

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

STREAM: COAL CREEK  
 GCG: 1-NC  
 SITE ID: 444  
 BASIN: NEHALEM  
 TREATMENT DATE: 2011  
 SURVEY DATE: 4/25/2012  
 SURVEY CREW: LaNoah Babcock, Eric Bailey, Lora Tennant  
 USGS MAPS: VERNONIA  
 ECOREGION: Willapa Hills  
 REPORT PREPARED BY: Lora Tennant

REACH: 1 LOCATION: T04N-R04W-S21NE

**SURVEY DESCRIPTION:**

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Young forest trees (3-15 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 30-50cm dbh

Primary channel length (meters) and area (m<sup>2</sup>): 4,461 : 21,965

Secondary channel length (meters) and area (m<sup>2</sup>) 329 : 616

VWI average: 7.8 VWI Range: 4.5 - 12.7 Average Gradient: 0.5%

Pieces LWD per 100m: 21.0 Wood Volume (m<sup>3</sup>) per 100m: 31.4

Percent pools: 79% Complex pools (LWD pieces>=3): 85 Pools >=1m deep:42

<u>Percent substrate (avg):</u>	<u>Silt / organics</u>	<u>Sand</u>	<u>Gravel</u>	<u>Cobble</u>	<u>Boulder</u>	<u>Bedrock</u>
All units	18	38	36	6	0	2
Pool units	22	42	29	5	1	2
Fast water units	14	35	40	8	0	3

**SURVEY COMMENTS:**

This is a post-restoration habitat survey. Numerous log habitat structures were noted throughout the survey site. Additionally, the crew noted many downed trees from 2012 winter conditions, new riparian tree plantings, and a lot of lateral scour pools associated with channel meandering.

Survey Date: 4/25/2012

Report Date: 11/13/2012

T04N-R04W-S21NE

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	7.8	VWI Range:	4.5 - 12.7

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m<sup>2</sup>)</u>	<u>Dry Units</u>
Primary	4,461	21,965	0
Secondary	329	616	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 10	<u>First Terrace</u> n = 10
Width: 4.4	Width: 8.1	12.0 ( 7.4 - 29.5 )	14.8 ( 9.1 - 33.7 )
Depth: 0.53	Height: 0.7	1.4 ( 1.1 - 1.9 )	1.7 ( 1.25 - 2.1 )

W:D ratio: 11.6

Stream Flow Type: MF

Average Unit Gradient: 0.5%

Water temperature (°C): 10.5 - 10.5

Entrenchment (ACW:FPW ratio): 1.5

Habitat Units/100m (total channel length): 6.2

Habitat Units/100m (primary channel length): 6.7

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	YT	ST
Riparian Vegetation:	D30	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	55%	Reach avg: 78%
Undercut Banks:	16%	Range: 22 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	937	21.0
Volume (m <sup>3</sup> ):	1,402	31.4
Key pieces (>=12m x 0.60m):	53	1.2

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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	
CASCADE/BEDROCK	1	1	0.3	0.05	0	0	0	10	0	0	0	0	90
CASCADE/BOULDERS	7	27	0.4	0.06	12	0	19	58	16	1	0	0	6
POOL-BACKWATER	13	79	2.6	0.42	228	1	41	49	9	1	0	0	0
POOL-DAMMED	4	143	4.8	0.93	715	0	22	54	20	0	0	0	4
POOL-ISOLATED	7	30	2.3	0.29	71	0	33	52	14	1	0	0	0
POOL-LATERAL SCOUR	142	3,358	5.0	0.86	16,908	62	22	41	29	5	1	2	2
POOL-PLUNGE	4	41	7.0	0.84	268	0	18	43	31	8	1	0	0
RAPID/BOULDERS	10	72	1.9	0.14	164	0	10	38	40	13	1	0	0
RIFFLE	44	716	4.0	0.22	2,825	18	13	30	45	9	0	2	2
RIFFLE W/ POCKETS	5	114	3.6	0.30	407	0	21	38	36	2	0	2	2
STEP/BEDROCK	1	2	6.0	0.10	9	0	0	5	5	20	0	70	0
STEP/COBBLE	50	203	4.8	0.15	948	37	6	22	63	9	0	0	0
STEP/LOG	10	4	5.3	0.11	24	0	11	49	38	2	0	0	0
<b>Total:</b>	<b>298</b>	<b>4,790</b>	<b>4.4</b>	<b>0.53</b>	<b>22,581</b>	<b>118</b>	<b>Avg: 18</b>	<b>38</b>	<b>36</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>2</b>

