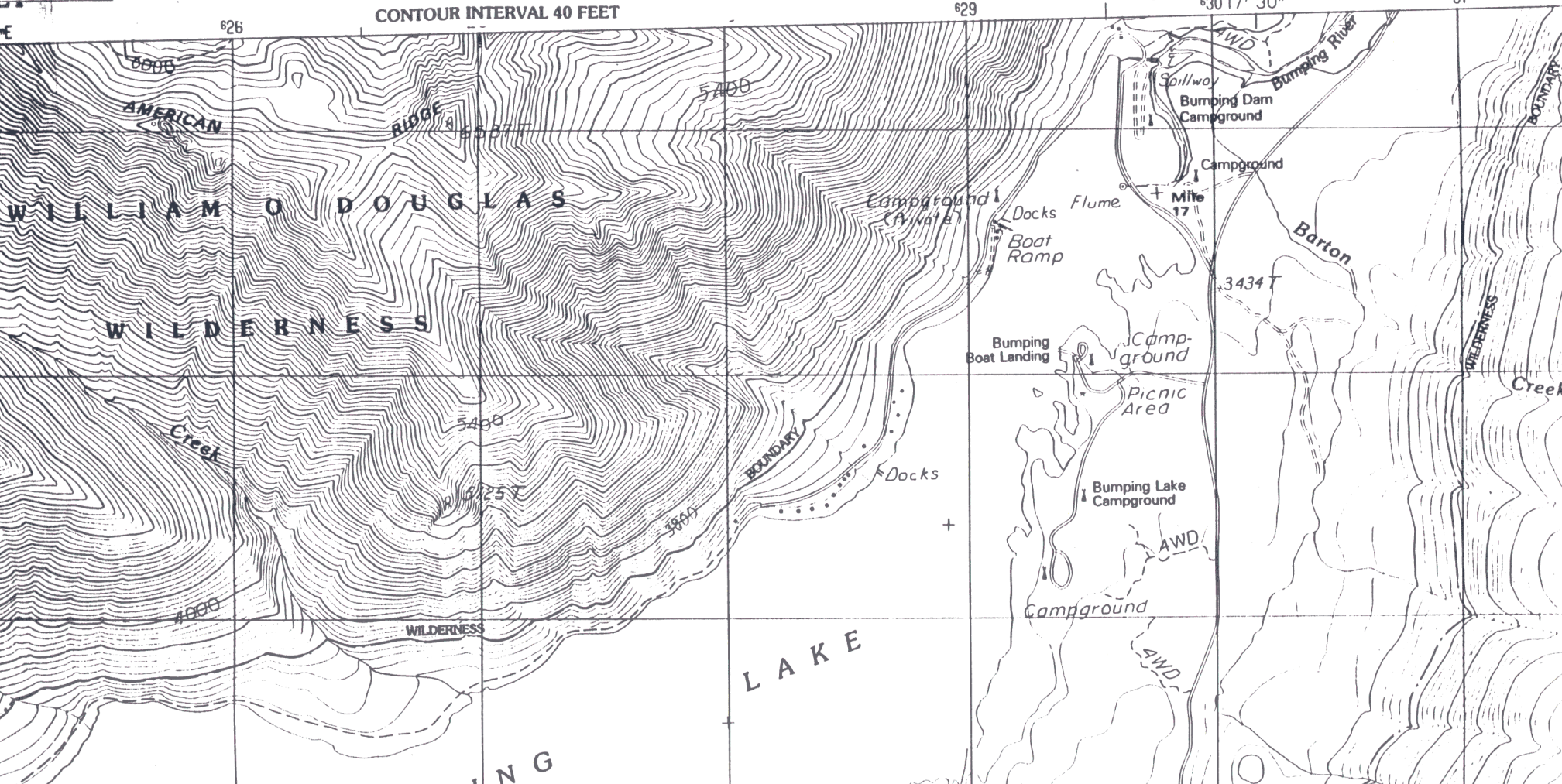


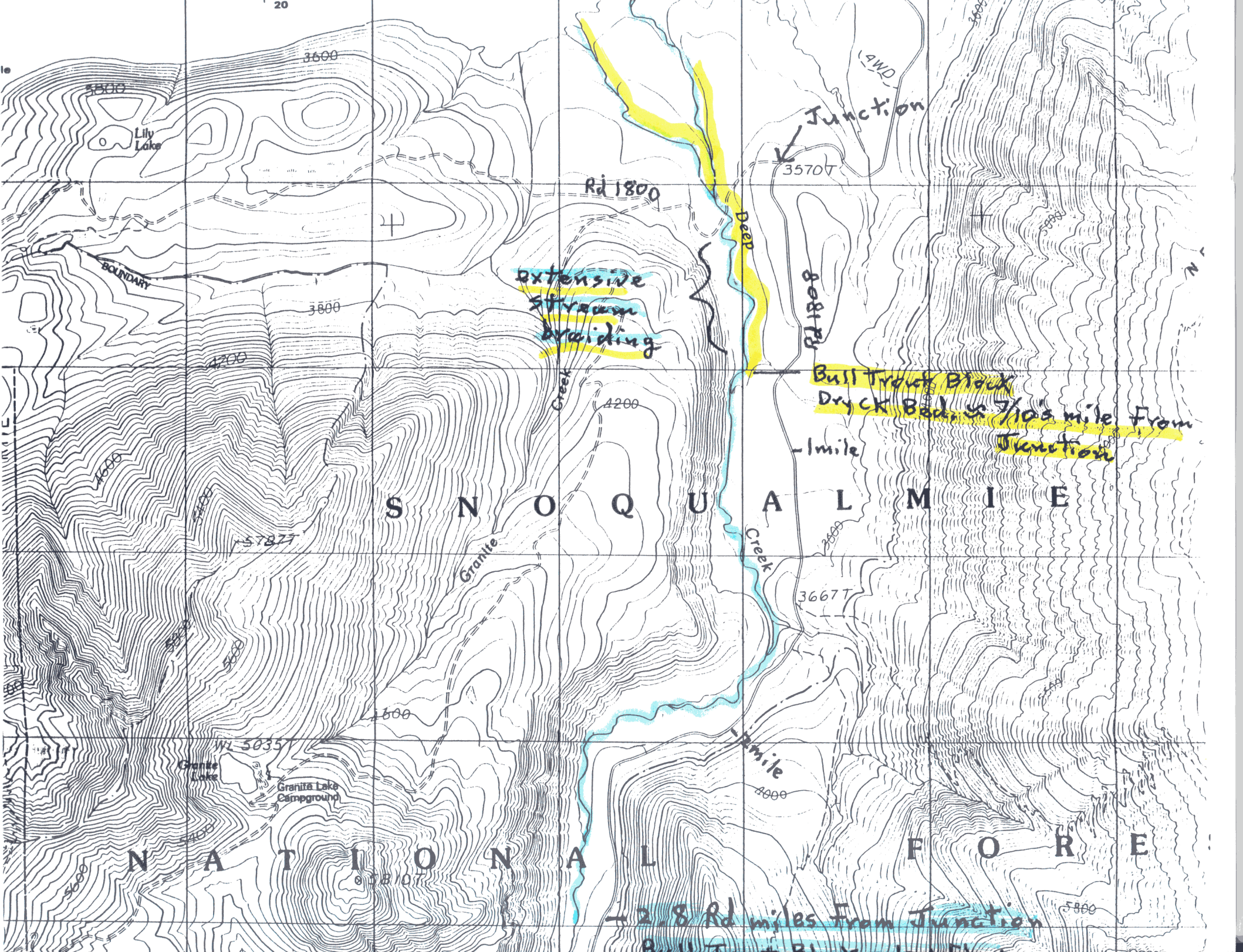
CONTOUR INTERVAL 40 FEET



1991 3 1/10's mile
BUMPING LAKE, WASH.

1992 1 1/10's mile
PROVISIONAL EDITION 1988

Blue Areas dry or impassable in 1992.



Lily Lake

Rd 1800

Junction

3570T

extensive stream braiding

Bull Trout Block Dry Cr Bed. \approx 7/10's mile from Junction

S N O Q U A L M I E

Granite Creek

Creek

3667T

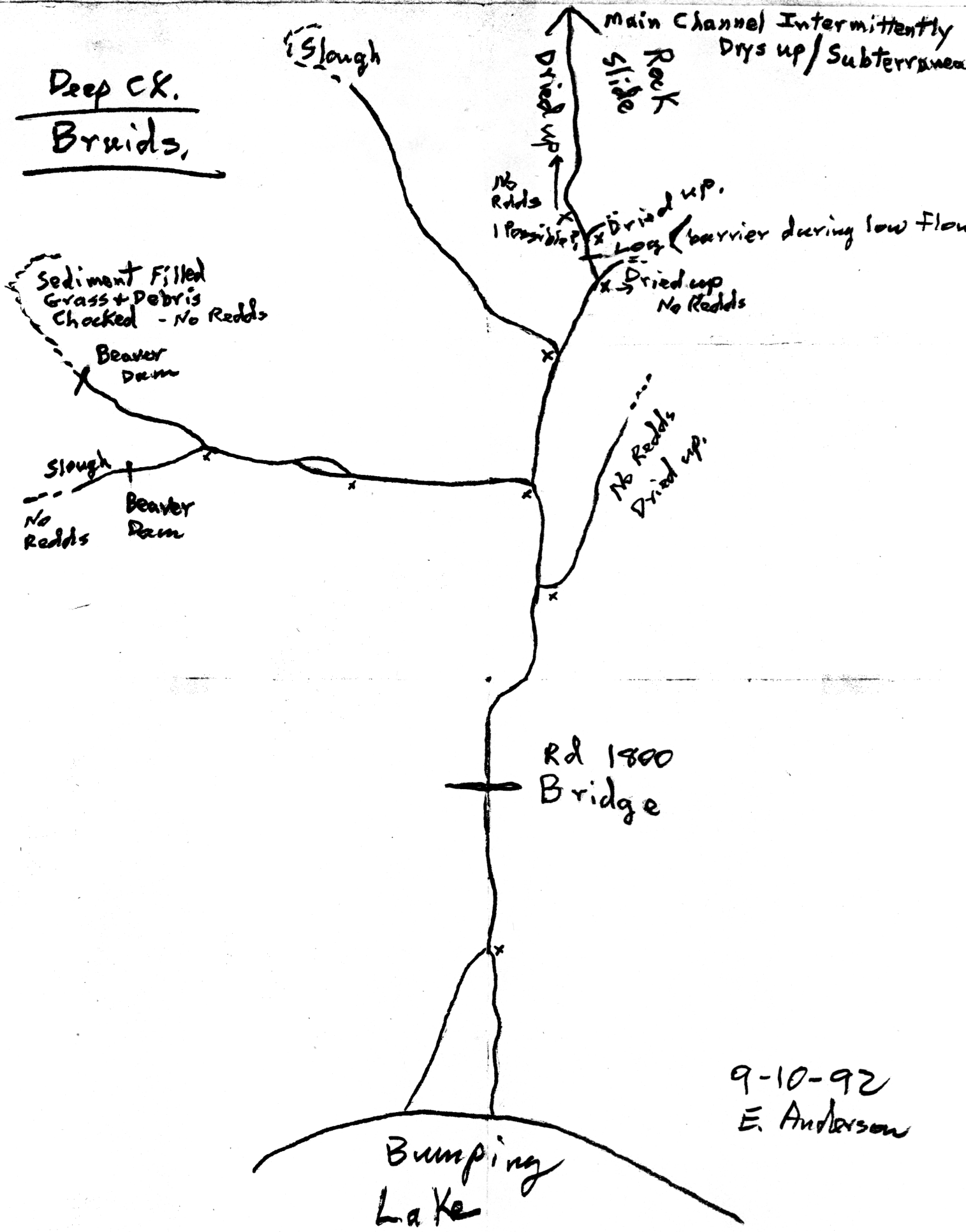
Granite Lake Campground

N A T I O N A L F O R E S T

- 2.8 Rd miles from Junction

BULL TROUT BLOCK

Deep Ck.
Bruids,



9-10-92
E. Anderson

Central
Washington
University



Department of Biological Sciences
Ellensburg, Washington 98928

October 5, 1992

Mr. Ken McDonald
USDA Forest Service
Wenatchee National Forest
P.O. Box 811
Wenatchee, WA 98807-0811

RECEIVED
STATE OF WASHINGTON
OCT - 7 1992
DEPARTMENT OF WILDLIFE
YAKIMA OFFICE

Dear Ken:

This letter is to update you on our progress on the bull trout field work that we have just completed. A total of 2 km (4, 500 m sections) were snorkeled in each of the four study streams. Juvenile bull trout were counted and measured in each of the study sites. For each bull trout found, microhabitat measurements were made and the macrohabitat (i.e., gradient, LOD, riffle/pool ratio) in each 500 m section was measured. Bull trout redds were counted in Indian Creek during September. An attempt was made to count redds in South Fork Tieton River but extremely high turbidity precluded any counts, however we were able to identify 2 redds in Bear Creek near its confluence with S.F. Tieton. The redd counts made on Indian Creek are as follows:

<u>DATE</u>	<u># of Redds</u>	<u># of Adults</u>
9/9/92	78 positive	40
9/15/92	135 positive 6 possible	30
9/25/92	142 positive 2 possible	0

We are now in the process of double-checking our field data sheets with our raw data computer print-outs and will begin data analyses soon. If you have any questions regarding the redd counts or our field work please give me a call.

