

ODFW AQUATIC INVENTORY PROJECT
OREGON PLAN FOR SALMON & WATERSHEDS
STREAM RESTORATION HABITAT REPORT

STREAM: Bald Barney Creek (W-195)
BASIN: South Santiam River
SURVEY TYPE: Post-Tx
DATE: June 25, 2003
SURVEY CREW: Carmen Vandyke, Brock Jonasson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.6 km²
USGS MAPS: Keel Mtn.
ECOREGION: Cascades Western Central

GENERAL DESCRIPTION:

The Bald Barney Creek habitat survey extended 530 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.4 (range: 1.5-7.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 6.4 percent. Rapids (54%) and cascades (25%) dominated stream habitat. Bedrock (33%), boulders (29%) and cobble (27%) dominated stream substrate. Wood volume was low at 16.3 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

The crew noted several habitat structures during the survey.

REACH 1

T12S-R02E-S05NW

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	3.4	VWI Range:	1.5 - 7

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	530	1,997	0
Secondary	80	129	3

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.5	Width	6.0	7.4	8.1
Depth	0.19	Height	0.5	1.0	1.5
		W:D ratio	12.5	Entrenchment	1.2

Stream Flow Type: MF Water temp (C): 10.0 - 10.0
 Avg. Unit Gradient: 6.4% Habitat Units/100m: 7.9

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	M15	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 97%
Undercut Banks:	1%	Range: 81 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	68	12.8
Volume (m ³):	86	16.3
Key pieces (>=10m x 0.60m):	6	1.1

OREGON DEPARTMENT OF FISH AND WILDLIFE

BALD BARNEY CREEK POST-TX (W-195)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

6/25/03

REACH 1		T12S-R02E-S05NW					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	8	109	2.9	0.13	301	68	1	2	4	8	13	73	
CASCADE/BOULDERS	4	55	4.2	0.16	228	85	0	3	5	49	44	0	
DRY UNIT	2	16	1.6	0.00	27	29	3	0	8	50	40	0	
POOL-LATERAL SCOUR	1	12	5.2	0.80	64	10	0	11	5	11	11	63	
POOL-PLUNGE	6	36	4.6	0.53	150	33	0	2	5	19	22	53	
POOL-STRAIGHT SCOUR	2	17	4.5	0.43	83	17	0	5	5	36	26	28	
PUDDLED UNIT	1	10	1.6	0.15	16	24	0	5	5	50	40	0	
RAPID/BEDROCK	5	88	3.5	0.07	306	41	0	0	1	4	13	82	
RAPID/BOULDERS	15	238	3.4	0.13	846	357	3	4	6	41	45	1	
RIFFLE	3	28	3.6	0.13	103	32	0	7	28	22	27	17	
STEP/BEDROCK	1	1	1.6	0.05	2	0	0	0	0	0	0	100	
Total:	48	609	3.5	0.19	2,127	696	Avg	1	3	6	27	29	33

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		80
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	0	0			0	0.00%	0	0.0	
Scour Pools	9	65	4.6	0.54	297	13.95%	60	20.2	
Glides	0	0			0	0.00%	0	0.0	
Riffles	3	28	3.6	0.13	103	4.84%	32	31.1	
Rapids	20	325	3.4	0.11	1,152	54.17%	398	34.5	
Cascades	12	164	3.3	0.14	529	24.89%	153	28.9	
Step/Falls	1	1	1.6	0.05	2	0.08%	0	0.0	
Dry	3	26	1.6	0.05	44	2.06%	53	120.8	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	9	14.8
Pools >=1m deep:	0	0.0
Complex pools (LWD pieces>=3):	2	3.3
Pool frequency (channel widths/pool):	11.2	
Residual pool depth (avg):	0.46	

STREAM SUMMARY

BALD BARNEY CREEK POST-TX (W-195)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
48	609	3.5	0.19	2,127	1	3	6	27	29	33	696

