

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

STREAM: Big Creek Tributary A (U-242)
BASIN: Smith River
SURVEY TYPE: Post-Tx
DATE: March 4, 2005
SURVEY CREW: Neil Jensen, Jennifer Schmitt
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.1 km²
USGS MAPS: Twin Sisters
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Big Creek Tributary A habitat survey extended 1,657 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 8.4 (range: 1.8-25.0). Land use for the reach was large (30-50 cm dbh) trees and timber harvest. The average unit gradient was 2.8 percent. Cascades (33%) and scour pools (27%) dominated stream habitat. Gravel (33%) and bedrock (26%) dominated stream substrate. Wood volume was high at 43.1 m³/100m.

COMMENTS:

There was one potential barrier to upstream fish migration in the surveyed length. This was a 1.57 m high bedrock step at unit 121 (1,453 m).

The crew noted several habitat structures during the survey.

REACH 1

T21S-R08W-S05SE

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	8.4	VWI Range:	1.8 - 25

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	1,657	4,895	0
Secondary Channel	0	0	0
Off-Channel Units	9	15	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 8	<u>First Terrace</u> n = 7
Width: 2.8	Width: 5.1	12.3 (4.85 - 29.4)	11.3 (6.25 - 29.3)
Depth: 0.25	Height: 0.4	0.9 (0.82 - 1.02)	1.1 (0.94 - 1.44)

W:D ratio: 11.4
 Stream Flow Type: LF
 Average Unit Gradient: 2.8%
 Water temperature (°C): 7.5 - 7.5

Entrenchment (ACW:FPW ratio): 2.4
 Habitat Units/100m (total channel length): 8.5
 Habitat Units/100m (primary channel length): 8.6

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):	520	31.4
Volume (m ³):	714	43.1
Key pieces (>=12m x 0.60m):	24	1.4

OREGON DEPT OF FISH AND WILDLIFE

BIG CREEK TRIB A POST-TX (4-UJP, 242)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

3/4/2005

REACH 1

T21S-R08W-S05SE

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	13	286	3.6	0.14	1,070	0	1	4	13	8	11	63
CASCADE/BOULDERS	11	208	2.5	0.15	556	0	0	5	27	40	23	4
CULVERT CROSSING	1	16	2.2	0.30	35	0	15	40	30	15	0	0
GLIDE	1	9	1.8	0.15	17	0	0	10	30	0	0	60
POOL-BACKWATER	3	9	1.8	0.32	15	0	77	23	0	0	0	0
POOL-DAMMED	4	52	3.2	0.48	169	0	29	28	5	5	15	19
POOL-LATERAL SCOUR	47	396	3.2	0.46	1,253	0	8	25	30	9	5	23
POOL-PLUNGE	2	12	5.7	0.48	70	0	6	23	25	2	5	40
RAPID/BEDROCK	8	184	3.1	0.09	574	0	1	4	13	4	4	74
RAPID/BOULDERS	11	130	2.1	0.10	272	0	1	6	51	31	8	3
RIFFLE	15	235	2.4	0.12	585	0	2	11	60	13	3	10
RIFFLE W/ POCKETS	5	66	2.5	0.13	153	0	3	12	46	17	4	18
STEP/BEDROCK	6	14	2.7	0.03	46	0	0	0	1	0	0	98
STEP/COBBLE	12	48	2.0	0.07	95	0	0	2	64	33	1	0
STEP/LOG	3	1	1.1	0.02	2	0	0	45	55	0	0	0
Total:	142	1,666	2.8	0.25	4,910	0	Avg: 6	15	33	14	6	26

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	7	60	2.6	0.41	184	3.75%	0	0.0
Scour Pools	49	408	3.3	0.46	1,323	26.93%	0	0.0
Glides	1	9	1.8	0.15	17	0.34%	0	0.0
Riffles	20	301	2.4	0.13	738	15.02%	0	0.0
Rapids	19	314	2.5	0.10	846	17.23%	0	0.0
Cascades	24	494	3.1	0.15	1,627	33.13%	0	0.0
Step/Falls	21	63	2.1	0.05	142	2.90%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	1	16	2.2	0.30	35	0.70%	0	0.0