Sincerely,

Paul W. James

cc: Mr. Eric Anderson
Mr. Larry Brown
Mr. Jim Cummins

THE DEPARTMENT OF WILDLIFE

Pass 2

Deep CK. Bull Trout Spawner Survey 9-10-92

Water Temp. 46°F 0900 Hrs. staff gauge 1.90

above Rd 1800 Bridge: **bridge to the falls**

Definite Redds (Fish) Probable Possible

old New (2) 1 4

39 4

below Rd 1800 Bridge **bridge to the Lake**

Definite Redds (Fish) Probable Possible

old New (1) 0 3

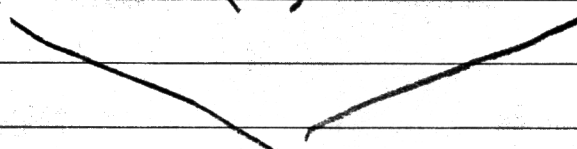
30 4

1
9
9
2

Total

Definite (Fish) Probable Possible

77 (3) 1 7



Pass 2 = 78 Redds 3 Fish

Pass 1 + Pass 2 = 78 Redds 24 live Fish (cumulative)

4 Dead (poaching)

Estimate spawning was 80-90% complete on Pass 1.

THE DEPARTMENT OF WILDLIFE

Indian CK - Bull Trout Spawner Survey 9-14-9.
 0630 - 1830 Hrs. Partly cloudy - lite rain, Air Temp 65°
 H₂O Temp 46°F

Mainstem (Hwy 12 Bridge to N. Fork Trib.)

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
63	(13)	2	11

1
9
9
2

7 Kokanee Redds (3 Fish)

'Mainstem (N. Fork to block - "No surface flow, subterranean flow for
 $\approx 15'$; surface flow picks up again above block but no
 fish or redds. Block $\approx \frac{1}{4}$ mile above S. Fork.)

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
20	(2)	ϕ	ϕ

'NOTE: Although I encountered block on mainstem between N. Fork
 and S. Fork tribs., I surveyed above block, up to and including
 S. Fork - but no redds or fish.

² N. Fork to Beaver Dam (surveyed stream that interconnected several
 beaver ponds above Dam).

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
40	(22)	ϕ	2

² Note: includes 3 Redds and 5 Fish above beaver Dam.

TOTAL

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
123	(37)	2	13

CURT SMITCH
Director



Eric

STATE OF WASHINGTON
DEPARTMENT OF WILDLIFE

January 6, 1992

TO: Greg Hueckel, Native Resident Trout Resource Manager
Fisheries Management / Olympia

FROM: Larry Brown, Area Fish Biologist
Fisheries Management / Wenatchee

Larry

SUBJECT: 1992 BULL TROUT SURVEYS IN REGION THREE

I don't yet have the data for surveys conducted by Wenatchee National Forest Personnel, but here is a summary of 1992 bull trout spawning data "in hand".

Water	Date	Temps	Adult BLC		Redds Observed			Done
			Live	Dead	Definite	Probable	Possible	
Box Canyon Cr	09/15	9.5C	8	0	0	0	0	WDW
Box Canyon Cr	09/24	9.2C	survey cancelled due to high water					WDW
Box Canyon Cr	09/28	7.7C	12	0	0	0	0	WDW
Box Canyon Cr	10/02	9.6C	8	0	1	0	1	WDW
Box Canyon Cr	10/08	7.5C	0	1	4	1	1	WDW
Box Canyon Cr	10/19	45F	0	0	4	1	0	WDW
Deep Cr	09/01	47F	21	4	69	8	8	WDW
Deep Cr	09/10	46F	3	0	77	1	7	WDW
Gold Cr (Lower)	09/30	51F	0	0	0	0	5	WDW
Gold Cr (Lower)	10/20	48F	survey cancelled due to high water					WDW
Gold Cr (Lower)	Sept?	anecdotal	1	0	0	7	1	JM
Gold Cr (Upper)	10/09	8.0C	0	0	0	2	0	WDW
Indian Cr	09/04	42F	many	0	many	many	many	WDW
Indian Cr	09/09		40	0	78	unk	0	CWU
Indian Cr	09/14	46F	37	0	123	2	13	WDW
Indian Cr	09/15		30	0	135	unk	6	CWU
Indian Cr	09/25		6	0	142	unk	2	CWU
Panther Cr	08/04		6	0	0	0	0	WDW
Panther Cr	09/09	9.0C	1	0	1	1	0	WDW
Panther Cr	09/18	7.5C	15	0	15	6	0	WDW
Panther Cr	09/23	10.8C	7	0	21	3	10	WDW
Panther Cr	10/02	9.5C	2	0	17	9	12	WDW

1
9
9
2

Note that "Definite" plus "Probable" counts is considered the total redds.

In addition, WDW conducted presence/absence surveys on Ingalls Cr and Chiwaukum Cr, tributaries of the Wenatchee. No barrier was found on Ingalls Creek to 0.3 miles above the confluence with Falls Creek. Juvenile bull trout were sampled within a half mile downstream of Falls Creek. No adult staging or spawning concentrations were located up to 6.3 miles (by trail) from the trailhead. Subsequent survey investigations should concentrate on the upper valley above the mouth of Falls Creek, from trail mile 6.0 to trail mile 12.0 near Turnpike Creek, to locate adult bull trout staging/spawning areas.

Bruce Bolding (WDW) located impassable vertical falls, one of 14 feet and another about 11 feet high, located in a narrow cataract about a half mile downstream of the confluence with the South Fork on Chiwaukum Creek (just below the wilderness boundary). Hook and line sampling found mostly rainbow trout from 228 to 265mm. Several small 7-inch charr thought to be bull trout were observed, but not captured. One 207mm possible hybrid bullXbrook was captured having vermiculations from the head to about half way to the dorsal fin. No spawning noted and no obvious adult bull trout staging areas were found. Little gravel in this area below the barrier falls, with mostly high gradient boulder/rubble substrate. This area deserves a better look. Access is via USFS Rd 121 out of Roaring Creek/Coulter Creek area.

Wenatchee National Forest personnel were to perform spawning surveys in Kachess River, Mineral Creek, Little Wenatchee River, Rock Creek, Chikamin Creek, Phelps Creek and Mad River. WNF personnel from the Cle Elum Ranger District were to conduct presence/absence surveys on the forks of the Teanaway, specifically the West and Middle Forks. I will forward that information when available from Ken MacDonald. In the meantime, I am working on relational database file structures to maintain a permanent, statewide bull trout/Dolly Varden spawning and presence/absence database system. The system I now utilize relies too heavily on MEMO field narratives and would benefit from more succinct data fields to maintain the same information.

lgb

cc: Jim Cummins, Eric Anderson, WDW, Yakima
Paul James, CWU, Ellensburg
Ken MacDonald, WNF, Wenatchee
Jerry Sherrid, SNF, North Bend

00
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

plus "probable" counts is considered the total number of

Stream Lake Fish Database
Box Canyon 1992

Year	Wa_nam	Date	Temp	New Redds	False_redds	Total_visible
1992	BOX CANYON CR	15-Sep-92	9	0	0	0
1992	BOX CANYON CR	24-Sep-92	9			
1992	BOX CANYON CR	28-Sep-92	8	0	0	0
1992	BOX CANYON CR	02-Oct-92	9	1	1	1
1992	BOX CANYON CR	08-Oct-92	7	4	1	5
1992	BOX CANYON CR	19-Oct-92	7	0	0	5

1
9
9
2

1031 09/15/92 1200 BDB AS4AS5 BOX CANYON CR

Very discouraging trip.

FIRST SURVEY OF 1992. CREEK SUBTERRANEAN ABOUT 300 YDS BELOW CAMPGROUNDS. OBS 8 ADULT BULLS IN 1ST LG BEDROCK POOL WITH WIDE GRAVEL TAILOUT. LOTS OF CEREMONIAL AGITATION, CIRCLING, ETC. SEVERAL WERE SEEN TRYING THE SMALL RIVULET ON LEFT BEDROCK FROM MAIN PLUNGE FALLS. ALL TURNED BACK TO MAIN POOL AFTER A WHILE. NO FISH IN 2ND BEDROCK POOL ABOUT 1/3 MI UPSTREAM QUIT AFTER REACHING FLAT GRAVELLY

1032 09/24/92 1200 BDB AS4AS5 BOX CANYON CR

AREA WHERE MOST FISH TRAP STAWING OCCURRED BECAUSE HAD TO MEET ERIC ANDERSON IN ELLENSBURG IN PM.

NOTED MUCH GARBAGE, BEER CANS, ETC. AT PEEK-A-BOO FALLS CAMPING BENCH, AND AT SKID ROAD BELOW. AT LEAST TWO CLOSED WATERS SIGNS HAD BEEN CHOPPED DOWN WITH AXE AT PEEK AND IN CAMP AREA ABOVE UPPER (BOMBER) FALLS. THE SIGN AT END OF SKID RD WAS BADLY DAMAGED, BUT STILL THERE.

SECOND TRIP THIS YEAR WASHED OUT DUE TO RAIN/HIGH WATER.

STARTED AT TRAILHEAD, BUT ONLY WENT ABOUT 300 YDS AND QUIT DUE TO GREENISH/BROWN TURBIDITY AND HIGH WATER. NO VISIBILITY TO SEE ANY REDDS AND TRAVEL DIFFICULT TO IMPOSSIBLE UP THE CHANNEL.

DROVE TO PEEK FALLS AND WALKED DOWN TO SPUR ROAD. SAME THING ONLY SEEMED TO BE EVEN MORE WATER HERE. SURVEY CANCELLED.

1033 09/28/92 1230 BDB AS4AS5 BOX CANYON CR

TEMP @ TRAILHEAD 6.7C @ 1010, @ PEEK-A-BOO 6.5C @ 1000.

WATER STILL HIGH, BUT DOWN APT 3' FROM MAX FLOW OCCURRING SINCE LAST VISIT ON 09/24. LOTS OF COBBLE/GRAVEL REARRANGED OVER PAST WEEK. OBS 12 ADULTS IN 1ST BEDROCK (CLASSIC POOL) HOLDING QUIETLY IN DEEP PART OF POOL BELOW PLUNGE FALLS. NO EFFORTS TO ASCEND AND NO AGITATION OR OTHER PRESPAWN BEHAVIOUR. MORE 4X4 TRACKS AND GARBAGE AT PEEK FALLS CAMP SITE. NO OTHER FISH, NO REDDS AND ONE DEAD (?) JUVENILE OF UNKNOWN (OR UNSTATED) SPECIES.

1034 10/02/92 1250 BDB AS4AS5 BOX CANYON CR

FRESH 4X4 TRACKS AT PEEK FALLS CAMP. WATER NEARLY BACK DOWN TO AUGUST LEVELS NOW, CLEAR. 2 PAIRS ON REDDS. CALLED ONE A POSSIBLE OR TEST IN FIELD NOTES, BUT WATCHED CONSISTENT HALF-HEARTED DIGGING FOR SOME 25 MINUTES. NO CHANGE IN THIS "TEST" DIG A WEEK LATER NOTES INDICATE MOST ACTIVITY BELOW 1ST LARGE BEDROCK POOL. TWO ADULTS OBS IN THIS POOL AND ONE ADULT IN LONG FLAT POOL BELOW SPUR ROAD. NO MENTION OF ACTIVITY IN LONG GRAVELLY FLATS.

REDD CLASSIFICATION: DEFINITE 1, PROBABLE 0, POSSIBLE 1.

1035 10/08/92 1040 BDB AS4AS5 BOX CANYON CR

FOUND STOMACH/PYLORIC CAECA FROM VERY LARGE FISH AT RT BANK JUST BELOW SPUR RD #201. WET/RAINY. HAD TO HIKE AROUND CATARACT CANYON DUE TO SLIPPERY CONDITIONS. REDDS BASICALLY WHERE FISH WERE OBS LAST WEEK. HIGHEST REDD WAS ABOUT 70m BELOW OLD SPUR RD ON LEFT BANK AT END OF LONG, SHALLOW POOL (AS USUAL IN MOST YEARS). FISH ARE GONE.

REDD CLASSIFICATION: DEFINITE 4, PROBABLE 1, POSSIBLE 1.

1036 10/19/92 1237 BDB AS4AS5 BOX CANYON CR

LAST SURVEY. NO CHANGE IN REDDS FROM PREVIOUS WEEK. NO FISH EXCEPT ONE 6" RB (?) IN CATARACT CHANNEL. DID NOT NOTE THE TEST OR POSSIBLE REDD THIS TIME FOR SOME REASON.

REDD CLASSIFICATION: DEFINITE 4, PROBABLE 1, POSSIBLE 0.

09/24/90 1155 EA

Z16Z17 DEEP CR

Already entered

ONE CARCASS OF A LARGE BULL TROUT.
FROM BRIDGE ON USFS RD 1800 TO ABOUT 3 MILES
UPSTREAM (2.7 MILES UP FROM Y INTERSECTION OF
ROADS 1800 AND 1808). SLOUGH AREA BY RD 1808
WHERE I CAME OUT. WENT TO APPARENT BLOCKAGE
CAUSED BY LOW FLOW AND SUBTERRANEAN FLOW. MAY
HAVE BEEN FISH ABOVE THIS POINT BY EARLIER
MIGRATION TIMING; WILL CHECK IT OUT NEXT YEAR.
NO BULL TROUT SEEN. SUSPECT SPAWNING IN EARLY TO
MID-SEPTEMBER. WILL START 1991 SURVEYS EARLIER.

09/10/91 1155 EA

Z16Z17 DEEP CR

FROM RD 1800 UPSTREAM 3 MILES JUST PAST SMALL POND
BY ROAD 1808: 76 REDDS, 3 FALSE, 2 ADULTS (APPROX.
16"). TEMP 44F. LOW FLOW BLOCKAGE AS FLOW GOES
SUBTERRANEAN. ELECTROFISHING SHOWED ONE ADULT
BULL TROUT (445mm F) TRAPPED IN POOL, 8 JUVENILE
BULL TROUT FROM 72-131mm, 1 BROOK TROUT 92mm, AND
LOTS OF SCULPINS. FROM ROAD 1800 DOWNSTREAM TO
LAKE: 8 REDDS, 6 ADULTS (MOSTLY KELTED), AND ONE
CARCASS OF 690mm BULL TROUT (otoliths taken).

STAFF GAUGE ABOVE DOUBLE CULVERT ON RD 1800 READ
1.98 (feet?).

