Big Bar Ranger District
Big Creek, T. 6 N., R. 6 E., Section 25
July 30-31, 1980
Surveyors: Mark Coleman, Joe Zustak

Big Creek was surveyed visually by walking from the mouth to 6.9 miles upstream. This medium-sized stream was rated Class I because of its significant water quality contribution to New River and sizeable population of rainbow trout. A small section of Big Creek was previously surveyed in 1974.

This medium-sized perennial creek is located in mountainous topography. Watershed vegetation includes a moderately dense stand of Douglas-fir with scattered oak and madrone. lower slopes were virgin except in the area above the Section 25-26 boundary. Side slopes were generally steep throughout (60%) with the lower reach being canyon-like as rock outcrop walls were frequently noted. Stream gradient was medium (6%) in both reaches. Stream and channel width averaged 12 feet and 20 feet, respectively near the mouth.

Fish habitat for rainbow trout was rated fair. Pool:riffle:run ratios averaged 35:65:0 with most pools formed by bedrock, rock, and debris. In-pool shelter was medium with pools being approximately 5-25% Class A and 60-65% Class B. Canopy cover was very dense 75-85% particularly in the upper reach. Shade species were vine maple, dogwood, and fir in the upper reach and alder, maple, dogwood and fir in the lower reach. Aquatic food organisms were abundant. Caddisfly larvae were dominant forms (12-25/ft.) followed by mayfly (3-5/ft.) and diptera (2-3/ft.)

Overall stream productivity was rated medium. Aquatic plants were common including moss, and Nostoc. Peltiphylum was also common along the sides of the channel in the lower reach.

Fish were noted from the mouth to 6.0 miles upstream. Anadromous fish have access to the lower 0.2 mile of stream. Rainbow trout ranging 1.5-9 inches (4 inch average) were noted at 10-20 fish per 100 feet of stream (excluding fry), Population density decreased in the upper reach where flow was less. Reproduction was rated fair as 5-10 fry were seen per 100 feet of stream. Adequate spawning areas were noted throughout the stream.

Water temperature was 51°F near the mouth at 1400 hours under clear skies (780~ air). Water quality was good and no turbidity noted. Flow was estimated at 5 cfs at the mouth. Watershed and channel stabilities were rated moderately stable. Some small slide areas were noted in the lower watershed. The stream channel was dominated by relatively stable materials (rock, rubble, bedrock). Nine barriers including a 30 foot bedrock falls near the mouth were noted in the survey.

Other barriers ranged 4-15 feet and were formed primarily by bedrock, and boulders. Five tributaries with flows of 0.1-1.5 cfs were noted. Two tribs with flow of 1.5 cfs were rated Class III and had small fish populations. Other tribs were Class IV with no fishery potential. No diversions were noted.

Big Creek, particularly the mouth, has relatively poor access. However, the upper watershed contains several roads (5N04, 5N06, 6N05). Walking the creek is very difficult because the riparian vegetation is very dense and side slopes are steep. There were some signs of mining activity in the watershed.

Big Creek should be managed as a resident trout stream and important water quality contributor to New River. Management objectives should focus on preventing increases in sedimentation into Big Creek. This can be accomplished by delineating the inner gorge and stream management zones with strict limitations on activity within these zones. Barrier removal is not recommended because of the large number and size of barriers.

MARK COLEMAN
Biological Technician, Fisheries

USDA - FOREST SERVICE
REGION 5

STREAM SURVEY

FOREST	DISTRICT
SHASTA - TRINITY	BIG BAR
1. NAML of STREAM: BIG CREEK	2. RIVER SYSTEM: NEW RIVER
3. TRIBUTARY TO: NEW RIVER	4. TOTAL LENGTH: 9.1 MILES
5. STREAM SECTION: FROM: MOUTH TO: 6.9 MILES UPSTREAM	
6. LOCATION OF MOUTH OR LOWERMOST POINT: TOWNSHIP 6N. RANGE 6E. SECTION 25	
7. DESCRIPTION OF STREAM (USE PAGE 4 OR SEPARATE SHEET TO RECORD NOTES MADE DURING SURVEY).	

SECTION DATA

	LOWER	MIDDLE	UPPER
8. LOCATION	TWP 6N RG 6E SEC 25	TWP RG SEC.	TWP 6N RG 6E SEC 33
9. ALTITUDE RANGE	925 FT. TO 2000 FT.	FT. TO FT.	2000 FT. TO 3150 FT.
10. WIDTH OF STREAM	RANGE 5-25 FT. AVE 12 FT	RANGE FT. AVE FT	RANGE 4-20 FT. AVE 7 FT
11. DEPTH	RANGE 0-7 FT. AVE 0.7 FT	RANGE FT. AVE FT	RANGE 0-5 FT. AVE 0.5 FT
12. FLOW	5.0 c.f.s.	c.f.s.	3.0 c.f.s.
13. VELOCITY	SLOW 0.6 F/S		SLOW 0.8 F/S
14. AIR TEMPERATURE	78 °F	°F	75 °F
15. WATER TEMPERATURE	51 °F	°F	50 °F
16. HOUR AND SKY	HOUR 1400 SKY CLEAR	HOUR SKY	HOUR 1200 SKY CLEAR
17. POOLS-ABUNDANCE	COMMON 25% A 60% B		COMMON 5% A 65% B
a. Size (diameter)	RANGE 1-25 FT. AVE 10 FT	RANGE FT. AVE FT	RANGE 1-15 FT. AVE 5 FT
b. Formed by	BEDROCK, BOULDERS, ROCK		DEBRIS, ROCK, BEDROCK
c. Shelter	MEDIUM		MEDIUM
18. RIFFLES-ABUNDANCE	P:R:R 40:59:1		P:R:R 35:65:0

