

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

STREAM: Willanch Creek (MS-278)
BASIN: Coos Bay
SURVEY TYPE: Post-Tx
DATE: February 16, 2005
SURVEY CREW: Jennifer Schmitt, Neil Jensen
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 20.1 km²
USGS MAPS: North Bend
ECOREGION: Coastal Uplands

GENERAL DESCRIPTION:

The Willanch Creek habitat survey extended 888 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 4.7 (range: 1.4-8.0). Land uses for the reach were young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 3.5 percent. Cascades (41%) and rapids (26%) dominated stream habitat. Sand (30%), gravel (28%) and cobble (23%) dominated stream substrate. Wood volume was high at 33.3 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

T25S-R12W-S09SW

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 | 4.7 | VWI Range: | 1.4 - 8 |

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 | 888 | 2,526 | 0 |
| Secondary Channel | 0 | 0 | 0 |
| Off-Channel Units | 29 | 41 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 8 | <u>First Terrace</u> n = 5 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 2.9 | Width: 4.5 | 12.2 (5.8 - 23.8) | 10.3 (8.4 - 13.5) |
| Depth: 0.24 | Height: 0.4 | 0.9 (0.68 - 1.16) | 1.2 (1.1 - 1.42) |

W:D ratio: 10.3

Entrenchment (ACW:FPW ratio): 2.9

Stream Flow Type: MF

Habitat Units/100m (total channel length): 7.4

Average Unit Gradient: 3.5%

Habitat Units/100m (primary channel length): 7.7

Water temperature (°C): 6.0 - 6.0

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | YT | ST |
| Riparian Vegetation: | D30 | 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): | 200 | 22.5 |
| Volume (m ³): | 296 | 33.3 |
| Key pieces (>=12m x 0.60m): | 14 | 1.6 |

OREGON DEPT OF FISH AND WILDLIFE

WILLANCH CREEK POST-TX (3-MS, 278)

HABITAT INVENTORY

Report Date: 11/29/2005

Survey Date:

2/16/2005

| REACH 1 | | T25S-R12W-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 |
| CASCADE/BEDROCK | 1 | 29 | 1.7 | 0.25 | 49 | 0 | 0 | 5 | 20 | 30 | 10 | 35 |
| CASCADE/BOULDERS | 17 | 397 | 2.6 | 0.13 | 1,014 | 0 | 2 | 17 | 28 | 39 | 11 | 1 |
| POOL-DAMMED | 4 | 35 | 3.1 | 0.38 | 113 | 0 | 3 | 68 | 20 | 4 | 1 | 4 |
| POOL-LATERAL SCOUR | 17 | 120 | 3.2 | 0.44 | 407 | 0 | 7 | 48 | 23 | 7 | 5 | 9 |
| POOL-PLUNGE | 4 | 22 | 3.2 | 0.43 | 71 | 0 | 9 | 49 | 21 | 7 | 6 | 7 |
| RAPID/BEDROCK | 2 | 26 | 5.3 | 0.19 | 133 | 0 | 0 | 7 | 25 | 22 | 12 | 34 |
| RAPID/BOULDERS | 12 | 207 | 2.7 | 0.13 | 543 | 0 | 0 | 8 | 37 | 42 | 12 | 0 |
| RIFFLE | 5 | 69 | 2.8 | 0.19 | 202 | 0 | 1 | 24 | 44 | 23 | 4 | 4 |
| STEP/BEAVER DAM | 1 | 1 | 1.7 | 0.06 | 2 | 0 | 0 | 90 | 5 | 5 | 0 | 0 |
| STEP/BEDROCK | 2 | 3 | 2.5 | 0.09 | 11 | 0 | 0 | 6 | 8 | 5 | 3 | 79 |
| STEP/COBBLE | 1 | 4 | 2.8 | 0.08 | 11 | 0 | 0 | 40 | 45 | 15 | 0 | 0 |
| STEP/LOG | 2 | 4 | 2.2 | 0.07 | 10 | 0 | 0 | 45 | 40 | 15 | 0 | 0 |
| Total: | 68 | 918 | 2.9 | 0.24 | 2,567 | 0 | Avg: 3 | 30 | 28 | 23 | 8 | 7 |