09/01/92 1000 EA

Z16Z17 DEEP CR

SPAWNING APPEARED 80-90 PERCENT COMPLETE, NEED TO
START SURVEYS IN MID-AUGUST IN THIS STREAM. STAFF
GAUGE 1.90 (WAS 1.98 LAST YR)
LOW FLOW CONDITIONS CAUSED STREAM TO DRY UP ABOUT
1.7 MILES FROM MOUTH. FOUND 2 ADULT BLC HEADS FROM
POACHING AND 2 ADULT BLC MORTS. ALSO OBS. 2 LIVE
AND 1 DEAD BLC JUV 6-8" AND ABOUT 25 LIVE BLC FRY
OF 1-2". 6 OF THE 25 ADULT BLCs WERE IN LG POOL
BELOW RD 1800 AND NOT ON REDDS.
REDD CLASSIFICATION: DEFINITE 69, PROBABLE 8,
POSSIBLE 8

09/10/92 0900 EA

Z16Z17 DEEP CR

REDD CLASSIFICATION: DEFINITE 77, PROBABLE 1,
POSSIBLE 7.

08/13/93 0845 EA

Z16Z17 DEEP CR

Initial or preliminary trip.
No spawning activity and no adult bull trout
observed.
Several small fry were observed. Unlike last
year, the channel above 1.7 miles from mouth has
considerable flow. Last year the channel was
dried up above that point.

Staff gauge at FSRD1800 bridge at 2.00

08/24/93 0900 EA

Z16Z17 DEEP CR

Eric calls this one his "first pass"

Water 44F at FSRD1800 bridge, BOR staff gauge at
2.00

No redds or fish in braided channels, none in

Stream Lake Fish Database
Deep Cr 1992

Year	Wa_nam	Temp	Date	Time	New	FALSE	Total	#Fish
1992	DEEP CR		9/1/1992	10:00 AM	69	0		
1992	DEEP CR	7	9/10/1992	9:00 AM	4	3		1
1992	DEEP CR	7	9/10/1992	9:00 AM	5	4		2

1
9
9
2

Date	Time	Code	Age	Sex	Location	Species	Weight	Measure	Notes	Live	Dead	Redds	False	Other	Remarks
09/10/92	0900	EA	38		Z16Z17	R	DEEP CR	46F	DV BULL						MEMO
08/13/93	0845	EA	38		Z16Z17	R	DEEP CR	47F	DV BULL	0	0				MEMO
08/24/93	0900	EA	38		Z16Z17	R	DEEP CR	44F	DV BULL	9	0				MEMO
09/02/93	0900	EA	38		Z16Z17	R	DEEP CR	45F	DV BULL	13	0				MEMO
09/10/93	0830	EA	38		Z16Z17	R	DEEP CR	46F	DV BULL	0	0				MEMO
07/07/92	1200	LGB	39		AT3AT4	R	GOLD CR		DV BULL	MEMO	ONLY				MEMO
09/25/84	1200	JS	39	20	AT3AT4	R	GOLD CR (LOWER)	9.5C	DV BULL	0	2				MEMO
10/05/84	1200	JS	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL	0	0				MEMO
09/09/85	0833	JS	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL	0	0				MEMO
09/13/85	0951	JS	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL						MEMO
09/14/85		JS	39		AT3AT4	R	GOLD CR (LOWER)		DV BULL	0	0				MEMO
09/20/85	0831	JS	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL						MEMO
09/30/85		JS	39		AT3AT4	R	GOLD CR (LOWER)		DV BULL						MEMO
09/22/86	1500	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL	0	0				MEMO
08/27/87	1300	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL	3	9				MEMO
09/17/87	1000	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL	0	0				MEMO
10/05/87	1030	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)	53F	DV BULL	0	4				MEMO
09/15/88	1200	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)	52F	DV BULL	0	7				MEMO
09/22/88	1100	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)	56F	DV BULL	0	4				MEMO
09/15/89	0900	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)	52F	DV BULL	0	6				MEMO
09/20/89	1000	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)	52F	DV BULL	0	4				MEMO
09/27/90	1330	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)	52F	DV BULL	0	4				MEMO
09/13/91	1400	LGB	39	20	AT3AT4	R	GOLD CR (LOWER)	58F	DV BULL	0	0				MEMO
09/20/91	NBRD	FG	39	20	AT3AT4	R	GOLD CR (LOWER)		DV BULL						MEMO
09/18/92	from	FRI	39		AT3AT4	R	GOLD CR (LOWER)		DV BULL						MEMO
09/30/92	1017	BDB	39		AT3AT4	R	GOLD CR (LOWER)		DV BULL						MEMO
10/20/92	1000	BDB	39		AT3AT4	R	GOLD CR (LOWER)	51F	DV BULL	0	0				MEMO
09/23/93	1201	FRI	39		AT3AT4	R	GOLD CR (LOWER)	48F	DV BULL						MEMO
09/18/90	1000	LGB	39	20	AT3AT4	R	GOLD CR (UPPER)	11.2C	DV BULL						MEMO
09/19/91	CERD	KS	39	20	AT3AT4	R	GOLD CR (UPPER)	52F	DV BULL	0	2				MEMO
09/20/91	NBRD	FG	39	20	AT3AT4	R	GOLD CR (UPPER)		DV BULL	0	0				MEMO
09/18/92	from	FRI	39		AT3AT4	R	GOLD CR (UPPER)		DV BULL						MEMO
10/09/92	1015	BDB	39		AT3AT4	R	GOLD CR (UPPER)		DV BULL						MEMO
09/23/93	1200	FRI	39		AT3AT4	R	GOLD CR (UPPER)	8.0C	DV BULL	0	0				MEMO
09/18/90	WDW		38	30	Y74Y75	R	HINDOO CR	9.6C	DV BULL						MEMO
09/08/84	1200	JS	38	23	Y58Y59	R	HINDOO CR	48F	DV BULL	0	0				MEMO

Live Dead

Redds False

9.5C

11.2C

8.0C

9.6C

HINDOO CR

2FM, 1STR 37 9
STRANDED 45 9

SPEARED 21 3

0 MEMO --- NO COUNT

0 SURVEY CANCELLED RAIN YUK

ANGLERS 3 0

2 LOST 15 OF 17 9 6

09/29/89 1155 EA	Z16Z17 DEEP CR		BELOW ROAD 1800: 5 REDDS, 0 ADULTS LIVE, ENTRAILS OF ONE BULL TROUT OBSERVED. ABOVE ROAD 1800 (ABOUT 1 MILE): 12 REDDS, NO LIVE BULL TROUT AND ONE CARCASS OF A LARGE BULL TROUT.
09/24/90 1155 EA	Z16Z17 DEEP CR		FROM BRIDGE ON USFS RD 1800 TO ABOUT 3 MILES UPSTREAM (2.7 MILES UP FROM Y INTERSECTION OF ROADS 1800 AND 1808). SLOUGH AREA BY RD 1808 WHERE I CAME OUT. WENT TO APPARENT BLOCKAGE CAUSED BY LOW FLOW AND SUBTERRANEAN FLOW. MAY HAVE BEEN FISH ABOVE THIS POINT BY EARLIER MIGRATION TIMING; WILL CHECK IT OUT NEXT YEAR. NO BULL TROUT SEEN. SUSPECT SPAWNING IN EARLY TO MID-SEPTEMBER. WILL START 1991 SURVEYS EARLIER.
09/10/91 1155 EA	Z16Z17 DEEP CR	★	FROM RD 1800 UPSTREAM 3 MILES JUST PAST SMALL POND BY ROAD 1808: 76 REDDS, 3 FALSE, 2 ADULTS (APPROX. 16"). TEMP 44F. LOW FLOW BLOCKAGE AS FLOW GOES SUBTERRANEAN. ELECTROFISHING SHOWED ONE ADULT BULL TROUT (445mm F) TRAPPED IN POOL, 8 JUVENILE BULL TROUT FROM 72-131mm, 1 BROOK TROUT 92mm, AND LOTS OF SCULPINS. FROM ROAD 1800 DOWNSTREAM TO LAKE: 8 REDDS, 6 ADULTS (MOSTLY KELTED), AND ONE CARCASS OF 690mm BULL TROUT (otoliths taken).
			STAFF GAUGE ABOVE DOUBLE CULVERT ON RD 1800 READ 1.98 (feet?).
09/01/92 1000 EA	Z16Z17 DEEP CR	★	SPAWNING APPEARED 80-90 PERCENT COMPLETE, NEED TO START SURVEYS IN MID-AUGUST IN THIS STREAM. STAFF GAUGE 1.90 (WAS 1.98 LAST YR) LOW FLOW CONDITIONS CAUSED STREAM TO DRY UP ABOUT 1.7 MILES FROM MOUTH. FOUND 2 ADULT BLC HEADS FROM POACHING AND 2 ADULT BLC MORTS. ALSO OBS. 2 LIVE AND 1 DEAD BLC JUV 6-8" AND ABOUT 25 LIVE BLC FRY OF 1-2". 6 OF THE 25 ADULT BLCs WERE IN LG POOL BELOW RD 1800 AND NOT ON REDDS. REDD CLASSIFICATION: DEFINITE 69, PROBABLE 8, POSSIBLE 8
09/10/92 0900 EA	Z16Z17 DEEP CR		REDD CLASSIFICATION: DEFINITE 77, PROBABLE 1, POSSIBLE 7.
08/13/93 0845 EA	Z16Z17 DEEP CR		Initial or preliminary trip. No spawning activity and no adult bull trout observed. Several small fry were observed. Unlike last year, the channel above 1.7 miles from mouth has considerable flow. Last year the channel was dried up above that point. Staff gauge at FSRD1800 bridge at 2.00
08/24/93 0900 EA	Z16Z17 DEEP CR		Eric calls this one his "first pass" Water 44F at FSRD1800 bridge, BOR staff gauge at 2.00

Alcady entered

✓614 09/27/89 WDW
✓615 10/09/89 WDW
639 10/11/91 NTS

*COLD COLD CR ?
*COLD COLD CR ?
ARSAR4 COOPER R

NATAPOC TIMBER SERVICES CONTRACTED BY USFS.
50F @1115, 52F @1300. LOTS OF BEDROCK,
GRAVEL LIMITED. 7 HOUR SURVEY FROM MOUTH
TO COOPER LAKE.

581 09/29/89 1155 EA Z16217 DEEP CR

BELOW ROAD 1800: 5 REDDS, 0 ADULTS LIVE, ENTAILS
OF ONE BULL TROUT OBSERVED. ABOVE ROAD 1800
(ABOUT 1 MILE): 12 REDDS, NO LIVE BULL TROUT AND
ONE CARCASS OF A LARGE BULL TROUT.

582 09/24/90 1155 EA Z16217 DEEP CR

FROM BRIDGE ON USFS RED 1800 TO ABOUT 3 MILES
UPSTREAM (2.7 MILES UP FROM Y INTERSECTION OF
ROADS 1800 AND 1808). SLOUGH AREA BY RD 1808
WHERE I CAME OUT. WENT TO APPARENT BLOCKAGE
CAUSED BY LOW FLOW AND SUBTERRANEAN FLOW. MAY
HAVE BEEN FISH ABOVE THIS POINT BY EARLIER
MIGRATION TIMING; WILL CHECK IT OUT NEXT YEAR.
NO BULL TROUT SEEN. SUSPECT SPAWNING IN EARLY TO
MID-SEPTEMBER. WILL START 1991 SURVEYS EARLIER.

Alcanda entered

583 09/10/91 1155 EA Z16217 DEEP CR

FROM RD 1800 UPSTREAM 3 MILES JUST PAST SMALL POND
BY ROAD 1808: 76 REDDS, 3 FALSE, 2 ADULTS (APPROX.
16"). TEMP 44F. LOW FLOW BLOCKAGE AS FLOW GOES
SUBTERRANEAN. ELECTROFISHING SHOWED ONE ADULT
BULL TROUT (445mm F) TRAPPED IN POOL, 8 JUVENILE
BULL TROUT FROM 72-131mm, 1 BROOK TROUT 92mm, AND
LOTS OF SCULPINS. FROM ROAD 1800 DOWNSTREAM TO
LAKE: 8 REDDS, 6 ADULTS (MOSTLY KELTED), AND ONE
CARCASS OF 690mm BULL TROUT (otoliths taken).

STAFF GAUGE ABOVE DOUBLE CULVERT ON RD 1800 READ
1.98 (feet?).

1046 09/01/92 1000 EA Z16217 DEEP CR

SPAWNING APPEARED 80-90 PERCENT COMPLETE, NEED TO
START SURVEYS IN MID-AUGUST IN THIS STREAM. STAFF
GAUGE 1.90 (WAS 1.98 LAST YR)
LOW FLOW CONDITIONS CAUSED STREAM TO DRY UP ABOUT
1.7 MILES FROM MOUTH. FOUND 2 ADULT BLC HEADS FROM
POACHING AND 2 ADULT BLC MORTS. ALSO OBS. 2 LIVE
AND 1 DEAD BLC JUV 6-8" AND ABOUT 25 LIVE BLC FRY
OF 1-2". 6 OF THE 25 ADULT BLCs WERE IN LG POOL
BELOW RD 1800 AND NOT ON REDDS.

REDD CLASSIFICATION: DEFINITE 69, PROBABLE 8,
POSSIBLE 8

1047 09/10/92 0900 EA Z16217 DEEP CR

REDD CLASSIFICATION: DEFINITE 77, PROBABLE 1,
POSSIBLE 7.

*09/15/92
Z16217 ?*

1107 08/13/93 0845 EA Z16217 DEEP CR

Initial or preliminary trip.
No spawning activity and no adult bull trout
observed.
Several small fry were observed. Unlike last
year, the channel above 1.7 miles from mouth has
considerable flow. Last year the channel was
dried up above that point.

