

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

STREAM: Sugar Creek (S-189)
BASIN: Sixes River
SURVEY TYPE: Post-Tx
DATE: August 7, 2003
SURVEY CREW: Chelsey Girt, Lisa Biggs
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.7 km²
USGS MAPS: Barklow Mtn.
ECOREGION: Coast Range California Extension

GENERAL DESCRIPTION:

The Sugar Creek habitat survey extended 560 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.3 (range: 2.0-15.0). Land use for the reach was second growth (15-30 cm dbh) and large (30-50 cm dbh) trees. The average unit gradient was 2.9 percent. Scour pools (32%), riffles (28%) and rapids (24%) dominated stream habitat. Gravel (35%), bedrock (26%) and sand (26%) dominated stream substrate. Wood volume was high at 34.1 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

T32S-R13W-S02SE

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	6.3	VWI Range:	2 - 15

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	560	1,510	0
Secondary	10	15	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	2.5	Width	5.7	7.6	9.1
Depth	0.24	Height	0.5	0.9	1.8
		W:D ratio	12.7	Entrenchment	1.4

Stream Flow Type:	LF	Water temp (C):	15.0 - 15.0
Avg. Unit Gradient:	2.9%	Habitat Units/100m:	9.8

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	LT
Riparian Vegetation:	M15	G

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	37%	Reach avg: 90%
Undercut Banks:	10%	Range: 42 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	153	27.3
Volume (m ³):	191	34.1
Key pieces (>=10m x 0.60m):	4	0.7

OREGON DEPARTMENT OF FISH AND WILDLIFE

SUGAR CREEK POST-TX (S-189)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

8/7/03

REACH 1		T32S-R13W-S02SE					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	2	45	3.5	0.15	144	0	0	5	5	3	0	87	
CULVERT CROSSING	4	26	1.8	0.38	56	0	0	4	10	0	0	86	
POOL-BACKWATER	2	7	1.7	0.20	10	0	7	59	33	0	0	0	
POOL-ISOLATED	2	3	1.8	0.15	6	0	12	69	14	0	0	5	
POOL-LATERAL SCOUR	11	102	2.8	0.39	277	0	8	43	31	2	0	16	
POOL-STRAIGHT SCOUR	6	54	4.0	0.55	207	2	8	29	10	2	0	52	
RAPID/BOULDERS	9	141	2.9	0.11	365	25	0	13	37	25	5	19	
RIFFLE	10	150	2.0	0.11	313	3	1	22	61	9	0	7	
RIFFLE W/ POCKETS	1	25	4.5	0.10	113	2	0	30	60	10	0	0	
STEP/BEDROCK	1	1	1.0	0.05	1	0	0	0	5	0	0	95	
STEP/COBBLE	6	16	1.9	0.20	34	1	2	15	49	20	0	13	
STEP/LOG	2	1	1.1	0.01	1	0	7	30	63	0	0	0	
Total:	56	570	2.5	0.24	1,526	33	Avg	4	26	35	9	1	26

HABITAT SUMMARY									
Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders		10
					(m ²)	Percent	Number	(# / 100m ²)	
Dammed & BW Pools	4	10	1.7	0.18	15	0.99%	0	0.0	
Scour Pools	17	157	3.2	0.44	484	31.72%	2	0.4	
Glides	0	0			0	0.00%	0	0.0	
Riffles	11	175	2.2	0.10	426	27.90%	5	1.2	
Rapids	9	141	2.9	0.11	365	23.95%	25	6.8	
Cascades	2	45	3.5	0.15	144	9.45%	0	0.0	
Step/Falls	9	17	1.6	0.14	36	2.34%	1	2.8	
Dry	0	0			0	0.00%	0	0.0	
Culverts	4	26	1.8	0.38	56	3.65%	0	0.0	

POOL SUMMARY

	Total	# / Km
All Pools:	21	36.8
Pools >=1m deep:	0	0.0
Complex pools (LWD pieces>=3):	8	14.0
Pool frequency (channel widths/pool):	4.7	
Residual pool depth (avg):	0.36	

STREAM SUMMARY

SUGAR CREEK POST-TX (S-189)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
56	570	2.5	0.24	1,526	4	26	35	9	1	26	33

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	15	0.99%
Scour Pools	484	31.72%
Glides	0	0.00%
Riffles	426	27.90%
Rapids	365	23.95%
Cascades	144	9.45%
Step/Falls	36	2.34%
Dry	0	0.00%
Culverts	56	3.65%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

