

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: DIETZ CREEK
 GCG: 1-NC
 SITE ID: 134
 BASIN: KILCHIS
 TREATMENT DATE: 2003
 SURVEY DATE: 4/21/2009
 SURVEY CREW: Ryan Jacobsen / Miles Johnson
 USGS MAPS: KILCHIS RIVER
 ECOREGION: Volcanics
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

REACH: 1 LOCATION: T01S-R09W-S23NW

SURVEY DESCRIPTION:

Channel morphology: Constrained by hillslopes
 Dominant landuse(s): Second growth timber (15-30 cm dbh)
 Dominant riparian vegetation: Mixed conifer/deciduous: size class 30-50cm dbh
 Primary channel length (meters) and area (m²): 523 : 2,059
 Secondary channel length (meters) and area (m²) 60 : 79
 VWI average: 2.6 VWI Range: 2 - 4 Average Gradient: 5.0%
 Pieces LWD per 100m: 17.4 Wood Volume (m³) per 100m: 27.7
 Percent pools: 15% Complex pools (LWD pieces>=3): 4 Pools >=1m deep:1
Percent substrate (avg): Silt / organics Sand Gravel Cobble Boulder Bedrock

| | | | | | | |
|------------------|---|----|----|----|----|---|
| All units | 3 | 14 | 28 | 29 | 26 | 0 |
| Pool units | 1 | 14 | 31 | 32 | 22 | 0 |
| Fast water units | 1 | 13 | 27 | 30 | 29 | 0 |

SURVEY COMMENTS:

The Dietz Creek habitat survey is a post-treatment, long term monitoring site. Several habitat structures were noted near the beginning of the survey. The crew also noted observing a school of approximately 30 juvenile coho salmon. There were no potential barriers to upstream fish migration observed within the survey reach. A previous post-treatment habitat survey was conducted during the winter of 2004. Comparisons were made among key coho salmon habitat attributes: total secondary channel length, pieces of LWD per 100 m, wood volume per 100 m, percent pools, and complex pools. All key attributes either stayed approximately the same or decreased slightly.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**DIETZ CREEK
GCG: 1-NC SITE ID: 134**

Survey Date: 4/21/2009

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T01S-R09W-S23NW

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 | 2.6 | VWI Range: | 2 - 4 |

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 | 523 | 2,059 | 0 |
| Secondary | 60 | 79 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 5 | <u>First Terrace</u> n = 1 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 3.6 | Width: 8.2 | 10.4 (6 - 13) | 12.5 (12.5 - 12.5) |
| Depth: 0.39 | Height: 0.5 | 1.0 (0.6 - 1.3) | 1.2 (1.2 - 1.2) |

W:D ratio: 18.9

Stream Flow Type: MF

Average Unit Gradient: 5.0%

Water temperature (°C): 10.0 - 10.0

Entrenchment (ACW:FPW ratio): 1.3

Habitat Units/100m (total channel length): 6.7

Habitat Units/100m (primary channel length): 7.5

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | ST | LT |
| Riparian Vegetation: | M30 | S |

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): | 91 | 17.4 |
| Volume (m ³): | 145 | 27.7 |
| Key pieces (>=12m x 0.60m): | 10 | 1.9 |

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REACH 1

HABITAT DETAIL

| Habitat Type | Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Total Area (m ²) | Large Boulders (#>0.5m) | Substrate Percent Wetted Area | | | | | |
|--------------------|-----------------|------------------------|---------------------|---------------------|------------------------------------|-------------------------------|----------------------------------|-----------|-----------|-----------|-----------|----------|
| | | | | | | | S/O | Snd | Grvl | Cbl | Bldr | Bdrk |
| | | | | | | | | | | | | |
| CASCADE/BOULDERS | 11 | 222 | 3.4 | 0.25 | 796 | 0 | 2 | 14 | 26 | 30 | 29 | 0 |
| POOL-ISOLATED | 3 | 13 | 2.7 | 0.38 | 28 | 0 | 27 | 32 | 20 | 15 | 7 | 0 |
| POOL-LATERAL SCOUR | 10 | 76 | 3.8 | 0.67 | 299 | 0 | 1 | 15 | 31 | 31 | 22 | 0 |
| POOL-PLUNGE | 1 | 6 | 4.8 | 0.80 | 28 | 0 | 0 | 5 | 30 | 40 | 25 | 0 |
| RAPID/BOULDERS | 12 | 263 | 3.8 | 0.26 | 981 | 0 | 0 | 12 | 28 | 31 | 29 | 0 |
| STEP/BOULDERS | 1 | 2 | 3.6 | 0.35 | 5 | 0 | 0 | 10 | 25 | 20 | 45 | 0 |
| STEP/LOG | 1 | 1 | 1.2 | 0.20 | 1 | 0 | 0 | 5 | 20 | 20 | 55 | 0 |
| Total: | 39 | 582 | 3.6 | 0.39 | 2,138 | 0 | Avg: 3 | 14 | 28 | 29 | 26 | 0 |

