

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

STREAM: Big Creek Tributary C (U-244)
BASIN: Smith River
SURVEY TYPE: Post-Tx
DATE: March 2, 2005
SURVEY CREW: Neil Jensen, Jennifer Schmitt
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 2.6 km²
USGS MAPS: Devils Graveyard
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Big Creek Tributary C habitat survey extended 855 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 8.3 (range: 2.1-22.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 3.0 percent. Cascades (38%) and scour pools (28%) dominated stream habitat. Gravel (34%) and cobble (20%) dominated stream substrate. Wood volume was very high at 67.9 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

T21S-R08W-S18NE

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	8.3	VWI Range:	2.1 - 22

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	855	2,381	0
Secondary Channel	0	0	0
Off-Channel Units	86	233	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 9	<u>First Terrace</u> n = 9
Width: 2.7	Width: 4.6	7.1 (5 - 10.8)	8.5 (5.4 - 13.3)
Depth: 0.28	Height: 0.4	0.9 (0.76 - 0.96)	2.1 (0.9 - 8.3)

W:D ratio: 10.9

Entrenchment (ACW:FPW ratio): 1.6

Stream Flow Type: LF

Habitat Units/100m (total channel length): 8.8

Average Unit Gradient: 3.0%

Habitat Units/100m (primary channel length): 9.7

Water temperature (°C): 7.0 - 7.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
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):	360	42.1
Volume (m ³):	581	67.9
Key pieces (>=12m x 0.60m):	17	2.0

OREGON DEPT OF FISH AND WILDLIFE

BIG CREEK TRIB C POST-TX (4-JUMP, 244)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

3/2/2005

REACH 1		T21S-R08W-S18NE					REACH 1					
HABITAT DETAIL												
Habitat Type	Number	Total	Avg	Avg	Total	Large	Substrate					
	Units	Length	Width	Depth	Area	Boulders	Percent Wetted Area					
		(m)	(m)	(m)	(m ²)	(>0.5m)	S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BEDROCK	4	39	2.7	0.15	106	0	1	5	16	26	15	37
CASCADE/BOULDERS	15	307	2.9	0.15	894	0	2	8	24	33	27	5
CULVERT CROSSING	1	17	2.2	0.10	37	0	0	5	25	25	5	40
POOL-BACKWATER	1	2	1.7	0.35	4	0	70	15	5	0	10	0
POOL-DAMMED	7	51	3.1	0.43	152	0	9	47	23	5	6	10
POOL-LATERAL SCOUR	21	207	3.2	0.48	612	0	8	27	31	10	7	17
POOL-PLUNGE	5	29	4.4	0.73	128	0	9	41	26	6	11	8
RAPID/BEDROCK	2	32	1.9	0.12	60	0	5	13	18	13	0	53
RAPID/BOULDERS	9	97	2.5	0.18	247	0	1	6	46	35	12	1
RIFFLE	3	36	2.6	0.13	91	0	4	28	45	18	6	0
RIFFLE W/ POCKETS	5	105	2.2	0.13	244	0	2	5	65	23	4	1
STEP/BEDROCK	1	1	0.5	0.08	0	0	0	0	0	0	0	100
STEP/COBBLE	4	15	2.3	0.08	36	0	0	8	45	41	6	0
STEP/LOG	5	3	0.6	0.04	2	0	3	17	66	14	0	0
Total:	83	941	2.7	0.28	2,613	0	Avg: 5	19	34	20	11	12

