

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: COLD CREEK
 GCG: 5-SC
 SITE ID: 464
 BASIN: ROGUE
 TREATMENT DATE: 2012
 SURVEY DATE: 6/25/2013
 SURVEY CREW: BRENT PRIZ, DAVID JONES, LORA TENNANT
 USGS MAPS: SKELETON MOUNTAIN
 ECOREGION: Oak Savannah Foothills
 REPORT PREPARED BY: Lora Tennant

REACH: 1 LOCATION: T33S-R03W-S34NW

SURVEY DESCRIPTION:

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Second growth timber (15-30 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 15-30cm dbh

Primary channel length (meters) and area (m²): 425 : 1,410

Secondary channel length (meters) and area (m²): 19 : 30

VWI average: 5.2 VWI Range: 3.2 - 12 Average Gradient: 2.9%

Pieces LWD per 100m: 17.9 Wood Volume (m³) per 100m: 9.2

Percent pools: 43% Complex pools (LWD pieces>=3): 5 Pools >=1m deep: 0

<u>Percent substrate (avg):</u>	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	1	32	16	15	6	31
Pool units	1	45	14	13	2	25
Fast water units	0	27	19	19	4	30

SURVEY COMMENTS:

This is a post-treatment habitat and snorkel survey at a large wood restoration treatment site. Habitat structures were noted throughout the survey. Adult salmon carcasses had been recently placed. Snorkel surveys identified numerous juvenile coho salmon and trout fry.

Survey Date: 6/25/2013

Report Date: 4/22/2014

T33S-R03W-S34NW

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.2	VWI Range:	3.2 - 12

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	100%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m²)</u>	<u>Dry Units</u>
Primary	425	1,410	0
Secondary	19	30	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 3.1	Width: 5.5	8.2 (7.2 - 10.8)	12.0 (10.1 - 14.3)
Depth: 0.24	Height: 0.4	0.7 (0.6 - 0.8)	1.3 (0.95 - 1.8)

W:D ratio: 15.1

Stream Flow Type: MF

Average Unit Gradient: 2.9%

Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio): 1.5

Habitat Units/100m (total channel length): 10.1

Habitat Units/100m (primary channel length): 10.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	9%	Reach avg: 77%
Undercut Banks:	6%	Range: 61 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	76	17.9
Volume (m ³):	39	9.2
Key pieces (>=12m x 0.60m):	0	0.0

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T33S-R03W-S34NW

REACH 1

HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
							CASCADE/BEDROCK	2	31	2.4	0.18	84
CULVERT CROSSING	1	10	6.0	0.15	58	0	0	10	30	40	20	0
POOL-BACKWATER	3	11	1.3	0.25	14	1	3	63	13	3	0	17
POOL-LATERAL SCOUR	14	161	3.6	0.42	618	10	1	45	14	13	2	25
RAPID/BEDROCK	3	39	3.6	0.15	142	3	0	3	2	3	2	90
RAPID/BOULDERS	3	32	3.2	0.22	97	9	0	20	28	40	12	0
RIFFLE	8	130	2.6	0.18	319	8	0	41	26	21	3	9
STEP/BEDROCK	6	20	3.1	0.10	70	0	0	8	3	2	0	87
STEP/BOULDERS	2	3	2.1	0.15	6	4	0	10	5	5	80	0
STEP/COBBLE	2	8	3.8	0.08	30	1	0	5	43	45	8	0
STEP/LOG	1	0	3.8	0.10	2	0	0	80	20	0	0	0
Total:	45	444	3.1	0.24	1,439	37	Avg: 1	32	16	15	6	31

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m ²)	Percent	Number	(# / 100m ²)
Dammed & BW Pools	3	11	1.3	0.25	14	0.95%	1	7.3
Scour Pools	14	161	3.6	0.42	618	42.94%	10	1.6
Glides	0	0			0	0.00%	0	0.0
Riffles	8	130	2.6	0.18	319	22.14%	8	2.5
Rapids	6	71	3.4	0.18	239	16.63%	12	5.0
Cascades	2	31	2.4	0.18	84	5.82%	1	1.2
Step/Falls	11	32	3.1	0.10	108	7.47%	5	4.6
Dry	0	0			0	0.00%	0	0.0
Culverts	1	10	6.0	0.15	58	4.04%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

