

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

STREAM: Knife Creek Lower (MS-161)
BASIN: Millicoma River
SURVEY TYPE: Post-Tx
DATE: March 1, 2004
SURVEY CREW: Michael Scheu, Jeremiah Bernier
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.2 km²
USGS MAPS: Elk Peak
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Knife Creek habitat survey extended 532 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 1.4 (range: 1.0-3.0). Land use for the reach was young (3-15 cm dbh) and mature (50-90 cm dbh) trees. The average unit gradient was 3.0 percent. Cascades (32%), scour pools (26%) and rapids (24%) dominated stream habitat. Bedrock (54%) dominated stream substrate. Wood volume was moderate at 29.6 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

T23S-R11W-S12NE

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	1.4	VWI Range:	1 - 3

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	532	2,977	0
Secondary	21	21	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 1
Width: 5.1	Width: 10.1	14.3 (10.2 - 21.6)	17.0 (17 - 17)
Depth: 0.41	Height: 0.6	1.2 (1 - 1.4)	1.9 (1.9 - 1.9)

W:D ratio: 17.0
Stream Flow Type: MF
Avg. Unit Gradient: 3.0%

Entrenchment (ACW:FPW ratio): 1.4
Water temp (°C): 8.0 - 8.0
Habitat Units/100m: 7.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	MT
Riparian Vegetation:	D15	C50

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</u>
All pieces (>=3m x 0.15m):	77	14.5
Volume (m ³):	157	29.6
Key pieces (>=10m x 0.60m):	12	2.3

OREGON DEPARTMENT OF FISH AND WILDLIFE

KNIFE CREEK LOWER POST-TX (MS-161)

HABITAT INVENTORY

Report Date: 6/16/2004

Survey Date:

3/1/2004

REACH 1

T23S-R11W-S12NE

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
CASCADE/BEDROCK	4	99	5.2	0.29	524	0	0	0	1	1	4	94
CASCADE/BOULDERS	4	63	5.8	0.26	430	0	0	3	20	39	34	4
POOL-BACKWATER	1	2	2.5	0.20	6	0	29	38	5	5	10	14
POOL-DAMMED	1	17	5.3	0.90	89	0	0	10	10	0	0	80
POOL-LATERAL SCOUR	6	84	5.4	0.63	451	0	0	7	26	15	6	46
POOL-PLUNGE	6	38	4.7	0.63	181	0	0	4	3	3	5	84
POOL-STRAIGHT SCOUR	1	18	7.6	0.65	137	0	0	10	29	19	5	38
PUDDLED UNIT	1	15	0.7	0.10	10	0	0	5	50	5	0	40
RAPID/BEDROCK	3	62	4.6	0.30	284	0	0	0	3	10	3	83
RAPID/BOULDERS	4	77	5.8	0.30	448	0	0	4	19	45	10	22
RIFFLE	4	64	5.8	0.35	371	0	0	5	27	11	10	48
STEP/BEDROCK	2	8	5.3	0.13	40	0	0	0	0	0	5	95
STEP/BOULDERS	1	6	4.2	0.20	25	0	0	0	6	44	44	6
STEP/LOG	1	1	3.5	0.20	3	0	0	40	40	0	0	20
Total:	39	553	5.1	0.41	2,998	0	Avg: 1	6	15	15	10	54

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	2	19	3.9	0.55	95	3.15%	0	0.0
Scour Pools	13	140	5.2	0.63	769	25.65%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	4	64	5.8	0.35	371	12.39%	0	0.0
Rapids	7	139	5.3	0.30	732	24.41%	0	0.0
Cascades	8	162	5.5	0.28	953	31.79%	0	0.0
Step/Falls	4	14	4.6	0.16	68	2.26%	0	0.0
Dry	1	15	0.7	0.10	10	0.35%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	<u>Total</u>	<u># / Km</u>	
All Pools:	15	27.1	21
Pools >=1m deep:	0	0.0	
Complex pools (LWD pieces>=3):	4	7.2	
Pool frequency (channel widths/pool):	3.6		
Residual pool depth (avg):	0.34		

STREAM SUMMARY

KNIFE CREEK LOWER POST-TX (MS-161)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate						Large Boulders (#>0.5m)
					Percent Wetted Area						
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
39	553	5.1	0.41	2,998	1	6	15	15	10	54	

