

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

STREAM: Nelson Creek (MC-210)
BASIN: Siuslaw River
SURVEY TYPE: Pre-Tx
DATE: June 23, 2003
SURVEY CREW: Carmen Vandyke, Brock Jonasson
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 38.6 km²
USGS MAPS: Walton
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Nelson Creek habitat survey extended 502 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.6 (range: 3.5-10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (52%) and riffles (29%) dominated stream habitat. Gravel (33%), cobble (27%) and sand (25%) dominated stream substrate. Wood volume was high at 29.1 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

REACH 1

T17S-R07W-S06SW

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 5.6		VWI Range: 3.5 - 10	

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	502	1,896	0
Secondary	80	357	2

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.8	Width	7.6	10.2	11.2
Depth	0.35	Height	0.4	0.9	1.3
W:D ratio		17.5	Entrenchment		1.4

Stream Flow Type:	MF	Water temp (C):	11.5 - 11.5
Avg. Unit Gradient:	1.1%	Habitat Units/100m:	6.9

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	0%	Reach avg: 91%
Undercut Banks:	15%	Range: 61 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	80	15.9
Volume (m ³):	146	29.1
Key pieces (>=10m x 0.60m):	8	1.6

OREGON DEPARTMENT OF FISH AND WILDLIFE

NELSON CREEK PRE-TX (MC-210)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

6/23/03

REACH 1		T17S-R07W-S06SW					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	
DRY CHANNEL	1	10	1.5	0.00	15	0	0	40	50	10	0	0	
GLIDE	2	35	2.8	0.18	95	0	10	18	48	25	0	0	
POOL-ISOLATED	1	8	1.0	0.25	8	0	76	19	5	0	0	0	
POOL-LATERAL SCOUR	14	228	4.0	0.64	912	4	11	30	29	22	2	6	
POOL-PLUNGE	3	25	4.5	0.63	119	5	10	25	25	21	5	15	
POOL-STRAIGHT SCOUR	1	21	6.5	0.60	138	0	20	40	30	10	0	0	
PUDDLED UNIT	1	30	9.5	0.10	283	0	0	10	20	70	0	0	
RAPID/BOULDERS	1	10	0.5	0.05	5	0	0	20	40	30	10	0	
RIFFLE	13	211	3.0	0.13	655	5	6	21	36	31	4	2	
STEP/COBBLE	1	4	4.5	0.10	19	0	0	10	50	40	0	0	
STEP/LOG	2	1	6.6	0.08	5	2	5	21	36	35	3	0	
Total:	40	582	3.8	0.35	2,253	16	Avg	10	25	33	27	3	4

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		80
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	1	8	1.0	0.25	8	0.36%	0	0.0	
Scour Pools	18	274	4.2	0.64	1,168	51.85%	9	0.8	
Glides	2	35	2.8	0.18	95	4.21%	0	0.0	
Riffles	13	211	3.0	0.13	655	29.05%	5	0.8	
Rapids	1	10	0.5	0.05	5	0.22%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	3	5	5.9	0.08	24	1.07%	2	8.3	
Dry	2	40	5.5	0.05	298	13.23%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	19	32.7
Pools >=1m deep:	1	1.7
Complex pools (LWD pieces>=3):	9	15.5
Pool frequency (channel widths/pool):	4.0	
Residual pool depth (avg):	0.57	

STREAM SUMMARY

NELSON CREEK PRE-TX (MC-210)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
40	582	3.8	0.35	2,253	10	25	33	27	3	4	16

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	8	0.36%
Scour Pools	1,168	51.85%
Glides	95	4.21%
Riffles	655	29.05%
Rapids	5	0.22%
Cascades	0	0.00%
Step/Falls	24	1.07%
Dry	298	13.23%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	1422
Total conifers/1000 ft	81
Total conifers >20" dbh/1000 ft	61
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	3.0	0.0	1.7	0.0	1.7	0.0	6.3
15-30cm	0.0	1.0	0.0	2.7	0.0	2.3	0.0	6.0
30-50cm	0.0	2.0	0.0	1.3	0.3	0.7	0.3	4.0
50-90cm	0.0	4.0	0.0	2.0	1.0	1.0	1.0	7.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	10.0	0.0	7.7	1.3	5.7	0.4	7.8

