**ODFW AQUATIC INVENTORY PROJECT**

**OREGON PLAN FOR SALMON & WATERSHEDS**

**STREAM RESTORATION HABITAT REPORT**

| | |
|---|---|
| STREAM: | Steer Creek Reach 1 (MC-349) |
| BASIN: | Siletz River |
| SURVEY TYPE: | Post-Tx |
| DATE: | August 20, 2007 |
| SURVEY CREW: | Josh Togstad, Jeff Snyder |
| REPORT PREPARED BY: | Paul Jacobsen |
| BASIN AREA: | 19.9 $km^2$ |
| USGS MAPS: | Nortons |
| ECOREGION: | Coast Range Sedimentary |

GENERAL DESCRIPTION:

The Steer Creek habitat survey extended 2,057 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 12.0 (range: 1.0-20.0). Land use for the reach was agriculture and second growth (15-30 cm dbh) trees. The average unit gradient was 0.8 percent. Scour pools (67%) and riffles (21%) dominated stream habitat. Gravel (40%) and sand (27%) dominated stream substrate. Wood volume was low at 14.6 $m^3$/100m.

COMMENTS:

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

The crew noted several habitat structures during the survey.

**OREGON DEPT OF FISH AND WILDLIFE** **STEER CREEK REACH 1 POST-TX (2-MC, 349)**

**HABITAT INVENTORY** Report Date: 11/14/2007 Survey Date: 8/16/2007

**REACH 1** **T10S-R08W-S09SW** **REACH 1**

## Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

| Narrow Valley Floor | | Broad Valley Floor | |
|---|---|---|---|
| Steep V-shape | 0% | Constraining Terraces | 0% |
| Moderate V-shape | 0% | Multiple Terraces | 100% |
| Open V-shape | 0% | Wide Floodplain | 0% |

Valley Width Index 12.0 VWI Range: 1 - 20

Channel Morphology (Percent Reach Length)

| Constrained | | Unconstrained | |
|---|---|---|---|
| Hillslope | 0% | Single Channel | 0% |
| Bedrock | 0% | Multiple Channel | 0% |
| Terrace | 100% | Braided Channel | 0% |
| Alt. Terrace/Hill | 0% | | |
| Landuse | 0% | | |

Channel Characteristics

| Type | Length (m) | Area (m2) | Dry Units |
|---|---|---|---|
| Primary Channel | 2,057 | 13,323 | 0 |
| Secondary Channel | 55 | 154 | 0 |
| Off-Channel Units | 66 | 106 | 0 |

Channel Dimensions (m)

| Wetted | | Active | | Floodprone *n* = 5 | | First Terrace *n* = 5 | |
|---|---|---|---|---|---|---|---|
| Width: | 5.5 | Width: | 7.4 | 9.6 | ( 6.9 - 11.4 ) | 14.5 | ( 10.8 - 19.4 ) |
| Depth: | 0.40 | Height: | 0.4 | 0.7 | ( 0.6 - 0.9 ) | 1.9 | ( 1.6 - 2.3 ) |

W:D ratio: 21.0
Stream Flow Type: MF
Average Unit Gradient: 0.8%
Water temperature (°C): 16.0 - 16.0

Entrenchment (ACW:FPW ratio): 1.3
Habitat Units/100m (total channel length): 4.6
Habitat Units/100m (primary channel length): 4.9

## Riparian, Bank, and Wood Summary

| | Primary | Secondary |
|---|---|---|
| Land Use: | AG | ST |
| Riparian Vegetation: | D15 | S |

Bank Condition and Shade

| Bank Status | Percent Reach Length | Shade (% of 180) |
|---|---|---|
| Actively Eroding: | 14% | Reach avg: 65% |
| Undercut Banks: | 6% | Range: 31 - 94 |

Large Wood Debris

| | Total | Total / 100m primary channel |
|---|---|---|
| All pieces (>=3m x 0.15m): | 152 | 7.4 |
| Volume ($m^3$): | 301 | 14.6 |
| Key pieces (>=12m x 0.60m): | 24 | 1.2 |

