

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

STREAM: Nell Creek (SC-397)  
BASIN: Chetco River  
SURVEY TYPE: Pre-Tx  
DATE: March 4, 2008  
SURVEY CREW: Kyle Brachter, Bobby Gomez  
REPORT PREPARED BY: Sharon Tippery  
BASIN AREA: 1.0 km<sup>2</sup>  
USGS MAPS: Mt Emily  
ECOREGION: Southern Oregon Coastal Mountains

**GENERAL DESCRIPTION:**

The Nell Creek habitat survey extended 553 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 5 (range: 1-20). Land use for the reach was second growth timber (15-30cm dbh) and rural residential area. The average unit gradient was 8.1 percent. Rapids (47%) and cascades (29%) dominated stream habitat. Gravel (48%), cobble (25%) and boulders (23%) dominated stream substrate. Wood volume was 7.0m<sup>3</sup>/100m.

**COMMENTS:**

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

Juvenile salmonids were observed during the survey.

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

**NELL CREEK  
GCG: 5-SC SITE ID: 397**

**Survey Date: 3/4/2008**

**Report Date: 5/8/2008**

**T40S-R13W-S24SE**

**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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	5.0	VWI Range:	1 - 20

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	553	1,599	0
Secondary	0	0	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 1
Width: 3.3	Width: 5.0	6.9 ( 5.3 - 8.3 )	12.8 ( 12.8 - 12.8 )
Depth: 0.30	Height: 0.4	0.9 ( 0.8 - 1 )	2.4 ( 2.4 - 2.4 )

W:D ratio: 11.4

Stream Flow Type: MF

Average Unit Gradient: 8.1%

Water temperature (°C): 9.0 - 9.0

Entrenchment (ACW:FPW ratio): 1.4

Habitat Units/100m (total channel length): 7.6

Habitat Units/100m (primary channel length): 7.6

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	RR
Riparian Vegetation:	D15	S

Bank Condition and Shade

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

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	43	7.8
Volume (m <sup>3</sup> ):	39	7.0
Key pieces (>=12m x 0.60m):	0	0.0

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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/BOULDERS	7	150	3.5	0.16	470	0	0	0	38	30	32	0
CULVERT CROSSING	1	14	1.5	0.15	21	0	0	0	0	0	0	100
POOL-LATERAL SCOUR	6	34	2.9	0.39	93	0	0	2	62	21	15	0
POOL-PLUNGE	11	45	3.8	0.55	178	0	0	3	51	20	26	0
POOL-STRAIGHT SCOUR	1	5	4.2	0.45	21	0	0	0	70	10	20	0
RAPID/BOULDERS	12	294	2.6	0.15	761	0	0	1	56	26	17	0
STEP/BOULDERS	1	4	6.0	0.20	24	0	0	0	25	30	45	0
STEP/COBBLE	2	6	4.7	0.10	30	0	0	0	28	43	30	0
STEP/STRUCTURE	1	2	0.7	0.15	1	0	0	0	10	30	60	0
<b>Total:</b>	42	553	3.3	0.30	1,599	0	<b>Avg:</b> 0	1	48	25	23	2

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	0	0			0	0.00%	0	0.0
Scour Pools	18	84	3.5	0.49	292	18.24%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	0	0			0	0.00%	0	0.0
Rapids	12	294	2.6	0.15	761	47.60%	0	0.0
Cascades	7	150	3.5	0.16	470	29.40%	0	0.0
Step/Falls	4	12	4.0	0.14	55	3.44%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	1	14	1.5	0.15	21	1.31%	0	0.0

