

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

STREAM: Starvout Creek (U-151)
BASIN: Umpqua River
SURVEY TYPE: Post-Tx
DATE: June 24, 2002
SURVEY CREW: Kevin Taft, Tom Hardy
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 30.8 km²
USGS MAPS: Starvout Creek
ECOREGION: Coast Range Klamath Siskiyou

GENERAL DESCRIPTION:

The Starvout Creek habitat survey extended 511 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 32.0 (range: 19.0 – 61.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.6 percent. Riffles (38%) and scour pools (28%) dominated stream habitat. Gravel (34%) and cobble (33%) dominated stream substrate. Wood volume was low at 13.9 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

T32S-R04W-S15NW

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 | 0% |
| Moderate V-shape | 0% | Multiple Terraces | 100% |
| Open V-shape | 0% | Wide Floodplain | 0% |
| Valley Width Index | 32.0 | VWI Range: | 19 - 61 |

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

| <u>Type</u> | <u>Length (m)</u> | <u>Area (m2)</u> | <u>Dry Units</u> |
|-------------|-------------------|------------------|------------------|
| Primary | 511 | 1,738 | 0 |
| Secondary | 183 | 366 | 9 |

Channel Dimensions (m)

| <u>Wetted</u> | | <u>Active</u> | | <u>Floodprone</u> | <u>First Terrace</u> |
|---------------------|------|---------------------|------|-------------------|----------------------|
| Width | 3.0 | Width | 5.7 | 10.2 | 16.5 |
| Depth | 0.19 | Height | 0.4 | 0.9 | 1.7 |
| | | W:D ratio | 13.5 | Entrenchment | 1.7 |
| Stream Flow Type: | MF | Water temp (C): | | 13.0 - 13.0 | |
| Avg. Unit Gradient: | 2.6% | Habitat Units/100m: | | 11.2 | |

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | ST | |
| Riparian Vegetation: | C15 | S |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding: | 1% | Reach avg: 81% |
| Undercut Banks: | 2% | Range: 57 - 100 |

Large Wood Debris

| | <u>Total</u> | <u>Total / 100m</u> |
|-----------------------------|--------------|---------------------|
| All pieces (>=3m x 0.15m): | 54 | 10.6 |
| Volume (m ³): | 71 | 13.9 |
| Key pieces (>=10m x 0.60m): | 7 | 1.4 |

OREGON DEPARTMENT OF FISH AND WILDLIFE

STARVOUT CREEK POST-TX (U-151)

HABITAT INVENTORY

Report Date: 3/17/03

Survey Date:

6/24/02

| REACH 1 | | T32S-R04W-S15NW | | | | | 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 |
| DRY UNIT | 6 | 129 | 2.2 | 0.00 | 284 | 0 | 22 | 36 | 17 | 23 | 3 | 0 |
| GLIDE | 1 | 6 | 3.3 | 0.21 | 20 | 2 | 5 | 10 | 30 | 20 | 10 | 25 |
| POOL-DAMMED | 1 | 6 | 3.0 | 0.39 | 19 | 2 | 5 | 10 | 55 | 25 | 5 | 0 |
| POOL-LATERAL SCOUR | 11 | 122 | 3.5 | 0.43 | 424 | 19 | 5 | 13 | 37 | 31 | 9 | 6 |
| POOL-PLUNGE | 1 | 17 | 3.5 | 0.25 | 60 | 4 | 0 | 5 | 15 | 50 | 25 | 5 |
| POOL-STRAIGHT SCOUR | 3 | 31 | 2.9 | 0.37 | 103 | 7 | 8 | 22 | 42 | 20 | 5 | 3 |
| PUDDLED UNIT | 3 | 42 | 1.3 | 0.08 | 71 | 2 | 7 | 12 | 50 | 25 | 7 | 0 |
| RAPID/BOULDERS | 5 | 75 | 3.7 | 0.13 | 272 | 17 | 0 | 8 | 30 | 44 | 18 | 0 |
| RIFFLE | 17 | 185 | 2.7 | 0.12 | 579 | 55 | 2 | 8 | 40 | 36 | 11 | 3 |
| RIFFLE W/ POCKETS | 5 | 69 | 3.2 | 0.15 | 225 | 21 | 0 | 5 | 33 | 45 | 17 | 1 |
| STEP/BOULDERS | 3 | 6 | 3.6 | 0.14 | 20 | 10 | 0 | 2 | 10 | 22 | 67 | 0 |
| STEP/COBBLE | 1 | 7 | 4.3 | 0.20 | 28 | 8 | 0 | 10 | 30 | 50 | 10 | 0 |
| Total: | 57 | 694 | 3.0 | 0.19 | 2,104 | 147 | Avg 5 | 12 | 34 | 33 | 13 | 3 |

