

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: July 6, 2006
SURVEY CREW: Jennifer Jacobs, Andy Livesay
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 50.4 km²
USGS MAPS: Elkton
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Paradise Creek habitat survey extended 1,466 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 10.9 (range: 4.0-18.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 0.8 percent. Scour pools (60%) and riffles (30%) dominated stream habitat. Bedrock (36%) and gravel (22%) dominated stream substrate. Wood volume was low at 18.5 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-S02SW

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	10.9	VWI Range:	4 - 18

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	1,466	9,303	0
Secondary Channel	57	220	4
Off-Channel Units	27	36	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 7
Width: 5.7	Width: 11.1	13.6 (9.1 - 17.3)	17.4 (11.4 - 27.5)
Depth: 0.30	Height: 0.6	1.2 (0.8 - 1.3)	1.6 (1.4 - 1.8)

W:D ratio: 20.1

Stream Flow Type: MF

Average Unit Gradient: 0.8%

Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 5.5

Habitat Units/100m (primary channel length): 5.9

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	3%	Reach avg: 86%
Undercut Banks:	7%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	325	22.2
Volume (m ³):	271	18.5
Key pieces (>=12m x 0.60m):	9	0.6

OREGON DEPT OF FISH AND WILDLIFE

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

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/6/2006

REACH 1		T22S-R08W-S02SW					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	3	9	0.4	0.01	4	4	3	15	25	26	30	0
DRY UNIT	3	47	4.3	0.00	205	0	25	42	32	2	0	0
GLIDE	1	15	7.0	0.10	105	4	5	10	48	10	10	19
POOL-ISOLATED	1	5	1.0	0.10	5	0	50	40	10	0	0	0
POOL-LATERAL SCOUR	39	838	6.7	0.57	5,689	175	2	17	22	14	9	35
PUDDLED UNIT	1	10	1.5	0.10	15	0	21	29	50	0	0	0
RAPID/BEDROCK	1	13	5.0	0.06	66	0	0	0	5	0	0	95
RAPID/BOULDERS	1	30	7.0	0.06	207	20	0	9	23	23	27	18
RIFFLE	21	514	5.3	0.06	2,895	122	1	8	19	14	11	46
STEP/BEDROCK	7	25	5.5	0.03	136	9	0	4	6	6	5	79
STEP/COBBLE	8	45	5.4	0.17	235	37	0	10	30	32	17	12
Total:	86	1,550	5.7	0.30	9,559	371	Avg: 3	14	22	15	10	36

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	1.0	0.10	5	0.05%	0	0.0	
Scour Pools	39	838	6.7	0.57	5,689	59.51%	175	3.1	
Glides	1	15	7.0	0.10	105	1.10%	4	3.8	
Riffles	21	514	5.3	0.06	2,895	30.28%	122	4.2	
Rapids	2	43	6.0	0.06	272	2.85%	20	7.4	
Cascades	3	9	0.4	0.01	4	0.04%	4	111.1	
Step/Falls	15	70	5.5	0.10	370	3.87%	46	12.4	
Dry	4	57	3.6	0.03	220	2.30%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	40	25.8	27.3
Pools >=1m deep:	1	0.6	0.7
Complex pools (LWD pieces>=3):	16	10.3	10.9
Pool frequency (channel widths/pool):	3.5		
Residual pool depth (avg):	0.45		

Survey Date 7/6/2006
Report Date: 3/5/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	390
Total conifers/1000 ft	402
Total conifers >20" dbh/1000 ft	24
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	2.4	0.8	1.6	2.0	0.6	2.8	4.6
15-30cm	0.0	0.4	1.0	0.2	1.2	0.4	2.2	1.0
30-50cm	0.8	0.6	0.0	0.0	0.4	0.2	1.2	0.8
50-90cm	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.2	3.4	1.8	1.8	3.6	1.2	2.2	2.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	50		44		39	
Shrub cover	56		59		51	
Grass/forb cover	30		25		36	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	20		40		50	
High terrace	60		50		50	
Low terrace	0		0		0	
Floodplain	10		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	10		10		0	
Riprap	0		0		0	
Surface slope (%)	6		18		30	

