

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

STREAM: Headrick Creek (MC-88)
BASIN: Alsea River
SURVEY TYPE: Post-Tx
DATE: March 22, 2006
SURVEY CREW: Brian Bangs, Trevan Cornwell
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 2.0 km³
USGS MAPS: Prairie Peak
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Headrick Creek habitat survey extended 436 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 10.8 (range: 7.0-15.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.0 percent. Scour pools (71%) and riffles (24%) dominated stream habitat. Gravel (46%) and sand (28%) dominated stream substrate. Wood volume was moderate at 21.9 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.

Stream Headrick Creek (MC-88)

Basin Alsea River

Treatment Large Wood

	ODFW Benchmark		Pre 3/11/98	Post 1/27/99	Post 3/22/06		
Habitat Variable	Desirable	Undesirable					
% Pool Area	>35%	<10%	72.2	47.7	70.8		
Number of Pools			40	15	24		
Deep Pools/km (>1.0 m)			8	8.5	4.5		
% Off-Channel			1.8	3.2	1.1		
LWD – Pieces/100m	>20	<10	8.0	13.0	14.2		
LWD – Volume/100m	>30	<20	12.6	41.8	21.9		
LWD – Key Pieces/100m	>3	<1	0.2	3.7	0		
Large Wood Jams/km			0	4.4	4.6		
% Riffle Fines	<10	>20	55	85	32		
% Riffle Gravel	>35	<15	44	16	67		
% Bedrock			2	0	5		

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. Large wood pieces have increased along with wood jams, but wood volume and key wood pieces have decreased since treatment. Pool area remains stable, but the number of pools and deep pools has decreased compared to pre-treatment conditions.

REACH 1

T14S-R07W-S07SE

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	10.8	VWI Range:	7 - 15

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	436	848	0
Secondary Channel	0	0	0
Off-Channel Units	9	9	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 1.9	Width: 3.0	11.9 (4.9 - 23.6)	15.0 (7.8 - 29.6)
Depth: 0.47	Height: 0.5	1.0 (0.9 - 1)	1.4 (1.3 - 1.4)

W:D ratio: 6.2
 Stream Flow Type: MF
 Average Unit Gradient: 1.0%
 Water temperature (°C): 7.0 - 7.0

Entrenchment (ACW:FPW ratio): 4.5
 Habitat Units/100m (total channel length): 9.5
 Habitat Units/100m (primary channel length): 9.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
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):	62	14.2
Volume (m ³):	95	21.9
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

HEADRICK CREEK POST-TX (2-MC, 88)

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/22/2006

REACH 1		T14S-R07W-S07SE					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
CULVERT CROSSING	1	15	0.8	0.20	12	0	40	40	20	0	0	0
POOL-LATERAL SCOUR	21	259	2.2	0.62	541	0	25	35	39	0	0	1
POOL-PLUNGE	3	21	2.7	1.13	65	0	20	30	50	0	0	0
RAPID/BOULDERS	1	12	1.9	0.25	23	0	20	30	50	0	0	0
RIFFLE	11	123	1.6	0.19	199	0	15	17	67	0	0	0
RIFFLE W/ POCKETS	1	9	1.1	0.25	9	0	20	40	40	0	0	0
STEP/BEDROCK	1	1	1.0	0.10	1	0	10	0	10	0	0	80
STEP/COBBLE	1	3	1.4	0.20	5	0	20	20	60	0	0	0
STEP/LOG	1	1	1.0	0.20	1	0	0	0	10	0	0	90
STEP/STRUCTURE	1	0	1.0	0.15	0	0	20	40	40	0	0	0
Total:	42	444	1.9	0.47	857	0	Avg: 21	28	46	0	0	5

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	0	0			0	0.00%	0	0.0	
Scour Pools	24	280	2.2	0.68	607	70.78%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	12	131	1.6	0.19	208	24.28%	0	0.0	
Rapids	1	12	1.9	0.25	23	2.70%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	4	6	1.1	0.16	7	0.83%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	15	0.8	0.20	12	1.40%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	24	54.0	55.1
Pools >=1m deep:	2	4.5	4.6
Complex pools (LWD pieces>=3):	8	18.0	18.4
Pool frequency (channel widths/pool):	6.3		
Residual pool depth (avg):	0.53		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **88** HEADRICK CREEK POST-TX

