

Ball Trout Spawner Survey Schedule.

August

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29 Deep Creek	30
31						

2003

September

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
	1	2	3	4 Indian Creek	5 S.F Tieton River American River - Eric + Michael N.F. Ahtanum Creek - Cummins	6
7	8 Deep Creek Crow Creek - Eric + Michael	9 Rattlesnake Creek M.F. Ahtanum Creek	10 Rattlesnake Creek	11 Rattlesnake Creek	12 American River	13
14	15 Crow Creek	16 N.F. Ahtanum Creek	17 Deep Creek M.F. Ahtanum Creek	18 Indian Creek	19 S.F. Tieton River American	20
21	22 Crow Creek	23 Rattlesnake Creek	24 Rattlesnake Creek	25 Box Canyon Creek Rattlesnake Creek	26 Gold Creek	27
28	29 N.F Ahtanum Creek	30 M.F. Ahtanum Creek				

2003

October

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
			1	2 Indian Creek	3 S.F. Tieton River	4
5	6	7	8	9 Box Canyon Creek	10 Gold Creek	11
12	13	14	15	16	17 Box Canyon Creek	18
19	20	21	22	23 Gold Creek	24 Kachess River	25
26	27	28	29	30 Gold Creek	31 Kachess River	

2003

November

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
						1
2	3	4	5	6	7 Kachess River	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

2003

September

CREEEL MARK'S SCHEDULE + B.T. SURVEY SCHEDULE

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3 8:00 A.M. NACHES HATCHERY BT SURVEY TRAINING	4 E-PM CREEEL Indian Creek NACHES/DOG	5 S.F Tieton River <u>American River</u> N.F. Ahtanum Creek	6
7 L-PM CREEEL NACHES/DOG	8 E-PM CREEEL <u>Deep Creek</u> <u>Crow Creek</u>	9 Rattlesnake Creek (F.S.) M.F. Ahtanum Creek	10 L-PM CREEEL Rattlesnake Creek (F.S.) NACHES/LEECH	11 Rattlesnake Creek (F.S.)	12 <u>American River</u>	13 E-PM CREEEL NACHES/LEECH
14	15 E-PM CREEEL <u>Crow Creek</u>	16 N.F. Ahtanum Creek	17 Deep Creek M.F. Ahtanum Creek	18 Indian Creek	19 S.F. Tieton River <u>American</u>	20 E-PM CREEEL NACHES/LEECH
21 L-PM CREEEL NACHES/DOG	22 <u>Crow Creek</u>	23 L-PM CREEEL <u>Rattlesnake Creek</u> us.	24 E-AM CREEEL <u>Rattlesnake Creek</u> us NACHES/LEECH	25 <u>Box Canyon Creek</u> us <u>Rattlesnake Creek</u>	26 Gold Creek	27 L-AM CREEEL NACHES/DOG
28	29 N.F. Ahtanum Creek	30 M.F. Ahtanum Creek				

2003

E-AM 7am. E-PM 11am.

L-AM 8am. L-PM 12pm.

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 L-PM CREEEL NACHES/LEECH	2 Indian Creek	3 S.F. Tieton River	4
5 E-PM. CREEEL NACHES/DOG	6	7 L-AM CREEEL	8	9 Box Canyon Creek	10 Gold Creek	11 E-AM CREEEL NACHES/LEECH
12	13	14 L-PM CREEEL NACHES/DOG	15	16 L-AM CREEEL	17 Box Canyon Creek	18 L-PM CREEEL NACHES/LEECH
19 E-AM CREEEL NACHES/DOG	20	21 E-AM CREEEL	22	23 E-PM CREEEL Gold Creek NACHES/DOG	24 Kachess River	25
26 L-PM CREEEL NACHES/LEECH	27	28 E-PM CREEEL	29	30 Gold Creek	31 Kachess River	

2003

E-AM 8 a.m. E-PM 10 a.m.

L-AM 9 a.m. L-PM 11 a.m.

APPENDIX

Table A-1. Bull trout take report for WDFW fish program monitoring activities in the Yakima sub-basin during 2002.

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
Deep Cr	Aug 29 Sep 8,17	Observation	2 Carcasses	Y	Redd Count	None – Carcasses left in stream.	120 Redds, 31 Bulls Observed
Indian Cr	Sep 4, 18 Oct 2	Observation	0	Y	Redd Count	None Taken	100 Redds, 43 Bulls Observed
SF Tieton R & trib (Bear)	Sep 5,19 Oct 3	Observation	1 Carcass	Y	Redd Count	None - Carcass left in stream.	141 Redds, 50 Bulls Observed
American R & tribs (Union, Kettle)	Sep 9,23	Observation	1 Carcass	Y	Redd Count	None - Carcass left in stream.	27 Redds, 3 Bulls Observed
Crow Cr	Sep 10,24	Observation	0	Y	Redd Count	None Taken	9 Redds, 5 Bulls Observed.
NF Ahtanum Cr & trib (Shellneck)	Sep 3,9,12 16, Oct 1	Observation	0	Y	Redd Count	None Taken	17 Redds, 16 Bulls Observed.
MF Ahtanum Cr	Sep 13,25, 28	Observation	0	Y	Redd Count	None Taken	6 Redds, 1 Bull Observed.
SF Ahtanum Cr	Aug 20 Sep 13, 17 Oct 1,10	Observation	0	Y	Redd Count	None Taken	13 Redds, 2 Bulls Observed.
Rattlesnake Cr & tribs (Little Wildcat) (Shell)	Sep 17,23	Observation	0	Y	Redd Count	None Taken	69 Redds, 22 Bulls Observed
Box Canyon Cr	Sep 27 Oct 9,18	Observation	0	Y	Redd Count	None Taken	15 Redds, 15 Bulls Observed
Kachess R (upper)	Nov 8,21 Dec 4	Observation	0	Y	Redd Count	None Taken	0 Redds, No Bulls Observed.
Gold Cr	Oct 1,10 Nov 4,19	Observation	0	Y	Redd Count	None Taken	31 Redds, 47 Bulls Observed

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

2/ Includes fork length, scale samples, genetic samples, etc.

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.

Table A-2. Bull trout take report for WDFW fish program monitoring activities in the Yakima sub-basin during 2003.

Take Location	Specific Date(s) of Take	Type of Take 1/	Number Taken	Biological Data Collected?	Type of Biological Data Collected 2/	Disposition of Bull Trout Taken 3/	Comments
Yakima/Naches drainage (Union Creek, Rattlesnake Cr., Tieton, R.	Sep 10 – Oct 29	Trapping, handling. Radio Tagging	22 handled (14 tagged, 8 genetic samples)	Yes	Length, weight, genetics, radio-telemetry	14 radio tagged (alive), (recovered 4 morts) 8 genetic samples only.	Info on recovered mortalities (tagged bull trout) is noted under individual streams in this table.
Deep Cr	Aug 29 Sep 8,17	Observation	1 Carcass	Yes	Redd Count	None - Carcass left in stream.	57 Redds, 29 Bulls Observed
Indian Cr	Sep 4, 18 Oct 2	Observation	0	Yes	Redd Count	None Taken	101 Redds, 43 Bulls Observed
SF Tieton R & trib (Bear)	Sep 3,19 Oct 3	Observation	1 Carcass	Yes	Redd Count	None - Carcass left in stream.	190 Redds, 51 Bulls Observed
American R & tribs (Union, Kettle)	Aug 27 Sep 5,11 Oct 2	Observation	0	Yes	Redd Count	None Taken	30 Redds, 33 Bulls Observed
American R	Sep 22, 24	Observation, radio tracked after trapping, handling.	2 (assumed morts via otter predation).	Yes	Length, Weight, Genetics, Radio-telemetry	None – no carcass found.	Radio transmitters retrieved out of water, no carcass. Bite marks on transmitter. Originally tagged in Union Cr.
Crow Cr	Sep 12,29	Observation	0	Yes	Redd Count	None Taken	9 Redds, 1 Bull Observed.
NF Ahtanum Cr & trib (Shellneck)	Sep 5,23, Oct 1	Observation	0	Yes	Redd Count	None Taken	12 Redds, 8 Bulls Observed.
MF Ahtanum Cr	Sep 19, Oct 3	Observation	0	Yes	Redd Count	None Taken	8 Redds, 0 Bulls Observed.
SF Ahtanum Cr	Sep3-Oct1 (5 days)	Observation	0	Yes	Redd Count	None Taken	7 Redds, 0 Bulls Observed (Reported by Yakama Nation)
Rattlesnake Cr & tribs (Little Wildcat) (Shell)	Sep 9,10, 29	Observation	8 Carcasses	Yes	Redd Count	None – Carcasses left in stream.	54 Redds, 7 Bulls Observed
Rattlesnake Cr.	Dec 2	Observation, radio tracked after trapping, handling.	1 Carcass	Yes	Length, Weight, Genetics, Radio-telemetry	Carcass left in stream.	Radio transmitter retrieved from bull trout at irrigation diversion screen. Originally tagged in Rattlesnake Cr.
Naches R.	Dec 16	Observation, radio tracked after trapping, handling.	1 Carcass remnant (small amount of tissue)	Yes	Length, Weight, Genetics, Radio-telemetry	None – no carcass found, only small amount of fish tissue.	Radio transmitter retrieved out of water, fish tissue found, appeared to be from raptor predation. Originally tagged in Rattlesnake Cr.
Box Canyon Cr	Sep 25 Oct 9,20,28	Observation	0	Yes	Redd Count	None Taken	8 Redds, 26 Bulls Observed
Kachess R (upper)	Oct 22,28, Nov 6	Observation	3 Carcasses	Yes	Redd Count	2 carcasses retained for genetics, 1 left in	16 Redds, 26 Bulls Observed.

						stream.	
Gold Cr	Sep 24, Oct 10,24	Observation	0	Yes	Redd Count	None Taken	9 Redds, 4 Bulls Observed

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

2/ Includes fork length, scale samples, genetic samples, etc.

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.

Summary of bull trout spawning surveys (redd counts) in index areas of the Yakima sub-basin, 1984-2003.

(R=Resident, F=Fluvial, F/R=Fluvial/Resident, AD=adfluvial). WDFW Files, Yakima, WA.

