

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

STREAM: South Sister Creek (U-252)
BASIN: Smith River
SURVEY TYPE: Reference
DATE: July 1, 2004
SURVEY CREW: Peter Baki, Jeremiah Bernier
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 30.6 km²
USGS MAPS: Gunter
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The South Sister Creek habitat survey extended 567 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.3 (range: 3.3-10.3). Land use for the reach was large (30-50 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 2.1 percent. Scour pools (48%), riffles (26) and rapids (21%) dominated stream habitat. Bedrock (35%) and gravel (33%) dominated stream substrate. Wood volume was low at 9.2 m³/100m.

COMMENTS:

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

REACH 1

T20S-R08W-S13NE

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	5.3	VWI Range:	3.3 - 10.3

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	567	1,358	0
Secondary	10	11	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.4	Width: 4.1	7.8 (3 - 12.9)	9.3 (3.1 - 13.4)
Depth: 0.23	Height: 0.5	1.1 (0.8 - 1.2)	1.2 (1.1 - 1.4)

W:D ratio: 8.0
Stream Flow Type: LF
Average Unit Gradient: 2.1%
Water temperature (°C): 15.0 - 15.0

Entrenchment (ACW:FPW ratio): 1.9
Habitat Units/100m (total channel length): 8.0
Habitat Units/100m (primary channel length): 8.1

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	4%	Reach avg: 85%
Undercut Banks:	3%	Range: 53 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	47	8.3
Volume (m ³):	52	9.2
Key pieces (>=12m x 0.60m):	1	0.2

OREGON DEPARTMENT OF FISH AND WILDLIFE

SOUTH SISTER CREEK REF (U-252)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/1/2004

REACH 1

T20S-R08W-S13NE

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
CASCADE/BEDROCK	1	5	0.5	0.05	2	0	0	0	0	0	0	100
CASCADE/BOULDERS	2	17	1.5	0.10	24	9	0	0	15	40	45	0
POOL-DAMMED	1	10	2.4	0.35	24	0	45	45	10	0	0	0
POOL-LATERAL SCOUR	18	201	3.2	0.43	651	14	3	15	28	8	4	43
POOL-PLUNGE	1	4	2.1	0.30	8	0	0	10	80	10	0	0
RAPID/BEDROCK	3	52	2.8	0.07	144	3	0	0	3	3	5	88
RAPID/BOULDERS	8	112	1.6	0.08	148	4	0	1	40	36	14	9
RIFFLE	9	165	2.0	0.11	354	9	0	2	45	8	2	44
STEP/COBBLE	3	11	1.3	0.05	14	0	0	17	50	23	10	0
Total:	46	577	2.4	0.23	1,369	39	Avg: 2	9	33	14	7	35

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	1	10	2.4	0.35	24	1.79%	0	0.0
Scour Pools	19	205	3.1	0.42	659	48.12%	14	2.1
Glides	0	0			0	0.00%	0	0.0
Riffles	9	165	2.0	0.11	354	25.88%	9	2.5
Rapids	11	165	2.0	0.07	291	21.29%	7	2.4
Cascades	3	21	1.2	0.08	26	1.91%	9	34.4
Step/Falls	3	11	1.3	0.05	14	1.02%	0	0.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	Total of all Channel Lengths		Primary Channel Length
	Total	# / Km	# / Km
All Pools:	20	34.7	35.3
Pools >=1m deep:	0	0.0	0.0
Complex pools (LWD pieces>=3):	2	3.5	3.5
Pool frequency (channel widths/pool):	7.1		
Residual pool depth (avg):	0.36		

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

REACH 1

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

Total hardwoods/1000	772
Total conifers/1000 ft	122
Total conifers >20" dbh/1000 ft	20
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	6.7	0.0	1.3	0.0	1.0	0.0	9.0
15-30cm	0.0	2.0	1.0	0.0	0.0	1.3	1.0	3.3
30-50cm	0.0	0.0	0.3	0.0	0.3	0.3	0.7	0.3
50-90cm	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	8.7	1.3	1.3	0.7	2.7	0.7	4.2

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	73		49		64	
Shrub cover	60		33		46	
Grass/forb cover	38		33		50	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	33		50		83	
High terrace	17		17		17	
Low terrace	33		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	17		33		0	
Riprap	0		0		0	
Surface slope (%)	6		14		35	

