

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

STREAM: Cougar Creek (MC-305)
BASIN: Yaquina River
SURVEY TYPE: Pre-Tx
DATE: February 28, 2005
SURVEY CREW: Brian Bangs, Sheila Davis
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 2.6 km²
USGS MAPS: Harlan
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Cougar Creek habitat survey extended 1,477 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.8 (range: 1.5-15.0). Land use for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 3.1 percent. Rapids (40%) and riffles (35%) dominated stream habitat. Gravel (35%) and sand (34%) dominated stream substrate. Wood volume was very low at 7.1 m³/100m.

COMMENTS:

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

REACH 1

T12S-R08W-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	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	6.8	VWI Range:	1.5 - 15

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	1,477	3,176	0
Secondary Channel	21	24	0
Off-Channel Units	112	88	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 5
Width: 1.9	Width: 3.3	6.8 (3.7 - 13.3)	9.0 (5.8 - 13.8)
Depth: 0.22	Height: 0.4	0.7 (0.5 - 0.9)	1.4 (0.9 - 2.2)

W:D ratio: 9.5
 Stream Flow Type: LF
 Average Unit Gradient: 3.1%
 Water temperature (°C): 8.5 - 8.5

Entrenchment (ACW:FPW ratio): 2.2
 Habitat Units/100m (total channel length): 9.7
 Habitat Units/100m (primary channel length): 10.6

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	ST
Riparian Vegetation:	S	G

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	158	10.7
Volume (m ³):	105	7.1
Key pieces (>=12m x 0.60m):	1	0.1

OREGON DEPT OF FISH AND WILDLIFE

COUGAR CREEK PRE-TX (2-MC, 305)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

2/28/2005

REACH 1		T12S-R08W-S15SE					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
CASCADE/BEDROCK	1	11	2.7	0.15	30	0	0	10	10	0	20	60
POOL-BACKWATER	24	54	1.0	0.17	59	0	22	58	13	6	2	0
POOL-BEAVER DAM	5	78	3.6	0.62	276	0	23	65	11	1	0	0
POOL-ISOLATED	1	2	1.2	0.15	3	0	45	55	0	0	0	0
POOL-LATERAL SCOUR	25	177	2.3	0.46	418	0	14	49	26	4	4	3
POOL-PLUNGE	2	6	4.0	0.48	26	0	13	43	23	15	8	0
RAPID/BOULDERS	35	592	2.3	0.14	1,331	0	3	17	35	29	17	0
RIFFLE	45	582	1.5	0.14	929	0	6	22	56	10	5	1
RIFFLE W/ POCKETS	10	104	2.0	0.23	211	0	9	34	49	6	3	0
STEP/BEAVER DAM	3	2	1.9	0.10	3	0	23	43	25	8	0	0
STEP/BEDROCK	1	1	0.5	0.10	0	0	0	0	0	0	0	100
STEP/LOG	4	1	3.0	0.10	4	0	8	41	38	8	6	0
Total:	156	1,610	1.9	0.22	3,288	0	Avg: 10	34	35	12	7	2

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	30	134	1.5	0.25	337	10.24%	0	0.0	
Scour Pools	27	183	2.4	0.46	444	13.49%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	55	686	1.6	0.16	1,140	34.67%	0	0.0	
Rapids	35	592	2.3	0.14	1,331	40.47%	0	0.0	
Cascades	1	11	2.7	0.15	30	0.92%	0	0.0	
Step/Falls	8	4	2.3	0.10	7	0.22%	0	0.0	
Dry	0	0			0	0.00%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	57	35.4	38.6
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	1	0.6	0.7
Pool frequency (channel widths/pool):	8.5		
Residual pool depth (avg):	0.35		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **305** COUGAR CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	19.2		CT MT D30 S LT SG	
5	BW	10	48.6	DJ		
8	SL	00	51.3		H=0.2	
11	RI	00	78.1	DJ		
12	LP	00	83.4	BV		
16	LP	00	112.8		SMALL SCULPIN	
17	RI	00	133.7	WL	ELK	
21	RI	01	161.6	/SS, WL	ELK	
23	RI	01	180.3		OLD FENCE CROSSES RIVER, WOULD	
24	BW	10	180.3		BE IN CHANNEL DURING HF	
25	LP	00	189.5		SCULPIN	
33	RI	01	252.5		US MT G S LT ST	
38	LP	00	285.9	WL	ELK	
45	SD	00	310.6	BV, BD	H=0.45	
46	BP	00	346.8	BV		
47	RI	01	362.2	TJ/		
52	RI	00	395.8	/SS		
55	RP	00	429.2	BV		
58	RI	01	456.6		BV DAM AT END OF UNIT, NO STEP	
60	BP	01	466.7	/TJ, BV		
62	RB	00	475.4		CA CT G S LT ST	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **305** COUGAR CREEK PRE-TX

