

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: Pre-Tx
DATE: July 8, 2004
SURVEY CREW: Peter Baki, Jeremiah Bernier
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 938 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.0 (range: 2.7-16.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 2.4 percent. Scour pools (45%) and rapids (26%) dominated stream habitat. Gravel (43%) dominated stream substrate. Wood volume was high at 33.7 m³/100m.

COMMENTS:

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

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	6.0	VWI Range:	2.7 - 16

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	938	1,921	0
Secondary	13	16	2

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.0	Width: 4.1	6.0 (3.5 - 7.5)	8.4 (7 - 10)
Depth: 0.21	Height: 0.4	0.7 (0.6 - 0.9)	1.4 (1.1 - 1.8)

W:D ratio: 11.8
Stream Flow Type: LF
Average Unit Gradient: 2.4%
Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio): 1.5
Habitat Units/100m (total channel length): 12.1
Habitat Units/100m (primary channel length): 12.3

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	26%	Reach avg: 99%
Undercut Banks:	4%	Range: 86 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	253	27.0
Volume (m ³):	316	33.7
Key pieces (>=12m x 0.60m):	5	0.5

OREGON DEPARTMENT OF FISH AND WILDLIFE

BIG CREEK TRIB C PRE-TX (U-244)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/8/2004

REACH 1		T21S-R08W-S18NE					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
CASCADE/BEDROCK	2	10	1.9	0.09	18	1	0	0	8	8	0	83
CASCADE/BOULDERS	7	58	1.9	0.17	114	37	0	17	24	18	34	7
CULVERT CROSSING	1	21	2.5	0.15	52	0	0	0	95	5	0	0
DRY UNIT	1	6	1.2	0.12	7	8	0	0	20	40	40	0
POOL-DAMMED	1	8	3.0	0.30	24	0	0	25	75	0	0	0
POOL-LATERAL SCOUR	30	266	2.0	0.31	556	64	2	21	45	16	7	10
POOL-PLUNGE	21	109	2.8	0.39	313	36	3	18	50	13	11	5
PUDDLED UNIT	1	7	1.3	0.10	9	2	0	0	9	18	45	27
RAPID/BEDROCK	3	42	1.8	0.13	80	11	0	0	28	45	25	2
RAPID/BOULDERS	14	210	2.0	0.12	414	64	0	8	46	25	17	5
RIFFLE	9	134	1.6	0.11	219	15	0	16	42	25	4	13
STEP/BEDROCK	4	18	1.5	0.06	22	4	0	11	13	20	6	50
STEP/BOULDERS	4	7	1.7	0.10	14	18	0	0	18	18	63	3
STEP/COBBLE	13	49	1.4	0.11	87	6	1	8	59	27	5	0
STEP/LOG	4	5	1.1	0.02	8	0	5	40	48	8	0	0
Total:	115	951	2.0	0.21	1,937	266	Avg: 1	15	43	19	13	9

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	8	3.0	0.30	24	1.25%	0	0.0
Scour Pools	51	375	2.3	0.34	869	44.87%	100	11.5
Glides	0	0			0	0.00%	0	0.0
Riffles	9	134	1.6	0.11	219	11.28%	15	6.9
Rapids	17	252	1.9	0.12	495	25.55%	75	15.2
Cascades	9	68	1.9	0.16	132	6.82%	38	28.8
Step/Falls	25	80	1.4	0.09	131	6.75%	28	21.4
Dry	2	13	1.3	0.11	16	0.82%	10	62.9
Culverts	1	21	2.5	0.15	52	2.66%	0	0.0

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	52	54.7	55.4
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	21	22.1	22.4
Pool frequency (channel widths/pool):	4.5		
Residual pool depth (avg):	0.31		

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

REACH 1

Summary of Riparian Zone (0-30m)

3 transects

Total hardwoods/1000	386
Total conifers/1000 ft	163
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	0.0	0.0	0.0	0.3	0.7	0.7	0.7	1.0
15-30cm	0.0	1.7	0.3	1.0	1.7	0.3	2.0	3.0
30-50cm	0.0	1.3	0.0	0.7	0.0	0.3	0.0	2.3
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	0.0	3.0	0.3	2.0	2.3	1.3	0.9	2.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	68		67		68	
Shrub cover	64		28		37	
Grass/forb cover	36		63		58	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	83		83		100	
High terrace	17		17		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	37		43		43	

