

**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: Pre-Tx  
DATE: June 29, 2006  
SURVEY CREW: Jennifer Jacobs, Andy Livesay  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 50.4 km<sup>2</sup>  
USGS MAPS: Elkton  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Paradise Creek habitat survey extended 1,532 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 15.4 (range: 8.5-20.0). Land use for the reach was agriculture. The average unit gradient was 0.9 percent. Scour pools (50%) and riffles (37%) dominated stream habitat. Bedrock (41%) dominated stream substrate. Wood volume was low at 17.7 m<sup>3</sup>/100m.

**COMMENTS:**

There was one potential barrier to upstream fish migration in the surveyed length. This was a high gradient cascade over bedrock at unit 43 (854 m).

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	15.4	VWI Range:	8.5 - 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	1,532	9,184	0
Secondary Channel	159	463	6
Off-Channel Units	73	102	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 7
Width: 5.1	Width: 9.7	12.9 ( 8.6 - 20.9 )	16.5 ( 10.1 - 26.9 )
Depth: 0.33	Height: 0.6	1.2 ( 1.04 - 1.34 )	1.8 ( 1.55 - 2.3 )

W:D ratio: 16.0  
 Stream Flow Type: MF  
 Average Unit Gradient: 0.9%  
 Water temperature (°C): 16.0 - 16.0

Entrenchment (ACW:FPW ratio): 1.3  
 Habitat Units/100m (total channel length): 5.0  
 Habitat Units/100m (primary channel length): 5.7

**Riparian, Bank, and Wood Summary**

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 62%
Undercut Banks:	3%	Range: 31 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	363	23.7
Volume (m <sup>3</sup> ):	271	17.7
Key pieces (>=12m x 0.60m):	6	0.4

OREGON DEPT OF FISH AND WILDLIFE

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

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

6/29/2006

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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	35	2.5	0.12	88	2	0	5	0	0	0	95
CASCADE/BOULDERS	1	10	1.0	0.02	10	0	0	0	30	70	0	0
DRY UNIT	5	133	3.3	0.00	389	0	6	64	19	11	0	0
GLIDE	1	21	3.2	0.10	67	0	0	100	0	0	0	0
POOL-BACKWATER	5	27	2.3	0.47	57	11	12	54	17	8	8	0
POOL-BEAVER DAM	1	58	8.5	0.93	493	0	36	14	18	0	0	32
POOL-ISOLATED	1	10	2.0	0.20	20	0	19	19	0	0	0	62
POOL-LATERAL SCOUR	32	719	6.2	0.64	4,620	111	8	22	13	8	3	46
POOL-PLUNGE	2	41	6.3	0.88	253	5	3	10	5	3	3	78
PUDDLED UNIT	1	6	0.8	0.15	5	0	42	42	0	0	0	16
RAPID/BOULDERS	1	10	0.6	0.02	6	0	5	15	80	0	0	0
RIFFLE	25	659	5.2	0.11	3,584	99	2	12	28	10	1	47
STEP/BEAVER DAM	1	1	8.7	0.03	4	0	10	10	30	0	0	50
STEP/BEDROCK	6	21	4.6	0.07	108	0	0	2	2	3	0	92
STEP/COBBLE	3	12	2.7	0.06	32	0	2	3	55	29	0	11
STEP/LOG	2	2	6.8	0.05	13	0	0	7	45	5	38	5
<b>Total:</b>	<b>88</b>	<b>1,764</b>	<b>5.1</b>	<b>0.33</b>	<b>9,749</b>	<b>228</b>	<b>Avg: 6</b>	<b>21</b>	<b>20</b>	<b>9</b>	<b>3</b>	<b>41</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	7	95	3.1	0.50	570	5.85%	11	1.9
Scour Pools	34	760	6.2	0.65	4,872	49.98%	116	2.4
Glides	1	21	3.2	0.10	67	0.69%	0	0.0
Riffles	25	659	5.2	0.11	3,584	36.76%	99	2.8
Rapids	1	10	0.6	0.02	6	0.06%	0	0.0
Cascades	2	45	1.8	0.07	98	1.00%	2	2.1
Step/Falls	12	35	4.8	0.06	158	1.62%	0	0.0
Dry	6	139	2.9	0.03	394	4.04%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

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REACH 1

**POOL SUMMARY**

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	41	23.2	26.8
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	13	7.4	8.5
Pool frequency (channel widths/pool):	4.4		
Residual pool depth (avg):	0.57		

Survey Date 6/29/2006  
Report Date: 3/5/2007

**RIPARIAN ZONE  
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	219
Total conifers/1000 ft	49
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	0.2	1.4	0.2	0.0	0.0	0.0	0.4	1.4
15-30cm	0.0	1.4	0.2	0.2	0.2	0.0	0.4	1.6
30-50cm	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6
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	0.2	3.4	0.4	0.2	0.2	0.0	0.3	1.2

