

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

STREAM: Wolf Creek (MC-108)  
BASIN: Yaquina River  
SURVEY TYPE: Pre-Tx  
DATE: January 29, 2001  
SURVEY CREW: Eric Brown, Joe Zuccarello  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 15.0 km<sup>2</sup>  
USGS MAPS: Harlan  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Wolf Creek habitat survey extended 489 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.7 (range: 6.0 – 7.5). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.0 percent. Scour pools (40%) and riffles (38%) dominated stream habitat. Sand (30%), bedrock (30%) and gravel (27%) dominated stream substrate. Wood volume was low at 12.2 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 SUMMARY

REACH 1

T11S-R8W-S31NW

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 avg: 6.7 range: 6.0-7.5

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     | 489              | 2,918            | 0                |
| Secondary   | 33               | 49               | 0                |

Channel Dimensions (m)

| <u>Wetted</u> |      | <u>Active</u> |      | <u>Floodprone</u> | <u>First Terrace</u> |
|---------------|------|---------------|------|-------------------|----------------------|
| Width         | 5.6  | Width         | 6.2  | 13.3              | 16.8                 |
| Depth         | 0.33 | Height        | 0.6  | 1.2               | 2.6                  |
|               |      | W:D ratio     | 10.2 | Entrenchment      | 2.1                  |

Stream Flow Type: MF Water Temp: 5.0-5.0°C  
 Avg. Unit Gradient: 1.0% Habitat Units/100m: 5.0

Riparian, Bank, and Wood Summary

|                      | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use:            |                |                  |
| Riparian Vegetation: | D 57<br>D15    | S                |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding   | 0%                          | Reach avg: 0%           |
| Undercut Banks     | 0%                          | Range: 0- 0             |

Large Woody Debris

|                          | <u>Total</u> | <u>Total/100m</u> |
|--------------------------|--------------|-------------------|
| All pieces (≥3m x 0.15m) | 90           | 18.4              |
| Volume (m <sup>3</sup> ) | 59           | 12.2              |
| Key pieces (≥10m x 0.6m) | 0            | 0.0               |

HABITAT UNIT SUMMARY

REACH 1 T11S-R8W-S31NW REACH 1

HABITAT DETAIL

| Habitat Type        | Number<br>Units | Total<br>Length<br>(m) | Avg<br>Width<br>(m) | Avg<br>Depth<br>(m) | Total<br>Area<br>(m <sup>2</sup> ) | Large<br>Boulders<br>(#>0.5m) | Substrate<br>Percent Wetted Area |           |           |          |          |           |
|---------------------|-----------------|------------------------|---------------------|---------------------|------------------------------------|-------------------------------|----------------------------------|-----------|-----------|----------|----------|-----------|
|                     |                 |                        |                     |                     |                                    |                               | S/O                              | Snd       | Grvl      | Cbbl     | Bldr     | Bdrk      |
| CASCADE/BOULDERS    | 1               | 6                      | 0.3                 | 0.02                | 2                                  | 0                             | 0                                | 20        | 40        | 20       | 20       | 0         |
| CULVERT CROSSING    | 1               | 15                     | 4.1                 | 0.15                | 63                                 | 0                             | 5                                | 30        | 50        | 10       | 5        | 0         |
| GLIDE               | 2               | 67                     | 5.5                 | 0.28                | 347                                | 0                             | 3                                | 50        | 30        | 3        | 0        | 15        |
| POOL-ALCOVE         | 1               | 18                     | 2.3                 | 0.30                | 41                                 | 0                             | 100                              | 0         | 0         | 0        | 0        | 0         |
| POOL-LATERAL SCOUR  | 8               | 135                    | 6.4                 | 0.56                | 896                                | 0                             | 5                                | 39        | 14        | 3        | 1        | 38        |
| POOL-STRAIGHT SCOUR | 2               | 35                     | 8.3                 | 0.55                | 279                                | 0                             | 5                                | 33        | 10        | 3        | 3        | 48        |
| RAPID/BEDROCK       | 1               | 36                     | 4.2                 | 0.15                | 152                                | 0                             | 0                                | 6         | 6         | 0        | 0        | 89        |
| RIFFLE              | 9               | 203                    | 5.3                 | 0.20                | 1,140                              | 0                             | 2                                | 26        | 45        | 5        | 2        | 20        |
| STEP/BEDROCK        | 1               | 6                      | 8.2                 | 0.10                | 48                                 | 0                             | 5                                | 10        | 0         | 0        | 0        | 85        |
| <b>Total:</b>       | <b>26</b>       | <b>522</b>             | <b>5.6</b>          | <b>0.33</b>         | <b>2,967</b>                       | <b>0</b>                      | <b>Avg: 7</b>                    | <b>30</b> | <b>27</b> | <b>4</b> | <b>2</b> | <b>30</b> |

