

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

STREAM: Argue Creek (UMP-183)  
BASIN: Smith River  
SURVEY TYPE: Post-Tx  
DATE: 8/8/2006  
SURVEY CREW: Jennifer Jacobs, Andy Livesay  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 26.06 km<sup>2</sup>  
USGS MAPS: Twin Sisters  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Argue Creek habitat survey extended 504 meters. The channel was hillslope constrained within a narrow valley floor. The average valley width index was 3.6 (range: 1.8-9.8). Land use for the reach was second growth timber (15-30 cm dbh). The average unit gradient was 1.8 percent. Scour pools (57%) and riffles (24%) dominated stream habitat. Gravel (45%) and fines (23%) dominated stream substrate. Wood volume was high at 59.7 m<sup>3</sup>/100m.

**COMMENTS:**

The crew identified a potential barrier to upstream fish migration at unit 43 (471.8 meters) at a debris jam at an old bridge.

The crew noted several habitat structures during the survey made up of placed logs and boulders.

A culvert crossing was identified at unit 2 (26 meters) that was 3 meters in diameter, and was embedded in the stream channel.

REACH 1

T21S-R08W-S05SW

REACH 1

**Valley and Channel Summary**

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	100%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	3.6	VWI Range:	1.5 - 9.8

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	100%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	0%	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	504	1,285	0
Secondary Channel	0	0	0
Off-Channel Units	20	26	0

Channel Dimensions (m)

<u>Wetted</u>	<u>Active</u>	<u>Floodprone</u> n = 5	<u>First Terrace</u> n = 5
Width: 2.5	Width: 7.1	11.0 ( 6.5 - 15 )	12.7 ( 7 - 19 )
Depth: 0.21	Height: 0.5	1.0 ( 0.84 - 1.1 )	1.5 ( 1 - 1.8 )

W:D ratio: 14.7

Entrenchment (ACW:FPW ratio): 1.5

Stream Flow Type: LF

Habitat Units/100m (total channel length): 9.0

Average Unit Gradient: 1.8%

Habitat Units/100m (primary channel length): 9.3

Water temperature (°C): 15.0 - 15.0

**Riparian, Bank, and Wood Summary**

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

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	7%	Reach avg: 96%
Undercut Banks:	7%	Range: 78 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m primary channel</u>
All pieces (>=3m x 0.15m):	137	27.2
Volume (m <sup>3</sup> ):	241	47.9
Key pieces (>=12m x 0.60m):	17	3.4

OREGON DEPT OF FISH AND WILDLIFE

ARGUE CREEK POST-TX (4-UJP, 183)

HABITAT INVENTORY

Report Date: 3/5/2007

Survey Date:

8/8/2006

REACH 1		T21S-R08W-S05SW					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	12	3.0	0.03	35	14	0	10	10	19	52	10
CULVERT CROSSING	1	18	1.6	0.03	29	6	0	5	75	15	5	0
GLIDE	1	16	3.5	0.11	56	1	0	19	10	10	0	62
POOL-ISOLATED	1	20	1.3	0.22	26	0	0	90	0	10	0	0
POOL-LATERAL SCOUR	19	239	3.1	0.44	718	23	3	34	32	11	4	15
POOL-STRAIGHT SCOUR	1	8	4.0	0.60	30	0	0	50	40	10	0	0
RAPID/BOULDERS	3	28	1.4	0.02	39	0	0	27	67	7	0	0
RIFFLE	9	153	1.8	0.04	314	38	1	8	47	23	4	18
STEP/BEDROCK	1	4	4.2	0.01	17	0	0	0	0	0	0	100
STEP/COBBLE	9	28	2.0	0.02	48	5	0	6	76	15	3	0
STEP/LOG	1	1	0.8	0.02	0	0	0	20	80	0	0	0
<b>Total:</b>	<b>47</b>	<b>524</b>	<b>2.5</b>	<b>0.21</b>	<b>1,311</b>	<b>87</b>	<b>Avg: 1</b>	<b>22</b>	<b>45</b>	<b>14</b>	<b>4</b>	<b>13</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	20	1.3	0.22	26	1.98%	0	0.0	
Scour Pools	20	246	3.2	0.45	748	57.06%	23	3.1	
Glides	1	16	3.5	0.11	56	4.27%	1	1.8	
Riffles	9	153	1.8	0.04	314	23.92%	38	12.1	
Rapids	3	28	1.4	0.02	39	3.00%	0	0.0	
Cascades	1	12	3.0	0.03	35	2.63%	14	40.6	
Step/Falls	11	32	2.1	0.02	65	4.95%	5	7.7	
Dry	0	0			0	0.00%	0	0.0	
Culverts	1	18	1.6	0.03	29	2.20%	6	20.8	

