

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

STREAM: Gourlay Creek (L-201)  
BASIN: Scappoose Creek  
SURVEY TYPE: Post-Tx  
DATE: March 1, 2004  
SURVEY CREW: Jim Andrews, April Waters  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 9.0 km<sup>2</sup>  
USGS MAPS: Dixie Mtn.  
ECOREGION: Coast Range Astoria Willapa

**GENERAL DESCRIPTION:**

The Gourlay Creek habitat survey extended 542 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 7.3 (range: 4.0-10.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.0 percent. Riffles (37%) and rapids (36%) dominated stream habitat. Gravel (35%) and cobble (33%) dominated stream substrate. Wood volume was high at 34.3 m<sup>3</sup>/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

T03N-R02W-S17SE

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	7.3	VWI Range:	4 - 10

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	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	542	2,491	0
Secondary	59	160	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 4.2	Width: 6.7	13.4 ( 7.4 - 20.4 )	16.8 ( 9.5 - 28.5 )
Depth: 0.41	Height: 0.4	0.7 ( 0.7 - 0.8 )	1.3 ( 0.8 - 2.2 )

W:D ratio: 18.8

Stream Flow Type: MF

Avg. Unit Gradient: 2.0%

Entrenchment (ACW:FPW ratio): 2.1

Water temp (°C): 8.5 - 8.5

Habitat Units/100m: 7.8

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
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</u>
All pieces (>=3m x 0.15m):	146	27.0
Volume (m <sup>3</sup> ):	186	34.3
Key pieces (>=10m x 0.60m):	15	2.8

OREGON DEPARTMENT OF FISH AND WILDLIFE

GOURLAY CREEK POST-TX (L-201)

HABITAT INVENTORY

Report Date: 6/16/2004

Survey Date:

3/1/2004

REACH 1

T03N-R02W-S17SE

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
POOL-ISOLATED	1	9	2.0	0.70	18	0	75	20	5	0	0	0
POOL-LATERAL SCOUR	13	126	4.0	0.65	527	0	6	28	27	32	5	1
POOL-PLUNGE	3	20	4.0	0.52	84	0	3	34	39	20	3	0
POOL-STRAIGHT SCOUR	1	10	6.0	0.60	60	0	10	10	50	20	10	0
RAPID/BOULDERS	12	217	4.2	0.34	954	0	2	16	35	43	5	0
RIFFLE	13	213	4.2	0.27	979	0	6	14	36	38	6	0
STEP/COBBLE	1	2	6.0	0.05	12	0	0	5	74	21	0	0
STEP/LOG	3	4	4.3	0.17	17	0	0	43	47	10	0	0
<b>Total:</b>	<b>47</b>	<b>600</b>	<b>4.2</b>	<b>0.41</b>	<b>2,651</b>	<b>0</b>	<b>Avg: 6</b>	<b>21</b>	<b>35</b>	<b>33</b>	<b>5</b>	<b>0</b>

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	1	9	2.0	0.70	18	0.68%	0	0.0
Scour Pools	17	156	4.1	0.62	671	25.29%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	13	213	4.2	0.27	979	36.94%	0	0.0
Rapids	12	217	4.2	0.34	954	35.99%	0	0.0
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	4	6	4.8	0.14	29	1.09%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total	# / Km	
All Pools:	18	30.0	59
Pools >=1m deep:	0	0.0	
Complex pools (LWD pieces>=3):	6	10.0	
Pool frequency (channel widths/pool):	4.9		
Residual pool depth (avg):	0.42		

**STREAM SUMMARY**

**GOURLAY CREEK POST-TX (L-201)**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate						Large Boulders (#>0.5m)
					S/O	Percent Wetted Area					
					Snd	Grvl	Cbl	Bldr	Bdrk		
47	600	4.2	0.41	2,651	6	21	35	33	5	0	

Habitat Group	Wetted Area	
	(m <sup>2</sup> )	Percent
Dammed & BW Pools	18	0.68%
Scour Pools	671	25.29%
Glides	0	0.00%
Riffles	979	36.94%
Rapids	954	35.99%
Cascades	0	0.00%
Step/Falls	29	1.09%
Dry	0	0.00%
Culverts	0	0.00%

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: 7-L      SITE ID: 201      GOURLAY CREEK POST-TX (L-201)

