

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

STREAM: Willanch Creek (MS-279)
BASIN: Coos Bay
SURVEY TYPE: Reference
DATE: September 1, 2005
SURVEY CREW: Lanoah Babcock, Eric Himmelreich
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 20.1 km²
USGS MAPS: North Bend
ECOREGION: Coast Range Coastal Uplands

GENERAL DESCRIPTION:

The Willanch Creek habitat survey extended 595 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.6 (range: 1.0-7.0). Land use for the reach was young (3-15 cm dbh) trees and rural residential. The average unit gradient was 3.7 percent. Riffles (50%) and rapids (37%) dominated stream habitat. Sand (38%), silt (20%) and gravel (19%) dominated stream substrate. Wood volume was very low at 5.1 m³/100m.

COMMENTS:

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

REACH 1

T25S-R12W-S09NE

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	2.6	VWI Range:	1 - 7

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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 Channel	595	1,128	0
Secondary Channel	19	23	1
Off-Channel Units	22	23	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 0
Width: 1.8	Width: 3.1	7.4 (3.8 - 15)	(-)
Depth: 0.13	Height: 0.4	0.7 (0.6 - 1)	(-)

W:D ratio: 8.9 Entrenchment (ACW:FPW ratio): 2.7
 Stream Flow Type: MF Habitat Units/100m (total channel length): 5.8
 Average Unit Gradient: 3.7% Habitat Units/100m (primary channel length): 6.2
 Water temperature (°C): 10.5 - 10.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	RR
Riparian Vegetation:	D15	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	30%	Reach avg: 65%
Undercut Banks:	9%	Range: 49 - 83

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	64	10.8
Volume (m ³):	30	5.1
Key pieces (>=12m x 0.60m):	0	0.0

OREGON DEPT OF FISH AND WILDLIFE

WILLANCH CREEK REFERENCE (3-MS, 279)

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

9/1/2005

REACH 1		T25S-R12W-S09NE					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	10	0.6	0.03	6	0	23	27	23	18	0	9
DRY CHANNEL	2	29	1.3	0.00	37	0	18	43	30	10	0	0
POOL-BACKWATER	1	2	1.4	0.25	3	0	60	40	0	0	0	0
POOL-LATERAL SCOUR	2	16	3.4	0.44	58	2	55	33	8	0	5	0
POOL-PLUNGE	1	4	1.5	0.25	6	0	65	35	0	0	0	0
POOL-STRAIGHT SCOUR	2	11	3.1	0.42	33	1	20	48	5	5	3	20
RAPID/BEDROCK	1	25	1.5	0.11	38	8	10	10	25	20	15	20
RAPID/BOULDERS	9	210	1.9	0.10	400	43	11	36	26	15	7	5
RIFFLE	15	324	1.8	0.09	590	39	15	42	21	12	5	6
STEP/BEDROCK	1	2	0.9	0.01	1	0	20	20	0	0	0	60
STEP/COBBLE	1	2	1.4	0.03	3	0	30	40	15	15	0	0
STEP/LOG	1	2	0.5	0.01	1	0	20	40	20	20	0	0
Total:	37	636	1.8	0.13	1,174	93	Avg: 20	38	19	11	5	7

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	1.4	0.25	3	0.27%	0	0.0	
Scour Pools	5	31	2.9	0.39	96	8.18%	3	3.1	
Glides	0	0			0	0.00%	0	0.0	
Riffles	15	324	1.8	0.09	590	50.23%	39	6.6	
Rapids	10	235	1.8	0.11	438	37.26%	51	11.7	
Cascades	1	10	0.6	0.03	6	0.51%	0	0.0	
Step/Falls	3	5	0.9	0.02	5	0.42%	0	0.0	
Dry	2	29	1.3	0.00	37	3.13%	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:	6	9.4	10.1
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	1	1.6	1.7
Pool frequency (channel widths/pool):	34.0		
Residual pool depth (avg):	0.34		