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
<u>Yakima River (F)</u>																					
Kecchelus to Easton Reach *																	2	1	0	0	
<u>Ahtanum Creek (R)</u>																					
N.F. Ahtanum Cr. (Shellneck Cr.)										9	14	6	5	7	5	7	11	20	17	12	
M.F. Ahtanum Cr. *													1	1		0	10	1	6	8	
S.F. Ahtanum Cr. *																	5	14	13	7	
<u>Naches River (F)</u>																					
Rattlesnake Cr. * (L.Wildcat Cr., Shell Cr.)							2				4	26	38	46	53	44	45	57	69	54	
American R. (Union Cr., Kettle Cr.)													25	24	31	30	44	36	27	30	
Crow Cr.																19	26	6	9	9	
<u>Rimrock Lake (AD)</u>																					
S.F. Tieton R. * (Bear Cr.)							32			38	167	95	233	177	142	161	144	158	141	190	
Indian Cr. *	29	69	16	35	25	39	69	123	142	140	179	201	193	193	212	205	226	117	100	101	
<u>Bumping Lake (AD)</u>																					
Deep Cr. *						17	15	84	78	45	12	101	46	126	98	107	147	51	120	57	
<u>N.F. Teanaway River (F/R)</u>																					
NF Teanaway/DeRoux Cr. *													2	0	0		0	0	0		
<u>Kachess Lake (AD)</u>																					
Box Canyon Cr.	5	4	3	0	0	0	5	9	5	4	11	4	8	10	16	17	10	14	15	8	
Kachess R (upper) *															0		15	14	0	16	
<u>Kecchelus Lake (AD)</u>																					
Gold Cr.	2	2	21	15	12	3	11	16	14	11	16	13	51	31	36	40	19	15	31	9	
<u>Cle Elum Lake (AD)</u>																					
Cle Elum R. (upper) *																	0	0	0	0	
<u>Summary</u>	36	75	40	50	37	59	134	232	239	247	403	446	602	615	593	630	704	504	548	501	

* Incomplete survey; index area not fully defined or adequately monitored: Yakima R. 2000-2001, M.F. Ahtanum 1996-2001, S.F. Ahtanum 2000, Rattlesnake 1990-1995, S.F. Tieton 1990-1993, Indian 1984-1987, Deep 1989-1990, N.F. Teanaway 1996-2002, Kachess 1998, Cle Elum 2000-2001.

Redds in small tribs (parenthesis) included in total stream count.

From: "brandonr@yakama.com" <brandonr@yakama.com>
To: "Bob Tuck (ykfpforwarder)" <salmon@fishdist.ykfp.o...>
Date: Fri, Feb 28, 2003 3:50 PM
Subject: Ahtanum BT

Ahtanum bulltrout specifics:

Date 2/28/03

Time 9:45am

Length 250

Weight 177.4

Caught in the Ahtanum rotary screw trap (5ft) which is locate in the NE1/4 NE1/4 sec12 T12 R18, 100 yards upstream from Goodman Rd. 2.3 miles up Ahtanum creek.

Surveyors were:

Brandon Rogers

Leon Ganwelas

David Reyes

Vernon Smartlowit

Bob, we have caught 42 steelhead so far this year. This time last year we had caught 18.

Pictures in electronic format.

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Table A-3. Historical and present distribution of bull trout in the Yakima subbasin (updated and modified from Goetz, 1989). (R = Resident, F = Fluvial, F/R = Fluvial/Resident, AD = Adfluvial). (NOTE: Last Year Present refers to the latest year their presence was officially recorded).

Lake or Stream	Last Year Present	Last Year Checked
*Yakima River (Benton Co) (F)	1997 (1)	2003
Yakima River (Yakima Co)(F)	2003	2003
Satus Cr.	1953 (2)	1991
* Ahtanum Creek (R)	2003	2003
N.F. Ahtanum Cr.	2003	2003
Shellneck Cr.	2003	2003
M.F. Ahtanum Cr.	2003	2003
S.F. Ahtanum Cr.	2003	2003
* Naches River (F)	2003	2003
Cowiche Cr.	2002	2002
Tieton R.	2003	2003
Oak Cr.	1999	1999
Rattlesnake Cr.	2003	2003
N.F. Rattlesnake Cr.	1996	1996
Hindoo Cr.	1995	1996
Dog Cr.	1996	1996
Little Wildcat Cr.	2003	2003
Milk Cr.	1996	1996
Bumping R. (Lower)	2003	2003
American R.	2003	2003
Kettle Cr.	2003	2003
Timber Cr.	1993	1993
Union Cr.	2003	2003
Little Naches R.	1998	1998
Crow Cr.	2003	2003
Quartz Cr.	1998	1998
Pileup Cr.	1998	1998
* Rimrock Lake (AD)	2003	2003
S.F. Tieton R.	2003	2003
Short and Dirty Cr.	1994	1994
Spruce Cr.	1996	1996
Grey Cr.	1994	1994
Bear Cr.	2003	2003
Indian Cr.	2003	2003
N.F. Tieton R. (Lower)	2003	2003
Clear Lk.	1993	1994
N.F. Tieton R.(Up.)	1996	1996
Dog Lk	1950 (2)	1990

Table A-3 (continued). Historical and present distribution of bull trout in the Yakima subbasin (updated and modified from Goetz, 1989). (R = Resident, F = Fluvial, F/R = Fluvial/Resident, AD = Adfluvial). (NOTE: Last Year Present refers to the latest year their presence was officially recorded).

Lake or Stream	Last Year Present	Last Year Checked
* Bumping Lake (AD)	2003	2003
Deep Cr.	2003	2003
Bumping River (Upper)	1994	1994
* Yakima River (Kittitas Co.) (F)	2001	2001
Coleman Cr.	1970	1984
Swauk Cr.	1993	1999
Easton Lake	2000	2000
* N.F. Teanaway R. (F/R)	2003	2003
Jack Cr.	1997	1997
Jungle Cr.	1997	1997
DeRoux Cr.	2001	2001
* Cle Elum Lake (AD)	1993	1993
Cle Elum R. (Upper)	2003	2003
Cooper Lake	2003 (3)	2003
Waptus Lake	1997	1998
* Kachess Lake (AD)	2003	2003
Box Canyon Cr.	2003	2003
Kachess R. (Upper)	2003	2003
Mineral Cr.	2003	2003
* Keechelus Lake (AD)	2003	2003
Rocky Run Cr.	1983	1983
Gold Cr.	2003	2003

- (1) A single fish captured near Benton City by WDFW biologists (extreme rare occurrence).
- (2) This record possibly species mis-identification (brook trout).
- (3) A single fish reported by angler/biologist.

From: James L. Cummins
To: Eric Anderson
Date: Wed, Aug 27, 2003 4:38 PM
Subject: Union CR/American R bull trout survey

This is for your file. Today, August 27, I walk all of Union Creek and a short distance of the American River below Union Creek.

There were no bull trout staging in the American River in the pool about 400 - 500 feet below the confluence with Union Creek. I counted 21 adult bull trout in this pool, which is located below a cabin, on August 31, 2001. I believe that I saw more fish the previous year at an earlier date, but can't find any record.

Today there were two spinners in the bottom of the pool, one with treble hooks, one not retrieved, that indicate that people are fishing here, possibly for bull trout, or perhaps chinook. There are a number of chinook redds from Union Creek down to this pool, and several chinook carcasses.

I saw one bull trout redd about 300 feet below the highway 410 bridge. No redds, but 4 or 5 bull trout were observed in Union Creek from the bridge to the falls. They were in the 17-20 inch range.

There is a place about 300 feet below the highway bridge where we can set a trap. The above mentioned bull trout redd was just below this area.

I counted 5 definite and 1 probable redds and 6 adult and 1 sub-adult bull trout in Union Creek on August 31, 2001, so they do start spawning in August.

2
0
0
3

From: James L. Cummins
To: Eric Anderson
Date: Mon, Oct 6, 2003 8:50 AM
Subject: Union Cr/American R BLC spawning survey

Mike Mizell and I walked Union Cr and the Upper American River (below Mesatchee Cr) on Sept 11, 2003.

Union Cr ←
Old Redds New Redds
def 17 5
prob 1 1
pos 1* 1

Total redds, including prob's are 24.

*one old pos was changed to new def

We observed two adult BLC in Union Cr above our trap.

→ We saw no redds on the American R and 1 adult BLC. You have the remaining data for the upper American. I recall that you walked upriver to meet us and found a redd or two.

2
0
0
3

From: "Stephen Croci" <scroci@pn.usbr.gov>
To: <ANDEREA@dfw.wa.gov>, <CUMMIJLC@dfw.wa.gov>
Date: Mon, Sep 15, 2003 9:20 AM
Subject: Re: Fwd: WDFW Weir on Crow Creek to Capture Post-spawn BullTrout

Glad to see you are up and running, and catching fish!!!

Couple of updates:
 Deep creek 2nd pass new redds:
 24 def
 6 prob
 11 poss

9/08/03

old redds:
 12 def
 3 prob
 1 poss

Numers seem a little low and parts of the creek are still dry.

The agreement between Reclamation and WDFW for fish passage in reservoir tributaries is official. Therefore there is money to fix passage probles in the inundation zones. We're watching most ever creek right now and all but Gold look OK. Ted C. is your contact.

Were going to SF Tieton, Indian and Deep this week.

See ya and catch and tag more fish!
 >>> "Eric Anderson" <ANDEREA@dfw.wa.gov> 09/15/03 08:58AM >>>
 FYI

2	□
0	□
0	□
3	

9-11-03

1400 - 1500 Hrs.

American R. - Mesatchee Cr. Trail
crossing @ American R. to
First access Rd past Lodgepole
Campground / American R. Bridge

J. Cummins / M. Mizell

E. Anderson / M. Tuttle

H₂O Temp. 47°F

1st Pass - No old redds

New Def. 1111 (4)

Fish 111 (3)

All fish were loose - not
on or near redds.
Spawning appears to be
complete.

2003

9-5-03

1415 Hrs

Kettle Cr. - mouth to upstream
≈ 1 mile.

E. Anderson, M. Mizell, M. Tuttle

H₂O Temp, 49°F

New Det. 1

New Pro.

New Pos

Fish φ

End 1450 Hrs

Two bulls in American below
Kettle, appear to be staging.
Surveyed most of index except
last ¼ mile.

2003

9-11-03 1250 Hrs,
Kettle Cr. - mouth to upstream
≈ 1 mile.

E. Anderson, M. Tuttle

H₂O Temp. 47° F

Old Det. 1

" Pro. -

" Pos. -

New Det. 1

" Pro. -

" Pos. -

Fish 11

* Possible barrier ≈ 1/3 mile from
mouth. Log jam / debris trap
has created ≈ 3-4' vertical
falls.

← No barrier →

* 1 Redd above this with
fish on it ~ so this is not
a barrier.

End Survey 1355 Hrs.

9-5-03 1214 Hrs.