HABITAT SUMMARY

| Habitat Group | Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area | | Large Boulders | |
|-------------------|-----------------|------------------------|---------------------|---------------------|-------------------|---------|----------------|-------------------------|
| | | | | | (m ²) | Percent | Number | (#/ 100m ²) |
| Dammed & BW Pools | 3 | 13 | 2.7 | 0.38 | 28 | 1.33% | 0 | 0.0 |
| Scour Pools | 11 | 82 | 3.9 | 0.68 | 327 | 15.29% | 0 | 0.0 |
| Glides | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Riffles | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Rapids | 12 | 263 | 3.8 | 0.26 | 981 | 45.89% | 0 | 0.0 |
| Cascades | 11 | 222 | 3.4 | 0.25 | 796 | 37.20% | 0 | 0.0 |
| Step/Falls | 2 | 2 | 2.4 | 0.28 | 6 | 0.30% | 0 | 0.0 |
| Dry | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Culverts | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |

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REACH 1

POOL SUMMARY

| | <u>Total</u> | Total of all Channel Lengths <u># / Km</u> | Primary Channel Length <u># / Km</u> |
|---------------------------------------|--------------|---|---|
| All Pools: | 14 | 24.0 | 26.8 |
| Pools >=1m deep: | 1 | 1.7 | 1.9 |
| Complex pools (LWD pieces>=3): | 4 | 6.9 | 7.7 |
| Pool frequency (channel widths/pool): | 5.0 | | |
| Residual pool depth (avg): | 0.43 | | |

OREGON DEPT OF FISH AND WILDLIFE
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OREGON PLAN MONITORING SITE
SURVEY DATE: 4/21/2009

COMMENT SUMMARY

MONITORING AREA: 1-NC SITE ID: 134 STREAM: DIETZ CREEK

| REACH | UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|-------|-------|------|------|-----------|----------|------------------|
| 1 | 1 | CB | 00 | 25 | | CHMV M30\S STLT |
| 1 | 3 | SL | 01 | 31.6 | HS | |
| 1 | 5 | RB | 01 | 49.6 | TJ\ | |
| 1 | 6 | CB | 11 | 49.6 | | ACW=1.1M, T=11C |
| 1 | 7 | LP | 00 | 57.6 | HS | |
| 1 | 11 | RB | 01 | 125.3 | | CHMV M30\S STLT |
| 1 | 12 | CB | 02 | 125.3 | | (30) COHO FRY |
| 1 | 21 | RB | 00 | 250.3 | | CA\CT M30\S STLT |
| 1 | 27 | CB | 00 | 365.3 | \SS | |
| 1 | 32 | CB | 00 | 411.2 | SS\ | |
| 1 | 33 | LP | 00 | 417.4 | | CHMV M30\S STLT |
| 1 | 34 | CB | 01 | 442.4 | TJ\ | |
| 1 | 35 | CB | 11 | 442.4 | | ACW=4.1M, T=9C |
| 1 | 39 | CB | 00 | 522.6 | SS\ | CHMV D30\S STLT |

Dietz Creek (NC-134) 2009 Winter Habitat Survey Photographs



Unit 1 - Upstream view of the Dietz Creek survey start.



Unit 13 - Looking upstream at a habitat structure with debris accumulation.



Unit 32 - Downstream view of cascade over boulders.



Unit 33 - Upstream view of cascade over boulders.



Unit 35 - Small tributary.



Unit 39 - Downstream view of the end of the survey.