

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

STREAM: Swab Creek (N-368)
BASIN: Nestucca River
SURVEY TYPE: Pre-Tx
DATE: August 8, 2007
SURVEY CREW: Lanoah Babcock, Nathan Wilson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 1.7 km²
USGS MAPS: Beaver
ECOREGION: Coast Range Volcanic

GENERAL DESCRIPTION:

The Swab Creek habitat survey extended 1,357 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.0 (range: 1.5-12.0). Land use for the reach was large (30-50 cm dbh) trees and rural residential. The average unit gradient was 2.0 percent. Riffles (68%) and scour pools (29%) dominated stream habitat. Gravel (45%) and sand (26%) dominated stream substrate. Wood volume was low at 10.5 m³/100m.

COMMENTS:

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

REACH 1

T03S-R09W-S22SW

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	6.0	VWI Range:	1.5 - 12

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	1,357	2,702	0
Secondary Channel	0	0	0
Off-Channel Units	15	9	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 6	<u>First Terrace</u> n = 5
Width: 2.0	Width: 3.7	7.5 (2.8 - 16)	9.2 (4.2 - 16.5)
Depth: 0.26	Height: 0.3	0.6 (0.5 - 0.6)	1.1 (0.75 - 1.3)

W:D ratio: 13.5

Entrenchment (ACW:FPW ratio): 2.1

Stream Flow Type: LF

Habitat Units/100m (total channel length): 5.6

Average Unit Gradient: 2.0%

Habitat Units/100m (primary channel length): 5.7

Water temperature (°C): 13.0 - 13.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	RR
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	15%	Reach avg: 82%
Undercut Banks:	9%	Range: 31 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	97	7.1
Volume (m ³):	142	10.5
Key pieces (>=12m x 0.60m):	5	0.4

OREGON DEPT OF FISH AND WILDLIFE

SWAB CREEK PRE-TX (1-NC, 368)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

8/7/2007

REACH 1		T03S-R09W-S22SW					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	1	35	2.0	0.35	69	40	0	5	10	10	75	0
DRY CHANNEL	1	4	0.9	0.02	4	0	0	20	80	0	0	0
POOL-LATERAL SCOUR	27	294	2.6	0.39	763	30	4	32	44	17	3	1
POOL-PLUNGE	2	8	3.7	0.43	31	4	3	33	36	23	5	0
RAPID/BOULDERS	1	6	0.5	0.05	3	0	5	10	85	0	0	0
RIFFLE	36	1,014	1.8	0.22	1,831	31	2	24	48	23	2	1
STEP/BOULDERS	2	1	0.8	0.04	1	9	0	0	0	0	100	0
STEP/COBBLE	3	7	1.0	0.07	7	0	0	17	47	36	0	0
STEP/LOG	4	4	0.7	0.06	3	0	0	21	46	30	3	0
Total:	77	1,372	2.0	0.26	2,712	114	Avg: 3	26	45	20	6	1

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	29	302	2.7	0.39	794	29.28%	34	4.3	
Glides	0	0			0	0.00%	0	0.0	
Riffles	36	1,014	1.8	0.22	1,831	67.52%	31	1.7	
Rapids	1	6	0.5	0.05	3	0.11%	0	0.0	
Cascades	1	35	2.0	0.35	69	2.56%	40	57.6	
Step/Falls	9	12	0.8	0.05	11	0.40%	9	83.5	
Dry	1	4	0.9	0.02	4	0.13%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	29	21.1	21.4
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	6	4.4	4.4
Pool frequency (channel widths/pool):	12.8		
Residual pool depth (avg):	0.33		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

SWAB CREEK PRE-TX
GCG: 1-NC SITE ID: 368

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

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 4 transects

Total hardwoods/1000	1097
Total conifers/1000 ft	0
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	3.8	0.0	5.5	0.0	1.5	0.0	10.8
15-30cm	0.0	0.3	0.0	1.0	0.0	3.8	0.0	5.0
30-50cm	0.0	0.8	0.0	0.3	0.0	0.5	0.0	1.5
50-90cm	0.0	0.3	0.0	0.3	0.0	0.3	0.0	0.8
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	5.0	0.0	7.0	0.0	6.0	0.0	6.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	74		74		66	
Shrub cover	26		24		43	
Grass/forb cover	56		63		49	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		63		88	
High terrace	38		38		13	
Low terrace	13		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 (%)	23		16		43	

