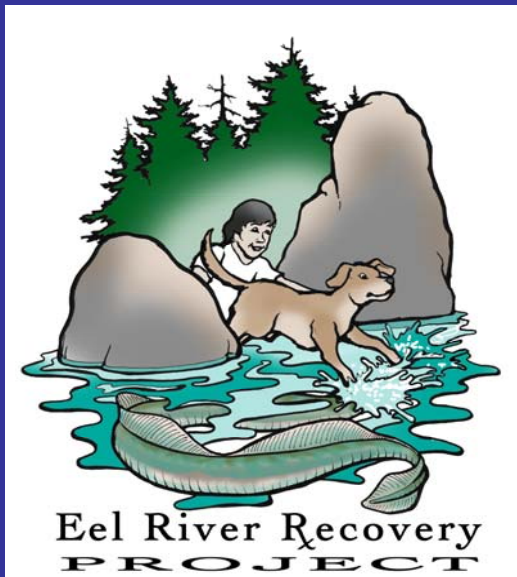


# Chinook Impressions

Eel River Recovery Project

Late Lower Eel River Dive

12/05/13



Photos and Slide Show by:

Patrick Higgins

ERRP Volunteer Coordinator

# Sponsored & Supported by:

**Salmon Restoration  
Association**



and

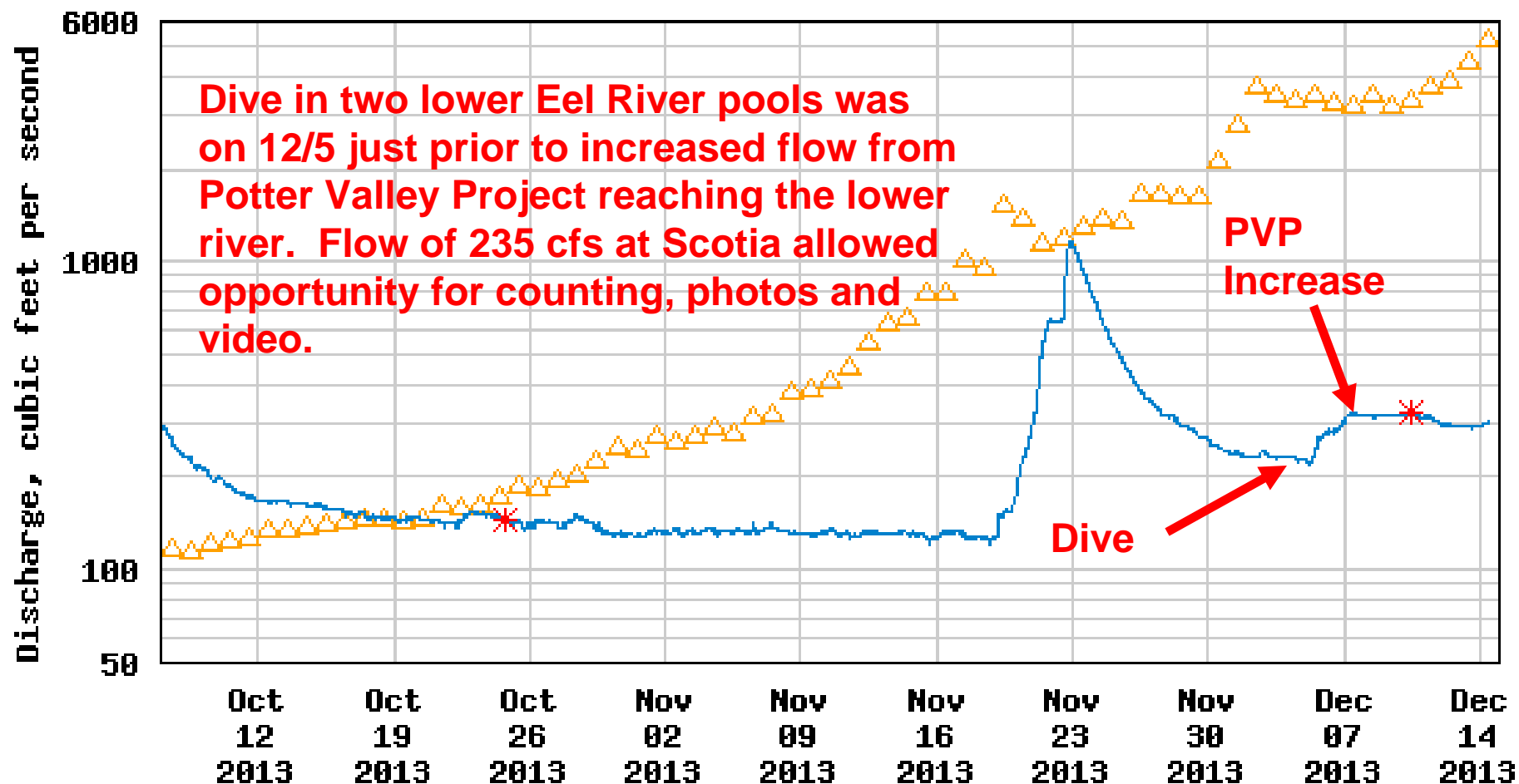
***Pacific  
Outfitters***





# Flow at Scotia

USGS 11477000 EEL R A SCOTIA CA



----- Provisional Data Subject to Revision -----

- △ Median daily statistic (101 years)
- \* Measured discharge
- Discharge

## 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 12<sup>th</sup> 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<sup>th</sup> Street Pool

