

Bull Trout Redd Survey Summary 1994
 T12N, R13E, sec 9 TO N. F. Antanum CREEK & TR13 (Shellneck CR
 T12N, R14E, sec 21

Date	Redds	FALSE REDDS	#FISH	temp	Surveyor
9/20	6	0	—	44°F	Anderson
9/21	1	1	—	42°F	Anderson / TUTTLE

SHELLNECK CREEK

date	Redds	False Redds	# FISH	temp	Surveyor
9/20	7	0	2	—	Curran

T12N, R13E, sec 14, 15

1
9
9
4



Alatanum Ck

From T12N, R13E, S. 9
TO T12N, R14E, S. 21



Shellneck Ck

T12N, R13E, Sec 14, 15

~~T12N, R13E~~

Shellmeck Creek 9/20/94
1030 42 F

Redds

Def	Prod	Pos	BAC
HH	1		2 11-12"
1			

12-15 small 5-8" fish, prob.
CT.

N F Autumnum

Shellmeck Cr down 1.5 mi
44° F 1350

Redds

Def

1111

Jim Cummins

9/20/94

N. F. Ahtanum CK

No BLC Redds

No BLC observed.

Several CT. observed, others unknown.

Moderate abundance of fish

sizes from YOY to 8".

From Shellneck
CK to upstream
1.5 mile up.

N. F. Ahtanum CK

From turnout

0.4 miles above snow cabin

CG to 1 mile downstream

2 Def. Redds 2 Fish (Bull T.)

Jim did Shellneck CK,
+ Shellneck to downstream
approx 1.4 mi.

N. Fork Antanum CK 9/21/94

1100 Hrs. Need mileage.

Eric Anderson, Mark Tuttle
From 2.7 miles from mouth
to upstream 5.7 miles
(Bridge) at start.

Def Redd

Prob.

Pos.

1

1

→ Tributary to Keechelus LK. (Kittitas Co.)

1994 Redd/test dig counts for Gold Cr. near Snoqualmie Pass, WA.

Sequential (Redd#)	Date first Observed	Location (km*)	1993 H+R Habitat Type and Number	Weekly Water Ave. (C)	Weekly Water Max (C)	Weekly Water Min. (C)	Water Temp. Recorded (km*)	Maximum # of Adult Bull Trout observed was 34. (Not including Adults in Gold Cr. Pond). (Comments)
1	8-Sep	7.5	RL-70	9.97	11.85	9.22	7.3	Superimposed on a 93 redd site
2	21-Sep	4.8	G-11	9.89	11.69	8.91	7.3	Large distinct redd (>2.83 sq. m disturbed)
3	21-Sep	5.3	SU-PB-37	9.89	11.69	8.91	7.3	Large distinct Redd, new location
4	21-Sep	4.8	G-33	9.89	11.69	8.91	7.3	Large distinct Redd, new location
5	21-Sep	6.2	RL-44	9.89	11.69	8.91	7.3	Superimposed on 93 redd site
6	21-Sep	6.6	PS-51	9.89	11.69	8.91	7.3	Superimposed on 93 redd site
7	21-Sep	6.6	SC-RL-51	9.89	11.69	8.91	7.3	Superimposed on 93 redd site
8	21-Sep	7.1	G-39	9.89	11.69	8.91	7.3	General area of 93 redd
9	21-Sep	7.1	G-39	9.89	11.69	8.91	7.3	General area of 93 redd
10	21-Sep	7.8	BC-RL-77	9.89	11.69	8.91	7.3	Located above subsurface zone/barrier-low flows.
11	28-Sep	5.9	G-32	9.48	11.38	8.75	7.3	Marginal redd^, site where Poached Fish were.
12	28-Sep	6.6	RL-57	9.48	11.38	8.75	7.3	Marginal redd^ <1.60 sq. m disturbed.
13	5-Oct	6.7	PS-52	8.34	10.61	7.06	7.3	Marginal redd^ in isolated pool, Subsurface zone.
14	12-Oct	0.7	PS-33	9.89	10.77	9.22	Pond**	Superimposed on 93 redd site, above Bedrock Pool.
15	12-Oct	Pond	NE Bay	9.89	10.77	9.22	Pond**	45 m east of inlet at 2 m depth-clean gravel sand.
16	21-Oct	Pond	NE Bay	9.08	9.99	8.59	Pond**	43 m east of inlet at 2 m depth-clean gravel sand.
////////////////////////////////////								
Test digs or unviable redds. (False Redds)								
1	21-Sep	3.5	PL-5	10.33	11.69	9.06	3.3	Small redd <0.60sq. m disturbed, dewatered for 4 weeks.
2	21-Sep	5.1	SC-RL-38	9.89	11.69	8.91	7.3	No tailout <0.60 sq. m disturbed.
////////////////////////////////////								
Most redds (above 3.5 km) were non-perceptible by 12-Oct, Visual-Redd life due to 95% periphyton 5% H2O flows. Discharges were high Sep. 14-16 than very low until 21 Oct.								
							Pond** Water temps. recorded 80 m below pond in outlet channel. km* above Rocky Run Bridge. Marginal Redd^ = Digging occurred but egg survival could be limited.	

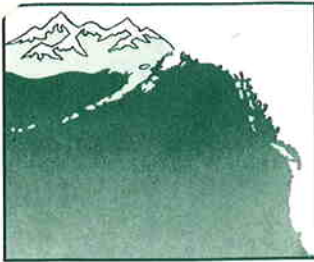
When? (dates)
How many?
F.H.

1994

Data from: Scott D. Craig and Dr. Robert C. Wissmar.
Fisheries Research Institute
University of Washington School of Fisheries

S & L DATABASE
ENTERED 4/19/95
BY SC

667
299000



FISHERIES RESEARCH INSTITUTE

RECEIVED
STATE OF WASHINGTON

DEC 05 1994

DEPT. OF FISH AND WILDLIFE
YAKIMA OFFICE

University of Washington
School of Fisheries, WH-10
Seattle, Washington 98195
Telephone 206-543-4650
Telex 474-0096 UWUI
FAX 206-685-7471

Dec. 1, 1994

S & L DATABASE

ENTERED

4/19/95

BY

sc

Eric Anderson
Washington Dept. of Wildlife
1701 S. 24 Ave.
Yakima, WA 98102
509 575-2648
Fax 509 575-2474

*Scott Craig
543-7720*

Eric,

Sorry about the wait on the redd inf. but we've really been to the wall. Plus Bob's been out of town and I didn't want to send out anything without his approval.

I observed 14 redds in Gold Cr., 2 Test Digs and 2 redds in the Gold Cr. Pond. The attached table shows the locations in km above the Rocky Run Bridge, dates first observed, water temps from thermographs and comments on the disturbed areas. If you have any questions I'll be in town until approximately Dec. 8th and won't be back until sometime in January?

1
9
9
4

Hopefully I'll see you if I drive through Yakima on my way down to New Mexico.

Scott Craig

*Scott Craig
Paul Whistler
Monday Back at
543-7767*

*ASK him, was there
some 10-12-94
3rd week
13-14*

*PH
12/16/94*

5-10-94

Fsh.com

SP-1002

000999

666

Stream Lake Fish Database
Box Canyon 1994

Year	Wa_nam	Date	New Redds	False_redds	Total_visible	Comment	Sampler
1994	BOX CANYON CR	9/6/1994	0	0		FOOTBRIDGE TO PEEKABOO FALLS.	ANDE
1994	BOX CANYON CR	9/19/1994	0	1		FOOTBRIDGE TO PEEKABOO FALLS.	ANDE
1994	BOX CANYON CR	9/28/1994	5	0		FOOTBRIDGE TO PEEKABOO FALLS.	DIVM
1994	BOX CANYON CR	10/11/1994	6	0		FOOTBRIDGE TO PEEKABOO FALLS.	DIVM

Stream Lake Fish Database

Deep Cr 1994

Year	Wa_nam	Date	Temp	New Redds	False redds	Total_visible
1994	DEEP CR	8/19/1994	7	0	0	
1994	DEEP CR	8/29/1994		0	0	
1994	DEEP CR	9/7/1994	6	5	4	
1994	DEEP CR	9/15/1994	7	7	0	

1
9
9
4

University of Washington Correspondence
INTERDEPARTMENTAL

2025 Digitized

31 March 1995

To: Sue Chyneb and Pete Hann
Washington State Dept. Fish and Wildlife

From: Robert C. Wissmar, Professor
School of Fisheries, W11-10

Subject: 1994 Bull trout spawning counts for Gold Creek

Robert C. Wissmar

WLM 23K TMS

Length of stream surveyed was 7.3 km. This channel length is from the mouth of Gold Creek upstream to Silver Creek (tributary).

Date	Numbers for Adult Fish (>30 cm in length)	
8/4	7	
8/11	6	
8/18	8	
8/25	5	
9/1	6	
9/5	14	9/8
9/9	27	
9/22	29	9/21
9/29	25	9/28
10/5	27	10/5
10/12	25	10/12
10/19	6	10/21 (?)

