

REACH 1

T15S-R7W-S33NE

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 avg: 5.0 range: 3.0-6.0

Channel Morphology (Percent Reach Length)

| <u>Constrained</u> | | <u>Unconstrained</u> | |
|--------------------|---|----------------------|-----|
| Hillslope | 0 | Single Channel | 100 |
| 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 | 643 | 3,022 | 0 |
| Secondary | 293 | 764 | 3 |

Channel Dimensions (m)

| <u>Wetted</u> | | <u>Active</u> | | <u>Floodprone</u> | | <u>First Terrace</u> | |
|---------------|------|---------------|------|-------------------|------|----------------------|------|
| Width | 4.0 | Width | 13.8 | | 47.5 | | 16.6 |
| Depth | 0.47 | Height | 0.7 | | 1.3 | | 1.0 |
| | | W:D ratio | 21.3 | Entrenchment | 3.6 | | |

Stream Flow Type: LF Water Temp: 12.0-12.0°C
Avg. Unit Gradient: 0.6% Habitat Units/100m: 6.4

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding | 6% | Reach avg: 79% |
| Undercut Banks | 20% | Range: 39-100 |

Large Woody Debris

| | <u>Total</u> | <u>Total/100m</u> |
|--------------------------|--------------|-------------------|
| All pieces (≥3m x 0.15m) | 162 | 25.2 |
| Volume (m ³) | 75 | 11.6 |
| Key pieces (≥10m x 0.6m) | 1 | 0.2 |

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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 |
| DRY UNITS | 1 | 9 | 8.2 | 0.00 | 71 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| POOL--ALCOVE | 3 | 75 | 3.3 | 0.38 | 207 | 0 | 25 | 45 | 28 | 2 | 0 | 0 |
| POOL--BACKWATER | 5 | 26 | 2.9 | 0.45 | 76 | 0 | 17 | 63 | 20 | 0 | 0 | 0 |
| POOL--ISOLATED | 2 | 5 | 1.3 | 0.28 | 6 | 0 | 4 | 34 | 60 | 3 | 0 | 0 |
| POOL--LATERAL SCOUR | 28 | 518 | 4.6 | 0.73 | 2,463 | 0 | 6 | 28 | 60 | 6 | 0 | 0 |
| POOL--STRAIGHT SCOUR | 1 | 31 | 4.0 | 0.70 | 124 | 0 | 10 | 40 | 45 | 5 | 0 | 0 |
| PUDDLED CHANNEL | 2 | 40 | 0.7 | 0.07 | 31 | 0 | 0 | 8 | 88 | 5 | 0 | 0 |
| RIFFLE | 8 | 163 | 3.3 | 0.15 | 533 | 0 | 3 | 23 | 63 | 12 | 0 | 0 |
| RIFFLE W/ POCKETS | 1 | 23 | 2.8 | 0.80 | 65 | 0 | 5 | 20 | 50 | 25 | 0 | 0 |
| STEP/COBBLE | 9 | 47 | 4.7 | 0.13 | 210 | 0 | 0 | 7 | 81 | 12 | 0 | 0 |
| Total: | 60 | 936 | 4.0 | 0.47 | 3,786 | 0 | Avg: 6 | 27 | 59 | 7 | 0 | 0 |

HABITAT SUMMARY

| Habitat Group | No. Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area (m ²) | Percent | Large Boulders Number | #/100m ² |
|-------------------|-----------|------------------|---------------|---------------|-------------------------------|---------|-----------------------|---------------------|
| Dammed & BW Pools | 10 | 105 | 2.7 | 0.40 | 289 | 7.63 | 0 | 0.0 |
| Scour Pools | 29 | 549 | 4.5 | 0.73 | 2,588 | 68.35 | 0 | 0.0 |
| Glides | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Riffles | 9 | 186 | 3.2 | 0.22 | 598 | 15.79 | 0 | 0.0 |
| Rapids | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Cascades | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Step/Falls | 9 | 47 | 4.7 | 0.13 | 210 | 5.54 | 0 | 0.0 |
| Dry | 3 | 49 | 3.2 | 0.04 | 101 | 2.68 | 0 | 0.0 |

POOL SUMMARY

| | Total | #/Km |
|---------------------------------------|-------|------|
| All Pools | 39 | 41.7 |
| Pools ≥1m deep: | 9 | 9.6 |
| Complex pools (LWD pieces≥3): | 22 | 23.5 |
| Pool Frequency (channel widths/pool): | 1.7 | |
| Residual pool depth (avg) | 0.64m | |

STREAM SUMMARY

CONGDON CK (PRE SUM 99)

| 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 | |
| 60 | 936 | 4.0 | 0.47 | 3,786 | 6 | 27 | 59 | 7 | 0 | 0 | 0 |

