

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

STREAM: Munson Creek (N-342)  
BASIN: Tillamook River  
SURVEY TYPE: Pre-Tx  
DATE: June 25, 2007  
SURVEY CREW: Lanoah Babcock, Kara Morris  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 7.4 km<sup>2</sup>  
USGS MAPS: Beaver  
ECOREGION: Coast Range Coastal Uplands

**GENERAL DESCRIPTION:**

The Munson Creek habitat survey extended 1,734 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 10.2 (range: 2.0-19.0). Land use for the reach was timber harvest and state park. The average unit gradient was 3.0 percent. Riffles (56%) and scour pools (22%) dominated stream habitat. Gravel (38%) and cobble (34%) dominated stream substrate. Wood volume was low at 11.8 m<sup>3</sup>/100m.

**COMMENTS:**

There were two potential barriers to upstream fish migration during low flows in the surveyed length. Both were steps over logs at units 56 and 97.

The crew noted some beaver activity during the survey.

REACH 1

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	10.2	VWI Range:	2 - 19

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	1,734	6,646	0
Secondary Channel	297	422	6
Off-Channel Units	29	55	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 10	<u>First Terrace</u> n = 10
Width: 3.5	Width: 6.2	9.8 ( 5.8 - 21 )	19.1 ( 7.2 - 40 )
Depth: 0.31	Height: 0.3	0.7 ( 0.44 - 1 )	1.0 ( 0.75 - 1.7 )

W:D ratio: 18.6  
 Stream Flow Type: LF  
 Average Unit Gradient: 3.0%  
 Water temperature (°C): 11.0 - 11.0

Entrenchment (ACW:FPW ratio): 1.6  
 Habitat Units/100m (total channel length): 5.9  
 Habitat Units/100m (primary channel length): 7.0

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	TH	GN
Riparian Vegetation:	D15	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	14%	Reach avg: 72%
Undercut Banks:	11%	Range: 22 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	248	14.3
Volume (m <sup>3</sup> ):	205	11.8
Key pieces (>=12m x 0.60m):	6	0.3

OREGON DEPT OF FISH AND WILDLIFE

MUNSON CREEK PRE-TX (1-NC, 342)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

6/25/2007

REACH 1		T02S-R09W-S28SE					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
CASCADE/BOULDERS	2	10	1.0	0.04	11	0	23	25	15	38	0	0
CULVERT CROSSING	1	10	1.0	0.20	10	0	0	5	15	60	20	0
DRY CHANNEL	2	75	1.1	0.01	77	0	3	23	36	36	3	0
POOL-ISOLATED	1	2	1.5	0.35	3	0	50	50	0	0	0	0
POOL-LATERAL SCOUR	31	359	3.4	0.62	1,371	7	6	28	40	23	3	0
POOL-PLUNGE	1	6	4.2	0.50	23	5	5	15	45	30	5	0
POOL-STRAIGHT SCOUR	3	29	5.7	0.85	182	1	5	25	44	26	0	0
PUDDLED UNIT	4	122	1.9	0.07	197	0	21	26	45	8	0	0
RAPID/BOULDERS	8	284	2.8	0.24	803	138	1	7	28	38	26	0
RIFFLE	43	1,021	3.6	0.20	3,891	119	2	14	38	37	7	0
RIFFLE W/ POCKETS	2	50	3.0	0.28	118	0	3	13	50	35	0	0
STEP/BOULDERS	1	2	3.6	0.10	7	6	0	0	10	38	52	0
STEP/COBBLE	19	86	4.6	0.14	422	8	0	8	39	51	2	0
STEP/LOG	2	6	1.6	0.13	7	0	0	15	68	18	0	0
STEP/STRUCTURE	1	0	1.0	0.20	0	0	0	5	15	60	20	0
<b>Total:</b>	121	2,060	3.5	0.31	7,123	284	<b>Avg:</b> 4	17	38	34	6	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	1	2	1.5	0.35	3	0.04%	0	0.0	
Scour Pools	35	393	3.7	0.64	1,576	22.13%	13	0.8	
Glides	0	0			0	0.00%	0	0.0	
Riffles	45	1,071	3.6	0.20	4,009	56.28%	119	3.0	
Rapids	8	284	2.8	0.24	803	11.27%	138	17.2	
Cascades	2	10	1.0	0.04	11	0.15%	0	0.0	
Step/Falls	23	94	4.1	0.14	437	6.13%	14	3.2	
Dry	6	197	1.6	0.05	274	3.84%	0	0.0	
Culverts	1	10	1.0	0.20	10	0.14%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	36	17.5	20.8
Pools >=1m deep:	3	1.5	1.7
Complex pools (LWD pieces>=3):	9	4.4	5.2
Pool frequency (channel widths/pool):	9.2		
Residual pool depth (avg):	0.50		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

