

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

STREAM: Roaring River Tributary (W-56)
BASIN: South Santiam River
SURVEY TYPE: Post-Tx
DATE: February 9, 2006
SURVEY CREW: Brian Cannon, Jon Nott
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.4 km³
USGS MAPS: Jordan
ECOREGION: Willamette Valley Foothills

GENERAL DESCRIPTION:

The Roaring River Tributary habitat survey extended 513 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 4.9 (range: 4.0-7.0). Land use for the reach was young (3-15 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 2.4 percent. Riffles (72%) dominated stream habitat. Gravel (31%), sand (25%) and cobble (20%) dominated stream substrate. Wood volume was very high at 42.6 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.

Stream Roaring River Tributary (W-56)
 Basin South Santiam River
 Treatment Large Wood

	ODFW Benchmark		Pre 2/22/00	Post 1/31/01	Post 2/9/06		
Habitat Variable	Desirable	Undesirable					
% Pool Area	>35%	<10%	22.6	9.8	9.4		
Number of Pools			22	6	6		
Deep Pools/km (>1.0 m)			0	0	0		
% Off-Channel			16.3	9.4	14.8		
LWD – Pieces/100m	>20	<10	13.7	19.8	27.1		
LWD – Volume/100m	>30	<20	15.4	30	42.6		
LWD – Key Pieces/100m	>3	<1	1.4	0.4	3.5		
Large Wood Jams/km			7.8	19.0	13.6		
% Riffle Fines	<10	>20	30	26	32		
% Riffle Gravel	>35	<15	35	31	36		
% Bedrock			1	5	5		

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, increased volume and key wood pieces. The number of pools and pool area are markedly reduced from pre-treatment conditions. Substrate remains relatively unchanged.

REACH 1 T11S-R01E-S05SE 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	4.9	VWI Range:	4 - 7

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	100%
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 Channel	513	1,850	0
Secondary Channel	129	275	1
Off-Channel Units	16	47	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u>	<i>n = 4</i>	<u>First Terrace</u>	<i>n = 0</i>
Width: 3.5	Width: 5.7	23.6	(19 - 26)	(-)	
Depth: 0.26	Height: 0.5	1.1	(0.9 - 1.3)	(-)	

W:D ratio: 11.0 Entrenchment (ACW:FPW ratio): 4.1
Stream Flow Type: MF Habitat Units/100m (total channel length): 5.5
Average Unit Gradient: 2.4% Habitat Units/100m (primary channel length): 7.0
Water temperature (°C): 7.5 - 7.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	LT
Riparian Vegetation:	D30	S

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	139	27.1
Volume (m ³):	219	42.6
Key pieces (>=12m x 0.60m):	18	3.5

OREGON DEPT OF FISH AND WILDLIFE ROARING RIVER TRIBUTARY POST-TX (8-W, 56)

HABITAT INVENTORY Report Date: 1/24/2007 Survey Date: 2/9/2006

REACH 1		T11S-R01E-S05SE					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
POOL-DAMMED	2	14	4.9	0.66	67	0	20	35	30	15	0	0
POOL-LATERAL SCOUR	3	23	3.9	0.56	89	0	6	32	31	12	2	18
PUDDLED UNIT	1	25	1.7	0.01	43	0	20	50	30	0	0	0
RAPID/BEDROCK	1	10	3.8	0.10	39	0	0	0	3	2	0	95
RAPID/BOULDERS	3	78	4.0	0.27	311	0	0	10	40	23	27	0
RIFFLE	22	496	3.1	0.20	1,571	0	7	25	36	25	6	1
STEP/LOG	4	13	4.6	0.25	53	0	54	28	10	8	1	0
Total:	36	659	3.5	0.26	2,173	0	Avg: 12	25	31	20	6	5

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	14	4.9	0.66	67	3.07%	0	0.0	
Scour Pools	3	23	3.9	0.56	89	4.11%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	22	496	3.1	0.20	1,571	72.33%	0	0.0	
Rapids	4	88	4.0	0.23	350	16.10%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	4	13	4.6	0.25	53	2.43%	0	0.0	
Dry	1	25	1.7	0.01	43	1.96%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

