

## Bull Trout Take Report - 2000

### WDFW Monitoring: Fish Program - Yakima subbasin

WDFW monitoring report of bull trout take during 2000 in the Yakima subbasin. Additional details of field operations and data summaries are contained in WDFW reports (i.e., Sport Fish Investigations in Washington State) and in Regional files/records.

WDFW survey biologists: Eric Anderson, Jim Cummins, John Easterbrooks  
Survey assistance provided by: Steve Croci, Jeff Thomas, Toni Davidson, Scott Deeds (USFWS); Scott Hoefer, Ken MacDonald, Jeff Hosman (USFS); Dr. Paul James, William Meyer, Tim Eichler, Yuki Reiss, Mark Tuttle (CWU); Gary Torretta, Kate Puckett (BR); Pat Monk (Irrigation District); Wendel Willey (YN); Mike Schmuck, Phillip Smith (WDFW/YN).

Anticipated survey activities that were not conducted due to lack of personnel/time:

Inventory, distribution, and presence/absence surveys were not conducted in Cowiche Creek, MF Teanaway River, or Stafford Creek.

Occasionally a bull trout carcass was observed during the course of conducting redd counts. Carcasses were reported in the following "Bull Trout Take Report" but were not caused by or were they a result of these monitoring activities.



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Take Location	Specific Date(s) of Take	Type of Take 1/	Number Taken	Biological Data Collected? (Y or N)	Type of Biological Data Collected 2/	Disposition of Bull Trout Taken 3/	Comments
Naches R (Nile area)	Sep 11	Angling	1 Lethal	Y	T.Length 35 cm, Genetic Sample	Confiscated - sent to Genetics Lab.	Illegal - Sport Angling Harvest
Naches R (Horseshoe Bend)	Sep 25	Observation	1 Carcass	N	est. T.Length 24-25 in.	None - Carcass left in stream.	Reported by Yakama Nation during Chinook Redd Count
SF Tieton R	Aug 21	Angling	2 Lethal	Y	T.Length 43,48cm Genetic Samples	Confiscated - sent to Genetics Lab	Illegal - Sport Angling Harvest
Easton Lake (Yakima R)	May 21	Angling	1 Lethal	Y	T.Length 58 cm	Confiscated -Frozen	Illegal - Sport Angling Harvest
Deep Cr	Aug 28, Sep 5,13	Observation	0	Y	Redd Count	None Taken	147 Redds, 50 Bulls Observed
Bumping R (upper)	Aug 30	Observation	0	Y	Redd Count	None Taken	No redds observed.
Indian Cr	Sep 5,18, Oct 5	Observation	0	Y	Redd Count	None Taken	226 Redds, 130 Bulls Observed
SF Tieton R & trib (Bear)	Sep 7, 26, 27, Oct 6	Observation	0	Y	Redd Count	None Taken	144 Redds, 98 Bulls Observed.
American R & tribs (Union, Kettle)	Sep 1,11, 12,20	Observation	0	Y	Redd Count	None Taken	44 Redds, 9 Bulls Observed
Crow Cr	Sep 8, 13, 22	Observation	1 Carcass	Y	Redd Count, No Genetic Sample	None - Carcass left in stream.	26 Redds, 1 Bull Observed.
NF Ahtanum Cr & trib (Shellneck)	Sep 6,12, 26	Observation	1 Carcass	Y	Redd Count Genetic Sample	Carcass to Genetics Lab.	11 Redds, 7 Bulls Observed.
MF Ahtanum Cr	Oct 4	Observation	0	Y	Redd Count	None Taken	10 Redds, No Bulls Observed
SF Ahtanum Cr	Oct 6	Observation	0	Y	Redd Count	None Taken	5 Redds, No Bulls Observed
Rattlesnake Cr & trib (Little Wildcat)	Sep 6,16,17	Observation	0	Y	Redd Count	None Taken	45 Redds, 7 Bulls Observed
Box Canyon Cr	Sep 25 Oct 3,16	Observation	0	Y	Redd Count	None Taken	10 Redds, 2 Bulls Observed
Kachess R (upper)	Oct 13,25, Nov 7	Observation	3 Carcass	Y	Redd Count Genetic Sample	Carcasses to Genetics Lab.	15 Redds, 14 Bulls Observed.
Gold Cr	Sep 26 Oct 4,17	Observation	0	Y	Redd Count	None Taken	19 Redds, 16 Bulls Observed
Yakima R (Easton Lk to Keechelus Dam)	Sep 14,27	Observation	0	Y	Redd Count	None Taken	2 Redds, 4 Bulls Observed
NF Teanaway R & trib (DeRoux)	Oct 9	Observation	0	Y	Redd Count	None Taken	No redds observed, incomplete survey.
Cle Elum R (upper) & trib (Fortune Cr)	Sep 27,28, Oct 12,18, 19	Observation	0	Y	Redd Count	None Taken	7 Redds, No Bulls Observed

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1/ Take types include observation, trapping/handling, trapping/handling/sampling, lethal take (i.e. bull trout killed while handling).

2/ Includes measurement of fork length, scale sampling, Genetic sampling.

3/ Note release location, if released (e.g. "above trap" or "downstream of collection point"). If a mortality, please note location of specimen, or that carcass was destroyed, etc.

Shipped to Genetics Lab  
in Oly Dec. 2000.

1  $6\frac{1}{4}$ " BLC N.F. Antanan Cr.  
above confluence w Shellrock R.  
9-12-00 Found by EA

1 BLC No length taken  
From Chuck Kohls <sup>from angler</sup>  
to Eric Anderson  
Naches R, downstream from  
Buckskin Creek  
12/12/99

2 BLC confiscated from  
anglers, L.S.F. Tieton  
R. No length taken  
Adult Fish.  
Sept. 2000 Bone Bedies,

over →

11-7-2000

3 BLC

2 Whole Carcasses  
& 1 head

From Kadloss River  
in Lake Bed.

# Bull Trout Spawning Ground Survey

Stream: Box Canyon Creek  
Date: 9/24/00

Location: Footbridge to falls (approx 2 miles)

Water Temp.: 53°F @ 1320 below falls

Investigator: Jim Cummins

Start Time: 1100

End Time: 1320

Redds:	New	Old
Definite:	<u>0</u>	<u></u>
Probable:	<u>0</u>	<u></u>
Possible:	<u>0</u>	<u></u>

Bull Trout Observed:  
Tagged:   
Untagged: 1  
Sub-adults: 1 ~ 13"  
Juvenile:

Comments: Reservoir low. Approximately 600' of the creek was  
put into a narrow channel last week, constructed of  
hay bales + plastic sheet. Creek is possible if fish are willing to  
swim over black plastic in narrow channel. As good as it can be.  
Counted 15 7-12" Cutthroat. Saw several 1" + 3"  
salmonids. One area slightly more than half way between  
foot bridge + lake may be impassible. Flow 60% ± of normal.  
The adult fish was in the pool below the cascade slightly  
less than halfway to main falls.

2  
0  
0  
0



# Bull Trout Spawning Ground Survey

Stream: Middle Fork Ahitanum Creek  
 Date: 10/4/00

Location: 3/4 mile downstream of Tree Phones to 3/4 mile upstream of Tree Phones

Water Temp.: 3° C (36°F)

Investigator: Wendall Willey (Yakama Nation)

Start Time: 09:45

End Time: 1530

Redds:	New	Old
Definite:	<u>6</u>	<u>                    </u>
Probable:	<u>4</u>	<u>                    </u>
Possible:	<u>9</u>	<u>                    </u>

Bull Trout Observed:  
 Tagged: ∅  
 Untagged:                       
 Sub-adults:                       
 Juvenile:                     

Comments: Incomplete Survey conducted over just 1 day. Survey  
was conducted after spawning was completely finished  
for the Fall 2000 spawning season.  
15 of the 19 suspected spawning redds were observed downstream  
of Tree Phones Campground, while only 4 were found upstream  
of the campground. However, of the 4 found upstream  
3 were definite redds. See field notes for more info.

2  
0  
0  
0

10/4/00

Bull Trout Spawning Survey  
Middle Fork Athabasca Creek

Arrived at Tree Phones Campground at 09:15.

Weather: Sunny with No Clouds. Cold with Frost on the ground.

Start of Survey: Approximately 1 mile downstream of the Tree Phones Campground.

Water Temp =  $3^{\circ}\text{C}$  ( $36^{\circ}\text{F}$ )

- ① 1 Possible
  - ② 1 Possible
  - ③ 1 Possible
- } Located around scouring flow such as LWD or boulders (questionable)
- ④ 1 Possible - on stream channel margin adjacent to flow

Possible Redds 1-3 were in a steep gradient section of stream with numerous cascade falls and large boulder/cobble substrate.  
(Not typical Bull trout spawning H<sub>2</sub>O, etc)

- ⑤ 1 Probable Redd - classic redd shape although no color distinction between redd and surrounding gravels. Also redd is in between two scouring flows.



BWSW  
10/14/00

Bull Trout Spawner Survey 30C  
Middle Fork Astorian Creek (cont.)

Redds 4 and 5 are located in an area that has a more gentle gradient than downstream. The channel is wider, shallower and has more gravels (More typical of Bull Trout spawning areas).

- ⑩ 1 Probable Redd - Located upstream of a Log Jam that retained spawning gravels. Redd is located on the channel margins.
- ⑪ 1 Definite Redd - Very small redd located on the channel margins (less than 1 inch size gravel). Distinct shape. Hiding low. Upstream ~ 10 ft.
- ⑫ - Both possible redds. They have the redd shape and there is a definite size difference between the surrounding cobbles and gravels. However both were found next to scouring channel flows so they could be just caused by hydraulics.
- ⑬ - Probable Redd - Located in area that is overgrown with green algae. The redd gravels are orange and black with no algae growth.

BWSW  
10/14/00

Bull Trout Spawner Survey  
Middle FK Astorian Creek (cont.)

Low Gradient Gravel Bar/LWD Area to show Eric Anderson (if possible). Lots of spawning gravels, but lots of scouring flow as well. Hard to decipher redds from typical substrate.

- ⑭ Possible Redd - downstream of LWD scouring the channel.
- ⑮ Probable Redd - channel margins away from scouring flow, good shape but small. Active beaver in the area. Lots of willow/cottonwood/Alder pieces in the stream and many beaver cut marks on riparian veg.
- ⑯ Possible Redd located in area with orange Temp monitoring site writing. Good gravels. Small cleared patch of gravel. However does not have distinct pit or tail-pit.
- ⑰ Definite Redd - Just upstream of orange Temp monitoring Site Flag. Beaver is attempting to make a dam here. Apparently.

10  
WSW  
10/4/00

Bull Trout Spawner Survey  
Middle Fork Athabasca Creek

- (15) Definite Redd - very old, dug in small  
gravel. Upstream of great spawning  
area that could contain more redds that  
were unnoticed.

Upstream of Tree Phones Campground

- (16) Possible Redd - very small, spawned in pea  
gravel under some SWD. The "redd" could  
be the result of scour under the SWD  
(small side channel of Tree Phones)

- (17) Definite Redd - Center of channel. Good  
pit, tailspill and distinct shape. (gravel)  
color looks the same as the surrounding  
substrate.

- (18) Definite Redd - Very, very small tucked  
up underneath undercut bank. Good  
tailspill with loosely packed gravel and  
very clean

- (19) Definite Redd - Channel margin. Good  
egg pocket and tailspill. Gravel in  
tailspill much smaller than surrounding  
gravel.

WSW  
10/4/00

Bull Trout Spawner Survey  
Middle Fork Athabasca Creek

11

End of day. <sup>water</sup>Temp = 4.5 °C @ 3:30pm

Used Truck's odometer to clock the  
distance of total survey reach,

Reach began 0.8 miles downstream of  
Tree Phones and ended 0.7 miles upstream  
of Tree Phones Campground.

Total Redds Downstream

Definite = 3

Possible = 4

Possible =  $\frac{8}{15}$

Total Redds Upstream of Tree Phones

Definite = 3

Possible =  $\frac{1}{4}$

I recommend continuing to use this reach for  
future index sampling. However, with the  
following changes. ① start the survey 0.5 miles  
downstream of TP to avoid high gradient unstable  
habitat and continue upstream for about 1.0  
miles instead of 0.7 miles. End.

# Bull Trout Spawning Ground Survey

Stream: South Fork Ahtanum Creek  
Date: 10/6/00

Location: S.F.K Ahtanum Creek through T11N-R14E Sections 3, 4 and 5 between R  
crossings 5

Water Temp.: 5°C (~~39~~°F)

Investigator: Wendall Wilbey (Yakama Nation)

Start Time: 0920

End Time: 1600

Redds:	New	Old
Definite:	<u>3</u>	<u>                    </u>
Probable:	<u>2</u>	<u>                    </u>
Possible:	<u>4</u>	<u>                    </u>

Bull Trout Observed:  
Tagged: 0  
Untagged:                       
Sub-adults:                       
Juvenile:                     

Comments: Incomplete Survey conducted over 1 day. Survey was  
conducted after Fall 2000 spawning season was finished.  
Good habitat, however there was a general lack of  
redds or possible redds throughout the greater than  
2 mile stretch of creek surveyed.

2  
0  
0  
0

WSW  
10/10/00

# Bull Trout Spawner Survey South Fork Ahtanum Creek

- Arrived on Site at 09:15
- Parked at the 1<sup>st</sup> major switchback leading away from the stream on the S.F.K. Ahtanum Road (approximately 7 miles from Tappica).

Weather Conditions: Perfectly sunny and cold.

Water Temp = 5°C (38°F)

Start of survey began where the switchback parallels the S.F.K. Ahtanum.

① Definite Redd - Found on the stream margin downstream from a plunge pool. Spawners in very small gravel (Redd was away from plunge pool scour and had loose, clean gravel in tailspill with classic shape. Location is marked by an existing box and white striped flag with T1-B marked on it. (Also at the confluence with small trib.

② Possible Redd (Actually 3 near each other)

③ Definite Redd - Redd located upler LWD at head end of side channel.

④ Possible Redd -

⑤ Probable Redd - Very small, Dinner Plate size but distinct shape. Actually looks like a lamprey redd. Juvenile salmonid (1.5 inches) observed near redd.

- Very long stretch of creek between redds 1-3 and 4 and 5. However, very good spawning and rearing habitat exists between these locations.

⑥ and ⑦ - Two Possible Redds - Gravels are sorted and appear to look like redds, however they are both located near hydraulic scouring flow caused by SWD.

⑧ Probable Redd - Looks like a redd, Located near and undercut bank.

⑨ Definite Redd - Good shape, Lots of gravel in tailspill. Like all redds on SFK Athabasca there is no colour differentiation between the redd and the surrounding substrate. It is in an area of scouring flow however

End of Survey.

The reach sampled began at the first major switchback on the A1000 Road (South Fork Athabasca Road) approximately 9 miles upstream from Tampico. The reach ended at the 1<sup>st</sup> Road Crossing upstream.

The reach sampled was greater than 2 miles in length and ran through T11N-R14E and Sections 3, 4 and 5.

Total Redds observed	
Definite =	3
Probable =	2
Possible =	4
	<hr/>
	9

Water Temperature = 5.5 to 6 °C at end of survey 3:45 p.m.



6/21/00

To: John Easterbrooks, Jim Cummins, Paul James  
Jeff Thomas, Steve Croci, Scott Hoefler,  
Ken MacDonald, Tina Mayo, Walt Larrick,  
Pat Monk, Kate Puckett, Gibbons, Uehara

From Eric Anderson

Subject: Bull Trout Investigations  
Redd counts, etc.

See attached schedule ... your names  
will be on it in multiple places ... so  
check it close. If any problems or  
conflicts let me know.

Check instruction sheet on procedure,  
You will need to get flagging.

Check survey form, I would like  
to get the data back in this format  
for the various streams and reaches.

Please contact your fellow surveyors to arrange  
meeting times, etc.