Staff gauge at FSRD1800 bridge at 2.00

1108 08/24/93 0900 EA Z16217 DEEP CR

Eric calls this one his "first pass"

Water 44F at FSRD1800 bridge, BOR staff gauge at
2.00

No redds or fish in braided channels, none in
slide area. Surveyed to about 1.5 miles upstream

2680

1037 07/07/92 1200 LGB

AT3AT4 GOLD CR

GOLD CREEK BULL TROUT REDD SURVEYS WILL BE DONE BY PERSONNEL FROM NORTH BEND RANGER DISTRICT THIS YEAR ACCORDING TO JERRY SHERRID. I ASSUME FRED GOETZ WILL DO THE SURVEYS IN CONJUNCTION WITH HABITAT SURVEY WORK ON-GOING.

27 09/25/84 1200 JS

AT3AT4 GOLD CR (LOWER)

28 10/05/84 1200 JS

AT3AT4 GOLD CR (LOWER)

541 09/09/85 0833 JS

AT3AT4 GOLD CR (LOWER)

542 09/13/85 0951 JS

AT3AT4 GOLD CR (LOWER)

1114 09/14/85 JS

AT3AT4 GOLD CR (LOWER)

THIS MAY BE CONFLICTING DATA FROM OTHER DATA WHICH JIM SPOTTS RECONSTRUCTED FROM HIS FIELD NOTEBOOK.

THIS DATA FROM AN OLD 9/14/86 MEMO TO JIM CUMMINS (WHICH JIM FINALLY LOCATED).

THE MEMO INDICATES NO FISH, NO REDDS AND NO FALSE REDDS ON GOLD CREEK SEPT.14, 1985.

543 09/20/85 0831 JS

AT3AT4 GOLD CR (LOWER)

1115 09/30/85 JS

AT3AT4 GOLD CR (LOWER)

DATA MAY CONFLICT WITH OTHER DATA (DATES?) WHICH WERE RECONSTRUCTED BY JIM SPOTTS FROM FIELD NOTEBOOKS.

THIS ENTRY IS FROM A MEMO FROM SPOTTS TO CUMMINS ON 09/14/86, WHICH HAS JUST RECENTLY (11/01/93) BEEN LOCATED.

NO FISH AND NO REDDS WERE NOTED, WHICH CONTRASTS WITH DATA RECEIVED EARLIER.

6 09/22/86 1500 LGB

AT3AT4 GOLD CR (LOWER)

Seven redds observed in lake outlet channel, but no fish. Walked from the lake to about 100 yds below I-90. Stream is dry to intermittent above the lake culvert. From culvert to I-90 found 21 redds and 3 false redds. Observed 3 bull trout on redds and another 9 adults in hiding pools (one VERY large male of 12+ lbs). Found one speared male (55cm) dead. Salvaged otos, Age-7+. Lots of evidence of harassment, sharpened sticks and fresh, clean two-hand rocks in holding and spawning areas.

17 08/27/87 1300 LGB

AT3AT4 GOLD CR (LOWER)

Spotts and I surveyed from gravel pit all the way to Lake Keechelus. Only 1 bull trout (female) of 5-7 pounds observed about 200 yds above I-90 under log near scaling pit parking area. Had reports of folks chasing and rocking "large fish" last Sunday, just downstream from I-90. No sign of any spawning yet.

19 09/17/87 1000 LGB

AT3AT4 GOLD CR (LOWER)

From lake to gravel pit pond. Only one redd about 200 yds below pit culvert. 2 large males and one female observed in a deep pool directly below the redd. 1 large male all by his lonesome up in the quiet channel below the gravel pit lake. No sign of any kokanee yet. People tracks and litter everywhere.

22 10/05/87 1030 LGB

AT3AT4 GOLD CR (LOWER)

From 200 yds below I-90 to pit lake. Kokanee (several hundred) now in the creek and spawning, confounding false redd counts. I re-evaluated redds for actual bull trout spawning on the return trip, but could not separate false bull trout

09/18/92 from FRI	AT3AT4 GOLD CR (LOWER)	<p>material).</p> <p>1992 DATA OBTAINED FROM SCOTT CRAIG, UW MASTER'S STUDENT UNDER BOB WISSMAR, FRI, IN A TABLE PRESENTED ON NOV.5,1993.</p> <p>I don't know where Scott obtained this information. Perhaps he got it from Fred Goetz or someone else at the North Bend Ranger District. Bruce Bolding did some cursory surveys, but never found this number of redds.</p>
09/30/92 1017 BDB	AT3AT4 GOLD CR (LOWER)	<p>DUE TO COMMUNICATIONS FOUL-UP, NORTH BEND RANGER DISTRICT WILL NOT BE DOING GOLD CREEK SPAWNING SURVEYS. I DON'T KNOW WHY SHERRID DIDN'T CARRY THROUGH WITH HIS COMMITMENT. BOLDING TALKED TO GOETZ AND WAS INFORMED "THEY DIDN'T HAVE TIME". BRUCE WILL TRY TO GET THE DATA. THIS IS FIRST ATTEMPT, BUT ONLY FOUND SOME TEST DIGS OR HYDRAULIC SPOTS, MOSTLY JUST ABOVE FRONTAGE ROAD. NO FISH OBSERVED. TEMP AT TOP SPAWNING CHANNEL 51F AND IN POOL BELOW CULVERT ON POND OUTLET 51F. CHANNEL WAS DRY AROUND POND SITE UNTIL HEAVY RAINS OF LAST WEEK OR SO.</p>
10/20/92 1000 BDB	AT3AT4 GOLD CR (LOWER)	<p>CANCELLED SURVEY DUE TO RAIN AND TURBID/HIGH WATER. SAW SCHOOLS OF 5-8" KOKANEE BELOW POND CHANNEL.</p> <p>MET JIM MIGHELL (NMFS) AND GOT THIS ANECDOTAL INFORMATION. JIM SAW 5 BLC REDDS WITHIN 300m BELOW CULVERT, 2 OR 3 REDDS IN CHANNEL WITH ONE MALE BLC ON ONE REDD SOMETIME IN SEPT.</p> <p>JIM ALSO SAID HE SAW ABOUT 15 BLC REDDS IN CLE ELUM RIVER NEAR SALMON LA SAC IN SEPTEMBER.</p> <p>JIM CLAIMS TO HAVE SEEN A PAIR OF ARCTIC CHARR IN GOLD CREEK NEAR JCT WITH ALASKA CREEK IN ABOUT 1974. CLAIMED ARCTIC CHARR WERE STOCKED IN KEECHELUS LAKE AFTER THE 1902 ALASKA EXIBITION. (MAYBE SO, MAYBE NOT?)</p> <p>IF JIM'S OBSERVATIONS OF REDDS IN SEPTEMBER IS ACCURATE, THEY WERE WASHED OUT AND NOT NOW VISIBLE DUE TO HIGH WATER BETWEEN SEPT. 24 AND NOW. SPAWNING MAY HAVE BEEN RESTRICTED TO THE LOWER SECTION BELOW THE POND DUE TO CHANNEL DEWATERING, AT LEAST UNTIL THE LATE SEPTEMBER RAINS.</p>

Taken from Washington Dept of Game Stream Lake Fish Database



09/23/93 1201 FRI	AT3AT4 GOLD CR (LOWER)	<p>Walked up Gold Cr trail to Wilderness Boundary. Began survey about 1/8 mi above wooden boundary sign on trail. Surveyed for about 1.5 miles to just above mouth of Silver Cr, probably close to mouth of outlet from Alaska Lake (not actually found). The two adults bull trout were widely separated about 1/2 mile. One 25" male in mainstem under LOD and one 20" female in right bank flood channel with small flow (multiple pocket redd near mainstem about 25 meters below</p>
09/18/90 1000 LGB	AT3AT4 GOLD CR (UPPER)	

09/19/91 CERD KS

AT3AT4 GOLD CR (UPPER)

TELEPHONE CALL FROM KATHERINE STALEY - CLE ELUM RD
USFS

Surveyed wilderness area of Gold Creek - ONLY
THREE REDDS FOUND ABOVE WILDERNESS BOUNDARY. Fair
amount of evidence of fishing and/or poaching
going on here. Found heads of two bull trout and
saw two live adult bull trout. NEED TO POST
CLOSED WATERS AND SPECIES CLOSURE INFORMATION.

(ED: THIS INFORMATION DOESN'T MATCH FRED GOETZ
INFORMATION 9/20)

(NEED TO GET BETTER DETAILS OF WHO SURVEYED WHAT
AND WHEN.....)

09/20/91 NBRD FG

AT3AT4 GOLD CR (UPPER)

SEE COMMENTS FOR RECORD 593 (LOWER GOLD CR)

09/18/92 from FRI

AT3AT4 GOLD CR (UPPER)

1992 DATA OBTAINED FORM SCOTT CRAIG, UW MASTER'S
STUDENT UNDER BOB WISSMAR, FRI, IN A TABLE
PRESENTED ON NOV.5,1993.

I don't know where Craig obtained his information.
Perhaps he got it from Fred Goetz or someone else
at the North Bend Ranger District. Bruce Bolding
did some cursory surveys, but never found this
number of redds.

10/09/92 1015 BDB

AT3AT4 GOLD CR (UPPER)

WATER TEMP AT POND CULVERT 9.5C AND AT TRAILHEAD
8.0C @1015.
FROM TRAILHEAD UPSTREAM. FOUND THE TWO
PROBABLE/POSSIBLE(?) REDDS ABOUT IN THE MIDDLE OF
THE SECTION FROM START TO ABOUT SILVER CREEK. GOT
TIRED AT ABOUT SILVER CREEK OR ALASKA CREEK (NOT
SURE WHICH) AND RETURNED ON TRAIL (1 HOUR WALK TO
WLDNESS BNDRY).
DID NOT SURVEY FROM POND AREA DOWN TO LAKE.

09/23/93 1200 FRI

AT3AT4 GOLD CR (UPPER)

Data from UW master's student, Scott Craig,
working under direction of Dr. Bob Wissmar (FRI).
Redd counts represent the "best" total count for
the season.

Note that he documented the loss of 15 of the 17
adult BLC (88 percent) known to have penetrated
into the upper river, above the pond. Temperature
ranged from 9.6-11.2C from Sept.03-23, 1993.

Two additional redds were located downstream of
the pond outfall (Lower Gold Cr) before
confounding by large numbers of kokanee.

Scott will publish details as a Master of Science
Thesis in the near future. Objectives of his
study were.....

1) Monitor with the least amount of
disturbance, the adult bull trout above and below
the dry creek bed located near the pond and
with habitat

09/04/92 1300 JLC

Y58Y59 INDIAN CR

REPORT FROM JIM CUMMINS. VISITED CREEK FOR EARLY
LOOK-SEE. LOTS OF FISH AND REDDS IN MAIN NORTH
SPRING CREEK. MAINSTEM GOES DRY FOR SOME 50' ABOUT
1/4 MILE ABOVE NORTH SPRING CONFL. NO FISH ABOVE
TRAIL CROSSING THIS YEAR. FISH IN MAINSTEM AND
NORTH SPRING APPEAR ABOUT 2/3 DONE ALREADY. BETTER
GET WITH FORMAL SURVEYS.
BOTH NORTH SPRING AND SOUTH SPRING AT 42F.

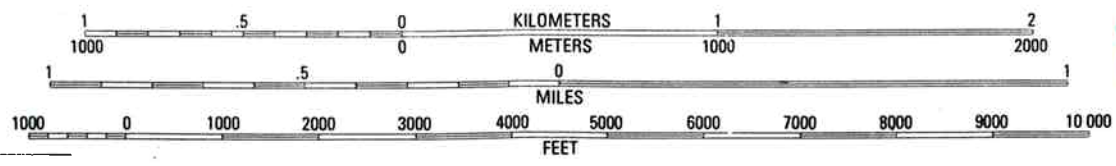
09/09/92 CWU

Y58Y59 INDIAN CR

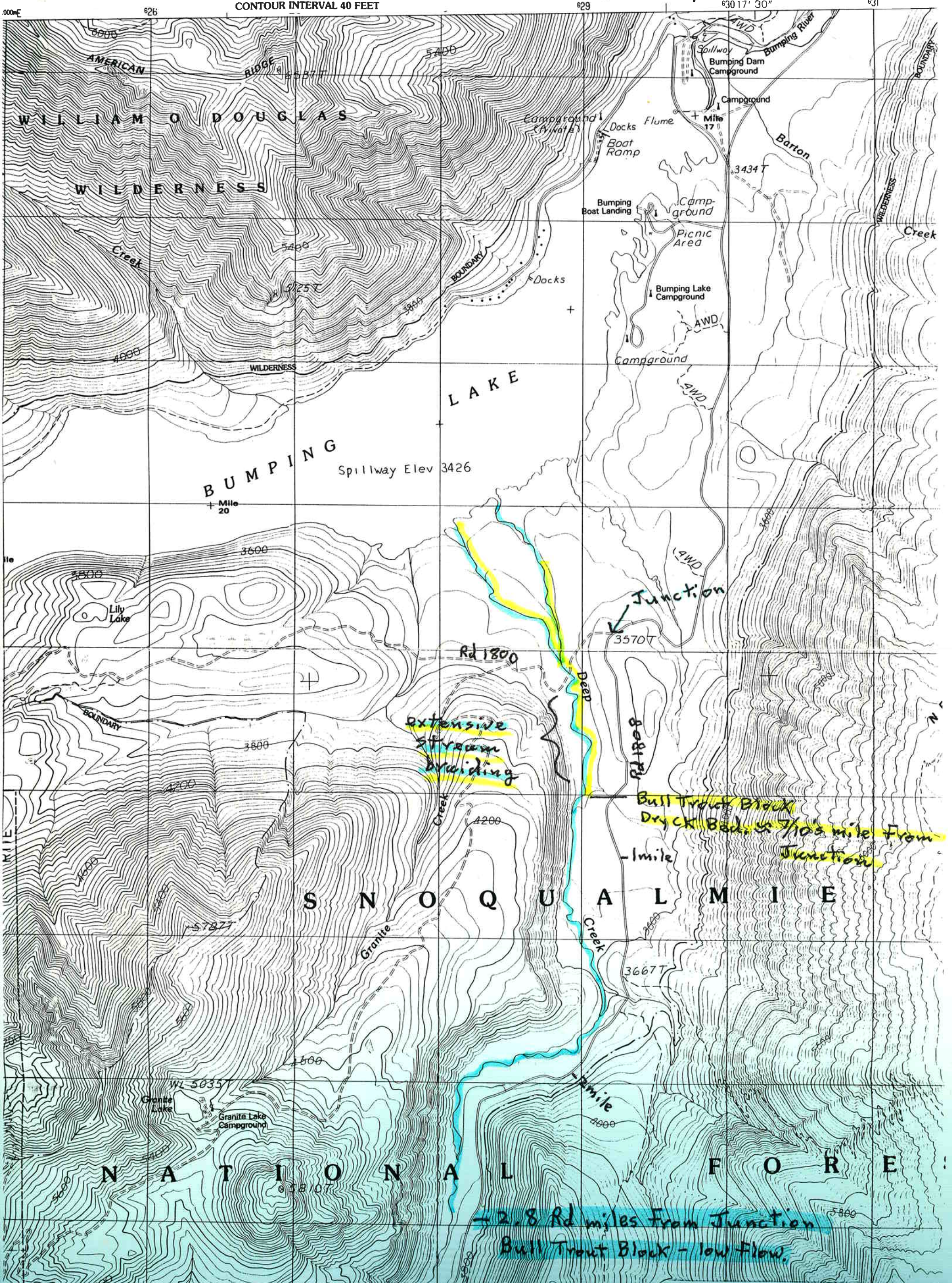
09/14/92 0830 EA

Y58Y59 INDIAN CR

ERIC ANDERSON SURVEY TO DOUBLE CHECK CENTRAL'S
CREW.
DEFINITE 123, PROBABLE 2, POSSIBLE 13, ADULT BLC
37.
ALSO OBS 7 KOKANEE REDDS/3 KOKS JUST UP FROM HWY
12 BR.
CLOSE ENUF TO DEFER TO CWU'S COUNTS.