Wetted Area

| Habitat Group | (m ²) | Percent |
|-----------------|-------------------|---------|
| Scour Pool | 2,588 | 68.4 |
| Backwater Pools | 289 | 7.6 |
| Glide | 0 | 0.0 |
| Riffle | 598 | 15.8 |
| Rapid | 0 | 0.0 |
| Cascade | 0 | 0.0 |
| Step | 210 | 5.5 |
| Dry | 101 | 2.7 |

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

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

| | |
|---------------------------------|-------|
| Total hardwoods/1000 ft | 1,869 |
| Total conifers/1000 ft | 142 |
| 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 | 5.7 | 0.3 | 5.0 | 1.7 | 3.3 | 2.3 | 14.0 |
| 15-30cm | 0.0 | 6.0 | 0.0 | 5.0 | 0.0 | 2.7 | 0.0 | 13.7 |
| 30-50cm | 0.0 | 1.3 | 0.0 | 0.7 | 0.0 | 0.3 | 0.0 | 2.3 |
| 50-90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.3 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.3 |
| Total/100m ² | 0.3 | 13.0 | 0.3 | 10.7 | 1.7 | 7.0 | 0.8 | 10.2 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|------------------|-----------------------|--|------------------------|--|------------------------|--|
| | (%) | | (%) | | (%) | |
| Canopy closure | 75 | | 68 | | 63 | |
| Shrub cover | 71 | | 73 | | 73 | |
| Grass/forb cover | 16 | | 17 | | 26 | |

Predominant landform in each zone

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|-------------------|-----------------------|----|------------------------|----|------------------------|----|
| | Hillslope | 17 | | 33 | | 33 |
| High terrace | 17 | | 17 | | 33 | |
| Low terrace | 50 | | 33 | | 33 | |
| Floodplain | 17 | | 0 | | 0 | |
| Wetland/meadow | 0 | | 0 | | 0 | |
| Stream channel | 0 | | 17 | | 0 | |
| Roadbed/Railroad | 0 | | 0 | | 0 | |
| Riprap | 0 | | 0 | | 0 | |
| Surface slope (%) | 2 | | 6 | | 5 | |

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 | 1,869 |
| Total conifers/1000 ft | 142 |
| 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 | 2.3 | 14.0 |
| 15-30cm | 0.0 | 13.7 |
| 30-50cm | 0.0 | 2.3 |
| 50-90cm | 0.0 | 0.3 |
| >90cm | 0.0 | 0.3 |

RIPARIAN ZONE VEGETATION

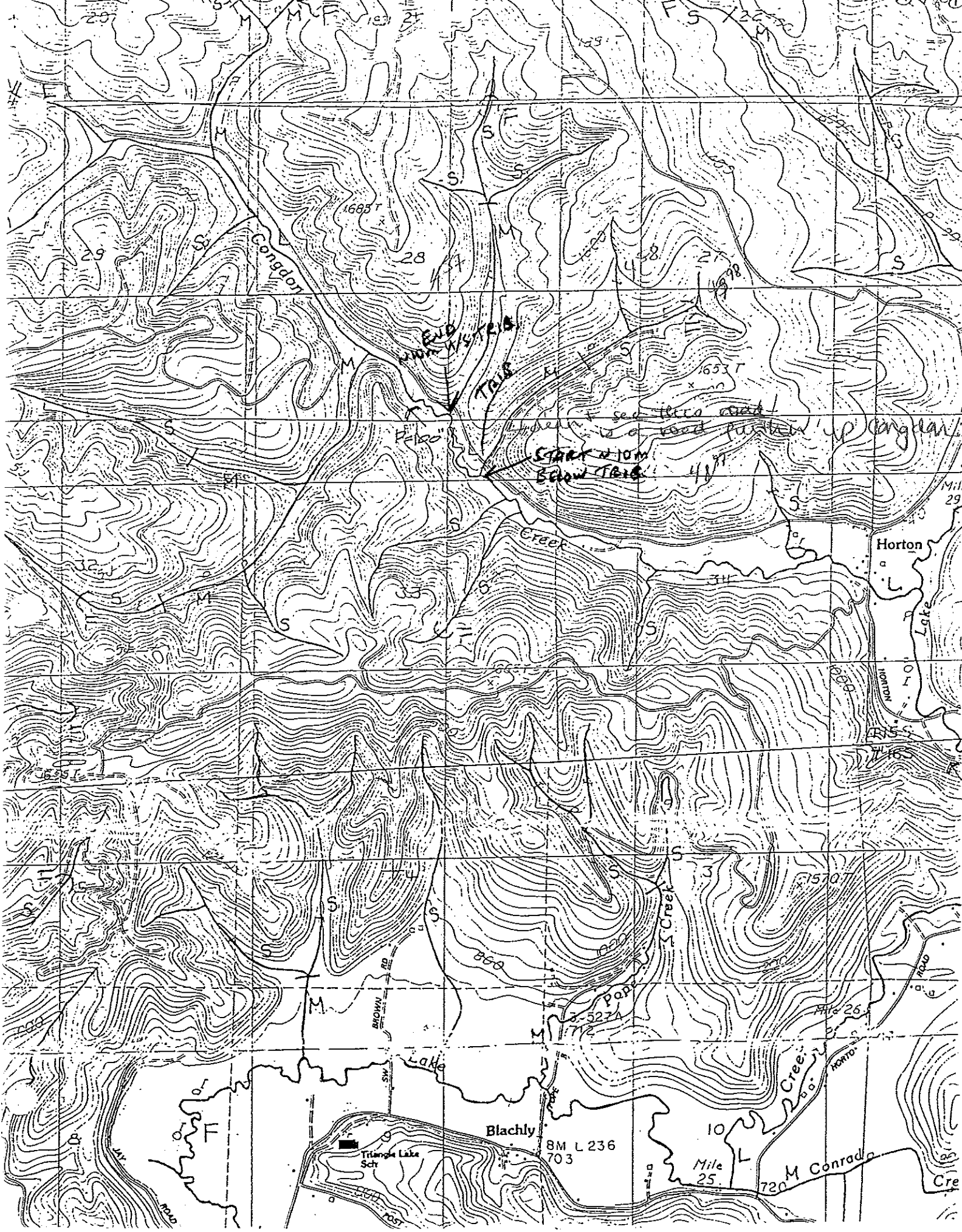
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VEGETATION DETAIL

