

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

STREAM: Paradise Creek Site 1 (U-351)
BASIN: Umpqua River
SURVEY TYPE: Post-Tx
DATE: July 31, 2007
SURVEY CREW: Andy Livesay, Ryan Lande
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 31.7 km²
USGS MAPS: Elkton
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Paradise Creek habitat survey extended 1,579 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 16.7 (range: 6.0-20.0). Land use for the reach was light grazing and agriculture. The average unit gradient was 0.7 percent. Scour pools (44%), dammed pools (26%) and riffles (23%) dominated stream habitat. Bedrock (39%) and gravel (20%) dominated stream substrate. Wood volume was low at 17.0 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

T22S-R08W-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	16.7	VWI Range:	6 - 20

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	1,579	10,319	0
Secondary Channel	59	243	2
Off-Channel Units	103	171	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 7
Width: 5.2	Width: 10.4	12.8 (7.7 - 20.4)	15.8 (8.1 - 25.4)
Depth: 0.35	Height: 0.7	1.3 (1 - 1.56)	2.0 (1.3 - 3)

W:D ratio: 16.1

Entrenchment (ACW:FPW ratio): 1.2

Stream Flow Type: MF

Habitat Units/100m (total channel length): 4.0

Average Unit Gradient: 0.7%

Habitat Units/100m (primary channel length): 4.4

Water temperature (°C): 18.0 - 18.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LG	AG
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 61%
Undercut Banks:	2%	Range: 14 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	253	16.0
Volume (m ³):	268	17.0
Key pieces (>=12m x 0.60m):	21	1.3

OREGON DEPT OF FISH AND WILDLIFE

PARADISE CREEK SITE 1 POST-TX (4-UJP, 351)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/30/2007

REACH 1		T22S-R08W-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	13	5.0	0.10	65	0	0	15	5	0	0	80
CASCADE/BOULDERS	2	16	0.6	0.02	9	4	5	30	35	20	10	0
DRY UNIT	2	44	3.9	0.00	175	0	3	43	43	13	0	0
POOL-BACKWATER	1	5	2.0	0.35	10	2	60	40	0	0	0	0
POOL-DAMMED	4	354	7.4	0.79	2,757	48	24	23	6	11	0	36
POOL-ISOLATED	4	12	1.2	0.18	15	0	29	55	11	0	0	5
POOL-LATERAL SCOUR	24	710	6.6	0.68	4,747	207	9	16	19	11	3	42
PUDDLED UNIT	1	60	2.0	0.35	120	0	10	40	40	10	0	0
RAPID/BEDROCK	2	47	5.1	0.20	215	11	0	5	3	13	0	80
RIFFLE	17	441	5.8	0.12	2,462	77	1	13	21	8	1	56
STEP/BEDROCK	4	17	5.8	0.05	100	22	8	5	5	8	0	75
STEP/COBBLE	3	17	3.0	0.06	50	0	0	5	65	30	0	0
STEP/STRUCTURE	4	6	1.4	0.02	8	33	13	11	25	5	46	0
Total:	69	1,741	5.2	0.35	10,733	404	Avg: 9	18	20	10	4	39

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	9	371	4.1	0.47	2,782	25.92%	50	1.8	
Scour Pools	24	710	6.6	0.68	4,747	44.22%	207	4.4	
Glides	0	0			0	0.00%	0	0.0	
Riffles	17	441	5.8	0.12	2,462	22.94%	77	3.1	
Rapids	2	47	5.1	0.20	215	2.00%	11	5.1	
Cascades	3	29	2.0	0.05	74	0.69%	4	5.4	
Step/Falls	11	39	3.4	0.04	158	1.48%	55	34.7	
Dry	3	104	3.3	0.12	295	2.75%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths	Primary Channel Length
		# / Km	# / Km
All Pools:	33	19.0	20.9
Pools >=1m deep:	3	1.7	1.9
Complex pools (LWD pieces>=3):	13	7.5	8.2
Pool frequency (channel widths/pool):	5.1		
Residual pool depth (avg):	0.66		

Survey Date 7/30/2007
Report Date: 11/7/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 5 transects

Total hardwoods/1000	171
Total conifers/1000 ft	37
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	1.8	0.4	0.0	0.0	0.2	0.4	2.0
15-30cm	0.0	0.8	0.2	0.0	0.0	0.0	0.2	0.8
30-50cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	2.6	0.6	0.0	0.0	0.2	0.2	0.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	33		7		7	
Shrub cover	50		6		4	
Grass/forb cover	49		95		97	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	10		10		10	
High terrace	80		90		90	
Low terrace	0		0		0	
Floodplain	10		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	30		7		4	

