

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

STREAM: UPPER SOUTH SISTER CREEK  
 GCG: 4-UMP  
 SITE ID: 404  
 BASIN: SMITH  
 TREATMENT DATE: 2008  
 SURVEY DATE: 3/9/2009  
 SURVEY CREW: David Jones / Ryan Emig  
 USGS MAPS: TWIN SISTERS  
 ECOREGION: Mid-Coastal Sedimentary  
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

REACH: 1 LOCATION: T20S-R08W-S23NW

**SURVEY DESCRIPTION:**

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Second growth timber (15-30 cm dbh)

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

Primary channel length (meters) and area (m<sup>2</sup>): 570 : 2,957

Secondary channel length (meters) and area (m<sup>2</sup>) 8 : 16

VWI average: 9.8 VWI Range: 9 - 12 Average Gradient: 2.2%

Pieces LWD per 100m: 29.3 Wood Volume (m<sup>3</sup>) per 100m: 54.7

Percent pools: 40% Complex pools (LWD pieces>=3): 7 Pools >=1m deep:0

<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	2	20	15	7	5	51
Pool units	2	28	15	6	4	46
Fast water units	0	13	15	8	5	59

**SURVEY COMMENTS:**

The Upper South Sister Creek survey is a post-treatment, restoration site. The noted habitat structures throughout the survey reach consisting of placed logs. The crew also observed juvenile coho salmon. There were no potential barriers to upstream fish migration observed within the survey.

Survey Date: 3/9/2009

Report Date: 2/16/2010

T20S-R08W-S23NW

REACH 1

**Valley and Channel Summary**

Valley Characteristics (Percent Reach Length)

Narrow Valley Floor		Broad Valley Floor	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	9.8	VWI Range:	9 - 12

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

Type	Length (m)	Area (m <sup>2</sup> )	Dry Units
Primary	570	2,957	0
Secondary	8	16	0

Channel Dimensions (m)

Wetted	Active	Floodprone <i>n</i> = 5	First Terrace <i>n</i> = 5
Width: 5.1	Width: 6.2	11.2 ( 7.8 - 15.6 )	14.4 ( 10.5 - 20 )
Depth: 0.37	Height: 0.4	0.7 ( 0.6 - 0.8 )	1.5 ( 1 - 1.9 )

W:D ratio: 17.6

Stream Flow Type: MF

Average Unit Gradient: 2.2%

Water temperature (°C): 6.0 - 6.0

Entrenchment (ACW:FPW ratio): 1.9

Habitat Units/100m (total channel length): 6.6

Habitat Units/100m (primary channel length): 6.7

**Riparian, Bank, and Wood Summary**

	Primary	Secondary
Land Use:	ST	LT
Riparian Vegetation:	D30	S

Bank Condition and Shade

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

Large Wood Debris

	Total	Total / 100m primary channel
All pieces (>=3m x 0.15m):	167	29.3
Volume (m <sup>3</sup> ):	312	54.7
Key pieces (>=12m x 0.60m):	27	4.7

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

**UPPER SOUTH SISTER CREEK**  
**GCG: 4-UMP SITE ID: 404**

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**T20S-R08W-S23NW**

**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	1	8	2.0	0.07	16	0	5	30	30	25	10	0
POOL-DAMMED	4	81	5.5	0.64	456	0	6	46	16	4	1	26
POOL-LATERAL SCOUR	11	132	5.3	0.58	720	0	1	21	14	6	5	53
RAPID/BEDROCK	10	203	4.8	0.22	961	0	0	10	6	4	5	75
RIFFLE	5	133	5.4	0.25	712	0	0	17	29	11	3	41
STEP/BEDROCK	3	11	5.7	0.18	60	0	2	13	13	10	7	55
STEP/BOULDERS	1	4	5.5	0.35	22	0	0	15	35	0	35	15
STEP/COBBLE	1	2	5.0	0.20	8	0	0	10	15	30	15	30
STEP/LOG	2	6	3.8	0.20	20	0	10	43	5	3	0	40
<b>Total:</b>	<b>38</b>	<b>578</b>	<b>5.1</b>	<b>0.37</b>	<b>2,973</b>	<b>0</b>	<b>Avg: 2</b>	<b>20</b>	<b>15</b>	<b>7</b>	<b>5</b>	<b>51</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	4	81	5.5	0.64	456	15.34%	0	0.0
Scour Pools	11	132	5.3	0.58	720	24.20%	0	0.0
Glides	0	0			0	0.00%	0	0.0
Riffles	5	133	5.4	0.25	712	23.95%	0	0.0
Rapids	10	203	4.8	0.22	961	32.31%	0	0.0
Cascades	1	8	2.0	0.07	16	0.54%	0	0.0
Step/Falls	7	22	5.0	0.21	109	3.67%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

OREGON DEPT OF FISH AND WILDLIFE  
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UPPER SOUTH SISTER CREEK  
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REACH 1

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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:	15	25.9	26.3
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	7	12.1	12.3
Pool frequency (channel widths/pool):	6.2		
Residual pool depth (avg):	0.36		

