

**ODFW AQUATIC INVENTORY PROJECT  
RESTORATION MONITORING  
STREAM HABITAT REPORT**

STREAM: FOSTER CREEK UPPER  
 GCG: 7-L  
 SITE ID: 86  
 BASIN: CLACKAMAS  
 TREATMENT DATE: 2002  
 SURVEY DATE: 7/8/2008  
 SURVEY CREW: Elizabeth Elbel / Megann Voth  
 USGS MAPS: REDLAND  
 ECOREGION: Prairie Terraces  
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

**SURVEY DESCRIPTION:**

Channel morphology: Constrained by high terraces

Dominant landuse(s): Agricultural crop or dairy land.

Dominant riparian vegetation: Annual grasses, herbs, and forbs.

Primary channel length (meters) and area (m<sup>2</sup>): 724 : 1,827

Secondary channel length (meters) and area (m<sup>2</sup>) 154 : 316

VWI average: 20.0 VWI Range: 20 - 20 Average Gradient: 0.4%

Pieces LWD per 100m: 5.5 Wood Volume (m<sup>3</sup>) per 100m: 8.9

Percent pools: 16% Complex pools (LWD pieces>=3): 1 Pools >=1m deep: 0

Percent substrate (avg):	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	34	12	49	5	0	0
Pool units	44	14	41	0	0	0
Fast water units	30	11	51	8	0	0

**COMMENTS:**

This is a post-treatment, restoration survey. The crew noted a habitat structure, beaver activity, and a frog near the beginning of the survey.

**OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY**

**FOSTER CREEK UPPER  
GCG: 7-L SITE ID: 86**

**Survey Date: 7/8/2008**

**Report Date: 12/29/2008**

**T02S-R03E-S43NE**

**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	20.0	VWI Range:	20 - 20

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	724	1,827	0
Secondary	154	316	4

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.4	Width: 2.6	3.5 ( 1.5 - 5.5 )	4.9 ( 2.1 - 8.1 )
Depth: 0.17	Height: 0.2	0.5 ( 0.4 - 0.6 )	0.7 ( 0.5 - 0.8 )

W:D ratio: 12.0

Stream Flow Type: LF

Average Unit Gradient: 0.4%

Water temperature (°C): 15.0 - 15.0

Entrenchment (ACW:FPW ratio): 1.3

Habitat Units/100m (total channel length): 2.6

Habitat Units/100m (primary channel length): 3.2

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	AG	RR
Riparian Vegetation:	G	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	22%	Reach avg: 61%
Undercut Banks:	18%	Range: 11 - 89

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	40	5.5
Volume (m <sup>3</sup> ):	64	8.9
Key pieces (>=12m x 0.60m):	1	0.1

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**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	3	146	2.1	0.00	305	50	39	15	46	0	0	0
POOL-LATERAL SCOUR	2	39	2.8	0.28	111	0	43	15	43	0	0	0
POOL-STRAIGHT SCOUR	3	104	2.5	0.33	239	0	45	14	41	0	0	0
PUDDLED UNIT	1	8	1.5	0.05	11	0	22	11	61	6	0	0
RIFFLE	14	581	2.5	0.17	1,477	1	30	11	51	8	0	0
<b>Total:</b>	<b>23</b>	<b>877</b>	<b>2.4</b>	<b>0.17</b>	<b>2,143</b>	<b>51</b>	<b>Avg: 34</b>	<b>12</b>	<b>49</b>	<b>5</b>	<b>0</b>	<b>0</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	0	0			0	0.00%	0	0.0
Scour Pools	5	143	2.6	0.31	349	16.30%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	14	581	2.5	0.17	1,477	68.93%	1	0.1
Rapids	0	0			0	0.00%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	0	0			0	0.00%	0	0.0
Dry	4	154	2.0	0.01	316	14.76%	50	15.8
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:	5	5.7	6.9
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	1	1.1	1.4
Pool frequency (channel widths/pool):	68.0		
Residual pool depth (avg):	0.23		

