

Stanislaus River Weekly Report

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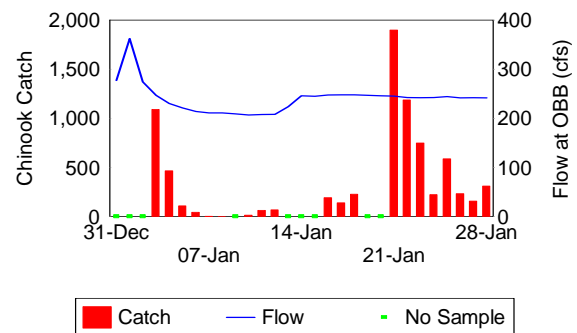


January 22-28, 2004 Report No. 3

Oakdale Outmigration

During the period of January 22 through January 28, the trap sampled every day and captured 3,447 Chinook increasing the season total to 7,762 (see figure). Size ranged between 29 mm and 65 mm ($\mu=35.4$ mm).

Flow at Orange Blossom Bridge (OBB) was maintained at 242 cfs during the entire sampling period. Instantaneous water temperature at Oakdale ranged between 47°F and 50°F, and turbidity ranged between 0.7 NTU and 2.0 NTU.



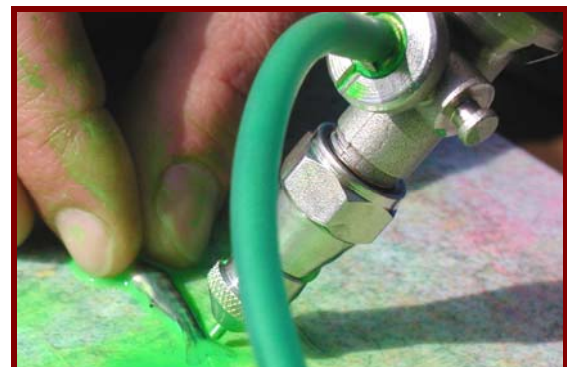
Chinook catch and Stanislaus River flow at Orange Blossom Bridge (OBB).



Pikeminnow captured at Oakdale entangled in plastic from a toy cap-gun.

The first trap efficiency test conducted this year began on January 24. A total of 488 Chinook were marked with a green photonic paint on their upper caudal fin (see pictures to the right). Marked fish were kept in net pens until being released the following evening at a site approximately one half mile upstream of the rotary screw trap. Results indicate that 185 of the 488 marked Chinook were recaptured, resulting in a 37.9%

Trap efficiency tests are conducted so that estimated numbers of migrating fish can be calculated. Estimated numbers are needed because the trap does not sample 100% of the river flow; therefore, only a percentage of fish migrating downstream are captured. The percentage of recaptured fish (i.e., trap efficiency) is applied to the daily fish counts which results in an estimated total number of fish moving past the trap during a given sampling period.



Top Picture : Photonic gun marking a Chinook. Bottom picture: Chinook marked green on upper caudal fin. The mark fades considerably within a few hours of marking.



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Caswell Outmigration

The Caswell trap was operated from January 22 through January 25 and again on January 28. The first three Chinook of the season were caught and forklengths ranged between 31 mm and 37 mm ($\mu=33.7$ mm).

Flow at Ripon (RIP) ranged from 272 cfs to 279 cfs and averaged 275 cfs. Instantaneous water temperatures remained between 48°F to 51°F, and turbidity ranged from 2.1 NTU to 2.5 NTU.

During this sampling period, non-salmonids included: one bluegill, two lamprey, and two white catfish.

Steelhead Recovery

On January 23, an 82 cm (32 inch) male *O. mykiss* carcass was recovered from the top of the Stanislaus River weir. Generally, adult resident trout do not exceed 500mm which indicates that this fish likely spent time in the ocean. Scale samples were collected to determine life history characteristics. For more information, see our Weir Newsletter No. 14 at www.stanislausriver.com/Updates. CDFG was notified and the fish is in the freezer.



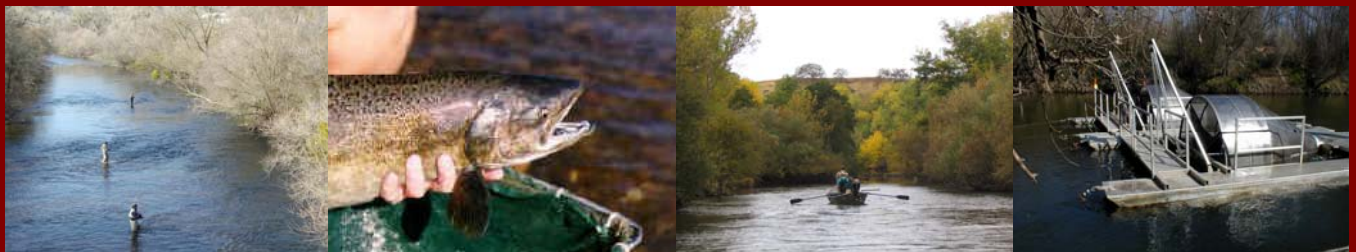
Large steelhead carcass found on the Stanislaus

Environmental Data

Winter water storage and snow pack levels influence the amount of water available for release during spring and summer months. An examination of past trends can provide a sign of what to expect in the upcoming outmigration season.

Water storage trends from 1990 to 2004 indicate that New Melones storage in early January has been greater than 50 percent of total reservoir capacity for the past eight years (see figure below). This year, New Melones storage is barely above 50% and is at its lowest capacity since 1996. During the five preceding years (1990-1995), reservoir storage was low and averaged below 25% capacity.

During this same 14 year period, snow pack fluctuated more randomly with highest snow pack levels occurring during years 1993, 1995, and 1997. Currently, snow pack is over the 14 year average and the highest recorded over the last 7 years.

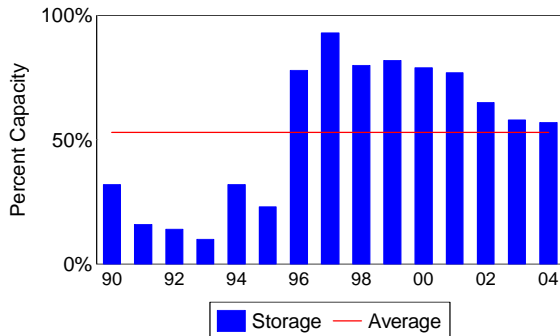


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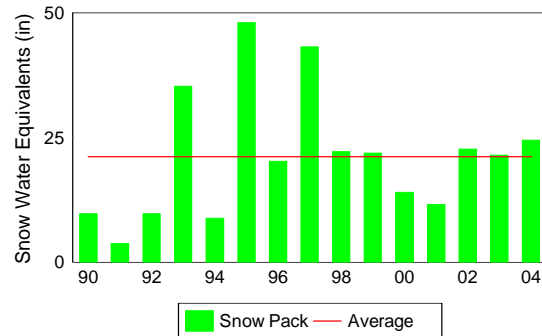
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Percent New Melones reservoir storage capacity in early January, 1990-2004. Note: reservoir storage values used for comparison were obtained from CDEC for January 6 of each year.



Snow pack levels in the Stanislaus River Basin in late January, 1990-2004. Note: snow pack values used for comparison are averages of six stations which were obtained from CDEC for January 28 of each year.

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