

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

STREAM: Deadhorse Creek (W-78)  
BASIN: Molalla River  
SURVEY TYPE: Pre-Tx  
DATE: June 28, 2001  
SURVEY CREW: Sara Meguffy, Rawlin Richardson  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 38.1 km<sup>2</sup>  
USGS MAPS: Soosap Peak  
ECOREGION: Willamette Valley Foothills

**GENERAL DESCRIPTION:**

The Deadhorse Creek habitat survey extended 604 meters. The channel was alternately constrained by terraces in a broad valley floor. The average valley width index was 3.4 (range: 2.0 – 5.0). Land use for the reach was second growth (15-30 cm dbh) trees and timber harvest. The average unit gradient was 4.1 percent. Riffles (46%) and rapids (24%) dominated stream habitat. Cobble (43%) and gravel (24%) dominated stream substrate. Wood volume was low at 15.4 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T5S-R4E-S31NW

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 avg: 3.4 range: 2.0-5.0

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	604	4,780	0
Secondary	65	192	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>	<u>Floodprone</u>	<u>First Terrace</u>
Width	7.5	11.3	16.6	21.6
Depth	0.57	Height 0.5	1.0	2.3
		W:D ratio 21.7	Entrenchment 1.5	

Stream Flow Type: MF Water Temp: 10.0-10.0°C  
 Avg. Unit Gradient: 4.1% Habitat Units/100m: 5.1

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	TH
Riparian Vegetation:	S	M30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	0%	Reach avg: 73%
Undercut Banks	1%	Range: 58- 83

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ( $\geq 3m \times 0.15m$ )	50	8.3
Volume (m <sup>3</sup> )	93	15.4
Key pieces ( $\geq 10m \times 0.6m$ )	3	0.5

REACH 1

T5S-R4E-S31NW

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	Cbbl	Bldr	Bdrk
CASCADE/BOULDERS	5	87	6.0	0.40	495	13	1	17	26	50	5	0
POOL-ALCOVE	1	9	2.5	0.50	22	0	5	50	1	5	0	40
POOL-LATERAL SCOUR	9	100	8.2	0.96	805	25	3	26	22	34	8	6
RAPID/BOULDERS	6	183	6.9	0.49	1,199	44	2	15	23	48	11	1
RIFFLE	6	119	6.0	0.45	684	24	2	15	25	47	6	6
RIFFLE W/ POCKETS	6	156	10.4	0.37	1,620	18	2	18	29	46	4	0
STEP/COBBLE	1	15	10.0	0.30	148	0	5	20	20	50	0	5
<b>Total:</b>	<b>34</b>	<b>669</b>	<b>7.5</b>	<b>0.57</b>	<b>4,971</b>	<b>124</b>	<b>Avg: 2</b>	<b>20</b>	<b>24</b>	<b>43</b>	<b>6</b>	<b>4</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m <sup>2</sup> )	Area Percent	Large Boulders Number	Boulders #/100m <sup>2</sup>
Dammed & BW Pools	1	9	2.5	0.50	22	0.44	0	0.0
Scour Pools	9	100	8.2	0.96	805	16.19	25	3.1
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	12	275	8.2	0.41	2,303	46.33	42	1.8
Rapids	6	183	6.9	0.49	1,199	24.11	44	3.7
Cascades	5	87	6.0	0.40	495	9.95	13	2.6
Step/Falls	1	15	10.0	0.30	148	2.98	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	10	14.9
Pools ≥1m deep:	4	6.0
Complex pools (LWD pieces ≥3):	4	6.0
Pool Frequency (channel widths/pool):	5.9	
Residual pool depth (avg)	0.68m	

STREAM SUMMARY

DEADHORSE CREEK PRE-TX (#78)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
34	669	7.5	0.57	4,971	2	20	24	43	6	4	124

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	805	16.2
Backwater Pools	22	0.4
Glide	0	0.0
Riffle	2,303	46.3
Rapid	1,199	24.1
Cascade	495	9.9
Step	148	3.0
Dry	0	0.0

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REACH 1

RIPIARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	1,869
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	20

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	0.7	5.7	0.0	6.7	3.7	15.0	4.3	27.3
15-30cm	0.0	1.3	0.0	0.7	2.0	1.0	2.0	3.0
30-50cm	0.7	0.0	0.7	0.0	0.0	0.0	1.3	0.0
50-90cm	0.3	0.0	0.0	0.3	0.3	0.0	0.7	0.3
>90cm	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0
Total/100m <sup>2</sup>	1.7	7.0	1.0	7.7	6.0	16.0	2.9	10.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	78		95		81	
Shrub cover	50		44		28	
Grass/forb cover	50		57		72	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	50		83		83
High terrace	50		17		17	
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 (%)	41		51		56	

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

Summary of riparian zone (0-100ft) extrapolated to 1,000 feet along stream

Total hardwoods/1000 ft	1,869
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	61

Average number of trees in a 5-meter wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	4.3	27.3
15-30cm	2.0	3.0
30-50cm	1.3	0.0
50-90cm	0.7	0.3
>90cm	0.3	0.0

