

STATE OF WASHINGTON

THE DEPARTMENT OF GAME

9/14/86
 RE: Bull Trout Spawning Records
 TO: Jim Cummins
 FROM: Jim Spotts

RECEIVED
 SEP 16 1986
 STATE OF WASHINGTON
 DEPARTMENT OF GAME
 YAKIMA OFFICE

Here's the list of streams of concern and the status of those spawning populations you requested (e.g. Bull Trout).

Date Surveyed	Stream	Sex	male	female	# redds	# fishes
9/14/85	Salal Creek		0	0	0	0
9/30/85	" "		" "	" "	" "	" "

9/8/85	Box Canyon Cr.		4	3	0	1
9/15/85	" "		8	5	5	2

9/23/85 Panther Cr. 5 3 6 5
 * One app. 6lb female was also found w/ head and eggs removed and is not included in the # of observed females (e.g. 3 live + 1 must = 4 females)

Date	Stream	Indian Creek			
9/3/86	Indian Cr.				
3 little Bullheads	" Above log"	13	9	9	6
0	" Below log"	4	6	3	2
0	North " Spring channel"	6	7	4	0
		<u>23</u>	<u>22</u>	<u>16</u>	<u>8</u>

Perhaps on Thursday 9/18/86 we should again survey that reach of Indian Creek again.

Jim Spotts

09/15/85	JS	AS4AS5 BOX CANYON CR	DATA FROM OLD 9/14/86 MEMO FROM SPOTTS TO CUMMINS, WHICH WAS ONLY RECENTLY LOCATED.
			DATA ENTERED INTO DATABASE ON 11/01/93.
09/20/85 1131	JS	AS4AS5 BOX CANYON CR	RECONSTRUCTED SURVEY NOTES (FROM POCKET CALENDAR) INDICATE FLOW AT MOUTH OF BOX CANYON CREEK ONLY AN INCH OR SO ON 9/14 AND INTERMITTENT ON 9/20.
09/22/86 1200	LGB	AS4AS5 BOX CANYON CR	Walked from lake to Peekaboo falls. Low and clear. Stream goes underground about 50 yds short of the lake. No access this season. Observed the 3 redds all in same area from 100-200 yds below Peekaboo falls. No sign of fish or redds from Peekaboo to Bomber falls. No recent blasting activity. Looks like this year is a bust for bull trout reproduction.
09/17/87 1300	LGB	AS4AS5 BOX CANYON CR	No fish this year again. Creek dry 50-100 yds short of the lakeshore. Reported (USFS) dry since July. No sign of any fish, even in the gravelly area below Peek-a-boo Falls. Did see one CT of about 10" in lower box canyon and one dead CT of 8" just below Peek-a-boo Falls. Several 2"-4" fry observed here and there. Lots of people tracks all along the creek, even through box canyon.

Stream Lake Fish Database
Box Canyon 1986

Year	Wa_nam	Date	Temp	New Redds	False_redds	Total_visible
1986	BOX CANYON CR	9/22/1986	9	3	0	3

1
9
8
6

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.
09/20/85 0831	JS	AT3AT4 GOLD CR (LOWER)	
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.
Gold Creek 1986			
09/22/86 1500	LGB	AT3AT4 GOLD CR (LOWER)	<p>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.</p> <p>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.</p> <p>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.</p> <p>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 redds from fresh kokanee redds. Bull trout</p>
08/27/87 1300	LGB	AT3AT4 GOLD CR (LOWER)	
09/17/87 1000	LGB	AT3AT4 GOLD CR (LOWER)	
10/05/87 1030	LGB	AT3AT4 GOLD CR (LOWER)	

observed from about 4 to 8 pounds, along with one tiny 9-incher DV or EB (?) which was hanging around a larger fish. Four bull trout adults in the deep pool about 200 yds below culvert have been harassed something fierce, judging from the amount of footprints around the shore. They were extremely nervous, racing up and down the pool as soon as they saw me.

09/15/88 1200 LGB AT3AT4 GOLD CR (LOWER)

THREE REDDS IN TALLOW UNDER ROCKY RUN FRONTAGE ROAD BRIDGE AND ONE AT EDGE OF DEEP POOL JUST ABOVE BRIDGE. CREEK FULL OF BEER AND POP CANS FROM "RECREATIONALISTS". NO FISH IN DEEP BEDROCK POOL BELOW GRAVEL PIT. ONE PAIR LYING UNDER LOG/DEBRIS 100 FT BELOW SCALING STATION CAMP. ONE BULL AT HEAD OF RIFFLY SECTION OF CHANNEL AND ANOTHER BULL ABOUT 50 YARDS FURTHER UPSTREAM. NO SIGN OF ANY KOKANEE YET.

