Big Bar Ranger District
China Creek, T.6N., R.7E., Section 19
August 27, 1985
Surveyors: Paul Renoud, Gary Rensink

China Creek was surveyed on foot from above barrier B1 (a formidible 20' falls located 100 feet above the mouth) approximately 3 miles upstream to tributary T6. At this point, flow of 0.6 c.f.s. was split evenly between the main channel and the tributary, and the stream became very small. China Creek is a Class II stream since it has sufficient flow to exert a moderate influence on New River water quality.

This small (1.6 c.f.s.), perennial stream flows in a westerly direction through steep, mountainous terain with a moderately dense Douglas-fir, digger pine, scrub oak overstory. Side slope gradient ranged from 30% to vertical. Stream gradient ranged from 6-15% and averaged 9%. Average stream width and average channel width were 30' and 8', respectively.

Fish habitat was poor. Pool:riffle ratio averaged 1:4 with 5% "A" and 15% "B" pools. Most good quality pools were concentrated within the first 0.5 mile of stream. Pools in the lower reaoh were formed primarily by bedrock. In the upper reach, the smaller, shallower pools were formed by boulders and rocks. Maximum pool width and length were 12' and 40' in the lower reach; 10' and 20' in the upper reach. Pool diameter averaged 13' in the lower reach, 9' in the upper. Medium to poor in pool shelter was provided by banks and surface turbulance plus rocks, logs and vegetation. Canopy cover averaged 90%. Vegetation within the inner gorge was dense. Alder, oak and dogwood provided the majority of cover along with bigleaf maple and ohinquapin, plus oooasional pacific yew in the upper watershed. ~~Darmera~~ and ~~Aralia~~ were abundant. Hazelnut, vine maple and ash were also present throughout the drainage.

Moss, ~~Nostoa~~ and algae were common. Numbers of aquatic food organisms, primarily caddisfly with mayfly and some stonefly, averaged 20/ft in the lower reach and 24/ft in the upper.

Rainbow trout was the only species observed. Numbers of adults (ranging in length from 2-8", with 3" average) averaged 11/100' of stream. Fry density averaged 10/100' Spawning areas were sparse throughout the entire section surveyed. Suitably-sized spawning gravels were present only in the tails of a few of the larger pools. There was also evidence of siltation and compaction.

Water temperature was 57'F (air temperature 55'F) at 1000 hours under clear skies. Water quality was excellent with no noticable turbidity. Stream bank and channel stability as rated by the ~~Stream and Channel Stability Evaluation~~ was "good" (47 in the lower reaoh; 75 in the upper), with bank cutting scour-deposition and mass wasting occurring in the upper reach.

No water diversions were seen, although an exposed 100 foot length of 1" PVC pipe was observed above the right bank, in the upper reaah. Six tributaries were noted. Two were dry; the rest contributed approximately 0.9 c.f.s. in total, with water temperatures ranging from 56 F to 60 F. Tributary T6, the largest, provided 0.3 c.f.s. at 60 F. Stream flow and temperature, at this tributary, was 0.3 c.f.s. and 62 F. A tributary noted as entering from

the right bank 1.7 miles above the mouth, on forest service maps& was not observed in the field. One spring contributed 0.2 c.f.s. at 55 F. Six complete barriers were observed within 1/4 mile of the mouth. Three partial barriers are clustered within the area of tributary T3 (0.9 miles upstream). Barriers are described as follows:

Bl--20' bedrock cascade chute at the head of a long, narrow bedrock canyon.

B2--4' cascade over bedrock.

B3--10' high, 20' long bedrock cascade falls.

B4--15' cascade over bedrock, preceded immediately upstream by another cascade.

B5--6' cascade over bedrock.

B6--15' falls/cascade over bedrock.

B7--7' high, 20' long cascade over bedrock; partial.

B8--6' log and debris jam; partial.

B9--log and debris jam with the stream trickling underneath; partial.

