

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

STREAM: UPPER LITTLE NESTUCCA RIVER
 GCG: 1-NC
 SITE ID: 411
 BASIN: NESTUCCA
 TREATMENT DATE: 2009
 SURVEY DATE: 2/4/2009
 SURVEY CREW: David Jones / Ryan Emig
 USGS MAPS: DOLPH
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

REACH: 1 LOCATION: T05S-R09W-S33SE

SURVEY DESCRIPTION:

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Mature timber (50-90 cm dbh)

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

Primary channel length (meters) and area (m²): 1,056 : 11,868

Secondary channel length (meters) and area (m²): 415 : 1,476

VWI average: 4.9 VWI Range: 3.5 - 7 Average Gradient: 0.8%

Pieces LWD per 100m: 46.3 Wood Volume (m³) per 100m: 71.6

Percent pools: 69% Complex pools (LWD pieces>=3): 21 Pools >=1m deep: 1

<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	23	39	20	5	9
Pool units	3	26	33	17	6	14
Fast water units	2	14	44	27	6	8

SURVEY COMMENTS:

The Upper Little Nestucca River survey is a pre-treatment, restoration site. The crew noted debris jams and pre-existing habitat structures throughout the entire survey reach. There were no potential barriers to upstream fish migration observed within the survey.

Survey Date: 2/4/2009

Report Date: 2/16/2010

T05S-R09W-S33SE

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	4.9	VWI Range:	3.5 - 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 (m²)</u>	<u>Dry Units</u>
Primary	1,056	11,868	0
Secondary	415	1,476	6

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 7.2	Width: 14.9	25.3 (14.8 - 44)	29.9 (20 - 45)
Depth: 0.50	Height: 0.5	1.0 (0.8 - 1.3)	1.6 (1.2 - 1.9)

W:D ratio: 30.8

Stream Flow Type: MF

Average Unit Gradient: 0.8%

Water temperature (°C): 5.0 - 5.0

Entrenchment (ACW:FPW ratio): 1.7

Habitat Units/100m (total channel length): 5.3

Habitat Units/100m (primary channel length): 7.4

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	LT
Riparian Vegetation:	D30	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):	489	46.3
Volume (m ³):	756	71.6
Key pieces (>=12m x 0.60m):	25	2.4

OREGON DEPT OF FISH AND WILDLIFE

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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	3	31	2.0	0.20	63	0	0	5	33	48	10	3
DRY CHANNEL	1	5	2.4	0.00	11	0	0	5	80	10	5	0
DRY UNIT	2	15	1.7	0.00	24	0	0	45	48	8	0	0
POOL-BACKWATER	2	28	2.4	0.38	67	0	13	48	38	3	0	0
POOL-DAMMED	3	112	7.7	1.43	992	0	12	42	33	12	2	0
POOL-ISOLATED	1	6	3.5	0.30	21	0	65	35	0	0	0	0
POOL-LATERAL SCOUR	31	786	8.6	0.78	8,258	0	2	25	33	18	6	16
PUDDLED UNIT	3	40	1.9	0.26	78	0	13	40	30	13	3	0
RAPID/BEDROCK	1	12	9.0	0.35	108	0	0	5	10	10	10	65
RAPID/BOULDERS	3	27	3.3	0.23	91	0	2	10	47	38	3	0
RIFFLE	17	381	7.9	0.30	3,362	0	2	17	47	22	5	7
STEP/COBBLE	6	25	7.3	0.23	226	0	3	12	52	28	6	0
STEP/LOG	5	4	9.8	0.09	44	0	4	25	43	20	7	1
Total:	78	1,472	7.2	0.50	13,344	0	Avg: 4	23	39	20	5	9

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	6	146	5.2	0.89	1,080	8.09%	0	0.0
Scour Pools	31	786	8.6	0.78	8,258	61.88%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	17	381	7.9	0.30	3,362	25.20%	0	0.0
Rapids	4	39	4.8	0.26	199	1.49%	0	0.0
Cascades	3	31	2.0	0.20	63	0.47%	0	0.0
Step/Falls	11	29	8.4	0.16	270	2.02%	0	0.0
Dry	6	60	1.9	0.13	113	0.84%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