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FOSTER CREEK UPPER  
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RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	284
Total conifers/1000 ft	0
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	0.0	0.0	0.0	0.0	1.3	0.0	1.3
15-30cm	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
30-50cm	0.0	0.7	0.0	0.0	0.0	0.3	0.0	1.0
50-90cm	0.0	0.3	0.0	1.0	0.0	0.0	0.0	1.3
>90cm	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.7
Total/100m2	0.0	1.3	0.0	1.3	0.0	2.0	0.0	1.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	66		60		62	
Shrub cover	30		33		36	
Grass/forb cover	65		63		58	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		0		0	
High terrace	100		100		100	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		0	
Riprap	0		0		0	
Surface slope (%)	0		0		0	

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	284
Total conifers/1000 ft	0
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	1.3
15-30cm	0.0	0.3
30-50cm	0.0	1.0
50-90cm	0.0	1.3
>90cm	0.0	0.7

**RIPARIAN ZONE VEGETATION**

Reach 1

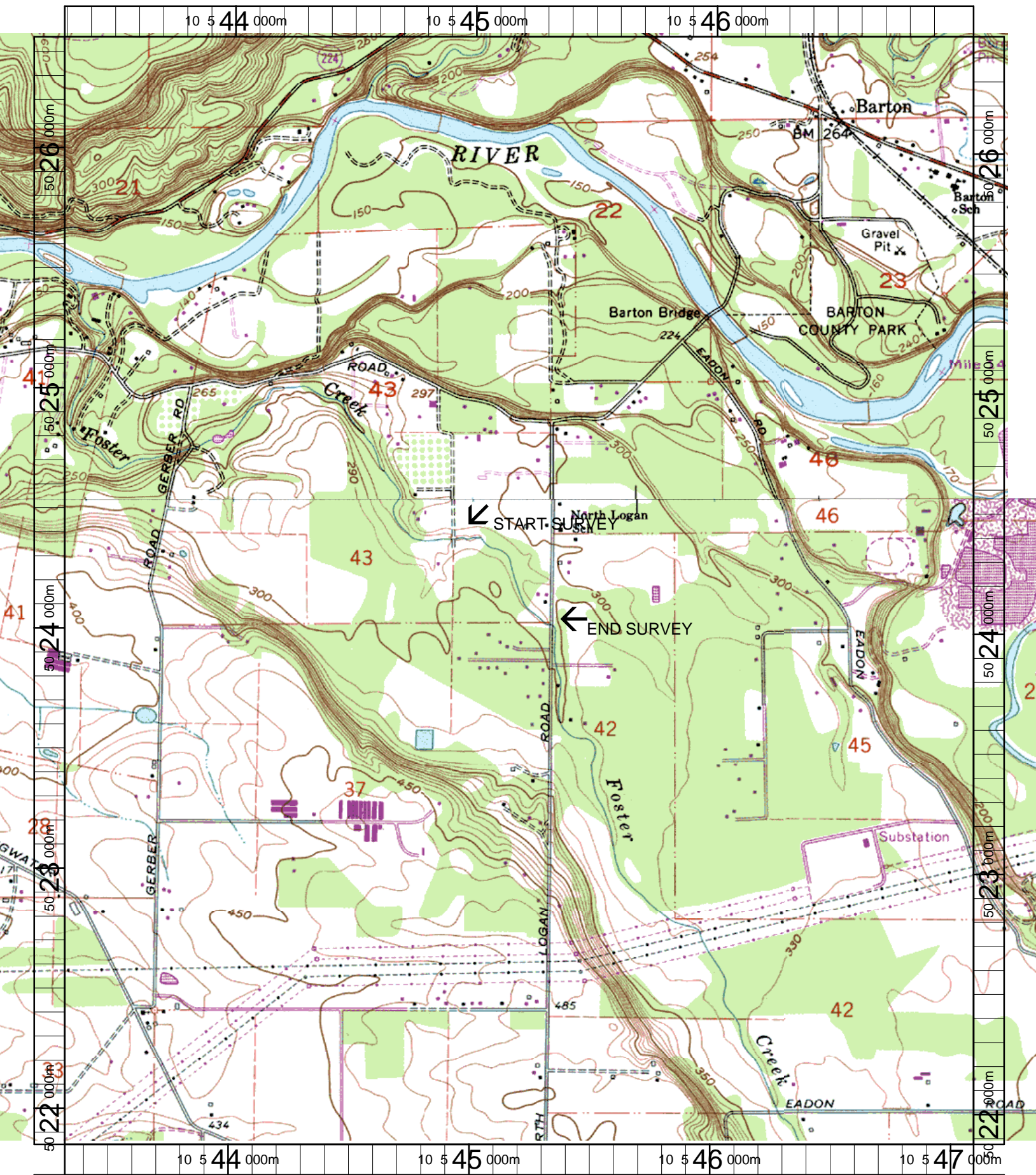
Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)			Diameter class (cm)					Notes		
					Canopy	Shrub	Grass	3-15	15-30	30-50	50-90	>90			
5	LT	1	HT	0	80	5	90	Conifer							
								Hardwood						1	
5	LT	2	HT	0	75	0	95	Conifer							
								Hardwood				1			
5	LT	3	HT	0	75	30	65	Conifer							
								Hardwood							
5	RT	1	HT	0	80	0	95	Conifer							
								Hardwood			1				
5	RT	2	HT	0	65	30	65	Conifer							
								Hardwood				1			
