

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

STREAM: North Fork Eagle Creek (L-157)
BASIN: Clackamas River
SURVEY TYPE: Post-Tx
DATE: June 25, 2003
SURVEY CREW: Tory Fitchett, Sarah Beldin
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 73.6 km²
USGS MAPS: Estacada, Cherryville
ECOREGION: Willamette Valley Foothills

GENERAL DESCRIPTION:

The North Fork Eagle Creek habitat survey extended 565 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.0. Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 2.1 percent. Rapids (34%) and riffles (34%) dominated stream habitat. Cobble (51%) and boulders (27%) dominated stream substrate. Wood volume was low at 18.4 m³/100m.

COMMENTS:

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

REACH 1

T03S-R04E-S11SE

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	5.0	VWI Range:	5 - 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	565	5,862	0
Secondary	44	96	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	9.5	Width	13.1	19.4	24.6
Depth	0.44	Height	0.8	1.7	2.7
		W:D ratio	16.1	Entrenchment	1.5
Stream Flow Type:	LF			Water temp (C):	11.0 - 11.0
Avg. Unit Gradient:	2.1%			Habitat Units/100m:	4.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	M15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 80%
Undercut Banks:	0%	Range: 61 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	57	10.1
Volume (m ³):	104	18.4
Key pieces (>=10m x 0.60m):	9	1.6

OREGON DEPARTMENT OF FISH AND WILDLIFE

NF EAGLE CREEK POST TX (L-157)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

6/25/03

REACH 1		T03S-R04E-S11SE					REACH 1						
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	2.2	0.01	12	15	0	0	0	50	50	0	
POOL-ISOLATED	1	25	2.7	0.80	66	0	100	0	0	0	0	0	
POOL-LATERAL SCOUR	2	37	9.0	1.20	320	9	0	8	10	41	41	0	
POOL-STRAIGHT SCOUR	3	119	10.5	0.98	1,267	17	0	7	17	58	18	0	
PUDDLED UNIT	1	14	1.2	0.15	17	5	0	10	10	20	20	40	
RAPID/BOULDERS	9	199	10.1	0.31	2,005	127	0	2	15	53	30	0	
RIFFLE	8	165	10.9	0.29	1,804	75	0	3	21	53	23	0	
RIFFLE W/ POCKETS	1	23	8.9	0.55	200	19	0	0	11	44	44	0	
STEP/COBBLE	2	22	11.8	0.25	265	19	0	3	5	73	20	0	
Total:	28	609	9.5	0.44	5,958	286	Avg	4	3	14	51	27	1

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		44
					(m ²)	Percent	Number	(# / 100m ²)	
					Dammed & BW Pools	1	25	2.7	0.80
Scour Pools	5	156	9.9	1.07	1,587	26.64%	26	1.6	
Glides	0	0			0	0.00%	0	0.0	
Riffles	9	188	10.6	0.32	2,005	33.65%	94	4.7	
Rapids	9	199	10.1	0.31	2,005	33.66%	127	6.3	
Cascades	1	6	2.2	0.01	12	0.21%	15	121.8	
Step/Falls	2	22	11.8	0.25	265	4.45%	19	7.2	
Dry	1	14	1.2	0.15	17	0.29%	5	29.3	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	6	9.9
Pools >=1m deep:	4	6.6
Complex pools (LWD pieces>=3):	2	3.3
Pool frequency (channel widths/pool):	7.7	
Residual pool depth (avg):	0.80	

STREAM SUMMARY

NF EAGLE CREEK POST TX (L-157)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (#>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
28	609	9.5	0.44	5,958	4	3	14	51	27	1	286

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	66	1.11%
Scour Pools	1,587	26.64%
Glides	0	0.00%
Riffles	2,005	33.65%
Rapids	2,005	33.66%
Cascades	12	0.21%
Step/Falls	265	4.45%
Dry	17	0.29%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	2073
Total conifers/1000 ft	467
Total conifers >20" dbh/1000 ft	122
Total conifers >35" dbh/1000 ft	20

