

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: LITTLE PARADISE CREEK
 GCG: 4-UJP
 SITE ID: 353
 BASIN: UMPQUA
 TREATMENT DATE: 2006
 SURVEY DATE: 7/22/2008
 SURVEY CREW: Roslyn Overstake / Kellie Scofield
 USGS MAPS: ELKTON
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained by hillslopes
 Dominant landuse(s): Second growth timber (15-30 cm dbh)
 Dominant riparian vegetation: Deciduous trees: size class 15-30cm dbh
 Primary channel length (meters) and area (m²): 2,203 : 6,521
 Secondary channel length (meters) and area (m²) 26 : 33
 VWI average: 3.9 VWI Range: 1 - 10 Average Gradient: 1.3%
 Pieces LWD per 100m: 11.8 Wood Volume (m³) per 100m: 16.1
 Percent pools: 55% Complex pools (LWD pieces>=3): 20 Pools >=1m deep: 2
 Percent substrate (avg):

	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	1	14	49	18	1	17
Pool units	2	18	52	13	0	16
Fast water units	0	10	47	22	1	20

COMMENTS:

This is a post-treatment, restoration survey. The crew noted habitat structures and fish throughout the survey. Evidence of amphibians included numerous rough-skinned newts.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**LITTLE PARADISE CREEK
GCG: 4-UMP SITE ID: 353**

Survey Date: 7/22/2008

Report Date: 12/29/2008

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	0%
Moderate V-shape	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	3.9	VWI Range:	1 - 10

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	2,203	6,521	0
Secondary	26	33	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 10	<u>First Terrace</u> n = 4
Width: 2.9	Width: 4.9	7.0 (4.4 - 11.3)	9.2 (6 - 12)
Depth: 0.27	Height: 0.4	0.9 (0.6 - 1.4)	1.3 (1 - 1.8)

W:D ratio: 11.7

Stream Flow Type: MF

Average Unit Gradient: 1.3%

Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.4

Habitat Units/100m (total channel length): 7.6

Habitat Units/100m (primary channel length): 7.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D15	C30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 90%
Undercut Banks:	7%	Range: 72 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	260	11.8
Volume (m ³):	354	16.1
Key pieces (>=12m x 0.60m):	7	0.3

OREGON DEPARTMENT OF FISH AND WILDLIFE

LITTLE PARADISE CREEK

HABITAT INVENTORY

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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
POOL-BACKWATER	1	4	4.0	0.60	14	0	10	60	20	10	0	0
POOL-LATERAL SCOUR	80	1,031	3.3	0.46	3,407	34	2	18	52	13	0	15
POOL-PLUNGE	1	30	6.0	1.00	182	0	5	25	25	0	0	45
RAPID/BEDROCK	3	20	3.9	0.04	79	0	0	0	0	0	0	100
RIFFLE	68	1,116	2.4	0.09	2,795	65	0	10	49	23	1	17
STEP/BEDROCK	2	2	2.7	0.02	5	0	0	0	3	3	3	92
STEP/COBBLE	14	26	3.0	0.04	72	5	0	10	59	30	1	0
Total:	169	2,228	2.9	0.27	6,554	104	Avg: 1	14	49	18	1	17

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	4	4.0	0.60	14	0.22%	0	0.0
Scour Pools	81	1,061	3.3	0.47	3,589	54.77%	34	0.9
Glides	0	0			0	0.00%	0	0.0
Riffles	68	1,116	2.4	0.09	2,795	42.64%	65	2.3
Rapids	3	20	3.9	0.04	79	1.20%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	16	28	2.9	0.04	77	1.17%	5	6.5
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	82	36.8	37.2
Pools >=1m deep:	2	0.9	0.9
Complex pools (LWD pieces>=3):	20	9.0	9.1
Pool frequency (channel widths/pool):	5.5		
Residual pool depth (avg):	0.40		

OREGON DEPARTMENT OF FISH AND WILDLIFE
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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 8 transects

Total hardwoods/1000	671
Total conifers/1000 ft	472
Total conifers >20" dbh/1000 ft	30
Total conifers >35" dbh/1000 ft	15

