

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

STREAM: MUNSON CREEK  
 GCG: 1-NC  
 SITE ID: 342  
 BASIN: TILLAMOOK  
 TREATMENT DATE: 2007  
 SURVEY DATE: 8/25/2008  
 SURVEY CREW: Gwyn Woolley-Scott / Linda Campbell  
 USGS MAPS: BEAVER  
 ECOREGION: Coastal Lowlands  
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

**SURVEY DESCRIPTION:**

Channel morphology: Constrained by high terraces  
 Dominant landuse(s): Large timber (30-50 cm dbh)  
 Dominant riparian vegetation: Mixed conifer/deciduous: size class 50-90cm dbh  
 Primary channel length (meters) and area (m<sup>2</sup>): 1,778 : 5,793  
 Secondary channel length (meters) and area (m<sup>2</sup>) 267 : 391  
 VWI average: 10.4 VWI Range: 1 - 20 Average Gradient: 2.8%  
 Pieces LWD per 100m: 21.4 Wood Volume (m<sup>3</sup>) per 100m: 23.7  
 Percent pools: 32% Complex pools (LWD pieces>=3): 29 Pools >=1m deep: 3  
 Percent substrate (avg):

	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	9	19	36	30	6	1
Pool units	17	27	34	20	2	1
Fast water units	1	13	40	36	10	0

**COMMENTS:**

This is a post-treatment, restoration survey. The crew noted habitat structures consisting primarily of placed logs throughout the survey. They also noted observing juvenile salmonids throughout the survey. Evidence of wildlife included beaver activity throughout the survey, a chipmunk, and a rough-skinned newt. The crew noted various points of extensive blowdown within the riparian area from a previous winter storm.

**OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY**

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**Survey Date: 8/25/2008**

**Report Date: 12/29/2008**

**T02S-R09W-S28SE**

**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	10.4	VWI Range:	1 - 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	1,778	5,793	0
Secondary	267	391	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 8	<u>First Terrace</u> n = 6
Width: 3.1	Width: 7.3	16.8 ( 8 - 48 )	16.2 ( 10 - 27 )
Depth: 0.26	Height: 0.6	1.3 ( 1.2 - 1.4 )	2.3 ( 1.5 - 3.7 )

W:D ratio: 11.5

Stream Flow Type: MF

Average Unit Gradient: 2.8%

Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio): 2.3

Habitat Units/100m (total channel length): 7.6

Habitat Units/100m (primary channel length): 8.8

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	LT	TH
Riparian Vegetation:	M50	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	32%	Reach avg: 75%
Undercut Banks:	16%	Range: 28 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	381	21.4
Volume (m <sup>3</sup> ):	421	23.7
Key pieces (>=12m x 0.60m):	14	0.8

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REACH 1

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
POOL-BACKWATER	3	91	1.7	0.27	151	0	72	13	12	3	0	0
POOL-LATERAL SCOUR	59	498	3.4	0.47	1,751	9	16	27	35	20	2	1
POOL-PLUNGE	4	23	2.8	0.38	64	6	17	35	25	10	4	10
POOL-STRAIGHT SCOUR	4	40	4.5	0.40	188	0	28	19	24	26	3	0
RAPID/BOULDERS	12	410	2.0	0.11	893	77	0	10	32	34	24	0
RIFFLE	44	766	2.9	0.12	2,258	28	1	14	42	37	6	0
RIFFLE W/ POCKETS	2	95	5.0	0.18	475	0	5	18	45	18	14	0
STEP/BEDROCK	1	2	2.0	0.02	4	3	0	0	17	26	17	39
STEP/BOULDERS	2	6	3.0	0.03	16	25	0	7	35	21	37	0
STEP/COBBLE	21	106	3.4	0.07	368	6	0	8	31	55	5	0
STEP/LOG	4	9	2.6	0.01	16	0	18	31	47	4	0	0
<b>Total:</b>	156	2,045	3.1	0.26	6,184	154	<b>Avg:</b> 9	19	36	30	6	1

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	91	1.7	0.27	151	2.44%	0	0.0
Scour Pools	67	561	3.4	0.46	2,003	32.39%	15	0.7
Glides	0	0			0	0.00%	0	0.0
Riffles	46	861	3.0	0.12	2,733	44.20%	28	1.0
Rapids	12	410	2.0	0.11	893	14.44%	77	8.6
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	28	123	3.2	0.06	404	6.53%	34	8.4
Dry	0	0			0	0.00%	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:	70	34.2	39.4
Pools >=1m deep:	3	1.5	1.7
Complex pools (LWD pieces>=3):	29	14.2	16.3
Pool frequency (channel widths/pool):	4.0		
Residual pool depth (avg):	0.40		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
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RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 6 transects

Total hardwoods/1000	203
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	30
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	0.5	0.2	0.0	0.0	0.0	0.5	0.5	0.7
15-30cm	0.5	1.3	0.0	0.2	1.0	0.2	1.5	1.7
30-50cm	1.0	0.5	1.3	0.3	1.2	0.2	3.5	1.0
50-90cm	0.2	0.0	0.2	0.0	0.2	0.0	0.5	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.2	2.0	1.5	0.5	2.3	0.8	2.0	1.1

