

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

STREAM: Little South Fork Hunter Creek (SC-45)
BASIN: Hunter Creek
SURVEY TYPE: Pre-Tx
DATE: July 29, 2000
SURVEY CREW: Peter Bower, Justin Gerding
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 4.4 km²
USGS MAPS: Sundown Mtn
ECOREGION: Coast Range Sitka Spruce

GENERAL DESCRIPTION:

The Little South Fork Hunter Creek habitat survey extended 551 meters. The channel was constrained hillslopes in a steep V-shaped valley. The average valley width index was 1.3 (range: 1.0 – 1.5). Land use for the reach was timber harvest and second growth (15-30 cm dbh) trees. The average unit gradient was 2.4 percent. Riffles (64%) and scour pools (24%) dominated stream habitat. Gravel (34%) and cobble (25%) dominated stream substrate. Wood volume was moderate at 20.8 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

T37S-R14W-27SW

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

| <u>Narrow Valley Floor</u> | | <u>Broad Valley Floor</u> | |
|----------------------------|-----|---------------------------|---|
| Steep V-shape | 100 | Constraining Terraces | 0 |
| Moderate V-shape | 0 | Multiple Terraces | 0 |
| Open V-shape | 0 | Wide Floodplain | 0 |

Valley Width Index avg: 1.3 range: 1.0-1.5

Channel Morphology (Percent Reach Length)

| <u>Constrained</u> | | <u>Unconstrained</u> | |
|--------------------|-----|----------------------|---|
| Hillslope | 100 | Single Channel | 0 |
| Bedrock | 0 | Multiple Channel | 0 |
| Terrace | 0 | 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 | 551 | 2,276 | 0 |
| Secondary | 0 | 0 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | | <u>Active</u> | | <u>Floodprone</u> | <u>First Terrace</u> |
|---------------|------|---------------|------|-------------------|----------------------|
| Width | 4.1 | Width | 11.6 | 16.3 | 15.3 |
| Depth | 0.33 | Height | 0.7 | 1.4 | 1.5 |
| | | W:D ratio | 15.7 | Entrenchment | 1.4 |

Stream Flow Type: LF Water Temp: 14.0-14.0°C
 Avg. Unit Gradient: 2.4% Habitat Units/100m: 4.0

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | TH | ST |
| Riparian Vegetation: | D30 | D15 |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding | 3% | Reach avg: 91% |
| Undercut Banks | 1% | Range: 75-100 |

Large Woody Debris

| | <u>Total</u> | <u>Total/100m</u> |
|---------------------------------------|--------------|-------------------|
| All pieces ($\geq 3m \times 0.15m$) | 144 | 26.2 |
| Volume (m ³) | 115 | 20.8 |
| Key pieces ($\geq 10m \times 0.6m$) | 8 | 1.5 |

REACH 1

T37S-R14W-27SW

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 | Cbbl | Bldr | Bdrk |
| POOL--LATERAL SCOUR | 8 | 115 | 4.5 | 0.58 | 531 | 38 | 2 | 31 | 34 | 15 | 16 | 1 |
| POOL--PLUNGE | 1 | 7 | 3.6 | 0.60 | 27 | 3 | 6 | 33 | 44 | 11 | 6 | 0 |
| RAPID/BOULDERS | 2 | 55 | 3.5 | 0.23 | 225 | 33 | 0 | 9 | 28 | 37 | 26 | 0 |
| RIFFLE | 10 | 367 | 3.9 | 0.13 | 1,468 | 107 | 0 | 12 | 37 | 29 | 22 | 0 |
| STEP/BOULDERS | 1 | 6 | 4.3 | 0.20 | 26 | 12 | 0 | 5 | 10 | 48 | 38 | 0 |
| Total: | 22 | 551 | 4.1 | 0.33 | 2,276 | 193 | Avg: 1 | 19 | 34 | 25 | 20 | 0 |

HABITAT SUMMARY

| Habitat Group | No. Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area (m ²) | Percent | Large Number | Boulders #/100m ² |
|-------------------|--------------|------------------------|---------------------|---------------------|----------------------------------|---------|-----------------|---------------------------------|
| Dammed & BW Pools | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Scour Pools | 9 | 123 | 4.4 | 0.58 | 558 | 24.49 | 41 | 7.4 |
| Glides | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Riffles | 10 | 367 | 3.9 | 0.13 | 1,468 | 64.47 | 107 | 7.3 |
| Rapids | 2 | 55 | 3.5 | 0.23 | 225 | 9.89 | 33 | 14.7 |
| Cascades | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Step/Falls | 1 | 6 | 4.3 | 0.20 | 26 | 1.15 | 12 | 45.8 |
| Dry | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |

POOL SUMMARY

| | | |
|---------------------------------------|--------------|-------------|
| All Pools | <u>Total</u> | <u>#/Km</u> |
| | 9 | 16.3 |
| Pools ≥1m deep: | 1 | 1.8 |
| Complex pools (LWD pieces ≥3): | 7 | 12.7 |
| Pool Frequency (channel widths/pool): | 5.3 | |
| Residual pool depth (avg) | 0.44m | |

