

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

STREAM: Bays Creek (N-3)
BASIN: Nestucca River
SURVEY TYPE: Post-Tx
DATE: July 15, 2004
SURVEY CREW: Scott Young, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 10.1 km²
USGS MAPS: Blaine
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Bays Creek habitat survey extended 496 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.1 (range: 1.5-4.5). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.9 percent. Rapids (40%), riffles (30%) and scour pools (27%) dominated stream habitat. Gravel (27%), cobble (27%) and bedrock (25%) dominated stream substrate. Wood volume was very high at 57.8 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.

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REACH 1

T03S-R09W-S24SW

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	3.1	VWI Range:	1.5 - 4.5

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	496	2,385	0
Secondary	10	13	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 4.8	Width: 8.6	10.1 (6.1 - 13.9)	13.0 (7.2 - 16.3)
Depth: 0.33	Height: 0.5	1.0 (0.9 - 1)	1.5 (1.2 - 2.3)

W:D ratio: 17.8
Stream Flow Type: MF
Average Unit Gradient: 2.9%
Water temperature (°C): -

Entrenchment (ACW:FPW ratio): 1.2
Habitat Units/100m (total channel length): 4.7
Habitat Units/100m (primary channel length): 4.8

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 89%
Undercut Banks:		Range: 75 - 94

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	56	11.3
Volume (m ³):	286	57.8
Key pieces (>=12m x 0.60m):	40	8.1

OREGON DEPARTMENT OF FISH AND WILDLIFE

BAYS CREEK POST-TX (N-3)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/15/2004

REACH 1		T03S-R09W-S24SW					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	
POOL-LATERAL SCOUR	6	131	5.0	0.66	649	3	7	33	15	14	1	31	
RAPID/BEDROCK	2	47	4.3	0.25	200	6	2	5	17	20	5	51	
RAPID/BOULDERS	8	165	4.4	0.18	764	7	4	9	42	34	1	9	
RIFFLE	7	155	4.6	0.26	726	8	5	11	20	29	2	34	
STEP/COBBLE	1	7	8.3	0.15	59	0	5	11	42	42	0	0	
Total:	24	506	4.8	0.33	2,398	24	Avg: 5	15	27	27	2	25	

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	0	0			0	0.00%	0	0.0	
Scour Pools	6	131	5.0	0.66	649	27.06%	3	0.5	
Glides	0	0			0	0.00%	0	0.0	
Riffles	7	155	4.6	0.26	726	30.27%	8	1.1	
Rapids	10	212	4.4	0.19	964	40.20%	13	1.3	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	1	7	8.3	0.15	59	2.46%	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	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	6	11.9	12.1
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	3	5.9	6.1
Pool frequency (channel widths/pool):	9.8		
Residual pool depth (avg):	0.42		

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	488
Total conifers/1000 ft	224
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		Zone 2		Zone 3		Zones 1-3	
	<u>0-10 meters</u>		<u>10 - 20 meters</u>		<u>20 - 30 meters</u>		<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>	<u>Conifer</u>	<u>Hardwood</u>	<u>Conifer</u>	<u>Hardwood</u>	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	1.7	0.0	0.0	0.0	0.3	0.0	2.0
15-30cm	1.0	0.3	0.7	1.7	0.7	1.7	2.3	3.7
30-50cm	0.0	0.7	0.0	1.0	1.3	0.0	1.3	1.7
50-90cm	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.0	3.3	0.7	2.7	2.0	2.0	1.2	2.7

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	<u>0-10 meters</u>		<u>10 - 20 meters</u>		<u>20 - 30 meters</u>	
	(%)		(%)		(%)	
Canopy closure	68		58		56	
Shrub cover	27		30		28	
Grass/forb cover	57		55		48	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	<u>0-10 meters</u>		<u>10 - 20 meters</u>		<u>20 - 30 meters</u>	
	(%)		(%)		(%)	
Hillslope	67		67		67	
High terrace	33		17		17	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		17	
Riprap	0		0		0	
Surface slope (%)	58		28		26	