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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:	37	25.1	35.0
Pools >=1m deep:	11	7.5	10.4
Complex pools (LWD pieces>=3):	21	14.3	19.9
Pool frequency (channel widths/pool):	2.7		
Residual pool depth (avg):	0.61		

OREGON DEPT OF FISH AND WILDLIFE
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OREGON PLAN MONITORING SITE
SURVEY DATE: 2/4/2009

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 411 STREAM: UPPER LITTLE NESTUCCA RIVER

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	2	RI	01	50	HS	SMALL EDDY/BW/POCKET POOLS ON RIGHT
1	6	LP	00	77	HS	
1	7	SC	00	84.3		H=0.15M, CONT. OF UPPER LITTLE NESTUCCA
1	8	LP	00	112.3	HS	
1	12	RI	00	215.8	HS	
1	16	RI	01	267	HS	
1	20	LP	12	267		ACW=2M, T=4.5C
1	22	LP	01	282.4	HS,DJ	
1	23	RI	01	329.4	HS,SS/	HS/DJ CONTINUED FROM PREVIOUS UNIT
1	26	CB	11	329.4		ACW=2.4M, T=5C
1	33	LP	01	457.4	TJ,CS,BC	
1	34	CB	00	465.4		ACW=3.6M, T=4.5C
1	35	RI	00	500.4	CS	
1	36	SL	00	501.4	HS	LOG WIER
1	39	RI	00	578.4	/SS	
1	40	SL	00	579.4	HS	H=0.30M, JUMP POOL BELOW
1	41	LP	00	642.4	HS	
1	43	LP	00	680.9	HS,DJ	
1	44	LP	01	698.9	DJ	
1	47	SL	01	716.7	HS	
1	49	RI	01	773.7	HS	ACW INCLUDES 2 SIDE CH THAT COME IN ABOVE SURVE
1	50	LP	01	817.7	HS,DJ,/SS	DJ SPREADS THROUGHOUT SEVERAL UNITS
1	51	SL	01	818.7	HS	
1	52	DP	01	854.7	DJ	POOL DAMMED BY DJ, TOOK GPS FOR DJ
1	53	SC	01	855.3	DJ	

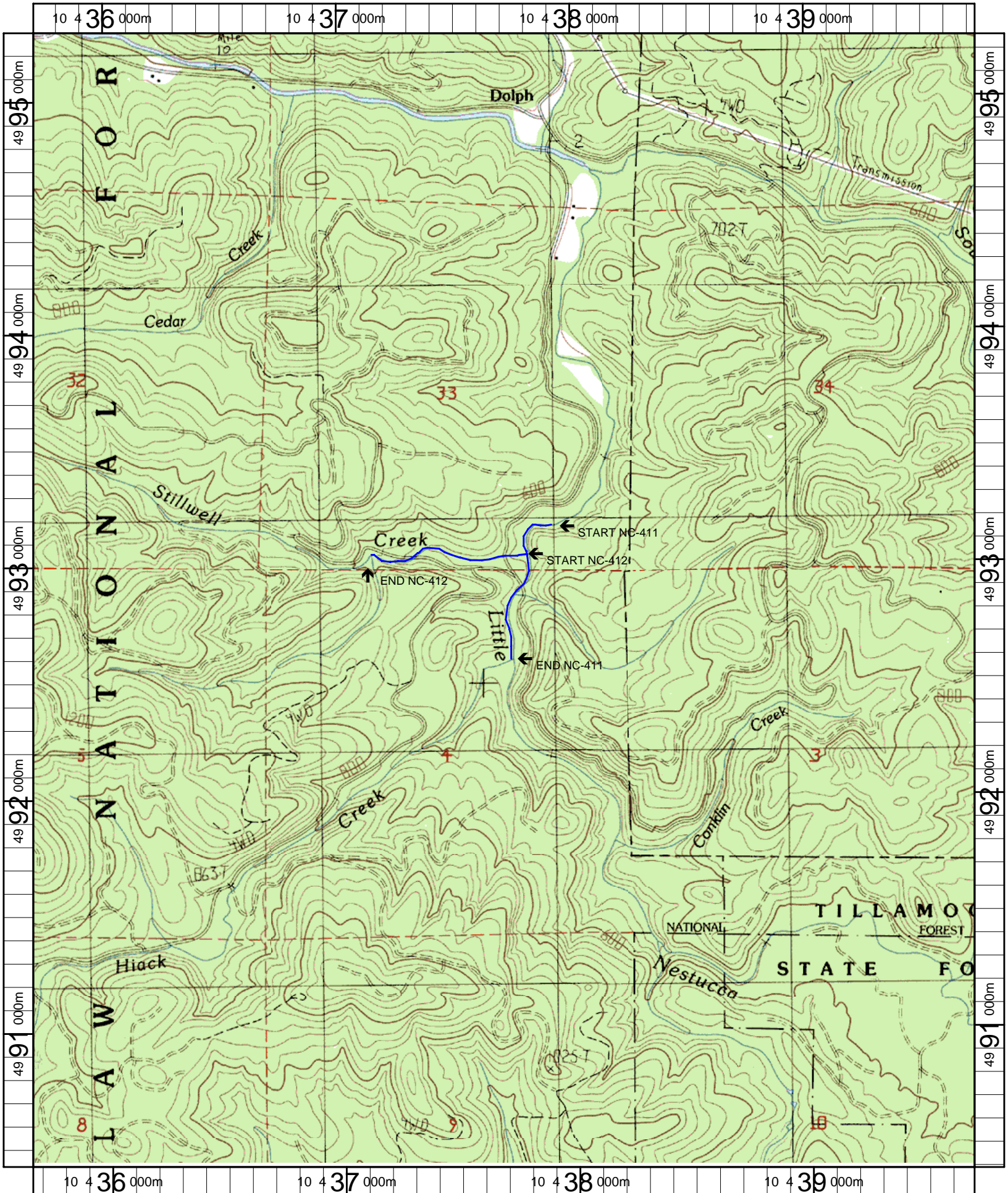
OREGON DEPT OF FISH AND WILDLIFE
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OREGON PLAN MONITORING SITE
SURVEY DATE: 2/4/2009