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	24	252	2.9	0.47	1,015	4.50%	1	0.1
Scour Pools	146	3,399	5.0	0.86	17,177	76.07%	62	0.4
Glides	0	0			0	0.00%	0	0.0
Riffles	49	830	4.0	0.23	3,232	14.31%	18	0.6
Rapids	10	72	1.9	0.14	164	0.72%	0	0.0
Cascades	8	28	0.4	0.06	12	0.05%	0	0.0
Step/Falls	61	209	4.9	0.14	981	4.34%	37	3.8
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

COAL CREEK  
GCG: 1-NC SITE ID: 444

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T04N-R04W-S21NE

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:	170	35.5	38.1
Pools >=1m deep:	42	8.8	9.4
Complex pools (LWD pieces>=3):	85	17.7	19.1
Pool frequency (channel widths/pool):	3.5		
Residual pool depth (avg):	0.70		

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

**GCG: 1-NC**

**COAL CREEK  
SITE ID: 444**

**Survey Date 4/25/2012**

**RIPARIAN ZONE**

**Report Date: 11/13/2012**

**VEGETATION SUMMARY**

**REACH 1**

Summary of Riparian Zone (0-30m) 8 transects

Total hardwoods/1000 ft	579
Total conifers/1000 ft	229
Total conifers >20" dbh/1000 ft	15
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	0.0	0.1	0.0	0.1	1.1	0.3	1.1	0.5
15-30cm	0.4	1.0	0.4	1.6	1.4	1.5	2.1	4.1
30-50cm	0.0	2.1	0.1	1.3	0.1	1.0	0.3	4.4
50-90cm	0.0	0.4	0.1	0.0	0.1	0.1	0.3	0.5
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m <sup>2</sup>	0.4	3.6	0.6	3.0	2.8	2.9	1.3	3.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	51		48		60	
Shrub cover	48		40		39	
Grass/forb cover	53		58		55	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	38		50		44	
High terrace	63		44		44	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		6		6	
Stream channel	0		0		0	
Roadbed/Railroad	0		0		6	
Riprap	0		0		0	
Surface slope (%)	23		30		16	

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

8 transects

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

Total hardwoods/1000 ft	579
Total conifers/1000 ft	229
Total conifers >20" dbh/1000 ft	15
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	1.1	0.5
15-30cm	2.1	4.1
30-50cm	0.3	4.4
50-90cm	0.3	0.5
>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		
30	LF	1	HT	0	20	40	60	Conifer							
								Hardwood							
30	LF	2	HT	0	20	50	50	Conifer							
								Hardwood							
30	LF	3	HT	0	40	60	40	Conifer							
								Hardwood		1	2	1			
30	RT	1	HS	55	40	60	40	Conifer							
								Hardwood							
30	RT	2	HS	35	40	20	80	Conifer							
								Hardwood							
30	RT	3	HS	33	50	10	90	Conifer							
								Hardwood							
55	LF	1	HT	0	50	90	10	Conifer							
								Hardwood			1				
55	LF	2	HT	0	50	85	15	Conifer							
								Hardwood							
55	LF	3	HT	0	70	85	15	Conifer							
								Hardwood							
55	RT	1	HS	50	40	60	40	Conifer							
								Hardwood		2					
55	RT	2	HS	61	60	30	70	Conifer					1		
								Hardwood			1				
55	RT	3	HS	55	60	10	90	Conifer							
								Hardwood	2	1					
93	LF	1	HS	45	60	75	25	Conifer							
								Hardwood					1		
93	LF	2	HS	80	80	70	30	Conifer							
								Hardwood		4	5				
93	LF	3	RB	0	20	5	20	Conifer	1						75% GRAVEL TRANSITIONA L SL
								Hardwood							
93	RT	1	HT	0	60	10	90	Conifer							
								Hardwood							
93	RT	2	HT	0	50	60	40	Conifer							
								Hardwood							
93	RT	3	HT	0	70	60	40	Conifer							
								Hardwood		5					
115	LF	1	HT	0	70	70	30	Conifer							
								Hardwood			1	1			
115	LF	2	HT	0	40	50	50	Conifer							
								Hardwood		1					

