

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

STREAM: Paradise Creek Site 2 (U-352)
BASIN: Umpqua River
SURVEY TYPE: Pre-Tx
DATE: June 27, 2007
SURVEY CREW: Andy Livesay, Ryan Lande
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 30.0 km²
USGS MAPS: Elkton
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Paradise Creek habitat survey extended 1,472 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 7.8 (range: 3.5-11.0). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.7 percent. Scour pools (54%) and riffles (37%) dominated stream habitat. Bedrock (37%) and gravel (26%) dominated stream substrate. Wood volume was low at 17.1 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-S03SE

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	7.8	VWI Range:	3.5 - 11

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	1,472	9,976	0
Secondary Channel	68	329	4
Off-Channel Units	31	36	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 7
Width: 5.8	Width: 10.5	12.6 (9.3 - 17)	15.5 (11.7 - 19.5)
Depth: 0.29	Height: 0.4	0.9 (0.68 - 1.08)	1.8 (1.3 - 3)

W:D ratio: 24.6
 Stream Flow Type: LF
 Average Unit Gradient: 0.7%
 Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.2
 Habitat Units/100m (total channel length): 5.2
 Habitat Units/100m (primary channel length): 5.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	ST
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	3%	Reach avg: 81%
Undercut Banks:	13%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	315	21.4
Volume (m ³):	251	17.1
Key pieces (>=12m x 0.60m):	11	0.7

OREGON DEPT OF FISH AND WILDLIFE

PARADISE CREEK SITE 2 PRE-TX (4-UJP, 352)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

6/25/2007

REACH 1		T22S-R08W-S03SE					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/BOULDERS	1	4	0.4	0.02	2	0	0	0	50	50	0	0
DRY CHANNEL	2	38	4.9	0.00	210	0	20	68	13	0	0	0
DRY UNIT	2	27	4.3	0.00	114	0	0	10	78	13	0	0
POOL-BACKWATER	1	5	2.0	0.35	9	0	29	57	14	0	0	0
POOL-LATERAL SCOUR	36	745	7.3	0.54	5,622	188	6	16	23	11	7	36
RAPID/BOULDERS	2	36	3.6	0.06	216	37	0	3	35	40	13	10
RIFFLE	24	653	5.3	0.10	3,832	135	1	8	29	13	5	44
STEP/BEDROCK	7	23	4.1	0.08	107	6	0	2	3	6	1	88
STEP/COBBLE	5	40	5.7	0.08	227	27	0	6	40	38	13	3
STEP/LOG	1	0	0.3	0.02	0	0	16	21	32	32	0	0
STEP/STRUCTURE	1	2	1.0	0.02	2	21	0	20	20	0	60	0
Total:	82	1,571	5.8	0.29	10,341	414	Avg: 4	13	26	14	7	37

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	5	2.0	0.35	9	0.09%	0	0.0	
Scour Pools	36	745	7.3	0.54	5,622	54.37%	188	3.3	
Glides	0	0			0	0.00%	0	0.0	
Riffles	24	653	5.3	0.10	3,832	37.06%	135	3.5	
Rapids	2	36	3.6	0.06	216	2.09%	37	17.1	
Cascades	1	4	0.4	0.02	2	0.02%	0	0.0	
Step/Falls	14	65	4.2	0.07	336	3.25%	54	16.1	
Dry	4	65	4.6	0.00	324	3.13%	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:	37	23.5	25.1
Pools >=1m deep:	1	0.6	0.7
Complex pools (LWD pieces>=3):	14	8.9	9.5
Pool frequency (channel widths/pool):	4.0		
Residual pool depth (avg):	0.43		

Survey Date 6/25/2007
Report Date: 11/7/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	354
Total conifers/1000 ft	488
Total conifers >20" dbh/1000 ft	73
Total conifers >35" dbh/1000 ft	12

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	0.4	1.4	0.8	1.4	2.4	0.2	3.6	3.0
15-30cm	0.0	0.4	0.2	0.6	1.2	0.8	1.4	1.8
30-50cm	0.6	0.0	1.2	0.4	0.0	0.2	1.8	0.6
50-90cm	0.4	0.0	0.4	0.2	0.2	0.0	1.0	0.2
>90cm	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.2
Total/100m2	1.4	1.8	2.8	2.8	3.8	1.2	2.7	1.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	74		70		61	
Shrub cover	55		50		49	
Grass/forb cover	27		45		39	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	30		40		40	
High terrace	60		50		50	
Low terrace	0		10		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	10		0		10	
Riprap	0		0		0	
Surface slope (%)	30		31		43	

