USDA-FOREST SERVICE
REGION 5

STREAM SURVEY

FOREST: ELDORADO	DISTRICT: Georgetown
1. NAME OF STREAM: Pilot Creek	2. RIVER SYSTEM: Rubicon
3. TRIBUTARY TO: Rubicon River	4. TOTAL LENGTH: Seven and one-quarter miles
5. STREAM SECTION FROM: Edson Lake	TO: Confluence with Rubicon
6. LOCATION OF MOUTH OR LOWERMOST POINT TOWNSHIP 13N	RANGE R12E SECTION 18
7. DESCRIPTION OF STREAM: (USE PAGE 4 OR SEPARATE SHEET TO RECORD NOTES MADE DURING SURVEY).	

Unmapped opposite Deep Canyon

SECTION DATA

	LOWER	MIDDLE	UPPER
8. LOCATION	TWP 13N RG 12e SEC 18	TWP - RG - SEC -	TWP 12N RG 12E SEC 4
9. ALTITUDE RANGE	3,200 FT. TO 1,600 FT.	3,800 FT. TO 3,200 FT.	4,120 FT. TO 3,800 FT.
10. WIDTH OF STREAM	RANGE 4-60 FT. AVE 10 FT	RANGE 4-20 FT. AVE 8 FT	RANGE 3-40 FT. AVE 12 FT
11. DEPTH	RANGE ½-12 FT. AVE 1½ FT	RANGE ½-7 FT. AVE 1 FT	RANGE 1-8 FT. AVE 1½ FT
12. FLOW	(estimate) 5 c.f.s.	(estimate) 3 c.f.s.	(estimate) 50 c.f.s.
13. VELOCITY	Cascading - rapid	Rapid	Rapid
14. AIR TEMPERATURE	63 °F	60 °F	65 °F
15. WATER TEMPERATURE	48 °F	47 °F	47 °F
16. HOUR AND SKY	HOUR 1400 SKY Clear	HOUR 1430 SKY Overcast	HOUR 1030 SKY Clear
17. POOLS-ABUNDANCE	Common	Common	Abundant
a. Size (diameter)	RANGE 3-60 FT. AVE 10 FT	RANGE 3-20 FT. AVE 7 FT	RANGE 3-40 FT. AVE 12 FT
b. Formed by	Bedrock and Boulders	Rock	Rock falls
c. Shelter	Medium	Medium	Good
18. RIFFLES-ABUNDANCE	Common	Abundant	Abundant
19. BOTTOM TYPE	Bedrock / Boulders / Rocks / Rubble / Gravel / Sand / Silt / Mud	Bedrock / Boulders / Rocks / Rubble / Gravel / Sand / Silt / Mud	Bedrock / Boulders / Rocks / Rubble / Gravel / Sand / Silt / Mud
a. Pools	20 / 5 / 10 / 10 / 5 / 30 / 20 / TR	15 / - / 10 / 30 / 5 / 30 / 10 / TR	10 / 5 / 5 / 20 / 25 / 15 / 10 / 10
b. Riffles	20 / 5 / 10 / 30 / 15 / 15 / 5 / TR	15 / TR / 5 / 25 / 10 / 10 / 15 / TR	10 / 5 / 5 / 40 / 20 / 10 / 5 / 5
20. SHADE CANOPY	Dense	Dense	Dense
a. Species	Mtn Walls - Conifer	Alder-conifer	Alder-conifer
21. AQUATIC VEGETATION	None seen	None seen	None seen
a. Species			
22. AQUATIC FOOD ORGANISMS			
a. Caddisflies	Few	Few	Few
b. Mayflies	None seen	None seen	None seen
c. Stoneflies	Few	None seen	Few
d. Diptera	None seen	None seen	None seen
e. Beetles	None seen	Few larvae & adult	Few adult
f. Other Insects	Terrestrials common	Terrestrials common	Lady bugs & terres.
g. Crustacea	None seen	None seen	None seen
h. Others		None seen	None seen
23. OVERALL AQUATIC FOODS	Few	Few	Few - common
24. FISHES PRESENT			
a. All Species Combined	Common	Common	Common
b. Species 1	Brown	Brown	Brown
(1) Abundance	Common	Common	Common
(2) Ave. No. per 100 ft.	25-30	25	20
(3) Length Range	4-14 INCHES	5-12 INCHES	5-11 INCHES
(4) Ave. Length	8-9 INCHES	9 INCHES	8 INCHES