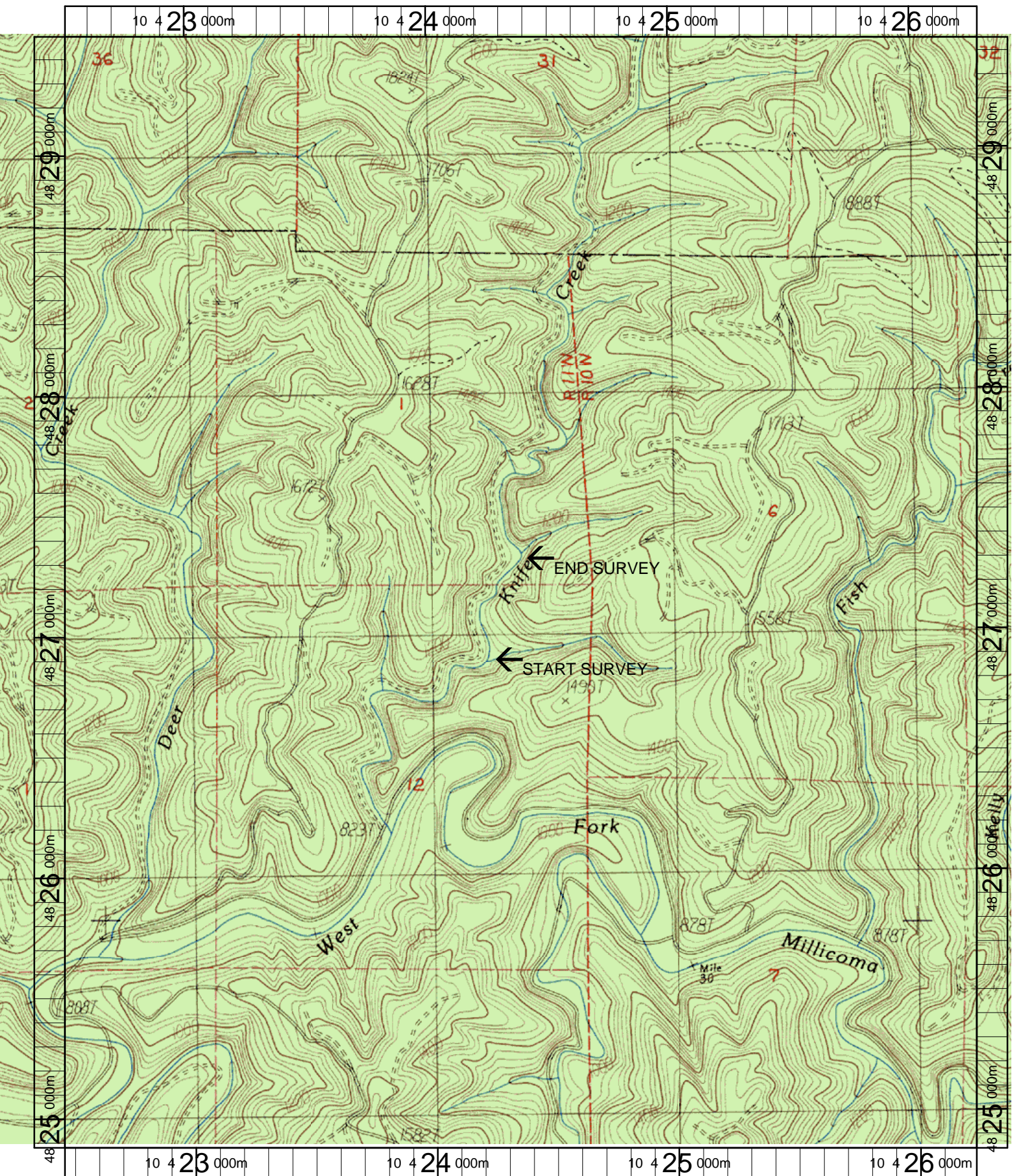
Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	95	3.15%
Scour Pools	769	25.65%
Glides	0	0.00%
Riffles	371	12.39%
Rapids	732	24.41%
Cascades	953	31.79%
Step/Falls	68	2.26%
Dry	10	0.35%
Culverts	0	0.00%

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **3-MS** SITE ID: **161** **KNIFE CREEK LOWER POST-TX (MS-**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	00	24.5		T=8C	
2	LP	00	36.6		FISH BONES	
3	CB	00	64.6	/SS		
7	RR	00	121.6	SS/SS		
10	BW	10	145.1	/SS		
11	CB	00	164.8		PHOTO 79	
19	CR	00	241.8	SS/		
21	SP	00	276.6	WL	SPAWN SIGN, PINK FLAG	
22	CR	00	305.6	HS	LOG	
23	RB	01	316.3	/SS, TJ		
24	CB	11	316.3		ACW=1.6, T=8C	
25	LP	01	336.5		STHD REDD	
26	SB	01	342.5		FISH BONES	
30	SL	00	376.5	SS/	H=.8M	
34	CR	00	473.1	HS	3 LOGS	
35	LP	00	482.3	HS	LOG, SG=4M	
39	LP	00	531.7	HS	BROKEN LOG	



Name: ELK PEAK
 Date: 3/20/2003
 Scale: 1 inch equals 1666 feet

Location: 10 424365 E 4827171 N
 Caption: KNIFE CREEK LOWER RESTORATION SITE - MILLICOMA BASIN