S & L DATABASE
 ENTERED 4/19/95
 BY SC

1	<input type="checkbox"/>
9	<input type="checkbox"/>
9	<input type="checkbox"/>
4	<input type="checkbox"/>

6 SPP A3
 7 Origin A2
 8 New Redds S
 9 False Redds S
 10 Total visible S
 A100

66

TIGRIZE

Z16217

#1974

Bull Trout Redd Survey Summary 1994

Deep Creek - TRIB OF Bumping LAKE

TIGRIZE Sec. 27, 34

date	Redds	False Redds	# Fish	temp	Surveyor
8-19	∅	∅	∅	46°F	Anderson / cummins
8-29	∅	∅	∅	49°F	Anderson / RUSH-CW
9-7	5	4	6	43°F	Anderson / WDFW Beech / CW Divens / cummins
9-15	7	∅	∅	45°F	Anderson / cummins

S & L DATABASE
 ENTERED 11 / 1 / 94
 BY SC

Bill Trout Redd Survey Summary

S & L DATABASE
 ENTERED 11/1/97
 BY SC

SOUTH Fork Tieton River AND TRIBS

SF, Tieton River FROM T13N, R1E, Sec 28 to T12N, R1E Sec 13

DATE	Redds	False Redds	#FISH	temp	Surveyors
8/31	0	1	6	45°F	Cummins / Anderson
9/8	20	33	28	46°F	Anderson / Divens / Lenhart / CWK / Rust /
9/16	89	10	69	-	Anderson / Cummins / James / Beech / CWK
9/26-27	33	1	0	-	Divens - WDFW

S & L DATABASE

ENTERED 11/1/97
 BY SC

TRIBS TO SF TIETON

BEAR CREEK T12N, R1E, Sec 11-12

11T12 R1E

date	Redds	False Redds	#FISH	temp	Surveyors
9/8	6	2	10	50°F	Divens / Lenhart / CWK
9/14	13	1	29	46°F	Anderson / Cummins
9/26	2	1	1	-	Divens - WDFW

Comment: 1st year surveyed for blue redds.

SPRUCE CREEK T13N, R1E, Sec 28

date	Redds	False Redds	#FISH	temp	Surveyors
9/16	4	0	4	44°F	Anderson / James / CWK

Bull Trout Redd Survey Summary 1994

Box Canyon Creek - trib to LAKE KACHESS

From T22N, R13E Sec. 32 to T22N R13E Sec. 19

date	Redds	FALSE Redds	# FISH	temp	Surveyor
9/6	0	0	3 BLC - 6 CT	48°F	Anderson
9/19	0	1	8 = 0 BLC 15 BLC	48°F	Anderson
9/28	5	0	3 BLC	—	Divens
10/11	6	0	2 BLC - 1 CT	—	Divens/Commings

Peek-A-Boo Falls

Comments: Survey from footbridge to falls

BULL TROUT REDD SURVEY SUMMARY 1994

Indian Creek - TRIB TO RIMROCK LAKE

From T13N, R13E, Sec 6 to T14N, R12E, Sec 35

date	Redds	False Redds	#FISH	temp	Surveyor
9/2	50 ✓	16 ✓	58 ✓	42°F ✓	Cummins / James / Anderson / Beech
9/12	70 ✓	16 ✓	47 ✓	44°F ✓	Anderson / Rush
9/22	30 ✓	4 ✓	5 ✓	46°F ✓	Anderson
10/3	29 ✓	0 ✓	2 ✓	47°F ✓	Divens

Surveyors
- Personnel Key

WDFW - Anderson / Cummins / Divens

CWU - Beech, James, Rush

↳ Central Washington University

Bull Trout Redd Survey Summary 1994

T12N, R13E, Sec 9
 To
 T12N, R14E, Sec 21

N. F. Antanum CREEK & TRIB (Shellneck CR)

date	Redds	FALSE REDDS	#FISH	temp	Surveyor
✓ 9/20	6 ✓	∅ ✓	—	44°F ✓	Anderson - WDFW
✓ 9/21	1 ✓	1 ✓	—	42°F ✓	Anderson / Tuttle - WDFW

