

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

STREAM: Lower Knife Creek (MS161)
BASIN: Millicoma River
SURVEY TYPE: Pre-Tx
DATE: February 6, 2002
SURVEY CREW: Sara Meguffy, Sarah Schuster
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.5 km²
USGS MAPS: Elk Peak
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Lower Knife Creek habitat survey extended 487 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.2 (range: 1.2 – 3.0). Land use for the reach was active timber harvest and mature (50-90 cm dbh) trees. The average unit gradient was 2.2 percent. Rapids (57%) and riffles (31%) dominated stream habitat. Bedrock (28%) and gravel (20%) dominated stream substrate. Wood volume was low at 13.5 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

REACH

T23S-R11W-S12NE

REACH

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.8	VWI Range:	1.2 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
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	487	2,840	0
Secondary	17	6	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 2
Width: 5.4	Width: 6.8	12.7 (9.9 - 23.2)	10.8 (10.6 - 11)
Depth: 0.32	Height: 0.6	1.1 (0.9 - 1.4)	1.5 (1.4 - 1.5)

W:D ratio: 12.4

Entrenchment (ACW:FPW ratio): 1.9

Stream Flow Type: MF

Habitat Units/100m (total channel length): 5.6

Average Unit Gradient: 2.2%

Habitat Units/100m (primary channel length): 5.7

Water temperature (°C): 6.5 - 6.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	MT
Riparian Vegetation:	D15	G

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):	37	7.6
Volume (m ³):	65	13.4
Key pieces (>=12m x 0.60m):	1	0.2

OREGON DEPARTMENT OF FISH AND WILDLIFE

KNIFE CR LOWER PRE-TX (MS-161)

HABITAT INVENTORY

Report Date: 11/15/2013

Survey Date:

2/6/2002

REACH	T23S-R11W-S12NE							REACH				
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	2	14	1.7	0.10	34	0	14	19	19	0	5	43
POOL-LATERAL SCOUR	4	49	6.1	0.71	293	0	7	20	26	2	8	36
RAPID/BEDROCK	4	150	5.5	0.23	819	0	5	10	16	17	21	31
RAPID/BOULDERS	6	113	7.1	0.28	812	0	3	12	19	21	32	13
RIFFLE	11	179	4.9	0.30	886	0	6	15	22	15	19	23
STEP/BOULDERS	1	0	4.8	0.05	2	0	0	0	0	0	0	100
Total:	28	504	5.4	0.32	2,846	0	Avg: 6	14	20	13	19	28

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	4	49	6.1	0.71	293	10.30%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	11	179	4.9	0.30	886	31.13%	0	0.0
Rapids	10	263	6.5	0.26	1,631	57.31%	0	0.0
Cascades	2	14	1.7	0.10	34	1.19%	0	0.0
Step/Falls	1	0	4.8	0.05	2	0.07%	0	0.0
Dry	0	0			0	0.00%	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:	4	7.9	8.2
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	18.4		
Residual pool depth (avg):	0.48		

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **3-MS** SITE ID: **161** **KNIFE CR LOWER PRE-TX (MS-161)**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	9.4		START ABOVE RIGHT TRIB
3	RI	00	29.2		SG = 4 SQ M
5	RI	00	48		/SS
7	SB	00	58.9		H = .65
10	RI	00	111.9		SG = 24 SQ M
12	RI	00	143.2		SPAWNING GRAVEL HERE
14	RR	01	216.8	TJ/	T = 7
15	CB	11	216.8		TRICKLE FLOW, 2%
17	RR	01	270.2	/TJ	SG = 8 SQ M, T = 7
20	LP	00	314.2		SG = 8 SQ M
21	RI	00	332.2		SG = 4 SQ M
22	RR	00	368.1		TIMBER CUT BOUNDARY
24	RB	00	425		SG = 16 SQ M
27	RI	00	482	WL	BOBCAT, KINGFISHER, SG = 8
28	RB	01	487	/TJ	