COLD CREEK
GCG: 5-SC SITE ID: 464

Survey Date: 6/25/2013

Report Date: 4/22/2014

T33S-R03W-S34NW

REACH 1

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	17	38.3	40.0
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	5	11.3	11.8
Pool frequency (channel widths/pool):	4.8		
Residual pool depth (avg):	0.31		

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**COLD CREEK
GCG: 5-SC SITE ID: 464**

**Survey Date: 6/25/2013
Report Date: 4/22/2014**

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 3 transects

Total hardwoods/1000 ft	874
Total conifers/1000 ft	792
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.7	3.3	1.7	2.7	4.3	2.3	6.7	8.3
15-30cm	0.7	3.3	1.3	0.3	2.0	1.7	4.0	5.3
30-50cm	0.0	0.3	0.7	0.0	0.3	0.0	1.0	0.3
50-90cm	0.3	0.0	1.0	0.0	0.0	0.3	1.3	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	1.7	7.0	4.7	3.0	6.7	4.3	4.3	4.8

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	64		58		47	
Shrub cover	38		23		38	
Grass/forb cover	20		23		16	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		100		100	
High terrace	33		0		0	
Low terrace	0		0		0	
Floodplain	17		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	17		0		0	
Riprap	0		0		0	
Surface slope (%)	14		44		41	

Summary of Riparian Zone (0-30m) for all reaches

3 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000 ft	874
Total conifers/1000 ft	792
Total conifers >20" dbh/1000 ft	81
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

Diameter class (cm)	Zones 1-3 <u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	6.7	8.3
15-30cm	4.0	5.3
30-50cm	1.0	0.3
50-90cm	1.3	0.3
>90cm	0.0	0.0

HABITAT INVENTORY

GCG: 5-SC

SITE ID: 464

Survey Date: 6/25/2013

Report Date: 4/22/2014

RIPARIAN ZONE VEGETATION

Reach 1										Reach 1					
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
16	LF	1	FP	22	70	60	20	Conifer	1						20% DUFF, SLOPE OVER ZONE 1
								Hardwood	4						
16	LF	2	HS	45	90	35	30	Conifer	1		1	2			35% DUFF
								Hardwood	2	1					
16	LF	3	HS	50	40	60	10	Conifer							30% DUFF
								Hardwood	3						
16	RT	1	RB	0	60	50	30	Conifer							20% GRAVEL ROAD
								Hardwood	1	5	1				
16	RT	2	HS	72	5	5	15	Conifer							80% ROCK/GRAVE L/SAND
								Hardwood							
16	RT	3	HS	62	20	20	0	Conifer	4						30% DUFF, 50% ROCK/SAND
								Hardwood	1						
27	LF	1	HT	13	70	40	30	Conifer							30% DUFF, SLOPE OVERALL
								Hardwood	1	4					
27	LF	2	HS	57	50	30	30	Conifer			2				40% DUFF
								Hardwood	5						
27	LF	3	HS	65	70	5	35	Conifer	8	3	1				60% DUFF
								Hardwood							
27	RT	1	HT	0	65	30	10	Conifer			1				60% DUFF
								Hardwood							
27	RT	2	HS	23	90	25	20	Conifer	4	1	1				55% DUFF
								Hardwood	1						
27	RT	3	HS	9	30	30	20	Conifer							30% ROCK/GRAVE L, 20% DUFF
								Hardwood	1						
38	LF	1	HS	27	80	20	20	Conifer			1				60% DUFF
								Hardwood	4						
38	LF	2	HS	23	70	20	30	Conifer					1		50% DUFF
								Hardwood							
38	LF	3	HS	17	60	70	10	Conifer	1	3					20% DUFF
								Hardwood							
38	RT	1	HS	22	40	30	10	Conifer	1				1		40% DUFF, 20% SAND, 3M HT
								Hardwood			1				
38	RT	2	HS	45	40	20	10	Conifer			1				70% DUFF, 3M VERY OLD ROADBED
								Hardwood							
38	RT	3	HS	42	60	40	20	Conifer							40% DUFF
								Hardwood	2	5			1		

