

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

STREAM: Foster Creek Lower (L-214)
BASIN: Clackamas River
SURVEY TYPE: Post-Tx
DATE: July 6, 2006
SURVEY CREW: Jeff Snyder, Annette Garrigues
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 6.8 km²
USGS MAPS: Damascus
ECOREGION: Willamette Valley Prairie Terraces

GENERAL DESCRIPTION:

The Foster Creek habitat survey extended 498 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.8 (range: 4.0-7.0). Land use for the reach was rural residential. The average unit gradient was 2.9 percent. Riffles (82%) dominated stream habitat. Cobble (34%) and gravel (27%) dominated stream substrate. Wood volume was very low at 8.8 m³/100m.

COMMENTS:

There was one potential barrier to upstream fish migration in the surveyed length. This was a 1.4 m high bedrock step at unit 6 (75 m).

The crew noted several habitat structures during the survey.

REACH 1

T02S-R03E-S41NE

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	4.8	VWI Range:	4 - 7

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	498	1,081	0
Secondary Channel	0	0	0
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.2	Width: 5.3	9.5 (4.4 - 20)	20.6 (8.4 - 45)
Depth: 0.29	Height: 0.4	0.7 (0.4 - 0.9)	1.6 (1 - 2.7)

W:D ratio: 18.1

Entrenchment (ACW:FPW ratio): 1.8

Stream Flow Type: MF

Habitat Units/100m (total channel length): 5.0

Average Unit Gradient: 2.9%

Habitat Units/100m (primary channel length): 5.0

Water temperature (°C): 13.0 - 13.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	RR	
Riparian Vegetation:	D15	M30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	21%	Reach avg: 89%
Undercut Banks:	5%	Range: 61 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	42	8.4
Volume (m ³):	44	8.8
Key pieces (>=12m x 0.60m):	1	0.2

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

7/6/2006

REACH 1		T02S-R03E-S41NE					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
POOL-LATERAL SCOUR	4	55	2.7	0.44	134	7	9	13	38	33	4	5
POOL-PLUNGE	1	3	0.4	0.60	1	0	0	0	0	0	0	100
POOL-STRAIGHT SCOUR	1	15	1.8	1.20	27	0	15	45	40	0	0	0
RAPID/BEDROCK	1	26	1.1	0.30	29	9	0	0	5	0	10	85
RIFFLE	17	398	2.2	0.19	885	408	1	12	28	43	16	0
STEP/BEDROCK	1	2	2.5	0.10	5	0	0	0	0	0	0	100
Total:	25	498	2.2	0.29	1,081	424	Avg: 3	12	27	34	12	12

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	0	0			0	0.00%	0	0.0	
Scour Pools	6	72	2.2	0.59	161	14.93%	7	4.3	
Glides	0	0			0	0.00%	0	0.0	
Riffles	17	398	2.2	0.19	885	81.94%	408	46.1	
Rapids	1	26	1.1	0.30	29	2.65%	9	31.5	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	1	2	2.5	0.10	5	0.49%	0	0.0	
Dry	0	0			0	0.00%	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:	6	12.0	12.0
Pools >=1m deep:	1	2.0	2.0
Complex pools (LWD pieces>=3):	1	2.0	2.0
Pool frequency (channel widths/pool):	15.7		
Residual pool depth (avg):	0.57		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

FOSTER CREEK LOWER POST-TX
GCG: 7-L SITE ID: 214

Survey Date 7/6/2006
Report Date: 3/5/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	386
Total conifers/1000 ft	406
Total conifers >20" dbh/1000 ft	142
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	0.3	0.0	2.0	2.3	1.7	2.3	4.0
15-30cm	0.0	0.0	0.7	1.0	0.7	0.0	1.3	1.0
30-50cm	0.0	0.0	0.3	0.3	0.3	0.3	0.7	0.7
50-90cm	0.0	0.3	1.7	0.3	0.7	0.0	2.3	0.7
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	0.7	2.7	3.7	4.0	2.0	2.2	2.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	68		73		65	
Shrub cover	23		13		13	
Grass/forb cover	20		38		42	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		17		17	
High terrace	83		67		50	
Low terrace	17		17		17	
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 (%)	51		27		5	

