

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

STREAM: Wildcat Creek (N-369)
BASIN: Nestucca River
SURVEY TYPE: Pre-Tx
DATE: August 1, 2007
SURVEY CREW: Lanoah Babcock, Kara Morris
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 2.2 km²
USGS MAPS: Beaver
ECOREGION: Coast Range Volcanic

GENERAL DESCRIPTION:

The Wildcat Creek habitat survey extended 2,111 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7.0 (range: 1.5-20.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 4.7 percent. Rapids (76%) dominated stream habitat. Gravel (51%) and cobble (21%) dominated stream substrate. Wood volume was low at 9.2 m³/100m.

COMMENTS:

There were four potential low flow barriers to upstream fish migration in the surveyed length. All were short, high-gradient steps located at units 72, 74, 88 and 97.

REACH 1

T03S-R09W-S18NE

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	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	7.0	VWI Range:	1.5 - 20

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	2,111	4,159	0
Secondary Channel	0	0	0
Off-Channel Units	8	5	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 9	<u>First Terrace</u> n = 8
Width: 2.2	Width: 4.4	6.3 (3.3 - 10.4)	12.9 (4.2 - 35)
Depth: 0.16	Height: 0.4	0.8 (0.6 - 1)	1.2 (0.9 - 2.5)

W:D ratio: 11.5

Entrenchment (ACW:FPW ratio): 1.5

Stream Flow Type: LF

Habitat Units/100m (total channel length): 4.9

Average Unit Gradient: 4.7%

Habitat Units/100m (primary channel length): 4.9

Water temperature (°C): 11.0 - 11.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	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:	20%	Reach avg: 92%
Undercut Banks:	9%	Range: 31 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	230	10.9
Volume (m ³):	195	9.2
Key pieces (>=12m x 0.60m):	5	0.2

OREGON DEPT OF FISH AND WILDLIFE

WILDCAT CREEK PRE-TX (1-NC, 369)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

8/1/2007

REACH 1		T03S-R09W-S18NE					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/BOULDERS	2	11	0.6	0.16	7	0	0	0	56	22	6	17
CULVERT CROSSING	2	30	0.3	0.06	9	0	0	10	21	45	24	0
GLIDE	1	7	2.8	0.25	20	0	11	42	37	11	0	0
POOL-LATERAL SCOUR	14	113	2.8	0.39	291	0	7	26	57	10	0	0
POOL-PLUNGE	7	35	3.1	0.44	106	0	9	28	46	14	3	0
RAPID/BEDROCK	5	190	1.7	0.14	269	8	0	7	22	16	16	39
RAPID/BOULDERS	41	1,468	2.0	0.10	2,887	26	1	14	53	27	4	2
RIFFLE	8	201	1.5	0.08	330	0	0	19	56	23	2	0
RIFFLE W/ POCKETS	1	29	3.5	0.20	102	0	10	30	50	10	0	0
STEP/BEDROCK	2	1	0.2	0.01	0	0	0	0	0	0	0	100
STEP/COBBLE	9	21	4.5	0.08	131	0	0	6	56	30	8	0
STEP/LOG	10	11	0.9	0.04	11	0	2	22	67	9	0	0
STEP/STRUCTURE	1	0	0.3	0.10	0	0	0	0	20	70	10	0
Total:	103	2,119	2.2	0.16	4,164	34	Avg: 2	16	51	21	4	5

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	0	0			0	0.00%	0	0.0
Scour Pools	21	148	2.9	0.41	397	9.53%	0	0.0
Glides	1	7	2.8	0.25	20	0.49%	0	0.0
Riffles	9	230	1.7	0.10	432	10.37%	0	0.0
Rapids	46	1,658	1.9	0.10	3,156	75.80%	34	1.1
Cascades	2	11	0.6	0.16	7	0.18%	0	0.0
Step/Falls	22	33	2.3	0.06	142	3.42%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	2	30	0.3	0.06	9	0.22%	0	0.0

POOL SUMMARY			
	Total	Total of all Channel Lengths	Primary Channel Length
		# / Km	# / Km
All Pools:	21	9.9	9.9
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	5	2.4	2.4
Pool frequency (channel widths/pool):	23.1		
Residual pool depth (avg):	0.36		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

WILDCAT CREEK PRE-TX
GCG: 1-NC SITE ID: 369

Survey Date 8/1/2007
Report Date: 11/7/2007

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 7 transects

Total hardwoods/1000	540
Total conifers/1000 ft	157
Total conifers >20" dbh/1000 ft	26
Total conifers >35" dbh/1000 ft	26