09/22/88 1100 LGB AT3AT4 GOLD CR (LOWER)

MOST OF THE "FALSE" REDDS WERE PROBABLY KOKANEE SPAWNING. SEVERAL HUNDRED KOKS IN THE STREAM, LARGER THAN NOTED IN THE PAST, AT 10-12 INCHES. FIVE OF THE BULL TROUT WERE MALES AND ONLY ONE WAS A FEMALE. IMPOSSIBLE TO CONTINUE BULL TROUT REDD COUNTS NOW WITH KOKANEE ACTIVE. BEDROCK POOL BELOW THE GRAVEL PIT HELD ITS USUAL SEVERAL BULL TROUT AND TWO WERE OBSERVED CRUISING THE LAKE SHORELINE ON THE WAY BACK. MANY, MANY HUMAN FOOTPRINTS AND 4X4 WHEEL TRACKS ALL OVER THE CREEK CHANNEL AND GRAVEL BARS.

09/15/89 0900 LGB AT3AT4 GOLD CR (LOWER)

ONE REDD BETWEEN I-90 AND FRONTAGE RD. ONE MALE AND ONE FEMALE AT LOWER END OF QUIET CHANNEL ABOVE GRAVEL RIFFLES. ALSO ONE MALE AND ONE FEMALE OBSERVED CRUISING SHORELINE OF THE LAKE ON THE WAY BACK.

09/20/89 1000 LGB AT3AT4 GOLD CR (LOWER)

KOKANEE AGAIN FOULING UP BULL TROUT SURVEYS. SMALL PODS OF KOKANEE SPAWNING CLEAR UP TO GRAVEL PIT LAKE. KOKANEE LARGER THAN LAST YEAR AT 11-13 INCHES. STILL ONLY 4 BULL TROUT OBSERVED, TWO OF WHICH WERE IN SLACK WATER CHANNEL BELOW THE LAKE. NONE OBSERVED CRUISING THE LAKE THIS TRIP. MAY HAVE TO DROP THIS INDEX AREA BECAUSE OF KOKANEE INTERFERENCE WITH REDD COUNTS.

09/27/90 1330 LGB AT3AT4 GOLD CR (LOWER)

From frontage road to Pond. Both redds along riprap run downstream from culvert. Walked about a mile above the pond without seeing any bull trout or redds. Temperature cooler above the pond (51F). Kokanee have appeared and are beginning to dig making further lower creek bull trout surveys impossible.

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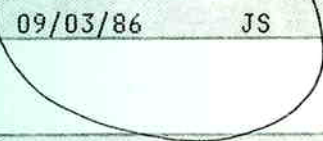
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09/03/86

JS

Y58Y59 INDIAN CR

DATA FROM JIM CUMMINS FILES. A PARTIAL SURVEY ONLY.

SURVEY BY JIM SPOTTS AND JIM CUMMINS FROM "AT LEAST" THE NORTH SPRING CONFLUENCE (INCLUDING NORTH SPRING FLOWAGE) UP TO THE FALLS. THE NUMBER OF FISH PRESENT (45) INDICATES SPAWNING WAS NOT COMPLETE, AND NO COUNTS WERE MADE DOWNSTREAM OF THE NORTH SPRING.