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

4 transects

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

Total hardwoods/1000	1097
Total conifers/1000 ft	0
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	10.8
15-30cm	0.0	5.0
30-50cm	0.0	1.5
50-90cm	0.0	0.8
>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		
18	LT	1	LT	0	90	10	90	Conifer							
								Hardwood	2		2				
18	LT	2	HS	20	90	10	80	Conifer							HW=VINE
								Hardwood	8						MAPLE
18	LT	3	HS	60	70	40	60	Conifer							ROADBED?
								Hardwood	5						CANOPY=VIN
18	RT	1	HT	0	95	10	30	Conifer							E MAPLE
								Hardwood	2						30-50 DEC.
18	RT	2	HS	15	85	20	80	Conifer							GROUND COV
								Hardwood							ER MOSTLY
18	RT	3	HS	40	20	100	0	Conifer							HACKED
								Hardwood		2					RIP ON TRAIL
40	LT	1	HS	75	40	20	80	Conifer							FOR
								Hardwood	1		1				RESTORATIO
40	LT	2	HT	0	50	0	100	Conifer							ROADBED?
								Hardwood							
40	LT	3	HS	45	80	40	40	Conifer							
								Hardwood	1	1					
40	RT	1	HS	45	30	90	10	Conifer							
								Hardwood							
40	RT	2	HT	0	50	80	20	Conifer							
								Hardwood	1	1					
40	RT	3	HS	50	50	40	60	Conifer							
								Hardwood		3					
52	LT	1	HS	40	90	0	25	Conifer							
								Hardwood							
52	LT	2	HS	35	80	0	35	Conifer							
								Hardwood							
52	LT	3	HT	0	80	5	90	Conifer							ROADBED?
								Hardwood		2					
52	RT	1	HT	0	90	0	100	Conifer							
								Hardwood		1					
52	RT	2	HT	0	75	0	90	Conifer							
								Hardwood	3	3					
52	RT	3	HS	55	80	0	60	Conifer							
								Hardwood	0	3					

58	LT	1	HT	0	70	0	90	Conifer					
								Hardwood	2	0	1		
58	LT	2	HS	20	80	10	80	Conifer					
								Hardwood	2	1	1		
58	LT	3	HS	40	75	40	60	Conifer					
								Hardwood		2	1	1	
58	RT	1	HS	20	85	80	20	Conifer					
								Hardwood	8				
58	RT	2	HS	40	80	70	15	Conifer					
								Hardwood	8				
58	RT	3	HS	50	70	80	20	Conifer					
								Hardwood		2	1		ALL RIGHT SIDE ESTIMATED