**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		
115	LF	3	HT	0	80	20	80	Conifer	1	3					
								Hardwood							
115	RT	1	HS	55	30	40	60	Conifer							
								Hardwood			1				
115	RT	2	HS	98	30	40	60	Conifer							
								Hardwood							
115	RT	3	HS	25	75	60	40	Conifer					1		
								Hardwood							
143	LF	1	HT	0	65	50	50	Conifer							
								Hardwood			2	1			
143	LF	2	HT	15	50	40	60	Conifer							TRANSITIONA L SLOPE
								Hardwood							
143	LF	3	HT	0	70	40	60	Conifer	2	3					
								Hardwood							
143	RT	1	HS	100	40	20	80	Conifer							
								Hardwood							
143	RT	2	HS	100	50	25	75	Conifer							
								Hardwood		1	1				
143	RT	3	HS	100	70	30	70	Conifer		1					
								Hardwood							
182	LF	1	HT	0	30	40	60	Conifer							
								Hardwood		1	3				
182	LF	2	HT	0	5	20	80	Conifer							
								Hardwood							
182	LF	3	HT	0	30	50	50	Conifer	3						
								Hardwood							
182	RT	1	HS	55	50	5	95	Conifer							
								Hardwood		1	3				
182	RT	2	HS	80	40	20	80	Conifer					1		
								Hardwood		2					
182	RT	3	HS	15	70	20	80	Conifer							
								Hardwood		1	2				
216	LF	1	HT	0	60	60	40	Conifer			3				
								Hardwood		1	2				
216	LF	2	HT	0	80	10	90	Conifer			3				
								Hardwood	1	1	1				
216	LF	3	HT	0	80	70	30	Conifer	2	4	1				
								Hardwood		1					
216	RT	1	HT	0	70	40	60	Conifer							
								Hardwood			2				



**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		
216	RT	2	HS	8	40	60	40	Conifer							
								Hardwood							
216	RT	3	HS	12	40	70	30	Conifer							
								Hardwood		1	3				
259	LF	1	HT	0	70	40	60	Conifer							
								Hardwood	1	3					
259	LF	2	WL	0	70	0	70	Conifer							30% WETLAND
								Hardwood		4					
259	LF	3	WL	0	70	20	70	Conifer							20% WETLAND
								Hardwood		1	1				MUCK
259	RT	1	HT	0	60	60	40	Conifer							
								Hardwood			2				
259	RT	2	HS	10	70	60	40	Conifer							
								Hardwood			2				
259	RT	3	HS	10	70	20	80	Conifer							OLD RB
								Hardwood		1					BECOMING OVERGROWN

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RI	00	16.4	WL	START 10T 485854/5073907, T=10.5C, DEER TRACKS
1	2	PP	00	30.6	BV	CHEW STICKS
1	3	SL	00	31.1	DJ	H=0.6
1	4	DP	00	50.5	/LA BV	CHEW STICKS
1	6	LP	00	96	BC	CROSSING UNDER PBBL CRK ML ROAD
1	9	SC	00	123.9	AM WL	10T 435968/5073894, CA/CT D30/S YT/TH, PHOTO OF AMPH, METRIC, DEER TR
1	10	LP	00	169.9	BV DJ LA/	SANDY MEANDERING LP, OLD BEAVER DAM
1	11	RI	00	182.9		POCKET = 0.5M
1	17	LP	00	266.9	LA/	
1	18	SC	00	271.9	WL BV	DEER TRACKS, OLD BEAVER STICKS

