

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

STREAM: Barn Gulch (MS-181)
BASIN: Tenmile Lakes
SURVEY TYPE: Post-Tx
DATE: March 2, 2004
SURVEY CREW: Michael Scheu, Jeremiah Bernier
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 1.7 km²
USGS MAPS: Trail Butte
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Barn Gulch habitat survey extended 483 meters. The channel was unconstrained in a broad valley floor. The average valley width index was 4.6 (range: 3.0-7.0). Land use for the reach was second growth (15-30 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (48%) and riffles (43%) dominated stream habitat. Gravel (67%) and sand (29%) dominated stream substrate. Wood volume was low at 14.5 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

T23E-R12W-S13SE

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	4.6	VWI Range:	3 - 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	483	1,357	0
Secondary	12	10	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 2
Width: 2.8	Width: 5.5	18.5 (10.4 - 25)	16.5 (13.4 - 19.5)
Depth: 0.37	Height: 0.4	0.8 (0.8 - 0.8)	1.1 (1.1 - 1.1)

W:D ratio: 13.9

Stream Flow Type: MF

Avg. Unit Gradient: 1.1%

Entrenchment (ACW:FPW ratio): 3.6

Water temp (°C): 8.0 - 8.0

Habitat Units/100m: 9.9

Riparian, Bank, and Wood Summary

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

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</u>
All pieces (>=3m x 0.15m):	55	11.4
Volume (m ³):	70	14.5
Key pieces (>=10m x 0.60m):	6	1.2

OREGON DEPARTMENT OF FISH AND WILDLIFE

BARN GULCH POST-TX (MS-181)

HABITAT INVENTORY

Report Date: 6/16/2004

Survey Date:

3/2/2004

REACH 1

T23E-R12W-S13SE

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	2	0.5	0.08	1	0	5	5	63	26	0	0
POOL-BACKWATER	1	3	1.8	0.60	6	0	10	70	20	0	0	0
POOL-LATERAL SCOUR	20	221	2.8	0.55	617	0	3	42	55	0	0	0
POOL-PLUNGE	2	7	4.9	0.83	37	0	0	55	45	0	0	0
RAPID/BOULDERS	2	17	1.4	0.13	26	0	8	13	55	25	0	0
RIFFLE	14	209	2.9	0.21	584	0	0	16	80	3	0	0
STEP/COBBLE	8	34	2.9	0.21	94	0	0	16	84	0	0	0
STEP/LOG	1	1	2.1	0.10	3	0	0	10	90	0	0	0
Total:	49	495	2.8	0.37	1,367	0	Avg: 2	29	67	2	0	0

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	1	3	1.8	0.60	6	0.45%	0	0.0
Scour Pools	22	228	3.0	0.57	654	47.80%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	14	209	2.9	0.21	584	42.68%	0	0.0
Rapids	2	17	1.4	0.13	26	1.90%	0	0.0
Cascades	1	2	0.5	0.08	1	0.07%	0	0.0
Step/Falls	9	36	2.8	0.19	97	7.10%	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>	<u># / Km</u>	
All Pools:	23	46.5	12
Pools >=1m deep:	1	2.0	
Complex pools (LWD pieces>=3):	4	8.1	
Pool frequency (channel widths/pool):	3.9		
Residual pool depth (avg):	0.40		

STREAM SUMMARY

BARN GULCH POST-TX (MS-181)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate						Large Boulders (#>0.5m)
					S/O	Percent Wetted Area					
					Snd	Grvl	Cbl	Bldr	Bdrk		
49	495	2.8	0.37	1,367	2	29	67	2	0	0	

