

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

STREAM: DEVILS LAKE FORK UPPER
 GCG: 1-NC
 SITE ID: 133
 BASIN: WILSON
 TREATMENT DATE: 2002
 SURVEY DATE: 7/5/2008
 SURVEY CREW: Jitesh Pattni / Aaron Paloni
 USGS MAPS: ROARING CREEK
 ECOREGION: Volcanics
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Second growth timber (15-30 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 15-30cm dbh

Primary channel length (meters) and area (m²): 509 : 904

Secondary channel length (meters) and area (m²) 77 : 168

VWI average: 5.7 VWI Range: 1.5 - 9 Average Gradient: 3.0%

Pieces LWD per 100m: 22.6 Wood Volume (m³) per 100m: 27.0

Percent pools: 38% Complex pools (LWD pieces>=3): 9 Pools >=1m deep: 3

Percent substrate (avg):	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	17	20	42	21	0	1
Pool units	26	29	36	9	0	0
Fast water units	7	10	49	32	0	3

COMMENTS:

This is a post-treatment, long term monitoring site. The crew noted an ATV crossing near the middle of the survey.

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

**DEVILS LAKE FORK UPPER
GCG: 1-NC SITE ID: 133**

Survey Date: 7/5/2008

Report Date: 12/29/2008

T01N-R05W-S08NW

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	5.7	VWI Range:	1.5 - 9

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	509	904	0
Secondary	77	168	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 2.0	Width: 4.1	12.5 (4.3 - 42)	5.6 (4.7 - 6.4)
Depth: 0.32	Height: 0.2	0.5 (0.3 - 0.6)	1.0 (0.8 - 1.1)

W:D ratio: 18.8

Stream Flow Type: LF

Average Unit Gradient: 3.0%

Water temperature (°C): 11.0 - 11.0

Entrenchment (ACW:FPW ratio): 2.8

Habitat Units/100m (total channel length): 8.2

Habitat Units/100m (primary channel length): 9.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D15	P

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 100%
Undercut Banks:	0%	Range: 92 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	115	22.6
Volume (m ³):	138	27.0
Key pieces (>=12m x 0.60m):	1	0.2

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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	2	15	1.8	0.08	25	0	0	3	54	44	0	0
DRY UNIT	1	35	3.0	0.00	105	0	5	5	45	45	0	0
POOL-BACKWATER	2	8	2.0	0.55	16	0	48	43	10	0	0	0
POOL-LATERAL SCOUR	18	157	2.6	0.66	405	1	26	29	36	9	0	0
RAPID/BEDROCK	1	30	1.0	0.10	30	0	6	6	17	11	0	61
RAPID/BOULDERS	4	59	1.3	0.11	68	0	1	5	43	51	0	0
RIFFLE	17	280	1.5	0.10	417	0	9	12	52	27	0	0
STEP/LOG	3	2	2.3	0.05	5	0	21	29	39	11	0	0
Total:	48	586	2.0	0.32	1,071	1	Avg: 17	20	42	21	0	1

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	8	2.0	0.55	16	1.46%	0	0.0
Scour Pools	18	157	2.6	0.66	405	37.84%	1	0.2
Glides	0	0			0	0.00%	0	0.0
Riffles	17	280	1.5	0.10	417	38.96%	0	0.0
Rapids	5	89	1.2	0.11	98	9.16%	0	0.0
Cascades	2	15	1.8	0.08	25	2.33%	0	0.0
Step/Falls	3	2	2.3	0.05	5	0.45%	0	0.0
Dry	1	35	3.0	0.00	105	9.80%	0	0.0
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:	20	34.1	39.3
Pools >=1m deep:	3	5.1	5.9
Complex pools (LWD pieces>=3):	9	15.4	17.7
Pool frequency (channel widths/pool):	7.1		
Residual pool depth (avg):	0.57		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