**OREGON DEPT OF FISH AND WILDLIFE** **STEER CREEK REACH 1 POST-TX (2-MC, 349)**

**HABITAT INVENTORY** Report Date: 11/14/2007 Survey Date: 8/16/2007

**REACH 1** **T10S-R08W-S09SW** **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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GLIDE | 5 | 138 | 7.0 | 0.27 | 1,017 | 0 | | 0 | 17 | 50 | 23 | 0 | 10 |
| POOL-BACKWATER | 1 | 12 | 4.3 | 0.25 | 53 | 0 | | 30 | 45 | 25 | 0 | 0 | 0 |
| POOL-LATERAL SCOUR | 43 | 1,287 | 6.6 | 0.70 | 9,122 | 2 | | 16 | 32 | 30 | 6 | 0 | 16 |
| RAPID/BEDROCK | 2 | 24 | 5.7 | 0.20 | 142 | 0 | | 0 | 13 | 23 | 13 | 0 | 53 |
| RIFFLE | 35 | 633 | 4.2 | 0.18 | 2,864 | 0 | | 2 | 27 | 49 | 17 | 0 | 5 |
| STEP/BEAVER DAM | 1 | 2 | 10.5 | 0.02 | 20 | 0 | | 90 | 0 | 10 | 0 | 0 | 0 |
| STEP/BEDROCK | 1 | 4 | 8.1 | 0.15 | 30 | 0 | | 0 | 5 | 0 | 0 | 0 | 95 |
| STEP/COBBLE | 13 | 77 | 4.2 | 0.10 | 334 | 0 | | 0 | 22 | 53 | 24 | 0 | 0 |
| **Total:** | 101 | 2,178 | 5.5 | 0.40 | 13,584 | 2 | **Avg:** | 9 | 27 | 40 | 13 | 0 | 11 |

**HABITAT SUMMARY**

| Habitat Group | Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area ($m^2$) | Wetted Area Percent | Large Boulders Number | Large Boulders (# / $100m^2$) |
|---|---|---|---|---|---|---|---|---|
| Dammed & BW Pools | 1 | 12 | 4.3 | 0.25 | 53 | 0.39% | 0 | 0.0 |
| Scour Pools | 43 | 1,287 | 6.6 | 0.70 | 9,122 | 67.16% | 2 | 0.0 |
| Glides | 5 | 138 | 7.0 | 0.27 | 1,017 | 7.49% | 0 | 0.0 |
| Riffles | 35 | 633 | 4.2 | 0.18 | 2,864 | 21.09% | 0 | 0.0 |
| Rapids | 2 | 24 | 5.7 | 0.20 | 142 | 1.05% | 0 | 0.0 |
| Cascades | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Step/Falls | 15 | 83 | 4.9 | 0.10 | 384 | 2.83% | 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 # / Km | Primary Channel Length # / Km |
|---|---|---|---|
| All Pools: | 44 | 20.2 | 21.4 |
| Pools >=1m deep: | 5 | 2.3 | 2.4 |
| Complex pools (LWD pieces>=3): | 15 | 6.9 | 7.3 |
| Pool frequency (channel widths/pool): | 6.7 | | |
| Residual pool depth (avg): | 0.58 | | |

**OREGON DEPARTMENT OF FISH AND WILDLIFE** **STEER CREEK REACH 1 POST-TX**

**HABITAT INVENTORY** **GCG: 2-MC** **SITE ID: 349**

**Survey Date 8/16/2007**

**Report Date: 11/7/2007**

## RIPARIAN ZONE VEGETATION SUMMARY

**REACH 1**

**Summary of Riparian Zone (0-30m) 3 transects**

| | |
|---|---|
| Total hardwoods/1000 | 752 |
| Total conifers/1000 ft | 711 |
| Total conifers >20" dbh/1000 ft | 0 |
| 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 | 0.3 | 2.0 | 0.3 | 0.0 | 0.3 | 1.0 | 1.0 | 3.0 |
| 15-30cm | 0.7 | 0.7 | 2.7 | 0.3 | 3.7 | 2.3 | 7.0 | 3.3 |
| 30-50cm | 0.0 | 2.7 | 1.7 | 0.3 | 2.0 | 1.3 | 3.7 | 4.3 |
| 50-90cm | 0.0 | 1.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 1.7 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m2 | 1.0 | 6.7 | 4.7 | 1.0 | 6.0 | 4.7 | 3.9 | 4.1 |

**Canopy closure and ground cover**

| | Zone 1 0-10 meters (%) | Zone 2 10 - 20 meters (%) | Zone 3 20 - 30 meters (%) |
|---|---|---|---|
| Canopy closure | 61 | 78 | 76 |
| Shrub cover | 42 | 19 | 10 |
| Grass/forb cover | 45 | 46 | 34 |