MUNSON CREEK PRE-TX  
GCG: 1-NC SITE ID: 342

Survey Date 6/25/2007  
Report Date: 11/7/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

Summary of Riparian Zone (0-30m) 5 transects

Total hardwoods/1000	1036
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	24

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	0.0	0.0	1.6	0.0	6.0	0.0	7.6
15-30cm	1.2	1.6	1.4	3.0	0.4	1.0	3.0	5.6
30-50cm	1.4	2.4	0.0	0.4	0.6	0.8	2.0	3.6
50-90cm	0.2	0.0	0.2	0.0	0.2	0.2	0.6	0.2
>90cm	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total/100m2	3.2	4.0	1.6	5.0	1.2	8.0	2.0	5.7

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	61	60	67
Shrub cover	57	56	43
Grass/forb cover	34	37	49

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	0	10	50
High terrace	90	80	40
Low terrace	10	0	0
Floodplain	0	10	0
Wetland/meadow	0	0	0
Stream channel	0	0	10
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	0	1	21

**Summary of Riparian Zone (0-30m) for all reaches****5 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	1036
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	24

**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	7.6
15-30cm	3.0	5.6
30-50cm	2.0	3.6
50-90cm	0.6	0.2
>90cm	0.4	0.0



85	LF	1	HT	0	80	30	70	Conifer			10T0439208, UTM 5023606
								Hardwood			
85	LF	2	HT	0	80	10	40	Conifer			ROAD BED / HIGH TERRACE
								Hardwood			
85	LF	3	HS	42	90	10	90	Conifer		3	
								Hardwood			
85	RT	1	HT	0	40	90	10	Conifer		1	
								Hardwood	3	3	
85	RT	2	HT	0	2	90	10	Conifer			CAT SCAT
								Hardwood			
85	RT	3	HS	65	0	90	10	Conifer			BLOWDOWN HS @ 30M CLEARCUT 10T0439420, UTM 5023600
								Hardwood			
106	LF	1	HT	0	90	85	15	Conifer			
								Hardwood			
106	LF	2	HT	0	90	70	30	Conifer			
								Hardwood	8		
106	LF	3	HT	0	90	80	20	Conifer			3M OF ROAD
								Hardwood			
106	RT	1	HT	0	70	90	10	Conifer		1	
								Hardwood		3	
106	RT	2	HT	0	45	90	10	Conifer			NO TREES
								Hardwood			
106	RT	3	HS	55	85	90	10	Conifer			
								Hardwood			

COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	LP	00	17.3		START SIGN ON RIGHT.
3	RI	00	53.3		CLEAR CUT ON RIGHT. FLAG ON LEFT SITE 2
4	LP	00	74.5	WL	TRAILS
6	SC	00	107.6	WL	WILDLIFE TRAILS, /CLEARCUT
7	RI	00	131.3	WL, BC	TRAILS
8	LP	00	148	CO	COHO JUV.
10	LP	00	160.9	DJ	
12	LP	00	177.5		PINK FLAG SITE 4
14	RI	01	230.3	TJ/	
15	CB	11	230.3		TRIB UNIT, LARGE ROOTWADS AT START OF CHANNEL.
20	RI	01	336.6		RIP 1.
22	RI	01	353.6		SWAMP AREA ON LEFT NO TRUE CHANNEL.
23	PD	02	353.6		02 CHANNEL / SWAMP
24	LP	01	383.8	WL, CO	FROG, COHO
25	PD	03	383.8		SUBSURFACE FLOW NOT MUCH OF A CHANNEL.
27	RI	00	466.2		SCULPIN AND COHO IN NEXT UNIT.
29	RI	01	512	/TJ	MUNSON CREEK TRIB A. 10T 0438774, UTM 5023837, 3D EPE 42. SALMON SPAW
30	RB	11	512		TRIB UNIT.
36	LP	01	614.1		T= 11C AT 8:58, LWD 4 PINK FLAG
37	RI	01	626.2	WL	TRAILS
38	DC	02	626.2		WIDTH IS ACW
39	LP	00	640.7		FLAG LWD



