

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

STREAM: SF LOUSIGNONT CREEK
 GCG: 1-NC
 SITE ID: 465
 BASIN: NEHALEM
 TREATMENT DATE: 2012
 SURVEY DATE: 3/20/2011
 SURVEY CREW: Kim Beedle and Eric Bailey
 USGS MAPS: TIMBER
 ECOREGION: Willapa Hills
 REPORT PREPARED BY: Lora Tennant

REACH: 1 LOCATION: T03N-R05W-S20SE

SURVEY DESCRIPTION:

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Second growth timber (15-30 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 50-90cm dbh

Primary channel length (meters) and area (m²): 1,889 : 12,084

Secondary channel length (meters) and area (m²): 561 : 1,095

VWI average: 3.4 VWI Range: 1 - 6 Average Gradient: 2.8%

Pieces LWD per 100m: 18.7 Wood Volume (m³) per 100m: 28.6

Percent pools: 20% Complex pools (LWD pieces>=3): 4 Pools >=1m deep: 3

<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	4	14	40	32	11	0
Pool units	6	16	42	30	7	0
Fast water units	2	11	39	33	13	1

SURVEY COMMENTS:

This is a pre-restoration habitat survey. There is a lot of wood throughout the survey – windfall alders and old log habitat structures. Many side-channels were documented in the survey.

Survey Date: 3/20/2011

Report Date: 11/13/2012

T03N-R05W-S20SE

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	3.4	VWI Range:	1 - 6

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 (m²)</u>	<u>Dry Units</u>
Primary	1,889	12,084	0
Secondary	561	1,095	3

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 8	<u>First Terrace</u> n = 8
Width: 5.0	Width: 8.0	17.6 (10.4 - 35)	20.1 (11.5 - 39)
Depth: 0.34	Height: 0.4	0.8 (0.8 - 0.8)	1.1 (0.85 - 1.4)

W:D ratio: 20.1

Stream Flow Type: MF

Average Unit Gradient: 2.8%

Water temperature (°C): 5.0 - 5.0

Entrenchment (ACW:FPW ratio): 2.5

Habitat Units/100m (total channel length): 6.1

Habitat Units/100m (primary channel length): 7.9

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D50	S

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	2%	Reach avg: 77%
Undercut Banks:	2%	Range: 25 - 94

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	354	18.7
Volume (m ³):	541	28.6
Key pieces (>=12m x 0.60m):	20	1.1

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T03N-R05W-S20SE

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
CASCADE/BOULDERS	4	16	1.6	0.19	29	0	8	13	45	13	5	18
POOL-ALCOVE	1	12	2.2	0.20	26	0	25	50	25	0	0	0
POOL-BACKWATER	5	26	2.5	0.45	68	0	17	47	33	3	0	0
POOL-DAMMED	1	10	5.0	0.90	50	0	10	40	40	10	0	0
POOL-LATERAL SCOUR	36	408	5.3	0.52	2,341	0	6	17	42	28	7	0
POOL-PLUNGE	5	21	8.3	0.72	184	0	0	6	40	44	10	0
PUDDLED UNIT	3	54	1.0	0.08	52	0	6	28	42	20	3	0
RAPID/BEDROCK	1	10	6.0	0.40	60	0	0	10	40	40	10	0
RAPID/BOULDERS	58	1,331	4.7	0.27	6,792	0	2	10	37	35	16	0
RIFFLE	23	525	5.8	0.23	3,455	0	2	15	44	32	7	0
STEP/BEAVER DAM	1	1	6.0	0.20	6	0	10	40	30	20	0	0
STEP/COBBLE	4	29	2.5	0.08	53	0	0	3	41	41	15	0
STEP/LOG	8	7	7.4	0.29	63	0	0	8	36	45	12	0
Total:	150	2,450	5.0	0.34	13,179	0	Avg: 4	14	40	32	11	0