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(Rev. 1/73)

	LOWER	MIDDLE	UPPER
c. Species 2 (1) Abundance	Rainbow trout	Rainbow trout	Rainbow trout
(2) Ave. No. per 100 ft.	NOne seen	Few 1-2	Few 4-5
(3) Length range		6-8 inches	6-8 inches
(4) Ave. length		8 inches	7 inches
d. Species 3	N/A	N/A	N/A
(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	Good	Good	Good
b. Species 2	-	Hard to assess	Hard to assess
c. Species 3			
d. Species 4			
26. FISH PREDATORS a. Birds	None seen	None seen	Belted Kingfisher
b. Snakes	None seen	None seen	None seen
27. CHARACTER OF WATERSHED	Wooded canyon	Mtn wooded	Mtn. wooded
28. WATERSHED SOIL STABILITY	Moderate	Unstable	Moderate
29. STREAM CHANNEL STABILITY	Stable	Stable	Stable
30. STREAM FLOW CONDITION	Low	Low	High
31. STREAM GRADIENT	Moderate-steep	Moderate	Slight
32. BARRIERS	Numerous rockfalls beginning at Deep Canyon.	Diversion dam at Mutton Canyon. Few rockfalls complete.	Rockfalls ½ mi downstream dam complete. Several other complete barriers.
33. DIVERSIONS	None	Georgetown H_2O Diversion at Mutton Canyon	None
34. SPRINGS		300 yards downstream diversion on south bank	North bank 1 mile from dam.
35. TRIBUTARIES 1/8 mi ds Deep Canyon ¼ mi ds last trib. sb 1/3 mi ds last trib. sb	46°F Deep Canyon sb ½ cfs sb½ cfs; 46°F ¼ cfs; 46°F trickle; 50°F	Mutton Canyon ½ cfs Bacon Canyon dammed for use in flume.	NB ½ mi downstream dam shown as intermit. extending into Sec. 3.
36. WATER QUALITY a. Turbidity	Low	Low	Low
b. Nature of Turbidity	-	-	-
c. Other Pollution	Heavy siltation present but not suspended	Heavy siltation Present but not suspended	Minor siltation
37. ACCESSIBILITY	Poor	Fair	Fair-trail
a. Car or Trail	No road or trail	Road and trail	part way
38. FISHING USE			
a. Est. Fisherman days	very light 1 Per Year	Light 5 Per Year	Medium 10-15 Per Year
b. Est. ave. hours fished per day			

SUMMARY-ENTIRE STREAM

39. STREAM CLASSIFICATION:	LOWER IIc	MIDDLE IIc	UPPER I b d

REMARKS:

40. STREAM CHARACTERISTICS AND REMARKS
Middle and lower sections heavily silt damaged. Limiting factor on fish populations. Has potential for good trout stream if silt removed. Fairly inaccessible.

41. MANAGEMENT RECOMMENDATIONS:
SEE ATTACHED SHEET.

42. DATE OF SURVEY	43. SURVEY MADE BY
September 27, October 10 & 11, 1973	Larry Week

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

1. TYPE OF FISHERY	2. PRIMARY SPECIES	
COLO	Brown trout	
3. OVERALL PRESENT FISHERY RATING: Fair	a. Size of Stream: Lower - small upper - large	b. Fishing Use: Light
c. Other Uses: Camping, some hiking and swimming.	d. Productivity: Low	e. Habitat Condition: Fair to poor

4. IMPROVEMENT POTENTIAL
Fair to good if silt can be flushed out.

5. FISH MANAGEMENT RECOMMENDATIONS:

a. Chemical Rehabilitation	NO
b. Fishery Regulation	NO
c. Regulation of Other Activities	NO
d. Introduction of Exotic Fish Species	NO
e. Maintenance Stocking of Established Fish Species	Possibly near Edson Lake
f. Others	Tagging program to evaluate feasibility of stocking.

