

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

STREAM: Preacher Creek (MC-375)
BASIN: Alsea River
SURVEY TYPE: Pre-Tx
DATE: September 19, 2007
SURVEY CREW: Josh Togstad, Jeff Snyder
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 14.5 km²
USGS MAPS: Digger Mountain
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Preacher Creek habitat survey extended 3,267 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 14.4 (range: 8.0-20.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 0.9 percent. Beaver pools (46%) and scour pools (33%) dominated stream habitat. Gravel (46%) and sand (24%) dominated stream substrate. Wood volume was low at 8.7 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

T15S-R09W-S12SE

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	14.4	VWI Range:	8 - 20

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	3,267	29,374	0
Secondary Channel	8	20	1
Off-Channel Units	125	348	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 7
Width: 5.7	Width: 8.1	10.6 (6.7 - 13.8)	16.2 (9.2 - 33.6)
Depth: 0.47	Height: 0.3	0.6 (0.5 - 0.7)	1.0 (0.7 - 1.5)

W:D ratio: 25.4
 Stream Flow Type: MF
 Average Unit Gradient: 0.9%
 Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 5.9
 Habitat Units/100m (primary channel length): 6.1

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	7%	Reach avg: 68%
Undercut Banks:	13%	Range: 19 - 94

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	208	6.4
Volume (m ³):	285	8.7
Key pieces (>=12m x 0.60m):	19	0.6

OREGON DEPT OF FISH AND WILDLIFE

PREACHER CREEK PRE-TX (2-MC, 375)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/19/2007

REACH 1		T15S-R09W-S12SE					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
DRY UNIT	1	8	2.5	0.00	20	0	0	0	20	80	0	0
GLIDE	2	65	3.7	0.23	231	0	5	20	46	27	0	2
POOL-BACKWATER	8	68	2.9	0.39	230	0	28	43	28	1	0	0
POOL-BEAVER DAM	5	355	23.8	1.30	13,392	0	19	24	46	11	0	0
POOL-ISOLATED	5	18	2.7	0.47	59	0	41	57	0	2	0	0
POOL-LATERAL SCOUR	78	1,439	6.4	0.82	9,406	59	16	33	39	11	0	2
POOL-STRAIGHT SCOUR	3	66	5.5	0.57	400	0	17	33	35	7	0	8
PUDDLED UNIT	1	8	1.4	0.20	11	0	10	30	50	10	0	0
RAPID/BEDROCK	2	24	3.6	0.23	100	0	0	8	8	3	0	83
RIFFLE	62	1,218	3.8	0.18	5,112	25	4	16	60	20	0	0
STEP/BEAVER DAM	5	10	18.6	0.03	238	0	92	0	5	3	0	0
STEP/BEDROCK	1	1	4.0	0.10	3	0	0	0	0	0	0	100
STEP/COBBLE	26	121	4.8	0.11	541	0	2	10	65	23	0	0
Total:	199	3,400	5.7	0.47	29,742	84	Avg: 13	24	46	15	0	2

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	18	441	8.7	0.67	13,680	46.00%	0	0.0	
Scour Pools	81	1,504	6.3	0.81	9,807	32.97%	59	0.6	
Glides	2	65	3.7	0.23	231	0.78%	0	0.0	
Riffles	62	1,218	3.8	0.18	5,112	17.19%	25	0.5	
Rapids	2	24	3.6	0.23	100	0.34%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	32	132	6.9	0.10	782	2.63%	0	0.0	
Dry	2	16	2.0	0.10	31	0.10%	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:	99	29.1	30.3
Pools >=1m deep:	23	6.8	7.0
Complex pools (LWD pieces>=3):	21	6.2	6.4
Pool frequency (channel widths/pool):	4.2		
Residual pool depth (avg):	0.69		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

PREACHER CREEK PRE-TX
GCG: 2-MC SITE ID: 375

Survey Date 7/19/2007
Report Date: 11/7/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1414
Total conifers/1000 ft	244
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	0.6	8.2	0.8	1.6	2.0	4.4	3.4	14.2
15-30cm	0.0	0.6	0.0	1.2	0.6	1.6	0.6	3.4
30-50cm	0.0	1.2	0.0	1.8	0.0	0.4	0.0	3.4
50-90cm	0.0	1.8	0.0	0.2	0.0	0.0	0.0	2.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
Total/100m2	0.6	11.8	0.8	4.8	2.6	6.6	1.3	7.7

