

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

STREAM: Game Hog Creek (N-297)
BASIN: Wilson River
SURVEY TYPE: Post-Tx
DATE: July 3, 2007
SURVEY CREW: Trevor Diemer, Nathan Wilson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.5 km²
USGS MAPS: Woods Point
ECOREGION: Coast Range Volcanic

GENERAL DESCRIPTION:

The Game Hog Creek habitat survey extended 729 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.3 (range: 1.0-5.0). Land use for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 4.0 percent. Rapids (42%) and scour pools (25%) dominated stream habitat. Gravel (30%), cobble (24%) and sand (23%) dominated stream substrate. Wood volume was very high at 52.6 m³/100m.

COMMENTS:

There was one potential barrier to upstream fish migration in the surveyed length. This was a high gradient cascade over bedrock that was the last surveyed unit.

The crew noted several habitat structures during the survey.

REACH 1

T02N-R06W-S33SW

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	2.3	VWI Range:	1 - 5

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	729	2,015	0
Secondary Channel	94	173	3
Off-Channel Units	10	5	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 4	<u>First Terrace</u> n = 1
Width: 2.6	Width: 7.0	8.9 (8 - 9.5)	13.0 (13 - 13)
Depth: 0.25	Height: 0.3	0.7 (0.5 - 0.8)	2.0 (2 - 2)

W:D ratio: 21.9
 Stream Flow Type: LF
 Average Unit Gradient: 4.0%
 Water temperature (°C): 11.0 - 11.0

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 5.9
 Habitat Units/100m (primary channel length): 6.7

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	6%	Reach avg: 70%
Undercut Banks:	2%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	343	47.1
Volume (m ³):	384	52.6
Key pieces (>=12m x 0.60m):	15	2.1

OREGON DEPT OF FISH AND WILDLIFE

GAME HOG CREEK POST-TX (1-NC, 297)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

7/3/2007

REACH 1		T02N-R06W-S33SW					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	2	21	1.8	0.08	39	0	0	0	3	5	0	93
CASCADE/BOULDERS	2	39	2.8	0.09	146	3	0	8	25	44	18	5
DRY UNIT	2	45	1.8	0.03	75	6	9	28	32	25	7	0
POOL-LATERAL SCOUR	16	140	3.2	0.50	471	16	17	35	32	13	2	1
POOL-PLUNGE	2	22	4.5	0.80	84	3	12	31	10	18	5	24
PUDDLED UNIT	1	24	2.0	0.05	48	2	24	24	33	14	5	0
RAPID/BEDROCK	2	67	1.4	0.15	85	26	5	7	14	7	16	52
RAPID/BOULDERS	11	308	2.3	0.10	832	70	2	16	29	39	13	1
RIFFLE	10	166	2.4	0.10	413	14	2	23	39	29	5	3
STEP/LOG	1	1	2.0	0.05	1	1	0	24	29	38	10	0
Total:	49	833	2.6	0.25	2,193	141	Avg: 8	23	30	24	7	8

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	18	162	3.4	0.53	555	25.29%	19	3.4	
Glides	0	0			0	0.00%	0	0.0	
Riffles	10	166	2.4	0.10	413	18.82%	14	3.4	
Rapids	13	375	2.1	0.11	917	41.80%	96	10.5	
Cascades	4	60	2.3	0.08	185	8.44%	3	1.6	
Step/Falls	1	1	2.0	0.05	1	0.05%	1	100.0	
Dry	3	69	1.8	0.03	123	5.61%	8	6.5	
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:	18	21.6	24.7
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	12	14.4	16.5
Pool frequency (channel widths/pool):	6.6		
Residual pool depth (avg):	0.45		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

GAME HOG CREEK POST-TX
GCG: 1-NC SITE ID: 297

Survey Date 7/3/2007

RIPARIAN ZONE

Report Date: 11/7/2007

VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	1036
Total conifers/1000 ft	229
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		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	1.8	0.0	1.3	0.3	2.0	0.3	5.0
15-30cm	1.3	4.0	0.0	1.8	0.3	2.0	1.5	7.8
30-50cm	0.8	1.0	0.5	2.5	0.8	0.5	2.0	4.0
50-90cm	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.0	6.8	0.5	5.5	1.3	4.8	1.3	5.7