HABITAT SUMMARY									
Habitat Group	Number	Total	Avg	Avg	Wetted Area		Large Boulders		
	Units	Length	Width	Depth	(m ²)	Percent	Number	(# / 100m ²)	
		(m)	(m)	(m)					
Dammed & BW Pools	8	53	2.9	0.42	156	5.98%	0	0.0	
Scour Pools	26	235	3.5	0.53	740	28.33%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	8	141	2.4	0.13	335	12.82%	0	0.0	
Rapids	11	130	2.4	0.17	306	11.73%	0	0.0	
Cascades	19	346	2.8	0.15	1,000	38.27%	0	0.0	
Step/Falls	10	19	1.3	0.06	39	1.48%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	17	2.2	0.10	37	1.40%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	34	36.1	39.8
Pools >=1m deep:	1	1.1	1.2
Complex pools (LWD pieces>=3):	20	21.3	23.4
Pool frequency (channel widths/pool):	6.0		
Residual pool depth (avg):	0.41		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **4-UMP** SITE ID: **244** **BIG CREEK TRIB C POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	CB	00	9.2	HS		
2	RB	00	22.5		REDD	
3	CC	00	39.1	CC	CTCT D30S STLT, BIG CR. RD	
4	RR	00	50.9		CULVERT IS 1.4m x 2.6m, FISH	
5	LP	00	57.2	HS	PLACED LOGS BOULDERS	
6	RP	00	76.5	HS	BOULDERS	
7	LP	00	85.3	HS	BOULDERS LOGS	
8	SC	00	88.2	HS	LOGS	
9	LP	00	102.1	WL HS	LOGS BOULDER	
10	RB	00	110.5		LOGS	
11	LP	00	125	HS	LOGS	
12	SC	00	130		LOGS	
13	LP	00	135.7		CTCT D30S STTH, LOGS BOULDER	
14	SC	00	139.7		LOGS	
15	RR	00	160.3		LOGS	
18	LP	00	186.1	HS	LOGS	
19	CR	00	196.4		LOGS	
20	LP	00	203.6	HS	FLAG = SITE 6	
21	CB	00	241.5		LOGS	
22	LP	00	258.6	WL	SMOLT	
23	CR	00	267.8		CACT D30S STTH	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **4-UMP** SITE ID: **244** **BIG CREEK TRIB C POST-TX**