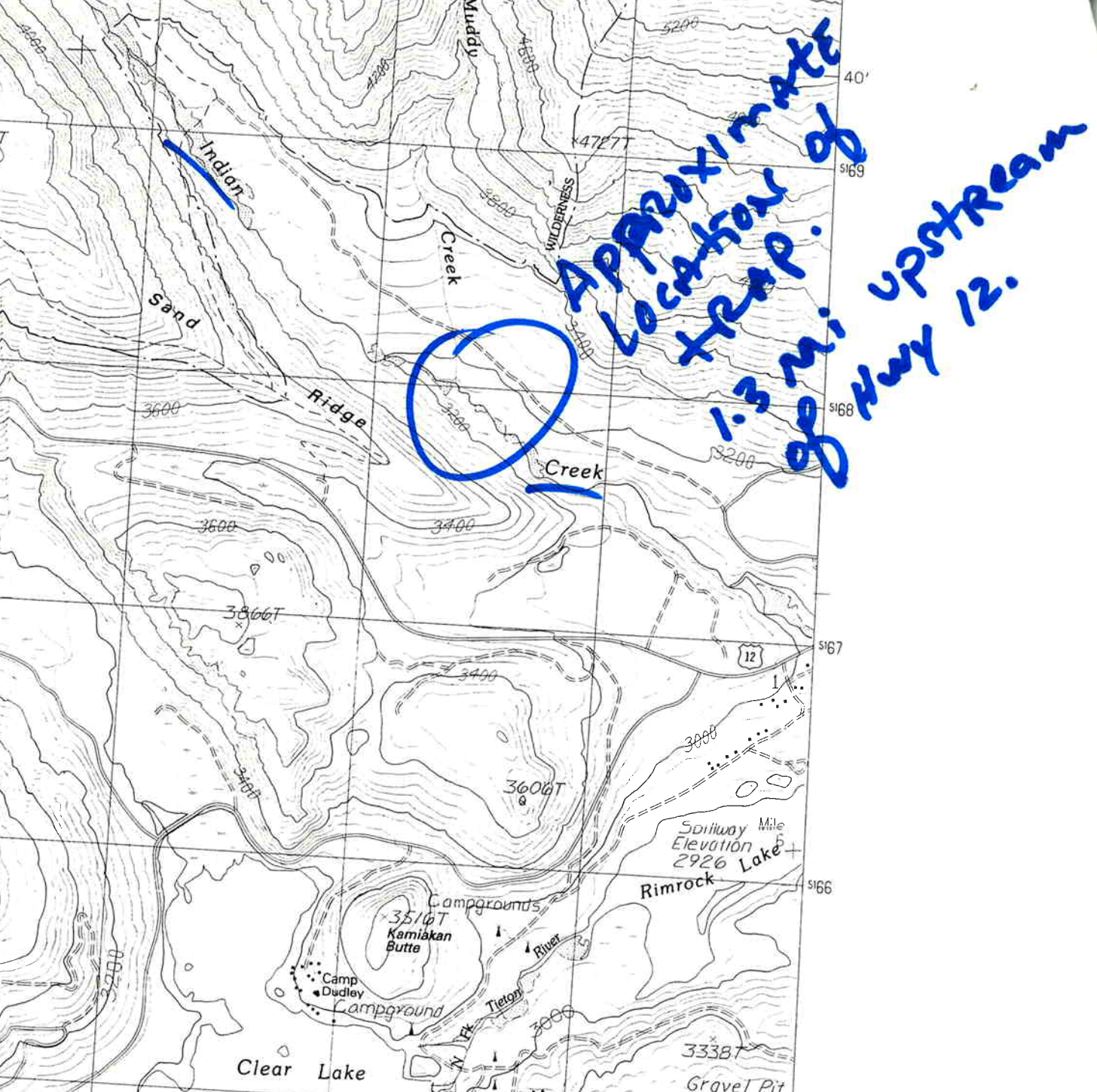
SHELLNECK CREEK

date	Redds	False Redds	# FISH	temp	Surveyor
9/20	7 ✓	∅ ✓	2 ✓	—	Cummins WDFW

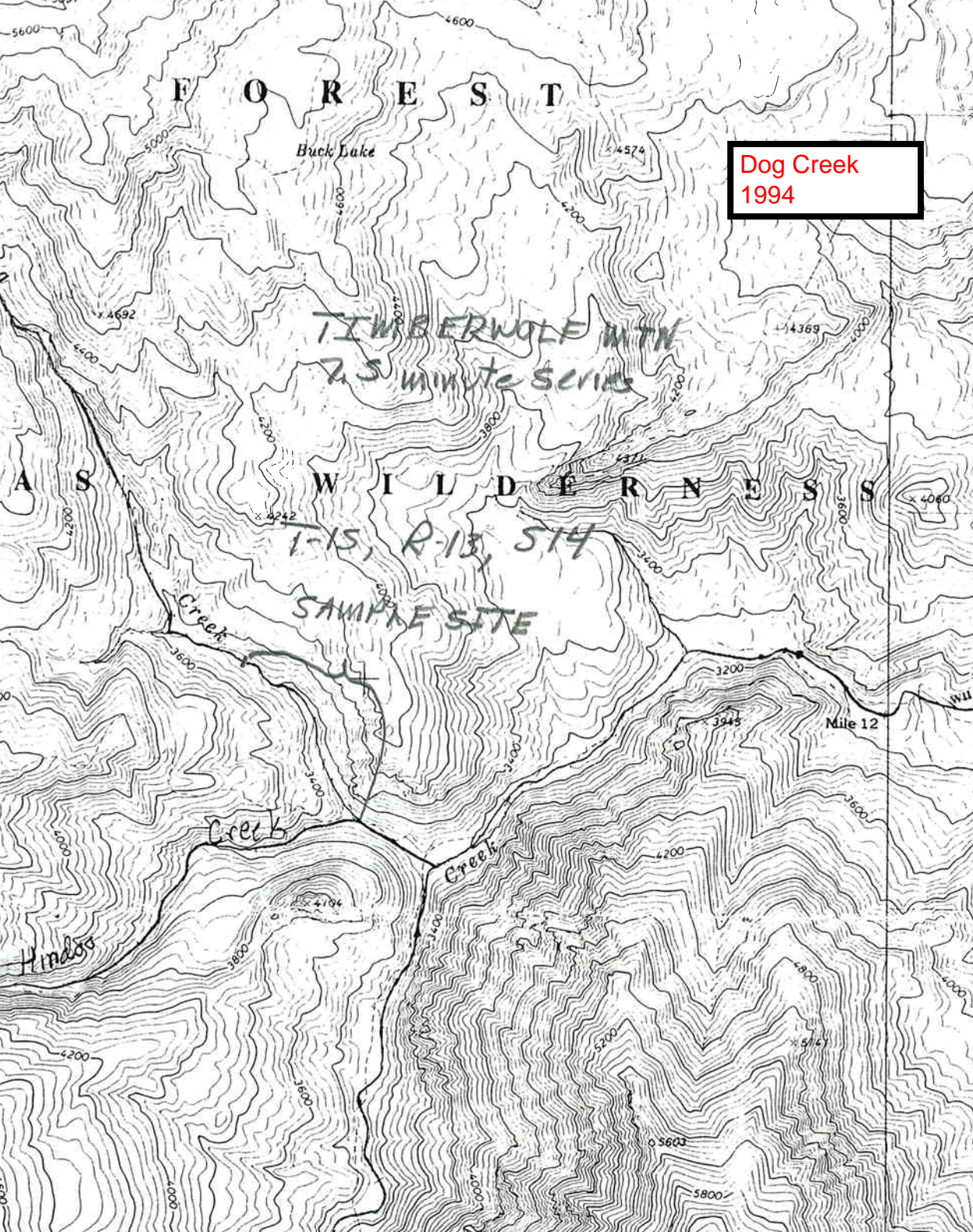
T12 N, R13E, Sec 14, 15

WDFW - Anderson / Cummins

#1614
 0A80A9



Approximate
Location of
trap.
1.3 mi. upstream
of Hwy 12.