5	RT	3	HT	0	75	25	70	Conifer							
								Hardwood			1				
12	LT	1	HT	0	60	95	0	Conifer							
								Hardwood							
12	LT	2	HT	0	75	70	25	Conifer							
								Hardwood						1	
12	LT	3	HT	0	70	25	60	Conifer							
								Hardwood	4						
12	RT	1	HT	0	80	65	30	Conifer							
								Hardwood							
12	RT	2	HT	0	75	80	15	Conifer							
								Hardwood							
12	RT	3	HT	0	85	75	20	Conifer							
								Hardwood		1					
17	LT	1	HT	0	15	0	95	Conifer							
								Hardwood							
17	LT	2	HT	0	0	0	95	Conifer							
								Hardwood							
17	LT	3	HT	0	0	0	95	Conifer							
								Hardwood							
17	RT	1	HT	0	80	15	80	Conifer							
								Hardwood			1		1		
17	RT	2	HT	0	70	15	80	Conifer							
								Hardwood				1			
17	RT	3	HT	0	65	60	35	Conifer							
								Hardwood							

**COMMENT SUMMARY**

MONITORING AREA: 7-L      SITE ID: 86      STREAM: FOSTER CREEK UPPER

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	50	CC,FC,HS	CC AT START, T=15C, 2 FC
3	RI	00	150	HS	
5	RI	00	250	FC,RF,AM	2FC, HS
8	RI	00	331.3	AM	
9	RI	01	381.3	TJ/	
12	RI	00	476.3	HS	VWI 20+,
13	LP	00	486.3	HS	FISH, SCULPIN
14	RI	00	536.3	FC,RF	
15	RI	00	566.3	HS,RF,FC	
17	RI	00	601.75	HS	
19	LP	01	654.75		MARSH WITH MANY PLANTS IN ACTIVE CHANNEL
22	SP	00	715.75	AM	
23	RI	00	723.75	CC	VWI 120+, CC AND ROAD AT END



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

Location: 10 545187 E 5024172 N  
 Caption: FOSTER CREEK RESTORATION SITE - CLACKAMAS BASIN



L-86 Foster Creek Upper (Post-Treatment) 2008 Summer Habitat Survey Photographs



Riparian vegetation



Riparian vegetation



Reach photo