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	3.5	0.8	1.6	1.4	0.9	2.5	6.0
15-30cm	0.4	0.9	0.9	1.0	1.8	1.0	3.0	2.9
30-50cm	0.4	0.9	0.6	0.8	0.8	0.4	1.8	2.0
50-90cm	0.0	0.0	0.1	0.1	0.1	0.0	0.3	0.1
>90cm	0.0	0.0	0.1	0.0	0.1	0.0	0.3	0.0
Total/100m2	1.1	5.3	2.5	3.5	4.1	2.3	2.6	3.7

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	76	77	76
Shrub cover	56	41	30
Grass/forb cover	38	52	63

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	81	81	81
High terrace	19	19	19
Low terrace	0	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 (%)	28	27	28

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

8 transects

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

Total hardwoods/1000	671
Total conifers/1000 ft	472
Total conifers >20" dbh/1000 ft	30
Total conifers >35" dbh/1000 ft	15

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	2.5	6.0
15-30cm	3.0	2.9
30-50cm	1.8	2.0
50-90cm	0.3	0.1
>90cm	0.3	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			
18	LT	1	HS	45	85	60	40	Conifer							
								Hardwood		1	1				
18	LT	2	HS	45	90	55	45	Conifer	1	1					
								Hardwood							
18	LT	3	HS	45	95	30	55	Conifer		1	1				
								Hardwood			1				
18	RT	1	HS	40	60	10	20	Conifer							LARGE TREE SLID DOWN RT BANK
								Hardwood		1					
18	RT	2	HS	40	50	5	20	Conifer							
								Hardwood							
18	RT	3	HS	40	80	40	55	Conifer	1		1				
								Hardwood	1						
38	LT	1	HT	0	40	80	20	Conifer							
								Hardwood	2						
38	LT	2	HT	0	55	80	20	Conifer							
								Hardwood	1						
38	LT	3	HT	0	30	80	20	Conifer							
								Hardwood							
38	RT	1	HS	60	90	60	40	Conifer							
								Hardwood	2		1				
38	RT	2	HS	60	95	15	85	Conifer				1			
								Hardwood				1			
38	RT	3	HS	60	90	10	80	Conifer				1			
								Hardwood		1					
61	LT	1	HT	0	95	40	45	Conifer							
								Hardwood	10	3					
61	LT	2	HT	0	75	40	45	Conifer							
								Hardwood	3	1	1				
61	LT	3	HT	0	75	20	60	Conifer	2	1					
								Hardwood		1	1				
61	RT	1	HS	20	90	70	30	Conifer							
								Hardwood	3	1					
61	RT	2	HS	20	95	35	65	Conifer	1						
								Hardwood	1		1	1			
61	RT	3	HS	45	85	20	80	Conifer	1	2					
								Hardwood							

74	LT	1	HT	0	55	90	10	Conifer				
								Hardwood	1		1	
74	LT	2	HT	0	80	80	20	Conifer	3			
								Hardwood	1	1	1	
74	LT	3	HT	0	90	25	45	Conifer	1	2		
								Hardwood				
74	RT	1	HS	25	75	75	25	Conifer	2	1		
								Hardwood	2			
74	RT	2	HS	30	70	45	45	Conifer	1	2	1	
								Hardwood	1			
74	RT	3	HS	30	75	20	70	Conifer		1	1	
								Hardwood			1	
87	LT	1	HS	30	80	45	45	Conifer				
								Hardwood		1		
87	LT	2	HS	30	80	15	75	Conifer		2		
								Hardwood		1		
87	LT	3	HS	25	90	10	75	Conifer				
								Hardwood	1	3		
87	RT	1	HS	25	80	10	85	Conifer	1	2		
								Hardwood				
87	RT	2	HS	25	85	10	85	Conifer		1		1
								Hardwood		1		
87	RT	3	HS	25	85	10	85	Conifer	1	1		1
								Hardwood				
110	LT	1	HS	20	90	80	20	Conifer			1	
								Hardwood	2			
110	LT	2	HS	30	85	45	55	Conifer				
								Hardwood	3		1	
110	LT	3	HS	30	85	30	70	Conifer	1	1		
								Hardwood	1	1		
110	RT	1	HS	60	85	20	80	Conifer				
								Hardwood	2		1	
110	RT	2	HS	40	85	20	80	Conifer			2	
								Hardwood	2	1		
110	RT	3	HS	30	75	30	70	Conifer		1	1	
								Hardwood	2			
133	LT	1	HS	45	90	60	40	Conifer				
								Hardwood	2			
133	LT	2	HS	30	80	45	55	Conifer		1	1	
								Hardwood		1		
133	LT	3	HS	35	70	35	65	Conifer		1		1
								Hardwood	1			
133	RT	1	HS	40	85	30	70	Conifer				
								Hardwood			1	
133	RT	2	HS	35	70	25	75	Conifer				1
								Hardwood	1			