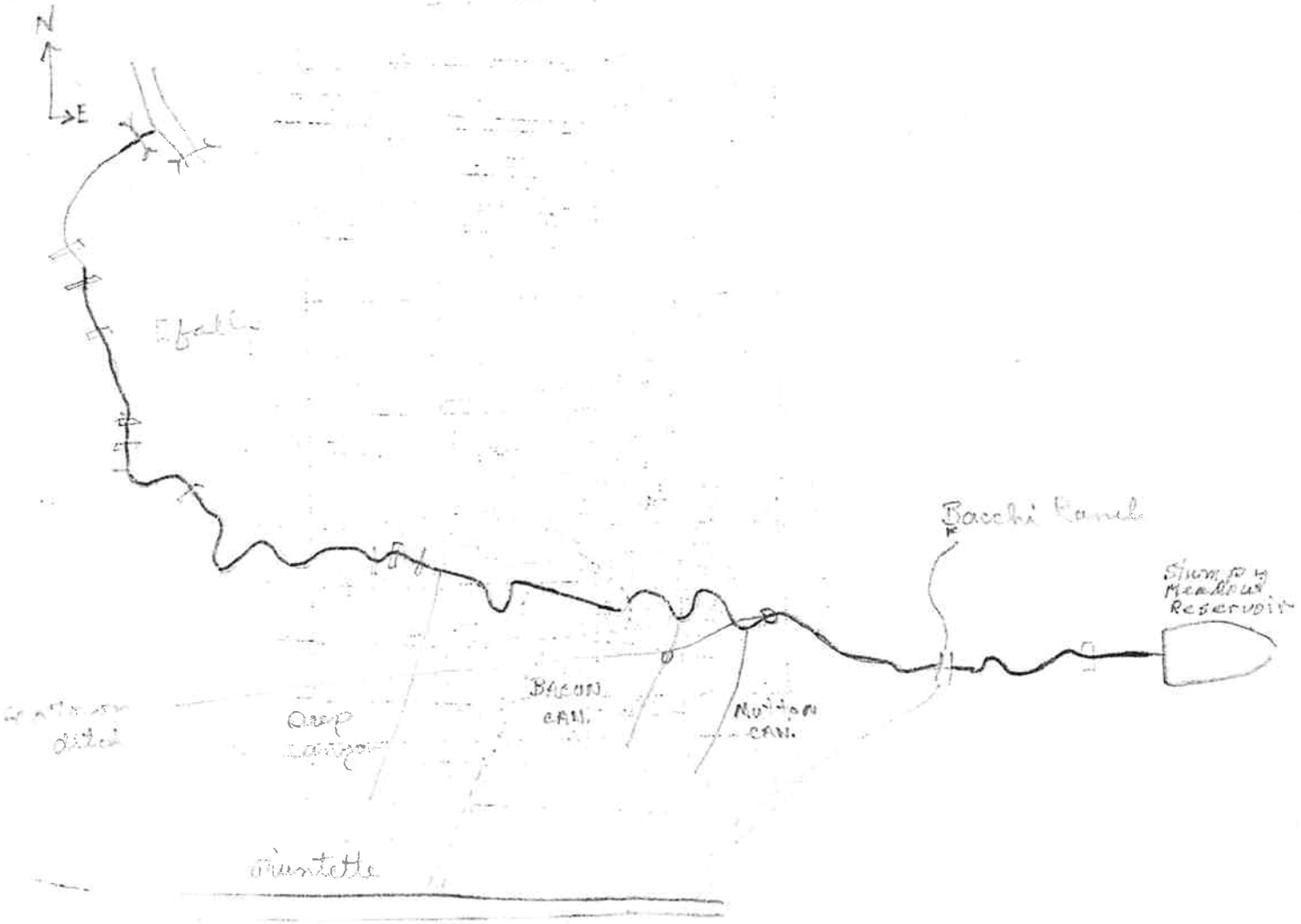
6. HABITAT MANAGEMENT:

