

REACH 1

T3S-R9W-S24SW

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 | 100 | Multiple Terraces | 0 |
| Open V-shape | 0 | Wide Floodplain | 0 |

Valley Width Index avg: 1.7 range: 1.0-2.0

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 | 506 | 3,001 | 0 |
| Secondary | 6 | 6 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | | <u>Active</u> | | <u>Floodprone</u> | <u>First Terrace</u> |
|---------------|------|---------------|------|-------------------|----------------------|
| Width | 5.8 | Width | 9.2 | 11.3 | 13.7 |
| Depth | 0.41 | Height | 0.6 | 1.1 | 1.5 |
| | | W:D ratio | 16.4 | Entrenchment | 1.2 |

Stream Flow Type: MF Water Temp: 10.5-10.5°C
 Avg. Unit Gradient: 2.6% Habitat Units/100m: 4.7

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 | 0% | Reach avg: 89% |
| Undercut Banks | 5% | Range: 69-100 |

Large Woody Debris

| | <u>Total</u> | <u>Total/100m</u> |
|--------------------------|--------------|-------------------|
| All pieces (≥3m x 0.15m) | 21 | 4.2 |
| Volume (m ³) | 10 | 2.0 |
| Key pieces (≥10m x 0.6m) | 0 | 0.0 |

REACH 1

T3S-R9W-S24SW

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 |
| CASCADE/BEDROCK | 1 | 25 | 4.9 | 0.50 | 123 | 5 | 0 | 5 | 5 | 0 | 5 | 86 |
| POOL-DAMMED | 1 | 19 | 6.4 | 0.60 | 122 | 0 | 5 | 20 | 20 | 20 | 5 | 30 |
| POOL-ISOLATED | 1 | 6 | 1.0 | 0.10 | 6 | 0 | 10 | 30 | 50 | 0 | 0 | 10 |
| POOL-LATERAL SCOUR | 5 | 107 | 6.1 | 0.76 | 655 | 1 | 6 | 29 | 21 | 12 | 3 | 29 |
| POOL-STRAIGHT SCOUR | 1 | 18 | 5.6 | 0.60 | 102 | 1 | 15 | 15 | 25 | 10 | 5 | 30 |
| RAPID/BEDROCK | 6 | 150 | 6.4 | 0.35 | 954 | 12 | 0 | 8 | 10 | 14 | 5 | 63 |
| RAPID/BOULDERS | 2 | 39 | 5.1 | 0.25 | 197 | 13 | 0 | 10 | 25 | 40 | 13 | 13 |
| RIFFLE | 7 | 148 | 6.1 | 0.22 | 849 | 5 | 0 | 8 | 32 | 45 | 7 | 9 |
| Total: | 24 | 512 | 5.8 | 0.41 | 3,007 | 37 | Avg: 3 | 14 | 22 | 24 | 6 | 32 |

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 | 2 | 25 | 3.7 | 0.35 | 128 | 4.24 | 0 | 0.0 |
| Scour Pools | 6 | 126 | 6.0 | 0.73 | 757 | 25.17 | 2 | 0.3 |
| Glides | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Riffles | 7 | 148 | 6.1 | 0.22 | 849 | 28.23 | 5 | 0.6 |
| Rapids | 8 | 189 | 6.0 | 0.33 | 1,151 | 38.29 | 25 | 2.2 |
| Cascades | 1 | 25 | 4.9 | 0.50 | 123 | 4.07 | 5 | 4.1 |
| Step/Falls | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Dry | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |

POOL SUMMARY

| | | |
|---------------------------------------|--------------|-------------|
| All Pools | <u>Total</u> | <u>#/Km</u> |
| | 8 | 15.6 |
| Pools ≥1m deep: | 0 | 0.0 |
| Complex pools (LWD pieces ≥3): | 1 | 2.0 |
| Pool Frequency (channel widths/pool): | 7.0 | |
| Residual pool depth (avg) | 0.49m | |

STREAM SUMMARY

BAYS CREEK PRE-TX (#3)

| 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 | |
| 24 | 512 | 5.8 | 0.41 | 3,007 | 3 | 14 | 22 | 24 | 6 | 32 | 37 |

Wetted Area

| Habitat Group | (m ²) | Percent |
|-----------------|-------------------|---------|
| Scour Pool | 757 | 25.2 |
| Backwater Pools | 128 | 4.2 |
| Glide | 0 | 0.0 |
| Riffle | 849 | 28.2 |
| Rapid | 1,151 | 38.3 |
| Cascade | 123 | 4.1 |
| Step | 0 | 0.0 |
| Dry | 0 | 0.0 |