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	0.7	6.3	1.0	8.3	0.7	10.0	2.3	24.7
15-30cm	1.0	1.7	0.0	2.0	1.3	1.3	2.3	5.0
30-50cm	0.7	1.7	0.3	0.3	0.0	1.7	1.0	3.7
50-90cm	0.0	0.0	1.0	0.3	0.7	0.3	1.7	0.7
>90cm	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0
Total/100m2	2.3	9.7	2.7	11.0	2.7	13.3	2.6	11.3

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	85	81	83
Shrub cover	49	47	44
Grass/forb cover	48	52	42

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	33	33	33
High terrace	50	67	67
Low terrace	0	0	0
Floodplain	17	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	22	27	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	2073
Total conifers/1000 ft	467
Total conifers >20" dbh/1000 ft	122
Total conifers >35" dbh/1000 ft	20

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	2.3	24.7
15-30cm	2.3	5.0
30-50cm	1.0	3.7
50-90cm	1.7	0.7
>90cm	0.3	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

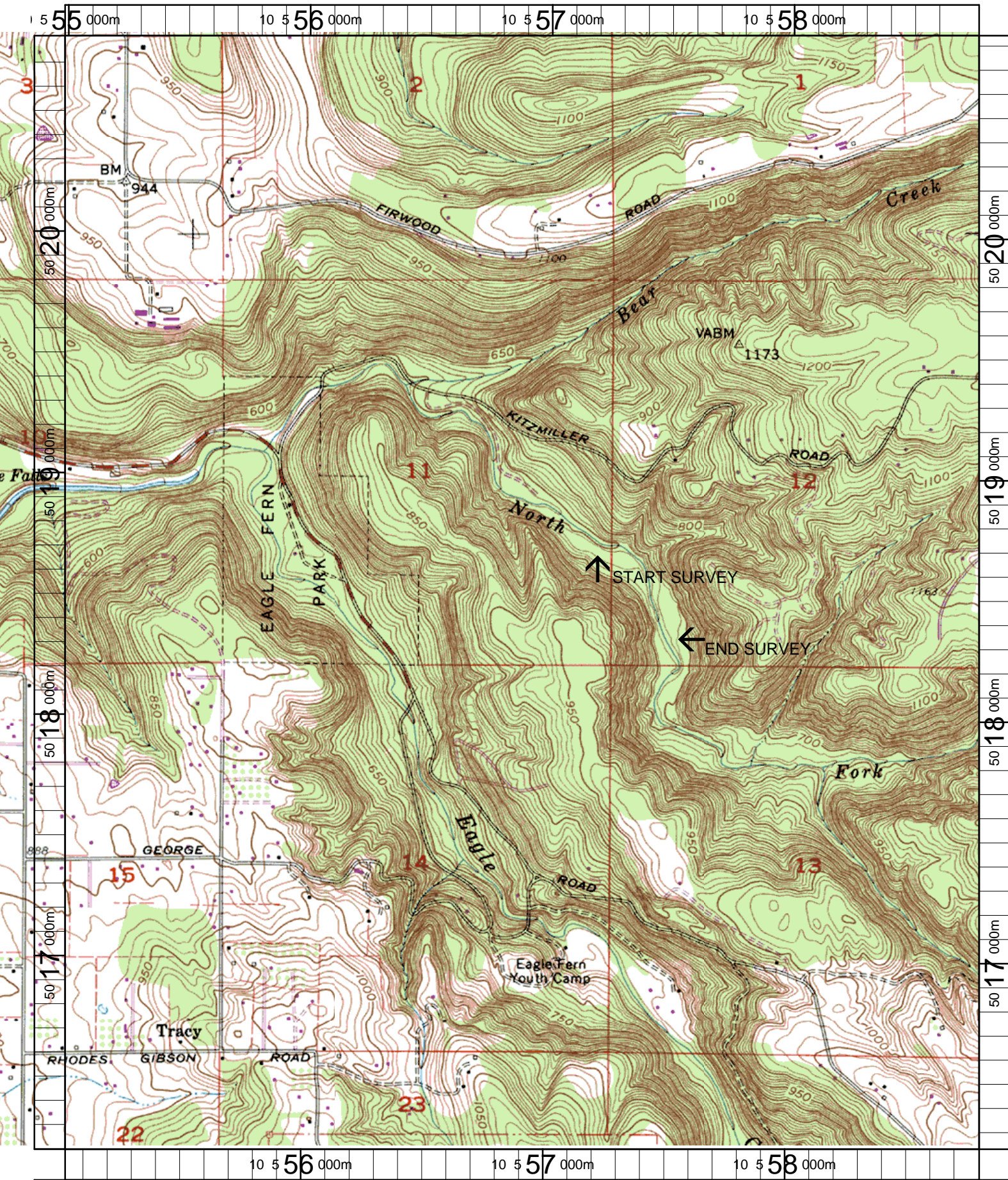
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
7	RT	1	FP	6	95	50	50	Conifer							
								Hardwood	3	1	3				
7	RT	2	HT	0	75	30	60	Conifer	1			2	1	BIG CEDAR!	
								Hardwood	2	2	1				
7	LF	2	HS	95	95	40	60	Conifer				1			
								Hardwood							
7	LF	1	HS	70	85	50	50	Conifer	2						
								Hardwood	2						
7	LF	3	HS	75	100	24	24	Conifer	2						
								Hardwood	6		1				
7	RT	3	HT	1	95	10	75	Conifer		4		2		30M TO HS @ END OF Z 3	
								Hardwood	1						
15	RT	3	HT	3	75	80	20	Conifer						20M TO BASE OF HS	
