

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

STREAM: Bales Creek (MC-1)
BASIN: Yaquina River
SURVEY TYPE: Post-Tx
DATE: 7/5/2006
SURVEY CREW: Paul Jacobsen, Brian Cannon
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 8.3 km²
USGS MAPS: Nortons
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Bales Creek habitat survey extended 494 meters. The channel was constrained by alternating hillslopes and terraces within a broad valley floor. The average valley width index was 8.8 (range: 5-15). Land use for the reach was second growth timber (15-30 cm dbh). The average unit gradient was 0.7 percent. Scour pools (58%) dominated stream habitat. Gravel (55%) and fines (29%) dominated stream substrate. Wood volume was high at 35.9 m³/100m.

COMMENTS:

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

The crew noted several habitat structures made up of placed logs during the survey.

Beaver activity was observed throughout the surveyed reach, and the crew observed two beaver dams.

Stream Bales Creek (MC-1)
 Basin Yaquina River
 Treatment Large Wood

	ODFW Benchmark		Pre 7/17/00	Post 7/18/01	Post 7/5/06		
Habitat Variable	Desirable	Undesirable					
% Pool Area	>35%	<10%	67.8	79.0	71.1		
Number of Pools			20	16	18		
Deep Pools/km (>1.0 m)			0.0	1.8	4.0		
% Off-Channel			1.6	.2	.2		
LWD – Pieces/100m	>20	<10	6.2	16.4	23.3		
LWD – Volume/100m	>30	<20	21.4	37.9	35.9		
LWD – Key Pieces/100m	>3	<1	1.1	1.1	0.6		
Large Wood Jams/km			2.1	13.1	14.2		
% Riffle Fines	<10	>20	3	13	10		
% Riffle Gravel	>35	<15	69	83	65		
% Bedrock			3	1	1		

Bold is noticeable change

Comments: Since the treatment was large wood assembled in complex jams, it is no surprise that there was an increase in those variables. What is important is that the large wood is being retained in the treated reach and is accumulating additional wood pieces. Deep pools increased, while substrate numbers remained relatively stable. Since the reach was pool-rich and had plenty of riffle gravel prior to treatment, it is unlikely that there will be significant increases in those characteristics.

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/5/2006

REACH 1		T10S-R09W-S26SE					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/BOULDERS	1	5	0.3	0.02	2	0	25	40	25	0	0	10
GLIDE	2	35	2.8	0.20	94	4	3	20	48	28	3	0
POOL-BACKWATER	1	3	0.9	0.12	3	0	30	40	20	10	0	0
POOL-BEAVER DAM	2	49	5.3	0.88	261	0	18	28	33	15	0	8
POOL-LATERAL SCOUR	15	268	4.4	0.64	1,158	9	11	29	52	8	1	0
RIFFLE	11	118	3.1	0.09	403	0	0	10	65	24	0	0
STEP/BEAVER DAM	2	1	5.5	0.05	7	0	23	25	53	0	0	0
STEP/COBBLE	4	23	3.2	0.08	72	0	0	10	73	18	0	0
Total:	38	502	3.7	0.35	2,000	13	Avg: 8	21	55	14	0	1

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	52	3.8	0.62	264	13.20%	0	0.0	
Scour Pools	15	268	4.4	0.64	1,158	57.91%	9	0.8	
Glides	2	35	2.8	0.20	94	4.69%	4	4.3	
Riffles	11	118	3.1	0.09	403	20.17%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	1	5	0.3	0.02	2	0.07%	0	0.0	
Step/Falls	6	24	3.9	0.07	79	3.96%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	18	35.8	36.4
Pools >=1m deep:	2	4.0	4.0
Complex pools (LWD pieces>=3):	10	19.9	20.2
Pool frequency (channel widths/pool):	3.9		
Residual pool depth (avg):	0.55		

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

**BALES CREEK POST-TX
GCG: 2-MC SITE ID: 1**

**Survey Date 7/5/2006
Report Date: 3/5/2007**

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	549
Total conifers/1000 ft	61
Total conifers >20" dbh/1000 ft	0
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	0.0	1.7	0.0	1.3	0.7	0.7	0.7	3.7
15-30cm	0.0	1.7	0.3	1.0	0.0	0.7	0.3	3.3
30-50cm	0.0	1.3	0.0	0.3	0.0	0.3	0.0	2.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	4.7	0.3	2.7	0.7	1.7	0.3	3.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	37		36		29	
Shrub cover	6		13		19	
Grass/forb cover	94		87		81	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		17		17	
High terrace	67		67		50	
Low terrace	17		0		0	
Floodplain	0		17		33	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	3		5		6	

