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

STREAM: Big Tom Folley Creek Phase 3 (U-245)

BASIN: Umpqua River

SURVEY TYPE: Post-Tx

DATE: March 29, 2006

SURVEY CREW: Brian Cannon, Jon Nott

REPORT PREPARED BY: Paul Jacobsen

BASIN AREA: 57.4 km²

USGS MAPS: Putnam Valley

ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Big Tom Folley Creek habitat survey extended 1,969 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 3.9 (range: 1.7-5.0). Land use for the reach was large (30-50 cm dbh) and young (3-15 cm dbh) trees. The average unit gradient was 1.3 percent. Riffles (41%) and scour pools (37%) dominated stream habitat. Bedrock (31%), gravel (22%) and sand (20%) dominated stream substrate. Wood volume was low at 9.0 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.

This stream was primarily treated with boulders.

OREGON DEPT OF FISH AND WILDLIFE BIG TOM FOLLEY CR PHASE 3 POST-TX (4-UMP, 245)

| HABITAT INVENTORY Report Date: | 12/6/2006 | Survey Date: 3/29/2006 |
|--------------------------------|-----------|------------------------|
|--------------------------------|-----------|------------------------|

| REACH 1 | T21S-R07W-S36NE | REACH 1 |
|---------|-----------------|---------|

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

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

Valley Width Index 3.9 VWI Range: 1.7 - 5

Channel Morphology (Percent Reach Length)

| Constrained | d | Unconstrained | |
|-------------------|------|------------------|----|
| 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> | Length (m) | Area (m2) | Dry Units |
|-------------------|------------|-----------|-----------|
| Primary Channel | 1,969 | 16,312 | 0 |
| Secondary Channel | 27 | 141 | 0 |
| Off-Channel Units | 64 | 78 | 0 |

Channel Dimensions (m)

| Wetted | | <u>Active</u> | <u>e</u> | Flood | $\frac{dprone}{dprone}$ $n =$ | 7 | <u>First</u> | <u>Terrace</u> | n = 5 |
|--------|------|---------------|----------|-------|-------------------------------|---|--------------|----------------|-------|
| Width: | 7.3 | Width: | 10.8 | 20.6 | (15.5 - 24.5 |) | 22.9 | (18 - 27 |) |
| Depth: | 0.48 | Height: | 0.7 | 1.4 | (1.3 - 1.4 |) | 1.7 | (1.6 - 1.8 | 3) |

W:D ratio: 15.7 Entrenchment (ACW:FPW ratio): 1.9

Stream Flow Type: MF Habitat Units/100m (total channel length): 3.6

Average Unit Gradient: 1.3% Habitat Units/100m (primary channel length): 3.8

Water temperature (°C): 10.0 - 10.0

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | LT | YT |
| Riparian Vegetation: | D30 | S |

Bank Condition and Shade

Bank StatusPercent Reach LengthShade (% of 180)Actively Eroding:Reach avg:Undercut Banks:Range: -

Large Wood Debris

| | <u>Total</u> | Total / 100m primary channel |
|-----------------------------|--------------|------------------------------|
| All pieces (>=3m x 0.15m): | 208 | 10.6 |
| Volume (m ³): | 177 | 9.0 |
| Key pieces (>=12m x 0.60m): | 1 | 0.1 |

OREGON DEPT OF FISH AND WILDLIFE BIG TOM FOLLEY CR PHASE 3 POST-TX (4-UMP, 245)

HABITAT INVENTORY Report Date: 12/6/2006 Survey Date: 3/29/2006

| REACH 1 | | | | T21S- | R07W- | S36NE | | | | RI | EACH | 1 | |
|-----------------|--------|---------|-------|-------|---------|----------|------|-----|------|---------|---------|------|------|
| | | | | HAB | ITAT DE | TAIL | | | | | | | |
| Habitat Type | Number | Total | Avg | Avg | Total | Large | | | | Substra | ate | | |
| | Units | Length | Width | Depth | Area | Boulders | i | | Perc | ent We | etted A | rea | |
| | | (m) | (m) | (m) | (m^2) | (#>0.5m) |) 5 | S/O | Snd | Grvl | Cbl | Bldr | Bdrk |
| CASCADE/BOULDE | RS (| 34 | 0.9 | 0.07 | 29 | 0 | | 7 | 13 | 42 | 26 | 3 | 10 |
| GLIDE | ; | 89 | 7.8 | 0.40 | 697 | 0 | | 0 | 15 | 10 | 8 | 10 | 57 |
| POOL-BACKWATER | ₹ ; | 2 8 | 1.2 | 0.23 | 9 | 0 | | 18 | 55 | 20 | 8 | 0 | 0 |
| POOL-ISOLATED | , | 1 5 | 2.0 | 0.35 | 10 | 0 | | 20 | 80 | 0 | 0 | 0 | 0 |
| POOL-LATERAL SO | COUR 2 | 710 | 8.5 | 0.84 | 6,144 | 0 | | 2 | 37 | 18 | 11 | 5 | 28 |
| RAPID/BEDROCK | : | 5 178 | 8.3 | 0.35 | 1,514 | 0 | | 0 | 8 | 9 | 3 | 12 | 68 |
| RAPID/BOULDERS | (| 6 161 | 6.8 | 0.30 | 1,158 | 0 | | 0 | 7 | 38 | 23 | 18 | 15 |
| RIFFLE | 19 | 845 | 7.9 | 0.34 | 6,734 | 0 | | 0 | 12 | 27 | 16 | 7 | 37 |
| STEP/BEDROCK | , | 1 7 | 6.5 | 0.20 | 42 | 0 | | 0 | 0 | 0 | 0 | 5 | 95 |
| STEP/BOULDERS | : | 5 24 | 8.8 | 0.33 | 192 | 0 | | 0 | 4 | 9 | 13 | 57 | 17 |
| STEP/LOG | | 1 0 | 8.0 | 0.10 | 2 | 0 | | 0 | 16 | 24 | 24 | 16 | 20 |
| Total: | 7. | 4 2,061 | 7.3 | 0.48 | 16,531 | 0 | Avg: | 2 | 21 | 22 | 14 | 10 | 31 |

