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:	January 29, 2004
SURVEY CREW:	Michael Scheu, Jeremiah Bernier
REPORT PREPARED BY:	Paul Jacobsen
BASIN AREA:	41.1 km^2
USGS MAPS:	Nonpareil
ECOREGION:	Coast Range Umpqua Valleys

GENERAL DESCRIPTION:

The Bachelor Creek Tributary habitat survey extended 508 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 15.0 (range: 10.0-20.0). Land use for the reach was light grazing and second growth (15-30 cm dbh) trees. The average unit gradient was 1.8 percent. Dammed pools (38%) and scour pools (30%) dominated stream habitat. Gravel (41%) and sand (41%) dominated stream substrate. Wood volume was very low at 1.7 m^3/100m.

COMMENTS:

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

The crew noted beaver activity during the survey.

OREGON DEPARTMENT OF FISH AND WILDLIFE **BACHELOR CR TRIBUTARY PRE-TX (U-233)**

HABITAT INVENTORY Report Date: 6/16/2004 Survey Date: 1/29/2004

REACH 1 **T24S-R04W-S18NW** **REACH 1**

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%

Valley Width Index 15.0 VWI Range: 10 - 20

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

Type	Length (m)	Area (m2)	Dry Units
Primary	508	1,736	0
Secondary	19	9	0

Channel Dimensions (m)

Wetted		Active		Floodprone *n* = 4		First Terrace *n* = 4	
Width:	2.6	Width:	3.0	4.4	(4 - 4.8)	7.2	(6.1 - 8)
Depth:	0.55	Height:	0.6	1.2	(1 - 1.4)	2.1	(1.4 - 2.8)

W:D ratio: 5.3
Entrenchment (ACW:FPW ratio): 1.5
Stream Flow Type: HF
Habitat Units/100m (total channel length): 7.8
Average Unit Gradient: 1.8%
Habitat Units/100m (primary channel length): 8.1
Water temperature (°C): 9.0 - 9.0

Riparian, Bank, and Wood Summary

	Primary	Secondary
Land Use:	LG	ST
Riparian Vegetation:	M15	M30

Bank Condition and Shade

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

Large Wood Debris

	Total	Total / 100m primary channel
All pieces (>=3m x 0.15m):	28	5.5
Volume (m^3):	9	1.7
Key pieces (>=12m x 0.60m):	0	0.0

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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	2	17	2.3	0.28	34	0	0	20	80	0	0	0
CASCADE/BOULDERS	2	22	1.8	0.40	46	0	0	25	30	35	10	0
CULVERT CROSSING	1	10	0.5	0.05	5	0	0	20	30	50	0	0
POOL-DAMMED	1	41	16.0	2.00	656	0	40	60	0	0	0	0
POOL-LATERAL SCOUR	17	223	2.4	0.78	517	0	6	47	42	4	0	0
POOL-PLUNGE	1	3	4.7	0.90	12	0	0	0	0	30	70	0
RAPID/BEDROCK	1	14	2.0	0.35	27	0	9	64	27	0	0	0
RAPID/BOULDERS	2	35	1.8	0.28	67	0	0	10	45	25	10	10
RIFFLE	11	157	2.3	0.33	369	0	8	47	42	3	0	0
STEP/COBBLE	2	5	2.2	0.23	12	0	0	45	55	0	0	0
STEP/STRUCTURE	1	1	2.0	0.10	2	0	0	20	30	50	0	0
Total:	41	527	2.6	0.55	1,746	0	**Avg:** 6	41	41	9	3	0

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m^2)	Wetted Area Percent	Large Boulders Number	Large Boulders (# / $100m^2$)
Dammed & BW Pools	1	41	16.0	2.00	656	37.58%	0	0.0
Scour Pools	18	226	2.6	0.79	529	30.28%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	11	157	2.3	0.33	369	21.16%	0	0.0
Rapids	3	48	1.8	0.30	94	5.38%	0	0.0
Cascades	4	39	2.0	0.34	80	4.56%	0	0.0
Step/Falls	3	6	2.1	0.18	13	0.76%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	1	10	0.5	0.05	5	0.28%	0	0.0

