

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: January 30, 2007
SURVEY CREW: Brian Bangs, Paul Jacobsen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 8.7 km²
USGS MAPS: Harlan
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Feagles Creek habitat survey extended 506 meters. The channel was alternately constrained by hillslope and terrace in a broad valley floor. The average valley width index was 3.2 (range: 1.8-5). Land use for the reach was second growth timber (15-30 cm dbh). The average unit gradient was 2.5 percent. Riffles (56%) and scour pools (26%) dominated stream habitat. Gravel (40%) and cobble (22%) dominated stream substrate. Wood volume was moderate at 22.8 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.

Minimal beaver activity was noted in the survey. A Coho carcass (fin-clipped), 3 redds, and a game trail were observed during the survey.

Stream Feagles Creek (MC-31)

Basin Yaquina River

Treatment Large Wood, Culvert to Bridge

	ODFW Benchmark		Pre	Post	Post		
Habitat Variable	Desirable	Undesirable	1/29/01	1/28/02	1/30/07		
% Pool Area	>35%	<10%	32.8	23.8	27.7		
Number of Pools			17	6	13		
Deep Pools/km (>1.0 m)			5.2	8.2	1.8		
% Off-Channel			7.6	0.0	2.4		
LWD – Pieces/100m	>20	<10	35.7	25.9	24.1		
LWD – Volume/100m	>30	<20	25.6	43.7	22.8		
LWD – Key Pieces/100m	>3	<1	0.2	3.7	1		
Large Wood Jams/km			29.4	18.5			
% Riffle Fines	<10	>20	11	8	16		
% Riffle Gravel	>35	<15	81	35	42		
% Bedrock			6	8	8		

Bold is noticeable change

Comments: Pool area, the number of pools and the number of deep pools has decreased over the last several years. This may be due to pools filling in through time, or may merely be a symptom of variable winter stream flows. Off channel habitat is reduced from pre-treatment conditions, but rebounding from the last post-treatment survey. Large wood numbers seem to be decreasing with time, suggesting that wood is leaving the reach without additional replenishment from the riparian area. Riffle gravel has lowered since the original pre-treatment 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	3.2	VWI Range:	1.8 - 5

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	506	2,436	0
Secondary Channel	0	0	0
Off-Channel Units	54	59	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 4.3	Width: 12.9	23.5 (15.4 - 35)	28.6 (17.3 - 37)
Depth: 0.37	Height: 0.8	1.5 (1.2 - 1.7)	2.1 (1.7 - 3)

W:D ratio: 17.0

Entrenchment (ACW:FPW ratio): 1.9

Stream Flow Type: MF

Habitat Units/100m (total channel length): 6.1

Average Unit Gradient: 2.5%

Habitat Units/100m (primary channel length): 6.7

Water temperature (°C): 7.0 - 7.0

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:		Reach avg:
Undercut Banks:		Range: -

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	122	24.1
Volume (m ³):	115	22.8
Key pieces (>=12m x 0.60m):	5	1.0

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

1/30/2007

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 ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BOULDERS	1	6	0.6	0.03	4	0	0	5	55	30	10	0
POOL-BACKWATER	1	9	2.0	0.08	18	0	25	55	15	5	0	0
POOL-ISOLATED	1	3	2.0	0.20	6	0	65	35	0	0	0	0
POOL-LATERAL SCOUR	11	144	5.1	0.75	666	0	8	16	45	14	8	9
RAPID/BEDROCK	1	14	6.0	0.25	86	0	0	10	30	10	0	50
RAPID/BOULDERS	3	48	4.2	0.15	244	0	0	27	40	22	12	0
RIFFLE	13	320	4.4	0.21	1,405	0	5	11	42	31	9	3
STEP/BEDROCK	1	4	1.4	0.02	5	0	0	0	30	0	0	70
STEP/COBBLE	2	12	5.1	0.20	61	0	5	5	33	43	12	3
Total:	34	560	4.3	0.37	2,494	0	Avg: 7	15	40	22	8	8

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	12	2.0	0.14	24	0.98%	0	0.0	
Scour Pools	11	144	5.1	0.75	666	26.70%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	13	320	4.4	0.21	1,405	56.32%	0	0.0	
Rapids	4	63	4.7	0.18	330	13.22%	0	0.0	
Cascades	1	6	0.6	0.03	4	0.14%	0	0.0	
Step/Falls	3	15	3.9	0.14	66	2.64%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