**Canopy closure and ground cover**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	43		8		7	
Shrub cover	54		5		3	
Grass/forb cover	41		88		91	

**Predominant landform in each zone**

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		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	10		0		0	
Riprap	0		0		0	
Surface slope (%)	0		5		5	

**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	219
Total conifers/1000 ft	49
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	1.4
15-30cm	0.4	1.6
30-50cm	0.0	0.6
50-90cm	0.0	0.0
>90cm	0.0	0.0



60	LF	1	HT	0	10	50	50	Conifer					
								Hardwood					
60	LF	2	HT	0	0	0	50	Conifer					
								Hardwood					
60	LF	3	HT	0	0	0	50	Conifer					
								Hardwood					
60	RT	2	HS	45	80	50	30	Conifer	1	1			
								Hardwood		1			
60	RT	1	RB	0	40	40	60	Conifer					HS/RB
								Hardwood		1			
60	RT	3	HS	45	70	30	60	Conifer		1			
								Hardwood					
71	LF	1	HT	0	70	40	50	Conifer					
								Hardwood	1	1			
71	LF	2	HT	0	0	0	100	Conifer					
								Hardwood					
71	LF	3	HT	0	0	0	100	Conifer					
								Hardwood					
71	RT	1	FP	0	80	50	10	Conifer					FP/HT
								Hardwood	1	3	2		
71	RT	2	HT	0	0	0	100	Conifer					PASTURE
								Hardwood					
71	RT	3	HT	0	0	0	100	Conifer					PASTURE
								Hardwood					



# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP**    SITE ID: **351**    **PARADISE CREEK SITE 1 PRE-TX**

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	LP	00	11.5	BC		
3	LP	00	27		T=16.0C	
4	RI	00	49		CT-CT	
5	LP	00	68.5	HS		PLACED LOG + BLDRS
10	LP	00	188.5	HS		PLACED BLDRS CABLED
11	RI	00	217.5	HS		PLACED LOGS + BLDRS
12	LP	00	234.5	HS		PLACED BLDRS
13	RI	00	258.5	HS, /SS	UTM 0449709-4835647	PLACED LOGS + BLDRS
14	SD	00	259	BD, PN	H=0.30M	SMALL BEAVER DAM
15	BP	00	317	BV	CT-CT	
16	RI	00	343			WOOD PILE STREAM LEF
19	LP	00	381.5	HS		
23	LP	00	440.5		RSN	
24	RI	00	461	HS, WL		PLACED WOOD + BLDRS,
25	LP	00	522	HS	UTM 0449519-4835838	PLACED WOOD + BLDRS
26	RI	00	571.5	HS		PLACED WOOD + BLDRS
27	LP	00	591.5	HS		PLACED WOOD + BLDRS
28	RI	00	626.5	HS	CT-CT	PLACED WOOD + BLDRS
29	LP	00	649.5	HS		PLACED WOOD + BLDRS
30	SL	00	651	HS		PLACED WOOD + BLDRS
31	LP	00	693	HS		

# Comment Summary

## Restoration Monitoring Sites 2006

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<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
32	RI	00	706			NATURAL BLDRS
33	LP	00	716			NATURAL BLDRS
39	SR	00	780.5		UTM 0449453-4836101	
41	SR	00	790.5		CT-CT	
42	PP	00	818.5	HS		
43	CR	01	853.5	PN, HS		
44	IP	10	853.5	SS/, WL	LOTS OF TADPOLES	MANY DIFFERENT TADPO
45	RI	01	901.5	SS/,TJ/,HS		CABLED RC + BLDRS
46	RB	11	901.5		T=14.5C	
47	LP	00	923.5	HS		
48	RI	01	952.5	HS		
50	LP	01	994.5	HS, BV		
52	SL	01	1005		H=0.15M	
53	RI	01	1045	DJ		
56	LP	02	1056			VERY MURKY WATER
58	LP	02	1056	WL		RED-LEGGED FROG, /TRA
60	GL	01	1077	WL, HS	UTM 0449622-4836311	CA-CT TRACKS
61	BW	10	1077	HS		
63	RI	01	1129	/TJ, HS		PLACED LOGS + BLDRS
64	BW	10	1129	HS		PLACED LOGS + BLDRS
65	RI	11	1129		T=14.5C	