| 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 | 1 | 6 | 3.0 | 0.39 | 19 | 0.90% | 2 | 10.6 |
| Scour Pools | 15 | 170 | 3.4 | 0.40 | 586 | 27.86% | 30 | 5.1 |
| Glides | 1 | 6 | 3.3 | 0.21 | 20 | 0.94% | 2 | 10.1 |
| Riffles | 22 | 254 | 2.8 | 0.13 | 804 | 38.21% | 76 | 9.5 |
| Rapids | 5 | 75 | 3.7 | 0.13 | 272 | 12.92% | 17 | 6.3 |
| Cascades | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Step/Falls | 4 | 12 | 3.8 | 0.15 | 48 | 2.29% | 18 | 37.3 |
| Dry | 9 | 171 | 1.9 | 0.03 | 355 | 16.88% | 2 | 0.6 |
| Culverts | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |

POOL SUMMARY

| | <u>Total</u> | <u># / Km</u> |
|---------------------------------------|--------------|---------------|
| All Pools: | 16 | 31.3 |
| Pools >=1m deep: | 0 | 0.0 |
| Complex pools (LWD pieces>=3): | 7 | 13.7 |
| Pool frequency (channel widths/pool): | 7.6 | |
| Residual pool depth (avg): | 0.29 | |

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

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

| | |
|---------------------------------|------|
| Total hardwoods/1000 | 1361 |
| Total conifers/1000 ft | 163 |
| 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 | 5.7 | 0.0 | 4.7 | 0.0 | 6.0 | 0.0 | 16.3 |
| 15-30cm | 0.0 | 2.3 | 0.7 | 0.3 | 0.3 | 1.3 | 1.0 | 4.0 |
| 30-50cm | 1.0 | 1.3 | 0.3 | 0.7 | 0.3 | 0.0 | 1.7 | 2.0 |
| 50-90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m2 | 1.0 | 9.3 | 1.0 | 5.7 | 0.7 | 7.3 | 0.9 | 7.4 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10 - 20 meters | | Zone 3 20 - 30 meters | |
|------------------|-----------------------|--|--------------------------|--|--------------------------|--|
| | (%) | | (%) | | (%) | |
| Canopy closure | 62 | | 54 | | 53 | |
| Shrub cover | 71 | | 69 | | 59 | |
| Grass/forb cover | 27 | | 28 | | 28 | |

Predominant landform in each zone

| | Zone 1 0-10 meters | | Zone 2 10 - 20 meters | | Zone 3 20 - 30 meters | |
|-------------------|-----------------------|--|--------------------------|--|--------------------------|--|
| | (%) | | (%) | | (%) | |
| Hillslope | 0 | | 0 | | 0 | |
| High terrace | 100 | | 50 | | 50 | |
| Low terrace | 0 | | 0 | | 0 | |
| Floodplain | 0 | | 17 | | 0 | |
| Wetland/meadow | 0 | | 17 | | 17 | |
| Stream channel | 0 | | 0 | | 17 | |
| Roadbed/Railroad | 0 | | 17 | | 17 | |
| Riprap | 0 | | 0 | | 0 | |
| Surface slope (%) | 12 | | 3 | | 1 | |