Total hardwoods/1000	1219
Total conifers/1000 ft	549
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	10.0	2.0	3.3	2.7	0.7	4.7	14.0
15-30cm	0.7	2.0	0.3	1.7	2.3	0.3	3.3	4.0
30-50cm	0.3	1.0	0.3	0.7	0.0	0.0	0.7	1.7
50-90cm	0.0	0.3	0.0	0.0	0.3	0.0	0.3	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	1.0	13.3	2.7	5.7	5.3	1.0	3.0	6.7

Canopy closure and ground cover

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	85	68	62
Shrub cover	9	13	9
Grass/forb cover	51	44	18

Predominant landform in each zone

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	50	50	17
High terrace	50	33	50
Low terrace	0	0	0
Floodplain	0	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	17	33
Riprap	0	0	0
Surface slope (%)	32	23	7

Summary of Riparian Zone (0-30m) for all reaches**3 transects****Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream**

Total hardwoods/1000	1219
Total conifers/1000 ft	549
Total conifers >20" dbh/1000 ft	20
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

<u>Diameter class (cm)</u>	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	4.7	14.0
15-30cm	3.3	4.0
30-50cm	0.7	1.7
50-90cm	0.3	0.3
>90cm	0.0	0.0

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	RT	1	HS	15	90	0	40	Conifer							
								Hardwood	3	2					
12	RT	2	HS	60	40	75	15	Conifer				1			
								Hardwood							
12	LF	3	HT	0	95	5	5	Conifer	5	5				REPROD	
								Hardwood	2						
12	LF	2	HS	40	95	0	40	Conifer							
								Hardwood	1		1				
12	LF	1	HT	0	95	15	60	Conifer						ALDER	
								Hardwood		1	1				
12	RT	3	RB	0	5	5	20	Conifer						5M GRAVEL, NO TREES	
								Hardwood							
23	RT	3	HT	0	90	45	45	Conifer						ALDER	
								Hardwood		1					
23	RT	2	HT	0	75	0	90	Conifer							
								Hardwood	1	2					
23	RT	1	HT	0	65	0	60	Conifer			2	1			
								Hardwood	10						
23	LF	3	HT	0	90	0	10	Conifer	2	2				DOUG FIR	
								Hardwood							
23	LF	2	HT	0	90	5	5	Conifer	5	1				DOUG FIR	
								Hardwood							
23	LF	1	HS	95	95	20	50	Conifer						MAPLE LG VINE MAPLE SM ALDER	
								Hardwood	2			1			
32	RT	1	HT	0	85	15	65	Conifer							
								Hardwood		2	2				
32	LF	3	HS	40	90	0	20	Conifer	1			1		HEMLOCK	
								Hardwood							
32	LF	2	HS	40	70	0	75	Conifer	1					ALDERS	
								Hardwood	8						
32	LF	1	HS	80	80	5	30	Conifer						VINE MAPLE	
								Hardwood	15	1					
32	RT	2	RB	0	40	0	40	Conifer						6M RB, ALDER	
								Hardwood		3	1				
32	RT	3	RB	0	0	0	5	Conifer						NO TREES	
								Hardwood							

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: **5-SC** SITE ID: **189** **SUGAR CREEK POST-TX (S-189)**