12/05/13

Flow at 235 cfs at USGS Scotia Gage



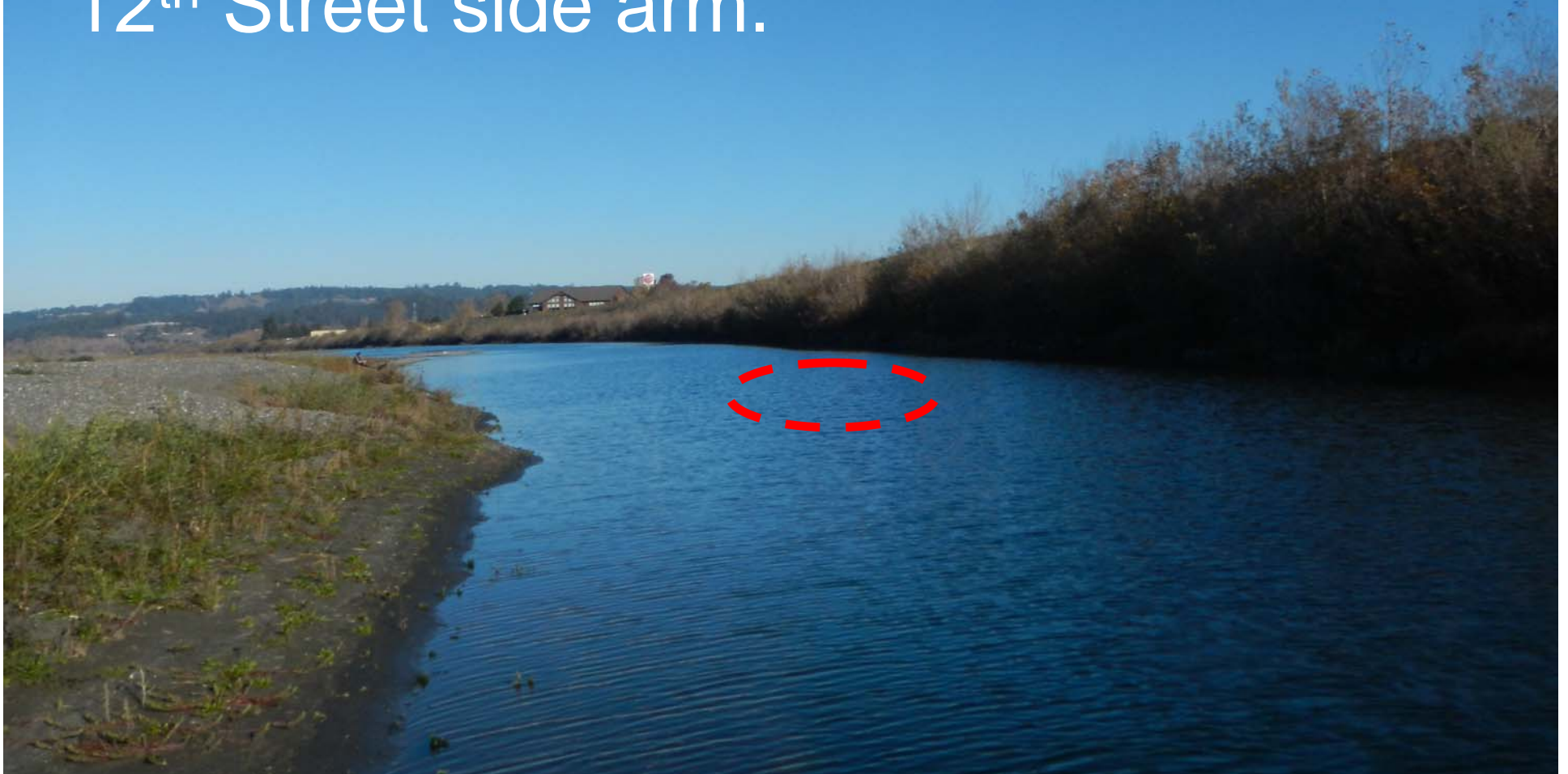
Volunteer Patrick Ruell getting ready to help count fish in 12<sup>th</sup> Street upstream side arm.