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m ²)	Percent	Number	(# / 100m ²)
Dammed & BW Pools	7	48	2.8	0.48	145	1.10%	0	0.0
Scour Pools	41	429	5.7	0.55	2,525	19.16%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	23	525	5.8	0.23	3,455	26.21%	0	0.0
Rapids	59	1,341	4.8	0.28	6,852	51.99%	0	0.0
Cascades	4	16	1.6	0.19	29	0.22%	0	0.0
Step/Falls	13	37	5.8	0.22	122	0.92%	0	0.0
Dry	3	54	1.0	0.08	52	0.39%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

SF LOUSIGNONT CREEK
GCG: 1-NC SITE ID: 465

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T03N-R05W-S20SE

REACH 1

POOL SUMMARY

	<u>Total</u>	Total of all Channel Lengths <u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	48	19.6	25.4
Pools >=1m deep:	3	1.2	1.6
Complex pools (LWD pieces>=3):	4	1.6	2.1
Pool frequency (channel widths/pool):	6.4		
Residual pool depth (avg):	0.39		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

SF LOUISIGNONT CREEK
GCG: 1-NC SITE ID: 465

Survey Date 3/9/2012
Report Date: 11/13/2012

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000 ft	284
Total conifers/1000 ft	325
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	10

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	0.3	0.2	0.5	0.5	0.5	0.7	1.3
15-30cm	1.0	0.2	0.7	0.0	0.2	0.0	1.8	0.2
30-50cm	0.7	1.0	0.2	0.8	1.0	0.7	1.8	2.5
50-90cm	0.2	0.2	0.2	0.2	0.5	0.2	0.8	0.5
>90cm	0.0	0.2	0.2	0.0	0.0	0.0	0.2	0.2
Total/100m ²	1.8	1.8	1.3	1.5	2.2	1.3	1.8	1.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	54		78		85	
Shrub cover	52		53		59	
Grass/forb cover	16		27		23	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		50		58	
High terrace	25		33		33	
Low terrace	17		8		0	
Floodplain	25		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	17		8		8	
Riprap	0		0		0	
Surface slope (%)	4		18		18	

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 ft	284
Total conifers/1000 ft	325
Total conifers >20" dbh/1000 ft	61
Total conifers >35" dbh/1000 ft	10

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	0.7	1.3
15-30cm	1.8	0.2
30-50cm	1.8	2.5
50-90cm	0.8	0.5
>90cm	0.2	0.2

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						
17	LF	1	FP	0	70	20	20	Conifer							60% DUFF				
								Hardwood											
17	LF	2	HS	9	100	60	10	Conifer						1	30% DUFF				
								Hardwood											
17	LF	3	HS	9	100	90	5	Conifer					1		5% DUFF				
								Hardwood											
17	RT	1	HT	0	90	80	10	Conifer							10% DUFF				
								Hardwood											
17	RT	2	HT	0	90	90	5	Conifer							5% DUFF				
								Hardwood					1						
17	RT	3	HT	0	90	90	10	Conifer											
								Hardwood					1						
31	LF	1	FP	0	15	25	25	Conifer							25% DUFF. 25% SAND				
								Hardwood											
31	LF	2	HS	50	80	10	85	Conifer							5% DUFF				
								Hardwood				3							
31	LF	3	HS	50	90	80	10	Conifer							10% DUFF				
								Hardwood					1						
31	RT	1	LT	0	30	90	10	Conifer											
								Hardwood						1					
31	RT	2	HT	0	80	90	10	Conifer											
								Hardwood											
31	RT	3	HT	0	80	80	10	Conifer							10% DUFF				
								Hardwood											
49	LF	1	HT	0	65	50	5	Conifer							45% DUFF				
								Hardwood	1										
49	LF	2	HT	0	40	60	10	Conifer							30% DUFF				
								Hardwood	3										
49	LF	3	HT	0	50	80	10	Conifer							10% DUFF				
								Hardwood					2						
49	RT	1	FP	0	100	80	5	Conifer							15% DUFF				
								Hardwood						2	1				
49	RT	2	RB	0	90	30	20	Conifer						1	50% ROADBED				
								Hardwood											
49	RT	3	HS	15	60	70	10	Conifer						1	20% DUFF				
								Hardwood											
79	LF	1	HS	13	20	80	10	Conifer			2	1			10% DUFF				
								Hardwood				1							
79	LF	2	HS	13	90	10	50	Conifer			3				40% BARE				
								Hardwood											

