

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

STREAM: Bear Creek Middle (MC-299)
BASIN: Salmon River
SURVEY TYPE: Post-Tx
DATE: March 9, 2005
SURVEY CREW: Jeremy Romer, Sheila Davis
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 14.0 km²
USGS MAPS: Devils Lake
ECOREGION: Coast Range Volcanic

GENERAL DESCRIPTION:

The Bear Creek habitat survey extended 594 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 10.0 (range: 9.0-12.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 2.0 percent. Riffles (35%) and dammed pools (25%) dominated stream habitat. Gravel (48%) and sand (23%) dominated stream substrate. Wood volume was high at 30.0 m³/100m.

COMMENTS:

There was one potential barrier to upstream fish migration in the surveyed length. This was a 0.6 m high step over log at unit 64 (497 m).

The crew noted several habitat structures during the survey.

REACH 1

T07W-R10W-S10NE

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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	10.0	VWI Range:	9 - 12

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	594	3,950	0
Secondary Channel	94	263	0
Off-Channel Units	116	200	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 4.4	Width: 8.9	16.5 (7.7 - 37)	20.0 (9.2 - 45)
Depth: 0.46	Height: 0.4	0.8 (0.7 - 0.9)	1.6 (0.9 - 3.6)

W:D ratio: 23.1

Entrenchment (ACW:FPW ratio): 1.7

Stream Flow Type: HF

Habitat Units/100m (total channel length): 8.7

Average Unit Gradient: 2.0%

Habitat Units/100m (primary channel length): 11.8

Water temperature (°C): -

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	D30	G

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):	153	25.7
Volume (m ³):	179	30.0
Key pieces (>=12m x 0.60m):	8	1.3

OREGON DEPT OF FISH AND WILDLIFE

BEAR CREEK MIDDLE POST-TX (2-MC, 299)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

3/9/2005

REACH 1		T07W-R10W-S10NE					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	1	10	0.6	0.01	6	0	5	10	15	20	0	50
POOL-BACKWATER	13	64	1.7	0.30	111	0	23	42	29	5	0	1
POOL-DAMMED	1	50	20.0	0.90	1,008	0	30	40	25	5	0	0
POOL-ISOLATED	1	2	0.8	0.20	2	0	50	50	0	0	0	0
POOL-LATERAL SCOUR	13	137	5.1	0.97	736	0	15	22	51	11	0	2
POOL-PLUNGE	5	23	4.8	0.91	108	0	15	36	43	6	0	0
RAPID/BOULDERS	10	191	4.4	0.25	867	0	2	10	56	30	2	0
RIFFLE	18	308	4.1	0.34	1,363	0	8	10	61	20	1	0
RIFFLE W/ POCKETS	1	14	13.6	0.30	186	0	10	20	65	5	0	0
STEP/LOG	7	5	5.6	0.19	26	0	22	31	46	1	0	0
Total:	70	804	4.4	0.46	4,413	0	Avg: 14	23	48	13	0	1

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	15	116	2.9	0.34	1,120	25.39%	0	0.0	
Scour Pools	18	160	5.1	0.96	844	19.12%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	19	322	4.6	0.34	1,549	35.11%	0	0.0	
Rapids	10	191	4.4	0.25	867	19.65%	0	0.0	
Cascades	1	10	0.6	0.01	6	0.14%	0	0.0	
Step/Falls	7	5	5.6	0.19	26	0.60%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	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	41.0	55.5
Pools >=1m deep:	9	11.2	15.1
Complex pools (LWD pieces>=3):	13	16.2	21.9
Pool frequency (channel widths/pool):	2.8		
Residual pool depth (avg):	0.61		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **299** BEAR CREEK MIDDLE POST-TX