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	1.1	0.1	1.1	0.3	0.1	0.4	2.4
15-30cm	0.1	0.7	0.1	0.9	1.3	1.7	1.6	3.3
30-50cm	0.0	0.4	0.0	1.4	0.1	0.3	0.1	2.1
50-90cm	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6
>90cm	0.0	0.1	0.1	0.1	0.3	0.1	0.4	0.4
Total/100m2	0.1	3.0	0.4	3.6	2.0	2.3	0.9	3.0

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	75	78	75
Shrub cover	55	55	60
Grass/forb cover	39	40	33

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	29	64	71
High terrace	71	36	29
Low terrace	0	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 (%)	16	29	30

Summary of Riparian Zone (0-30m) for all reaches

7 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	540
Total conifers/1000 ft	157
Total conifers >20" dbh/1000 ft	26
Total conifers >35" dbh/1000 ft	26

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	0.4	2.4
15-30cm	1.6	3.3
30-50cm	0.1	2.1
50-90cm	0.0	0.6
>90cm	0.4	0.4

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			
16	LT	1	HT	0	80	25	75	Conifer							
								Hardwood			1	1	1		
16	LT	2	HT	0	90	20	80	Conifer							
								Hardwood		1	1				
16	LT	3	HT	0	100	50	50	Conifer							
								Hardwood	1	5	1				
16	RT	1	HT	0	85	60	35	Conifer							SALMONBERRY AND SHRUBS. NO TREES JUST SALMONBERRY ROADBED AT LAST 5M OF ZONE 3.
								Hardwood	2						
16	RT	2	HS	50	70	60	25	Conifer							
								Hardwood							
16	RT	3	HS	45	60	50	20	Conifer							
								Hardwood			1				
27	LT	1	HT	0	95	40	55	Conifer							
								Hardwood			1	1			
27	LT	2	HT	0	90	95	5	Conifer							8 FEET TALL SALMONBERRY
								Hardwood					1		Y
27	LT	3	HT	0	95	95	5	Conifer							OLD GROWTH SALMONBERRY TERRACE = 2.5M HIGH
								Hardwood							
27	RT	1	HT	0	65	55	40	Conifer							
								Hardwood	3	2					
27	RT	2	HT	0	85	30	65	Conifer			1				
								Hardwood	2	1	1				
27	RT	3	HT	0	100	85	15	Conifer	1	4					
								Hardwood		3					
41	LT	1	HT	0	80	70	25	Conifer							
								Hardwood	1	1					
41	LT	2	HT	0	60	45	40	Conifer							2M HIGH SECOND TERRACE LIP
								Hardwood			3				
41	LT	3	HT	0	90	30	70	Conifer		2					
								Hardwood							
41	RT	1	HT	0	65	70	25	Conifer							
								Hardwood	2	1					
41	RT	2	HS	24	80	10	85	Conifer	1						
								Hardwood	3		1				
41	RT	3	HS	17	90	30	70	Conifer	1	1					
								Hardwood		2					