I am out & about but I can be reached  
at work 509-457-9301 or Home 509-966-4017.  
Feel free to call & leave  
message. Tnx Eric




SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	28 Aug. Deep Cr. Anderson, Cummins	29 Upper Bumping R. Anderson	30 cancelled Upper Cle Elum Anderson	31 cancelled Cowiche Creek Anderson, Cummins	1 American River 215/122 Cowiche Creek Presence/Absence Anderson, Cummins	2 246/121
3 247/120	4 248/119 HOLIDAY LABOR DAY	5 249/118 Deep Creek Paul James + CWU	6 250/117 N.F. Ahtanum Cr. Anderson	7 251/116 Rattlesnake Creek Hoetter, Macdonald	8 252/115 S.F. Tieton R. Anderson, Cummins	9 253/114 Upper Cle Elum (Croc + Deeds) on 7 + 8
	0645 0800 office @ Indian Creek Corral	Indian Creek Anderson + Cummins Croci, Hoetter, Macdonald, Torella		S.F. Tieton R. Anderson, Cummins, Thomas, Croci, Easterbrooks	Lower Crow Creek Anderson, Cummins	
10 254/113	11* 255/112 American Hoetter + other USFS	12 256/111 River + Crow Creek N.F. Ahtanum Cr. Anderson	13 257/110 Deep Creek Cummins, Monk, Torella	14 0700 office 258/109 Yukima River Anderson, Thomas	15 259/108	16 260/107 to Easton (K) Eastbrooks Rattlesnake Cr. Anderson, Thomas, Easterbrooks
	N.F. Ahtanum Cr. Anderson cancelled	N.F. Ahtanum Cr. Anderson	Cancelled	Croci, Easterbrooks, Torella		
17 261/106	18 262/105 Rattlesnake Creek Anderson, Thomas, Easterbrooks	19 263/104 S.F. Tieton R. Paul James + CWU	20 264/103 American River Anderson + Cummins	21 265/102 Crow Creek Anderson	22 266/101 N.F. Ahtanum Cr. Anderson	23 267/100
	Indian Creek Paul James + CWU	S.F. Tieton R. Paul James + CWU OFF?			most Jim at Bimart 7:15	
24 268/99	25* 269/98 Box Canyon Cr. Steve Croci + Pat Monk	26 270/97 Gold Creek Steve Croci + Pat Monk	27 Anderson, Yakima R. Kerckhoffs → Easton	28 Big Creek Anderson, Cummins	29 - most Warden Willey Ahitenuum CRMP Field Tour w DNR, Cattle Permitters Anderson, Brackon 9am Tempico	30 274/99
	N.F. Ahtanum Anderson office	N.F. Ahtanum Anderson				

AUGUST 2000	OCTOBER 2000
1 2 3 4 5	1 2 3 4 5 6 7
6 7 8 9 10 11 12	8 9 10 11 12 13 14
13 14 15 16 17 18 19	15 16 17 18 19 20 21
20 21 22 23 24 25 26	22 23 24 25 26 27 28
27 28 29 30 31	29 30 31

\* Croci + Deeds - upper Cle Elum (per Croci), on 7 + 8 + other dates in Sept./Oct.  
 \* James + CWU - Kachas R./Mineral Cr. Investigations; Traps on Deep, Indian, S.F. Tieton, Gold, Box Canyon.  
 \* James + CWU - Investigations Traps on...  
 \* STATE PAYDAY (subject to change—not officially adopted as of calendar print)

# Bass Trout monitoring - DRAFT

OCTOBER, 2000

FORM S.F. 9205 (5/99)  STATE OF WASHINGTON APPOINTMENT/SCHEDULE CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 275/92	2 276/91 <i>Office</i>	3 277/90 <i>Box Canyon Anderson, <del>Mayo</del> Thomas or <del>Craic</del></i>	4 278/89 <i>Gold Creek Anderson, Mayo Thomas or Craic 0700 Hrs, Shell Station.</i>	5 279/88 <i>Indian Creek Anderson, Hofer Thomas or Craic 0900 Hrs, Hofer Indian Corral Thomas or Craic</i>	6 280/87 <i>S.F. Tieton R. Anderson, Hofer Thomas or Craic Cummins 0900 Bridge</i>	7 281/86
8 282/85	9 283/84 <i>Fio Rito LR Anderson, Divans Divans meet 1700 Monday</i>	10* 284/83 <i>Investigations Phillips 0700 office Eusty - Bumpy Flow Investigations</i>	11 285/82 <i>us needed. Cla Elum noip O Craic - <del>Wati</del> Lori Spokane</i>	12 286/81 <i>(Thurs) 0615 Shell Station</i>	13 287/80 <i>Kachess R. Mineral Cr Eric</i>	14 288/79
15 289/78 <i>L. Bday</i>	16 290/77 <i>Box Canyon Cr. Anderson, Thomas or Craic 0615 Shell Station</i>	17 291/76 <i>Gold Cr. Anderson, Thomas or Craic <del>Midnight Rpt.</del> 0730 Shell</i>	18 292/75 <i><del>Midnight Rpt.</del> Ass. <del>Visser</del> Electrofisk on Wide Hollow Cr.</i>	19 293/74 <i>Interviews</i>	20 294/73 <i>Interviews</i>	21 295/72
22 296/71 <i>HOLIDAY DAYLIGHT SAVINGS TIME ENDS</i>	23 297/70	24 298/69	25* 299/68	26 300/67	27 301/66	28 302/65
29 303/64	30 304/63	31 305/62	<i>961-3488</i>			

SEPTEMBER 2000	NOVEMBER 2000	NO * James + cwu - Kachess R. / Mineral Cr. Investigations; traps on Indian, S.F. Tieton, Gold, Box Canyon.
1 2	1 2 3 4	
3 4 5 6 7 8 9	5 6 7 8 9 10 11	
10 11 12 13 14 15 16	12 13 14 15 16 17 18	
17 18 19 20 21 22 23	19 20 21 22 23 24 25	
24 25 26 27 28 29 30	26 27 28 29 30	

\*STATE PAYDAY (subject to change - not officially adopted as of calendar print)



DRAFT

## Instructions

adfluvial adult populations. However, we must agree on standards and techniques so that surveys conducted by differing agency personnel will be comparable over the long term.

The first task is to set boundaries for each spawning survey site or stream. These boundaries must be utilized for all future work and existing spawning survey data must conform or be removed from the long-range database. I recommend that streams and site boundaries as listed above, for long-term habitat monitoring, be used also for annual spawning surveys. The WDW Area Fish Biologist, Wenatchee, will be responsible for maintaining the long-range bull trout spawning database, regardless of who conducts the surveys on the ground.

Timing and frequency of spawning surveys will adhere to the criteria of Shepard and Graham (1983c), consisting of two or more "preliminary" surveys (starting about 1 Sept.) and a final survey after water temperatures have cooled to below 9C (48F) and adults have mostly left the area (usually early to mid-October). In Appendix F there are selected graphical comparisons of redds and adults counted during 1988 through 1991 surveys. Preliminary surveys offer at least trend information for the cycle which would be useful in case the final survey is cancelled or rendered ineffective due to inclement weather or streamflow. A significant number of WDW and WNF surveys have been conducted too early in the cycle or were "rained out" (Tables 5 and 6).

Spawning surveys will consist of separately enumerating definite, probable, and possible redds (Shepard and Graham 1983c), along with numbers of adult bull trout observed. Some of our (WDW and WNF) redd counts since 1983 have included both completed redds and "false" redds (test digs) and some have not differentiated between them. The following redd identification criteria will be used for every redd survey.

- \* (1) **Definite:** No doubt about it. The area is definitely "cleaned" and a pit (pocket) and tailspill are recognizable. Adult bull trout may still be attending the site. Not normally in an area normally cleaned by steam hydraulics.
- \* (2) **Probable:** An area cleaned that may possibly be due to stream hydraulics, but a pit and tailspill are recognizable, or an area that does not appear clean, but has a definite pit and tailspill (an "old" redd).
- \* (3) **Possible:** A cleaned area of about the right size and appearance from a distance, but that does not have a definite pit or tailspill. This could be caused by stream hydraulics, by the tentative digging of spawners (false or test dig), or by wading anglers, etc.

For final reports and trend analysis, only Class 1 and 2 redd counts should be included. Occasionally large (up to 5m x 10m), multiple redds will be encountered in the field and surveyors will find it difficult to determine the exact number of redds at the site. In such instance, each identifiable pit or pocket will be counted as a separate redd.

Flag all redds w/ Date, Redd Type, # Fish, Surveyors.  
Send data back to Eric Anderson by filling out the  
Form for stream/reach.

# Bull Trout Spawning Ground Survey

Stream: \_\_\_\_\_

Date: \_\_\_\_\_

Location: \_\_\_\_\_

Water Temp.: \_\_\_\_\_

Investigator: \_\_\_\_\_

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Redds:                      New                      Old

Definite:                      \_\_\_\_\_

Probable:                      \_\_\_\_\_

Possible:                      \_\_\_\_\_

Bull Trout Observed: \_\_\_\_\_

Tagged: \_\_\_\_\_

Untagged: \_\_\_\_\_

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
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From: "Jeff Thomas" <jthomas@pn.usbr.gov>  
To: <ANDEREA@dfw.wa.gov>  
Date: Mon, Aug 28, 2000 8:00 AM  
Subject: Bull trout schedule

Eric,

Let me try this for a third time!

I looked over you schedule. It works for me with the exception of the Rattlesnake trip when you have us coming out on the 19th. We already talked about that. I'm not available on the 19th. If we can get the Keechelus-Easton lake fish/redd survey done on the 14th and 15th and go into the Rattlesnake on the 16th, 17th, and 18th it will work for me. One more thing about the Keechelus-Easton effort-- I can probably snag Croci to help with that as well. I'll talk to him about it this Monday. I also have to confirm that he can help on all the dates given below as identified on your work schedule. The following confirms the dates I can work for sure and the dates I hope that Steve can.

Me:

- Sept. 13 Deep Creek redd survey ✓
- Sept. 14-15 Keechelus-Easton fish/redd survey ✓
- Sept. 16-18 Rattlesnake Creek redd survey ✓
- Oct. 4 Gold Creek redd survey ✓
- Oct. 5 Indian Creek redd survey ✓
- Oct. 16 Box Canyon Creek redd survey ✓

Croci:

- Sept. 5 Indian Creek redd survey ✓
- Sept. 7 ~~S. Fork Tieton River redd survey~~ ✓ *via Elan with Deeds on 7 & 6*
- Sept. 14-15 Keechelus-Easton fish/redd survey ✓
- Sept. 25 Box Canyon Creek redd survey ✓
- Sept. 26 Gold Creek redd survey ✓
- Oct. 3 Box Canyon Creek redd survey ✓
- Oct. 6 S. Fork Tieton River redd survey ✓
- Oct. 17 Gold Creek redd survey ✓

I will be doing some reconnaissance of the Keechelus Reach in the next couple of weeks to see where we have the best access. Give me a call on Monday, August 28 between 9:00 and 11:00 AM or in the afternoon between 1:00 and 4:00 and I'll be able to confirm Steve's availability.

Jeff

## **Fishery Investigation in the Upper Yakima River (Easton to Keechelus Reach) with an Emphasis on Documenting Bull Trout Presence/Absence**

Field notes from a one day snorkel/foot survey spot check for bull trout. Includes a few notes on other species observed (size, general abundance, etc.).

**Date:** Sept 14, 2000

**Reach Sections:** (Upper Section) Keechelus Dam down to BPA Power-line Crossing (3.5 miles)  
(Lower Section) BPA Power-line Crossing down to the Quarry (3.85 miles)  
(Area not surveyed, from the Quarry to the head of Easton Lake, 3.35 miles)

**Water Temp:** 52.3 F. @ 0940 Hrs below Keechelus Dam

**Investigators:** (Upper Section) Eric Anderson (WDFW) wade / Jeff Thomas (USFWS) snorkel.  
(Lower Section) John Easterbrooks (WDFW) wade / Gary Torretta (BR) wade / Steve Croci (USFWS) snorkel.

**Start Time:** 0940 Hrs

**End Time:** 1500 Hrs

**Conditions:** Sunny, clear day; H2O clarity/visibility excellent.

**Results (Upper Section):** Bull Trout 4 (all in the 24-30 inch range; 3 males, 1 female); 2 Redds (1 redd/1 male in the Crystal Springs area above the bridge; the other redd/2 males/1 female in the braided area below Crystal Springs). H2O temp over the redds was 54.5 & 54.8 F. This was first time discovery (observation) of bull trout spawning in the Keechelus to Easton Reach. Chinook (adults) 19, (jacks) 1, Redds 18 (fresh fish).

Chinook (juveniles) - abundant, small schools clustered near woody debris & in pools below riffle areas (juvenile size range estimate 75-80 mm and 100-125 mm TL) (TL = total length). High concentration of juvenile chinook in pools below Keechelus Dam and along the woody/vegetated bank below Crystal Springs.

Eastern Brook Trout 22 (most brookies were 4-7 inches TL, 4@ 10-12 in., 2@ 12-14 in. & 1@ 14-16 in.)

Rainbow Trout 9 (1 large rainbow of approx. 24 inches TL, presumably a steelhead, no other rainbow near this size was observed. Most rainbow were 8-12 inches TL, 4@ 12-14 in.)

Mountain whitefish - abundant, small schools in most pools.

Other unidentified minnow species were abundant in pool/slack H2O areas, particularly in slack H2O areas below Crystal Springs.

Periodic check of overturned cobble reflected low invertebrate attachment ....(clean cobble).

The section of river from Keechelus Dam to Crystal Springs contained large cobble interspersed with patches of smaller gravels. Increased deposits of fine gravel in Crystal Springs area.

Increased deposits of fine gravel/sand and woody debris in the braided area below Crystal Springs (major large woody debris jams in the braided area).

2000

**Results (Lower Section):** No Bull Trout or redds were observed.

Chinook (adults) 28, Redds 20. (all live/fresh fish , no carcasses).

Chinook (juveniles) - abundant in this reach.

Eastern Brook Trout - prevalent, numerous throughout the reach (most brookies were 6-10 inches TL).

Rainbow Trout - abundant in this reach (more rainbow noted in the main channel than in the braided area near the power-line crossing).

The section of river from the BPA power-line crossing down to the quarry contained good spawning gravels interspersed with sand deposits.

**Additional Note:** Eric Anderson (WDFW) conducted a follow up bull trout spawning survey on Sept 27 specific to those areas (noted above) where bull trout were observed on Sept 14, but no additional redds or bull trout were observed. Temp was 51.8 F. @ 1020 hrs in the braided area below Crystal Springs. Spring chinook spawning appeared to be complete on Sept 27 (a few live fish & carcasses were observed).

2000



## Bull Trout Take Report - 2000

### WDFW Monitoring: Fish Program - Yakima subbasin

WDFW monitoring report of bull trout take during 2000 in the Yakima subbasin. Additional details of field operations and data summaries are contained in WDFW reports (i.e., Sport Fish Investigations in Washington State) and in Regional files/records.

WDFW survey biologists: Eric Anderson, Jim Cummins, John Easterbrooks

Survey assistance provided by: Steve Croci, Jeff Thomas, Toni Davidson, Scott Deeds (USFWS); Scott Hoefler, Ken MacDonald, Jeff Hosman (USFS); Dr. Paul James, William Meyer, Tim Eichler, Yuki Reiss, Mark Tuttle (CWU); Gary Torretta, Kate Puckett (BR); Pat Monk (Irrigation District); Wendel Willey (YN); Mike Schmuck, Phillip Smith (WDFW/YN).

Anticipated survey activities that were not conducted due to lack of personnel/time:

Inventory, distribution, and presence/absence surveys were not conducted in Cowiche Creek, MF Teanaway River, or Stafford Creek.

Occasionally a bull trout carcass was observed during the course of conducting redd counts.

Carcasses were reported in the following "Bull Trout Take Report" but were not caused by or were they a result of these monitoring activities.

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**2000 Bull Trout Redd Survey  
S.F. Tieton River**

**Total Season Count = 144**

<u>Segment of Stream</u>	<u>Definite</u>	<u>Probable</u>	<u>Possible</u>	<u>Fish</u>	<u>Temp/Time</u>	<u>Date</u>
Road 1050 Bridge to 1/8 mi. above Blue Slide Cr (Junction Rd 1040 & Rd 1000)	85	0	0	0	35/0950	10/6/00
Falls to Rd 1050 Bridge	23	1	8	0	36/1030	10/6/00
Bear Creek - mouth to falls	31	4	1	0	36/0950	10/6/00
<b>Total</b>	<b>139</b>	<b>5</b>	<b>9</b>	<b>0</b>		

**Notes:**

Season total is definite + probable on final pass (possibles not included in season total).  
Temp = degrees F.