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	390
Total conifers/1000 ft	402
Total conifers >20" dbh/1000 ft	24
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	2.8	4.6
15-30cm	2.2	1.0
30-50cm	1.2	0.8
50-90cm	0.4	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		
13	RT	1	HS	30	50	30	50	Conifer				1			
								Hardwood	1			1			
13	LF	1	HT	0	80	40	50	Conifer				1	2		NO AMPHIBIANS SEEN, FP/HT
								Hardwood	1						
13	LF	3	HT	0	75	35	60	Conifer	1			1			
								Hardwood	2	2					
13	RT	2	HS	45	0	75	25	Conifer	2						SECOND GROWTH SMALL TREES
								Hardwood							
13	RT	3	HS	45	0	25	60	Conifer	2						
								Hardwood							
13	LF	2	HT	0	85	25	70	Conifer							
								Hardwood	5						
27	RT	3	HT	0	5	20	40	Conifer	3						SECOND GROWTH TREES HT/RB
								Hardwood							
27	LF	1	RB	0	0	5	25	Conifer							
								Hardwood				2			
27	LF	2	HS	50	90	85	5	Conifer				1			
								Hardwood	1						
27	LF	3	HS	50	50	60	30	Conifer	1	2					
								Hardwood							
27	RT	1	HT	0	60	20	70	Conifer				2			
								Hardwood	1						
27	RT	2	HT	0	50	30	50	Conifer	2	2					
								Hardwood							
50	RT	1	HS	25	75	80	10	Conifer							
								Hardwood	3						
50	LF	1	FP	5	30	75	10	Conifer							FP/HT
								Hardwood	3						
50	RT	2	HS	30	20	70	25	Conifer							
								Hardwood	2						
50	RT	3	HS	35	45	70	25	Conifer				1			
								Hardwood				1			
50	LF	3	HT	0	70	25	35	Conifer				2			HT/RB
								Hardwood							
50	LF	2	HT	0	50	75	10	Conifer							
								Hardwood							

60	RT	3	HT	0	40	70	30	Conifer	1		
								Hardwood			
60	LF	1	HT	0	70	90	10	Conifer			
								Hardwood		1	
60	LF	2	RB	0	30	20	10	Conifer			
								Hardwood			
60	LF	3	HS	120	20	70	25	Conifer	2	1	
								Hardwood			
60	RT	1	HT	0	80	60	40	Conifer			
								Hardwood	1	1	
60	RT	2	HT	0	20	85	10	Conifer		2	
								Hardwood			
78	RT	2	HS	50	0	45	30	Conifer			NO TREES
								Hardwood			
78	RT	1	HT	0	30	70	20	Conifer			HT/HS, NO TREES
								Hardwood			
78	LF	3	HT	0	70	65	20	Conifer		1	
								Hardwood			
78	LF	1	HT	0	20	90	10	Conifer			
								Hardwood	2		
78	RT	3	HS	50	10	65	30	Conifer			
								Hardwood	1		
78	LF	2	HT	0	95	80	10	Conifer			
								Hardwood		1	

