

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: July 13, 2005
SURVEY CREW: Scott Young, Ben Walczak
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 397.0 km²
USGS MAPS: Baker Point
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Clatskanie River habitat survey extended 861 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.4 (range: 2.0-10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.7 percent. Scour pools (40%) and rapids (39%) dominated stream habitat. Cobble (36%) and gravel (34%) dominated stream substrate. Wood volume was very low at 9.0 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

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	4.4	VWI Range:	2 - 10

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	861	5,741	0
Secondary Channel	315	551	7
Off-Channel Units	54	99	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 4
Width: 5.0	Width: 8.6	10.5 (6 - 16)	10.9 (9.4 - 12)
Depth: 0.35	Height: 0.5	0.9 (0.8 - 1)	1.4 (0.85 - 2)

W:D ratio: 18.8
 Stream Flow Type: MF
 Average Unit Gradient: 1.7%
 Water temperature (°C): -

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 4.2
 Habitat Units/100m (primary channel length): 6.0

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	5%	Reach avg: 72%
Undercut Banks:	1%	Range: 44 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	73	8.5
Volume (m ³):	78	9.0
Key pieces (>=12m x 0.60m):	8	0.9

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

7/13/2005

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 ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CULVERT CROSSING	2	40	1.5	0.15	60	20	0	0	20	40	40	0
DRY CHANNEL	1	12	0.7	0.00	8	0	5	5	45	45	0	0
POOL-BACKWATER	2	13	2.3	0.18	38	0	10	13	50	28	0	0
POOL-ISOLATED	1	1	1.0	0.10	1	0	20	30	40	10	0	0
POOL-LATERAL SCOUR	15	360	6.0	0.71	2,269	45	2	5	38	36	4	16
POOL-PLUNGE	1	18	8.5	1.20	153	0	5	5	50	40	0	0
POOL-TRENCH	1	27	4.5	1.50	122	0	0	0	10	20	0	70
PUDDLED UNIT	6	213	1.2	0.08	273	0	7	10	46	37	0	1
RAPID/BOULDERS	9	387	6.3	0.17	2,490	157	1	1	22	44	20	12
RIFFLE	7	129	5.6	0.18	770	21	0	1	35	37	6	21
STEP/BEDROCK	3	17	5.1	0.10	107	10	0	0	3	3	8	85
STEP/COBBLE	4	13	7.8	0.10	102	20	0	0	40	54	6	0
Total:	52	1,230	5.0	0.35	6,391	273	Avg: 2	4	34	36	8	16

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	3	14	1.8	0.15	39	0.61%	0	0.0	
Scour Pools	17	405	6.0	0.79	2,543	39.79%	45	1.8	
Glides	0	0			0	0.00%	0	0.0	
Riffles	7	129	5.6	0.18	770	12.05%	21	2.7	
Rapids	9	387	6.3	0.17	2,490	38.95%	157	6.3	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	7	30	6.6	0.10	208	3.26%	30	14.4	
Dry	7	225	1.1	0.07	281	4.40%	0	0.0	
Culverts	2	40	1.5	0.15	60	0.94%	20	33.3	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	20	16.3	23.2
Pools >=1m deep:	4	3.3	4.6
Complex pools (LWD pieces>=3):	3	2.4	3.5
Pool frequency (channel widths/pool):	7.1		
Residual pool depth (avg):	0.69		

Survey Date 7/13/2005
Report Date: 4/26/2006

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	386
Total conifers/1000 ft	163
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	0.7	0.0	0.0	0.0	0.3	0.3	1.0	0.3
15-30cm	0.0	2.0	1.3	0.0	0.3	1.0	1.7	3.0
30-50cm	0.0	1.3	0.0	0.3	0.0	1.0	0.0	2.7
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
Total/100m2	0.7	3.7	1.3	0.3	0.7	2.3	0.9	2.1

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	50		47		48	
Shrub cover	23		17		21	
Grass/forb cover	78		68		79	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		50		83	
High terrace	50		33		17	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		0	
Riprap	0		0		0	
Surface slope (%)	16		15		19	

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	386
Total conifers/1000 ft	163
Total conifers >20" dbh/1000 ft	0
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	1.0	0.3
15-30cm	1.7	3.0
30-50cm	0.0	2.7
50-90cm	0.0	0.0
>90cm	0.0	0.3

