Chinook Impressions

Eel River Recovery Project
Late Lower Eel River Dive
12/05/13

Photos and Slide Show by:
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Dive in two lower Eel River pools was on 12/5 just prior to increased flow from Potter Valley Project reaching the lower river. Flow of 235 cfs at Scotia allowed opportunity for counting, photos and video.
Purpose of December 5 Dive

• Historic salmon counts at Benbow Dam found that half the Chinook salmon run passed upstream before December 1 and half afterward.

• Since 2013 low flow conditions extended into December, ERRP decided to see if we could document the late run of Chinook and capture video in lower Eel River pools.

• Because of limited dive team size, complete count on December 5 dive was not expected, but late run Chinook could be confirmed and video documentation using scuba gear might later be used to estimate abundance.
Scuba!

ERRP volunteer Jeff Wells has mastered capturing beautiful images salmon underwater with video. He was frustrated by having to go up and down to video fish in deep pools like the 12th Street. ERRP rented him scuba gear from Pacific Outfitters in Eureka and equipped him so that he could swim deep amongst the late run fall Chinook salmon. Jeff (r) gets his scuba gear ready as David Wagner of Fernbridge looks on.

We appreciate the discount given by Pacific Outfitters and the support of other community businesses.
Main Eel – Top of 12^{th} Street Pool

12/05/13

Flow at 235 cfs at USGS Scotia Gage
Volunteer Patrick Ruell getting ready to help count fish in 12th Street upstream side arm.

David Sopjes in the back of the 12th Street Pool in a dry suit, which is a very good strategy when the water is cold.
School of 24 Chinook salmon, 12 jacks and 2 adult steelhead in Upper 12th Street side arm.
Divers form line in 12th Street Pool to count but also herd fish. Jeff Wells was under the divers in the deepest part of the pool.
As divers moved to near River Lodge in a line, the water became cloudy indicating that they were pushing a school of Chinook salmon. And then they came into view.

Bright Chinook salmon visible in foreground, but school of Chinook salmon is obscured by sediment and algae stirred up by fish as divers advance.
Chinook adult female and jack salmon in 12th Street Pool. Scuba diver was able to swim forward out of the murky water with fish and good video will be available on ERRP website soon.
12th Street Pool
Holding Chinook Location
A total of 323 adult Chinook, 175 Chinook jacks and 88 coho salmon were counted in the 12th Street Pool along with 10 adult steelhead. There was evidence of more fish, but water temperatures did not allow census of full length of pool.
Three sturgeon were seen on 12/5 in 12th Street Pool ranging in length from 3 feet, four feet, and six feet or more. Most sturgeon in the Eel are green sturgeon, but the larger white sturgeon are also sometimes seen.

One 4 foot sturgeon was also sighted on 10/26 and 11/9.
Riffle Above the Van Duzen -
Eel River Convergence Pool
Van Duzen - Eel River Convergence Pool looking downstream with Jeff Wells and Dave Sopjes ready to dive.
Male Moves Up

Dave and Jeff ready for action. No scuba was necessary here because of shallow depths.
Female Chinook on redd in riffle at top of Van Duzen – Eel River Pool
12/5 Chinook in VD/Eel Pool
Striped bass running with school of Chinook
Two passes through pool lead to estimate of 275 adult Chinook, 75 jacks, 36 adult steelhead, 24 half pounders and 45 coho salmon.
Pikeminnow in foreground with steelhead adult at upper left. Coho and steelhead numbers will be analyzed using video.
What Did We Learn

- Late run of Chinook in the lower Eel River was clearly evident on December 5 with many fish in a very bright, fresh condition.

- The order of magnitude of run is in the low thousands at least, with number counted by small team only partial.

- Use of scuba to capture video in deeper pools is safe and feasible.

- Winter dives when flow conditions are low are feasible but water temperature was around lower limit for wetsuits and dry suits are recommended for future late season dives.

- Coho salmon and adult steelhead present as expected at lower numbers than Chinook.

- Three sturgeon (3 feet, 4 feet and one 6+ feet long) in 12th Street.

- The pilot use of scuba gear to get down amongst fish shows promise for helping cross check diver observations in deep pools.