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	67		65		72	
Shrub cover	29		34		23	
Grass/forb cover	72		65		77	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	10		30		30	
High terrace	90		70		70	
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 (%)	4		16		15	

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	1414
Total conifers/1000 ft	244
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	3.4	14.2
15-30cm	0.6	3.4
30-50cm	0.0	3.4
50-90cm	0.0	2.0
>90cm	0.0	0.2

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		
33	LT	1	HT	0	95	0	100	Conifer							
								Hardwood	23						
33	LT	2	HT	0	65	10	90	Conifer							
								Hardwood	5						
33	LT	3	HT	0	90	15	85	Conifer							
								Hardwood	3	5					
33	RT	1	HT	0	10	10	90	Conifer							
								Hardwood							
33	RT	2	HT	0	10	5	95	Conifer							
								Hardwood							
33	RT	3	HT	0	10	30	70	Conifer	2	2					
								Hardwood							
62	LT	1	HT	0	65	15	85	Conifer							
								Hardwood	5						
62	LT	2	HT	0	75	25	75	Conifer							
								Hardwood	1	1					
62	LT	3	HT	0	85	20	80	Conifer							
								Hardwood	5	1	2				
62	RT	1	HT	0	60	20	80	Conifer	3						
								Hardwood	11						
62	RT	2	HT	0	30	15	85	Conifer	3						
								Hardwood							
62	RT	3	HT	0	90	10	90	Conifer	6						
								Hardwood							
93	LT	1	HT	0	80	30	70	Conifer							
								Hardwood		1	1	1			
93	LT	2	HS	33	85	40	60	Conifer							
								Hardwood		3	2				
93	LT	3	HS	19	90	20	80	Conifer		1					
								Hardwood	9	2					
93	RT	1	HT	0	65	10	90	Conifer							
								Hardwood	2	1					
93	RT	2	HT	0	85	20	80	Conifer							
								Hardwood	2	2	3				
93	RT	3	HT	0	85	10	90	Conifer							
								Hardwood	3						

115	LT	1	HS	35	85	30	70	Conifer						
								Hardwood		1	2			
115	LT	2	HS	60	85	40	60	Conifer						
								Hardwood						
115	LT	3	HS	63	85	5	95	Conifer						
								Hardwood						1-1.5 PLUS MAPLE SHADOWING
115	RT	1	HT	0	80	80	20	Conifer						
								Hardwood						
115	RT	2	HT	0	85	90	10	Conifer						
								Hardwood			1			
115	RT	3	HT	0	75	90	10	Conifer						
								Hardwood						1
145	LT	1	HT	0	70	80	20	Conifer						
								Hardwood						
145	LT	2	HS	68	80	75	15	Conifer						
								Hardwood			5			
145	LT	3	HS	65	80	10	90	Conifer						
								Hardwood		4				10 PERCENT BARE GROUND
145	RT	1	HT	0	60	10	90	Conifer	1					
								Hardwood		1	4	1		
145	RT	2	HT	0	50	20	80	Conifer	1					
								Hardwood						
145	RT	3	HT	0	30	20	80	Conifer	2					
								Hardwood	1					

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	12.1	BC, CS	BEGIN
2	LP	00	24.2	BC, CS	
3	RI	00	37.9	CS	
4	LP	00	51.8	CS, CO	
5	RI	00	67.2		METRIC 1
7	LP	00	106.2	CO	
9	LP	00	127	CO	
11	LP	00	151.1	BV, CO	
12	LP	00	168.5	CO	
14	LP	00	236.7	CO	
17	LP	00	281.7	CO	
18	IP	10	281.7	RSN	
20	SD	00	329.2	BD	
21	BP	00	381.2	CO, BV	
22	LP	00	399.3	CO	
24	LP	00	414.4	WL	
26	BW	10	418.1	RSN	
27	GL	00	437.7	WL	
29	LP	00	470.9	RSN, CO	
30	SC	00	476.6	RSN	
32	IP	10	504.7	RSN, CO	
33	RI	00	521.6	CO, WL	METRIC 2