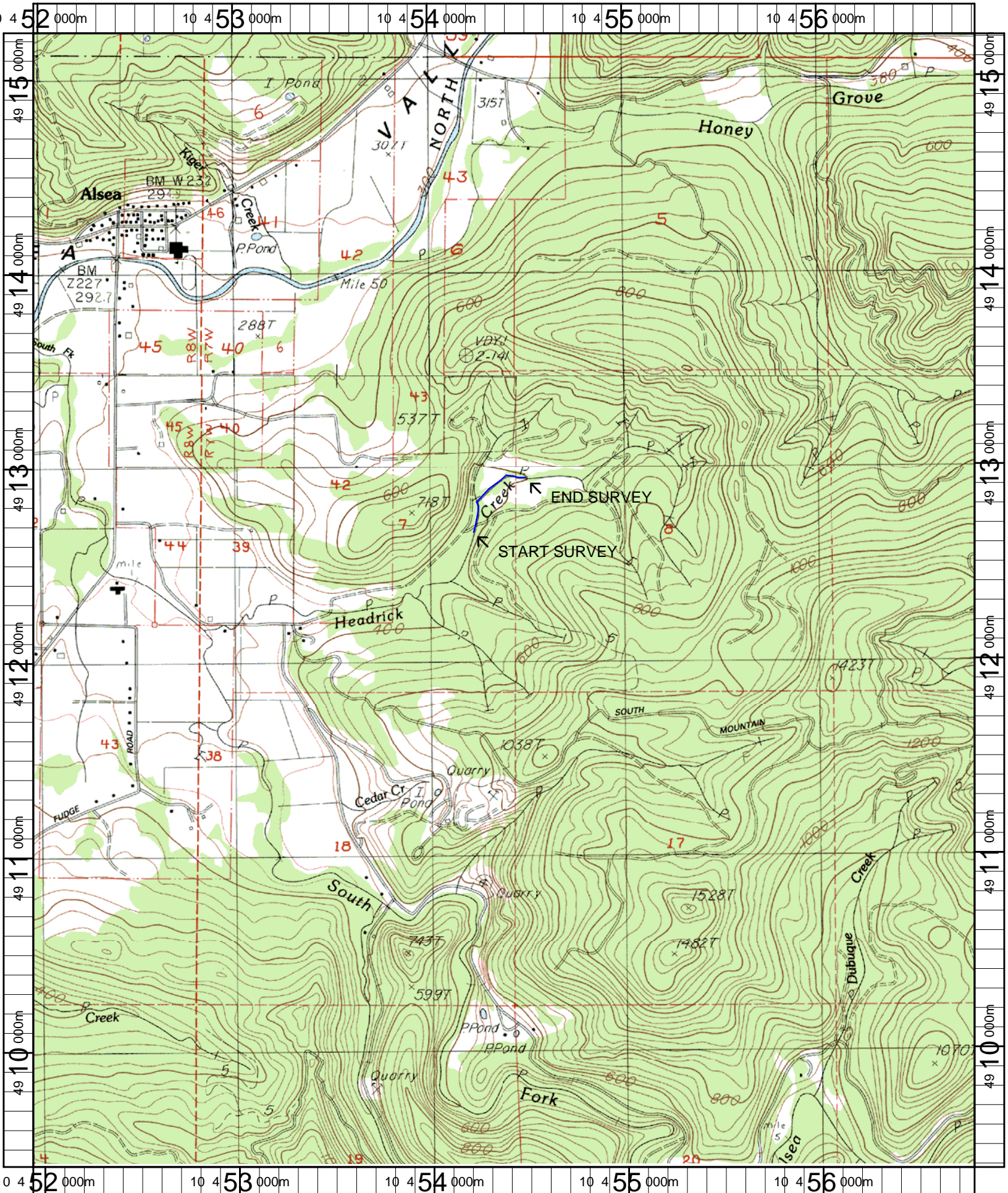
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	12.2	HS	HS NO. 4	
2	RI	00	17.3		WATER MURKY	
3	LP	00	25.3	HS	SINGLE PLACED LOG, HS NO. 5	
5	PP	00	52.2	HS, /SS	BIG PLACED LOG	
6	SS	00	52.5		H = 0.3	
7	CC	00	67.5	CC	1.5 M DIA., METAL, ROAD XING	
9	LP	00	97.9	HS, /SS		
10	RI	00	114.3	BV		
12	LP	01	134.2	HS, TJ/	HS NO. 7	
13	RP	11	134.2		T = 7.0	
14	RI	00	149.2		T = 7.0	
17	SC	00	163.6	BV		
18	LP	00	171.2		ERODING BANKS FROM HI FLOWS	
19	LP	00	176.2		MOST OF STRM HAS ERODING BANKS	
21	LP	00	195.2	WL	COUGAR TRACKS	
27	RB	00	285.5	HS	SITE NO. 8	
28	RI	00	299.6	/SS		
30	RI	00	313.9	/SS		
32	SR	00	322.5		H = 0.35	
35	LP	00	345.8	/SS		
37	LP	00	369	HS	SITE NO. 9, RSN	

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **2-MC** SITE ID: **88** HEADRICK CREEK POST-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>
38	LP	00	386.2	SS/SS		SITE NO. 9, SEEP W/ HAB. LOG
40	LP	00	416.4	HS		OLD ROAD CROSSING, HS NO. 10
41	SL	00	417.5			H = 0.7
42	LP	00	435.8			END SURVEY



Name: PRAIRIE PEAK (OR)
 Date: 2/13/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0454377 E 4912313 N
 Caption: HEADRICK CREEK RESTORATION SITE - ALSEA BASIN