

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

STREAM: Seeley Creek (MC-60)  
BASIN: Alsea River  
SURVEY TYPE: Post-Tx  
DATE: February 16, 2006  
SURVEY CREW: Paul Jacobsen, Brian Bangs  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 6.7 km<sup>3</sup>  
USGS MAPS: Alsea  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Seeley Creek habitat survey extended 532 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 7.4 (range: 6.0-9.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 2.1 percent. Scour pools (38%) and riffles (37%) dominated stream habitat. Gravel (40%) and sand (30%) dominated stream substrate. Wood volume was low at 19.8 m<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.

Stream            Seeley Creek (MC-60)  
 Basin             Alsea River  
 Treatment        Large Wood

	ODFW Benchmark		Pre 2/3/99	Post 1/18/00	Post 2/16/06		
<b>Habitat Variable</b>	<b>Desirable</b>	<b>Undesirable</b>					
% Pool Area	>35%	<10%	52.6	51.1	<b>45.6</b>		
Number of Pools			19	<b>35</b>	<b>36</b>		
Deep Pools/km (>1.0 m)			10.8	<b>7.6</b>	<b>3.3</b>		
% Off-Channel			5.0	<b>17.8</b>	<b>28.5</b>		
LWD – Pieces/100m	>20	<10	6.5	<b>11.9</b>	<b>13.7</b>		
LWD – Volume/100m	>30	<20	7.7	<b>26.6</b>	<b>19.8</b>		
LWD – Key Pieces/100m	>3	<1	0.6	<b>1.4</b>	0.8		
Large Wood Jams/km			11.4	10.8	<b>5.6</b>		
% Riffle Fines	<10	>20	38	13	20		
% Riffle Gravel	>35	<15	32	48	44		
% Bedrock			0	0	1		

**Bold** is noticeable change

Comments: Since the treatment was large wood assembled in complex jams, it is no surprise that there was an initial increase in those variables. Over time, there has been additional recruitment of wood pieces, but a reduction in wood volume, key pieces, and wood jams, suggesting that wood is leaving the reach without additional sizeable recruitment. While the number of pools are increasing, both pool area and deep pools are decreasing, possibly a symptom of the loss of wood. Stream substrate remains unchanged over time, but off-channel habitat has increased dramatically.

REACH 1

T13S-R07W-S28SW

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	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	7.4	VWI Range:	6 - 9

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
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 Channel	532	1,775	0
Secondary Channel	339	557	2
Off-Channel Units	46	152	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 2.5	Width: 9.8	24.5 ( 19 - 33 )	28.8 ( 21 - 40 )
Depth: 0.35	Height: 0.5	1.0 ( 0.8 - 1.2 )	1.3 ( 1.1 - 1.6 )

W:D ratio: 20.2  
 Stream Flow Type: MF  
 Average Unit Gradient: 2.1%  
 Water temperature (°C): 4.0 - 4.0

Entrenchment (ACW:FPW ratio): 2.6  
 Habitat Units/100m (total channel length): 7.8  
 Habitat Units/100m (primary channel length): 13.5

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	D30	D3

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):	73	13.7
Volume (m <sup>3</sup> ):	105	19.8
Key pieces (>=12m x 0.60m):	4	0.8

OREGON DEPT OF FISH AND WILDLIFE

SEELEY CREEK POST-TX (2-MC, 60)