1991 3 7/10 mile
BUMPING LAKE, WASH.
1992 1 7/10 mile
PROVISIONAL EDITION 1988
Blue Areas dry or impassable in 1992.



ROAD LEGEND

Improved Road
Unimproved Road	-----
Trail
Interstate Route	Ⓜ
U.S. Route	Ⓜ
State Route	Ⓜ

E. Anderson

216211

33T16128

See TRS + Map on previous
STREAM SURVEY FORM (Dated 9-1-92)
STATE OF WASHINGTON

THE DEPARTMENT OF WILDLIFE

Pass 2
9-10-92

Deep CK.

Bull Trout Spawner Survey

Water Temp. 46°F 0900 Hrs. staff gauge 1.90

above Rd 1800 Bridge:

Definite Redds (Fish)

Probable

Possible

old New (2)

sample 1615

39 4 1 216217 4
09T15R12E

below Rd 1800 Bridge:

Definite Redds (Fish)

Probable

Possible

old New (1)

216217

sample 1614

30 4 0 3

Total

Definite (Fish)
77 (3)

Probable
1

Possible
7

Pass 2 = 78 Redds 3 Fish

Pass 1 + Pass 2 = 78 Redds 24 live Fish (cumulative)

4 Dead (poaching)

Estimate spawning was 80-90% complete on Pass 1.

2450

002450

Deep Cr.
Braids,

Slough

main Channel Intermittently
Drys up / Subterranean
Rock
Slide

No
Redds
1 Possible?

x Dried up,
Log (barrier during low flow)

x Dried up
No Redds

Sediment Filled
Grass + Debris
Chocked - No Redds

Beaver
Dam

Slough
No Redds
Beaver
Dam

No Redds
Dried up

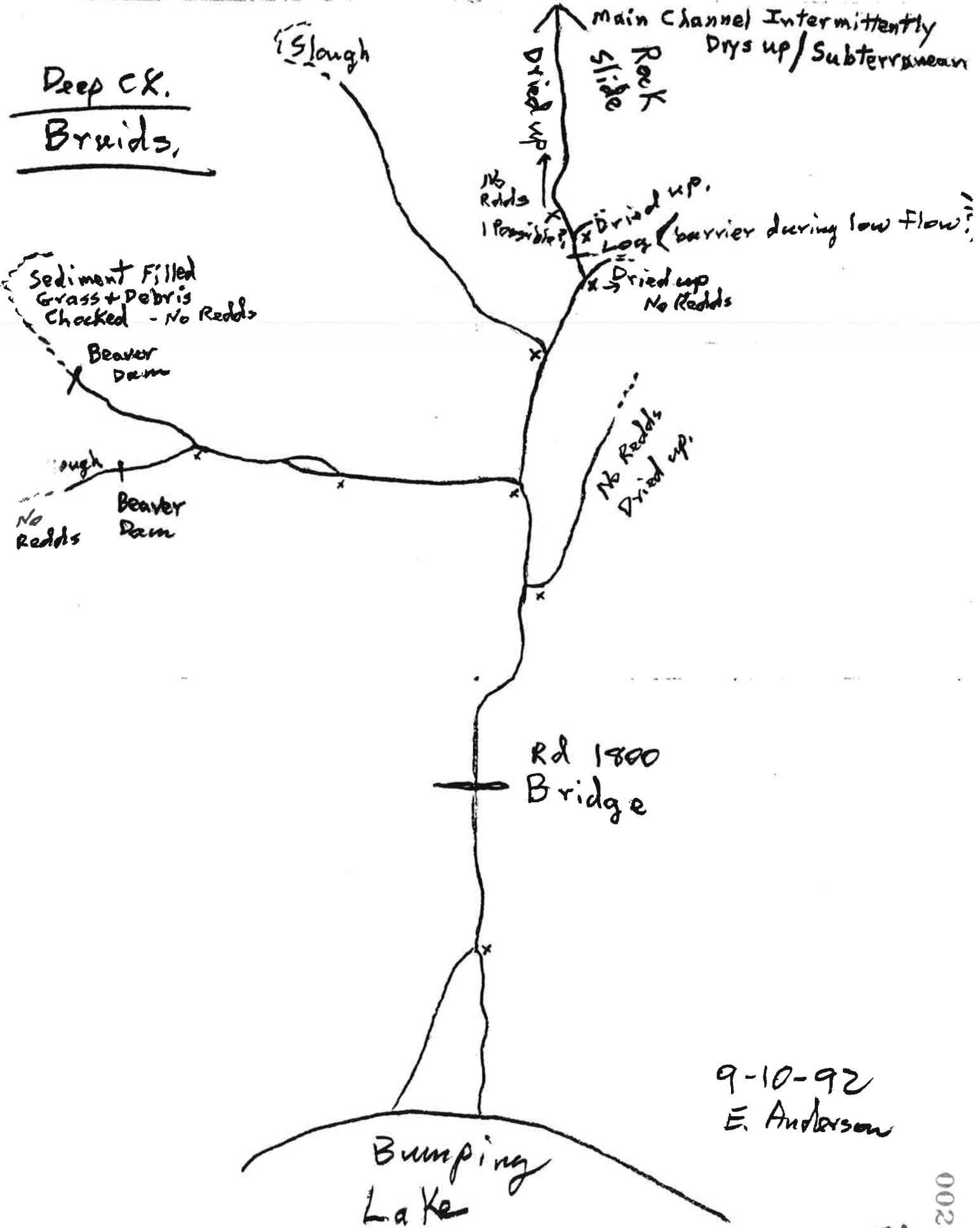
Rd 1800
Bridge

9-10-92
E. Anderson

Bumping
Lake

2451

002451



SAMPLE # 09101992 EAJC000
 Mn Dy Yr Int Time

Pass 1
 69 Total Redds (30 Below Rd 1800 Bridge)

2/24/94 1/17/94
 Page 1 of 1

STREAM SURVEY FORM

Agency WDW Division 15
 Project Bull Trout Spawner Survey
 Sampling Crew EAJC Sample Method ES
 Area covered 1.7 miles Length 1.7 Width 1.0

SPAWNER SURVEY DATA

Type of count Index Method used Faqt
 Redds observed: New 69 Visible 1
 Probable 1 Possible 7
 Fish species observed:

	Species	H/W	Live	Dead	Total
Adults	<u>BLC</u>	<u>W</u>	<u>21</u>	<u>4</u>	<u>25</u> *
Juveniles	<u>BLC</u>	<u>W</u>	<u>2</u>	<u>1</u>	<u>3</u>
≈ 6-8"	<u>BLC</u>	<u>W</u>	<u>25</u>	<u>0</u>	<u>25</u>
yoys	<u>BLC</u>	<u>W</u>	<u>25</u>	<u>0</u>	<u>25</u>
1-2"	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	<u>COT</u>	<u>W</u>	<u>2</u>	<u>1</u>	<u>3</u>

* 6 of the 25 adults were observed in a

* **COMMENTS** (Weather Conditions, Flooding, Pollution, Etc.)
Sunny, clear sky, air temp. 70°F
staff gauge at Rd 1800 Bridge 1.90 (1.98 in 1991)
Water Temp. 47°F - low flow conditions.
Stream dried up ≈ 1 1/2 miles from mouth
(Some pools and sporadic stream flow from springs but
impossible to bull trout). Found 2 heads - suspect
poaching.

SAMPLE SITE LOCATION

Stream Name Deep Creek
 Tributary to Bumping Lake
 Specific Location Mouth upstream approx. 1 1/2 miles
(See attached map - yellow highlighted area - 1992)
(Blue area - 1991) Rd's 1800 + 1808

CHEMISTRY large pool below Rd 1800 bridge (not on Redds). Method

pH
 Total Alkalinity (mg CaCO3/liter)
 TDS (mg/liter)
 Conductivity (micromhos/cm)
 Dissolved Oxygen (mg/liter)
 Turbidity (NTUs)
 Nitrate Nitrogen (mg/liter)
 Total Phosphates (mg/liter)
 Orthophosphates (mg/liter)

Downstream Survey Boundary

RRN 17
 Reach Mile See Map.

Upstream Survey Boundary

RRN 17
 Reach Mile See Map.

Other Chemical Measurements Taken:

None taken.

If survey stream has no RRN, fill in this section and mark location on copy of 100K quad map.

24K
 Township 16 Range 12 (Circle one) (E/W) Section 27 Qtr. Section SW
 Reach Mile
 1st Downstream RRN 17

STREAM SURVEY FORM – Physical Parameters

Method

Elevation (m) (Feet) mouth to 3440

Gradient (%) upstream boundary 3.19 TJB

Water Temperature (degrees F) 47 U

Water Color: (Circle appropriate color)
 Clear / Tanic / Glacial / Muddy / Other
 (Specify "Other" in comment field)

Average Max Riffle Depth (m) inches 5.00 VJ

Average Max Pool Depth (m) Feet 3.00 VJ

Average Channel Width (m) Feet 10.00 VJ

Range of Wetted Width (m) Feet 2.00 to 20.00 VJ
 (includes braided channels)

Method

SUBSTRATE

0 + 2 + 24 + 50 + 4 + 15 + 5 = 100%
 Bedrock Boulder Rubble Gravel Sand Silt/Mud Detritus

Embeddedness: High Med Low
 (>50%) (25-50%) (25%)

Compaction: High Med Low
 (Circle One)

POOL/RIFFLE/RUN/OTHER RATIO

20 + 70 + 10 + 0 = 100%
 Pools Riffles Runs Other

INSTREAM COVER

Total 75 %

20 + 5 + 0 + 60 + 5 + 10 = 100%
 LOD Boulder In. Veg Over Veg Cutbank Pools

DISCHARGE	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6	Cell 7	Cell 8	Cell 9	Cell 10	Stream Average	Method
Wetted Width												<u>U</u>
Water Depth												<u>U</u>
Velocity (m/sec)												<u>U</u>
Bottom Coefficient												<u>U</u>
Discharge (cms)												<u>U</u>
Total Discharge <u>20.00</u>											<u>CFS</u>	<u>VJ</u>

SHORELINE VEGETATION (List common names observed)

Overstory (trees) Douglas Fir, Few Cedar.

Understory (shrubs) Present but unknown.

Ground Cover (grasses) Present (unknown) sparse.
mostly woody cover.

