

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

STREAM: Feagles Creek (MC-31)  
BASIN: Yaquina River  
SURVEY TYPE: Post-Tx  
DATE: June 27, 2007  
SURVEY CREW: Kara Anlauf, Jeff Snyder  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 8.7 km<sup>2</sup>  
USGS MAPS: Harlan  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Feagles Creek habitat survey extended 485 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.5 (range: 3.5-9.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.4 percent. Riffles (73%) and scour pools (23%) dominated stream habitat. Cobble (42%) and gravel (25%) dominated stream substrate. Wood volume was moderate at 24.0 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.

REACH 1

T12S-R08W-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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.5	VWI Range:	3.5 - 9

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	100%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary Channel	485	2,651	0
Secondary Channel	19	29	1
Off-Channel Units	8	23	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.1	Width: 6.5	14.8 ( 7.1 - 21.4 )	18.6 ( 10.8 - 29.3 )
Depth: 0.32	Height: 0.5	1.0 ( 1 - 1.1 )	1.9 ( 1.3 - 3.2 )

W:D ratio: 12.9

Entrenchment (ACW:FPW ratio): 2.5

Stream Flow Type: MF

Habitat Units/100m (total channel length): 7.2

Average Unit Gradient: 1.4%

Habitat Units/100m (primary channel length): 7.6

Water temperature (°C): 11.0 - 11.0

**Riparian, Bank, and Wood Summary**

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	5%	Reach avg: 66%
Undercut Banks:	3%	Range: 31 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	130	26.8
Volume (m <sup>3</sup> ):	116	24.0
Key pieces (>=12m x 0.60m):	1	0.2

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

6/27/2007

REACH 1		T12S-R08W-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	Cbl	Bldr	Bdrk
DRY CHANNEL	1	19	1.5	0.00	29	0	0	10	35	55	0	0
POOL-BACKWATER	2	6	3.1	0.18	17	0	93	8	0	0	0	0
POOL-LATERAL SCOUR	12	129	4.8	0.61	580	14	12	26	26	28	0	8
POOL-STRAIGHT SCOUR	2	14	3.1	0.50	43	5	3	23	30	35	5	5
RIFFLE	17	330	6.1	0.16	1,976	116	1	13	29	53	2	1
STEP/BEDROCK	1	2	3.0	0.05	6	0	0	0	0	0	0	100
STEP/COBBLE	2	12	4.4	0.20	52	6	0	0	10	90	0	0
<b>Total:</b>	<b>37</b>	<b>512</b>	<b>5.1</b>	<b>0.32</b>	<b>2,703</b>	<b>141</b>	<b>Avg: 10</b>	<b>16</b>	<b>25</b>	<b>42</b>	<b>1</b>	<b>6</b>

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		
					(m <sup>2</sup> )	Percent	Number	(# / 100m <sup>2</sup> )	
Dammed & BW Pools	2	6	3.1	0.18	17	0.62%	0	0.0	
Scour Pools	14	143	4.6	0.60	623	23.05%	19	3.1	
Glides	0	0			0	0.00%	0	0.0	
Riffles	17	330	6.1	0.16	1,976	73.09%	116	5.9	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	3	14	3.9	0.15	59	2.18%	6	10.2	
Dry	1	19	1.5	0.00	29	1.07%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	16	31.3	33.0
Pools >=1m deep:	1	2.0	2.1
Complex pools (LWD pieces>=3):	8	15.6	16.5
Pool frequency (channel widths/pool):	4.9		
Residual pool depth (avg):	0.42		

Survey Date 6/27/2007

**RIPARIAN ZONE**

Report Date: 11/7/2007

**VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	671
Total conifers/1000 ft	20
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		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	4.0	0.0	0.3	0.0	1.3	0.0	5.7
15-30cm	0.0	1.3	0.0	0.3	0.0	1.7	0.0	3.3
30-50cm	0.0	1.3	0.0	0.3	0.3	0.3	0.3	2.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	6.7	0.0	1.0	0.3	3.3	0.1	3.7

**Canopy closure and ground cover**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	59		38		53	
Shrub cover	52		48		48	
Grass/forb cover	48		52		52	

**Predominant landform in each zone**

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		33		50	
High terrace	83		67		33	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		17	
Riprap	0		0		0	
Surface slope (%)	6		15		23	

**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	20
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

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

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	5.7
15-30cm	0.0	3.3
30-50cm	0.3	2.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