Canopy closure and ground cover

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Canopy closure	86	88	83
Shrub cover	89	78	73
Grass/forb cover	9	23	20

Predominant landform in each zone

	Zone 1 0-10 meters (%)	Zone 2 10 - 20 meters (%)	Zone 3 20 - 30 meters (%)
Hillslope	50	50	67
High terrace	50	50	33
Low terrace	0	0	0
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 (%)	25	21	22

Summary of Riparian Zone (0-30m) for all reaches 3 transects

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

Total hardwoods/1000	1422
Total conifers/1000 ft	81
Total conifers >20" dbh/1000 ft	61
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	0.0	6.3
15-30cm	0.0	6.0
30-50cm	0.3	4.0
50-90cm	1.0	7.0
>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			
10	RT	3	HS	15	75	75	25	Conifer							
								Hardwood		1					
10	LF	1	HT	1	90	90	10	Conifer							
								Hardwood	2	1	1	5			
10	LF	2	HT	0	95	75	25	Conifer							
								Hardwood		4					
10	LF	3	HT	0	80	75	25	Conifer							
								Hardwood		2		1			
10	RT	1	HS	21	90	90	10	Conifer							
								Hardwood	4		3	1			
10	RT	2	HS	30	90	50	50	Conifer							
								Hardwood			2	1			
17	RT	3	HS	25	85	90	10	Conifer							
								Hardwood	3	1	2	1			
17	LF	2	HT	0	95	90	10	Conifer							
								Hardwood		2		1			
17	LF	3	HT	0	90	90	10	Conifer							
								Hardwood		2		1			
17	RT	1	HS	80	100	70	20	Conifer							
								Hardwood	3						
17	RT	2	HS	40	90	85	15	Conifer							
								Hardwood	2	1	2	3			
17	LF	1	HT	0	80	90	10	Conifer							
								Hardwood		1	2	5			
33	RT	3	HS	30	90	60	40	Conifer			1	3			
								Hardwood	2						
33	LF	2	HT	1	90	75	25	Conifer							
								Hardwood		1		1			
33	LF	3	HS	60	80	50	10	Conifer							40% RB
								Hardwood		1					
33	RT	1	HS	45	60	100	0	Conifer							
								Hardwood							
33	RT	2	HS	55	70	90	10	Conifer							
								Hardwood	3						
33	LF	1	HT	0	95	95	5	Conifer							
								Hardwood		1		1			

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: **2-MC** SITE ID: **210** **NELSON CREEK PRE-TX (MC-210)**