19. BOTTOM TYPE

	LOWER Bedrock	Boulders	Rocks	Rubble	Gravel	Sand	Silt	Mud	MIDDLE Bedrock	Boulders	Rocks	Rubble	Gravel	Sand	Silt	Mud	UPPER Bedrock	Boulders	Rocks	Rubble	Gravel	Sand	Silt	Mud
a. Pools	2	3	25	30	25	15	0	0									1	0	14	35	30	20	0	0
b. Riffles	3	2	30	40	24	1	0	0									1	0	29	40	25	5	0	0

	LOWER	MIDDLE	UPPER
20. SHADE CANOPY	DENSE 75%		DENSE 85%
a. Species	ALDER, MAPLE, DOGWOOD		VINE MAPLE, DOGWOOD, FIR
21. AQUATIC VEGETATION	COMMON		COMMON
a. Species	MOSS, PELTIPHYLUM,	NOSTOC	MOSS, PELTIPHYLUM
22. AQUATIC FOOD ORGANISMS			
a. Caddisflies	25 / Ft²		12 / Ft²
b. Mayflies	5 / Ft²		3 / Ft²
c. Stoneflies			
d. Diptera	3 / Ft²		2 / Ft²
e. Beetles			
f. Other Insects			
g. Crustacea			
h. Others SNAILS	3 / Ft²		
23. OVERALL AQUATIC FOODS	ABUNDANT 36 / Ft²		COMMON 17 / Ft²
24. FISHES PRESENT			
a. All Species Combined	COMMON		COMMON
b. Species 1	RAINBOW TROUT		RAINBOW TROUT
(1) Abundance	COMMON		COMMON
(2) Ave. No. per 100 ft.	20 EXC. FRY		10 EXCL. FRY
(3) Length Range	1.5 - 9 INCHES	INCHES	1.5 - 8 INCHES
(4) Ave. Length	4 INCHES	INCHES	4 INCHES

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	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. length			
25. REPRODUCTION a. Species 1 RT	FAIR 10/100'		FAIR 5/100'
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	MODERATE		MODERATE
29. STREAM CHANNEL STABILITY	MODERATE 85		MODERATE 84
30. STREAM FLOW CONDITION	AVERAGE		AVERAGE
31. STREAM GRADIENT	MEDIUM 6%		MEDIUM 6%
32. BARRIERS	B1 - 30' BEDROCK FALLS	B5 - 15' BEDROCK CHUTE	B9 - 10' BEDROCK
	B2 - 6' LOG & ROCK FALLS	B6 - 5' LOG & BOULDER FALL	FALLS
	B3 - 10' BEDROCK FALLS	B7 - 4' & 6' BOULDER FALLS	
	B4 - 8' BEDROCK FALLS	B8 - 4' BEDROCK FALL	
33. DIVERSIONS	NONE		NONE
34. SPRINGS	NS		S1 0.01 CFS
35. TRIBUTARIES	T1 0.2CFS CLASS IV		T4 1.5 CFS CLASS III
	T2 0.8CFS CLASS IV		T5 0.1 CFS CLASS IV
	T3 1.5 CFS CLASS III		
36. WATER QUALITY a. Turbidity	LOW		LOW
b. Nature of Turbidity			
c. Other Pollution			
37. ACCESSIBILITY	FAIR		FAIR
a. Car or Trail	CAR 5N06		CAR 5N04
38. FISHING USE	NONE		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	I	MIDDLE	■■ UPPER

REMARKS: SMALL - MEDIUM POPULATION OF RESIDENT RAINBOW TROUT (Lower 6.0 MILESS)

40. STREAM CHARACTERISTICS AND REMARKS

MEDIUM-SIZED STREAM WITH DENSE RIPARIAN AND WATERSHED VEGETATION COVER. STEEP-SIDED SLOPES INCLUDING A LARGE AMOUNT OF ROCK OUTCROPS. NUMEROUS BEDROCK FALLS IN THE LOWER REACH

41. FISH STOCKING PROGRAM NONE

42. MANAGEMENT RECOMMENDATIONS:

STEEP SIDE-SLOPES ARE FOUND THROUGHOUT THE WATERSHED. MANAGEMENT OBJECTIVES SHOULD FOCUS ON MAINTAINING WATERSHED STABILITY. ESTABLISHMENT OF ADEQUATE SMZ AND DELINEATION OF THE INNER GORGE ARE REQUIRED. THIS STREAM SHOULD BE MANAGED PRIMARILY AS A RESIDENT TROUT STREAM WITH ONLY THE LOWER 0.2 MILES ACCESSIBLE BY STEELH

42. DATE OF SURVEY	43. SURVEY MADE BY
7/30-31 /80	MARK COLEMAN JOE ZUSTAK

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
FAIR	MEDIUM	None
C. Other Uses	**d. Productivity**	**e. Habitat Condition**
NONE	medium	FAIR

4. IMPROVEMENT POTENTIAL: POOR

5. FISH MANAGEMENT RECOMMENDATIONS:

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

6. HABITAT MANAGEMENT:

a. Watershed Management	ESTABLISH ADEQUATE Sm2 DELINEATE INNER GORGE
b. Stream Protection Belt Management	REMOVAL OF SOME CONIFERS POSSIBLE BECAUSE
c. Water Quality Management.	NR OF THE DENSE RIPARIAN
d. Physical Corrective Measures	NO
a. others	NR

7. PUBLIC ACCESS AND LAND AQUISITION: NR

8. PUBLIC USE FACILITIES: NR