REF 91610

Dec. 21, 1992

To : Files (FM-Scott River, Siskiyou Co.)

From : Yreka Fisheries Unit

Subject : Adult Summer Steelhead/Spring Chinook Snorkeling Surveys

On August 13th and 14th, 1992 snorkeling surveys were made of the lower 15.9 miles of the Scott River. Primary purpose of the survey was to determine the presence or absence of adult summer steelhead and/or spring chinook. Reports of adult salmonids seen in Beaver Creek during the summer of 1991 and 1992 and Scott River during the summer of 1991 prompted the survey.

Survey crew members consisted of five Fish and Game employees (Eric Gerstung, Mike Rode, Dennis Maria, Mike Weaver, and Laurie Gordon) and three volunteers (Ewell Baker, Kyle Cooper and Felice Pace). Mr. Baker and Mr. Cooper assisted on Aug. 13 and Felice Pace on August 14.

During the two-day survey Scott River temperatures below Kelsey Creek ranged from 21°C (69.8°F) to 28.5°C (83.3°F).

Visibility ranged from a low of about 4 feet to a maximum of ten feet. The variation was due to large accumulations of fine sediment brought down from the Moffett Creek drainage during a major rainstorm event in late June of this year (1992). As a result of the reduced visibility some of the larger, deeper pools required more thorough inspection with some diving necessary to ascertain whether adult salmonids were present.

Six suction dredge operations were noted from about 3 miles above Scott Bar to the Klamath River confluence. Some minor turbidity was noted below two dredges operating at the time of the survey. One of the operations was suspected of being illegal (using an oversize dredge intake) and was reported to the local warden. Several days later a citation was issued to the operator of that illegal dredge.

No adult salmonids were observed during the survey period although many juvenile salmonids, presumably steelhead, were noted. Most of the juvenile salmonids were young-of-the-year fish with a number of yearling and older salmonids also seen. Most of the salmonid sightings were from Boulder Creek to just below Tompkins Creek with progressively fewer salmonids noted the further downstream survey crews proceeded. Relatively high stream temperatures in the lower river are believed to be principally responsible for the reduced salmonid fish densities in the lower stream sections surveyed. All dive crews noted many of the salmonids being lethargic and looking pale-yellowish (a sign of heat stress). Approximately a half-dozen salmonids were found dead.

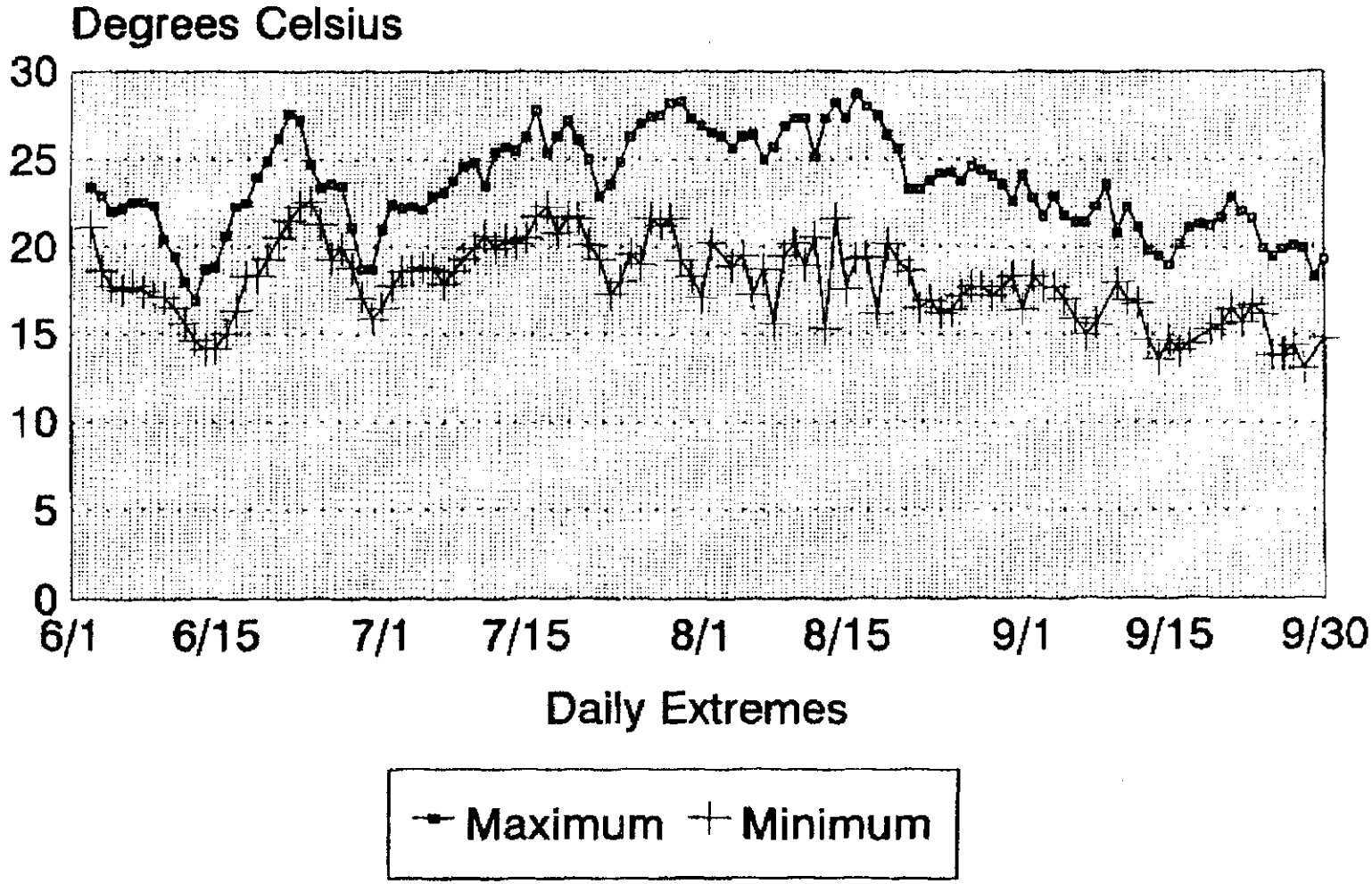
A variety of fish species were observed and reported by survey crews. Fish observed included, in order of relative abundance, speckled dace (extremely abundant), roach (very abundant), steelhead/RT (many), suckers (many), sculpin (many), brook stickleback (7),coho (several), green sunfish (2) and bluegill (1).

