

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

STREAM: Willanch Creek Tributary A (MS-280)
BASIN: Coos Bay
SURVEY TYPE: Post-Tx
DATE: August 18, 2005
SURVEY CREW: Kevin Cellura, Eric Himmelreich
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.9 km²
USGS MAPS: North Bend
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Willanch Creek Tributary A habitat survey extended 486 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.7 (range: 2.8-6.5). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 2.6 percent. Riffles (49%) and rapids (30%) dominated stream habitat. Sand (28%) and silt (22%) dominated stream substrate. Wood volume was low at 14.5 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.

OREGON DEPT OF FISH AND WILDLIFE WILLANCH CREEK TRIBUTARY POST-TX (3-MS, 280)

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date: 8/18/2005

REACH 1

T25S-R12W-S09NW

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	3.7	VWI Range:	2.8 - 6.5

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	486	1,408	0
Secondary Channel	60	104	2
Off-Channel Units	9	6	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 2.8	Width: 4.8	10.0 (7.3 - 13.2)	10.4 (7.8 - 13.4)
Depth: 0.23	Height: 0.4	0.8 (0.7 - 1)	1.5 (1.2 - 1.8)

W:D ratio: 11.8

Entrenchment (ACW:FPW ratio): 2.2

Stream Flow Type: LF

Habitat Units/100m (total channel length): 7.4

Average Unit Gradient: 2.6%

Habitat Units/100m (primary channel length): 8.4

Water temperature (°C): 13.0 - 13.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	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:	14%	Reach avg: 83%
Undercut Banks:	10%	Range: 50 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	67	13.8
Volume (m ³):	70	14.5
Key pieces (>=12m x 0.60m):	2	0.4

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REACH 1		T25S-R12W-S09NW					REACH 1					
HABITAT DETAIL												
Habitat Type	Number	Total	Avg	Avg	Total	Large	Substrate					
	Units	Length	Width	Depth	Area	Boulders	Percent Wetted Area					
		(m)	(m)	(m)	(m ²)	(>0.5m)	S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BOULDERS	1	7	0.2	0.05	1	2	10	29	43	10	5	5
DRY CHANNEL	2	18	2.6	0.00	44	0	30	28	28	15	0	0
POOL-BACKWATER	1	2	2.2	0.30	5	0	40	50	10	0	0	0
POOL-LATERAL SCOUR	3	23	3.5	0.43	74	9	30	37	25	0	3	5
POOL-PLUNGE	1	4	5.3	0.50	23	2	65	10	0	0	15	10
POOL-STRAIGHT SCOUR	7	49	3.1	0.44	154	13	36	39	11	4	3	7
RAPID/BEDROCK	2	43	2.8	0.17	130	4	8	10	5	0	3	75
RAPID/BOULDERS	7	131	2.5	0.16	331	50	16	26	15	18	8	17
RIFFLE	13	248	2.8	0.16	680	58	13	27	28	15	7	11
RIFFLE W/ POCKETS	1	25	2.5	0.20	63	25	10	30	10	20	20	10
STEP/BEDROCK	2	6	2.2	0.10	12	0	5	10	5	5	0	75
STEP/LOG	1	0	2.0	0.11	1	0	70	20	10	0	0	0
Total:	41	555	2.8	0.23	1,518	163	Avg: 22	28	19	10	5	16

HABITAT SUMMARY									
Habitat Group	Number	Total	Avg	Avg	Wetted Area		Large Boulders		
	Units	Length	Width	Depth	(m ²)	Percent	Number	(# / 100m ²)	
		(m)	(m)	(m)					
Dammed & BW Pools	1	2	2.2	0.30	5	0.32%	0	0.0	
Scour Pools	11	76	3.4	0.44	252	16.59%	24	9.5	
Glides	0	0			0	0.00%	0	0.0	
Riffles	14	273	2.8	0.16	743	48.95%	83	11.2	
Rapids	9	174	2.6	0.16	461	30.34%	54	11.7	
Cascades	1	7	0.2	0.05	1	0.09%	2	140.8	
Step/Falls	3	6	2.1	0.10	13	0.83%	0	0.0	
Dry	2	18	2.6	0.00	44	2.88%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	12	21.6	24.7
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	2	3.6	4.1
Pool frequency (channel widths/pool):	9.7		
Residual pool depth (avg):	0.37		

