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REF 90459

1998 Upper Redwood Creek Summer Steelhead Survey

- Dates: August 24th, 25th, 26th, 27th, and 31st.
- Location: Redwood Creek, Humboldt County, California
Bradford Creek downstream to Stover Creek.
- Distance: 26 miles
- Crew: Matt Smith*, Brian Young*, Casey Massei
(* denotes prior Redwood Creek summer steelhead survey experience)
- Method: Mask and snorkel direct observation, hand held thermometer.
- Itinerary: August 24th- Bradford Creek to Ayres Cabin. Matt Smith, Brian Young, Casey Massei.
August 25th- Ayres Cabin to Windy Creek. Matt Smith, Brian Young, Casey Massei.
August 26th- Windy Creek to Sweathouse Creek. Matt Smith, Brian Young, Casey Massei.
August 27th- Sweathouse Creek to Wiregrass Creek Matt Smith, Casey Massei.
August 31st- Wiregrass Creek to Stover Creek. Matt Smith, Casey Massei.

Summer Steelhead: Total number of adult Summer Steelhead observed over 16", were 21 (see attached map for locations). 7 other fish were observed under 16" which are believed to be summer steelhead and not resident trout. These fish ranged from 13" to 15" and were counted as 1/2 pounders.

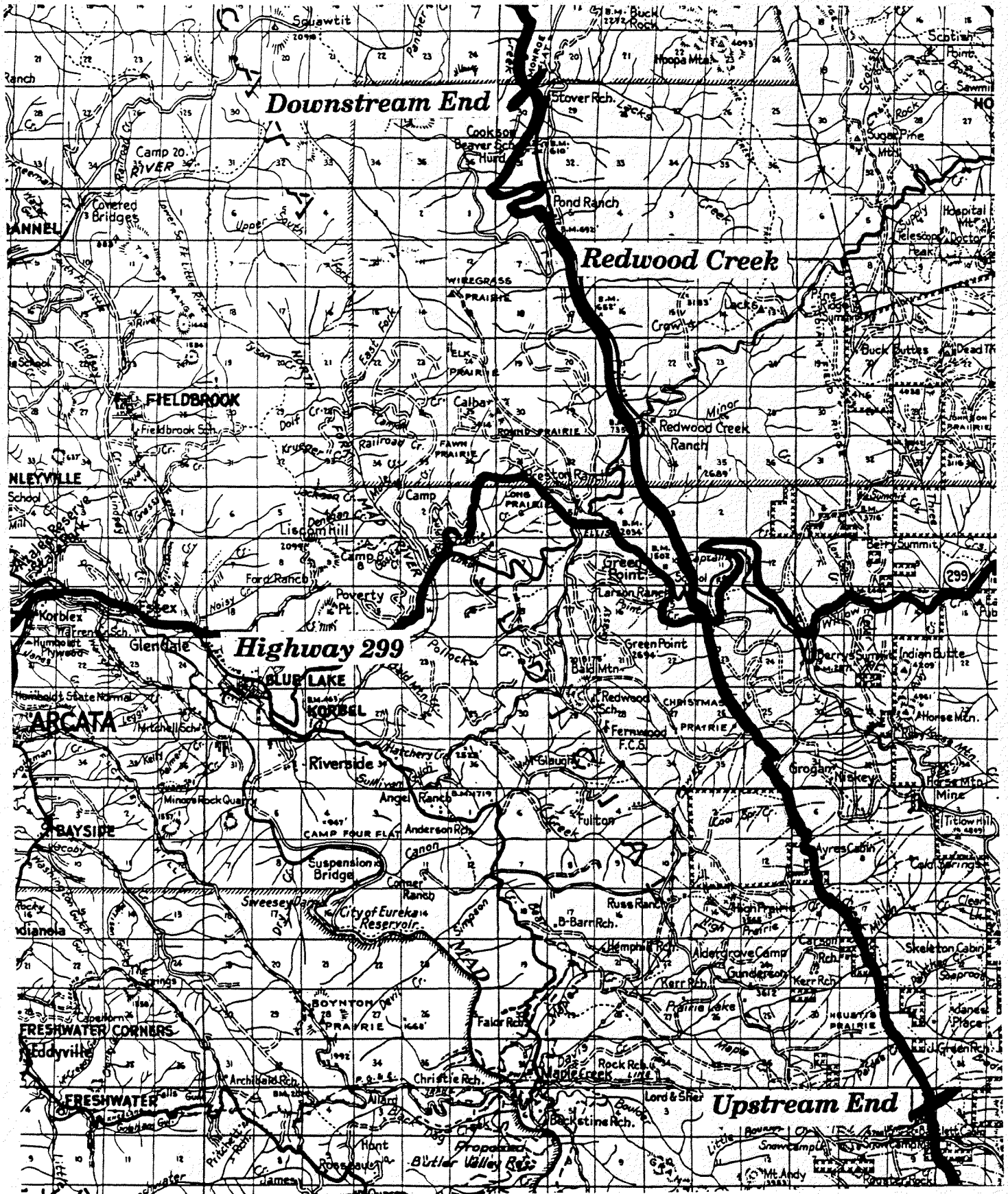
1/2 pounders: Total number of 1/2 pounders observed were 86. Juvenile steelhead densities appeared to be the same as 1997 numbers.