Comment Summary

Restoration Monitoring Sites 2006

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

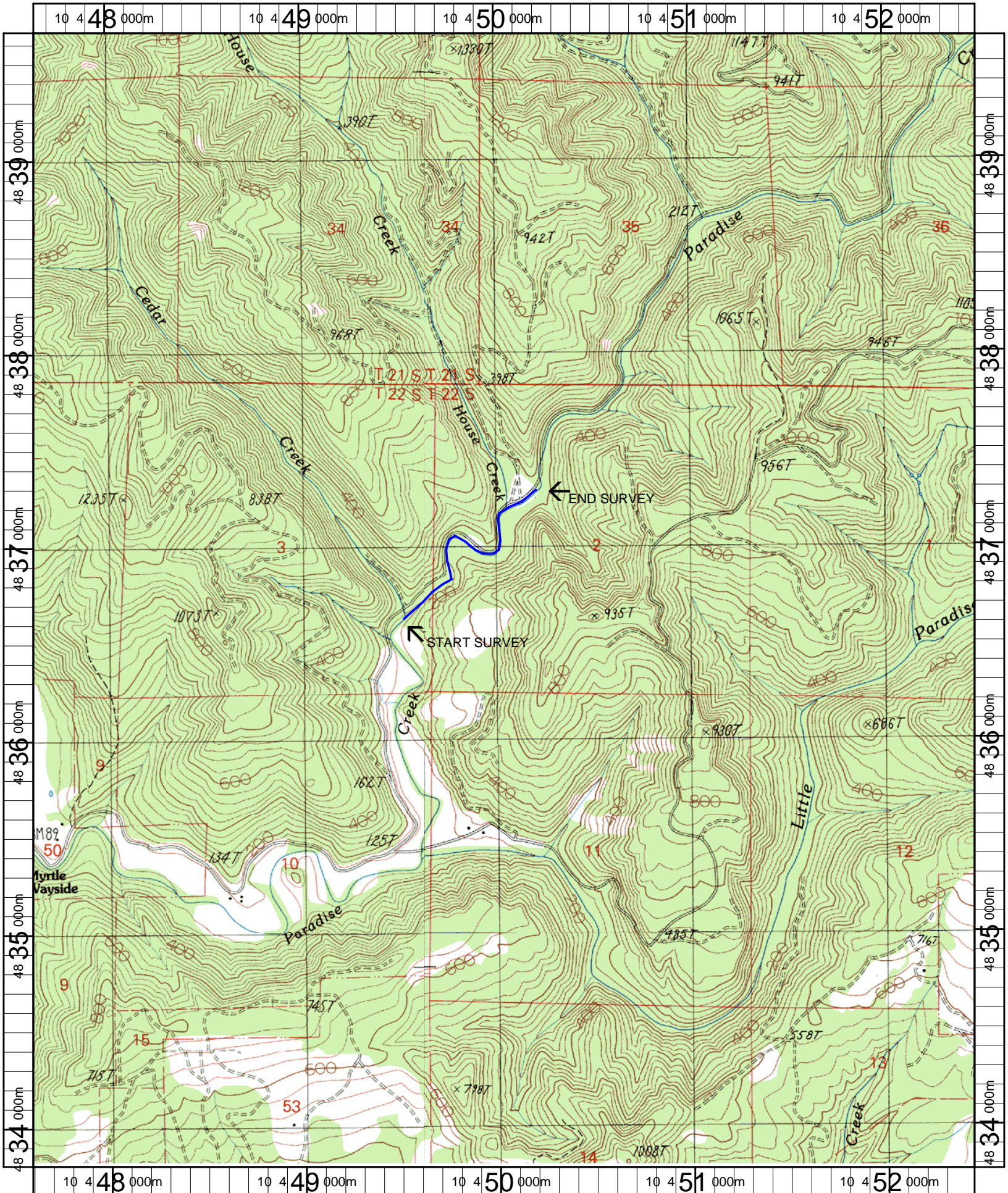
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	30.4		CT-CT,D30,S,ST	T=14.0C
4	LP	01	109.7	TJ/		
13	LP	00	277.5		CA-CT,C30,S,ST	METRIC, RIPARIAN #1
14	RI	00	305.6			UTM 0449765-4836797-3D
17	IP	10	353.3	WL		NEWTS
21	LP	00	421.7		COHO FRY	
26	RI	00	482.6			,ETRIC, RIPARIAN #2
27	LP	00	500.6		CA-CT,C30,D30,ST	UTM 0449730-4836963-2D
31	LP	01	557.6	TJ/, CS/		
33	LP	00	579	CS/		
35	LP	01	599.8	TJ/		
36	RI	11	599.8			T=13.0C
44	LP	00	651.5	DJ		
45	LP	00	671.5	DJ		
49	LP	00	753.4	SS/, /LI		
50	RI	00	778.7			RIPARIAN #3, METRIC
51	LP	00	813.7			UTM 0449921-4836948-3D
60	RI	00	1056			METRIC, RIPARIAN #4
61	LP	00	1068.2	HS		
65	SC	00	1122.9	CS/		
66	LP	00	1135.5	CS/		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP** SITE ID: **352** **PARADISE CREEK SITE 2 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>
67	SR	00	1137.3	CS/		
68	LP	00	1159.8	CS/		
69	RB	01	1189.3	TJ/		
70	RI	11	1189.3		CT-CT	HOUSE CK, 0450049-48371
73	LP	01	1272.4	HS, DJ	VERY LARGE WOOD JAM	T=14.5C
76	RI	01	1306.5			METRIC, RIPARIAN #5
77	DU	02	1306.5			UTM 0450161-4837174
80	GL	00	1377.5		CA-CT,C40,S,ST	
81	RI	01	1401.5	/TJ		
83	LP	00	1411		ORANGE FLAG "SITE 6 3-4 T	
84	SC	00	1417.3	/SS		
86	RI	00	1466.3	WL		RED-LEG FROG, END SIG



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

Location: 10 450036 E 4836718 N
 Caption: PARADISE CREEK SITE 2 RESTORATION SITE - UMPQUA
 BASIN