

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

STREAM: Hayes Creek (MC-220)
BASIN: Yaquina River
SURVEY TYPE: Post-Tx
DATE: March 1, 2005
SURVEY CREW: Brian Bangs, Sheila Davis
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 5.9 km²
USGS MAPS: Eddyville
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Hayes Creek habitat survey extended 2,050 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.6 (range: 4.0-10.5). Land use for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 1.7 percent. Scour pools (48%) and riffles (37%) dominated stream habitat. Gravel (36%) and sand (28%) dominated stream substrate. Wood volume was moderate at 28.1 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

T10S-R09W-S28SW

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	6.6	VWI Range:	4 - 10.5

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	2,050	5,878	0
Secondary Channel	131	168	1
Off-Channel Units	233	276	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 9	<u>First Terrace</u> n = 9
Width: 2.4	Width: 4.3	7.5 (3.6 - 11.2)	11.6 (7.5 - 25)
Depth: 0.24	Height: 0.3	0.5 (0.4 - 0.7)	1.2 (0.75 - 1.7)

W:D ratio: 16.3
 Stream Flow Type: MF
 Average Unit Gradient: 1.7%
 Water temperature (°C): 7.5 - 7.5

Entrenchment (ACW:FPW ratio): 1.8
 Habitat Units/100m (total channel length): 9.9
 Habitat Units/100m (primary channel length): 11.7

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):	501	24.4
Volume (m ³):	576	28.1
Key pieces (>=12m x 0.60m):	47	2.3

OREGON DEPT OF FISH AND WILDLIFE

HAYES CREEK POST-TX (2-MC, 220)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

3/1/2005

REACH 1		T10S-R09W-S28SW					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	10	0.1	0.05	0	0	20	0	10	0	0	70
DRY CHANNEL	1	19	0.3	0.00	6	0	60	30	5	5	0	0
GLIDE	4	50	3.0	0.13	160	0	16	26	14	3	3	39
POOL-BACKWATER	43	118	1.0	0.15	117	0	34	43	17	3	1	2
POOL-BEAVER DAM	1	12	7.4	0.55	87	0	25	50	15	5	5	0
POOL-LATERAL SCOUR	87	871	3.4	0.47	2,988	0	18	34	28	10	2	9
POOL-PLUNGE	1	4	4.6	0.50	19	0	10	25	40	10	0	15
RAPID/BEDROCK	8	133	3.2	0.08	442	0	2	9	13	7	4	65
RAPID/BOULDERS	6	69	1.9	0.05	136	0	6	14	44	29	2	5
RIFFLE	77	1,026	2.0	0.09	2,076	0	6	17	59	15	2	1
RIFFLE W/ POCKETS	7	96	2.8	0.18	281	0	9	21	37	14	1	19
STEP/BEAVER DAM	1	0	0.6	0.05	0	0	50	25	10	0	0	15
STEP/BEDROCK	2	7	1.8	0.05	11	0	0	13	20	8	5	55
STEP/LOG	1	1	0.6	0.05	0	0	10	10	30	0	0	50
Total:	240	2,414	2.4	0.24	6,323	0	Avg: 16	28	36	10	2	9