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 | | |
| 16 | LF | 1 | HT | 9 | 80 | 80 | 20 | Conifer | | | | | | | SMALL COBBLE |
| | | | | | | | | Hardwood | 1 | | | | | | RFRM |
| 16 | LF | 2 | WL | 0 | 90 | 80 | 20 | Conifer | | | | | | | OLD |
| | | | | | | | | Hardwood | 10 | | | | | | ARTIFICIAL RFRMS |
| 16 | LF | 3 | WL | 0 | 90 | 60 | 40 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 14 | | | | | | |
| 16 | RT | 1 | HT | 21 | 10 | 30 | 65 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 16 | RT | 2 | RB | -6.5 | 25 | 35 | 50 | Conifer | | 1 | 1 | | | | D. FIR, MADRONE |
| | | | | | | | | Hardwood | 1 | | | | | | |
| 16 | RT | 3 | HT | -10 | 25 | 45 | 35 | Conifer | | | 1 | | | | D. FIR, ROAD IS NEAR |
| | | | | | | | | Hardwood | | | | | | | |
| 32 | LF | 1 | HT | 0 | 70 | 75 | 25 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 2 | 1 | | | | |
| 32 | LF | 2 | HT | 0 | 75 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 32 | LF | 3 | HT | 0 | 75 | 60 | 30 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 4 | | | | | | |
| 32 | RT | 1 | HT | 0 | 85 | 90 | 0 | Conifer | | | | | | | MINING BERM |
| | | | | | | | | Hardwood | 11 | | | | | | |
| 32 | RT | 2 | HT | 27 | 9 | 70 | 30 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 32 | RT | 3 | RB | 9 | 0 | 20 | 30 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 48 | LF | 1 | HT | 31 | 75 | 100 | 0 | Conifer | | | | 1 | | | MINING BERM |
| | | | | | | | | Hardwood | 2 | 4 | 2 | | | | |
| 48 | LF | 2 | FP | -12 | 85 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 3 | 1 | 2 | | | | |
| 48 | LF | 3 | TC | 0.5 | 90 | 95 | 5 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 4 | | | | | |
| 48 | RT | 1 | HT | 10 | 50 | 50 | 50 | Conifer | | | | 2 | | | |
| | | | | | | | | Hardwood | 3 | 1 | 1 | | | | |
| 48 | RT | 2 | HT | 11 | 40 | 50 | 45 | Conifer | | | 1 | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 48 | RT | 3 | HT | 6 | 40 | 75 | 25 | Conifer | | | | 1 | | | |
| | | | | | | | | Hardwood | | | | | | | |

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **4-UMP** SITE ID: **151** **STARVOUT CREEK POST-TX (U-151)**