Roaded access to China Creek is poor. Forest service roads provide limited access to the upper watershed. A road through private property leads to the New River approximately 3/4 mile upriver from the mouth of China Creek, on the opposite bank. No known foot trails exist within the China Creek drainage. There appears to be no fishing or other recreational use of this stream.

According to current Forest Service maps, the first l/2 mile of stream crosses private land.

Management of this stream and watershed should reflect the low habitat quality and limited improvement potential for both anadramous and resident species. The value of China Creek lies in its continued contribution of high quality water to the New River system.

PAUL RENOUD
Biological Technician, Fisheries

USDA-FOREST SERVICE
REGION 5

STREAM SURVEY

FOREST: SHASTA-TRINITY	DISTRICT: BIG BAR
1. NAME OF STREAM: CHINA CREEK	2. RIVER SYSTEM: TRINITY
3. TRIBUTARY TO: NEW RIVER	4. TOTAL LENGTH: 4.7 miles
5. STREAM SECTION — FROM: MOUTH	TO: 3 miles upstream
6. LOCATION OF MOUTH OR LOWERMOST POINT — TOWNSHIP: 6N	RANGE: 7E
SECTION: 19	
7. DESCRIPTION OF STREAM: (USE PAGE 4 OR SEPARATE SHEET TO RECORD NOTES MADE DURING SURVEY) (see narrative)	

SECTION DATA

	LOWER	MIDDLE	UPPER
8. LOCATION	TWP 6N RG 7E SEC 19	TWP 6N RG 7E SEC. 17	TWP RG SEC
9. ALTITUDE RANGE	1050 FT. TO 1470 FT.	1470 FT. TO 2000 FT.	FT. TO FT.
10. WIDTH OF STREAM	RANGE 4-15 FT. AVE 8 FT	RANGE 2-12 FT. AVE 8 FT	RANGE FT. AVE FT
11. DEPTH	RANGE 1-10 FT. AVE .2 FT	RANGE .1-2 FT. AVE .1 FT	RANGE FT. AVE FT
12. FLOW	1.6 c.f.s.	3.8 c.f.s.	c.f.s.
13. VELOCITY	1 fps	1 fps	
14. AIR TEMPERATURE	55 °F	— °F	°F
15. WATER TEMPERATURE	57 °F	— °F	°F
16. HOUR AND SKY	HOUR 0940 SKY Clear	HOUR — SKY —	HOUR SKY
17. POOLS-ABUNDANCE	10% "A", 20% "B"	10% "B"	
a. Size (diameter)	RANGE 8-26 FT. AVE 12 FT	RANGE 6-12 FT. AVE 8 FT	RANGE FT. AVE FT
b. Formed by	Bedrock, rock	Boulders, rock	
c. Shelter	medium	poor	
18. RIFFLES-ABUNDANCE	P.R 1:3	R 1:5	

19. BOTTOM TYPE	Bedrock	Boulders	Rocks	Rubble	Gravel	Sand	Silt	Mud
a. Pools	20	5	10	35	10	7	3	—
b. Riffles	30	10	15	35	10	—	—	—
LOWER MIDDLE								
a. Pools	3	7	18	40	27	6	4	—
b. Riffles		10	25	49	20	5	—	—
UPPER								
a. Pools								
b. Riffles								

	LOWER	MIDDLE	UPPER
20. SHADE CANOPY	90%	90%	
a. Species	Alder, oak, maple	Alder, oak, maple	
21. AQUATIC VEGETATION	common	common	
a. Species	moss, Nostoc, algae	moss, Nostoc, algae	
22. AQUATIC FOOD ORGANISMS			
a. Caddisflies	12	15	
b. Mayflies	6	6	
c. Stoneflies	2	1	
d. Diptera	—	—	
e. Beetles	—	—	
f. Other Insects	—	—	
g. Crustacea	—	—	
h. Others	—	—	
23. OVERALL AQUATIC FOODS	20	27	
24. FISHES PRESENT			
a. All Species Combined			
b. Species 1	Rainbow	Rainbow	
(1) Abundance	common	common	
(2) Ave. No. per 100 ft.	10	12	
(3) Length Range	2 - 6 INCHES	2 - 8 INCHES	INCHES
(4) Ave. Length	3 INCHES	3 INCHES	INCHES