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**WILLANCH CREEK REFERENCE
GCG: 3-MS SITE ID: 279**

**Survey Date 9/1/2005
Report Date: 4/26/2006**

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

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

Total hardwoods/1000	1321
Total conifers/1000 ft	81
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	5.7	0.0	6.7	0.0
15-30cm	0.3	2.0	0.3	0.7	0.0	0.3	0.7	3.0
30-50cm	0.7	0.7	0.0	0.0	0.0	0.0	0.7	0.7
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	1.0	8.3	0.3	6.3	0.0	7.0	0.4	7.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
	Canopy closure	63		61		73
Shrub cover	33		39		53	
Grass/forb cover	49		33		41	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
	Hillslope	83		83		100
High terrace	0		0		0	
Low terrace	17		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 (%)	46		40		55	

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	1321
Total conifers/1000 ft	81
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	18.0
15-30cm	0.7	3.0
30-50cm	0.7	0.7
50-90cm	0.0	0.0
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

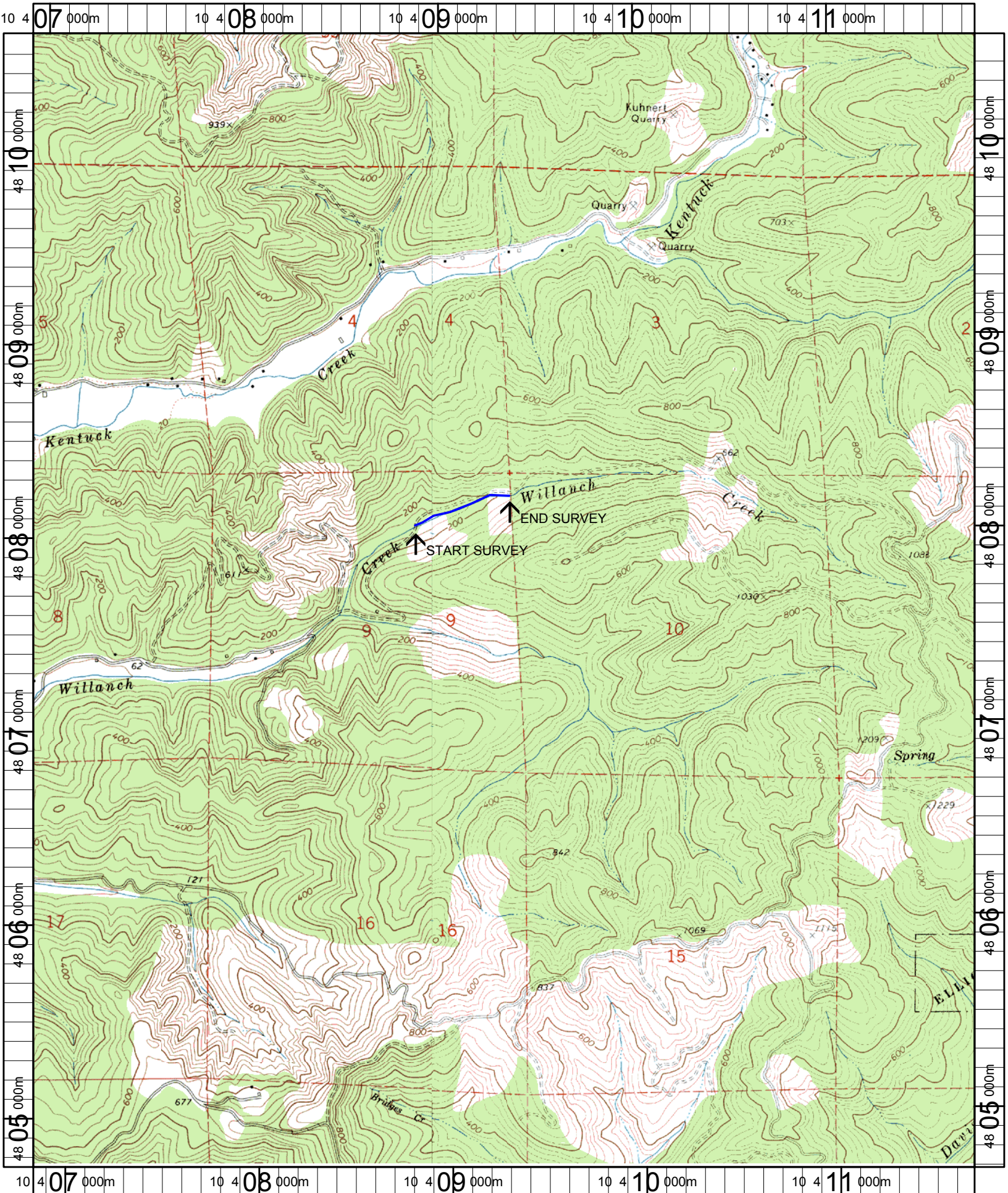
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
9	RT	3	HS	70	85	20	80	Conifer							
								Hardwood	5						
9	LF	1	LT	0	10	20	80	Conifer							LEFT SIDE
								Hardwood	4						EST. -
															BLACKBERRIE
9	RT	2	HS	45	85	15	45	Conifer							
								Hardwood	3						
9	LF	2	HS	20	80	100	0	Conifer							408939,
								Hardwood	3						4808005
9	LF	3	HS	25	80	100	0	Conifer							
								Hardwood	4						
9	RT	1	HS	45	45	45	30	Conifer				2			
								Hardwood							
18	RT	2	HS	80	45	90	10	Conifer							
								Hardwood							
18	LF	3	HS	30	85	20	70	Conifer							
								Hardwood	10	1					
18	LF	2	HS	25	85	10	60	Conifer							409006,
								Hardwood	8	1					4808123
18	RT	3	HS	90	45	80	20	Conifer							
								Hardwood							
18	RT	1	HS	75	85	20	80	Conifer				1			
								Hardwood	1	4					
18	LF	1	HS	25	85	10	45	Conifer							LEFT SIDE
								Hardwood	8	2					EST. -
															BLACKBERRIE
29	LF	3	HS	45	75	70	15	Conifer							
								Hardwood							
29	RT	1	HS	70	75	50	40	Conifer							
								Hardwood							
29	LF	2	RB	0	0	0	10	Conifer							
								Hardwood	3						
29	LF	1	HS	60	80	50	20	Conifer							409111,
								Hardwood	4		2				4808141
29	RT	3	HS	70	70	30	60	Conifer							
								Hardwood	1						
29	RT	2	HS	70	70	20	70	Conifer				1			
								Hardwood					1		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **279** WILLANCH CREEK REFERENCE

