

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

STREAM: Nelson Creek (MC-210)
BASIN: Siuslaw River
SURVEY TYPE: Post-Tx
DATE: June 28, 2005
SURVEY CREW: Jennifer Jacobs, Andy Livesay
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 491 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 12.9 (range: 6.5-30.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (57%) and riffles (27%) dominated stream habitat. Gravel (66%) dominated stream substrate. Wood volume was high at 34.2 m³/100m.

COMMENTS:

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

The crew noted several habitat structures during the survey.

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	12.9	VWI Range:	6.5 - 30

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 Channel	491	1,960	0
Secondary Channel	58	78	3
Off-Channel Units	19	32	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 3
Width: 3.5	Width: 5.7	7.1 (5.1 - 8.9)	9.1 (8.2 - 9.9)
Depth: 0.32	Height: 0.7	1.4 (0.86 - 1.9)	1.7 (1.36 - 2)

W:D ratio: 8.1
 Stream Flow Type: MF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 11.5 - 11.5

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 9.9
 Habitat Units/100m (primary channel length): 11.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	D30	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	19%	Reach avg: 80%
Undercut Banks:	14%	Range: 56 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	119	24.2
Volume (m ³):	168	34.2
Key pieces (>=12m x 0.60m):	4	0.8

OREGON DEPT OF FISH AND WILDLIFE

NELSON CREEK POST-TX (2-MC, 210)

HABITAT INVENTORY

Report Date: 4/26/2006

Survey Date:

6/28/2005

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 UNIT	1	4	2.5	0.00	9	0	45	45	5	5	0	0
GLIDE	2	24	3.2	0.16	85	0	0	3	95	3	0	0
POOL-BACKWATER	3	9	2.6	0.42	25	0	15	27	56	2	0	0
POOL-LATERAL SCOUR	20	229	4.2	0.55	1,018	22	12	24	53	5	1	5
POOL-PLUNGE	1	10	2.8	0.60	28	0	0	20	70	10	0	0
POOL-STRAIGHT SCOUR	4	32	4.1	0.49	143	2	6	20	60	13	1	0
PUDDLED UNIT	2	30	1.3	0.13	33	0	40	13	43	5	0	0
RIFFLE	13	183	2.7	0.11	558	15	2	8	79	11	1	0
STEP/COBBLE	9	46	4.1	0.08	170	0	0	4	88	7	1	0
STEP/LOG	1	0	2.6	0.10	1	0	0	30	70	0	0	0
Total:	56	568	3.5	0.32	2,070	39	Avg: 8	16	66	7	1	2

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	3	9	2.6	0.42	25	1.20%	0	0.0	
Scour Pools	25	271	4.2	0.54	1,189	57.43%	24	2.0	
Glides	2	24	3.2	0.16	85	4.11%	0	0.0	
Riffles	13	183	2.7	0.11	558	26.98%	15	2.7	
Rapids	0	0			0	0.00%	0	0.0	
Cascades	0	0			0	0.00%	0	0.0	
Step/Falls	10	46	4.0	0.08	171	8.25%	0	0.0	
Dry	3	34	1.7	0.08	42	2.03%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	
		<u># / Km</u>	Primary Channel Length <u># / Km</u>
All Pools:	28	49.3	57.0
Pools >=1m deep:	1	1.8	2.0
Complex pools (LWD pieces>=3):	9	15.9	18.3
Pool frequency (channel widths/pool):	3.6		
Residual pool depth (avg):	0.43		

OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY

NELSON CREEK POST-TX
GCG: 2-MC SITE ID: 210

Survey Date 6/28/2005
Report Date: 4/26/2006

RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	996
Total conifers/1000 ft	0
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 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	2.3	0.0	2.0	0.0	1.7	0.0	6.0
15-30cm	0.0	0.3	0.0	0.3	0.0	0.7	0.0	1.3
30-50cm	0.0	1.7	0.0	3.7	0.0	1.7	0.0	7.0
50-90cm	0.0	1.3	0.0	0.3	0.0	0.3	0.0	2.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	5.7	0.0	6.3	0.0	4.3	0.0	5.4

