

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

STREAM: Coal Creek (NC-16)
BASIN: Nehalem River
SURVEY TYPE: Pre-Tx
DATE: March 6, 2000
SURVEY CREW: Andrew Gross, Joe Zuccarello
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 8.5 km²
USGS MAPS: Vernonia
ECOREGION: Coast Range Astoria Willapa

GENERAL DESCRIPTION:

The Coal Creek habitat survey extended 522 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 10.0. Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (41%) and riffles (39%) dominated stream habitat. Gravel (47%) and sand (34%) dominated stream substrate. Wood volume was high at 46.3 m³/100m.

COMMENTS:

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

OREGON DEPARTMENT OF FISH AND WILDLIFE

COAL CREEK

HABITAT INVENTORY

Report Date: 11/12/03

Survey Date:

3/6/00

REACH 1

T4N-R4W-23SW

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 |
| POOL-BACKWATER | 3 | 11 | 2.1 | 0.35 | 20 | 0 | 43 | 53 | 3 | 0 | 0 | 0 |
| POOL-DAMMED | 3 | 46 | 5.4 | 0.70 | 263 | 0 | 8 | 33 | 55 | 3 | 0 | 0 |
| POOL-LATERAL SCOUR | 18 | 227 | 4.4 | 0.78 | 1,001 | 0 | 8 | 46 | 39 | 6 | 1 | 0 |
| POOL-PLUNGE | 1 | 11 | 6.0 | 0.90 | 65 | 0 | 20 | 80 | 0 | 0 | 0 | 0 |
| POOL-STRAIGHT SCOUR | 1 | 11 | 5.0 | 0.60 | 55 | 0 | 10 | 29 | 5 | 10 | 10 | 38 |
| RAPID/BOULDERS | 2 | 29 | 5.5 | 0.25 | 169 | 0 | 5 | 13 | 63 | 18 | 3 | 0 |
| RIFFLE | 13 | 265 | 3.8 | 0.24 | 1,063 | 0 | 6 | 15 | 67 | 10 | 2 | 1 |
| STEP/BEAVER DAM | 1 | 3 | 4.0 | 0.15 | 13 | 0 | 30 | 60 | 10 | 0 | 0 | 0 |
| STEP/COBBLE | 2 | 8 | 6.6 | 0.13 | 52 | 0 | 0 | 10 | 78 | 13 | 0 | 0 |
| STEP/LOG | 3 | 7 | 3.6 | 0.12 | 16 | 0 | 10 | 37 | 53 | 0 | 0 | 0 |
| Total: | 47 | 618 | 4.3 | 0.49 | 2,717 | 0 | Avg 10 | 34 | 47 | 7 | 1 | 1 |

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 | 6 | 57 | 3.7 | 0.53 | 282 | 10.39% | 0 | 0.0 |
| Scour Pools | 20 | 249 | 4.5 | 0.78 | 1,121 | 41.26% | 0 | 0.0 |
| Glides | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Riffles | 13 | 265 | 3.8 | 0.24 | 1,063 | 39.13% | 0 | 0.0 |
| Rapids | 2 | 29 | 5.5 | 0.25 | 169 | 6.22% | 0 | 0.0 |
| Cascades | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Step/Falls | 6 | 18 | 4.7 | 0.13 | 81 | 2.99% | 0 | 0.0 |
| Dry | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Culverts | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |

POOL SUMMARY

| | Total | # / Km |
|---------------------------------------|-------|--------|
| All Pools: | 26 | 49.8 |
| Pools >=1m deep: | 3 | 5.7 |
| Complex pools (LWD pieces>=3): | 13 | 24.9 |
| Pool frequency (channel widths/pool): | 4.4 | |
| Residual pool depth (avg): | 0.52 | |

STREAM SUMMARY

COAL CREEK

| Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Total Area (m ²) | Substrate Percent Wetted Area | | | | | | Large Boulders (#>0.5m) |
|-----------------|------------------------|---------------------|---------------------|------------------------------------|----------------------------------|-----|------|-----|------|------|-------------------------------|
| | | | | | S/O | Snd | Grvl | Cbl | Bldr | Bdrk | |
| 47 | 618 | 4.3 | 0.49 | 2,717 | 10 | 34 | 47 | 7 | 1 | 1 | |