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

RESTORATION MONITORING SITE
SURVEY DATE: 6/25/2013

COMMENT SUMMARY

MONITORING AREA: 5-SC SITE ID: 464 STREAM: COLD CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RB	00	6.2		495931/4723221, START, FISH CARCASS
1	2	CC	00	15.9	CC	ROCK CR RD, OPEN BTM CONCRETE, H=3, W=6
1	3	LP	00	25.5		FISH CARCASS, LP STARTS 3.3M BACK IN CULVERT
1	5	LP	00	47.9		METRIC @ PTC
1	6	SR	00	52.9	PN	FOR JUVIES
1	15	LP	00	125.4		1M DEEP OF UNDERCUT ON RB
1	16	RB	00	140.7		RIP/MET, METRIC AND RIP
1	17	LP	01	145.4	HS	LOGS
1	18	SR	01	147.6	WL	FEATHER
1	19	LP	02	147.6	HS	LOGS, FISH CARCASS
1	21	RI	01	155.5	DJ;HS	LOGS, SMELLY CARCASS
1	23	RI	00	168.5	DJ	FISH CARCASS
1	27	RI	00	222.2	HS	RIP/MET, LOG, METRIC & RIP
1	30	SL	00	233	HS;DJ	H=0.35, LOG
1	31	RI	00	248	HS;DJ	UNIT GOES UNDER MAJOR DJ, LOGS, CAN'T SEE SUBSTRATE(DJ)
1	32	RI	01	279.5	HS	LOGS
1	34	LP	00	294.5	HS	FISH-SALMONID AND COTTID, LOGS
1	35	SC	00	299.1	HS	LOGS
1	36	LP	00	313.9	HS	LOGS
1	37	LP	00	328.5	/LS	
1	38	RR	00	340.3		RIP/MET
1	39	LP	00	347.5		METRIC & RIP
1	40	CR	00	371.3	/SS	W/ 0.3 M DEEP POCKET
1	45	RB	00	425.3		END, METRIC

