

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

STREAM: Bachelor Creek Tributary (U-233)  
BASIN: Umpqua River  
SURVEY TYPE: Pre-Tx  
DATE: July 15, 2004  
SURVEY CREW: Peter Baki, Jeremiah Bernier  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 41.1 km<sup>2</sup>  
USGS MAPS: Non Pareil  
ECOREGION: Coast Range Umpqua Valleys

**GENERAL DESCRIPTION:**

The Bachelor Creek Tributary habitat survey extended 546 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 13.3 (range: 3.1-20.1). Land use for the reach was light grazing and second growth (15-30 cm dbh) trees. The average unit gradient was 1.5 percent. Scour pools (45%) and slackwater pools (45%) dominated stream habitat. Gravel (35%) and fines (32%) dominated stream substrate. Wood volume was very low at 3.2 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T24S-R04W-S18NW

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	13.3	VWI Range:	3.1 - 20.1

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	546	864	3
Secondary	10	10	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 0.9	Width: 3.6	5.4 ( 3.5 - 10.8 )	9.0 ( 5.8 - 11.5 )
Depth: 0.25	Height: 0.6	1.2 ( 1 - 1.5 )	1.8 ( 1.3 - 2.7 )

W:D ratio: 5.6  
 Stream Flow Type: LF  
 Average Unit Gradient: 1.5%  
 Water temperature (°C): 20.0 - 20.0

Entrenchment (ACW:FPW ratio): 1.6  
 Habitat Units/100m (total channel length): 10.4  
 Habitat Units/100m (primary channel length): 10.6

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LG	ST
Riparian Vegetation:	M15	M30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	29%	Reach avg: 61%
Undercut Banks:	5%	Range: 25 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	34	6.2
Volume (m <sup>3</sup> ):	18	3.2
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPARTMENT OF FISH AND WILDLIFE

BACHELOR CREEK TRIB PRE-TX (U-233)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/15/2004

REACH 1		T24S-R04W-S18NW					REACH 1					
HABITAT DETAIL												
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BOULDERS	1	8	0.1	0.03	1	0	0	0	70	20	10	0
CULVERT CROSSING	1	9	0.1	0.01	1	0	0	0	10	40	50	0
DRY UNIT	3	19	1.1	0.00	24	0	47	13	40	0	0	0
POOL-DAMMED	2	59	5.5	1.30	393	0	65	25	10	0	0	0
POOL-LATERAL SCOUR	22	283	1.2	0.44	360	3	46	23	20	4	0	6
POOL-PLUNGE	6	36	1.2	0.33	35	3	32	17	25	18	9	0
PUDDLED UNIT	1	8	0.1	0.01	1	5	0	0	20	50	30	0
RAPID/BEDROCK	1	4	0.2	0.01	1	0	0	0	5	0	0	95
RAPID/BOULDERS	7	40	0.3	0.03	14	1	6	7	59	14	7	7
RIFFLE	5	78	0.5	0.03	42	1	26	12	61	1	0	0
STEP/COBBLE	8	11	0.1	0.01	1	0	23	10	58	10	0	0
STEP/STRUCTURE	1	1	1.0	0.01	1	3	0	0	10	40	50	0
<b>Total:</b>	<b>58</b>	<b>556</b>	<b>0.9</b>	<b>0.25</b>	<b>874</b>	<b>16</b>	<b>Avg: 32</b>	<b>15</b>	<b>35</b>	<b>9</b>	<b>4</b>	<b>5</b>

HABITAT SUMMARY								
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )
Dammed & BW Pools	2	59	5.5	1.30	393	45.02%	0	0.0
Scour Pools	28	318	1.2	0.41	395	45.18%	6	1.5
Glides	0	0			0	0.00%	0	0.0
Riffles	5	78	0.5	0.03	42	4.79%	1	2.4
Rapids	8	44	0.3	0.03	15	1.71%	1	6.7
Cascades	1	8	0.1	0.03	1	0.09%	0	0.0
Step/Falls	9	12	0.2	0.01	3	0.30%	3	116.3
Dry	4	28	0.8	0.00	25	2.81%	5	20.4
Culverts	1	9	0.1	0.01	1	0.11%	0	0.0