| Unit | Side | Zone | Surface | Slope | Cover (percent) | | | | Diameter class (cm) | | | | | Notes |
|------|------|------|---------|-------|-----------------|-------|-------|----------|---------------------|-------|-------|-------|-----|-----------------|
| | | | | | Canopy | Shrub | Grass | | 3-15 | 15-30 | 30-50 | 50-90 | >90 | |
| 14 | RT | 1 | HT | 0.0 | 100 | 90 | 5 | Conifer | 1 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 9 | 1 | 1 | 0 | 0 | MUDDY DC |
| 14 | RT | 2 | HT | 0.0 | 25 | 95 | 5 | Conifer | 1 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | ESTIMATED |
| 14 | RT | 3 | HT | 0.0 | 0 | 100 | 0 | Conifer | 5 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | ESTIMATED |
| 14 | LF | 1 | FP | 0.0 | 0 | 0 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 1 | 0 | 0 | 0 | |
| 14 | LF | 2 | SC | 0.0 | 10 | 5 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 14 | LF | 3 | LT | 0.0 | 60 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 1 | 0 | 0 | 0 | |
| 39 | LF | 1 | LT | 0.0 | 85 | 90 | 5 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 4 | 7 | 0 | 0 | 0 | |
| 39 | LF | 2 | HS | 25.0 | 90 | 70 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 2 | 0 | 0 | 0 | 1/2 LT, WL-VOLE |
| 39 | LF | 3 | HS | 20.0 | 95 | 30 | 70 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 1 | 0 | 0 | 0 | 1 | |
| 39 | RT | 1 | LT | 0.0 | 95 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 1 | 0 | 0 | 0 | 0 | |
| 39 | RT | 2 | LT | 0.0 | 95 | 70 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 3 | 5 | 0 | 0 | 0 | |
| 39 | RT | 3 | HT | 0.0 | 95 | 70 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 2 | 1 | 1 | 0 | |
| 49 | LF | 1 | HS | 9.0 | 75 | 95 | 5 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 3 | 6 | 3 | 0 | 0 | |
| 49 | LF | 2 | HS | 9.0 | 95 | 95 | 5 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 10 | 4 | 0 | 0 | 0 | |
| 49 | LF | 3 | HS | 11.0 | 95 | 90 | 5 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 5 | 4 | 0 | 0 | 0 | |
| 49 | RT | 1 | LT | 0.0 | 95 | 100 | 0 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 3 | 0 | 0 | 0 | WL-HUMMING BIRD |
| 49 | RT | 2 | LT | 0.0 | 95 | 100 | 0 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 4 | 2 | 0 | 0 | |
| 49 | RT | 3 | LT | 0.0 | 30 | 100 | 0 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 1 | 0 | 0 | 0 | ESTIMATED |

GONGDON CR. NS00M 2/11/99 WINTER HABITAT SURVEY Triangle Lake



END OF SURVEY

START 10M BELOW TRAIL

see also creek is a good position up Gongdon

Triangle Lake Sch

Blachly

8M L 236
703

Mile 25

M Conrado

Horton

Lake

Mile 29

Mile 26

Cre

Cre