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

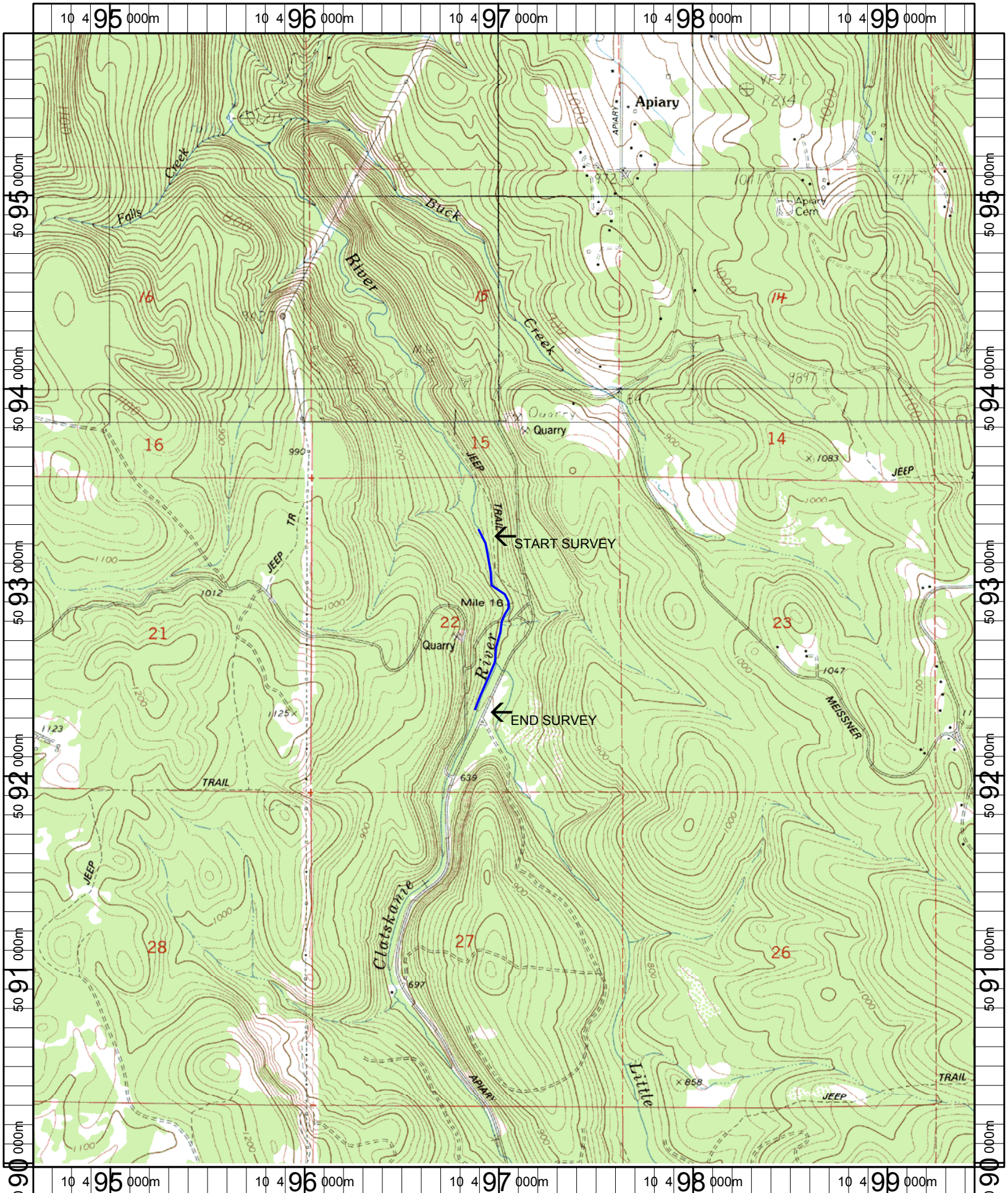
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
10	LF	2	HT	0	70	30	70	Conifer		1					
								Hardwood							
10	LF	3	HS	30	80	20	80	Conifer							
								Hardwood		2					
10	RT	1	HS	45	65	30	70	Conifer							
								Hardwood						1	
10	RT	2	HS	45	80	20	80	Conifer							
								Hardwood			1				
10	RT	3	HS	45	80	20	80	Conifer							
								Hardwood			1				
10	LF	1	HT	0	65	30	70	Conifer							0497002,
								Hardwood							5093086
20	RT	3	HS	30	30	20	80	Conifer							
								Hardwood	1	1					
20	RT	1	HS	30	40	10	95	Conifer							
								Hardwood			1	1			
20	LF	3	HS	30	40	5	95	Conifer	1	1					
								Hardwood							
20	LF	2	HS	15	40	5	95	Conifer			3				
								Hardwood							
20	LF	1	HT	0	40	5	95	Conifer	2						0497012,
								Hardwood			3				5092813
20	RT	2	HS	30	30	0	100	Conifer							ALSO OLD
								Hardwood							ROAD BED
47	LF	1	HS	20	50	20	80	Conifer							0497005,
								Hardwood				1			5092546
47	LF	2	RB	0	30	5	5	Conifer							APNIRY RD.
								Hardwood							
47	LF	3	HS	-20	30	20	80	Conifer							ROAD BERM
								Hardwood							= NEG SLOPE
47	RT	3	HT	0	30	40	60	Conifer							
								Hardwood				2			
47	RT	1	HT	0	40	40	60	Conifer							
								Hardwood			1	1			
47	RT	2	HT	0	30	40	60	Conifer							
								Hardwood							

Comment Summary

Restoration Monitoring Sites 2005

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	SC	00	2		H = 1 M	
16	RI	00	350	SS/		
19	LP	00	405	HS x 2		BOULDERS AND LOGS
20	RB	01	455	HS x 2		BOULDERS AND LOGS
35	SR	01	622.5		H = .5 M	BEDROCK = HARDPAN CLAY
36	RI	01	632.5			BEDROCK = HARDPAN
41	LP	01	663.5			BEDROCK = HARDPAN
42	SC	01	668.5		H = 1 M	
43	PD	02	668.5			OLD CULV ON RT SIDE OF C
44	LP	01	685.5	TJ/		LITTLE CLATSKANIE R
45	CC	11	685.5	CC		
46	CC	11	685.5	CC		SPAWNING SURVEY END SI
47	RI	00	705.5			SPAWNING SURVEY START
52	TP	00	860.5			END SIGN ALDER LEFT



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