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

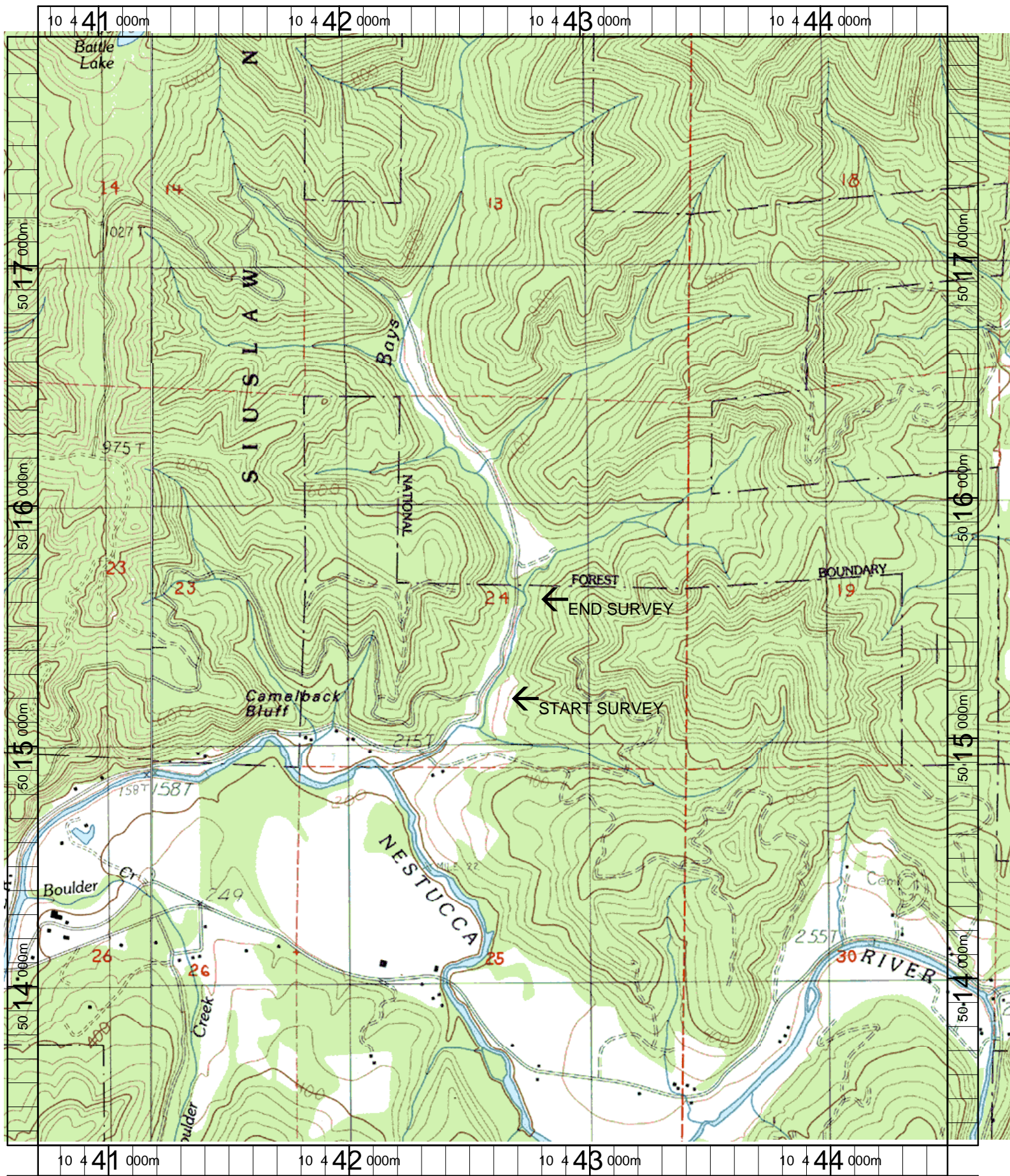
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
6	LF	2	RB	0	40	20	30	Conifer							
								Hardwood		1					
6	LF	3	HS	20	50	20	40	Conifer			1				
								Hardwood							
6	RT	1	HS	45	85	60	40	Conifer							
								Hardwood			1				
6	RT	2	HS	40	75	60	40	Conifer							
								Hardwood			1				
6	RT	3	HS	35	65	60	40	Conifer							
								Hardwood			1				
6	LF	1	HS	70	70	30	30	Conifer							10T 0442704
								Hardwood	2						5015286
11	LF	1	HT		60	20	80	Conifer			2				10T 0442610
								Hardwood							5015439
11	LF	2	HT		80	20	80	Conifer							
								Hardwood			1				
11	LF	3	HT		80	20	80	Conifer			1	1			
								Hardwood		1					
11	RT	1	HS	80	85	10	40	Conifer							COULDN'T
								Hardwood		1		2			RUN THIS
11	RT	2	HS	25	60	30	40	Conifer							SIDE
								Hardwood			2				
11	RT	3	HS	25	60	30	40	Conifer				1			
								Hardwood			2				
17	LF	2	HS	40	60	10	90	Conifer							
								Hardwood				1			
17	RT	3	HS	25	40	30	60	Conifer			1	1			
								Hardwood	1						
17	RT	2	HS	35	30	40	50	Conifer			2				
								Hardwood			2				
17	LF	3	RB		40	10	30	Conifer				2			
								Hardwood			2				
17	LF	1	HT		60	10	90	Conifer							10T 0442708
								Hardwood	2			1			5015512
17	RT	1	HS	35	50	30	60	Conifer			1				
								Hardwood	1						

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 1-NC SITE ID: 3 BAYS CREEK POST-TX (N-3)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	24.4		POOR COVERAGE	
6	RI	00	130.7	/SS	RIP 1 10T 0442704 501528	
7	RR	00	158			NICE POCKET W/ FISH
11	RB	00	247.2		RIP T 2 10T 0442610 5015	
12	LP	00	264.5	HS		
13	RB	00	289.5	HS		
14	RI	00	310.5	HS		
15	RB	00	337.8	HS		
16	RI	00	350.2	HS	PHOTO 16	
17	LP	00	382.5	HS	RIP T 3 10T 0442708 5015	
18	SC	00	389.6	HS	H=0.50M	
19	RI	00	416.6	HS		
20	LP	00	437.1	HS		VERY NICE POOL, LOTS OF
22	LP	00	474.2	HS		
23	RB	01	495.6	/TJ		
24	RB	11	495.6	HS	END	TRIB UNIT



Name: BLAINE
 Date: 3/20/2003
 Scale: 1 inch equals 1666 feet

Location: 10 442613 E 5015633 N
 Caption: BAYS CREEK RESTORATION SITE - NESTUCCA BASIN