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	54	48	42
Shrub cover	65	60	62
Grass/forb cover	35	33	38

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	25	25	50
High terrace	42	67	42
Low terrace	33	8	8
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 (%)	15	18	26

**Summary of Riparian Zone (0-30m) for all reaches****6 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	203
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	30
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	0.5	0.7
15-30cm	1.5	1.7
30-50cm	3.5	1.0
50-90cm	0.5	0.0
>90cm	0.0	0.0



121	LT	1	LT	3	30	95	5	Conifer				
								Hardwood				
121	LT	2	HT	0	95	5	5	Conifer				
								Hardwood				
121	LT	3	HT	8	30	80	20	Conifer			1	
								Hardwood				
121	RT	1	LT	5	20	90	10	Conifer			1	
								Hardwood	1		1	
121	RT	2	HT	4	20	85	15	Conifer				
								Hardwood				
121	RT	3	HS	32	5	85	15	Conifer				
								Hardwood				
144	LT	1	HT	5	60	90	10	Conifer	1	1		
								Hardwood				
144	LT	2	HT	3	75	85	15	Conifer				
								Hardwood			1	PARKING AREA HERE
144	LT	3	HS	12	90	90	10	Conifer		1		
								Hardwood				
144	RT	1	HS	12	5	90	10	Conifer				
								Hardwood				
144	RT	2	HS	45	15	95	5	Conifer				
								Hardwood				
144	RT	3	HS	70	10	95	5	Conifer				
								Hardwood		1		
156	LT	1	HS	52	70	15	85	Conifer			1	
								Hardwood			2	TRAIL CROSSES HERE
156	LT	2	HS	63	30	90	10	Conifer				
								Hardwood			1	
156	LT	3	HS	61	40	90	10	Conifer			1	
								Hardwood				
156	RT	1	HS	36	65	30	70	Conifer				
								Hardwood				
156	RT	2	HS	52	25	50	50	Conifer			3	1
								Hardwood				
156	RT	3	HS	70	15	70	30	Conifer				
								Hardwood				

COMMENT SUMMARY

MONITORING AREA: 1-NC      SITE ID: 342      STREAM: MUNSON CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	LP	00	6	HS	
2	RP	00	51	HS	
3	LP	00	62	HS	
4	RP	00	112	HS	
5	RI	00	131	BC, HS	LOGGING ROAD BRIDGE
8	LP	00	160	HS	
22	RI	02	323		WATER MOVES UNDER LOGS + BRUSH 13M
27	SL	01	365		H=0.50M
31	LP	01	398	DJ	
32	LP	02	398	AM	ROUGH-SKINNED NEWT
47	LP	00	500		FISH 3-5CM
49	LP	01	537	/TJ	(2) FISH 3-6CM
50	RI	11	537	HS	
51	RI	00	558	HS	
52	LP	00	563	HS	
53	RI	00	574	HS	
54	LP	00	576	HS	
55	RI	00	592	HS	
56	LP	00	597	HS	
57	RI	00	607	HS	
58	LP	00	615	HS	
59	RI	00	630	HS	