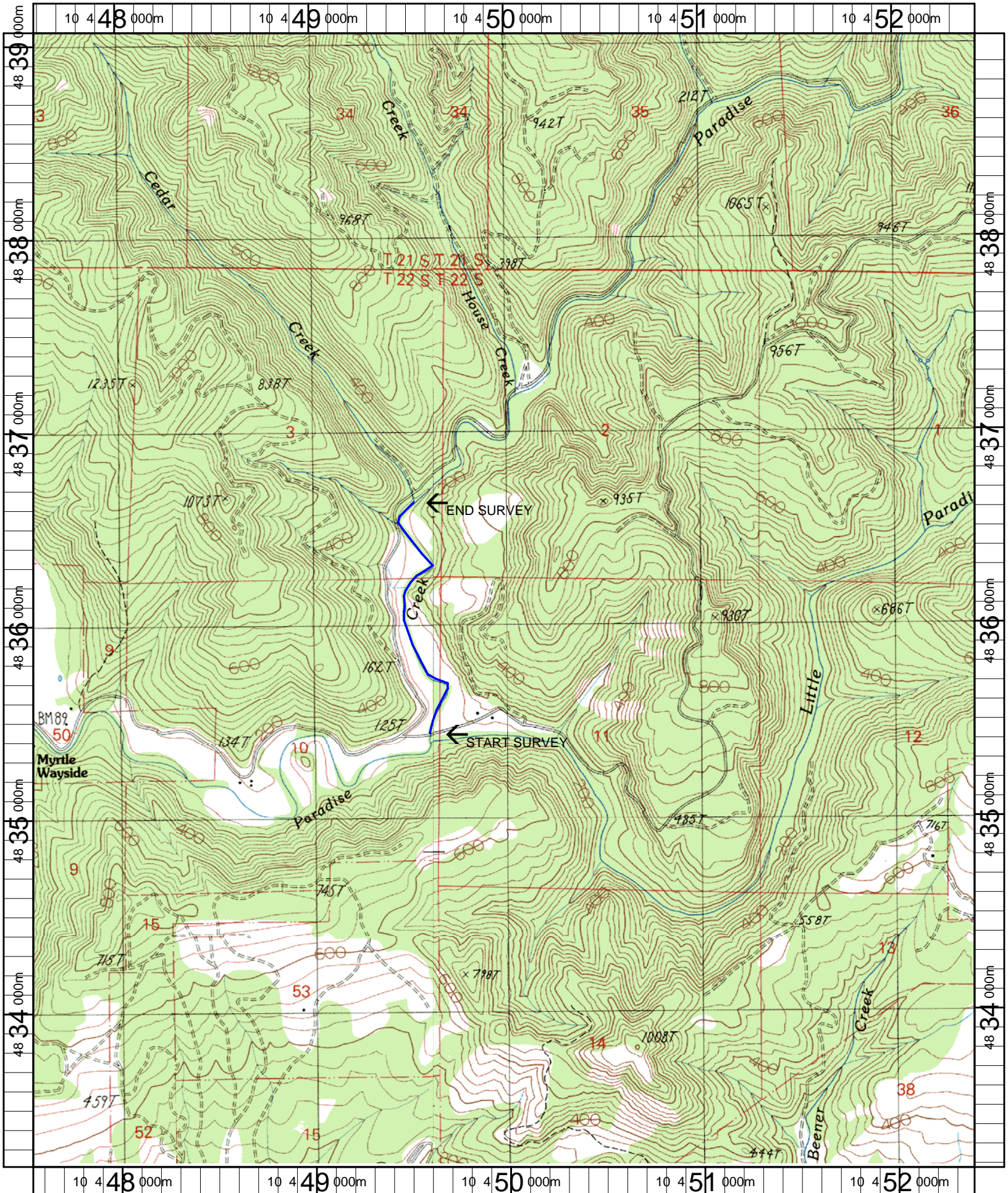
# Comment Summary

## Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
66	LP	00	1169	HS, DJ		VERY LARGE JAM
67	RI	00	1223	HS		
68	RI	01	1235	HS		
69	BW	10	1235	HS		
70	LP	00	1259	HS		
71	RI	00	1277	HS	UTM 0449492-4836486 CT-CT	
72	LP	01	1295	HS		
73	SC	01	1300.6	DJ, HS		
74	LP	01	1310.6	HS		
76	LP	01	1341.1	TJ/		
79	LP	00	1352.1	HS		
86	LP	00	1493.6			LOTS OF COHO FRY
87	RI	01	1532.1	TJ/	UTM 0449552-4836622-2D	
88	RI	11	1532.1		END SIGN TRIB LT (CEDAR	





Name: ELKTON  
 Date: 5/30/2006  
 Scale: 1 inch equals 2000 feet

Location: 10 449984 E 4836124 N  
 Caption: PARADISE CREEK SITE 1 RESTORATION SITE - UMPQUA BASIN