COMMENT SUMMARY

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
43	RI	01	694.7		FLAG 2 LWD
44	PD	02	694.7		SUBSURFACE FLOW, WIDTH = ACW, POCKET = 0.3M 1.5X3
45	SP	00	707.7	CE	CE
46	SS	00	707.9		H= 0.05, EROSION UNDER CULVERT
47	CC	00	718.1	CC	1.6 X 2 METAL BOTTOM
48	SC	00	720.1	WL	CRAWDAD
49	RP	01	729.7		POCKETS MADE FROM DOWNED WOOD
50	SP	01	739.5	WL. CO, BV	TRAILS, COHO, FLAGGING
53	LP	01	783.3		BDRCK = HARDPAN
54	RI	01	808.3	WL	
56	SL	01	820	DJ, PN	DJ-WATER FLOWS UNDER JAM, WATER FLOWS UNDER LOG
57	RI	02	820	TF	2 POCKETS = 0.3M DEPTH
58	DC	02	820		ACW=5.6, SUBSURFACE WATER FLOW
61	RI	03	852.8		03 CHANNEL
63	RI	03	852.8	/TJ	
64	SC	11	852.8		T = 12C , /TJ, TRIB UNIT COMES INTO 03
65	PD	03	852.8		WW = 1M
68	RI	00	906		TH=1.55M, 1.85M=TH=RIGHT
71	RI	00	977.2	WL	/TRAIL,-30M TIL CLEARCUT RIGHT
72	RI	00	1012.2	RF	
73	RI	00	1028		/HILLSLOPE
75	RI	00	1049.8		/BLOW DOWN OF RIP AREA