Some turbid water conditions during final pass but still able to identify redds..

Spawning complete; no fish were observed on final pass.

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## Summary

### 2000 Bull Trout Redd Survey American River

**Total Season Count = 44 Redds**

<u>Segment of Stream</u>	<u>Definite</u>	<u>Probable</u>	<u>Possible</u>	<u>Fish</u>	<u>Temp/Time</u>	<u>Date</u>
Union Cr. - mouth to falls	25	0	1	1	45/1406	9/20/00
American R. - 1/4 mile below Union Cr. to Union Cr.	1	0	0	0	48/1330	9/20/00
American R. - Mesatchee Trail x-ing to 1/8 mi. above Timber Cr.	7	2	2	0	45/1025	9/20/00
Kettle Cr. - lower 3/4 mile	9	0	0	0	44/1015	9/20/00
American River - 1/4 mile below Kettle Cr. to Kettle Cr.	0	0	0	0	--/0930	9/20/00
<b>Total</b>	<b>42</b>	<b>2</b>	<b>3</b>	<b>1</b>		

#### Notes:

Season total is definite + probable on final pass (possibles not included in season total).

Temp = degrees F.

In the Kettle Creek Section, proceeded from mouth to upstream; stopped at a pink ribbon that says END Reach 1, also near a small creek flowing into right bank (approx. 3/4 mile).

Spawning complete; only one fish observed in Union Creek.

2000



**2000 Bull Trout Redd Survey  
Crow Creek**

**Total Season Count = 26 Redds**

<u>Segment of Stream</u>	<u>Definite</u>	<u>Probable</u>	<u>Possible</u>	<u>Fish</u>	<u>Temp/Time</u>	<u>Date</u>
Stream Trail x-ing near end of Road 1922 to gorge area below Falls Creek	26	0	0	0	42/0855	9/22/00
<b>Total</b>	26	0	0	0		

**Notes:**

Season total is definite + probable on final pass (possibles not included in season total).

Temp = degrees F.

Spawning complete; no live fish were observed on final pass. One dead adult bull trout (total length 17 1/4 inches) was observed in a pool (suspect natural mortality). No tissue samples were taken.

A survey was conducted on 9/8/00 from the end of Road 1922 to Road 1902 (just above confluence with Little Naches River). No bull trout redds or fish were observed. However, 7 spring chinook redds and 2 chinook carcasses were encountered in this reach.

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**2000 Bull Trout Redd Survey  
Rattlesnake Creek**

**Total Season Count = 45 Redds**

<u>Segment of Stream</u>	<u>Definite</u>	<u>Probable</u>	<u>Possible</u>	<u>Fish</u>	<u>Temp/Time</u>	<u>Date</u>
Trail 1114 x-ing (below MJB x-ing) to MJB Trail x-ing	5	0	1	0	--/1100	9/17/00
MJB Trail x-ing to Shell Cr.	4	0	0	0	42/0917	9/17/00
Shell Cr. to Little Wildcat Cr.	7	1	0	0	45/1430	9/16/00
Little Wildcat Cr.	11	1	0	1	--/1235	9/17/00
Little Wildcat Cr. to McNeil Cr.	16	0	0	0	--/1045	9/17/00
<b>Total</b>	<b>43</b>	<b>2</b>	<b>1</b>	<b>1</b>		

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**Notes:**

Season total is definite + probable on final pass (possibles not included in season total).

Temp = degrees F.

In Little Wildcat Creek, proceed up Little Wildcat from trail crossing for approximately 50 minutes steady walking/wading time (about 10 minutes above upper end of rock slide area on left bank).

Spawning complete; only one fish observed on redd.

One pass survey conducted in Shell Creek from mouth to upstream approximately 50 minutes steady walking/wading time. One definite redd was observed above the stream crossing. Several probable passage barriers above the trail x-ing. This redd not included in the above index area total. Suggest additional investigation in this stream in 2001.

# Bull Trout Spawning Ground Survey

Stream: Yakima River

Date: 9-14-00

Location: Easton Lake to Keechelus Dam

Water Temp.: J. Easterbrooks (WDFW)

Investigator: E. Anderson (WDFW), J. Thomas Stone (WDFW), Gary Torretta (BR)

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Redds:	New	Old
Definite:	<u>2</u>	_____
Probable:	_____	_____
Possible:	_____	_____

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: 4

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: See attached writcamp notes & maps.

## **Fishery Investigation in the Upper Yakima River (Easton to Keechelus Reach) with an Emphasis on Documenting Bull Trout Presence/Absence**

Field notes from a one day snorkel/foot survey spot check for bull trout. Includes a few notes on other species observed (size, general abundance, etc.).

**Date:** Sept 14, 2000

**Reach Sections:** (Upper Section) Keechelus Dam down to BPA Power-line Crossing (3.5 miles)  
(Lower Section) BPA Power-line Crossing down to the Quarry (3.85 miles)  
(Area not surveyed, from the Quarry to the head of Easton Lake, 3.35 miles)

**Water Temp:** 52.3 F. @ 0940 Hrs below Keechelus Dam

**Investigators:** (Upper Section) Eric Anderson (WDFW) wade / Jeff Thomas (USFWS) snorkel.  
(Lower Section) John Easterbrooks (WDFW) wade / Gary Torretta (BR) wade / Steve Croci (USFWS) snorkel.

**Start Time:** 0940 Hrs

**End Time:** 1500 Hrs

**Conditions:** Sunny, clear day; H2O clarity/visibility excellent.

**Results (Upper Section):** Bull Trout 4 (all in the 24-30 inch range; 3 males, 1 female); 2 Redds (1 redd/1 male in the Crystal Springs area above the bridge; the other redd/2 males/1 female in the braided area below Crystal Springs). H2O temp over the redds was 54.5 & 54.8 F. This was first time discovery (observation) of bull trout spawning in the Keechelus to Easton Reach. Chinook (adults) 19, (jacks) 1, Redds 18 (fresh fish).

Chinook (juveniles) - abundant, small schools clustered near woody debris & in pools below riffle areas (juvenile size range estimate 75-80 mm and 100-125 mm TL) (TL = total length). High concentration of juvenile chinook in pools below Keechelus Dam and along the woody/vegetated bank below Crystal Springs.

Eastern Brook Trout 22 (most brookies were 4-7 inches TL, 4@ 10-12 in., 2@ 12-14 in. & 1@ 14-16 in.)

Rainbow Trout 9 (1 large rainbow of approx. 24 inches TL, presumably a steelhead, no other rainbow near this size was observed. Most rainbow were 8-12 inches TL, 4@ 12-14 in.)

Mountain whitefish - abundant, small schools in most pools.

Other unidentified minnow species were abundant in pool/slack H2O areas, particularly in slack H2O areas below Crystal Springs.

Periodic check of overturned cobble reflected low invertebrate attachment ....(clean cobble).

The section of river from Keechelus Dam to Crystal Springs contained large cobble interspersed with patches of smaller gravels. Increased deposits of fine gravel in Crystal Springs area.

Increased deposits of fine gravel/sand and woody debris in the braided area below Crystal Springs (major large woody debris jams in the braided area).

**Results (Lower Section):** No Bull Trout or redds were observed.

Chinook (adults) 28, Redds 20. (all live/fresh fish, no carcasses).

Chinook (juveniles) - abundant in this reach.

Eastern Brook Trout - prevalent, numerous throughout the reach (most brookies were 6-10 inches TL).

Rainbow Trout - abundant in this reach (more rainbow noted in the main channel than in the braided area near the power-line crossing).

The section of river from the BPA power-line crossing down to the quarry contained good spawning gravels interspersed with sand deposits.

**Additional Note:** Eric Anderson (WDFW) conducted a follow up bull trout spawning survey on Sept 27 specific to those areas (noted above) where bull trout were observed on Sept 14, but no additional redds or bull trout were observed. Temp was 51.8 F. @ 1020 hrs in the braided area below Crystal Springs. Spring chinook spawning appeared to be complete on Sept 27 (a few live fish & carcasses were observed).

9-14-00 E. Anderson - Wade  
J. Thomas - Snorkel  
Yakima R. (Easton to Keechelus)

Upper section

Keachelus Dam to Powerline King,  
Subsection: Dam to Crystal Spr. Bridge

0940 Hrs 52.3°F below Dam

H<sub>2</sub>O Vis Excellent, Clear, Sunny  
chinook Adults IIII Jack 1 @ 16"

Fresh Fish Redds IIII

JUV. abundant, small schools  
in pools near woody debris, below  
riffles 75-80mm + 100-125mm TL  
abundant below dam.

EB IIIIIIIIIII most 4-7"  
1 12-14"  
1 14-16"

RB IIIII 1 24" probably off  
most 8-12", few 12-14"

MWF abundant, small schools in  
most pools.

BLL 1 one 24-30" male under  
cut left bank  
1 Redd nearby, top jam.

above bridge @ Crystal Springs,  
H<sub>2</sub>O Temp over Redd. 54.5°F  
other small unidentified minnow  
species observed.

Low invertebrate attachment on  
overtumed rocks.

Large Cobble interspersed with gravel,  
increased gravel deposits downstream



Lunch Break @ 1210 Hrs.

1255 Hrs.

Subsection: Crystal Sp. Br. to  
Powerline xing.

{ Chinook Adults IIII IIII

Redds IIII IIII

Juv. abundant near vegetated bank

Redds in area below Crystal Sp.

Bridge & in area below  
braids, also near powerline  
xing.

CK juveniles in the 100-125mm range.

EB III 1 @ 12", 4 @ 10-12"

RB 1 1 @ 12"

MWF - abundant in pools

Other unidentified minnow species  
abundant in pool/slack H<sub>2</sub>O  
areas, particularly below  
Crystal Springs.

BLC 3 2 males 1 Female

1 Redd 24-30" in braided  
area 2 Fish on Redd.

1 nearby.

appeared to be active spawning.

H<sub>2</sub>O Temp over Redd 54.4°F

Increased deposit of fine gravel below  
Crystal Sp. & in braids interspersed  
with sand. Large log jam below Cry. Sp. <sup>end</sup> 1500

Pond field trip  
 3/10/2000  
 ERICA EASTY  
 Lenny Cook  
 higher than  
 6" CONC. pipe  
 screen @ Pond 2 outlet  
 w/ 5/8" mesh screens  
 w/ debris  
 wooden  
 Prevent BUT smallest  
 escaping - we are not  
 large for August -> RISK  
 getting out low in my  
 "Camp under ID-2  
 NEEDS AN!  
 2"-8" Brook Trout releases  
 F-F

Keechelus Reach Survey 9/14/08  
 (Lower reach) EASTY  
 BOCI  
 TARTIA

BROOK TROUT (6-10")  
 ☒☒ - PREVALENT; NUMEROUS THROUGHOUT REACH

BULL TROUT (fish)  
 = ∅

SPRING CHINOOK JUVENILES  
 ∴ + (LOTS of JUV. CHK IN THIS REACH)

SPR. CHINOOK ADULTS  
 ☒☒☒ = 28 (ALL LIVE + FRESH)  
 NO CARCASSES

SP CHINOOK REEDS  
 ☒☒ = 20 (ONLY 4-5 BELOW POWER LINES SO FAR)

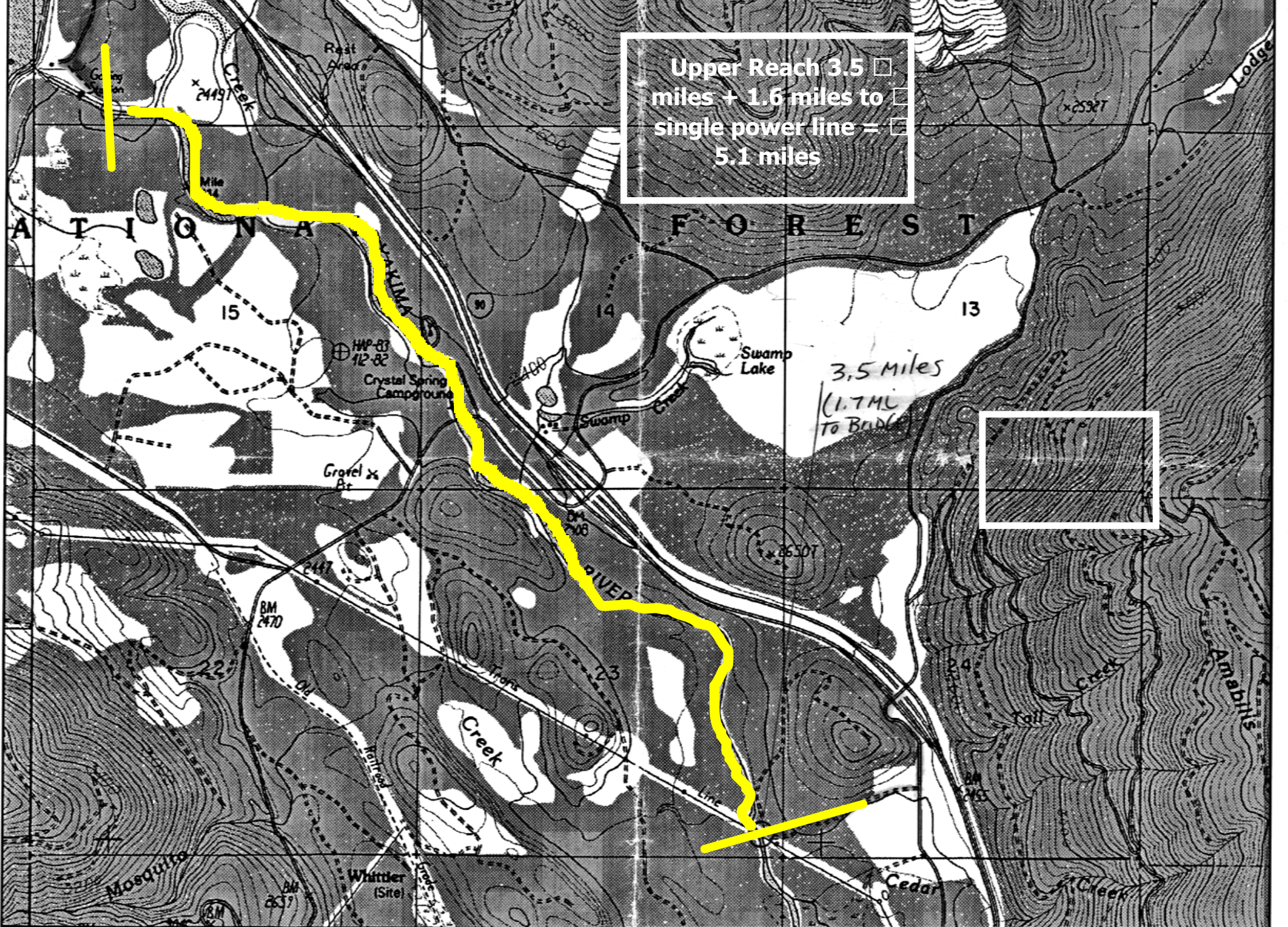
BULL TROUT REEDS = ∅

RAINBOW TROUT  
 ∴ + Many more

Additional per com: John Easterbrooks  
 Rainbow more abundant in main channel than braided area  
 Good spawning gravels interspersed with sand  
 deposits. Eric Anderson



