

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

STREAM: Bachelor Creek Tributary (U-233)
BASIN: Umpqua River
SURVEY TYPE: Post-Tx
DATE: February 22, 2006
SURVEY CREW: Scott Venables, Seth Ring
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 41.1 km²
USGS MAPS: Nonpareil
ECOREGION: Coast Range Umpqua Valleys

GENERAL DESCRIPTION:

The Bachelor Creek Tributary habitat survey extended 551 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 19.0 (range: 15.0-20.0). Land use for the reach was young (3-15 cm dbh) trees and rural residential. The average unit gradient was 1.2 percent. Scour pools (72%) and riffles (27%) dominated stream habitat. Gravel (28%) and bedrock (24%) dominated stream substrate. Wood volume was low at 4.4 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

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	19.0	VWI Range:	15 - 20

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 Channel	551	947	0
Secondary Channel	0	0	0
Off-Channel Units	11	4	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 1.6	Width: 3.5	6.3 (4.8 - 7.9)	9.4 (8.5 - 10.4)
Depth: 0.33	Height: 0.7	1.4 (1.2 - 1.8)	2.7 (1.6 - 3.7)

W:D ratio: 5.3
 Stream Flow Type: MF
 Average Unit Gradient: 1.2%
 Water temperature (°C): 4.5 - 4.5

Entrenchment (ACW:FPW ratio): 2.0
 Habitat Units/100m (total channel length): 10.0
 Habitat Units/100m (primary channel length): 10.2

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	RR
Riparian Vegetation:	D30	S

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	63	11.4
Volume (m ³):	24	4.4
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

BACHELOR CREEK TRIB POST-TX (4-UJP, 233)

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

2/22/2006

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 ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area				
							S/O	Snd	Grvl	Cbl	Bldr
POOL-ISOLATED	1	1	0.7	0.25	1	0	0	0	0	0	100
POOL-LATERAL SCOUR	34	373	1.8	0.42	670	0	27	22	24	5	21
POOL-PLUNGE	3	11	1.4	0.57	19	0	8	15	13	0	64
RIFFLE	14	148	1.3	0.12	193	0	10	15	50	15	6
RIFFLE W/ POCKETS	1	26	2.6	0.25	67	0	0	10	20	30	0
STEP/BEDROCK	2	3	0.6	0.05	2	0	0	0	0	0	100
STEP/LOG	1	0	0.7	0.05	0	0	25	0	5	0	70
Total:	56	562	1.6	0.33	952	0	Avg: 20	18	28	7	24

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	1	1	0.7	0.25	1	0.10%	0	0.0
Scour Pools	37	384	1.8	0.43	689	72.37%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	15	174	1.4	0.13	260	27.32%	0	0.0
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	3	3	0.6	0.05	2	0.21%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

