

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

STREAM: Wolf Creek (MC-108)
BASIN: Yaquina River
SURVEY TYPE: Pre-Tx
DATE: July 5, 2001
SURVEY CREW: Justin Gerding, Russ Macal
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 15.0 km²
USGS MAPS: Harlan
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Wolf Creek habitat survey extended 497 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 8.8 (range: 8.0 – 10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (57%) and riffles (35%) dominated stream habitat. Gravel (30%), sand (30%) and bedrock (26%) dominated stream substrate. Wood volume was low at 9.8 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

T11S-R8W-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	0
Moderate V-shape	0	Multiple Terraces	100
Open V-shape	0	Wide Floodplain	0

Valley Width Index avg: 8.8 range: 8.0-10.0

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	100	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	497	1,826	0
Secondary	23	16	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.4	Width	5.9	9.5	11.7
Depth	0.28	Height	0.5	1.0	1.2
		W:D ratio	12.3	Entrenchment	1.6

Stream Flow Type: LF Water Temp: 12.0-12.0°C
 Avg. Unit Gradient: 1.1% Habitat Units/100m: 6.5

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	2%	Reach avg: 80%
Undercut Banks	9%	Range: 67-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	105	21.1
Volume (m ³)	49	9.8
Key pieces (≥10m x 0.6m)	0	0.0

REACH 1

T11S-R8W-S31NW

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	Cbbl	Bldr	Bdrk
CULVERT CROSSING	1	14	3.5	0.15	50	0	0	25	75	0	0	0
GLIDE	3	30	3.0	0.18	92	3	2	27	27	5	3	37
POOL-ISOLATED	3	8	1.1	0.15	10	0	65	33	2	0	0	0
POOL-LATERAL SCOUR	13	222	4.7	0.48	1,009	3	12	50	19	2	1	17
POOL-STRAIGHT SCOUR	1	11	3.7	0.50	41	4	0	25	35	10	10	20
RIFFLE	13	234	2.6	0.13	639	2	0	12	46	1	1	40
Total:	34	520	3.4	0.28	1,842	12	Avg:10	30	30	2	1	26

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Percent	Large Number	Boulders #/100m ²
Dammed & BW Pools	3	8	1.1	0.15	10	0.54	0	0.0
Scour Pools	14	234	4.6	0.48	1,050	57.03	7	0.7
Glides	3	30	3.0	0.18	92	5.01	3	3.3
Riffles	13	234	2.6	0.13	639	34.70	2	0.3
Rapids	0	0	-	-	0	0.00	0	0.0
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	0	0	-	-	0	0.00	0	0.0
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	17	32.7
Pools ≥1m deep:	0	0.0
Complex pools (LWD pieces ≥3):	10	19.2
Pool Frequency (channel widths/pool):	5.2	
Residual pool depth (avg)	0.42m	

STREAM SUMMARY

WOLF CREEK PRE-TX (#108)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
34	520	3.4	0.28	1,842	10	30	30	2	1	26	12

Wetted Area

Habitat Group	(m ²)	Percent
Scour Pool	1,050	57.0
Backwater Pools	10	0.5
Glide	92	5.0
Riffle	639	34.7
Rapid	0	0.0
Cascade	0	0.0
Step	0	0.0
Dry	0	0.0

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	447
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	0
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	0.0	0.3	0.0	1.7	0.0	1.0	0.0	3.0
15-30cm	1.0	2.7	1.7	0.0	3.0	0.7	5.7	3.3
30-50cm	0.7	0.7	1.0	0.3	1.3	0.0	3.0	1.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	1.7	3.7	2.7	2.0	4.3	1.7	2.9	2.4

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	76		78		78	
Shrub cover	40		58		51	
Grass/forb cover	59		43		49	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	33		33		33
High terrace	50		67		67	
Low terrace	17		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 (%)	13		14		14	

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	447
Total conifers/1000 ft	528
Total conifers >20" dbh/1000 ft	0

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	0.0	3.0
15-30cm	5.7	3.3
30-50cm	3.0	1.0
50-90cm	0.0	0.0
>90cm	0.0	0.0