611	10/05/89	WDW	46	11	BH7BH8 R	MAD R		DV BULL		7			15		MEMO	
612	10/16/89	WDW	46	11	BH7BH8 R	MAD R	44F	DV BULL		1			15	0	MEMO	
628	10/16/90	WDW	46	11	BH7BH8 R	MAD R	32F	DV BULL	0	0	2	0	17	0	MEMO	
641	10/17/91	WNF	46	11	BH7BH8 R	MAD R	43F	DV BULL	0	0	1	0	21	0	MEMO	
1048	10/01/92	1500 WNF	46		BH7BH8 R	MAD R (partial 1 of 3)	47F	DV BULL	0	0	0	0	6	0	MEMO	
1049	10/02/92	1300 WNF	46		BHYBH8 R	MAD R (partial 2 of 3)	47F	DV BULL	0	0	0	0	2	0	MEMO	
1050	10/09/92	1400 WNF	46		BH7BH8 R	MAD R (partial 3 of 3)	41F	DV BULL	0	0	0	0	8	2	MEMO	
1094	09/09/93	1300 WNF	46		BH7BH8 R	MAD R (partial, level I)	52F	DV BULL			0	0	2	0	MEMO	
1095	09/14/93	1300 WNF	46		BH7BH8 R	MAD R (partial, level I)	47F	DV BULL			0	0	1	0	MEMO	
1096	09/22/93	1300 WNF	46		BH7BH8 R	MAD R (partial, level II)	39F	DV BULL			0	0	2	0	MEMO	
1097	10/19/93	1300 WNF	46		BH7BH8 R	MAD R (partial, level II)	41F	DV BULL			0	0	0	0	MEMO	
1098	10/20/93	1300 WNF	46		BH7BH8 R	MAD R (partial, level II)	39F	DV BULL			0	0	5	0	MEMO	
616	09/29/89	WDW	39	20	*MEADO R	MEADOW CR	52F	DV BULL			0				memo	
619	09/18/89	WDW	45	22	BD6BD7 R	MILL CR	45F	DV BULL	0	0	0	0	1	0	MEMO	
620	09/21/89	WDW	45	22	BD6BD7 R	MILL CR		DV BULL	0	0	0	0	1	0	memo	
621	10/12/89	WDW	45	22	BD6BD7 R	MILL CR		DV BULL	0	0	0	0	1	0	memo	
642	10/16/91	WNF	45	22	BD6BD7 R	MILL CR	43F	DV BULL	0	0	1	0	1	0	MEMO	
643	10/07/80	LGB	39	21	A58A59 R	• MINERAL CR		DV BULL			3	0	0	0	MEMO	
26	08/15/84	1500 JS	39	21	A58A59 R	• MINERAL CR		DV BULL	0	0	0	0	0	0	memo	
544	09/09/85	1133 JS	39	21	A58A59 R	• MINERAL CR		DV BULL	0	0	0	0	0	0	memo	
1	08/27/86	0900 LGB	39	21	A58A59 R	• MINERAL CR		DV BULL	0	0	0	0	0	0	MEMO	
638	10/16/91	MTS	39	21	A58A59 R	MINERAL CR	44F	DV BULL	0	0	0	0	0	0	MEMO	
1052	08/31/93	1045 LGB	39		AS8AS9 R	• MINERAL CR	49F	DV BULL	0	0	0	0	0	0	MEMO	
1061	09/16/93	1400 LGB	39		AS8AS9 R	MINERAL CR	51F	DV BULL	0	0	0	0	0	0	memo	
1078	09/30/93	1330 LGB	39		AS8AS9 R	• MINERAL CR	49F	DV BULL	0	0	0	0	0	0	MEMO	
1084	10/18/93	1405 LGB	39		AS8AS9 R	• MINERAL CR	44F	DV BULL	0	0	0	0	0	0	MEMO	
55	09/18/84	1200 LGB	45	22	BC9CD1 R	NASON CR		DV BULL	0	0	0	0	4	0	MEMO	
42	09/27/83	1200 LGB	45	50	BF4BF5 R	• PANTHER CR		DV BULL	12	2	14	1	POACHER	46	0	MEMO
50	08/18/84	1200 LGB	45	50	BF4BF5 R	• PANTHER CR		DV BULL	0	0	0	0	0	0	MEMO	
52	09/11/84	1500 LGB	45	50	BF4BF5 R	• PANTHER CR	48F	DV BULL	7	3	10	0	8	7	MEMO	
56	09/19/84	1100 LGB	45	50	BF4BF5 R	• PANTHER CR	48.2F	DV BULL	8	6	14	0	POACHER	20	11	MEMO
548	09/23/85	1102 JS	45	50	BF4BF5 R	• PANTHER CR		DV BULL	0	0	8	1	POACHER	6	5	MEMO
2	09/09/86	1300 LGB	45	50	BF4BF5 R	• PANTHER CR	51.8F	DV BULL	0	0	0	0	2	1	memo	
3	09/16/86	1230 LGB	45	50	BF4BF5 R	• PANTHER CR	48.2F	DV BULL	0	0	0	0	2	1	MEMO	