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

| | |
|---------------------------------|-------|
| Total hardwoods/1000 ft | 1,849 |
| Total conifers/1000 ft | 589 |
| 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 | 10.3 | 0.0 | 12.0 | 0.0 | 2.3 | 0.0 | 24.7 |
| 15-30cm | 1.0 | 1.0 | 1.0 | 1.0 | 6.0 | 0.3 | 8.0 | 2.3 |
| 30-50cm | 0.0 | 0.7 | 1.0 | 0.3 | 0.7 | 0.3 | 1.7 | 1.3 |
| 50-90cm | 0.0 | 1.7 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 2.0 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m ² | 1.0 | 13.7 | 2.0 | 13.7 | 6.7 | 3.0 | 3.2 | 10.1 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|------------------|-----------------------|--|------------------------|--|------------------------|--|
| | (%) | | (%) | | (%) | |
| Canopy closure | 100 | | 82 | | 83 | |
| Shrub cover | 37 | | 43 | | 52 | |
| Grass/forb cover | 63 | | 43 | | 48 | |

Predominant landform in each zone

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|-------------------|-----------------------|--|------------------------|--|------------------------|--|
| | | | | | | |
| Hillslope | 67 | | 83 | | 100 | |
| High terrace | 33 | | 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 | | 0 | |
| Riprap | 0 | | 0 | | 0 | |
| Surface slope (%) | 39 | | 44 | | 46 | |

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 | 1,849 |
| Total conifers/1000 ft | 589 |
| 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 | 0.0 | 24.7 |
| 15-30cm | 8.0 | 2.3 |
| 30-50cm | 1.7 | 1.3 |
| 50-90cm | 0.0 | 2.0 |
| >90cm | 0.0 | 0.0 |