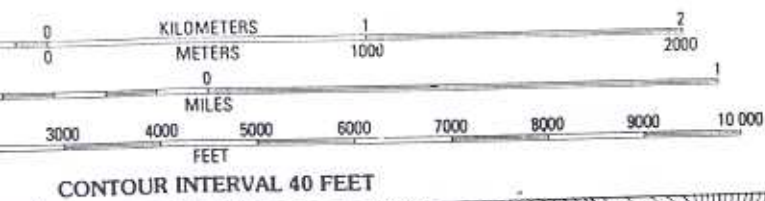
Land Use AG WT RD

Method

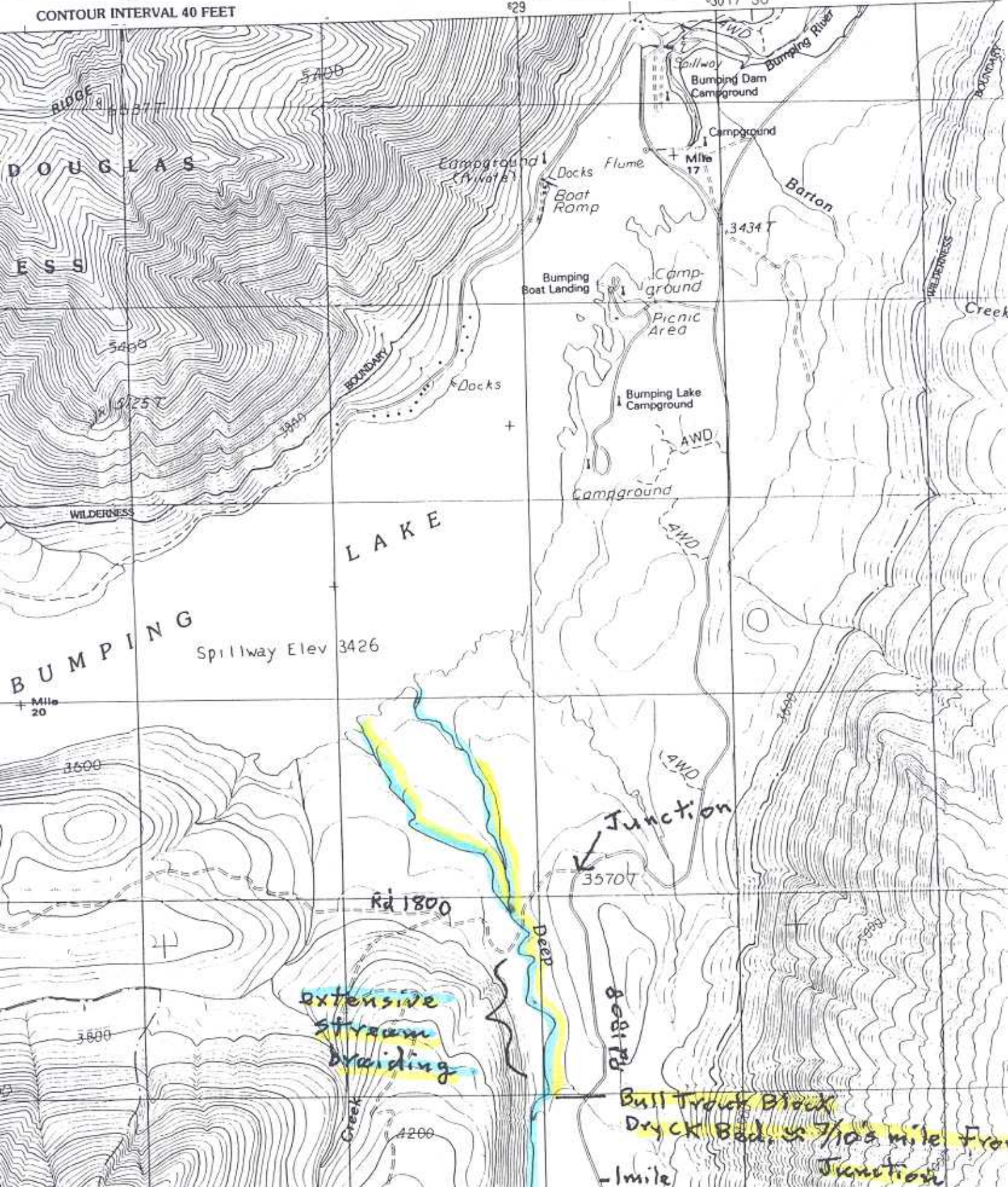
INVERTEBRATES

Macro-invertebrates (#/m²) 0

Groups present 1 3 4



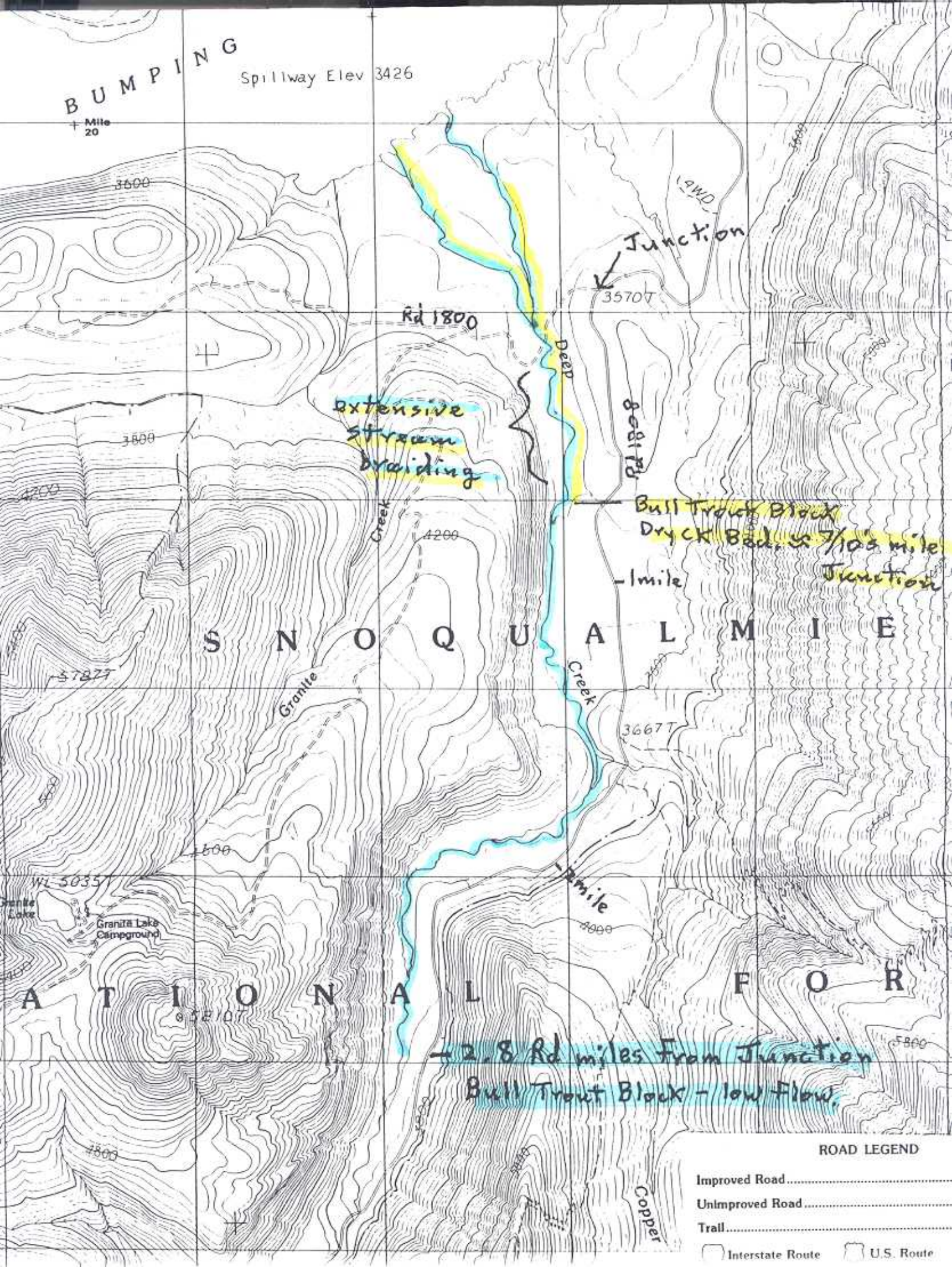
1991 3 1/10's mile
 1992 1 7/10's mile
 Blue Areas dry or impassable in 1992.



BUMPING

Spillway Elev 3426

+ Mile
20



extensive
stream
braiding

Junction

Bull Trout Block
Dryck Bed, ca 7/10s mile
Junction

2.8 Rd miles From Junction
Bull Trout Block - low flow.

ROAD LEGEND

- Improved Road
- Unimproved Road
- Trail

Interstate Route U.S. Route

THE DEPARTMENT OF WILDLIFE

Pass 2

Deep CK. Bull Trout Spawner Survey 9-10-92

Water Temp. 46°F 0900 Hrs. staff gauge 1.90

above Rd 1800 Bridge:

<u>Definite Redds (Fish)</u>		<u>Probable</u>	<u>Possible</u>
<u>Old</u>	<u>New</u>		
39	4	1	4

(2)

below Rd 1800 Bridge:

<u>Definite Redds (Fish)</u>		<u>Probable</u>	<u>Possible</u>
<u>Old</u>	<u>New</u>		
30	4	0	3

(1)

Total

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
77	(3)	1	7

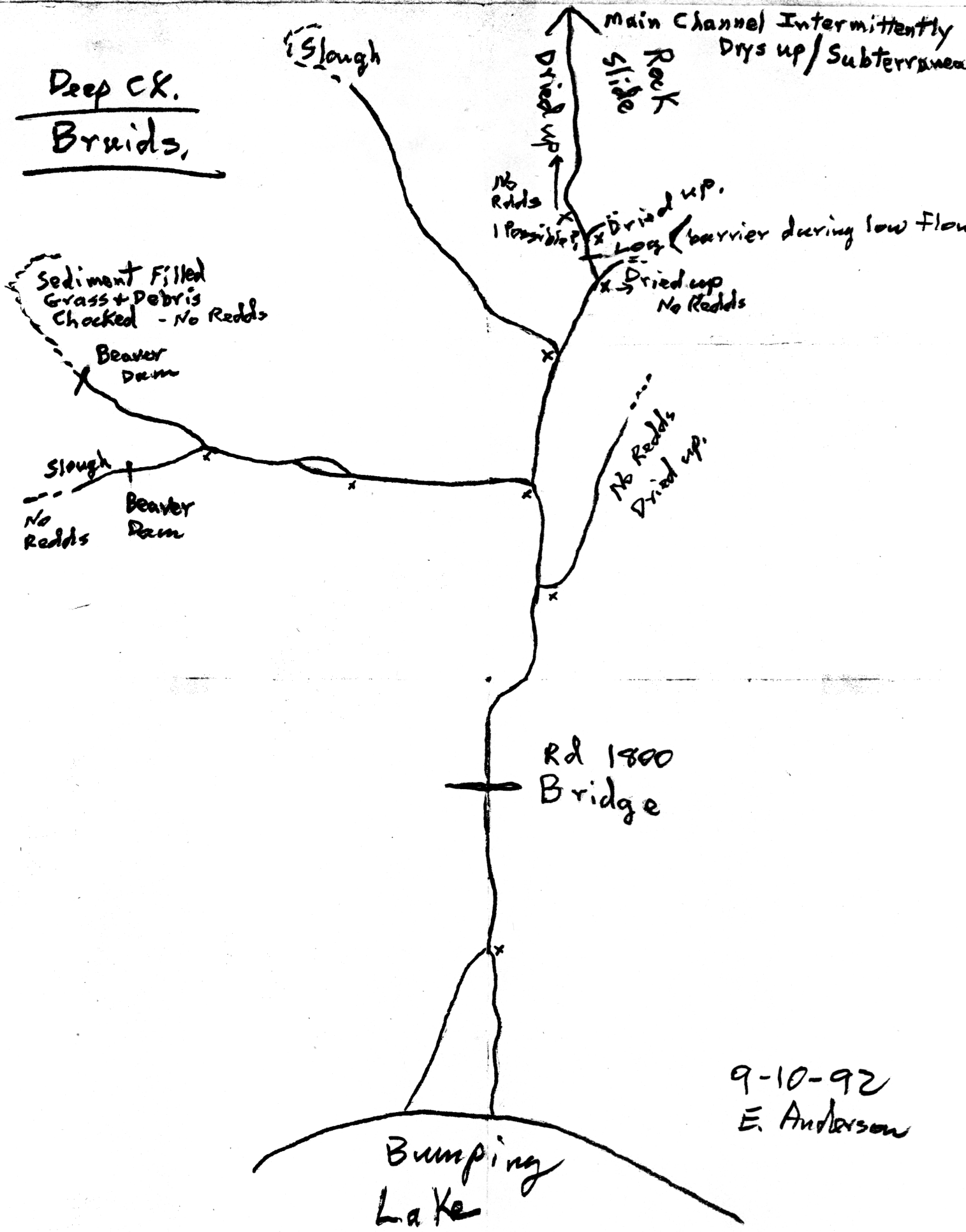
Pass 2 = 78 Redds 3 Fish

Pass 1 + Pass 2 = 78 Redds 24 live fish (cumulative)

4 Dead (poaching)

Estimate spawning was 80-90% complete on Pass 1.

Deep Ck.
Bruids,



9-10-92
E. Anderson

Central
Washington
University



Department of Biological Sciences
Ellensburg, Washington 98926

October 5, 1992

Mr. Ken McDonald
USDA Forest Service
Wenatchee National Forest
P.O. Box 811
Wenatchee, WA 98807-0811

RECEIVED
STATE OF WASHINGTON
OCT - 7 1992
DEPARTMENT OF WILDLIFE
YAKIMA OFFICE

Dear Ken:

This letter is to update you on our progress on the bull trout field work that we have just completed. A total of 2 km (4, 500 m sections) were snorkeled in each of the four study streams. Juvenile bull trout were counted and measured in each of the study sites. For each bull trout found, microhabitat measurements were made and the macrohabitat (i.e., gradient, LOD, riffle/pool ratio) in each 500 m section was measured. Bull trout redds were counted in Indian Creek during September. An attempt was made to count redds in South Fork Tieton River but extremely high turbidity precluded any counts, however we were able to identify 2 redds in Bear Creek near its confluence with S.F. Tieton. The redd counts made on Indian Creek are as follows:

<u>DATE</u>	<u># of Redds</u>	<u># of Adults</u>
9/9/92	78 positive	40
9/15/92	135 positive 6 possible	30
9/25/92	142 positive 2 possible	0

We are now in the process of double-checking our field data sheets with our raw data computer print-outs and will begin data analyses soon. If you have any questions regarding the redd counts or our field work please give me a call.

Sincerely,

Paul W. James

cc: Mr. Eric Anderson
Mr. Larry Brown
Mr. Jim Cummins

THE DEPARTMENT OF WILDLIFE

Indian CK - Bull Trout Spawner Survey 9-14-9.
 0630 - 1830 Hrs. Partly cloudy - lite rain, Air Temp 65°
 H₂O Temp 46°F

Mainstem (Hwy 12 Bridge to N. Fork Trib.)

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
63	(13)	2	11

7 Kokanee Redds (3 Fish)

'Mainstem (N. Fork to block - "No surface flow, subterranean flow for
 $\approx 15'$; surface flow picks up again above block but no
 fish or redds. Block $\approx \frac{1}{4}$ mile above S. Fork.)

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
20	(2)	ϕ	ϕ

'NOTE: Although I encountered block on mainstem between N. Fork
 and S. Fork tribs., I surveyed above block, up to and including
 S. Fork - but no redds or fish.

² N. Fork to Beaver Dam (surveyed stream that interconnected several
 beaver ponds above Dam).

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
40	(22)	ϕ	2

² Note: includes 3 Redds and 5 Fish above beaver Dam.