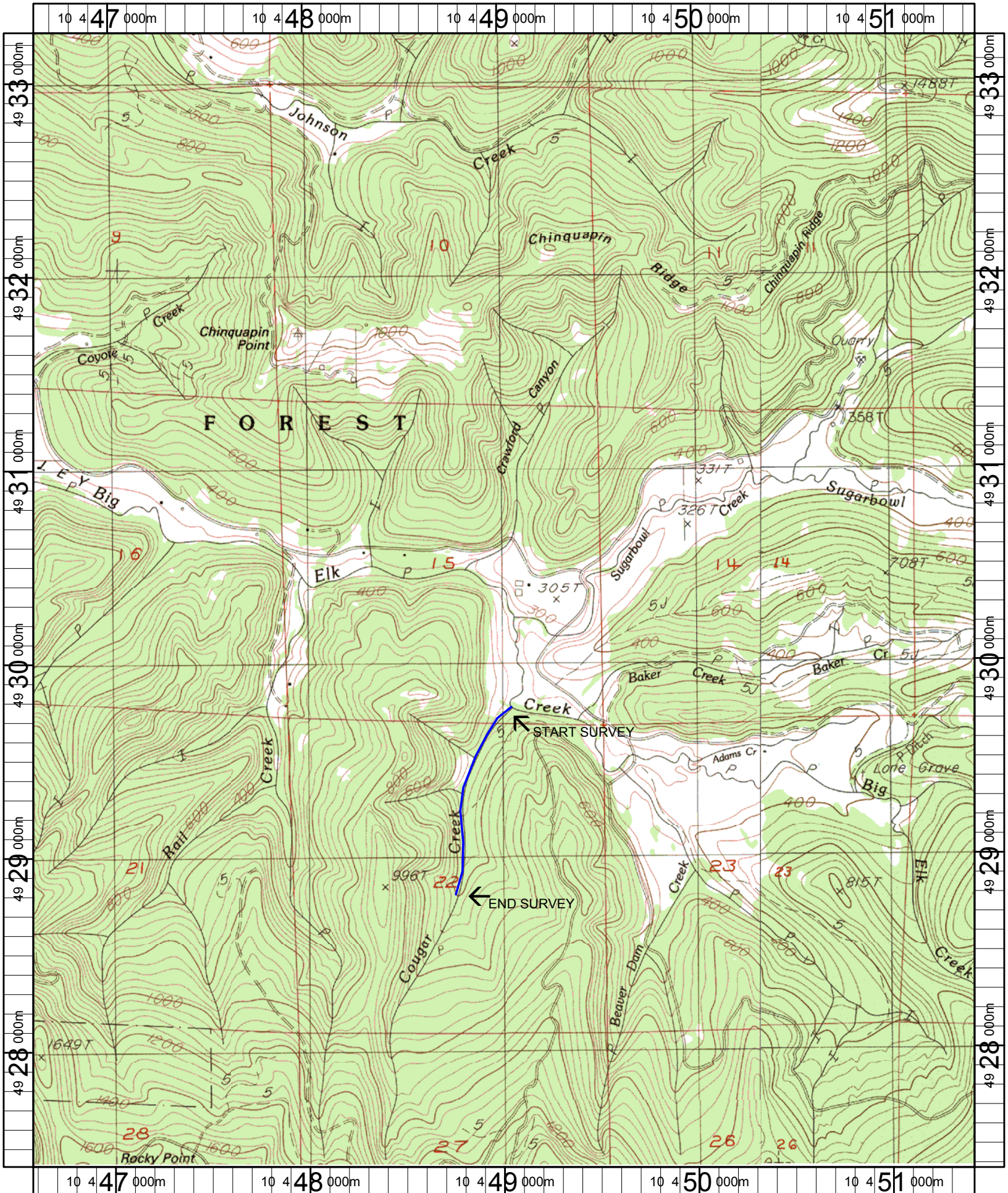
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
67	RI	00	516.7	BV		
68	SL	00	517.25		H=0.25	
70	SD	00	521.15	BD	BV DAM H=0.25	
71	BP	00	535.85	BV		
72	RI	00	551.15	BV, /SS		
75	CR	00	585.75	BV		
78	LP	00	618.95	BV		
83	RI	01	682.35	SS/	FENCE CROSSES STREAM AT START	
87	RB	01	713.15	BV		
89	RB	01	737.65		CT MT S G LT ST	
93	RI	01	780.15	BV		
96	BP	01	797.65	BV	BV DAM NO STEP	
98	RI	00	816.05	DJ, BV		
99	SD	00	816.55	BD	BV DAM H=0.25	
100	BP	00	828.25	BV		
101	RP	00	844.05	/SS		
102	RB	00	867.95	BV		
105	LP	00	895.15	BV		
107	RB	00	941.05	DJ		
108	RB	00	955.75		CH MV S G LT MT	
116	RB	00	1026.25	DJ		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **305** COUGAR CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
119	RB	00	1061.75	BV		
120	RB	00	1084.55	/SS, DJ		
121	RB	00	1095.55	BV, WL	ELK	
124	RB	01	1138.85	TJ/		
125	RI	11	1138.85	BV		
129	SL	00	1173		H=0.25	
130	RB	01	1179.9	TJ/		
134	SL	00	1199.4	DJ	H=0.2	
135	RB	00	1221.5	DJ	CA MT S D30 ST LT	
139	RB	01	1284.5	DJ		
141	RB	00	1298.3	DJ		
144	PP	00	1321.8	BV		
145	SR	00	1322.6		H=0.25	
150	RB	00	1404.2	DJ		
153	RB	00	1460.3	DJ		
156	RB	00	1476.7		CH MV D30 S LT ST	



Name: HARLAN
 Date: 1/21/2005
 Scale: 1 inch equals 2000 feet

Location: 10 449017 E 4930317 N
 Caption: COUGAR CREEK RESTORATION SITE - YAQUINA BASIN