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	21	LP	00	335.9	WL	TRAIL
1	22	LP	01	370.9	TJ/	BEDROCK IS HARDPAN
1	23	CB	11	370.9		10T 486145/5073923, ACW=1.2, T=10.5
1	24	SC	00	380.4		BEDROCK IS HARDPAN
1	25	LP	00	404.8	HS	OLD HAB LOGS
1	26	LP	00	425.8	/SS	PHOTO OF LARGE ROOT
1	27	LP	01	468.8	BV /SS	CHEW STICKS
1	28	IP	10	468.8	LA/	
1	29	LP	00	515.8		BEDROCK IS HARDPAN
1	30	LP	01	527.8	/TJ WL	RIP & METRIC, 10T486214/5073883, CA/CT D50/S TH/YT, RIPARIAN #1, WILDLIFE TRAIL

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REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	31	SC	11	527.8		10T 486217/5073880, ACW=0.6, T=8.5, H=0.9
1	32	RI	00	539.8	WL	DEER TRACKS
1	34	LP	00	572.8	/LA /SS BV	STILL MEANDERING CHEW STICKS
1	35	SL	00	573.8	BV	H=0.3
1	36	DP	00	623.8	/SS BV	CHEW STICKS BEDROCK=HARDPAN
1	37	LP	00	680.8	SS/ BV	CHEW STICKS BEDROCK=HARDPAN
1	38	SC	00	685.2		BEDROCK=HARDPAN
1	39	LP	00	715.2	LA/ /SS	GIANT MAPLE BLOWN DOWN, LG HARDWOOD CAME DOWN
1	40	SL	00	715.5	BV	H=0.2, CHEWSTICKS
1	41	LP	00	742.5	/LA	

COMMENT SUMMARY

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REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	42	LP	00	772.5	LA/SS	
1	43	LP	00	810.5	LA/	
1	44	RI	00	827.5		SM POCKET 0.7M DEEP
1	45	LP	00	862.5	SS/	
1	46	SL	00	862.75		H=0.1
1	49	BW	10	920.75		VERY SMALL
1	51	LP	00	942.75	BV	
1	52	SL	00	943.05	BV	H=0.25, START OF DAM
1	53	DP	01	1004.05	TJ/	BEDROCK=HARDPAN
1	54	CB	11	1004.05	WL	10T 486533/5073907, ACW=1.2, T=12.5, TRAIL

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REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	55	LP	01	1025.05	AM	10T 486540/5073906, CA/CT D50/S TH/YT, RIP #2, PACIFIC TREE FROG
1	56	CB	11	1025.05		10T 486540/5073906, ACW=0.9, T=10C
1	57	RI	00	1040.05		SM ISLAND W/ SAND & GRAVEL
1	58	LP	01	1075.05	TJ/	T=11.5C, CC=0.5 x 0.5, STEP=0.7
1	59	RB	11	1075.05		10T 486585/5073940, ACW=1.1, T=11.5C
1	62	IP	10	1110.05	DJ	
1	63	LP	01	1130.05	BV	CHEW STICKS, FRY
1	66	RI	00	1161.05	/SS	ACTUAL BEDROCK
1	67	LP	00	1198.05	/SS WL	HUMMING BIRDS NEST, DEER TRACK
1	68	LP	01	1215.05	DJ BV /SS	MUSSEL, CHEW STICKS

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REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	71	LP	01	1262.55	BV TJ//SS	VERY SINUOUS SLIDE/CHEW STICKS, 20 COHO PARR
1	72	CB	11	1262.55		10T 486707/5073835, ACW=0.9, T=8C
1	74	RP	00	1302.55		POCKET = 0.7M, LOGS MAKE POCKET
1	75	LP	01	1331.55	/TJ	
1	76	CB	11	1331.55	WL	10T 486743/5073789, ACW=0.6, T=9C, T=7C, ACW=0.6, DEER TRACKS
1	77	LP	01	1376.55	HS DJ	RIPARIAN PLANTINGS
1	80	RI	00	1388.55		BDRCK=HARDPAN
1	81	LP	01	1405.55	/TJ	
1	82	CR	11	1405.55		10T 486803/507350, ACW=0.9, T=9.5C, H=0.6, ACW=0.9, T=9.5 TRIB UNIT
1	83	RI	00	1429.55		TWO 5M POCKETS NOT PROTECTED

