

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

STREAM: Feagles Creek (MC-31)  
BASIN: Yaquina River  
SURVEY TYPE: Pre-Tx  
DATE: June 28, 2001  
SURVEY CREW: Russ Macal, Justin Gerding  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 21.0 km<sup>2</sup>  
USGS MAPS: Harlan  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Feagles Creek habitat survey extended 521 meters. The channel was single channel unconstrained in a broad valley floor. The average valley width index was 4.5 (range: 3.0 – 8.0). Land use for the reach was light grazing and second growth (15-30 cm dbh) trees. The average unit gradient was 2.3 percent. Riffles (58%) and scour pools (26%) dominated stream habitat. Gravel (33%) and cobble (32%) dominated stream substrate. Wood volume was low at 9.8 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T12S-R8W-S30NE

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 avg: 4.5 range: 3.0-8.0

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	521	2,111	0
Secondary	38	109	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<u>First Terrace</u>
Width 4.0	10.8	29.3	17.1
Depth 0.50	Height 0.6	1.2	1.6
	W:D ratio 17.2	Entrenchment 3.1	

Stream Flow Type: LF Water Temp: 11.0-11.0°C  
 Avg. Unit Gradient: 2.3% Habitat Units/100m: 5.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LG	ST
Riparian Vegetation:	G	D30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	2%	Reach avg: 54%
Undercut Banks	0%	Range: 36-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	85	16.3
Volume (m <sup>3</sup> )	51	9.8
Key pieces (≥10m x 0.6m)	2	0.4

REACH 1

T12S-R8W-S30NE

REACH 1

HABITAT DETAIL

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	Cbbl	Bldr	Bdrk
CULVERT CROSSING	1	17	2.0	0.15	34	0	0	5	35	50	10	0
POOL-BACKWATER	5	38	3.0	0.56	109	3	20	49	13	15	3	0
POOL-BEAVER DAM	1	31	7.1	0.90	220	0	10	35	20	30	5	0
POOL-LATERAL SCOUR	9	102	3.9	0.81	407	2	4	28	40	19	2	7
POOL-PLUNGE	1	14	12.2	1.50	168	1	0	17	33	39	11	0
RIFFLE	11	356	3.7	0.19	1,277	21	0	8	40	46	6	0
STEP/BEAVER DAM	1	1	6.8	0.01	3	0	0	10	20	70	0	0
STEP/STRUCTURE	1	0	1.7	0.10	1	0	40	40	20	0	0	0
<b>Total:</b>	<b>30</b>	<b>558</b>	<b>4.0</b>	<b>0.50</b>	<b>2,220</b>	<b>27</b>	<b>Avg: 6</b>	<b>23</b>	<b>33</b>	<b>32</b>	<b>4</b>	<b>2</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m <sup>2</sup> )	Percent	Large Boulders Number	Boulders #/100m <sup>2</sup>
Dammed & BW Pools	6	69	3.7	0.62	329	14.83	3	0.9
Scour Pools	10	115	4.7	0.88	575	25.92	3	0.5
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	11	356	3.7	0.19	1,277	57.53	21	1.6
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	2	1	4.3	0.06	4	0.18	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	16	28.7
Pools ≥1m deep:	3	5.4
Complex pools (LWD pieces ≥3):	8	14.3
Pool Frequency (channel widths/pool):	3.2	
Residual pool depth (avg)	0.74m	

STREAM SUMMARY

FEAGLES CREEK PRE-TX (#31)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
30	558	4.0	0.50	2,220	6	23	33	32	4	2	27

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	575	25.9
Backwater Pools	329	14.8
Glide	0	0.0
Riffle	1,277	57.5
Rapid	0	0.0
Cascade	0	0.0
Step	4	0.2
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	528
Total conifers/1000 ft	102
Total conifers >20" dbh/1000 ft	0
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	0.0	2.3	1.0	0.7	0.0	1.7	1.0	4.7
15-30cm	0.3	0.0	0.0	1.7	0.3	0.0	0.7	1.7
30-50cm	0.0	0.3	0.0	1.0	0.0	0.7	0.0	2.0
50-90cm	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m <sup>2</sup>	0.3	2.7	1.0	3.7	0.3	2.3	0.6	2.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	35		53		50	
Shrub cover	18		22		27	
Grass/forb cover	82		78		58	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	33		33		50
High terrace	17		17		17	
Low terrace	50		50		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		33	
Riprap	0		0		0	
Surface slope (%)	21		11		16	

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

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

Total hardwoods/1000 ft	528
Total conifers/1000 ft	102
Total conifers >20" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	1.0	4.7
15-30cm	0.7	1.7
30-50cm	0.0	2.0
50-90cm	0.0	0.3
>90cm	0.0	0.0

