

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

STREAM: Foster Creek Upper (L-86)
BASIN: Clackamas River
SURVEY TYPE: Post-Tx
DATE: June 24, 2003
SURVEY CREW: Kevin Cellura, Chris Dattler
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 9.0 km²
USGS MAPS: Damascus
ECOREGION: Willamette Valley Foothills

GENERAL DESCRIPTION:

The Foster Creek habitat survey extended 775 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 18.8 (range: 15.0-20.0). Land use for the reach was light grazing and rural residential. The average unit gradient was 0.8 percent. Scour pools (49%) and riffles (34%) dominated stream habitat. Gravel (29%) and cobble (29%) dominated stream substrate. Wood volume was low at 9.9 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.

REACH 1

T03S-R03E-S42NW

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 18.8		VWI Range: 15 - 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	775	1,643	0
Secondary	131	280	4

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	2.0	Width	3.4	6.1	7.0
Depth	0.15	Height	0.3	0.6	0.8
W:D ratio		11.7	Entrenchment		1.9
Stream Flow Type:		LF	Water temp (C): 15.5 - 15.5		
Avg. Unit Gradient:		0.8%	Habitat Units/100m: 9.3		

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	1%	Reach avg: 80%
Undercut Banks:	14%	Range: 19 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	52	6.7
Volume (m ³):	77	9.9
Key pieces (>=10m x 0.60m):	7	0.9

OREGON DEPARTMENT OF FISH AND WILDLIFE

FOSTER CREEK UPPER POST-TX (L-86)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

6/24/03

REACH 1		T03S-R03E-S42NW					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	
CULVERT CROSSING	1	4	1.4	0.09	5	0	0	0	0	0	0	100	
DRY CHANNEL	4	88	2.1	0.00	234	0	39	39	14	9	0	0	
POOL-BACKWATER	6	43	1.2	0.08	46	0	45	35	7	13	0	0	
POOL-DAMMED	1	9	2.0	0.20	19	0	57	29	10	5	0	0	
POOL-LATERAL SCOUR	34	379	2.3	0.25	907	0	15	21	29	32	2	2	
POOL-STRAIGHT SCOUR	2	12	3.3	0.17	41	0	30	35	25	10	0	0	
RIFFLE	29	289	1.8	0.08	524	0	5	22	37	33	2	1	
RIFFLE W/ POCKETS	4	69	2.0	0.09	131	0	13	20	35	29	4	0	
STEP/COBBLE	3	12	1.5	0.09	15	0	0	13	40	47	0	0	
Total:	84	905	2.0	0.15	1,923	0	Avg 15	23	29	29	2	2	

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		131
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	7	52	1.3	0.09	65	3.38%	0	0.0	
Scour Pools	36	391	2.4	0.25	948	49.30%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	33	358	1.8	0.08	655	34.07%	0	0.0	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	3	12	1.5	0.09	15	0.80%	0	0.0	
Dry	4	88	2.1	0.00	234	12.17%	0	0.0	
Culverts	1	4	1.4	0.09	5	0.28%	0	0.0	

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	43	47.5
Pools >=1m deep:	1	1.1
Complex pools (LWD pieces>=3):	7	7.7
Pool frequency (channel widths/pool):	6.2	
Residual pool depth (avg):	0.14	

STREAM SUMMARY

FOSTER CREEK UPPER POST-TX (L-86)

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	
84	905	2.0	0.15	1,923	15	23	29	29	2	2	

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	65	3.38%
Scour Pools	948	49.30%
Glides	0	0.00%
Riffles	655	34.07%
Rapids	0	0.00%
Cascades	0	0.00%
Step/Falls	15	0.80%
Dry	234	12.17%
Culverts	5	0.28%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

Summary of Riparian Zone (0-30m) 4 transects

Total hardwoods/1000	808
Total conifers/1000 ft	107
Total conifers >20" dbh/1000 ft	30
Total conifers >35" dbh/1000 ft	15

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	7.0	0.0	2.5	0.3	1.8	0.3	11.3
15-30cm	0.0	0.3	0.3	0.0	0.3	0.0	0.5	0.3
30-50cm	0.0	0.3	0.3	0.8	0.3	0.3	0.5	1.3
50-90cm	0.3	0.0	0.0	0.0	0.0	0.5	0.3	0.5
>90cm	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
Total/100m2	0.3	7.5	0.5	3.3	1.0	2.5	0.6	4.4

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	53	39	48
Shrub cover	33	35	7
Grass/forb cover	57	61	79

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	25	25
High terrace	100	75	75
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 (%)	6	5	5

Summary of Riparian Zone (0-30m) for all reaches 4 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	808
Total conifers/1000 ft	107
Total conifers >20" dbh/1000 ft	30
Total conifers >35" dbh/1000 ft	15