Upper Reach 3.5   
miles + 1.6 miles to   
single power line =   
5.1 miles





Mosquito  
Creek

Stampede  
Creek

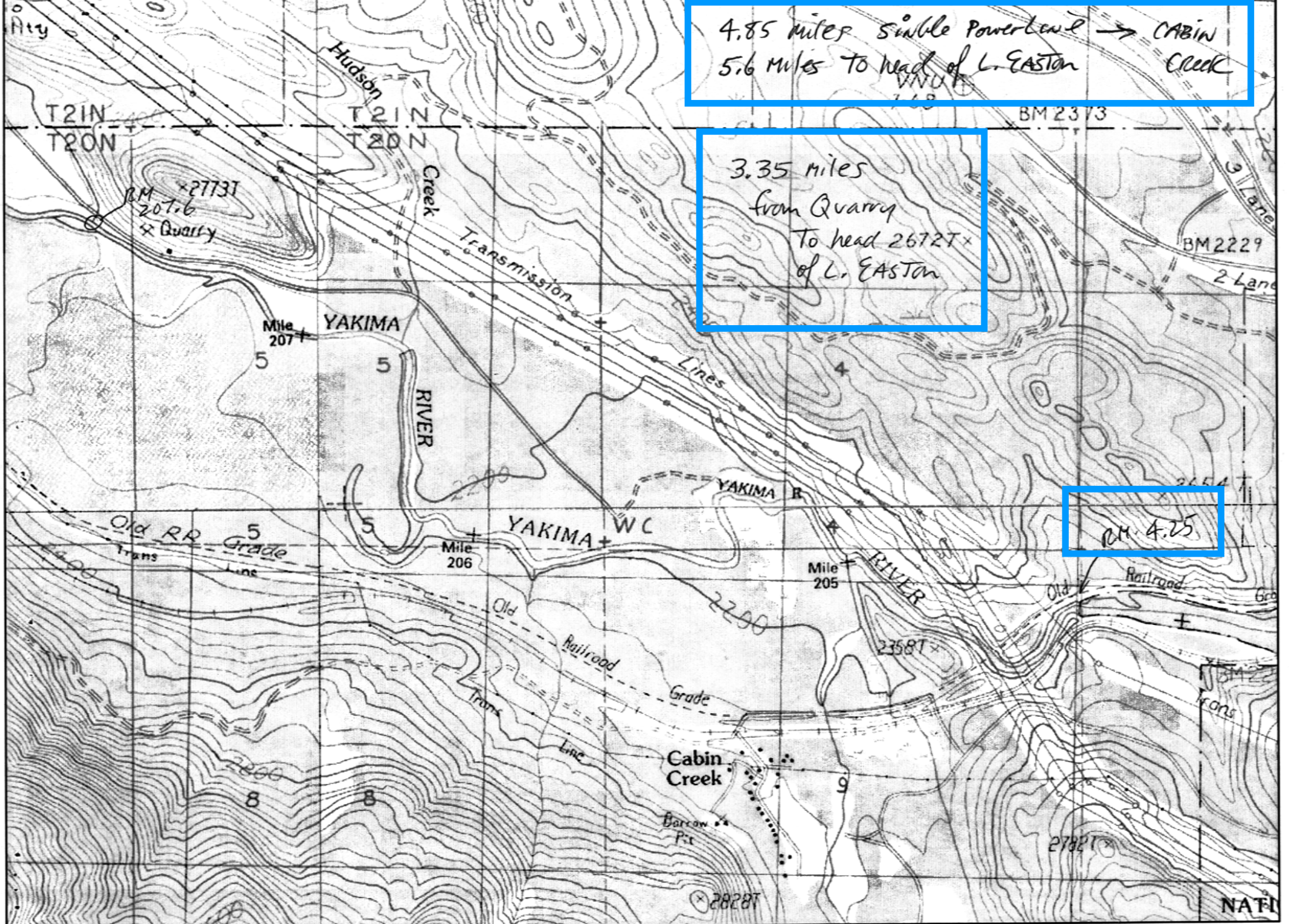
Lower Reach 3.8  
miles



4.85 miles single powerline → CABIN Creek  
5.6 miles TO head of L. EASTON

3.35 miles  
from Quarry  
TO head 26727  
of L. EASTON

BM 4.25





# Bull Trout Spawning Ground Survey

Stream: Yakima River

Date: 9/27/00

Location: Easton LK to Keeholas Reach (braids below Crystal S)

Water Temp.: \_\_\_\_\_

Investigator: E. Anderson WDFW

Start Time: 1020 Hrs.

End Time: 1230 Hrs.

Redds:	New	Old
Definite:	<u>0</u>	<u>1</u>
Probable:	_____	_____
Possible:	_____	_____

Bull Trout Observed:  
Tagged: 0  
Untagged: \_\_\_\_\_  
Sub-adults: \_\_\_\_\_  
Juvenile: \_\_\_\_\_

Comments: Chinook carcasses + and a few live chinook  
Chinook spawning appear complete.  
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\_\_\_\_\_  
\_\_\_\_\_

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9/27 E. Anderson 1020 hrs Start  
Yukima R.

Euston to Karchelas,  
Braids between Cabin Cr. Rd +  
Crystal Sp. Temp. 51.8°F

chinook carcasses & <sup>few</sup> live chinook  
No bulls observed, 1 Redd.  
end 1230

↓  
old Redd  
in braids

Chinook spawning appears  
complete.



### Bull Trout Spawning Ground Survey

Stream: Cle Elum River  
 Date: 9/27/00  
 Location: above Hyas Lake  
 Water Temp.: 42° @ 10:00  
 Investigator: Steve Craci Toni Davidson (usfw - spot time)  
 Start Time: 10:00  
 End Time: 12:00

Redds:	New	Old
Definite:	<u>0</u>	<u>—</u>
Probable:	<u>0</u>	<u>—</u>
Possible:	<u>2</u>	<u>—</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:	<u>0</u>	
Sub-adults:	<u>0</u>	
Juvenile:	<u>0</u>	

Comments: Many small tribs / springs entering lake  
Some entering in beaver ponds some go dry  
Looks like good habitat if there was more  
water Lot of little fry observed in  
shallow water + weeds. likely brook trout,  
Smaller + questionable redds.

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# Bull Trout Spawning Ground Survey

Stream: Cle Elum River  
 Date: 9/28/00  
 Location: from end of Road (Trailhead) upstream to Heyal Lake  
 Water Temp.: 52°F @ 10:00  
 Investigator: Steve Craci Toni Davidson  
 Start Time: 10:00  
 End Time: 1:00

Redds:	New	Old
Definite:	<u>1</u>	<u>0</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>7</u>	<u>1</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:	<u>0</u>	
Sub-adults:	<u>0</u>	
Juvenile:	<u>0</u>	

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Comments: lower section lots of larger substrate (boulder/rubble)  
not likely spawning habitat. As channel flattened  
in meadow area good habitat and redds  
were observed. Flows may be a little slow.  
Lots of brook trout observed 6 inch range.  
one fry positively I.D. as brook trout.  
 \* This area is worth observing in the  
future.  
**NOT SURE WHAT SPECIES MADE REDD!**

### Bull Trout Spawning Ground Survey

Stream: Cle Elum River

Date: 10/12/00

Location: Above Hyas Lake

Water Temp.: 49° F

Investigator: Steve Croci Eric Anderson

Start Time: 11:00

End Time: 12:00

Redds:	New	Old
Definite:	<u>0</u>	<u>0</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>2 NOT REDDS</u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults: 0

Juvenile: 0

Comments: Old possibilities not considered redds  
Area looks good but needs more water.

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### Bull Trout Spawning Ground Survey

Stream: Cle Elum River

Date: 10/12/00

Location: Hyas Lake downstream to end of meadow

Water Temp.: 47.1° F

Investigator: Steve Ciochi Eric Anderson

Start Time: 1:00

End Time: 3:00

Redds:	New *	Old
Definite:	<u>5</u>	<u>1</u>
Probable:	<u>2</u>	<u>0</u>
Possible:	<u>1</u>	<u>7</u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults: 0

Juvenile: 0

Comments: \* No actual "New" redds. These were  
redds observed on 9/28/00 that were  
re classified based on observers experience  
This area should be surveyed earlier  
next year.  
Not sure of what SPECIES made redd.

20000

### Bull Trout Spawning Ground Survey

Stream: Cle Elum River

Date: 10/18/00

Location: Hyas Lake downstream to end of meadow

Water Temp.: ?

Investigator: Steve Croci Scott Deeds Cassens - Spokane

Start Time: 12:00

End Time: 1:00

Redds:	New	Old
Definite:	<u>0</u>	<u>5</u>
Probable:	<u>0</u>	<u>2</u>
Possible:	<u>0</u>	<u>1</u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults: 0

Juvenile: 0

Comments: No new redds. Confirmed old redds  
but not sure what species constructed them.

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### Bull Trout Spawning Ground Survey

Stream: Fortune Creek  
 Date: 10/19/00  
 Location: above bridge upstream ≈ 1/2 mile  
 Water Temp.: ?  
 Investigator: Steve Cini Scott Doods  
 Start Time: 9:30 1  
 End Time: 10:30

Redds:	New	Old
Definite:	<u>0</u>	<u>0</u>
Probable:	<u>6</u>	<u>6</u>
Possible:	<u>0</u>	<u>0</u>

Bull Trout Observed:  
 Tagged: 0  
 Untagged: 0  
 Sub-adults: 0  
 Juvenile: 0

Comments: A few small pockets of suitable  
spawning gravel mostly larger rock  
+ high gradient.

2000

### Bull Trout Spawning Ground Survey

Stream: Cle Elum River

Date: 10/19/00



Location: Fish Lake upstream to Trail Crossing

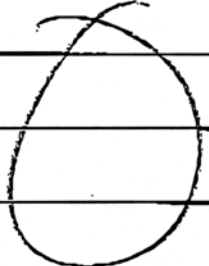
Water Temp.: ?

Investigator: Craci / Deeds

Start Time: -

End Time: -

Redds:	New	Old
Definite:	<u></u>	<u></u>
Probable:	<u></u>	<u></u>
Possible:	<u></u>	<u></u>

Bull Trout Observed:	
Tagged:	<u></u>
Untagged:	<u></u>
Sub-adults:	<u></u>
Juvenile:	<u></u>

Comments: Pretty slow moving water. marginal spawning habitat.

2  
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### Bull Trout Spawning Ground Survey

Stream: Cle Elum River

Date: 10/19/00

Location: Fish Lake down stream ~ 1/2 mile

Water Temp.: ?

Investigator: Choi / Deeds

Start Time: -

End Time: -

Redds:	New	Old
Definite:	<u>0</u>	<u>0</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u> </u>	<u> </u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults:  

Juvenile:  

Comments: Decent looking habitat. worth surveying  
at later dates.

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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# Bull Trout Spawning Ground Survey

Stream: Kachess River (upper) + Mineral Creek

Date: 10/13/00

Location: mouth to barrier falls on Kachess R. + Mineral Cr.

Water Temp.: 43.3°F @ 0920 Hrs. Kachess R. 44.1°F @ 1045 Hrs. Mineral

Investigator: Eric Anderson

Start Time: 0920 Hrs.

End Time: 1320 Hrs.

Redds:	New	Old
Definite:	<u>1</u>	<u>—</u>
Probable:	<u>∅</u>	<u>—</u>
Possible:	<u>∅</u>	<u>—</u>
Bull Trout Observed:		
Tagged:	<u>∅</u>	
Untagged:	<u>2 (1 ≈ 12" + 1 ≈ 24")</u>	
Sub-adults:	<u>∅</u>	
Juvenile:	<u>∅</u>	

20000

1 \* No Fish or Redds observed in Mineral Cr.  
1 ≈ 12" BLC observed near Redd in Kachess R.  
above Mineral confluence.  
1 ≈ 24" BLC observed in Kachess R. below  
trail crossing; holding in pool.

2 Little useable spawning gravel in Mineral Cr.  
short stretch of stream before encountering barrier  
Falls, log & boulder jams.

Lower 1/2 mile of Kachess River was dry. Therefore  
adults that have moved into the River are  
stranded until? next rainfall. - Earlier Report from  
William Meyer (CNU) that bull trout moved into River from  
lake during recent rains that watered channel (part)

10-13-00 E. Anderson  
Ketchikan R. above confluence w  
Mineral Cr. 43.30F @ 0920hrs  
Def. 1 Below possible log jam  
barrier

1

Fish 1-12" not on redd but  
near redd.  
End 1012 Hrs, - Fly near  
Falls

Mineral Cr. 44.10F 1045 Hrs.

End Below Falls @ Gorge  
thru slide 1120 Hrs

2

No Fish or Redds Observed  
Little ~~and~~ spawning gravel.

Little usable spawning gravel in  
Mineral Cr. - short stretch before  
encountering barrier falls, boulders/logs  
over →



Karless R. below  
mineral cr. confluence  
1059 hrs  
45.1°F

Fish 1  $\approx$  24" below T-xing  
holding in pool  
End 1320 hrs

Lower  $\frac{1}{4}$  mile

Karless R.

Dry (subsurface)

No Radd's

From: WilliamR Meyer <MeyerW@cwu.EDU>  
To: <ANDEREA@dfw.wa.gov>  
Date: Fri, Oct 27, 2000 12:02 PM  
Subject: Re: Kachess/Mineral Creek Bulls

- CWU Grad Student

Hey Eric, Sorry I haven't gotten back to you sooner... things have been way busy with school and just finished an initial redd survey yesterday (thurs) afternoon on Kachess River. I walked from the reservoir up to the confluence and up 3/4 of Kachess before it got too dark, and we stopped seeing redds after a point. It was of course dark by the time I got back to Mineral confluence, so I'll hit that next week. Saw ~10 fish on redds, so they're battling it out. Found one large female dead up Kachess. Looked like a bear lunch. Found around 8 definite redds and then 4 or 5 probable redds total. One below the confluence w fish and then all the others above the confluence, but in the lower half of Kachess before it gets bedrocky.

I'm planning on heading back up to do a more thorough survey once they are finished and as time permits. It looked to me like they are right at, or close to the peak of spawning as far as timing goes. I'll try and get a tissue sample and otolith off that dead fish next time I'm up there - next week.

Thanks for your phone message and I'll give you a holler one of these days with some more details. Talk to you soon. William.

>>> Eric Anderson <ANDEREA@dfw.wa.gov> 10/27/00 09:25AM >>>

William,

How are things going on Kachess/Mineral? Any redds? I left you message on your phone a while back and message with Dr. James concerning my observations ....hope you got it!

Eric

2	<input type="checkbox"/>
0	<input type="checkbox"/>
0	<input type="checkbox"/>
0	<input type="checkbox"/>

Redd survey on Oct. 25

Now - 8 def

Now - 4 Prob.

Peak spawning.

10 Adults

\* carcass to genetics lab

# Bull Trout Spawning Ground Survey

Stream: Kachess R. (upper) + Mineral Creek.

Date: 11-7-00

Location: mouth to barrier falls on Kachess R. + Mineral Cr.

Water Temp.: 4.6°C @ Kokanee Redds on stream/lake bed.

Investigator: Eric Anderson (WDFW) + William Meyer (CWU)

Start Time: 0930 Hrs.

End Time: 1500 Hrs.

Redds:	New	Old
Definite:	<u>7</u>	<u>8</u>
Probable:	<u>φ</u>	<u>φ</u>
Possible:	<u>φ</u>	<u>2</u>
Bull Trout Observed:		
Tagged:	<u>φ</u>	
Untagged:	<u>2 (1 ≈ 20" + 1 ≈ 10"-12")</u>	
Sub-adults:	<u>φ</u>	
Juvenile:	<u>φ</u>	

2  
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Comments: Spawning appears complete. Only one large adult bull on redd.

H<sub>2</sub>O flow in channel to lake - no dry areas but questionable passage in 1 or 2 areas near lake.

2 dead bull trout found in stream pool near lake, natural mortality likely - sent to Oly Genetics Lab. TL 55cm, 49cm. Probable mortality here to stranding.

20' above Redds below mineral Creek confluence, all others in Kachess River above confluence - no Redds in Mineral Cr.

1 BLC Redd observed in stream channel lake bed but not counted in above → over back

likely drying of channel + or flooding  
of lake bed would destroy this redd.

Future index will likely be established  
above lake bed.

Approximately 100+ kokanee (11") were spanning  
in Kachess R channels of lake bed.  
in several dozen redds. several  
dead kokanee.

Report from William Meyer on Nov 16  
during snorkel surveys - lower <sup>section of</sup> Kachess River  
was dry again.

20000

\* carcasses to genetics lab



# Bull Trout Spawning Ground Survey

Stream: GOLD CREEK

Date: 9/26/00

Location: Confluence of Gold Pown outlet to barrier falls

Water Temp.: 42° @ 10:30 am

Investigator: Steve Croci / Pat Monk

Start Time: 9:30

End Time: 1:30

Redds:	New	Old
Definite:	<u>4</u>	
Probable:	<u>1</u>	
Possible:	<u>3</u>	

Bull Trout Observed:	
Tagged:	<u>0</u>
Untagged:	<u>3</u>
Sub-adults:	<u>0</u>
Juvenile:	<u>0</u>

Comments: Stream channel dry in several areas  
No fish or redds observed above  
Cascade falls area.