a. Watershed Management	Regulate logging, mining and road construction.
b. Stream Protection Belt Management	
c. Water Quality Management	Consider flushing silt with increased flows.
d. Physical Corrective Measures	Revegetate or otherwise repair Georgetown ditch slide.
e. Others	
7. PUBLIC ACCESS AND LAND AQUISITION	Try to establish Mutton Canyon access.
8. PUBLIC USE FACILITIES	Fireplaces at mouth.

Map of Pilot Rock Study Area

WEEK 13

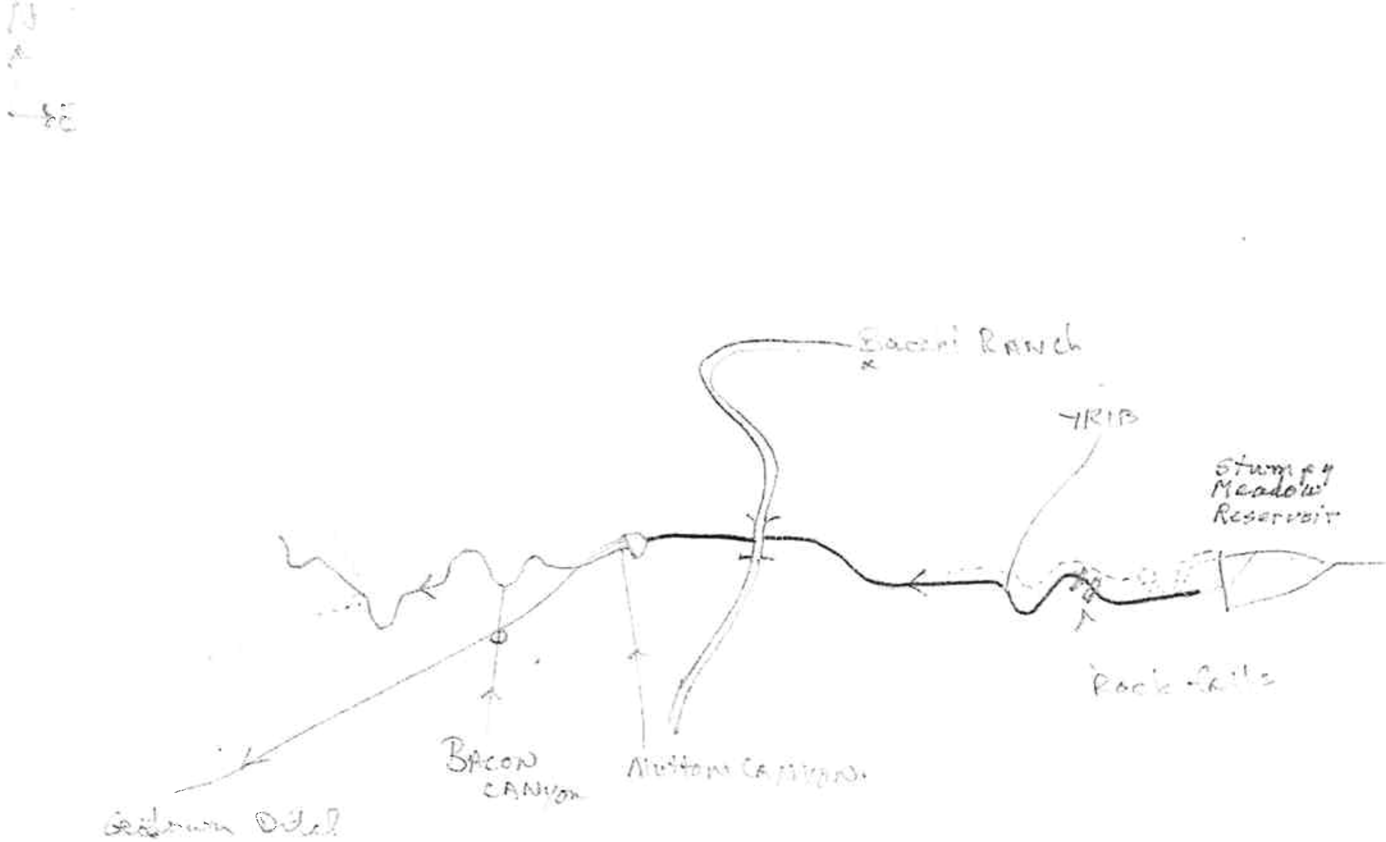
Areas Actually Surveyed: ——



Map of the Upper Portion of Cold Creek

area actually surveyed —

WEEK '73



Notes on the Upper Section of Pilot Creek:

The section of Pilot Creek below Stumpy Meadows Reservoir was surveyed on September 27 and October 10, 1973. This section extends from a point just below the Edson Lake Dam to the Georgetown Diversion dam.

The stream in this section is quite large and was flowing at 50 cfs (estimate). Most of this flow is diverted to the Georgetown ditch at a point 3/4 mile downstream from the Bacchi Ranch Road crossing.

This section is free of barriers with the exception of the diversion dam and a series of rock waterfalls ½ mile downstream from the dam (Photos F-1 & 3).

Brown trout are common in this area and are more numerous than the rainbow trout which is also present. Both species appear to be in good condition but not very large. This may be due to the moderate angling pressure which occurs in this area. Because of the high flows I was unable to see many fish and I caught only a small number.

A road follows the north bank near the dam for a short distance. A fair trail continues for 1/2 to 3/4 mile beyond the road's end. Beyond the end of the trail the streambanks are brushy and hard to negotiate.

A series of rock falls occur about 1/2 mile below the dam. These are a complete barrier to upstream fish movements.

A tributary flows in from the north bank approximately 1/4 mile below the falls. The flow was negligible.

The Bacchi Ranch Road crossing is well bridged. Local soil disturbance in the area are not producing significant amounts of siltation.

The entire section of stream above the diversion dam is in fairly good condition with only light amounts of silt present. Other conditions seem to favor a healthy trout population.

