

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

STREAM: WEST FORK DAIRY CREEK
 GCG: 8-W
 SITE ID: 363
 BASIN: TUALATIN
 TREATMENT DATE: 2007
 SURVEY DATE: 7/6/2008
 SURVEY CREW: Jitesh Pattni / Aaron Paloni
 USGS MAPS: BUXTON
 ECOREGION: Willapa Hills
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained by hillslopes
 Dominant landuse(s): Second growth timber (15-30 cm dbh)
 Dominant riparian vegetation: Deciduous trees: size class 30-50cm dbh
 Primary channel length (meters) and area (m²): 931 : 1,872
 Secondary channel length (meters) and area (m²) 35 : 29
 VWI average: 1.2 VWI Range: 1 - 2 Average Gradient: 3.8%
 Pieces LWD per 100m: 34.5 Wood Volume (m³) per 100m: 33.8
 Percent pools: 25% Complex pools (LWD pieces>=3): 7 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	24	20	25	18	7	6
Pool units	34	25	17	15	5	4
Fast water units	18	17	30	20	9	5

COMMENTS:

This is a post-treatment, restoration survey. The crew noted habitat structures throughout the survey. Evidence of wildlife during the survey included sculpin and numerous amphibians observations.

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

**WEST FORK DAIRY CREEK
GCG: 8-W SITE ID: 363**

Survey Date: 7/6/2008

Report Date: 12/29/2008

T03N-R04W-SS20N

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	1.2	VWI Range:	1 - 2

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	931	1,872	0
Secondary	35	29	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 0
Width: 2.3	Width: 3.7	4.2 (3.3 - 5.2)	(-)
Depth: 0.25	Height: 0.3	0.6 (0.5 - 0.6)	(-)

W:D ratio: 13.2

Stream Flow Type: LF

Average Unit Gradient: 3.8%

Water temperature (°C): 4.0 - 4.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 5.1

Habitat Units/100m (primary channel length): 5.3

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	GN
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	45%	Reach avg: 89%
Undercut Banks:	1%	Range: 72 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	321	34.5
Volume (m ³):	315	33.8
Key pieces (>=12m x 0.60m):	5	0.5

OREGON DEPARTMENT OF FISH AND WILDLIFE

WEST FORK DAIRY CREEK

HABITAT INVENTORY

GCG: 8-W SITE ID: 363

Survey Date: 7/6/2008

Report Date: 12/29/2008

T03N-R04W-SS20N

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	38	2.0	0.20	76	67	25	10	15	30	20	0
CULVERT CROSSING	1	10	0.4	0.10	4	0	0	0	0	0	0	100
POOL-DAMMED	2	33	3.5	0.80	121	0	35	28	20	18	0	0
POOL-LATERAL SCOUR	14	111	3.3	0.50	346	53	34	25	16	15	6	4
RAPID/BEDROCK	2	54	0.5	0.18	27	58	10	5	8	15	10	53
RAPID/BOULDERS	10	319	2.3	0.12	652	468	13	15	31	23	16	2
RIFFLE	14	395	1.6	0.10	659	142	22	21	34	19	4	0
STEP/BEAVER DAM	1	1	4.5	0.01	2	0	25	15	60	0	0	0
STEP/BOULDERS	1	2	1.7	0.10	4	4	0	15	20	45	20	0
STEP/LOG	3	4	2.2	0.08	10	0	46	26	19	10	0	0
Total:	49	966	2.3	0.25	1,901	792	Avg: 24	20	25	18	7	6

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	33	3.5	0.80	121	6.36%	0	0.0
Scour Pools	14	111	3.3	0.50	346	18.18%	53	15.3
Glides	0	0			0	0.00%	0	0.0
Riffles	14	395	1.6	0.10	659	34.67%	142	21.5
Rapids	12	373	2.0	0.13	679	35.71%	526	77.5
Cascades	1	38	2.0	0.20	76	4.00%	67	88.2
Step/Falls	5	7	2.5	0.07	16	0.86%	4	24.4
Dry	0	0			0	0.00%	0	0.0
Culverts	1	10	0.4	0.10	4	0.21%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	16	16.6	17.2
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	7	7.2	7.5
Pool frequency (channel widths/pool):	16.3		
Residual pool depth (avg):	0.46		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

