

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

STREAM: Big Creek Tributary C (U-244)  
BASIN: Umpqua River  
SURVEY TYPE: Post-Tx  
DATE: March 29, 2006  
SURVEY CREW: Paul Jacobsen, Brian Bangs  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 2.6 km<sup>2</sup>  
USGS MAPS: Devils Graveyard  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Big Creek Tributary C habitat survey extended 993 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.2 (range: 2.2-7.0). Land use for the reach was large (30-50 cm dbh) trees and timber harvest. The average unit gradient was 2.9 percent. Riffles (44%) and scour pools (30%) dominated stream habitat. Gravel (41%) and sand (32%) dominated stream substrate. Wood volume was very high at 52.7 m<sup>3</sup>/100m.

**COMMENTS:**

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

The crew noted several habitat structures during the survey.

This site has a very large debris jam caused by the failure of a high gradient tributary at unit 40 (590 m).

REACH 1

T21S-R08W-S18SE

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	4.2	VWI Range:	2.2 - 7

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 Channel	993	2,932	0
Secondary Channel	0	0	0
Off-Channel Units	32	20	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 2.7	Width: 7.2	14.4 ( 7 - 33.5 )	9.3 ( 9 - 9.5 )
Depth: 0.34	Height: 0.6	1.3 ( 1.2 - 1.6 )	1.5 ( 1.5 - 1.6 )

W:D ratio: 11.3  
 Stream Flow Type: LF  
 Average Unit Gradient: 2.9%  
 Water temperature (°C): 7.5 - 7.5

Entrenchment (ACW:FPW ratio): 1.9  
 Habitat Units/100m (total channel length): 7.4  
 Habitat Units/100m (primary channel length): 7.7

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	TH
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):	859	86.5
Volume (m <sup>3</sup> ):	524	52.7
Key pieces (>=12m x 0.60m):	13	1.3

OREGON DEPT OF FISH AND WILDLIFE

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

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/29/2006

REACH 1		T21S-R08W-S18SE					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	5	87	2.1	0.10	209	0	3	12	51	18	14	2
CULVERT CROSSING	1	19	1.6	0.20	30	0	5	23	64	5	5	0
POOL-BACKWATER	1	3	1.3	0.40	4	0	20	60	20	0	0	0
POOL-LATERAL SCOUR	24	244	2.9	0.61	707	0	11	46	33	6	2	2
POOL-PLUNGE	8	64	3.0	0.64	190	0	7	36	33	5	9	9
RAPID/BOULDERS	5	153	2.6	0.14	465	0	3	12	39	32	14	0
RIFFLE	21	430	2.9	0.15	1,287	0	5	24	50	15	6	1
STEP/BOULDERS	1	1	1.7	0.08	2	0	0	0	0	0	100	0
STEP/COBBLE	5	20	2.4	0.11	49	0	4	17	61	14	3	1
STEP/LOG	5	4	2.1	0.08	9	0	3	52	43	2	0	0
<b>Total:</b>	<b>76</b>	<b>1,024</b>	<b>2.7</b>	<b>0.34</b>	<b>2,952</b>	<b>0</b>	<b>Avg: 7</b>	<b>32</b>	<b>41</b>	<b>11</b>	<b>7</b>	<b>2</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	1	3	1.3	0.40	4	0.12%	0	0.0	
Scour Pools	32	308	2.9	0.62	897	30.37%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	21	430	2.9	0.15	1,287	43.60%	0	0.0	
Rapids	5	153	2.6	0.14	465	15.77%	0	0.0	
Cascades	5	87	2.1	0.10	209	7.08%	0	0.0	
Step/Falls	11	25	2.2	0.09	60	2.04%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	19	1.6	0.20	30	1.03%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	33	32.2	33.2
Pools >=1m deep:	2	2.0	2.0
Complex pools (LWD pieces>=3):	18	17.6	18.1
Pool frequency (channel widths/pool):	4.3		
Residual pool depth (avg):	0.48		

# Comment Summary

## Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	21.3	HS	6 LOGS	
2	CC	00	40.3	CC	2.6WX1.1H OPEN BOTTOM	
3	RI	00	81.8	HS,WL,HS		
4	LP	00	89	HS	3LOGS, 2BLDR;US,MT,D30,S,CT,ST	
5	RI	00	99.5	HS,HS	1LOG, 2BLDR; 4LOGS,2BLDR	
9	LP	00	132.3	HS	4LOGS,2BLDRS; VERY SMALL FRY	
11	LP	00	147.9	HS	5LOGS,2BLDRS	
12	RI	00	168		PHOTO PT#5, SNORKEL POOL#12	
13	LP	00	175	WL	GROUSE	
15	LP	00	190.2	DJ		
18	LP	00	220.8	HS	5 LOGS	
20	PP	00	265.1		CT,CT,D30,S,LT,ST	
21	CB	00	297.1	DJ		
22	RI	00	309.1	HS	6LOGS,4BLDR; FRY	
26	RI	00	336	HS	4 LOGS	
27	LP	00	341	DJ		
28	RI	00	372.2		FRY	
30	RI	00	400.9		FRY	
32	RB	00	439.9	HS	4 LOGS	
33	PP	00	445.9	HS	5 LOGS	
34	SB	00	447		H=0.40M	

