

**ODFW AQUATIC INVENTORY PROJECT  
RESTORATION MONITORING  
STREAM HABITAT REPORT**

STREAM: FARMER CREEK  
 GCG: 1-NC  
 SITE ID: 30  
 BASIN: NESTUCCA  
 TREATMENT DATE: 2000  
 SURVEY DATE: 4/6/2011  
 SURVEY CREW: Frank Drake and Keenan Smith  
 USGS MAPS: SAND LAKE  
 ECOREGION: Coastal Uplands  
 REPORT PREPARED BY: Matt Strickland / Charles Stein

REACH: 1 LOCATION: T04S-R10W-S03NE

**SURVEY DESCRIPTION:**

Channel morphology: Constrained by high terraces  
 Dominant landuse(s): Second growth timber (15-30 cm dbh)  
 Dominant riparian vegetation: Deciduous trees: size class 15-30cm dbh  
 Primary channel length (meters) and area (m<sup>2</sup>): 502 : 2,035  
 Secondary channel length (meters) and area (m<sup>2</sup>) 41 : 88  
 VWI average: 8.3 VWI Range: 5.5 - 10 Average Gradient: 3.2%  
 Pieces LWD per 100m: 16.9 Wood Volume (m<sup>3</sup>) per 100m: 48.8  
 Percent pools: 17% Complex pools (LWD pieces>=3): 4 Pools >=1m deep:1  
 Percent substrate (avg):

	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	1	17	47	27	7	0
Pool units	2	20	59	16	3	0
Fast water units	0	8	46	35	11	0

**SURVEY COMMENTS:**

This is a post treatment restoration survey. The crew noted large wood habitat structures throughout the survey. The also noted a large alcove that was just downstream from the start of the survey. A male, adult winter steelhead was noted midway through the survey. Evidence of wildlife included beaver activity and recent elk crossings.

Survey Date: 4/6/2011

Report Date: 9/14/2011

T04S-R10W-S03NE

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	8.3	VWI Range:	5.5 - 10

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	502	2,035	0
Secondary	41	88	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 3.8	Width: 5.7	7.3 ( 3.2 - 12.8 )	9.4 ( 3.8 - 15.1 )
Depth: 0.42	Height: 0.5	0.9 ( 0.7 - 1.1 )	1.4 ( 1 - 1.9 )

W:D ratio: 12.1

Stream Flow Type: HF

Average Unit Gradient: 3.2%

Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.2

Habitat Units/100m (total channel length): 6.4

Habitat Units/100m (primary channel length): 7.0

**Riparian, Bank, and Wood Summary**

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 66%
Undercut Banks:	0%	Range: 56 - 67

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	85	16.9
Volume (m <sup>3</sup> ):	245	48.8
Key pieces (>=12m x 0.60m):	11	2.2

HABITAT INVENTORY

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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	1	25	2.5	0.35	63	0	0	5	40	35	20	0	
POOL-BACKWATER	1	7	4.0	0.80	26	0	5	55	20	15	5	0	
POOL-DAMMED	1	11	2.7	0.55	29	0	10	25	55	10	0	0	
POOL-ISOLATED	1	1	0.2	0.10	0	0	17	78	4	0	0	0	
POOL-LATERAL SCOUR	7	64	4.5	0.75	311	0	1	21	57	16	4	0	
POOL-PLUNGE	2	10	3.1	0.65	30	0	0	15	68	18	0	0	
PUDDLED UNIT	1	22	1.1	0.02	24	0	10	75	10	5	0	0	
RAPID/BOULDERS	16	337	4.2	0.32	1,443	0	0	8	44	36	12	0	
RIFFLE	3	66	3.3	0.30	192	0	0	10	54	31	5	0	
STEP/LOG	2	1	3.7	0.13	4	0	0	10	63	25	3	0	
<b>Total:</b>		35	544	3.8	0.42	2,122	0	<b>Avg:</b> 1	17	47	27	7	0

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	3	18	2.3	0.48	55	2.59%	0	0.0
Scour Pools	9	75	4.2	0.73	341	16.06%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	3	66	3.3	0.30	192	9.07%	0	0.0
Rapids	16	337	4.2	0.32	1,443	67.99%	0	0.0
Cascades	1	25	2.5	0.35	63	2.94%	0	0.0
Step/Falls	2	1	3.7	0.13	4	0.20%	0	0.0
Dry	1	22	1.1	0.02	24	1.14%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE  
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FARMER CREEK  
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T04S-R10W-S03NE

REACH 1

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**POOL SUMMARY**

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	12	22.1	23.9
Pools >=1m deep:	1	1.8	2.0
Complex pools (LWD pieces>=3):	4	7.4	8.0
Pool frequency (channel widths/pool):	7.9		
Residual pool depth (avg):	0.40		