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

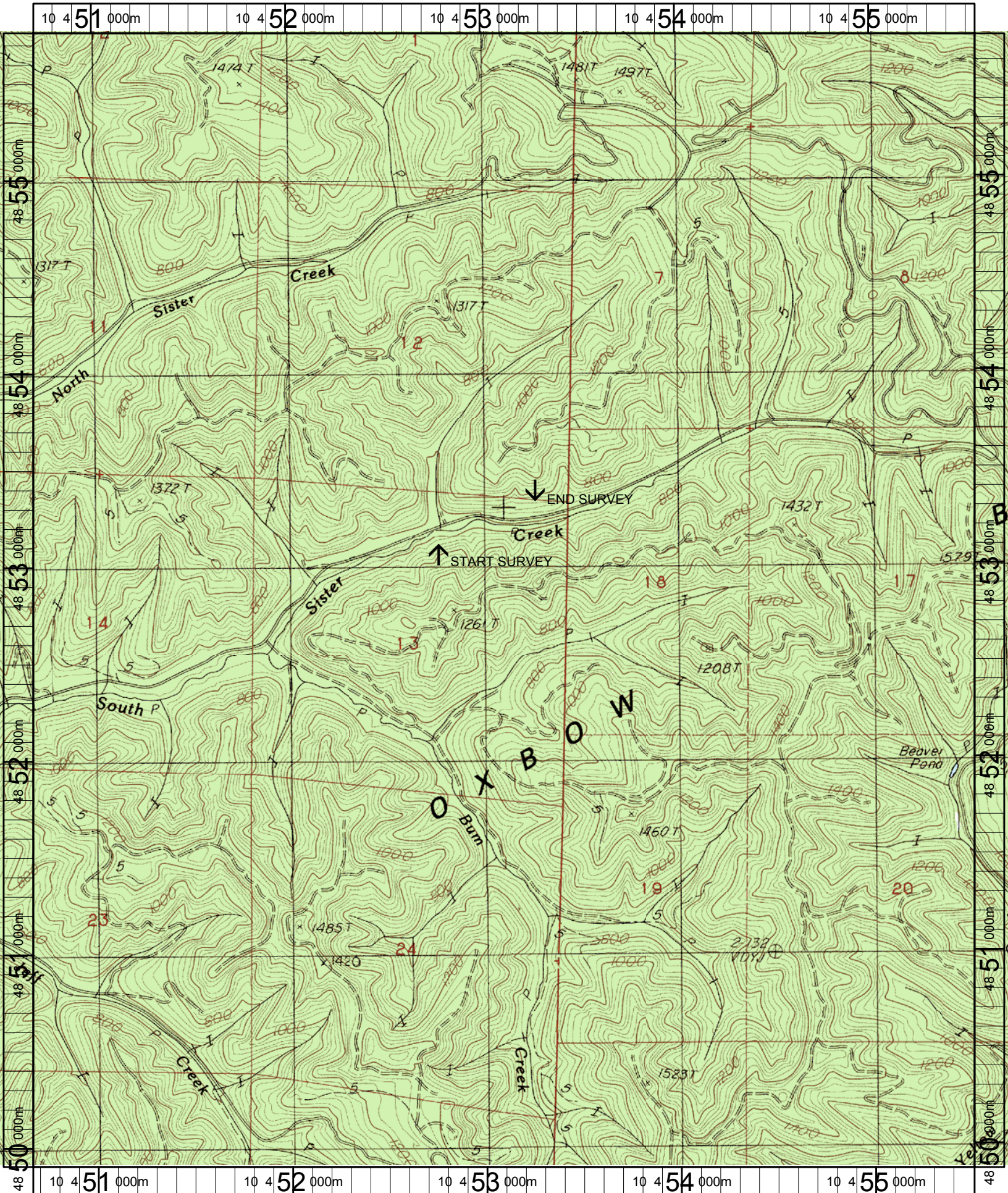
Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes	
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90		
12	LF	1	LT	0	90	70	30	Conifer							
								Hardwood	1	6					
12	LF	2	HT	0	75	90	10	Conifer							
								Hardwood							
12	LF	3	HT	0	75	90	10	Conifer					1		
								Hardwood							
12	RT	2	HS	55	85	50	50	Conifer				1			
								Hardwood							
12	RT	1	HT	0	90	50	50	Conifer							
								Hardwood							
12	RT	3	HS	55	95	30	70	Conifer							
								Hardwood							
26	RT	1	HS	20	60	30	60	Conifer							
								Hardwood	5						
26	LF	1	RB	0	70	50	50	Conifer							
								Hardwood	4						
26	RT	3	HS	25	60	50	50	Conifer							
								Hardwood	3	1					
26	LF	2	RB	0	0	0	0	Conifer							
								Hardwood							
26	RT	2	HS	20	40	50	50	Conifer							
								Hardwood	4						
26	LF	3	HS	60	40	5	70	Conifer							
								Hardwood		3	1				
36	LF	1	LT	0	90	70	30	Conifer							
								Hardwood	9						
36	LF	2	RB	0	0	0	0	Conifer							
								Hardwood							
36	LF	3	HS	60	20	90	10	Conifer					1		
								Hardwood							
36	RT	1	HS	15	40	90	10	Conifer							
								Hardwood	1						
36	RT	3	HS	10	95	10	90	Conifer							
								Hardwood							
36	RT	2	HS	10	95	10	90	Conifer			3				
								Hardwood							

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **4-UMP** SITE ID: **252** SOUTH SISTER CREEK REF (U-252)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RB	01	50	TJ/	PHOTO 14 REACH	T=15 DEG C AT 14:00
2	CB	11	50		ACW=2.6M	T=13 DEG C, SALMON SPAW
4	RI	00	85.9		UNIT 230 RI ODFW 2002	
5	SC	00	89.9	DJ	H=1.2M	
7	RI	00	126.5			SG=30
8	LP	00	133.4			SG=12
12	LP	00	179.6		RIP 1	
16	LP	00	205.7			SG=4
18	LP	00	225.2			SG=8
19	RB	00	231.5		FLAG STW RED 3-18-02	
20	LP	00	252.2			SG=4
26	LP	00	315.7		RIP 2	
36	RR	00	434.1		RIP 3	
42	RI	00	543.2		FLAG ODFW 310 RI	
46	SC	00	566.5			END SIGN ALDER LEFT



Name: GUNTER
 Date: 6/14/2004
 Scale: 1 inch equals 2000 feet

Location: 10 453101 E 4852822 N
 Caption: SOUTH SISTER CREEK REFERENCE SITE - SMITH BASIN