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	
79	LF	3	HS	21	100	10	50	Conifer		1	2			40%BARE
								Hardwood						
79	RT	1	LT	0	95	30	30	Conifer						40%DUFF
								Hardwood	1					
79	RT	2	LT	0	65	70	10	Conifer				1		20%DUFF
								Hardwood						
79	RT	3	RB	0	60	10	20	Conifer						70%ROADBED
								Hardwood	2					
102	LF	1	HT	0	50	80	10	Conifer						10%DUFF
								Hardwood			1			
102	LF	2	HT	0	60	85	10	Conifer						5%DUFF
								Hardwood			2			
102	LF	3	HT	0	95	90	10	Conifer						
								Hardwood	1		1			
102	RT	1	RB	0	30	15	10	Conifer						75%ROADBED
								Hardwood		1	1			
102	RT	2	HS	45	80	50	30	Conifer						20%ROADBED
								Hardwood						
102	RT	3	HS	45	100	20	75	Conifer				1		5%DUFF
								Hardwood						
139	LF	1	HS	40	50	70	30	Conifer		2	2			
								Hardwood						
139	LF	2	HS	38	100	60	40	Conifer		1				
								Hardwood						
139	LF	3	HS	30	100	50	50	Conifer				2		
								Hardwood						
139	RT	1	RB	0	30	0	30	Conifer		2	1	1		70%ROADBED
								Hardwood			1			
139	RT	2	HS	55	60	20	40	Conifer	1					10%ROADBED ,30%DUFF
								Hardwood						
139	RT	3	HS	50	90	40	20	Conifer	3		1			40%DUFF
								Hardwood						

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 3/20/2011

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 465 STREAM: SF LOUSIGNONT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	RI	00	29		CT/CT D30/S ST/LT, T=70
1	2	RB	00	67	/LS	ACTIVE-SLUFFING FROM ROAD
1	3	RB	00	93		DOWNED ALDERS
1	7	RB	01	161	LS/	ACTIVE
1	8	BW	10	161		LANDSLIDE
1	10	SL	00	188	DJ	HT=.6
1	11	RI	01	205	HS	WOOD
1	16	RB	00	262	HS,DJ	WOOD,HS EXTENDS TO U 15
1	17	LP	00	291	BV	474093/5063858, CA/CT D50/S ST/LT, CHEWED STICKS
1	18	RI	00	310	BV	CHEWED STICKS

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SURVEY DATE: 3/20/2011

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 465 STREAM: SF LOUSIGNONT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	19	RB	00	351	DJ	
1	22	SL	01	400.5	HS,DJ	HT=.5 WOOD
1	24	LP	00	405.9	BV	CHEWED STICKS
1	25	RI	00	439.9	BV	CHEWED STICKS
1	26	LP	01	451.9	TJ/	TJ/
1	27	CB	11	451.9		474061/5063889, ACW=1.7
1	28	RB	00	482.9		T=5
1	29	PP	00	491.9		T=7
1	30	RB	00	518.9	/SS	WATER BUBBLING OUT OF GROUND
1	31	RB	01	583.9	HS	473954/5063966, CA/MT D30/S ST/LT

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 465 STREAM: SF LOUSIGNONT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	32	RB	02	583.9		NEW CHANNEL DUE TO BEAVER DAM
1	33	SD	02	583.9	BV, BD	HT=.8 DAM
1	34	DP	02	583.9	BV	
1	35	RI	01	638.9	BV,HS	DAM,STICKS,HS LOG PUSHED UP ON
1	36	RI	03	638.9	HS	LOGS
1	37	LP	03	638.9	HS	LOGS
1	38	RB	03	638.9		03&04 NEWLY FORMED
1	40	RI	00	680.9	BV	CHEWED STICKS
1	42	RI	01	741.9	HS	LOGS
1	43	PD	02	741.9		ACW=1.4

