ODFW AQUATIC INVENTORY PROJECT

OREGON PLAN FOR SALMON & WATERSHEDS

STREAM RESTORATION HABITAT REPORT

STREAM:	East Humbug Creek (N-225)
BASIN:	Nehalem River
SURVEY TYPE:	Pre-Tx
DATE:	July 8, 2004
SURVEY CREW:	Scott Young, Ben Walczak
REPORT PREPARED BY:	Paul Jacobsen
BASIN AREA:	23.2 km^2
USGS MAPS:	Vinemaple
ECOREGION:	Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The East Humbug Creek habitat survey extended 957 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.9 (range: 3.5-8.0). Land use for the reach was timber harvest and second growth (15-30 cm dbh) trees. The average unit gradient was 1.4 percent. Riffles (40%) and scour pools (39%) dominated stream habitat. Gravel (48%) and cobble (22%) dominated stream substrate. Wood volume was low at 18.0 m^3/100m.

COMMENTS:

There was a potential barrier to upstream fish migration in the surveyed length. This was noted as a culvert crossing and step to culvert at units 45 and 46 (945 m).

OREGON DEPARTMENT OF FISH AND WILDLIFE **EAST HUMBUG CREEK PRE-TX (N-225)**

HABITAT INVENTORY Report Date: 10/27/2004 Survey Date: 7/8/2004

REACH 1 **T05N-R08W-S13NW** **REACH 1**

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	100%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%

Valley Width Index 5.9 VWI Range: 3.5 - 8

Channel Morphology (Percent Reach Length)

Constrained		Unconstrained	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	Braided Channel	0%
Alt. Terrace/Hill	100%		
Landuse	0%		

Channel Characteristics

Type	Length (m)	Area (m2)	Dry Units
Primary	957	6,027	0
Secondary	112	346	1

Channel Dimensions (m)

Wetted		Active		Floodprone *n* = 5	First Terrace *n* = 5
Width:	5.7	Width:	11.2	13.6 (12.1 - 15.2)	17.5 (13.7 - 23.2)
Depth:	0.43	Height:	0.6	1.2 (1 - 1.5)	1.5 (1.3 - 1.7)

W:D ratio: 19.0
Stream Flow Type: MF
Average Unit Gradient: 1.4%
Water temperature (°C): 12.0 - 12.0

Entrenchment (ACW:FPW ratio): 1.2
Habitat Units/100m (total channel length): 4.4
Habitat Units/100m (primary channel length): 4.9

Riparian, Bank, and Wood Summary

	Primary	Secondary
Land Use:	TH	ST
Riparian Vegetation:	M30	D15

Bank Condition and Shade

Bank Status	Percent Reach Length	Shade (% of 180)
Actively Eroding:	6%	Reach avg: 66%
Undercut Banks:	4%	Range: 19 - 100

Large Wood Debris

	Total	Total / 100m primary channel
All pieces (>=3m x 0.15m):	146	15.3
Volume (m^3):	172	18.0
Key pieces (>=12m x 0.60m):	7	0.7

OREGON DEPARTMENT OF FISH AND WILDLIFE **EAST HUMBUG CREEK PRE-TX (N-225)**

HABITAT INVENTORY Report Date: 10/27/2004 Survey Date: 7/8/2004

REACH 1 **T05N-R08W-S13NW** **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
CULVERT CROSSING	1	12	3.7	0.05	44	0		10	10	30	50	0	0
POOL-ALCOVE	1	12	0.5	0.25	6	0		20	20	60	0	0	0
POOL-BACKWATER	4	21	3.1	0.33	59	0		15	29	44	0	0	13
POOL-LATERAL SCOUR	17	404	5.5	0.77	2,249	0		6	12	39	19	0	24
POOL-PLUNGE	1	17	13.5	1.70	234	3		5	5	25	40	5	20
PUDDLED UNIT	1	43	4.0	0.10	171	0		10	10	60	20	0	0
RAPID/BOULDERS	3	45	2.4	0.17	118	4		0	5	48	38	2	7
RIFFLE	13	456	5.1	0.19	2,573	5		3	8	60	22	1	7
STEP/COBBLE	5	58	13.5	0.14	918	10		1	2	60	33	4	0
STEP/STRUCTURE	1	1	1.3	0.05	1	0		10	10	30	50	0	0
Total:	47	1,069	5.7	0.43	6,373	22	**Avg:**	6	11	48	22	1	12

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m^2)	Percent	Large Boulders Number	(# / $100m^2$)
Dammed & BW Pools	5	33	2.6	0.31	65	1.02%	0	0.0
Scour Pools	18	421	6.0	0.82	2,483	38.96%	3	0.1
Glides	0	0			0	0.00%	0	0.0
Riffles	13	456	5.1	0.19	2,573	40.38%	5	0.2
Rapids	3	45	2.4	0.17	118	1.85%	4	3.4
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	6	59	11.4	0.13	918	14.41%	10	1.1
Dry	1	43	4.0	0.10	171	2.68%	0	0.0
Culverts	1	12	3.7	0.05	44	0.70%	0	0.0

