

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

STREAM: Little Paradise Creek (U-353)  
BASIN: Umpqua River  
SURVEY TYPE: Post-Tx  
DATE: August 8, 2007  
SURVEY CREW: Andy Livesay, Ryan Lande, Charlie Stein  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 10.1 km<sup>2</sup>  
USGS MAPS: Elkton  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Little Paradise Creek habitat survey extended 2,123 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.1 (range: 1.5-17.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (48%) and riffles (42%) dominated stream habitat. Gravel (48%) dominated stream substrate. Wood volume was moderate at 24.4 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.

REACH 1

T22S-R08W-S12NW

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	6.1	VWI Range:	1.5 - 17

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	2,123	6,266	0
Secondary Channel	89	136	3
Off-Channel Units	42	40	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 9	<u>First Terrace</u> n = 8
Width: 2.7	Width: 6.1	8.8 ( 6.5 - 11.6 )	11.2 ( 7.9 - 15 )
Depth: 0.26	Height: 0.4	0.8 ( 0.72 - 0.92 )	1.7 ( 1 - 3 )

W:D ratio: 15.0  
 Stream Flow Type: MF  
 Average Unit Gradient: 1.1%  
 Water temperature (°C): 15.0 - 15.0

Entrenchment (ACW:FPW ratio): 1.5  
 Habitat Units/100m (total channel length): 6.5  
 Habitat Units/100m (primary channel length): 6.9

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	8%	Reach avg: 92%
Undercut Banks:	4%	Range: 64 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	283	13.3
Volume (m <sup>3</sup> ):	519	24.4
Key pieces (>=12m x 0.60m):	16	0.8

OREGON DEPT OF FISH AND WILDLIFE

LITTLE PARADISE CREEK POST-TX (4-UJP, 353)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/31/2007

REACH 1		T22S-R08W-S12NW					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/BEDROCK	1	5	0.5	0.02	3	0	0	0	10	10	0	80
DRY CHANNEL	1	20	2.3	0.00	46	0	5	19	67	10	0	0
DRY UNIT	2	19	1.8	0.00	41	0	3	8	63	26	0	0
GLIDE	2	36	2.8	0.15	99	0	3	10	70	10	0	8
POOL-BACKWATER	1	3	1.1	0.20	3	0	19	62	19	0	0	0
POOL-ISOLATED	1	2	1.0	0.15	2	1	10	20	30	40	0	0
POOL-LATERAL SCOUR	65	930	3.3	0.49	3,078	52	5	24	38	12	4	18
PUDDLED UNIT	1	36	0.9	0.02	32	0	40	50	10	0	0	0
RAPID/BEDROCK	3	42	2.3	0.05	97	0	0	0	4	3	0	93
RAPID/BOULDERS	5	60	2.4	0.08	171	36	1	10	51	21	12	6
RIFFLE	44	1,029	2.5	0.08	2,718	98	0	9	57	17	3	14
STEP/BEDROCK	2	7	1.4	0.04	11	0	0	0	0	0	0	100
STEP/COBBLE	18	65	2.2	0.06	140	6	0	5	79	14	0	2
<b>Total:</b>	<b>146</b>	<b>2,253</b>	<b>2.7</b>	<b>0.26</b>	<b>6,441</b>	<b>193</b>	<b>Avg: 3</b>	<b>16</b>	<b>48</b>	<b>14</b>	<b>3</b>	<b>17</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	2	4	1.1	0.18	4	0.07%	1	23.0	
Scour Pools	65	930	3.3	0.49	3,078	47.79%	52	1.7	
Glides	2	36	2.8	0.15	99	1.54%	0	0.0	
Riffles	44	1,029	2.5	0.08	2,718	42.20%	98	3.6	
Rapids	8	102	2.4	0.07	268	4.17%	36	13.4	
Cascades	1	5	0.5	0.02	3	0.04%	0	0.0	
Step/Falls	20	72	2.2	0.05	152	2.35%	6	4.0	
Dry	4	75	1.7	0.01	119	1.85%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	67	29.7	31.6
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	22	9.8	10.4
Pool frequency (channel widths/pool):	5.5		
Residual pool depth (avg):	0.42		

Survey Date 8/1/2007  
Report Date: 11/7/2007

**RIPARIAN ZONE  
VEGETATION SUMMARY**

REACH 1

**Summary of Riparian Zone (0-30m) 7 transects**

Total hardwoods/1000	923
Total conifers/1000 ft	131
Total conifers >20" dbh/1000 ft	17
Total conifers >35" dbh/1000 ft	17