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	0	0.00%
Scour Pools	297	13.95%
Glides	0	0.00%
Riffles	103	4.84%
Rapids	1,152	54.17%
Cascades	529	24.89%
Step/Falls	2	0.08%
Dry	44	2.06%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	732
Total conifers/1000 ft	1199
Total conifers >20" dbh/1000 ft	122
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	1.7	3.3	2.7	1.7	2.3	1.0	6.7	6.0
15-30cm	0.0	1.7	3.0	0.7	1.7	0.0	4.7	2.3
30-50cm	1.0	2.3	2.0	1.3	3.3	0.0	6.3	3.7
50-90cm	0.3	0.0	0.3	0.0	1.3	0.0	2.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	3.0	7.3	8.0	3.7	8.7	1.0	6.6	4.0

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	84	91	82
Shrub cover	25	24	13
Grass/forb cover	68	62	75

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	50	100	100
High terrace	50	0	0
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	24	48	33

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	732
Total conifers/1000 ft	1199
Total conifers >20" dbh/1000 ft	122
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	6.0
15-30cm	4.7	2.3
30-50cm	6.3	3.7
50-90cm	2.0	0.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

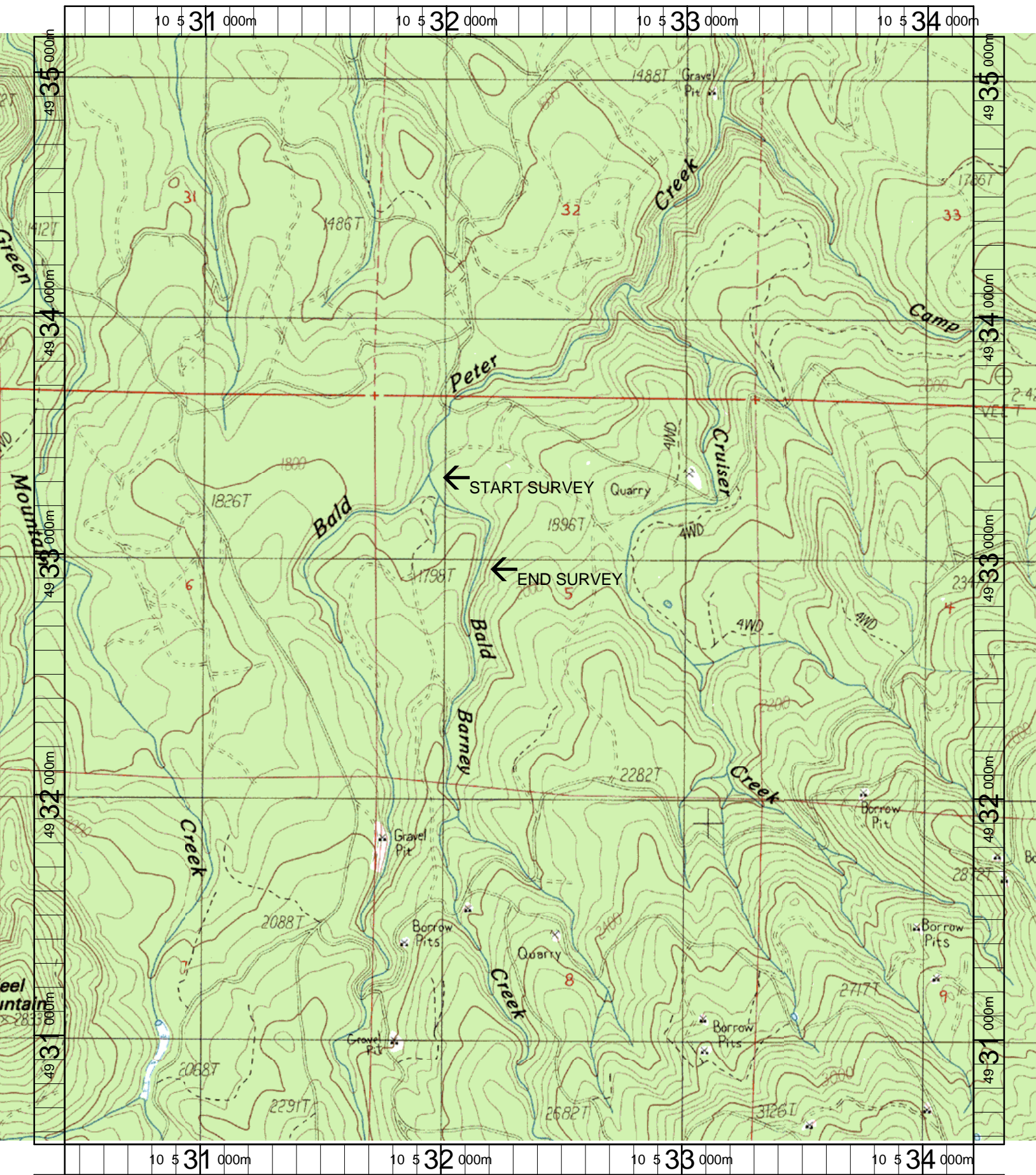
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
8	LF	1	HT	0	95	20	80	Conifer							
								Hardwood	2		1				
8	LF	2	HS	60	95	10	80	Conifer					1		
								Hardwood	2	2					
8	LF	3	HS	20	60	0	70	Conifer	1		3				JUST BEYOND RECENT CUT
								Hardwood							
8	RT	1	HT	0	95	40	60	Conifer							
								Hardwood	4	1	4				
8	RT	2	HS	20	95	10	70	Conifer			1	1			
								Hardwood			4				
8	RT	3	HS	30	90	20	60	Conifer					3		
								Hardwood	1						
21	LF	1	HT	0	90	20	70	Conifer	3						
								Hardwood	2	3	2				
21	RT	3	HS	40	80	30	60	Conifer	3		2				
								Hardwood	2						
21	RT	2	HS	45	90	25	50	Conifer			3	3			
								Hardwood							
21	RT	1	HS	40	60	10	90	Conifer	2						
								Hardwood	1						
21	LF	2	HS	40	95	80	10	Conifer	4	1					
								Hardwood	2						
21	LF	3	HS	20	90	10	90	Conifer	2		1	1			
								Hardwood							
33	LF	1	HS	70	70	30	70	Conifer				1			
								Hardwood			1				
33	LF	2	HS	65	90	10	80	Conifer	4	2					
								Hardwood							
33	LF	3	HS	65	90	10	80	Conifer			2	2			
								Hardwood							
33	RT	1	HS	35	95	30	40	Conifer				2	1		
								Hardwood	1						
33	RT	2	HS	60	80	10	80	Conifer			2	2			
								Hardwood	1						
33	RT	3	HS	20	80	10	90	Conifer	1	3	2				
								Hardwood							