Survey Date 8/18/2005
Report Date: 4/26/2006

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	1057
Total conifers/1000 ft	0
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	5.7	0.0	3.7	0.0	4.3	0.0	13.7
15-30cm	0.0	0.0	0.0	1.0	0.0	1.0	0.0	2.0
30-50cm	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7
50-90cm	0.0	0.0	0.0	0.7	0.0	0.3	0.0	1.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	5.7	0.0	6.0	0.0	5.7	0.0	5.8

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	80		61		46	
Shrub cover	44		68		60	
Grass/forb cover	47		23		24	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	67		100		100	
High terrace	0		0		0	
Low terrace	33		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 (%)	42		48		47	

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	1057
Total conifers/1000 ft	0
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	0.0	13.7
15-30cm	0.0	2.0
30-50cm	0.0	0.7
50-90cm	0.0	1.0
>90cm	0.0	0.0

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HABITAT INVENTORY Report Date: 4/27/2006

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GCG: 3-MS SITE ID: 280

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

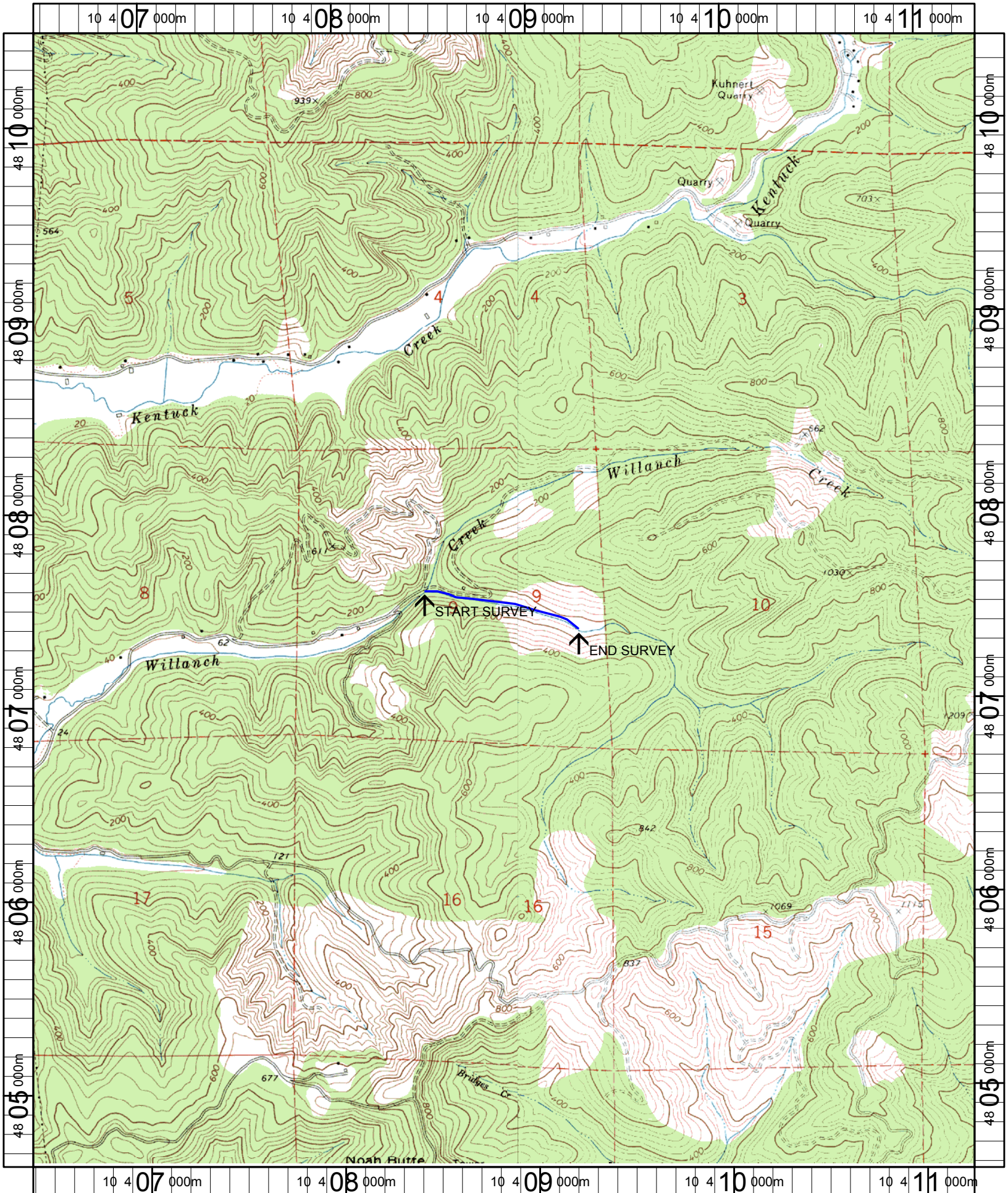
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
9	RT	3	HS	40	85	25	50	Conifer							
								Hardwood	12						
9	RT	2	HS	50	85	30	60	Conifer							
								Hardwood	1			1			
9	RT	1	HS	50	75	80	15	Conifer							
								Hardwood							
9	LF	3	HS	40	90	30	30	Conifer							
								Hardwood		1		1			
9	LF	2	HS	30	90	60	30	Conifer							
