

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

STREAM: Weatherly Creek (U-150)  
BASIN: Umpqua River  
SURVEY TYPE: Post-Tx  
DATE: July 2, 2003  
SURVEY CREW: Jeremiah Bernier, Alex Higgins  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 34.4 km<sup>2</sup>  
USGS MAPS: Devils Graveyard  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Weatherly Creek habitat survey extended 538 meters. The channel was constrained by hillslopes in a moderate V-shaped valley. The average valley width index was 2.3 (range: 1.8-3.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.6 percent. Rapids (55%) dominated stream habitat. Bedrock (40%) and sand (23%) dominated stream substrate. Wood volume was low at 19.7 m<sup>3</sup>/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

T22S-R09W-S02NW

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	100%	Multiple Terraces	0%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index 2.3		VWI Range: 1.8 - 3	

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	538	4,255	0
Secondary	60	118	0

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	6.3	Width	11.9	17.2	24.5
Depth	0.34	Height	0.7	1.4	1.8
W:D ratio		18.5	Entrenchment		1.5

Stream Flow Type: MF                      Water temp (C): 11.5 - 11.5  
 Avg. Unit Gradient: 1.6%                  Habitat Units/100m: 5.2

**Riparian, Bank, and Wood Summary**

	<u>Primary</u>	<u>Secondary</u>
Land Use:	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: 98%
Undercut Banks:	9%	Range: 92 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	125	23.2
Volume (m <sup>3</sup> ):	106	19.7
Key pieces (>=10m x 0.60m):	2	0.4

OREGON DEPARTMENT OF FISH AND WILDLIFE

WEATHERLEY CREEK POST-TX (U-150)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

7/2/03

REACH 1		T22S-R09W-S02NW					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/BEDROCK	1	8	0.8	0.02	7	0	0	5	5	0	0	90	
GLIDE	1	30	8.1	0.35	245	7	0	10	10	0	10	70	
POOL-DAMMED	2	37	11.5	0.55	510	34	0	50	3	3	20	25	
POOL-LATERAL SCOUR	7	116	6.5	0.67	811	40	6	38	11	10	12	24	
RAPID/BEDROCK	6	173	8.2	0.12	1,427	145	0	14	4	2	9	72	
RAPID/BOULDERS	4	113	8.3	0.24	963	120	0	15	15	17	25	28	
RIFFLE	4	68	2.2	0.15	202	34	3	41	31	8	10	8	
RIFFLE W/ POCKETS	2	38	3.6	0.25	131	25	0	13	23	18	8	40	
STEP/BEDROCK	2	4	4.0	0.10	16	1	0	0	0	0	0	100	
STEP/BOULDERS	2	10	6.1	0.65	62	27	0	0	20	45	35	0	
<b>Total:</b>	<b>31</b>	<b>599</b>	<b>6.3</b>	<b>0.34</b>	<b>4,373</b>	<b>433</b>	<b>Avg</b>	<b>2</b>	<b>23</b>	<b>13</b>	<b>10</b>	<b>13</b>	<b>40</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	2	37	11.5	0.55	510	11.67%	34	6.7
Scour Pools	7	116	6.5	0.67	811	18.54%	40	4.9
Glides	1	30	8.1	0.35	245	5.59%	7	2.9
Riffles	6	106	2.7	0.18	333	7.61%	59	17.7
Rapids	10	286	8.3	0.17	2,390	54.66%	265	11.1
Cascades	1	8	0.8	0.02	7	0.15%	0	0.0
Step/Falls	4	14	5.1	0.38	78	1.78%	28	36.0
Dry	0	0			0	0.00%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY		
	<u>Total</u>	<u># / Km</u>
All Pools:	9	15.0
Pools >=1m deep:	0	0.0
Complex pools (LWD pieces>=3):	4	6.7
Pool frequency (channel widths/pool):	5.6	
Residual pool depth (avg):	0.49	

**STREAM SUMMARY**

**WEATHERLEY CREEK POST-TX (U-150)**

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
31	599	6.3	0.34	4,373	2	23	13	10	13	40	433