Union Cr. Falls to $\frac{1}{4}$ mile below
Union in American

E. Anderson, M. Mizell, M. Tuttle

H₂O Temp. 50°F

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

New Pro.

New Pos. ||

Fish ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~

End 1330 Hrs.

Active spawning, appears to be
near peak. No fish or redds
observed in American below Union.

American River - access Rd near
Lodgepole Cam Ground to Musatche
cr. Trail Head ; Did not
do on this date 9-5-03
Used to do next week.

Union Creek Bull T. Redd count.

Oct. 2, 2003

E. Anderson

Old Def. ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ || (22)

Old Pro. ~~||~~ 2 old Pro. changed
to New Def.

New Def. - || (2) ↓

1

Kettle Creek

Old Def. || (2)

New Def. ∅

2

American R. (From access Rd. above

Lodgesport C.G. to Magatchee Cr.

T.H.)

Old Def. |||| (4)

New Def. ∅

3

From: "William Meyer" <meyerwrm@dfw.wa.gov>
To: "Perry Harvester" <HARVEPJH@dfw.wa.gov>
Date: Tue, Apr 1, 2003 7:59 AM
Subject: Box Canyon drought flume and Kachess River observations

Hey Perry, Thought you might be interested in some recent observations from the Kachess River bull trout population in regards to de-watering and in relation to your previous work in the lakebed at Box Canyon and Indian Creek.

Due to the extreme dry stretch last fall - little or no rain till very late October or mid November, Kachess River stayed dry for 4-5 weeks longer than usual (usual being re-watering the first week or so of October), and as a result the adult bull trout never moved up to spawn. Mark Teske and I walked from the usual spawning reach all the way to the lakebed (Nov. 21) looking for redds and even peered into the edges of the lake, but saw no evidence of fish spawning at the lake's edge. This was within a week of the stream re-watering yet there was no evidence of fish present. I returned Dec. 4th just to make sure we didn't miss something, yet also saw no redds.

So, in short, it seems these guys have some physiological flexibility, but at some point they just can't make a go of it, and probably reabsorb their gametes. We may now know a 4 week delay is too much, but it will be interesting to continue following these populations. I think your acting to aid their movement and minimize migration delay in the past was quite prudent considering their extremely low population levels and the threat de-watering poses. I'll pass on any other similar observations we get in the future. William

William Meyer
WDFW, Habitat Biologist
(509) 933-2491

CC: "Eric Anderson" <ANDEREA@dfw.wa.gov>, "Jim Cummins..."

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

Rattlesnake Cr. bull trout reed survey 2003 1st pass 9.10, 11.20
 Torrella
 Lindhorst
 Muir

			Def	Prob	Pass	fish	Morts	Temp
Trail 1114	to	MJB	9.9	8	2	1	6	52°
MJB	to	Shell	9.9	9	0	4	0	50/133
Shell Cr.	(mouth to 300' above shell ^{9.10} ending)		0	0	0	0	0	50/163
Shell	to	L. Wildcat	9.10	3	0	2	1	47/102
L. Wildcat			9.10	0	2	0	1	47/102
L. Wildcat	to	End of Water (McNeil)	9.10	15	0	1	0	44/102
			32	4	7	7	8	

Weather - overcast thru both days of survey

Fax - 575-2474

1701 5.24th

98902

2
0
0
3

9-29-03

begin 0645 Hrs

Rattlesnake Cr. Index Area

for Bull T. Redd Count

E. Anderson 45.10 F

Trail crossing below MJB to MJB

old Def. III III (8)

old Prob. ~~+~~ cancelled or changed

old Pos. ~~+~~ cancelled or changed

New Def. IIII

Fish ϕ end 100 Hrs.

observed ~~1~~ dozen 8-13" CT

in pool

MJB to shell creek 1100 Hrs.

old Def. III IIII

old Pro.

old Pos. ~~+++~~ cancelled or changed

New Def. IIII

ϕ Fish

Carcass of bull t. (14-16")

end 1340 Hrs.

From: James L. Cummins
To: Eric Anderson
Date: Wed, Oct 1, 2003 9:36 AM
Subject: Rattlesnake Creek Survey

Here are the results of my part of our (9/29/03) Rattlesnake Creek Survey.

→ Shell Creek.
 No old or new redds

Rattlesnake Creek- Shell Creek to Little Wildcat Creek

	Old Redds	New Redds	Totals
def	3	3	6
prob	0	0	0
pos	2	0	-

→ Rattlesnake Creek - Little Wildcat Creek to dry area

	Old Redds	New Redds	Totals
def	14*	3	17*
prob	0	0	0
pos	1	0	-

* I may have missed one old def redd. Gary Torretta reported 15 so the total may be 18.

→ Little Wildcat Creek

	Old Redds	New Redds	Totals
def	0	3	3
prob	*	0	0
pos	2	2	-

* 2 old reported but I deleted them.

There was a total of 26 redds (def + Prob) in the sections that I surveyed.

I did not see any bull trout, and no mortalities. I saw one fish, probably a cutthroat. I am surprised that I didn't see a few more cutthroat.

We left Yakima at 5 am, and returned by about 6:45 PM. I hiked the Burnt Mtn Trail from 6:50 am until 8:27 am to Shell Creek, walked Shell Creek, then walked Rattlesnake Creek from 8:56 - 12:00, then returned downstream below the trail crossing and completed a short section (15 minutes) of Rattlesnake Creek (split channel). I walked up Little Wildcat Creek from 12:48 - 13:50 PM and was back to the intersection of Burnt Mtn and Rattlesnake Creek trail about 2:30 PM.

CC: John Easterbrooks

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From: James L. Cummins
To: Eric Anderson
Date: Wed, Oct 1, 2003 9:36 AM
Subject: Rattlesnake Creek Survey

Here are the results of my part of our (9/29/03) Rattlesnake Creek Survey.

1

Shell Creek.
 No old or new redds

2

Rattlesnake Creek- Shell Creek to Little Wildcat Creek

	Old Redds	New Redds	Totals
def	3	3	6
prob	0	0	0
pos	2	0	-

128
 126
 54

3

Rattlesnake Creek - Little Wildcat Creek to dry area

	Old Redds	New Redds	Totals
def	14*	3	17*
prob	0	0	0
pos	1	0	-

* I may have missed one old def redd. Gary Torretta reported 15 so the total may be 18.

4

Little Wildcat Creek

	Old Redds	New Redds	Totals
def	0	3	3
prob	*	0	0
pos	2	2	-

* 2 old reported but I deleted them.

There was a total of 26 redds (def + Prob) in the sections that I surveyed.

I did not see any bull trout, and no mortalities. I saw one fish, probably a cutthroat. I am surprised that I didn't see a few more cutthroat.

We left Yakima at 5 am, and returned by about 6:45 PM. I hiked the Burnt Mtn Trail from 6:50 am until 8:27 am to Shell Creek, walked Shell Creek, then walked Rattlesnake Creek from 8:56 - 12:00, then returned downstream below the trail crossing and completed a short section (15 minutes) of Rattlesnake Creek (split channel). I walked up Little Wildcat Creek from 12:48 - 13:50 PM and was back to the intersection of Burnt Mtn and Rattlesnake Creek trail about 2:30 PM.

CC: John Easterbrooks

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Bull Trout Spawning Ground Survey Data Form

Stream: Rattlesnake Creek

Date: 9.9 and 9.10 2003 1st Pass

Location: lower 1114 trail crossing to M. Neil Creek, L. Wildcat, Shell Creeks

Water Temp.: 44°F - 52°F

Investigator: Torretta, Lindhorst, Muir

Start Time: 9.9.03 @ 1330 - 1730

End Time: 9.10.03 @ 0900 - 1300

Redds:	New	Old
Definite:	<u>32</u>	
Probable:	<u>4</u>	
Possible:	<u>7</u>	

Bull Trout Observed:

Adults: 07

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc):

8 mortalities seen. Fish ranged from 8" to 18". This appears much higher than what was observed last year.

All mortalities were of spawning size except one 8" fish

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RECEIVED
STATE OF WASHINGTON
SEP 16 2003
DEPT. OF FISH AND WILDLIFE
YAKIMA OFFICE

Rattlesnake Cr. bull trout reced survey 2003 1st Pass 9.10, 11.02

Torrelta
Lindhorst
Muir

			Def	Prob	Pass	Fish	Morts	Te	
Trail 1114	to	MJB	9.9	8	2	1	6	0	52
MJB	to	Shell	9.9	9	0	4	0	5	50/13
Shell	Cr.	(mouth to 300' above trail X-ing)	9.9	0	0	0	0	0	50/10
Shell	to	L. Wildcat	9.10	3	0	2	1	0	47/10
L. Wildcat			9.10	0	2	0	0	1	47/10
L. Wildcat	to	End of Water (McNeil)	9.10	15	0	1	0	2	44/10
			32		4	7	7	8	

Weather - overcast thru both days of survey

Fax - 575-2474

1701 5. 24th

98902

2003

From: "brandonr@yakama.com" <brandonr@yakama.com>
To: Eric Anderson <ANDEREA@dfw.wa.gov>
Date: Tue, Dec 9, 2003 7:54 AM
Subject: SF Ahtanum Bulltrout

Eric, we saw 7 definite redds this year. We made 5 passes from 9/3 to 10/1. What did you find in the MF and NF?

Brandon

CC: Tom McCoy <tmccoy@yakama.com>

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N. F. Antanum Cr.

10/1/03

Grey Rock → Shellneck

Eric Anderson

43.5°F

1130Hr.

6-8 CT observed in pool.

New Det. Redds

11

(2)

old " "

11

(2)

old Prob.

1

(one)

Shellneck Creek

Jim Cummins

old Det. Redds

~~11~~

(5)

New " "

1

(one)

old Prob.

1

(one)

10/3/03

M. F. Ahtanum
E. Anderson

New Reeds 11 (2)
old Det Reeds 141 (5)

old Prob. 1 (one)

No transect location or
Temperature data indicated

From: James L. Cummins
To: Eric Anderson
Date: Fri, Sep 5, 2003 4:25 PM
Subject: NF Ahtanum Cr

.25

I walked from Gray Creek Trailhead parking lot to Shellneck Creek, and Shellneck Creek for about 1/2 mile.

There are two definite bull trout redds in N. F. Ahtanum, less than 1/4 mile below Shellneck, both in the same tailout. No fish there. I did not see bull trout in Ahtanum, but plenty of cutthroat adults and fry.