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	30	53.9	54.9
Pools >=1m deep:	1	1.8	1.8
Complex pools (LWD pieces>=3):	3	5.4	5.5
Pool frequency (channel widths/pool):	5.2		
Residual pool depth (avg):	0.44		

**RIPARIAN ZONE VEGETATION SUMMARY**

REACH 1

REACH 1

**Summary of Riparian Zone (0-30m)**

3 transects

Total hardwoods/1000	244
Total conifers/1000 ft	41
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	0.3	0.3	0.0	0.3	0.0	0.0	0.3	0.7
15-30cm	0.0	2.3	0.0	0.3	0.0	0.0	0.0	2.7
30-50cm	0.0	0.7	0.3	0.0	0.0	0.0	0.3	0.7
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	0.3	3.3	0.3	0.7	0.0	0.0	0.2	1.3

**Canopy closure and ground cover**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	54		20		8	
Shrub cover	40		22		13	
Grass/forb cover	60		52		33	

**Predominant landform in each zone**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		17		33	
High terrace	83		50		17	
Low terrace	17		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		33		50	
Riprap	0		0		0	
Surface slope (%)	0		1		3	

**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

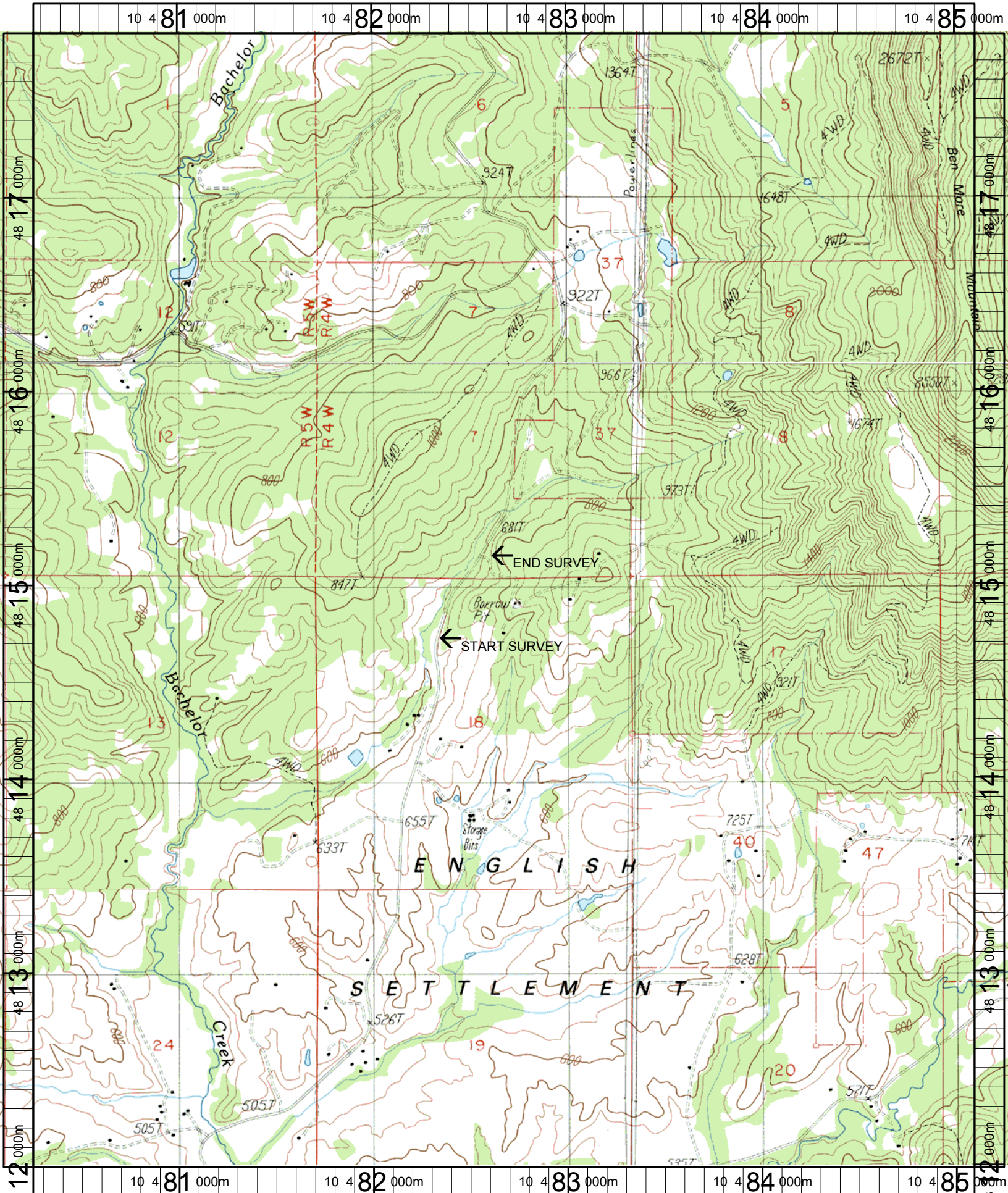
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
19	RT	2	HT	0	30	0	100	Conifer							
								Hardwood							
19	LF	3	HS	5	10	0	100	Conifer							
								Hardwood							
19	LF	2	HS	5	10	0	100	Conifer							
								Hardwood							
19	RT	1	LT	0	80	0	100	Conifer							
								Hardwood		1					
19	LF	1	HT	0	10	0	100	Conifer							PASTURE
								Hardwood							
19	RT	3	RB	0	10	0	20	Conifer							
								Hardwood							