**COMMENT SUMMARY**

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	84	LP	01	1489.55	DJ /TJ	ERODING LEFT BANK
1	85	RB	11	1489.55		10T 486860/5073726, ACW=0.7, T=12C, TRIB UNIT GOES SUBSURFACE
1	86	RI	00	1507.55		RECENT RIPARIAN PLANTING
1	87	LP	00	1528.55	DJ /LI /SS	HS, BEDROCK = HARDPAN
1	88	SC	00	1533.35	WL /SS	COHO PARR, DEER TRACKS
1	89	LP	00	1551.35	/SS	PHOTO OF RIPARIAN TREES
1	90	LP	01	1572.35	DJ TJ/	
1	91	BW	10	1572.35		COHO PARR IN POOL
1	92	RB	11	1572.35		10T 486950/5073761, ACW=2.5, T=12C, ALL SAND TRIB UNIT, ACW=2.5
1	93	RI	00	1578.95		10T 486950/5073761, CA/CT D30/G TH/ST, RIPARIAN



OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	94	LP	00	1607.95	LI/ SS/	RIP #3, PARR
1	95	LP	00	1630.95	/LA	OLD BEAVER DAM BLOWN
1	96	RI	00	1648.95	/LI	
1	98	LP	00	1677.95	DJ LA/ SS/	BV CHEW STICKS
1	99	LP	00	1704.95	BV	MUSSEL, CHEW STICK
1	100	LP	00	1741.95	BV	SLIDE AND CHEW STICKS
1	101	SC	00	1749.95	BV WL	CHEW STICKS, DEER TRCKS, AND TRL
1	102	LP	00	1768.95	/SS	
1	104	LP	00	1819.95		BDRCK=HARDPAN
1	106	LP	00	1890.95	SS/, LA/	BDRCK=HARDPAN

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	107	RI	00	1918.95	/SS BV	FRESH CHEWS
1	108	LP	00	1956.95	BV	
1	110	LP	00	1984.95	LI/ WL SS/	WILDLIFE TRAIL, SS HAS NEW CULV
1	113	SL	00	2007.35		H=0.15
1	114	LP	00	2040.35	DJ	
1	115	SC	00	2043.55	WL	10T487197/5073684, CA/CT D30/S ST/YT, TRAIL, RIP #4 COHO PARR
1	116	LP	00	2062.75		4/26/2012 START, T=11C 9:18 AM
1	120	LP	01	2141.25	DJ HS	
1	121	BW	10	2141.25		H=0.25
1	122	SL	00	2141.75	BV	H=0.25

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	125	LP	00	2219.35		COHO PARR
1	127	LP	00	2236.65	LA/ HS DJ	RIPARIAN PLANTINGS & SALMON SPAWNING SURVEY SIGN
1	128	LP	01	2283.85	TJ/ HS	
1	129	RB	11	2283.85		10T 487331/5073678, ACW=1.4, T=9C
1	130	RB	00	2293.85	HS	
1	131	LP	00	2342.15		RIPARIAN PLANTINGS AND NEW CULVERT, COHO PARR, LG HARDWOOD FELL
1	132	LP	00	2388.65		COHO PARR, BDRCK=HARDPAN
1	133	SC	00	2391.95	BV	CHEW STICKS
1	137	SC	00	2435.05	BV	
1	138	LP	00	2463.65	HS	

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	139	RI	00	2472.75		RIPARIAN WORK 4 TREES
1	140	LP	00	2497.35	HS	RIPARIAN PLANTINGS
1	141	RI	01	2521.05	/LA TJ/	
1	142	CB	11	2521.05		10T 487497/5073585, ACW=2.0, T=9C
1	143	LP	00	2535.65	/SS /LA	10T 487497/5073585, CA/CT D30/S YT/ST, RIP #5
1	144	SC	00	2541.65	WL	DEER TRACKS
1	145	LP	00	2589.85	WL BV	DEER TRACKS/TRAILS
1	146	SC	00	2595.35	BV	/UNDERCUT=0.5m IN 0.6m DEPTH
1	147	LP	00	2617.25	BV	CHEW STICKS FRESH
1	149	LP	00	2666.15	HS	HS=OLD