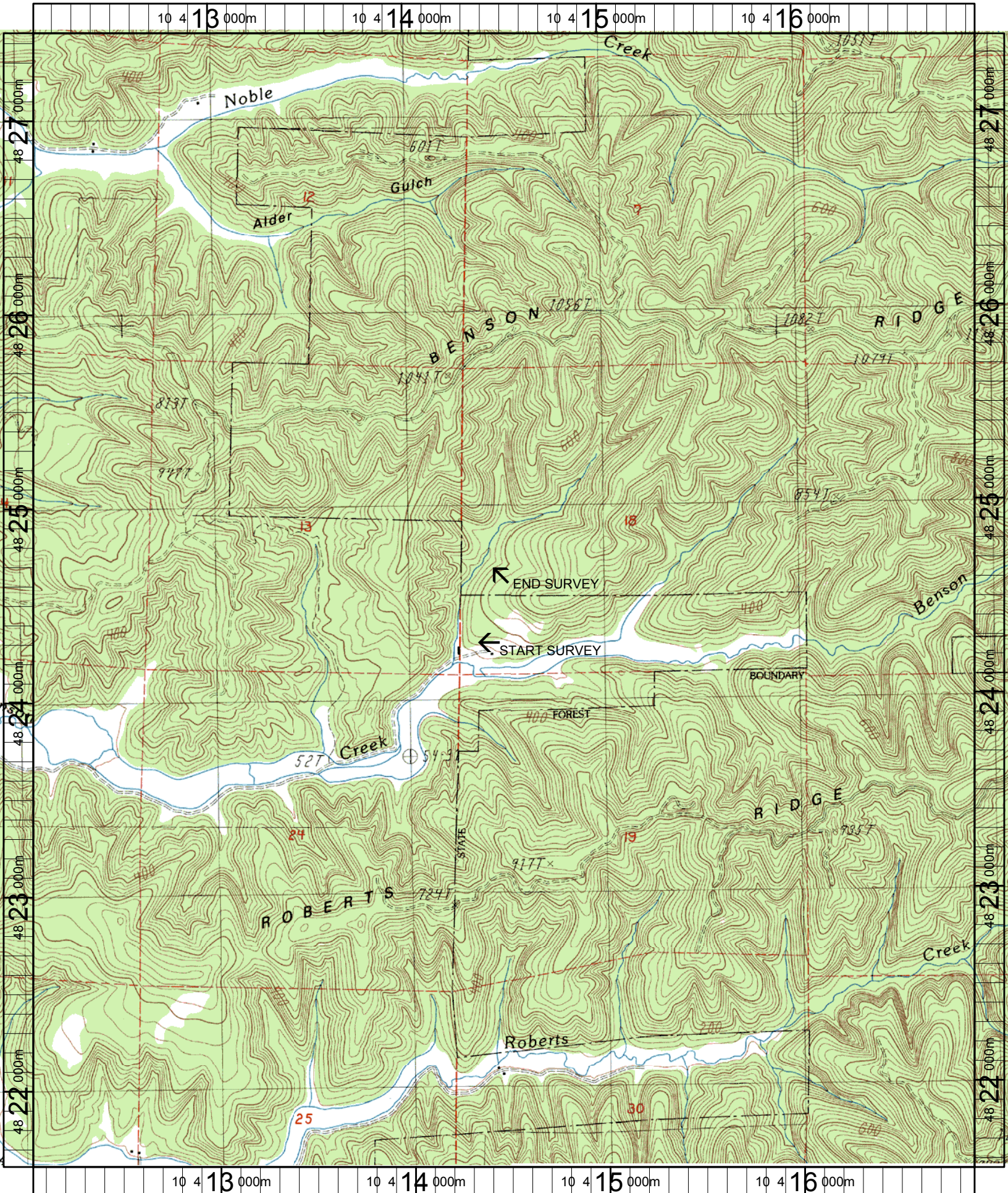
Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	6	0.45%
Scour Pools	654	47.80%
Glides	0	0.00%
Riffles	584	42.68%
Rapids	26	1.90%
Cascades	1	0.07%
Step/Falls	97	7.10%
Dry	0	0.00%
Culverts	0	0.00%

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **3-MS** SITE ID: **181** BARN GULCH POST-TX (MS-181)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	9.4	2-HS	T=8C	
2	LP	00	19.1	HS		
3	LP	00	26.1	2-HS		
4	RI	00	37.6	2-HS		
7	LP	00	60	HS		
10	SC	00	76.4	HS		
11	LP	00	90.5	HS		
13	LP	00	120.7	HS		
14	RI	00	141.1	HS		
21	LP	00	211	SS/		
26	RB	11	249.4		T=8C, ACW=1.2M	
38	LP	00	377.3	WL	RL FROG	
41	RI	00	413.9	/SS		
43	CB	11	433.4		ACW=1.0M, T=8C	
46	SL	00	447.2		H=.3M	
47	RI	00	472.2	/LS,SS		



Name: TRAIL BUTTE
 Date: 7/22/2004
 Scale: 1 inch equals 2000 feet

Location: 10 414485 E 4824506 N
 Caption: BARN GULCH RESTORATION SITE - TENMILE LAKE BASIN