

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

STREAM: Elk Creek (MS-292)  
BASIN: Coquille River  
SURVEY TYPE: Reference  
DATE: March 1, 2006  
SURVEY CREW: Seth Ring, Scott Venables  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 39.0 km<sup>3</sup>  
USGS MAPS: Remote  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Elk Creek habitat survey extended 496 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 6.2 (range: 1.8-15.0). Land use for the reach was timber harvest and mature (50-90 cm dbh) trees. The average unit gradient was 0.1 percent. Scour pools (92%) dominated stream habitat. Gravel (34%), bedrock (23%) and sand (20%) dominated stream substrate. Wood volume was very low at 3.0 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

T28S-R11W-S27NE

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         | 6.2 | VWI Range:                | 1.8 - 15 |

Channel Morphology (Percent Reach Length)

| <u>Constrained</u> |      | <u>Unconstrained</u> |    |
|--------------------|------|----------------------|----|
| Hillslope          | 0%   | Single Channel       | 0% |
| Bedrock            | 0%   | Multiple Channel     | 0% |
| Terrace            | 100% | 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   | 496               | 5,032            | 0                |
| Secondary Channel | 0                 | 0                | 0                |
| Off-Channel Units | 42                | 40               | 0                |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 5 | <u>First Terrace</u> n = 5 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 7.3    | Width: 14.5   | 17.9 ( 14.5 - 22.1 )    | 20.6 ( 15.3 - 23.5 )       |
| Depth: 0.77   | Height: 0.8   | 1.6 ( 1.3 - 1.8 )       | 3.2 ( 2.8 - 3.9 )          |

W:D ratio: 18.0  
 Stream Flow Type: MF  
 Average Unit Gradient: 0.1%  
 Water temperature (°C): 8.0 - 8.0

Entrenchment (ACW:FPW ratio): 1.3  
 Habitat Units/100m (total channel length): 3.9  
 Habitat Units/100m (primary channel length): 4.2

**Riparian, Bank, and Wood Summary**

|                      | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use:            | TH             | MT               |
| Riparian Vegetation: | D30            | 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):  | 35           | 7.1                                 |
| Volume (m <sup>3</sup> ):   | 15           | 3.0                                 |
| Key pieces (>=12m x 0.60m): | 0            | 0.0                                 |

HABITAT INVENTORY

Report Date: 12/6/2006

Survey Date:

3/1/2006

| REACH 1            |                 | T28S-R11W-S27NE        |                     |                     |                                    |                               | 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/BOULDERS   | 1               | 6                      | 1.2                 | 0.10                | 7                                  | 0                             | 0                                | 0   | 20   | 70  | 0    | 10   |
| POOL-BACKWATER     | 1               | 2                      | 1.2                 | 0.80                | 3                                  | 0                             | 100                              | 0   | 0    | 0   | 0    | 0    |
| POOL-LATERAL SCOUR | 10              | 450                    | 10.2                | 1.17                | 4,489                              | 0                             | 8                                | 24  | 42   | 15  | 5    | 7    |
| POOL-PLUNGE        | 1               | 13                     | 12.3                | 1.75                | 160                                | 0                             | 0                                | 15  | 25   | 0   | 0    | 60   |
| RIFFLE             | 4               | 55                     | 6.3                 | 0.37                | 395                                | 0                             | 0                                | 27  | 38   | 0   | 0    | 35   |
| STEP/BEDROCK       | 2               | 11                     | 0.8                 | 0.02                | 10                                 | 0                             | 0                                | 0   | 0    | 0   | 0    | 100  |
| STEP/LOG           | 2               | 2                      | 5.2                 | 0.18                | 8                                  | 0                             | 11                               | 31  | 49   | 8   | 0    | 0    |
| <b>Total:</b>      | 21              | 538                    | 7.3                 | 0.77                | 5,072                              | 0                             | <b>Avg:</b> 10                   | 20  | 34   | 11  | 2    | 23   |

| 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               | 2                      | 1.2                 | 0.80                | 3                 | 0.05%   | 0              | 0.0                      |  |
| Scour Pools       | 11              | 463                    | 10.4                | 1.22                | 4,649             | 91.67%  | 0              | 0.0                      |  |
| Glides            | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Riffles           | 4               | 55                     | 6.3                 | 0.37                | 395               | 7.78%   | 0              | 0.0                      |  |
| Rapids            | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Cascades          | 1               | 6                      | 1.2                 | 0.10                | 7                 | 0.13%   | 0              | 0.0                      |  |
| Step/Falls        | 4               | 13                     | 3.0                 | 0.10                | 18                | 0.36%   | 0              | 0.0                      |  |
| Dry               | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Culverts          | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |

| POOL SUMMARY                          |                              |               |                        |
|---------------------------------------|------------------------------|---------------|------------------------|
|                                       | Total of all Channel Lengths |               | Primary Channel Length |
|                                       | <u>Total</u>                 | <u># / Km</u> | <u># / Km</u>          |
| All Pools:                            | 12                           | 22.3          | 24.2                   |
| Pools >=1m deep:                      | 8                            | 14.9          | 16.1                   |
| Complex pools (LWD pieces>=3):        | 4                            | 7.4           | 8.1                    |
| Pool frequency (channel widths/pool): | 3.1                          |               |                        |
| Residual pool depth (avg):            | 0.89                         |               |                        |