18	08/31/87	1200 LGB	45	50	BF4BF5 R	• PANTHER CR	58F	DV BULL	0	0	0	0	0	0	MEMO	
21	09/18/87	1030 LGB	45	50	BF4BF5 R	• PANTHER CR	47F	DV BULL	0	3	3	0	0	0	MEMO	
23	10/05/87	1400 LGB	45	50	BF4BF5 R	• PANTHER CR	48F	DV BULL	0	0	0	0	11	11	MEMO	
549	09/12/88	1330 LGB	45	50	BF4BF5 R	• PANTHER CR	50F	DV BULL	0	0	0	0	0	0	MEMO	
552	09/20/88	1200 LGB	45	50	BF4BF5 R	• PANTHER CR	46.5F	DV BULL	7	9	16	0	8	4	MEMO	
555	09/27/88	1200 LGB	45	50	BF4BF5 R	• PANTHER CR	46F	DV BULL	5	7	12	0	19	3	MEMO	
556	10/03/88	1100 LGB	45	50	BF4BF5 R	• PANTHER CR	49F	DV BULL	0	0	0	0	32	8	MEMO	
557	09/13/89	1100 LGB	45	50	BF4BF5 R	• PANTHER CR	50F	DV BULL	2	7	9	0	2	2	MEMO	
562	09/21/89	1330 LGB	45	50	BF4BF5 R	• PANTHER CR	48.5F	DV BULL	9	6	15	0	27	5	MEMO	
563	10/03/89	1230 LGB	45	50	BF4BF5 R	• PANTHER CR	45F	DV BULL	2	2	4	0	33	3	MEMO	
566	09/20/90	1100 LGB	45	50	BF4BF5 R	• PANTHER CR	50F	DV BULL	0	0	0	0	2	0	MEMO	
570	09/28/90	1200 LGB	45	50	BF4BF5 R	• PANTHER CR	50F	DV BULL	2	0	2	1	UNKNOWN	7	3	MEMO
572	10/04/90	1400 LGB	45	50	BF4BF5 R	• PANTHER CR		DV BULL	HIGH	WATER	0	NO	SURVEY	POSS	0	MEMO
576	09/17/91	1100 LGB	45	50	BF4BF5 R	• PANTHER CR	51F	DV BULL	7	9	16	0	12	3	MEMO	
577	09/25/91	1100 LGB	45	50	BF4BF5 R	• PANTHER CR	50F	DV BULL	2	3	5	0	31	3	MEMO	
578	10/01/91	1030 LGB	45	50	BF4BF5 R	• PANTHER CR	48F	DV BULL	4	1	5	?	ROTTEN SMELL	36	5	MEMO
580	10/15/91	0915 LGB	45	50	BF4BF5 R	• PANTHER CR	45F	DV BULL	0	0	0	0	37	2	MEMO	
1030	08/04/92	1200 BDB	45		BF4BF5 R	• PANTHER CR		DV BULL	0	6	6	0	0	0	MEMO	
1026	09/09/92	1000 LGB	45		BF4BF5 R	• PANTHER CR	9C	DV BULL	0	1	1	0	2	0	MEMO	
1027	09/18/92	1030 LGB	45		BF4BF5 R	• PANTHER CR	7.5C	DV BULL	8	7	15	0	21	8	MEMO	
1028	09/23/92	1100 LGB	45		BF4BF5 R	• PANTHER CR	10.8C	DV BULL	1	6	7	0	24	10	MEMO	
1029	10/02/92	0915 LGB	45		BF4BF5 R	• PANTHER CR	9.5C	DV BULL	2	0	2	0	26	12	MEMO	
1051	08/27/93	1000 LGB	45		BF4BF5 R	• PANTHER CR	51F	DV BULL	0	15	15	0	0	0	MEMO	
1055	09/03/93	1000 LGB	45		BF4BF5 R	• PANTHER CR	52F	DV BULL	4	8	12	0	2	2	MEMO	
1059	09/13/93	1200 LGB	45		BF4BF5 R	• PANTHER CR	49F	DV BULL	4	14	18	0	10	3	MEMO	
1064	09/22/93	1100 LGB	45		BF4BF5 R	• PANTHER CR	44F	DV BULL	17	2	19	1	(SKIN) UNKNOWN	37	6	MEMO
1079	10/01/93	0900 LGB	45		BF4BF5 R	• PANTHER CR	48F	DV BULL	3	2	5	0	45	8	MEMO	
1080	10/15/93	0945 LGB	45		BF4BF5 R	• PANTHER CR	47F	DV BULL	0	0	0	0	41	12	MEMO	
603	09/19/89	1401 WDW	45	23	H27H28 R	• PHELPS CR		DV BULL			1	0	0	0	MEMO	
604	09/28/89	1402 WDW	45	23	H27H28 R	• PHELPS CR	47F	DV BULL			12	0	18	0	MEMO	
605	10/11/89	1403 WDW	45	23	H27H28 R	• PHELPS CR	46F	DV BULL			0	0	23	0	memo	
625	10/11/90	WDW	45	23	H27H28 R	• PHELPS CR	36F	DV BULL	0	0	0	0	7	0	MEMO	