STREAM SUMMARY

LITTLE SF HUNTER (PRE-TX)

| Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Total Area (m ²) | Substrate Percent Wetted Area | | | | | | Total Large Boulder |
|-----------------|------------------------|---------------------|---------------------|------------------------------------|----------------------------------|------|------|------|------|------|---------------------------|
| | | | | | S/O | Sand | Grvl | Cbbl | Bldr | Bdrk | |
| 22 | 551 | 4.1 | 0.33 | 2,276 | 1 | 19 | 34 | 25 | 20 | 0 | 193 |

Wetted Area

| Habitat Group | (m ²) | Percent |
|-----------------|-------------------|---------|
| Scour Pool | 558 | 24.5 |
| Backwater Pools | 0 | 0.0 |
| Glide | 0 | 0.0 |
| Riffle | 1,468 | 64.5 |
| Rapid | 225 | 9.9 |
| Cascade | 0 | 0.0 |
| Step | 26 | 1.2 |
| Dry | 0 | 0.0 |

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

| | |
|---------------------------------|-----|
| Total hardwoods/1000 ft | 549 |
| Total conifers/1000 ft | 61 |
| 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 | 0.3 | 0.7 | 0.0 | 1.3 | 0.0 | 0.3 | 0.3 | 2.3 |
| 15-30cm | 0.7 | 1.0 | 0.0 | 0.7 | 0.0 | 2.0 | 0.7 | 3.7 |
| 30-50cm | 0.0 | 1.3 | 0.0 | 1.0 | 0.0 | 0.3 | 0.0 | 2.7 |
| 50-90cm | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m ² | 1.0 | 3.3 | 0.0 | 3.0 | 0.0 | 2.7 | 0.3 | 3.0 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|------------------|-----------------------|--|------------------------|--|------------------------|--|
| | (%) | | (%) | | (%) | |
| Canopy closure | 17 | | 20 | | 23 | |
| Shrub cover | 31 | | 20 | | 17 | |
| Grass/forb cover | 69 | | 78 | | 83 | |

Predominant landform in each zone

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|-------------------|-----------------------|----|------------------------|----|------------------------|----|
| | Hillslope | 50 | | 83 | | 67 |
| High terrace | 50 | | 0 | | 0 | |
| Low terrace | 0 | | 0 | | 0 | |
| Floodplain | 0 | | 0 | | 0 | |
| Wetland/meadow | 0 | | 0 | | 0 | |
| Stream channel | 0 | | 0 | | 0 | |
| Roadbed/Railroad | 0 | | 17 | | 33 | |
| Riprap | 0 | | 0 | | 0 | |
| Surface slope (%) | 27 | | 48 | | 53 | |

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

Summary of riparian zone (0-100ft) extrapolated to 1,000 feet along stream

| | |
|---------------------------------|-----|
| Total hardwoods/1000 ft | 549 |
| Total conifers/1000 ft | 61 |
| Total conifers >20" dbh/1000 ft | 0 |

Average number of trees in a 5-meter wide band

| <u>Diameter</u> <u>class (cm)</u> | <u>Zones 1-3</u> | |
|--------------------------------------|------------------|-----------------|
| | <u>Conifer</u> | <u>Hardwood</u> |
| 3-15cm | 0.3 | 2.3 |
| 15-30cm | 0.7 | 3.7 |
| 30-50cm | 0.0 | 2.7 |
| 50-90cm | 0.0 | 0.3 |
| >90cm | 0.0 | 0.0 |

