

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

STREAM: Buck Creek (L-73)  
BASIN: Clatskanie River  
SURVEY TYPE: Post-Tx  
DATE: September 10, 2007  
SURVEY CREW: James Davis, Thomas Litwin  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 3.3 km<sup>2</sup>  
USGS MAPS: Delena  
ECOREGION: Coast Range Astoria Willapa

**GENERAL DESCRIPTION:**

The Buck Creek habitat survey extended 489 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 9.7 (range: 1.0-18.0). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 4.4 percent. Rapids (65%) dominated stream habitat. Gravel (42%) and silt (28%) dominated stream substrate. Wood volume was low at 9.0 m<sup>3</sup>/100m.

**COMMENTS:**

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

REACH 1

T06N-R03W-S15SE

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	9.7	VWI Range:	1 - 18

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 Channel	489	899	1
Secondary Channel	38	58	1
Off-Channel Units	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 2.0	Width: 2.1	2.8 ( 2.3 - 4.2 )	3.4 ( 3 - 3.8 )
Depth: 0.17	Height: 0.2	0.5 ( 0.4 - 0.6 )	0.7 ( 0.45 - 1 )

W:D ratio: 9.3  
 Stream Flow Type: LF  
 Average Unit Gradient: 4.4%  
 Water temperature (°C): 10.0 - 10.0  
 Entrenchment (ACW:FPW ratio): 1.4  
 Habitat Units/100m (total channel length): 4.0  
 Habitat Units/100m (primary channel length): 4.3

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	ST
Riparian Vegetation:	M15	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 91%
Undercut Banks:	1%	Range: 56 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	31	6.3
Volume (m <sup>3</sup> ):	44	9.0
Key pieces (>=12m x 0.60m):	0	0.0

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

9/10/2007

REACH 1		T06N-R03W-S15SE					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	2	44	2.3	0.05	95	0	0	0	6	6	0	89
DRY UNIT	1	19	1.0	0.00	19	0	90	0	10	0	0	0
POOL-BEAVER DAM	1	18	6.0	0.50	107	0	80	0	20	0	0	0
POOL-LATERAL SCOUR	4	19	2.4	0.48	45	0	54	1	40	5	0	0
PUDDLED UNIT	1	22	1.5	0.10	33	1	5	0	80	10	5	0
RAPID/BOULDERS	11	384	1.7	0.09	620	9	16	0	49	31	3	0
RIFFLE	1	21	1.8	0.07	37	0	25	0	70	5	0	0
<b>Total:</b>	21	528	2.0	0.17	957	10	<b>Avg:</b> 28	0	42	19	2	8

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	1	18	6.0	0.50	107	11.16%	0	0.0	
Scour Pools	4	19	2.4	0.48	45	4.70%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	1	21	1.8	0.07	37	3.91%	0	0.0	
Rapids	11	384	1.7	0.09	620	64.83%	9	1.5	
Cascades	2	44	2.3	0.05	95	9.91%	0	0.0	
Step/Falls	0	0			0	0.00%	0	0.0	
Dry	2	41	1.3	0.05	53	5.49%	1	1.9	
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	9.5	10.2
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	0	0.0	0.0
Pool frequency (channel widths/pool):	49.8		
Residual pool depth (avg):	0.43		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

BUCK CREEK POST-TX  
GCG: 7-L SITE ID: 73

Survey Date 9/10/2007

RIPARIAN ZONE

Report Date: 11/7/2007

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1727
Total conifers/1000 ft	447
Total conifers >20" dbh/1000 ft	41
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	0.3	16.3	1.0	2.0	0.0	1.0	1.3	19.3
15-30cm	0.3	0.7	0.7	1.3	2.7	1.3	3.7	3.3
30-50cm	0.0	2.0	1.3	0.7	0.3	0.7	1.7	3.3
50-90cm	0.0	1.7	0.3	0.3	0.3	0.3	0.7	2.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.7	20.7	3.3	4.3	3.3	3.3	2.4	9.4

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	83	94	70
Shrub cover	23	13	33
Grass/forb cover	47	45	34

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	33	83	100
High terrace	67	17	0
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 (%)	13	24	31

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

3 transects

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

Total hardwoods/1000	1727
Total conifers/1000 ft	447
Total conifers >20" dbh/1000 ft	41
Total conifers >35" dbh/1000 ft	0

**Average number of trees in a 5-m wide band**

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	1.3	19.3
15-30cm	3.7	3.3
30-50cm	1.7	3.3
50-90cm	0.7	2.3
>90cm	0.0	0.0