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	80		75		83	
Shrub cover	64		81		68	
Grass/forb cover	22		13		28	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	50		50		50	
High terrace	17		17		17	
Low terrace	33		33		33	
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 (%)	28		26		27	

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	996
Total conifers/1000 ft	0
Total conifers >20" dbh/1000 ft	0
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	6.0
15-30cm	0.0	1.3
30-50cm	0.0	7.0
50-90cm	0.0	2.0
>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		
25	RT	1	HS	55	85	80	20	Conifer							
								Hardwood			2				
25	LF	1	LT	5	50	100	0	Conifer							2D 0452612 / 4884641
								Hardwood							
25	LF	3	LT	8	95	100	0	Conifer							
								Hardwood		2	2				
25	RT	2	HS	55	85	90	10	Conifer							
								Hardwood			2				
25	RT	3	HS	55	80	100	0	Conifer							
								Hardwood			1	1			
25	LF	2	LT	8	60	100	0	Conifer							
								Hardwood	2		2				
31	LF	3	LT	2	95	80	5	Conifer							
								Hardwood	1		2				
31	RT	3	HS	15	95	10	80	Conifer							
								Hardwood	2						
31	RT	2	HS	35	95	80	5	Conifer							
								Hardwood			5	1			
31	RT	1	HS	60	90	40	40	Conifer							
								Hardwood	1						
31	LF	2	LT	2	95	85	10	Conifer							
								Hardwood	2						
31	LF	1	LT	1	95	75	10	Conifer							3D 0452647 / 4884643
								Hardwood	2			4			
49	LF	2	HT	5	35	90	10	Conifer							
								Hardwood	2		1				
49	LF	3	HT	10	45	90	10	Conifer							
								Hardwood	1						
49	RT	3	HS	70	85	30	70	Conifer							
								Hardwood	1						
49	RT	1	HS	45	70	40	50	Conifer							
								Hardwood	1		2				
49	RT	2	HS	50	80	40	40	Conifer							
								Hardwood		1	1				
49	LF	1	HT	0	90	50	10	Conifer							
								Hardwood	3	1	1				

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **2-MC** SITE ID: **210** **NELSON CREEK POST-TX**