Dog Creek
1994

F O R E S T

Buck Lake

TIMBERWOLF WITH
7.5 minute series

W I L D E R N E S S

1-15, R-13, S14

SAWYER SITE

A S

Hinds
Creek

Mile 12

TIMBERWOLF MTN
7.5 minute series

Hindoo Creek
1994

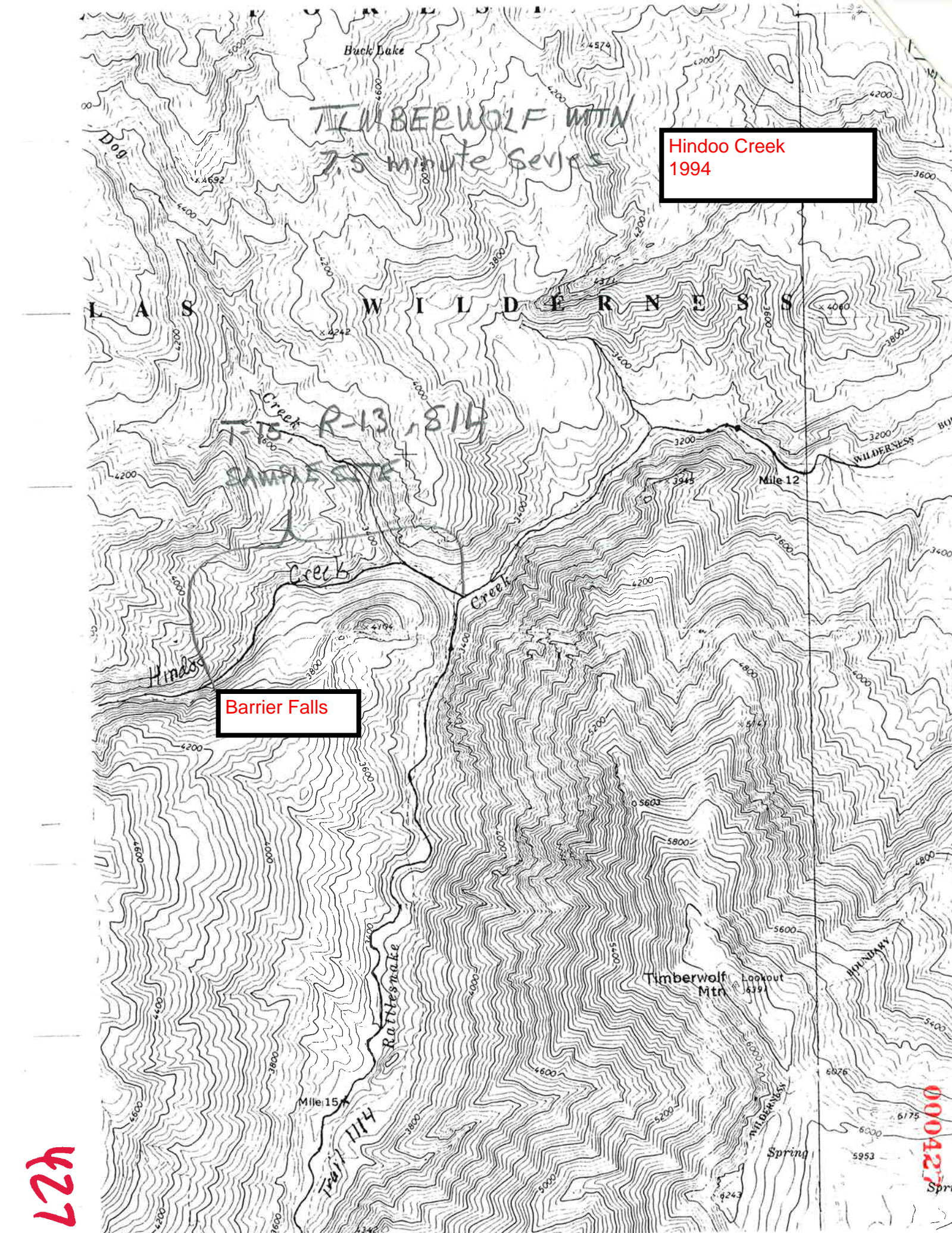
L A S W I L D E R N E S S

R-13, 814
SWAMP SITE

Barrier Falls

427

000427
Spring



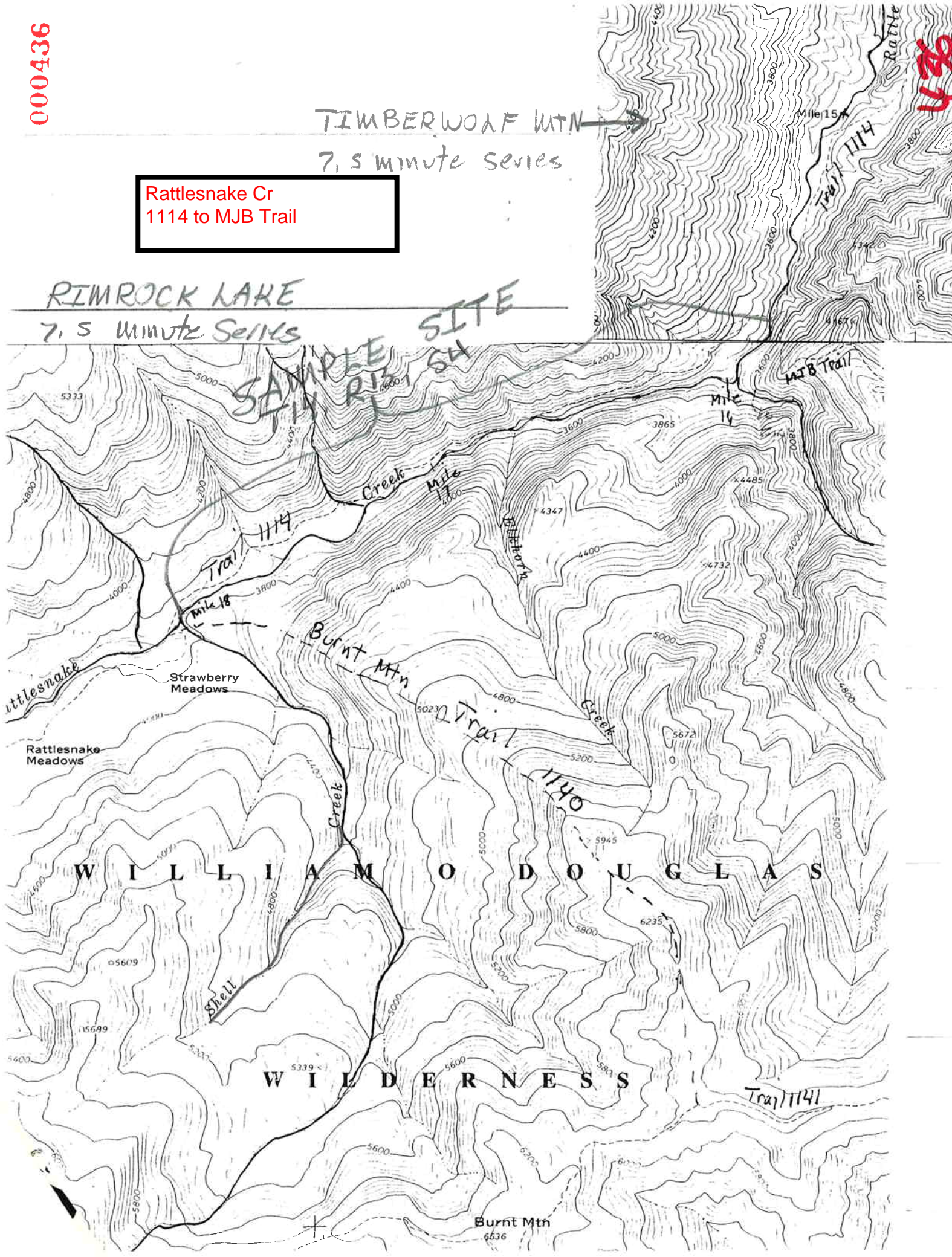
000436

TIMBERWOLF Mtn
7.5 minute series

Rattlesnake Cr
1114 to MJB Trail

RIMROCK LAKE
7.5 minute series

SAMPLE SITE
RIMROCK SW



436

Box Canyon Cr.
Sec. 32

Bull Trout Redd Survey Summary 1994

Box Canyon Creek - trib to LAKE KACHESS
From T22N, R13E Sec. 32 to T22N R13E Sec. 19

date	Redds	FALSE Redds	# FISH	temp	Surveyor
9/6	∅	∅	3 BLK - 6 CT	48°F	Anderson
9/19	∅	1	8 BLK	48°F	Anderson
9/28	5	∅	3 BLK	—	Divens
10/11	6	∅	2 BLK - 1 CT	—	Divens/comm

Comments: Survey from footbridge to faus

Box Canyon CK,
Season Total

Redds = 11

(includes 10 definite and
1 probable)

BULL TROUT Redd Survey Summary
 BOX CANYON CREEK
 1994

DATE	def	prob	pos	# FISH	temp
9/6	∅	∅	∅	3 BLC 6 CT	48°F
9/19	∅	∅	1	8 BLC	48°F
9/28	5	∅	∅	3 BLC	
10/11	<u>5</u>	<u>1</u>	<u>∅</u>	2 BLC 1 CT	
Total	11 Redds	1 False			

Comments: FOOTBRIDGE TO FALLS ON ALL FOUR SURVEYS

FIRST 3 SURVEYS

Def = Redds

PROB/POS = FALSE Redds

FINAL SURVEY

def / PROB = Redd

POS = FALSE Redd

Bull Trout Redd Survey 10-11-94

Box Canyon Creek

DIVENS / Cummins

DEF	PROB	POS	# FISH
1	1		1
1			0
2			0
1			0
(5 old)			1
<hr/>	<hr/>	<hr/>	<hr/>
10	1	0	2

Comments: SAW ONE DEAD
FISH HEAD.

FOOTBRIDGE TO FALLS

1 CUTTHROAT TROUT

FINAL SURVEY

Def & PROB = Redds

POS = FALSE REDDS

Bull Trout Redd Survey 9-28-94

BOX CANYON CREEK

DIVENS

DEF	PROB	POS	# FISH
HH			2
			1
<hr/> 5	<hr/> 0	<hr/> 0	<hr/> 3

COMMENTS:

FOOTBRIDGE TO FALLS

3rd Survey

DEF = Redds

PROB & POS = FALSE REDDS

9/19/94

1030 hrs.

Box Canyon Cr.
Anderson

<u>Def</u>	<u>Prob.</u>	<u>Pos.</u>	<u>#</u>
		1	FISH 8

5 of these were holding in calm water in gravelled/silt trough below boulders flats. All 5 appeared to be males.

Temp. 45°F

Others were holding in boulder pools further downstream

Sept. 6, 1994 1000 Hrs

Box Canyon Cr.

Anderson, Cummins

BLC Redd Survey

Water Temp. 48.0 F

Clear, Sunny

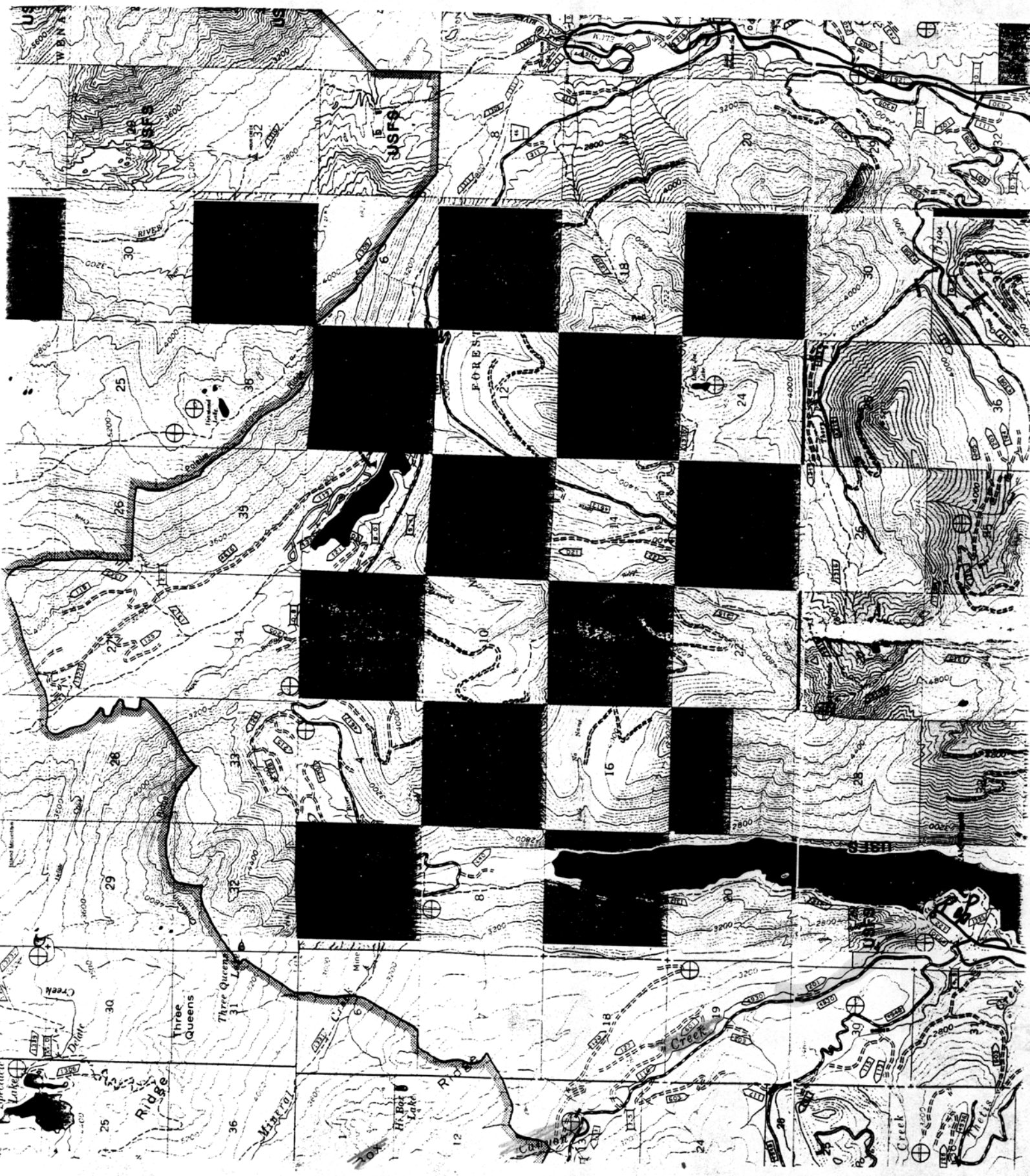
Passage conditions ok at
mouth.

Fish Sited - 1 F.

1 F }
1 M }

111 CT - 8-12"

BOX CANYON CREEK
BULL TROUT REED SURVEY 1994
FROM T 22N, R 13E, Sec 32 : TO T 22N, R 13E, Sec 19



1994

Deep CK.

Season Total - Bull Trout

Redds = 12

(includes 9 definite and
3 probables)

2 possible Redds

Not counted in Total

Dry Cr 9/15/94
Above Road

Redds (New)

Det

φ

Prob

φ

Pos

φ

Fish

φ

J. Cummins

Old Redds

Prob

1

Det

1

Deep CK.

9/15/94

Below Rd 1800 Bridge 1200 Hrs

New Redds

Det.

Prob.

Pos.

||||

I

Fish ϕ

1 Fish Head - Poaching

Old Redds

Det.

Prob.

Pos.

||||

I

II

Staff Gate at Rd. 1800 1.92

Temp. 45°F

E. Anderson

Colman

Darp Creek 4301F

9/7/94 1000

Below Rd 1800 Bridge

Redds

Adult BLC

Ref Prob Pos

1111

1

11

1111

J. Cummins & M. Divens
WDFW

Removed 32 cm BLC from
possible stranding River Mouth

Sept. 7, 1994 1000 Hrs
Deep CK. (Bumping LK.)

E. Anderson - WDFW S. Beech - CWU
Staff Gauge at Rd 1400, 1994
43°F - Water Temp.

Above Rd 1400 Bridge

<u>Det</u>	<u>Pre</u>	<u>Pos.</u>
------------	------------	-------------

1 6" Unidentified Fish

Main Channel Dry \approx
 $\frac{1}{3}$ mile above bridge.