TOTAL

<u>Definite</u>	<u>(Fish)</u>	<u>Probable</u>	<u>Possible</u>
123	(37)	2	13

CURT SMITCH
Director



Eric

STATE OF WASHINGTON
DEPARTMENT OF WILDLIFE

January 6, 1992

TO: Greg Hueckel, Native Resident Trout Resource Manager
Fisheries Management / Olympia

FROM: Larry Brown, Area Fish Biologist
Fisheries Management / Wenatchee

Larry

SUBJECT: 1992 BULL TROUT SURVEYS IN REGION THREE

I don't yet have the data for surveys conducted by Wenatchee National Forest Personnel, but here is a summary of 1992 bull trout spawning data "in hand".

Water	Date	Temps	Adult BLC		Redds Observed			Done	
			Live	Dead	Definite	Probable	Possible by		
Box Canyon Cr	09/15	9.5C	8	0	0	0	0	WDW	
Box Canyon Cr	09/24	9.2C	survey cancelled due to high water						WDW
Box Canyon Cr	09/28	7.7C	12	0	0	0	0	WDW	
Box Canyon Cr	10/02	9.6C	8	0	1	0	1	WDW	
Box Canyon Cr	10/08	7.5C	0	1	4	1	1	WDW	
Box Canyon Cr	10/19	45F	0	0	4	1	0	WDW	
Deep Cr	09/01	47F	21	4	69	8	8	WDW	
Deep Cr	09/10	46F	3	0	77	1	7	WDW	
Gold Cr (Lower)	09/30	51F	0	0	0	0	5	WDW	
Gold Cr (Lower)	10/20	48F	survey cancelled due to high water						WDW
Gold Cr (Lower)	Sept?	anecdotal	1	0	0	7	1	JM	
Gold Cr (Upper)	10/09	8.0C	0	0	0	2	0	WDW	
Indian Cr	09/04	42F	many	0	many	many	many	WDW	
Indian Cr	09/09		40	0	78	unk	0	CWU	
Indian Cr	09/14	46F	37	0	123	2	13	WDW	
Indian Cr	09/15		30	0	135	unk	6	CWU	
Indian Cr	09/25		6	0	142	unk	2	CWU	
Panther Cr	08/04		6	0	0	0	0	WDW	
Panther Cr	09/09	9.0C	1	0	1	1	0	WDW	
Panther Cr	09/18	7.5C	15	0	15	6	0	WDW	
Panther Cr	09/23	10.8C	7	0	21	3	10	WDW	
Panther Cr	10/02	9.5C	2	0	17	9	12	WDW	

Note that "Definite" plus "Probable" counts is considered the total redds.

In addition, WDW conducted presence/absence surveys on Ingalls Cr and Chiwaukum Cr, tributaries of the Wenatchee. No barrier was found on Ingalls Creek to 0.3 miles above the confluence with Falls Creek. Juvenile bull trout were sampled within a half mile downstream of Falls Creek. No adult staging or spawning concentrations were located up to 6.3 miles (by trail) from the trailhead. Subsequent survey investigations should concentrate on the upper valley above the mouth of Falls Creek, from trail mile 6.0 to trail mile 12.0 near Turnpike Creek, to locate adult bull trout staging/spawning areas.

Bruce Bolding (WDW) located impassable vertical falls, one of 14 feet and another about 11 feet high, located in a narrow cataract about a half mile downstream of the confluence with the South Fork on Chiwaukum Creek (just below the wilderness boundary). Hook and line sampling found mostly rainbow trout from 228 to 265mm. Several small 7-inch charr thought to be bull trout were observed, but not captured. One 207mm possible hybrid bullXbrook was captured having vermiculations from the head to about half way to the dorsal fin. No spawning noted and no obvious adult bull trout staging areas were found. Little gravel in this area below the barrier falls, with mostly high gradient boulder/rubble substrate. This area deserves a better look. Access is via USFS Rd 121 out of Roaring Creek/Coulter Creek area.

Wenatchee National Forest personnel were to perform spawning surveys in Kachess River, Mineral Creek, Little Wenatchee River, Rock Creek, Chikamin Creek, Phelps Creek and Mad River. WNF personnel from the Cle Elum Ranger District were to conduct presence/absence surveys on the forks of the Teanaway, specifically the West and Middle Forks. I will forward that information when available from Ken MacDonald. In the meantime, I am working on relational database file structures to maintain a permanent, statewide bull trout/Dolly Varden spawning and presence/absence database system. The system I now utilize relies too heavily on MEMO field narratives and would benefit from more succinct data fields to maintain the same information.

lgb

cc: Jim Cummins, Eric Anderson, WDW, Yakima
Paul James, CWU, Ellensburg
Ken MacDonald, WNF, Wenatchee
Jerry Sherrid, SNF, North Bend

00
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

plus "probable" counts is considered the total number of

Record#	MUCODE	DATE	INITIALS	WATEMP	ONREDD	OFFREDD	TOTLIVE	DEAD	CAUSE	REDDS	FALSE
631	Y52Y53	09/20/90	WDW	46F	0	0	11	0		16	0
632	Y52Y53	10/01/90	WDW	44F	0	0	0	0		32	0
1102	Y52Y53	08/20/93	EA	50F	0	1	1	0		0	0
1103	Y52Y53	08/31/93	EA	45F	0	0	0	0		0	0
1099	Y52Y53	08/19/93	EA	50F	0	9	9	0		0	0
1100	Y52Y53	08/31/93	EA	45F			12	0		5	0
1101	Y52Y53	09/08/93	EA	46F			5	2	POACHERS	38	4

Record#	MUCODE	DATE	INITIALS	WATEMP	ONREDD	OFFREDD	TOTLIVE	DEAD	CAUSE	REDDS	FALSE
30	Y58Y59	09/08/84	JS		6	140	146	1	CLUBBED	3	6
29	Y58Y59	09/15/84	JS	11C	20	25	45	0		29	22
1111	Y58Y59	09/12/85	JS				90	FALSE	IN CLUDED	69	INC
547	Y58Y59	09/17/85	JS				62	0		37	18
1112	Y58Y59	09/13/86	JS				45	PARTIAL	SURVEY	16	8
1113	Y58Y59	09/12/87	JS				20	FALSE	IN CLUDED	35	INC
584	Y58Y59	09/02/88	EA	43F			25	0		8	0
585	Y58Y59	09/09/88	EA	45F			25	0		22	0
586	Y58Y59	09/16/88	EA	48F	0	0	23	1	unknown	25	0
587	Y58Y59	09/26/88	EA	43F	0	0	0	0		25	0
588	Y58Y59	09/14/89	EA	?	0	0	36	0		30	0
589	Y58Y59	09/28/89	EA	47F	0	0	5	0		39	0
590	Y58Y59	09/25/90	EA	45F	0	0	27	0		69	21
591	Y58Y59	09/13/91	JLC	45F	0	0	61	FALSE	IN CLUDED	108	INC
592	Y58Y59	10/01/91	EA	46F	0	0	15	FALSE	IN CLUDED	123	INC
1045	Y58Y59	09/04/92	JLC	42F	LOTS	LOTS		NONE	NO COUNT	UNK	UNK
1041	Y58Y59	09/09/92	CWU				40	0		78	0
1043	Y58Y59	09/14/92	EA	46F			37	0		125	13
1042	Y58Y59	09/15/92	CWU				30	0		135	6
1044	Y58Y59	09/25/92	CWU				0	0		142	2
1104	Y58Y59	09/09/93	EA	47F	46	7	53	0		95	13
1105	Y58Y59	09/21/93	EA	46F			16	0		133	2
1106	Y58Y59	10/01/93	EA	46F	1	2	3	0		140	0

Deep Creek

Record#	MUCODE	DATE	INITIALS	WATEMP	ONREDD	OFFREDD	TOTLIVE	DEAD	CAUSE	REDDS	FALSE
581	Z16Z17	09/29/89	EA		0	0	0	2	ANGLERS?	17	0
582	Z16Z17	09/24/90	EA	47F	0	0	0	0		15	5
583	Z16Z17	09/10/91	EA	44F	0	8	8	1	UNKNOWN	84	3
1046	Z16Z17	09/01/92	EA	47F			21	4	POACHERS	77	8
1047	Z16Z17	09/10/92	EA	46F			3	0		78	7
1107	Z16Z17	08/13/93	EA	47F	0	0	0	0		0	0
1108	Z16Z17	08/24/93	EA	44F	9	0	9	0		15	2
1109	Z16Z17	09/02/93	EA	45F	13	0	13	3	2FM, 1STR	37	9
1110	Z16Z17	09/10/93	EA	46F	0	0	0	1	STRANDED	45	9

March 1, 1994

GOLD CREEK BULL TROUT SPAWNING SURVEYS

YEAR	LOWER CREEK (INCLUDING POND)		UPPER CREEK (ABOVE POND)	
	Total Redds Counted	Most Adult Bull Trout Observed	Total Redds Counted	Most Adult Bull Trout Observed
1984	2	(2)	no data	
1985	2	(2)	no data	
1986	21	(13)	no data	
1987	15	(7)	no data	
1988	12	(6)	no data	
1989	2	(4)	no data	
1990	2	(0)	9	(2)
1991	6	(16)	10	(20)
1992	3	(0)	11	(0)
1993	2	(2)	9	(17)

lgb

Larry Brown, Area Fish Biologist
Washington Department of Fish and Wildlife

Panther Creek - Prelim. Survey Sept. 9, 1992 ✓

Water	Temp.	Times	Where
White	8°C	1000	Grasshopper
White	9°C	1400	Grasshopper
Panther	9°C	1005	Mouth
Panther	8°C	1100	Falls
Panther	10°C	1400	Mouth

DEF.	PROB.	POSS.	Comments
------	-------	-------	----------

	(1)	-	Riffle 50' below Jct Pool
(1)		-	Tailout Jct Pool
		-	Trail Xing "Posted"
		-	Rock Wall
		-	Poacher Pool
		-	Classic TO/Pool
		-	(1 adult) obs. Log Falls Pool
		-	@ impasse Falls

1115 → 1415 H&L down w/ Rapalas

(5) RB's 23 23 29.5 31 23

(5) BLC's 47.5 61.9 55.3 53.4 58.4

HAAS measurements (mm)

	Jaw	SL	TL	LBR	RBR	AN	Head
♂	66	419	475	14	13	9	112
♀	80	545	619	13	13	11	142
♀	69	485	553	14	13	10	122
♀	67	464	534	13	13	10	125
♂	84	502	584	13	12	9	141

each ♀ caught was followed around by a male.

only observed one adult BLC
on upstream survey -

Hook and line accounted for
5 caught and 3 others observed
for total of eight BLCs 18½"-24"

5 Very nice Rainbows 9 to 12"

Water Very low - much bedload changes
from previous years

Two Redds down near mouth were
in same place earliest redds
were found last year.

of the 3 BLC ♀♀, 2 were tight
and one appeared gravid.

Panther Creek Spawning Survey Sept. 18, 1992
 @ 1030 White R 8°C Panther Cr 7.5°C
 @ 1330 White R 9.5°C - head Grasshopper Island

DEF.	PROB.	POSS.	Comments (w/Bruce)
(3)	—	—	White R - Rt. Chan. Grasshopper
(3)	—	(1)	100 yd below Jct Pool
(2)	(1)	—	Jct Tailout (same as 9/9) ^{under} 1/2 way up Jct Pool - Boulder
—	—	(1)	(1♂) spooked fm attending
(1)	—	(1)	30 yds abv Jct Pool in back eddy Rt Bank
—	—	—	Under boulder Rt Bank
(1)	—	—	40 yds above Jct Pool at "Peek" hole (near dry)
—	—	—	@ Wild RB photo site - left bank
—	—	(1)	40 yd abv RB photo site
—	—	(1)	30 yd below trail Rt Bank side channel - USFS N50:16 P.6)
—	—	(1)	@ trail xing
—	—	—	(1) adult spooked 30 yds abv trail
—	—	—	Nothing @ Rock Wall Pool/tail
(1)	(1)	mit	mid-ataract between ^{Rock Wall} & Poacher
—	—	(1)	50' below Poacher Pool test scratch Poacher tailout
(1)	—	—	(1♂) head Poacher Pool Rt Bank 50' above Poacher Pool

Panther Creek survey (cont) Sept. 18, 1992 ✓

DEF.	PROB.	Poss.	Comments
		①	L Bank opposite DEF.
	①		L Bank 50' below Classic
①			R Bank 40' below Classic
①			Classic Tailout (1♂ @ head)
①			L Bank Pocket below Log Falls Pool
			2♂ 1♀ attending (one 26-28" male)
①			Rt Bank Log Falls tail (1♀)
①	← huge excavation		L Bank Eddy - Log Falls Pool
①			50' below last Cattract mid-channel at site of prev. highest
	①		2 adults on Redd Deep pool - new high
		①	60 yd below Falls
	②		1 redd pool tail - Rt. 3' deep
			1 redd in Eddy under rock
			on left redd pool head
			1♂ 1♀ attending left
			redd 40 yd below Falls
			2 adults next pool over bedrock - little gravel.
			Nothing above Final rocks into Waterfall Pool/Tail
		①	recent working in wide area on CK site head of Grasshopper Island
①	①	①	PANTHER CR TOTALS
③	③	①	WHITE R TOTALS

15 DEF. 6 PROB. 8 POSS. with 15 Adult BLCs
 ③ DEF. No PROB. ① POSS. with No Adult BLCs

Panther Creek Redd Survey/Workshop

Wednesday Sept. 23, 1992

with 14 USFS personnel & Bolding
Good Rapport - reception -

Panther cr @ 1100 11°C - month

White River below Panther 10.8°C (Bruce)

Could not see White R Redds - Glacial runoff

DEF	PROB	POSS	Comments
(3)	(+)	(1)	100 yd below JCT Pool - RAIN
(2)			Jct Tailout
		1 → (1)	1/2 way up JCT Pool (1 adult)
		(1)	30 yds above JCT Pool in back eddy on RT
(1)			under boulder RT bank 40 yds above JCT Pool
—	—	—	"Peek" channel dryish
(1)			at wild RB photo site - L
		(1)	40 yd above RB photo - L
		(1)	30 yd below trail - Right side channel @ USFS Flag
		(1)	@ Trail Xing
(+)			20 yd above Trail (1 adult)
(2) ← 1			mid cataract - Rock Wall/Poacher
(1)		(1)	56' below Poacher
		(1)	Poacher Tailout

Panther Creek (cont) 9-23-92 ✓

DEF. PROB. POSS. Comments

①

nothing in Poacher Pool
50' above Poacher - Rt bank
L. bank opposite DEF.