Split survey into two reaches one person  
surveyed creek from outlet to trail crossing.  
Other person drove to trail head (beyond gate), hiked  
to trail crossing and went upstream from there.  
Made for two very workable sections and saved  
lots of time & effort. would recommend this  
approach.

2  
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0

# Bull Trout Spawning Ground Survey

Stream: Gold Creek

Date: 10-4-00

Location: Trailhead to lower cascade falls, (not to upper barrier falls)

Water Temp.: 39.9° F @ 0925 Hrs.

Investigator: Eric Anderson (WDFW) + Jeff Thomas (USFWS)

Start Time: 0925 Hrs.

End Time: 1435 Hrs.

Redds:	New	Old
Definite:	<u>7</u>	<u>2</u>
Probable:	<u>0</u>	<u>1</u>
Possible:	<u>1</u>	<u>3</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:	<u>13</u>	
Sub-adults:	<u>0</u>	
Juvenile:	<u>None Observed.</u>	

2  
0  
0  
0

Comments: Did not survey to upper barrier falls or lower section from Gold Cr. Pond outlet to Trailhead.

Good H<sub>2</sub>O flow throughout channel - no dry areas. Recent heavy rain raised H<sub>2</sub>O levels considerably -- possibly affecting spawning. Also conducted flow measurement at upper site.

Additional 2 old Det Redds below Trailhead, surveyed last time. (9-26-00). Redd Count Down; spawning not complete yet.



Gold Cr 10/4/00 0925 Hrs.  
Anderson / Thomas  
Entire channel H<sub>2</sub>O'ed up. - Good Flow  
Access Rd. below Trhead to Flow Site.  
No Redds 1 Fish  
Thomas conducted Flow measurement  
@ upper site.  
Temp. 39.9°F

Flow site to TCrossing  
Redds Fish III  
Old Def  
" Prob. I  
New Def I end  
~~11 Post~~ 1435

T Crossing to Cascade Falls  
Old Def II Fish IV IIII  
Old Prob  
Old Pos III  
New Defs IIII  
New Pos. I

# Bull Trout Spawning Ground Survey

Stream: Gold Creek

Date: 10-17-00

Location: Gold Creek Outlet Pond channel to upper barrier falls

Water Temp.: 48° @ 0930 (Croc measured near Gold Creek Pond)

Investigator: Eric Anderson (WDFW) & Steve Croci (USFWS)

Start Time: 0930 Hrs (Gold Cr. Pond-stake Outlet) 1039 Hrs (Upper Trail x-ing Eric)

End Time: 1204 Hrs.

Redds:	New Total <b>(8)</b>	Old Total <b>(11)</b>
Definite:	<u>5 above Trail x-ing, 3 below</u>	<u>9 above Trail x-ing; 2 below x-ing</u>
Probable:	<u>∅</u>	<u>∅</u>
Possible:	<u>∅</u>	<u>∅</u>
Bull Trout Observed:		
Tagged:	<u>∅</u>	
Untagged:	<u>∅</u>	
Sub-adults:		
Juvenile:		

2
0
0
0

Comments: No Fish observed, No Fish or vedds observed above lower cascade Falls to barrier Falls.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Gold Cr. 10/17/00 1039 hrs.  
Upper Trail crossing to upper  
barrier Falls. E. Anderson  
Old Def ~~||||~~ |||

Old Pos +++ - changed to New Def.

New Def ~~||||~~

End 1204

Fish  $\phi$

No Redds or Fish Observed  
above lower cascade Falls  
to upper barrier Falls

32

10/17/00 GOLD CREEK

Gold pond outlet to trail crossing

H<sub>2</sub>O temp 48°F @ 9:30

REDDS	DEF	PROB	POS
NEW	11 (3)		
OLD	11 (2)		

FISH  $\phi$

Steve Croci

### Bull Trout Spawning Ground Survey

Stream: Box Canyon Creek

Date: 9/25/00

Location: mouth to barrier falls

Water Temp.: 42° F @ 10:30 am

Investigator: Steve Croci / Kate Puckett

Start Time: 10:30 am

End Time: 12:30 pm

Redds:	New	Old
Definite:	<u>2</u>	<u>0</u>
Probable:	<u>1</u>	<u>0</u>
Possible:	<u>1</u>	<u>0</u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults: 0

Juvenile: 0

Comments: Good connection with reservoir.  
Reservoir still very high.

2000

# Bull Trout Spawning Ground Survey

Stream: Box Canyon Creek

Date: 10-3-00

Location: Footbridge @ Kachess LK C.G. to barrier falls.

Water Temp.: 41°F @ 1045 Hrs.

Investigator: Eric Anderson (WDFW)

Start Time: 1045 Hrs.

End Time: 1300 Hrs.

Redds:	New	Old
Definite:	<u>2</u>	<u>2</u>
Probable:	<u>φ</u>	<u>φ</u>
Possible:	<u>2</u>	<u>1</u>

Bull Trout Observed:	
Tagged:	<u>φ</u>
Untagged:	<u>2</u>
Sub-adults:	<u>φ</u>
Juvenile:	<u>φ</u>

Comments: High H<sub>2</sub>O due to recent rains, but clear.

Possible high fast H<sub>2</sub>O obscured visibility of old redds, or some scour may have occurred. Old redds did not look good, but counted anyway. - Possible recent heavy rains possibly affected spawning. Visibility still good for observing new redds despite lack of activity.

2  
0  
0  
0

Oct. 3

210°F

1045 Hrs

Box Canyon Cr.

Anderson

Old Redds

Def 2

Pos 1

Prot

New Redds

Def 2

Pos 2

Fish 2

} None of these  
looked like reds;  
obscured by  
high H<sub>2</sub>O. Scour?

↑  
changed to Def.

High H<sub>2</sub>O, but clear.

Possible high fast H<sub>2</sub>O obscured  
old reds. (Recent rains)

end 1300 Hrs.

Does not appear that peak  
spawning has occurred yet.



# Bull Trout Spawning Ground Survey

Stream: Box Canyon Creek

Date: 10-16-00

Location: Footbridge @ Kachess Lk C.G. to barrier Falls.

Water Temp.: 43° F @ 1030 Hrs.

Investigator: Eric Anderson (WDFW) & Jeff Thomas (USFWS)

Start Time: 1030 Hrs.

End Time: 1245 Hrs.

Redds:	New	Old
Definite:	<u>6</u>	<u>4</u>
Probable:	<u>φ</u>	<u>φ</u>
Possible:	<u>φ</u>	<u>φ</u>
Bull Trout Observed:		
Tagged:	<u>φ</u>	
Untagged:	<u> </u>	
Sub-adults:		
Juvenile:	<u>↓</u>	

2000

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10/16/00 1030 - 1245

J. Thomas

E. Anderson

Box Canyon Creek

6 New Def Redds

4 Old Def Redds

2 Old Pos. Redds E. Anderson

Rainy-Drizzle

H<sub>2</sub>O Temp 43°F

# Bull Trout Spawning Ground Survey

Stream: N. F. Teamanway River  
Date: End of Sept to 1st WK October, ? (WDFW EIT Files)  
Location: upper N. F.  
Water Temp.: \_\_\_\_\_  
Investigator: Mike Schmuck + Phillip Smith (YIV)  
Start Time: WDFW EIT Files  
End Time: contact Todd Pearsons.

Redds:	New	Old
Definite:	<u>0</u>	<u>—</u>
Probable:	<u>—</u>	<u>—</u>
Possible:	<u>—</u>	<u>—</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_  
Untagged: EIT (Ecological Interactions Team)  
Sub-adults: snorkel surveys with pop. est.  
Juvenile: info. check w/ Todd Pearsons Team Leader.

Comments: **Not included in database**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2000

**From:** todd.pearsons@elltel.net  
**To:** "Eric Anderson" <ANDEREA@dfw.wa.gov>  
**Date:** Mon, Oct 9, 2000 3:08 PM  
**Subject:** Re: Fishy Update

Eric,

No bull trout redds were observed in the North Fork Teanaway or in the lower mile of DeRoux Creek during our 2000 survey. Mike Schmuck and Phillip Smith did the surveys.

Todd

----- Original Message -----

**From:** "Eric Anderson" <ANDEREA@dfw.wa.gov>  
**To:** "John Easterbrooks" <EASTEJAE@dfw.wa.gov>  
**Cc:** "jeff bernatowicz" <BERNAJAB@dfw.wa.gov>; "Ken Bevis" <BEVISKRB@dfw.wa.gov>; <brackefb@dfw.wa.gov>; <confecjc@dfw.wa.gov>; <essmawr@dfw.wa.gov>; "Perry Harvester" <HARVEPJH@dfw.wa.gov>; "Vicki Hunt" <huntvlh@dfw.wa.gov>; "Charles D. Kohls" <KOHLSCDK@dfw.wa.gov>; "Pete Lopushinski" <lopuspl@dfw.wa.gov>; "John McGowan" <MCGOWJGM@dfw.wa.gov>; "Naches Hatchery" <naches@dfw.wa.gov>; "Judith A. Otani" <OTANIJAO@dfw.wa.gov>; <PEARSTNP@dfw.wa.gov>; <renfrbr@dfw.wa.gov>; "Leray E. Stream" <STREALES@dfw.wa.gov>; "Mark Teske" <Teskemst@dfw.wa.gov>; "Richard Visser" <visserhv@dfw.wa.gov>; "William J. Weiler" <WEILEWJW@dfw.wa.gov>  
**Sent:** Monday, October 09, 2000 8:19 AM  
**Subject:** Fishy Update

> Conducted bull trout redd counts in the following systems:  
> Box Canyon Creek 2nd pass 4 Redds  
> Gold Creek 2nd pass 10 redds  
> Indian Creek Final pass, Total count 216 Redds  
> S.F. Tieton River Final pass, Total count  
>  
> Counts in Indian Creek are at all time high, previous record was 212 redds in 1998. Counts in the S.F. Tieton were down a bit (146 redds) but in the normal range compared to last few years (140-177 redds).  
>  
>

**Not included in database**

2000



# Bull Trout Spawning Ground Survey

Stream: Bumping River (upper)  
 Date: 6-30-00  
 Location: Swamp LK Tr. xing to mouth.  
 Water Temp.: 50.5°F  
 Investigator: Eric Anderson (WDFW)  
 Start Time: 1100 Hrs.  
 End Time: 1300 Hrs.

Redds:	New	Old
Definite:	<u>0</u>	<u>1</u>
Probable:	<u>↓</u>	<u>1</u>
Possible:	<u>↓</u>	<u>1</u>

Bull Trout Observed:	New	Old
Tagged:	<u>0</u>	
Untagged:	<u>↓</u>	
Sub-adults:	<u>↓</u>	
Juvenile:	<u>↓</u>	

20000

Comments: Spot check for redds, none observed.  
No bull trout observed.  
1 Dead eastern brook trout in pool,  
no other fish seen.  
Limited spawning gravels in this reach; mostly  
a mix of large slate/boulder/cobble.  
Impassable falls-cascade/sheet flow/steep  
gradient type, - below trail  
x-ing.

# Bull Trout Spawning Ground Survey

Stream: Deep Creek  
 Date: 8/28/00  
 Location: Copper Creek to Falls  
 Water Temp.: 45.5 F.  
 Investigator: Eric Anderson WDFW  
 Start Time: 1008 Hrs.  
 End Time: 1340 Hrs.

Redds:	New	Old
Definite:	<u>42</u>	<u>-</u>
Probable:	<u>0</u>	<u>-</u>
Possible:	<u>6</u>	<u>-</u>

Bull Trout Observed:  
 Tagged: 13 Blue Tag  
 Untagged: 6  
 Unknown if Tagged: 2  
 Sub-adults: 1 (No Tag)  
 Juvenile: Numerous Fry observed - unidentified.

Comments: Approximately 1/4 mile of intermittent dry channel area between Copper Creek + Falls (≈ 1 hour wading distance downstream of Falls) that poses as impassable barrier to bull trout migration. However, 5 definite redds + 1 adult bull trout with blue tag was above this dry area. 4 of the 5 redds were above the bridge that lies a short distance below the falls.

2  
0  
0  
0

4/26/00 E. Anderson

Deep

Copper  $\rightarrow$  up  
to falls

100%  
end 13 1/2

~~Def III III III III III III III III~~

II 42 Def,

69 to 5 sub

Prob,

45.50

77 total

Jim  
26 Def + 9 Def  
2 Prob  
1 Prob

~~Pos III I 6 pos~~

Fish ~~100%~~ Blue III III III

~~10 Tapp. III I~~

6 1 Subadult + 1 Vgt Tapp

~~Unknown II 2~~

100% known fish observed

~~45.9 5.5 C.~~

49.1

Impossible

Def  $\rightarrow$  counted

~~Road above dry area (above bridge)~~  
IF " " " " near falls

Blue Tag

approx. 1/4 mile intermittent dry areas  
approx 1 Hr walking distance downstream  
from falls. 50-100m stretch

# Bull Trout Spawning Ground Survey

Stream: Deep Creek (1800 Rd to Copper Ck)  
 Date: 8/28/00  
 Location: 1800 Rd to Copper Ck  
 Water Temp.: —  
 Investigator: Jim Cummins WDFW  
 Start Time: 1000  
 End Time: 1200

Redds:	New	Old
Definite:	<u>26</u>	<u>First Survey in 2006</u>
Probable:	<u>2</u>	<u>—</u>
Possible:	<u>1</u>	<u>—</u>

Bull Trout Observed:  
 Tagged: 6  
 Untagged: 8      Unknown: 3  
 Sub-adults: —

Juvenile: Fry present in good numbers. but not all fry could be identified as BLC. Some were BLC.

Comments: Eric Anderson survey the area from Copper Ck up to the falls & found 42 definite + 2 possible redds.  
No passage blocks in the area I surveyed.  
Also see my survey for section below 1800 Road.

2000



# Bull Trout Spawning Ground Survey

Stream: Deep Creek  
 Date: 8/28/00  
 Location: 1800 Rd to Bumping Lake - Right channel  
 Water Temp.: —  
 Investigator: Eric Anderson WDFW  
 Start Time: 1420 Hrs.  
 End Time: 1510 Hrs.

Redds:	New	Old
Definite:	<u>0</u>	<u>—</u>
Probable:	<u>0</u>	<u>—</u>
Possible:	<u>1</u>	<u>—</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:	<u>0</u>	
Sub-adults:	<u>0</u>	
Juvenile:	<u>0</u>	

Comments: Approximately half of the right channel (1/3 mile)  
was dry - impassable barrier.  
The possible redd was above the split channel.

2  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: Deep Creek  
 Date: 8/28/00  
 Location: 1800 Rd to Bumbing Lake - left channel  
 Water Temp.: \_\_\_\_\_  
 Investigator: JIM CUMMINS WDFW  
 Start Time: 1420 - 54  
 End Time: 1540

Redds:	New	Old
Definite:	<u>9</u>	<u>—</u>
Probable:	<u>0</u>	<u>—</u>
Possible:	<u>1</u>	<u>—</u>
Bull Trout Observed:		
Tagged:	<u>3</u>	
Untagged:	<u>0</u>	
Sub-adults:	<u>1 - about 8 inches</u>	
Juvenile:	<u>Fry present - not counted</u>	

Comments: Most of water flows in the left channel. Eric Anderson surveyed the right channel.  
Also, see Jim Cummins & Eric Anderson's survey summary for Deep Creek upstream of 1800 Road on this creek.