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	549
Total conifers/1000 ft	61
Total conifers >20" dbh/1000 ft	0
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	0.7	3.7
15-30cm	0.3	3.3
30-50cm	0.0	2.0
50-90cm	0.0	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		
14	LF	1	HT	5	5	5	95	Conifer							
								Hardwood	2						
14	LF	2	HT	0	5	10	90	Conifer							
								Hardwood	2						
14	LF	3	FP	0	0	10	90	Conifer							MAIN CHANNEL
								Hardwood	1						
14	RT	1	HT	0	0	0	100	Conifer							NO TREES
								Hardwood							
14	RT	2	HT	0	0	30	70	Conifer							NO TREES
								Hardwood							
14	RT	3	HT	0	20	30	70	Conifer							NO TREES
								Hardwood							
22	LF	1	HT	0	15	0	100	Conifer							NO TREES
								Hardwood							
22	LF	2	HT	0	5	0	100	Conifer							NO TREES
								Hardwood							
22	LF	3	HT	0	5	0	100	Conifer							NO TREES
								Hardwood							
22	RT	1	HT	5	90	0	100	Conifer							
								Hardwood			2				
22	RT	2	HT	0	75	0	100	Conifer							NO TREES
								Hardwood							
22	RT	3	HT	0	60	20	80	Conifer							
								Hardwood			1				
32	LF	2	HS	30	40	30	70	Conifer			1				
								Hardwood	2	1					
32	RT	3	FP	0	80	20	80	Conifer							
								Hardwood	1	1	1				
32	RT	2	FP	0	90	10	90	Conifer							
								Hardwood		2	1				
32	RT	1	LT	0	90	5	95	Conifer							
								Hardwood			5	2			
32	LF	3	HS	35	10	35	65	Conifer	2						
								Hardwood							
32	LF	1	HS	10	20	25	75	Conifer							
								Hardwood	3						

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 2-MC SITE ID: 1 BALES CREEK POST-TX

