



Oakdale Outmigration

Between February 19 and March 7, the trap sampled continuously and captured 195,246 Chinook which is 50% of the season total of 390,734 fish (Figure 1). Forklengths ranged from 26 to 79 mm with the exception of six yearlings captured ranging between 117 to 145 mm. Average forklength ($\mu = 39$ mm) is also increasing much faster than in previous weeks which is consistent with observations in previous sampling years (Figure 2).

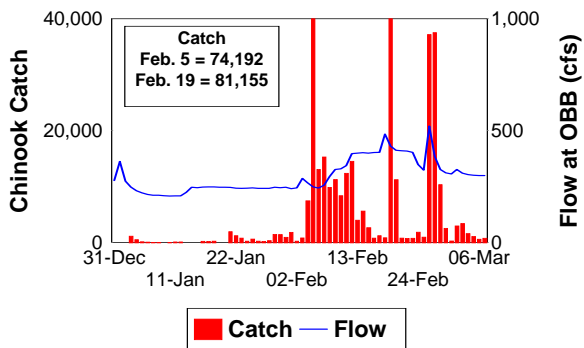


Figure 1. Daily Chinook catch at Oakdale and flow at Orange Blossom Bridge (OBB), 2003-2004.

Flow fluctuated during the sampling period due to release changes at Goodwin Dam (GDW) as well as from multiple precipitation events. Flows released from GDW gradually decreased from 500 cfs on February 21 to 200 cfs by February 27. Meanwhile, precipitation events occurred February 16-18, 21-27, and March 2 which resulted in increased flows and turbidity at Orange Blossom Bridge (OBB), as well as apparent corresponding increases in catch (Figure 1). Turbidity at Oakdale varied between 0.95 NTU and 18.8 NTU. Instantaneous water temperature at Oakdale ranged be-

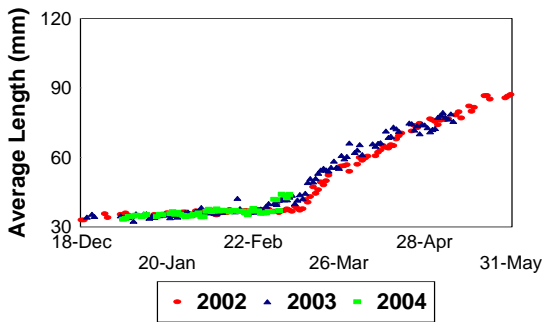


Figure 2. Daily average forklength of Chinook at Oakdale, 2002-2004.



Lamprey caught at Oakdale

At Oakdale, one trap efficiency test was conducted on March 2 with a resulting trap efficiency of 25.5%.

In addition to Chinook, ten *O. mykiss* (Age 1+) were captured at Oakdale. Forklengths ranged from 212 mm to 260 mm (Figure 3).

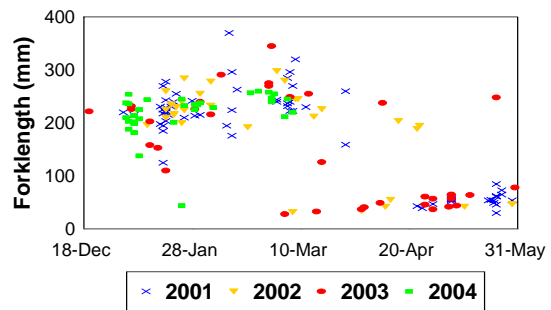


Figure 3. Forklengths of individual *O. mykiss* caught in the Oakdale trap, 2001-2004.



O. mykiss Captured at Oakdale



Caswell Outmigration

Between February 19 and March 7, trapping occurred 15 of 18 days and captured 32,192 Chinook which is 99.8% of the season total of 32,247 Chinook (Figure 4). Peaks in catch occurred following precipitation events (Figure 4). Forklengths ranged from 27 mm to 72 mm ($\mu = 38$ mm). Although forklengths are increasing at both Oakdale and Caswell, the percentage of catch comprised of Chinook in the 40-49 mm size class is greater at Caswell (19%) than Oakdale (10%), however, the percentage of catch more than 49 mm is greater at Oakdale (12%) than at Caswell (1%: Figure 5).

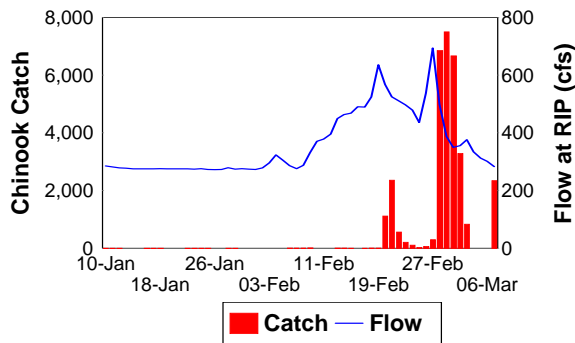


Figure 4. Daily Chinook catch at Caswell and flow at Ripon (RIP), 2004.

At Caswell, three trap efficiency tests were conducted including February 22, February 25, and March 1, and individual trap efficiencies were 12.1%, 7.5%, and 10.5%, respectively.

In addition to Chinook, five *O. mykiss* (Age 1+) were captured at Caswell and forklengths ranged from 220 mm to 252 mm ($\mu = 242$ mm).

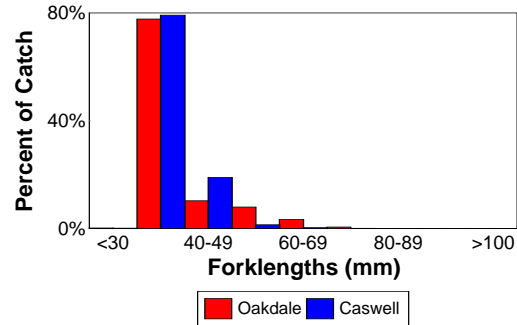


Figure 5. Percent of Chinook catch by size class at Oakdale and Caswell, January 19, 2004 - March 7, 2004.

This sampling period was punctuated with three rain events which corresponded with peaks in catch (Figure 4). Daily turbidity at Caswell varied between 4.3 NTU and 55.2 NTU. The highest turbidity was recorded on February 27 following three days of precipitation and high winds which also correspond with peak catch. Temperatures at Caswell were slightly warmer than Oakdale between 52°F and 57°F ($\mu = 54^\circ\text{F}$).



Example of turbid water at Caswell on March 3, 2004.



Unusual Captures at Caswell

On February 24th, a wood duck was found unharmed in the livebox and released.

On March 6th, a non-native turtle (a red-eared slider, *Trachemy scripta elegans*) was found in the livebox. Red-eared sliders are considered a nuisance species since they are known to outcompete native turtles, such as the western pond turtles (*Clemmys marmorata* spp.) found in the Stanislaus River which are State and Federal Species of Concern (California Natural Diversity Database, January 2004).



Female Wood Duck captured at Caswell.



Red-eared Slider Captured at Caswell.

You can find a “printable” version of this report at <http://www.stanislausriver.com/Outmigration.htm>