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	150	SC	00	2668.15	BV	
1	151	LP	00	2683.65	BV	CHEWSTICKS
1	152	LP	00	2694.55		LG HARDWOOD FELL IN/
1	153	RI	01	2718.25	/TJ	
1	154	CB	11	2718.25		10T 487605/5073547, ACW=0.7, T=9C
1	155	LP	01	2743.75	BV	COHO PARR
1	156	BW	10	2743.75		COHO PARR
1	158	LP	00	2775.35	BV /LI	CHEWSTICKS
1	160	SL	00	2783.85		H=0.25
1	161	LP	00	2798.45	HS	GOES INTO 162

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	163	LP	01	2844.75	DJ BV HS	RIPARIAN PLANTING AND LARGE MAPLES FALLEN, /SS, LARGE HARDWOOD FELL IN/
1	164	BW	10	2844.75	AM	RSN, COHO PARR, RIP TREE PLANTING
1	165	RI	01	2859.75	HS	
1	166	LP	01	2872.45	DJ	
1	167	RP	02	2872.45		POCKET = 0.7M
1	168	LP	00	2893.45	/LA BV	
1	169	RI	00	2907.15	/SS	BDRCK = HARDPAN
1	170	LP	00	2919.95		JUVENILE COHO, /LG HARDWOOD FELL IN
1	172	LP	00	2931.35	HS BV DJ	/LG HARDWOOD FELL IN NEW
1	174	LP	00	2955.85	HS DJ	RIPARIAN PLANTING, /LG HARDWOOD FELL IN NEW

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	175	RI	00	2964.05	BV	OLD CHEWSTICKS
1	176	LP	00	2983.15		COHO PARR
1	178	LP	00	3003.95	SS/	W/ SAND POOL COHO
1	179	LP	00	3020.35	BV	CHEWSTICKS
1	180	RI	00	3037.65	BV	
1	181	LP	00	3061.05	BV WL	CHEWSTICKS, TRAIL
1	182	RI	00	3096.65	BV /SS	10T 487798/5073427, CA/CT D30/G YT/ST, RIP #6, SMALL POCKET = 0.5M
1	183	LP	00	3109.45		COHO
1	184	SC	00	3112.45	BV	CHEWSTICKS
1	185	LP	00	3134.35	WL	ELK TRACKS

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	186	SC	01	3139.15	BV /TJ	OLD CHEWSTICKS
1	187	RI	11	3139.15		10T 487852/5073388, ACW=2.5, T=10C
1	188	LP	01	3161.05	/TJ	
1	189	RI	11	3161.05		10T 487852/5073388, ACW=1.1, T=8.5C
1	190	RI	00	3179.25	BV	
1	191	LP	00	3209.25		COHO PARR
1	193	SC	01	3222.45		/DEEP UNDERCUT =0.5M
1	194	LP	01	3238.85	HS DJ	
1	195	LP	02	3238.85		DEEP UNDERCUT/ =0.7M
1	196	RI	02	3238.85		COHO PARR, RI COMES UP TO 01 LP



OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	197	LP	00	3247.05	WL	SOME KIND OF DEN/ PHOTO TAKEN
1	198	RI	00	3259.85	SS/	
1	200	LP	00	3318.95	BV	CHEWSTICKS
1	201	RI	01	3333.55	/DJ	MAKES 02 POOL
1	207	SC	00	3403.35	BV WL	CHEWSTICKS TRAIL
1	208	LP	00	3415.15	WL	TRAILS
1	209	SC	00	3419.65		/HAS POCKET BUT NOT TRUE "02"
1	210	LP	00	3432.45		DEEP UNDERCUT = 0.7M
1	211	LP	00	3452.55	BV	CHEWSTICKS
1	213	LP	00	3465.25		COHO PARR