David Sopjes in the back of the 12<sup>th</sup> Street Pool in a dry suit, which is a very good strategy when the water is cold.



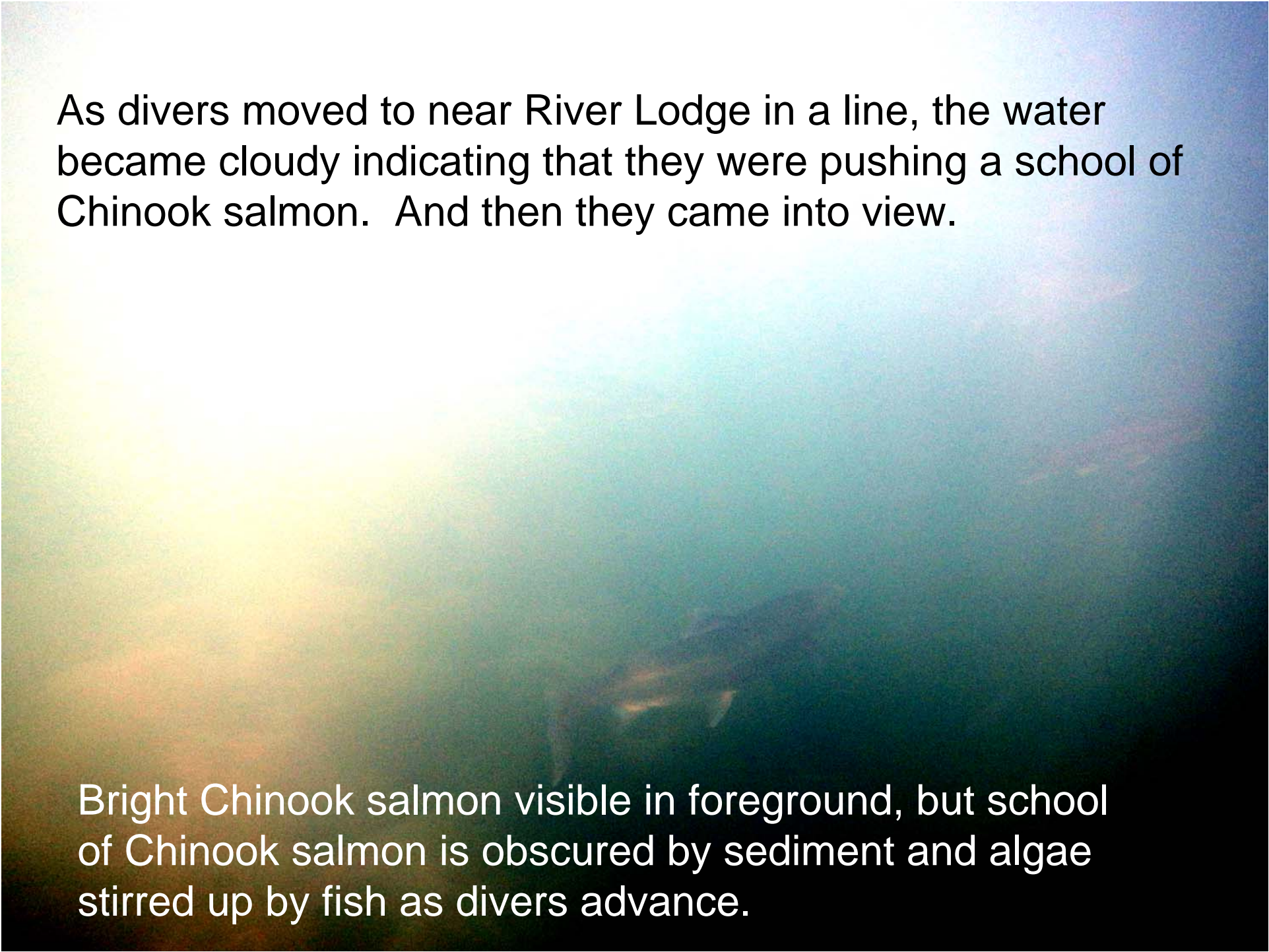
School of 24 Chinooks salmon, 12 jacks and 2 adult steelhead in Upper 12<sup>th</sup> Street side arm.





Divers form line in 12<sup>th</sup> Street Pool to count but also herd fish. Jeff Wells was under the divers in the deepest part of the pool.