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	354
Total conifers/1000 ft	488
Total conifers >20" dbh/1000 ft	73
Total conifers >35" dbh/1000 ft	12

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	3.6	3.0
15-30cm	1.4	1.8
30-50cm	1.8	0.6
50-90cm	1.0	0.2
>90cm	0.2	0.2

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	
9	LT	1	HT	0	75	50	50	Conifer				1		
								Hardwood	2					
9	LT	2	LT	0	60	35	65	Conifer				1		
								Hardwood	1	1				
9	LT	3	HT	0	75	40	40	Conifer	2					ENTERING TREE FARM SEEDLINGS
								Hardwood						
9	RT	1	HS	75	50	70	30	Conifer						
								Hardwood						
9	RT	2	HS	85	75	20	80	Conifer						
								Hardwood	1	1		1	1	
9	RT	3	HS	80	65	15	85	Conifer						
								Hardwood	1	4	1			
20	LT	1	RB	0	60	20	25	Conifer						
								Hardwood		1				
20	LT	2	HS	80	70	80	10	Conifer	3	1				
								Hardwood	0	0				
20	LT	3	HS	80	90	70	30	Conifer	2	3				
								Hardwood	0					
20	RT	1	HT	15	65	15	35	Conifer	1		2			
								Hardwood						
20	RT	2	HT	5	85	85	15	Conifer	1					
								Hardwood						
20	RT	3	HT	10	85	65	35	Conifer	3					
								Hardwood	0					
42	LT	1	HS	15	80	65	15	Conifer						
								Hardwood						
42	LT	2	HT	10	90	20	60	Conifer						
								Hardwood	2	1	2			
42	LT	3	HT	15	60	15	85	Conifer		3				
								Hardwood						
42	RT	1	HS	95	75	25	40	Conifer	1					
								Hardwood						
42	RT	2	HS	95	65	45	55	Conifer					1	
								Hardwood						
42	RT	3	HS	95	60	70	30	Conifer	4					
								Hardwood						

52	LT	1	HT	70	85	55	45	Conifer				1			
								Hardwood							
52	LT	2	HT	15	90	40	60	Conifer							
								Hardwood	1						
52	LT	3	RB	0	50	5	15	Conifer							
								Hardwood							
52	RT	1	HT	10	85	90	10	Conifer							
								Hardwood		1					
52	RT	2	HT	10	75	85	15	Conifer							1
								Hardwood	2						
52	RT	3	HT	10	20	95	5	Conifer							
								Hardwood							
70	LT	1	HT	20	85	55	15	Conifer							
								Hardwood	5						
70	LT	2	HT	5	75	35	50	Conifer		0	4	2			
								Hardwood			0	0			
70	LT	3	HT	10	90	35	45	Conifer	1						1
								Hardwood							
70	RT	1	HT	0	80	100	0	Conifer							1
								Hardwood							
70	RT	2	HS	0	15	50	40	Conifer							
								Hardwood							
70	RT	3	HS	130	15	80	15	Conifer							
								Hardwood							