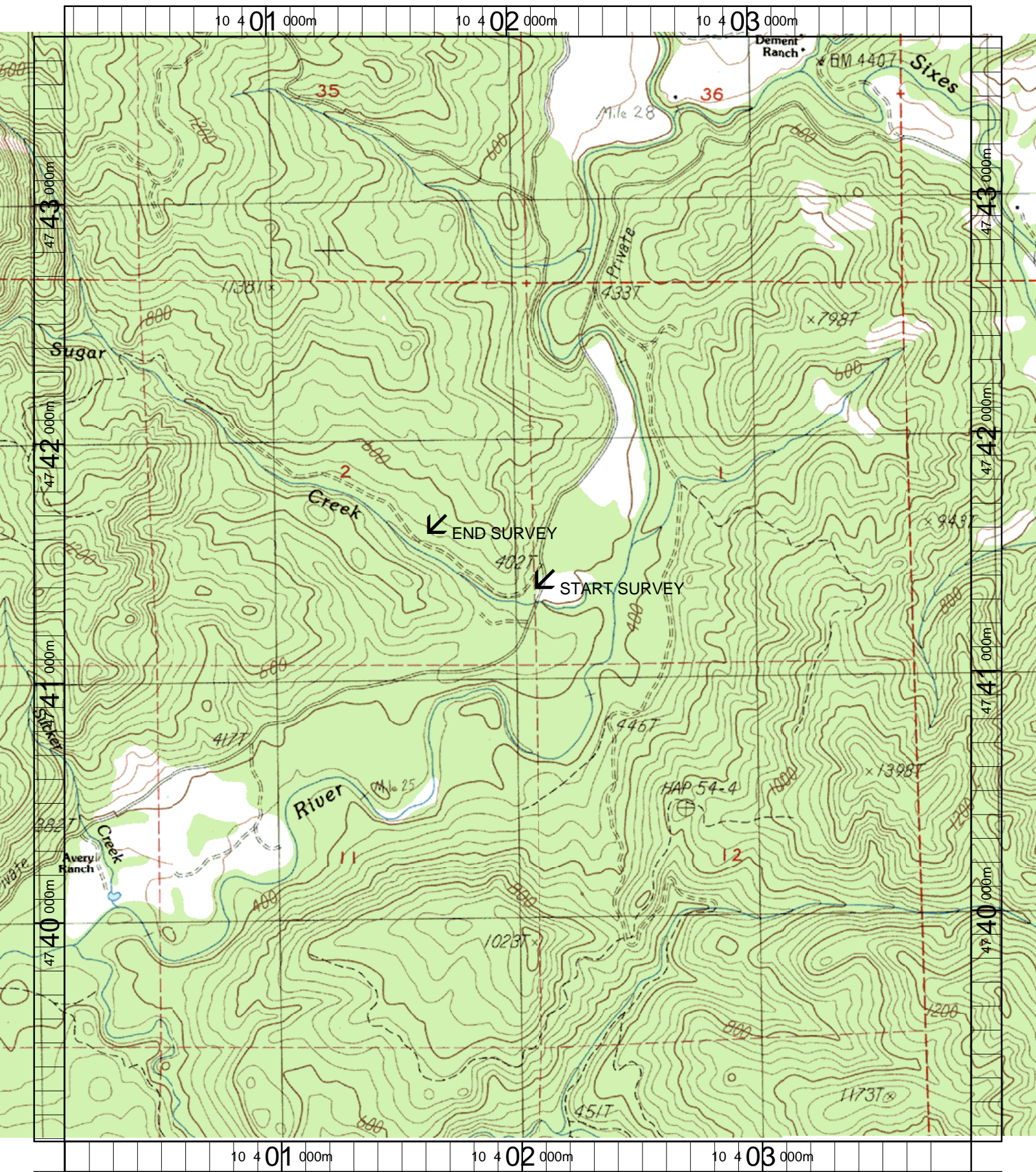
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	CC	00	5	CC	POOL LP	POOL @ BEGINNING OF CC
2	CC	00	5.2	CC	SR H=.4	STEP OVER BEDROCK
3	CC	00	9.7	CC	RR	RAPID OVER BEDROCK
4	CC	00	25.5	CC	LP	LP- M EXTENDS PAST CC
5	RB	01	50.5		T=15 DEG C 9:40 AM	PHOTO 114- REACH 1 PHOT
7	SR	00	51.1		H=.4	
8	RI	00	63.6			SALMONIDS
9	CR	00	79.9	HS		UNCABLED
12	LP	00	131.1			SALMONIDS RIP 1 PHOTO 11
14	SP	01	147.9			6" CUTTHROAT
23	RB	00	260.7			RIP 2 PHOTO 116= LF BANK
24	LP	00	272.3	WL		RSN
25	CR	00	300.6	HS		UNCABLED
29	LP	00	358.5	HS, WL		UNCABLED, FROG, SALMONI
30	SL	00	358.8		H=.35	
32	RI	00	383.5			RIP 3 PHOTO 117= L BANK
36	SP	00	400.9	HS		
37	SC	00	401.2		H=.8	
38	RB	00	417.4	HS		
39	LP	00	425.9			SALMONIDS
41	LP	00	433.6	HS		

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: **5-SC** SITE ID: **189** **SUGAR CREEK POST-TX (S-189)**

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
44	SC	00	454.8	/SS		DRY
45	LP	00	465.7	HS		
47	LP	01	488.3	WL		RSN, SALMONIDS
50	SP	00	512.9	DJ, HS		SALMONIDS
52	LP	00	530.2	DJ, HS		
53	SL	00	530.7		H=.7	
55	BW	10	551.1	WL		RSN, FISH
56	LP	00	560.1			SALMONIDS THROUGHOUT



Name: BARKLOW MT
 Date: 6/11/2003
 Scale: 1 inch equals 1666 feet

Location: 10 402010 E 4741372 N
 Caption: SUGAR CREEK RESTORATION SITE - SIXES BASIN