2  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: Deep Creek

Date: 9/5/00

Location: Bumping Lake to Barrier Falls

Water Temp.: —

Investigator: Paul James, Tim Eichler, William Meyer, Mark Tuttle (CWU)

Start Time: —

End Time: —

Redds:	New	Old
Definite:	<u>46</u>	<u>73</u>
Probable:	<u>8</u>	<u>1</u>
Possible:	<u>7</u>	<u>9</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: \_\_\_\_\_  
Unknown if Tagged: 6  
Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: Deep Creek

Date: ##### Sep. 5, 2000

Location: Bumping Lake to Barrier Falls

Counters: Paul James, Tim Eichler, William Meyer, Mark Tuttle

Redds:	New	Old	Totals
Definite	46	<del>72</del> 73	119
Probable	8	1	9
Possible	7	9	16

Bull Trout: 6

2000



# Bull Trout Spawning Ground Survey

Stream: Deep Creek

Date: 9/13/00

Location: 1800 Rd Culvert to Lake - Left Channel  
(looking upstream)

Water Temp.: -

Investigator: Jim Cummins (WDFW) / Gary Torretta (BR)

Start Time: 1415

End Time: 1510

Redds:	New	Old
Definite:	<u>11</u>	<u>21</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>1</u>

Bull Trout Observed:  
Tagged: 0

Untagged: 0

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: changed 3 old possible to "old det."

Two additional data sheets for 9/13/00

Total Deep Crk Redds - 147

2
0
0
0

# Bull Trout Spawning Ground Survey

Stream: Deep Creek  
 Date: 9/13/00  
 Location: 1800 Rd Culvert to Copper Creek  
 Water Temp.: —  
 Investigator: Pat Monk + Gary Tometta (USBR)  
 Start Time: 0940  
 End Time: 1300

Redds:	New	Old
Definite:	<u>3</u>	<u>48</u>
Probable:	<u>0</u>	<u>1</u>
Possible:	<u>0</u>	<u>2</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:	<u>0</u>	
Sub-adults:	<u>0</u>	
Juvenile:	<u>0</u>	

Comments: See 2 other data sheets  
 \_\_\_\_\_  
 \_\_\_\_\_  
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# Bull Trout Spawning Ground Survey

Stream: Deep Creek

Date: 9/13/00

Location: Copper Creek to falls

Water Temp.: 42°F above Copper CK @ 0948

Investigator: Tim Cummins WDFW

Start Time: 0948

End Time: 1220

Redds:	New	Old
Definite:	<u>5</u>	<u>57</u>
Probable:	<u>0</u>	<u>1</u>
Possible:	<u>3</u>	<u>2</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: 1 above dry area

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: Changed 4 possibles + "old definite."

Reach low flow area @ 1123 + no flow -  
dry for about 1,000' between 1140 + 1147

1 of the new Redds was above the dry area.

2000

# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 9/5/00

Location: Hwy 12 Bridge to N. Spring

Water Temp.: 43° F.

Investigator: Eric Anderson (WDFW); Steve Croci (USFWS); Gary Torretta (BR)

Start Time: 0830 Hrs.

End Time: 1110 Hrs.

Redds:	New	Old
Definite:	<u>27</u>	<u>—</u>
Probable:	<u>1</u>	<u>—</u>
Possible:	<u>10</u>	<u>—</u>

Bull Trout Observed:  
Tagged: 6

Untagged: 6  
Unknown if Tagged: 13  
Sub-adults: 0

Juvenile: A few unidentified fry observed.

Comments: Tagged fish with orange tags.  
One tagged fish with white tag.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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9-5-00

0830 hrs

Inchium Cr.

43°F

Hyd 12 to N. Spring

Torotta, Crest Anderson

Def. III III III III III II

Pro. I

Pos. III III

Fish. Tagged III I

untagged III I

unknown III III III

most orange tags

1 white tag noted

End 110 hrs

# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 9/5/00

Location: North Spring (including area above beaver dams).

Water Temp.: 43°F

Investigator: Eric Anderson (WDFW); Steve Croci (USFWS); Gary Torretta (BR)

Start Time: 1140 Hrs.

End Time: 1300 Hrs.

Redds:	New	Old
Definite:	<u>18</u>	<u>-</u>
Probable:	<u>0</u>	<u>-</u>
Possible:	<u>2</u>	<u>-</u>

Bull Trout Observed:  
Tagged: 16

Untagged: 10  
Unknown if Tagged: 5

Sub-adults: 1 (10-12") on Redd with adult

Juvenile: \_\_\_\_\_

Comments: Most tagged fish with orange tags; 2 fish with yellow tags, 1 fish with pink tag.

4 adults + several redds above beaver dams.

2000

Start 1140 hrs - 1235 9/5/00

Indian Cr.

N. Spring

Tovetta  
Cucci  
Anderson

DoF, ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~

Probi

Fos. II

Fish Tagged ~~||||~~ ~~||||~~ ~~||||~~

Not Tagged ~~||||~~ ~~||||~~

Unknowns ~~||||~~ ↗

11 yellow Tag  
1 orange  
1 pink

1 subadult  
included.

43.0F

1235 Beaver Ponds  
2 Fish / 1 Tag  
11 Not tag  
1 unknown

# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 9/5/00

Location: End of Indian Cr from Trail Crossing to Confluence w North Spring

Water Temp.: -

Investigator: Jim Cummins (WDFW) / Ken McDonald (USFS)

Start Time: 1200

End Time: 1315

Redds:	New	Old
Definite:	<u>13</u>	<u>-</u>
Probable:	<u>1</u>	<u>-</u>
Possible:	<u>3</u>	<u>-</u>

Bull Trout Observed:

Tagged: 2

Untagged: 5      Unknown: 3

Sub-adults: 2 BLC

Juvenile: \_\_\_\_\_

Comments: Total Redds for both sections that I  
counted = 33. Eric found 45 redds  
in lower section so total is 79

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 9/5/00

Location: End Indian Cr. road from Trail crossing to falls, including Spruce

Water Temp.: 41°F @ 0835      40°F @ falls @ 1040

Investigator: Jim Cummins (WDFW) w Scott Hoeller (USFS)

Start Time: 0835

End Time: 1040 @ falls

Redds:	Indian Cr.	New Li. Spring	Old Spring	Old
Definite:	15	3	1	—
Probable:	0	0	0	—
Possible:	2	0	1	—

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: 3      Unknown: 2

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: Good flow & passage - no dry areas.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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# Bull Trout Spawning Ground Survey

Stream: N.F. Antanum Creek  
 Date: 9-6-00  
 Location: Gray Rock Trailhead Footbridge to Shellneck Cr.  
 Water Temp.: 44°F @ 0930 Hrs.  
 Investigator: Eric Anderson (WDFW)  
 Start Time: 0930 Hrs  
 End Time: 1150 Hrs

Redds:	New	Old
Definite:	<u>5</u>	<u>—</u>
Probable:	<u>0</u>	<u>—</u>
Possible:	<u>0</u>	<u>—</u>
Bull Trout Observed:	<u>—</u>	
Tagged:	<u>—</u>	
Untagged:	<u>3 @ ≈ 10-13" on redds</u>	
Sub-adults:	<u>—</u>	
Juvenile:	<u>—</u>	

Comments: 3 redds clustered upper end of Snowcabin C.G. +  
other 2 between Snowcabin + shellneck  
lots of recent cattle activity along creek,  
but no cows observed during survey.

2  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: Shellneck Creek (Ahtanum Drainage)  
Date: 9-6-00  
Location: mouth to old Road Crossing above Fork in creek  
Water Temp.: 43°F @ 1230 Hrs  
Investigator: Eric Anderson (WDFW)  
Start Time: 1230 Hrs.  
End Time: 1500 Hrs.

Redds:	New	Old
Definite:	<u>4</u>	<u>—</u>
Probable:	<u>φ</u>	<u>—</u>
Possible:	<u>2</u>	<u>—</u>
Bull Trout Observed:	<u>—</u>	
Tagged:		
Untagged:	<u>4 @ ≈ 8-10" in area of redds but not on redds.</u>	
Sub-adults:	<u>—</u>	
Juvenile:	<u>—</u>	

Comments: Redds smaller than mainstem redds.  
3 Redds were along the Road, 1 up higher  
near split channel.

20000

9/06/00 N. F. Antanum Creek  
Bull Trout Spawner Survey

Grey Rock Trailhead Footbridge  
to Shellneck Cr.

0930 Start 44°F

New Def. Redds 111

1

Pro. ♂

Pos. ♀

— on Redds

Adults 111  $\approx$  10-13 inches length.

3 Redds clustered upper end of  
Snowcabin C.G., other 2 between  
Snowcabin & Shellneck.

Lots of recent cattle activity  
along creek, but no cows  
observed during survey.

End 1150 Hrs

Shellneck Creek

Mouth to old Road Crossing  
above Fork in creek.

1230 Start 43°F

New Def. Redds 111

Pro

Pos. 11

Bull trout 111  $\approx$  8-10 inches length  
not on Redds but in area of  
marked redds, Redds smaller  
than mainstem. 3 Redds  
along Road, 1 up higher  
near split channel.  
end 1500



# Bull Trout Spawning Ground Survey

Stream: N. F. Ahtanum Creek

Date: 9-12-00

Location: Grey Rock Trailhead Footbridge to Shellneck Cr.

Water Temp.: 42.4°F @ 0910 Hrs

Investigator: Eric Anderson

Start Time: 0910 Hrs.

End Time: 1130 Hrs.

Redds:	New	Old
Definite:	<u>0</u>	<u>5</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:		
Sub-adults:		
Juvenile:		

2  
0  
0  
0

Comments: - No cows observed in creek but evidence have been in area. - Cattle crossing over 1 redd  
- H<sub>2</sub>O Temp in N.F. above Shellneck 45.1°F.  
- Surveyed (spot check) N.F. above Shellneck for 1/2 mile. No redds observed but found 1 dead bull trout in pool. Natural mort? Will ship to Genetics Lab in Oly.

# Bull Trout Spawning Ground Survey

Stream: Shellneck Creek (Antunum Drainage)  
Date: 9-12-00  
Location: mouth to old Road crossing above Fork in Creek  
Water Temp.: 41.9° F  
Investigator: Eric Anderson (WDFW)  
Start Time: 1135 Hrs  
End Time: 1335 Hrs

Redds:	New	Old
Definite:	<u>2</u>	<u>4</u>
Probable:	<u>φ</u>	<u>φ</u>
Possible:	<u>φ</u>	<u>2</u>

Bull Trout Observed:  
Tagged: φ  
Untagged: \_\_\_\_\_  
Sub-adults: \_\_\_\_\_  
Juvenile: ↓

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2  
0  
0  
0

9/12/00

E. Anderson

start

N. F. Antennae 0910 Hrs 42.4°F

Gray Rock to Shellneck

old Def. III

old Prob.  $\phi$

end 1130

old Pos.  $\phi$

Fish  $\phi$

New Def  $\phi$

New Prob.  $\phi$

New Pos.  $\phi$

No cows observed but recent activity.

Shellneck to headwaters (old Rocking)

old Def IIII

41.9°F

old Prob.  $\phi$

old Pos. II

Fish -  $\phi$

New Def II

New Prob.  $\phi$

Start 1135

New Pos.  $\phi$

end 1335

N. F. Above Shellneck 45.1°F

over →

Surveyed (spot check) N/E up to  $\frac{1}{2}$  mile above confluence with Shellneck Creek.

No Redds observed but found 1 dead  $6\frac{1}{4}$ " bull trout in pool. Will ship to Genetics Lab in Oly.

No cows observed, but there have been cattle recently as evidenced by fresh cow pies. Most cattle sign appears to be in the area below Snow Cabin to Grey Rock. 1 of the 5 Redds in this area was in the middle of the creek - fresh cattle sign on banks + trucks across the stream over this redd.



# Bull Trout Spawning Ground Survey

Stream: N. F. Altatum Creek  
 Date: 9-26-00  
 Location: Gray Rock Trailhead Footbridge to Shellneck Cr.  
 Water Temp.: \_\_\_\_\_  
 Investigator: Eric Anderson (WDFW)  
 Start Time: 1200 Hrs.  
 End Time: 1400 Hrs.

Redds:	New	Old
Definite:	<u>0</u>	<u>5</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>
Bull Trout Observed:	<div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 2em; margin-right: 5px;">}</div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; width: 10px; height: 100px; margin: 0 5px;"></div> <div style="font-size: 2em; margin-left: 5px;">}</div> </div>	
Tagged:		
Untagged:		
Sub-adults:		
Juvenile:		

2  
0  
0  
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0

Comments: Encountered USFWS Protocol Team -  
studying juvenile distribution for  
protocol development.  
Keri Lodge  
Brandon Bryant  
Marisa Weber

Did not see any cows - although  
evidence of summer activity - tracks  
+ cow pies in the stream spring  
seeps. - see previous notes.

# Bull Trout Spawning Ground Survey

Stream: Shellneck Cr. (Ahtamam drainage)  
Date: 9-26-00  
Location: mouth to old Road crossing above Fork in Creek  
Water Temp.: 36.9°F @ 0945 Hrs  
Investigator: Eric Anderson  
Start Time: 0945 Hrs.  
End Time: 1130 Hrs.

Redds:	New	Old
Definite:	<u>0</u>	<u>6</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>1</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:		
Sub-adults:		
Juvenile:		

Comments: No cows observed in the stream  
on this trip.  
Cows on road during walk out.  
1 Bull elk crossed the road above  
Shellneck Junction.



9/26/00 N.F. Ashton  
E. Anderson  
Bull Trout Spanner Survey  
Grey Rock Trailhead Footbridge  
to Shellneck Cr.  
1200-1400 Hrs.

Old Def III

No Fish Observed

Did not see any cows,  
although evidence of summer  
activity. Cow pies + tracks  
in the stream, in spring seeps.

Shellneck Cr.

0945 - 1130 Hrs.

mouth to old Road crossing  
above Fork in Creek.

Old Def III 1

old Pos. 1+ (1 changed to  
Def. 1 eliminated)

USFWS  
Ran into bull trout protocol  
team, Juvenile Distribution  
Keri Lodge, Brandon Boyant, Meris Weber

# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 9/18/00

Location: Rimrock Lake to Barrier Falls

Water Temp.: —

Investigator: Paul James, William Mayer, Yuki Reiss (CWU), Kate Puckoff (BR)

Start Time: —

End Time: —

Redds:	New	Old
Definite:	<u>112</u>	<u>70</u>
Probable:	<u>8</u>	<u>2</u>
Possible:	<u>19</u>	<u>10</u>

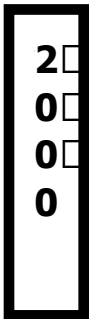
Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: \_\_\_\_\_  
Unknown if Tagged: 54

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: No Redds between Hwy 12 Bridge + Lake.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





Stream: Indian Creek

Date: ##### Sep 16, 2000

Location: Rimrock Lake to Barrier Falls

Counters: Paul James, Kate Puckett, William Meyer, Yuki Reiss

Redds:	New	Old	Totals
Definite	112	70	182
Probable	8	2	10
Possible	19	10	29

Bull Trout: 54

No Redds Between Hwy 12 + Lake.

# Bull Trout Spawning Ground Survey

Stream: Indian Creek  
Date: 10/5/00  
Location: Hwy 12 Bridge to N. Spring  
Water Temp.: 43.5 F  
Investigator: Eric Anderson (WOFW); Jeff Thomas (USFWS)  
Start Time: 1000 Hrs.  
End Time: 1245 Hrs.

Redds:	New	Old
Definite:	<u>18</u>	<u>69</u>
Probable:	<u>ϕ</u>	<u>ϕ</u>
Possible:	<u>ϕ</u>	<u>ϕ</u>

Bull Trout Observed:

Tagged:	<u>ϕ</u>
Untagged:	<u>ϕ</u>
Sub-adults:	<u>ϕ</u>
Juvenile:	<u>A few unidentified fry observed.</u>

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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10/5/00 1000 Hrs Hwy 12 to N. Spring  
Indian Co. Thomas/Anderson 43.50

Old Def III III III III III III III  
III III III III III III III 69

Old Pos + + + + + + + + +

Old Det +

Old Pro + + + +

changed or  
eliminated

New Def III III III III 18

Fish ♀?

Total 87

End 1300 Hrs.

A few unidentified fry observed.

# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 10/5/00

Location: Trailhead Crossing to Falls (including 2 South Springs)

Water Temp.: 40.0 F

Investigator: Scott Hoetter + Jeff Hosman (USFS)

Start Time: 1025 Hrs.

End Time: 1300 Hrs.

Redds:	New	Old
Definite:	<u>10</u>	<u>30</u>
Probable:	<u>1</u>	<u>4</u>
Possible:	<u>0</u>	<u>1</u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults: 0

Juvenile: —

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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0



10/5/00 Indian Cr.