DEVILS LAKE FORK UPPER
GCG: 1-NC SITE ID: 133

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	488
Total conifers/1000 ft	772
Total conifers >20" dbh/1000 ft	81
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	0.3	0.0	0.7	0.0	0.7	0.0	1.7	0.0
15-30cm	0.7	3.0	2.3	1.0	1.0	0.0	4.0	4.0
30-50cm	1.3	1.7	1.0	0.7	3.3	1.3	5.7	3.7
50-90cm	0.3	0.3	0.3	0.0	0.7	0.0	1.3	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.7	5.0	4.3	1.7	5.7	1.3	4.2	2.7

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	91		88		65	
Shrub cover	18		25		30	
Grass/forb cover	56		50		52	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		100		100	
High terrace	50		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		0	
Riprap	0		0		0	
Surface slope (%)	19		35		45	

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	488
Total conifers/1000 ft	772
Total conifers >20" dbh/1000 ft	81
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	1.7	0.0
15-30cm	4.0	4.0
30-50cm	5.7	3.7
50-90cm	1.3	0.3
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

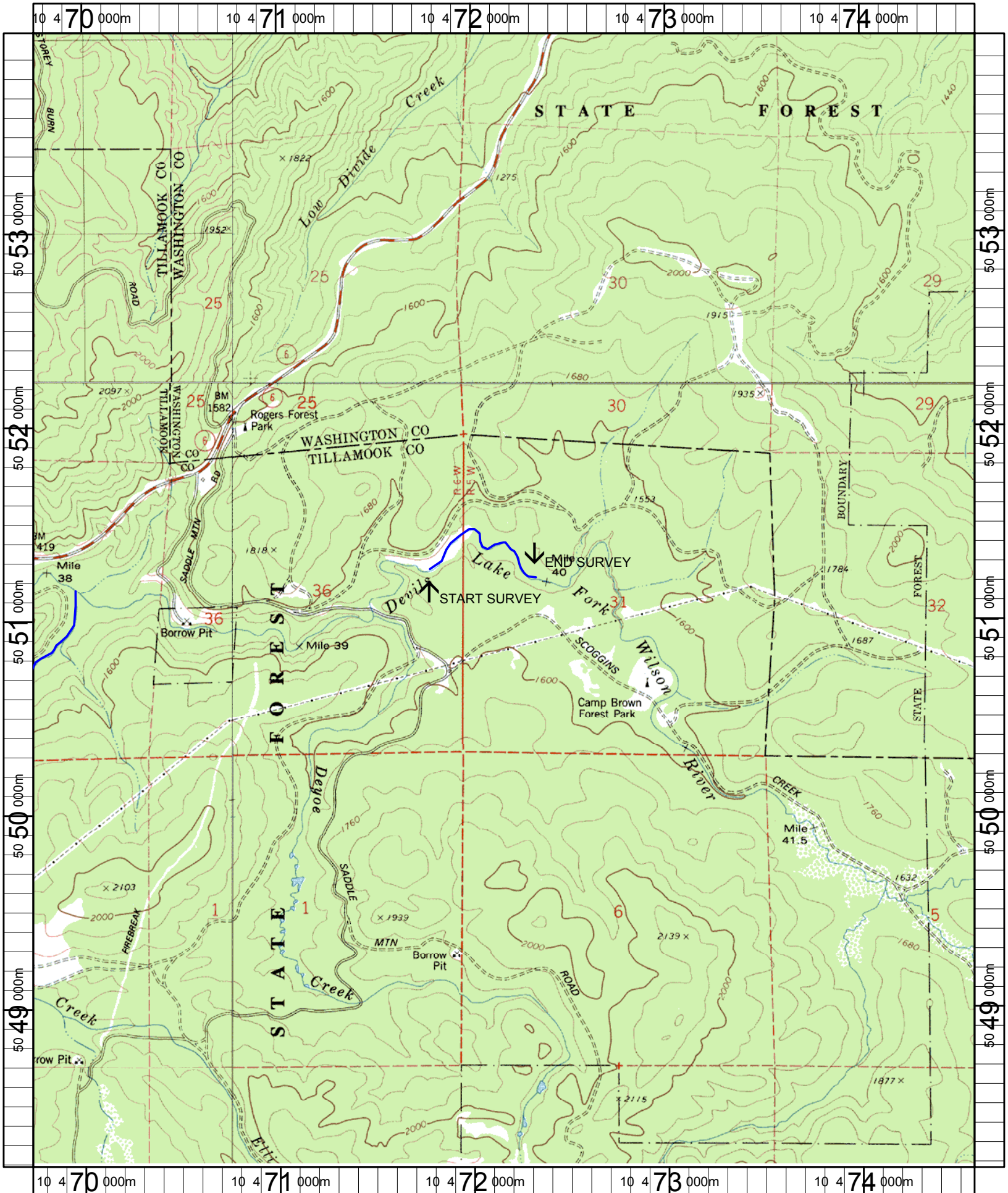
Reach 1

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	80	95	20	50	Conifer	1	2	1			10T 473690E 5048717N
								Hardwood						
18	LT	2	HS	75	90	20	60	Conifer		4	2			
								Hardwood						
18	LT	3	HS	75	85	10	70	Conifer		2	1	1		
								Hardwood						
18	RT	1	HS	20	95	20	70	Conifer				2		
								Hardwood				1		
18	RT	2	HS	20	90	40	50	Conifer	2	1	1			
								Hardwood						
18	RT	3	HS	19	30	10	80	Conifer				1		RB CC 4M