Survey Date 4/6/2011  
Report Date: 9/14/2011

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 3 transects

Total hardwoods/1000	467
Total conifers/1000 ft	244
Total conifers >20" dbh/1000 f	0
Total conifers >35" dbh/1000 f	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	2.0	0.0	0.0	0.0	0.0	0.0	2.0
15-30cm	0.0	0.7	0.3	2.0	0.7	0.0	1.0	2.7
30-50cm	0.3	1.7	1.7	0.7	1.0	0.3	3.0	2.7
50-90cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.3	4.7	2.0	2.7	1.7	0.3	1.3	2.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	80		79		76	
Shrub cover	34		33		15	
Grass/forb cover	46		43		48	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	0		17		67	
High terrace	100		67		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		33	
Riprap	0		0		0	
Surface slope (%)	0		8		48	

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

**3 transects**

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

Total hardwoods/1000	467
Total conifers/1000 ft	244
Total conifers >20" dbh/1000 f	0
Total conifers >35" dbh/1000 f	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	2.0
15-30cm	1.0	2.7
30-50cm	3.0	2.7
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		
8	LT	1	HT	0	85	45	45	Conifer							10% BARE GROUND
								Hardwood							
8	LT	2	HT	0	85	35	55	Conifer							10% BARE GROUND
								Hardwood			2				
8	LT	3	HS	130	70	15	80	Conifer							5% BARE GROUND
								Hardwood							
8	RT	1	HT	0	85	40	55	Conifer							5% BARE GROUND
								Hardwood	5		1				
8	RT	2	HT	0	90	45	50	Conifer				2			5% BARE GROUND
								Hardwood		2					
8	RT	3	RB	0	60	10	10	Conifer							GRAVEL
								Hardwood							
15	LT	1	HT	0	80	40	55	Conifer							5% BARE GROUND
								Hardwood			2				
15	LT	2	HT	0	75	40	55	Conifer							5% BARE GROUND
								Hardwood		4					
15	LT	3	HS	70	70	20	75	Conifer							5% BARE GROUND
								Hardwood			1				
15	RT	1	HT	0	80	25	55	Conifer							20% BARE GROUND
								Hardwood	1		2				
15	RT	2	HT	0	80	40	45	Conifer			1	1			15% BARE GROUND
								Hardwood							
15	RT	3	RB	0	75	10	10	Conifer							GRAVEL
								Hardwood							
26	LT	1	HT	0	80	20	30	Conifer							50% BARE GROUND
								Hardwood		2					
26	LT	2	HS	45	85	35	45	Conifer				2			20% BARE GROUND
								Hardwood							
26	LT	3	HS	35	90	20	55	Conifer				2			25% BARE GROUND
								Hardwood							
26	RT	1	HT	0	70	35	35	Conifer				1			30% BARE GROUND
								Hardwood					1		
26	RT	2	RB	0	60	5	5	Conifer							GRAVEL
								Hardwood							
26	RT	3	HS	50	90	15	55	Conifer			2	1			GRAVEL
								Hardwood							

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/6/2011

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 30 STREAM: FARMER CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RB	01	30	/SS	START SURVEY JUST UPSTREAM OF ALCOVE. TEMP=8.5
1	2	BW	10	30	HS	LOGS
1	4	LP	00	62.9	HS/BV	LOGS. CHEWED STICKS
1	5	RB	01	87.9	HS	LOGS
1	6	RB	01	107.3	HS	LOGS
1	7	PD	02	107.3		ACW=1.8
1	8	LP	00	122.8	WL	ELK CROSSING
1	9	RB	00	139.8	WL	LIVE ADULT STW MALE
1	10	RB	01	164.8	/TJ HS	LOGS
1	11	RB	11	164.8	HS	LOG. ACW=3.9. TEMP=8.5
1	15	RB	00	225.2	HS	LOGS
1	16	LP	00	231.7	HS	