POOL SUMMARY

		Total of all Channel Lengths	Primary Channel Length
	Total	# / Km	# / Km
All Pools:	23	21.5	24.0
Pools >=1m deep:	2	1.9	2.1
Complex pools (LWD pieces>=3):	8	7.5	8.4
Pool frequency (channel widths/pool):	4.2		
Residual pool depth (avg):	0.67		

OREGON DEPARTMENT OF FISH AND WILDLIFE **EAST HUMBUG CREEK PRE-TX (N-225)**

HABITAT INVENTORY Report Date: 10/27/2004 Survey Date: 7/8/2004

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	508
Total conifers/1000 ft	163
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	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters		Zones 1-3 0-30 meters	
class (cm)	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-30cm	0.0	3.0	0.7	1.7	1.3	1.0	2.0	5.7
30-50cm	0.3	0.7	0.0	0.7	0.3	0.7	0.7	2.0
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	0.3	0.0	0.0	0.0	0.3
Total/100m2	0.3	4.0	0.7	2.7	1.7	1.7	0.9	2.8

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	47	1374	65
Shrub cover	11	30	20
Grass/forb cover	81	70	81

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	17	33	50
High terrace	67	67	50
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	17	0	0
Roadbed/Railroad	0	0	0
Riprap	0	0	0
Surface slope (%)	13	13	6

OREGON DEPARTMENT OF FISH AND WILDLIFE EAST HUMBUG CREEK PRE-TX (N-225)

HABITAT INVENTORY Report Date: 10/27/2004 Survey Date: 7/8/2004

RIPARIAN ZONE VEGETATION

Reach 1 Reach 1

					Cover (percent)				Diameter class (cm)					
Unit	Side	Zone	Surface	Slope	Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	Notes
15	LF	2	HT	10	10	10	90	**Conifer**		1				
								Hardwood						
15	RT	1	HT	0	10		100	**Conifer**						CUT MARKS ON LOG
								Hardwood				1		
15	LF	3	HS	-25	15	5	95	**Conifer**		2				
								Hardwood						
15	LF	1	SC	0	10		60	**Conifer**						10T 0452060 5085515
								Hardwood						
15	RT	2	HT	0	70		10	**Conifer**						
								Hardwood			1			
15	RT	3	HT	0	80		100	**Conifer**						
								Hardwood		1	2			
26	RT	2	HT	0	8010	90		**Conifer**						
								Hardwood		4	1			
26	RT	3	HT	0	80	15	85	**Conifer**		1				
								Hardwood		1				
26	RT	1	HT	0	70	10	90	**Conifer**						
								Hardwood		3				
26	LF	3	HS	30		20	70	**Conifer**						RECENTLY CLEARCUT
								Hardwood						
26	LF	2	HS	30	10	20	80	**Conifer**						RECENTLY CLEARCUT
								Hardwood						
26	LF	1	HS	80	30	10	60	**Conifer**						10T 0451891 5085631
								Hardwood		1	2			
35	RT	3	HT	0	85	10	85	**Conifer**		1	1			
								Hardwood		1				
35	LF	2	HS	35	70	20	80	**Conifer**						
								Hardwood					1	
35	LF	3	HS	30	65	50	50	**Conifer**						CLEARCUT
								Hardwood						
35	RT	1	HT	0	75	20	80	**Conifer**						
								Hardwood		3				
35	RT	2	HT	0	75	10	90	**Conifer**		1				
								Hardwood		1				
35	LF	1	HT	0	85	5	95	**Conifer**			1			
								Hardwood		2				

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **1-NC** **SITE ID:** **225** **EAST HUMBUG CREEK PRE-TX (N-2**