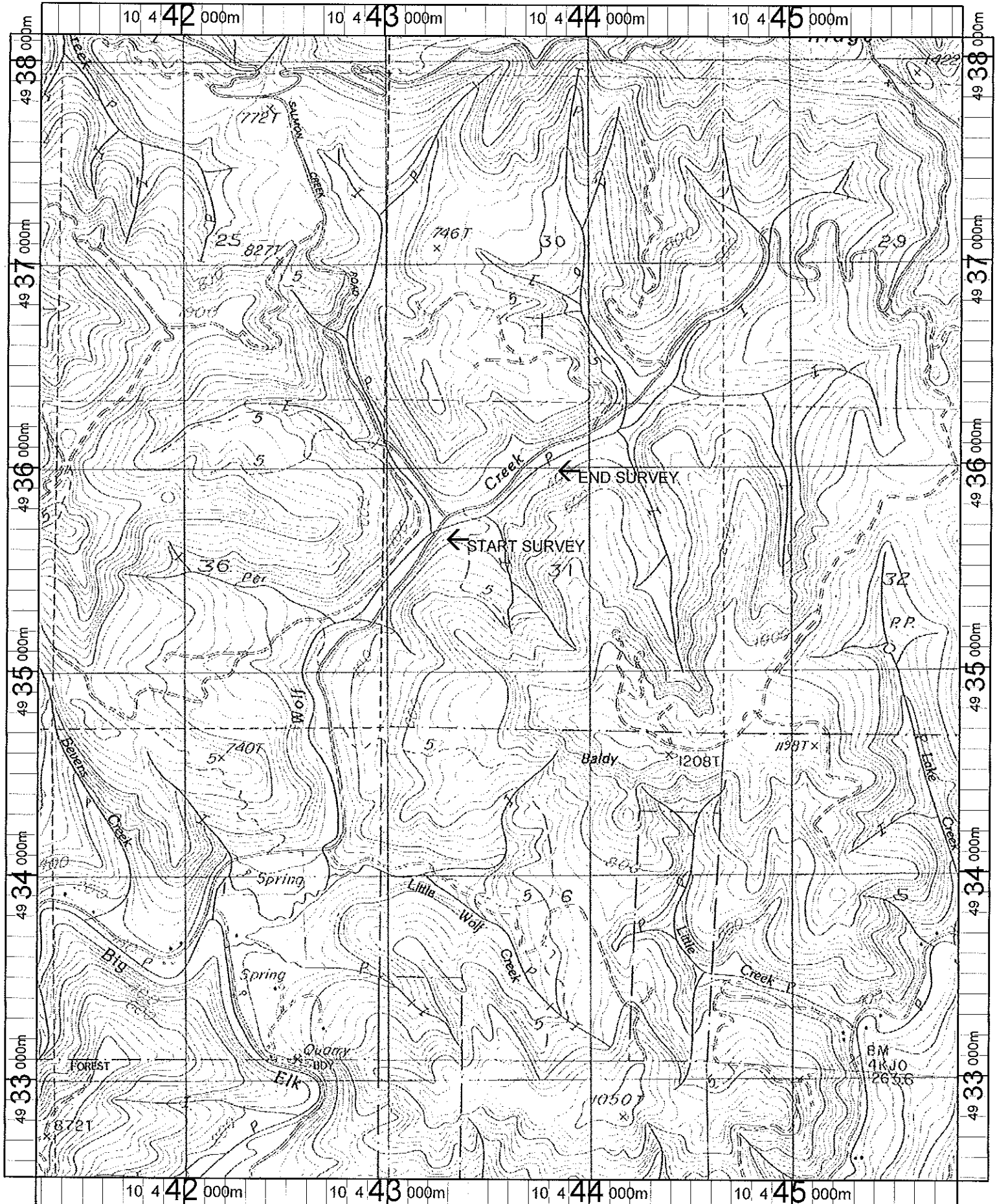
RIPARIAN ZONE VEGETATION

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	0.0	80	55	40	Conifer	0	0	1	0	0	
								Hardwood	0	1	0	0	0	ALDER
12	LF	2	HT	0.0	90	45	55	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	0	0	
12	LF	3	HT	0.0	65	35	65	Conifer	0	0	2	0	0	
								Hardwood	0	0	0	0	0	
12	RT	1	HS	45.0	70	50	50	Conifer	0	0	0	0	0	
								Hardwood	0	0	2	0	0	ALDER
12	RT	2	HS	50.0	80	80	20	Conifer	0	2	0	0	0	
								Hardwood	5	0	0	0	0	D. FIR, VINE MAPLE
12	RT	3	HS	45.0	80	40	60	Conifer	0	2	0	0	0	
								Hardwood	3	2	0	0	0	D. FIR, VINE MAPLE
17	LF	1	LT	0.0	70	30	70	Conifer	0	1	1	0	0	
								Hardwood	0	0	0	0	0	
17	LF	2	HT	0.0	50	80	20	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
17	LF	3	HT	0.0	60	90	10	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	SALMONBERRY
17	RT	1	HT	0.0	70	60	40	Conifer	0	1	0	0	0	
								Hardwood	0	2	0	0	0	D. FIR
17	RT	2	HT	0.0	80	60	40	Conifer	0	3	1	0	0	
								Hardwood	0	0	0	0	0	
17	RT	3	HT	0.0	85	50	50	Conifer	0	3	1	0	0	
								Hardwood	0	0	0	0	0	
25	LF	1	HT	0.0	85	15	85	Conifer	0	0	0	0	0	
								Hardwood	0	5	0	0	0	ALDER
25	LF	2	HT	0.0	90	10	90	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	D. FIR
25	LF	3	HT	0.0	90	10	90	Conifer	0	1	1	0	0	
								Hardwood	0	0	0	0	0	D. FIR
25	RT	1	HS	30.0	80	30	70	Conifer	0	1	0	0	0	
								Hardwood	1	0	0	0	0	D. FIR, ELDERBERRY
25	RT	2	HS	35.0	75	70	30	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
25	RT	3	HS	40.0	90	80	20	Conifer	0	3	0	0	0	
								Hardwood	0	0	0	0	0	D. FIR



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

Location: 10 443564 E 4935307 N
 Caption: WOLF CREEK RESTORATION SITE - YAQUINA
 BASIN