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		
30	RT	3	HS	10	60	30	40	Conifer		2					
								Hardwood							
30	RT	2	HS	15	55	0	50	Conifer							
								Hardwood		1					
30	RT	1	HS	40	60	90	10	Conifer							
								Hardwood							
30	LF	3	HS	70	50	10	90	Conifer	2						
								Hardwood							
30	LF	2	HS	70	45	40	60	Conifer		1					
								Hardwood							
30	LF	1	HS	25	45	90	10	Conifer							
								Hardwood							
50	RT	1	HT	25	80	80	20	Conifer							
								Hardwood		1	1				
50	LF	1	HS	50	75	5	95	Conifer							
								Hardwood		2					
50	LF	2	HS	65	75	20	80	Conifer							
								Hardwood			1				
50	LF	3	HS	65	75	70	30	Conifer							
								Hardwood	2						
50	RT	2	HT	5	80	50	50	Conifer							
								Hardwood		2					
50	RT	3	HS	25	80	50	50	Conifer							
								Hardwood		1					
80	RT	3	HS	30	65	40	60	Conifer							
								Hardwood			1				
80	LF	1	HS	10	80	40	60	Conifer							
								Hardwood			2				
80	LF	2	HS	70	80	20	80	Conifer							
								Hardwood	1						
80	LF	3	HS	60	80	20	80	Conifer			3				
								Hardwood							
80	RT	1	HS	70	70	80	20	Conifer							
								Hardwood		2	1				
80	RT	2	HS	30	65	40	60	Conifer							
								Hardwood			1				

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 4-UMP SITE ID: 244 BIG CREEK TRIB C PRE-TX (U-244)