133	RT	3	HS	30	65	15	85	Conifer	2		1
								Hardwood		1	
158	LT	1	HS	20	60	80	20	Conifer			1
								Hardwood	2		
158	LT	2	HS	20	70	70	30	Conifer			
								Hardwood		1	1
158	LT	3	HS	30	70	60	40	Conifer		2	
								Hardwood	1	1	
158	RT	1	HS	15	55	85	15	Conifer			1
								Hardwood			2
158	RT	2	HS	25	60	70	30	Conifer			
								Hardwood		1	
158	RT	3	HS	25	60	45	55	Conifer	2		1
								Hardwood			

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	18.8		PICTURE 30 AT10:00
3	RI	00	31.2	DJ	
7	SR	00	86.6		H=0.25M
10	RI	00	168.6		FISH OBSERVED
13	LP	00	214.6	DJ	FISH OBSERVED
14	RI	00	228.8	DJ	
19	SR	00	275.9		H=0.30M
23	LP	01	325.2	DJ	
29	LP	00	372.3		FISH-BIG!
33	LP	00	456.8	AM	ROUGH-SKINNED NEWT, FISH
37	LP	00	486.4		FISH OBSERVED
43	LP	01	558.7	AM	ROUGH-SKINNED NEWT
50	LP	00	633.2	HS	
51	SC	00	635	HS	
52	LP	00	642.8	HS	
53	SC	00	643.6	HS	H=0.15M
54	LP	00	660.6	HS	HAB STRUCTURE CREATING SOME POOLING
62	LP	01	768.7	TJ/	FISH OBSERVED
63	RI	11	768.7		T=12C
64	RI	00	816.2	HS	CREATING POOLING, NO SIGNIFICANT CHANGE, BLOCKING SEDIMENT
65	LP	00	824.2	AM	ROUGH-SKINNED NEWT
66	RI	00	842.2	AM	ROUGH-SKINNED NEWT