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	44	130	1.1	0.16	204	3.23%	0	0.0	
Scour Pools	88	875	3.4	0.47	3,007	47.55%	0	0.0	
Glides	4	50	3.0	0.13	160	2.53%	0	0.0	
Riffles	84	1,122	2.0	0.09	2,357	37.27%	0	0.0	
Rapids	14	202	2.6	0.06	577	9.13%	0	0.0	
Cascades	1	10	0.1	0.05	0	0.01%	0	0.0	
Step/Falls	4	8	1.2	0.05	12	0.19%	0	0.0	
Dry	1	19	0.3	0.00	6	0.09%	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:	132	54.7	64.4
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	42	17.4	20.5
Pool frequency (channel widths/pool):	4.2		
Residual pool depth (avg):	0.36		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **220** HAYES CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	01	25.6	HS, DJ	CT MT S G ST LT	
2	RI	02	25.6		FISH JAW	
4	RI	01	38.7	TJ/		
14	LP	00	97.7	BV		
22	LP	00	159.2	HS		
25	LP	00	191.2		CARCASS MISSING HEAD L=0.7M	
26	LP	00	209.5		SCULPIN	
27	RP	01	227.1	HS, DJ		
30	LP	00	239.1	DJ	FRY	
32	LP	00	261.6	HS, BV, DJ		
33	RI	01	280.4	/TJ	CT MT G D50 ST MT	
34	LP	10	280.4		COHO FRY	
36	SL	11	280.4		H=1	
38	RR	00	314.4		BRIDGE CROSSING	
40	LP	00	347.6	DJ	SCHOOL OF FRY	
42	LP	00	358		FRY PRESENT	
44	LP	00	380.4		FRY PRESENT	
46	LP	00	401.3	DJ		
47	RI	01	422.5	DJ		
49	BW	10	422.5		FRY PRESENT	
52	RI	01	448.6	WL	DEER OR SM ELK	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **220** HAYES CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
54	LP	00	454.4		FRY PRESENT	
55	RI	01	479.7	TJ/		
56	RI	11	479.7		SPAWNING SURV. SIGN AT MOUTH	
61	LP	00	511.3		JUVENILE TROUT (2), COHO FRY	
62	RI	01	530.7	/TJ	CA MT G S LT ST	
66	LP	01	546.6		FRY PRESENT	
71	LP	00	583.8	HS, DJ		
76	LP	00	648.6	HS	FRY PRESENT	
83	RR	01	720.2	/SS		
89	RI	01	766.2		CA CT S G LT ST	
93	RI	00	799.7	HS		
100	LP	00	882.7	HS		
104	LP	00	915.6	HS		
107	RI	01	950.5	DJ		
110	LP	00	962.2	DJ		
112	LP	00	990.1	HS		
114	RB	00	1009.7		CA MT S G LT ST	
116	LP	00	1022.8	HS		
119	RI	01	1063.6	/TJ		
127	LP	00	1110.1	HS, DJ	FRY, JUVENILES	
129	LP	00	1125.4	BV		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **220** HAYES CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
131	LP	00	1146.9	BV		
132	SD	00	1147.3	BD	H=0.3	
133	BP	00	1159.1	DJ, BV	ADULT TROUT	
134	RI	00	1169.3	BV		
136	LP	00	1188.5	BV, HS	FRY, BV DAM IN PROGRESS	
143	LP	02	1246	DJ		
144	RI	02	1246	BV		
145	LP	01	1252.9	BV /TJ DJ		
148	LP	00	1270.9		CA MT S G ST LT, FRY	
151	LP	00	1301.4	HS		
152	LP	00	1309.3	BV, DJ		
154	LP	00	1329.2	BV		
157	LP	00	1355.4	SS/	FRY	
158	LP	00	1360.8	DJ		
159	RI	01	1373.9	DJ		
162	LP	00	1380.7	DJ, BV		
163	RI	01	1393	BV, DJ		
165	RI	01	1407.3	BV, DJ	BV DAM W/ NO DAMMING EFFECT	
167	LP	01	1422.7	BV	FRY	
168	RI	11	1422.7	/TJ		
169	RP	01	1440.6	BV, DJ		