Summary of Riparian Zone (0-30m) for all reaches

5 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	171
Total conifers/1000 ft	37
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.4	2.0
15-30cm	0.2	0.8
30-50cm	0.0	0.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

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		
14	LT	1	HT	50	30	55	45	Conifer							
								Hardwood	1						
14	LT	2	HT	5	0	0	100	Conifer							PASTURE
								Hardwood							
14	LT	3	HT	1	0	0	100	Conifer							PASTURE
								Hardwood							
14	RT	1	HT	50	30	45	55	Conifer							
								Hardwood	2						
14	RT	2	HT	1	0	0	100	Conifer							PASTURE
								Hardwood							
14	RT	3	HT	0	0	0	100	Conifer							PASTURE
								Hardwood							
28	LT	1	HT	45	0	60	40	Conifer							
								Hardwood							
28	LT	2	HT	3	0	0	100	Conifer							PASTURE
								Hardwood							
28	LT	3	HT	0	0	0	100	Conifer							PASTURE
								Hardwood							
28	RT	1	HT	30	0	0	100	Conifer							PASTURE
								Hardwood							
28	RT	2	HT	5	0	0	100	Conifer							PASTURE
								Hardwood							
28	RT	3	HT	5	0	0	100	Conifer							PASTURE
								Hardwood							
34	LT	1	HT	35	45	75	25	Conifer							
								Hardwood	1						
34	LT	2	HT	3	0	0	100	Conifer							PASTURE
								Hardwood							
34	LT	3	HT	3	0	0	100	Conifer							PASTURE
								Hardwood							
34	RT	1	HT	40	0	35	65	Conifer							
								Hardwood							
34	RT	2	HT	3	0	0	100	Conifer							PASTURE
								Hardwood							
34	RT	3	HT	3	0	0	100	Conifer							PASTURE
								Hardwood							

41	LT	1	FP	1	80	85	5	Conifer			
								Hardwood	3	1	
41	LT	2	HT	15	0	35	65	Conifer	1		
								Hardwood			
41	LT	3	HT	2	0	0	100	Conifer			PASTURE
								Hardwood			
41	RT	1	HS	40	80	50	40	Conifer			
								Hardwood	2		
41	RT	2	HS	30	70	20	80	Conifer	1	1	
								Hardwood			
41	RT	3	HS	25	65	35	65	Conifer			
								Hardwood	1		
53	LT	1	HT	5	20	40	60	Conifer			
								Hardwood			
53	LT	2	HT	0	0	0	100	Conifer			PASTURE
								Hardwood			
53	LT	3	HT	0	0	0	100	Conifer			PASTURE
								Hardwood			
53	RT	1	HT	7	40	50	50	Conifer			
								Hardwood	3		
53	RT	2	HT	1	0	0	100	Conifer			PASTURE
								Hardwood			
53	RT	3	HT	3	0	0	100	Conifer			PASTURE
								Hardwood			

