

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

STREAM: Preacher Creek (MC-375)  
BASIN: Alsea River  
SURVEY TYPE: Post-Tx  
DATE: February 19, 2008  
SURVEY CREW: David Jones, Ryan Emig  
REPORT PREPARED BY: Sharon Tippery  
BASIN AREA: 14.5 km<sup>2</sup>  
USGS MAPS: Digger Mountain  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Preacher Creek habitat survey extended 3,178 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 12.5 (range: 5.5-20). Land use for the reach was second growth timber (15-30cm dbh) and young trees (3-15cm dbh). The average unit gradient was 1.0 percent. Riffles (41%) and scour pools (40%) dominated stream habitat. Gravel (49%) and sand (31%) dominated stream substrate. Wood volume was 35.2m<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.

Beaver activity was noted throughout the survey. Juvenile Coho, nine redds, and rough-skinned newts were observed during the survey.

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

**PREACHER CREEK  
GCG: 2-MC SITE ID: 375**

**Survey Date: 2/13/2008**

**Report Date: 5/8/2008**

**T14S-R09R-S1SE**

**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	12.5	VWI Range:	5.5 - 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	3,178	22,273	0
Secondary	997	5,145	8

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.6	Width: 9.7	15.5 ( 8.2 - 30 )	18.8 ( 10.6 - 31 )
Depth: 0.60	Height: 0.5	1.1 ( 1 - 1.2 )	1.4 ( 1.3 - 1.5 )

W:D ratio: 18.7

Stream Flow Type: MF

Average Unit Gradient: 1.0%

Water temperature (°C): 7.0 - 7.0

Entrenchment (ACW:FPW ratio): 1.5

Habitat Units/100m (total channel length): 5.1

Habitat Units/100m (primary channel length): 6.7

**Riparian, Bank, and Wood Summary**

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

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	433	13.6
Volume (m <sup>3</sup> ):	1,119	35.2
Key pieces (>=12m x 0.60m):	81	2.5

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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
DRY CHANNEL	2	80	4.5	0.00	255	0	20	77	3	0	0	0
DRY UNIT	2	17	1.9	0.00	38	0	11	42	42	6	0	0
POOL-ALCOVE	2	21	5.6	0.90	130	0	30	68	3	0	0	0
POOL-BACKWATER	6	99	1.8	0.88	186	0	26	72	2	0	0	0
POOL-BEAVER DAM	1	98	30.0	1.20	2,940	0	90	10	0	0	0	0
POOL-DAMMED	2	116	5.3	1.08	756	0	12	62	24	2	0	0
POOL-ISOLATED	3	11	1.7	0.43	18	0	32	57	7	5	0	0
POOL-LATERAL SCOUR	81	1,475	7.0	1.01	10,922	0	7	35	48	5	1	4
POOL-PLUNGE	2	14	4.0	1.35	60	0	13	51	21	16	0	0
PUDDLED UNIT	4	116	3.0	0.20	332	0	25	68	7	0	0	0
RAPID/BOULDERS	4	27	1.8	0.17	55	0	1	11	75	13	0	0
RIFFLE	67	1,308	4.5	0.29	7,018	0	8	23	59	8	1	2
RIFFLE W/ POCKETS	19	743	5.7	0.35	4,375	0	8	20	62	7	0	1
STEP/BEAVER DAM	2	4	6.0	0.08	27	0	25	35	21	19	0	0
STEP/BEDROCK	1	3	6.0	0.25	15	0	0	0	0	5	0	95
STEP/COBBLE	12	39	7.1	0.23	277	0	0	6	82	12	0	0
STEP/LOG	4	6	2.7	0.23	16	0	43	58	0	0	0	0
<b>Total:</b>	214	4,176	5.6	0.60	27,418	0	<b>Avg:</b> 10	31	49	7	1	3

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	14	345	4.8	0.84	4,030	14.70%	0	0.0
Scour Pools	83	1,489	6.9	1.02	10,982	40.05%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	86	2,051	4.8	0.30	11,392	41.55%	0	0.0
Rapids	4	27	1.8	0.17	55	0.20%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	19	52	6.0	0.22	334	1.22%	0	0.0
Dry	8	213	3.1	0.10	624	2.28%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