| | | | HABITAT | Γ SUMMAR | Y | | | |
|-------------------|--------|--------|---------|----------|-------------------|---------|---------|--------------------------|
| Habitat Group | Number | Total | Avg | Avg | | | | |
| | Units | Length | Width | Depth | Wette | d Area | Large B | oulders |
| | | (m) | (m) | (m) | (m ²) | Percent | Number | (# / 100m ²) |
| Dammed & BW Pools | 3 | 13 | 1.4 | 0.27 | 19 | 0.12% | 0 | 0.0 |
| Scour Pools | 25 | 710 | 8.5 | 0.84 | 6,144 | 37.17% | 0 | 0.0 |
| Glides | 3 | 89 | 7.8 | 0.40 | 697 | 4.22% | 0 | 0.0 |
| Riffles | 19 | 845 | 7.9 | 0.34 | 6,734 | 40.73% | 0 | 0.0 |
| Rapids | 11 | 339 | 7.5 | 0.32 | 2,672 | 16.16% | 0 | 0.0 |
| Cascades | 6 | 34 | 0.9 | 0.07 | 29 | 0.17% | 0 | 0.0 |
| Step/Falls | 7 | 31 | 8.4 | 0.28 | 237 | 1.43% | 0 | 0.0 |
| Dry | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Culverts | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |

POOL SUMMARY

| | <u>Total</u> | Total of all Channel Lengths # / Km | Primary Channel Length # / Km |
|---------------------------------------|--------------|-------------------------------------|-------------------------------|
| All Pools: | 28 | 13.6 | 14.2 |
| Pools >=1m deep: | 2 | 1.0 | 1.0 |
| Complex pools (LWD pieces>=3): | 13 | 6.3 | 6.6 |
| Pool frequency (channel widths/pool): | 6.8 | | |
| Residual pool depth (avg): | 0.52 | | |