32	LF	1	HT	0	95	50	50	Conifer	1						
								Hardwood		2					
32	LF	2	RB	0	0	0	40	Conifer							
								Hardwood							
32	LF	3	RB	0	0	0	0	Conifer							
								Hardwood							
32	RT	1	HT	0	50	30	70	Conifer							
								Hardwood		1	1				
32	RT	2	RB	0	0	0	0	Conifer							
								Hardwood							
32	RT	3	HS	15	10	0	60	Conifer							
								Hardwood							
43	RT	1	HT	0	50	80	20	Conifer							
								Hardwood	1	1					
43	RT	2	HT	0	50	50	50	Conifer							
								Hardwood	1	1					
43	LF	1	HT	0	40	80	20	Conifer							
								Hardwood		2	1				
43	LF	3	HT	0	10	80	20	Conifer							
								Hardwood							
43	LF	2	HT	0	30	80	20	Conifer				1			
								Hardwood							
43	RT	3	RB	0	10	0	0	Conifer							
								Hardwood							

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: **4-UMP**    SITE ID: **233**    **BACHELOR CREEK TRIB PRE-TX (U-**

<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	RB	00	4.9		START SIGN LEFT	
4	LP	00	36.2	SS/		
19	LP	00	151.4		RIPARIAN 1	RIPARIAN 1
20	RI	00	164.9	FC		
21	PP	01	167	TJ/		TRIB NOT ON MAP
22	DU	11	167		ACW = 1.0	
29	RR	00	225.1			HARDPAN
32	PD	00	255.1		RIPARIAN 2	RIPARIAN 2
33	PP	00	257	CS/CS		DACE
34	SS	00	258.3	CS/CS	H = 1.7	
35	CC	00	267.7	CC	PHOTO 26, CC	5 CULVERTS, PRIVATE ROA
36	DP	00	305.7			POND
42	SC	00	401		H = 0.3	
43	PP	00	406.4		RIPARIAN 3	RIPARIAN 3
52	LP	00	500.5	/LI		



Name: NONPAREIL  
 Date: 8/4/2004  
 Scale: 1 inch equals 2000 feet

Location: 10 482672 E 4814921 N  
 Caption: BACHELOR CREEK TRIBUTARY RESTORATION SITE -  
 UMPQUA (CALAPOOYA) BASIN