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POOL SUMMARY

	<u>Total</u>	<u>Total of all Channel Lengths # / Km</u>	<u>Primary Channel Length # / Km</u>
All Pools:	97	23.2	30.5
Pools >=1m deep:	54	12.9	17.0
Complex pools (LWD pieces>=3):	35	8.4	11.0
Pool frequency (channel widths/pool):	4.4		
Residual pool depth (avg):	0.75		

COMMENT SUMMARY

MONITORING AREA: 2-MC      SITE ID: 375      STREAM: PREACHER CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	15	/CS	TEMP=6.8C
2	LP	00	27.3	/CS	
5	BW	10	74.3	RSN	
7	LP	01	110.3		ACTIVE EROSION ON RIVER RIGHT
8	RI	02	110.3	BV	BEAVER TRACKS IN SAND
9	LP	02	110.3	BV	BEAVER TRACKS IN SAND
20	RI	01	292.3	TJ/	
22	LP	01	325.3	BV	FRESH BEAVER STICKS AND BLOWN OUT DAMS
24	LP	01	337.6	BV	
25	RI	01	355.6	BV	
26	PP	01	363.6	BV	POOL MADE BY BEAVER DAM
27	SL	01	365.1	BV	STEP IS A BLOWN OUT BEAVER DAM
28	DP	01	465.1	BV	FRESH BV STICKS & POOL FROM BLOWN OUT BD. POWER LINES OVER HEAD
29	LP	01	497.1	BV	POWER LINES OVERHEAD. FRESH BEAVER STICKS
31	RI	01	515.1	BV	BEAVER STICKS
32	LP	01	547.1	BV, HS	OLDER BEAVER STICKS
33	RI	02	547.1	BV	A CHANNEL COMING OFF A BEAVER POND.
34	LP	02	547.1	SS/, BV	CHANNEL COMES OFF A BEAVER POND
35	RP	02	547.1	BV	CHANNEL COMES OFF A BEAVER POND
36	RI	02	547.1	BV	CHANNEL COMES OFF A BEAVER POND
37	RI	11	547.1	BV	ACW=3M, T=6.8C, TRIB FEEDS INTO CHANNEL THAT COMES OFF BEAVER POND
38	BP	02	547.1	BV	BEAVER POND

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UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
39	PD	02	547.1	BV	CHANNEL FEEDS BEAVER POND
40	SL	03	547.1		STEP IS DROP OVER SAND/DEBRIS BANK. ONE OF THE MULT CHANNELS OFF BP
41	RI	03	547.1	BV	ONE OF MULTIPLE CHANNELS COMING OUT OF BEAVER POND
43	SL	05	547.1		ONE OF MULT CHANNELS OFF BP. STEP IS A DROP OFF SAND/DEBRIS BANK.
44	RI	05	547.1	BV	ONE OF MULTIPLE CHANNELS COMING OFF BEAVER POND
45	PP	06	547.1	BV	ONE OF MULTIPLE CHANNELS COMING OFF BEAVER POND
46	SD	06	547.1	BV,BD	BEAVER DAM
47	SL	07	547.1		STEP IS A SAND/DEBRIS DROP OFF OF BANK.
48	RI	07	547.1	BV	
49	LP	07	547.1	BV	
50	RP	07	547.1	/TJ, BV	
51	RI	11	547.1	AM	ROUGH-SKINNED NEWT, T=8.5C
52	RI	00	555.1	BV	THREE STEELHEAD REDDS AND A LIVE STEELHEAD, BEAVER STICKS.
53	LP	00	570.1	BV	BEAVER STICKS - FRESH
57	LP	00	655.1	BV	BEAVER STICKS
59	BW	10	746.1	/SS, AM	ROUGH-SKINNED NEWT
60	LP	00	770.1	HS, /SS	
62	LP	01	800.6	HS	
63	RI	01	831.6	HS	
65	LP	00	843.6	HS	
67	LP	01	878.6	TJ/	ONE STEELHEAD REDD.
68	RB	11	878.6		ACW=3.3M, T=5.8C