Quite a few dead and dying fish were also observed primarily within the lower 10 miles of the Scott River including mostly dace, roach, sculpin and all 7 of the observed brook stickleback. Brook stickleback were first noted and confirmed in the Scott River during the summer of 1991. The lower river sightings provide the first evidence that brook stickleback are quite widespread throughout the Scott River system and have likely entered the Klamath River. Brook stickleback sightings to this time had been limited to the Scott River from just above Young's Dam to Shackleford Creek and in its major tributaries (Shackleford Crk., Mill Crk., Kidder Crk, Etna Crk., Patterson Crk. and French Creek).

The US Forest Service (Fort Jones Ranger District) has been collecting continuous temperature data from the Scott River below Scott Valley. The temperature data collected in recent years indicates stream temperatures during summer months are commonly reaching levels known to be extremely deleterious to salmonids (>85° F). Observations from this most recent survey help substantiate that a serious threat to salmonid existence is occurring as a result of these high stream temperatures. With the relatively high summer temperatures in the lower Scott River it is very unlikely that adult summer steelhead or adult spring chinook will be able to tolerate lower river conditions and survive any summer holdover attempts.

Dennis R. Maria
Fishery Biologist
-Yreka Unit

Water Temperatures - Summer 1992
Scott River below Scott Bar



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Daily Means

Klamath River Basin WATER YEAR - 1992
Scott River Sub-basin, Scott River below Scott Bar
Scott River Ranger District, Klamath NF, Siskiyou County
Instrument: RYAN TempMentor 1.0/hour/sample

Temperature - Degrees Celsius, Water Year October 1991 to September 1992
Daily Mean Values

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	18.3	23.2	19.2
2	---	---	---	---	---	---	---	---	---	20.0	23.2	20.2
3	---	---	---	---	---	---	---	---	22.5	20.3	22.2	19.4
4	---	---	---	---	---	---	---	---	20.7	20.2	21.4	19.6
5	---	---	---	---	---	---	---	---	19.9	20.0	22.0	19.1
6	---	---	---	---	---	---	---	---	19.8	20.5	22.1	18.3
7	---	---	---	---	---	---	---	---	20.0	20.4	22.0	18.0
8	---	---	---	---	---	---	---	---	19.9	21.1	21.3	18.7
9	---	---	---	---	---	---	---	---	19.6	21.9	22.6	18.1
10	---	---	---	---	---	---	---	---	18.8	22.3	23.6	19.3
11	---	---	---	---	---	---	---	---	17.7	22.0	23.5	19.2
12	---	---	---	---	---	---	---	---	16.8	22.4	23.2	18.5
13	---	---	---	---	---	---	---	---	15.6	22.7	23.2	16.9
14	---	---	---	---	---	---	---	---	15.9	22.8	24.7	16.5
15	---	---	---	---	---	---	---	---	16.4	23.4	24.2	16.4
16	---	---	---	---	---	---	---	---	17.6	24.6	24.3	16.9
17	---	---	---	---	---	---	---	---	19.1	23.8	24.2	17.4
18	---	---	---	---	---	---	---	---	20.3	23.3	23.1	17.1
19	---	---	---	---	---	---	---	---	21.0	24.1	22.9	18.0
20	---	---	---	---	---	---	---	---	22.0	23.6	21.9	18.2
21	---	---	---	---	---	---	---	---	23.2	22.4	20.5	19.2
22	---	---	---	---	---	---	---	---	24.3	20.8	19.7	19.0
23	---	---	---	---	---	---	---	---	24.6	20.1	20.0	18.8
24	---	---	---	---	---	---	---	---	23.5	21.3	19.8	17.9
25	---	---	---	---	---	---	---	---	22.2	22.5	19.7	16.3
26	---	---	---	---	---	---	---	---	21.6	23.4	19.6	16.7
27	---	---	---	---	---	---	---	---	21.6	24.1	20.5	16.9
28	---	---	---	---	---	---	---	---	20.0	24.2	20.8	16.6
29	---	---	---	---	---	---	---	---	18.0	24.6	20.3	15.6
30	---	---	---	---		---	---	---	17.1	24.3	20.4	16.9
31	---		---	---		---		---		23.7	20.1	
Mean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.7	22.2	21.9	18.0
Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.6	24.6	24.7	20.2
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	19.6	15.6

Instantaneous Peaks
Maximum 28.7 on August 16 Minimum on

Average 7 day maximum temperature
27.62857 on August 16, 1992