| 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 | 4 | 35 | 3.1 | 0.38 | 113 | 4.40% | 0 | 0.0 | |
| Scour Pools | 21 | 143 | 3.2 | 0.44 | 479 | 18.64% | 0 | 0.0 | |
| Glides | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 | |
| Riffles | 5 | 69 | 2.8 | 0.19 | 202 | 7.87% | 0 | 0.0 | |
| Rapids | 14 | 234 | 3.1 | 0.13 | 676 | 26.34% | 0 | 0.0 | |
| Cascades | 18 | 426 | 2.6 | 0.13 | 1,063 | 41.42% | 0 | 0.0 | |
| Step/Falls | 6 | 12 | 2.3 | 0.08 | 34 | 1.32% | 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: | 25 | 27.2 | 28.1 |
| Pools >=1m deep: | 0 | 0.0 | 0.0 |
| Complex pools (LWD pieces>=3): | 11 | 12.0 | 12.4 |
| Pool frequency (channel widths/pool): | 8.2 | | |
| Residual pool depth (avg): | 0.27 | | |

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **278** WILLANCH CREEK POST-TX

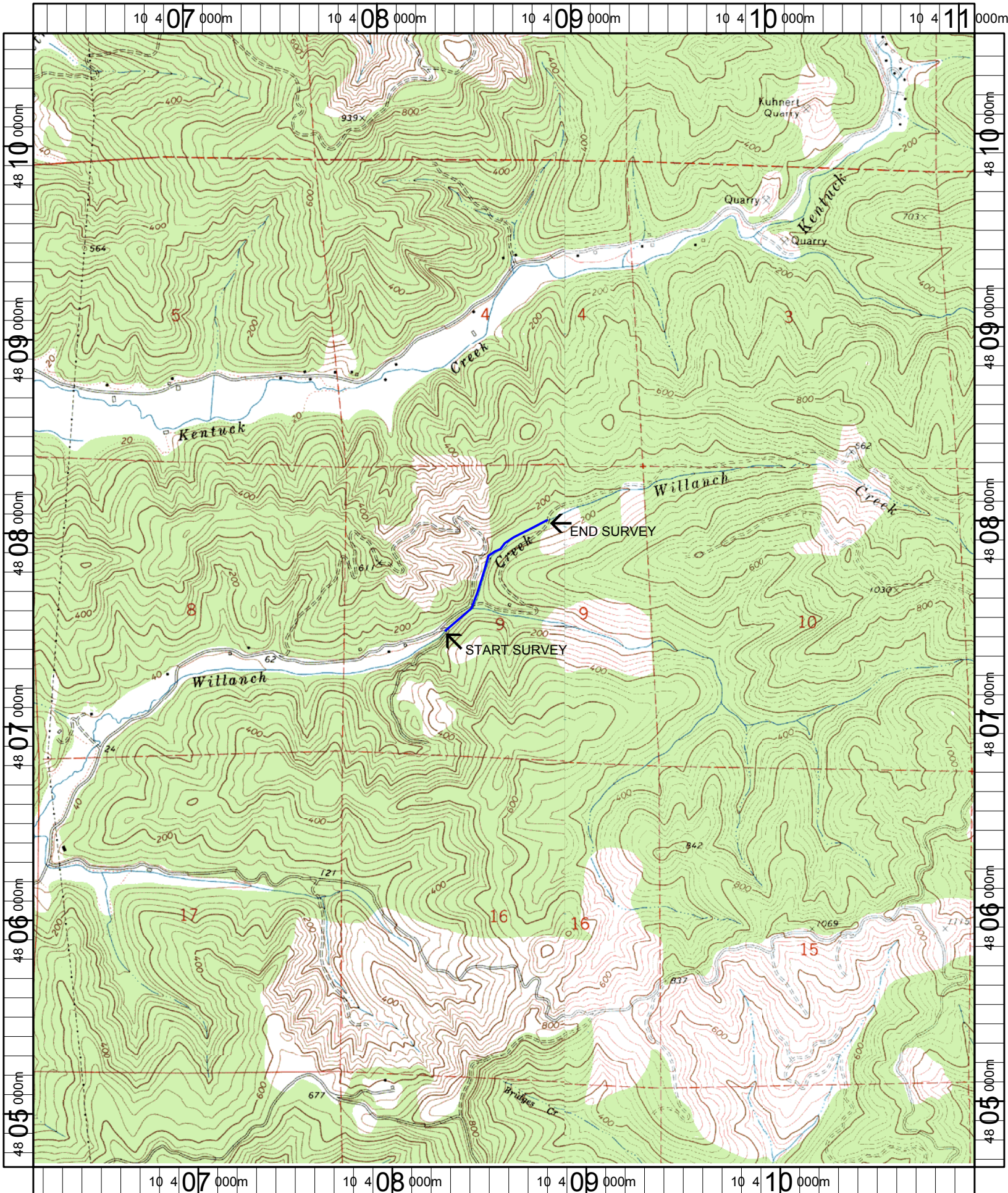
| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|----------|----------------|----------------|
| 3 | LP | 00 | 26.3 | HS | | |
| 4 | RR | 00 | 46.2 | HS, BV | | |
| 5 | PP | 00 | 52 | HS | FLAG SITE 1 | |
| 9 | LP | 00 | 89.3 | SS/, HS | FLAG SITE 2 | |
| 10 | CB | 00 | 122.7 | HS | FLAG SITE 3 | |
| 11 | DP | 00 | 132.5 | HS | | |
| 12 | CB | 00 | 138.6 | SS/ | | |
| 13 | LP | 00 | 154.1 | DJ, WL | STEELHEAD | |
| 15 | RB | 00 | 182.4 | HS | | |
| 16 | LP | 01 | 190.1 | /TJ | | |
| 17 | RB | 11 | 190.1 | | ACW = 5.4 | |
| 19 | CB | 00 | 230.4 | BC, HS | | |
| 23 | LP | 00 | 288.3 | | FLAG SITE 5 | |
| 26 | SR | 00 | 317.5 | | H = 0.2 | |
| 27 | RB | 00 | 328.6 | HS | | |
| 30 | CB | 00 | 379 | /LA | | |
| 34 | LP | 01 | 461.1 | TJ/ | | |
| 35 | CB | 11 | 461.1 | BV | ACW = 0.95 | |
| 36 | RB | 00 | 474.4 | DJ, BV | | |
| 37 | LP | 00 | 478.8 | DJ | | |
| 38 | CB | 00 | 499.3 | /SS | | |