**Predominant landform in each zone**

| | Zone 1 0-10 meters (%) | Zone 2 10 - 20 meters (%) | Zone 3 20 - 30 meters (%) |
|---|---|---|---|
| Hillslope | 33 | 33 | 33 |
| High terrace | 67 | 67 | 67 |
| Low terrace | 0 | 0 | 0 |
| Floodplain | 0 | 0 | 0 |
| Wetland/meadow | 0 | 0 | 0 |
| Stream channel | 0 | 0 | 0 |
| Roadbed/Railroad | 0 | 0 | 0 |
| Riprap | 0 | 0 | 0 |
| Surface slope (%) | 23 | 16 | 16 |

**OREGON DEPARTMENT OF FISH AND WILDLIFE** **STEER CREEK REACH 1 POST-TX**

**HABITAT INVENTORY - RIPARIAN SURVEY** **GCG: 2-MC** **SITE ID: 349** **8/16/2007**

**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 | 752 |
| Total conifers/1000 ft | 711 |
| Total conifers >20" dbh/1000 ft | 0 |
| Total conifers >35" dbh/1000 ft | 0 |

**Average number of trees in a 5-m wide band**

| Diameter class (cm) | Zones 1-3 0-30 meters Conifer | Hardwood |
|---|---|---|
| 3-15cm | 1.0 | 3.0 |
| 15-30cm | 7.0 | 3.3 |
| 30-50cm | 3.7 | 4.3 |
| 50-90cm | 0.0 | 1.7 |
| >90cm | 0.0 | 0.0 |

**OREGON DEPT OF FISH AND WILDLIFE** **STEER CREEK REACH 1 POST-TX (2-MC, 349)**

**HABITAT INVENTORY** Report Date: 11/14/2007 Survey Date: 8/16/2007

**GCG: 2-MC** **SITE ID: 349**

## RIPARIAN ZONE VEGETATION

Reach 1 Reach 1

| | | | | | Cover (percent) | | | | Diameter class (cm) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | Side | Zone | Surface | Slope | Canopy | Shrub | Grass | | 3-15 | 15-30 | 30-50 | 50-90 | >90 | Notes |
| 36 | LT | 1 | HT | 0 | 50 | 70 | 30 | **Conifer** | | | | | | TRANSITION 24 |
| | | | | | | | | **Hardwood** | | | | | | |
| 36 | LT | 2 | HT | 0 | 85 | 5 | 25 | **Conifer** | 1 | 2 | 2 | | | 70% BAREGROUND. |
| | | | | | | | | **Hardwood** | | 1 | | | | |
| 36 | LT | 3 | HT | 0 | 40 | 25 | 75 | **Conifer** | | 1 | | | | |
| | | | | | | | | **Hardwood** | | | | | | |
| 36 | RT | 1 | HT | 0 | 80 | 40 | 60 | **Conifer** | | | | | | |
| | | | | | | | | **Hardwood** | | 1 | 8 | | | |
| 36 | RT | 2 | HT | 0 | 80 | 30 | 70 | **Conifer** | | 1 | | | | |
| | | | | | | | | **Hardwood** | | | | | | |
| 36 | RT | 3 | HT | 0 | 85 | 10 | 5 | **Conifer** | 1 | 1 | 3 | | | |
| | | | | | | | | **Hardwood** | | 1 | | | | |
| 53 | LT | 1 | HT | 0 | 25 | 45 | 55 | **Conifer** | | | | | | CATTLE GRAZING. |
| | | | | | | | | **Hardwood** | | | | | | |
| 53 | LT | 2 | HT | 0 | 85 | 0 | 10 | **Conifer** | | 1 | 1 | | | 90 BAREGROUND |
| | | | | | | | | **Hardwood** | | | | | | |
| 53 | LT | 3 | HT | 0 | 85 | 0 | 15 | **Conifer** | | 4 | 2 | | | 85 BAREGROUND |
| | | | | | | | | **Hardwood** | | | | | | |
| 53 | RT | 1 | HS | 114 | 65 | 15 | 15 | **Conifer** | 1 | 2 | | | | 70 BAREGROUND |
| | | | | | | | | **Hardwood** | 3 | 1 | | | | |
| 53 | RT | 2 | HS | 41 | 85 | 0 | 85 | **Conifer** | | 3 | 1 | | | 15 BAREGROUND |
| | | | | | | | | **Hardwood** | | | | | | |
| 53 | RT | 3 | HS | 35 | 85 | 0 | 10 | **Conifer** | | | | | | 90 BAREGROUND |
| | | | | | | | | **Hardwood** | | 3 | 2 | | | |
| 79 | LT | 1 | HT | 0 | 65 | 45 | 55 | **Conifer** | | | | | | 55 TRANSITION |
| | | | | | | | | **Hardwood** | 1 | | | | 3 | |
| 79 | LT | 2 | HT | 0 | 60 | 35 | 50 | **Conifer** | | 1 | 1 | | | 15 BAREGROUND |
| | | | | | | | | **Hardwood** | | | | | | |
| 79 | LT | 3 | HT | 0 | 80 | 5 | 40 | **Conifer** | | 5 | 1 | | | 55 BAREGROUND |
| | | | | | | | | **Hardwood** | | | 1 | | | |
| 79 | RT | 1 | HS | 24 | 80 | 35 | 55 | **Conifer** | | | | | | 10 BAREGROUND |
| | | | | | | | | **Hardwood** | 2 | | | | 1 | |
| 79 | RT | 2 | HS | 52 | 70 | 45 | 35 | **Conifer** | | | | | | 20 BAREGROUND |
| | | | | | | | | **Hardwood** | | | 1 | | 1 | |
| 79 | RT | 3 | HS | 58 | 80 | 20 | 60 | **Conifer** | | | | | | 20 BAREGROUND |
| | | | | | | | | **Hardwood** | 3 | 3 | 1 | | | |