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
37	BW	10	545	CO, RSN	
40	LP	00	579.5	BV, CO	RSN
42	LP	00	611.1	WL, CO	
44	LP	00	622.9	CO, RSN	
46	LP	00	661.6	BV, CO	RSN
48	LP	00	685.8	CO,RSN, BV	WL
50	LP	00	708	CO, RSN	
52	LP	00	751.6	CO	
53	SC	00	759	BV	
54	SP	00	777.5	BV, CO	
55	SD	00	780.3	BV, BD	
56	RI	11	780.3		T= 13C
57	BP	00	980.3	BV	LARGE BEAVER DAM POOL EXTENDS UPSTREAM BEYOND TRIB JUNCTION.
59	BW	10	1004.5	RSN	
61	LP	00	1032.3	CO	
62	RI	00	1047.6		METRIC 3
63	LP	00	1063.8	CO	
65	LP	00	1086.4	CO, WL	
67	LP	00	1108.5	CO	
69	SP	00	1122.4	CO	
71	LP	00	1143.6	CO	
74	RI	00	1234.3	CO	

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
75	LP	00	1253.6	CO	
77	LP	00	1309.9	HS, CO, WL	RSN
79	LP	00	1370.2	CO	
80	RI	00	1398.3	CO	
81	LP	00	1411.4	CO, HS	
83	LP	01	1433	HS, CO,/TJ	
84	RI	11	1433		10T- 0442045
86	LP	00	1446.3		SPAWNING SURVEY END SIGN
88	SP	00	1495.3	CO, WL,RSN	
90	LP	00	1512.5	CO	
92	LP	00	1546.6	CO, RSN	
93	RI	00	1570.4	CO, RSN	METRIC 4
94	LP	00	1594.8	RSN/CO	
96	LP	00	1618	RSN/CO/WL	
98	LP	00	1643.7	CO	
100	LP	00	1692.3	CO, WL	
101	RI	00	1717.8	CO	
102	LP	00	1764.7	CO, RSN	
103	RI	00	1789.9	RSN/CO	
104	LP	00	1810.9	CO	
106	LP	00	1864.1	CO	
108	LP	00	1890.2	CO, RSN	

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
110	LP	00	1939.9	CO	
111	RI	00	1973.8	CO	
112	LP	00	1991.5	CO	
114	LP	00	2025.1	CO	
115	RI	00	2052.3		END- 7/23
116	PD	11	2052.3	CO	10T- 0441940
118	RI	00	2075.8	CO	
119	LP	00	2085.9	CO	
121	LP	00	2120.1	CO	
122	BW	10	2120.1	CO, RSN	
124	LP	00	2150.6	CO, RSN	
126	LP	00	2166.2	CO	
128	BW	10	2211.9	RSN	
130	LP	00	2237.5	CO	
132	LP	00	2263.1	CO, WL	
134	LP	00	2282.6	CO	
135	RI	00	2333.3	CO	
137	LP	00	2348.9	CO	
138	RI	00	2363.7	CO	
139	LP	00	2396.1	CO	
140	RI	00	2425.9	CO	
141	LP	00	2451.2	CO	