I found five definite redds in Shellneck, one right at the confluence with N. F. Ahtanum. I ate lunch and watched the redd and fish. Although there were 3 fish on the redd when I first spotted it, after watching it for 1/2 hour, I found that there were 5 fish, most in the 12-13 inch range, one maybe 14, and one little 8 inches. Two of the other redds each had one fish (that is all I saw) and I saw one other fish not close to a redd, so I counted at total of 8 fish. Fish are actively spawning today.

We could probably trap 5 fish as they move out of Shellneck Creek, but we would likely have to trap next week. Also, they are on the small side for our tags.

I saw no cows and no sign that cows have been in the creek bottom or below the fence. Water flows appear to be about normal, and of course visibility was excellent. Don't know where the fish and redds are that should be near Snow Cabin Campground and other areas that I walked.

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From: James L. Cummins
To: Eric Anderson
Date: Tue, Sep 23, 2003 8:14 AM
Subject: NF Ahtanum bull trout spawning survey

Yesterday, 9/23/03 I conducted a bull trout spawning survey in North Fork Ahtanum from Gray Creek Trail parking lot to Shellneck Creek and Shellneck Creek.

NF Ahtanum water Temp was 44F at 12:30 PM. Redd Counts:

Old	New
def 2	0
prob 0	1
pos 0	0

Shellneck Creek

Old	New
def 5	1
prob 0	1
pos 0	0

All redds in NF were above Snow Cabin Campground.

No bull trout were observed. Several cutthroat and salmonid fry were observed.

There were no cattle and no sign of recent cattle in the riparian zone or below the fence.

CC: John Easterbrooks

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From: James L. Cummins
To: Eric Anderson
Date: Tue, Sep 23, 2003 11:19 AM
Subject: MF Ahatanum Bull Trout Spawning Survey

I conducted a bull trout spawning survey at Middle Fork Ahtanum Creek from Tree Phones CG down river about 2.1 road miles on ~~9/21~~₁₉/03.

The water temperature was 43 F. at 10:05 AM when I started the survey. The survey ended at 1:45 PM.

Redds
def -5
Prob - 1
Pos - 1

No bull trout were observed.

CC: John Easterbrooks

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From: James L. Cummins
To: Eric Anderson
Date: Fri, Sep 5, 2003 4:25 PM
Subject: NF Ahtanum Cr

I walked from Gray Creek Trailhead parking lot to Shellneck Creek, and Shellneck Creek for about ½ mile.

There are two definite bull trout redds in N. F. Ahtanum, less than 1/4 mile below Shellneck, both in the same tailout. No fish there. I did not see bull trout in Ahtanum, but plenty of cutthroat adults and fry.

I found five definite redds in Shellneck, one right at the confluence with N. F. Ahtanum. I ate lunch and watched the redd and fish. Although there were 3 fish on the redd when I first spotted it, after watching it for ½ hour, I found that there were 5 fish, most in the 12-13 inch range, one maybe 14, and one little 8 inches. Two of the other redds each had one fish (that is all I saw) and I saw one other fish not close to a redd, so I counted at total of 8 fish. Fish are actively spawning today.

We could probably trap 5 fish as they move out of Shellneck Creek, but we would likely have to trap next week. Also, they are on the small side for our tags.

I saw no cows and no sign that cows have been in the creek bottom or below the fence. Water flows appear to be about normal, and of course visibility was excellent. Don't know where the fish and redds are that should be near Snow Cabin Campground and other areas that I walked.

2	□
0	□
0	□
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From: "William Meyer" <meyerwrm@dfw.wa.gov>
To: "Eric Anderson" <ANDEREA@dfw.wa.gov>, "Jeff Thomas...
Date: Thu, Nov 6, 2003 6:32 PM
Subject: 3rd Pass at Kachess River

Eric/Jeff - Below are my notes for the 3rd survey at Kachess River. Water is still high enough for passage to the reservoir, but its dropping, and there are at least 15 fish still in the system that might get stranded like Eric and I found a couple years ago. A couple fish still on redds. So, I may contemplate doing another pass. William

PS - I'll fill out the survey form and send it along soon. Wm

Survey Type: 3rd Pass BT redd survey
Observer: William Meyer
Weather: Sunny, cold (~29°F), calm, with 2 inches of recent snow on the ground.
Stream Temp: 2°C

Narrative: Walked the trail to the lake bed, and then proceeded to the confluence with the lake to look for fish or redds or kokanee. There were a few skinny spots of water, but it still looks passable at this point - although I could see where the level is dropping by the ice formations. Walked up the spring channel on the lakebed to look for kokanee and didn't see a single fish.

First two adults observed were holding in two pools ~300m below where the old road comes into the creek. Third adult was ~200m below the trail crossing sitting in a sunny, still, shallow pool. 4th adult holding in shallows just below the confluence of Mineral/Kachess. 5th adult holding still in the shallow margin of the stream. 6th adult holding in pool just below the log jam in Kachess River. 7th adult was a dead female partially spawned out with some otter bites out of her (the other dead female from last weeks survey was gone). She measured ~23" long and looked in fine shape otherwise... I cut her open to check spawning condition and took a small fin clip for genetics. 8th adult resting in the shallow margins - easy to see why the otters are here! 9th adult resting in shallows. 10th and 11th adults paired on a redd (so I flagged it). 12th adult resting in shallows. 13th and 14th adult on a definite redd. Plus 3 new definite redds, 0 fish present. Plus 1 redd with 1 fish present. And finally, a Probable redd with 0 fish present.

Most of the adult fish observed were sitting in the shallow margins of the stream, often with their fins sticking out of the water - they appeared to be resting after the big spawning event. I observed what I thought were two males sparring a bit - one male was biting the other males caudal peduncle and giving him the "what for" shake.

Also, saw some bobcat tracks near the trail crossing and two sets of cougar tracks in the upper Kachess canyon (mother and yoy).

Redd Summary: 6 new definite redds + 1 new probable redd + 9 old definites = 16 redds to date.
Fish Summary: 15 fish observed present, one of which was dead.

William Meyer
WDFW, Habitat Biologist
(509) 933-2491

CC: "Paul W. James" <JamesP@cwu.edu>, "Steve Croci" <S...

Bull Trout Spawning Ground Survey Data Form

Stream: Kachess River , Third pass

Date: November 6, 2003

Location: Lake to Falls

Water Temp.: 2°C

Investigator: William Meyer (WDFW)

Start Time: 0915

End Time: 1430

Redds:	New	Old
Definite:	<u>6</u>	<u>9</u>
Probable:	<u>1</u>	<u></u>
Possible:	<u></u>	<u></u>

Bull Trout Observed:

Adults: 15

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): Weather: 29°F , sunny, 2 inches fresh snow on the ground. Water visibility was excellent. Observed one adult BT mortality - female (new) – apparently from an otter by the bite marks. Walked to the lake to check flows and look for kokanee, flow was connected to the lake, although skinny in places. No kokanee were observed. Observed 15 adults total (including the mort.) in the upper watershed, and most fish were sitting absolutely still in the shallow margins of the upper Kachess River. There were still two sets of fish on redds, but one set appeared to be two males fighting. The probable redd was just below the trail crossing log jam in good flow and gravels. Observed two sets of fresh cougar tracks in the snow near the stream.

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From: "William Meyer" <meyerwrm@dfw.wa.gov>
To: "Eric Anderson" <ANDEREA@dfw.wa.gov>, "Jeff Thomas..."
Date: Tue, Oct 28, 2003 6:20 PM
Subject: 2nd Kachess River redd survey notes

Hi Eric/Jeff, Here are the notes from the survey Rebecca Wassell, Jeff, and I completed today... interesting stuff, and a good day.

Survey Type: Bull Trout redd survey - 2nd Pass

Survey Location: Kachess River Index Area (Trail crossing to barrier falls)

Observers: Jeff Thomas, William Meyer, Rebecca Wassell

Weather: Cool (~50°F), cloudy and light rain at the beginning, with heavy rain near the end. A cold front is expected to follow tomorrow and drop the freezing level down to 1000-2000ft, with 3-7inches of snow expected on the pass.

Stream Temperature: 8°C

Narrative: We began the survey ~10:35am and walked from the trail crossing to the confluence, up Kachess River to the barrier falls, returned to the confluence and walked Mineral Creek to the barrier, before returning to the truck. A large weather front moved in during our survey and the rains increased as we completed the survey. Lots of alder leaves were falling due to the winds and rain during the survey. We observed a possible redd with a small fish (12") attending ~50m below the confluence on left bank - we returned later and didn't observe any fish at the site and removed this flag. Just upstream of this location -20ft - we observed a dead ~25 inch female bull trout that appeared to have been 1/2 eaten by an otter. We observed several eggs in the abdominal cavity and later collected the head for genetics and ageing. The fish had a single small barbed hook stuck in its throat with ~12-14 inches of leader sticking out of the mouth. The hook was moderately rusted, and had probably been in the fish for several months. Just upstream of the carcass we discovered and flagged a definite redd.

We proceeded up the Kachess River from the confluence and observed two new definite redds with a single fish attending, adjacent to a redd we had observed last week. We found another definite redd with 1 fish on and another fish nearby a bit below the log jam. We also observed another single fish holding in this area. Ate lunch at the log jam (12:10) and proceeded upstream. Observed: 2 fish on a definite redd above the log jam; 1 large female on a definite redd with a 6" fish attending; 2 large fish on gravel - but no redd yet evident; 2 large fish paired ~75m below the falls - no redd yet; 2 large fish paired in still pool - no redd yet; 2 fish on definite redd in the last big pool below the falls (50m below); 2 fish in falls pool - 1 big and 1 small (8 inches) - no redd yet; plus another four single fish in the falls or vicinity. Of these four single fish, we observed 2 fish jumping up the lower end of the falls to the last pools reachable below a logjam barrier directly below the 40ft waterfalls. We reached the falls ~1pm.

We returned to the confluence and walked up Mineral Creek to a barrier log jam ~100m below the 40 ft barrier falls. We didn't observe any fish or redds in this reach. Returned to the confluence and re-inspected the 1st possible redd, but decided to remove the flag after revisiting the site and seeing no fish. Also collected the dead BT's head at this point. Finished the survey ~2:30pm.

This is the first time we have observed adult fish in this system move above the small logjam falls (around half way to the barrier falls from the confluence), and as in other systems, they moved about as far upstream as possible.

Total Fish observed: 23 alive + 1 dead

Total redd count: 7 new definite redds, plus two old definite redds for a total of 9 definite redds to date this season.

William Meyer
WDFW, Habitat Biologist
(509) 933-2491

CC: "Paul W. James" <JamesP@cwu.edu>, "Rebecca Wassell..."