**OREGON DEPT OF FISH AND WILDLIFE** **RESTORATION MONITORING SITE**
**HABITAT INVENTORY** **SURVEY DATE: 8/16/2007**

# COMMENT SUMMARY

**MONITORING AREA: 2-MC SITE ID: 349 STREAM: STEER CREEK REACH 1 POST-TX**

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|---|---|---|---|---|---|
| 1 | SC | 00 | 6.1 | | BEGIN SURVEY. T=16C. |
| 2 | LP | 00 | 51.8 | US | |
| 4 | LP | 00 | 84.1 | US | |
| 6 | LP | 00 | 115.8 | US, CO, CF | FC |
| 7 | RI | 00 | 124 | COT | |
| 8 | LP | 00 | 180 | CO, US, HS | |
| 10 | LP | 00 | 260.5 | CO, US,COT | |
| 12 | LP | 00 | 277.9 | CO, US,COT | |
| 14 | LP | 00 | 301.9 | CO, US | |
| 16 | LP | 00 | 327.1 | US | |
| 18 | LP | 00 | 365 | CO, US, AM | RSN |
| 20 | GL | 00 | 388.2 | CO | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 21 | RI | 00 | 402.8 | | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 22 | LP | 00 | 427.6 | CO | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 23 | RI | 00 | 442.9 | | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 24 | LP | 00 | 459.3 | CO, HS | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 25 | RI | 00 | 481.4 | | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 26 | BW | 10 | 481.4 | CO | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 27 | LP | 00 | 498.9 | CO | CATTLE GRAZING ON BOTH STREAMBANKS. |
| 29 | LP | 01 | 528.3 | CO | CATTLE GRAZING ON STREAMBANKS. |
| 30 | RI | 11 | 528.3 | CO | TJ 10T-0446165. UTM-4951253 ELEV 109 3D EPE 11, T=15.5C, CATTLE GRAZING. |
| 31 | SC | 00 | 536.1 | | CATTLE GRAZING ON STREAMBANKS. |