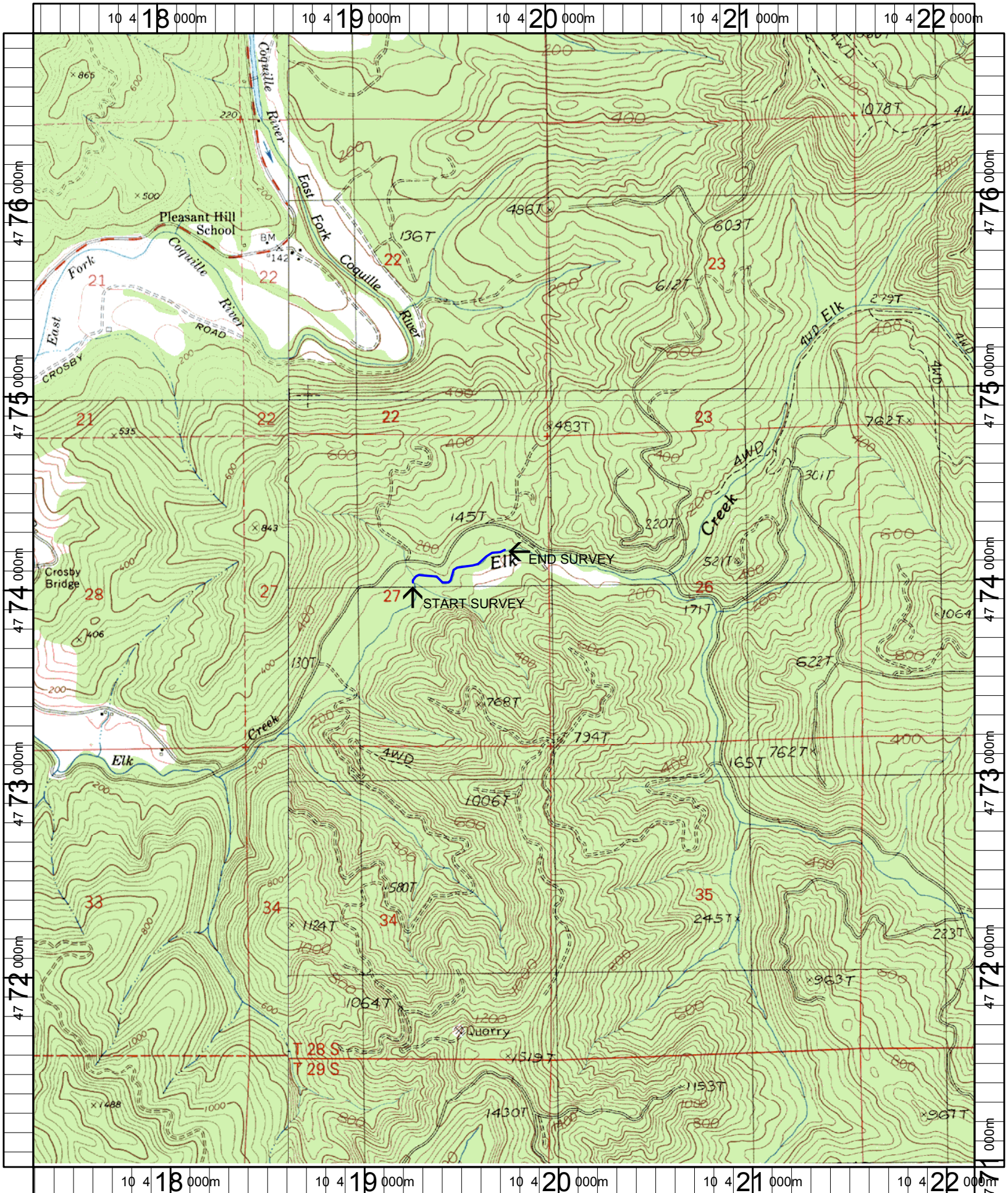
# Comment Summary

## Restoration Monitoring Sites 2006

MONITORING AREA: **3-MS**      SITE ID: **292**      ELK CREEK REFERENCE

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS     | NOTE ESTIMATOR               | NOTE NUMERATOR |
|-------|------|------|-----------|--------------|------------------------------|----------------|
| 1     | RI   | 01   | 20.2      | TJ/          | T = 8.0 AT 1:30              |                |
| 3     | SL   | 11   | 20.2      |              | H = 2.1                      |                |
| 7     | LP   | 00   | 132.9     | HS, /SS      | BOULDERS                     |                |
| 9     | CB   | 11   | 209.1     | HS, /SS, /TJ | BOULDERS                     |                |
| 10    | LP   | 00   | 239.3     | HS           | BOULDERS, 3 REDDS, STLHD     |                |
| 11    | LP   | 00   | 295.7     | SS/ x 2      |                              |                |
| 12    | LP   | 01   | 309.1     | TJ/          |                              |                |
| 13    | SR   | 11   | 309.1     |              | T = 8.5, H = 3.15, ACW = .55 |                |
| 14    | LP   | 00   | 339.9     | HS           | BOULDERS                     |                |
| 15    | LP   | 00   | 396       | HS, /SS      | BOULERS                      |                |
| 16    | SL   | 00   | 396.8     | DJ           | H = 0.4                      |                |
| 19    | BW   | 10   | 496.1     | TJ/          |                              |                |
| 20    | RI   | 11   | 496.1     |              | T = 8.0, ACW = 1.9           |                |
| 21    | SR   | 11   | 496.1     |              | H = 4.0                      |                |





Name: REMOTE  
 Date: 1/6/2005  
 Scale: 1 inch equals 2000 feet

Location: 10 419752 E 4773921 N  
 Caption: ELK CREEK REFERENCE SITE - COQUILLE BASIN