8/29/94

Deep CK. (Bumping Lk).

E. Anderson - WDFW L. Rush - CWK

From USFS Rd 1800 to Upstream.

Water Temp. 49°F

Staff Gauge at double culvert 1.96

NO Fish Observed.
NO Redds Observed.

Aug. 19, 1994

1000 Hrs.

- Deep Ck. (Bumping Lk) BLC Spanner
Survey.

- Eric Anderson, Jim Cummins

- Cloudy, Overcast.

- Stream Temp. 46°F

- Staff Gauge at Rd 1800 Bridge
double culvert. 1.97.

No Fish Observed.

No Reeds Observed.



WILLIAM O DOUGLAS

WILDERNESS

DEEP CREEK

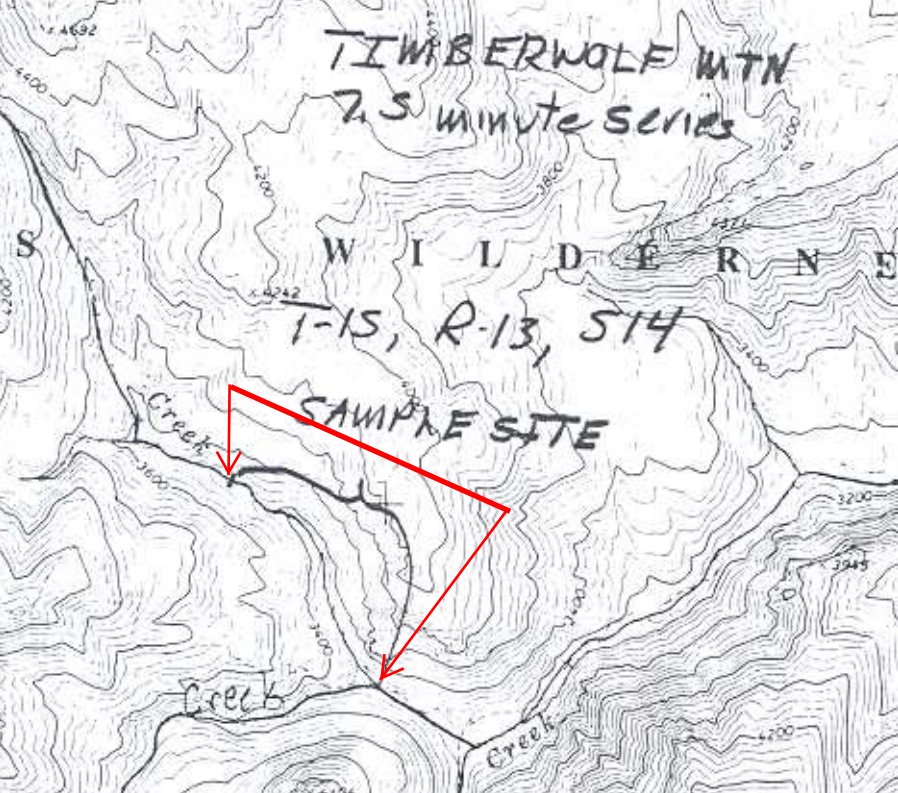
STATION, RIZE
SEC. 27, 34

TIMBERWOLF MTN
7.5 minute series

W I L D E R N E S S

T-15, R-13, S14

SAMPLE SITE



Stream Physical Attributes

Stream Type 3 Elevation (m) 11238 3560'

Gradient (%) 06.11

Site Length (m) 11837.11 5,280

Avg. Max Riffle Depth (m)

Avg. Max Pool Depth

Avg. Channel Width (m)

Avg. Wetted Width (m)

SUBSTRATE

 + + + + + + = 100%
 Bedrock Boulder Rubble Gravel Sand Silt/mud Detritus

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

Compaction: High Med Low
(Circle one)

POOL/RIFFLE/RUN/OTHER RATIO

 + + + = 100%
 Pools Riffles Runs Other

INSTREAM COVER

Total %

 + + + + + \geq 100%
 LOD Boulder In. Veg OverVeg Cutbank Pools

INSTREAM FLOWS

Water Discharge (m³/sec):

Method

MAP

MAP

Lake Physical Attributes

Site Max Depth(m)

Littoral or Limnetic
(check one)

AQUATIC VEGETATION COVER

Submergent Vegetation (%)

Emergent Vegetation (%)

Floating Vegetation (%)

Method

Both Stream and Lake Physical Attributes

WATER COLOR (Check appropriate color)

- Clear Algal Bloom (green, brown)
 Tannic (brown) Diatom Bloom (brown)
 Glacial (gray, milky) Other (specify "other" in comment field)
 Muddy

% RIPARIAN VEGETATION

Deciduous Coniferous

Shrubs Grasses

T-15, R-13, S14

SAMPLE SITE

Creek

Creek

Hinds

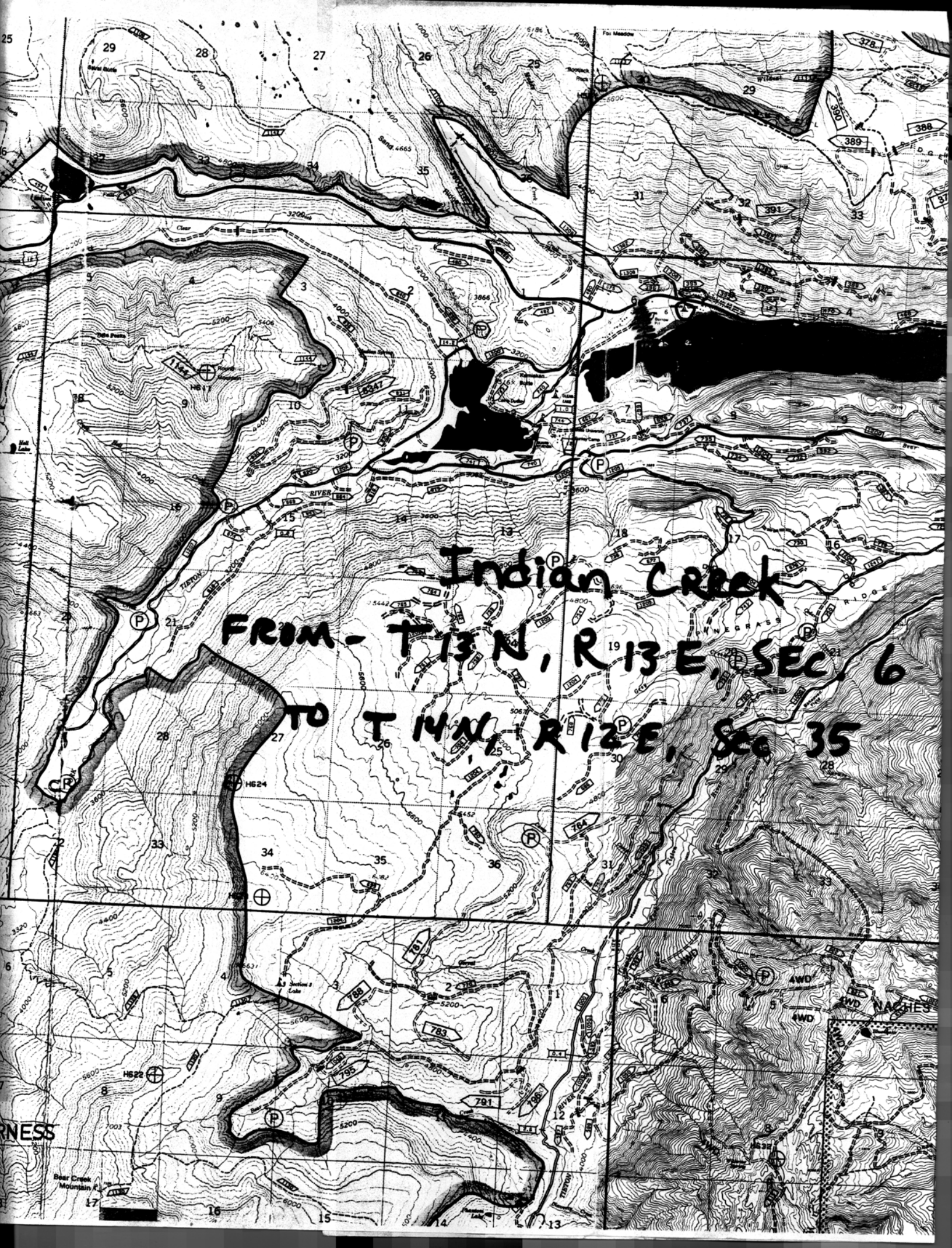


BULL TROUT REDD SURVEY SUMMARY 1994

Indian Creek - TRIB TO RIMROCK LAKE

From T13N, R13E, sec 6 to T14N, R12E, sec 35

date	Redds	False Redds	#Fish	Temp	Surveyor
9/2	50	16	58	42°F	Cummins / James / Anderson / Beeth
9/12	70	16	47	44°F	Anderson / Rush
9/22	30	4	5	46°F	Anderson
10/3	29	0	2	47°F	DIVENS



1994

Indian Creek
Season Total - Bull Trout

Redds = 179

(includes 171 definite and
8 probables)

9 Possible Redds

Not Counted in Total

INDIAN CREEK

OCT 3, 1994

N. Spring

Mark Divens - WDFW

OLD def. Redds

|||| |

|||| |

|||| |

|||| |

|||| |

|||| |

1 pro. to def

2 prob.