MANAGEMENT RECOMMENDATIONS

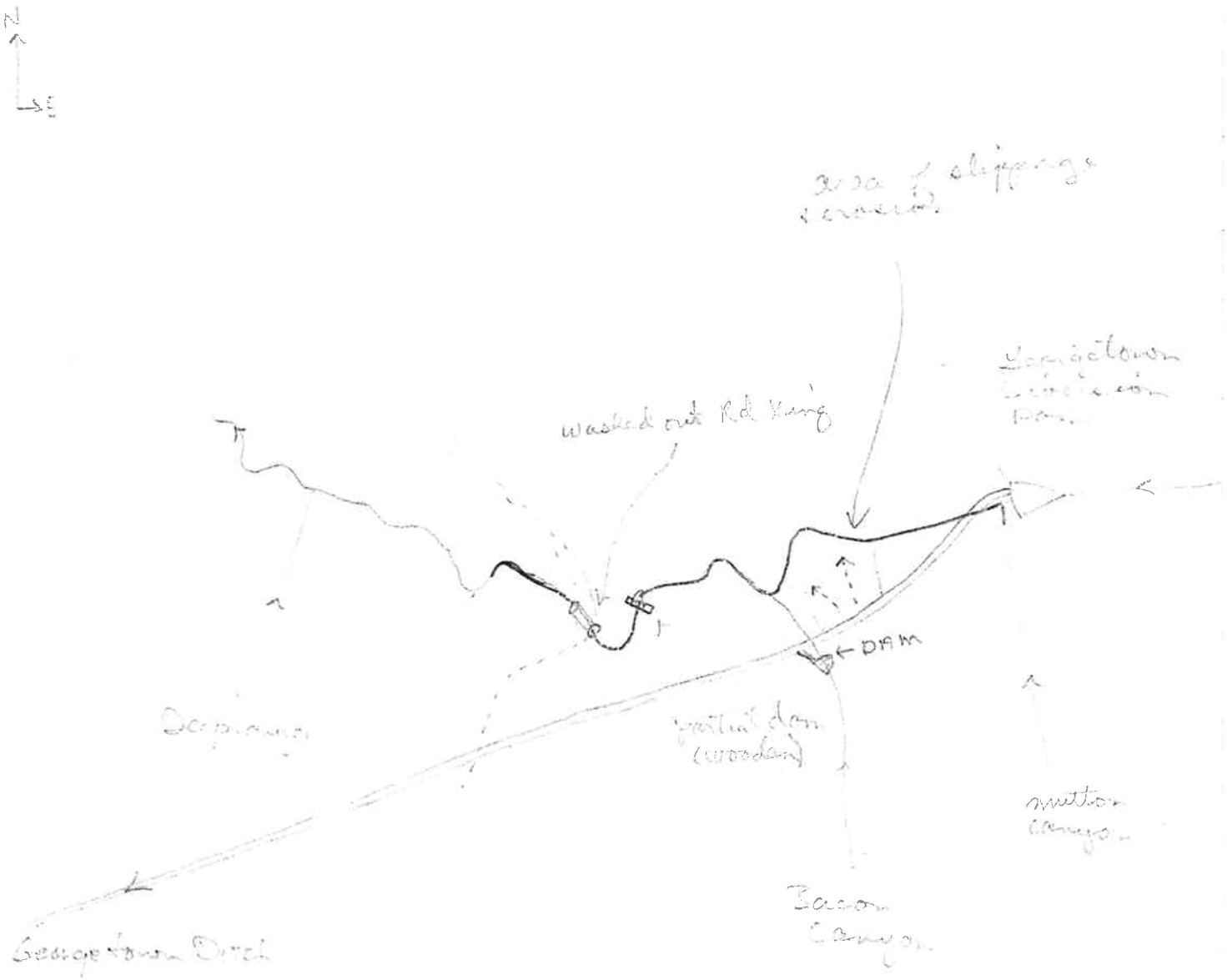
Complete trail to Bacchi Ranch Road crossing.

Investigate possibility of gaining public access to stream from Bacchi Ranch Road (now private).

Investigate feasibility of stocking the upstream section near Stumpy Meadows Reservoir with catchable trout.

Map of Pilot Creek (Middle section) WEEK '73

Area naturally managed



Notes on the Middle Section of Pilot Creek:

The middle section of Pilot Creek was surveyed on October 10 and 11, 1973. The study section extends from the Georgetown Divide Municiple Utilities District (GDPUD) diversion dam to a point approximately 3/4 mile above Deep Canyon.

The stream is substantially smaller in this area due to the diversion of water for GDPUD use. Total flow was 3 cfs (estimate).

One live tributary was observed 100 yards below the diversion dam on the South bank. This was Mutton Canyon Creek which added 1/2 cfs (estimate) to Pilot Creek (Photo F-6). This small tributary was heavily silted. Fish were present in the lower part to within 200 yards of the mouth. The water temperature was 50°F.

Bacon Canyon was flowing from ¼ to ½ cfs. A small dam diverted this flow into the GDPUD Ditch. The creekbed was dry at the confluence with Pilot Creek.

An area of earth slippage and erosion occurs between Mutton Canyon and Bacon Canyon on the south bank (Photos F-8 and 9). This area is associated with the construction of the GDPUD Ditch. The most critical area lies just upstream from Bacon Canyon. The slide area is steep and is composed of mud and rock. It is devoid of vegetation. Silt will enter the stream at this point even with moderate precipitation. The stream in this area is heavily silted and moderate to heavy amounts are found throughout the lower section (Photos F-10 and 11).