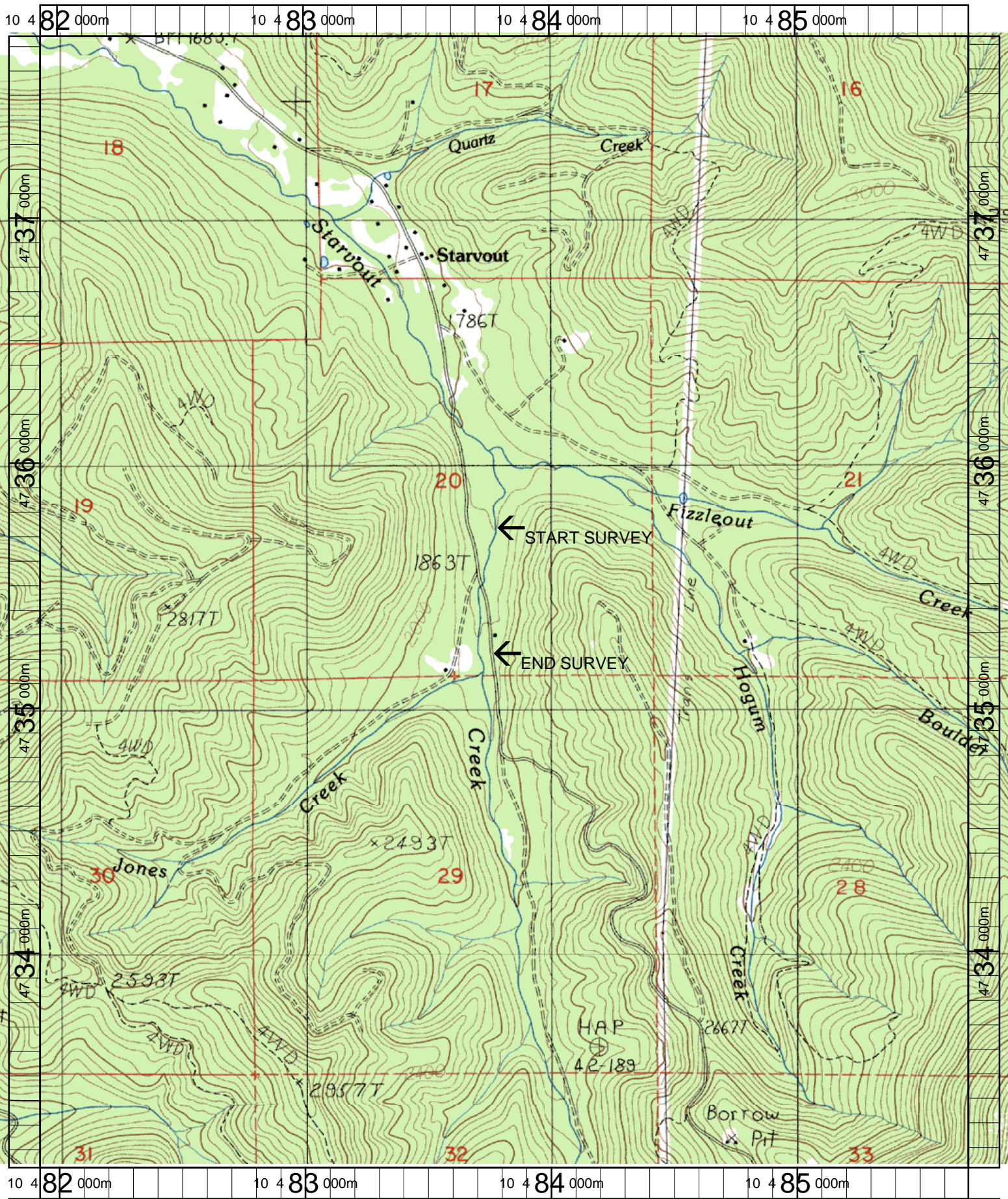
| <u>UNIT#</u> | <u>TYPE</u> | <u>CHAN</u> | <u>DIST. (m)</u> | <u>COMMENTS</u> | <u>NOTE ESTIMATOR</u> | <u>NOTE NUMERATOR</u> |
|--------------|-------------|-------------|------------------|-----------------|-----------------------|--------------------------|
| 1 | SC | 00 | 6.6 | HS | T = 13 @ 11:10 | HS = LOGS, COHO FRY, SCU |
| 2 | SP | 00 | 22 | HS | | HS = LOGS, COHO FRY |
| 4 | LP | 00 | 58.6 | HS | HIGH TERRACE | HS = LOGS, COHO FRY |
| 5 | RB | 01 | 68.3 | | | HIGH GRADIENT RAPID |
| 6 | LP | 01 | 81 | HS | COHO FRY | |
| 8 | SB | 01 | 93.4 | | H = .45 | |
| 9 | RI | 01 | 112.2 | | COHO FRY, HIGH TERRA | COHO, POORLY DEVELOPE |
| 10 | PD | 02 | 112.2 | | | SIDE CHANNEL ON LEFT |
| 14 | LP | 00 | 121.9 | | FLAG "SNORKEL POOL #2 | COHO FRY, FLAG "SNORKLE |
| 16 | SP | 00 | 150.5 | MI, HS | | COHO FRY, CUTT ADULT |
| 18 | LP | 00 | 171.8 | HS | | COHO FRY |
| 19 | RI | 00 | 192.3 | MI, WL | MI - BUCKETS, PIPES | RSN, MINING EQUIPMENT |
| 20 | RB | 00 | 210.9 | MI | MI = HYDRAULIC WASHIN | PIPING |
| 21 | DP | 00 | 217.2 | MI, WL | MI - DAM, LOW BERM | RED-LEGGED FROG |
| 23 | RI | 01 | 236.2 | TJ/ | TJ/ | |
| 24 | RI | 11 | 236.2 | | T = 13.5 @ 15:30 | TRIB UNIT |
| 25 | RI | 01 | 242.7 | | T = 15 @ 15:30 | |
| 26 | DU | 02 | 242.7 | | | SIDE CHANNEL ON RIGHT |
| 28 | LP | 00 | 259.5 | BC | STARVOUT CREEK ROAD | COHO FRY, SCULPIN, SN PO |
| 30 | RB | 01 | 285.8 | WL | | GARTER SNAKE, SUBUNIT P |
| 32 | DU | 02 | 298.8 | | T = 11 @ 8:35 | SIDE CHANNEL ON RIGHT |

