



Oakdale Outmigration

The trap sampled fourteen of twenty-one days between March 22 and April 11. A total of 2,419 Chinook were captured increasing the season total to 397,298 (Figure 1). Fork-lengths ranged from 30 mm to 95 mm ($\mu = 60.5$ mm), which is an average increase of 18.5 mm over the previous sampling period (Figure 2). Weights of Chinook sampled ranged between 0.2g and 10.2g ($\mu = 2.3$ g).



Top picture: Trap fishing in main flow of river channel. Bottom picture: Fisheries technician collecting data.

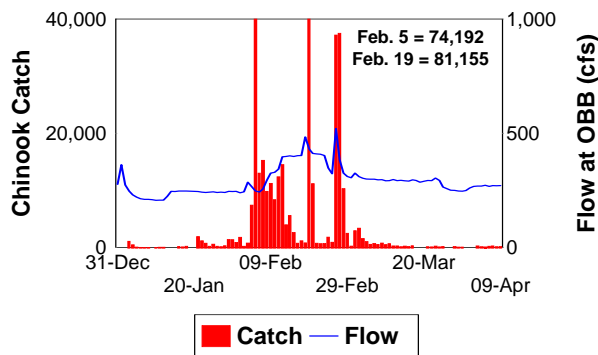


Figure 1. Daily Chinook catch at Oakdale and flow at Orange Blossom Bridge (OBB), 2003-2004.

Flow remained steady during the sampling period due to relatively constant releases of between 175 cfs and 232 cfs at Goodwin Dam (GDW). Flow at Orange Blossom Bridge (OBB) averaged 268 cfs. Turbidity at Oakdale varied between 1.4 NTU and 3.0 NTU. Instantaneous water temperature remained between 56°F and 58°F during the sampling period ($\mu = 58^\circ\text{F}$).

Three trap efficiency tests were conducted at Oakdale during the sampling period. One efficiency test was conducted on April 7 and consisted of 525 hatchery Chinook marked top caudal fin orange (TCO). Two efficiency tests were conducted on April 8 and consisted of 655 hatchery Chinook marked top caudal fin orange (TCO) and 233 wild Chinook marked caudal fin green (CFG). The three tests resulted in trap efficiency estimates of 27.4%, 27.0%, and 23.6%, respectively. The lower of the three efficiency estimates were wild Chinook salmon.

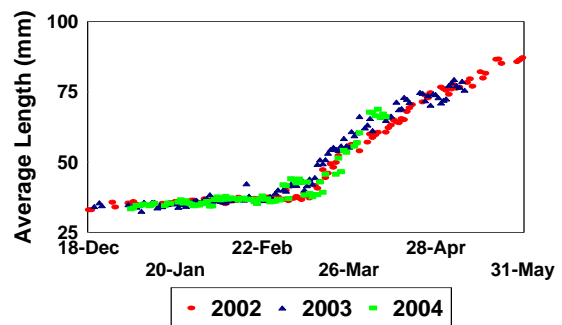


Figure 2. Daily average forklength of Chinook at Oakdale, 2002-2004.

In addition to Chinook salmon, one *O. mykiss* (Age 1+) was captured at Oakdale with a fork-length of 196 mm (smolt index: 4) and weighed 81.9 g.



Caswell Outmigration

Trapping occurred on eight of twenty-one days between March 22 and April 11. A total of 1,169 Chinook were captured, which is 3.2% of the season total (37,098; Figure 3). Forklengths ranged from 40 mm to 94 mm ($\mu = 60$ mm), which is an average increase of 10 mm over the previous sampling period (Figure 4). About half of all Chinook (48%) captured at Caswell during this sampling period were in the 50-59 mm size class, whereas, about half of Chinook captured at Oakdale were equally split into both 40-49 mm (28%) and 50-59 mm (28%) size classes (Figure 5). In addition, Chinook forklengths at Caswell this year are similar to those seen in 2002, and smaller than those recorded in 2003; whereas, forklengths at Oakdale are similar during all three years (Figures 2 & 4).

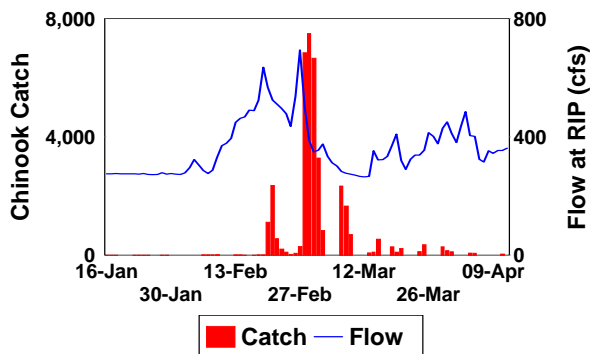


Figure 3. Daily Chinook catch at Caswell and flow at Ripon (RIP), 2004.

Daily average flow at Ripon remained between 315 cfs and 485 cfs ($\mu = 386$ cfs; Figure 4). Turbidity at Caswell remained fairly low varying between 3.6 NTU and 6.3 NTU ($\mu = 4.9$ NTU). Temperatures at Caswell remained warmer than Oakdale ranging between 59°F and 64°F ($\mu = 62$ °F).

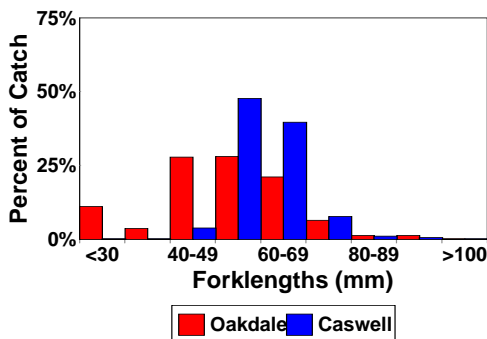


Figure 5. Percent of Chinook catch by size class at Oakdale and Caswell, March 22, 2004—April 11, 2004.

At Caswell, one trap efficiency test was conducted on April 30. Wild Chinook were released and recaptured with an estimated trap efficiency of 16.8%.

A 239 mm (smolt index: 5) *O. mykiss* (Age 1+) was captured at Caswell during the sampling period.



Example of bluegill captured at Caswell

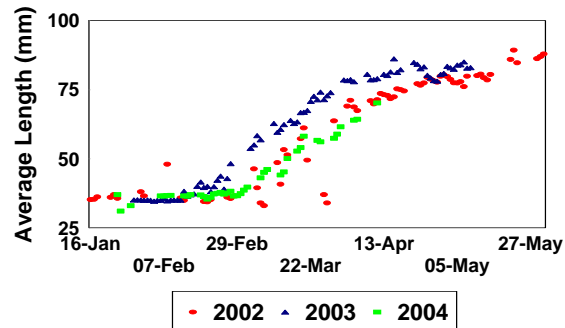


Figure 4. Daily average forklength of Chinook at Caswell, 2002-2004.