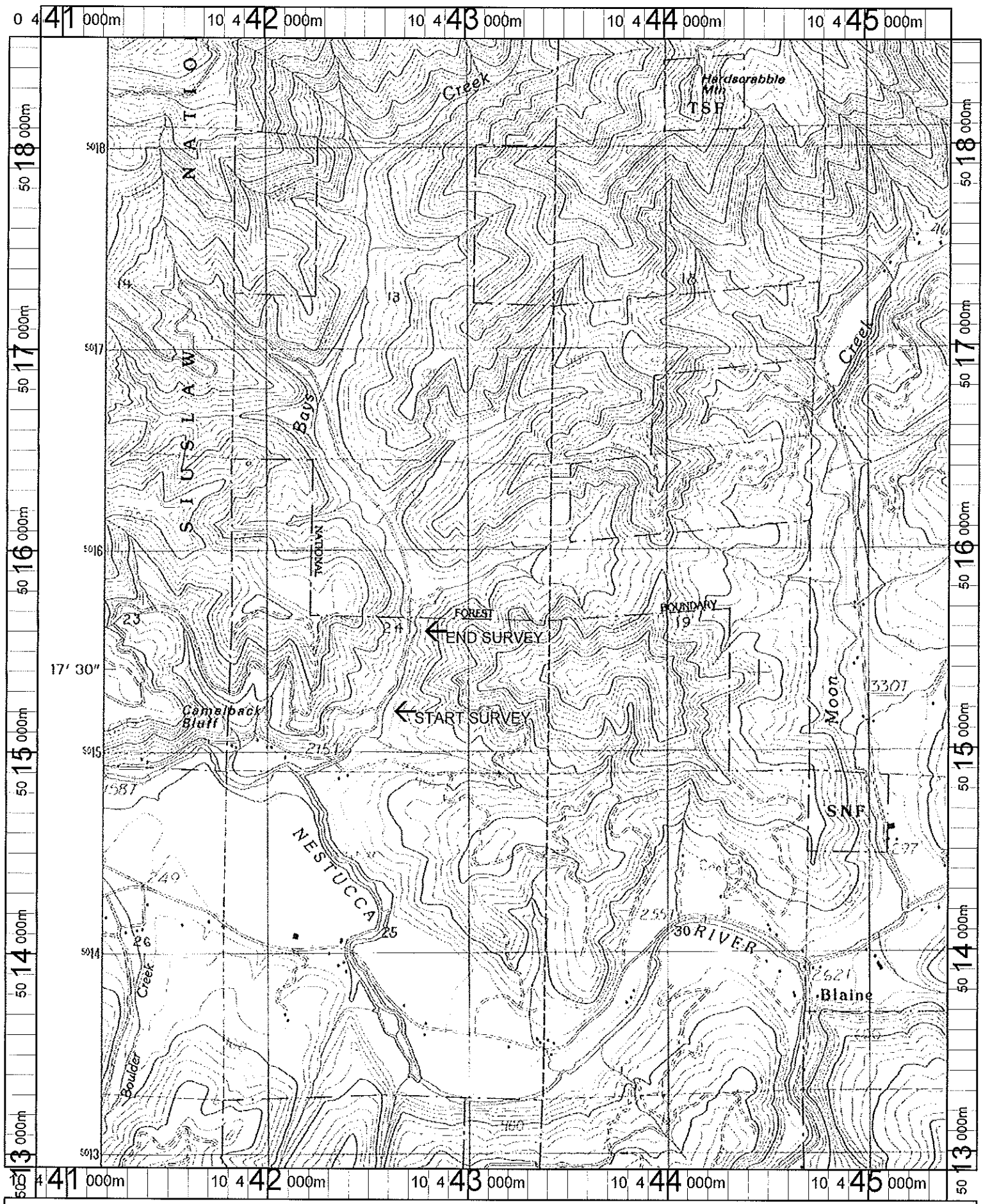
RIPARIAN ZONE VEGETATION

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 | LF | 1 | HS | 55.0 | 100 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 10 | 1 | 0 | 1 | 0 | |
| 6 | LF | 2 | RB | 55.0 | 20 | 10 | 10 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 6 | LF | 3 | HS | 55.0 | 100 | 20 | 80 | Conifer | 0 | 3 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 6 | RT | 1 | HS | 40.0 | 100 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 1 | 1 | 0 | |
| 6 | RT | 2 | HS | 40.0 | 90 | 50 | 50 | Conifer | 0 | 1 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 6 | 1 | 1 | 0 | 0 | |
| 6 | RT | 3 | HS | 40.0 | 80 | 50 | 50 | Conifer | 0 | 3 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 3 | 0 | 0 | 0 | 0 | |
| 12 | LF | 1 | HS | 10.0 | 100 | 10 | 90 | Conifer | 0 | 3 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 1 | 0 | 0 | 1 | 0 | |
| 12 | LF | 2 | HS | 10.0 | 100 | 0 | 100 | Conifer | 0 | 1 | 3 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 12 | LF | 3 | HS | 20.0 | 100 | 60 | 90 | Conifer | 0 | 3 | 2 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 1 | 0 | 0 | EDGE OF ROAD |
| 12 | RT | 1 | HS | 120.0 | 100 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 7 | 0 | 0 | 2 | 0 | MAPLE, VINE MAPLE |
| 12 | RT | 2 | HS | 80.0 | 80 | 90 | 10 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 12 | 0 | 0 | 0 | 0 | VINE MAPLE |
| 12 | RT | 3 | HS | 80.0 | 50 | 50 | 50 | Conifer | 0 | 3 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 1 | 0 | 0 | 0 | ALDER |
| 18 | LF | 1 | HT | 0.0 | 100 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 6 | 0 | 1 | 0 | 0 | |
| 18 | LF | 2 | HS | 20.0 | 100 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 2 | 0 | 1 | 0 | |
| 18 | LF | 3 | HS | 20.0 | 70 | 40 | 10 | Conifer | 0 | 2 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 0 | 0 | 0 | 0 | 50% ROADBED |
| 18 | RT | 1 | HT | 10.0 | 100 | 40 | 60 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 7 | 2 | 0 | 0 | 0 | ALDER, WILLOW |
| 18 | RT | 2 | HS | 60.0 | 100 | 90 | 10 | Conifer | 0 | 1 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 18 | 0 | 0 | 0 | 0 | ALDER, WILLOW |
| 18 | RT | 3 | HS | 60.0 | 100 | 90 | 10 | Conifer | 0 | 4 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 0 | 0 | 0 | 0 | DOUGLAS FIR |



Name: BLAINE
 Date: 1/10/2002
 Scale: 1 inch equals 2000 feet

Location: 10 443138 E 5015727 N
 Caption: BAYS CREEK RESTORATION SITE - NESTUCCA
 BASIN