OREGON DEPT OF FISH AND WILDLIFE
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OREGON PLAN MONITORING SITE
SURVEY DATE: 3/20/2011

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 465 STREAM: SF LOUSIGNONT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	46	LP	01	794.9	TJ/	
1	47	RB	11	794.9		473799/5064103, ACW=6.5, T=5
1	48	RB	00	814.9	HS,SS	LOGS, EXTENDS TO U 49
1	50	BW	10	837.9		473769/5064133, CT/MT D30/S ST/LT
1	51	LP	00	848.9	BV	CHEWED STICKS
1	53	LP	00	868.9	BV	CHEWED STICKS
1	55	SL	01	904.6	DJ,BV	HT=.4 CHEWED STICKS,OLD DAM
1	56	RB	01	921.6	BV	CHEWED STICKS
1	65	RI	01	964.6		T=5, 3-20-12 START
1	78	PD	02	1053.9		SECTIONS GOING UNDERGROUND

OREGON DEPT OF FISH AND WILDLIFE
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OREGON PLAN MONITORING SITE
SURVEY DATE: 3/20/2011

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 465 STREAM: SF LOUSIGNONT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	79	RI	01	1066.9		473684/5064280, CT/MT D50/S ST/LT
1	81	RB	01	1082.9	HS	WOOD, HS IN 02-U82,83,84
1	85	RB	01	1125.9	/TJ	RECENTLY REMOVED CULVERT
1	86	CB	11	1125.9		473674/5064344, T=6, ACW=2
1	88	LP	00	1151.9	DJ	
1	92	RB	00	1206.9	/SS	
1	93	LP	00	1219.9	DJ	
1	94	RB	01	1238.9	TJ/	
1	95	RB	11	1238.9		473595/5064427, T=6, ACW=3
1	102	RB	00	1305.3		473606/5064517, CT/CT D50/S ST/LT

