

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

STREAM: Steer Creek Reach 2 (MC-354)
BASIN: Siletz River
SURVEY TYPE: Post-Tx
DATE: June 28, 2007
SURVEY CREW: Hanna Stone, Sharon Tippet
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 9.9 km²
USGS MAPS: Nortons
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Steer Creek habitat survey extended 1,441 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 5.4 (range: 2.5-11.0). Land use for the reach was timber harvest and young (3-15 cm dbh) trees. The average unit gradient was 1.2 percent. Scour pools (54%) and riffles (34%) dominated stream habitat. Gravel (38%) and sand (30%) dominated stream substrate. Wood volume was moderate at 29.0 m³/100m.

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

T10S-R08W-S03SW

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 | 5.4 | VWI Range: | 2.5 - 11 |

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 Channel | 1,441 | 6,412 | 0 |
| Secondary Channel | 19 | 18 | 1 |
| Off-Channel Units | 72 | 80 | 1 |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 7 | <u>First Terrace</u> n = 7 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 3.9 | Width: 6.7 | 8.8 (6 - 10.9) | 10.7 (7.2 - 13.4) |
| Depth: 0.34 | Height: 0.4 | 0.8 (0.7 - 1) | 1.1 (0.9 - 1.3) |

W:D ratio: 16.6
 Stream Flow Type: LF
 Average Unit Gradient: 1.2%
 Water temperature (°C): 11.0 - 11.0

Entrenchment (ACW:FPW ratio): 1.3
 Habitat Units/100m (total channel length): 6.5
 Habitat Units/100m (primary channel length): 6.9

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | TH | YT |
| Riparian Vegetation: | 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: 83% |
| Undercut Banks: | 5% | Range: 50 - 100 |

Large Wood Debris

| | <u>Total</u> | <u>Total / 100m primary channel</u> |
|-----------------------------|--------------|-------------------------------------|
| All pieces (>=3m x 0.15m): | 125 | 8.7 |
| Volume (m ³): | 417 | 29.0 |
| Key pieces (>=12m x 0.60m): | 33 | 2.3 |

OREGON DEPT OF FISH AND WILDLIFE

STEER CREEK REACH 2 POST-TX (2-MC, 354)

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

6/27/2007

| REACH 1 | | T10S-R08W-S03SW | | | | | 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 |
| CULVERT CROSSING | 1 | 19 | 3.7 | 0.90 | 68 | 0 | 10 | 80 | 10 | 0 | 0 | 0 |
| POOL-BACKWATER | 3 | 15 | 2.1 | 0.30 | 33 | 0 | 24 | 62 | 11 | 4 | 0 | 0 |
| POOL-DAMMED | 1 | 38 | 8.8 | 0.55 | 332 | 0 | 14 | 29 | 48 | 10 | 0 | 0 |
| POOL-ISOLATED | 3 | 11 | 1.4 | 0.15 | 16 | 0 | 30 | 40 | 26 | 2 | 2 | 0 |
| POOL-LATERAL SCOUR | 43 | 705 | 4.9 | 0.56 | 3,505 | 20 | 13 | 44 | 19 | 6 | 2 | 16 |
| PUDDLED UNIT | 2 | 21 | 0.6 | 0.06 | 12 | 0 | 16 | 47 | 30 | 7 | 0 | 0 |
| RAPID/BEDROCK | 1 | 8 | 1.2 | 0.10 | 10 | 0 | 10 | 5 | 5 | 0 | 0 | 81 |
| RAPID/BOULDERS | 3 | 55 | 1.8 | 0.11 | 160 | 29 | 3 | 26 | 55 | 11 | 3 | 2 |
| RIFFLE | 30 | 605 | 3.4 | 0.15 | 2,198 | 29 | 2 | 14 | 60 | 15 | 2 | 7 |
| STEP/BEDROCK | 1 | 4 | 3.5 | 0.15 | 13 | 0 | 0 | 5 | 15 | 5 | 0 | 75 |
| STEP/COBBLE | 11 | 52 | 3.2 | 0.11 | 163 | 2 | 0 | 8 | 64 | 24 | 1 | 3 |
| Total: | 99 | 1,532 | 3.9 | 0.34 | 6,510 | 80 | Avg: 9 | 30 | 38 | 10 | 2 | 11 |