**COMMENT SUMMARY**

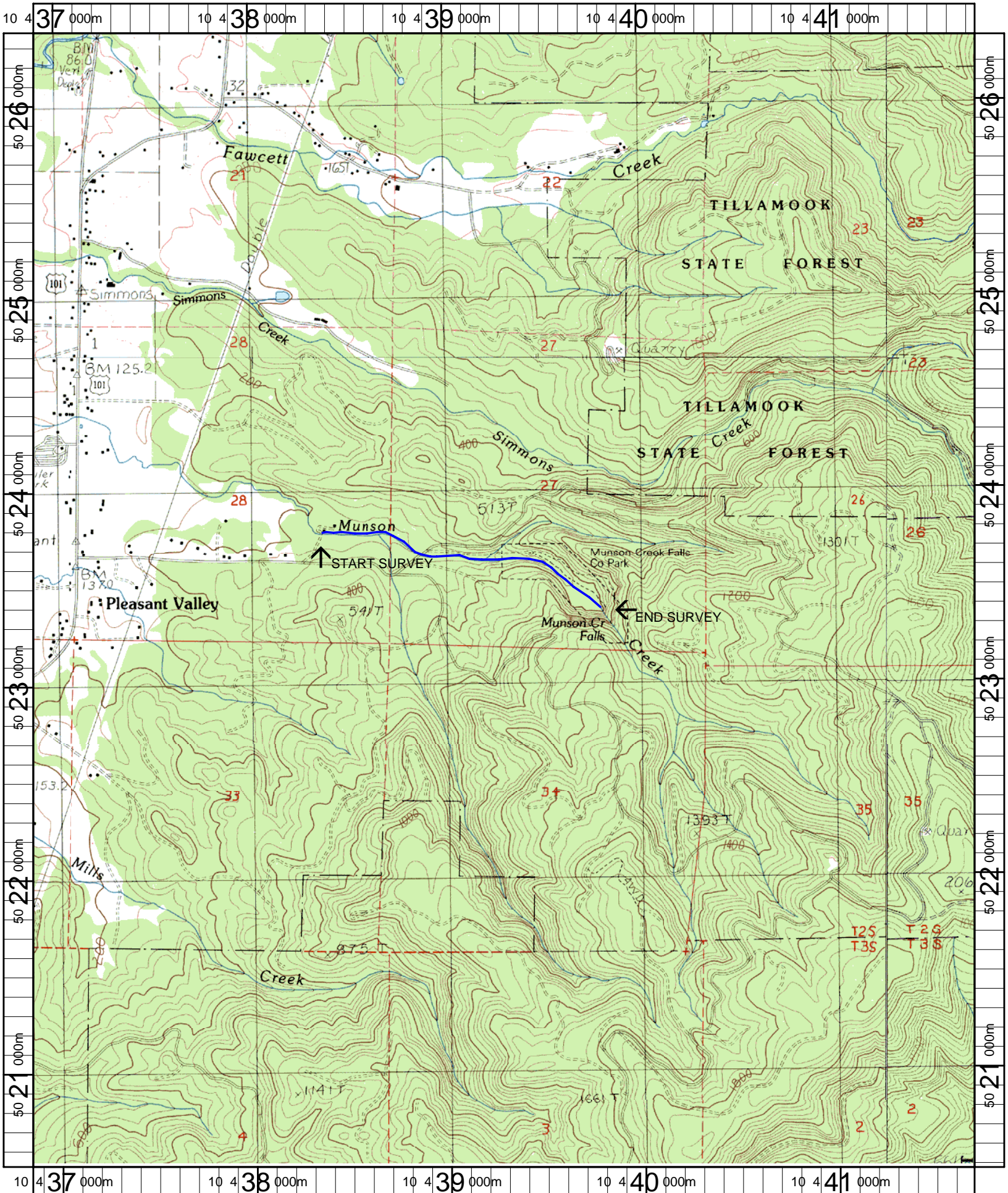
MONITORING AREA: 1-NC      SITE ID: 342      STREAM: MUNSON CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
60	LP	00	639	HS	
61	RI	00	652	HS	
62	LP	00	670	HS, BV	BEAVER CUT STICKS; (1) FISH 10CM; (6) FISH 3-6CM
63	RI	00	720	HS	
64	RI	00	737	HS	
65	SP	00	743	BC	MUNSON CREEK FALLS RD
68	BW	10	757	SS/	AMBIGUOUS AREA-COULD BE PUDDLED SECONDARY CHANNEL
73	SL	01	853	DJ, PN	H=0.50M, CAUSE OF AMBIGUOUS AREA BELOW, PHOTO
76	RI	02	887	/TJ	
77	RB	11	887		TRIB OFF SECONDARY CHANNEL-R
82	LP	02	887	/SS	
90	LP	00	956		(6) FISH 3-6CM
101	SC	00	1073		UNIT INCLUDES LONG SHALLOW MEANDER, SAND & ORGANICS
103	RI	00	1095		MASSIVE BLOWDOWN & CLEARCUT ON RIGHT
104	LP	01	1099	/TJ	
105	RB	11	1099		BEGIN HEARING GUNFIRE
106	SL	00	1099.3		H=0.15M
108	RI	00	1112.3		MULTIPLE CHANNELS & EROSION & GRAVEL BARS UNDER BLOWDOWN MESS
110	SC	00	1122.3		SAME NOTE AS UNIT 108
111	SP	00	1138.3	BV	(12+) FISH 3-10CM. BEAVER CUT STICKS & TRAIL
113	LP	00	1162.3	BV	BEAVER CUT STICKS
115	LP	00	1193.3	WL	CHIPMUNK. FISH 3CM.

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 342 STREAM: MUNSON CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
118	RB	01	1265.3	TJ/, HS	BRAIDS & GRAVEL BARS UNDER HS - BLOWN OUT? 2 PHOTOS DOWNSTREAM.
122	LP	00	1294.3		(7) FISH-3-6CM.
125	SL	00	1315.3		H=0.50M
126	LP	01	1329.3	BV	BEAVER SCAT & CUT STICKS; (6+) FISH 3-6CM.
137	LP	00	1386.3	HS	
143	RB	00	1507.3		PARK ON LEFT
144	RB	00	1557.3		PARK ON LEFT
146	SB	00	1598.3	DJ	H=0.30M
151	RB	00	1716.3	/LI	
153	RB	00	1769.3	CS/	TRAIL TO FALLS ON LEFT; BANK COMPROMISED, RIPRAP & WIRED
155	SR	00	1773.3		H=0.60M
156	PP	00	1778.3		END SIGN AT TRAIL INTERFACE ON MAPLE RIGHT, FALLS NOT VISIBLE. PHOTOS



Name: BEAVER  
 Date: 1/3/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 439294 E 5023428 N  
 Caption: MUNSON CREEK RESTORATION SITE - TILLAMOOK BASIN



NC-342 Munson Creek (Post-Treatment) 2008 Summer Habitat Survey Photographs



Debris jam



Park waterfall trail and riprap on left bank



Large wood habitat structure



Large wood habitat structure



Clearcut on right hillslope