Comment Summary Restoration Monitoring Sites 2006

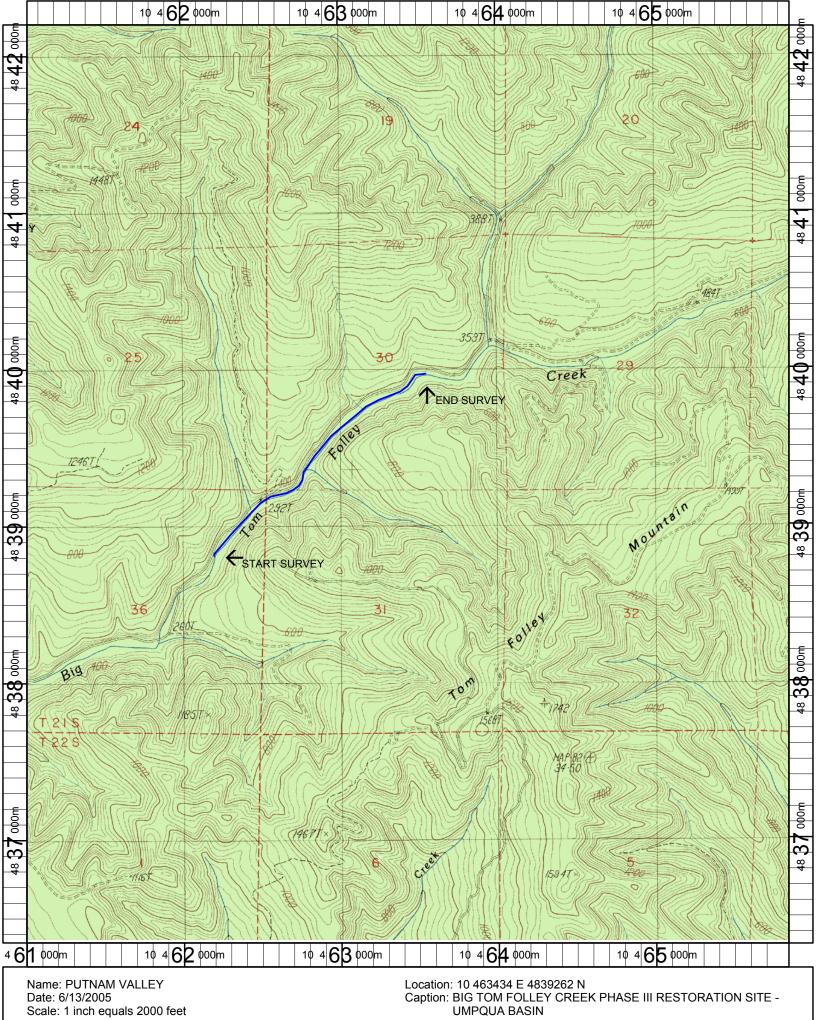
MONITORING AREA: 4-UMP SITE ID: 245 BIG TOM FOLLEY CR PHASE 3 POST

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|----------|---------------------------|----------------|
| 1 | RI | 00 | 31 | HS | 25 BOULDERS | |
| 3 | RR | 00 | 86.5 | HS | 15 BOULDERS | |
| 5 | RB | 00 | 143 | HS | 30 BOULDERS - SITE 3 | |
| 6 | RI | 01 | 193 | TJ/ | T = 10.0 | |
| 7 | СВ | 11 | 193 | | ACW = 1.2, T = 10.0, BDRK | E=CLAY |
| 8 | RR | 00 | 232.5 | HS | 50 BOULDERS | |
| 10 | LP | 00 | 264 | HS | 25 BOULDERS | |
| 11 | SB | 00 | 269 | HS | 25 BOULDERS | |
| 12 | LP | 00 | 315 | | FRESH REDD | |
| 13 | SL | 00 | 315.3 | HS | 12 BOULDERS, ONE LOGS | S, H=0.2 |
| 14 | LP | 00 | 383.3 | HS x 3 | 18 BLDRS, 12 BLDRS, 18 E | BLDRS |
| 15 | SB | 00 | 383.9 | HS | 25 BOULDERS | |
| 16 | LP | 00 | 409.9 | HS | 40 BOULDERS - SITE 7 | |
| 17 | RI | 01 | 426.4 | TJ/ | | |
| 18 | СВ | 11 | 426.4 | | ACW = 3.7, CC UPSTREAM | Л |
| 20 | RI | 01 | 512.4 | /TJ | | |
| 21 | СВ | 11 | 512.4 | | ACW = 1.2 | |
| 26 | RB | 01 | 647.9 | TJ/ | | |
| 27 | СВ | 11 | 647.9 | | ACW = 0.7 | |
| 33 | RR | 01 | 815.4 | HS x 5 | 4 WITH 10 BLDRS, 1 WITH | 18 |
| 36 | RI | 01 | 858.4 | DJ | | |

Comment Summary Restoration Monitoring Sites 2006

MONITORING AREA: 4-UMP SITE ID: 245 BIG TOM FOLLEY CR PHASE 3 POST

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|----------|---------------------------|----------------|
| 38 | LP | 01 | 899.4 | /TJ | | |
| 39 | RB | 11 | 899.4 | | ACW = 3.6 | |
| 41 | SB | 00 | 951.8 | HS x 3 | 2 WITH 10 BLDRS, 1 WITH | 25 |
| 43 | RI | 00 | 995.3 | HS x 3 | ALL WITH BLDRS - 8, 15, 4 | ı |
| 44 | SB | 00 | 995.7 | | H = 0.25 | |
| 45 | LP | 00 | 1027.7 | HS | 12 BOULDERS | |
| 46 | LP | 00 | 1056.7 | DJ | | |
| 47 | RI | 01 | 1144.7 | TJ/ | | |
| 48 | СВ | 11 | 1144.7 | | ACW = 0.9, BDRK IS HARD | PAN |
| 50 | RI | 00 | 1221.7 | | SEVERAL FRESH REDDS | IN SURVEY |
| 51 | RI | 00 | 1246.7 | HS | 50 BOULDERS THROUGH | RIFFLE |
| 56 | RB | 00 | 1372 | HS x 4 | BOULDERS - 15, 10,12, 7 | |
| 60 | RI | 01 | 1526.3 | TJ/, SS/ | | |
| 61 | СВ | 11 | 1526.3 | | ACW = 1.6 | |
| 71 | BW | 10 | 1895 | SS/ | | |
| 74 | GL | 01 | 1969.4 | TJ/ | | |



Scale: 1 inch equals 2000 feet