| 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 | 7 | 64 | 2.8 | 0.27 | 380 | 5.84% | 0 | 0.0 | |
| Scour Pools | 43 | 705 | 4.9 | 0.56 | 3,505 | 53.84% | 20 | 0.6 | |
| Glides | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |
| Riffles | 30 | 605 | 3.4 | 0.15 | 2,198 | 33.77% | 29 | 1.3 | |
| Rapids | 4 | 63 | 1.7 | 0.11 | 170 | 2.61% | 29 | 17.1 | |
| Cascades | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |
| Step/Falls | 12 | 55 | 3.2 | 0.11 | 176 | 2.70% | 2 | 1.1 | |
| Dry | 2 | 21 | 0.6 | 0.06 | 12 | 0.19% | 0 | 0.0 | |
| Culverts | 1 | 19 | 3.7 | 0.90 | 68 | 1.05% | 0 | 0.0 | |

| POOL SUMMARY | | | |
|---------------------------------------|--------------|------------------------------|------------------------|
| | <u>Total</u> | Total of all Channel Lengths | Primary Channel Length |
| | | <u># / Km</u> | <u># / Km</u> |
| All Pools: | 50 | 32.6 | 34.7 |
| Pools >=1m deep: | 2 | 1.3 | 1.4 |
| Complex pools (LWD pieces>=3): | 12 | 7.8 | 8.3 |
| Pool frequency (channel widths/pool): | 4.6 | | |
| Residual pool depth (avg): | 0.44 | | |

Survey Date 6/27/2007
Report Date: 11/7/2007

**RIPARIAN ZONE
VEGETATION SUMMARY**

REACH 1

Summary of Riparian Zone (0-30m) 5 transects

| | |
|---------------------------------|-----|
| Total hardwoods/1000 | 268 |
| Total conifers/1000 ft | 24 |
| 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 | 0.0 | 0.2 | 0.0 | 0.8 | 0.2 | 0.6 | 0.2 |
| 15-30cm | 0.0 | 0.4 | 0.0 | 0.2 | 0.2 | 0.8 | 0.2 | 1.4 |
| 30-50cm | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 1.2 |
| 50-90cm | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m2 | 0.0 | 1.2 | 0.0 | 1.2 | 0.4 | 2.0 | 0.1 | 1.5 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10 - 20 meters | | Zone 3 20 - 30 meters | |
|------------------|-----------------------|----|--------------------------|----|--------------------------|----|
| | (%) | | (%) | | (%) | |
| | Canopy closure | 49 | | 48 | | 50 |
| Shrub cover | 76 | | 76 | | 73 | |
| Grass/forb cover | 24 | | 24 | | 27 | |

Predominant landform in each zone

| | Zone 1 0-10 meters | | Zone 2 10 - 20 meters | | Zone 3 20 - 30 meters | |
|-------------------|-----------------------|----|--------------------------|----|--------------------------|----|
| | (%) | | (%) | | (%) | |
| | Hillslope | 60 | | 50 | | 40 |
| High terrace | 30 | | 50 | | 70 | |
| 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 (%) | 16 | | 19 | | 10 | |

Summary of Riparian Zone (0-30m) for all reaches

5 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

| | |
|---------------------------------|-----|
| Total hardwoods/1000 | 268 |
| Total conifers/1000 ft | 24 |
| 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 | |
|------------------------|--------------------|-----------------|
| | <u>0-30 meters</u> | |
| | <u>Conifer</u> | <u>Hardwood</u> |
| 3-15cm | 0.2 | 1.6 |
| 15-30cm | 0.2 | 1.4 |
| 30-50cm | 0.0 | 1.2 |
| 50-90cm | 0.0 | 0.2 |
| >90cm | 0.0 | 0.0 |