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	216	RI	00	3505.65	BV WL	RIP #7, TRAIL, REPLANT RIPARIAN/
1	217	LP	00	3539.35	HS	10T 488043/5073308, CT/MT D30/S ST/YT, RIPARIAN TREE PLANTED/
1	218	SC	00	3542.25		RIPARIAN PLANTING
1	221	LP	00	3595.15	HS	
1	222	SC	00	3599.15		SALMON FLY
1	223	LP	00	3623.75	BV	SLIDE AND STICKS, /LG HRDWD FELL
1	224	SC	00	3627.75	/SS	
1	225	LP	00	3642.35	HS DJ	
1	226	RI	00	3682.55		HAS POCKET = 0.7M DEPTH
1	227	SC	00	3686.25	WL	TRAIL

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	228	LP	00	3707.25	LI/ RR/ BV	COHO, BV=SLIDE/
1	229	RI	00	3714.55	RR/	RIPRAP FROM ROAD
1	231	SC	00	3743.95	HS	
1	232	LP	00	3761.25	HS DJ /WL	RIPARIAN PLANTINGS, BEAVER SLIDE
1	240	LP	01	3834.75	TJ/	
1	241	RB	11	3834.75		10T 488253/5073239, ACW=1.4, T=9.5C
1	242	LP	00	3848.85		HAB LOG
1	244	LP	01	3883.55	WL	TRAIL
1	247	SC	00	3888.05		RAIN AND HAIL
1	248	LP	00	3912.85	HS	

OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 4/25/2012

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	251	BW	10	3937.05		COHO, FLOW GOES SUBSURFACE
1	252	RP	01	3967.05	HS DJ	RIPARIAN PLANTINGS AND HAB STRUCTUTES EXTENDING THROUGH UNIT 256, POCKET = 0.7
1	254	LP	00	3984.35	HS	PLANTED TREES IN RIP
1	255	RI	00	4018.55	/SS /LA	/SS /LI
1	256	LP	00	4034.05	BV	CHEWSTICKS
1	257	RI	00	4052.25	HS	
1	258	LP	00	4069.55		/LG HARDWOOD FELL IN
1	259	RI	00	4096.95		10T 488391/5073122, CT/CT D30/S YT/ST, RIP #8
1	260	LP	00	4105.15	HS DJ	
1	261	LP	00	4116.95		#1999 SNORKEL SURVEY, END POINT SIGN