Traveled to Fallt

Time: 1025 start Temp: 40°F

1300 end

Definite		Probable		Possible	
N	O	N	O	N	O


Fish seen:

45

S. Hofer (USFS)

+

J. Hosman (USFS)

# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 10/5/00

Location: Trail Crossing down to confluence with N. Spring

Water Temp.: 43.0 F

Investigator: Eric Andersen (WDFW); Jeff Thomas (USFWS)  
Scott Hofer (USFS); Jeff Hosman (USFS)

Start Time: 1300 Hrs.

End Time: 1345 Hrs.

Redds:	New	Old
Definite:	<u>11</u>	<u>24</u>
Probable:	<u>φ</u>	<u>1</u>
Possible:	<u>φ</u>	<u>φ</u>
Bull Trout Observed:		
Tagged:	<u>φ</u>	
Untagged:	<u>φ</u>	
Sub-adults:	<u>φ</u>	
Juvenile:	<u>—</u>	

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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20000

# Bull Trout Spawning Ground Survey

Stream: Indian Creek

Date: 10/5/00

Location: North Spring (including area above beaver dams).

Water Temp.: 43.0 F

Investigator: Eric Anderson (WDFW); Jeff Thomas (USEFS)  
Scott Hofer (USEFS); Jeff Hasman (USEFS)

Start Time: 1410 Hrs.

End Time: 1530 Hrs.

Redds:	New	Old
Definite:	<u>14</u>	<u>44</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: \_\_\_\_\_  
*Unknown; 1 tagged; 1*  
Sub-adults: 1 @ 10"

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2000

Indian Cr. . Anderson + Thomas  
N. Spring to upstream @ Trail Xing

old Def ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~

old Pos + Ht — changed or eliminated

old Def + —

New Def ~~||||~~ ~~||||~~

old Prob. + + — changed

~~Including Beaver Ponds~~

added to Hofer + Hosman  
count for this same  
section

10/5/00

Bull Trout Redd Count



Inidan Creek Anderson & Thomas  
N. Spring 1410 start 1530 end

Old Def. ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~

New Def. ~~||||~~ ~~||||~~

old Pos + + + +

old Def +

old Prob. + + +

Fish 1

Including  
Brewer  
Ponds

Added with Hofer  
& Rossman  
count

Trail Head  
Trail X-ing over Indian

Added to Anderson's counts.

10/5/00 Indian Cr.

- TH → downstream

Time: 5:330 Temp: 43°F

E			E						
Definite		Probable	Possible		Definite	Probable	Possible		
N	O	N	O	N	O	N	O	N	O
1	III	1		II		III	IIII		II

Fish Seen:

10/5/00 Indian Cr.

- North Spring

Time: 5:1410 Temp:

E			E						
Definite		Probable	Possible		Definite	Probable	Possible		
N	O	N	O	N	O	N	O	N	O
III	IIII								II

Fish Seen 1-10'

→ added to Anderson's counts in N. Spring

45  
25  
-----  
160  
152  
-----  
216

# Bull Trout Spawning Ground Survey

Stream: American River

Date: 9-1-00

Location: Mesatchee Creek Trail X-ing to  $\frac{1}{8}$  mi. above Timber Creek

Water Temp.: 44.5°F @ 0945 Hrs

Investigator: Eric Anderson (WDFW)

Start Time: 0945 Hrs.

End Time: 1300 Hrs.

Redds:	New	Old
Definite:	<u>2</u>	<u>—</u>
Probable:	<u>0</u>	<u>—</u>
Possible:	<u>0</u>	<u>—</u>

Bull Trout Observed:

Tagged: ∅

Untagged: \_\_\_\_\_

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: No chinook Redds observed either.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2  
0  
0  
0

9/1

American R.

Mesatawa Tr. Xing

To access Rd above

Lodgepole Bridge @ Hwy 410

Def 11 (5) Redds

No - Fish observed

44.5°

No Chinook Redds.

Eric Anderson

8945-1300 Hrs

On SGS form

# Bull Trout Spawning Ground Survey

Stream: Union Creek

Date: 9/1/00

Location: Confluence w American Rivi to falls - approx. 1,925 feet

Water Temp.: 45°F @ 1205 @ Highway 410 bridge

Investigator: JIM CUMMINS

Start Time: 1205

End Time: 1300

Redds:	New	Old
Definite:	<u>8</u>	
Probable:	<u>1</u>	
Possible:	<u>1</u>	

Bull Trout Observed:

Tagged: \_\_\_\_\_

Untagged: 1 @ 15"

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

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# Bull Trout Spawning Ground Survey

Stream: Kettle Creek.

Date: 9/1/00

Location: Mouth (confluence with American R) upstream approx 2/3 m.

Water Temp.: 42°F @ mouth - 1000

Investigator: Jim Cummins

Start Time: 1000

End Time: 1130 (Return to vehicle)

Redds:	New	Old
Definite:	<u>4</u>	
Probable:	<u>0</u>	
Possible:	<u>0</u>	

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: 1 @ 20-22"

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: Forgot to flat 1 redd.

Upstream boundary flagged - at lower end of cascades where creek goes into canyon - ~ 3500 feet.

All redds in lower 1/8 mile - Was 92 a survivor - 5-6' full. at 1091 am start distance above trail footbridge

2  
0  
0  
0

RECEIVED  
STATE OF WASHINGTON  
SEP 15 2000  
DEPT. OF FISH AND WILDLIFE  
YAKIMA OFFICE

# Bull Trout Spawning Ground Survey

Stream: American River

Date: 9/11/00

Location: 1/4 mile below Union Creek to Union Creek

Water Temp.: 43°F

Investigator: Scott Hoefler & Jeff Hosman

Start Time: 0845

End Time: 0930

Redds:	New	Old
Definite:	<u>1</u>	<u>0</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: 1 (15"-16")

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2000

28 new  
15 old

# Bull Trout Spawning Ground Survey

Stream: Union Creek

Date: 9/11/00

Location: Union Creek from mouth to falls

Water Temp.: 42°F

Investigator: Scott Hoefler + Jeff Hosman

Start Time: 0930

End Time: 1030

Redds:	New	Old
Definite:	<u>11</u>	<u>7</u>
Probable:	<u>2</u>	<u>2</u>
Possible:	<u>1</u>	<u>1</u>

Bull Trout Observed:

Tagged: \_\_\_\_\_

Untagged: 3

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21000

# Bull Trout Spawning Ground Survey

Stream: American River  
Date: 9/11/00  
Location: Timber Creek to Mesatchee trail x-ing  
Water Temp.: 44°F  
Investigator: Scott Hoefler + Jeff Hosman  
Start Time: 1130  
End Time: 1545

Redds:	New	Old
Definite:	<u>4</u>	<u>2</u>
Probable:	<u>1</u>	<u>0</u>
Possible:	<u>3</u>	<u>0</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_  
Untagged: 2  
Sub-adults: \_\_\_\_\_  
Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: Kettle Creek

Date: 9/12/00

Location: lower 3/4 mile of Kettle Creek

Water Temp.: 43°F

Investigator: Scott Hoefler + Jeff Hosman

Start Time: 0830

End Time: 0945

Redds:	New	Old
Definite:	<u>5</u>	<u>3</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_  
Untagged: \_\_\_\_\_  
Sub-adults: \_\_\_\_\_  
Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2000



# Bull Trout Spawning Ground Survey

Stream: American River

Date: 9/12/00

Location: 1/4 mile below Kettle Creek

Water Temp.: 44°F

Investigator: Scott Hofer + Jeff Hosman

Start Time: 1015

End Time: 1035

Redds:	New	Old
Definite:	<u>0</u>	<u>0</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>

Bull Trout Observed:

Tagged: \_\_\_\_\_

Untagged: \_\_\_\_\_

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

20000

# Bull Trout Spawning Ground Survey

Stream: American River

Date: 9/20/00

Location: Mesatchee Creek Trail Crossing to 1/8 mile above Timber Creek

Water Temp.: 45° F @ 1025

Investigator: Jim Cummins

Start Time: 1025

End Time: 1230

Redds:	New	Old
Definite:	<u>2</u>	<u>5</u>
Probable:		<u>2</u>
Possible:		<u>2</u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults: 0

Juvenile: Saw 6 - 7-8" Trout + 1 12" Trout

Comments:

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2000

# Bull Trout Spawning Ground Survey

Stream: Union Creek (American R. Drainage)

Date: 9-20-00 + 1/4 mile below Union Creek

Location: mouth to barrier Falls.

Water Temp.: 45.9°F @ 1406 Hrs. <sup>- Union</sup> 48°F American - 1330-1350 @ 1330 Hrs

Investigator: Eric Anderson + Jim Cummins (WDFW)

Start Time: 1406 Hrs.

End Time: 1440 Hrs.

Redds:	New	Old
Definite:	<u>6</u>	<u>19 + 1 Below Union Creek in American R.</u>
Probable:	<u>∅</u>	<u>∅</u>
Possible:	<u>∅</u>	<u>1</u>
Bull Trout Observed:		
Tagged:	<u>∅</u>	
Untagged:	<u>1</u>	
Sub-adults:	<u>∅</u>	
Juvenile:	<u>∅</u>	

2  
0  
0  
0

Comments: Surveyed mainstem American River for 1/4 mile below Union Creek - down to split channel.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Anderson / Cummings  
9/20 Union Cr. 1406-1440  
Temp ~~480F~~ 45.9°F

Old Def IIII IIII IIII IIII

Old Pro IIII (changed to Def)

Old Pos I (changed to Def)

New Def IIII

Fish I

1

American R. Below Union

Old Def, I

New Def, 0

1330-1350

480F Anderson / Cummings

Down to split channel

2

Separate Transect

Bull Trout Spawning Ground Survey

Stream: Kettle Creek (American R. Drainage) 1/4 mile below Kettle Cr. 10930 Hr

Date: 9-20-00

Location: lower 3/4 mile to Flagged area (canyon like area).

Water Temp.: 44.6°F @ 1015 Hrs

Investigator: Eric Anderson (WDFW)

Start Time: 1015 Hrs.

End Time: 1115 Hrs.

Redds:	New	Old
Definite:	1	8
Probable:	0	0
Possible:	0	0
Bull Trout Observed:	0	
Tagged:		
Untagged:		
Sub-adults:		
Juvenile:		

2000

Comments: 4 Redds were above the 3-4 FT log Jam Vertical H2O Fall.

No Redds or bull trout observed in American R. 1/4 mile below Kettle Creek.



9/20 Kettle Cr. 1015 Hrs.  
Temp 44.6 F  
old Det. ~~III~~ III  
New Det. I  
φ Fish

4 Redds above 3-4 FT Log Jam Vertical  
H<sub>2</sub>O Fall (included in above).

end 1115 Hrs.

E. Anderson.

No Redds or Bull Trout  
observed  $\frac{1}{4}$  mile below  
Kettle Creek.

# Bull Trout Spawning Ground Survey

Stream: Crow Creek (Lower)

Date: 9/8/00

Location: End Rd #1922 to Rd #1902 just above Confluence w L. Narves R

Water Temp.: 47°F @ 1035 (Upper end of section)

Investigator: Jim Cummins & Eric Anderson

Start Time: 1035 - 1520

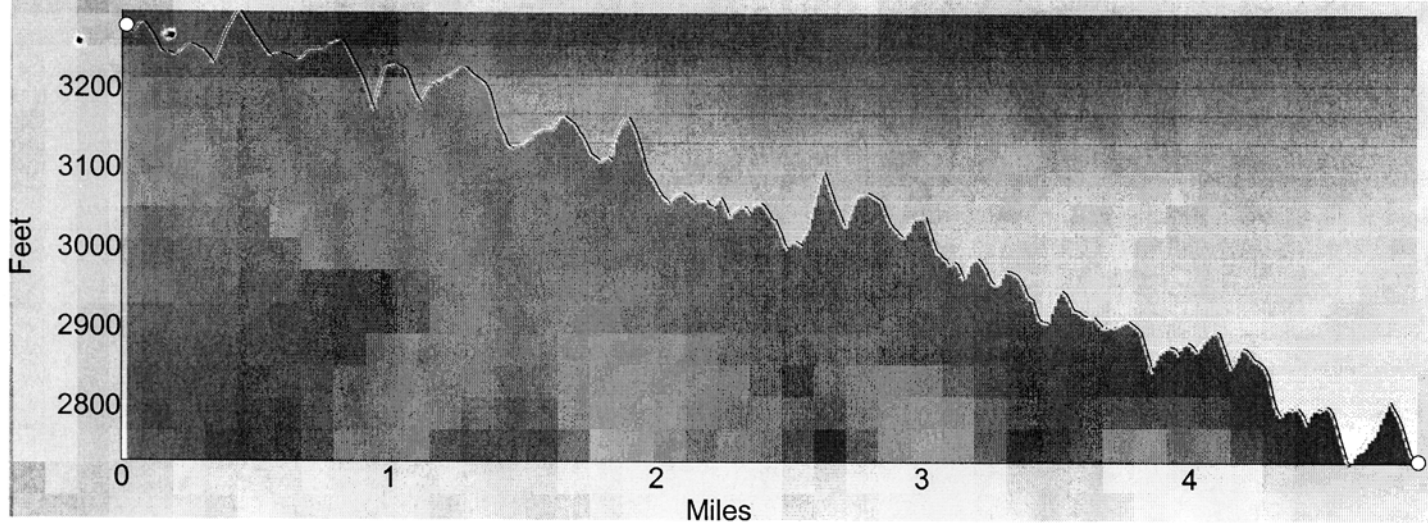
End Time: 1520

Redds:	New	Old
Definite:	<u>0</u>	<u>                    </u>
Probable:	<u>0</u>	<u>                    </u>
Possible:	<u>0</u>	<u>                    </u>
Bull Trout Observed:		
Tagged:	<u>0</u>	<u>                    </u>
Untagged:	<u>0</u>	<u>                    </u>
Sub-adults:	<u>0</u>	<u>                    </u>
Juvenile:	<u>0</u>	<u>                    </u>

2000

Comments: Found 7 Spring Chinook redds + 2 carcasses  
1 - 28" TL. Starting from upper end chinook redds  
were found @ 1300, 1335, 1408, 1411, 1419, 1435, 1454,  
Location: T-18, R-13 E/2, S26 through T-15, R14  
SW/4 S30. See attached map. Total distance  
of survey approximately 4.8 miles.

Saw a few CT, including fm to 10" 1 CT  
Went approx 10"



Total distance:	4 miles, 4496 feet	Climbing:	831 feet	Latitude:	090° 00' 00.0" N
Ground distance:	4 miles, 4669 feet	Descending:	-1376 feet	Longitude:	180° 00' 00.0" W
		Elevation change:	-544 feet	Elevation:	
		Min/Max:	2731/3296	Grade:	

*4.85 miles*

Spring Chimook  
Redd Survey  
9/8/00

CUMMINS  
&  
ANDERSON

Approx.  
Redd  
Locations

Start

T18

1922  
Pool

Crow

Footbridge  
Creek

West  
Quartz



RECEIVED  
STATE OF WASHINGTON  
SEP 15 2000  
DEPT. OF FISH AND WILDLIFE  
YAKIMA OFFICE

# Bull Trout Spawning Ground Survey

Stream: Crow Creek

Date: 9/13/00

Location: End of 1922 road to near the gorge w/ big boulder

Water Temp.: 45°F

Investigator: Scott Hoefler & Jeff Hosman

Start Time: 1000

End Time: 1600

Redds:	New	Old
Definite:	<u>14</u>	<u>0</u>
Probable:	<u>2</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>

Bull Trout Observed:  
Tagged: \_\_\_\_\_

Untagged: 1 (14-15")

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2000



# Bull Trout Spawning Ground Survey

Stream: Crow Creek

Date: 9-22-00

Location: Stream Trail x-ing near end of 1922 Rd. to gorge below Falls Creek. - end marked w Ribbon.

Water Temp.: 42°F @ 0655

Investigator: Eric Anderson + Jim Cummins (WDFW)

Start Time: 0851 Hrs.

End Time: 1430 Hrs.

Redds:	New	Old
Definite:	<u>12</u>	<u>14</u>
Probable:	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>

2000

Bull Trout Observed: Tagged: 0

Untagged: 1 Dead Adult TL 17 1/4" Probable Natural mortality. No sample taken.