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	386
Total conifers/1000 ft	406
Total conifers >20" dbh/1000 ft	142
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	2.3	4.0
15-30cm	1.3	1.0
30-50cm	0.7	0.7
50-90cm	2.3	0.7
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

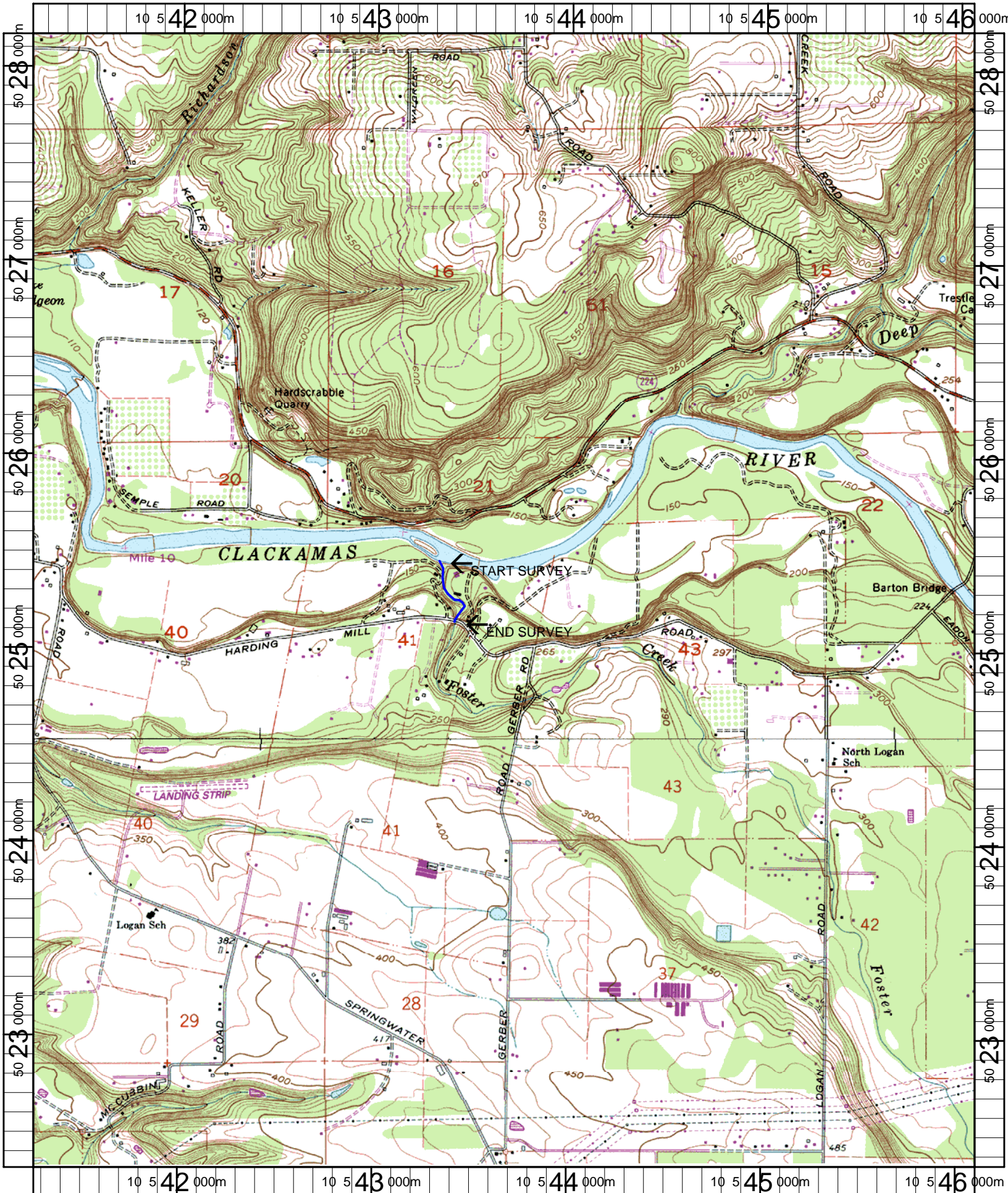
Unit	Side	Zone	Surface	Slope	Cover (percent)			Diameter class (cm)					Notes		
					Canopy	Shrub	Grass	3-15	15-30	30-50	50-90	>90			
9	RT	2	HS	32	70	5	50	Conifer							PHOTO #3
								Hardwood		1	1	1			
9	LF	1	HT	32	70	10	10	Conifer							TRANS, PHOTO #2
								Hardwood							
9	LF	2	HT	70	80	0	0	Conifer		1		2			TRANS
								Hardwood							
9	LF	3	HT	2	90	0	100	Conifer	6	2					UTM 0453353-5025842-3D
								Hardwood							
9	RT	1	HT	11	60	10	40	Conifer							TRANS
								Hardwood				1			
9	RT	3	HS	17	60	5	60	Conifer							
								Hardwood	1						
14	RT	1	HT	150	60	0	0	Conifer							TRANS
								Hardwood							
14	LF	3	LT	0	80	60	1	Conifer							LT/WL
								Hardwood	4						
14	LF	2	LT	3	70	60	10	Conifer							
								Hardwood		1					
14	LF	1	LT	2	80	70	10	Conifer							UTM 0543411-5025243-3D
								Hardwood	1						
14	RT	3	HT	0	70	0	60	Conifer	1			1			
								Hardwood							
14	RT	2	HT	0	70	0	70	Conifer				1			
								Hardwood							
20	LF	2	HT	55	75	15	70	Conifer							TRANS