COMMENT SUMMARY

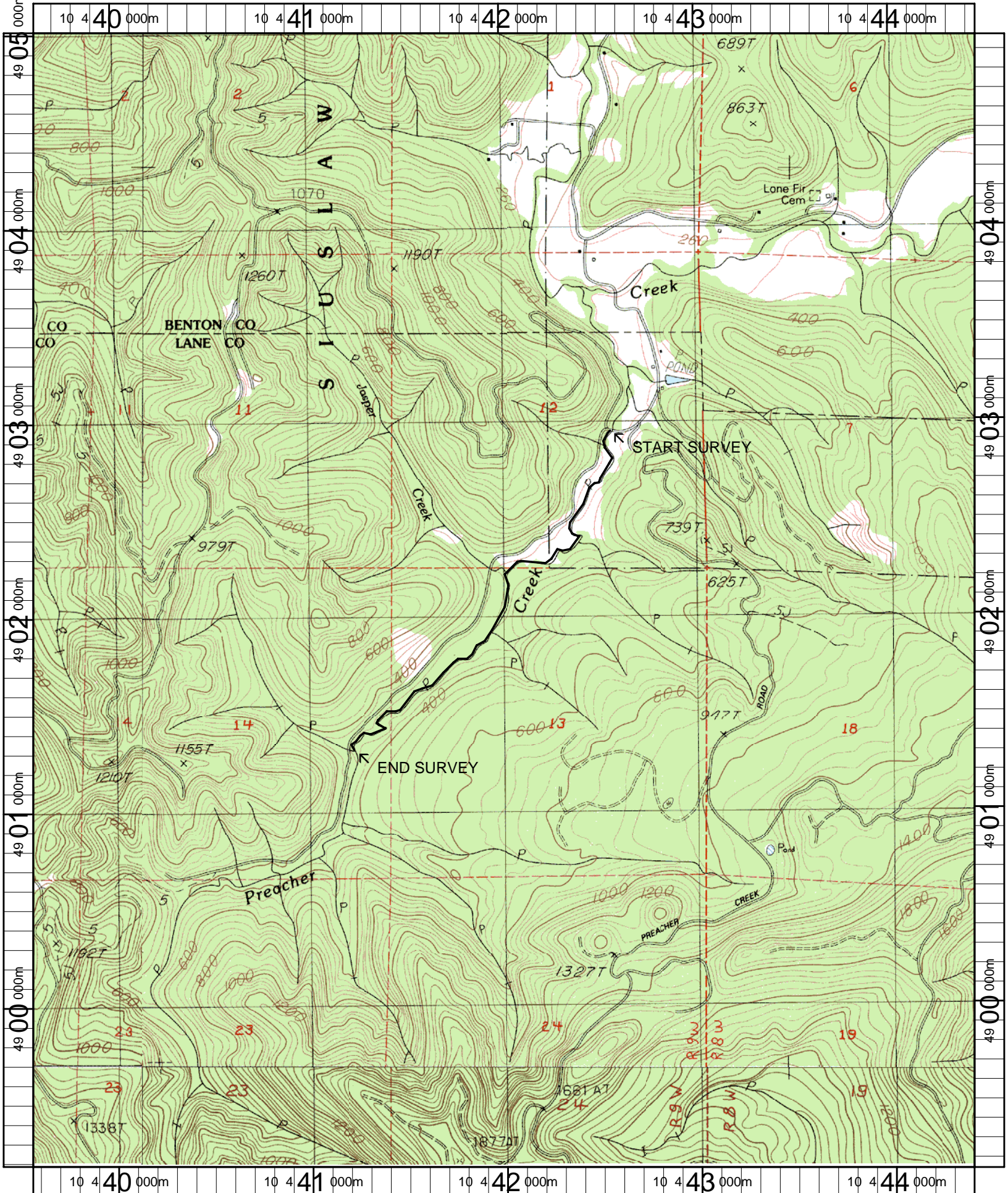
MONITORING AREA: 2-MC SITE ID: 375 STREAM: PREACHER CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
142	LP	00	2477.5	CO	
144	LP	00	2497.6	CO	
145	RI	01	2507.4		METRIC 6
147	LP	00	2533.6	CO	RED AT TAILOUT
149	LP	00	2570.1	CO, HS	SITE NUMBER 5
151	LP	01	2600.5	CO	
152	IP	10	2600.5	RSN/CO	
154	LP	00	2625.1	CO	
157	LP	00	2650.5	CO	
159	LP	00	2686.7	CO	DACE, TROUT
162	LP	00	2725.1	CO	
164	BW	10	2737.6	CO	
165	LP	01	2772.6	CO	
166	IP	10	2772.6	CO	
168	LP	00	2793.6	CO	
170	LP	00	2818.1	CO	
172	LP	00	2838.6	CO	
173	LP	00	2867.6	CO	
175	LP	00	2906.1	CC	
179	RR	00	2977.1	BV	
180	SD	00	2978.3	BD	
181	BP	00	3027.1	BV, CO	

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
183	SD	10	3037.7	BD	
184	BP	00	3064.7	BV, COT	
187	LP	00	3096.2	CO	
191	SD	00	3140.4	BD	
192	BP	00	3167.4	BV, CO	
194	LP	00	3179.9	CO	
195	LP	00	3196.9	CO	
197	LP	00	3236.4	BV, CO	BV DEN
199	LP	00	3266.9	CO	METRIC 7



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