

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

STREAM: Clatskanie River (L-215)  
BASIN: Clatskanie River  
SURVEY TYPE: Post-Tx  
DATE: 8/15/2006  
SURVEY CREW: Gordon Rose, Ben Walczak  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 397 km<sup>2</sup>  
USGS MAPS: Baker Point  
ECOREGION: Coast Range Astoria Willapa

**GENERAL DESCRIPTION:**

The Clatskanie River habitat survey extended 908 meters. The channel was constrained by alternating hillslopes and terraces within a broad valley floor. The average valley width index was 3 (range: 2.8-3). Land use for the reach was second growth timber. The average unit gradient was 1.6 percent. Riffles (32%), scour pools (35%) and rapids (19%) dominated stream habitat. Gravel (27%), bedrock (26%) and cobble (24%) dominated stream substrate. Wood volume was low at 14.6 m<sup>3</sup>/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

T06N-R03W-S22NE

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	3.0	VWI Range:	2.8 - 3

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	908	7,119	0
Secondary Channel	198	716	6
Off-Channel Units	22	30	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 7.0	Width: 16.8	20.3 ( 12.6 - 27.8 )	22.9 ( 15.4 - 31.4 )
Depth: 0.36	Height: 0.8	1.6 ( 1.2 - 1.8 )	2.1 ( 1.8 - 2.2 )

W:D ratio: 21.3  
 Stream Flow Type: LF  
 Average Unit Gradient: 1.6%  
 Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.2  
 Habitat Units/100m (total channel length): 4.0  
 Habitat Units/100m (primary channel length): 5.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	D30	C15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	14%	Reach avg: 63%
Undercut Banks:	2%	Range: 44 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	119	13.1
Volume (m <sup>3</sup> ):	132	14.6
Key pieces (>=12m x 0.60m):	8	0.9

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

8/15/2006

REACH 1		T06N-R03W-S22NE					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
CULVERT CROSSING	1	20	1.2	0.05	24	2	10	10	20	20	20	20
DRY CHANNEL	3	84	3.0	0.00	297	0	0	3	47	37	13	0
POOL-BACKWATER	1	2	3.0	0.20	6	0	10	10	70	10	0	0
POOL-LATERAL SCOUR	13	311	7.3	0.64	2,297	127	5	7	32	17	11	28
POOL-PLUNGE	1	33	8.0	2.00	264	0	10	10	30	10	0	40
POOL-TRENCH	1	31	6.0	2.00	186	0	5	5	5	5	0	80
PUDDLED UNIT	3	114	3.7	0.00	419	0	10	10	31	28	12	11
RAPID/BEDROCK	1	36	8.0	0.20	288	65	0	0	0	15	15	70
RAPID/BOULDERS	4	157	7.3	0.16	1,223	715	0	0	15	30	43	13
RIFFLE	10	311	7.9	0.22	2,554	517	1	2	24	31	18	24
STEP/BEDROCK	3	14	8.0	0.12	129	18	0	0	0	5	8	87
STEP/BOULDERS	1	4	16.0	0.05	64	80	0	0	25	25	50	0
STEP/COBBLE	3	12	9.3	0.07	114	9	0	0	43	47	7	3
<b>Total:</b>	<b>45</b>	<b>1,128</b>	<b>7.0</b>	<b>0.36</b>	<b>7,865</b>	<b>1,533</b>	<b>Avg: 3</b>	<b>4</b>	<b>27</b>	<b>24</b>	<b>16</b>	<b>26</b>

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	2	3.0	0.20	6	0.08%	0	0.0	
Scour Pools	15	375	7.3	0.82	2,747	34.93%	127	4.6	
Glides	0	0			0	0.00%	0	0.0	
Riffles	10	311	7.9	0.22	2,554	32.47%	517	20.2	
Rapids	5	193	7.4	0.17	1,511	19.21%	780	51.6	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	7	30	9.7	0.09	307	3.90%	107	34.9	
Dry	6	198	3.3	0.00	716	9.10%	0	0.0	
Culverts	1	20	1.2	0.05	24	0.31%	2	8.3	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	16	14.2	17.6
Pools >=1m deep:	4	3.5	4.4
Complex pools (LWD pieces>=3):	4	3.5	4.4
Pool frequency (channel widths/pool):	4.2		
Residual pool depth (avg):	0.72		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