COMMENT SUMMARY

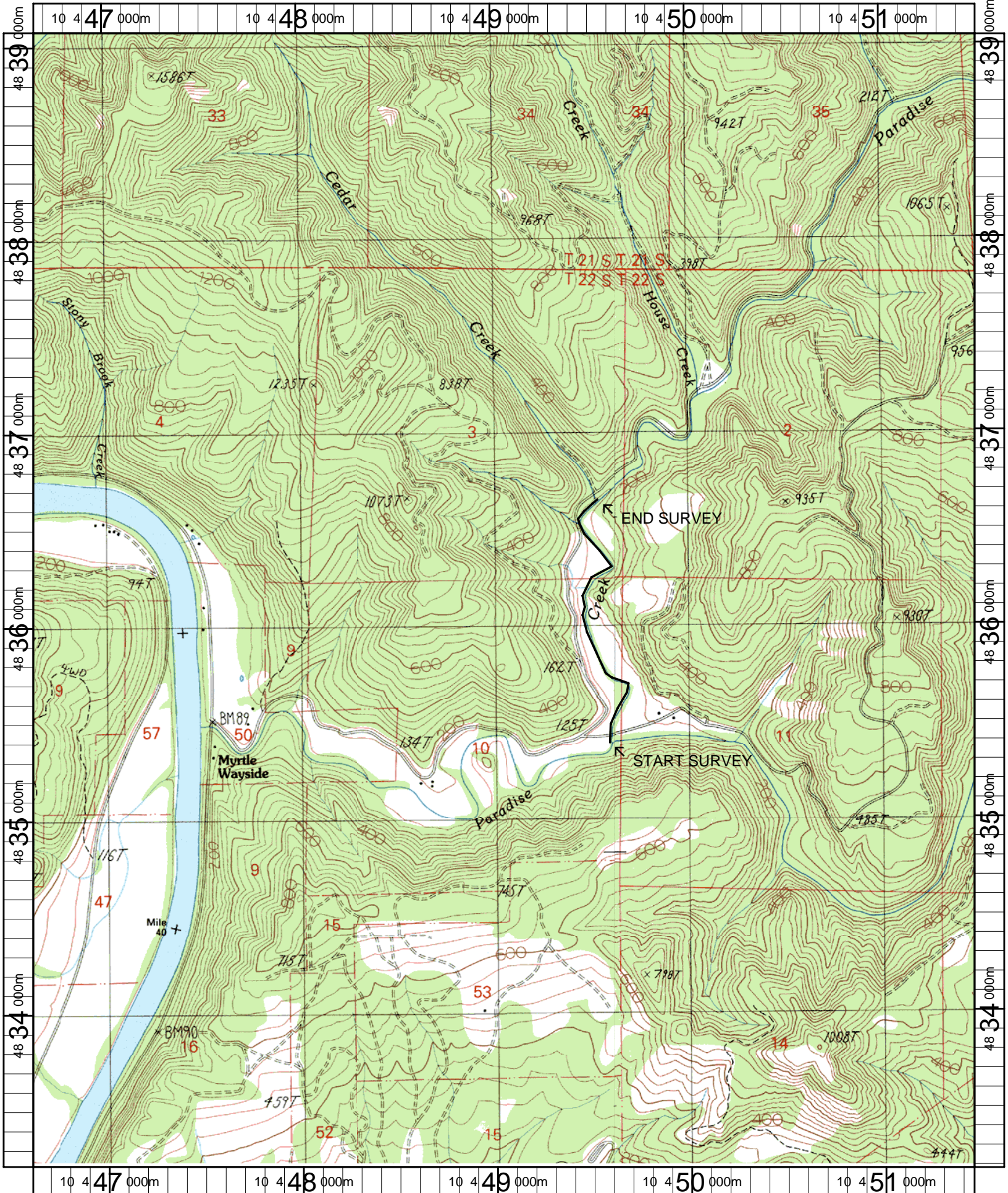
MONITORING AREA: 4-UMP SITE ID: 351 STREAM: PARADISE CREEK SITE 1 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
6	LP	00	71.3	HS	
7	LP	00	108.8	HS	
9	LP	00	153.8	HS	
11	LP	00	189.8	HS	BOULDER HAB STRUCTURE
12	RI	00	219.8	HS	
13	LP	00	245.8	HS	
14	RI	00	265.8	HS, BV	
15	LP	00	301.8	HS	
16	SS	00	303.8	HS	FULL CHANNEL BOULDER DAM [MAN MADE], UNDERGROUND FLOW
17	DP	01	392.8	HS	
22	SS	00	419.9	HS	FULL CHANNEL ROCK DAM, UNDERGROUND FLOW
27	LP	00	535.9	HS	
28	SR	00	543.9	HS	
29	SS	00	545.4	HS	UNDERGROUND FLOW
30	DP	00	655.4	HS	
31	SS	00	656.7	HS	BEAVER ADDING TO ROCK DAM
32	DP	01	798.7	TJ	WOOD DUCK HEN W/ BABIES, PTC FLOWING INTO HS DAM
33	CB	11	798.7		TEMPERATURE 16 CENTIGRADE
37	RI	00	901.7	HS	
39	LP	00	964.7	HS	
41	RI	01	1064.7	HS, DJ	
42	PD	10	1064.7		MADE ME ENTER SLOPE

COMMENT SUMMARY

MONITORING AREA: 4-UMP SITE ID: 351 STREAM: PARADISE CREEK SITE 1 POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
45	LP	01	1210.7	HS	
46	RI	01	1260.7	DJ, RF, FC	MADE ME ENTER PTC, TEMPORARY FENCE
47	BW	10	1260.7	HS	
49	IP	10	1260.7	HS	
53	RI	00	1276.7	HS	
54	LP	00	1296.7	HS	
55	RI	00	1318.9	HS	
56	LP	00	1333.9	HS	
58	LP	00	1354.9	HS	
60	LP	01	1394.9	HS, TJ/	
61	CB	11	1394.9		TEMPERATURE 14C
65	LP	00	1481.6		LOCALIZED FOAM COVERING POOL SURFACE
67	LP	00	1540.6		TONS OF COHO FRY



Name: DEVILS GRAVEYARD (OR)
 Date: 4/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0449052 E 4836130 N
 Caption: PARADISE CREEK SITE 1 RESTORATION SITE - UMPQUA BASIN