Adult Upstream

Objective: Estimate spring-run spawning population

Type: VAKI Riverwatcher

Location: Near 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 - 2021 by Brian Poxon and Paul Bratovich. The modeling approach involves determining the run and interpolating for missing data.

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). A Generalized Additive Model (GAM) was used to interpolate missing values (i.e. when the video system was not working or during high flows) but could not be applied for 2016-2017 due to a high number of outages. Adipose fin clip rates were recorded as raw observations but are likely underestimating the contribution of hatchery fish to the population. Additionally, note that the north ladder was closed from February - September 2019.