CLATSKANIE RIVER POST-TX  
GCG: 7-L SITE ID: 215

Survey Date 8/15/2006  
Report Date: 3/5/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	589
Total conifers/1000 ft	345
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	1.3	1.7	1.0	1.7	1.7	3.3	4.0
15-30cm	0.0	2.7	0.3	0.3	1.3	0.0	1.7	3.0
30-50cm	0.3	1.3	0.0	1.0	0.3	0.3	0.7	2.7
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/100m2	0.3	5.3	2.0	2.3	3.3	2.0	1.9	3.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	61		67		75	
Shrub cover	33		34		43	
Grass/forb cover	45		38		26	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		33		67	
High terrace	50		50		33	
Low terrace	17		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	17		17		0	
Riprap	0		0		0	
Surface slope (%)	13		13		14	

**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	589
Total conifers/1000 ft	345
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

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

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	3.3	4.0
15-30cm	1.7	3.0
30-50cm	0.7	2.7
50-90cm	0.0	0.0
>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		
11	RT	2	HS	55	60	70	20	Conifer							
								Hardwood		1	2				
11	LF	1	HT	0	70	60	40	Conifer							UTM 0496986-5092986-3D
								Hardwood	2	2					
11	RT	1	HS	75	50	70	20	Conifer							
								Hardwood							
11	LF	3	HS	15	85	60	40	Conifer							
								Hardwood			1				
11	RT	3	HS	55	60	70	20	Conifer							
								Hardwood							
11	LF	2	HS	20	85	60	40	Conifer							
								Hardwood	2		1				
22	LF	2	HT	0	70	20	40	Conifer	5						
								Hardwood	1						
22	RT	3	HS	10	85	25	25	Conifer	1	2					
								Hardwood							
22	RT	2	HT	0	80	20	70	Conifer		1					
								Hardwood							
22	LF	3	HT	0	70	10	20	Conifer	4						
								Hardwood							
22	LF	1	HT	0	80	30	50	Conifer							UTM 0497016-5092763-3D
								Hardwood	1	1	1				
22	RT	1	LT	0	60	10	90	Conifer							
								Hardwood		2	1				
41	RT	1	HT	0	85	20	60	Conifer				1			
								Hardwood	1	2					
41	RT	3	HT	0	80	70	20	Conifer		1					
								Hardwood							
41	RT	2	HT	0	85	30	50	Conifer							
								Hardwood							
41	LF	1	RB	0	20	5	10	Conifer							UTM 0496982-5092523-3D
								Hardwood		1	2				
41	LF	2	RB	0	20	5	10	Conifer							
								Hardwood							
41	LF	3	HS	5	70	20	30	Conifer			1	1			
								Hardwood	5						

# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 7-L      SITE ID: 215      CLATSKANIE RIVER POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	SB	00	4		H=0.75M	
11	LP	00	228.5			14.0C AT 10:50
14	SR	00	297.6		H=0.80M	
16	SR	00	341.6		H=0.60M	
17	RI	00	380.1	HS		
18	LP	00	412.1	HS		LOGS & BLDRS
19	SC	00	416.1		H=0.50M	
20	LP	00	431.1	HS		LOGS & BLDRS
21	RI	00	475.6	HS		LOGS & BLDRS
22	LP	00	500.6	/SS		
25	SC	01	538.6		H=0.50M	
30	PP	01	656.1			BEDROCK=HARDPAN
31	SR	01	657.1		H=0.70M	BEDROCK=HARDPAN
32	RI	01	683.6			BEDROCK=HARDPAN
33	PD	02	683.6	/SS		
35	LP	01	695.6			BEDROCK=HARDPAN
36	BW	10	695.6			OLD CULVERT THROWN A
37	SC	00	701.6	SS/	H=0.50M	
38	LP	01	717.6	TJ/		
39	CC	11	717.6	CC		ROUND 2.30M GALV. NEW X
40	RB	00	742.6			APIARY RD, END&START SP