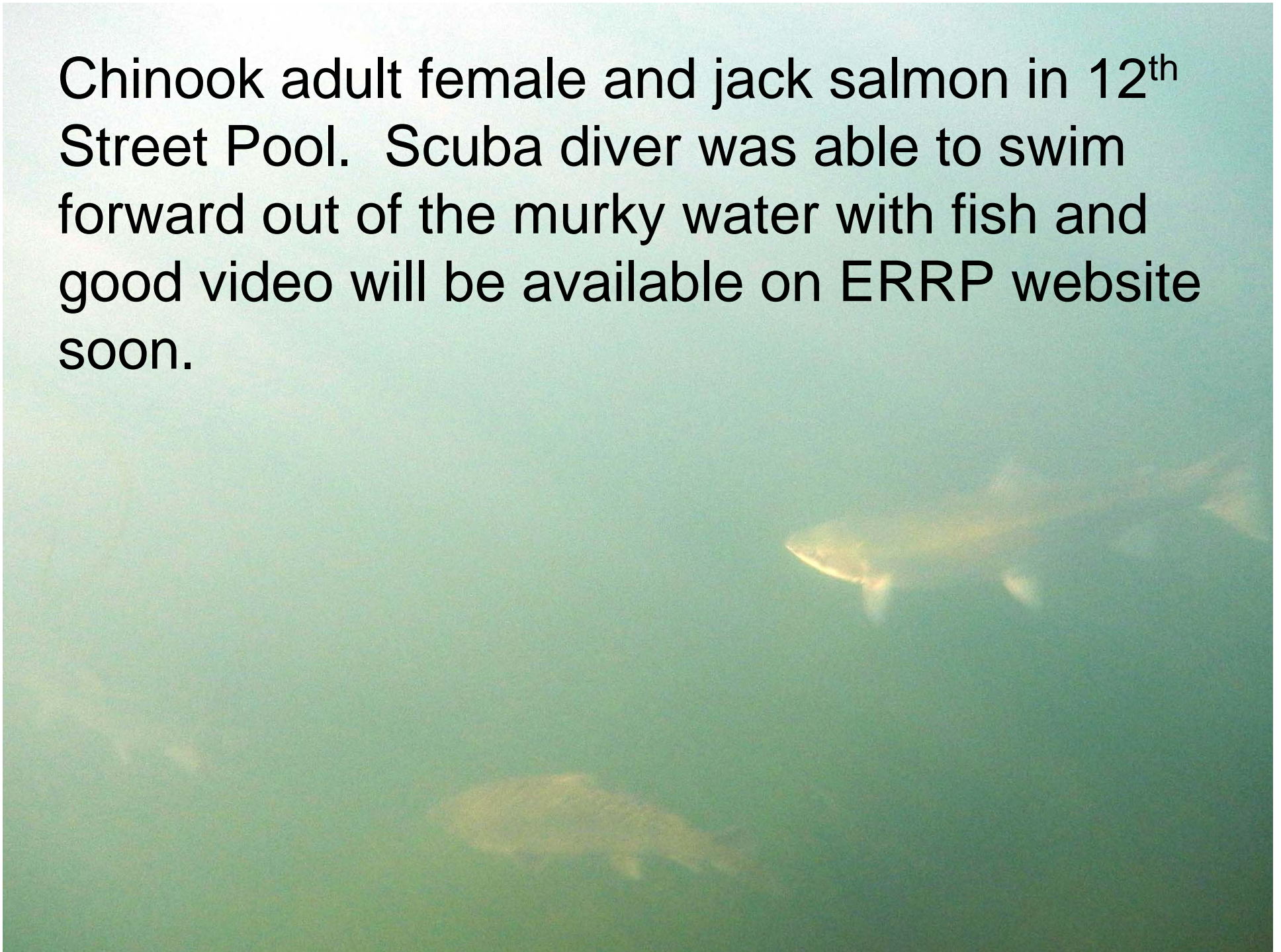


An underwater photograph showing a single Chinook salmon in the foreground, swimming towards the viewer. The water is very turbid and cloudy, with a yellowish-brown hue, likely due to sediment and algae stirred up by the fish. The background is dark and indistinct, suggesting a school of salmon is present but obscured by the water's murkiness. The lighting is dim, with a bright spot on the left side of the frame.

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.

