

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

STREAM: South Sister Creek (UMP-250)
BASIN: Smith River
SURVEY TYPE: Post-Tx
DATE: January 18, 2007
SURVEY CREW: Andy Lanier, Laurel Moulton
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 17.7 km²
USGS MAPS: Gunter
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The South Sister Creek habitat survey extended 2,632 meters. The channel was constrained by multiple terraces in a broad valley floor. The average valley width index was 8.4 (range: 2-10). Land use for the reach was second growth timber (15-30 cm dbh). The average unit gradient was 1.1 percent. Riffles (43%) and scour pools (37%) dominated stream habitat. Bedrock (49%) and gravel (18%) dominated stream substrate. Wood volume was low at 9.0 m³/100m.

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

T20S-R8W-S14SW

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	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	8.4	VWI Range:	2 - 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 Channel	2,632	17,085	0
Secondary Channel	69	120	3
Off-Channel Units	77	186	1

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 5.7	Width: 8.3	11.3 (5.7 - 15.5)	15.7 (6 - 23.5)
Depth: 0.37	Height: 0.6	1.1 (0.8 - 1.3)	1.9 (1 - 3.2)

W:D ratio: 15.0
 Stream Flow Type: MF
 Average Unit Gradient: 1.1%
 Water temperature (°C): 5.0 - 5.0

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 5.0
 Habitat Units/100m (primary channel length): 5.3

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 primary channel</u>
All pieces (>=3m x 0.15m):	311	11.8
Volume (m ³):	236	9.0
Key pieces (>=12m x 0.60m):	1	0.0

OREGON DEPT OF FISH AND WILDLIFE

SOUTH SISTER CREEK POST-TX (4-UJP, 250)

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

1/18/2007

REACH 1		T20S-R8W-S14SW					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/BOULDERS	2	7	0.4	0.04	2	0	0	8	45	0	40	8
DRY CHANNEL	1	8	0.1	0.02	1	0	0	15	80	5	0	0
POOL-BACKWATER	1	6	4.0	0.30	24	0	0	36	0	0	18	45
POOL-DAMMED	11	349	7.0	0.66	2,538	0	8	24	8	1	7	52
POOL-LATERAL SCOUR	51	990	6.1	0.59	6,408	0	2	14	18	5	7	54
POOL-PLUNGE	2	12	5.5	0.70	69	0	0	5	45	5	5	40
PUDDLED UNIT	3	51	1.1	0.17	54	0	30	69	2	0	0	0
RAPID/BEDROCK	6	88	6.7	0.18	558	0	0	4	3	5	4	84
RAPID/BOULDERS	1	13	2.0	0.10	25	0	0	5	48	24	24	0
RIFFLE	37	1,120	5.8	0.16	6,975	0	3	8	22	6	6	55
RIFFLE W/ POCKETS	2	84	6.3	0.20	476	0	0	12	5	2	2	78
STEP/BEDROCK	2	3	2.4	0.10	9	0	0	0	0	0	0	100
STEP/COBBLE	4	22	5.0	0.11	102	0	0	11	66	18	0	5
STEP/STRUCTURE	16	28	5.5	0.23	150	0	1	9	7	2	52	29
Total:	139	2,778	5.7	0.37	17,391	0	Avg: 3	13	18	5	12	49

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	12	355	6.8	0.63	2,562	14.73%	0	0.0	
Scour Pools	53	1,002	6.1	0.60	6,477	37.25%	0	0.0	
Glides	0	0			0	0.00%	0	0.0	
Riffles	39	1,203	5.8	0.16	7,451	42.85%	0	0.0	
Rapids	7	101	6.0	0.16	583	3.35%	0	0.0	
Cascades	2	7	0.4	0.04	2	0.01%	0	0.0	
Step/Falls	22	52	5.1	0.19	261	1.50%	0	0.0	
Dry	4	59	0.9	0.13	55	0.32%	0	0.0	
Culverts	0	0			0	0.00%	0	0.0	