OREGON DEPT OF FISH AND WILDLIFE
RESTORATION MONITORING SNORKEL SURVEY SUMMARY

Stream: COLD CREEK

Survey Date: 7/2/2013

GCG: 5-SC Site ID: 464

Location: T33S-R03W-S34NW

Report Date: 4/22/2014

Start UTM E: 495931

End UTM E: 495716

Stream Flow: MF

Start UTM N: 4723221

End UTM N: 4723509

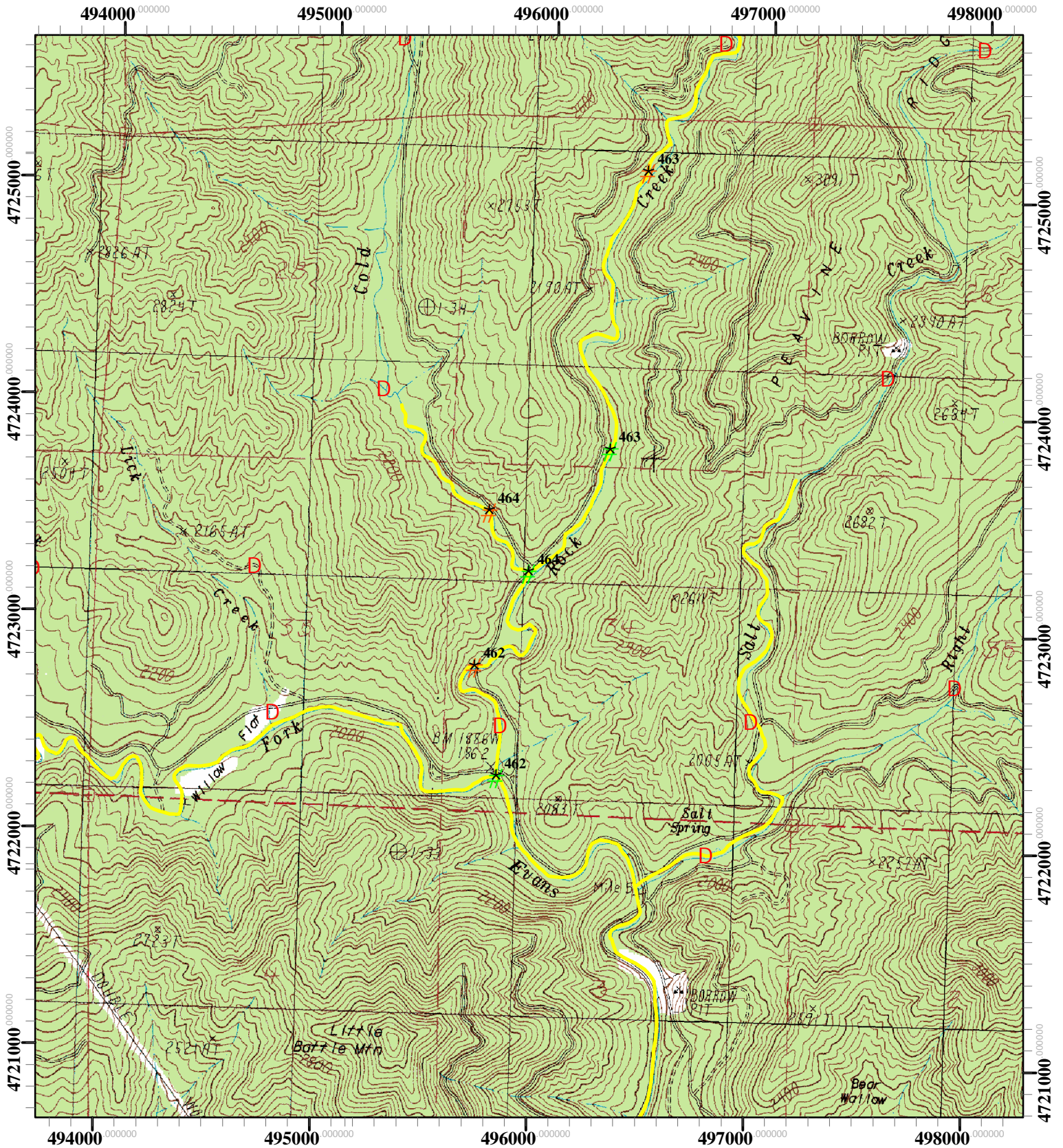
Water Temperature: 16

Reach Notes:

Num	<u>Pool Information</u>						<u>Fish Information</u>								Note
	Type	Vis	Length(m)	Width(m)	Depth(m)	CO	CT	ST	CH	TR	RSS	D	Other		
3	LP	3	9.6	4.2	0.35	28		1		Yes	No	No			
5	LP	2	20	5	0.55	3				Yes	No	No		SILTED UNDERCUT	
8	LP	3	11.8	3.8	0.5	2		1		Yes	No	No	1 COT		
10	LP	3	8.9	3.2	0.4	3				Yes	No	No			
15	LP	3	9.4	3.3	0.55	19		1		Yes	No	No			
17	LP	3	4.7	1.8	0.3	4				No	No	No			
19	LP	3	7.1	1.9	0.4	4				Yes	No	No			
29	LP	3	7	4.3	0.7	21		1		Yes	No	No		2 COHO 90+	
34	LP	3	15	3.5	0.35	16				Yes	No	No	1 COT		
36	LP	3	4.8	4.5	0.3	25				Yes	No	No	1 COT		
37	LP	3	4.6	3.4	0.35	25		2		Yes	No	No	2 COT		
39	LP	3	7.2	3.3	0.3	17		1		Yes	No	No	3 COT		
42	LP	3	17.7	4.3	0.45	28				Yes	No	No	1 COT		
44	LP	3	13.2	4	0.4	17				Yes	No	No	2 COT	1 COHO 90+	

Vis=Visibility (0-3): 0=poorest, 3=best. Visibility may be influenced by either habitat complexity or water clarity.

CO = Coho; CT = cutthroat ≥90mm; ST = steelhead ≥90mm; CH = Chinook; TR = trout ≤90mm; RSS = reddsider shiner; D = dace; COT = sculpin



Site Number: 464
 Stream: Cold Cr
 T33S R03W S34
 County: Jackson
 Quad: Skeleton Mountain

- ✱ Restoration Start
- ✱ Restoration End
- D Potential Barrier
- Spawning Survey Segments

