

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

STREAM: Karl Creek (MS-356)  
BASIN: East Fork Coquille River  
SURVEY TYPE: Pre-Tx  
DATE: February 21, 2007  
SURVEY CREW: Andy Lanier, Laurel Moulton  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 8.3 km<sup>2</sup>  
USGS MAPS: Dora, Sitkum  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Karl Creek habitat survey extended 786 meters. The channel was constrained by hillslopes in a moderate V-shape valley. The average valley width index was 1.5 (range: 1-2.5). Land use for the reach was second growth timber (15-30 cm dbh). The average unit gradient was 2.9 percent. Rapids (51%) and scour pools (30%) dominated stream habitat. Gravel (35%) and boulders (27%) dominated stream substrate. Wood volume was high at 32.5 m<sup>3</sup>/100m.

**COMMENTS:**

There were no potential barriers to upstream fish migration in the surveyed length.

No habitat structures were noted in the survey.

REACH 1

T27S-R10W-S22SW

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         | 1.5  | VWI Range:                | 1 - 2.5 |

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   | 786               | 5,831            | 0                |
| Secondary Channel | 8                 | 16               | 0                |
| Off-Channel Units | 30                | 43               | 0                |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 5 | <u>First Terrace</u> n = 3 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 6.6    | Width: 10.3   | 14.1 ( 11 - 24 )        | 17.3 ( 12 - 25 )           |
| Depth: 0.64   | Height: 0.8   | 1.6 ( 1.4 - 2 )         | 2.0 ( 1.5 - 2.5 )          |

W:D ratio: 13.0                      Entrenchment (ACW:FPW ratio): 1.3  
 Stream Flow Type: MF              Habitat Units/100m (total channel length): 4.2  
 Average Unit Gradient: 2.9%      Habitat Units/100m (primary channel length): 4.5  
 Water temperature (°C): 6.5 - 6.5

**Riparian, Bank, and Wood Summary**

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

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):  | 133          | 16.9                                |
| Volume (m <sup>3</sup> ):   | 256          | 32.5                                |
| Key pieces (>=12m x 0.60m): | 8            | 1.0                                 |

OREGON DEPT OF FISH AND WILDLIFE

KARL CREEK PRE-TX (3-MS, 356)

HABITAT INVENTORY

Report Date: 4/25/2007

Survey Date:

2/21/2007

| REACH 1            |                 | T27S-R10W-S22SW        |                     |                     |                                    |                               | 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      | Cbl       | Bldr      | Bdrk     |
| CASCADE/BEDROCK    | 1               | 6                      | 1.5                 | 0.10                | 9                                  | 0                             | 0                                | 0        | 0         | 0         | 0         | 100      |
| CASCADE/BOULDERS   | 2               | 27                     | 2.4                 | 0.48                | 98                                 | 0                             | 3                                | 3        | 10        | 20        | 50        | 15       |
| POOL-ISOLATED      | 1               | 15                     | 1.5                 | 0.35                | 23                                 | 0                             | 100                              | 0        | 0         | 0         | 0         | 0        |
| POOL-LATERAL SCOUR | 8               | 179                    | 6.4                 | 1.09                | 1,174                              | 0                             | 2                                | 14       | 41        | 20        | 22        | 1        |
| POOL-PLUNGE        | 3               | 37                     | 11.3                | 1.63                | 418                                | 0                             | 2                                | 20       | 40        | 20        | 20        | 0        |
| POOL-TRENCH        | 1               | 36                     | 4.5                 | 1.70                | 162                                | 0                             | 0                                | 10       | 20        | 30        | 40        | 0        |
| RAPID/BOULDERS     | 9               | 389                    | 7.1                 | 0.33                | 3,032                              | 0                             | 0                                | 6        | 30        | 23        | 39        | 2        |
| RIFFLE             | 3               | 89                     | 5.5                 | 0.25                | 607                                | 0                             | 0                                | 8        | 71        | 13        | 7         | 0        |
| STEP/BOULDERS      | 3               | 18                     | 7.3                 | 0.35                | 125                                | 0                             | 0                                | 7        | 10        | 10        | 65        | 8        |
| STEP/COBBLE        | 3               | 26                     | 8.3                 | 0.28                | 226                                | 0                             | 0                                | 5        | 72        | 23        | 0         | 0        |
| STEP/LOG           | 1               | 2                      | 8.0                 | 0.20                | 16                                 | 0                             | 0                                | 5        | 19        | 38        | 19        | 19       |
| <b>Total:</b>      | <b>35</b>       | <b>824</b>             | <b>6.6</b>          | <b>0.64</b>         | <b>5,890</b>                       | <b>0</b>                      | <b>Avg: 4</b>                    | <b>9</b> | <b>35</b> | <b>19</b> | <b>27</b> | <b>6</b> |