①

L. bank 50' below classic
R. bank 40' below classic
classic tailout

①

①

①

L. bank pocket below Log
Falls pool (Largest still on)

①

①

①

Rt. channel Log Falls Tail
L. bank eddy Log Falls Pool
50' below last cataract
mid-channel - textbook

①

Deep plunge Pool (Fish gone)

① 2.5" trying cataract

①

60 yd below Falls - Rt
4' diam - deep tailout
large Redd L. bank eddy
under Rock near pool head

② ← 2

New - under boulder just
above last pool - LEFT Side1 adult ^{only 30' below} Falls Pool tail

1 SMALL BLC x 12" obs

trying last Rockpile

1 ♀ only 18" stuck in
Rock dead end - gave
up & slid down

Panther Creek - (cont) - 9/23/92

DEF. PROB. POSS.

(21)

(3)

(10)

PANTHER CR

REDD TOTALS

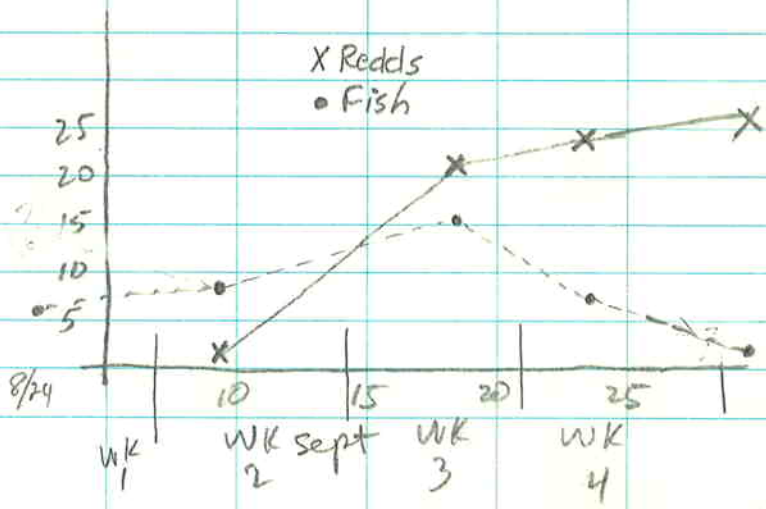
(24)

(7) FISH obs. from

12"± to 28"±

WET/SOGGY
TRIP BACK DOWN

1992 - So far, have observed highest spawning (within 30' of Falls Pool tail) and smallest fish - appeared to be a male BLC of only 12" or so trying last rock pile.



Panther Cr Bull Trout Survey 10-2-92 ✓

temp @ 0915 7.5C (white) overcast/dry/sle
@ 0930 9.5C (Panther) * = barely visible/now
① = New

DEF	PROB	POSS	Comments
3	1	1	100 yd below JCT
2			JCT Tail
		②	JCT Head
		1	30 yd above JCT Pool-RT
1*			40 yd " JCT Pool-RT ^{under} Rock
		①	1/2 way to Peck falls
1*		①	40 yd below RB Photo-Left RB photo - barely visible
		-1*	40 yd above RB photo
①		①	60 yd above RB photo-RT
			50 yd below Trail-Eddy-RT
		-1**	No longer visible @ Flag
		①	10' above Flag behind boulder
		1	trail xing-RT
1			Flat above trail xing
—	—	—	still nothing @ Rock Wall
1 → 1*			Left Redd mid-cataract
1*		-1**	50' below poacher
		1	poacher tail
1*			50' above Poacher-RT
		1	opposite DEF, Left

Panther Creek 10-2-92 ✓

DEF PROB POSS Comments

1 (2 pockets)

→ 1**

50' below classic - L

40' below classic - R

classic tail

1

→ 1*

L bank under rock below
Log Falls Pool

→ 1*

Log Falls tail - center Rt

Log Falls Eddy - Larger ^{Deep F}

1

① 1*

50' below last cataract

textbook redd hardly

visible after freshet

deep plunge pool -

would not see at

this late date / flow

1**

- 1**

60 yds below falls - Rt

deep tail out on Rt

→ 1**

1 (huge)

L bank eddy 1♀ 21"

? more than one pocket

still digging 1♀ 25"

≠ → 1*

L Bank under Rock might

be missed at late date

Final Pool

17

♀

26

12

Flow is up 30-40' (4" deep)
lots new hydraulic washes2 adults
still spawning

09159Z

BOX CANYON CREEK ✓

- water temp at 1st falls pool = 9.5°C
- Did not see any fish or Redds
- water temp ~250 yds down from trailhead parking lot & ~300 yds up from Lake = 77°C

Pool \approx 90 ft long
 plunge pool at top end then two deep pools ~7' and 8' long then panning out to gravel shallows ~30' wide - 40' wide

* at least 8 adults

* No redds; but fish going through ceremonial behavior - establishing hierarchy or pre-spawning rituals?
 - circling around, turning on sides and chasing ea other, but not fiercely - one fish made $\frac{1}{2}$ hearted attempt to slither up around right side of falls \rightarrow is passable

water temp 9.8°

one side: 6' drop - other: 4' + 2'

\rightarrow ON way back down - 4 fish trying to ascend
 - Found another pool ~ $\frac{1}{3}$ mi up stream in a narrow passage but w/ good

gravel substrate ~ 100' long X ✓
10' wide; deepest $\approx 7'$

← Did not see any fish or redds →

Ended survey just at the beginning of the flat gravelly area where most spawning has historically taken place due to time constraint & had to meet Eric Anderson in Ellensburg for Sorenson Pond survey

* At access to lower Peek-A-Boo Falls a 4x4 had been driven down through trees to a bench where the people camped and littered spreading beer cans all over bench area + down to the creek - 2 "closed-water" signs had been chopped down w/ an ax & next to main road above lower falls + in camping area above upper falls - one attempted to be cut down at bottom of spur road - garbage down there too, and at upper camping area.

BOX CANYON CREEK 092492 ✓

trailhead 1200H 9.7°

Peck-a-Boo Falls 1230 8.8°

- Hard rain + high turbid water
canceled all efforts to survey.

DEF PROB POS FISH

DEF	PROB	POS	FISH
			Started at trailhead + went upstream ~ 300 yds ⇒ NO visibility + fast water.
			Drove up to Falls + walked down to bottom of spur road. Same thing - even more water?
			Color ≈ greenish-brown - enough water to re- arrange gravel

092892

Box CANYON CREEK ✓

→ later; 1230 = 7.7°
 Peek-a-Boo Falls 1000H = 6.5°C

Trailhead 1010H = 6.7°C

Backwater of "tail-out pool" = 7°C

Middle of stream @ lower spur road 7.5°C

DEF PROB POSS FISH

* No Redds - No spawning activity

12 - at tailout pool

- there was 4x4 tracks down to bench above lower falls again + garbage

- Stopped at Cle Elum FS St and talked to Steve

Rogers WDW, Steve Roberson USFS,
 Roger Skistad USFS + Catherine
 Stephenson USFS re: closing the spur
 roads to vehicles

- ← 12 adult BLC laying at top of tailout in the "tail out pool" - in deep pocket just laying there. No evidence of spawning in the pool + no spawning activity from the fish - None seen trying to ascend.
- water conditions = very clear but high enough to impede visibility - gravel washed clean from higher flows
 - Backwater in flats directly below lower spur road were filled in w/ gravel + flat as a table - main channel cobbly w/ no fines
 - long pool half way between spur road + falls has smooth gravel bottom - No fish, no redds - 1 dead juvenile
 - water level was ~ 1' lower than last Thursday and at least 3' lower than max level. Level must have continued to rise after last Thursday

BOX CANYON CREEK 100292 ✓

trailhead temp @ = 9.6°C; 49.9°F 1250#

"tailout pool" @

"Peek-a-Boo Falls" @ = 10.4°C 51°F 1550#

- water level back to near August conditions

DEF PROB PASS EST

		OT	
①	? ←	11:07	Road in pocket - L side - test dig? (over) Moss-covered "House Rock" @ Rt bend
②	1	11:07	"RT Mossy-Slab Pool" - in progress - tongue small fish = OT 16" → L = 12" - pocket = 2' top of 100' white log RT side above tongue 2 pool basins bridge here w/ root and L rock back pool L side in gravel - no digging milling aimlessly around "tailout pool"
		11:07	
		1	OT = 16" at bottom of spur road

- spur road = #201 (4930)

- fresh 4x4 tracks down to lower falls bench.

① - watched for 25 min - fish swam all around but kept coming back to one pocket and 1/2-sec digging ✓

② Pair stayed directly over pocket, digging continuously, ~~at~~ dug, ~~or~~ hovered at tailout

BOX CANYON CREEK 100892 ✓

overcast; drizzly - stopped

water temp trailhead @ 1040 = 7.5°C

"tailout Pool" @ 1200 = 7.5°C

Peck-a-Boo Falls @ 1300 = 7.5

DEF | PROD | POSS | FISH

? ←

"Mossy"
No Δ @ House Rock dig - No fish
40m above House Rock
M - bottom of pool - clean pocket
between 2 log jams

"mossy slab pool"
tailout is where pocket was last week
M - pool 50m above "bridg-tree R-bend"

M - very bottom of slick rock pool
long pool just below tailout pool.

∅ at tailout pool

L-side, very bottom end of long flat
pool just above old bridge xing spur

→ ~70m down from bottom of road

- stomach + pyloric coxae from very large
fish near bank at bottom of rd #201

- maybe 3-6d old.

- more fresh tire tracks down to the falls
bench.

- had to hike around the cataract canyon
because of slippery conditions

BOX CANYON CREEK 101992 ✓

weather - drizzly

water temp trailhead @ 1150 = 45°

tailout pool @ 1237 = 45°

Falls @ 1400 = 45°

DEF PROB Poss F.3A

1

40m above Hanao Rock - NOΔ

1

Mossy Slab - NOΔ

1

up from bridge tree bend NOΔ

1

slide rock pool - NOΔ

1

pool by old bridge structure

1

RB ~6" long in cataract channel

- More camping + 4x4 tracks in to Lower Falls - Large notch chopped in to side of 18" diameter tree and an 8" diameter tree between the bench + the river was chopped in half with an ax 2" above the ground. More garbage + beer cans.

- lg piece ($\sim 10 \times 4$ " long) of fish skin on bottom at end of "tailout pool"
- dead mouse swirling around in back-eddy of tailout pool

- RB? ~ 6 " long swimming in ~~at~~ cataract channel

GOLD CREEK 093092

I-90 Bridge 0920 = 49°F

AT 3ATH ✓

Pool below culvert (outlet of pond) 1017H = 51°

top of spawning channel = 51°

DEF PROB Poss Fish

I

test dig? in lg cobble 50 m ^{above} ^{old} bridge

III

test hydraulic? M, 20m above ^{scalo} ^{station}

last Sept, below culvert to bridge at I-90 ✓
there were 7 redds. None from culvert up
the channel. Water temp was 54-55°.
Experiments have shown 100% mortality
of eggs > 48°-50° (10°C). Best rearing shown
at 4°C. Last year the main creek bed
around the pond was dry; and it was
dry this year until the heavy rains last
week. Last year + this, it was dry to
~ 300-500 m below wilderness boundary.
Last year adults were found stranded in
several pools surrounded by dry creek bed.

GOLD CREEK - 100992 ✓

WEATHER - CLEAR, SUNNY

WATER - FAIRLY LOW, CLEAR

Water Temp - pool at culvert @ 1015H = 9.5°C
near trailhead 8.0°C

DEF PROB POSS FISH

11

middle of section J did in
large grave/cobble

- saw sow bear w/ 2 small cubs on the road at the trailhead
- started at the trailhead and went upstream.
- the creek had gone subterranean again and water level was low throughout the basin.

- I did not get ^{to} the impassable falls because I was getting tired and the day was getting late; I turned around at 1440H. I found the trail on the E side of the creek right away and it took exactly 1 hour to get to the wilderness area boundary. there is a large basin to the W of where I turned around (Alziba lake Basin?) Silver Creek?

In the upper reaches of where I
hiked, I saw 2 possibilities /
probables - no fish, no definite, ✓

GOLD CREEK 102092 ✓

- weather - cloudy, raining
- water temp @ 1000 culvert = 48°
- saw school of 6" KOK below old Hwy bridge
- Numerous KOK in stream below culvert all 5"-8". Mile said last Nov fish were bigger: different run? ^{~ > 10,000} in channel
- Met Jim Mile USFWS Seattle - he said he saw ~ 5^{BLC} redds w/i 300m below the culvert + 2-3 redds in the diversion channel w/ 1 male over one of those redds - in Sept

After the 1902 Alaska convention in Seattle, Arctic Char were dumped into Keechalis Lake and in 1974 Jim saw one pair of fish near Altesha Creek that looked like Arctic char

He also saw ~ 15 BLC? redds in the Cle Elum R, near Salmon La Sac in Sept

- did not do the survey in Gold Creek ✓
today because of rain, higher water
& when I stopped at the gravel pit
pond, the battery in the truck went
dead, so I had to wait for a
rescue (Jim Miles), then went once
to the DOT shop to borrow jumper
cables. After that it was 1245H.

- Also, Jim Miles' sightings of
bull trout redds in Sept leads me
to believe they are long through with
spawning and the reason none were
seen earlier is that they were
washed out by the high water
after the heavy rains of Sept 24.
the reason they spawned so low in the
river is because it was dry above
the gravel pit.