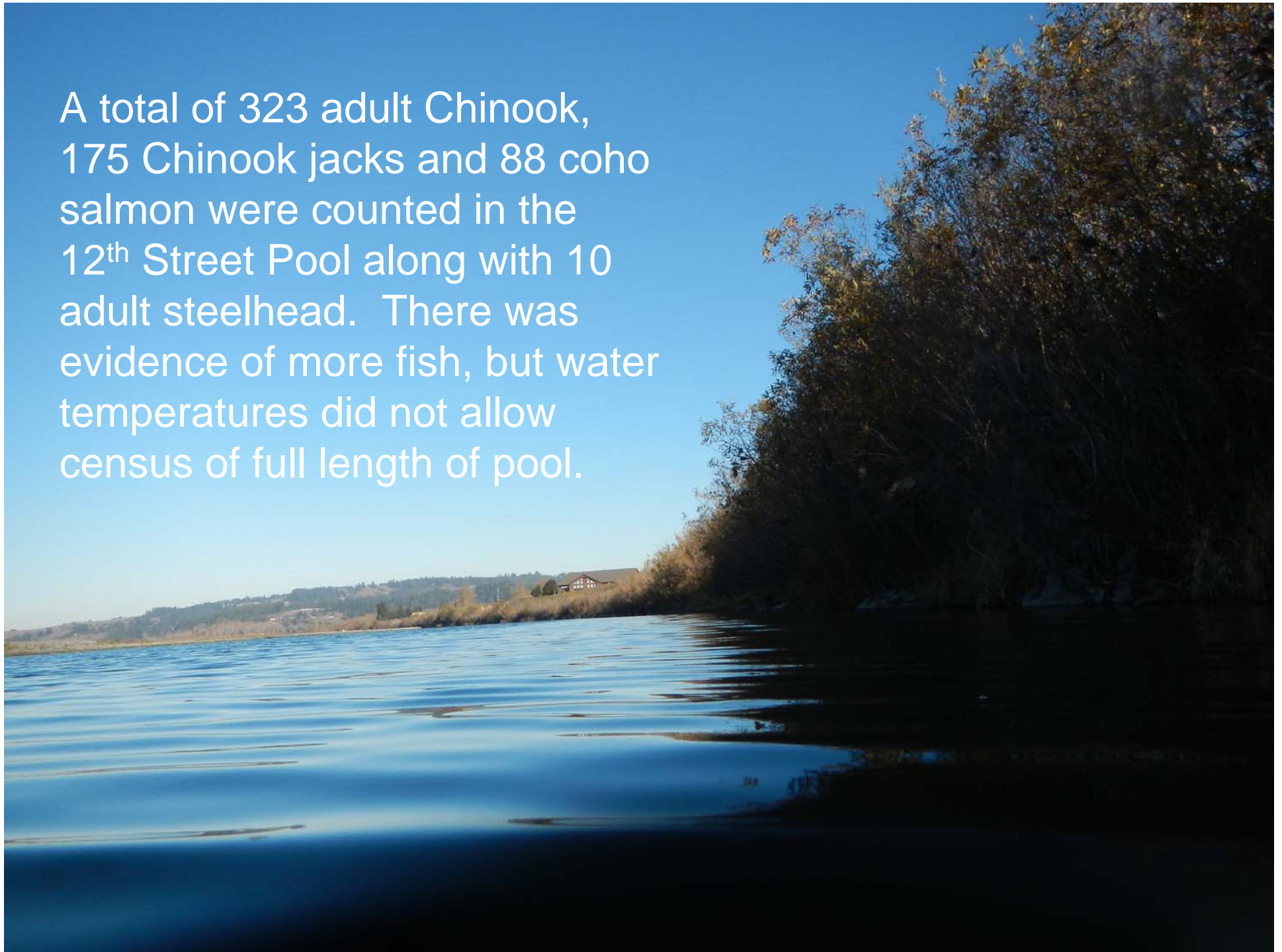
Chinook adult female and jack salmon in 12<sup>th</sup> Street Pool. Scuba diver was able to swim forward out of the murky water with fish and good video will be available on ERRP website soon.



# 12<sup>th</sup> Street Pool Holding Chinook Location



A total of 323 adult Chinook, 175 Chinook jacks and 88 coho salmon were counted in the 12<sup>th</sup> 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 12<sup>th</sup> 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.