Table 1. Summer steelhead identified during the 1998 survey, including date of observation, estimated length of fish, pool location and description, and location in stream relative to habitat.

| <u>Date</u> | <u>Map Location</u> | <u>Estimated Length of SSHD</u> | <u>Habitat Location</u> |
|-------------|---------------------|---------------------------------|---|
| 8/24 | 1 | 16" | Under LWD structure, new site #2 downstream of Bradford Creek. Poor sighting, fish under structure. |
| 8/24 | 2 | 16" | Downstream of right bank corner pool downstream of lower Massei crossing. |

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Project Site Map



| <u>Date</u> | <u>Map Location</u> | <u>Estimated Length of SSHD</u> | <u>Habitat Location</u> |
|-------------|---------------------|---------------------------------|--|
| 8/25 | 3 | 16" | Downstream end of boulder rough upstream of cut-off meander. 4' deep pool in boulder rough, boulder cover. |
| 8/25 | 4 | 16" | Right bank boulder pool downstream of Cut-off meander Creek. |
| 8/25 | 5 | 16" | Left bank boulder pool downstream of Noisy Creek at O'hannons house. 1990 LWD structure is gone. Fish on left bank in boulder and overhanging veg. cover. Pool 5' deep. |
| 8/25 | 6 | 16" | Same as # 5. |
| 8/25 | 7 | 16" | Left bank bedrock corner pool downstream of O'hannons at upstream end of S-bends. 5' deep pool. Fish on bottom. |
| 8/25 | 8 | 18" | 2,000ft upstream of Windy Creek at Tilly's 1990 LWD site. Structure gone. Fish next to right bank large boulder that structure was anchored too. 4' deep scour pool. |
| 8/26 | 9 | 18" | 1,000ft downstream of Windy Creek at mid channel boulder pool downstream of Mason's cabin. Fish in the open in 3.5ft boulder pool. Fish darted under new recruited rootwad on boulder. |
| 8/26 | 10 | 20" | 1,000ft upstream of Hwy 299 bridge in bedrock trench pool. Fish at downstream end of pool and hid under boulder cover. |
| 8/26 | 11 | 20" | Upstream of O'kane gauging station in 6ft deep boulder pool. |
| 8/26 | 12 | 16" | First boulder pool downstream of O'kane gauging station. |
| 8/26 | 13 | 18" | First boulder pool downstream of Lupton Creek. Good LWD and depth cover. 8ft deep pool. |
| 8/26 | 14 | 22" | Upstream of Sweathouse Creek, upstream of left bank slide at Frankies cabin. Left bank boulder and rootwad pool. |
| 8/27 | 15 | 18" | Downstream of Sweathouse Creek at right bank bedrock pool. Fish on bottom by bedrock. |
| 8/27 | 16 | 22" | 2,000ft upstream of Minor Creek in right bank boulder pocket water. Fish holding under bubble curtain at upstream end of pool. |
| 8/27 | 17 | 24" | Left bank boulder pool just downstream of Redwood Valley Road bridge. Fish on bottom against 15ft diameter boulder on left bank. |
| 8/31 | 18 | 16" | Just upstream of old Simpson bridge upstream of Beaver Creek. Long straight reach upstream through valley had very few fish probably due to high temperatures. |
| 8/31 | 19 | 18" | Same as #18. |
| 8/31 | 20 | 18" | Downstream of Garcia Creek. Fish holding at upstream end of right bank boulder pool. |
| 8/31 | 21 | 16" | Lake at Adventist Camp. Fish at left bank large redwood stump and swam to middle of lake. Probably more fish but hard to survey due to poor visibility and large size. |

Table 2. Water temperatures on Redwood Creek and tributaries during the 1998 summer steelhead Survey