WEST FORK DAIRY CREEK
GCG: 8-W SITE ID: 363

Survey Date 7/6/2008

RIPARIAN ZONE

Report Date: 12/29/2008

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	244
Total conifers/1000 ft	142
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	0.3	0.0	0.0	0.0	0.0	0.0	0.3
15-30cm	0.0	1.3	0.0	1.0	1.0	0.3	1.0	2.7
30-50cm	0.0	0.3	0.7	0.7	0.7	0.0	1.3	1.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	2.0	0.7	1.7	1.7	0.3	0.8	1.3

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	83		82		79	
Shrub cover	58		68		43	
Grass/forb cover	36		27		18	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	100		100		67	
High terrace	0		0		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		33	
Riprap	0		0		0	
Surface slope (%)	48		57		38	

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	244
Total conifers/1000 ft	142
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	0.3
15-30cm	1.0	2.7
30-50cm	1.3	1.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

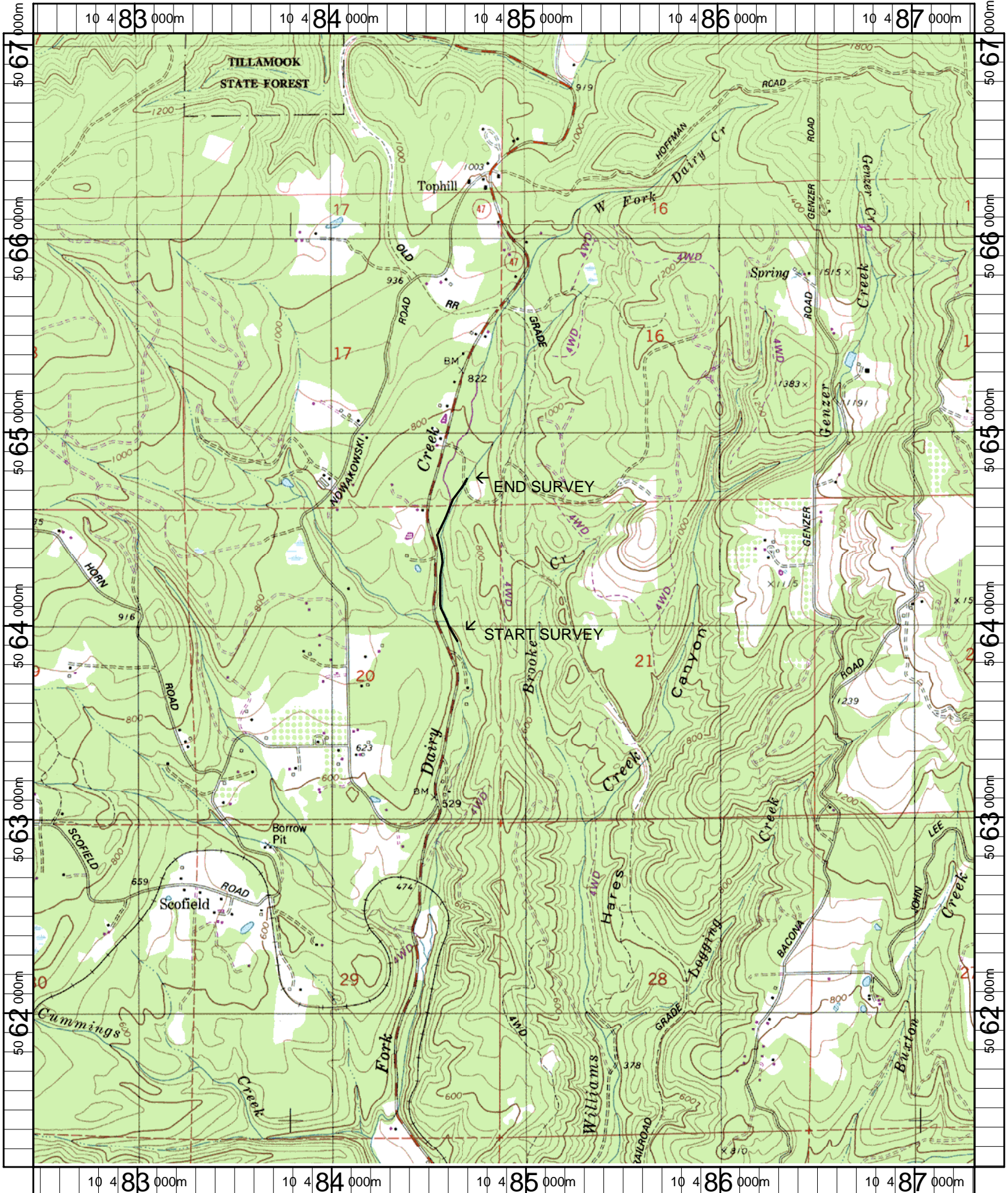
Reach 1 Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
18	LT	1	HS	30	80	80	15	Conifer							10N 484459E 5064308N
								Hardwood	1	1					
18	LT	2	HS	60	75	80	10	Conifer			2				
								Hardwood							
18	LT	3	RB	0	70	0	0	Conifer							HIGHWAY 47 ROADBED
								Hardwood							
18	RT	1	HS	40	80	90	5	Conifer							
								Hardwood		1					
18	RT	2	HS	40	90	90	10	Conifer							
								Hardwood		1					
18	RT	3	HS	40	90	90	5	Conifer							
								Hardwood		1					
32	LT	1	HS	60	85	90	5	Conifer							