								Hardwood							
9	LF	1	HS	30	90	60	30	Conifer							408556,
								Hardwood							4807585,
															ALSO HT
21	LF	2	HS	20	90	90	5	Conifer							
								Hardwood	4			1			
21	LF	3	HS	40	10	75	20	Conifer							
								Hardwood							
21	RT	3	HS	60	0	90	5	Conifer							SOME VERY
								Hardwood							YOUNG
															DOUG FIR
21	RT	2	HS	80	0	90	5	Conifer							
								Hardwood							
21	RT	1	HS	90	90	30	55	Conifer							
								Hardwood	1						
21	LF	1	LT	0	40	15	80	Conifer							408666,
								Hardwood	1						4807501
29	RT	3	HS	60	0	80	10	Conifer							
								Hardwood							
29	RT	2	HS	80	10	80	10	Conifer							
								Hardwood	3						
29	RT	1	HS	80	90	70	20	Conifer							
								Hardwood	10						
29	LF	3	HS	40	90	60	30	Conifer							
								Hardwood	1	2					
29	LF	2	HS	30	90	60	30	Conifer							
								Hardwood	3	3	2				
29	LF	1	LT	0	95	10	80	Conifer							408804,
								Hardwood	5						4807505

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **280** WILLANCH CREEK TRIBUTARY POS

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	01	10.7			T = 13 C
2	DC	02	10.7	HS		408432, 4807570
7	SP	00	112.6	HS		
8	RB	00	135.2	HS		
10	RI	00	156.5	HS		
12	RI	01	190.9	/TJ	/TJ	
13	CB	11	190.9		ACW = .9 M	TRIB 1 408595, 4807555
14	BW	10	190.9			MAIN T=14 C, TRIB T=13.5 C
33	SL	01	430		H = .5 M	
40	SR	00	460.8		H = .3 M	



Name: NORTH BEND
 Date: 6/13/2005
 Scale: 1 inch equals 2000 feet

Location: 10 408852 E 4807528 N
 Caption: WILLANCH CREEK TRIBUTARY A RESTORATION SITE - COOS BASIN