

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

STREAM: Cougar Creek (MC-305)  
BASIN: Yaquina River  
SURVEY TYPE: Post-Tx  
DATE: February 2, 2006  
SURVEY CREW: Brian Cannon, Jon Nott  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 2.6 km<sup>2</sup>  
USGS MAPS: Harlan  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Cougar Creek habitat survey extended 1,497 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 3.5 (range: 1.2-8.0). Land use for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 2.2 percent. Riffles (65%) dominated stream habitat. Gravel (42%) and sand (32%) dominated stream substrate. Wood volume was low at 10.5 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

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	3.5	VWI Range:	1.2 - 8

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	1,497	4,498	0
Secondary Channel	0	0	0
Off-Channel Units	69	41	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 7	<u>First Terrace</u> n = 1
Width: 2.8	Width: 5.6	14.6 ( 6.3 - 27.7 )	7.0 ( 7 - 7 )
Depth: 0.50	Height: 0.7	1.3 ( 1 - 1.8 )	1.4 ( 1.4 - 1.4 )

W:D ratio: 8.9                      Entrenchment (ACW:FPW ratio): 3.0  
 Stream Flow Type: MF              Habitat Units/100m (total channel length): 4.5  
 Average Unit Gradient: 2.2%      Habitat Units/100m (primary channel length): 4.7  
 Water temperature (°C): 9.0 - 9.0

**Riparian, Bank, and Wood Summary**

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

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):	129	8.6
Volume (m <sup>3</sup> ):	156	10.5
Key pieces (>=12m x 0.60m):	4	0.3

OREGON DEPT OF FISH AND WILDLIFE

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

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

2/2/2006

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 <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk
CASCADE/BOULDERS	5	56	1.8	0.19	109	0	0	22	44	20	9	6
GLIDE	1	14	3.9	0.50	55	0	10	90	0	0	0	0
POOL-DAMMED	2	18	3.0	0.92	47	0	5	49	46	0	0	0
POOL-LATERAL SCOUR	17	176	3.4	0.84	604	0	5	47	38	3	0	6
POOL-PLUNGE	3	19	3.8	0.85	76	0	3	37	39	17	3	0
RAPID/BOULDERS	8	250	2.0	0.21	651	0	0	8	43	42	7	0
RIFFLE	28	1,021	2.8	0.43	2,971	0	2	31	45	21	1	0
STEP/BOULDERS	2	9	1.8	0.13	17	0	0	3	20	78	0	0
STEP/COBBLE	1	2	3.4	0.35	5	0	0	20	80	0	0	0
STEP/LOG	4	2	3.0	0.21	5	0	0	20	45	25	10	0
<b>Total:</b>	<b>71</b>	<b>1,566</b>	<b>2.8</b>	<b>0.50</b>	<b>4,539</b>	<b>0</b>	<b>Avg: 2</b>	<b>32</b>	<b>42</b>	<b>19</b>	<b>3</b>	<b>2</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	2	18	3.0	0.92	47	1.03%	0	0.0	
Scour Pools	20	195	3.5	0.84	680	14.98%	0	0.0	
Glides	1	14	3.9	0.50	55	1.20%	0	0.0	
Riffles	28	1,021	2.8	0.43	2,971	65.45%	0	0.0	
Rapids	8	250	2.0	0.21	651	14.34%	0	0.0	
Cascades	5	56	1.8	0.19	109	2.40%	0	0.0	
Step/Falls	7	13	2.7	0.21	27	0.60%	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	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	22	14.0	14.7
Pools >=1m deep:	2	1.3	1.3
Complex pools (LWD pieces>=3):	4	2.6	2.7
Pool frequency (channel widths/pool):	12.6		
Residual pool depth (avg):	0.43		

# Comment Summary

## Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
4	LP	00	58.5		US MT D30/S LT/ST	
8	LP	00	139	BV		
9	RI	00	189	FC		
10	RI	00	232.6	SS/	FEMALE COHO CARCASS	
12	RI	01	257.5	TJ/		
14	LP	00	264.8	HS	US MT G/S LT/ST; HS= 3 LOGS	
15	SL	00	265.6		H= 0.35m	
19	RI	00	311	HS	HS= 4 LOGS	
20	LP	00	329.4	HS	HS = 4 LOGS	
21	RI	01	364.4	TJ/ SS/ HS	HS= 1 LOG	
23	LP	00	373.4	HS	HS= 1 LOG	
26	PP	01	480	/TJ		
28	SL	00	480.45		H= 0.25M	
30	RI	00	514.75		CH MV M30/S LT	
31	LP	00	521.25		HARDPAN	
32	RI	00	571.25	/SS		
33	LP	00	580.05		HARDPAN	
35	RI	00	645.65	HS	HS= 5 LOGS	
36	RI	00	695.65	HS	HS= 2 LOGS	
37	RI	00	732.95	HS	HS= 5 LOGS	
39	RI	00	779.95	HS	HS= 15 LOGS	