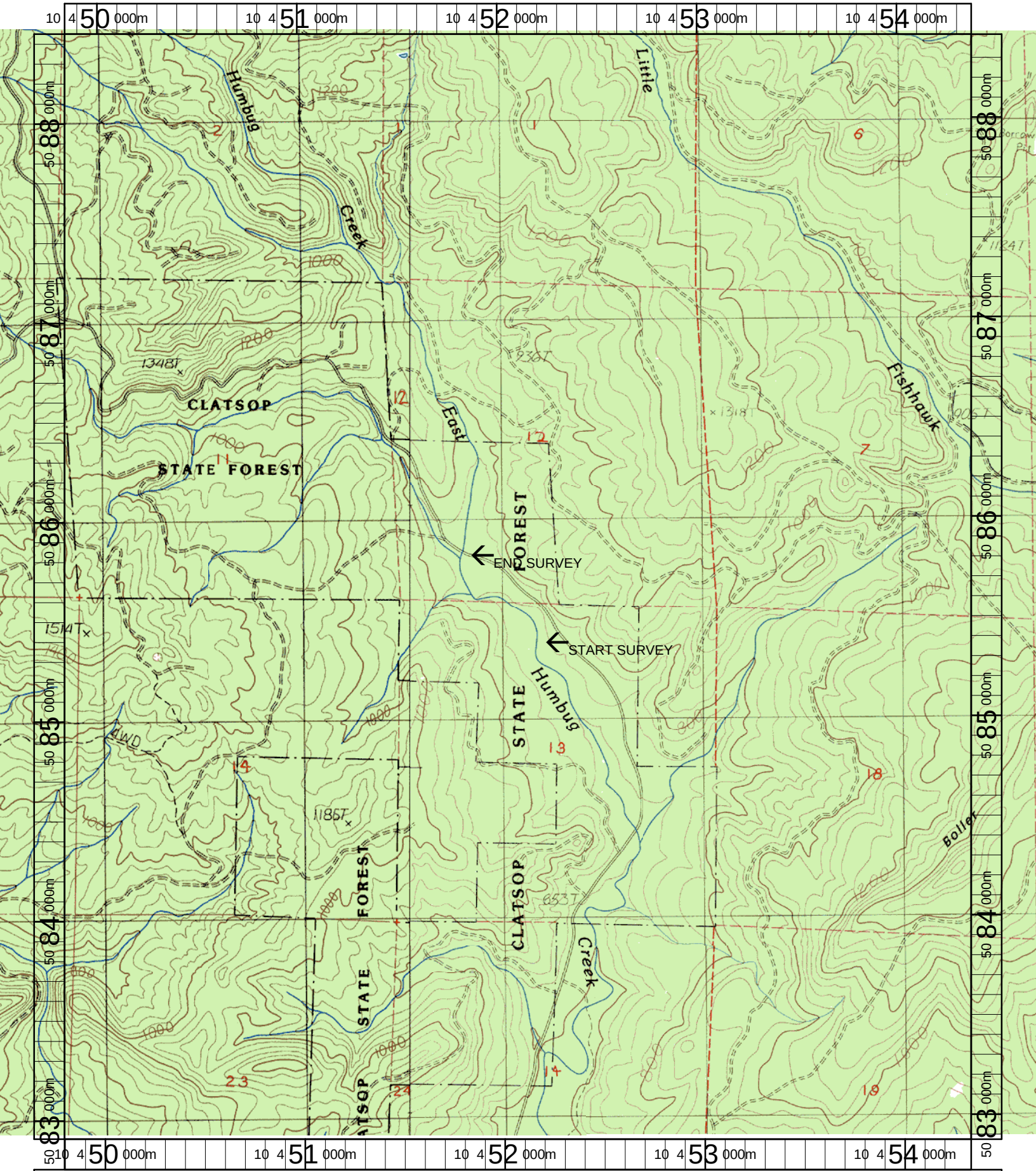
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	20.9		10T 0452176 5005414	TEMP=12 DEG C AT 9:15
3	LP	00	100.3			COHO FRY
7	LP	00	182.8	/SS		
8	RI	00	198			ALWAYS ON STEP
10	SC	00	242.4		HT=.5M	
12	RI	01	300.92	DJ		
13	BW	10	300.92	DJ		
14	AL	10	300.92			COHO FRY
15	LP	01	329.72	DJ		RIP.T. PHOTO 11, 12
17	PD	02	329.72	BV		DEN IN BANK, ABANDONED
19	RI	00	344.82			BDRK=HARDPAN
23	LP	00	499.42			6" TROUT
24	SC	00	507.92		H=.4	
26	RI	00	584.92	WL		RIP T 2
27	LP	00	613.62	LA/		LG. UPROOTED TREES
28	SC	00	618.62	LA/	HT=.3	
29	LP	00	641.52			6IN TROUT
35	RI	00	800.02			RIP T 3
36	LP	01	815.32	TJ/		
37	RI	11	815.32			T=12 DEG C AT 12:30
40	SC	00	886.12		HT=.8M	

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **1-NC** **SITE ID:** **225** **EAST HUMBUG CREEK PRE-TX (N-2**

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
41	LP	01	906.82	TJ/	TJ	SPAWNING SURVEY SIGNS
42	RB	11	906.82			TEMP=12 DEG C AT 13:00
43	SC	00	914.92		H=.6	LG STUMP ON RIGHT
45	SS	00	932.72	PA	H=.5	
46	CC	00	944.72	PA, CC		3.7M GALV OVAL
47	RB	00	956.92	/CS		



Name: VINEMAPLE
Date: 1/22/2004
Scale: 1 inch equals 2000 feet

Location: 10 452080 E 5085663 N
Caption: EAST HUMBUG CREEK RESTORATION SITE - NEHALEM BASIN