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

2/16/2006

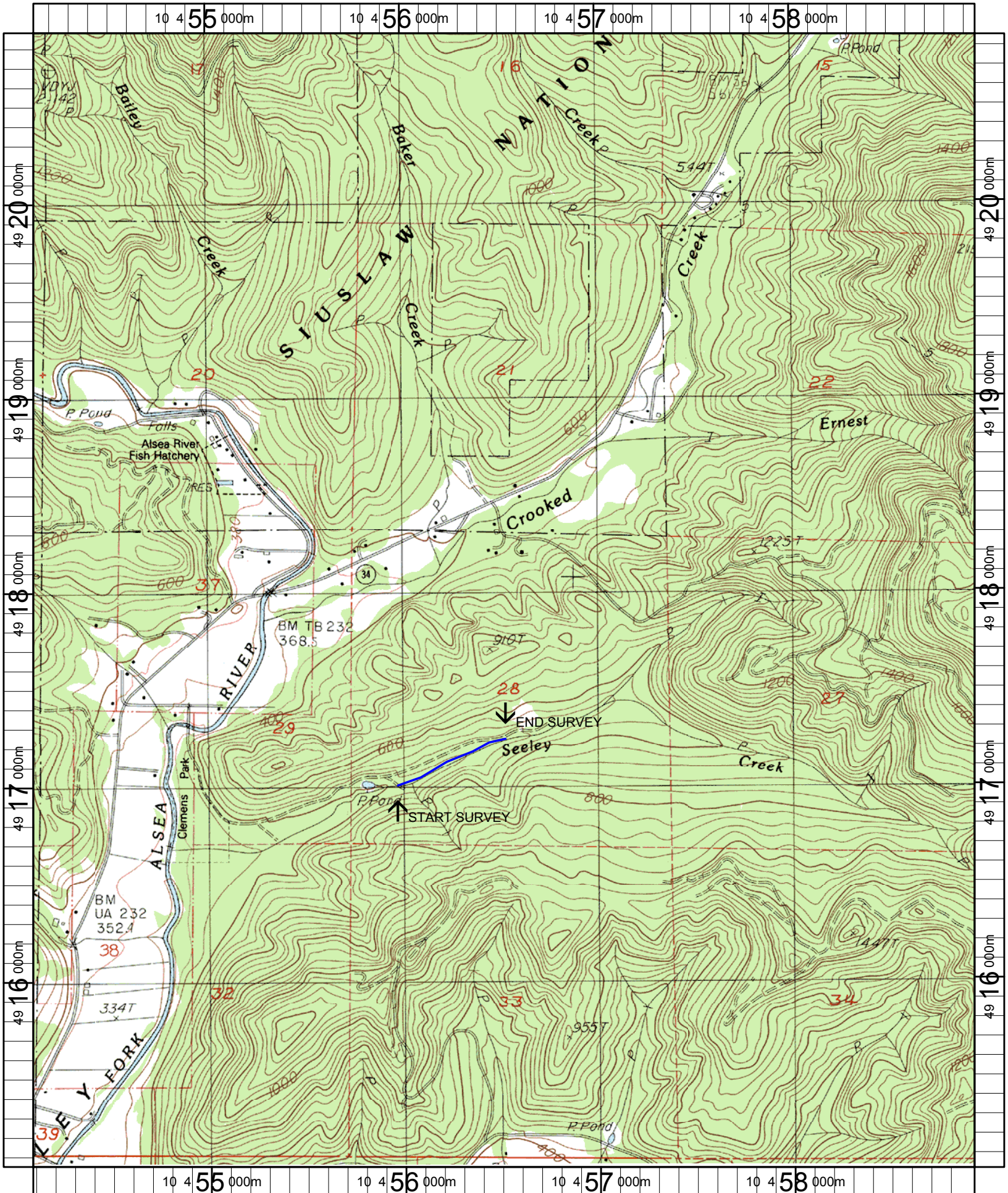
REACH 1		T13S-R07W-S28SW					REACH 1					
HABITAT DETAIL												
Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BOULDERS	1	11	1.8	0.05	19	0	20	50	30	0	0	0
CULVERT CROSSING	1	18	1.2	0.25	21	0	0	20	40	20	20	0
DRY CHANNEL	1	43	1.2	0.00	52	0	10	30	60	0	0	0
DRY UNIT	1	5	2.0	0.00	9	0	20	80	0	0	0	0
GLIDE	1	16	2.0	0.10	32	0	5	10	70	15	0	0
POOL-BACKWATER	8	30	2.9	0.39	133	0	23	55	20	3	0	0
POOL-DAMMED	1	15	1.8	0.40	27	0	15	39	44	2	0	0
POOL-ISOLATED	1	7	2.6	0.30	17	0	35	65	0	0	0	0
POOL-LATERAL SCOUR	25	289	2.8	0.63	941	0	7	31	42	17	1	2
POOL-PLUNGE	1	5	2.9	0.60	15	0	5	40	50	5	0	0
PUDDLED UNIT	1	10	0.2	0.10	2	0	30	65	5	0	0	0
RAPID/BOULDERS	4	86	1.6	0.11	174	0	8	18	50	23	0	0
RIFFLE	16	327	2.7	0.17	903	0	3	17	44	35	1	0
RIFFLE W/ POCKETS	1	9	1.1	0.05	9	0	20	69	10	2	0	0
STEP/COBBLE	7	42	2.1	0.10	105	0	1	11	48	40	0	0
STEP/LOG	2	7	2.2	0.06	25	0	0	10	50	15	0	25
<b>Total:</b>	<b>72</b>	<b>918</b>	<b>2.5</b>	<b>0.35</b>	<b>2,484</b>	<b>0</b>	<b>Avg: 8</b>	<b>30</b>	<b>40</b>	<b>20</b>	<b>1</b>	<b>1</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	10	51	2.8	0.38	177	7.14%	0	0.0
Scour Pools	26	294	2.8	0.63	956	38.47%	0	0.0
Glides	1	16	2.0	0.10	32	1.29%	0	0.0
Riffles	17	336	2.6	0.17	912	36.71%	0	0.0
Rapids	4	86	1.6	0.11	174	7.00%	0	0.0
Cascades	1	11	1.8	0.05	19	0.76%	0	0.0
Step/Falls	9	49	2.1	0.09	131	5.27%	0	0.0
Dry	3	58	1.1	0.03	63	2.52%	0	0.0
Culverts	1	18	1.2	0.25	21	0.85%	0	0.0

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	36	39.2	67.7
Pools >=1m deep:	3	3.3	5.6
Complex pools (LWD pieces>=3):	3	3.3	5.6
Pool frequency (channel widths/pool):	2.6		
Residual pool depth (avg):	0.47		

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Name: ALSEA  
 Date: 1/23/2006  
 Scale: 1 inch equals 2000 feet

Location: 10 456520 E 4917953 N  
 Caption: SEELEY CREEK UPPER - #60 - RESTORATION SITE - ALSEA BASIN