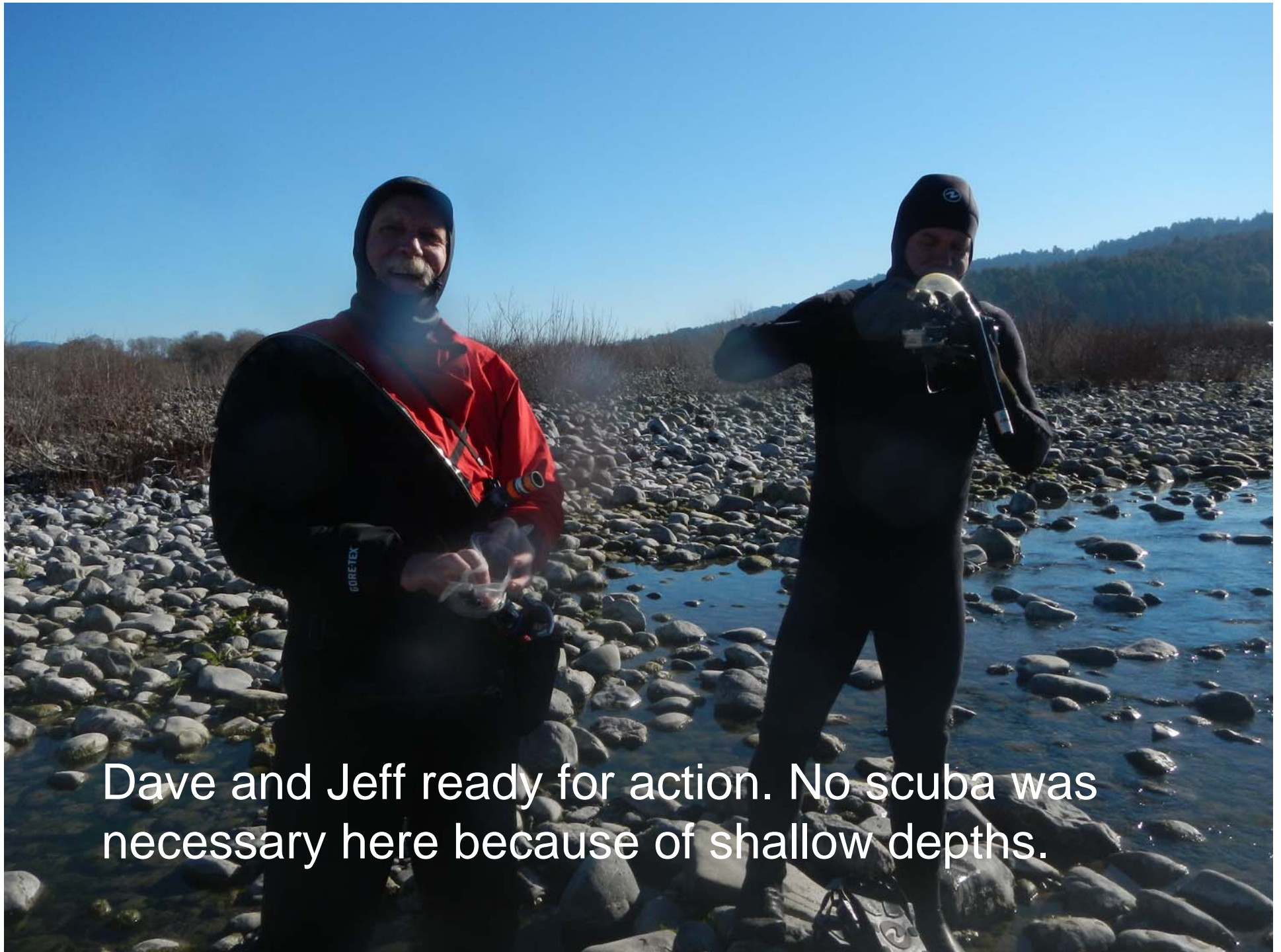
# Riffle Above the Van Duzen - Eel River Convergence Pool



Van Duzen - Eel River Convergence Pool  
looking downstream with Jeff Wells and Dave  
Sopjes ready to dive.