COMMENT SUMMARY

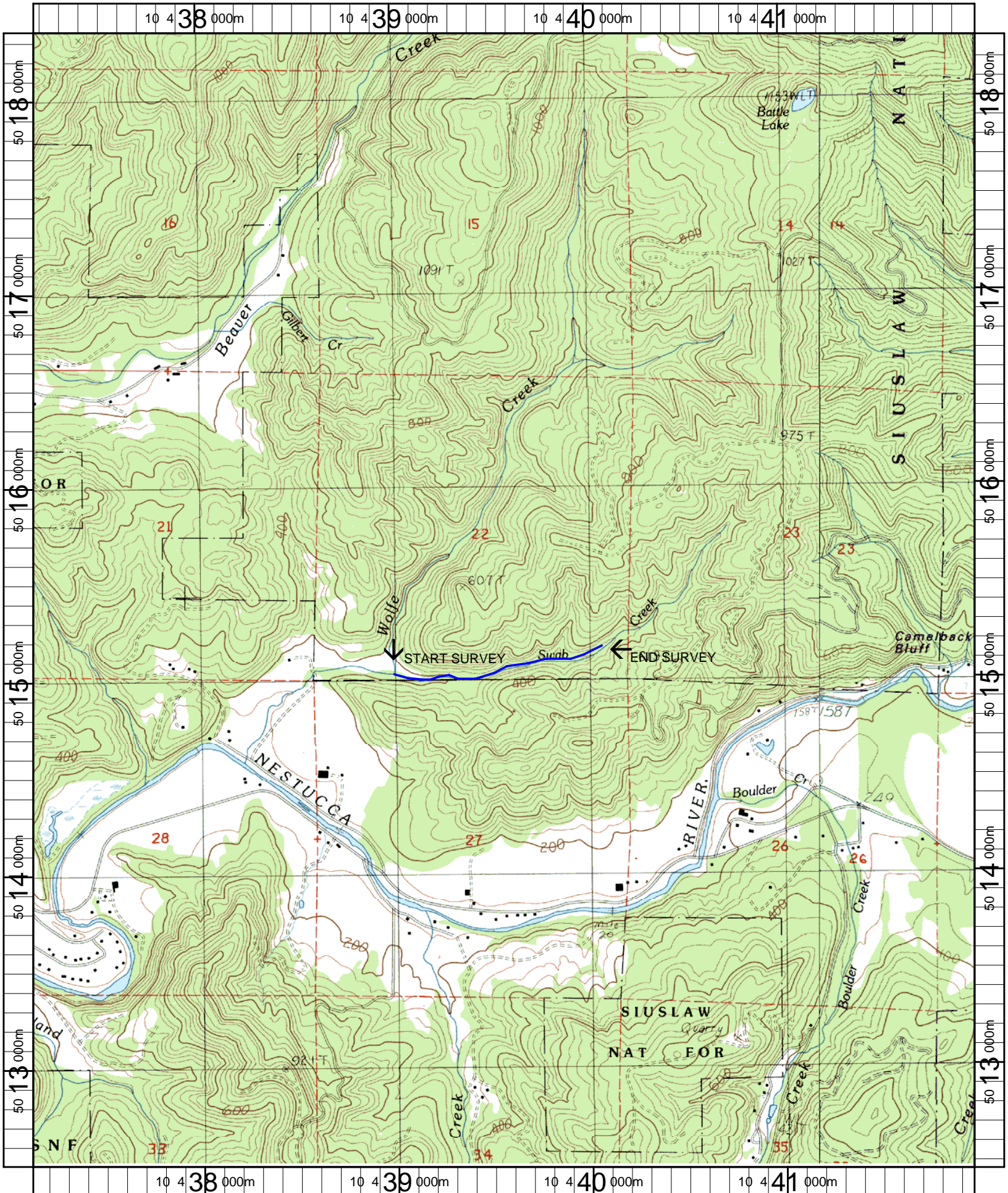
MONITORING AREA: 1-NC SITE ID: 368 STREAM: SWAB CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	SC	00	2		START SIGN ON LEFT BANK
4	RI	00	70.2		TWO WHITE FLAGS. SITE 3 2 KEY LWD.
5	LP	00	74.5		LOTS OF UNDEFCUT ON LEFT
10	SC	00	122.2		STICKS AND GRAVEL BUILT UP BEHIND STICKS TOO SMALL TO COUNT.
15	LP	00	186.2		FLAG SITE 5. TWO POOLS TOGETHER
17	RI	00	237.5		FLAG SITE 6
18	RI	00	260		RIPARIAN 1
22	LP	00	302.9		FISHES
24	LP	00	328	BV	POSSIBLE DEN UNDER OLD HUGE 2.5 DBH TREE ON LEFT BANK
25	RI	00	346.3		YOUNG TREES PLANTED ON RIGHT POSSIBLE LEFT. COUPLE OF POCKETS =0.4
26	LP	00	351.7		FLAG SITE 9, 3 KEY WOOD
27	LP	00	366.8	DJ	
28	RI	00	373.5		HILLSLOPE ON BOTHSIDES
31	LP	00	424.6		LUMP OF 2 POOLS HARD TO GET INTO. ESTIMATED LENGTH .
37	RI	00	493.6	/EA, /SS	
42	SB	00	533.4	PN	
43	RI	00	570.6	/EA, WL	ELK TRAIL
46	PP	00	612.2	WL	TRAILS
48	CB	00	647.1	PN, DJ	1 POCKET = 0.7M DEPTH.
50	LP	00	683.6	WL	
51	RI	00	733.6		FISH
55	LP	00	894.4		FISH IN POOL ROUGHLY 4 INCHES

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 368 STREAM: SWAB CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
56	RI	00	944.4	WL	BEDROCK = HARDPAN, COUPLE OF POCKETS WITH DEPTHS = 0.45
57	RI	00	994.4	WL	TREES RUBBED
61	RI	01	1085.9	/TJ, TJ/	
63	DC	11	1085.9		PUDDLED ABOVE
66	RI	00	1134.9	WL	
68	RI	00	1158.7		BEAR TRACKS AND SMELL
69	LP	00	1172.7	WL	BEAR TRACKS
70	RI	00	1200.3	WL	TRACKS
71	RI	01	1232.3	/TJ	
74	RI	00	1298.3		HILLSLOPE ON BOTH SIDES PLUS SHRUBS COMING IN ON US.
77	RI	00	1357.32		END SIGN ON LEFT BANK HARDWOOD.



Name: BEAVER
 Date: 1/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 439565 E 5015408 N
 Caption: SWAB CREEK RESTORATION SITE - NESTUCCA BASIN