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: 4-UMP SITE ID: 151 STARVOUT CREEK POST-TX (U-151)

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|------------|------------------------|-------------------------|
| 33 | LP | 01 | 318.2 | HS | | COHO FRY |
| 34 | RP | 01 | 329.4 | | | 2 SMALL POCKET POOLS |
| 36 | LP | 01 | 354.2 | HS | | COHO, FLAG "SNORKLE PO |
| 37 | RI | 01 | 367.2 | HS | RESTORATION ACCESS/ | RIPARIAN SURVEY |
| 39 | RB | 01 | 389.2 | HS | | |
| 40 | LP | 01 | 393.2 | HS, WL,TJ/ | TJ/ | FIELD MOUSE |
| 41 | RI | 11 | 393.2 | | T = 12 @ 9:51 | UNKNOWN SALMONID |
| 44 | DU | 02 | 393.2 | WL | | ROUGH SKIN NEWT |
| 45 | PD | 02 | 393.2 | | | RESTORATION SITE FLAGGI |
| 46 | RP | 00 | 407 | | COHO FRY, FLAG "SITE 8 | COHO FRY |
| 47 | RI | 00 | 423 | WL | | RUFFED GROUSE |
| 48 | RP | 00 | 440.6 | | | COHO FRY, SCULPIN |
| 50 | PP | 00 | 467.1 | | | SMALL POOL BUT GOOD HA |
| 51 | SB | 00 | 468.9 | | BOULDER STEP | |
| 52 | RI | 00 | 474.4 | WL | | RSN, AMPHIBIAN EGG MASS |
| 53 | LP | 00 | 480.4 | | | SNORKLE POOL #5 |
| 54 | RI | 00 | 486.4 | HS | | |
| 55 | SB | 00 | 488.3 | HS | | |
| 56 | LP | 00 | 496.7 | HS | | |
| 57 | RP | 00 | 511.2 | | END SURVEY | END SIGN ALDER LEFT |



Name: STARVOUT CREEK
 Date: 3/21/2003
 Scale: 1 inch equals 1666 feet

Location: 10 483809 E 4735433 N
 Caption: STARVOUT CREEK RESTORATION SITE - COW
 CR/S.UMPQUA BASIN