POOL SUMMARY			
	Total	Total of all Channel Lengths # / Km	Primary Channel Length # / Km
All Pools:	65	23.4	24.7
Pools >=1m deep:	1	0.4	0.4
Complex pools (LWD pieces>=3):	22	7.9	8.4
Pool frequency (channel widths/pool):	5.1		
Residual pool depth (avg):	0.41		

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: **4-UMP** SITE ID: **250** SOUTH SISTER CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
1	RI	01	9.3	TJ/	TEMP=5°
2	RI	11	9.3		TEMP=6°
4	RR	01	64.3	/TJ	LARGE DJ
5	RI	11	64.3		ACW=1.1
12	RI	11	215.8		ACW=1.6
14	RI	00	288.3	SS/	
15	RP	00	299.3	SS/	
22	LP	00	511.3		SALMON SPAWNING SIGN
24	LP	00	548.8		CA-CT D30 VEG ST LAND
25	RI	00	596.8	SS/	
36	LP	01	790.3	/TJ	
37	CB	11	790.3		ACW=1.2
43	LP	00	927.3	HS	BOULDERS PLACED
44	SS	00	928.3	HS	PICTURE 225
47	SS	00	965.8	HS	BOULDERS PLACED IN STREAM
55	SS	00	1138.8	HS	BOULDERS PLACED IN STREAM
56	DP	00	1189.8	BV	
57	RI	00	1217.8	/SS	
59	DP	00	1260.8	HS	BOULDERS PLACED
61	SS	00	1281.8	HS	
66	DP	00	1404.3		DEAD ADULT COHO SALMON

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: **4-UMP** SITE ID: **250** **SOUTH SISTER CREEK POST-TX**