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Bull Trout Spawning Ground Survey Data Form

Stream: Kachess River , First Pass

Date: October 22, 2003

Location: Mouth-to- Falls

Water Temp.: 8.5 – 9.0 degrees C

Investigator: Jeff Thomas (USFWS), William Meyer (WDFW)

Start Time: 1025 hours

End Time: 1325 hours

Redds: New Old

Definite: 2 _____

Probable: _____

Possible: _____

Bull Trout Observed:

Adults: 2 on each redd (4 total), 13 additional

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc): Weather: partly cloudy, approx. 60 degrees F. Water visibility was excellent. The river had reconnected, probably a week or so previous, as the result of significant rainfall. There was substantial discharge estimated at 120-140 cfs (below the Kachess/Mineral fork) . We went to the mouth primarily out of curiosity- to assess conditions at the mouth and to see if any kokanee had begun to move in to spawn (they had not). Two of the bull trout observed were seen below the Kachess/Mineral fork although there certainly could have been others that would have gone easily undetected due to the high flows and presence of multiple channels in places. The rest of the fish, and the two redds, were observed in the Kachess River above the fork with 10 of these holding in the pool below a cascade which marks the uppermost boundary where fish and redds have been observed in the past. No fish or redds were observed from this location to the falls. We did not survey Mineral Creek. We will survey again next week.

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From: "William Meyer" <meyerwrm@dfw.wa.gov>
To: "Eric Anderson" <ANDEREA@dfw.wa.gov>
Date: Wed, Oct 22, 2003 5:24 PM
Subject: Kachess River BT redd survey field notes

Hey Eric, Jeff and I did a complete survey of the Kachess River system today (October 22, 2003) and the system is well watered and connected and we observed 17 fish with 2 redds. Below are my detailed field notes, and Jeff will fill out a redd survey form. William

Survey: Bull Trout redd survey

Surveyors: William Meyer WDFW, Jeff Thomas USFWS

Location: Kachess River - from reservoir to barrier falls.

Weather: Foggy in a.m. with high overcast, high humidity and relatively warm for October (~55-60°F).

There had been very recent rains and water was still draining down the trails.

Stream Temperature: 9°C

Narrative: We hiked the trail down to the reservoir bed, then walked along the stream through the reservoir bed to near its mouth. No sign of kokanee either in this lower section, or in the small seep stream in the reservoir bed. Next we walked the main channel upstream towards the trail crossing. All three channels at the end of the forest were connected and flowing.

We observed one adult bull trout in the main channel near where the old road from the parking area intercepts the river. Another adult bull trout was observed ~1/2 way between the trail crossing and the "Y" of Kachess River/Mineral Cr. - not far above the old redd flag. We saw 2 fish on a definite redd just below the first small log jam (~200m upstream of the confluence). A second pair of fish was observed actively digging a redd another ~200m upstream of the first pair, in a spot that had a redd in years past. We observed another single female holding in a pool a little below the big log jam pool, and at the big log jam pool we observed 10-11 fish holding. As in the past, we saw no fish above this second larger log jam and I suspect it is likely a partial to full barrier in its current configuration. We then walked to the barrier falls and returned to the truck. In all, we observed 17 fish and 2 redds.

We'll plan on returning next week to do the second survey.

William Meyer
WDFW, Habitat Biologist
(509) 933-2491

CC: "Jeff Thomas" <JThomas@pn.usbr.gov>

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Bull Trout Spawning Ground Survey Data Form

Stream: Kachess River , First Pass

Date: October 22, 2003

Location: Mouth-to- Falls

Water Temp.: 8.5 – 9.0 degrees C

Investigator: Jeff Thomas (USFWS), William Meyer (WDFW)

Start Time: 1025 hours

End Time: 1325 hours

Redds: New Old

Definite: 2 _____

Probable: _____

Possible: _____

Bull Trout Observed:

Adults: 2 on each redd (4 total), 13 additional

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc): Weather: partly cloudy, approx. 60 degrees F. Water visibility was excellent. The river had reconnected, probably a week or so previous, as the result of significant rainfall. There was substantial discharge estimated at 120-140 cfs (below the Kachess/Mineral fork) . We went to the mouth primarily out of curiosity- to assess conditions at the mouth and to see if any kokanee had begun to move in to spawn (they had not). Two of the bull trout observed were seen below the Kachess/Mineral fork although there certainly could have been others that would have gone easily undetected due to the high flows and presence of multiple channels in places. The rest of the fish, and the two redds, were observed in the Kachess River above the fork with 10 of these holding in the pool below a cascade which marks the uppermost boundary where fish and redds have been observed in the past. No fish or redds were observed from this location to the falls. We did not survey Mineral Creek. We will survey again next week.

2	<input type="checkbox"/>
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Bull Trout Spawning Ground Survey Data Form

Stream: Waptus River

Date: October 15, 2003

Location: Mouth to impassable falls at Hour Creek camp

Water Temp.: 7.5 degrees C

Investigator: Jeff Thomas and Steve Mallas (USFWS)

Start Time: 0910 hours

End Time: 1155 hours

Redds: New Old

Definite: None _____

Probable: None _____

Possible: None _____

Bull Trout Observed:

Adults: None

Sub-adults: None

Juveniles: None

Comments (mortalities, tagged fish, H2O visibility, etc): This was intended to be a one-time survey this year and after seeing the reach both during our presence/absence work this summer and on this survey I do not believe further surveys are necessary. Spawning size gravels for bull trout, even larger adfluvial life forms, are virtually non-existent in this reach of the Waptus River. The reach is mostly high gradient, consisting of riffle and pocket-water habitats with some steep cascades that dump into deep pools. Bedrock, boulders (all sizes) and large cobbles are the predominant substratum material. This is not spawning habitat! One other note: the walk (in some cases climb) upstream was grueling but we finished in two hours and forty-five minutes which surprised the heck out of us. Although the reach has been reported to be seven river miles, I seriously doubt it is that long. Steve Mallas is going to map it out and attempt to ascertain the correct distance. I'm guessing it is closer to five river miles, possibly less.

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Bull Trout Spawning Ground Survey Data Form

Stream: Upper Cle Elum River (Fnal Pass)

Date: 11/6/03

Location: Fortune Creek to Tucquala 2.9 miles

Water Temp.: 3 degrees C (Fortune Ck. Reach)

Investigator: Jeff Thomas (USFWS)

Start Time: 0945 hrs (Fortune Creek Reach)

End Time: 1200 hrs (Fortune Creek Reach). 1200 hrs

<u>Redds:</u>	New	Old
Definite:	<u>No redds observed</u>	_____
Probable:	_____	_____
Possible:	_____	_____

Bull Trout Observed:

Adults: No fish of any life stage observed

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc.: Weather was sunny, 38 degrees F. Water clarity was on the poor side. After completing the lower reach I hiked into the beginning of the Hyas Lake reach but found the water clarity to be very poor. Decided a survey would be useless under those conditions. This is the last trip this season to the upper Cle Elum. Once again, no redds or bull trout were found during the course of the surveys.

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Bull Trout Spawning Ground Survey Data Form

Stream: Upper Yakima River (Second Pass)

Date: 10/20/03

Location: Crystal Springs Reach

Water Temp.: 13.5 degrees C

Investigator: Steve Croci (USFWS), Scott Kline (USBR), Steve Mallas (USFWS)

Start Time: 1000 hrs

End Time: 1300 hrs

Redds: New Old

Definite: None

Probable: None

Possible: None

Bull Trout Observed:

Adults: None

Sub-adults: None

Juveniles: None

Comments (mortalities, tagged fish, H2O visibility, etc: Weather was hideous(raining hard) and water clarity was very poor. Area around Crystal Springs was checked but lower portion of Keechelus-to-Easton reach was not attempted. Hope to get to the upper Yakima one more time the week of November 10 if weather will permit.

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Bull Trout Spawning Ground Survey Data Form

Stream: Upper Yakima River (Third Pass)

Date: 11/13/03

Location: Crystal Springs Reach

Water Temp.: 6 degrees C

Investigator: Jeff Thomas (USFWS)

Start Time: 1930 hrs

End Time: 1300 hrs

Redds: New Old

Definite: None _____

Probable: None _____

Possible: None _____

Bull Trout Observed:

Adults: None

Sub-adults: None

Juveniles: None

Comments (mortalities, tagged fish, H2O visibility, etc: Weather: Cloudy, 40 degrees F. Water Temp: 7 degrees C. Water Clarity: Good. Crystal Springs reach was surveyed but lower portion of Keechelus-to-Easton reach was not attempted. I could not get any assistance. BT redd surveys in the upper Yakima are problematic. We lucked out in 2001 when we were fortunate enough to see fish on redds because if you do not, an observed redd cannot be classified as anything but "possible" given the presence of spring chinook in the reach. This local population does not appear to be comprised of many individuals. I believe that next year we should consider doing some night snorkeling in some select areas (probably in early October) to see if we can observe bull trout (both adults and juveniles).

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Bull Trout Spawning Ground Survey Data Form

Stream: YAKIMA RIVER 2nd pass

Date: 10/20/03

Location: Keechelus to Easton (upper section only see comments) ^{crystal springs area only}

Water Temp.: 52° F @ 11:00 am

Investigator: Croci + Mullus (USFWS), Willey (USBR), + Meyer (WDFW)

Start Time: 9:45 am

End Time: 11:30 am

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:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): Rain, low light, + slightly turbid water made survey conditions poor. The area upstream of the power lines, + above + below Crystal Springs road were surveyed. The longer down stream stretch was not surveyed due to poor conditions.

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Deep Creek 1st Pass

Date: _____

Location: She

Water Temp.: _____

Investigator: _____

Start Time: _____

End Time: _____

Redds: New Old

Definite: _____

Probable: _____

Possible: _____

Bull Trout Observed:

Adults: _____

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc): _____

Jim Cunniff may have filled out data sheets.

To avoid duplication attached is an email message

from Jim.

RECEIVED
STATE OF WASHINGTON
NOV 05 2003
DEPT. OF FISH AND WILDLIFE
YAKIMA OFFICE

From: "James L. Cummins" <CUMMIJLC@dfw.wa.gov>
To: "Eric Anderson" <ANDEREA@dfw.wa.gov>
Date: 9/2/03 8:29AM
Subject: Deep Cr BLC/Gold Hill Lake

Steve Croci, Scott Windel and I completed a bull trout spawning survey on Friday, August 29. Scott and I started at the culvert and walked up to Copper Creek. Steve walked from Copper Cr. to the falls.