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	0.3	11.3
15-30cm	0.5	0.3
30-50cm	0.5	1.3
50-90cm	0.3	0.5
>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		
11	LF	3	HT	4	30	5	95	Conifer							
								Hardwood							
11	RT	3	HT	-2	10	0	95	Conifer	1						
								Hardwood							
11	RT	1	HT	3	75	40	20	Conifer							
								Hardwood	4		1				
11	LF	2	HT	6	0	5	90	Conifer							
								Hardwood							
11	LF	1	HT	5	0	5	95	Conifer							
								Hardwood							
11	RT	2	HT	5	10	0	100	Conifer							
								Hardwood							
19	RT	2	HT	1	60	30	40	Conifer				1			
								Hardwood	1		2				
19	LF	2	HS	11	50	80	20	Conifer							
								Hardwood							
19	RT	3	HT	2	75	20	30	Conifer							
								Hardwood	5		1				
19	LF	3	HS	10	75		100	Conifer							
								Hardwood				1			
19	LF	1	HT	5	30	50	50	Conifer							
								Hardwood	1						
19	RT	1	HT	6	75	20	70	Conifer							
								Hardwood	2						
38	LF	1	HT	7	50	65	30	Conifer							
								Hardwood	7	1					
38	LF	2	HT	2	15	50	50	Conifer							
								Hardwood							
38	LF	3	HT	4	5	5	90	Conifer							FC
								Hardwood	1						
38	RT	1	HT	10	85	40	50	Conifer							
								Hardwood	6						
38	RT	2	HS	15	60	10	80	Conifer			1				
								Hardwood	1						
38	RT	3	HS	15	100		60	Conifer						1	FC
								Hardwood							
59	LF	2	HT	1	25		80	Conifer							
								Hardwood							

59	RT	2	HT	2	90	70	30	Conifer					
								Hardwood	8	1			
59	LF	1	HT	8	70	15	70	Conifer				1	
								Hardwood	1				
59	RT	1	HT	6	40	25	70	Conifer					
								Hardwood	7				
59	RT	3	HT	5	65	5	80	Conifer		1			FC
								Hardwood	1			1	
59	LF	3	HT	2	25		85	Conifer			1		COW
								Hardwood					PASTURE, SAPSUCKER

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 7-L SITE ID: 86 FOSTER CREEK UPPER POST-TX (L-

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	CC	00	3.8	DJ, CC	TRIPLE CULVERT 2 WET,	CONCRETE ALL AROUND CU
2	RI	00	30.2	FC	H2O TEMP 13.5 DEG C	ONE CULVERT DRY
3	LP	00	37.9	HS		
5	RP	00	71.3		SHRUBS COVER 3/4 WIDT	
6	LP	01	86		DJ	SCULPIN DJ
7	BW	10	86		SCULPIN	
9	LP	00	108.8		SHRUBS COVER 3/4 WIDT	
11	LP	00	132.5	HS		PLACED WOOD
13	RI	00	166.4	HS		
17	RP	00	221.9	RF/FC	FC/RF	
18	LP	00	232.5	HS		
19	LP	00	245.7	HS		
22	RI	00	276.7		DJ	SKUNK CABBAGE
23	RI	01	283.9		TIRE	
28	SC	00	317.7		CANOPY FULL. ENCLOS.	
29	LP	01	330.5		CANOPY FULL. ENCLOS.	
30	BW	10	330.5		CANOPY FULL. ENCLOS.	
31	DC	02	330.5		CANOPY FULL. ENCLOS.	
32	RI	00	335.8		CANOPY FULL. ENCLOS.	
33	LP	00	342.3		CANOPY FULL. ENCLOS.	
34	RP	00	354.1	DJ	CANOPY FULL. ENCLOS.	