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 411 STREAM: UPPER LITTLE NESTUCCA RIVER

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	54	DP	01	910.3	HS,DJ	POOL DAMMED BY DJ
1	57	RI	02	910.3	DJ	
1	58	RB	02	910.3	DJ	
1	60	RI	02	910.3	DJ	2 DJ'S IN THIS UNIT
1	61	LP	02	910.3	DJ	
1	63	LP	02	910.3	DJ	
1	64	RI	02	910.3		RIFFLE GOES UNDER DJ IN UNIT 54
1	67	LP	03	910.3		JUVENILE SALMONIDS OBSERVED IN POOL
1	68	SL	03	910.3		WATER TRICKLING FROM PD UNIT, STEP OVER MUD/WO
1	70	DP	03	910.3	DJ	ONLY FLOW OUT IS SEEP INTO PD, POOL DAMMED BY M
1	71	PD	03	910.3	DJ	
1	72	RI	04	910.3		ENDS UNDER DJ IN UNIT 52
1	73	RB	05	910.3		ENDS UNDER DJ IN UNIT 52
1	76	RI	00	966.3	HS	2 REDDS IN UNIT
1	77	LP	01	1056.3	/TJ,DJ	SGS SIGN AT TJ, END SIGN PLACED ABOVE SGS
1	78	CB	11	1056.3		ACW=2.5M, T=6C



Name: DOLPH
 Date: 1/29/2009
 Scale: 1 inch equals 1667 feet

Location: 10 0437694 E 4992846 N
 Caption: UPPER LITTLE NESTUCCA RIVER RESTORATION SITE -
 NESTUCCA BASIN

Upper Little Nestucca River (NC-411) 2009 Winter Habitat Survey Photographs



Unit 1 - A upstream view near the Upper Little Nestucca River start.



Hill slope view of stream, riparian, and log jams.



Unit 22 - Downstream view of a large wood debris jam.



Unit 52 - Large wood debris jam.



Unit 54 - Large wood debris jam.



Unit 63-64 - Large wood debris jam encompassing units.

Upper Little Nestucca River (NC-411) 2009 Winter Habitat Survey Photographs



Unit 64 - Downstream view of large wood debris jam.