| HABITAT SUMMARY   |                 |                        |                     |                     |                   |         |                |                          |  |
|-------------------|-----------------|------------------------|---------------------|---------------------|-------------------|---------|----------------|--------------------------|--|
| Habitat Group     | Number<br>Units | Total<br>Length<br>(m) | Avg<br>Width<br>(m) | Avg<br>Depth<br>(m) | Wetted Area       |         | Large Boulders |                          |  |
|                   |                 |                        |                     |                     | (m <sup>2</sup> ) | Percent | Number         | (# / 100m <sup>2</sup> ) |  |
| Dammed & BW Pools | 1               | 15                     | 1.5                 | 0.35                | 23                | 0.38%   | 0              | 0.0                      |  |
| Scour Pools       | 12              | 252                    | 7.5                 | 1.28                | 1,754             | 29.78%  | 0              | 0.0                      |  |
| Glides            | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Riffles           | 3               | 89                     | 5.5                 | 0.25                | 607               | 10.31%  | 0              | 0.0                      |  |
| Rapids            | 9               | 389                    | 7.1                 | 0.33                | 3,032             | 51.48%  | 0              | 0.0                      |  |
| Cascades          | 3               | 33                     | 2.1                 | 0.35                | 107               | 1.82%   | 0              | 0.0                      |  |
| Step/Falls        | 7               | 46                     | 7.9                 | 0.30                | 367               | 6.23%   | 0              | 0.0                      |  |
| Dry               | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Culverts          | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |

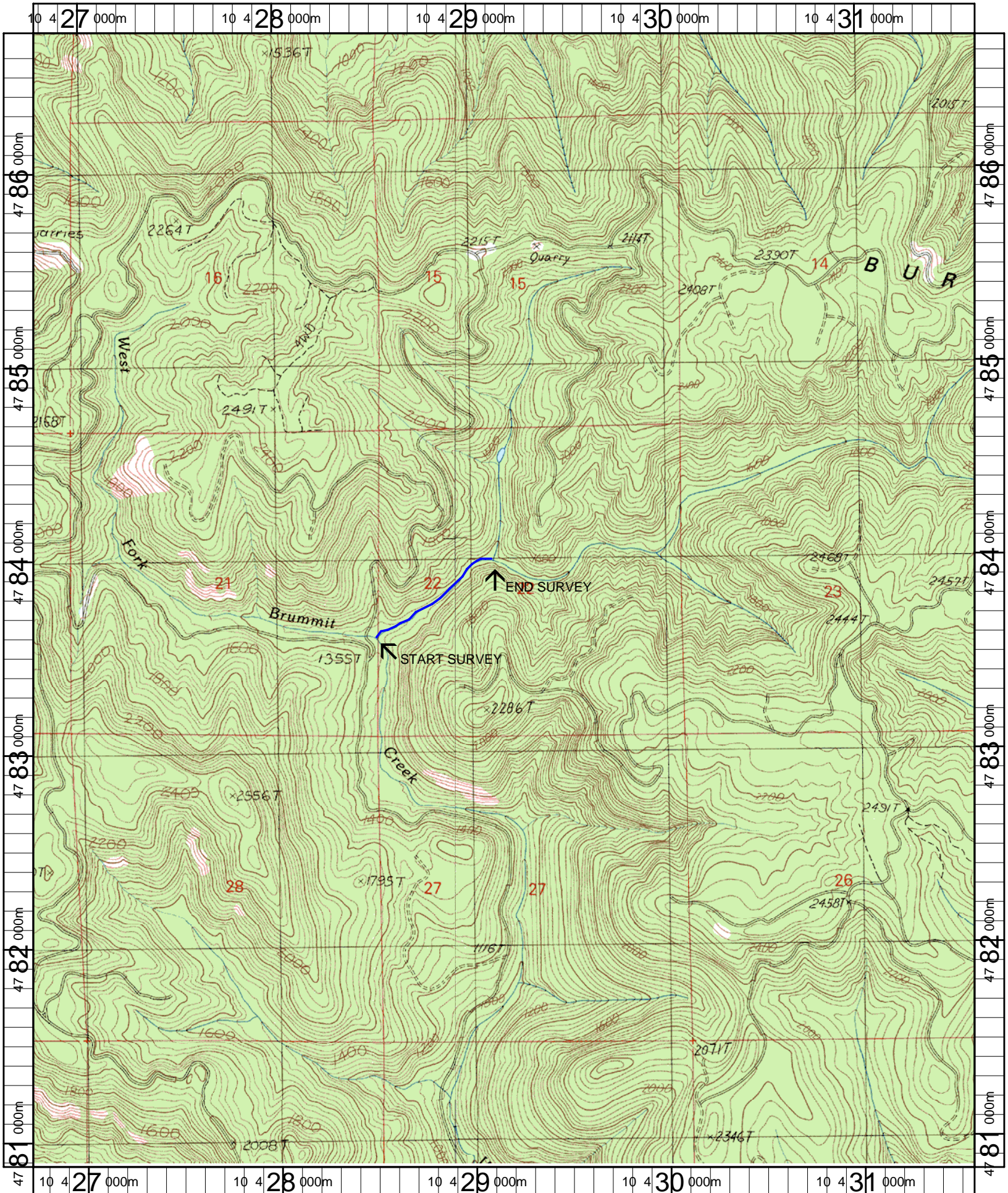
| POOL SUMMARY                          |       |  |                                  |
|---------------------------------------|-------|--|----------------------------------|
|                                       | Total | Total of all Channel Lengths<br># / Km | Primary Channel Length<br># / Km |
| All Pools:                            | 13    | 15.8                                   | 16.5                             |
| Pools >=1m deep:                      | 10    | 12.1                                   | 12.7                             |
| Complex pools (LWD pieces>=3):        | 6     | 7.3                                    | 7.6                              |
| Pool frequency (channel widths/pool): | 6.2   |  |                                  |
| Residual pool depth (avg):            | 0.93  |  |                                  |

# Comment Summary

## Restoration Monitoring Sites 2007

MONITORING AREA: 3-MS      SITE ID: 356      KARL CREEK PRE-TX

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR            |
|-------|------|------|-----------|----------|---------------------------|
| 7     | LP   | 01   | 106       | /TJ      |                           |
| 8     | RI   | 11   | 106       |          | ACW=3.0                   |
| 17    | LP   | 01   | 325       | /TJ      |                           |
| 18    | CR   | 00   | 331       |          | ACW=2.0                   |
| 22    | CB   | 11   | 447       |          | ACW=1.5                   |
| 23    | RB   | 01   | 523       | TJ/SS    | TJ@BOTTOM OF UNIT. SS@TOP |
| 30    | RB   | 00   | 693       | SS/      | SS AT BOTTOM OF UNIT      |



Name: DORA  
 Date: 1/3/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 429167 E 4783779 N  
 Caption: KARL CREEK RESTORATION SITE - COQUILLE BASIN