REACH 1

T21S-R08W-S05SE

REACH 1

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	56	33.6	33.8
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	33	19.8	19.9
Pool frequency (channel widths/pool):	5.8		
Residual pool depth (avg):	0.37		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 4-UMP SITE ID: 242 BIG CREEK TRIB A POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	CR	00	23.5	HS, WL	LOGS, RSN, FLAG SITE 1	
2	LP	00	30.9	HS	LOGS	
3	RI	00	44.8	HS	LOGS	
4	RP	00	60.9		CT-CT, D3, C30, LT, ST	
5	LP	00	68.1	WL, HS	YOUNG STHD, LOGS, BOULDERS	
6	DP	00	80.7	HS, WL	LOGS, BOULDERS, SALMON CARCASS	
7	SR	00	83.9	HS	LOGS	
8	DP	00	92.9	WL	FISH CARCASS	
9	CB	00	104.1	HS	LOGS	
10	LP	00	117	HS	LOGS	
12	LP	00	129.2		BIG CREEK RD	
13	CC	00	144.9	CC	POOL IN U12 EXTENDED CC LENGTH	
14	CR	00	161.7	HS	BOULDERS, NO. 5 FLAG SITE	
15	DP	00	175.6	HS, WL	BOULDERS, SALMON CARCASS	
17	LP	00	185.8	DJ		
18	CB	00	223.9	WL	REDDS	
19	CR	00	256.9	HS	LOGS, BOULDERS	
20	LP	00	261.5		SNORKEL POOL 3,CT-CT,D30,D3	
21	CR	00	280	HS	LOGS BOULDERS, U20 = LT, ST	
22	RI	00	297.2		FLAG SITE 8	
23	SR	00	297.9		H = .4	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **4-UMP** SITE ID: **242** **BIG CREEK TRIB A POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
24	LP	00	309.2	HS	LOGS, BOULDERS	
25	RP	00	320.1	HS	LOGS	
27	CR	00	347.9		FLAG - SNORKEL POOL 4	
28	CR	00	375.7	HS	LOGS	
29	CR	00	393.1	HS	LOGS	
30	RR	00	407.8	HS	BOULDERS, LOGS	
32	LP	00	435.1	WL, HS	FLAG = SNORKEL POOL 5	
33	SR	00	440.8		UNIT 32 = SALMNON CARCASS, LOG	
34	LP	00	452.6	HS	LOGS	
35	RR	00	491.7	HS	FLAG = SNORKEL SITE 11, LOGS	
36	CR	00	523.4	WL	FLAG = SNRKL POOL 6, REDDS	
37	LP	00	537.7	HS	CT-CT,D30,S,LT,ST REDDS, LOGS	
38	RI	00	552.5	HS	LOGS, UNIT 36 AND 38 CARCASSES	
40	LP	00	567.8	HS	LOGS	
41	SR	00	570.9	LI/		
42	RP	00	579.4		FLAG SITE 13, REDD	
43	LP	00	585.1	HS	LOGS	
44	SC	00	586.8	HS, DJ	LOGS	
45	DP	00	602.8	HS	BOULDER, YOUNG STHD	
46	LP	00	613.1	HS, DJ	LOGS, YOUNG STHD, SMALL STEP	
50	SR	00	642.5		H = .48	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **4-UMP** SITE ID: **242** **BIG CREEK TRIB A POST-TX**

