

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

STREAM: Devils Lake Fork Wilson River (N-27)  
BASIN: Wilson River  
SURVEY TYPE: Post-Tx  
DATE: March 22, 2006  
SURVEY CREW: Brian Cannon, Jon Nott  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 69.9 km<sup>3</sup>  
USGS MAPS: Roaring Creek  
ECOREGION: Coast Range Volcanic

**GENERAL DESCRIPTION:**

The Devils Lake Fork Wilson River habitat survey extended 772 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.3 (range: 1.2-10.0). Land use for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 0.4 percent. Scour pools (45%), dammed pools (26%) and riffles (22%) dominated stream habitat. Gravel (32%), sand (27%) and bedrock (23%) dominated stream substrate. Wood volume was moderate at 29.1 m<sup>3</sup>/100m.

**COMMENTS:**

There were no potential barriers to upstream fish migration in the surveyed length.

The crew noted several habitat structures during the survey.

Stream Devils Lake Fork Wilson River (NC-27)

Basin Wilson River

Treatment Large Wood

	ODFW Benchmark		Pre 3/8/99	Post 2/16/00	Post 3/22/06		
Habitat Variable	Desirable	Undesirable					
% Pool Area	>35%	<10%	46.8	<b>62.2</b>	<b>70.8</b>		
Number of Pools			10	<b>14</b>	<b>15</b>		
Deep Pools/km (>1.0 m)			10.1	8.4	<b>14.7</b>		
% Off-Channel			1.3	7.1	<b>.9</b>		
LWD – Pieces/100m	>20	<10	3.2	<b>9.0</b>	<b>14.4</b>		
LWD – Volume/100m	>30	<20	5.5	<b>31.9</b>	<b>29.1</b>		
LWD – Key Pieces/100m	>3	<1	.4	.4	.3		
Large Wood Jams/km			0	1.9	<b>11.7</b>		
% Riffle Fines	<10	>20	32	19	38		
% Riffle Gravel	>35	<15	21	32	33		
% Bedrock			54	28	<b>23</b>		

**Bold** is noticeable change

Comments: Since the treatment was large wood assembled in complex jams, it is no surprise that there was an increase in those variables. What is important is that the large wood is being retained in the treated reach and is accumulating additional wood pieces. Apparently few key pieces were utilized in the treatment and none have been retained. However, the stream seems to be responding well to treatment. There has been a large increase in pool area, there a more total pools, and more deep pools. Riffle fines and gravel remain unchanged. However, percent bedrock seems to be decreasing.



OREGON DEPT OF FISH AND WILDLIFE      DEVILS LAKE FORK WILSON POST-TX      (1-NC, 27)

HABITAT INVENTORY      Report Date: 12/6/2006      Survey Date: 3/22/2006

REACH 1		T02N-R06W-S36NE					REACH 1					
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
CASCADE/BEDROCK	1	2	0.5	0.02	1	0	0	0	0	0	0	100
GLIDE	2	53	8.0	0.70	418	0	8	23	55	15	0	0
POOL-ALCOVE	1	5	3.0	0.20	14	0	60	40	0	0	0	0
POOL-DAMMED	2	195	8.8	1.65	1,728	0	15	38	41	5	0	0
POOL-ISOLATED	1	16	1.5	0.50	24	0	40	60	0	0	0	0
POOL-LATERAL SCOUR	11	342	9.1	1.31	3,057	0	5	22	35	5	0	32
RAPID/BOULDERS	1	8	1.5	0.15	12	0	20	0	0	0	0	80
RIFFLE	6	194	7.2	0.45	1,502	0	8	30	33	7	0	22
STEP/LOG	1	1	9.0	0.25	5	0	20	40	40	0	0	0
STEP/STRUCTURE	2	4	12.0	0.30	52	0	25	40	35	0	0	0
<b>Total:</b>	28	817	7.7	0.84	6,813	0	<b>Avg:</b> 12	27	32	5	0	23

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	4	215	5.5	1.00	1,766	25.92%	0	0.0	
Scour Pools	11	342	9.1	1.31	3,057	44.87%	0	0.0	
Glides	2	53	8.0	0.70	418	6.13%	0	0.0	
Riffles	6	194	7.2	0.45	1,502	22.05%	0	0.0	
Rapids	1	8	1.5	0.15	12	0.18%	0	0.0	
Cascades	1	2	0.5	0.02	1	0.01%	0	0.0	
Step/Falls	3	4	11.0	0.28	57	0.84%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