Comment Summary

Restoration Monitoring Sites 2005

MONITORING AREA: **3-MS** SITE ID: **278** WILLANCH CREEK POST-TX

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|------------|-------------------------------|----------------|
| 41 | CB | 00 | 533.2 | HS, DJ | | |
| 42 | DP | 00 | 542 | DJ | | |
| 44 | LP | 00 | 551.4 | HS, DJ | | |
| 45 | RI | 00 | 572.1 | LI/ | | |
| 47 | SL | 00 | 580 | | H = 0.4 | |
| 48 | RB | 01 | 597.2 | TJ/ | | |
| 49 | CB | 11 | 597.2 | | ACW = 0.7 | |
| 51 | CB | 00 | 626.6 | SS/SS, HS | DJ | |
| 52 | LP | 00 | 630.7 | DJ | | |
| 54 | LP | 00 | 654.6 | /SS | | |
| 56 | LP | 00 | 678.7 | HS, DJ | | |
| 57 | SL | 00 | 681.7 | DJ | | |
| 58 | DP | 00 | 690.9 | DJ,SS/ | | |
| 59 | CB | 00 | 712.3 | DJ, HS | | |
| 62 | PP | 00 | 762.6 | BV | | |
| 63 | SD | 00 | 763.7 | BD | H = 0.45 | |
| 64 | CB | 00 | 799.3 | SS/, HS,DJ | | |
| 65 | DP | 00 | 806.6 | /SS, BV,HS | | |
| 66 | CB | 00 | 847.8 | | OLD CULVERT PARTIALLY IN STRM | |
| 67 | RB | 00 | 881.2 | LI/ | | |
| 68 | LP | 00 | 888.3 | LA/ | | |



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

Location: 10 408614 E 4807622 N
 Caption: WILLANCH CREEK RESTORATION SITE - COOS BASIN