

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

STREAM: Sixes River Unnamed Tributary (MS-192)
BASIN: Sixes River
SURVEY TYPE: Pre-Tx
DATE: July 1, 2004
SURVEY CREW: Greg Ryder, Justin Gerding
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 3.2 km²
USGS MAPS: Barklow Mountain
ECOREGION: Coast Range California Extension

GENERAL DESCRIPTION:

The Sixes River Tributary habitat survey extended 695 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 8.6 (range: 4.0-20.0). Land use for the reach was young (3-15 cm dbh) and second growth (15-30 cm dbh) trees. The average unit gradient was 2.5 percent. Riffles (70%) dominated stream habitat. Cobble (41%) and gravel (37%) dominated stream substrate. Wood volume was low at 5.3 m³/100m.

COMMENTS:

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

REACH 1

T32S-R13W-S10SW

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 | 8.6 | VWI Range: | 4 - 20 |

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 | 695 | 1,352 | 0 |
| Secondary | 97 | 87 | 3 |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 5 | <u>First Terrace</u> n = 5 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 1.9 | Width: 5.1 | 7.7 (6.4 - 8.8) | 8.5 (7 - 10) |
| Depth: 0.24 | Height: 0.5 | 0.9 (0.9 - 1) | 1.2 (1.1 - 1.5) |

W:D ratio: 10.9 Entrenchment (ACW:FPW ratio): 1.5
 Stream Flow Type: LF Habitat Units/100m (total channel length): 6.1
 Average Unit Gradient: 2.5% Habitat Units/100m (primary channel length): 6.9
 Water temperature (°C): 14.0 - 14.0

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | YT | ST |
| Riparian Vegetation: | D15 | S |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding: | 1% | Reach avg: 95% |
| Undercut Banks: | 4% | Range: 67 - 100 |

Large Wood Debris

| | <u>Total</u> | <u>Total / 100m primary channel</u> |
|-----------------------------|--------------|-------------------------------------|
| All pieces (>=3m x 0.15m): | 67 | 9.6 |
| Volume (m ³): | 37 | 5.3 |
| Key pieces (>=12m x 0.60m): | 0 | 0.0 |

OREGON DEPARTMENT OF FISH AND WILDLIFE SIXES RIVER UNNAMED TRIB PRE-TX (MS-192)

HABITAT INVENTORY

Report Date: 10/27/2004

Survey Date:

7/1/2004

REACH 1

T32S-R13W-S10SW

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 | 22 | 1.2 | 0.20 | 26 | 2 | 0 | 5 | 70 | 15 | 5 | 5 |
| GLIDE | 2 | 25 | 2.3 | 0.15 | 62 | 0 | 0 | 8 | 43 | 8 | 0 | 43 |
| POOL-LATERAL SCOUR | 15 | 128 | 2.2 | 0.40 | 272 | 4 | 1 | 29 | 45 | 16 | 0 | 8 |
| PUDDLED UNIT | 3 | 69 | 0.8 | 0.25 | 52 | 0 | 0 | 11 | 20 | 63 | 0 | 5 |
| RAPID/BOULDERS | 1 | 6 | 1.4 | 0.30 | 9 | 17 | 0 | 5 | 20 | 15 | 60 | 0 |
| RIFFLE | 25 | 538 | 1.9 | 0.16 | 1,014 | 31 | 0 | 6 | 34 | 57 | 3 | 1 |
| STEP/COBBLE | 1 | 3 | 1.4 | 0.05 | 5 | 0 | 0 | 5 | 20 | 75 | 0 | 0 |
| Total: | 48 | 792 | 1.9 | 0.24 | 1,438 | 54 | Avg: 0 | 13 | 37 | 41 | 3 | 5 |

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 | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Scour Pools | 15 | 128 | 2.2 | 0.40 | 272 | 18.88% | 4 | 1.5 |
| Glides | 2 | 25 | 2.3 | 0.15 | 62 | 4.30% | 0 | 0.0 |
| Riffles | 25 | 538 | 1.9 | 0.16 | 1,014 | 70.48% | 31 | 3.1 |
| Rapids | 1 | 6 | 1.4 | 0.30 | 9 | 0.60% | 17 | 195.9 |
| Cascades | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Step/Falls | 1 | 3 | 1.4 | 0.05 | 5 | 0.32% | 0 | 0.0 |
| Dry | 3 | 69 | 0.8 | 0.25 | 52 | 3.60% | 0 | 0.0 |
| Culverts | 1 | 22 | 1.2 | 0.20 | 26 | 1.82% | 2 | 7.6 |