4 pos.

New Redds

1 def
1 def

1 def

1 def

1 def

1 def

1 def

1 def

1 def

1 def

INDIAN Creek ^{BLC} Redds

10-3-94

Temp °F = 47

Hwy to TRAP
(Mainstem)

Mark Di Zons-WDFW

OLD

NEW

~~||||~~ ~~||||~~

~~||||~~ ~~||||~~

~~||||~~ ~~||||~~

||| ~~||||~~



1 prob to det

1 def OF
1 def 2 FISH
(1 HAS TAG)
prob. Male

1 def
1 def
1 def
1 def

SAW several Kokanee

Kokanee redds in lower 1/2 mile
from bridge upstream

BLC Redds,
INDIAN Creek

OCT 3, 1994

TRAP to N. Spring (Mainstem)
Main Drivers - WDFW

OLD (def)

NEW

|||| |||

1 def

|||| |||

1 def

1 def

|||| |||

1



{ 2 pos to 1 def }

1 pos

1 prob

1 prob

1 prob

1 prob

INDIAN CREEK OLT 3. 1994
Mainstem From N. Spring to S. Spring
(dry channel in this area).

OLD Def

NEW

|||| |||

∅

|||| |||

BLC Spawner Survey
MARK DIVENS - WDFW

↓
1 pos

1 pos

1 pos

1 pos

1 prob

Indian CK 9-22-94
E. Anderson - WDFW
N. Spring 44°F

BLC
Redd
Survey

New Redds

Def.

Prob.

Pos.

||||

Fish - ||||

old Redds

Def.

Prob.

Pos.

||||

|||

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||||

||

10

BLC Spawner Survey.

Indian Ck. 9-22-94

E. Anderson - WDFW

N. Spring to S. Spring (Mainstem)

- Dry channel section between N. & S. Spring prevents entry into S. Spring + upstream reaches.

New Redds

Def.

||||

Prob.

|

Pos.

|

Fish ϕ

old Redds

Def

|||||

||||

Prob.

Pos.

|||

1 Pos to Def.	note
1 Def to Nothing	
1 Prob. to Def.	
2 Pos. to Nothing	

Accounted for in new redds above.
Eric

9/22/94

E. Anderson - WDFW

Indian CK ^{mainstem} 1100 Hrs.
New Redds - Hwy 12 to N. Spring.

46°F - Water Temp.

Def.

Prob.

Pos

###

||

φ

###

Fish φ

Kokanee also spawning on this date.

old Redds

Def.

Prob.

Pos

###

|||

|||

###

###

3 Pos. changed to Def.
2 Prob. || || ||

Accounted for in new redds above.
See

38 Def + 1 Prob Redds below trap.
included in above counts

Indian CK. BLC Spawner Survey

N. Spring E. Anderson-WDFW 9/12/94
L. Rush-CWU

New Redds

<u>Def.</u>	<u>Pre.</u>	<u>Pos.</u>
III III	III	I
III III		
III I		

} includes 3 new Redds above
beaver ponds, and eight fish.

Fish III III III III III III III III

Old Redds

<u>Def.</u>	<u>Pre.</u>	<u>Pos.</u>
III III	Φ	III
III III		
III I		

OK. Accounted
for in New Redds
Etc
(1 Old Pos. to Def.)

} includes 3 old reds above
beaver ponds

Indian CK

9/12/94

BLC
Summer
Survey

E. Anderson WDFW

L. Rush - CWU

N. Spring to S. Spring (Mainstem)

New Redds

Def.
IIIIII

Pre.

Pos.
III

Fish IIIII

Old Redds

Def.
IIIIII

Pre.
I

Pos.
III

2 pos. changed to Def.

Accounted for in above
new redd count. Eric

BLC Spawner Survey 9/12/91

E. Anderson-WDFW, L. Rush-CMU 44°F - H₂O Temp.

Indian CK.

1000 Hrs.

July 12 to N. Spring. (Mainstem)

New Redds

Def.

##

##

1

Prob.

|||

Pos.

1

Fish ## |||

Old Redds

Def.

1

Pre.

##

Pos.

1 pos. changed to Def.
3 prob. changed to Def.

} OK
Accounted
for in
new redds
above.

Em

over →

Correct date 9/02/94

~~9/12/94~~

N. Spring - 43°F water temp.

Redds

<u>Def.</u>	<u>Fish</u>	<u>Prob</u>	<u>Pos</u>
## ##	## ##	φ	
## ##	## ##		
## -	## -		

includes
eleven fish above beaver ponds
and 3 redds.

E. Anderson - WDSW
S. Beech - CWU

Sept. 2, 1994

Indian CK. BLC Spawner
Survey. E. Anderson - WDRW

Clear, Sunny. S. Beech - CWU

* S. Spring - good H₂O Flow
- 42°F

- No Fish or Redds

* Mainstem From S. Spring to
N. Spring. has good H₂O
Flow but dried up approx.
halfway to N. Spring. 150 meters.

* Mainstem above S. Spring was
dry, ^{but} water in channel below falls.

* Mainstem From S. Spring to
N. Spring below dry channel,
↓ Redds

Def.

NI

III

Fish
NI

Prob.

I

Pos.

NI

over →

Indian Creek - bridge to N. Spring

9/2/94 - 45°F Water Temp.

J. Cummins - WDFW B. James - CWU

Redds - BLC

Fish

<u>def</u>	<u>Prob</u>	<u>Pos</u>	

BLC SPANNER SURVEY

STATE OF WASHINGTON
DEPARTMENT OF WILDLIFE

Memo for

Indian CK Bull Trout Redd Counts

From Hwy 12 Bridge to Falls

≈ 4 miles

T 13 R 13 S 6 NW $\frac{1}{4}$

T 13 R 12 S 1 NE $\frac{1}{4}$

T 14 R 12 S 36, 35, 26, 23, 22

see Ahtanum CK File
for map (site I.D.)

Bull Trout Redd Survey Summary 1994
N. F. Ahtanum CREEK & TRIB (Shellneck CK)

T12N, R13E, Sec 9 TO T12N, R14E, Sec 21	date	Redds	FALSE REDDS	#FISH	temp	Surveyor
	9/20	6	0	—	44°F	Anderson
	9/21	1	1	—	42°F	Anderson / Tuttle

SHELLNECK CREEK

date	Redds	False Redds	#FISH	temp	Surveyor
9/20	7	0	2	—	Cummins

T12N, R13E, SEC 14, 15

LAKE AND STREAM SURVEY FORM

Sample Site Identification

Water Name Rattlesnake Cr. Section Name _____
Township 14 Range 13 E / W (circle one) Section 5 Qtr. Section
Site Specifics Little Wildcat Cr downstream to Shell Cr.
Sample Date 09/1/94 International Time 1530 Physiographic Province SEC Stream Habitat Unit Type

NOT FOR DATA ENTRY
County Yakima
Mgmt Unit Code Y68Y69

Sampler Last Name Cummins / Divens Agency WDFW
Comments (weather conditions, flooding, pollution, etc.) Fair habitat, only a few deep pools; mostly riffles. Fish not plentiful, but more abundant than upstream. Fish citations (not including fish caught by hook + line - BLC - 3, Ct - 15. 1 BLC redd. More Ct, fewer BLC than upstream.

Chemistry for Streams and Lakes (multiple depths available for lakes)

	Depth 1	Depth 2	Depth 3	Depth 4	Depth 5	Depth 6	Depth 7	Depth 8	Depth 9	Depth 10	Method
Depth (m)	
Temp. (°C)	6.0	
pH	
DO ₂ (mg/l)	
Total Alkalinity (mg CaCO ₃ /l)											
TDS (mg/l)											
Conductivity (micromhos/cm)											
Water Clarity (m-lake/JTU-stream)											
Nitrate N ₃ (mg/l)											
Total PO ₄ (mg/l)											
Ortho PO ₄ (mg/l)											
Chlorophyll 'A' (mg/l)											