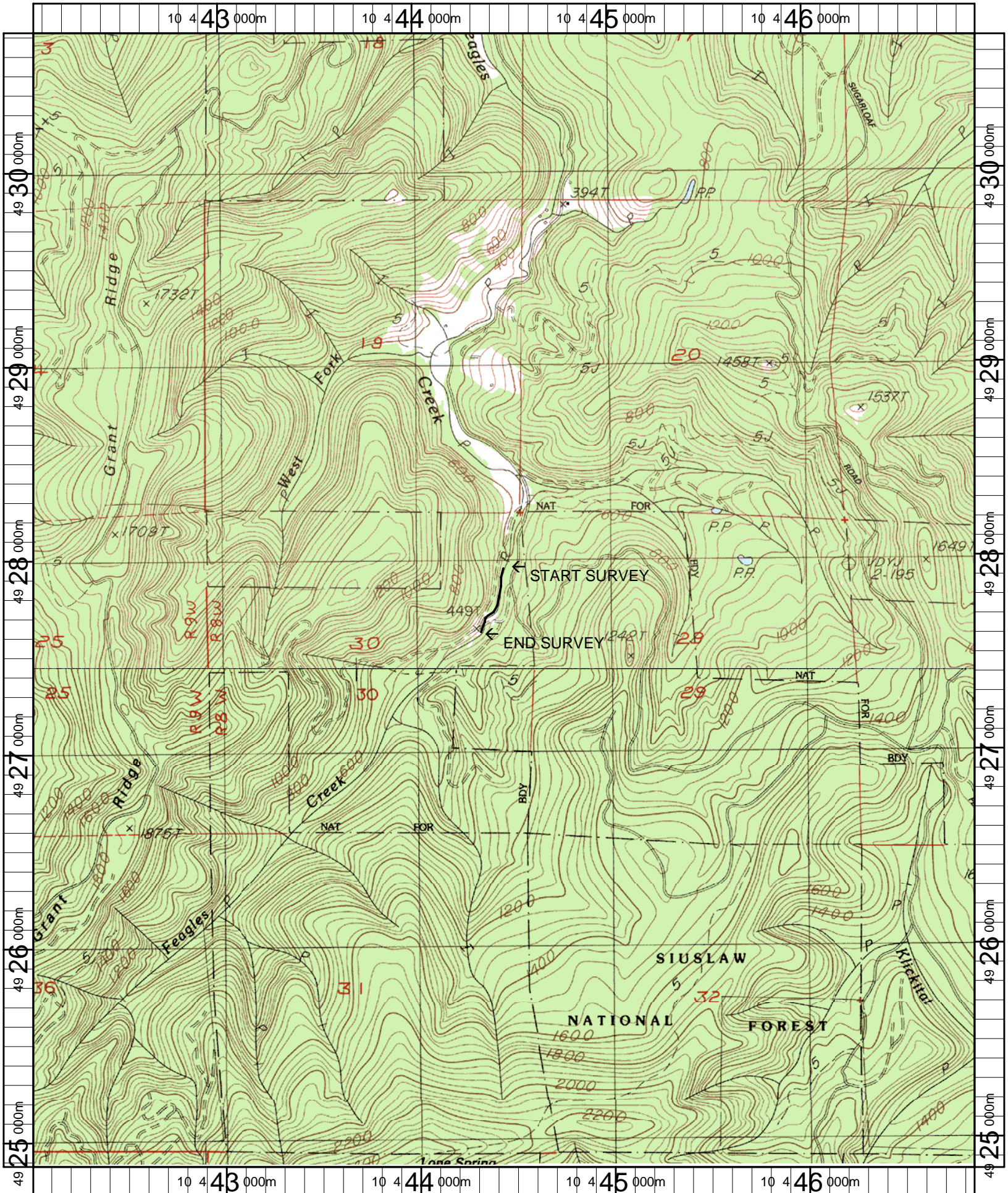
POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	13	23.2	25.7
Pools >=1m deep:	1	1.8	2.0
Complex pools (LWD pieces>=3):	7	12.5	13.8
Pool frequency (channel widths/pool):	3.3		
Residual pool depth (avg):	0.51		

Comment Summary

Restoration Monitoring Sites 2007

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	RI	00	23.5	SS/	T=7.0C
2	LP	00	37.7		CA/CT/ST/D30/S
5	LP	00	97.5		3 REDDS
7	IP	10	126.1		CT/MT/ST/D3/S
8	RI	01	163.2	TJ	
10	CB	11	163.2		ACW=1.30M, T=7.0C
13	LP	00	199.4		DEAD COHO W/ FIN CLIPPED
16	SC	00	225.7	HS	HS THRU UNIT18
17	LP	01	238.8	TJ	
18	SR	11	238.8		ACW=1.30M
19	RI	00	252.5		CH/MV/D30/S/ST
20	LP	00	261	HS	HS THRU UNIT 22
21	RR	00	275.3	BV	
22	RI	00	292.3		PHOTO
24	RI	00	316.2	HS	HS THRU UNIT 26
26	RB	00	336.2	BV	
27	LP	00	355.3	BC, CS/CS	NEW BC, BOULDERS IN CEMENT
28	RI	01	383.1	TJ	
29	RB	11	383.1		ACW=1.10M
32	RI	00	448.2	BV, HS	HS THRU U33, CA/CT/ST/D3/S
34	RI	00	506.2	/SS, WL	GAME TRAIL, CA/CT/D30/S/ST/YT



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