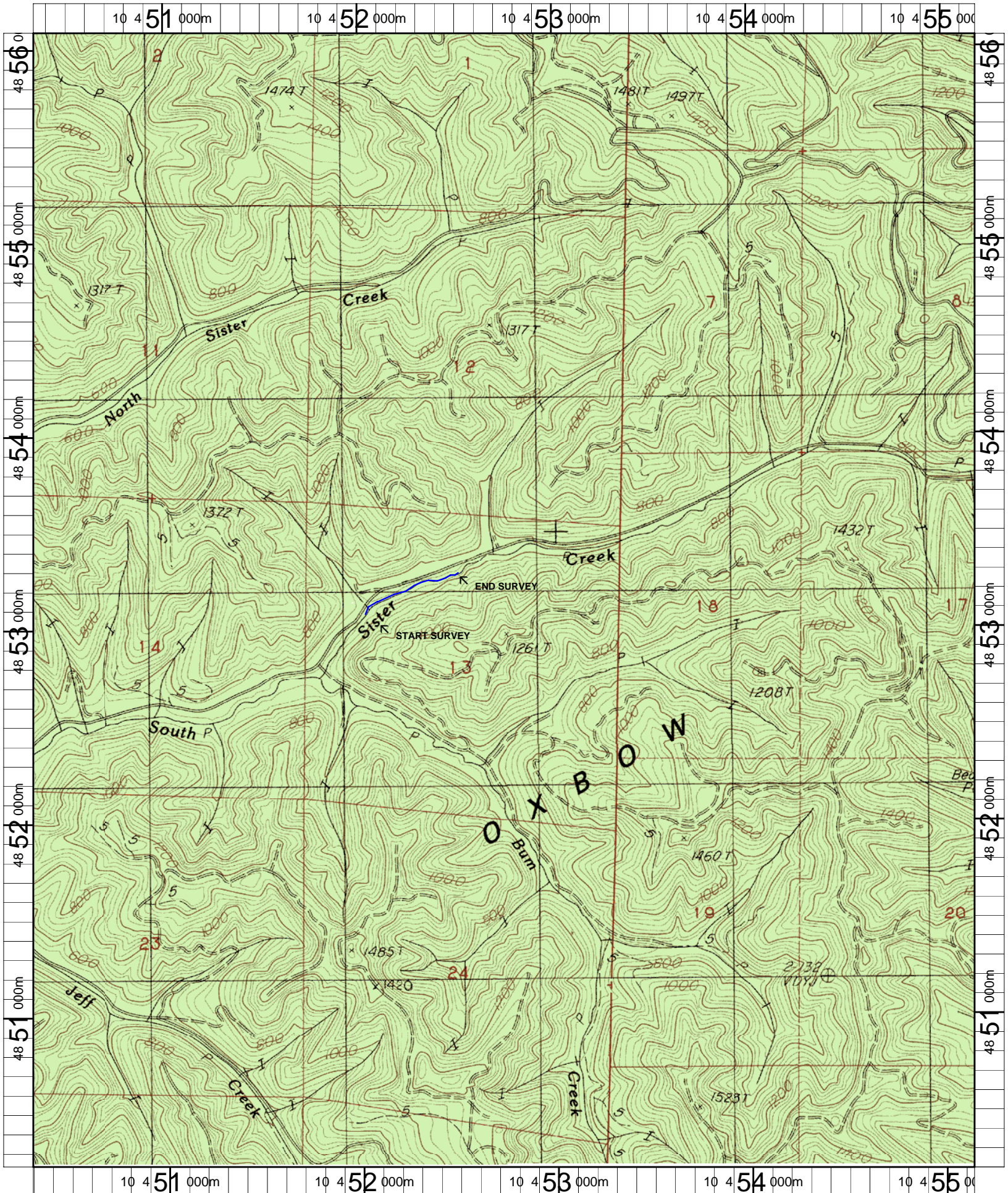
OREGON DEPT OF FISH AND WILDLIFE  
HABITAT INVENTORY

OREGON PLAN MONITORING SITE  
SURVEY DATE: 3/9/2009

COMMENT SUMMARY

MONITORING AREA: 4-UMP SITE ID: 404 STREAM: UPPER SOUTH SISTER CREEK

REACH	UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTES
1	1	SB	00	4	DJ	
1	3	LP	00	41	HS,DJ	COHO FRY IN POOL
1	4	RI	00	72	HS,DJ	
1	6	SL	00	81	HS	
1	8	RI	00	112	HS	
1	9	LP	00	130	HS	
1	12	LP	00	174.5	HS,DJ	
1	14	LP	00	198.5	HS	
1	17	RI	00	268	HS,DJ	
1	20	LP	00	304	DJ,HS	
1	25	RR	01	365.5	HS,DJ	
1	30	RR	00	425	DJ	
1	33	RR	00	483.6	HS,DJ	
1	34	DP	00	504.6	/SS	COHO FRY IN POOL
1	35	RR	00	532.6	HS,DJ,SS/	



Name: GUNTER  
 Date: 1/5/2009  
 Scale: 1 inch equals 2000 feet

Location: 10 0452737 E 4853145 N NAD 83  
 Caption: UPPER SOUTH SISTER CREEK RESTORATION SITE - SMITH  
 BASIN

## Upper South Sister Creek (UMP-404) 2009 Winter Habitat Survey Photographs



Unit 1 - A upstream view of the Upper South Sister Creek survey start.



Upstream view of large wood placement.



Upstream view at the end of the Upper South Sister Creek survey.