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UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
69	RI	00	893.6		ONE STEELHEAD REDD
73	RI	01	947.6		ONE STEELHEAD REDD
77	RP	02	987.6	AM	ROUGH-SKINNED NEWT, COHO JUVENILES
80	LP	00	1052.6		BANK EROSION ON RIVER RIGHT
82	LP	00	1073.1	BV	
85	RI	00	1111.6	BV	FRESH BEAVER STICKS
86	LP	00	1138.6	BV	FRESH BEAVER STICKS
93	LP	00	1307.6	HS	
99	LP	00	1408.6	HS, AM	ROUGH-SKINNED NEWT
101	LP	01	1430.6	HS	
102	RP	01	1468.6		END PREACHER CREEK SGS #24733.001
103	LP	02	1468.6	/TJ	TRIB IS JASPER CREEK
104	RI	11	1468.6		ACW=2.5M, T=6.9C
108	LP	01	1493.6	HS	
113	LP	00	1548.6		TEMP=6C
119	LP	00	1603.6	HS	
123	LP	01	1697.9	HS	
128	LP	02	1764.9	HS, DJ	COHO JUVENILES
138	LP	01	1921.9	HS	
139	RI	02	1921.9	SS/	
141	BW	10	1921.9	AM	COHO JUVENILES, ROUGH-SKINNED NEWT
143	RB	11	2003.9		ACW=7M, T=6.8C