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	82		61		50	
Shrub cover	6		12		9	
Grass/forb cover	88		88		91	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	63		75		88	
High terrace	25		25		13	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	13		0		0	
Riprap	0		0		0	
Surface slope (%)	26		44		47	

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	1036
Total conifers/1000 ft	229
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	0.3	5.0
15-30cm	1.5	7.8
30-50cm	2.0	4.0
50-90cm	0.0	0.3
>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		
5	LT	1	HT	0	95	5	95	Conifer							BIG LEAF MAPLE BOLE, 10T 04660
								Hardwood	1	5	1				
5	LT	2	HT	0	95	10	90	Conifer							
								Hardwood		1	1				
5	LT	3	HS	40	95	5	95	Conifer			1				
								Hardwood	3	1					
5	RT	1	HT	0	90	0	100	Conifer							BIG LEAF MAPLE BOLE
								Hardwood	3	1	1				
5	RT	2	HT	0	95	5	95	Conifer							
								Hardwood	2	2	4				
5	RT	3	HT	0	95	5	95	Conifer							
								Hardwood		2					
17	LT	1	RB	0	40	5	55	Conifer							
								Hardwood		3					
17	LT	2	HS	70	25	25	75	Conifer				1			
								Hardwood							
17	LT	3	HS	60	10	15	85	Conifer				1			
								Hardwood							
17	RT	1	HS	60	90	5	95	Conifer			3				10T0466008,50 50743
								Hardwood	2	2					
17	RT	2	HS	60	25	5	95	Conifer							
								Hardwood							
17	RT	3	HS	60	5	10	90	Conifer				1			
								Hardwood							
41	LT	1	HS	45	95	10	80	Conifer				1			
								Hardwood	1		1				
41	LT	2	HS	45	90	10	90	Conifer							
								Hardwood				2			
41	LT	3	HS	50	95	5	95	Conifer							
								Hardwood	1	1	1				
41	RT	1	HS	60	55	5	95	Conifer			1				10T 0465909, 5051004
								Hardwood		0	1				
41	RT	2	HS	60	25	5	95	Conifer				1			
								Hardwood	1	2					
41	RT	3	HS	65	5	5	95	Conifer	1						
								Hardwood	1						

49	LT	1	HS	0	95	10	90	Conifer	0	1		10T 0465808
								Hardwood		5		5051179, 2D
49	LT	2	HS	75	95	15	85	Conifer				
								Hardwood	2	2	3	
49	LT	3	HS	55	70	15	85	Conifer				1
								Hardwood	3	4	1	
49	RT	1	HS	45	95	5	95	Conifer				2
								Hardwood				
49	RT	2	HS	45	35	20	80	Conifer				
								Hardwood				
49	RT	3	HS	45	25	10	90	Conifer				
								Hardwood				1

