

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

STREAM: Esmond Creek Middle (MC-138)  
BASIN: Siuslaw River  
SURVEY TYPE: Post-Tx  
DATE: July 9, 2003  
SURVEY CREW: Alex Higgins, Jeremiah Bernier  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 44.9 km<sup>2</sup>  
USGS MAPS: Roman Nose Mtn.  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Esmond Creek habitat survey extended 552 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.7 (range: 4.0-9.5). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 0.9 percent. Scour pools (41%) and riffles (41%) dominated stream habitat. Bedrock (43%) dominated stream substrate. Wood volume was low at 12.4 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.



**OREGON DEPARTMENT OF FISH AND WILDLIFE    ESMOND CREEK MIDDLE POST-TX (MC-138)**

**HABITAT INVENTORY**

Report Date: 12/17/03

Survey Date:

7/9/03

<b>REACH 1</b>		<b>T19S-R08W-S16SE</b>					<b>REACH 1</b>						
<b>HABITAT DETAIL</b>													
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	
GLIDE	2	68	6.2	0.18	426	61	0	5	15	8	15	58	
POOL-DAMMED	1	7	8.0	0.60	58	11	0	5	35	40	20	0	
POOL-ISOLATED	2	16	2.9	0.36	50	0	20	60	20	0	0	0	
POOL-LATERAL SCOUR	7	164	6.5	0.57	1,008	20	5	23	18	9	7	38	
POOL-STRAIGHT SCOUR	1	50	8.2	0.50	407	0	0	15	5	20	0	60	
RAPID/BEDROCK	1	15	0.3	0.00	5	0	0	0	10	20	0	70	
RIFFLE	7	246	4.7	0.09	1,173	42	3	7	17	10	4	59	
RIFFLE W/ POCKETS	1	31	7.3	0.25	228	100	0	10	29	19	38	5	
STEP/BEDROCK	2	21	3.4	0.04	67	7	0	0	0	0	8	93	
STEP/BOULDERS	1	1	6.4	0.05	4	6	0	0	30	5	65	0	
STEP/COBBLE	1	3	2.0	0.10	7	0	0	40	60	0	0	0	
<b>Total:</b>	26	621	5.2	0.28	3,433	247	<b>Avg</b>	4	16	19	10	43	

<b>HABITAT SUMMARY</b>									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		69
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	3	23	4.6	0.44	108	3.14%	11	10.2	
Scour Pools	8	214	6.7	0.56	1,415	41.21%	20	1.4	
Glides	2	68	6.2	0.18	426	12.42%	61	14.3	
Riffles	8	277	5.0	0.11	1,402	40.83%	142	10.1	
Rapids	1	15	0.3	0.00	5	0.13%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	4	25	3.8	0.06	78	2.26%	13	16.8	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

<b>POOL SUMMARY</b>		
	<u>Total</u>	<u># / Km</u>
All Pools:	11	17.7
Pools >=1m deep:	0	0.0
Complex pools (LWD pieces>=3):	4	6.4
Pool frequency (channel widths/pool):	5.0	
Residual pool depth (avg):	0.47	

**STREAM SUMMARY**

**ESMOND CREEK MIDDLE POST-TX (MC-138)**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
26	621	5.2	0.28	3,433	4	16	19	10	10	43	247

Habitat Group	Wetted Area	
	(m <sup>2</sup> )	Percent
Dammed & BW Pools	108	3.14%
Scour Pools	1,415	41.21%
Glides	426	12.42%
Riffles	1,402	40.83%
Rapids	5	0.13%
Cascades	0	0.00%
Step/Falls	78	2.26%
Dry	0	0.00%
Culverts	0	0.00%