# COMMENT SUMMARY

**MONITORING AREA: 2-MC SITE ID: 349 STREAM: STEER CREEK REACH 1 POST-TX**

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|---|---|---|---|---|---|
| 32 | LP | 01 | 565.3 | CO, US, HS | CATTLE GRAZING ON STREAMBANKS. |
| 33 | RI | 11 | 565.3 | CO | TJ, 10T-0446228, UTM-4951287, ELEV. 119, 3D, EPE 9M, T=14C CATTLE GRAZING. |
| 34 | RI | 00 | 580.8 | | CATTLE GRAZING ON STREAMBANKS. |
| 35 | LP | 00 | 622.9 | CO | CATTLE GRAZING ON STREAMBANKS. |
| 36 | RI | 00 | 633.8 | | METRIC #2, RIP #1. |
| 37 | LP | 00 | 653.6 | CO, US | |
| 39 | LP | 00 | 703.7 | CO | CATTLE GRAZING ON STREAMBANKS. |
| 40 | RI | 00 | 714.7 | | CATTLE GRAZING ON STREAMBANKS. |
| 41 | LP | 00 | 730.6 | CO | |
| 43 | LP | 00 | 801.9 | CO, HS | |
| 44 | RI | 00 | 828.6 | CF | CATTLE GRAZING ON STREAMBANKS. |
| 46 | LP | 00 | 883.3 | CO, US, CF | CATTLE GRAZING ON STREAMBANKS. |
| 47 | RI | 00 | 907.5 | | CATTLE GRAZING ON STREAMBANKS. |
| 48 | LP | 00 | 994.9 | CO, US, CF | CATTLE GRAZING ON STREAMBANKS. |
| 50 | LP | 00 | 1019.8 | | END 8/16 |
| 51 | SR | 00 | 1023.5 | | BEGIN 8/20. |
| 53 | RI | 00 | 1049.5 | | METRIC #3, RIP #2. |
| 54 | LP | 00 | 1089 | | ASYMETRICAL CUT. |
| 56 | LP | 01 | 1107.1 | CO, HS,/TJ | |
| 57 | RI | 11 | 1107.1 | | 10T-0446569, UTM-4951059, ELEV. 102M., 3D, EPE 7M., T=13C. |
| 59 | LP | 00 | 1120.4 | CO, US | |
| 61 | LP | 01 | 1143.7 | CO, US | |