COMMENT SUMMARY

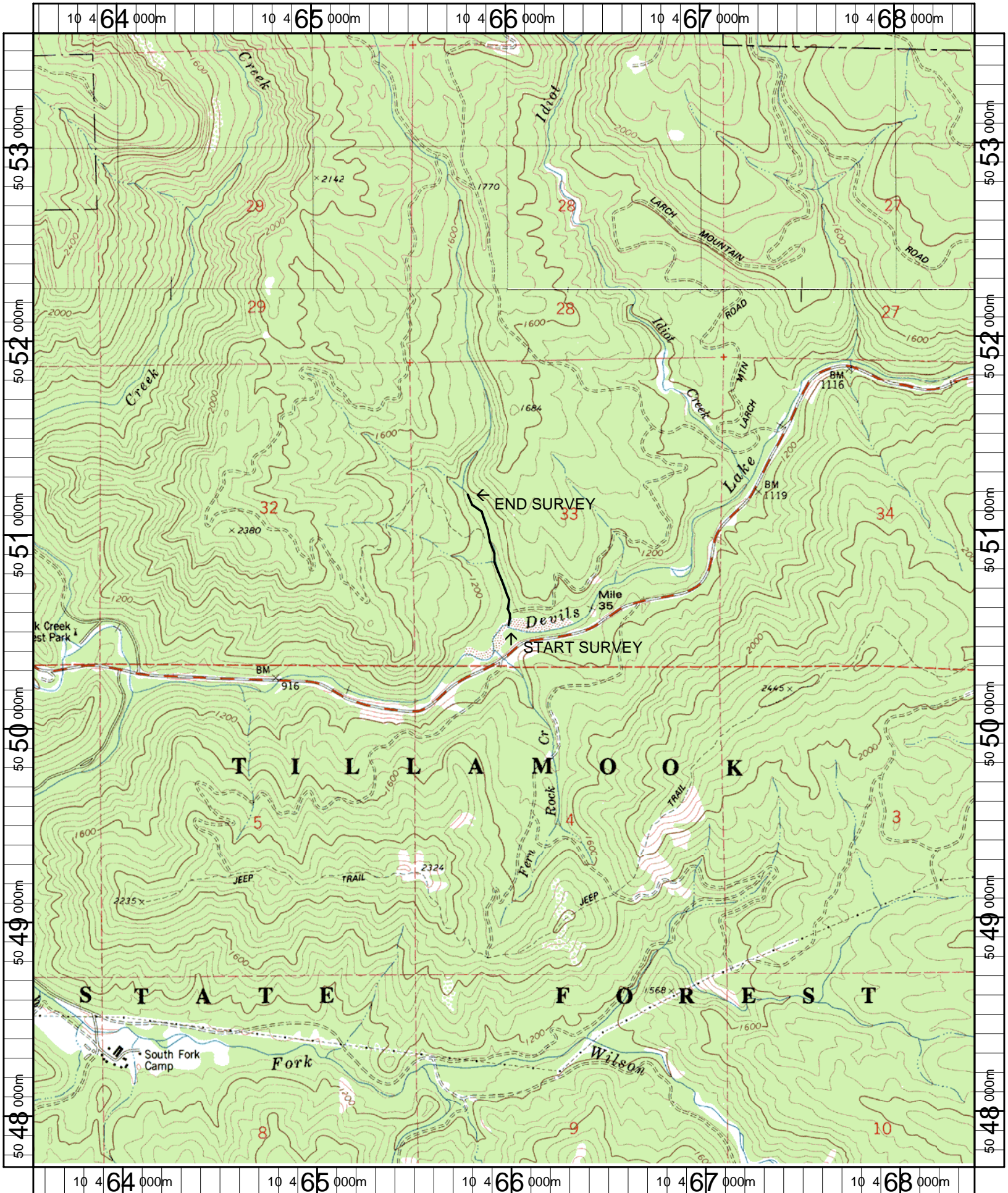
MONITORING AREA: 1-NC SITE ID: 297 STREAM: GAME HOG CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	RI	00	9		PHOTO 0263, 0264
6	LP	00	67	HS	THIS IS A RESTO SITE
7	RI	00	72	HS	
8	LP	00	83	HS	
9	RI	00	111	DJ, HS	
11	RI	00	137	BC	LOG BRIDGE
12	LP	00	143		REACH 2 STARTS
13	RI	00	174	HS	
14	LP	00	183	HS	
15	CB	00	187	HS	
16	LP	00	195	DJ, HS	
17	RB	00	244	HS	REACH 2 CALLED OUT.
18	RI	01	275	HS	
19	LP	01	281	HS	
20	RI	02	281	HS	
21	DU	02	281	HS	THROUGH GROUND FLOW
22	RI	00	289	HS	
23	PP	00	305	HS	
24	SL	00	305.5	HS, PN	
25	LP	00	312.5	HS	
26	RB	00	328.5	HS	
28	RB	01	356.5	HS, TJ/	

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 297 STREAM: GAME HOG CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
29	RB	11	356.5	HS	
30	LP	00	369.5	HS	
31	RB	00	392.5	HS	
32	LP	00	398.5	HS	
33	RB	01	429.5	LA, HS	LA ON R BANK
34	LP	01	434.5	HS	
35	RB	01	444.5	HS	
37	LP	01	462.5		30+ COHO IN POOL
38	CR	01	477.5	HS	
39	PD	02	477.5	HS	
40	DU	02	477.5	HS	
41	RB	00	530.5	HS	
42	RB	00	564.5	HS, /SS	
43	RR	00	615.5	HS	
44	RR	00	631.5	HS	
46	RB	00	681.5	HS	
47	CB	00	716.5	HS, DJ	HUGE LOG JAM
49	CR	00	728.5	PN	NATURAL BARRIER?



Name: WOODS POINT
 Date: 4/25/2007
 Scale: 1 inch equals 2000 feet

Location: 10 0465976 E 5050653 N
 Caption: GAME HOG CREEK RESTORATION SITE - WILSON BASIN