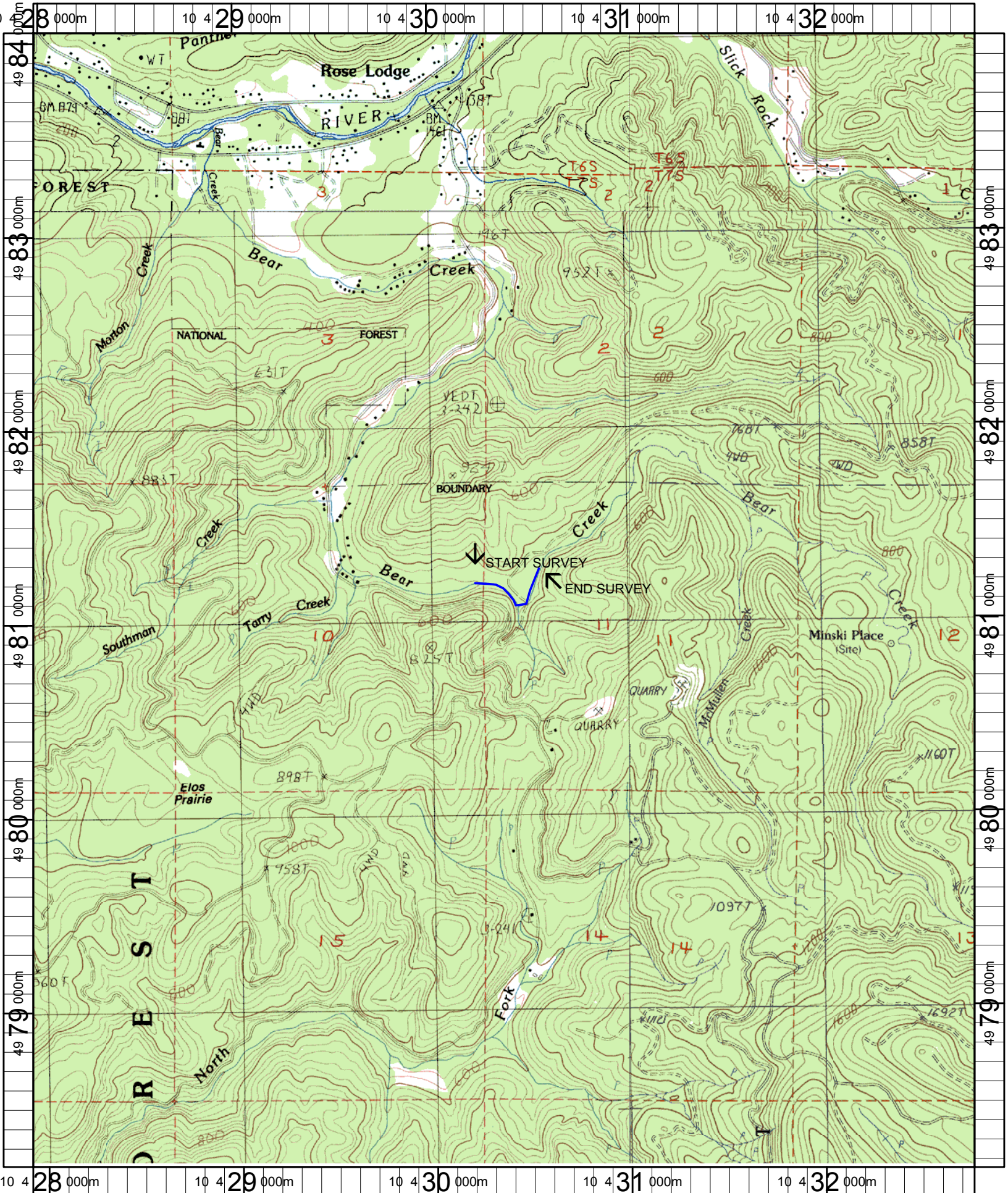
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	PP	01	5	/TJ	CA CT D30 G ST YT, PHOTO 16,17	
3	SL	00	5.5	DJ	H=0.35	
7	SL	02	31.9	/SS	H=0.25	
9	LP	01	47.5	/SS		
10	RB	01	65	/SS		
12	LP	01	73.5	DJ, HS	PHOTO 18	
13	BW	10	73.5		FLOW FROM TOP	
14	LP	00	82.1	BV	FRY, YOUNG OF YEAR	
21	LP	00	138.3	SS/, HS DJ	COHO FRY PHOTO 19	
22	RI	00	163.4	SS, LI/	CT MT D30 G ST YT	
24	IP	10	190.4		FISH FRY	
26	BW	10	202.5		LOTS OF FRY, 50	
27	LP	00	220.7	DJ		
28	RB	01	250.7	HS		
30	RB	01	276.3		CT MT D30 G ST YT	
33	BW	10	308.5		FRY COHO	
34	LP	00	314.5	HS, DJ	SITE 4 08/02 (FLAG)	
35	RB	01	336	LA/, DJ		
37	BW	10	336		FLOW FROM TOP COHO FRY PHOTOS	
40	LP	00	370.9	HS, DJ	SITE 5 (FLAG), PHOTO 22	
41	RI	00	394.3	BC, CS /SS	ROAD RUNOFF	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **299** BEAR CREEK MIDDLE POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
42	RB	01	402.9	CS, /TJ	SGS SURVEY SIGN ON HS	
43	RB	11	402.9	HS, DJ		
44	RI	01	416.8	/TJ		
46	SL	01	417.4		H=0.25	
48	SL	02	417.4		H=0.6	
51	SL	01	442.2		H=0.55	
52	RP	01	455.9		LOTS OF EROSION	
54	RI	01	478.1		CA MT D30 G YT ST	
58	SL	02	492.4	HT	H=0.5, SO=CLAY	
59	RI	02	492.4		SO=CLAY	
60	LP	02	492.4		SO=CLAY	
62	BW	10	492.4		FRY	
63	PP	00	496.1	HS, DJ	SITE 6	
64	SL	00	496.8	PA	H=0.6	
65	DP	00	547.2	BV		
67	BW	10	573.2		430520, 4981240 GPS	
68	RB	01	594.4	TJ/		
69	BW	10	594.4		FRY	
70	RB	11	594.4		CT MT D30 D3 TH ST	



Name: DEVILS LAKE
 Date: 1/21/2005
 Scale: 1 inch equals 2000 feet

Location: 10 430369 E 4981106 N
 Caption: BEAR CREEK MIDDLE RESTORATION SITE - SALMON RIVER BASIN