**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	0.3	3.9	0.3	3.9	0.1	3.4	0.7	11.1
15-30cm	0.0	0.9	0.1	1.9	0.3	0.7	0.4	3.4
30-50cm	0.0	0.1	0.1	0.0	0.6	0.4	0.7	0.6
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.0
Total/100m2	0.4	4.9	0.7	5.7	1.0	4.6	0.7	5.0

**Canopy closure and ground cover**

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	65	76	85
Shrub cover	67	51	48
Grass/forb cover	30	43	47

**Predominant landform in each zone**

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	43	57	71
High terrace	50	43	29
Low terrace	7	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	23	33	39

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

7 transects

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

Total hardwoods/1000	923
Total conifers/1000 ft	131
Total conifers >20" dbh/1000 ft	17
Total conifers >35" dbh/1000 ft	17

**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	0.7	11.1
15-30cm	0.4	3.4
30-50cm	0.7	0.6
50-90cm	0.0	0.0
>90cm	0.3	0.0

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**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		
22	LT	1	HS	30	90	70	30	Conifer							
								Hardwood	3	1					
22	LT	2	HS	50	100	50	50	Conifer							
								Hardwood		1					
22	LT	3	HS	50	100	60	40	Conifer		1					
								Hardwood		1					
22	RT	1	HS	65	100	90	10	Conifer							
								Hardwood							
22	RT	2	HS	70	100	70	30	Conifer							
								Hardwood		4					
22	RT	3	HS	70	75	40	50	Conifer							
								Hardwood	2						
40	LT	1	HT	5	75	80	20	Conifer							
								Hardwood	3	2					
40	LT	2	HT	5	100	60	20	Conifer							
								Hardwood	4	2					
40	LT	3	HT	10	95	80	20	Conifer							
								Hardwood	4						
40	RT	1	HT	5	60	95	5	Conifer							
								Hardwood							
40	RT	2	HS	70	95	90	10	Conifer							
								Hardwood	1	2					
40	RT	3	HS	75	95	65	35	Conifer							
								Hardwood		1	2				
55	LT	1	HT	20	90	65	35	Conifer							
								Hardwood	3	1					
55	LT	2	HT	3	100	5	95	Conifer							
								Hardwood	9						
55	LT	3	HT	5	100	25	60	Conifer	0		1				
								Hardwood	2						
55	RT	1	HT	15	85	80	20	Conifer							
								Hardwood	5						
55	RT	2	HS	70	100	5	90	Conifer	1		1				
								Hardwood	2						
55	RT	3	HS	70	100	5	80	Conifer							
								Hardwood	1	1					