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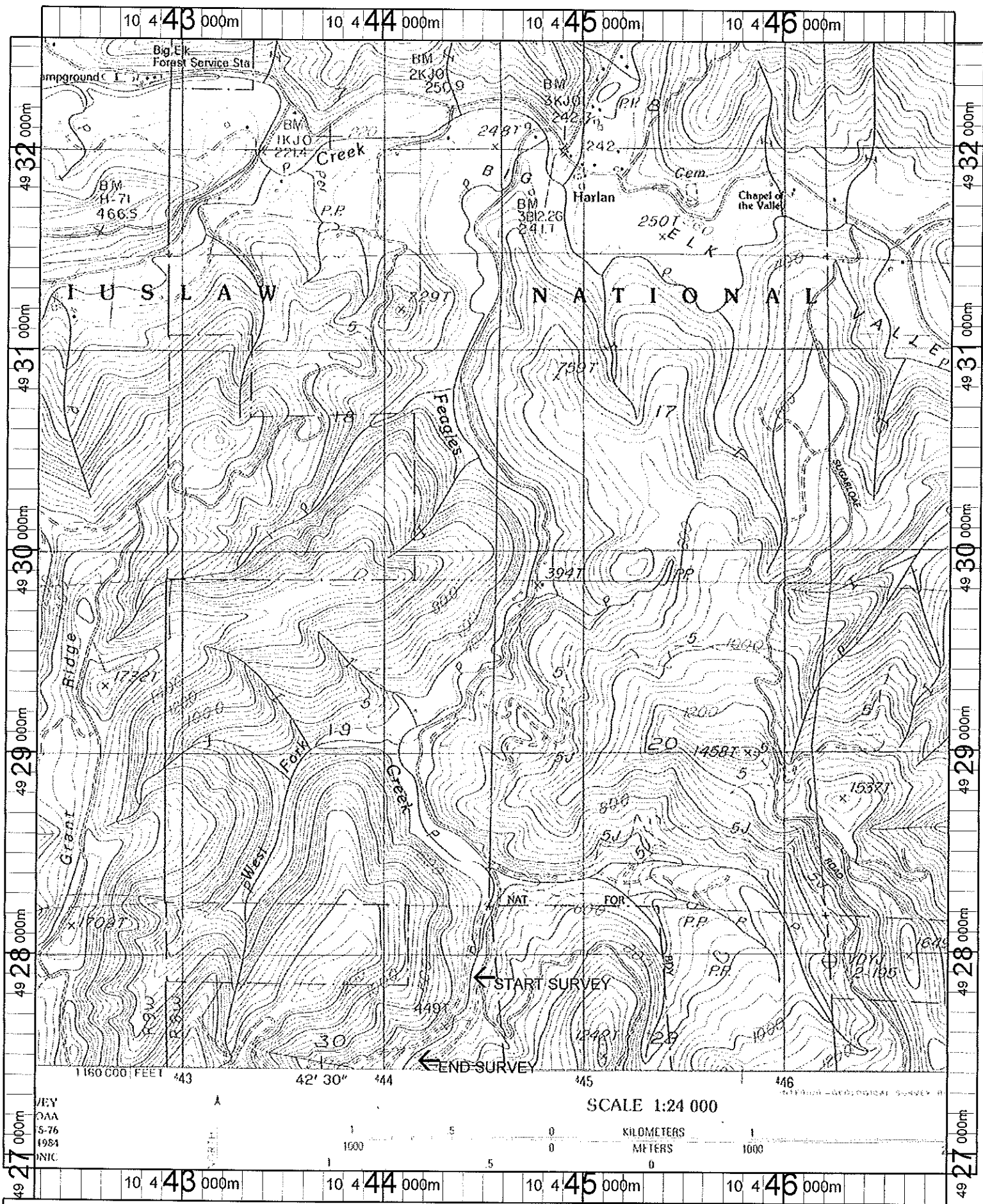
RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

Unit	Side	Zone	Surface	Slope	Cover (percent)			Diameter class (cm)					Notes	
					Canopy	Shrub	Grass	3-15	15-30	30-50	50-90	>90		
8	LF	1	HS	80.0	20	60	40	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	0	0	ALDER
8	LF	2	HS	50.0	70	60	40	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	0	0	
8	LF	3	HS	30.0	90	60	40	Conifer	0	0	0	0	0	
								Hardwood	0	0	2	0	0	ALDER
8	RT	1	LT	0.0	60	20	80	Conifer	0	0	0	0	0	
								Hardwood	6	0	0	0	0	CASCARA
8	RT	2	LT	0.0	100	10	90	Conifer	0	0	0	0	0	
								Hardwood	2	5	2	0	0	ALDER
8	RT	3	HS	45.0	80	20	70	Conifer	0	0	0	0	0	
								Hardwood	2	0	0	0	0	VINE MAPLE
15	LF	1	HT	0.0	30	10	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
15	LF	2	HT	0.0	0	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
15	LF	3	HT	0.0	20	10	90	Conifer	0	1	0	0	0	
								Hardwood	0	0	0	0	0	DOUGLAS FIR
15	RT	1	HS	45.0	60	0	100	Conifer	0	0	0	0	0	
								Hardwood	1	0	0	0	0	CASCARA
15	RT	2	HS	15.0	100	40	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	1	0	ALDER
15	RT	3	RB	0.0	60	0	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
26	RT	1	LT	0.0	40	0	100	Conifer	0	1	0	0	0	
								Hardwood	0	0	0	0	0	DOUGLAS FIR, BLACKB
26	RT	2	LT	0.0	50	0	100	Conifer	3	0	0	0	0	
								Hardwood	0	0	0	0	0	DOUGLAS FIR, BLACKB
26	RT	3	RB	0.0	20	0	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
26	LF	1	LT	0.0	0	20	80	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
26	LF	2	LT	0.0	0	20	80	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
26	LF	3	HS	20.0	30	70	30	Conifer	0	0	0	0	0	
								Hardwood	3	0	0	0	0	VINE MAPLE



Name: HARLAN  
 Date: 1/10/2002  
 Scale: 1 inch equals 2000 feet

Location: 10 444559 E 4929722 N  
 Caption: FEAGLES CREEK RESTORATION SITE - YAQUINA BASIN