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	25		T = 10.5 C	
2	RB	00	46.4		ATV TRACK ENTERS CRE	
5	RB	01	121.4	TJ/	TJ/, GROWN OVER WITH	
6	DC	11	121.4		ACW = 1.4 M, NETTLES, S	TRIB 1 408902, 4808079
7	DC	02	121.4		ACW = 1.2 M	
9	RI	00	158.5			BLUE/WHITE FLAG=END RC
10	RI	00	188.3			U 9 = SURVEY, START RCH
15	SL	00	240.7		H = .3 M	
19	RB	01	270.4	/TJ	/TJ	
20	CB	11	270.4			TRIB 2 409024, 4808132
22	SR	00	275.7		H = .9 M	
25	RR	00	350.7		YELLOW FLAG=RCH 5 RE	
27	RI	00	374.4	/SS, BV	/SS, OLD BV	
33	RI	00	505.4	/SS	/SS	
34	RI	00	530.4		SS/	
35	RI	00	555.4		U37=END SIGN W/ SPAW	
36	RB	00	580.4		U37=FLAG END WILLANC	
37	RI	00	594.6		/SS, MONITORING RCH 5	



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

Location: 10 409300 E 4807647 N
 Caption: WILLANCH CREEK REFERENCE SITE - COOS BASIN