HABITAT SUMMARY

| Habitat Group     | No.<br>Units | Total<br>Length<br>(m) | Avg<br>Width<br>(m) | Avg<br>Depth<br>(m) | Wetted Area<br>(m <sup>2</sup> ) | Percent | Large Boulders<br>Number | #/100m <sup>2</sup> |
|-------------------|--------------|------------------------|---------------------|---------------------|----------------------------------|---------|--------------------------|---------------------|
| Dammed & BW Pools | 1            | 18                     | 2.3                 | 0.30                | 41                               | 1.39    | 0                        | 0.0                 |
| Scour Pools       | 10           | 170                    | 6.8                 | 0.56                | 1,175                            | 39.61   | 0                        | 0.0                 |
| Glides            | 2            | 67                     | 5.5                 | 0.28                | 347                              | 11.68   | 0                        | 0.0                 |
| Riffles           | 9            | 203                    | 5.3                 | 0.20                | 1,140                            | 38.42   | 0                        | 0.0                 |
| Rapids            | 1            | 36                     | 4.2                 | 0.15                | 152                              | 5.11    | 0                        | 0.0                 |
| Cascades          | 1            | 6                      | 0.3                 | 0.02                | 2                                | 0.06    | 0                        | 0.0                 |
| Step/Falls        | 1            | 6                      | 8.2                 | 0.10                | 48                               | 1.60    | 0                        | 0.0                 |
| Dry               | 0            | 0                      | -                   | -                   | 0                                | 0.00    | 0                        | 0.0                 |

POOL SUMMARY

|                                       | Total | #/Km |
|---------------------------------------|-------|------|
| All Pools                             | 11    | 21.1 |
| Pools ≥1m deep:                       | 0     | 0.0  |
| Complex pools (LWD pieces ≥3):        | 7     | 13.4 |
| Pool Frequency (channel widths/pool): | 7.6   |      |
| Residual pool depth (avg)             | 0.40m |      |

STREAM SUMMARY

WOLF CREEK PRE-TX

| Number<br>Units | Total<br>Length<br>(m) | Avg<br>Width<br>(m) | Avg<br>Depth<br>(m) | Total<br>Area<br>(m <sup>2</sup> ) | Substrate |      |      |      |      |      | Total<br>Large<br>Boulder |
|-----------------|------------------------|---------------------|---------------------|------------------------------------|-----------|------|------|------|------|------|---------------------------|
|                 |                        |                     |                     |                                    | S/O       | Sand | Grvl | Cbbl | Bldr | Bdrk |                           |
| 26              | 522                    | 5.6                 | 0.33                | 2,967                              | 7         | 30   | 27   | 4    | 2    | 30   | 0                         |

| Habitat Group   | Wetted Area       |         |
|-----------------|-------------------|---------|
|                 | (m <sup>2</sup> ) | Percent |
| Scour Pool      | 1,175             | 39.6    |
| Backwater Pools | 41                | 1.4     |
| Glide           | 347               | 11.7    |
| Riffle          | 1,140             | 38.4    |
| Rapid           | 152               | 5.1     |
| Cascade         | 2                 | 0.1     |
| Step            | 48                | 1.6     |
| Dry             | 0                 | 0.0     |