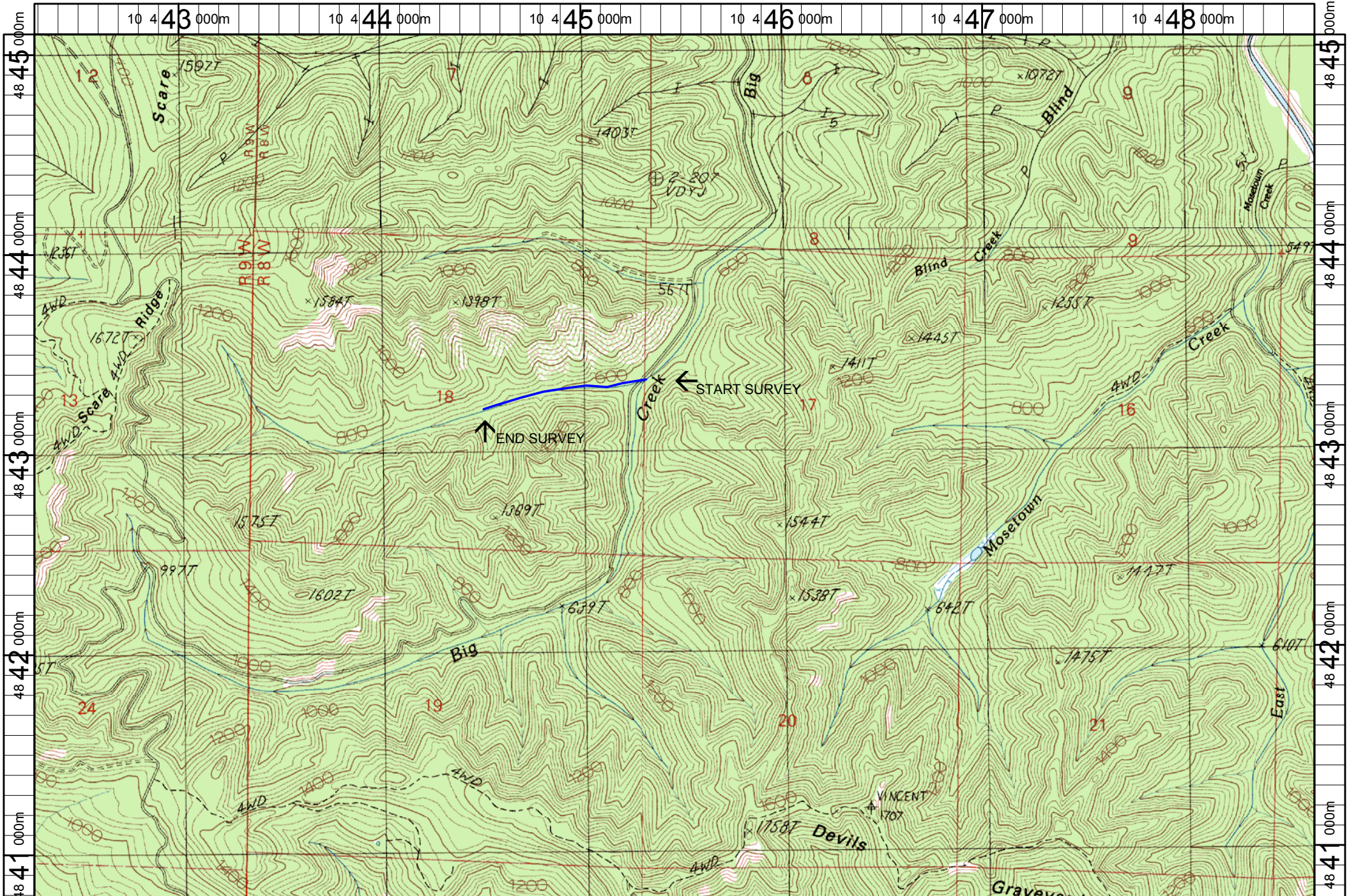
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
26	LP	00	311.4	HS, WL	LOGS BOULDERS SMOLT	
27	DP	00	318.8		LOGS	
28	RB	00	329.9	HS	LOGS	
32	CB	00	389.7		FLAG: SITE 9	
33	DP	00	395.3	HS, WL	LOGS, SCULPIN	
34	CB	00	415.5		CTCT D30S STTH LOGS	
35	LP	00	430.8	HS, /LI	LOGS	
36	RB	00	439.9		LOGS	
37	DP	00	444.8		LOGS	
38	PP	00	450		LOGS	
39	SR	00	450.7		H=0.45m, LOGS	
40	DP	00	457.6	HS	LOGS	
41	CR	00	467.4	HS	LOGS	
42	RI	00	480.1	HS	LOGS	
43	RB	00	493.6		LOGS	
44	LP	00	500.6		LOGS	
45	CB	00	530.7	WL	ROUGH SKINNED NEWT	
46	CB	00	566	HS	CACT D30S LTTH, LOGS BOULDER	
47	LP	00	571.8	LI/		
49	PP	00	586	LI/		
50	SL	00	586.6		H=0.7m	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **4-UMP** SITE ID: **244** **BIG CREEK TRIB C POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
53	RP	00	619.7		REDD	
54	LP	00	634		REDD	
56	LP	00	645.5		CACT D30S LTTH, REDD	
57	RP	00	669.7	HS	LOGS	
58	LP	00	674.7	HS WL	LOGS SMOLT	
59	CB	00	693	HS	LOGS	
61	CB	00	711.8	HS	LOGS	
62	DP	00	716.1	HS	LOGS	
63	SL	00	716.8		H=0.45m	
65	SL	00	720.7		H=0.2m	
66	PP	00	731.1	WL	SMOLT	
67	SL	00	732.6		H=0.9m	
71	LP	00	774.6	WL	SCULPIN SMOLT	
72	CB	00	809.6	SS/	CTCT D30S STLT	
74	RP	01	855.1		REDD	
79	SL	10	855.1		H=0.45	
81	CB	10	855.1		CHMV D30S STLT	
83	CB	10	855.1		CHMV D30S STLT	



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

Location: 10 445450 E 4842913 N
 Caption: BIG CREEK TRIBUTARY C RESTORATION SITE - SMITH BASIN