OREGON DEPT OF FISH AND WILDLIFE
HABITAT INVENTORY

OREGON PLAN MONITORING SITE
SURVEY DATE: 3/20/2011

COMMENT SUMMARY

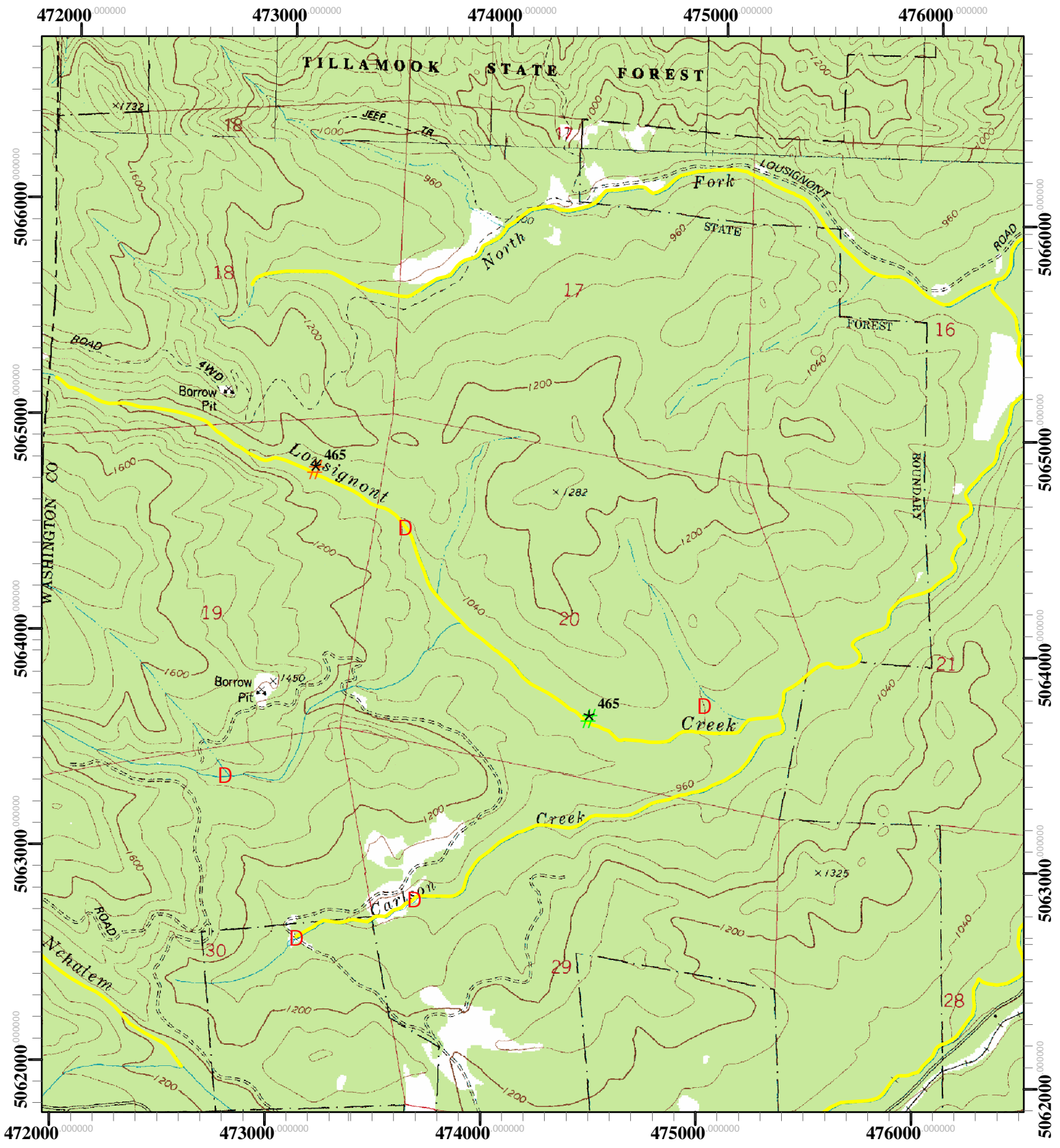
MONITORING AREA: 1-NC SITE ID: 465 STREAM: SF LOUSIGNONT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	103	LP	01	1320.3		STEELHEAD ON REDD
1	104	RB	01	1327.5		START OF BIG SIDE CHANNEL
1	113	RB	02	1372.5	/SS,CS	RUN OFF FROM ROAD
1	119	LP	01	1420.8	HS	
1	121	RB	01	1450.8	HS	BRAIDED CHANNEL
1	123	RB	00	1489.8	HS	WOOD
1	134	RB	00	1588.8	SS/	BRAIDED
1	135	LP	01	1604.8	TJ/	
1	136	CB	11	1604.8		473369/5064601, ACW=2.5, T=6
1	139	RB	00	1669.8		473339/5064695, CH/MV M30/G ST/LT

COMMENT SUMMARY

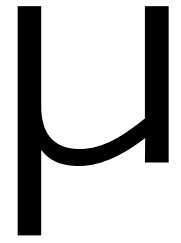
MONITORING AREA: 1-NC SITE ID: 465 STREAM: SF LOUSIGNONT CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	140	PP	00	1672.9	/LS	
1	142	RB	00	1724.9	DJ	
1	145	RB	00	1788.9	HS	LOG
1	146	RB	00	1804.9	HS,DJ	WOOD
1	147	RB	00	1835.9	HS	WOOD
1	149	LP	00	1862.9	HS	WOOD
1	150	RB	00	1888.9	TJ/	473274/5064723, CH/MV D30/S ST/LT, END@LEFT TRIB



Site Number: 465
 Stream: SF Lousignont Creek
 T03N R05W S20
 County: Washington
 Quad: Timber

- ✱ Restoration Start
- ✱ Restoration End
- D Potential Barrier
- Spawning Survey Segments



NC-465 South Fork Lousignont Creek (Nehalem Basin) - 2012 Winter Restoration Survey



Start of survey looking upstream.



Log habitat structures spanning the channel.



Log habitat structures in the riparian zone.



End of survey.