POOL SUMMARY

| | Total of all Channel Lengths | | Primary Channel Length |
|---------------------------------------|------------------------------|---------------|------------------------|
| | <u>Total</u> | <u># / Km</u> | <u># / Km</u> |
| All Pools: | 15 | 18.9 | 21.6 |
| Pools >=1m deep: | 0 | 0.0 | 0.0 |
| Complex pools (LWD pieces>=3): | 4 | 5.0 | 5.8 |
| Pool frequency (channel widths/pool): | 10.4 | | |
| Residual pool depth (avg): | 0.32 | | |

OREGON DEPARTMENT OF FISH AND WILDLIFE IXES RIVER UNNAMED TRIB PRE-TX (MS-192)

HABITAT INVENTORY Report Date: 10/27/2004

Survey Date: 7/1/2004

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

REACH 1

Summary of Riparian Zone (0-30m)

3 transects

| | |
|---------------------------------|-----|
| Total hardwoods/1000 | 955 |
| Total conifers/1000 ft | 366 |
| Total conifers >20" dbh/1000 ft | 41 |
| Total conifers >35" dbh/1000 ft | 41 |

Average number of trees in a 5-meter wide band

| Diameter class (cm) | Zone 1 | | Zone 2 | | Zone 3 | | Zones 1-3 | |
|---------------------|-------------|----------|----------------|----------|----------------|----------|-------------|----------|
| | 0-10 meters | | 10 - 20 meters | | 20 - 30 meters | | 0-30 meters | |
| | Conifer | Hardwood | Conifer | Hardwood | Conifer | Hardwood | Conifer | Hardwood |
| 3-15cm | 0.3 | 0.7 | 0.3 | 0.3 | 1.0 | 4.7 | 1.7 | 5.7 |
| 15-30cm | 0.0 | 1.7 | 0.7 | 1.3 | 0.7 | 0.3 | 1.3 | 3.3 |
| 30-50cm | 0.7 | 2.0 | 1.7 | 1.3 | 0.0 | 1.7 | 2.3 | 5.0 |
| 50-90cm | 0.0 | 0.3 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.3 |
| >90cm | 0.7 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.3 |
| Total/100m2 | 1.7 | 5.0 | 2.7 | 4.0 | 1.7 | 6.7 | 2.0 | 5.2 |

Canopy closure and ground cover

| | Zone 1 | | Zone 2 | | Zone 3 | |
|------------------|-------------|--|----------------|--|----------------|--|
| | 0-10 meters | | 10 - 20 meters | | 20 - 30 meters | |
| | (%) | | (%) | | (%) | |
| Canopy closure | 97 | | 83 | | 57 | |
| Shrub cover | 37 | | 60 | | 40 | |
| Grass/forb cover | 40 | | 27 | | 40 | |

Predominant landform in each zone

| | Zone 1 | | Zone 2 | | Zone 3 | |
|-------------------|-------------|--|----------------|--|----------------|--|
| | 0-10 meters | | 10 - 20 meters | | 20 - 30 meters | |
| | (%) | | (%) | | (%) | |
| Hillslope | 50 | | 67 | | 67 | |
| High terrace | 50 | | 33 | | 17 | |
| Low terrace | 0 | | 0 | | 0 | |
| Floodplain | 0 | | 0 | | 0 | |
| Wetland/meadow | 0 | | 0 | | 0 | |
| Stream channel | 0 | | 0 | | 0 | |
| Roadbed/Railroad | 0 | | 0 | | 17 | |
| Riprap | 0 | | 0 | | 0 | |
| Surface slope (%) | 18 | | 15 | | 10 | |