132 RT 3 HS 50 80 75 25 **Conifer**  
**Hardwood** 1



COMMENT SUMMARY

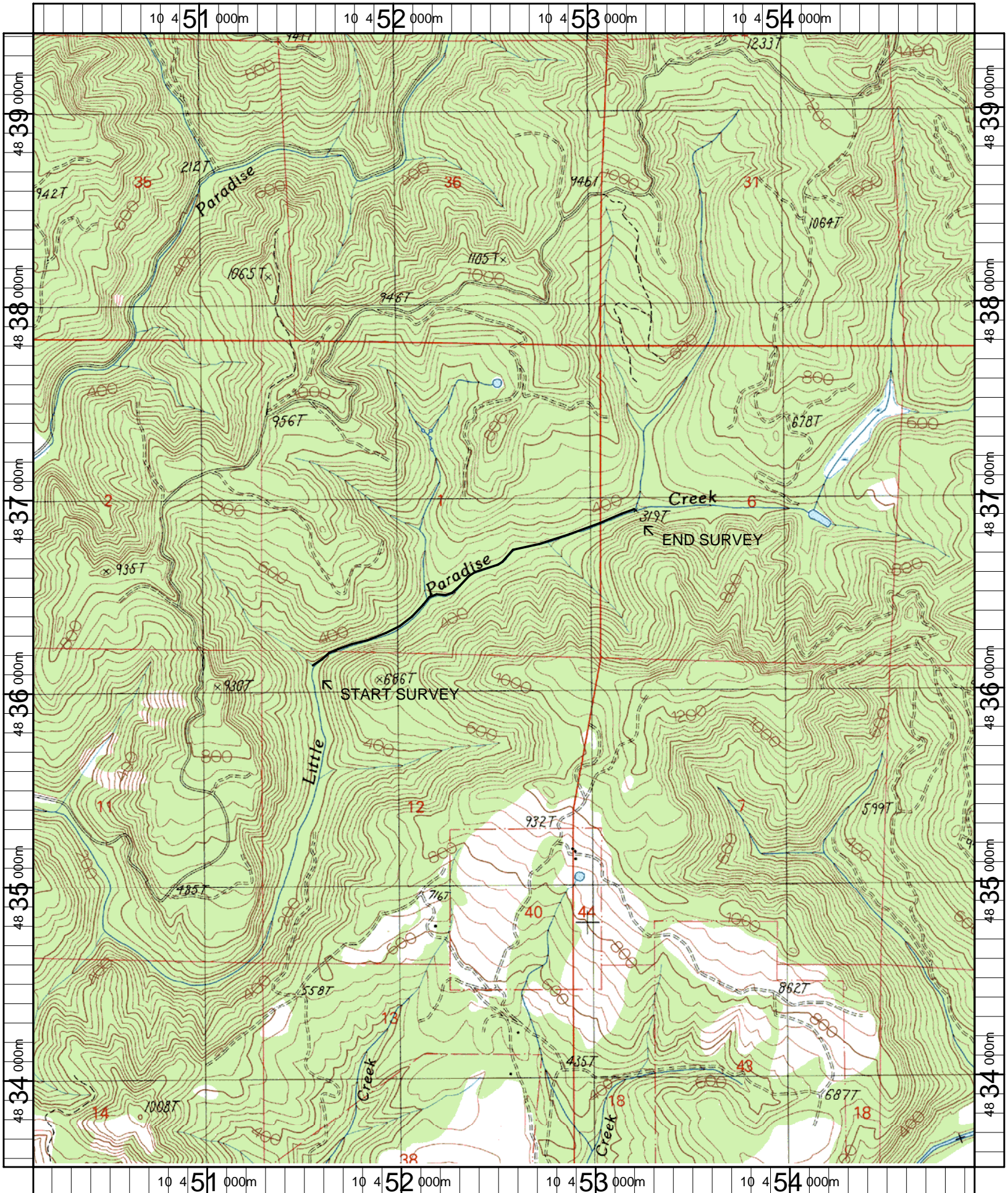
MONITORING AREA: 4-UMP      SITE ID: 353      STREAM: LITTLE PARADISE CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	01	9.6	TJ/	
33	LP	00	480.8		LARGE REDD IN TAILOUT
40	SC	00	529.7		METRICS AND RIPARIAN
44	SC	00	584	HS	LOGS
45	LP	00	596	HS	LOGS
46	RI	00	605.3	HS	LOGS
47	LP	00	618.7	HS	LOGS
48	RI	00	631.2	HS	LOGS
53	LP	01	715.2	TJ/	
54	RI	11	715.2		TRIB TEMPERATURE 15 C
55	RI	00	765.2	HS	LOGS
58	RI	00	869.7	HS	LOGS
62	LP	00	992.9	HS	PLACED LOGS
64	LP	00	1064.6		OLD REDD
77	LP	01	1261.9	/TJ	
78	SR	11	1261.9		ACW = 1.9
84	DU	11	1290.2		ACW=1.2
90	SC	00	1332.4	HS	PLACED LOGS
91	LP	00	1354.4	HS	PLACED LOGS
93	LP	00	1399.9	/SS	
102	LP	00	1494.9	HS	PLACED LOGS
103	SC	00	1496.9	HS	

COMMENT SUMMARY

MONITORING AREA: 4-UMP      SITE ID: 353      STREAM: LITTLE PARADISE CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
104	LP	00	1515.9	HS, /SS	PLACED LOGS
105	RI	01	1542.9	/TJ	
106	CR	11	1542.9		ACW = 1.8
107	LP	00	1551.6		METRICS AND RIPARIAN
118	LP	00	1722.9	DJ	
120	LP	00	1755.6	SS/	
122	GL	00	1773.6	HS	PLACED LOGS
123	LP	00	1783.6	HS	PLACED LOGS
124	RI	00	1805.6	HS	PLACED LOGS
132	LP	00	1885.1		METRICS AND RIPARIAN
137	LP	00	1982.1	/SS, HS	PLACED LOGS
138	SR	00	1986.4	HS	
146	RI	00	2122.8		END



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

Location: 10 0452548 E 4836469 N  
 Caption: LITTLE PARADISE CREEK RESTORATION SITE - UMPQUA BASIN