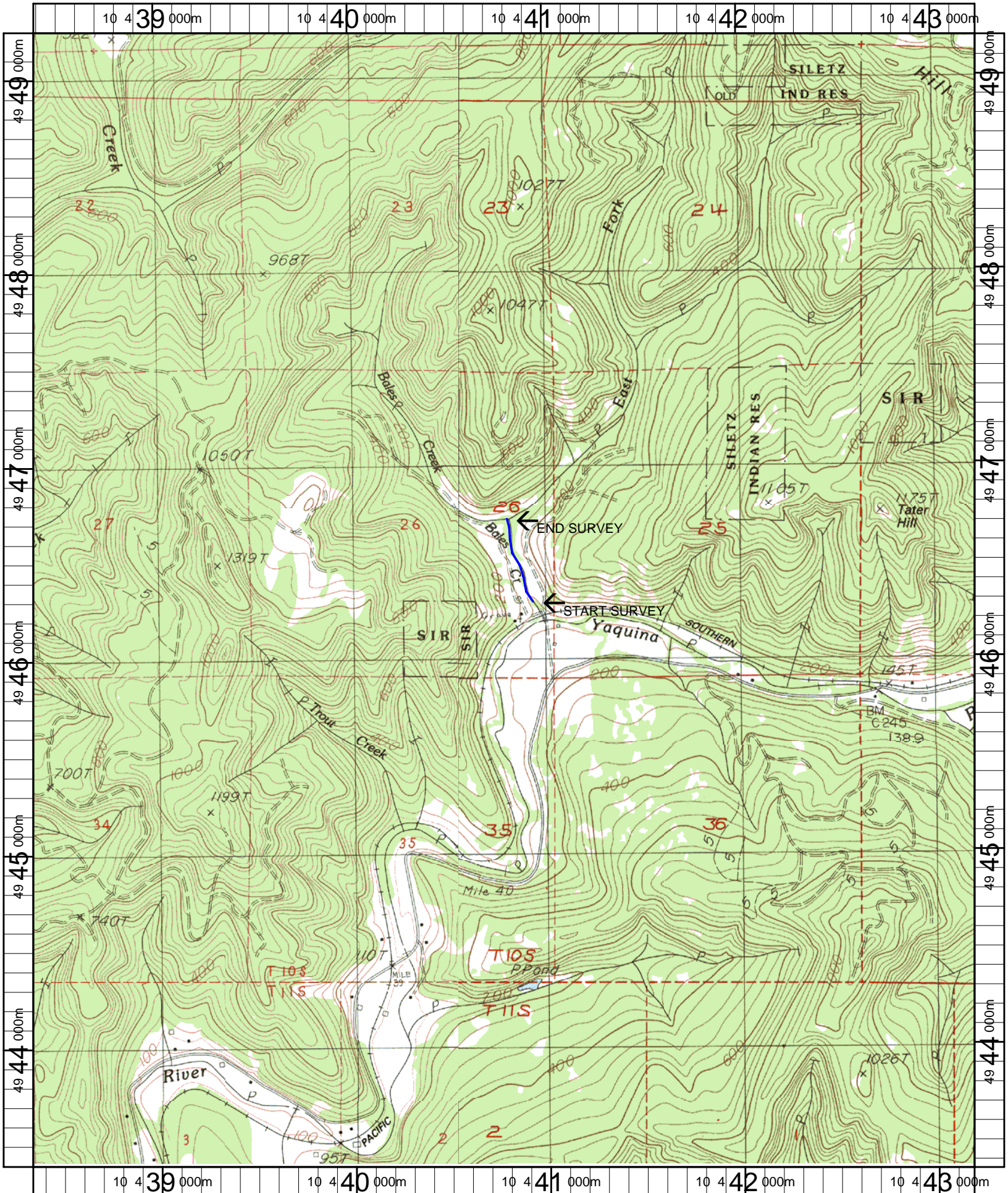
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	LP	01	9.7	TJ;/HS;BV	BV; CA-MT, LF, ST/AG, G/D15	7 LOGS, FRY
2	CB	11	9.7			AMERICAN CROW, FLYCA
3	RI	00	15.6			RIPARIAN PLANTINGS
4	SD	00	16.3	BD	H=0.40M	FINCH, TURKEY VULTURE
5	BP	01	34.1	BV, HS	CO FRY	COHO FRY, BV SLIDE, 6 L
6	BW	10	34.1			COMMON YELLOWTHROA
7	RI	00	47.5	BV		BV SLIDE, MOURNING DO
8	SD	00	48.1	BD	H=0.30M	WHITE-CROWNED SPARR
9	BP	00	79.4	HS, BV		CRAYFISH, 11 LOGS, COH
10	LP	00	91.4	HS; BV		12 LOGS, FRY
11	RI	00	101	BV		RUFOUS HUMMINGBIRD (
12	LP	00	124	BV		COHO FRY
13	RI	00	142.5	BV	US-MT, D30/G, ST	
14	LP	00	158.5	BV		FRY
15	RI	00	165.9	BV		
16	GL	00	189.9	/CS, BV		RIPRAP -OLD ROAD
17	LP	00	202.2	/CS		RIPRAP -OLD ROAD, RUS
19	LP	00	239.5			PLENTY OF NETTLES
22	RI	00	267.3		US-MT, G/D30, ST	RED ELDERBERRY
23	LP	00	288.3	HS		1 LOG, FRY
24	SC	00	293.8			AMERICAN ROBIN

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **1** **BALES CREEK POST-TX**

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
25	LP	00	306.8	HS;BV;DJ		11 LOGS, STRM ENHANCE
26	LP	00	316.2	HS; BV		2 LOGS, COHO FRY
27	RI	00	324.5			DIGITALIS
28	LP	00	338.5			COHO FRY
29	SC	00	344.2	WL		GAME TRAIL
30	LP	00	377.2	BV		COHO FRY
31	RI	00	404.8			SONG SPARROW
32	LP	00	441.3	HS	US-WF, D30/G, ST	7LOGS, SWAINSON THRU
33	RI	00	449.3			STRM ENHANCEMENT TA
34	GL	00	459.8			BELTED KINGFISHER
36	LP	00	480.2	HS		7 LOGS, COHO FRY
38	LP	00	494.2	HS	US-MT, D30/G, ST	5 LOGS, COHO FRY



Name: NORTONS
 Date: 1/24/2007
 Scale: 1 inch equals 2000 feet

Location: 10 440783 E 4946303 N
 Caption: BALES CREEK RESTORATION SITE - YAQUINA BASIN