

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

STREAM: Esmond Creek Lower (MC-137)
BASIN: Siuslaw River
SURVEY TYPE: Post-Tx
DATE: February 20, 2008
SURVEY CREW: Kyle Brachter, Bobby Gomez
REPORT PREPARED BY: Sharon Tippery
BASIN AREA: 31.8 km²
USGS MAPS: Roman Nose Mountain
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Esmond Creek Lower habitat survey extended 510 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 14 (range: 9-20). Land use for the reach was second growth timber (15-30cm dbh) and large growth timber (30-50cm dbh). The average unit gradient was 0.8 percent. Scour pools (68%) dominated stream habitat. Gravel (47%) and bedrock (33%) dominated stream substrate. Wood volume was 6.0m³/100m.

COMMENTS:

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

The crew noted several habitat structures during the survey.

Two redds were observed during the survey.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**ESMOND CREEK (LOWER)
GCG: 2-MC SITE ID: 137**

Survey Date: 2/20/2008

Report Date: 5/8/2008

T19S-R08W-S16NE

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	14.0	VWI Range:	9 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	510	5,310	0
Secondary	10	64	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 4
Width: 9.5	Width: 13.5	15.7 (13.3 - 18.5)	20.8 (19.5 - 22)
Depth: 0.59	Height: 0.7	1.4 (1.2 - 1.5)	2.5 (1.7 - 3.2)

W:D ratio: 19.6

Stream Flow Type: MF

Average Unit Gradient: 0.8%

Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 3.7

Habitat Units/100m (primary channel length): 3.7

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	M30	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):	20	3.9
Volume (m ³):	30	6.0
Key pieces (>=12m x 0.60m):	2	0.4

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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
POOL-LATERAL SCOUR	8	312	10.2	0.97	3,305	0	0	5	44	8	8	36
POOL-STRAIGHT SCOUR	1	27	12.8	0.70	351	0	0	5	29	5	5	57
RAPID/BEDROCK	1	34	8.0	0.35	272	0	0	0	10	5	5	80
RAPID/BOULDERS	3	44	8.5	0.32	381	0	0	2	45	10	20	23
RIFFLE	4	95	11.0	0.31	1,012	0	0	3	74	9	8	8
STEP/BEDROCK	1	2	0.5	0.02	1	0	0	0	0	0	0	100
STEP/COBBLE	1	6	8.2	0.25	52	0	0	0	80	20	0	0
Total:	19	520	9.5	0.59	5,374	0	Avg: 0	3	47	8	8	33

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	9	340	10.5	0.94	3,656	68.02%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	4	95	11.0	0.31	1,012	18.84%	0	0.0
Rapids	4	78	8.4	0.33	653	12.15%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	2	8	4.4	0.14	53	0.99%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