								Hardwood	5						
15	RT	2	HT	15	70	35	65	Conifer	2						
								Hardwood	10	2					
15	RT	1	HT	10	65	65	35	Conifer		1					
								Hardwood	1	2					
15	LF	3	HT	4	90	30	60	Conifer							
								Hardwood	4	4	2				
15	LF	2	HT	5	80	50	50	Conifer							
								Hardwood	2	2					
15	LF	1	HT	5	80	50	50	Conifer				1		3M OF HT	
								Hardwood	8	2	2				
20	RT	1	HS	34	85	70	30	Conifer							
								Hardwood	2						
20	LF	3	HT	-3	55	60	40	Conifer							
								Hardwood	6		2				
20	RT	3	HS	58	80	60	30	Conifer						VINE MAPLE	
								Hardwood	8			1			
20	RT	2	HS	48	100	70	30	Conifer						VINE MAPLE	
								Hardwood	10			1			
20	LF	1	HT	7	100	10	70	Conifer		2	1			60M FROM AC TO HS	
								Hardwood	3						
20	LF	2	HT	1	65	55	45	Conifer				1			
								Hardwood	1						

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 7-L SITE ID: 157 NF EAGLE CREEK POST TX (L-157)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	25.4		T=11 DEG C @ 10:30 AM	START
2	RB	01	53.3		2 DEEP POCKETS	2 X 0.7M DEEP POCKETS
6	RB	00	113.1		DOM: 15-30D SUB: 50-90C	
7	RP	00	135.6			RIPARIAN
9	RB	01	165.9			TJ/
10	CB	11	165.9		HIGH GRADIENT TRIB	
15	RB	01	264.6		MET	RIPARIAN
16	LP	01	276.1	DJ		
19	SP	00	350.7		HS PINCHES IN ON RT.	
20	RB	00	375.7	BV	METRICS RIP	RIPARIAN
22	RI	00	420.2		CABLES IN CREEK	
28	RI	00	564.5		METRICS END ON ALDER	



Name: ESTACADA
 Date: 3/20/2003
 Scale: 1 inch equals 1666 feet

Location: 10 556890 E 5018524 N
 Caption: NORTH FORK EAGLE CREEK RESTORATION SITE -
 CLACKAMAS BASIN