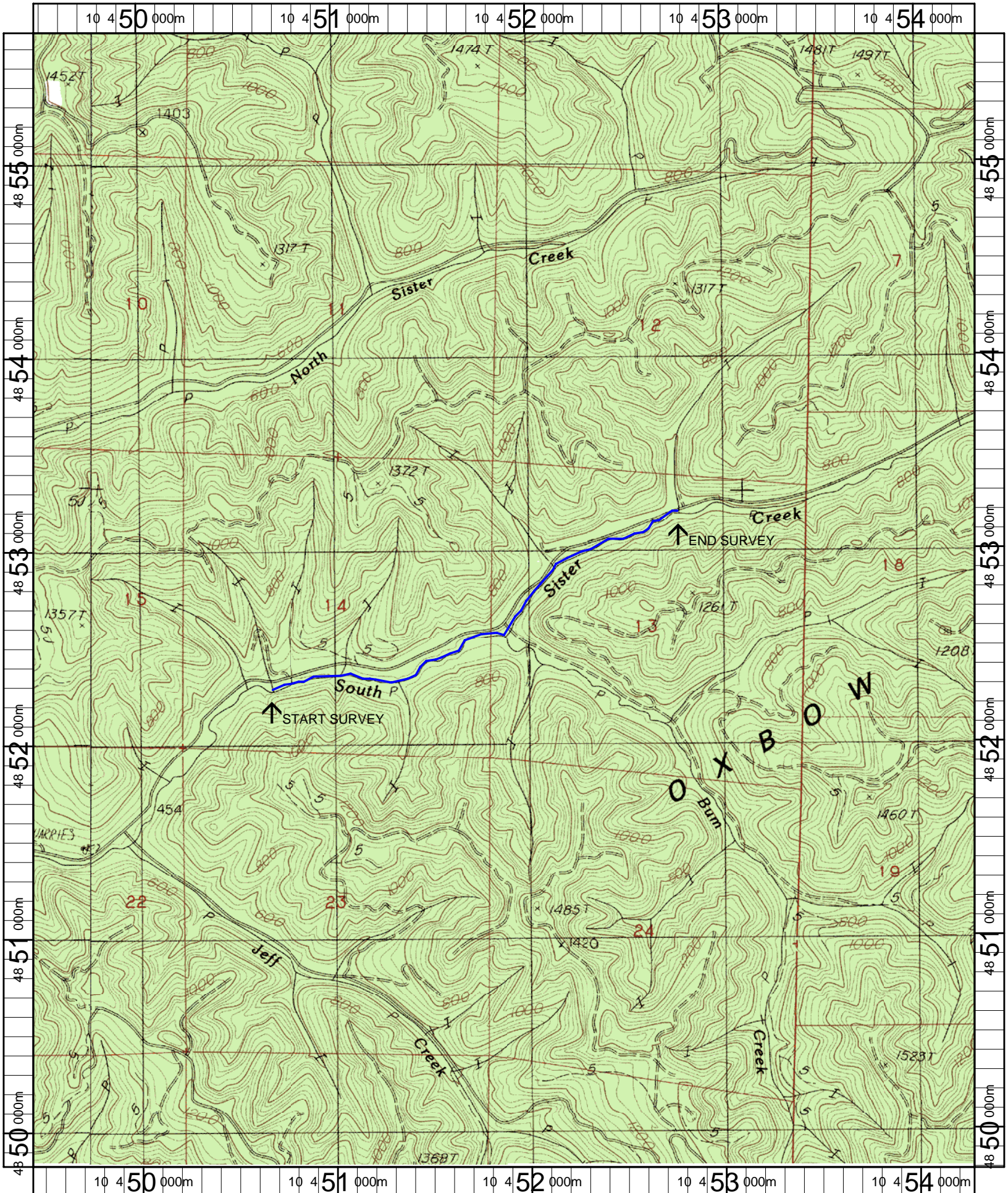
UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
69	SS	00	1436.3	HS	BOULDERS PLACED IN STREAM
71	SS	11	1452.8	HS	ODFW SIGN
72	RI	11	1452.8	BV	ACW=7.5
73	SS	11	1452.8	HS	BOULDERS
75	SS	00	1475.3	HS	BOULDERS
76	DP	00	1498.3	CS/CS, BC	
77	SC	00	1502.8		ODFW FLAG HAB
78	LP	00	1533.8	HS	COHO JUVENILES
81	LP	01	1556.8	HS	LOGS
82	SC	01	1560.8	HS	
84	PD	02	1579.8	HS	SAME LOGJAM
89	SS	00	1620.3	HS	LOGJAM
93	SR	02	1665.8		BEDROCK IS HARDPAN SILT
95	SS	01	1669.3	HS	LOGJAM
97	LP	01	1713.8	HS	LOGJAM
99	LP	00	1750.8	HS	LOGJAM
102	RI	01	1837.8	HS	BOULDERS
104	SS	00	1840.8	HS	BOULDERS AND LOGS
106	SS	00	1855.8	HS	BOULDERS
107	DP	01	1895.8	TJ/, HS	BOULDERS
110	SS	00	1897.3	HS	BOULDERS

Comment Summary

Restoration Monitoring Sites 2007

MONITORING AREA: 4-UMP SITE ID: 250 SOUTH SISTER CREEK POST-TX

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR
112	LP	01	1935.3	/TJ	
113	CB	11	1935.3		ACW=.8
115	LP	00	1977.3	HS	LOGJAM
120	RI	00	2138.3	/SS	
126	LP	00	2247.3	CS/	
128	DC	11	2268.3		ACW=0.8
130	LP	00	2297.3		JUVENILE COHO
132	LP	00	2343.3		NO STEP
133	RI	00	2393.3	/SS	.5M DP, 2M LONG POOL



Name: GUNTER
 Date: 5/9/2007
 Scale: 1 inch equals 2000 feet

Location: 10 451874 E 4852738 N
 Caption: SOUTH SISTER CREEK RESTORATION SITE - SMITH BASIN