**OREGON DEPARTMENT OF FISH AND WILDLIFE    ESMOND CREEK MIDDLE POST-TX (MC-138)**

**HABITAT INVENTORY**    Report Date: 12/15/03    Survey Date: 7/9/03

**RIPARIAN ZONE VEGETATION SUMMARY**

**REACH 1**    **REACH 1**

**Summary of Riparian Zone (0-30m)    3 transects**

Total hardwoods/1000	671
Total conifers/1000 ft	41
Total conifers >20" dbh/1000 ft	20
Total conifers >35" dbh/1000 ft	0

**Average number of trees in a 5-meter wide band**

Diameter class (cm)	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.3	2.3	0.0	3.0	0.0	1.3	0.3	6.7
15-30cm	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.7
30-50cm	0.0	1.3	0.0	0.0	0.0	2.0	0.0	3.3
50-90cm	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	4.0	0.0	3.3	0.0	3.7	0.2	3.7

**Canopy closure and ground cover**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	77	76	64
Shrub cover	93	81	73
Grass/forb cover	3	10	17

**Predominant landform in each zone**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	17	0	33
High terrace	83	100	67
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	3	0	3

Summary of Riparian Zone (0-30m) for all reaches 3 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	671
Total conifers/1000 ft	41
Total conifers >20" dbh/1000 ft	20
Total conifers >35" dbh/1000 ft	0

**Average number of trees in a 5-m wide band**

<u>Diameter class (cm)</u>	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.3	6.7
15-30cm	0.0	0.7
30-50cm	0.0	3.3
50-90cm	0.3	0.3
>90cm	0.0	0.0

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**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
7	LF	3	HT	0	55	80	10	Conifer							
								Hardwood	1	1	4				
7	RT	3	HT	0	60	90	10	Conifer							
								Hardwood							
7	RT	2	HT	0	65	80	10	Conifer							
								Hardwood	2						
7	LF	1	HS	15	80	80	5	Conifer							
								Hardwood	4	1	3				
7	LF	2	HT	0	70	80	0	Conifer							
								Hardwood	1				1		
7	RT	1	HT	0	55	90	10	Conifer						1	
								Hardwood	1						
17	LF	1	HT	0	70	90	0	Conifer							
								Hardwood			1				
17	RT	3	HT	0	65	70	10	Conifer							
								Hardwood							
17	RT	2	HT	0	70	95	0	Conifer							
								Hardwood							
17	RT	1	HT	0	75	95	0	Conifer							
								Hardwood							
17	LF	2	HT	0	75	90	0	Conifer							
								Hardwood							
17	LF	3	HT	0	55	90	0	Conifer							
								Hardwood			1				
23	RT	3	HS	10	75	20	60	Conifer							
								Hardwood	2						
23	RT	2	HT	0	85	40	50	Conifer							
								Hardwood	1						
23	LF	1	HT	0	90	100	0	Conifer							
								Hardwood	2						
23	LF	2	HT	0	90	100	0	Conifer							
								Hardwood	5						
23	LF	3	HS	5	75	90	10	Conifer							
								Hardwood	1		1				
23	RT	1	HT	0	90	100	0	Conifer	1						
								Hardwood							