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

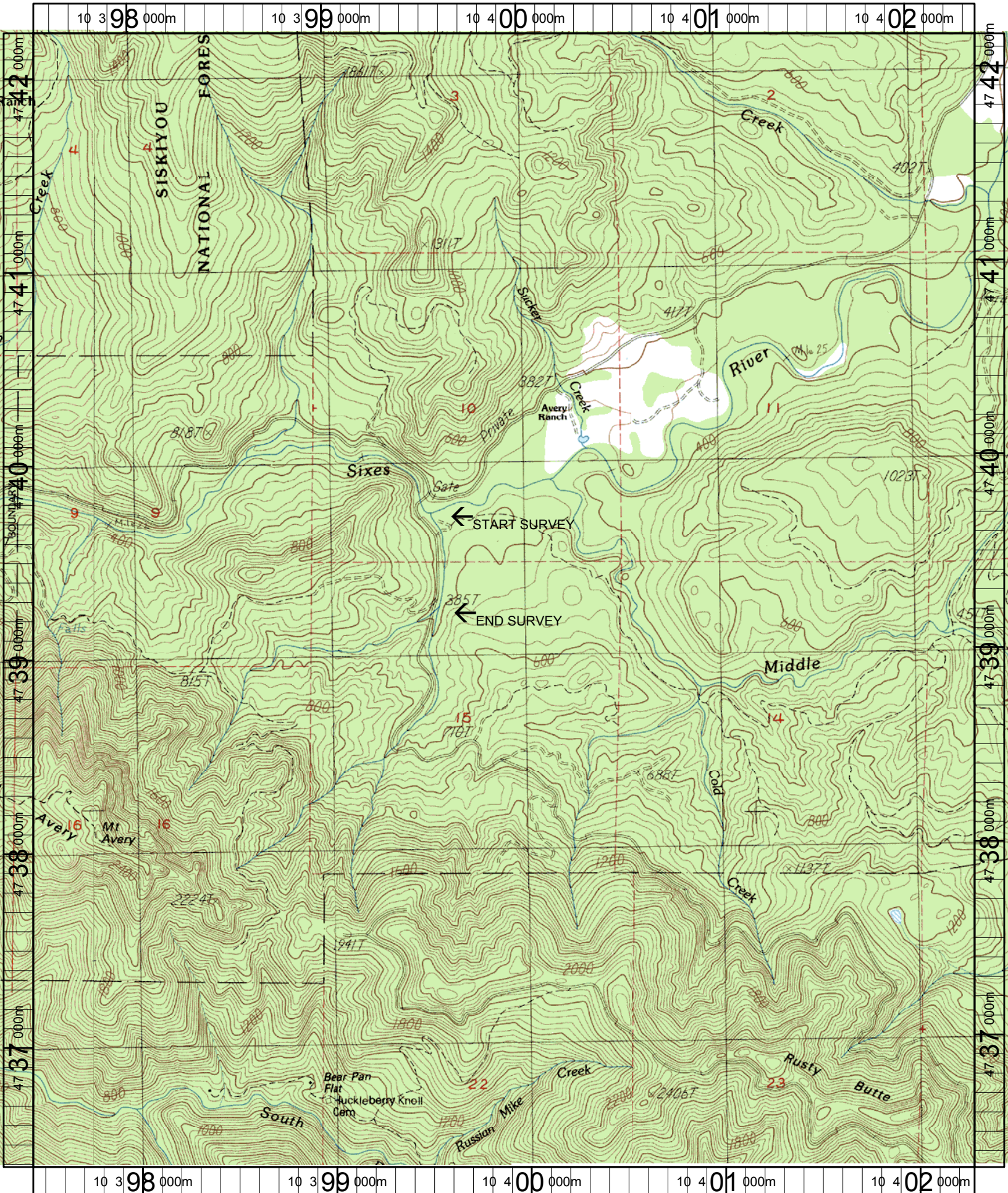
| Unit | Side | Zone | Surface | Slope | Cover (percent) | | | | Diameter class (cm) | | | | | Notes | |
|------|------|------|---------|-------|-----------------|-------|-------|----------|---------------------|-------|-------|-------|-----|-------|----------|
| | | | | | Canopy | Shrub | Grass | | 3-15 | 15-30 | 30-50 | 50-90 | >90 | | |
| 9 | LF | 3 | HS | 5 | 60 | 40 | 60 | Conifer | 1 | | | | | | |
| | | | | | | | | Hardwood | 3 | 1 | | | | | |
| 9 | RT | 3 | HT | 5 | 40 | 20 | 80 | Conifer | 1 | 2 | | | | | |
| | | | | | | | | Hardwood | 1 | | | | | | |
| 9 | RT | 1 | HT | 0 | 100 | 0 | 40 | Conifer | 1 | | 2 | | 1 | | |
| | | | | | | | | Hardwood | 1 | | | | | | |
| 9 | LF | 2 | HS | 5 | 60 | 40 | 60 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 1 | | | | | |
| 9 | LF | 1 | HS | 5 | 80 | 60 | 40 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | 1 | |
| 9 | RT | 2 | HT | 0 | 80 | 80 | 0 | Conifer | 1 | | | | | | |
| | | | | | | | | Hardwood | 1 | | | | | | |
| 20 | RT | 3 | RB | 0 | 0 | 0 | 0 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 20 | LF | 3 | HS | 10 | 100 | 60 | 40 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 10 | | | | | | |
| 20 | RT | 1 | HS | 20 | 100 | 60 | 40 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 20 | LF | 2 | HT | 0 | 80 | 80 | 20 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | 2 | | |
| 20 | LF | 1 | HT | 0 | 100 | 20 | 20 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 1 | 2 | | | | |
| 20 | RT | 2 | HS | 50 | 100 | 40 | 20 | Conifer | | | 1 | | | | |
| | | | | | | | | Hardwood | | | 2 | | | | |
| 28 | RT | 1 | HS | 70 | 100 | 20 | 80 | Conifer | | | | | | 1 | |
| | | | | | | | | Hardwood | 1 | | | | | | |
| 28 | LF | 3 | HS | 10 | 100 | 20 | 60 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 28 | LF | 2 | HS | 20 | 100 | 40 | 40 | Conifer | | | 2 | | | | |
| | | | | | | | | Hardwood | | | 3 | 1 | | | |
| 28 | RT | 2 | HS | 15 | 80 | 80 | 20 | Conifer | | 1 | 3 | | | | CROSS |
| | | | | | | | | Hardwood | | 1 | 1 | | | | SMALL SS |
| 28 | RT | 3 | HS | 30 | 40 | 100 | 0 | Conifer | 1 | | | | | | |
| | | | | | | | | Hardwood | | | 5 | | | | |
| 28 | LF | 1 | HT | 10 | 100 | 60 | 20 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | 4 | 4 | 1 | | | |