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COMMENT SUMMARY

MONITORING AREA: 2-MC      SITE ID: 31      STREAM: FEAGLES CREEK POST-TX

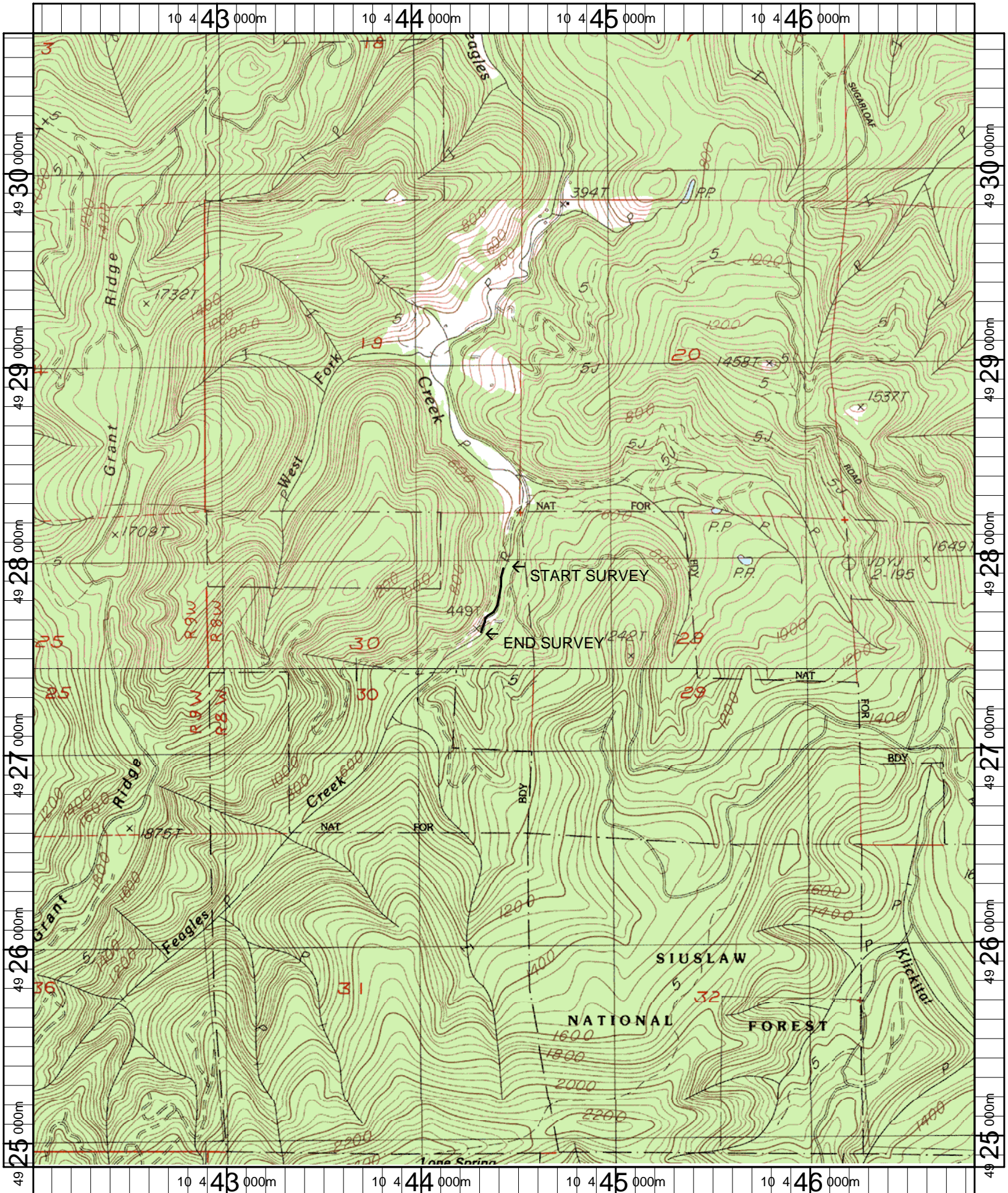
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	LP	00	13.5	US, SS/	
4	RI	00	41.8	US	
7	LP	00	90.1	CO	
11	SP	00	164.5	CO	
12	RI	00	186	CO	
13	LP	00	192.2	CO	
15	LP	00	213.8	CO	
17	LP	00	233.6	CO, HS	
18	BW	10	233.6	SS/, AM	TREE FROG
20	LP	00	255.5	HS	
22	BW	10	255.5	AM	RSN
23	LP	00	261.8	HS, CO, AM	
24	RI	00	288.8	CO, BV	
25	LP	00	297.1	BV, CO, AM	
26	RI	00	313.3	BV	
27	LP	00	322.4	HS, CO, AM	
28	RI	01	344.5	BV	
29	DC	02	344.5		DRY CHANNEL
30	LP	00	353.1	BC	
32	RI	00	385.7	/CS, WL	AM. DIPPER
34	RI	00	424.7	CO	
35	SP	00	432.3	CO	

**COMMENT SUMMARY**

MONITORING AREA: 2-MC      SITE ID: 31      STREAM: FEAGLES CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
36	RI	00	457.6	CO, HS	
37	RI	00	484.6	BV, CO	DEER TRACKS, GAME TRAIL





Name: HARLAN  
 Date: 4/26/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 0444449 E 4927781 N  
 Caption: FEAGLES CREEK RESTORATION SITE - MC - 31 - YAQUINA BASIN