SURFACE \longrightarrow \longrightarrow \longrightarrow BOTTOM

Other Chemical Measurements Taken: _____

RIW ROCK LAKE

7.5 Minute Series

T14, R13, S5

SAMPLE
SITE

Strawberry
Meadows

Rattlesnake
Meadows

Trail 114

Mile 11

Rattlesnake

Trail 15

Trail 114

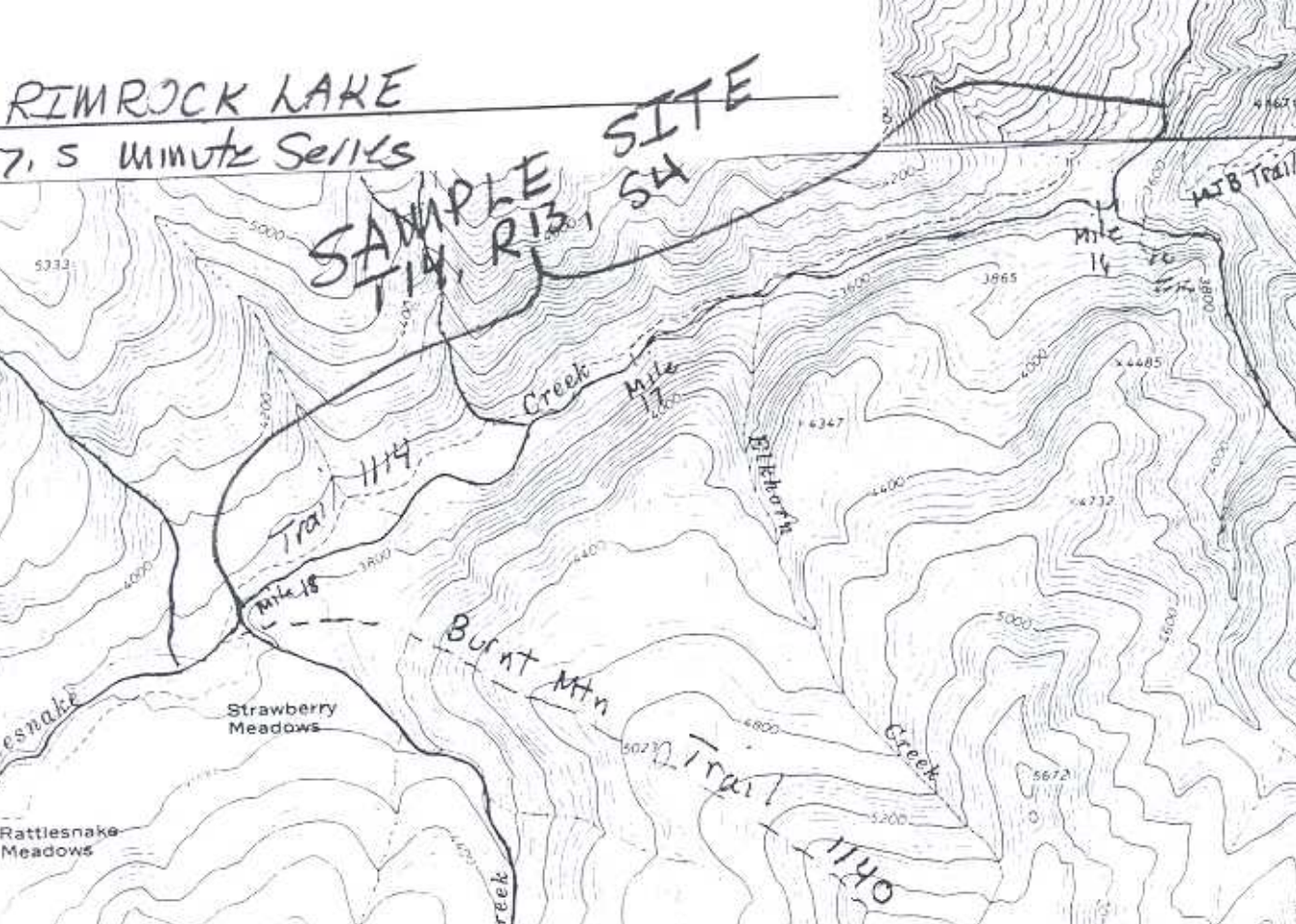


RIMROCK LAKE
7.5 minute Series

SITE

SAMPLE
TRAIL

R13.1



1114
Trail

1140
Trail

Burnt Mtn

Elephant
Creek

Snake
Creek

MJB Trail

Rattlesnake
Meadows

Strawberry
Meadows

Rattlesnake
Meadows

Snake
Creek

1140

1 mile

1/4

1/2

3/4

1

1 1/4

1 1/2

1 3/4

2

2 1/4

2 1/2

2 3/4

3

5332

5000

4800

4600

4000

3800

4400

3600

3400

4200

4000

4685

4400

4200

4000

5000

4800

4247

5020

4800

5200

5672

4467

4200

4000

3800

3600

3400

3200

3000

2800

2600

2400

2200

2000

1800

1600

1400

1200

LAKE AND STREAM SURVEY FORM

Sample Site Identification

Water Name Rattlesnake Creek Section Name _____
 Township V4.0 Range 13.0 (E) W (circle one) Section 6 Qtr. Section
 Site Specifics Approx 1/2 mile above upper crossing of Trail 1114 down to mouth of Little Wildcat Cr
 Sample Date 09/11/94 International Time 1345 Physiographic Province SEC Stream Habitat Unit Type

NOT FOR DATA ENTRY

County Yakima
 Mgmt Unit Code Y68/Y69

Sampler Last Name Cummins, Dennis Agency WPIFW

Comments (weather conditions, flooding, pollution, etc.) Cr dry from 1/2 m above Trail 1114 crossing to 1/4 m below trail crossing. 1st pool had fish (3 BAC + 2 ct). BAC + Ct not abundant. Total BAC sited - 5 + 4 caught by hook & line. 3 definite BAC redds. No Ct sampled. Fair habitat, not very many pools, mostly riffles + shallow.

Chemistry for Streams and Lakes (multiple depths available for lakes)

	Depth 1	Depth 2	Depth 3	Depth 4	Depth 5	Depth 6	Depth 7	Depth 8	Depth 9	Depth 10	Method
Depth (m)											
Temp. (°C) <u>41°F</u>	<u>50</u>										
pH											
DO ₂ (mg/l)											
Total Alkalinity (mg CaCO ₃ /l)											
TDS (mg/l)											
Conductivity (micromhos/cm)											
Water Clarity (m-lake/JTU-stream)											
Nitrate N ₃ (mg/l)											
Total PO ₄ (mg/l)											
Ortho PO ₄ (mg/l)											
Chlorophyll 'A' (mg/l)											
	SURFACE →					→					BOTTOM

Other Chemical Measurements Taken: _____

RIW ROCK LAKE
7.5 Minute Series
T14, R13, S6

SAMPLE
SITE

dry

dry
Mile
30

Trail 114

Rattlesnake

Rattlesnake
Meadows

Strawberry
Meadows

Creek

Wildcat

Little

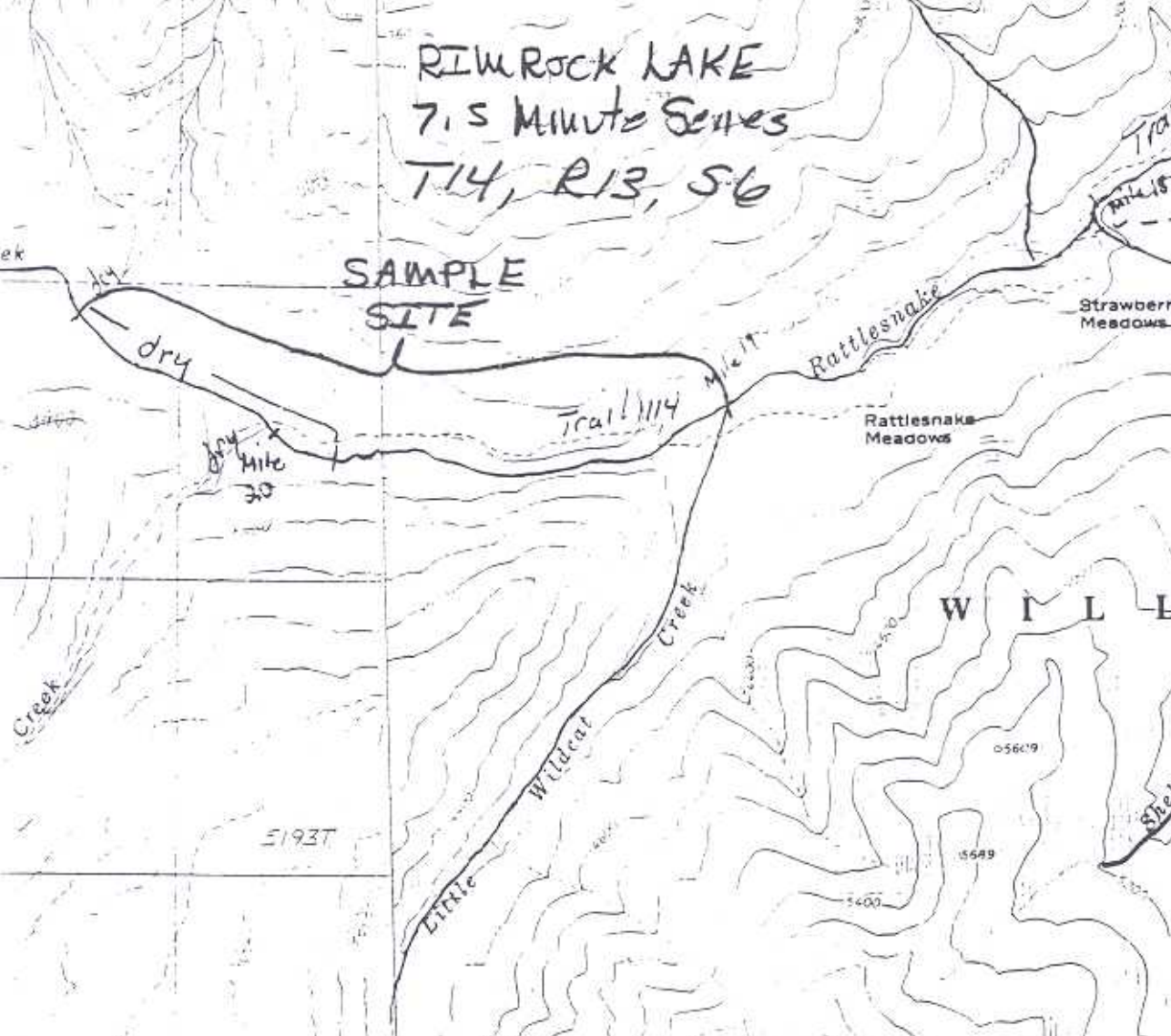
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5619

5589

5400

E193T



BULL TROUT Redd Survey Summary 1994

SOUTH FORK Tieton River AND TRIBS

S.F. Tieton River T13N R13E S28 to T12N, R1E Sec. 13

DATE	Redds	False Redds	#fish	temp	Surveyor
8/31	0	1	6	45°F	Cummins/ Anderson
9/8	20	33	28	46°F	Anderson/ Divens/ Lenhart/ Rush/
9/16	89	10	69	-	Anderson/James Cummins/Beech
9/26-27	33	1	0	-	Divens

TRIBS TO SF TIETON

BEAR CREEK T12N, R12E Sec 11, 12

date	Redds	False Redds	#fish	temp	Surveyors
9/8	6	2	10	50°F	Divens/Lenhar
9/14	13	1	29	46°F	Anderson/ Cummins
9/26	2	1	1	-	Divens

Comment: 1st year surveyed for BLC Redds

SPRUCE CREEK T13N R13E S28

date	Redds	False Redds	#fish	temp	Surveyors
9/16	4	0	4	44°F	Anderson/ James

SF TRESTON R.