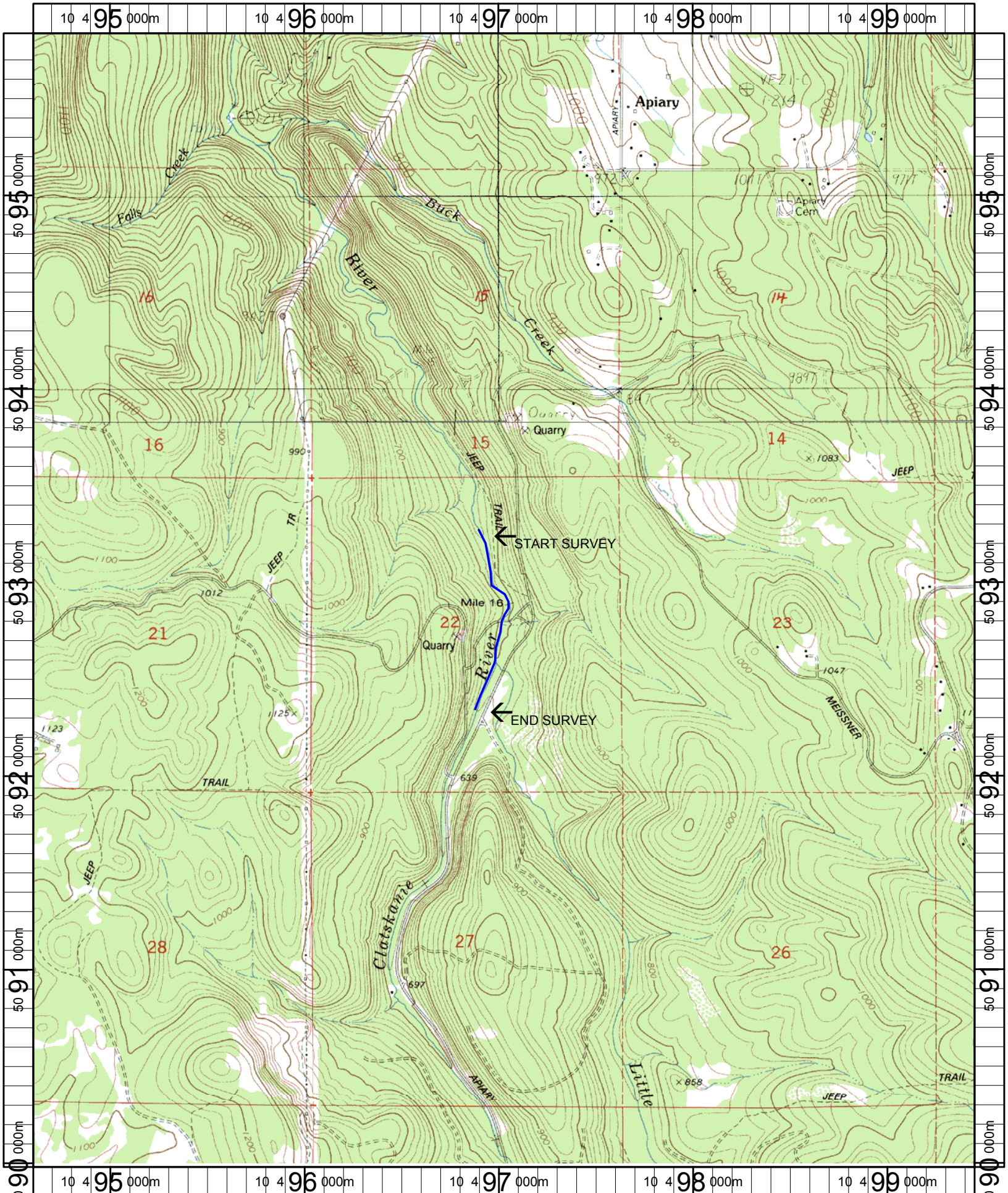
# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: 7-L SITE ID: 215 CLATSKANIE RIVER POST-TX

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
45	TP	00	908.1	/SS	END SURVEY	





Name: BAKER POINT  
 Date: 6/13/2005  
 Scale: 1 inch equals 2000 feet

Location: 10 497026 E 5092908 N  
 Caption: CLATSKANIE RIVER RESTORATION SITE - CLATSKANIE BASIN