POOL SUMMARY			
	<u>Total</u>	Total of all Channel Lengths	Primary Channel Length
		<u># / Km</u>	<u># / Km</u>
All Pools:	21	40.1	41.7
Pools >=1m deep:	1	1.9	2.0
Complex pools (LWD pieces>=3):	8	15.3	15.9
Pool frequency (channel widths/pool):	3.5		
Residual pool depth (avg):	0.43		

OREGON DEPARTMENT OF FISH AND WILDLIFE  
HABITAT INVENTORY

ARGUE CREEK POST-TX  
GCG: 4-UMP SITE ID: 183

Survey Date 8/8/2006  
Report Date: 3/5/2007

RIPARIAN ZONE  
VEGETATION SUMMARY

REACH 1

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

Total hardwoods/1000	833
Total conifers/1000 ft	325
Total conifers >20" dbh/1000 ft	0
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	0.3	0.3	0.3	0.3	0.0	5.0	0.7	5.7
15-30cm	1.7	2.3	1.3	3.0	1.3	2.0	4.3	7.3
30-50cm	0.0	0.7	0.3	0.0	0.0	0.0	0.3	0.7
50-90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	2.0	3.3	2.0	3.3	1.3	7.0	1.8	4.6

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	82		81		86	
Shrub cover	31		17		10	
Grass/forb cover	62		77		76	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10 - 20 meters		Zone 3 20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	17		83		100	
High terrace	33		17		0	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	50		0		0	
Riprap	0		0		0	
Surface slope (%)	17		63		73	

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	833
Total conifers/1000 ft	325
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

**Average number of trees in a 5-m wide band**

Diameter class (cm)	Zones 1-3	
	<u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.7	5.7
15-30cm	4.3	7.3
30-50cm	0.3	0.7
50-90cm	0.0	0.0
>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		
15	RT	3	HS	75	80	45	45	Conifer							RB/HS
								Hardwood	1	4					
15	LF	1	HS	100	85	0	80	Conifer							
								Hardwood		3					
15	LF	2	HS	85	80	0	90	Conifer							RB/HS
								Hardwood	1	5					
15	LF	3	HS	85	85	0	70	Conifer							
								Hardwood	3	2					
15	RT	1	HT	0	75	90	10	Conifer							FP/HT
								Hardwood		1					
15	RT	2	HT	0	80	65	30	Conifer							
								Hardwood		3					
25	RT	1	RB	0	75	45	45	Conifer							HS/RB
								Hardwood		2					
25	LF	3	HS	75	90	0	85	Conifer							
								Hardwood	3						
25	LF	2	HS	95	85	0	90	Conifer	1	1					HS/RB
								Hardwood		1					
25	RT	3	HS	70	85	5	85	Conifer			2				
								Hardwood	1						
25	LF	1	HT	0	80	15	80	Conifer							FP/HT/HS
								Hardwood	1		1				
25	RT	2	HS	70	75	25	70	Conifer			1				
								Hardwood							
37	LF	2	HS	75	85	0	90	Conifer			1				
								Hardwood							
37	RT	2	HS	50	80	10	90	Conifer			1	1			RB/HS
								Hardwood							
37	RT	3	HS	60	85	10	80	Conifer			1				
								Hardwood	3						
37	LF	3	HS	75	90	0	90	Conifer			1				
								Hardwood	4						
37	LF	1	RB	0	90	10	85	Conifer							HT/RB
								Hardwood			1	1			
37	RT	1	RB	0	85	25	70	Conifer	1	5					FP/RB
								Hardwood							