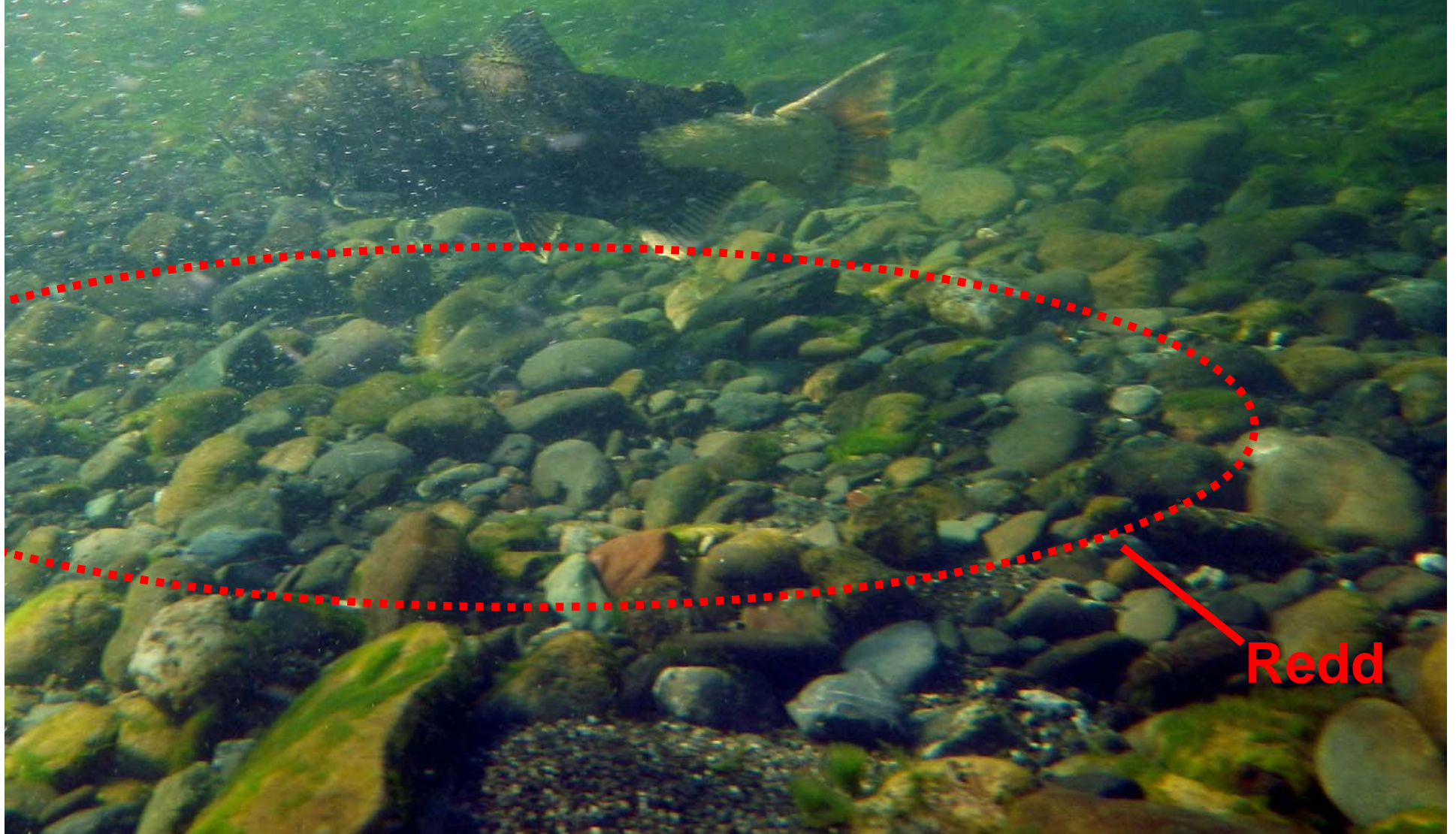




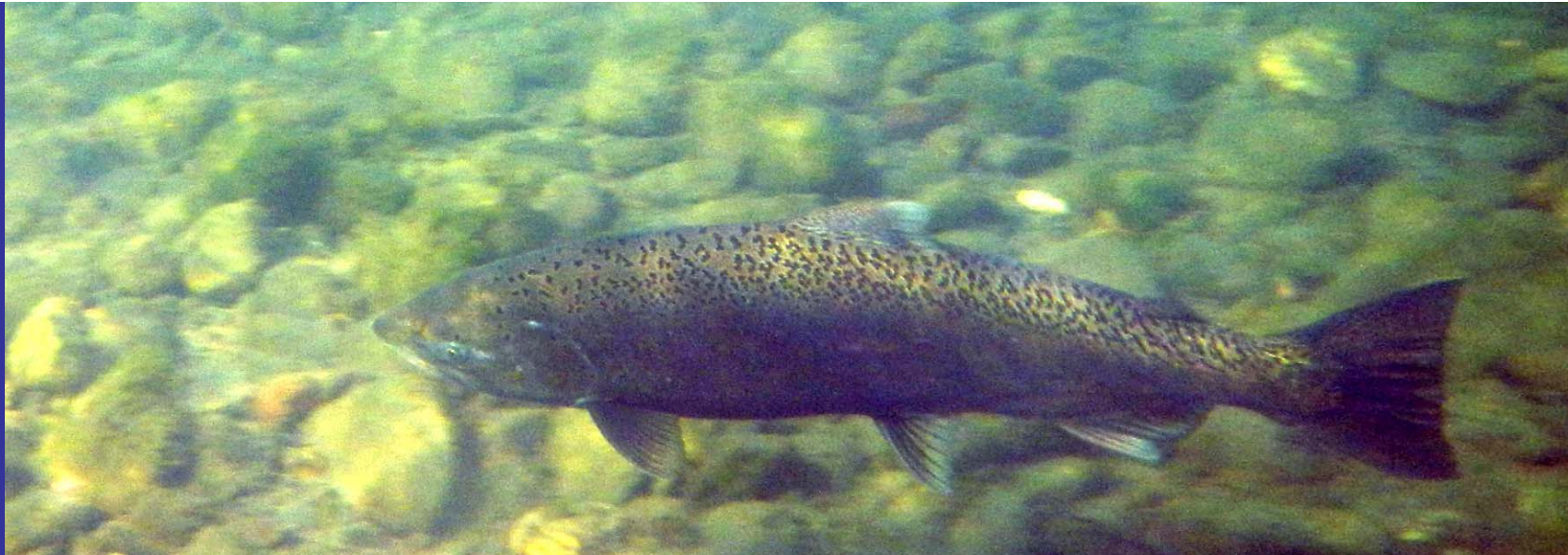


Dave and Jeff ready for action. No scuba was necessary here because of shallow depths.