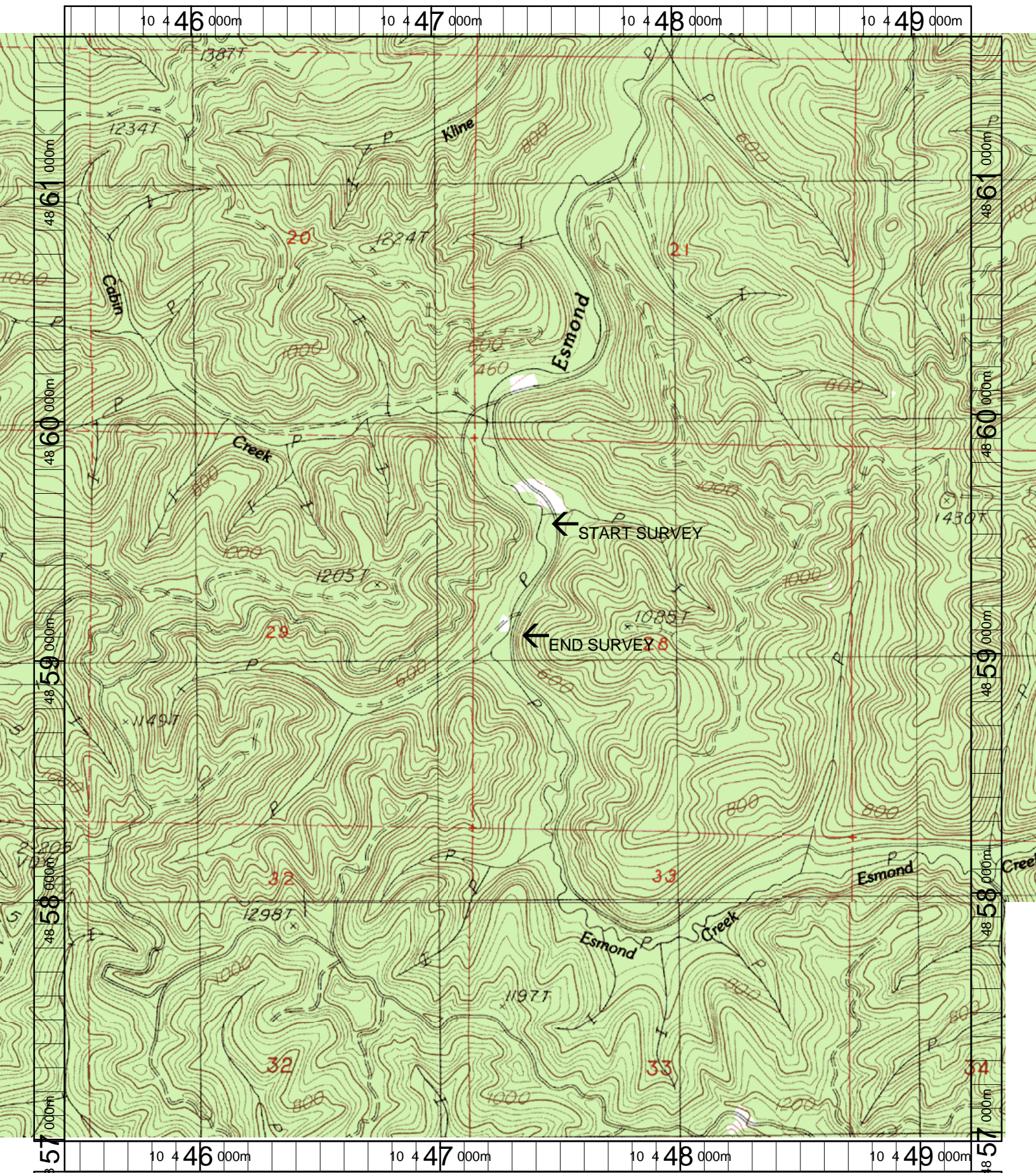
# Comment Summary

## Oregon Plan Monitoring Sites 2003

MONITORING AREA: **2-MC**      SITE ID: **138**      **ESMOND CREEK MIDDLE 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>
1	RP	01	31.3	TJ/ HS	T= 14	BOULDERS
2	RR	11	31.3		ACW=1.8 T=11	
8	RI	02	170.4	DJ		
14	LP	00	214.1	HS		
15	SB	00	214.7	HS	H= .15	
16	DP	00	222	HS		
17	LP	00	251.2	HS		
19	LP	00	303.8	HS		
22	RI	00	366		AQI UNIT 290 6-27-01	
25	GL	00	498.6	HS		BOULDERS
26	RI	00	552.3			END





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

Location: 10 447338 E 4859290 N  
 Caption: ESMOND CREEK (MIDDLE) RESTORATION SITE -  
 SIUSLAW BASIN