Adult Upstream

Objective: Estimate spring-run spawning population

Type: VAKI Riverwatcher

Location: Daguerre Dam

Times of operation: Year-round

Yuba River operates a video monitoring system near Daguerre Dam with two ladders (North and South). This dataset is considered to be a census for spring run chinook because mostly all spawn upstream of Daguerre Dam. Passage estimates using the adult upstream data have been modeled for 2004 – 2022. The modeling approach involves determining the run and interpolating for missing data.

Data is available in tables following sequential QA/QC processes and modeling:

Instantaneous passage records: data in this file form the base dataset for analyses and methodologies identified in Poxon and Bratovich (2020).

Uncorrected daily passage: data in this file represent the aggregation of the instantaneous records in instantaneous passage records to net upstream daily passage counts. Data undergo the count correction analysis presented in Poxon & Bratovich (2020). The results of the count correction analysis form the input to the run differentiation analysis.

Run differentiation is performed by splitting the dataset into three components (early migrating spring run, late migrating spring run, and fall run) and conducting an iterative analysis to find the differentiating date between spring and run as outlined in Poxon and Bratovich (2020). The Generalized Additive Model (GAM) used to interpolate missing values (i.e. when the video system was not working or during high flows) could not be applied for 2016-2017 due to a high number of outages and the north ladder was closed from February - September 2019, both of which are important context for data from those years.

Works cited

Poxon, B. and Bratovich, P. 2020. Lower Yuba River Vaki Riverwatcher Chinook Salmon Passage and Run Differentiation Analyses. Prepared by HDR for Yuba Water Agency.