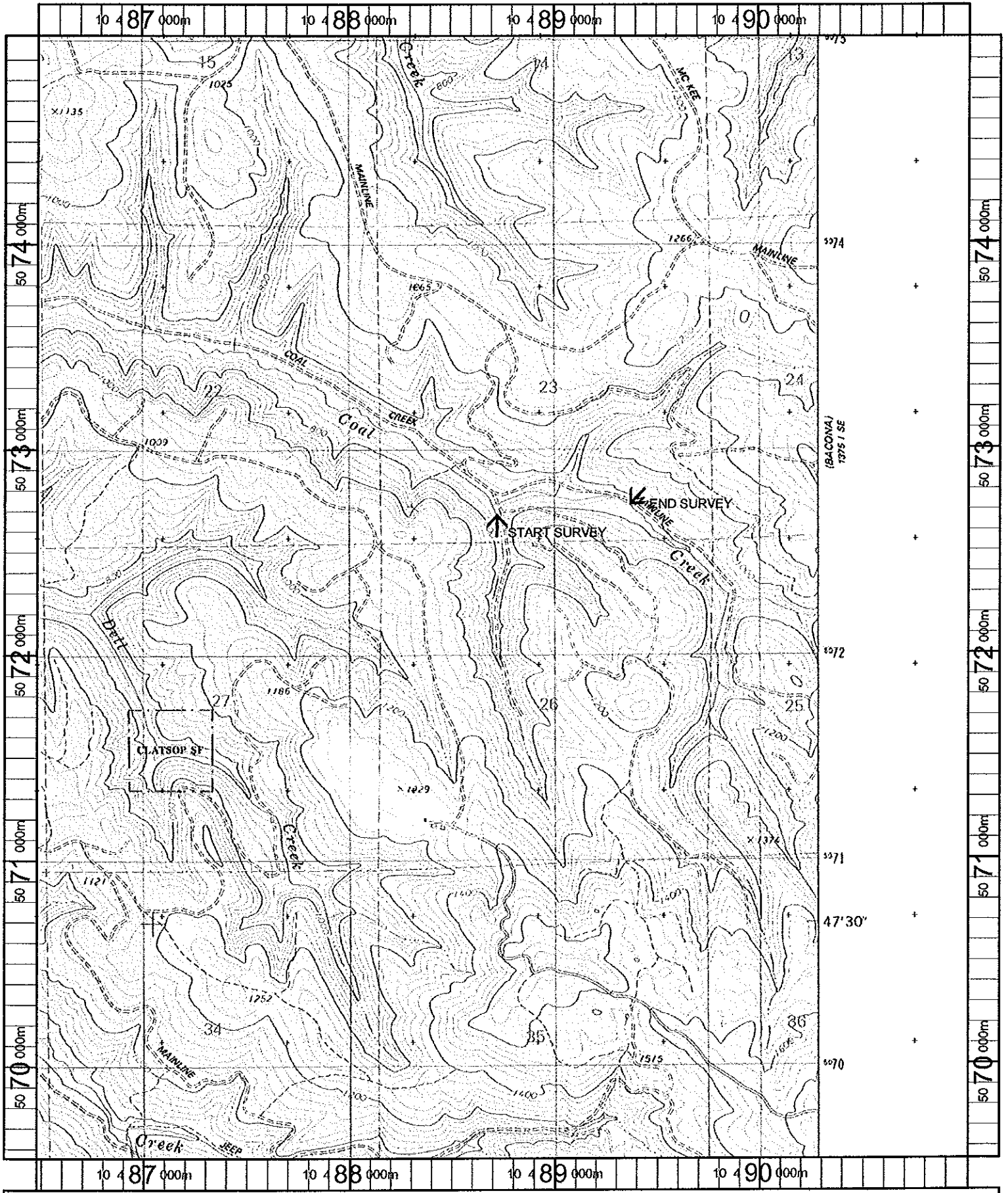
| Habitat Group | Wetted Area | |
|-------------------|-------------------|---------|
| | (m ²) | Percent |
| Dammed & BW Pools | 282 | 10.39% |
| Scour Pools | 1,121 | 41.26% |
| Glides | 0 | 0.00% |
| Riffles | 1,063 | 39.13% |
| Rapids | 169 | 6.22% |
| Cascades | 0 | 0.00% |
| Step/Falls | 81 | 2.99% |
| Dry | 0 | 0.00% |
| Culverts | 0 | 0.00% |

Comment Summary

Restoration Monitoring Sites 2003

MONITORING AREA: 1-NC SITE ID: 16 COAL CREEK

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|----------|----------------|------------------------|
| 1 | RI | 00 | 15.3 | | | VWI = 10+ |
| 7 | LP | 00 | 78.8 | SS/ | | |
| 14 | SL | 00 | 149.9 | | | H= 0.55 |
| 18 | LP | 01 | 229.5 | | | VWI= 10+ |
| 21 | LP | 00 | 261.7 | /SS | | |
| 22 | SD | 00 | 264.9 | | | BLOWNOUT DAM POOL |
| 24 | LP | 01 | 300.9 | TJ/ | | |
| 25 | RI | 11 | 300.9 | | | T=6.0°C,TRIB B SURVEY |
| 26 | SC | 00 | 305.3 | | | T = 6.5°C @ 14:00 |
| 27 | LP | 00 | 318.9 | | | VWI=10+ |
| 36 | LP | 00 | 404.6 | | | VWI=10+ |
| 39 | SL | 01 | 429.9 | | | H= 0.55 |
| 47 | SP | 00 | 522.1 | | | PHOTO#1,3/6/00,JZINPHO |



Name: VERNONIA
 Date: 10/16/100
 Scale: 1 inch equals 2000 feet

Location: 10 488654 E 5072263 N
 Caption: COAL CREEK RESTORATION SITE - NEHALEM BASIN