								Hardwood						
29	LT	1	HT	0	95	10	60	Conifer						473575E 5048680N
								Hardwood		5	1	1		
29	LT	2	HS	35	90	30	50	Conifer		1			1	
								Hardwood						
29	LT	3	HS	75	95	40	30	Conifer	1	1	2	1		
								Hardwood						
29	RT	1	HS	15	80	10	10	Conifer						DOWN ALDERS
								Hardwood						
29	RT	2	HS	15	80	10	20	Conifer						MOSTLY DOWNED ALDERS
								Hardwood						
29	RT	3	HS	20	30	60	30	Conifer				1		4 WHEEL TRAIL CROSSING
								Hardwood				4		
40	LT	1	HT	0	90	5	85	Conifer				1	1	473494E 5048598N
								Hardwood		1	2			
40	LT	2	HS	55	90	10	80	Conifer		1				
								Hardwood						
40	LT	3	HS	65	90	20	60	Conifer	1			1		
								Hardwood						
40	RT	1	HT	0	90	40	60	Conifer						
								Hardwood		3	1			
40	RT	2	HS	12	85	40	40	Conifer						
								Hardwood		3	2			
40	RT	3	HS	15	60	40	40	Conifer					4	
								Hardwood						

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 133 STREAM: DEVILS LAKE FORK UPPER

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	12		US/WF D15 SDS ST
3	SL	01	19.2		H=0.60M
12	SL	00	84.1		H=0.40M
18	LP	00	129.1		CH/MV D30/D15 ST/
26	RR	01	240.1	/TJ	
27	RI	11	240.1		TRIB T=10C, MAINSTEM ABOVE TRIB T=11C
29	RI	00	278.1		CA/MV D15/P ST/
31	SL	00	282.3		H=0.40M
34	LP	00	302.3	RF	ATV CROSSING AT TOP OF POOL
35	RI	00	324.3	SS/	
40	LP	00	379.3		CTMV DD15 SDP ST
48	RB	00	509.3		CA/MV D15/P ST/



Name: ROARING CREEK
 Date: 1/19/2006
 Scale: 1 inch equals 2000 feet

Location: 10 472161 E 50511103 N
 Caption: DEVILS LAKE FORK WILSON RIVER RESTORATION SITE -
 WILSON BASIN