10/1/94

how to enter ask lang

10/07/80	LGB	A58A59 MINERAL CR LISTED AS AS8AS9 IN MUDEF	SHOCKER SURVEY WITH JUDITH PARSONS, CLE ELUM RD. FOUND 3 LARGE MALES (21, 28, 26 INCHES TL) FROM KACHESS RIVER TO APPARENT IMPASSE IN CATARACTS. ALSO SAMPLED 3 JUVENILE BULL TROUT 8-10 INCHES. NO SIGN OF ANY FEMALES OR REDDS. THIS IS THE FIRST RECORDS OF AFLUVIAL BULL TROUT HERE. NOTED THAT LOWER KACHESS CHANNEL GOES SUBTERRANEAN ANNUALLY NEAR TRAIL CROSSING, OFTEN STRANDING ADULT BULL TROUT IN THE FALL.
08/15/84	1500 JS	A58A59 MINERAL CR	
09/09/85	1133 JS	A58A59 MINERAL CR	
08/27/86	0900 LGB	A58A59 MINERAL CR	Surveyed Kachess R and Mineral Cr. No adult bull trout found. Flows very low. Goes dry within 300 yds of leaving forested area and flowing across alluvial plain. Fished Mineral Cr from barrier falls to alluvium area. Caught 3 CT 16,17,19 cm and 2 DV 19,15 cm. Observed fry from 1-2" from Mineral Cr to where goes intermittent (about 500 yds.)
10/16/91	NTS	A58A59 MINERAL CR	NATAPOC TIMBER SERVICES UNDER CONTRACT W/USFS. SURVEYED FROM MOUTH TO IMPASSE ABOUT 2000 FT. FLOW INTERRUPTS NEAR WILDERNESS BNDRY. 5 HOUR SURVEY. 44F @1245.
08/31/93	1045 LGB	AS8AS9 MINERAL CR	SET UP NEW SPAWNING INDEX AREA FROM MOUTH OF MINERAL CREEK TO IMPASSABLE VERTICAL 20ft FALLS ABOUT 1/2 MILE UPSTREAM.
09/16/93	1400 LGB	AS8AS9 MINERAL CR	
09/30/93	1330 LGB	AS8AS9 MINERAL CR	STILL NOTHING IN THIS CREEK OR IN UPPER KACHESS R.
10/18/93	1405 LGB	AS8AS9 MINERAL CR	SAW NO ADULT BLC OR REDDS THIS SEASON.
			THE ONLY CHANCE IS FOR EARLY FALL FAINS TO RE-WATER THE CHANNEL OF KACHESS RIVER, ALLOWING BULL TROUT (AND KOKANEE) ACCESS TO THE SYSTEM FOR SPAWNING.

Overall 135 5 0 3 (2 on redd, 1 off redd)

019 51	10/18/91 10/07/80 1200 LGB	WNF LGB	*JAMES JAMES CR A56A57 KACHESS R	Backpack shocker sampling with Judith Parsons (USFS). 2 DV found below Mineral Cr jct. and 3 DV in Mineral Cr itself. All were males, no females in the run this year. Kachess R dried up about 1/4 mi. below the jct with Mineral Cr. (Total lengths were 27, 25, 26, 28, and 21 inches). Lots of DV juveniles in Kachess R below and above Mineral Cr. from fry to 11 inches. Few DV and CT in Mineral Creek itself. Fair no. CT and DV juveniles in old east bank channel, which stays wetted through summer/fall due to influence of beaver dam/ponds.
25	09/25/87 1200 JS	JS	A56A57 KACHESS R A56A57	No redds and no fish found. Earlier shocker survey (8/15/84) produced a number of juvenile bull trout below the barrier falls, but no migratory adults. Stream channel went underground again this year, precluding adult entry.
053	08/31/93 1200 LGB	LGB	AS6A57 KACHESS R (Upper)	SET UP NEW SPAWNING INDEX AREA FROM MINERAL CREEK TRAIL CROSSING TO CONFLUENCE WITH MINERAL CREEK, THEN UP KACHESS RIVER TO IMPASSABLE VERTICAL 50 ft FALLS ABOUT 1/2 MILE UPSTREAM.
062	09/16/93 1500 LGB	LGB	AS6A57 KACHESS R (Upper)	STILL NOTHING IN THIS CREEK OR IN MINERAL CREEK. SAW NO ADULT BLC OR REDDS ENTIRE SEASON.
077	09/30/93 1430 LGB	LGB	AS6A57 KACHESS R (Upper)	
083	10/18/93 1400 LGB	LGB	AS6A57 KACHESS R (Upper)	
53	09/12/84 1100 LGB	LGB	BD8BD9 LITTLE WENATCHEE R	THE ONLY CHANCE IS FOR EARLY FALL RAINS TO RE-WATER THE CHANNEL AND LET FISH UP FROM KACHESS LAKE. Attempted to find dolly spawners below the falls for about one mile. No fish observed and no spawning activity.