Habitat Group	Wetted Area	
	(m <sup>2</sup> )	Percent
Dammed & BW Pools	510	11.67%
Scour Pools	811	18.54%
Glides	245	5.59%
Riffles	333	7.61%
Rapids	2,390	54.66%
Cascades	7	0.15%
Step/Falls	78	1.78%
Dry	0	0.00%
Culverts	0	0.00%

**RIPARIAN ZONE VEGETATION SUMMARY**

REACH 1	REACH 1
<b>Summary of Riparian Zone (0-30m) 3 transects</b>	
Total hardwoods/1000	569
Total conifers/1000 ft	81
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	2.3	0.0	0.0	0.0	0.0	0.0	2.3
15-30cm	0.0	3.3	0.3	0.0	0.3	0.0	0.7	3.3
30-50cm	0.0	3.3	0.0	0.3	0.3	0.0	0.3	3.7
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	9.0	0.3	0.3	1.0	0.0	0.4	3.1

**Canopy closure and ground cover**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Canopy closure	72	71	61
Shrub cover	40	31	15
Grass/forb cover	32	47	40

**Predominant landform in each zone**

	Zone 1	Zone 2	Zone 3
	0-10 meters (%)	10 - 20 meters (%)	20 - 30 meters (%)
Hillslope	67	67	67
High terrace	0	17	0
Low terrace	0	0	0
Floodplain	33	0	0
Wetland/meadow	0	0	0
Stream channel	0	0	0
Roadbed/Railroad	0	17	33
Riprap	0	0	0
Surface slope (%)	17	16	16

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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	569
Total conifers/1000 ft	81
Total conifers >20" dbh/1000 ft	20
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	0.0	2.3
15-30cm	0.7	3.3
30-50cm	0.3	3.7
50-90cm	0.3	0.0
>90cm	0.0	0.0

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# Comment Summary

## Oregon Plan Monitoring Sites 2003

MONITORING AREA: 4-UMP    SITE ID: 150    WEATHERLEY CREEK POST-TX (U-1)

UNIT#	TYPE	CHAN	DIST. (m)	COMMENTS	NOTE ESTIMATOR	NOTE NUMERATOR
1	RR	00	19.3	BC CS/CS	CS//CS BC	BLM ROAD 22-9-14
2	GL	00	49.5		CS/CS PINK FLAG="END3	
3	SR	00	51.7		H=.4 CS/	
4	LP	00	79.7	CS/	CS/	PINK FLAG-SNORKLE POOL
6	RB	00	127.7	HS	HS	LOGS AND BOULDERS
8	LP	00	163.4	HS	PINK FLAG "SNORKLE PO	LOGS AND BOULDERS
9	RI	00	190.6	HS	HS	1 LOG OVER
10	RB	00	218.5		PINK FLAG"SNORKLE PO	5 HAB BOULDERS
11	LP	00	236.9		PINK FLAG "SNORKLE PO	PINK FLAG-SNORKLE POOL
13	SB	01	253		H=.3	
14	RP	01	267.8	DJ	DJ	
16	SB	00	274.8	LA/	LA/	
17	LP	00	297.3		SNORKLE POOL 5	RIP 2
20	RB	00	350.9			PINK FLAG-SNORKLE POOL
21	RR	01	374.9	HS	PHOTOPOINT 1-PINK FLA	BOULDER SITE 5-20 BOULDE
24	DP	00	421.3	DJ WL	HS	MOUSE IN WOOD JAM
25	RP	02	421.3		SNORKLE POOL #8	
27	RR	00	471.3			RIP 3; PHOTO POINT 2;HAB
28	RR	01	490.6	/SS,TJ	PINK FLAG S.P. #9 /TJ	
29	CR	11	490.6		ACW=1.4 T=11.5	
30	RR	00	524.2	HS	CE/	BOULDER