POOL SUMMARY

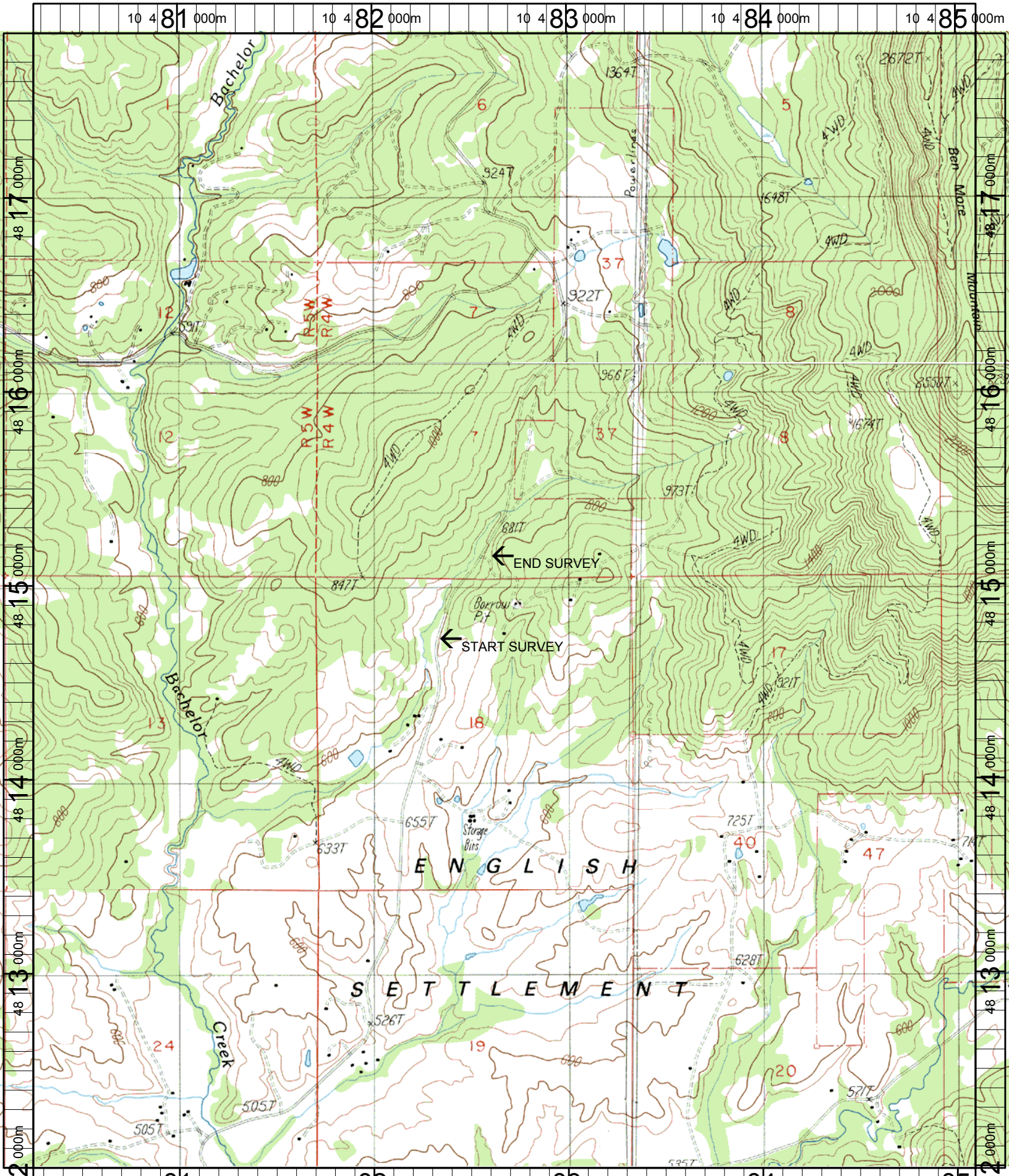
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	19	36.1	37.4
Pools >=1m deep:	3	5.7	5.9
Complex pools (LWD pieces>=3):	1	1.9	2.0
Pool frequency (channel widths/pool):	9.2		
Residual pool depth (avg):	0.62		

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **4-UMP** **SITE ID:** **233** **BACHELOR CREEK TRIBUTARY PRE**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	10.3		T=9C	
2	LP	01	21.3	TJ; SS/	NOT ON MAP	
3	CB	11	21.3		T=9C; ACW=1.5	
4	CR	00	28.3	SS/		
14	RI	01	143.5	FC; TJ/	NOT ON MAP	
15	CR	11	143.5		T=10C; ACW=1.2	
23	SS	00	225.7		H=1.25M	
24	CC	00	235.5	CC	PRIVATE ROAD/5 CULVE	
25	DP	00	276.5	BV		
26	RI	00	302.5	BV	MUD DEPOSITION ON BA	
27	LP	00	312.5	BV	CC	
28	RI	00	319	BV		
29	LP	00	334	BV		
30	LP	00	343.3	BV		
32	LP	00	370.9	LI/		
35	RB	00	426.2	SS; LI/		
36	LP	00	452.2	LI/		
37	RI	00	464.5	/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