COMMENT SUMMARY

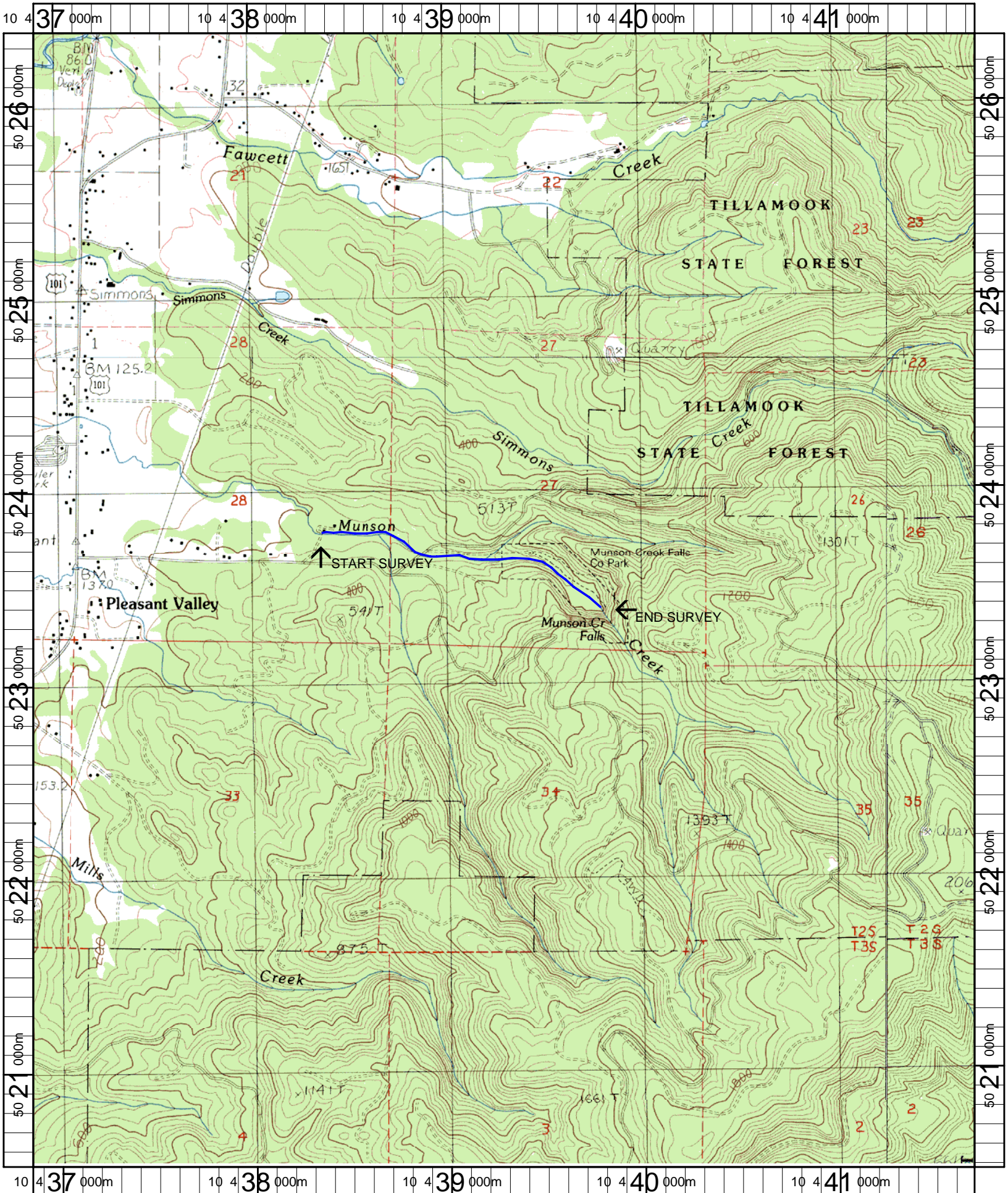
MONITORING AREA: 1-NC      SITE ID: 342      STREAM: MUNSON CREEK PRE-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
76	SC	01	1053	/TJ	DEBRIS CLUSTER, /TJ, H2O FLOWS UNDER DJ MAKING STEP
77	CB	11	1053		10T0439163, UTM 5023607
81	LP	01	1093	BV	FISH
84	LP	00	1111.8	BV	
85	RI	00	1134.9		RIP 4
86	LP	00	1141.3	BV	
88	RI	00	1173	BV	
89	SC	00	1175.8		MONKEY FLOWERS
90	LP	00	1182.8	WL	TROUT
91	RP	01	1222.8	TJ/, BV	
92	SC	11	1222.8		10T 0439291, UTM 5023640
93	LP	00	1238.1		FISH
96	RI	00	1275.4		/CLEARCUT THRU U-108
97	SL	00	1276.1	PN, BV	H= 0.35, H2O FLOWS UNDER LOGS, H=0.35
98	LP	00	1277.9	WL	FISH
100	LP	00	1310.5	CO	COHO
102	RI	00	1323		COVERED BY SHRUBS
103	LP	00	1330.3		WILD RASPBERRIES
104	RI	00	1358.3	BV	
106	RI	00	1396.8		RIP 5
109	RI	00	1435.9		FRESH WATER CLAMS
110	RI	00	1461.2		TREES ON RIGHT AGAIN

**COMMENT SUMMARY**

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

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
111	RB	01	1488.2		6/28/07
112	RI	02	1488.2		/90+ CONIFERS
113	RB	00	1525.3		DEVILS CLUB EVERYWHERE !!
115	RB	00	1629.5	WL	TRAILS/
117	RB	01	1719.9	CS	RIP RAP - NETTING/
119	PP	00	1725.4	CS	CAGED ROCKS
120	SB	00	1727.4		H= 0.4
121	RI	01	1734.4		END: 10T0439900, UTM 5023504



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