There was a 1/4 mile section of dry creek bed above Copper Creek. Passage by the rock slide area was marginal, but we did see one fish not to far below Copper Creek and one redd in that area.

Water Temp was 46 F in above the culvert and Steve got 44 F above Copper Creek.

Culvert to Copper Creek

Def Redds 7 Adult BLC 4, Sub-adult 1, 1 mort. 6"
 Prob 2

1

Cooper Creek to Falls

Def Redds 4 No fish
 Prob 1
 Pos 1

2

Culvert to Lake

Def Redds 1 No fish

3

Total 15 def plus prob redds.

That seems a little low, particularly since there don't seem to be many fish around. The fish that we saw were generally not associated with a redd. In other words the redds had no fish on them, except for one.

USBR counter recorded about 178 fish up and 164 down. These are not real numbers because fish evidently swim up and down, and or there are sticks, etc that get counted. Talk with Croci about that if you want more info.

2003

CC: "John Easterbrooks" <EASTEJAE@dfw.wa.gov>

Bull Trout Spawning Ground Survey Data Form

Stream: DEEP CREEK ^{2nd Pass}

Date: 9/8/03

Location: mouth to double culverts

Water Temp.: 7.0

Investigator: WILLET (USBR); Jenny P. (CWA)

Start Time: ≈ 1:00 pm

End Time: ≈ 12:00 pm

Redds:	New	Old
Definite:	<u>9</u>	<u>1</u>
Probable:	<u>1</u>	<u>0</u>
Possible:	<u>3</u>	<u>0</u>

Bull Trout Observed:

Adults: 2 (one tagged)

Sub-adults: 0

Juveniles: 1 (5" long)

Comments (mortalities, tagged fish, H2O visibility, etc):

2 fish on redd on the downstream side of counting weir

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: DEEP CREEK 2nd Pass

Date: 9/8/03

Location: Double culverts to Cooper Creek

Water Temp.: 17°C @ 10:00 am

Investigator: Willey (USBR) Jenny P. (CWW)

Start Time: ~10:00 am

End Time: ~12:00 pm

<u>Redds:</u>	<u>New</u>	<u>Old</u>
Definite:	<u>6</u>	<u>7</u>
Probable:	<u>3</u>	<u>2</u>
Possible:	<u>2</u>	<u>0</u>

Bull Trout Observed:

Adults: 11 Several on Redds

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2
0
0
3

ok

Bull Trout Spawning Ground Survey Data Form

Stream: DEEP CREEK 2nd Pass

Date: 9/8/03

Location: Copper CREEK To Falls

Water Temp.: 7.5°C @ 12:00

Investigator: Karen Lindhorst (USFS) Chyeene (USFS)

Start Time: ~ 10:30 am

End Time: ~ 2:30 pm

Redds:	New	Old
Definite:	<u>9</u>	<u>4</u>
Probable:	<u>2</u>	<u>1</u>
Possible:	<u>6</u>	<u>1</u>

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 3 rescued from pools

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

3rd Pass

Stream: Deep Creek

Date: 9/17/03

Location: Bumping Lake to double culvert

Water Temp.: 42° @ 2:00 pm

Investigator: Croci (USFWS), Nelle (USFWS Leavenworth) Kline USBR

Start Time: 2:00

End Time: 3:00

Redds:	New	includes 1 old possible which is now a New Definite	Old	
Definite:	<u>10</u>		<u>10</u>	21
Probable:	<u>0</u>		<u>1</u>	
Possible:	<u>0</u>		<u>3</u>	one was changed to new definite

Bull Trout Observed:

Adults: 3

Sub-adults: 0

Juveniles: 1

2
0
0
3

Comments (mortalities, tagged fish, H2O visibility, etc): _____

Three old redds built on the downstream side of weir. Next year more flow should be directed through the counting device, to direct fish there & discourage redds from being built on weir. Redds were located where the velocity appeared the same as or higher than the velocity going through the counter.

Bull Trout Spawning Ground Survey Data Form

Stream: Deep Creek 3rd Pass

Date: 9/17/03

Location: Double Culvert to Copper Creek

Water Temp.: 44°F @ 10:00 am

Investigator: Croci (USFWS) ; KLine (USBR)

Start Time: 10:00 am

End Time: 1:00 pm

Redds:	New	Old
Definite:	<u>1</u> <i>this was an old possible</i>	<u>13</u>
Probable:	<u>0</u>	<u>5</u>
Possible:	<u>0</u>	<u>2</u> <i>1 changed to new definite</i>

Bull Trout Observed:

Adults: 1

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc):

area near rock slide is still dry.

2

0

0

3

Bull Trout Spawning Ground Survey Data Form

3rd push

Stream: Deep Creek

Date: 9/17/03

Location: Copper Creek to falls

Water Temp.: -

Investigator: Nelle (USFWS, Leavenworth)

Start Time: 1030 am

End Time: 1:30 pm

Redds:	New	Old
Definite:	<u>1</u>	<u>13</u>
Probable:	<u>0</u>	<u>3</u>
Possible:	<u>0</u>	<u>7</u>

17
20
00
00
3

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc):

Still dry in places

Some confusion on the flagging. New

Bull Trout Spawning Ground Survey Data Form

Stream: INDIAN CREEK 1st Pass

Date: 9/4/03

Location: MOUTH TO NORTH SPRING

Water Temp.: 48° F @ 9:25 am

Investigator: CROCI USFWS; LARSEN USBR

Start Time: 9:25 am

End Time: 11:30 am

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

Bull Trout Observed:

Adults: 0

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc):

1 rather large + 2 small recreational
dams removed below highway 12
bridge. Connection through inundation
zone good.

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

1st Pass

Stream: INDIAN CREEK INDIAN

Date: 9/4/03

Location: NORTH SPRING

Water Temp.: —

Investigator: CROCI, USFWS; LARSEN USBR

Start Time: 11:30 am

End Time: 1:00 pm

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

Bull Trout Observed:

Adults: 7

Sub-adults: 5

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc):

NONE.

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: INDIAN CREEK 1st pass

Date: 9/4/03

Location: NORTH SPRING to FALLS

Water Temp.: —

Investigator: TORRETTA, USFS

Start Time: 10:00 am

End Time: 1:30 pm

Redds:	New	Old
Definite:	<u>9</u>	<u>—</u>
Probable:	<u>3</u>	<u>—</u>
Possible:	<u>2</u>	<u>—</u>

Bull Trout Observed:

Adults: 4

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

1st Page

Stream: INDIAN CREEK

Date: 9/4/03

Location: LOWER SOUTH SPRING

Water Temp.: —

Investigator: TORRETTA, USFS

Start Time: 12:30

End Time: 12:45

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

Bull Trout Observed:

Adults: 0

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2003

Bull Trout Spawning Ground Survey Data Form

Stream: INDIAN CREEK 1st Pass

Date: 9/4/03

Location: UPPER SOUTH SPRING

Water Temp.: —

Investigator: TORRETA, USFS

Start Time: ?

End Time: ?

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

Bull Trout Observed:

Adults: 0

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc): May have lost radio + camera in this area.

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Indian Creek 2nd Pass

Date: 9/18/03

Location: North spring to falls

Water Temp.: 6°C @ 9:15am

Investigator: Willey, USBR

Start Time: 9:15

End Time: 2:00 pm (including south spings)

Redds:	New	observed	Old (from previous count)
Definite:	<u>22</u>	<u>7</u>	<u>(9)</u>
Probable:	<u>8</u>	<u>3</u>	<u>(3)</u>
Possible:	<u>3</u>	<u>1</u>	<u>(2)</u>

Bull Trout Observed:

Adults: 6

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: INDIAN CREEK 2nd Pass

Date: 9/18/03

Location: Upper SOUTH SPRING

Water Temp.: -

Investigator: Willey USBB

Start Time: -

End Time: -

<u>Redds:</u>	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:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): -

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Indian Creek 2nd Pass

Date: 9/18/03

Location: Lower South Spring

Water Temp.: —

Investigator: Willey, USBR

Start Time: —

End Time: —

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

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): —

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Indian Creek 2nd Pass

Date: 9/18/03

Location: North Spring

Water Temp.: —

Investigator: Croci + Nelle, USFWS

Start Time: 12:30

End Time: 12:45

Redds:	New	Old
Definite:	<u>6</u>	<u>3</u>
Probable:	<u>2</u>	<u>0</u>
Possible:	<u>1</u>	<u>0</u>

Bull Trout Observed:

Adults: 9

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2003

Bull Trout Spawning Ground Survey Data Form

Stream: Indian Creek 2nd Pass

Date: 9/18/03

Location: Highway 12 bridge to North Spring

Water Temp.: 45° @ 9:00 am

Investigator: Croci + Nelle USFWS

Start Time: 9:00

End Time: 11:00

Redds:	New	Old
Definite:	<u>16</u>	<u>0</u>
Probable:	<u>1</u>	<u>0</u>
Possible:	<u>2</u>	<u>0</u>

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc):
Passage good through inundation zone.

2
0
0
3

101 total Redds
(def+prob)

Bull Trout Spawning Ground Survey Data Form

Stream: Indian Creek 3rd pass

Date: 10/2/03

Location: Highway 12 - North Spring

Water Temp.: 46°F @ 9:15

Investigator: CROG + Thomas USFWS

Start Time: 9:15

End Time: 11:30

<u>Redds:</u>	New	Old
Definite:	<u>4</u>	<u>16</u>
Probable:	<u>0</u>	<u>1</u>
Possible:	<u>0</u>	<u>2</u>

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): _____

Many kokoi in lower end; observed up to + in
1st major side channel. 1st eight "old" bull trout
redds had kokoi spawning on them.