POOL SUMMARY

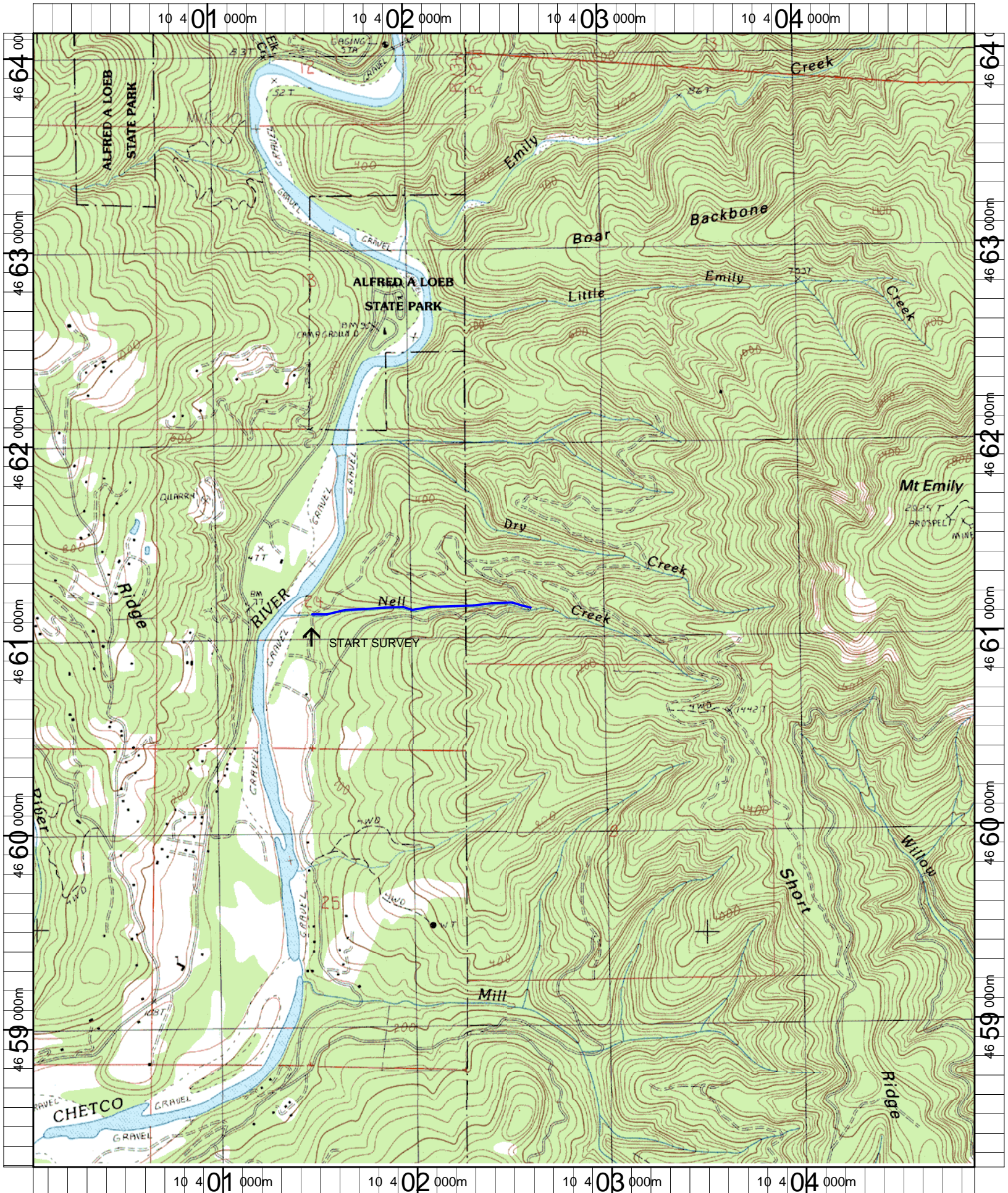
	Total of all Channel Lengths		Primary Channel Length
	<u>Total</u>	<u># / Km</u>	<u># / Km</u>
All Pools:	18	32.6	32.6
Pools >=1m deep:	1	1.8	1.8
Complex pools (LWD pieces>=3):	1	1.8	1.8
Pool frequency (channel widths/pool):	6.2		
Residual pool depth (avg):	0.38		

**COMMENT SUMMARY**

MONITORING AREA: 5-SC      SITE ID: 397      STREAM: NELL CREEK

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	PP	00	7.3	CS/CS	FORM:CA,CT. VEG:D15,S. USE:RR,ST.
3	CC	00	22.8	CC	STEEL CULVERT. DIAMETER=1.5M
11	RB	00	185.2		FORM:CH,MV. VEG:D15,S. USE:ST,RR.
15	CB	00	216.2	SS/	
17	CB	00	271.2	SS/	FORM:CH,MV. VEG:D15,S. USE:ST,RR.
32	CB	00	395.9		POCKET=1.5M X 3M X 0.5M FORM:CH,MV. VEG:D15,S. USE:ST,RR.
40	RB	00	496.7		JUVENILE SALMONID
42	RB	00	552.5		FORM:CH,MV. VEG:D15,S. USE:ST,RR.





Name: MT EMILY  
 Date: 1/3/2008  
 Scale: 1 inch equals 2000 feet

Location: 10 0402484 E 4661179 N NAD 27  
 Caption: NELL CREEK RESTORATION SITE - CHETCO RIVER