**COMMENT SUMMARY**

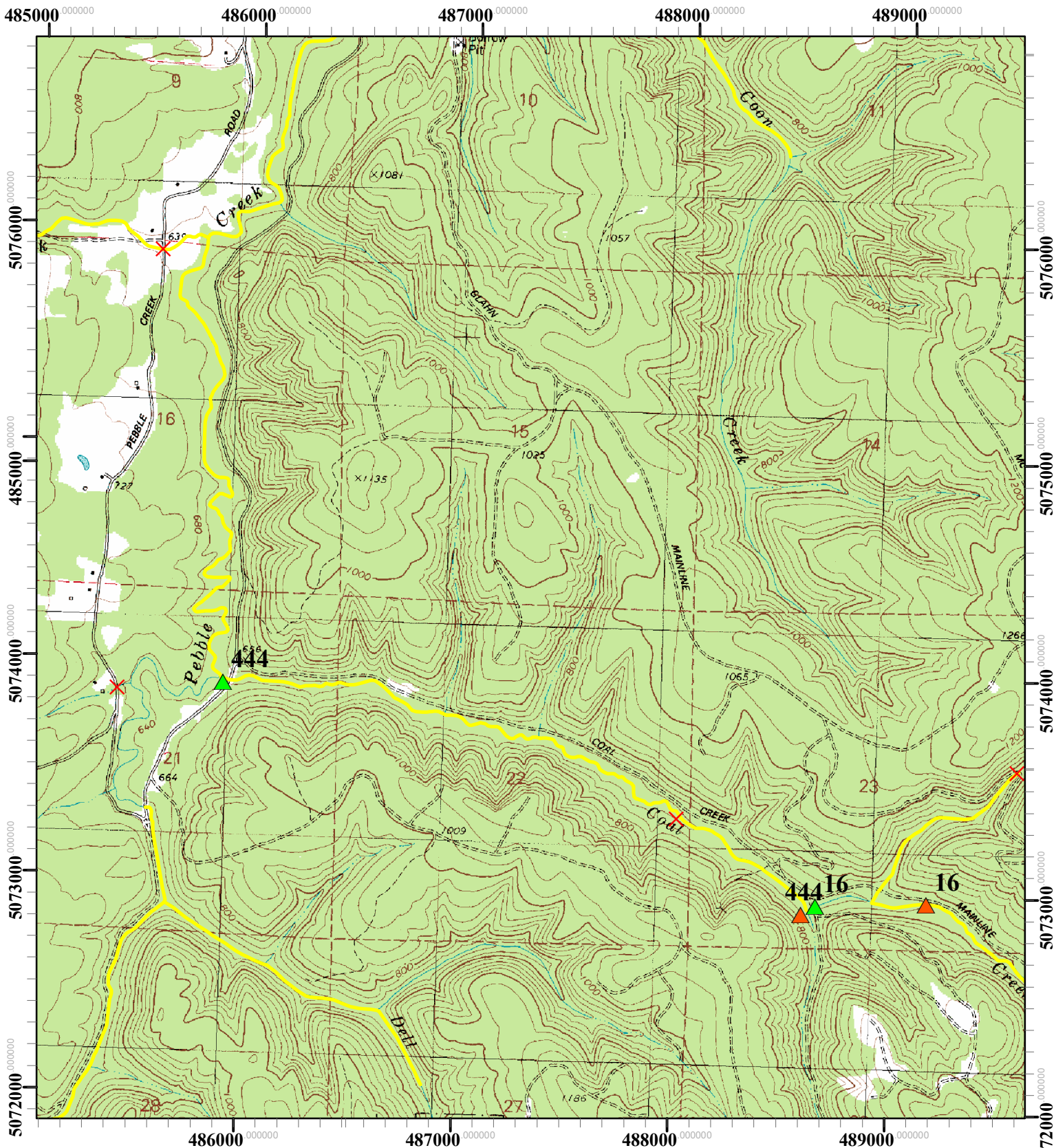
MONITORING AREA: 1-NC      SITE ID: 444      STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	263	LP	00	4133.35	HS	
1	265	LP	00	4158.85	WL	TRAILS
1	267	LP	01	4172.45	HS	
1	268	SC	01	4177.65	BV	CHEW STICKS
1	272	RP	02	4209.55		POCKET = 0.7M, 0.85M
1	274	LP	00	4237.95	BV	
1	277	LP	00	4273.45	HS	
1	279	LP	00	4297.15	BV	
1	281	LP	00	4318.15	HS DJ	COHO
1	284	SL	00	4332.45		H=0.25

COMMENT SUMMARY

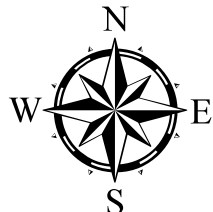
MONITORING AREA: 1-NC SITE ID: 444 STREAM: COAL CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	285	PP	01	4345.25	DJ	
1	286	SL	01	4345.65	BV	H=0.35, CHEWSTICKS
1	288	BW	10	4368.45	BV	
1	289	LP	02	4368.45		LG HARDWOOD FELL/ NEW
1	297	RI	01	4460.75	/TJ	END, 10T 488594/5072912, US/WF D30/SYT/ST
1	298	LP	11	4460.75		T=9C, ACW=4.1, COHO



Restoration Site ID: NC-444  
 Stream: Coal Cr  
 T04N-R04W-S21NE  
 USGS Map: Vernonia  
 Basin: Nehalem

- ▲ Restoration Start
- ▲ Restoration End
- × Potential Barrier
- Spawning Survey Segments



## NC-444 Coal Creek (Nehalem Basin) - 2012 Winter Restoration Survey



Tributary junction and active erosion.



Looking upstream at a debris jam.



Nurse log.



Newly placed log habitat structure and riparian plantings.



Newly placed log habitat structure.



Plunge pool and step-over-log habitat units.