								Hardwood		1	1				
32	LT	2	HS	60	75	85	5	Conifer							
								Hardwood		1	1				
32	LT	3	RB	0	65	0	0	Conifer							
								Hardwood							
32	RT	1	HS	50	75	40	55	Conifer							10N 484492E 5064555N
								Hardwood		1					
32	RT	2	HS	50	75	50	50	Conifer							
								Hardwood							
32	RT	3	HS	50	80	60	40	Conifer				1			
								Hardwood							
43	LT	1	HS	50	85	25	65	Conifer							10N 484514E 5064769N
								Hardwood							
43	LT	2	HS	70	90	30	65	Conifer							
								Hardwood		1	1				
43	LT	3	HS	70	85	40	40	Conifer			2				
								Hardwood							
43	RT	1	HS	55	90	25	70	Conifer							
								Hardwood							
43	RT	2	HS	60	85	70	20	Conifer							
								Hardwood							
43	RT	3	HS	65	85	70	20	Conifer			1	1			
								Hardwood							

COMMENT SUMMARY

MONITORING AREA: 8-W SITE ID: 363 STREAM: WEST FORK DAIRY CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RB	00	39		CA/MV
7	SB	00	64.6		H=0.30M
11	RB	00	124.6		HAB STRUCTURE
15	RR	01	205.6	TJ/	
16	CC	11	205.6	CC	TRIB ENTERS AT CULVERT CROSSING
18	LP	00	259.6		CH/MV
24	CB	00	405.6		CASCADE OVER CONCRETE BLOCKS
26	SD	00	422.1	BD	H=0.40M
27	DP	00	444.1	AM	UNKNOWN FROG OBSERVED
28	RI	00	484.1	/SS	
30	SL	00	495.8		H=2.0M
33	SL	00	520.8		H=1.2M
37	RI	01	612.8	TJ/	
43	LP	00	751.8		CH/SV
44	SL	00	752.3		H=0.40M
46	RB	00	852.3	/SS	
47	RB	00	888.3	/SS	
48	LP	00	891.3	/SS	
49	RB	00	931.3		CH/MV



Name: BUXTON
 Date: 4/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0484893 E 5064127 N
 Caption: WEST FORK DAIRY CREEK RESTORATION SITE - TUALATIN BASIN