T12 R13 S29
to

T12 R13 S13

SPRUCE
CREEK

T13
R13
S28

BEAR
CREEK

T12
R12
S11-12



1994

S. F. Tieton R.

Season Total including
BEAR & spruce creek

Redds = 167

(includes 157 definite and
10 probables)

13 possible or False Redds

9-27-94 SF Tieton R
Mark Divens - WDW

Grey creek to
Bridge at Spruce CK

III Def 1 Pos.

Ø Fish

Spruce CK. - Trib. to -
S.F. Tieton

IIII Def.

Ø Fish

Rd 1050 to Grey CK CG. Bull Trout
9-27-94 S.F. Tieton R. Records
mark Divens - WDFW

OLD

NEW

|||| |

1 def (BC)

|||| |

1 prob

|||| |

2 def

|||| |

1 def

|||| |

1 def

|||| |

1 prob

1 prob
1 prob 1 prob

1 def

1 prob

1 def

1 prob

1 def

1 pos

1 def

1 pos - prob

1 def

5 pos

0 Fish

Bear Creek

9-26-94

Redd CT

Trib. to S. F. Tieton

OLD Redds

NEW Redds

HHH LHH

1 def

HHH IIII

1 def

1 POS

1 FISH

Mark Divens - WDFW
Bull Trout Spawning Survey

S.F. Tieton R.
Mark Divens - WDFW

9-26-94

Bear CK to 1050 Bridge
Bull Trout spawning survey
OLD New

~~||||~~

1 def

||||

1 def

1 def

1 def

1 def

∅ Fish

S.F. TICTON River

9-26-94

Falls to Bear CK.

Mark Divens-WDFW

OLD

NEW

|||||

1 def

|||||

1 def

φ Fish

1 prob

1 def

1 def

1 prob

1 def

1 pos (prob-def) ✓
1 prob-def

1 pos (STAY) ✓
1 prob-def

1 prob-pos ✓

1 pos-(STAY)

Falls to Bear

Bull Trout Spawning Survey

S. Fork Teton Tributary

* Spruce CK

9/16/94

E. Anderson - WDFW,

B. James - CWA

New Redds

44°F - H₂O Temp.

Def

Pro

Pos.

||||

Fish - ||||

Section - From mouth to temp. gauging station (≈ 300 meters). No redds or fish above temperature station. 3' falls ≈ 1/4 mile up stream.

No old redds noted - 1st time survey. Not surveyed in previous years.

Bull Trout Spawner Survey 9/16/94
S.F. Tipton R. Grey Ck. to 2.3 miles
downstream.

Eric Anderson - WDFW, Brenda James - CWU

New Redds

Def.

Pro.

Pos.

111

1

No Fish observed

Old Redds

Def.

Pro.

Pos.

0

0

0

old to new

1 Pos. to nothing
11111 Pro. to nothing
1 Pro. to Pos.

Accounted
for in above
new reds. ~~500~~

No Redds or Fish
below Bridge
at Spruce Ck.
- Future Index
area should
be from Falls
to bridge at
Spruce Ck.

S.F. Tieton R. 9/16/94

Rd 1050 to Grey Ck C.G.

J. Cummins - WDFN, Storm Beech-CWU

Water Temp. 42°F

Bull Trout Spawning Survey

New Redds

<u>Det.</u>	<u>Prob.</u>	<u>Pos.</u>
###	##	1
##	##	
##	##	
##	##	

Fish ## ## ## ## ## ## ## ##

Old Redds

<u>Det</u>	<u>Prob</u>	<u>Pos</u>
##		##
##		

Numerous redds in braided areas and side channels,

Bull Tr. Spawning Survey 9/16/94

S.F. Tieton R. 1050 Hrs

Water Temp. 44°F. Clear Sunny

E. Anderson - WDFW B. James - EWU

Falls to Rd. 1050 Bridge

New Redds

<u>Def.</u>	<u>Prob.</u>	<u>Pos.</u>

Fish |||||

Old Redds

<u>Def.</u>	<u>Prob.</u>	<u>Pos.</u>

1 Pos to Def.	<u>old to New</u>
1 Pro to Def.	
11 Pro to Pos.	
Pro. to Nothing	
11 Pos to Nothing	

Accounted
for under
new Redds

OK →

9/14/94

1300 Hrs

Bear Ck. - Trib. to S.F. Tieton (1st yr. survey)
E. Anderson, J. Cummins WDFW

Old Redds

Bull Tr. Spawning Survey

Def.

||||

46°F - Water Temp.

changed 2 old probable to Def.

Two 15' waterfalls approx 3/4 mile
upstream from mouth's
barrier to Bull Tr. passage.

New Redds

Def

|||| |||||

Pos

|

Fish

|||| ||||| ||||| |||||
|||| |||||

Bull Trout spawning Survey 9/8/94

S.F. Tieton Clear & Sunny

Water Temp 46°F

Rd 1050 to Grey Ck. C.G. 0900Hrs

New Redds

Det.

|||||

||||

Prob.

Pos.

||||

1 Old Pos.

Fish - ||| ||| |||
|||

cloudy H₂O - Glacial

No Redds From Blue Side
to Grey Ck. C.G.

Mouth to 2.3 miles upstream.

No Redds
No Fish

Eric Anderson WDFW
Larry Rush CWU

9/8/94. Falls to RD. 1050 (cont.)
S.F. Tieton

Def	Prob	Pos	Fish on Redd
1			2
1			

3 Fish seen that
were not on a redd.

Ball

Bull Trout Spawning Survey 9-8-94
 Mark Divans - WDFW, Jason Lenhart - CWU
 Bear Creek Temp 50°F
 Trib. to S. F. Tieton

Def	Prob	pos	Fish on redds
1			
1			
1			2
1	1		3
1			3
1	1		

2 Not on Redds

First time survey - not surveyed in previous years.

10 TOTAL Fish

7 were from mouth to where we shocked.

No barrier E. Anderson

Probable barrier Approx 250-300 Yds from mouth.

S. F. Tieton R. 8-31-94
E. Anderson^{-W.P.F.W.} Water Temp. 51°F
0915 Hrs.

USFS Rd 1050 to Grey CK C.G.
Water Clarity - slightly glacial.
Bull Trout - 6 Fish Observed.

Redds

Definite Probable Possible

1

Bull Trout Spawning Survey

S. F. Tieton R. 8/31/94
Bull Trout Spawning Survey

Falls to Bear Ck.

0930 Hrs, 45° F - Water Temp.

No fish

No Redds

Bear Ck to 1010 Rd

1045 Hrs, 47° F - Water Temp.

J. Cummins
WDFW

Upper Bumping bull trout summary (as of Jan 13, 2004)

Stream survey 1994: Karen Lindhorst saw two adult bull trout on a redd on September 8, and one more large bull trout in a pool nearby.

Snorkel survey 9-30-2002: Yuki Reiss and Gary Torretta night snorkeled from the reservoir to the first barrier falls (below the 970 trail x-ing) and saw 10 juvenile/sub-adult bull trout (five 4-6 in, five 6-10 in.). Genetic samples were taken but have not been analyzed. Before snorkeling, we walked the main channel from the lake and did not see any redds.

Stream survey 2003: On August 14, Yuki Reiss and Ken Jarrett night snorkeled the pool below the first barrier falls and saw 2 bull trout (one 200-299 mm, one 300-400 mm). No bull trout were seen above the first falls despite extensive night snorkeling effort. The area available below the falls is 0.8 miles of main channel habitat and 2.0 miles of side channel habitat. There was no attempt to locate redds in 2003 due to communication errors.

There are many brook trout throughout this stream!

Note from [unclear] 1-3-04

1994 - Lindhorst ^{24-27" fish}
2 fish on a redd ^{small site}
2 addtl. fish in pool
1st week Sept.

2002 - night snorkel
mouth → falls
Torretta / Reiss
(+ 33 brookies)
5 - 4-6" bull trout (100-150)
5 - 6-10" bull trout (150+)
9/30/02 - walked stretch
to look for redds

2003 - Pool below falls ^{2 bull trout}
1 200+
1 300+