

REACH 1

T9S-R8W-S18NE

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 avg: 9.8 range: 9.0-10.0

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 | 488 | 2,603 | 0 |
| Secondary | 8 | 15 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | | <u>Active</u> | | <u>Floodprone</u> | | <u>First Terrace</u> | |
|---------------|------|---------------|------|-------------------|-----|----------------------|------|
| Width | 5.1 | Width | 6.8 | | 8.2 | | 25.8 |
| Depth | 0.62 | Height | 0.6 | | 1.1 | | 1.8 |
| | | W:D ratio | 12.0 | Entrenchment | 1.2 | | |

Stream Flow Type: MF Water Temp: 15.0-15.0°C
 Avg. Unit Gradient: 0.5% Habitat Units/100m: 6.3

Riparian, Bank, and Wood Summary

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

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding | 10% | Reach avg: 70% |
| Undercut Banks | 8% | Range: 31-100 |

Large Woody Debris

| | <u>Total</u> | <u>Total/100m</u> |
|--------------------------|--------------|-------------------|
| All pieces (≥3m x 0.15m) | 77 | 15.8 |
| Volume (m ³) | 69 | 14.1 |
| Key pieces (≥10m x 0.6m) | 2 | 0.4 |

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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 |
| GLIDE | 1 | 28 | 5.2 | 0.50 | 145 | 5 | 70 | 25 | 5 | 0 | 0 | 0 |
| POOL-BACKWATER | 1 | 4 | 1.6 | 0.50 | 7 | 0 | 100 | 0 | 0 | 0 | 0 | 0 |
| POOL-DAMMED | 1 | 13 | 7.8 | 1.30 | 98 | 0 | 70 | 15 | 15 | 0 | 0 | 0 |
| POOL-ISOLATED | 1 | 4 | 2.1 | 0.20 | 8 | 0 | 100 | 0 | 0 | 0 | 0 | 0 |
| POOL-LATERAL SCOUR | 21 | 381 | 5.8 | 0.78 | 2,181 | 0 | 78 | 13 | 8 | 0 | 0 | 1 |
| RIFFLE | 5 | 66 | 2.6 | 0.10 | 174 | 0 | 9 | 20 | 72 | 0 | 0 | 0 |
| STEP/BEAVER DAM | 1 | 1 | 8.6 | 0.01 | 5 | 0 | 70 | 15 | 15 | 0 | 0 | 0 |
| Total: | 31 | 496 | 5.1 | 0.62 | 2,618 | 5 | Avg:68 | 13 | 18 | 0 | 0 | 1 |

HABITAT SUMMARY

| Habitat Group | No. Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area (m ²) | Percent | Large Boulders Number | Boulders #/100m ² |
|-------------------|--------------|------------------------|---------------------|---------------------|----------------------------------|---------|-----------------------------|---------------------------------|
| Dammed & BW Pools | 3 | 21 | 3.8 | 0.67 | 113 | 4.32 | 0 | 0.0 |
| Scour Pools | 21 | 381 | 5.8 | 0.78 | 2,181 | 83.32 | 0 | 0.0 |
| Glides | 1 | 28 | 5.2 | 0.50 | 145 | 5.52 | 5 | 3.5 |
| Riffles | 5 | 66 | 2.6 | 0.10 | 174 | 6.63 | 0 | 0.0 |
| Rapids | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Cascades | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Step/Falls | 1 | 1 | 8.6 | 0.01 | 5 | 0.20 | 0 | 0.0 |
| Dry | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |

POOL SUMMARY

| | Total | #/Km |
|---------------------------------------|-------|------|
| All Pools | 24 | 48.4 |
| Pools ≥1m deep: | 5 | 10.1 |
| Complex pools (LWD pieces ≥3): | 10 | 20.2 |
| Pool Frequency (channel widths/pool): | 3.0 | |
| Residual pool depth (avg) | 0.62m | |

STREAM SUMMARY

SUNSHINE CK (POST 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 |
| 31 | 496 | 5.1 | 0.62 | 2,618 | 68 | 13 | 18 | 0 | 0 | 1 | 5 |