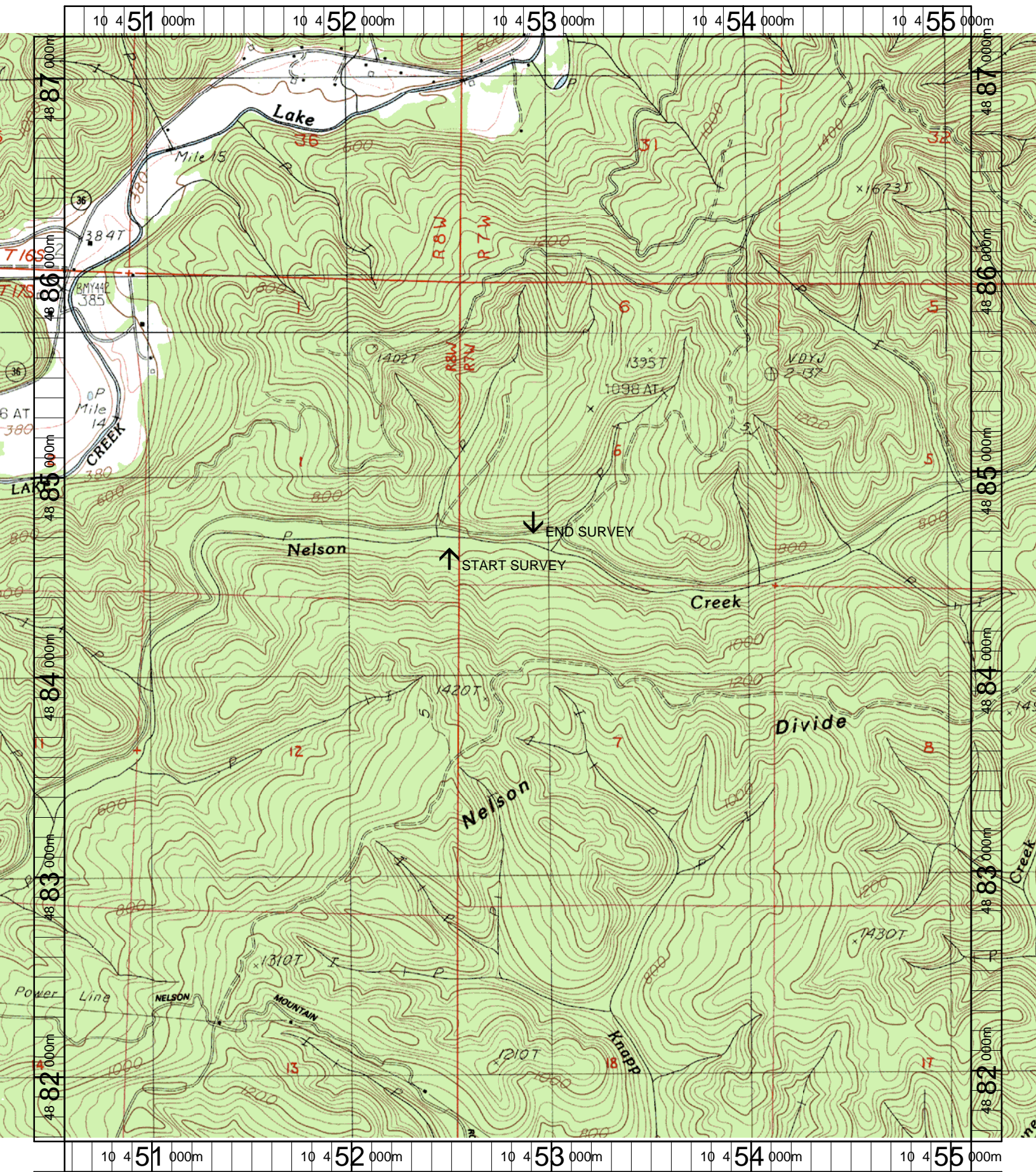
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	LP	00	26.3		VW=60 START	START, SCULPIN, COHO
2	RI	01	43	DJ		
3	IP	10	43	WL		RSN, COHO
5	GL	00	70.2			.4 POCKET ON SIDE
6	SC	00	74.4		H=.2	
7	GL	00	91.8			COHO
9	LP	01	129.5	/TJ		
10	DC	11	129.5			TRIB UNIT
11	LP	00	146.7	/SS	VW=70	
15	LP	00	210			.5M RI @ TAIL
16	RI	00	225	DJ		
17	RI	00	252.1		VW=30	
18	LP	01	259.6	/TJ WL		BEAR PRINTS, SCAT
19	RI	11	259.6			TRIB UNIT
20	RB	11	259.6			TRIB UNIT
22	LP	00	288.6	WL		BEAR PRINTS
28	PP	01	352.5	CS/		RIP RAP
29	SL	01	352.9		H=.2	COHO
30	RI	01	380.7			.4 POCKET
31	LP	02	380.7	DJ		
33	RI	00	393.7		VW=28.5	

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 2-MC SITE ID: 210 NELSON CREEK PRE-TX (MC-210)

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
35	LP	00	420.7			2M TAILOUT
38	LP	00	490.9		VW=26.5	2M TAILOUT
39	PP	00	501.3	DJ		TAILOUT
40	SL	00	501.7		H=.5	



Name: WALTON
 Date: 12/17/2003
 Scale: 1 inch equals 2000 feet

Location: 10 452847 E 4884427 N
 Caption: NELSON CREEK RESTORATION SITE - SIUSLAW BASIN