COMMENT SUMMARY

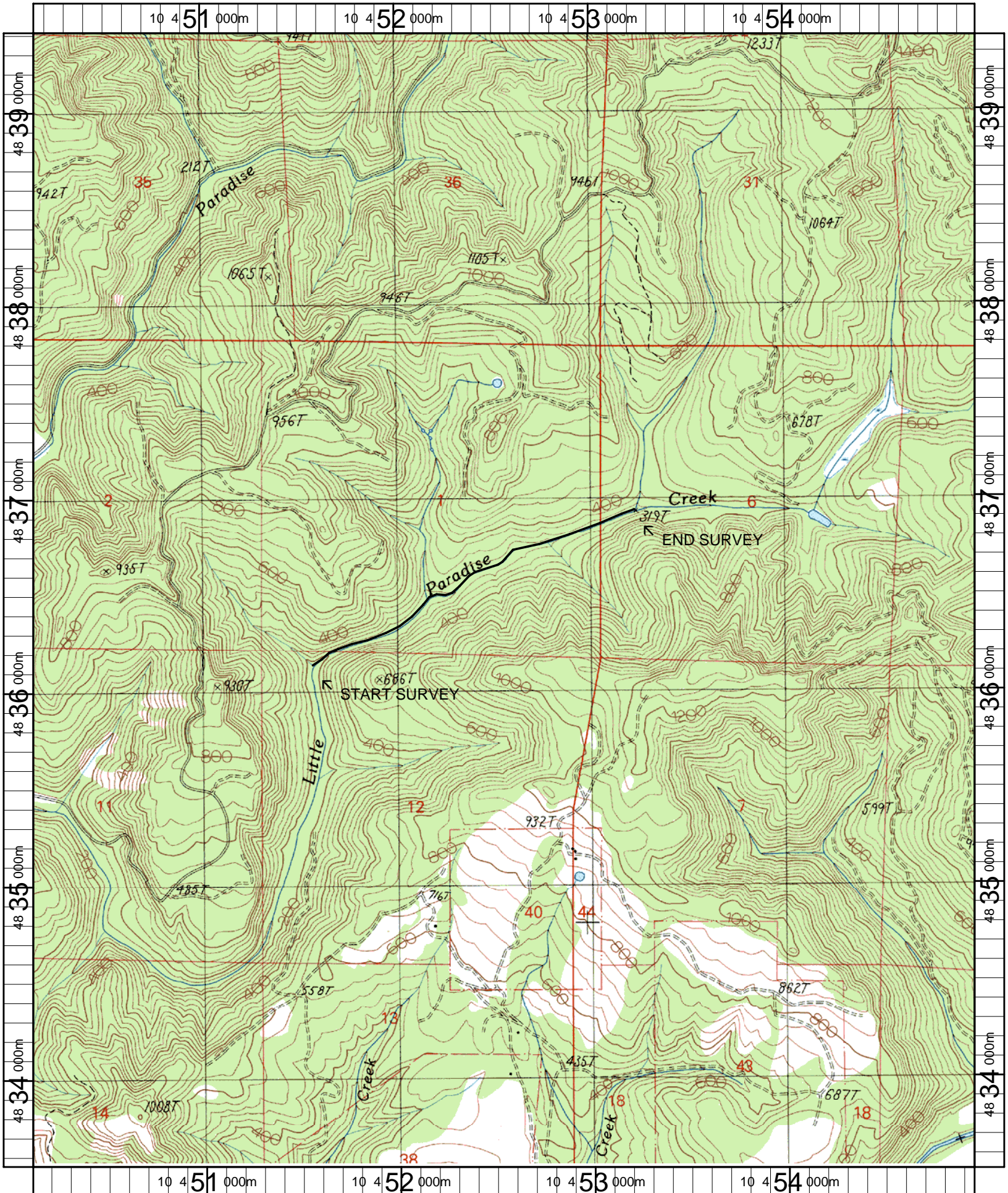
MONITORING AREA: 4-UMP SITE ID: 353 STREAM: LITTLE PARADISE CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
67	LP	00	865.2		FISH OBSERVED
70	RI	00	928.6	HS	FISH, BLOCKING SOME SEDIMENT AND DEBRIS
74	RI	00	1034.4	DJ	FISH OBSERVED
75	LP	00	1042.8	HS	CREATING SOME POOLING, TRAPPING OTHER DEBRIS
79	LP	00	1127.1		FISH OBSERVED
83	LP	00	1183.3	DJ	FISH OBSERVED
85	LP	00	1246.7		FISH OBSERVED
94	SC	00	1327.1		H=0.10M
95	LP	00	1350.9		FISH OBSERVED
101	LP	00	1402.2	AM	ROUGH-SKINNED NEWT, FISH
104	RI	00	1418.2	HS	CREATING SOME POOLING
105	LP	00	1426.4	HS	
106	RI	00	1430.9	HS	
107	LP	00	1442.4	HS	FISH OBSERVED
108	RI	00	1471.9	HS	NOT CHANGING CHANNEL FLOW
109	LP	00	1497.8		FISH OBSERVED
113	LP	00	1532.3	DJ	
117	LP	00	1552.7	AM	ROUGH-SKINNED NEWT
119	LP	00	1580.7	HS	NOT CHANGING FLOW FISH
120	RI	00	1583.7	HS	CREATING SOME POOLING
121	LP	00	1589.5	HS	
122	RI	00	1592.5	HS	

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
123	LP	00	1600.6	HS, DJ	DJ CREATED BY HS
124	RI	01	1630.6	DJ, /TJ	
125	RI	11	1630.6		T=11C
126	LP	00	1637.1	DJ	FISH OBSERVED
128	LP	00	1660.4		FISH OBSERVED
140	LP	00	1809.8	DJ	
141	RI	00	1817.1	DJ	
144	LP	00	1845.7	AM	ROUGH-SKINNED NEWT
146	LP	00	1871.2	DJ	CATCHNG SOME DEBRIS
147	SC	00	1872.7	DJ, HS	
148	LP	00	1877.7	DJ	
154	LP	00	1958.2	AM, DJ	ROUGH-SKINNED NEWT
158	LP	00	2026.9		FISH OBSERVED
160	LP	00	2080.2	HS	CREATING LOTS OF POOLING
161	RI	00	2112.7	HS, DJ	
169	LP	00	2202.5	HS	



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

UMP-353 Little Paradise Creek (Post-Treatment) 2008 Summer Habitat Survey Photographs



Reach photo