FS-2600-16
(Rev. 1/73)

	LOWER	MIDDLE	UPPER
c. Species 2 (1) Abundance			
(2) Ave. No. per 100 ft.			
(3) Length range			
(4) Ave. length			
d. Species 3 (1) Abundance			
(2) Ave. No. per 100 ft.			
(3) Length range			
(4) Ave. length			
e. Species 4 (1) Abundance			
(2) Ave. No. per 100 ft.			
(3) Length range			
(4) Ave. l			
25. REPRODUCTION a. Species 1	/	12	
b. Species 2			
c. Species 3			
d. Species 4			
26. FISH PREDATORS a. Birds	NS	NS	
b. Snakes	NS	NS	
27. CHARACTER OF WATERSHED	mountainous	mountainous	
28. WATERSHED SOIL STABILITY	stable	stable	
29. STREAM CHANNEL STABILITY	47 - good	75 - good	
30. STREAM FLOW CONDITION	low	low	
31. STREAM GRADIENT	7%	11%	
32. BARRIERS	8 barriers - see narrative.	1 barrier - see narrative	
33. DIVERSIONS	none seen	none seen	
34. SPRINGS	none seen	S1 .2 cfs. 55°F	
35. TRIBUTARIES	T1 - DRY T2 - DRY T3 - 0.3 cfs, 59°F	T4 - .15 cfs, 51°F T5 - .1 cfs, 56°F T6 - .3 cfs, 60°F	
36. WATER QUALITY a. Turbidity	low	low	
b. Nature of Turbidity			
c. Other Pollution			
37. ACCESSIBILITY	Poor	Poor	
a. Car or Trail			
38. FISHING USE	light to none	light to none	
a. Est. Fisherman days	Per Year	Per Year	Per Year
b. Est. ave. hours fished per day			

SUMMARY-ENTIRE STREAM

39. STREAM CLASSIFICATION:	LOWER II	MIDDLE II	UPPER

REMARKS: No anadromous access beyond initial 100'. Poor habitat.

40. STREAM CHARACTERISTICS AND REMARKS
Small-sized stream with numerous barrirs including 20' falls 100' upstream from mouth. Poor pool:riffle ratio and poor habitat - lack of spawning gravels, holding or rearing spaces.

41. FISH STOCKING PROGRAM None

42. MANAGEMENT RECOMMENDATIONS: Low habitat quality and limited potential for improvement for anadromous and resident species. Manage as source of high quality water for New River.

42. DATE OF SURVEY	43. SURVEY MADE BY
August 27, 1985	P. RENOUD, G. RENSINK

STREAM MANAGEMENT ANALYSIS-(May be filled out at Office)

1. TYPE OF FISHERY		2. PRIMARY SPECIES
cold		Rainbow Trout
3. OVERALL PRESENT FISHERY RATING	a. Size of Stream	b. Fishing Use
Poor	Small	Light to none
c. Other Uses	d. Productivity	e. Habitat Condition
mining	Low	Poor - good

4. IMPROVEMENT POTENTIAL Poor

5. FISH MANAGEMENT RECOMMENDATIONS:

a. Chemical Rehabilitation	NR
b. Fishery Regulation	NR
c. Regulation of Other Activities	Mining
d. Introduction of Exotic Fish Species	NR
e. Maintenance Stocking of Established Fish Species	NR
f. Others	NR

6. HABITAT MANAGEMENT:

a. Watershed Management	NR
b. Stream Protection Belt Management	BMP
c. Water Quality Management	BMP
d. Physical Corrective Measures	NR
e. Others	NR

7. PUBLIC ACCESS AND LAND AQUISITION NR

8. PUBLIC USE FACILITIES NR