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

| Unit | Side | Zone | Surface | Slope | Cover (percent) | | | Diameter class (cm) | | | | | Notes | | |
|------|------|------|---------|-------|-----------------|-------|-------|---------------------|-------|-------|-------|-----|-------|--|-----------------|
| | | | | | Canopy | Shrub | Grass | 3-15 | 15-30 | 30-50 | 50-90 | >90 | | | |
| 17 | LT | 1 | HS | 0 | 100 | 90 | 10 | Conifer | | | | | | | TRANS: 4 METERS |
| | | | | | | | | Hardwood | | | | | | | |
| 17 | LT | 2 | HS | 100 | 25 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 17 | LT | 3 | HT | 0 | 25 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 17 | RT | 2 | HT | 0 | 85 | 85 | 15 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 1 | 1 | | | | | |
| 17 | RT | 3 | HT | 0 | 70 | 85 | 15 | Conifer | 1 | | | | | | |
| | | | | | | | | Hardwood | 1 | | | | | | |
| 17 | RT | 3 | HT | 4 | 100 | 85 | 15 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 1 | 1 | 2 | | | | |
| 42 | LT | 1 | HS | 35 | 20 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 1 | | | | | |
| 42 | LT | 2 | HS | 25 | 25 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 42 | LT | 3 | HS | 25 | 85 | 95 | 5 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 42 | RT | 1 | HT | 0 | 45 | 95 | 5 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 42 | RT | 2 | HT | 0 | 80 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | 1 | | |
| 42 | RT | 3 | HT | 0 | 80 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 3 | | | | | |
| 59 | LT | 1 | HT | 0 | 85 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 1 | | | | | |
| 59 | LT | 2 | HT | 0 | 60 | 70 | 30 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 59 | LT | 3 | HT | 0 | 5 | 70 | 30 | Conifer | | 1 | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 59 | RT | 1 | HS | 30 | 40 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | 3 | | | | |
| 59 | RT | 2 | HS | 20 | 25 | 95 | 5 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 59 | RT | 3 | HS | 30 | 30 | 100 | 0 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |