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 8-W SITE ID: 195 BALD BARNEY CREEK POST-TX (W-

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	00	22.9		START @ MOUTH	START
7	RB	00	101		DJ	
8	CB	01	117.2		VW= 45 TROUT FRY	
9	RB	11	117.2	/TJ		
11	RB	01	139.9	HS	HS	
15	RB	00	163.9	HS	HS SITE #4	
16	SP	00	170.6		CHANNEL PINCHING IN	UNDERCUT 1M
19	SP	00	215.9	HS	SITE #1 HS	
21	RB	00	247.6		VW=20	
22	RI	00	259.4	HS		
25	SR	00	278		H=.6	
29	LP	00	312.4	HS, WL		CRAYFISH, SALAMANDER, FI
30	CR	00	330.5	SS/		
31	PP	00	336.6	SS/		
32	CR	00	345.4	SS/		CORN POCKET
33	RR	00	370.6	SS/		
42	RR	00	477.9	WL		FISH 4 X 2M POOL .2M DEEP
43	RR	00	489.4			.4M POCKET
48	PP	00	529.6		END T=13 DEG C @ 2:40	END



Name: KEEL MT
 Date: 6/11/2003
 Scale: 1 inch equals 1666 feet

Location: 10 532309 E 4932861 N
 Caption: BALD BARNEY CREEK RESTORATION SITE - SOUTH SANTIAM BASIN