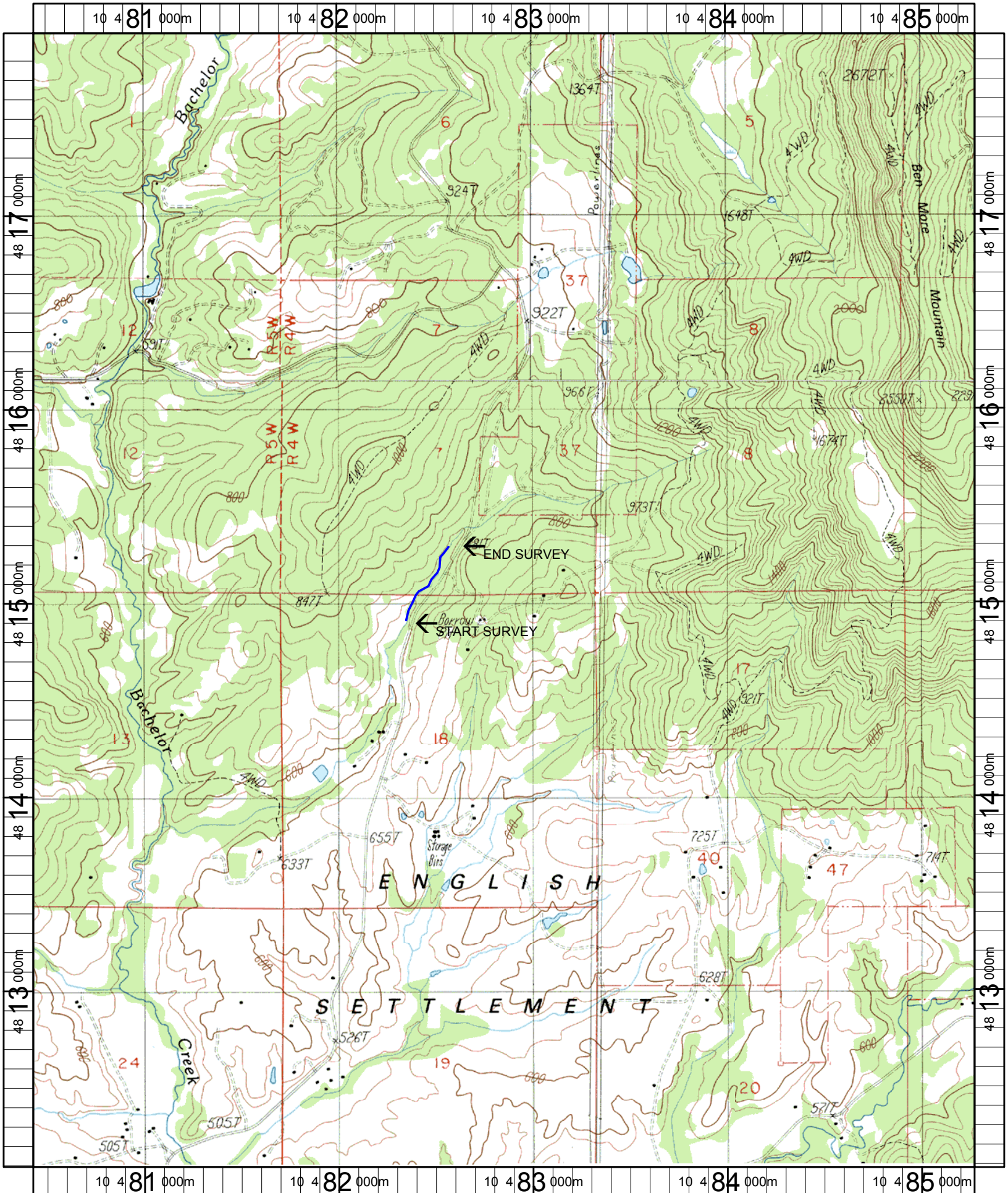
POOL SUMMARY		
	Total	Primary Channel Length
	# / Km	# / Km
All Pools:	38	69.0
Pools >=1m deep:	1	1.8
Complex pools (LWD pieces>=3):	5	9.1
Pool frequency (channel widths/pool):	4.2	
Residual pool depth (avg):	0.36	

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP** SITE ID: **233** **BACHELOR CREEK TRIB POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	22.6	SS x 2, HS		
2	PP	00	28.5	DJ	T = 4.5 AT 10:15, HARDPAN	
3	SR	00	30.3		H = 1.2, HARPAN	
4	LP	00	40.2		HARDPAN	
5	LP	00	48.2	HS		
9	RI	00	72.7		BEDROCK IN SURVEY IS HARDPAN	
11	SL	00	77		H = 0.35	
12	LP	00	87.2	DJ	LIVE FISH	
17	LP	00	152.7	DJ		
18	RI	01	160.9	TJ/		
19	RI	11	160.9		ACW = 0.6, T = 6.5	
20	SR	11	160.9		H = 0.5	
30	RP	00	258.4	HS	CULVERT 1.85m x 3.6m	
33	LP	01	288.2	/TJ		
34	RI	11	288.2		ACW = 0.5, T = 5.0	
37	LP	00	301.4	HS		
38	LP	00	311	HS		
40	RI	00	347.7	HS		
41	LP	00	360.9		LIVE FISH	



Name: NONPAREIL
 Date: 6/13/2005
 Scale: 1 inch equals 2000 feet

Location: 10 482854 E 4815012 N
 Caption: BACHELOR CREEK TRIBUTARY RESTORATION SITE -
 UMPQUA (CALAPOOYA) BASIN