2003

Bull Trout Spawning Ground Survey Data Form

Stream: Indian Creek 3rd Pass

Date: 10/2/03

Location: North Spring

Water Temp.: -

Investigator: Croci, USFWS

Start Time: 11:45

End Time: 12:45

<u>Redds:</u>	New	Old
Definite:	<u>7</u>	<u>9</u>
Probable:	<u>0</u>	<u>2</u>
Possible:	<u>0</u>	<u>1</u>

Bull Trout Observed:

Adults: 0

Sub-adults: 3

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

3rd pass

Stream: Indian Creek

Date: 10/21/03

Location: North Spring to Falls

Water Temp.: -

Investigator: Reiss, Jarrett, USFS

Start Time: 9:30

End Time: 12:00

Redds:	New	Old
Definite:	<u>78</u> includes 6 old probable	<u>31</u>
Probable:	<u>4</u> includes 1 old possible	<u>11</u> (6)
Possible:	<u>0</u>	<u>4</u> (1)(1)

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 6

Comments (mortalities, tagged fish, H2O visibility, etc): -

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

3rd Pass

Stream: Indian Creek

Date: 10/2/03

Location: South Spring (lower + upper)

Water Temp.: -

Investigator: Thomas (USFS) + Riess (USFS)

Start Time: -

End Time: -

Redds:	lower	New upper	lower	Old	upper
Definite:	0	0	3	3	0
Probable:	0	0	1	1	0
Possible:	0	0	1	1	0

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H20 visibility, etc): -

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Box Canyon Creek (First pass)

Date: 9/25/03

Location: Footbridge at campground to barrier falls

Water Temp.: 9 degrees C

Investigator: Jeff Thomas (USFWS)

Start Time: 1025 hrs

End Time: 1400 hrs

Redds: New Old

Definite: 4 _____

Probable: 1 _____

Possible: 1 _____

Bull Trout Observed:

Adults: 16

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc): Creek does not reach Kachess Lake;

Surface flow ends approximately 40 meters from lake. Flows above footbridge estimated at

12-14 cfs. Eight large adults observed in pool just below first falls. Four adults and one

possible redd observed above these falls.

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Box Canyon Creek 2nd pass
Date: 10-9-03 (Thursday)
Location: Index Reach + Inundation Zone
Water Temp.: 8°C
Investigator: Scott Willey
Start Time: 10:45
End Time: 13:15

Redds:	New	Old
Definite:	<u>1 + 1 in inundation zone</u>	<u>4</u>
Probable:	<u>0</u>	<u>1</u>
Possible:	<u>0</u>	<u>1</u>

Bull Trout Observed:
Adults: 9
Sub-adults: -
Juveniles: -

Comments (mortalities, tagged fish, H2O visibility, etc): _____

- 2 New Redds were actually seen during this survey. 1 was in the index Reach about 200 yards downstream of 30 ft. falls. The other was in the inundation zone between the ^{USFS} Campground and Lake ^{Trachet}
- Rain (or drizzle) over the last 2 days has increased flow substantially in Box Canyon Creek. Visibility was still excellent.

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Box Canyon Attempted 3rd pass

Date: 10/20/03

Location: No Survey

Water Temp.: —

Investigator: Croci USFWS

Start Time: 11:00 am

End Time: 11:00 am

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

Bull Trout Observed:

Adults: —

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc): No Survey water too deep, turbid & fast. It was raining pretty steadily

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Box Canyon Creek 3rd pass

Date: 10/28/03

Location: Kachess Lake to Falls

Water Temp.: —

Investigator: Croci (USFWS)

Start Time: 9:00 am

End Time: 11:30 am

Redds:	New	Old
Definite:	<u>1</u>	<u>1 6 = (including 1 in the inundation zone)</u>
Probable:	<u>0</u>	<u>1</u>
Possible:	<u>0</u>	<u>1</u>

Bull Trout Observed:

Adults: 1

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): Good flow throughout creek. Did not survey part of canyon due to amount of water. Well connected through inundation zone.

2003

From: Eric Anderson
To: "kreiss@fs.fed.us"@GWDFW.SMTP
Date: Wed, Dec 10, 2003 8:58 AM
Subject: Re: crow creek

Thanks Yuki.....after looking at the data for both passes I ended up with 9 redds for Crow. Still, an awfully low count.
Thanks a bunch for your work on the S.F. Tieton & Rattlesnake...that really helped answer some questions.

>>> Karin Y Reiss <kreiss@fs.fed.us> 12/09 9:15 AM >>>

Eric - I found my notes from Crow Creek. Just writing to confirm that we saw 8 redds total on the stretch.

Yuki

2
0
0
3

From: Karin Y Reiss <kreiss@fs.fed.us>
To: <anderea@dfw.wa.gov>, <anderea@dfw.wa.gov>
Date: Tue, Dec 9, 2003 9:09 AM
Subject: crow creek

Eric - I found my notes from Crow Creek. Just writing to confirm that we saw 8 redds total on the stretch.

Yuki

2003

From: James L. Cummins
To: Eric Anderson
Date: Mon, Dec 8, 2003 9:01 AM
Subject: Official Crow Creek Redd Count

For the record, Mark Tuttle and I conducted a bull trout redd survey on Crow Creek 9/12/03. The water temp. was 46 F. Flow was low and visibility was good.

We flagged 4 def and 1 prob bull trout redd, and saw 1 11-12 inch bull trout near the uppermost redd at the exact upper end of the index area. We saw a few small cutthroat, mostly fry.

Now this is official.

Jim Cummins
Special Projects Biologist

2003

From: Karin Y Reiss <kreiss@fs.fed.us>
To: <anderea@dfw.wa.gov>, <anderea@dfw.wa.gov>
Date: Mon, Oct 6, 2003 7:13 AM
Subject: redd info

Crow Cr.

Eric -

A written summary of our findings so far on redd surveys.

In Crow Creek (9/29):
 3 flagged definites
 1 flagged "prob" = 1 definite

Final count = 9

1

4 new redds

Rattlesnake (9/30-10/1) - expanded index from NF confluence to bottom of index area
 7-10 fish holding in pools above the trap
 2 redds that appeared to be bull trout size (both within 2 miles of the NF)

2

Also 1 flagged chinook redd
 1 chinook carcass
 6 new chinook redds (definites, plus one possible)

2
 0
 0
 3

Yuki

Rattlesnake Cr.

Bull Trout Spawning Ground Survey Data Form

Stream: GOLD CREEK ^{1st} PASS

Date: 9/24/03

Location: Bridge to trail crossing

Water Temp.: 9°C @ 9:10 am

Investigator: Mallas USFWS, Leavenworth

Start Time: 9:00 am

End Time: 12:00 pm

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

2
0
0
3

Bull Trout Observed:

Adults: 3 (one just upstream of bridge)

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): Creek was
Dry for about a mile in the Gold
Pond area up to trail head.
Checked mouth splits into a few
small + shallow channels. Passage is
probably impossible for adult bull trout.
Only a few kokanee were observed

Bull Trout Spawning Ground Survey Data Form

Stream: GOLD CREEK ^{1st Pass}

Date: 9/24/03

Location: Trail Crossing to Falls (2nd one)

Water Temp.: 44°F @ 10:30

Investigator: Croci USFWS

Start Time: 10:00

End Time: 12:15

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

Bull Trout Observed:

Adults: 1 small \approx 9"

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc):
Creek is nearly dry \approx 1/4 mile upstream
of Silver Creek confluence. Adult passage
at that point would be impossible.
Silver Creek was also dry. No redds
above 1st falls

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: Gold Creek 3rd pass

Date: 10/24/03

Location: Creek crossing to 1st falls

Water Temp.: 6°C @ 11:00

Investigator: Thomas USFWS

Start Time: 11:00

End Time: 1:00

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

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H20 visibility, etc): _____

lots of clean water

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: GOLD CREEK 3rd pass

Date: 10/24/03

Location: Gold Pond to trail crossing

Water Temp.: 6°C @ 9:00

Investigator: Croci + Mallas (USFWS)

Start Time: 9:30

End Time: 12:30

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

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): Good flow, every
thing was connected. water was running high +
clear. Difficult to distinguish old redds as
all rock looked clean. Good weather

* also added 1 Redd from 1st survey,
 Redd just upstream of bridge,
 9 Total Redds
 EA.

2
0
0
3

From: Karin Y Reiss <kreiss@fs.fed.us>
 To: "Eric Anderson" <ANDEREA@dfw.wa.gov>, <ANDEREA@dfw...>
 Date: Wed, Oct 8, 2003 8:35 AM
 Subject: SFT expanded index

Eric -

Info for the expanded index survey :

10/06/03

We started 2.7 miles upstream from the 1010 rd. (section 22). No redds were seen until Grey Creek, and there were 2 definites between the creek and the campground.

From the campground, there was approx. .3 miles with no redds, and then the stream begins to split into side channels. From this point on we found 12 definite redds. The majority are concentrated right below and along Blue Slide.

In terms of a easy start point, Grey Creek campground may be the easiest to describe, though that does include .3 miles of less ideal habitat. Else, the intermittent stream that comes from the road-side of the SFT (section 29) may be good - though it would be good to start a bit below this.

No fish were seen.

We can talk today if you want more details. I am curious how the telemetry is going. I am in the office 653-2205 x 284.
Yuki

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- added into total Redd count

- Revised & expanded index Grey Creek C.G. upstream to top of Blue Slide (current index area)

178 Redds in Index
~~140~~
 192 Redds out of Index

Bull Trout Spawning Ground Survey Data Form

Stream: SOUTH FORK TETON RIVER 1st Pass

Date: 9/3/03

Location: Blue Slide to 1050 rd.

Water Temp.: 50°F @ 10:00

Investigator: CROCI, USFWS

Start Time: 10:00 am

End Time: 12:15 pm

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

Bull Trout Observed:

Adults: 9 (2 tagged)

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc):

water slightly more turbid than usual.
It was "milky" or had glacier flour.

- 1st PASS

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Bull Trout Spawning Ground Survey Data Form

1st Add

Stream: SOUTH FORK TETON RIVER

Date: 9/3/03

Location: 1050 to Falls

Water Temp.: 9°C @ 10:15

Investigator: Willey, USBR

Start Time: 10:15 am

End Time: ~ 1:00 pm

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

Bull Trout Observed:

Adults: 17 (3 yellow tag)

Sub-adults: —

Juveniles: —

Comments (mortalities, tagged fish, H2O visibility, etc):

Slightly more milky (glacial flow) than usual.

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Bull Trout Spawning Ground Survey Data Form

1st pass

Stream: BEAR CREEK (SOUTH Fork TETON RIVER)

Date: 9/3/03

Location: MOUTH to Falls

Water Temp.: -

Investigator: TORRETTA, USFS

Start Time: 10:20 am

End Time: ≈ 12:00 pm

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

Bull Trout Observed:
Adults: 0 (1 half eaten)

Sub-adults: -

Juveniles: -

Comments (mortalities, tagged fish, H2O visibility, etc): _____

NONE.