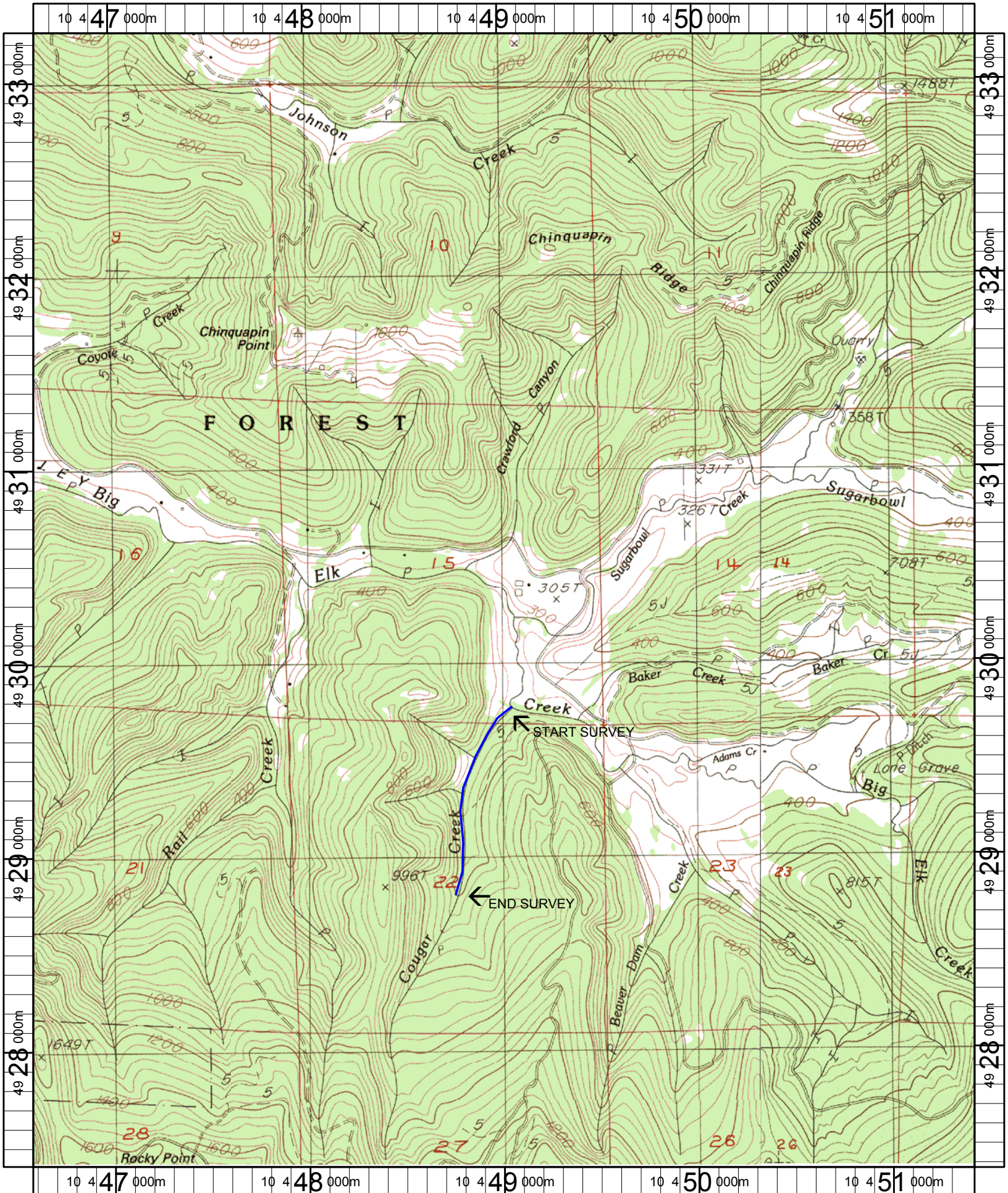
# Comment Summary

## Restoration Monitoring Sites 2006

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
41	RI	00	812.55	HS	HS= 1 LOG; MALE COHO CARCASS	
42	LP	01	821.55	/TJ		
44	RI	00	838.15		US MT D30/S ST/LT	
45	SL	00	838.45		H= 0.47M	
46	DP	00	843.75		CON'T SURVEY 2/6/06	
48	RI	01	908.15	/TJ		
49	CB	11	908.15		T=14C	
50	SB	00	913.15		T= 13C	
51	LP	00	923.25		SPAWNING COHO/REDD	
52	RI	00	973.25	/SS BV		
53	RI	00	1023.25		CH MV D30/S ST/LT	
57	RI	01	1106.45	SS/TJ		
58	RB	11	1106.45		T= 9.5C	
59	RI	00	1156.45	TJ/		
61	RB	11	1170.95		T= 9C	
62	SL	00	1171.25		H= 0.35M	
63	RI	01	1221.25	TJ/		
64	SB	11	1221.25		T= 9C	
65	RI	00	1271.25		CH MV D30/S LT/ST	
71	RB	00	1496.75		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