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **220** HAYES CREEK POST-TX

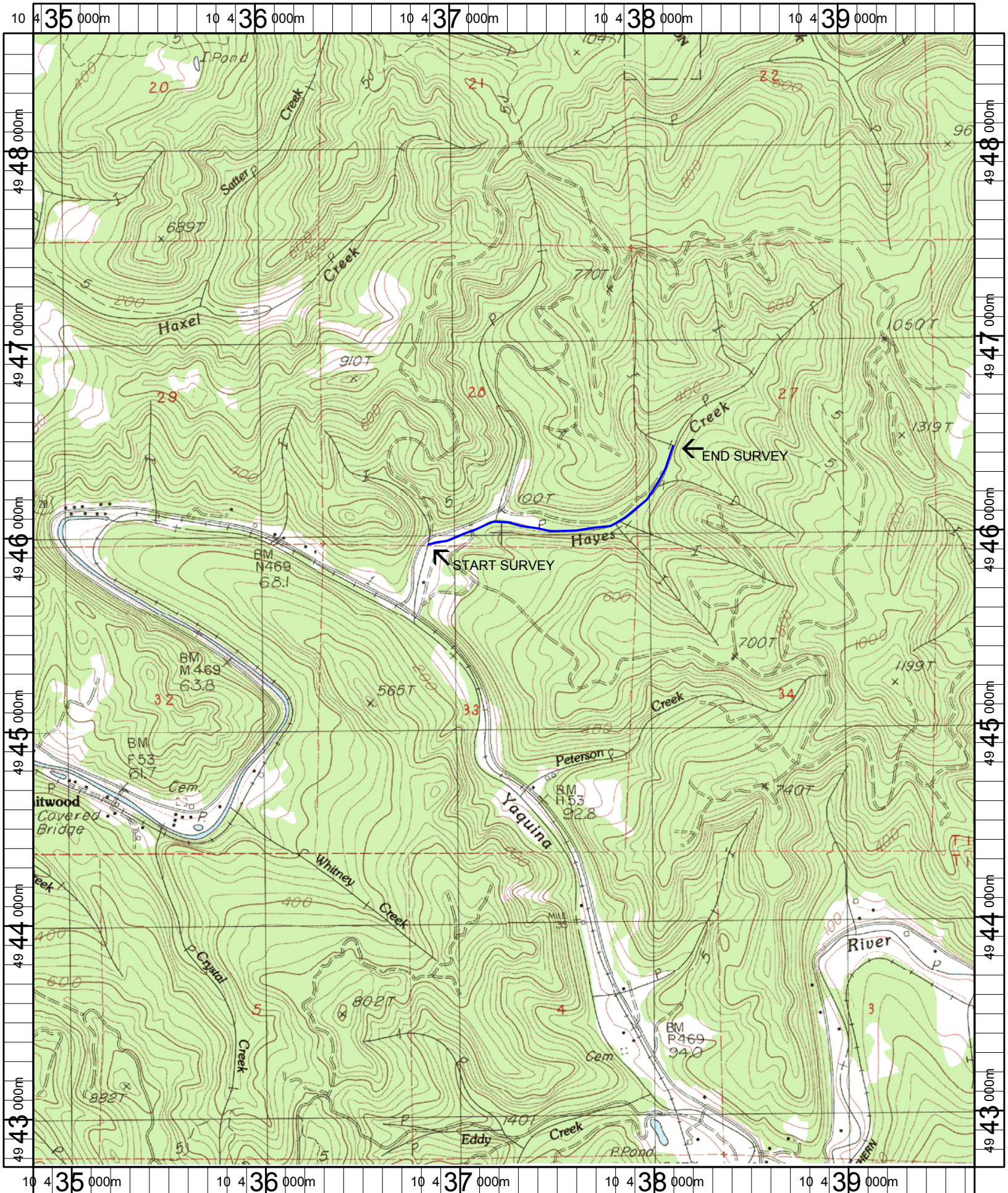
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
171	RI	01	1450.2	BV, DJ		
173	LP	00	1455.3	BV, DJ		
174	RI	00	1468.8	HS		
176	RI	01	1486.1	BV		
178	LP	00	1491.3	BV, DJ		
182	RI	00	1522.9	BV		
183	LP	00	1529.8	BV		
184	RI	00	1533.1	BV		
185	LP	00	1550.8	BV		
186	RI	01	1569.3	BV		
188	LP	00	1579.1	BV		
189	LP	00	1584.4	BV, DJ		
190	RI	00	1598.3	BV		
191	LP	00	1607.6	BV	FRY, JUV. TROUT	
192	RI	00	1614.9	BV		
193	LP	00	1628.6	BV, DJ		
194	RI	00	1637.3	BV		
195	LP	01	1653.3	HS, BV	FISH SKELTN, FRY, SAL EGG MASS	
196	BW	10	1653.3		BREEDING RS NEWTS	
199	LP	00	1676.3	BV	FRY, FISH SKELETON	
200	LP	00	1683	BV, DJ	FRY	

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **220** HAYES CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
202	LP	00	1699.8	HS		
203	RI	01	1716.8	DJ		
205	LP	00	1724.1		FRY	
208	LP	00	1762.5		FRY	
209	LP	00	1772	HS	FISH JAW	
211	RI	01	1828.3	DJ		
213	RI	02	1828.3	DJ		
214	RB	01	1841	/TJ		
216	LP	00	1846.2	DJ		
220	LP	00	1890.2	HS, SS/		
222	LP	00	1911.4	FRY		
225	SR	00	1932.9		H=1.05	
229	LP	00	1969.7		SCULPIN	
230	RI	01	1985.5	TJ/ HS	CA CT D30 S ST LT	
232	LP	00	1992.4	WL, DJ	DEER TRAIL	
234	LP	00	2020	DJ		
236	LP	01	2031.3		JUVENILE TROUT	
237	RB	01	2045.2	DJ		
240	LP	00	2050		CT CT D30 S TH ST	



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

Location: 10 437253 E 4945659 N
 Caption: HAYES CREEK RESTORATION SITE - YAQUINA BASIN