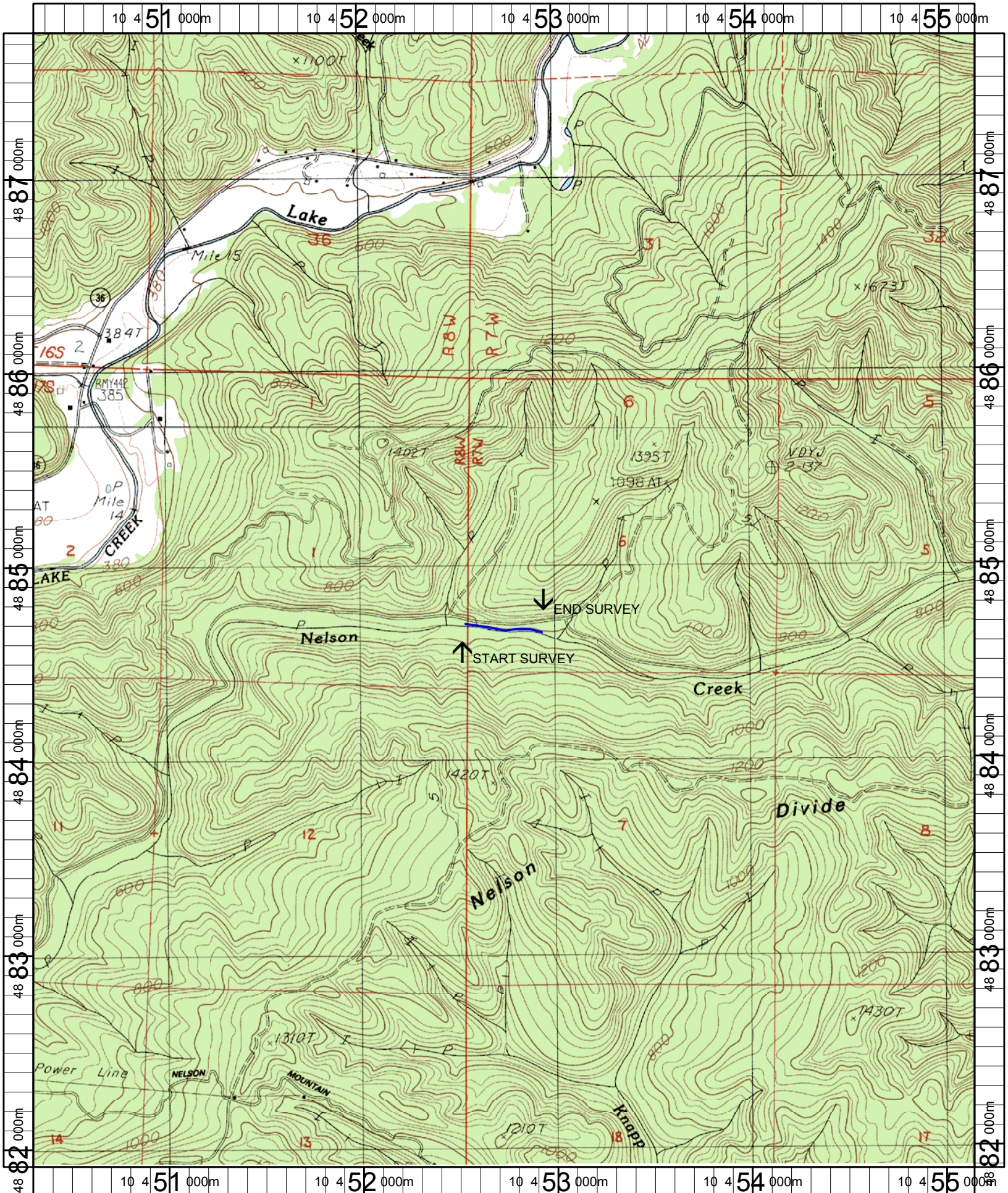
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	LP	00	14.8		TEMP 12C	COHO FRY
2	PP	01	24.9		COHO FRY	DEAD SALAMANDER
4	SL	00	25.25		H=0.15M	
12	DU	02	59.55		EST.	
13	PD	02	59.55		EST.	
15	LP	00	64.55			HARDPAN
18	SC	00	83.25		H 0.3M	
22	BW	10	139.35		COHO PRESENT	
25	LP	00	173.85		RIPARIAN 1	
28	LP	00	219.45			COHO FRY
31	RI	00	254.55	SS	3D 0452687 / 4888683	
33	RI	01	267.55	TJ		TEMP 11.5 ABOVE TRIB
34	RI	11	267.55		TEMP 10C	TEMP 10C
35	LP	00	284.25	HS		LARGE PLACED TIMBER
36	RI	00	292.25		HS	
39	LP	01	322.55	HS		
41	LP	01	339.15			RIP RAP
43	LP	01	370.35	HS		LARGE PLACED TIMBER
44	LP	02	370.35			COHO FRY
46	PD	02	370.35		BRAIDED CHANNEL	BRAIDED CHANNEL
47	SC	00	378.35			BRAIDED, SMALL POCKETS

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: 2-MC SITE ID: 210 NELSON CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
49	SC	00	394.25		RIPARIAN 3	
50	SP	00	405.25		3D 0452818 / 4884648	
52	LP	00	441.25	HS		
54	LP	00	468.05	BV	DRY CHANNEL ON LEFT	LARGE OG LOG
55	RI	00	480.85		END AT SIGN ON RT LOG	
56	LP	00	490.85	HS		3D 0452893 / 4884685



Name: WALTON
 Date: 6/13/2005
 Scale: 1 inch equals 2000 feet

Location: 10 452740 E 4884817 N
 Caption: NELSON CREEK RESTORATION SITE - SIUSLAW BASIN