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

Wed. Aug. 27, 1986

✓

Surveyed Kachess R./Mineral Creek
NO adult bull trout found. flow
very low. Goes dry within 300 yds
after leaving forested area and
flowing across alluvial plains

fished back down Mineral Creek from
barrier falls (20' sheer cauldron)

- caught 3 CT ~~16, 17, 19 cm~~
- caught 2 DV ~~19, 15 cm~~
- observed ~~✓~~ fry of 1"-2" from
Mineral/Kachess Jct. to where
goes underground (about 500 yds).

Looked over Milwaukee Pond - 1PM

- long oxbow channel cut-off
by railroad const. in old days.
 - looks like beaver pond with
lots of macrophytes & riparian
veg. - osprey nest near lower
end - one grease uppers end
shiners & dace observed water
18°C near center & 21°C lower end.
- Plant EB and BT fry w/ legals

Tuesday Sept. 9, 1986



walked all of Panther Creek

saw only 2 redds & 1 false redd

No fish observed, except 2 trout

Water Temp $11^{\circ}\text{C} - 51.8^{\circ}\text{F}$ at 1300

water very low & clean

- White River very milky & low
cannot see salmon or D.V.
due to glacial color - observed
one spring chinook & 2 redds
in the White. mostly not
visible.

Monday Sept. 22nd - 1986 ✓

Walked Box Canyon Creek from Lake (Little Kachess) to "Peekaboo" Falls.

Water $9.5^{\circ}\text{C} = 49.1^{\circ}\text{F}$ @ 1200 hrs.

Flow low and clear. Does not reach Lake, but forks below campground & both forks go subterranean about 50 yds short of lakeshore.

Only 3 redds observed and no bull front adults observed ==

all 3 redds in same vicinity just above braided/gravelly zone and between 100 and 200 yards below "Peekaboo" Falls.

No evidence of any adult bull trout above "Peekaboo" Falls for 1/4 mile to "Bomben" Falls. No evidence of recent bomb blasts. Thought I heard a blast while in the canyon but found no evidence.

GOLD CREEK

9/22/86



Water Temp $10.5^{\circ}\text{C} = 50.9^{\circ}\text{F}$

from Grand Pit Lk to 100 yds below I90.

7 redds in outlet channel

no fish observed

Creek dry above outlet culvert

from outlet Culvert to I-90

21 Redds

3 false Redds

Fish observed

3 adults (2♀ & 1♂) on redds

9 Adults in hiding pools

(one VERY LARGE male of 12-15 lbs)

one dead ♂ 55cm partly spent
found with spear hole thru
body. Otoliths Recovered

partly spent - age 7+

DO CRKSITE
CRK AGES

28 Redds total

13 Adult Bull Trout

Wednesday - October 15, 1986 ✓

- Gold Creek (Keechelus Lk)

Bull trout done and gone - now filled with smallish kokanee.
- fair number of fish in every suitable area from I-90 to and into lake channel. A few even wiggled up nearly dry creek channel above culvert. Two redds found in nearly dry channel above lake. Most riffle spawning is tentative. Quite a bit of spawning in still backwaters and wide tailouts. Major spawning is "mass" effort for full length of slow-deep pools.

Kokanee are very small, running approximately 7 to 10 inches. Most are 8 to 9 inches.

Spawning just underway as there are no mortalities in evidence.
(over)

Found no fish in Coal Creek
no fish in Cold Creek
no fish in Mill Creek
(Frib. Cold creek)

Checked a few anglers on
Lavendar Lake

5 FM / 10.5 hrs / 8 Rb

1 LO @ 25 (10")

7 FD @ 20-23 (8-9 1/2")

Anglers are steady's and said
they have caught a fair number
of small brown trout in past several
weeks, slightly larger than
the fry-origin rainbows.