Wetted Area

| Habitat Group | (m ²) | Percent |
|-----------------|-------------------|---------|
| Scour Pool | 2,181 | 83.3 |
| Backwater Pools | 113 | 4.3 |
| Glide | 145 | 5.5 |
| Riffle | 174 | 6.6 |
| Rapid | 0 | 0.0 |
| Cascade | 0 | 0.0 |
| Step | 5 | 0.2 |
| Dry | 0 | 0.0 |

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RIPARIAN ZONE VEGETATION SUMMARY

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Summary of Riparian Zone (0-30m) (2 transects)

| | |
|---------------------------------|-------|
| Total hardwoods/1000 ft | 2,713 |
| Total conifers/1000 ft | 0 |
| 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 | 6.0 | 0.0 | 18.0 | 0.0 | 14.5 | 0.0 | 38.5 |
| 15-30cm | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| 30-50cm | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| 50-90cm | 0.0 | 2.0 | 0.0 | 0.5 | 0.0 | 1.5 | 0.0 | 4.0 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m ² | 0.0 | 8.0 | 0.0 | 20.5 | 0.0 | 16.0 | 0.0 | 14.8 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|------------------|-----------------------|--|------------------------|--|------------------------|--|
| | (%) | | (%) | | (%) | |
| Canopy closure | 63 | | 68 | | 70 | |
| Shrub cover | 30 | | 34 | | 26 | |
| Grass/forb cover | 70 | | 66 | | 54 | |

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 | 75 | | 100 | | 75 | |
| Low terrace | 0 | | 0 | | 0 | |
| Floodplain | 0 | | 0 | | 0 | |
| Wetland/meadow | 0 | | 0 | | 0 | |
| Stream channel | 0 | | 0 | | 0 | |
| Roadbed/Railroad | 0 | | 0 | | 0 | |
| Riprap | 0 | | 0 | | 0 | |
| Surface slope (%) | 0 | | 0 | | 0 | |

Summary of Riparian Zone (0-30m) for all reaches (2 transects)

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

| | |
|---------------------------------|-------|
| Total hardwoods/1000 ft | 2,713 |
| Total conifers/1000 ft | |
| 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 | 38.5 |
| 15-30cm | 0.0 | 1.0 |
| 30-50cm | 0.0 | 1.0 |
| 50-90cm | 0.0 | 4.0 |
| >90cm | 0.0 | 0.0 |