Female Chinook on redd in riffle at top of  
Van Duzen – Eel River Pool



Redd



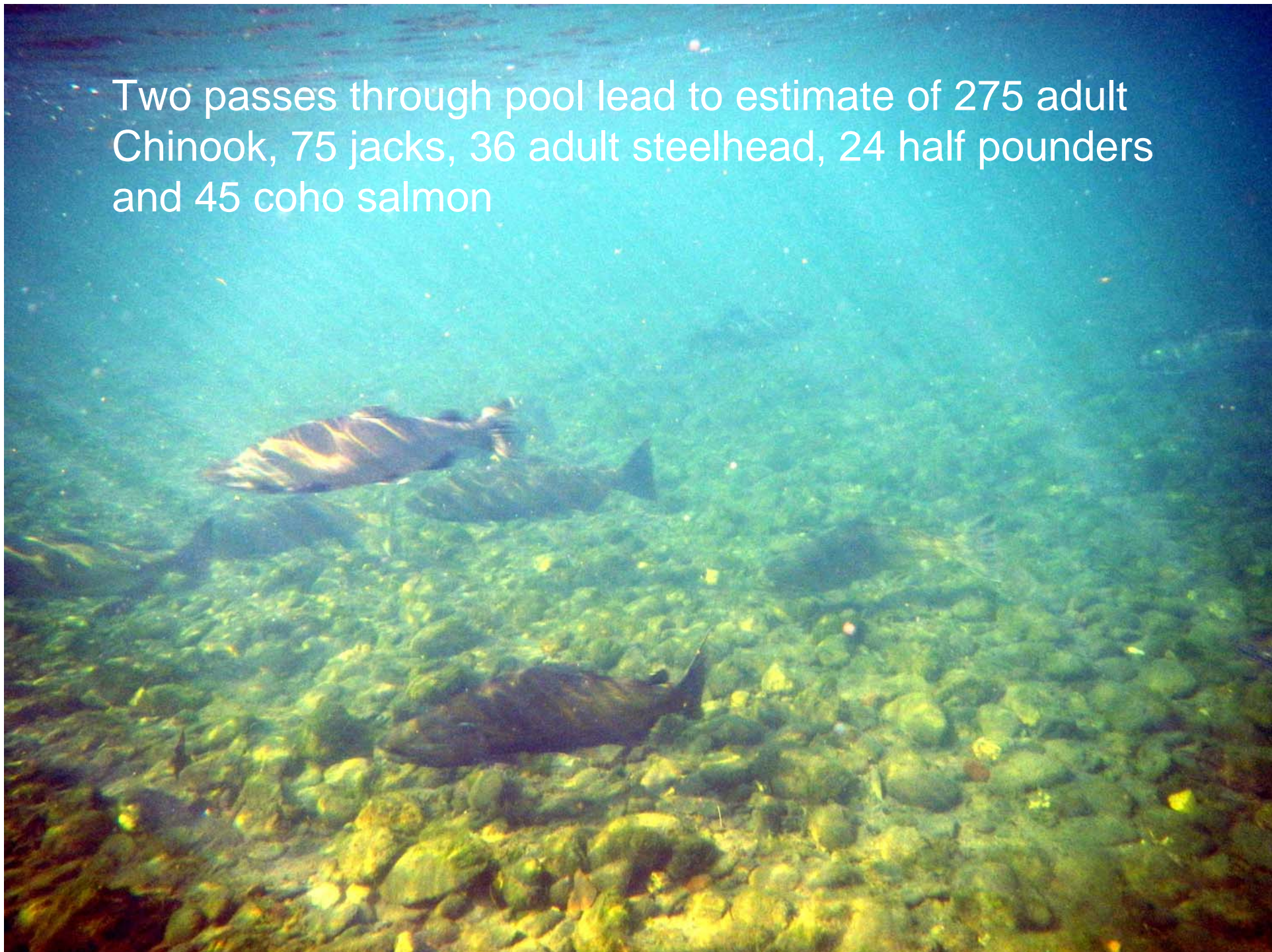
12/5 Chinook in VD/Eel Pool






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



An underwater photograph showing a steelhead adult fish in the upper left and a smaller pikeminnow in the foreground. The water is clear and blue-green. The steelhead is larger and has a more robust body, while the pikeminnow is smaller and more slender. Both fish are swimming in the same direction.

Pikeminnow in foreground with steelhead adult at upper left. Coho and steelhead numbers will be analyzed using video.



Salmon  
Recycling

# 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 12<sup>th</sup> Street
- The pilot use of scuba gear to get down amongst fish shows promise for helping cross check diver observations in deep pools.