COMMENT SUMMARY

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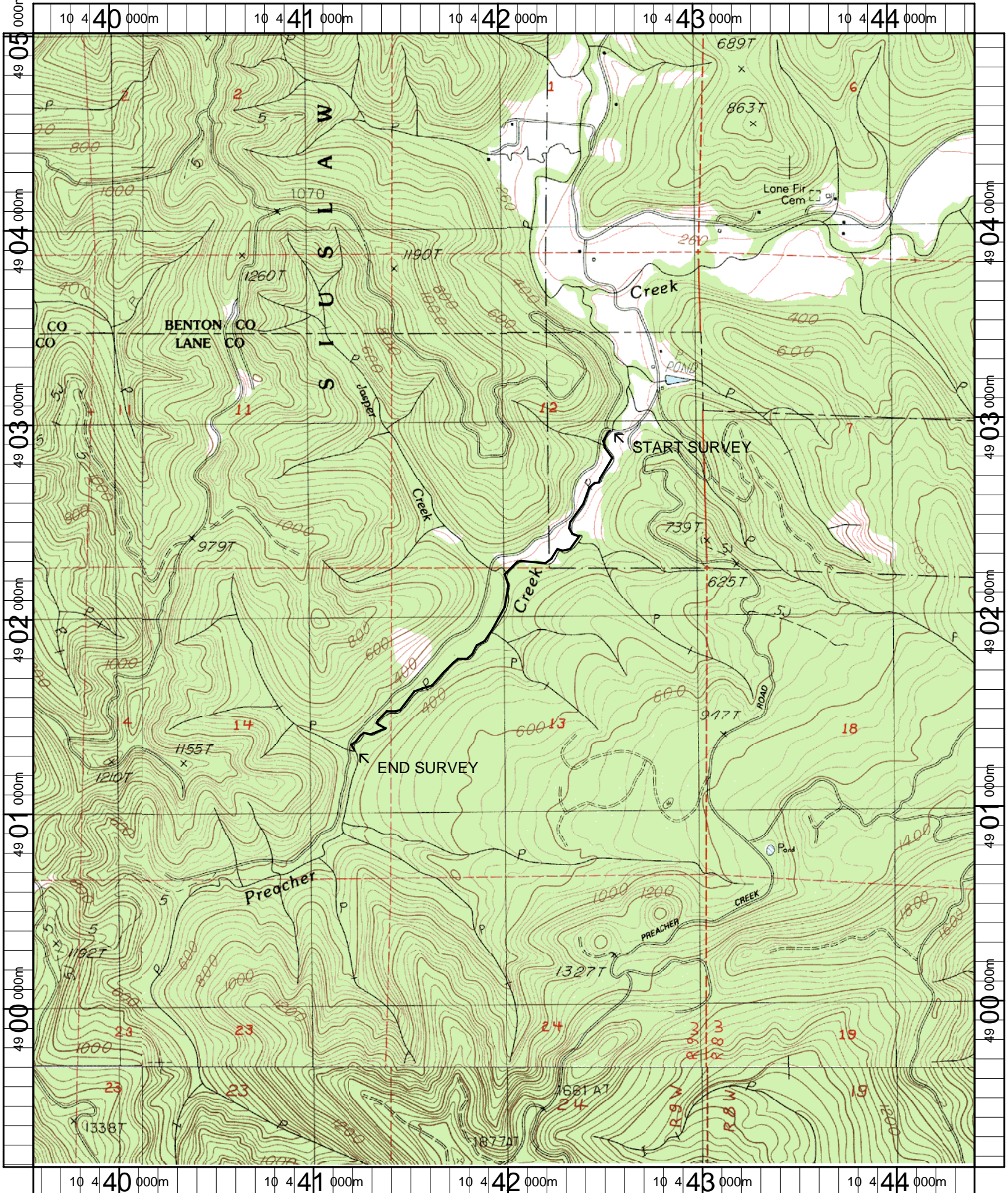
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
145	RI	00	2031.9		ONE STEELHEAD REDD
149	RI	00	2147.9	SS/	
150	RI	11	2147.9		ACW=0.6M, TEMP=7C
151	LP	01	2175.9	HS, /SS	COHO AND ROUGH-SKINNED NEWT IN THE SS
152	BW	10	2175.9		DEEP POCKET CREATED BY UPROOTED MAPLE
154	LP	00	2214.9		COHO JUVENILES
155	RP	00	2263.9		TEMP=7C
156	LP	00	2320.9		STEELHEAD REDD IN TAILOUT
163	RP	00	2534.9	HS	STEELHEAD REDD, STREAM ENHANCEMENT PROJECT #5
164	LP	00	2549.9	HS, SS/	
171	RP	01	2712.9	/SS	
173	LP	00	2742.9	HS	
175	LP	00	2765.9		ACTIVE EROSION & LAND MOVEMENT RIGHT BANK UNDER ALDER TREES
182	RP	00	2919.4	/SS	
185	LP	00	2949.4	HS	
187	RI	11	2963.4		ACW=2M, T=7C
190	LP	01	2995.4		EROSION OF STREAM BANK ON RIVER LEFT
191	RP	01	3008.4		EROSION OF STREAM BANK ON RIVER LEFT
192	LP	01	3023.4	BV	
194	LP	01	3033.4	HS	
195	RI	01	3098.4	BV	
197	RI	01	3125.4	HS	POWER LINES OVERHEAD



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UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
198	PD	02	3125.4	BV	COHO JUVENILES
199	IP	10	3125.4		COHO JUVENILES, ROUGH-SKINNED NEWT, 0.5M DEEP MUDD
200	RI	03	3125.4	BV	
201	LP	03	3125.4	BV	
202	SD	03	3125.4	BD, AM	ROUGH-SKINNED NEWT
203	DP	03	3125.4	BV	BEAVER POOL, COHO JUVENILES
205	RB	04	3125.4	BV	OLD BEAVER STICKS AND BLOWN OUT DAM
206	RI	05	3125.4	BV	
207	LP	05	3125.4		COHO JUVENILES, ROUGH-SKINNED NEWT
209	DU	05	3125.4		HYPERHYIC FLOW FEEDING 05 CHANNEL FROM 01 CHANNEL.
210	LP	05	3125.4		LP TOP OF 05CH. NO TAIL CREST, HYPERHYIC FLOW FROM LP TO 05CH
211	IP	10	3125.4	AM	15-20 JUV COHO, FROG. WATER SEEPING INTO POOL FROM UNDERGROUND.
213	RI	00	3157.4	HS	
214	LP	00	3178.4	HS	SGS END = 24733.001



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

Location: 10 0442004 E 4902080 N  
 Caption: PREACHER CREEK RESTORATION SITE - ALSEA BASIN