A wooden dam is located about ½ mile below Bacon Canyon (Photos F-11 and 12). This is an old disused structure and the stream flows around the south end

of it. The dam is about four feet high and 35 feet long. A moderate amount of silt and other bottom materials have accumulated behind it. I don't know why the dam was built. Presently it is not a barrier to fish movement.

An old logging road which runs from Quintette to Peavine Point crosses Pilot Creek about ¼ mile below the dam. The crossing has washed out but the culvert remains (Photos F-13 and 14). The stream flows through the culvert at low flow periods but during spring runoff further erosion of fill materials will be washed into the creek. This is not a barrier to fish movements.

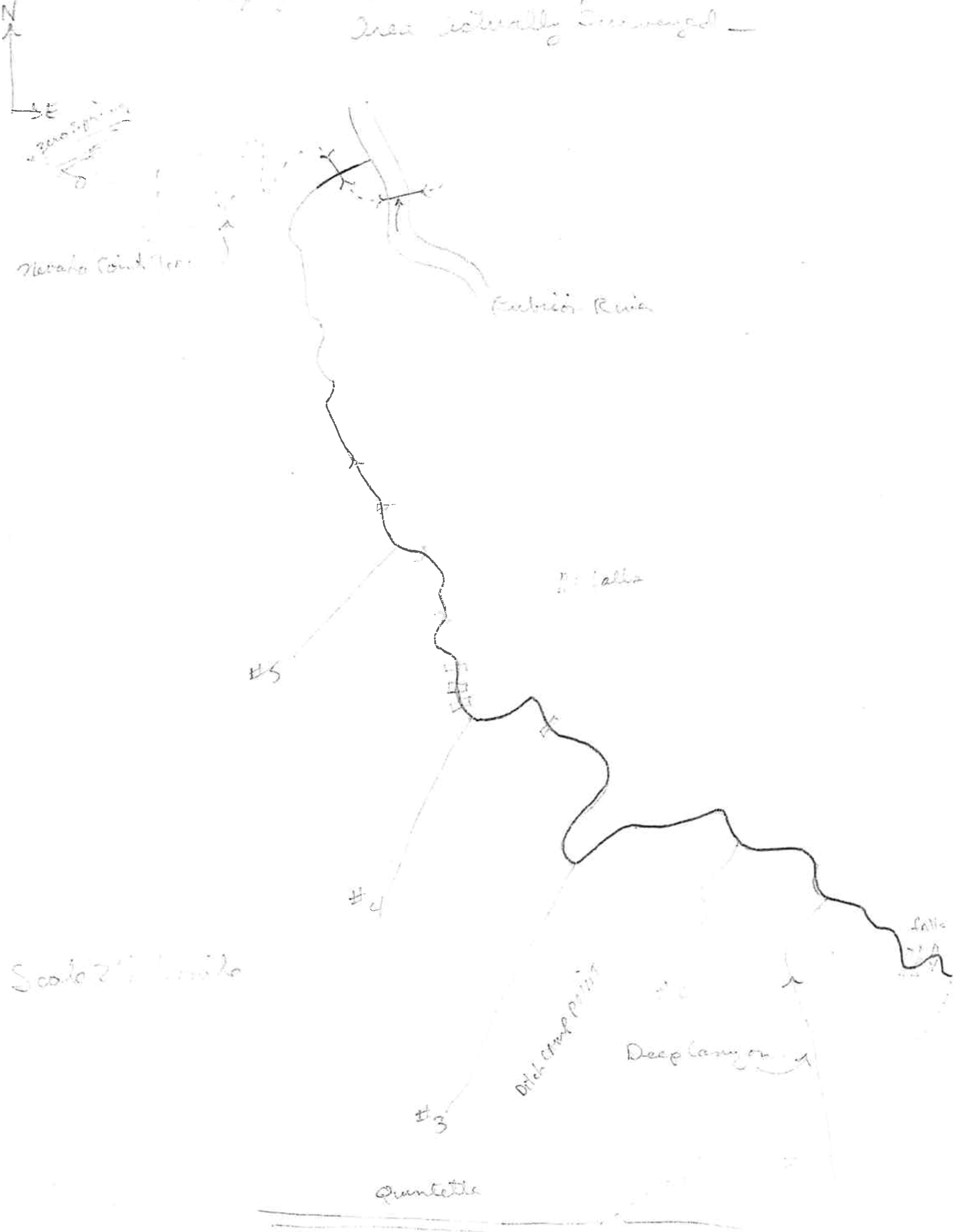
A mixed population of brown and rainbow trout exist in the middle section Photo F-15). The brown trout are the dominant species. Rainbow appeared to be even less common than in upstream waters. One female brown trout was examined. The nine inch trout was gravid and ripe, and had a few caddis fly larvae in the gut.