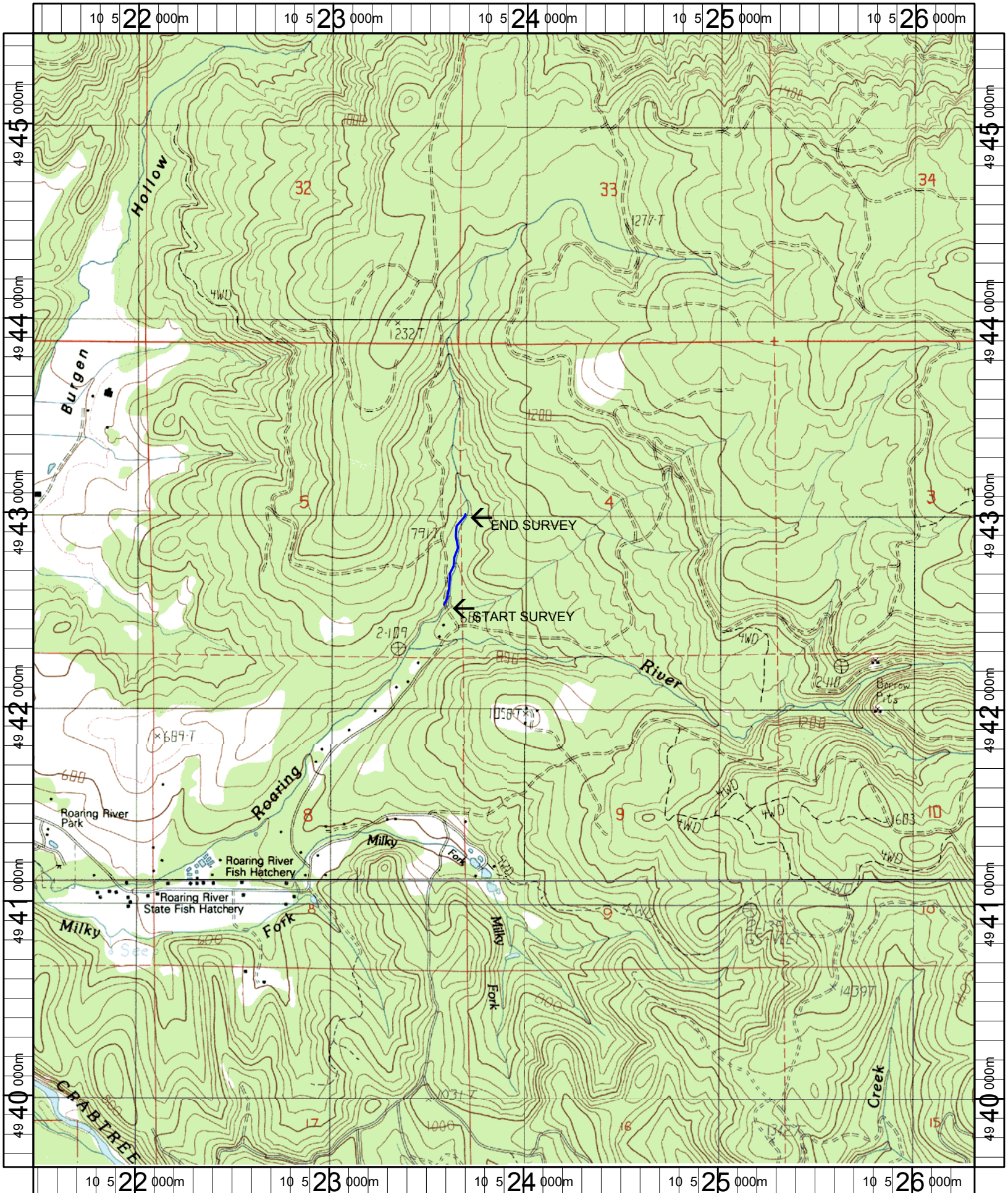
POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	5	7.6	9.7
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	2	3.0	3.9
Pool frequency (channel widths/pool):	23.0		
Residual pool depth (avg):	0.43		

Comment Summary

Restoration Monitoring Sites 2006

MONITORING AREA: **8-W** SITE ID: **56** ROARING RIVER TRIBUTARY POST-

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	01	43.2	/TJ	STARTED AT TOP OF CULVERT	
7	RI	01	140.9	HS		
9	RI	03	140.9		FLOWS OVER HABITAT STRUCTURE	
10	SL	00	141.2		H = 0.4	
11	DP	00	147.7	DJ		
12	SL	00	148		H = 0.25	
14	RI	00	180.9	HS		
15	RI	00	208.1	DJ		
16	RI	00	229.1	HS		
17	SL	01	229.4		H = 0.7	
22	LP	00	273.7	HS		
24	RI	00	308.6	HS		
25	RB	00	336.2	HS		
26	RI	00	364.6	HS		
27	RI	01	393.3	HS		
28	RI	01	418.8	HS		
29	RI	01	455.3	HS		
31	RI	01	484.5		T = 5.5	
36	RI	03	513.4		END ONE UNIT ABOVE END SIGN	



Name: JORDAN
 Date: 1/23/2006
 Scale: 1 inch equals 2000 feet

Location: 10 523888 E 4942557 N
 Caption: ROARING RIVER TRIBUTARY RESTORATION SITE - SOUTH
 SANTIAM BASIN