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COMMENT SUMMARY

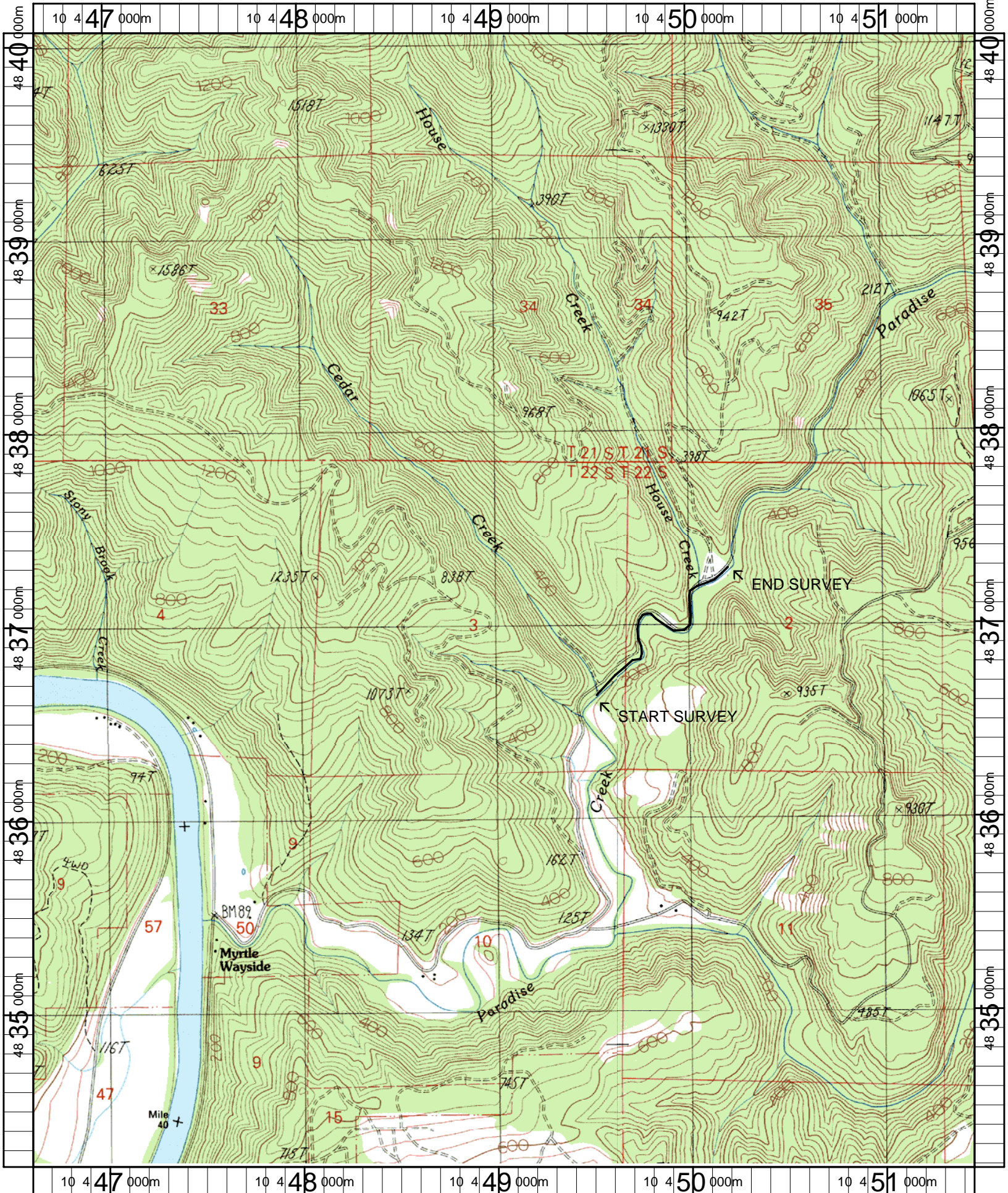
MONITORING AREA: 4-UMP SITE ID: 352 STREAM: PARADISE CREEK SITE 2 PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
6	LP	00	187.5		CUTTHROAT AND COHO FRY
9	RI	00	252.5		RIP. AND METRICS
13	DU	02	338.5		DRY
14	LP	02	338.5		COHO FRY IN POOL
20	SR	00	472.4		METRICS AND RIPARIAN
21	RI	00	495.4	CE/	
25	RI	00	569.7	CE/	
26	LP	00	587.2	CS/	
28	LP	01	607.3	TJ/	
29	RI	11	607.3		TEMP 10 DEG C.
34	LP	01	658.3	DJ	
35	DC	02	658.3	DJ	
36	LP	01	676.8	DJ	
39	LP	00	712.2		LARGE
42	RI	00	743.2		RSN
46	LP	00	821.2		COHO FRY X 30
50	LP	00	962.7		LOTS OF COHO FRY
52	SC	00	1001.7		METRICS AND RIPARIAN
56	SC	00	1095.7		POSSIBLE OLDER HAB. STRUCTURE
57	LP	00	1116.7	HS	OLDER HAB. STRUCTURE
61	LP	00	1159	CS/	RIP RAP
62	RB	01	1192	HS, TJ/	TJ -- HOUSE CR.

COMMENT SUMMARY

MONITORING AREA: 4-UMP SITE ID: 352 STREAM: PARADISE CREEK SITE 2 PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
63	RI	11	1192		HOUSE CREEK
64	SS	11	1192	HS	ARTIFICIAL BOULDER DAM ACROSS CHANNEL
67	LP	00	1256	DJ	LARGE JAM SPANING CHANNEL
68	RI	00	1275		LOTS OF COHO FRY
70	RI	00	1311.5		RIPARIAN AND METRICS
74	RI	01	1407.9	/TJ	UNNAMED TRIB
75	CB	11	1407.9		TRIB TEMP 11 C
78	SR	11	1407.9	PN	LARGE STEP, 1.3M HIGH
82	RI	00	1471.9		END SURVEY SIGN CEDAR RIGHT



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

Location: 10 0449048 E 4837127 N
 Caption: PARADISE CREEK SITE 2 RESTORATION SITE - UMPQUA BASIN