Comment Summary

Oregon Plan Monitoring Sites 2003

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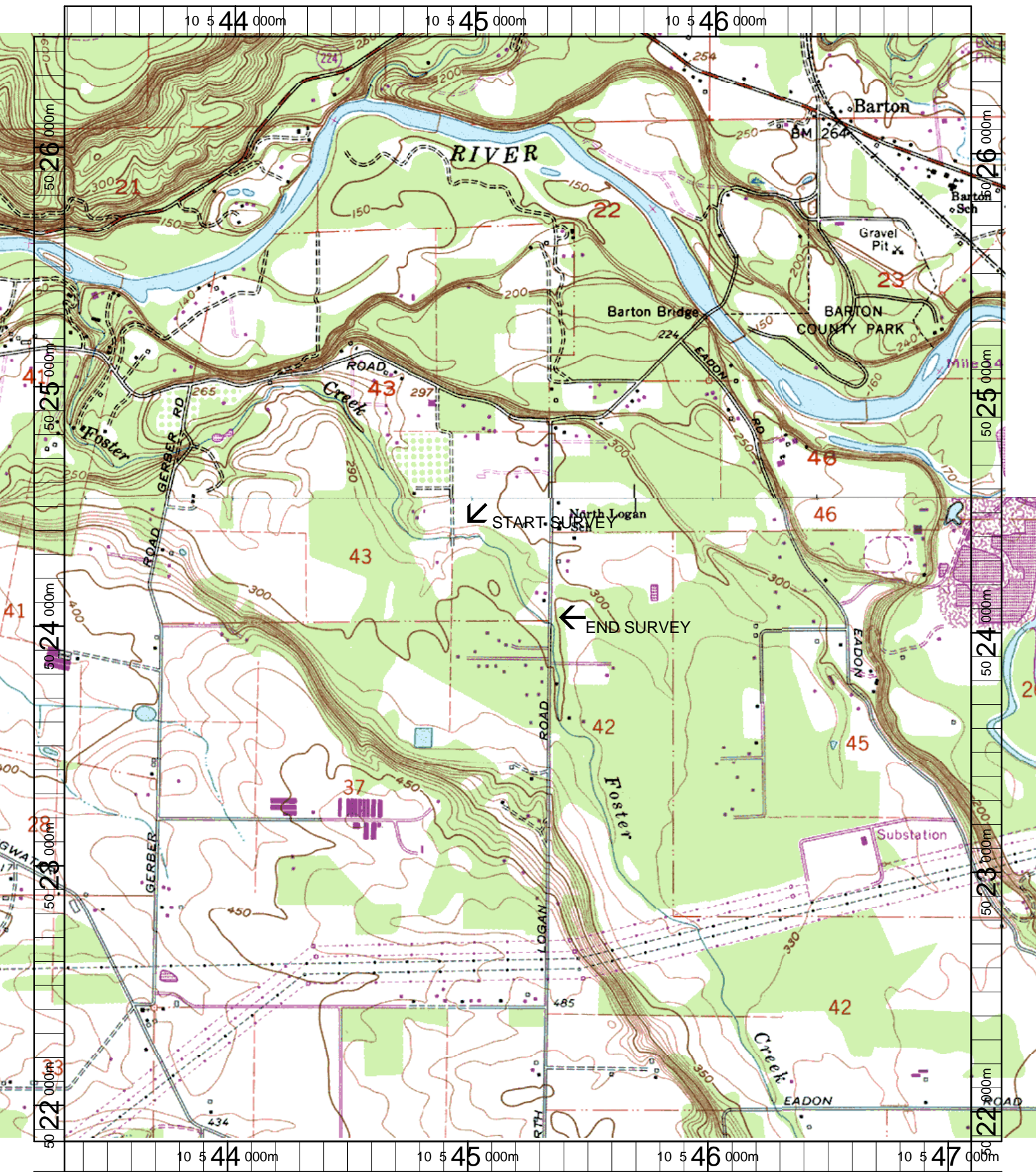
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
35	LP	00	366.4		CANOPY FULL. ENCLOS.	
36	RI	01	371.2	DJ	DJ	LARGE DJ COVERED SECTI
41	RI	00	396.3		CANOPY FULL. ENCLOS.	
42	SP	00	399.8	DJ	CANOPY FULL. ENCLOS.	GARBAGE
43	RI	00	405.5		CANOPY FULL. ENCLOS.	
45	RI	00	433.8		GARBAGE	GARBAGE
46	LP	00	445.5			GARBAGE
47	BW	10	445.5		OFF UNIT 40 TJ	OFF OF UNIT 40
48	DC	02	445.5		DC CONTINUES UNKNOW	OFF OF UNIT 40
49	RI	00	449.9	HS		
50	LP	00	457.7			FROGS
52	LP	00	479.9		CANOPY FULL. ENCLOS.	
54	LP	00	512.4	HS	CANOPY FULL. ENCLOS.	GARBAGE
55	RI	00	517.5	DJ	DJ	
56	LP	00	524.1		CONIFER CANOPY COVE	
57	RI	00	535.5	DJ		
58	SP	00	544.1	FC, RF	FC/RF	
59	RI	00	559.5			BUD CAN
60	DP	00	568.9	DJ, HS	DJ HUMAN INFLUENCE	ACT. WOOD
61	RI	00	582.2	FC, RF	FC/RF	
62	LP	00	586.7	FC, RF	FC/RF	

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 7-L SITE ID: 86 FOSTER CREEK UPPER POST-TX (L-

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
64	LP	00	604.3	HS		
65	RI	01	619.7	FC	FC	
68	LP	01	643.6		FOOT BRIDGE	FOOT BRIDGE
70	LP	01	655.7		FRY	FRY
84	LP	00	774.5	FC	TEMP 15.5	STOP



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