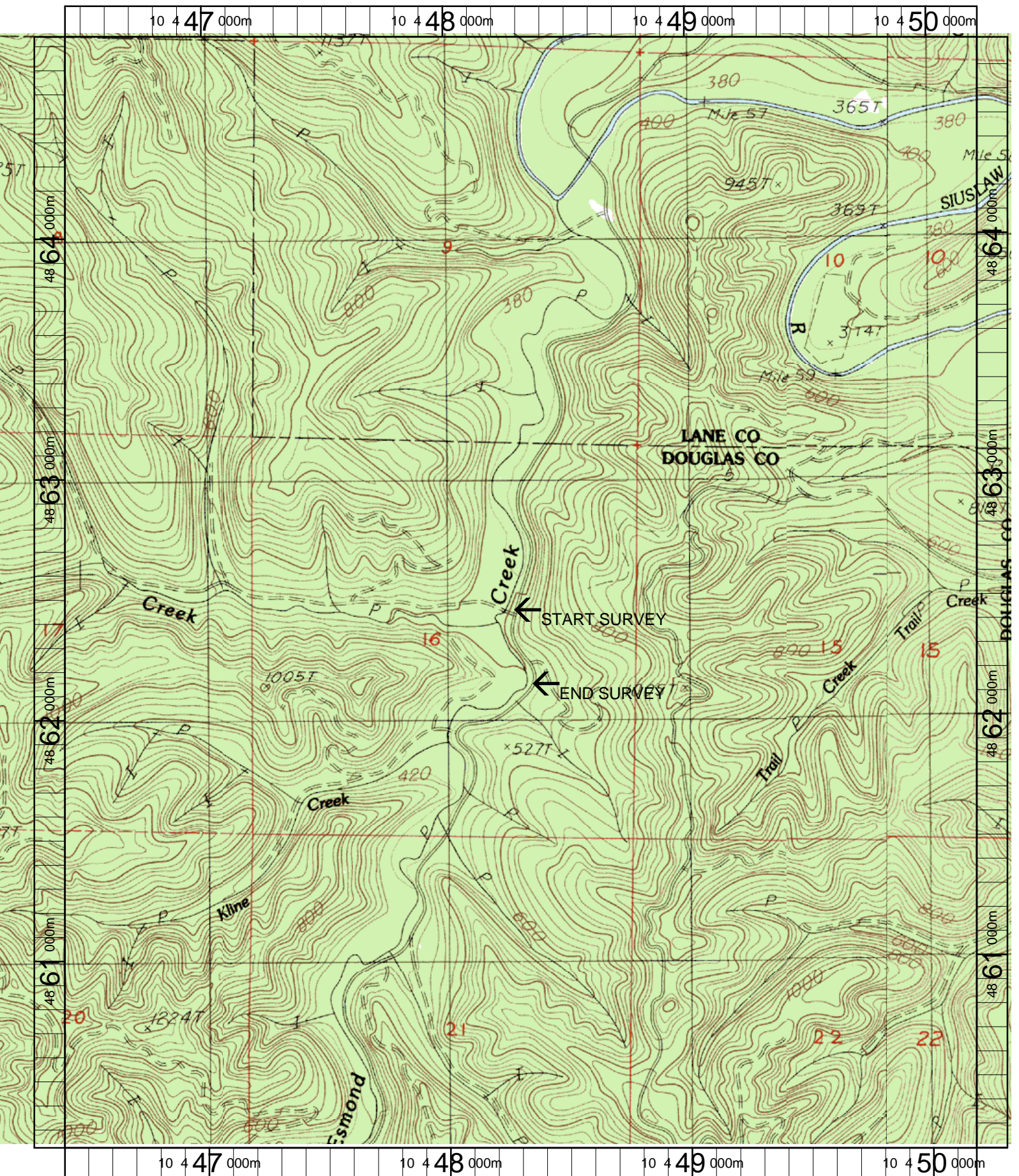
POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	9	17.3	17.6
Pools >=1m deep:	4	7.7	7.8
Complex pools (LWD pieces>=3):	2	3.8	3.9
Pool frequency (channel widths/pool):	4.3		
Residual pool depth (avg):	0.60		

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 137 STREAM: ESMOND CREEK (LOWER)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	LP	00	59	BC,CS/CSHS	
2	RI	00	75.5		FORM:CT,MT. VEG:M30,S. USE:LT,ST.
3	LP	00	128.5	/SS	REDDS
6	RB	00	192.4		FORM:CT,CT. VEG:C30,S. USE:ST,LT.
7	SP	01	219.8	/TJ	
8	RB	11	219.8		TEMPERATURE=8C, ACW=9.5M
10	LP	00	303.6	HS	
11	LP	00	335.6		REDD
13	RR	00	392.4		FORM:CT,CT. VEG:M30,S. USE:ST,LT.
18	SC	01	508.5	TJ/	FORM:CA,CT. VEG:M30,S. USE:ST,LT.
19	SR	00	510		ACW=1M, TEMPERATURE=8C



Name: ROMAN NOSE MT
 Date: 3/20/2003
 Scale: 1 inch equals 1666 feet

Location: 10 448303 E 4862522 N
 Caption: ESMOND CREEK (LOWER) RESTORATION SITE -
 SIUSLAW BASIN