90	RT	3	HS	17	45	45	35	Conifer		ESTIMATED
								Hardwood	2	

COMMENT SUMMARY

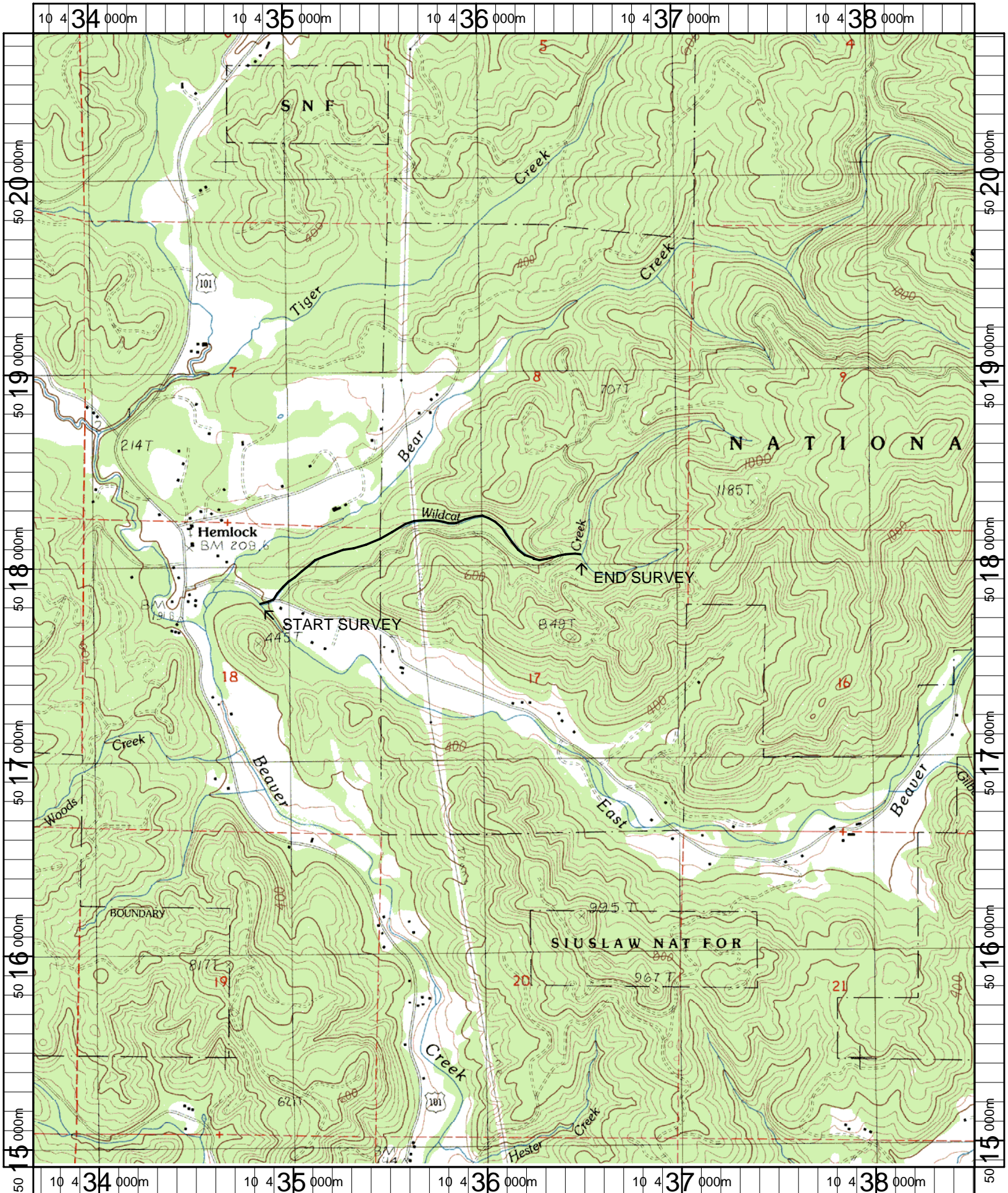
MONITORING AREA: 1-NC SITE ID: 369 STREAM: WILDCAT CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RB	00	35		2 FOOT BRIDGES
2	RR	00	45.6	CS	RIPRAP
3	SS	00	45.8	CC	1X1-CEMENT
4	CC	00	57.8	CC	CEMENT
9	LP	00	152	WL	TRAIL
10	RB	00	170.5		STEELHEAD REDD
14	RB	00	229	WL	TRAIL
16	RB	00	265.6	AM	BLUE FROG
18	LP	00	284.3	/SS	
19	RB	00	315.7	BC, /SS	NO NAME
21	RB	00	335.4	WL	TRAIL
23	SL	00	342.2		WATER FLOWING UNDER LOG
25	RB	00	403.3	WL	TRAIL
27	RB	00	500.9	WL	TRAIL
31	RB	00	555.2	BC	NO NAME-GRASS ROAD
32	RI	00	593.2	WL	TRAILS
33	RB	00	638.2	DJ	
35	RB	00	689.7	WL	TRAIL
37	SC	00	698.2		DOG FIRS BEGIN ON LEFT HILLSLOPE
39	LP	00	714.1	DJ	
49	RB	01	886.5	WL /TJ	TREE FROG
50	CB	11	886.5		0435500

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 369 STREAM: WILDCAT CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
51	RB	00	936.5		REDD MARKER
52	RB	00	986.5		
53	RB	00	1020		STWR
54	RI	00	1065		JUV FISH-TORPEDO SHAPE
55	RB	00	1115	DJ	JUV FISH
56	RP	00	1144	DJ	BLOWDOWN
62	RB	00	1263.2		SMALL POOL WITH JUV FISH ASSOCIATED WITH LOG
70	RB	00	1364.2	WL /SS	TRAIL
72	SL	00	1393.2	DJ, PN	
74	SL	00	1399.6	PN	
75	RB	00	1449.6		JUV FISH
80	RB	00	1573.5	WL	HERON
88	SR	00	1649.1	PN	
92	RR	00	1852.1		BLOWDOWN
93	RR	00	1902.1	/SS	
95	RB	00	1999.3	WL	TRAIL
97	SC	00	2005.6	PN	SALMON SPAWN END
98	CC	00	2023.6	CC	METAL BOTTOM
99	RB	00	2060.9		JUV FISH
103	SL	00	2076.9		MANY UNCOUNTABLE PIECES



Name: BEAVER
 Date: 4/26/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0436113 E 5017815 N
 Caption: WILDCAT CREEK RESTORATION SITE - NESTUCCA BASIN