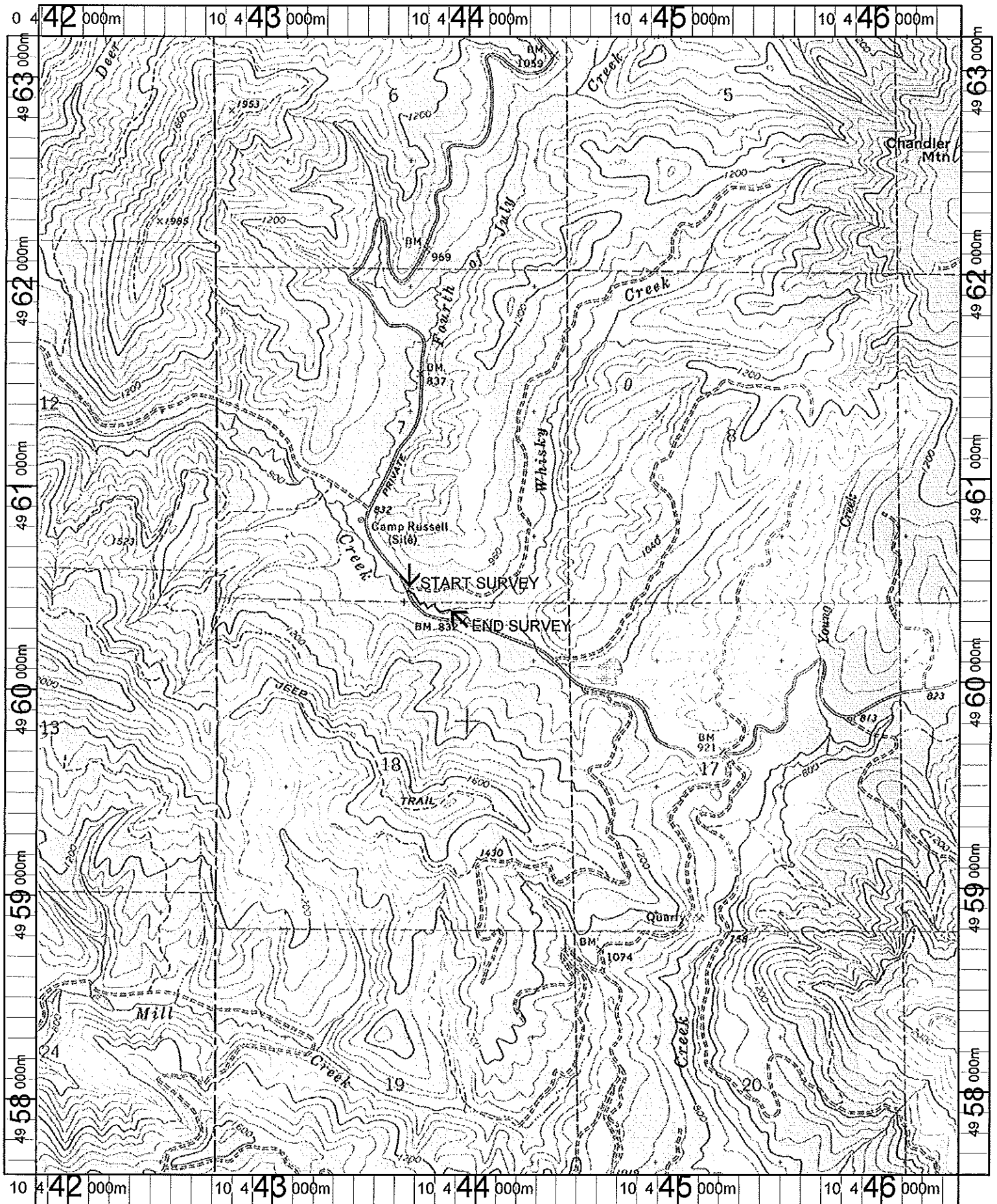
RIPARIAN ZONE VEGETATION

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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 | |
| 9 | LF | 1 | HT | 0.0 | 90 | 30 | 70 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 3 | 0 | |
| 9 | LF | 2 | HT | 0.0 | 90 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 3 | 0 | 2 | 0 | 0 | |
| 9 | LF | 3 | HT | 0.0 | 90 | 10 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 3 | 0 | 0 | 0 | 0 | 10% NEEDLES ETC. |
| 9 | RT | 1 | HT | 0.0 | 60 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 1 | 0 | 0 | 0 | 0 | |
| 9 | RT | 2 | HT | 0.0 | 80 | 60 | 40 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 14 | 0 | 0 | 0 | 0 | |
| 9 | RT | 3 | HT | 0.0 | 95 | 10 | 90 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 11 | 0 | 0 | 3 | 0 | |
| 20 | LF | 1 | HT | 0.0 | 95 | 65 | 35 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 9 | 0 | 0 | 1 | 0 | |
| 20 | LF | 2 | HT | 0.0 | 95 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 7 | 2 | 0 | 1 | 0 | |
| 20 | LF | 3 | HT | 0.0 | 80 | 80 | 20 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 13 | 0 | 0 | 0 | 0 | |
| 20 | RT | 1 | HT | 0.0 | 5 | 5 | 95 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 0 | 0 | 0 | 0 | |
| 20 | RT | 2 | HT | 0.0 | 8 | 5 | 95 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 12 | 0 | 0 | 0 | 0 | ELDERBERRY |
| 20 | RT | 3 | PC | 0.0 | 15 | 5 | 25 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 0 | 0 | 0 | 0 | |



Name: VALSETZ
 Date: 4/24/100
 Scale: 1 inch equals 2000 feet

Location: 10 444034 E 4960381 N
 Caption: SUNSHINE CREEK
 RESTORATION SITE
 ODFW 1999