								Hardwood	6	1					
20	RT	2	HT	2	70	0	30	Conifer			1		3		ESTIMATED
								Hardwood							
20	RT	3	HT	2	70	0	30	Conifer				1	1		ESTIMATED
								Hardwood							
20	LF	3	RB	10	20	10	0	Conifer							HT/RB, ROADBED
								Hardwood				1			
20	LF	1	HT	8	80	20	60	Conifer							UTM 0543451-5025203-2D
								Hardwood							
20	RT	1	HT	100	60	30	0	Conifer							TRANS
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: 7-L SITE ID: 214 FOSTER CREEK LOWER POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	13.4			BEGIN AT 1037 HRS
2	RI	00	43.8		CT,MT, 80%D15-30, 30%C30	T=13.0C
3	RI	00	55.6			CONCRETE SLABS IN STR
5	PP	00	72.9		CONCRETE SLABS	
6	SR	00	75	PN	H=1.40M, PN	PHOTO #1, H=1.40M
8	RI	00	126.4	BC, HS	LIVE TREE OVER STREAM	RIPARIAN #1 AT 126M
9	RI	00	154.9	HS	CT,MT, D15 80%, C50 20%	
11	RI	00	206.1			ILLEGAL HS, PHOTO #6
13	RI	00	251.3		HOUSE BEING BUILT	
14	RI	00	276.5		CA,MT, D15 80%, C30 25%	RIPARIAN #2
18	RI	00	350	HS		
19	LP	00	358	HS		
20	RI	00	379.4	HS	CA,MT, D30 80%, C30 20%	RIPARIAN #3
22	RI	00	419.9	SS		
23	RI	00	446	BC, WL	BC	RED-LEGGED FROG
24	RI	00	472.5	BC, SS		
25	RI	00	498.1		CA,MT, D30 50%, C30 60%	END SURVEY



Name: DAMASCUS
 Date: 5/23/2006
 Scale: 1 inch equals 2000 feet

Location: 10 543661 E 5025258 N
 Caption: FOSTER CREEK LOWER RESTORATION SITE - CLACKAMAS BASIN