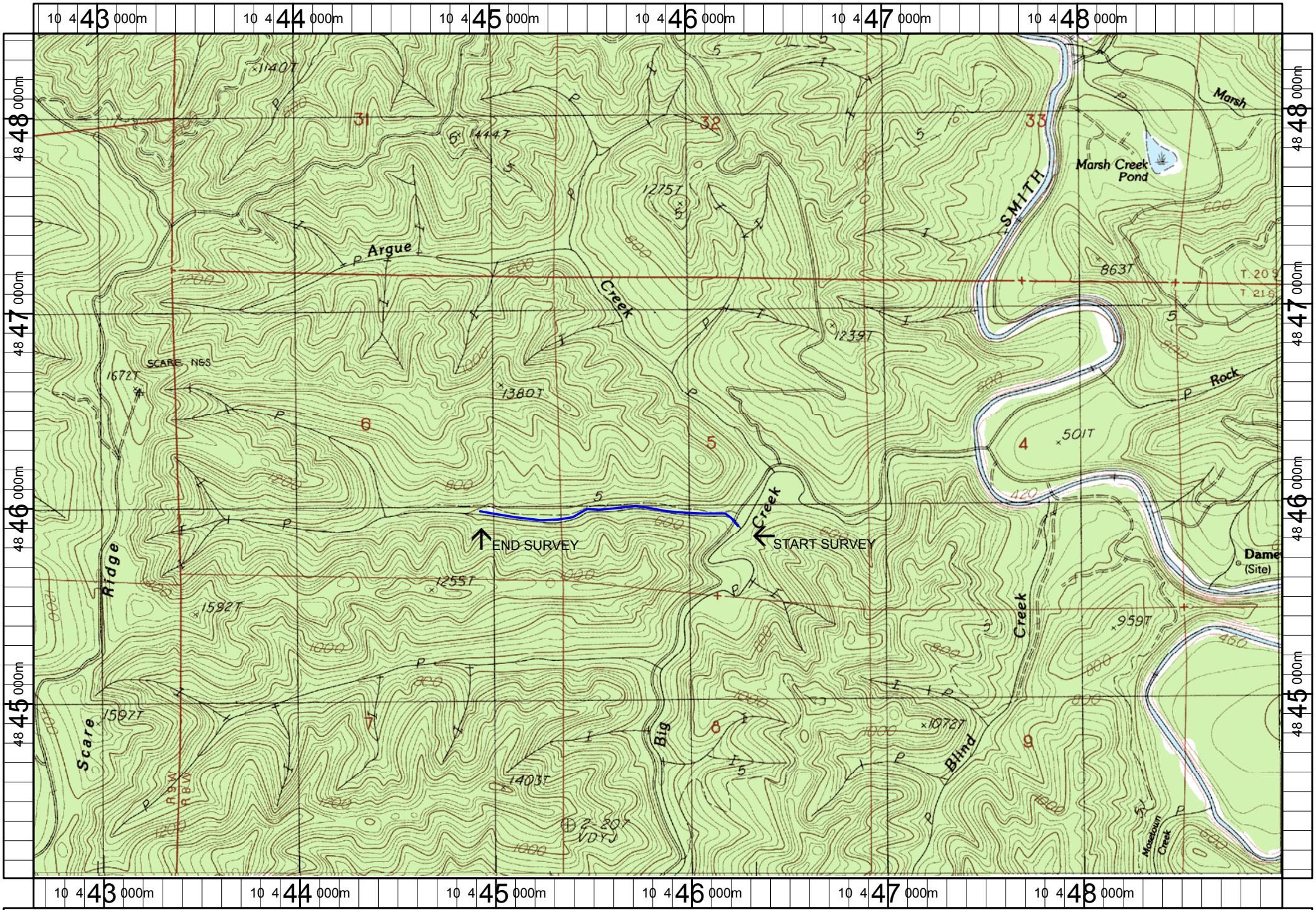
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
51	RR	00	672.6	HS	LOGS	
52	CR	00	691.9	HS	LOGS	
54	LP	00	714.3		FLAG= SNRKL POOL 8, YOUNG STHD	
56	RI	00	765.1		REDDS	
57	RB	00	781.8		CT-CT, D30, S, LT, ST	
58	SL	00	781.85	HS, DJ	LOGS, H = .52	
60	LP	00	803.95		SMALL STEP	
61	LP	00	815.05		FLAG = SNORKEL POOL 9	
62	RB	00	828.45		REDDS	
63	LP	00	840.25		FISH CARCASS	
64	RR	00	884.45	SS/		
65	LP	00	897.15	HS	LOGS BLDRS, FLAG=SNRKL POOL 10	
72	SL	00	945.25	DJ	H = .4	
74	LP	00	968.25		YOUNG STHD	
77	LP	00	1025.15		CA-CT, D30, G, ST, LT	
83	LP	00	1098.15	DJ		
85	LP	00	1117.35	DJ		
91	SL	00	1168.35		H = .42	
92	LP	00	1179.85		YOUNG STHD	
96	RB	00	1212.95		FISH CARCASS	
97	LP	00	1222.95		REDDS	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **4-UMP** SITE ID: **242** **BIG CREEK TRIB A POST-TX**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
99	RI	00	1245.65		REDD	
100	CB	00	1257.15		ACTIVE TIMBER HARVEST, 100 END	
101	LP	00	1265.85		CH-MV, D30, S, TH, LT	
105	LP	00	1301.95		FISH CARCASS	
107	LP	00	1326.95		FLAG = T400	
111	LP	00	1344.35	DJ	REDDS	
113	LP	00	1369.35	SS/		
121	SR	00	1453.45	PN, DJ	H = 1.57	
131	LP	00	1521.05	WL	ROUGHED GROUSE, NEWT	
133	LP	00	1543.15		US-WF, D30, S, TH, TH	
135	LP	00	1570.85	DJ		
140	CB	00	1629.85	DJ		
141	LP	00	1637.95		NO FISH IN POOLS	
142	CB	00	1657.45		CA-CT, D30, S, TH, LT, END	



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

Location: 10 445843 E 4846246 N
 Caption: BIG CREEK TRIBUTARY A RESTORATION SITE - SMITH BASIN