COMMENT SUMMARY

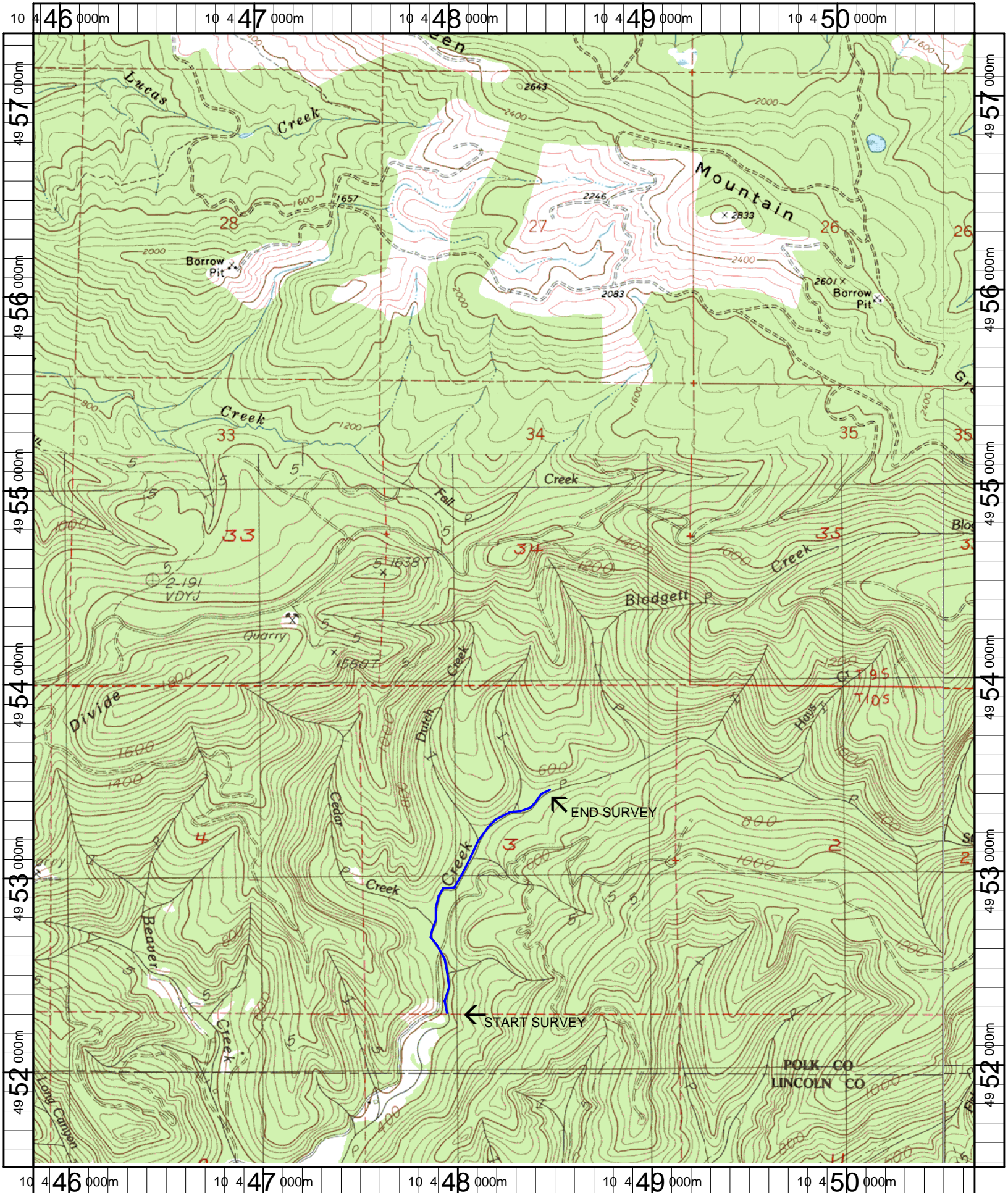
MONITORING AREA: 2-MC SITE ID: 354 STREAM: STEER CREEK REACH 2 POST-TX

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|-------|------|------|-----------|----------|---|
| 1 | RI | 01 | 16.6 | WL, /TJ | DEER TRACKS THROUGHOUT, T=11 |
| 2 | RB | 11 | 16.6 | | ACW=0.5, T=11 |
| 3 | LP | 00 | 39 | | COHO THROUGHOUT |
| 5 | LP | 00 | 79.5 | HS | LOGS |
| 7 | DP | 00 | 124 | BV | BLOWN OUT BD DAMMING POOL IN LOW FLOW |
| 12 | LP | 00 | 179.1 | | SGS |
| 13 | CC | 00 | 197.6 | CC | DIA=3.7, HT=2.0, COR. METAL, OPEN BOTTOM |
| 14 | LP | 00 | 213.8 | CS/CS | RIPRAP AROUND CC |
| 16 | LP | 00 | 240.5 | BV | |
| 17 | LP | 00 | 256.5 | BV | |
| 18 | RI | 00 | 267 | WL | BIRD NEST |
| 20 | LP | 00 | 287.9 | HS, AM | LOGS, RSN |
| 22 | LP | 00 | 313.4 | BV | BV DEN IN LEFT BANK |
| 26 | LP | 01 | 358.9 | HS | LOGS UNITS 26, 28, 29, 31; BEDROCK IS HARDPAN |
| 27 | IP | 10 | 358.9 | AM | RSN, COHO |
| 29 | LP | 01 | 373.1 | TJ/, BV | END SIGN MC-152 JDN 2/8/06, BV DEN LEFT BANK |
| 30 | RB | 11 | 373.1 | | ACW=1.4, T=12, CEDAR CREEK |
| 31 | LP | 00 | 388.4 | AM | RSN |
| 37 | LP | 00 | 459 | HS | LOGS |
| 44 | RI | 01 | 562.8 | HS | LOGS |
| 46 | IP | 10 | 562.8 | AM | RSN |
| 50 | RI | 01 | 651.2 | HS | LOG |

COMMENT SUMMARY

MONITORING AREA: 2-MC SITE ID: 354 STREAM: STEER CREEK REACH 2 POST-TX

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|-------|------|------|-----------|------------|--|
| 52 | LP | 02 | 668.5 | AM | 2 RSN |
| 53 | PD | 02 | 668.5 | | ACW=1.3 |
| 56 | LP | 00 | 686.3 | | CRAYFISH |
| 57 | RI | 00 | 707.6 | HS | LOGS |
| 59 | RI | 01 | 736.7 | /TJ | |
| 60 | RI | 11 | 736.7 | | ACW=1.2, T=12 |
| 61 | LP | 01 | 772 | HS, TJ/ | LOGS |
| 62 | PD | 11 | 772 | | ACW=0.9, T=13 |
| 64 | LP | 00 | 833.4 | HS | LOGS |
| 70 | LP | 00 | 942.5 | HS | LOGS |
| 73 | RI | 00 | 1002.7 | HS | LOGS |
| 80 | LP | 00 | 1098.6 | HS | LOGS THROUGH UNIT 82 |
| 84 | LP | 01 | 1177.7 | HS, BV,TJ/ | LOGS, TRIB ON MAP, BV DEN IN BANK |
| 85 | RR | 11 | 1177.7 | | ACW=2.0, T=11.5 |
| 91 | RI | 00 | 1347.1 | | CRAYFISH, EGGS FISH? 2MM DIA CREAM COLOR |
| 93 | RI | 01 | 1401.5 | HS | LOGS |
| 94 | BW | 10 | 1401.5 | AM | RSN |
| 99 | RI | 00 | 1440.5 | BV | |



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

Location: 10 448260 E 4954419 N
 Caption: STEER CREEK REACH 2 RESTORATION SITE - SILETZ BASIN