2003

Bull Trout Spawning Ground Survey Data Form

2nd pass

Stream: South Fork Tieton

Date: 9/14/03

Location: Bear Creek

Water Temp.: 7°C

Investigator: Willey, USBR

Start Time: ≈ 10:30

End Time: ≈ 12:45

Redds:	New	Old
Definite:	<u>15</u>	<u>5</u>
Probable:	<u>5</u>	<u>1</u>
Possible:	<u>0</u>	<u>1</u>

Bull Trout Observed:

Adults: 4 (1 yellow tag)

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc): _____

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

Stream: South Fork Teton 2nd pass

Date: 9/19/03

Location: Blue Slide to 1050 Rd. Bridge

Water Temp.: 49°F @ 9:50 am

Investigator: Torretta + Reese USFS ; Croci USFWS
1050 → mid meadows

Start Time: ≈ 10:00

End Time: ≈ 1:30

<u>Redds:</u>	New	Old
Definite: <u>51 89</u>	<u>90</u>	<u>4</u>
Probable: _____	<u>5</u>	<u>0</u>
Possible: _____	<u>7</u>	<u>0</u>

2
0
0
3

Bull Trout Observed:

Adults: 15

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): _____

Bull Trout Spawning Ground Survey Data Form

Stream: South Fork Tieton 2nd pass

Date: 9/19/03

Location: 1050 to Falls

Water Temp.: 46°F @ 10:30

Investigator: Crod (Bear to 1050) + Nelle (Bear to Falls), USFWS

Start Time: ≈ 10:20 am/2

End Time: ≈ 12:30 pm

Redds:	New	Old
Definite:	<u>11</u> <small>one new is an old possible</small>	<u>3 observed (4 from previous)</u>
Probable:	<u>5</u>	<u>0</u>
Possible:	<u>9</u>	<u>1 changed to definite</u>

2
0
0
3

Bull Trout Observed:

Adults: 6

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): _____

178 total
cut + grab

Bull Trout Spawning Ground Survey Data Form

Stream: SOUTH FORK TETON RIVER

3rd AM

Date: 10/3/03

Location: Blue Slide to 1050

Water Temp.: -

Investigator: Willey (USBR) + Jarrett (USFS)

Start Time: 9:00

End Time: 1:00

Redds:	New	Old
Definite:	<u>21</u>	<u>94</u>
Probable:	<u>3</u>	<u>5</u>
Possible:	<u>1</u>	<u>7</u>

Bull Trout Observed:

Adults: 0

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H20 visibility, etc): _____

2
0
0
3

Bull Trout Spawning Ground Survey Data Form

3rd pass

Stream: SOUTH FORK TIBETON RIVER

Date: 10/3/03

Location: BEAR CREEK

Water Temp.: 45°C 10:00

Investigator: TORRETTA, USFS

Start Time: 10:00

End Time: 12:00

Redds:	New	include 1 old probable	Old
Definite:	<u>3</u>	←	<u>20</u>
Probable:	<u>0</u>		<u>6 (11)* (1)</u>
Possible:	<u>0</u>	← include 1 old probable	<u>1</u>

Bull Trout Observed:

Adults: _____

Sub-adults: _____

Juveniles: _____

Comments (mortalities, tagged fish, H2O visibility, etc): _____

* One^{old} probable was changed to "NO REPD"

2
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Bull Trout Spawning Ground Survey Data Form

3rd pull

Stream: SOUTH FORK TETON RIVER

Date: 10/3/03

Location: 1050 to falls

Water Temp.: 42°F @ 10:00

Investigator: CROCI (USFWS) + Tometta (USFS)

Beam to 1050

Start Time: 10:00

End Time: 1:00

Redds:	New	Old
Definite:	8 <i>includes 2 old possible</i>	15
Probable:	0	5
Possible:	0	10(2)

2
0
0
3

Bull Trout Observed:

Adults: 8

Sub-adults: 0

Juveniles: 0

Comments (mortalities, tagged fish, H2O visibility, etc): _____

From: "Jeff Thomas" <jthomas@pn.usbr.gov>
To: <ANDEREA@dfw.wa.gov>
Date: Tue, Oct 14, 2003 9:45 AM
Subject: Gold Creek second pass

I conducted the second pass bull trout redd survey of Gold Creek this past Friday (see attached form). The creek has watered back up after recent rains and there was substantial flow (~10 cfs) through the formerly dewatered reach with multiple channels in places. I was solo and went from a couple hundred meters above Gold Creek Pond to a point I estimate was a quarter mile or so below the first falls. At that point I had been at it for over 5 hours and was fairly exhausted so I hit the trail.

Jeff

CC: "Stephen Croci" <scroci@pn.usbr.gov>

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Bull Trout Spawning Ground Survey Data Form

Stream: Gold Creek (2nd Pass)

Date: October 10, 2003

Location: Keechelus Lake Basin (see comments below)

Water Temp.: 7 degrees C

Investigator: Jeff Thomas (USFWS)

Start Time: 0900 hours

End Time: 1405 hours

Redds: New Old

Definite: 1 3

Probable: 2 1

Possible: _____ _____

Bull Trout Observed:

Adults: None

Sub-adults: None

Juveniles: None

Comments (mortalities, tagged fish, H2O visibility, etc): _____

Weather was cloudy with light rain. Visibility very good. Gold Creek was completely connected as the result of recent rains with substantial flow (~10 cfs) through the reach which was sub-surface for much of the summer. Did not have time to reconnoiter the mouth but suspect that bull trout passage may be restored. No kokanee, however, were observed. Surveyed from about 200 meters above Gold Creek Pond to a point I estimate to be about 15-30 minutes below the

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first falls. I needed to get out at that point. Third pass surveyors should definitely go the entire length of the stream (I was solo). Bull trout may have entered the creek with the restoration of passage.

2
0
0
3

From: "brandonr@yakama.com" <brandonr@yakama.com>
To: Eric Anderson <ANDEREA@dfw.wa.gov>
Date: Tue, Dec 9, 2003 7:54 AM
Subject: SF Ahtanum Bulltrout

Eric, we saw 7 definite redds this year. We made 5 passes from 9/3 to 10/1. What did you find in the MF and NF?

Brandon

CC: Tom McCoy <tmccoy@yakama.com>

2
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N. F. Antanum Cr.
10/1/03 Gray Rock → Shellneck
Eric Anderson 43.5°F 1130 hrs.

6-8 CT observed in pool.

New Det. Redds	11	(2)
old " "	"	(2)
old Prob.	1	(one)

Shellneck Creek
Jim Cummins

old Det. Redds	11	(5)
New " "	1	(one)
old Prob.	1	(one)

10/3/03

M. F. Ahtanum

E. Anderson

New Redds 11 (2)

old Def Redds 111 (5)

old Prob. 1 (one)

From: James L. Cummins
To: Eric Anderson
Date: Fri, Sep 5, 2003 4:25 PM
Subject: NF Ahtanum Cr

I walked from Gray Creek Trailhead parking lot to Shellneck Creek, and Shellneck Creek for about ½ mile.

There are two definite bull trout redds in N. F. Ahtanum, less than ¼ mile below Shellneck, both in the same tailout. No fish there. I did not see bull trout in Ahtanum, but plenty of cutthroat adults and fry.

I found five definite redds in Shellneck, one right at the confluence with N. F. Ahtanum. I ate lunch and watched the redd and fish. Although there were 3 fish on the redd when I first spotted it, after watching it for ½ hour, I found that there were 5 fish, most in the 12-13 inch range, one maybe 14, and one little 8 inches. Two of the other redds each had one fish (that is all I saw) and I saw one other fish not close to a redd, so I counted at total of 8 fish. Fish are actively spawning today.

We could probably trap 5 fish as they move out of Shellneck Creek, but we would likely have to trap next week. Also, they are on the small side for our tags.

I saw no cows and no sign that cows have been in the creek bottom or below the fence. Water flows appear to be about normal, and of course visibility was excellent. Don't know where the fish and redds are that should be near Snow Cabin Campground and other areas that I walked.

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

From: James L. Cummins
To: Eric Anderson
Date: Tue, Sep 23, 2003 8:14 AM
Subject: NF Ahtanum bull trout spawning survey

Yesterday, 9/23/03 I conducted a bull trout spawning survey in North Fork Ahtanum from Gray Creek Trail parking lot to Shellneck Creek and Shellneck Creek.

NF Ahtanum water Temp was 44F at 12:30 PM. Redd Counts:

Old	New
def 2	0
prob 0	1
pos 0	0

Shellneck Creek

Old	New
def 5	1
prob 0	1
pos 0	0

All redds in NF were above Snow Cabin Campground.

No bull trout were observed. Several cutthroat and salmonid fry were observed.

There were no cattle and no sign of recent cattle in the riparian zone or below the fence.

CC: John Easterbrooks

2
0
0
3

From: James L. Cummins
To: Eric Anderson
Date: Tue, Sep 23, 2003 11:19 AM
Subject: MF Ahatanum Bull Trout Spawning Survey

I conducted a bull trout spawning survey at Middle Fork Ahtatum Creek from Tree Phones CG down river about 2.1 road miles on 9/19/03.

The water temperature was 43 F. at 10:05 AM when I started the survey. The survey ended at 1:45 PM.

Redds
def -5
Prob - 1
Pos - 1

No bull trout were observed.

CC: John Easterbrooks

2003

From: James L. Cummins
To: Eric Anderson
Date: Fri, Sep 5, 2003 4:25 PM
Subject: NF Ahtanum Cr

I walked from Gray Creek Trailhead parking lot to Shellneck Creek, and Shellneck Creek for about ½ mile.

There are two definite bull trout redds in N. F. Ahtanum, less than 1/4 mile below Shellneck, both in the same tailout. No fish there. I did not see bull trout in Ahtanum, but plenty of cutthroat adults and fry.

I found five definite redds in Shellneck, one right at the confluence with N. F. Ahtanum. I ate lunch and watched the redd and fish. Although there were 3 fish on the redd when I first spotted it, after watching it for ½ hour, I found that there were 5 fish, most in the 12-13 inch range, one maybe 14, and one little 8 inches. Two of the other redds each had one fish (that is all I saw) and I saw one other fish not close to a redd, so I counted at total of 8 fish. Fish are actively spawning today.

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2
0
0
3

From: James L. Cummins
To: Eric Anderson
Date: Tue, Sep 23, 2003 8:14 AM
Subject: NF Ahtanum bull trout spawning survey

Yesterday, 9/23/03 I conducted a bull trout spawning survey in North Fork Ahtanum from Gray Creek Trail parking lot to Shellneck Creek and Shellneck Creek.

NF Ahtanum water Temp was 44F at 12:30 PM. Redd Counts:

Old	New
def 2	0
prob 0	1
pos 0	0

Shellneck Creek

Old	New
def 5	1
prob 0	1
pos 0	0

All redds in NF were above Snow Cabin Campground.

No bull trout were observed. Several cutthroat and salmonid fry were observed.

There were no cattle and no sign of recent cattle in the riparian zone or below the fence.

CC: John Easterbrooks