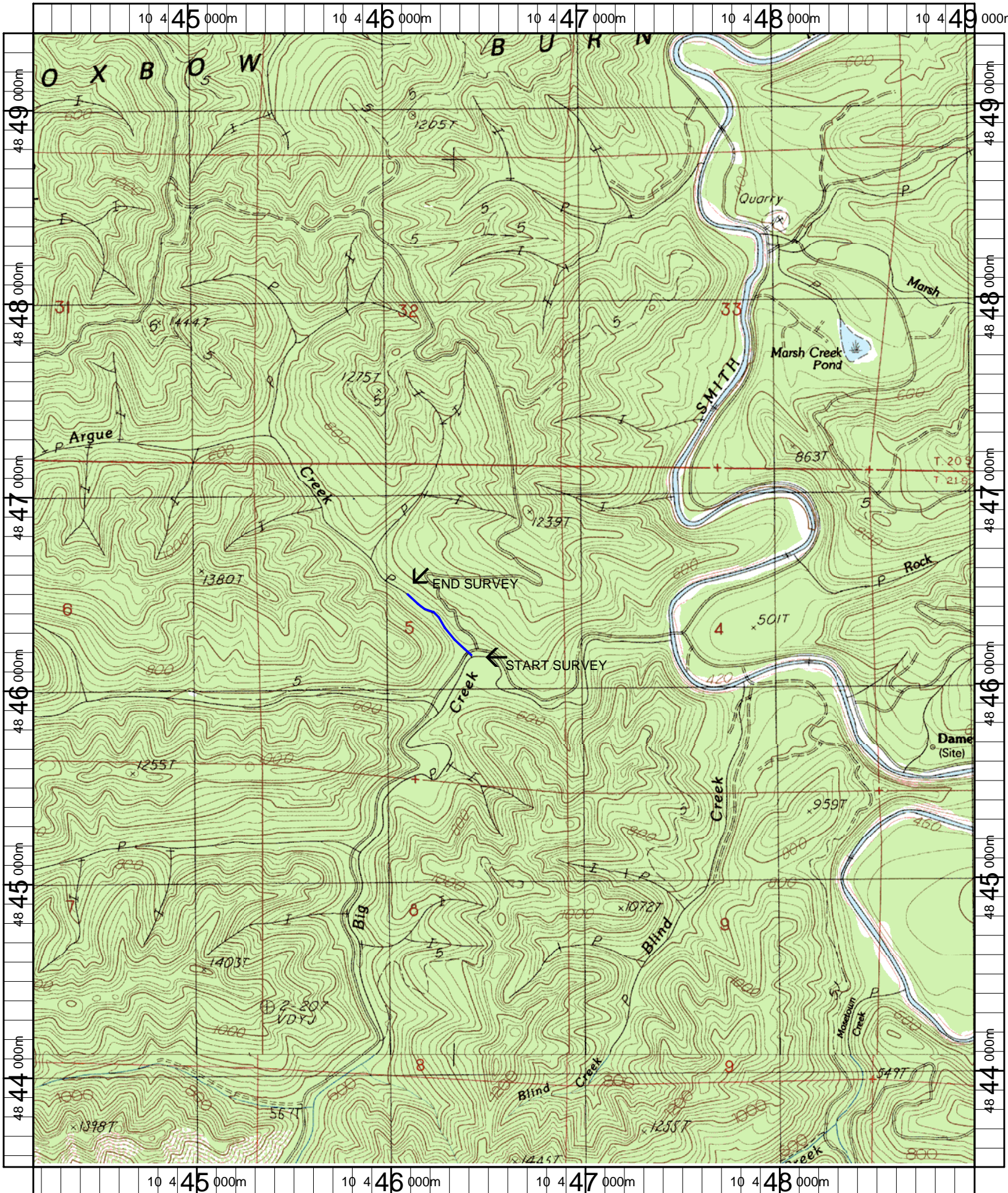
# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: **4-UMP**    SITE ID: **183**    ARGUE CREEK POST-TX

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
2	CC	00	26	CC	D=3M, METAL, NO BOTTOM	DIA=3M, NATURAL SUBST
3	RI	00	33.5			CONCRETE IN STREAM
6	LP	00	68.5	HS		PLACED LOGS AND BOUL
7	RI	00	78			CLAY PRESENT
8	LP	00	88.5	DJ		
15	SC	00	133.1		3D-0446341-4846270	
20	LP	00	184.9	HS		PLACED LOGS AND BOUL
22	LP	00	232.9	HS		PLACED LOGS AND BOUL
25	SC	00	255.8		3D-0446259-4846348	
29	RI	00	338.3	HS		PLACED BOULDERS
33	SL	00	352.3		H=1.50M	
37	RI	00	404.3	HS	3D-0446184-4846413	PLACED LOGS AND BOUL
42	CB	00	461.8			OLD BRIDGE
43	LP	00	471.8	DJ, PN	OLD BC	FLows UNDER & THRU D
45	LP	00	497.3			COHO FRY
47	LP	00	503.8		T=15.0C, NO GPS COVERAG	COHO FRY, END SIGN /AL





Name: TWIN SISTERS  
 Date: 5/23/2006  
 Scale: 1 inch equals 2000 feet

Location: 10 446603 E 4846451 N  
 Caption: ARGUE CREEK RESTORATION SITE - SMITH BASIN