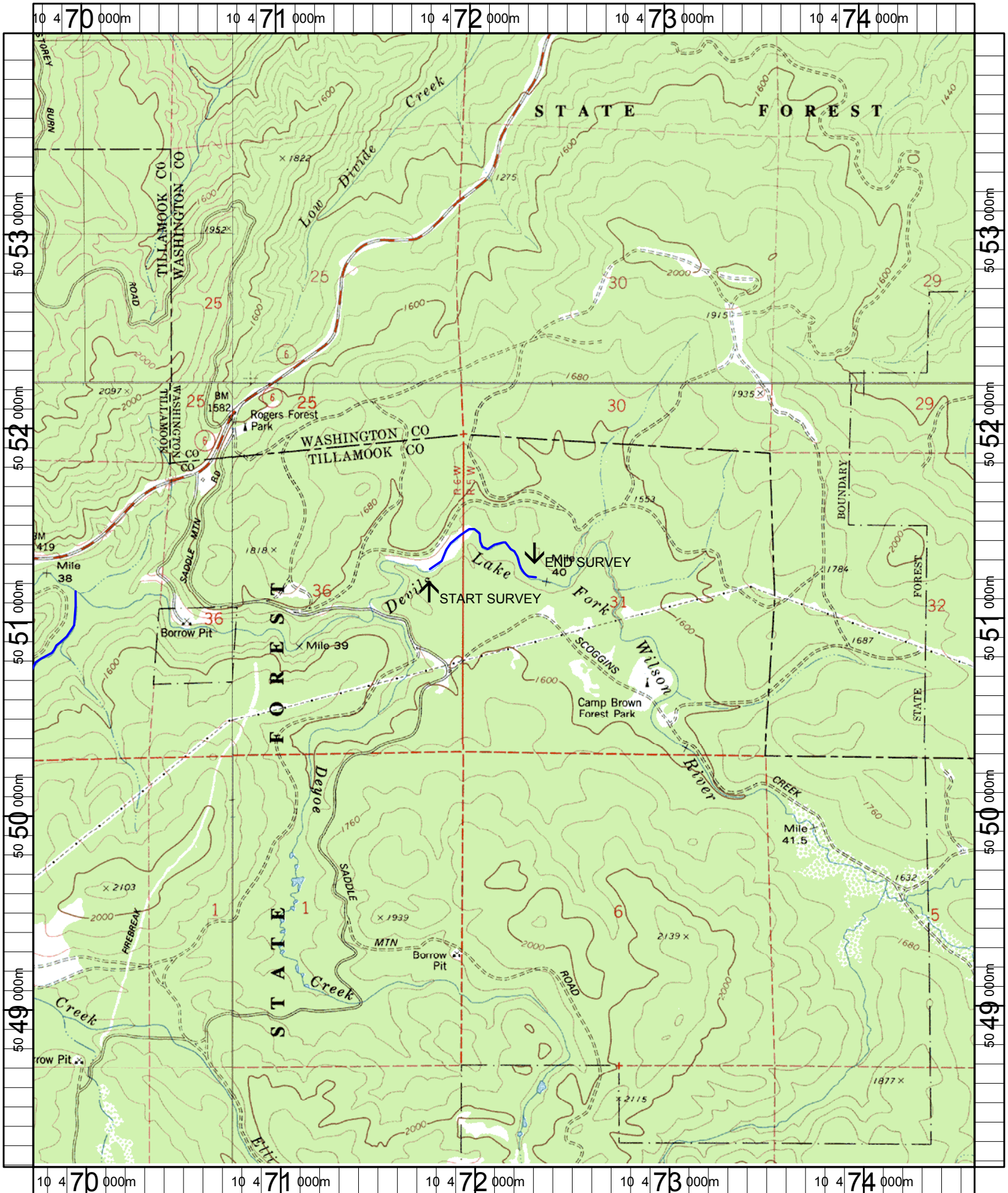
POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	15	18.4	19.4
Pools >=1m deep:	12	14.7	15.6
Complex pools (LWD pieces>=3):	10	12.2	13.0
Pool frequency (channel widths/pool):	4.8		
Residual pool depth (avg):	0.94		

# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 1-NC      SITE ID: 27      DEVILS LAKE FORK WILSON POST-

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	35	BV	T = 7.0 AT 14:00	
2	SL	00	35.6		H = 0.4	
3	DP	00	80.1	HS	ELEVEN LOGS	
5	LP	01	172.6	HS	SEVEN LOGS	
7	LP	00	192.1	HS	SEVEN LOGS	
8	RI	00	215.3	HS		
9	LP	00	232.3	HS		
10	SS	00	234.8	BD	H = 0.7	
11	DP	01	384.8	HS, /TJ		
13	GL	00	408.8	HS	TWELVE LOGS	
14	LP	00	432.8	SS/		
17	LP	01	525.8	TJ/, HS		
18	CR	11	525.8		H = 1.0	
19	RI	00	590.3	HS		
21	LP	00	661.3	HS		
23	SS	00	692.6		H = 0.2, BLOWNOUT BEAVER DAM	
24	LP	00	723.6	TJ/		
27	LP	00	756.6	HS		



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