State of California

Memorandum

NOV 4 '91

To : Mr. Robert Klamt
North Coast Regional Water
Quality Control Board
1440 Guerneville Road
Santa Rosa, California 95403

Date November 1, 1991

From : Department of Fish and Game - Region 1
601 Locust Street, Redding, California 96001

Subject : Update of the North Coast Region's Water Quality Assessment

Attached are our field biologist's responses to your request for "detailed background information" on waters recommended by DFG as having water quality problems. Because of numerous demands on their time, these do not include nearly as much detail as we would like. In many instances, our recommendations were made on the basis of general knowledge, but we have no actual field measurements.

Please direct any specific questions to the responsible biologist:

Eel River drainage: Larry Preston - (707) 445-6493

North Coast streams: Dave McLeod - (707) 445-6493

Upper Klamath drainage: Dennis Maria - (916) 842-3249

David A. Hoopaugh

David A. Hoopaugh
Associate Fishery Biologist

DAH:js:hoop2

To: Dave Hoopaugh
From: Dave McLeod

Re: Water Quality Assessment

Per your request, here are a few pieces of information on various streams north of the Mad River:

North Fork Ah Pah Creek-
June 1986 survey. Watershed unstable, spawning limited by silted gravels.
May 1987. Electrofished 500 feet once = 5 CTC, 2 SH YOY

Mainstem Ah Pah Creek-
Sporadic spawning counts 1983, 84, 85. Three redds total, 1 coho carcass.
May 1987. Electrofished 950 feet once = 18 SH/CTC YOY
Oct. 1989. Highway 101 bypass devastation. Increased sedimentation.

South Fork Ah Pah Creek-
June 1986 survey. Salmonids averaged 5-10/100 feet of stream.
June 1987. Electrofished 200 feet once = 1 coho, 23 SH/CTC YOY.
Index area population estimates, biomass =:
August 1988. Coho = 0.31/m2, SH = 0.13/m2
August 1989. Coho = 0.72/m2, SH = 0.02/m2

Gilbert Creek-
Subsurface flow in vicinity of mouth each year.
Flow under 101 bridge 7/17/81 = 0.9 cfs.
Flow under 101 bridge 8/20/80 = 0.14 cfs.

Klamath River-
Nothing current on mainstem.

Luffenholtz Creek-
5/2/68 = 2.2 cfs near diversion
9/20/68 = 1.3 cfs near diversion
6/19/69 = 3.68 cfs 2500 feet above mouth

McGarvey Creek-
1981 survey. Estimated substrate 20% sand, 20% silt in a 1/4 mile section, 1 1/4-1 1/2 miles above mouth.
Eight carcass surveys in winter 1983/84 = 0 spawners.
8/22/84 = 0.96 cfs 1 1/2 mile above the mouth.
May 1987. Electrofished 850 feet once = 2 coho, 6 SH, 5 CTC YOY.
Index area population estimates, biomass =:
August 1988. Coho = 0.3/m2, SH = 0.48/m2
August 1989. Coho = 0 SH = 0.40/m2

McGarvey Creek (cont.)
Oct. 1989. Highway 101 bypass devastation. Increased sedimentation.

Mill Creek near Trinidad-
10/2/78 = 0.25 cfs 100 yards upstream from the mouth.

Omagar Creek-
1980 survey. 800 feet 1 1/2 miles above mouth = electrofished 12 SH, 4 CTC. 450 foot section above that = 2 SH/RT, 4 CTC all age 1+.
1981 survey. A 1/3 mile section 1 1/2 miles above the mouth, estimated substrate 40% silt, 20% sand.
1983 survey. "Limited SH spawning habitat". Estimated substrate 15% silt, gravel severely compacted and angular.

Peacock Creek-
4/02/68 = 5.38 cfs 3/4 mile above mouth.
8/16/76 = 2.63 cfs " " " " below diversion.
8/16/77 = 0.38 cfs " " " " above diversion.
8/16/77 = 0.11 cfs " " " " below diversion.
7/24/78 = 0.25 cfs " " " " below diversion.
8/11/86 = 0.32 cfs " " " " above diversion.
8/11/86 = 0.03 cfs " " " " below diversion.

Redwood Creek-
Redwood National Park has all kinds of info on the degraded habitat. In reports. Still recovering from 1964 flood.

Redwood Creek estuary-
Same for depressed fish population.

Rowdy Creek-
8/1/58. Water 85 degrees 1 1/2 miles above mouth. Stream drying. Water 71 degrees 2 miles above mouth. Water 79 degrees 3 miles above mouth.
7/25/72. Lower 3/4 miles subsurface.
8/18/78. Mentions streamflow subsurface in lower end. Mouth dry most if not all years.

Smith River-
Not much info on mainstem.

Trinity River-
Not much info on mainstem in this office that is quick to find.

State of California — The Resources Agency

Memorandum

To : Dave Hoopaugh, ES

Date : Oct. 21, 1991

From : Department of Fish and Game , Larry Preston

Subject: Water Quality Assessment for Eel River

OCT 2 5 1991

A summary discussion of supporting evidence for USFWS and CDFG ranking the Eel River as having problems in the area of degraded habitat, high water temperature, and low flow levels.

A summary discussion of supporting evidence for USFWS and CDFG ranking the Eel River as having problems in the area of degraded habitat, high water temperature, and low flow levels.

The information on the Eel River and Eel River Estuary is extensive. Stream survey files are voluminous and describe a watershed basin composed of highly erodible soil types resulting in mass wasting of main channels and tributaries alike. Most of the habitat degradation was exacerbated by land use activity and severe flood flows in 1964.

A description of salmonid habitat conditions is available for Sprowl Creek and Redwood Creek, both tributaries of the south fork Eel River. The Sprowl Creek survey described pool degradation of 24-26% from sediment. The average percent fines >0.85 mm found in the gravel samples was 23.7%. Water temperatures were about 65°F.

The sediment volume of three Redwood Creek pools was 8%, 13%, and 21%, respectively from upper to lower sample location. Water temperature was adequate at the upper reaches, but lower stream water temperatures were as high as 81°F.

The best evidence available supporting the degradation of the Eel River system is historical photographs. These are not all available at DFG. Many are available at County Public Works, Soil Conservation, and Historical Archives. For example, there is

photographic evidence of a loading dock at Port Kenyon several miles up the Salt River, Eel River Estuary. The channel is currently silted, shallow and choked with riparian vegetation.

The first regulation restricting angling during periods of low fall flows was implemented November, 1979. Photographic records and file notes indicate fish passage problems on the lower Eel River as far back as 1976 and attempts to dredge and bulldoze channels were made in an attempt to provide passage for salmon to swim upstream.

Using Criteria by Thompson (1972) Determining Stream Flows for Fish Life a flow of 350 cfs was determined to passage to fish in the lower Eel River. USGS records show the relationship between each main artery of the Eel River system. When flow is 350 at Scotia which provides passage, The south fork Eel River is about 40 cfs which is impassable to salmon and steelhead. The regulation closes the Eel River for most of October and parts of November because of low flows. A regulation change was proposed to extend the low flow closures through winter because of low flow conditions in drought years.

Stream survey files describe intermittent flow conditions as a result of aggraded stream channels.