Comment Summary

Oregon Plan Monitoring Sites 2002

MONITORING AREA: **3-MS** SITE ID: **192** **SIXES RIVER UNNAMED TRIB PRE-T**

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTE ESTIMATOR | NOTE NUMERATOR |
|-------|------|------|-----------|----------|-----------------------|-----------------------|
| 1 | RI | 00 | 25 | | TEMP=14 DEG C AT 9:35 | T=14 DEG C AT 9:40 |
| 3 | PD | 02 | 42.4 | | FRY | |
| 5 | RI | 00 | 75 | | | RIGHT BANK UNDERCUT |
| 6 | RI | 00 | 101.5 | | GREEN FLAG | |
| 7 | RI | 01 | 126.5 | TJ/ | GREEN FLAG | |
| 8 | PD | 11 | 126.5 | | ACW=1.8, TEMP=13 DEG | TRIB=13 DEG C AT10:50 |
| 9 | RI | 01 | 137.6 | | | T ABOVE TRIB-14 DEG C |
| 16 | RI | 00 | 207.2 | | TROUT FRY | |
| 18 | RI | 00 | 248.9 | /SS | | |
| 19 | LP | 00 | 256.7 | | GREEN FLAG | |
| 26 | RI | 00 | 360.1 | | GREEN FLAG | |
| 28 | RI | 00 | 388.1 | /SS | | |
| 29 | LP | 00 | 394.4 | | TROUT FRY | LG. LOG SCOURED OUT |
| 31 | RI | 00 | 446.3 | | GREEN FLAG | |
| 33 | LP | 00 | 468 | | TROUT FRY | |
| 38 | RI | 00 | 523.3 | | GREEN FLAG | |
| 41 | RI | 00 | 583.3 | | TROUT FRY | |
| 42 | RI | 00 | 608.3 | | GREEN FLAG | |
| 46 | LP | 01 | 694.8 | /TJ | END SIGN | T=14 DEG C AT 15:10 |
| 47 | RB | 11 | 694.8 | | CULVERT W=2.7 H=2.7 | |
| 48 | CC | 11 | 694.8 | CC | NO STEP BEFORE CULVE | TROUT FRY IN CC |



Name: BARKLOW MT
 Date: 6/14/2004
 Scale: 1 inch equals 2000 feet

Location: 10 399895 E 4739280 N
 Caption: SIXES RIVER UNNAMED TRIBUTARY RESTORATION SITE - SIXES BASIN