| <u>Date</u> | <u>Tributary</u> | <u>Time</u> | <u>Upstream Red Cr./</u> <u>Tributary Water</u> | <u>Downstream</u> <u>Redwood Creek</u> |
|-------------|-----------------------|-------------|--|---|
| | | | <u>Temp. °C</u> | <u>Temp. °C</u> |
| August 24th | Mainstem | 11:15 | 14° | N/A |
| | Bradford Cr. | | dry | |
| | Mainstem | 11:40 | 18° | N/A |
| | Lake Prairie Cr. | | dry | |
| | Mainstem | 13:15 | 17.5° | 18° |
| | Minon Cr. | | 15.5° | |
| | Mainstem | 15:50 | 20.5° | 17° |
| | High Prairie Cr. | | 15° | |
| | Mainstem | 16:10 | 20.5° | 20.5° |
| August 25th | L.B. trib. U.S. Ayres | | 14.5° | |
| | Mainstem | 12:00 | 18.5° | 18° |
| | Six Rivers Cr. | | 14° | |
| | Mainstem | 15:30 | 20° | 18.5° |
| | Cold Springs Cr. | | 14° | |
| | Mainstem | 15:40 | 20° | N/A |
| | Cut Off Meander Cr. | | dry | |
| | Mainstem | 16:50 | 21° | 21° |
| | Emmy Lou Cr. | | 18.5° | |
| August 26th | Mainstem | 17:15 | 20° | N/A |
| | Squirrel Tail Cr. | | dry | |
| | Mainstem | 17:30 | 20° | 18.5° |
| | Noisy Cr. | | 14° | |
| | Mainstem | 11:00 | 17.5° | 17.5° |
| August 27th | Jena Cr. | | 14.5° | |
| | Mainstem | 11:30 | 18° | N/A |
| | Windy Cr. | | dry | |
| | Mainstem | 9:00 | 17° | N/A |
| | Fern Prairie Cr. | | dry | |
| August 27th | Mainstem | 9:50 | 17° | N/A |
| | O'Hanniels Cr. | | dry | |
| | Mainstem | 10:20 | 17° | |
| | Lupton Cr. | | 14° | |
| | Mainstem | 11:35 | 19° | 21°(lake) |
| | Captains Cr. | | 19° | |
| | Mainstem | 14:00 | 21° | N/A |
| | Sweathouse Cr. | | dry | |
| | Mainstem | 14:40 | 23° | 21° |
| | Santa Fe Cr. | | 16° | |
| | Mainstem | 15:30 | 25° | 23° |
| | Loin Cr. | | 15° | |
| | Mainstem | 16:30 | 24° | 23° |
| August 31 | Minor Cr. | | 19° | |
| | Mainstem | 17:00 | 23° | 23° |
| | Wiregrass Cr. | | 16° | |
| | Mainstem | 11:20 | 21° | N/A |
| | Moon Cr. | | dry | |
| | Mainstem | 13:45 | 24° | 24° |

| <u>Date</u> | <u>Tributary</u> | <u>Time</u> | <u>Upstream Red Cr./</u> | <u>Downstream</u> |
|-------------|------------------|-------------|--------------------------|----------------------|
| | | | <u>Tributary Water</u> | <u>Redwood Creek</u> |
| | | | <u>Temp. °C</u> | <u>Temp. °C</u> |
| August 31 | Toss-up Cr. | | 17° | |
| | Mainstem | 15:15 | 25° | 22° |
| | Molasses Cr. | | 17° | |
| | Mainstem | 15:30 | 23° | 23° |
| | Pilchuck Cr. | | 16° | |
| | Mainstem | 16:15 | 26° | 26° |
| | Beaver Cr. | | 20° | |
| | Mainstem | 17:00 | 25° | 25° |
| | Weepy Cr. | | 19° | |
| | Mainstem | 17:35 | 25° | 25° |
| Sept. 1 | Cashmere Cr. | | 16° | |
| | Mainstem | 17:50 | 23° | 21° |
| | Garcia Cr. | | 16° | |
| | Mainstem | 10:30 | 19° | 19° |
| | Roaring Gulch | | 15.5° | |
| | Mainstem | 12:00 | 19.5° | 19.5° |
| | Lee Cr. | | 16.5° | |
| | Mainstem | 12:55 | 20.5° | 20° |
| | Karen Cr. | | 16° | |
| | Mainstem | 14:30 | 23° | 23° |
| | Stover Cr. | | 17° | |

Field Notes:

Similar to previous surveys, juvenile numbers were lower downstream of Cool Springs Creek. Juvenile and adult fish were practically non-existent downstream of Beaver Creek, presumably due to the high 26°C temperatures. The few cold water imputes through this reach were separated from the mainstem by gravel bars reducing their ability to lower mainstem temperatures. This survey was conducted in conjunction with a cold water survey contract funded through the Ca State Restoration Program. For additional information, please see the attached final report for the cold water survey.

As observed in 1996 and 1997 significant channel changes resulting from the previous winters high flows were evident. Many of the point source slides were much worse than in 1996.

The two road failures in the Lake Prairie drainage during the 1995-96 winter had dramatic effects on High Prairie Creek and Redwood Creek. All of the woody debris and vegetation was scoured out of the Lake Prairie Creek channel by a debris torrent caused when two roads failed which were both dams for large ponds. A mile of Redwood Creek downstream of Lake Prairie Creek had the substrate turn orange, apparently from the high iron content of the sediment in the ponds. This discoloration was still evident during this 1998 survey.

Other species observed during survey were yellow legged frog, mountain lion, racoon, gopher snake, black bear, white tailed deer, merganser, kingfisher, blue heroin, pacific giant salamander, and newts. Observed 1 dead 15" steelhead with scratch marks.

Redwood Creek Map