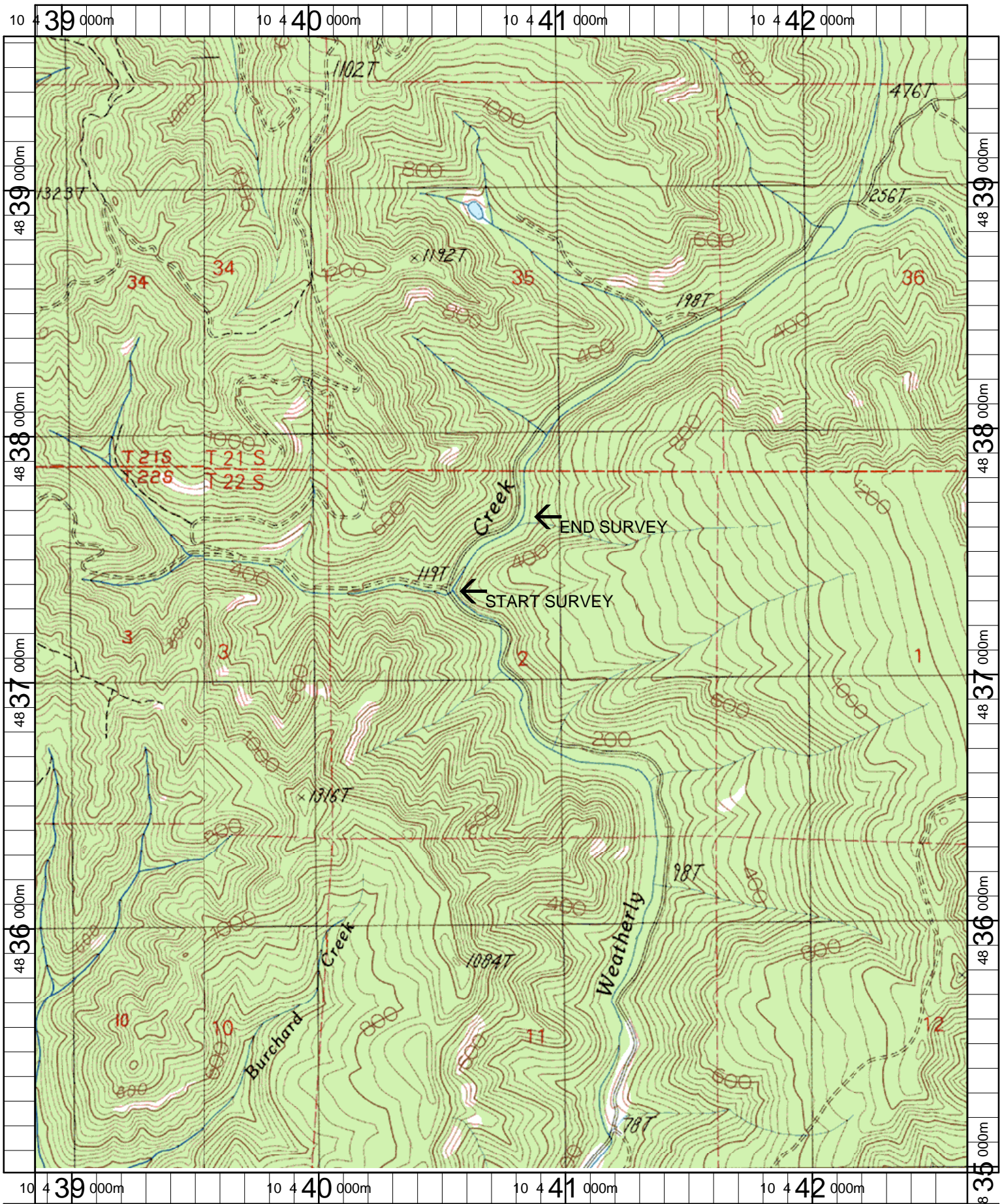


# Comment Summary

## Oregon Plan Monitoring Sites 2003

MONITORING AREA: 4-UMP    SITE ID: 150    WEATHERLEY CREEK POST-TX (U-1)

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
31	LP	00	538.3	HS	END HS	LOGS AND BOULDERS



Name: DEVILS GRAVEYARD  
 Date: 6/18/2003  
 Scale: 1 inch equals 1666 feet

Location: 10 440759 E 4837301 N  
 Caption: WEATHERLEY CREEK RESTORATION SITE - UMPQUA BASIN