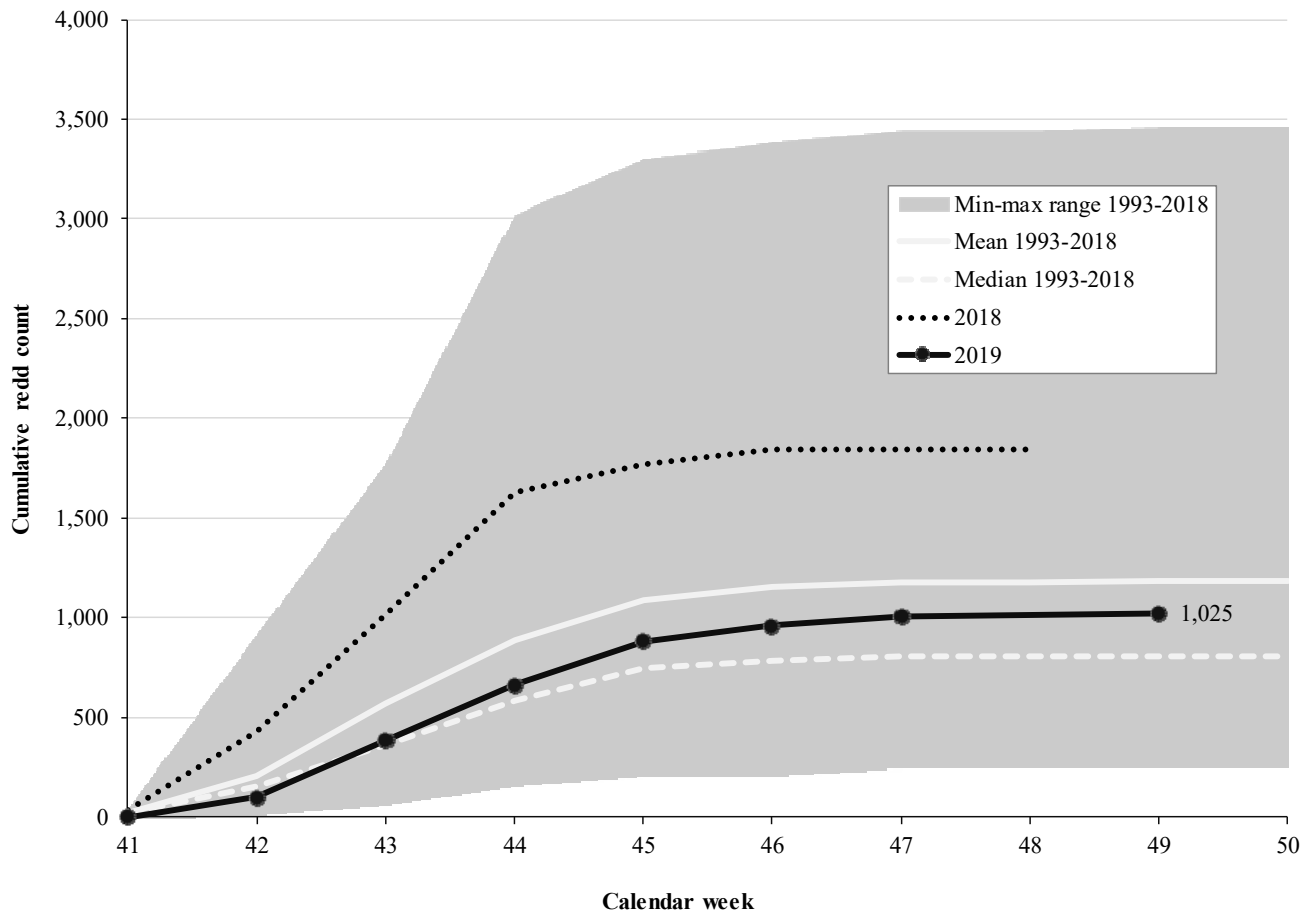


Figure 3. Cumulative count of fall Chinook Salmon redds in the mainstem Klamath River from Shasta River to Indian Creek in 2019 compared with 1993–2018. An additional 13 redds were counted between Indian Creek and Wingate Bar. See Figure 1 for the dates defining this year’s calendar weeks. Note: No redd survey was conducted during calendar week 48 due to extreme weather and the Thanksgiving holiday.