I have heard unconfirmed reports that logging activity within the last five to ten years has contributed substantial amounts of silt. The GDPUD ditch washed out several years ago and also deposited large quantities of silt in the stream.

Heavy siltation is the factor limiting trout populations throughout the downstream part of the creek. Silt fills the interstices between the gravel and rubble and eliminate spawning areas and valuable insect production habitat. It settles out in the pool areas and reduces hiding and resting areas for fish. The biological carrying capacity could be doubled in Pilot Creek if the silt were removed. The recreational values and the esthetic values have been substantially reduced in Pilot Creek. The

water quality of downstream waters has undoubtedly been degraded by the sediment load from this creek. Destruction of valuable streams as this must be prevented in the future.

Map of the [illegible] Section of Pilot Creek
Area actually Surveyed —



Notes on the Lower Section of Pilot Creek:

The lower section of Pilot Creek was surveyed on October 11, 1973. The study area extends from a point ¼ mile upstream from Deep Canyon, to the confluence with the Rubicon River. A ¼ mile stretch near the mouth was not surveyed (see Map).

There were five tributaries observed flowing into the creek, all of which were on the south bank. The first and largest of these was Deep Canyon Creek (Photo F-17). It was flowing at ½ cfs (estimate)at a temperature of 46°F. It carried a moderate silt load. Tributary 2 (see Map for numbering sequence) was flowing at ½ cfs (estimate) at a temperature of 46°F at 1330. This tributary had a heavy silt load. Brown trout were present near the mouth. Tributary 3 enters the creek just downstream from Ditch Camp Point. Its flow was ¼ cfs (estimate) at a temperature of 46°F at 1500. No fish were observed in this ttream. Tributary 4 was just a trickle and was 50° F at 1600. No fish were observed here. Tributary 5 was barely flowing and was not checked for temperature.

This part of Pilot Creek is very inaccessible. There is a fair dirt road which comes in from Quintette which ends in a short steep trail to the creek. Some camping and fishing activity takes place in this location. Access can be gained near the mouth of the creek by the Nevada Point Trail, a long steep trail that crosses a footbridge near the mouth. The terrain is steep and the creek is hard to travel upon. Angler and recreation use is limited due to these factors.

High rock waterfalls occur throughout the length of this section (Photo F-18). Many complete barriers to fish movements exist.

Brown trout are common in the lower section of the creek. Fish up to 14 inches were observed. No rainbow trout were either caught or observed in this section. They are either absent or few in this area. Little evidence of angling pressure was noted from Deep Canyon Creek to a point ¼ mile from the mouth. Evidence of camping and angling use is evident near the footbridge.

The stream has a moderate to heavy silt load throughout this section (Photos F-17 and 18). Deep Canyon Creek and Tributary 2 appeared to be sinificant contributors. The major portion of sediments have come from upstream sources, and is the limiting factor on trout populations in this area.

Bear sign was observed near Tributary 2.

MANAGEMENT RECOMMENDATIONS:

Locate and remedy all upstream sources of silt intrusion.

Regulate future logging, road construction, mining and other associated activities as this is a sensitive watershed.

Consider high flow releases from Lake Edson to flush the silt out of the creek.

Make campsite at footbridge fire-safe by constructing adequate facilities.