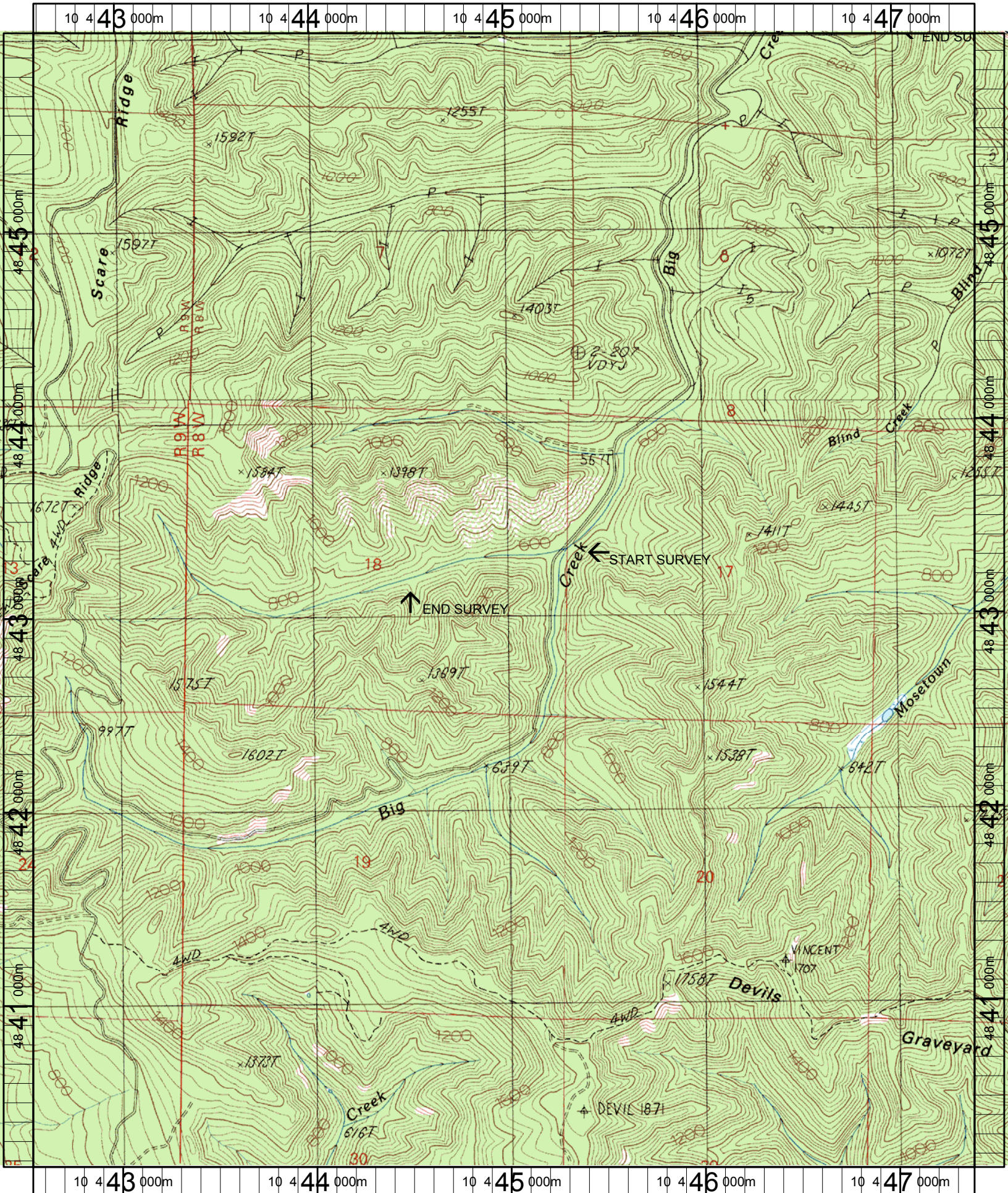
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	RI	00	19.3		SITE 1 A- 5 LOGS	START SIGN TEMP=12 DEG
2	PP	00	22.6		BIG CR ROAD	
3	CC	00	43.2	CC	WIDE=2.5 TALL= 1.35 STE	
5	LP	00	59.6		SITE 1 5 LOGS, 6 BOULD	
7	LP	00	90.4			SG=4
13	LP	00	129.9		SITE 3 2 LOGS 18 BOULD	
15	LP	00	163.1		SITE 4-3 LOGS	
16	RI	00	188.2		SITE 5-18 BOULDERS	
21	LP	00	212.8			SG=4
23	LP	00	226.1			SG=2
30	CR	00	291.9		RIP 1	
31	LP	00	297			PHOTO 20 REACH
36	LP	00	331.5		SITE 7-3 LOGS	
37	RB	00	380.1		SITE 8- FLAG EATEN	
39	RB	00	404.9		SITE 9-5 LOGS	
40	PP	00	409.9			SG=4
42	LP	00	417.7			SG=2
49	SR	00	460.4		H=0.5	
50	RI	00	480		RIP 2	
52	PP	00	492.6		SITE 11- 4 LOGS	SG=2
65	PP	00	581.8	DJ		

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **4-UMP** SITE ID: **244** **BIG CREEK TRIB C PRE-TX (U-244)**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
67	LP	00	596.5	LA		SG=2
68	SL	00	597.3		H=0.9	
69	DP	00	605.4			SG=6
70	CB	00	614.1	DJ		LOTS OF SMALL DEBRIS
71	LP	00	626.7			SG=8
73	LP	00	643.3			SG=6
75	LP	00	654.8			SG=2
80	RI	00	710.6		RIP 3	
85	SB	00	730.1		H=0.2	
87	SL	00	741.1		H=0.9	
89	PP	00	765.5			SG=4
91	LP	00	772.2			COHO
95	PP	00	795.5			SG=2
100	LP	00	839.8			SG=8
104	LP	00	869.5			SG=2
107	RB	00	879.3			SG=4
109	SC	00	887.2		H=0.55	SG=8
112	SC	00	897		H=0.2	
115	CB	01	938	DJ		
116	DU	11	938	TJ/ DJ	END	END SIGN LEFT



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

Location: 10 444980 E 4843082 N
 Caption: BIG CREEK TRIBUTARY C RESTORATION SITE - SMITH BASIN