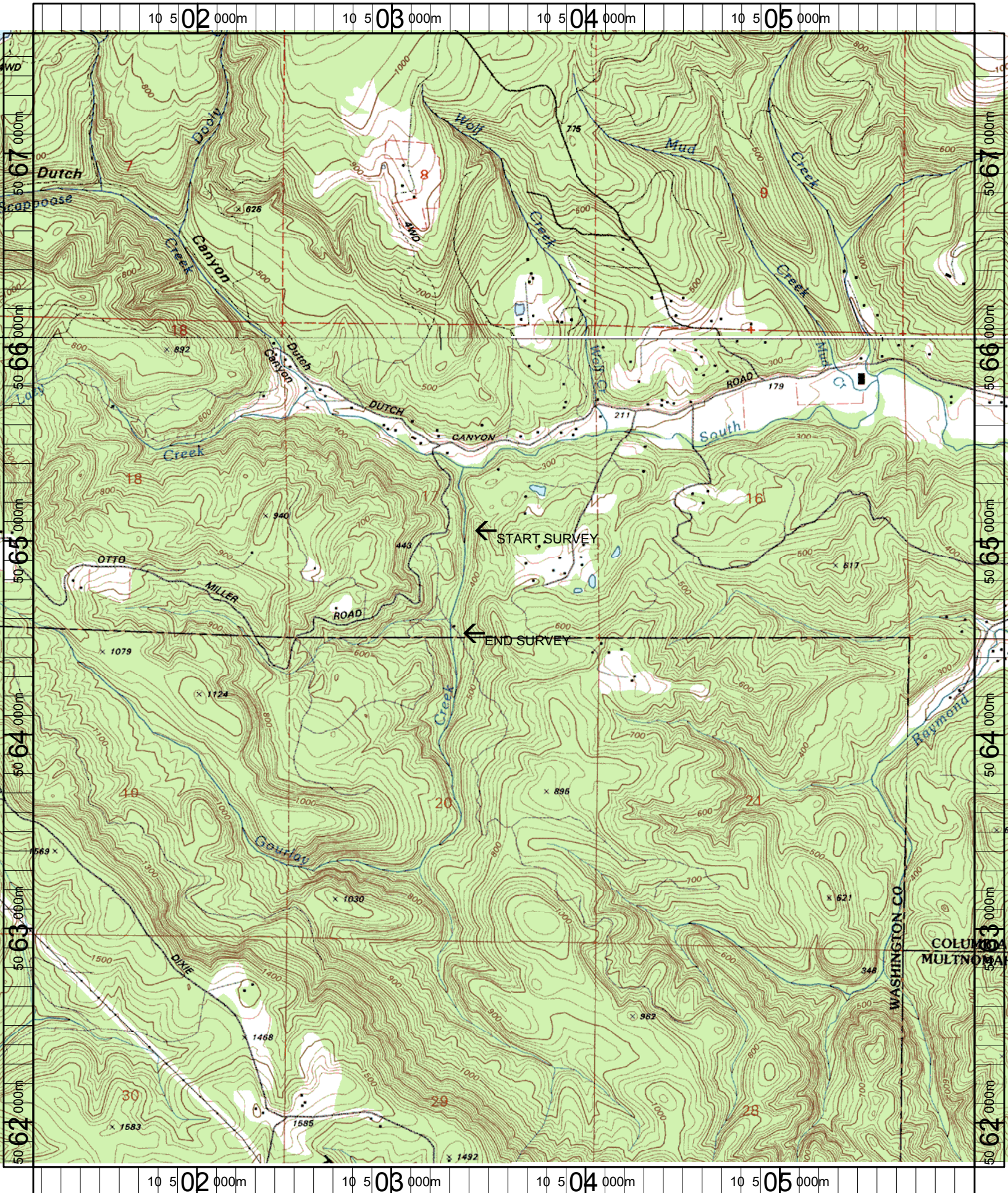
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RI	00	11.6	HS, SS/	T=8C/11:00	
2	PP	00	24.1	/SS, HS		
3	SL	00	25.1	DJ		
5	PP	00	40.4	DJ		
8	RI	00	74.4	SS/		
9	RI	00	101.6	HS		
10	LP	00	111.8	HS		
14	LP	00	133.8		ACW=4.5M	
18	LP	00	207.2	HS		
20	LP	00	227.5		4M LONG PTC	
22	LP	00	241.8	HS		
23	RB	01	268.8	TJ/, HS		
24	RI	11	268.8	CE	ACW=.9, T=9.5C	
25	RI	00	289.8	HS		
28	RI	01	351.9		CHNL/=60% FLOW	
29	PP	01	354.4	HS		
31	LP	02	356.4	/SS	HARDPAN, 40% FLOW	
32	RB	02	356.4	BV, DJ	.6M DEEP	
39	LP	00	401.3		HARDPAN	
42	RB	01	473.9	/TJ, HS	SPAWN SIGN	
43	RB	11	473.9		TRIB UNIT 1.6M ACW	

# Comment Summary

## Oregon Plan Monitoring Sites 2002

MONITORING AREA: 7-L SITE ID: 201 GOURLAY CREEK POST-TX (L-201)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
45	RI	00	497	WL	BIRDS	
46	RB	00	522	HS, SS/		
47	RI	00	541.7	BC	EOS @ BC, T=8.5C/15:05	



Name: DIXIE MT  
 Date: 8/10/2004  
 Scale: 1 inch equals 2000 feet

Location: 10 503574 E 5064696 N  
 Caption: GOURLAY CREEK RESTORATION SITE - SCAPPOOSE BASIN