**RIPARIAN ZONE VEGETATION**

Reach 1

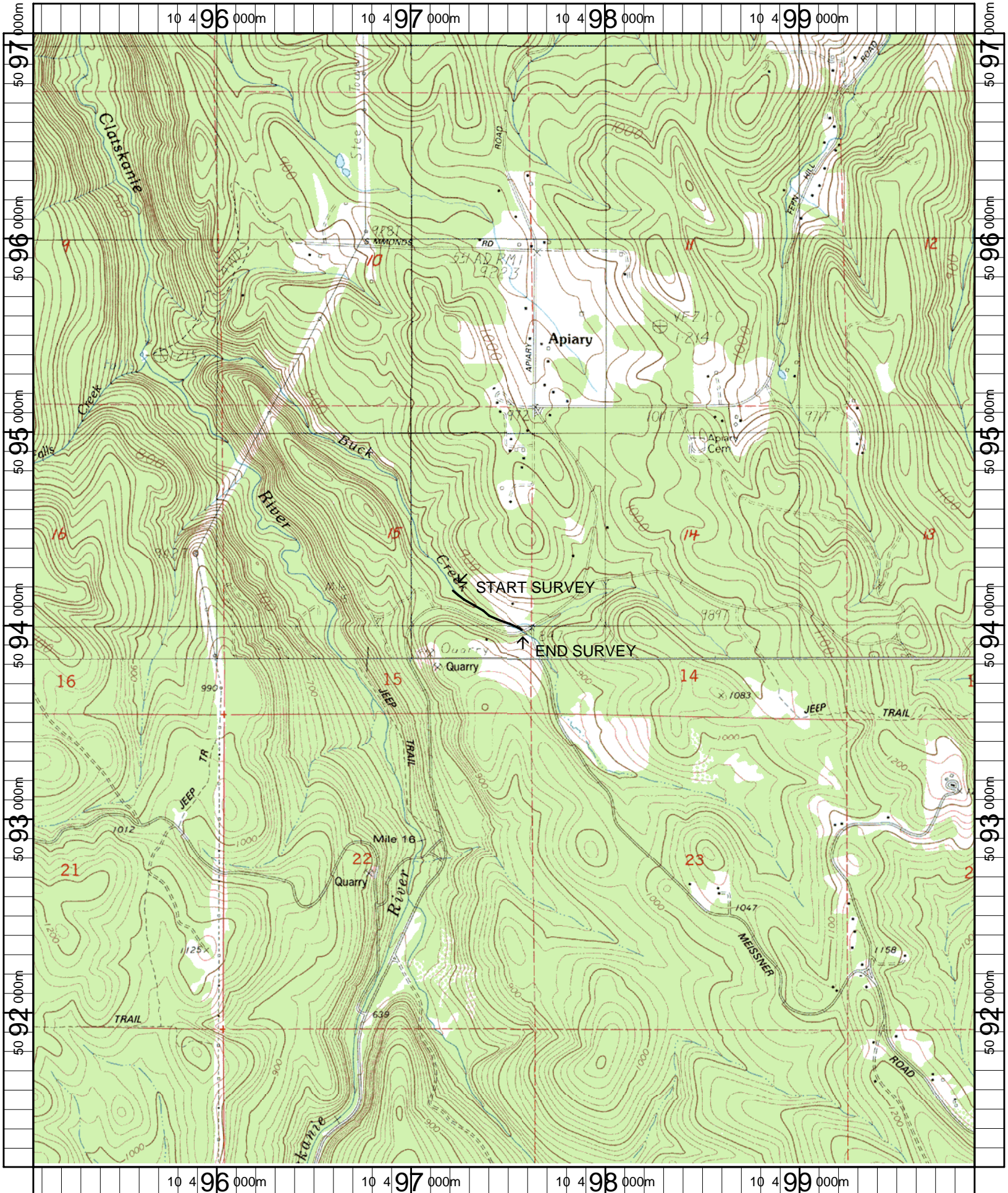
Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
6	LT	1	HT	0	90	40	10	Conifer	1						
								Hardwood	11						
6	LT	2	HS	21	100	15	30	Conifer			1	1			
								Hardwood	1						
6	LT	3	HS	34	95	5	80	Conifer		4					
								Hardwood	1	4	1				
6	RT	1	HS	43	100	0	30	Conifer			1				
								Hardwood	27						
6	RT	2	HS	45	100	0	15	Conifer	2	2	1				
								Hardwood	1						
6	RT	3	HS	24	100	0	5	Conifer		4	1				
								Hardwood							
11	LT	1	HT	0	95	5	85	Conifer							
								Hardwood			3	5			
11	LT	2	HS	20	95	15	70	Conifer	1						
								Hardwood	1	1	2				
11	LT	3	HS	34	70	20	40	Conifer							
								Hardwood			1				
11	RT	1	HS	34	90	50	10	Conifer							
								Hardwood	1	1	2				
11	RT	2	HS	31	95	20	5	Conifer							
								Hardwood	2	3					
11	RT	3	HS	26	95	60	20	Conifer							
								Hardwood	1						
16	LT	1	HT	0	90	5	90	Conifer							
								Hardwood	9	1	1				
16	LT	2	HS	26	90	20	60	Conifer			2				
								Hardwood							
16	LT	3	HS	26	0	80	10	Conifer							
								Hardwood							
16	RT	1	HT	0	30	40	55	Conifer							
								Hardwood	1						
16	RT	2	HT	0	85	5	90	Conifer							
								Hardwood	1			1			
16	RT	3	HS	42	60	30	50	Conifer					1		
								Hardwood	1			1			

**COMMENT SUMMARY**

MONITORING AREA: 7-L      SITE ID: 73      STREAM: BUCK CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	BP	00	17.8	BV	



Name: DELENA  
 Date: 4/25/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 0497478 E 5094130 N  
 Caption: BUCK CREEK RESTORATION SITE - CLATSKANIE BASIN