Sub-adults: 0

Juvenile: A few unidentified fry observed

Comments: Several dozen schooling cutthroat observed in beaver pond area 8-11" length.

old Count 9/13/00 From Hoefler

Crow Cr. 14 Det 9/13/00  
2 Prob. 1 " 14-15" fish

1 1000 - 1600 Hrs

Crow Creek BLC Redd Count

9-22-00

42° Fe 0855 Hrs

old Det ~~||||~~ ~~||||~~ ~~||||~~

" Prob. + (1 Prob. changed to Det) 1 not found

New Det ~~||||~~ ~~||||~~ ~~||||~~

0851 - 1430 Hrs.

14  
12  
26 Total

Cummins / Anderson

1st of Hoefler's Redds above  
Sandstone cliff.

1 Redd Below.

A few unidentified fry observed.

Several dozen schooling CT in  
Beaver Pond in 8-10" length  
area

1 Dead BLC TL 174  
No sample taken.

Probable  
Natural  
mortality

RECEIVED WASHINGTON  
STATE OF WASHINGTON  
SEP 11 2000  
DEPT. OF FISH AND WILDLIFE  
YAKIMA OFFICE

# Bull Trout Spawning Ground Survey

Stream: Rattlesnake Creek  
Date: 9/16/00  
Location: X-ing below MJB to MJB x-ing  
Water Temp.: 45° F  
Investigator: Jeff Hosman  
Start Time: 1125  
End Time: 1445

Redds:	New	Old
Definite:	_____	_____
Probable:	_____	_____
Possible:	<u>1</u>	_____

Bull Trout Observed:  
Tagged: \_\_\_\_\_  
Untagged: 2 adults - one was 15-20", other was 20+"  
Sub-adults: \_\_\_\_\_  
Juvenile: \_\_\_\_\_

Comments: This possible redd could have been due to scour.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2  
0  
0  
0









# Bull Trout Spawning Ground Survey

Stream: Rattlesnake Creek

Date: 9/6/00

Location: Little Wildcat Creek to McNeil Creek

Water Temp.: 42°F

Investigator: Scott Hoefler

Start Time: 1340

End Time: 1625

Redds:	New	Old
Definite:	<u>12</u>	
Probable:	<u>1</u>	
Possible:		

Bull Trout Observed:

Tagged:	<u>0</u>
Untagged:	<u>0</u>
Sub-adults:	<u>0</u>
Juvenile:	<u>0</u>

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2  
0  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: Rattlesnake Creek

Date: 9/16/00

Location: Shell Cr. to Little Wildcat Creek

Water Temp.: 45.9°F

Investigator: Eric Anderson + John Easterbrooks (WDFW); Jeff Thomas (USFWS)

Start Time: 1430 Hrs.

End Time: 1545 Hrs.

Redds:	New	Old
Definite:	<u>6</u>	<u>1</u>
Probable:	<u>1</u>	<u>0</u>
Possible:	<u>0</u>	<u>0</u>
Bull Trout Observed:		
Tagged:	<u>0</u>	
Untagged:	<u>↓</u>	
Sub-adults:		
Juvenile:		

2  
0  
0  
0

Comments: A few cutthroat observed.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Bull Trout Spawning Ground Survey

Stream: Rattlesnake creek

Date: 9/16/00 + 9/17/00

Location: Little Wildcat Creek to McNeil Creek

Water Temp.: —

Investigator: Jeff Thomas (USFWS), Eric Anderson + John Easterbrooks (WDFW)

Start Time: <sup>16th</sup> 1545 Hrs. + <sup>17th</sup> 0915 Hrs

End Time: 1615 Hrs. + 1045 Hrs.

Redds:	New	Old
Definite:	<u>4</u>	<u>12</u>
Probable:	<u>φ</u>	<u>φ</u>
Possible:	<u>φ</u>	<u>φ</u>

Bull Trout Observed:

Tagged: φ

Untagged: \_\_\_\_\_

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2  
0  
0  
0



9/16 Anderson, Easty, Thomas  
RattleSnake Cr. 1430

~~King above Shell to King above~~  
L. Wildcat.

Rattle Temp. 45.90 F  
old Def. I

" Pro. 8 Redds

" Pos.

New Def III

No BLC observed

" Pro. I

A few CT "

" Pos

L. Wildcat to Trail King (McNeil)  
old Def III 1545 Hrs. (Section)

old Pro. + Anderson + Easty

old Pos

↓ changed

New Def II

Added to 9/17  
count By J. Thomas

New Pro

New Pos.

Below Trail King to mouth

Little Wildcat 1530 Hrs. Thomas

New Def. II

No Fish

9-17-00 start: 9:15 AM

Upper Rattlesnake Creek to McNeil Cr.  
(Tr.-ing to McNeil Cr.)

OLD CONFIRMED: III

NEW: II

FISH: Q

END: 10:45 AM

1

9/17/00

start: 11:25 AM

END: 12:35 PM

Low water  
above trail  
crossing  
1/2 mile  
up.

OLD PROBABLE: I

OLD CONFIRMED: III

NEW: IIII

FISH: I

2

# Bull Trout Spawning Ground Survey

Stream: Rattlesnake Creek  
Date: 9/17/00  
Location: MJB Trail X-ing to Shell Cr.  
Water Temp.: 41.9°F  
Investigator: Eric Anderson (WDFW)  
Start Time: 0917 Hrs.  
End Time: 1224 Hrs.

Redds:	New	Old
Definite:	<u>2</u>	<u>2</u>
Probable:	<u>φ</u>	<u>φ</u>
Possible:	<u>φ</u>	<u>φ</u>
Bull Trout Observed:	<u>φ</u>	
Tagged:	<u>φ</u>	
Untagged:		
Sub-adults:		
Juvenile:	<u>↓</u>	

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: Rattlesnake Creek

Date: 9/17/00

Location: Trail 1114 x-ing (below MJB x-ing) to MJB Trail x-ing

Water Temp.: —

Investigator: John Easterbrooks + Eric Anderson (WDFW)

Start Time: 1130 Hrs.

End Time: 1330 Hrs.

Redds:	New	Old
Definite:	<u>5</u>	<u>ϕ</u>
Probable:	<u>ϕ</u>	<u>ϕ</u>
Possible:	<u>ϕ</u>	<u>1</u>
Bull Trout Observed:		
Tagged:	<u>ϕ</u>	
Untagged:		
Sub-adults:		
Juvenile:	<u>↓</u>	

2  
0  
0  
0

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

9/17/00 · E. Anderson  
Rattlesnake Cr. 46.9°F @ 0917 hrs  
old Def II Shell to MJBxing  
" Pro. end 1224

" Pos.  
New Def. II  
New Pro.  
New Pos

No ball trout  
observed  
in either  
section.

Trail Below MJBxing to MJB  
J. Easterbroads.

1130 - 1330

old Pos 1

New Def 5

↑ Anderson Assisted  
at lower end  
of reach



# Bull Trout Spawning Ground Survey

Stream: Shell Creek

Date: 9/17/00

Location: mouth to upstream ~ 50 min. wading time,

Water Temp.: -

Investigator: Jeff Thomas (USFWS)

Start Time: 1400 Hrs.

End Time: 1455 Hrs.

Redds:	New	Old	Total
Definite:	<u>1</u>	<u>-</u>	<u>-</u>
Probable:	<u>0</u>	<u>-</u>	<u>-</u>
Possible:	<u>0</u>	<u>-</u>	<u>-</u>

*- This redd not included in Index*

Bull Trout Observed:

Tagged: 0

Untagged: \_\_\_\_\_

Sub-adults: \_\_\_\_\_

Juvenile: \_\_\_\_\_

2  
0  
0  
0

New area investigated!

Comments: Probable passage barrier ~ 100 yds upstream of Trail x-ing. (1 Redd found below).

Another probable barrier ~ 300 yds upstream of 1st barrier - (not as severe as 1st barrier).

Another definite barrier ~ 50 yds upstream of last barrier (~ 4 ft vertical).

Another definite barrier ~ 50 minutes into survey. No fish, no redds past 1st barrier.

9-17-00

Shell ck. - U.S. of Trail xing

Start: 1400 hrs

End: 1455 hrs

Redds: 1

Fish: 0

- 1 - Probable passage barrier  $\approx$  100 yds U.S. of trail xing. First (maybe only redd) found below this.
- 2 - Another probable barrier  $\approx$  300 yds U.S. of first. Not as severe as first one.
- 3 - All right! They definitely can't get by this one. 4' vertical drop. Rocks/logs. Virtually no hydraulic lift. About 50 yds. above last one.

(OVER)

4) Another definite barrier. 50 minutes  
into survey. No fish. No redds past  
first barrier. Headed back D.S.  
(About 100 yds. U.S. of #3)

# Bull Trout Spawning Ground Survey

Stream: S. E. Tilton River  
 Date: 9/7/00  
 Location: Falls to Road 1050 + Bear Creek  
 Water Temp.: 42 F @ Falls 100 ft  
 Investigator: Jim Cummins (WDFW) w Jeff Thomas (USEFWS)  
 Start Time: 1000  
 End Time: 1530

Redds:	S.P Above Bear	New Bear C	S.F Below Bear	Old
Definite:	5	15	1	
Probable:	1	3	0	
Possible:	2	0	0	

Bull Trout Observed:

Tagged:	Above Bear C	Bear Creek	Below Bear
Untagged:	" 2	" 28	" 6
<del>Unknown</del> Sub-adults:	" 5	" 0	" 0
Juvenile:			

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

20000

# SOUTH FORK TIEYON RIVER

SEPT. 7, 2000

LOCATION: S. FORK FALLS TO FR1050

Water temp: 6°C @ 10:00 AM S. FORK  
8°C @ 1:00 PM Bear CK.

SURVEYORS: JEFF THOMAS + JIM CUMMINS

START: 10:00 AM

END:

---

COMMENTS:



## REDDS (S. FORK)

DEFINITE III 1

PROBABLE 1

POSSIBLE II

## REDDS (BEAR CK.)

DEFINITE III III III

PROBABLE III

POSSIBLE :

## BULL TROUT OBSERVED

S. FORK

BEAR CK

TAGGED

III III II

UNTAGGED III III III

III III III III III  
II

Sub-Adults

Juveniles

# Bull Trout Spawning Ground Survey

Stream: S.F. Teton River

Date: 9/7/00

Location: 1050 Bridge down to Blue Slide

Water Temp.: 43.0 F mainstem minnie meadow side channel 48° F

Investigator: Eric Anderson + John Easterbrooks (WDFW)

Start Time: 1000 Hrs.

End Time: 1500 Hrs.

Redds:	New	Old
Definite:	<u>49</u>	<u>-</u>
Probable:	<u>2</u>	<u>-</u>
Possible:	<u>0</u>	<u>-</u>

Bull Trout Observed:  
Tagged: 5

Untagged: 27  
Unknown if Tagged: 12  
Sub-adults: 0

Juvenile: A few unidentified fry observed in side channels,

Comments: ~ Dozen 11-14" Cutthroat Trout + Whitefish  
observed in deep pools under log jams.

Also observed 15-20 adult bull trout holding  
in deep pools under log jams.

Redds in side channel near minnie meadow.  
Several other side channels with bull trout redds.

Fence across river in this section. Evidence of  
cattle grazing in area + in stream  
channels where bull trout spawn.  
Scott Hooper informed me that cattle are taken out  
before spawning occurs.

20  
00  
00  
0

9-7-00

S.F. Tieton R. 1000 Hrs

E. Anderson J. Easterbrook

H<sub>2</sub>O Temp. 43°F 1050 Rd Br to

down @ blue  
side

Det. ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~

~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ 49 Det.

Prob. 11

2 Probs.

Pos

Fish Tagged ~~||||~~

Not Tagged ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~

Unknown ~~||||~~ ~~||||~~ 44 Fish

minnie meadow Sp. Temp 48°F

CT & white fish observed.

11-14"

14 Rodd's side stream 1450 Hrs

Cows

stop 1500 Hrs

# Bull Trout Spawning Ground Survey

Stream: S.F. Tieton River

Date: 9/26-27/00

Location: Barrier Falls to Blue Side & Bear Creek

Water Temp.: —

Investigator: Tim Eichler (CWU) Works for Paul Jones

Start Time: —

End Time: —

Redds:	New		Old	
	<u>S.F.</u>	<u>Bear</u>	<u>S.F.</u>	<u>Bear</u>
Definite:	<u>46</u>	<u>13</u>	<u>40</u>	<u>15</u>
Probable:	<u>4</u>	<u>4</u>	<u>4</u>	<u>0</u>
Possible:	<u>11</u>	<u>2</u>	<u>1</u>	<u>0</u>

Bull Trout Observed:  
Tagged: None Recorded

Untagged: " "

Sub-adults: " "

Juvenile: " "

Comments: See attached.

Appears to have missed country old  
redds from previous survey.

2000

South Fork Tieton River Redd Counts

Date: Sept. 26-27, 2000

Surveyor: Tim Eichler

Reach	NEW			OLD	
	<u>Definite</u>	<u>Probable</u>	<u>Possible</u>	<u>Definite</u>	<u>Probable</u>
Falls to Bear Cr	11	1	4	5	2
Bear Cr.	13	4	2	15	0
Bear Cr to 1050 bridge	8	1	4	2	0
1050 Bridge to Blue Slide	27	2	3	33	2
Totals =	59	8	13	55	4

2000



Possible

1  
0  
0  
0

1

2  
0  
0  
0

# Bull Trout Spawning Ground Survey

Stream: S.F. Tieton  
Date: 10/6/00  
Location: 1050 Bridge down to Blue Slide  
Water Temp.: 35°F @ 0950 Hrs. 40.3°F @ 1340 Hrs.  
Investigator: Eric Anderson (WDFW) + Scott Hoefler (USFS)  
Start Time: 0950 Hrs.  
End Time: 1340 Hrs.

Redds:	New	Old
Definite:	<u>15</u>	<u>70</u>
Probable:	<u>ϕ</u>	<u>ϕ</u>
Possible:	<u>ϕ</u>	<u>ϕ</u>
Bull Trout Observed:		
Tagged:	<u>ϕ</u>	
Untagged:	<u>ϕ</u>	
Sub-adults:	<u>ϕ</u>	
Juvenile:	<u>A few unidentifiable fry observed.</u>	

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2000

S.F.T. of m 0950 Hrs  $\rightarrow$  35°F

Rd 1050 to Blue slide

Hoeffler / Anderson E 1340  $\rightarrow$  40.3°F

Old

Def ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~  
~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ 70

Prob ++

Pos ++

No Fish

New

Def ~~||||~~ ~~||||~~ ~~||||~~ 15

End 1340 Hrs

85 Total

No Bull Trout Observed

A few unidentified fry observed.

# Bull Trout Spawning Ground Survey

Stream: S.F. Tieton  
 Date: 10/6/00  
 Location: Falls to 1050 Bridge  
 Water Temp.: 36° F @ 1030 (near falls)  
 Investigator: Croce, Hosman + Cummins  
 Start Time: 1015  
 End Time: 1230

Redds:	New	Old	
		Falls to Bear Ck	Bear Ck to 1050
Definite:	<u>0</u>	<u>13</u>	<u>10</u>
Probable:	<u>0</u>	<u>0</u>	<u>0</u>
Possible:	<u>0</u>	<u>4</u>	<u>4</u>

Bull Trout Observed:

Tagged: 0

Untagged: 0

Sub-adults: 0

Juvenile: 0

2  
0  
0  
0

Comments: River turbid - poor visibility  
Cummins did the section from Bear Ck to 1050  
Note Croce changed 2 old probables to No Redds

# Bull Trout Spawning Ground Survey

Stream: Bea Creek  
Date: 10/6/00  
Location: Mouth to Falls  
Water Temp.: 36°F @ 0950  
Investigator: JIM CUMMINS  
Start Time: 0950 - 1042  
End Time: 1042

Redds:	New	Old
Definite:	<u>1</u>	<u>30</u>
Probable:	<u>0</u>	<u>4</u>
Possible:	<u>0</u>	<u>4</u>

Bull Trout Observed:  
Tagged: 0  
Untagged: 0  
Sub-adults: 0  
Juvenile: 0

Comments: Good visibility.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20000