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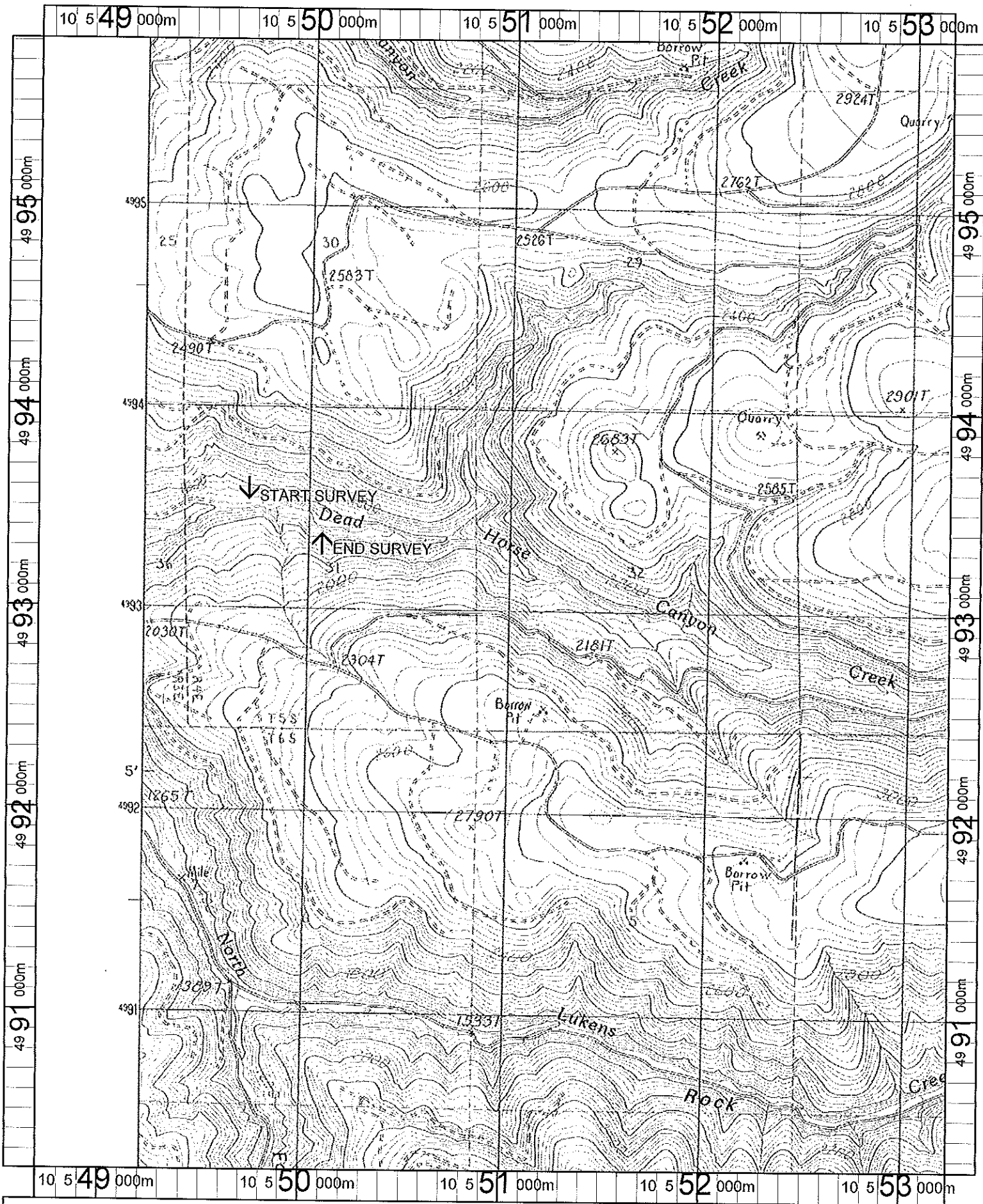
RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
12	LF	1	HT	10.0	50	80	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
12	LF	2	HT	0.0	85	50	50	Conifer	0	0	0	0	1	
								Hardwood	0	0	0	1	0	
12	LF	3	HT	0.0	80	10	90	Conifer	11	2	0	0	0	
								Hardwood	6	3	0	0	0	
12	RT	1	HS	90.0	98	80	20	Conifer	0	0	1	0	0	
								Hardwood	2	0	0	0	0	
12	RT	2	HS	90.0	98	80	20	Conifer	0	0	1	0	0	
								Hardwood	2	0	0	0	0	
12	RT	3	HS	90.0	70	50	50	Conifer	0	1	0	1	0	
								Hardwood	0	0	0	0	0	
18	LF	1	HT	0.0	95	20	80	Conifer	0	0	1	0	0	
								Hardwood	0	1	0	0	0	
18	LF	2	HS	70.0	95	20	88	Conifer	0	0	1	0	0	
								Hardwood	0	2	0	0	0	
18	LF	3	HS	70.0	45	10	90	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
18	RT	1	HS	55.0	70	30	70	Conifer	2	0	0	0	0	
								Hardwood	0	0	0	0	0	
18	RT	2	HS	0.0	95	25	75	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
18	RT	3	HS	28.0	90	10	90	Conifer	0	1	0	0	0	
								Hardwood	0	0	0	0	0	
30	LF	1	HT	0.0	80	60	40	Conifer	0	0	0	0	0	
								Hardwood	8	3	0	0	0	
30	LF	2	HS	55.0	99	50	50	Conifer	0	0	0	0	0	
								Hardwood	15	0	0	0	0	
30	LF	3	HS	60.0	99	50	50	Conifer	0	2	0	0	0	
								Hardwood	30	0	0	0	0	
30	RT	1	HS	90.0	75	30	70	Conifer	0	0	0	1	0	
								Hardwood	7	0	0	0	0	
30	RT	2	HS	90.0	99	40	60	Conifer	0	0	0	0	0	
								Hardwood	3	0	0	0	0	
30	RT	3	HS	90.0	99	40	60	Conifer	0	0	0	0	0	
								Hardwood	9	0	0	0	0	



Name: SOOSAP PEAK  
 Date: 1/10/2002  
 Scale: 1 inch equals 2000 feet

Location: 10 550934 E 4993029 N  
 Caption: DEADHORSE CREEK RESTORATION SITE -  
 MOLALLA RIVER