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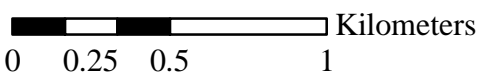
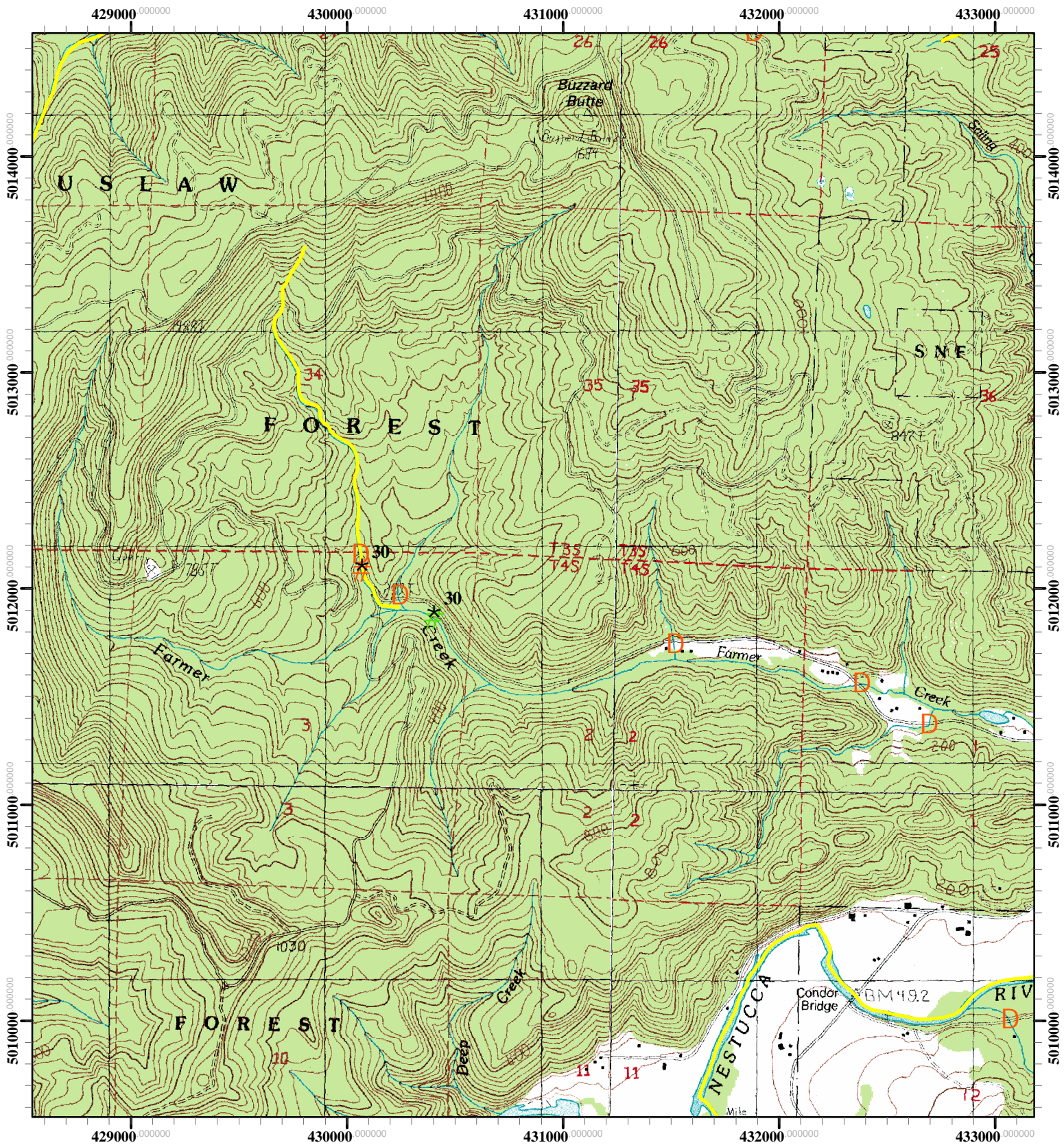
REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	17	RB	01	249.1	TJ/ HS	LOG. "TRIB" IS ACTUALLY FARMER CR. SURVEY CONTINUED UP FARMER CR TRIB.
1	19	LP	00	254.1	HS	LOG
1	20	RB	00	261.6	HS	LOG
1	21	PP	00	267.2	HS	LOGS
1	22	SL	00	267.8	HS	H=.45 LOGS
1	23	RI	00	287.8	HS	LOGS
1	24	RB	00	312.8	BC	FARMER CR RD
1	28	LP	00	369.9	HS	LOGS
1	29	RB	00	394.9	WL	FRESH ELK TRACKS
1	30	RB	00	419.9	HS	LOGS
1	31	RB	00	451.9	SS/ WL	A FRANK SPOTTED AND OBSERVED. COULD HAVE BEEN SASQUATCH!
1	32	PP	00	456.5	HS /LA	ERODING ROAD EDGE

**COMMENT SUMMARY**

MONITORING AREA: 1-NC SITE ID: 30 STREAM: FARMER CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	33	SL	00	457.05	HS	H=.50 LOG
1	34	DP	00	467.75	/SS HS	LOG
1	35	RI	00	502.15	SS/ WL	ELK TRAIL





Restoration Site ID: 30  
 Stream: Farmer Creek  
 T04S- R10W - S03  
 USGS Map: Sand Lake  
 Basin: Nestucca

- # Restoration Start Point
- # Restoration End Point
- D Potential Barrier
- Spawning Survey Segments