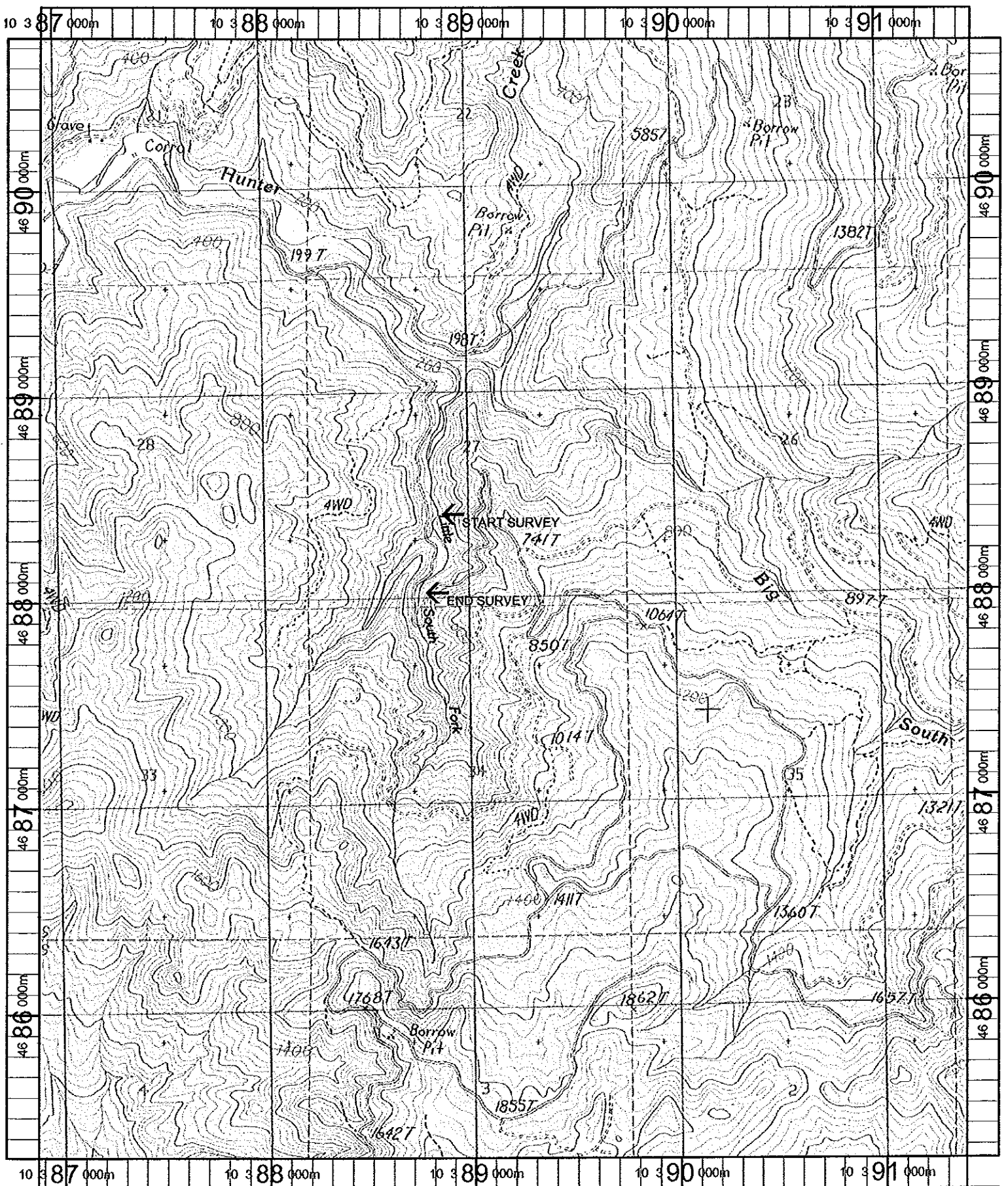
RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

VEGETATION DETAIL

| Unit | Side | Zone | Surface | Slope | Cover (percent) | | | | Diameter class (cm) | | | | | Notes |
|------|------|------|---------|-------|-----------------|-------|-------|----------|---------------------|-------|-------|-------|-----|-----------|
| | | | | | Canopy | Shrub | Grass | | 3-15 | 15-30 | 30-50 | 50-90 | >90 | |
| 6 | RT | 1 | HT | 10.0 | 15 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 1 | 0 | 1 | 0 | |
| 6 | RT | 2 | HS | 55.0 | 0 | 0 | 100 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | CLEAR CUT |
| 6 | RT | 3 | RB | 55.0 | 0 | 0 | 100 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | CLEAR CUT |
| 6 | LF | 1 | HS | 25.0 | 25 | 5 | 95 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 6 | LF | 2 | HS | 50.0 | 70 | 10 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 3 | 0 | 0 | ALDER |
| 6 | LF | 3 | HS | 60.0 | 75 | 0 | 100 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 2 | 0 | 0 | 0 | |
| 11 | RT | 1 | HT | 0.0 | 30 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 1 | 2 | 0 | 0 | ALDER |
| 11 | RT | 2 | HS | 50.0 | 0 | 10 | 90 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 0 | 0 | 0 | 0 | CLEARCUT |
| 11 | RT | 3 | RB | 50.0 | 0 | 0 | 100 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | CLEARCUT |
| 11 | LF | 1 | HT | 20.0 | 10 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 1 | 1 | 0 | 0 | ALDER |
| 11 | LF | 2 | HS | 45.0 | 30 | 10 | 90 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 0 | 0 | 0 | 0 | ALDER |
| 11 | LF | 3 | HS | 45.0 | 45 | 10 | 90 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 1 | 2 | 0 | 0 | 0 | ALDER |
| 17 | LF | 1 | HS | 50.0 | 15 | 80 | 20 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 1 | 0 | 0 | ALDER |
| 17 | LF | 2 | HS | 50.0 | 20 | 90 | 10 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 2 | 0 | 0 | 0 | ALDER |
| 17 | LF | 3 | HS | 55.0 | 20 | 90 | 10 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 2 | 1 | 0 | 0 | ALDER |
| 17 | RT | 1 | HS | 55.0 | 5 | 10 | 90 | Conifer | 1 | 2 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 17 | RT | 2 | RB | 40.0 | 0 | 0 | 100 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | CLEAR CUT |
| 17 | RT | 3 | HS | 55.0 | 0 | 0 | 100 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | CLEAR CUT |



Name: SUNDOWN MT
 Date: 10/17/100
 Scale: 1 inch equals 2000 feet

Location: 10 389067 E 4687975 N
 Caption: LITTLE SOUTH FORK HUNTER CREEK RESTORATION SITE -
 HUNTER CREEK BASIN