# Comment Summary

## Restoration Monitoring Sites 2006

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

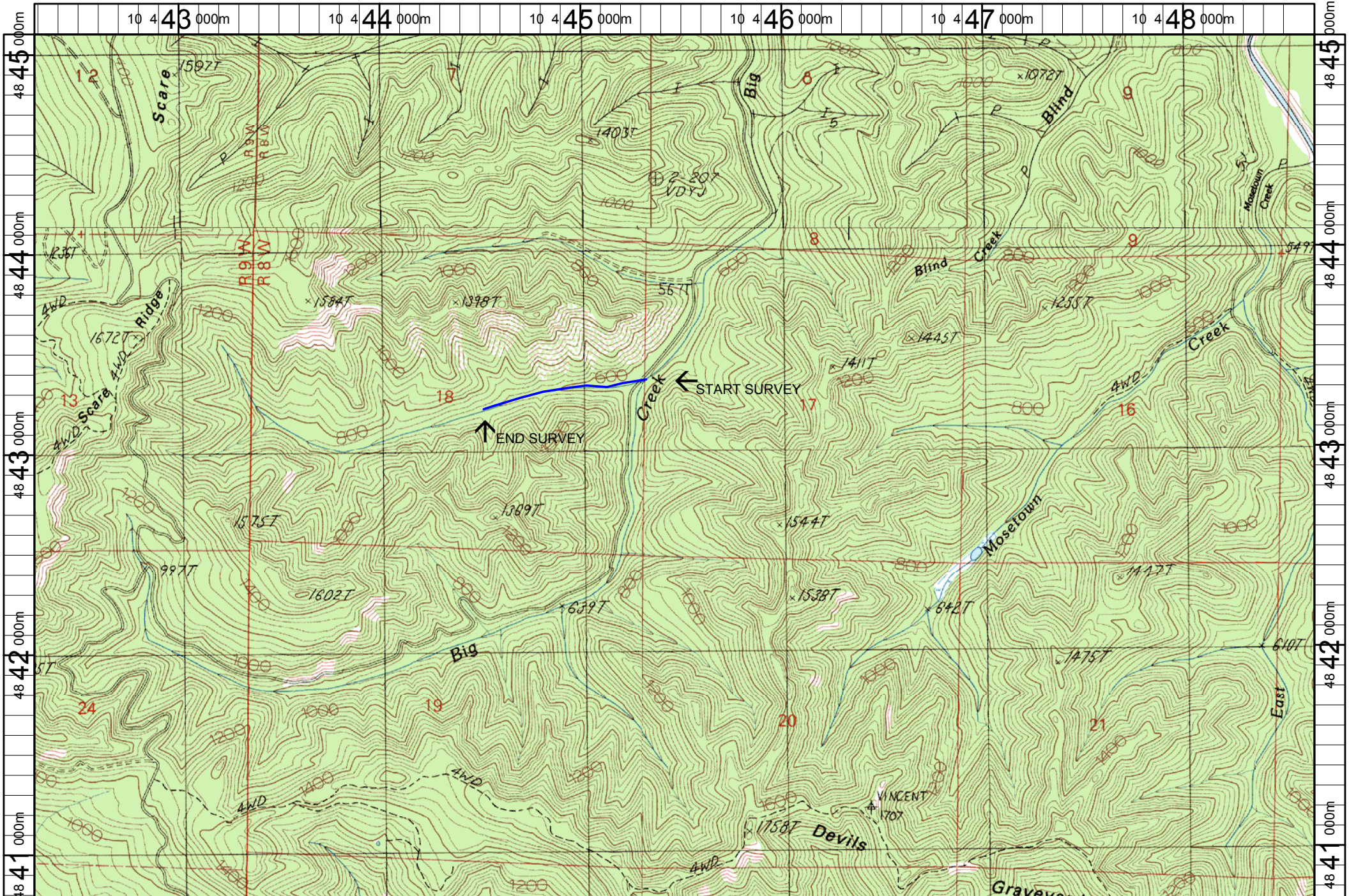
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
37	LP	00	507.9	HS	4LOGS; CA,CT,D30,S,LT,TH	
38	CB	00	515.9	DJ		
39	SC	00	516.3		H=1.40M; DEBRIS TORRENT	
40	RB	01	590.3	DJ,PN,TJ/	VRY BIG DJ-4.5MHX25MWX55ML;AA/	
42	LP	00	612.9	DJ	LOTS OF FRY	
43	RI	00	631.4	WL	WINTER WREN	
44	LP	00	636.5		LOTS FINES BACKED BEHIND JAM	
46	RI	00	669		RECENT HARVEST, UNPLANTED HS/	
48	RI	00	699.8		YELLOW VIOLETS	
49	LP	00	706.8		SALMONBERRY IN BLOOM	
51	PP	00	721.5		STORM'S A BREWIN'	
55	SL	00	752.7		H=0.50M	
56	PP	00	766.3	/SS		
57	SL	00	766.8		H=0.90M	
58	RI	00	783.3		CA,CT,D30,S,LT,TH	
60	SL	00	792.7		H=0.30M	
63	CB	00	837.7	DJ		
65	BW	10	853.7		6 COHO FRY	
67	LP	00	910.7	SS/		
70	SL	00	926.4		H=0.50M	
74	SL	00	978.6	DJ	H=1.10M	

# Comment Summary

## Restoration Monitoring Sites 2006

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

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
75	RI	01	992.6	TJ/	CA,CT,D30,S,LT,TH	
76	CB	11	992.6		ACW=2.20M, T=7.0C	



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