# COMMENT SUMMARY

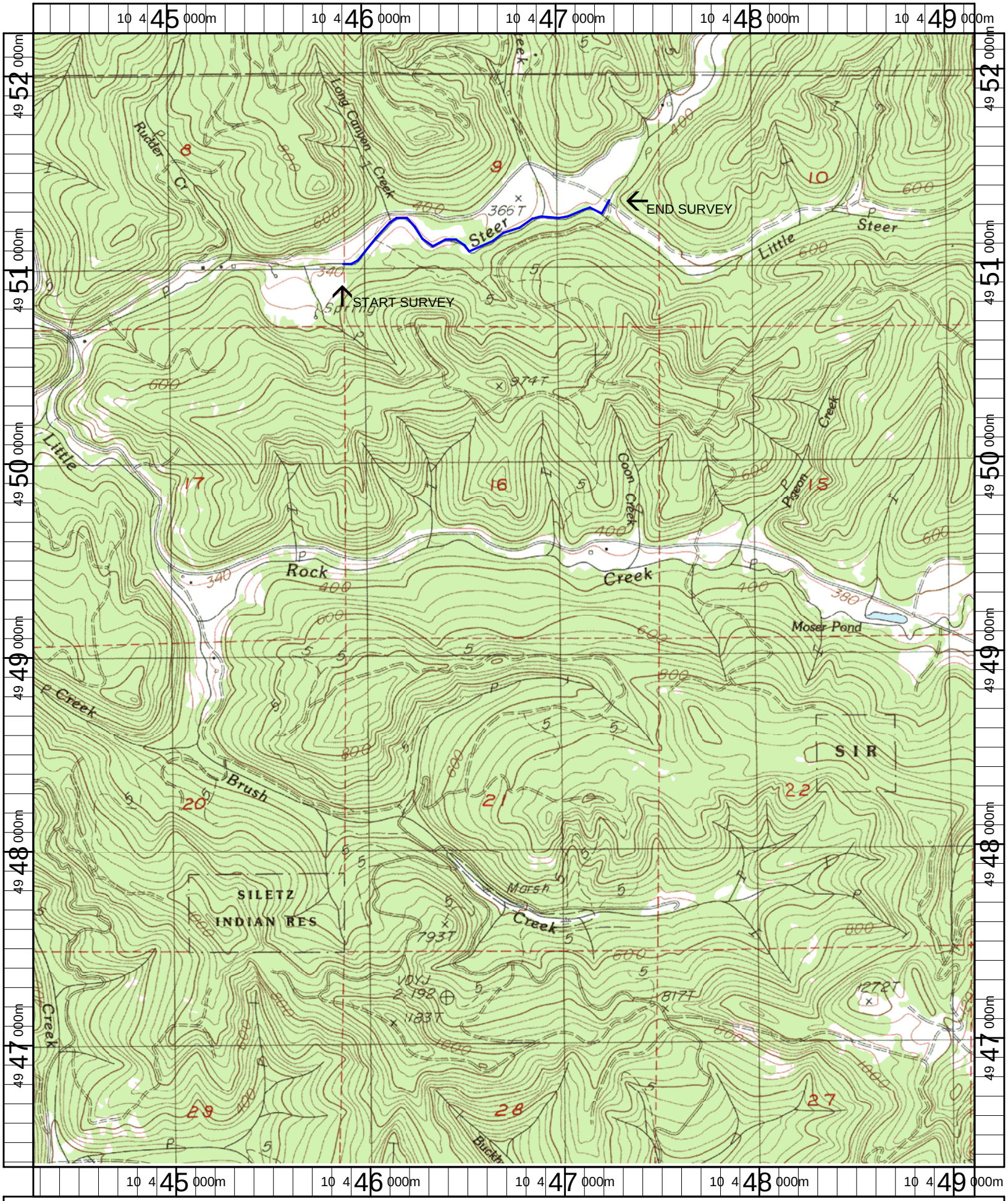
**MONITORING AREA: 2-MC SITE ID: 349 STREAM: STEER CREEK REACH 1 POST-TX**

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|---|---|---|---|---|---|
| 62 | RI | 02 | 1143.7 | | SECONDARY CHANNEL. |
| 63 | LP | 02 | 1143.7 | CO, US, AM | RSN |
| 64 | RI | 02 | 1143.7 | CO | |
| 65 | LP | 00 | 1155.5 | CO, CF | |
| 66 | SD | 00 | 1157.4 | BD | |
| 68 | LP | 00 | 1214 | CO | |
| 70 | LP | 00 | 1274.5 | CO | |
| 72 | LP | 00 | 1313.5 | HS, CO, US | |
| 74 | LP | 00 | 1361.9 | CO, US, HS | |
| 77 | LP | 00 | 1459.6 | CO | |
| 79 | RI | 00 | 1511 | | METRIC #4, RIP #3. |
| 80 | LP | 00 | 1566.4 | CO, US, HS | RSN |
| 81 | RI | 01 | 1600.8 | TJ/ | |
| 82 | RI | 11 | 1600.8 | | 10T-0446949, UTM-4951252, ELEV. 109M. 2D EPE 17M, T=13.5C |
| 83 | LP | 00 | 1616.9 | CO | |
| 85 | LP | 00 | 1654.8 | | CATTLE GRAZING ON STREAMBANKS. |
| 86 | RI | 00 | 1668.2 | SS/ | |
| 87 | LP | 00 | 1701.6 | | CATTLE GRAZING ON STREAMBANKS. |
| 89 | LP | 00 | 1768.8 | CO, US, HS | |
| 91 | LP | 00 | 1870.4 | CO, US, HS | CATTLE GRAZING ON STREAMBANKS. |
| 92 | RI | 00 | 1911.6 | | CATTLE GRAZING ON STREAMBANKS. |
| 93 | RI | 00 | 1933.9 | /SS | |

# COMMENT SUMMARY

**MONITORING AREA: 2-MC SITE ID: 349 STREAM: STEER CREEK REACH 1 POST-TX**

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|---|---|---|---|---|---|
| 94 | LP | 00 | 1948.6 | CO, US, HS | RSN, AM |
| 95 | RI | 00 | 1965.8 | | CATTLE GRAZING ON STREAMBANKS. |
| 96 | LP | 01 | 1986.5 | CO, US, HS | RSN |
| 97 | RI | 11 | 1986.5 | | CATTLE GRAZING. 10T-0447242, UTM-4951260, ELEV. 116M., 3D EPE 10M, T=14C |
| 99 | LP | 00 | 2001.5 | CO, US | |
| 101 | LP | 00 | 2056.7 | CO, US | CATTLE GRAZING ON STREAMBANKS. END SURVEY AT BRIDGE. |




Name: NORTONS
Date: 5/9/2007
Scale: 1 inch equals 2000 feet

Location: 10 446709 E 4949280 N
Caption: STEER CREEK REACH 1 RESTORATION SITE - SILETZ BASIN