

REACH 1

T11S-R9W-S34SW

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: 4.9 range: 1.2-8.0

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 | 391 | 1,992 | 0 |
| Secondary | 38 | 81 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | | <u>Active</u> | | <u>Floodprone</u> | <u>First Terrace</u> |
|---------------|------|---------------|------|-------------------|----------------------|
| Width | 4.7 | Width | 7.1 | 8.1 | 8.9 |
| Depth | 0.44 | Height | 0.5 | 1.0 | 1.6 |
| | | W:D ratio | 14.2 | Entrenchment | 1.1 |

Stream Flow Type: MF Water Temp: 12.5-12.5°C
 Avg. Unit Gradient: 1.4% Habitat Units/100m: 4.0

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | TH | YT |
| Riparian Vegetation: | D30 | S |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding | 3% | Reach avg: 83% |
| Undercut Banks | 4% | Range: 69- 94 |

Large Woody Debris

| | <u>Total</u> | <u>Total/100m</u> |
|---------------------------------------|--------------|-------------------|
| All pieces ($\geq 3m \times 0.15m$) | 49 | 12.5 |
| Volume (m ³) | 156 | 39.9 |
| Key pieces ($\geq 10m \times 0.6m$) | 1 | 0.3 |

HABITAT UNIT SUMMARY

REACH 1 T11S-R9W-S34SW 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 |
| GLIDE | 1 | 29 | 6.0 | 0.25 | 175 | 0 | 10 | 60 | 30 | 0 | 0 | 0 |
| POOL-BACKWATER | 1 | 28 | 2.5 | 0.30 | 69 | 0 | 30 | 20 | 50 | 0 | 0 | 0 |
| POOL-LATERAL SCOUR | 7 | 138 | 5.4 | 0.71 | 744 | 11 | 10 | 63 | 11 | 10 | 6 | 0 |
| RAPID/BOULDERS | 4 | 140 | 3.9 | 0.21 | 644 | 119 | 0 | 11 | 28 | 39 | 23 | 0 |
| RIFFLE | 3 | 91 | 4.9 | 0.25 | 422 | 14 | 2 | 15 | 64 | 16 | 3 | 0 |
| STEP/COBBLE | 1 | 4 | 4.2 | 0.30 | 19 | 3 | 0 | 11 | 0 | 67 | 22 | 0 |
| Total: | 17 | 429 | 4.7 | 0.44 | 2,073 | 147 | Avg: 7 | 37 | 27 | 20 | 10 | 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 | 1 | 28 | 2.5 | 0.30 | 69 | 3.32 | 0 | 0.0 |
| Scour Pools | 7 | 138 | 5.4 | 0.71 | 744 | 35.89 | 11 | 1.5 |
| Glides | 1 | 29 | 6.0 | 0.25 | 175 | 8.45 | 0 | 0.0 |
| Riffles | 3 | 91 | 4.9 | 0.25 | 422 | 20.35 | 14 | 3.3 |
| Rapids | 4 | 140 | 3.9 | 0.21 | 644 | 31.09 | 119 | 18.5 |
| Cascades | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Step/Falls | 1 | 4 | 4.2 | 0.30 | 19 | 0.89 | 3 | 16.2 |
| Dry | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |

POOL SUMMARY

| | | |
|---------------------------------------|--------------|-------------|
| All Pools | <u>Total</u> | <u>#/Km</u> |
| | 8 | 18.7 |
| Pools ≥1m deep: | 1 | 2.3 |
| Complex pools (LWD pieces ≥3): | 4 | 9.3 |
| Pool Frequency (channel widths/pool): | 7.6 | |
| Residual pool depth (avg) | 0.50m | |

STREAM SUMMARY

DEER CREEK (POST-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 | |
| 17 | 429 | 4.7 | 0.44 | 2,073 | 7 | 37 | 27 | 20 | 10 | 0 | 147 |

| Habitat Group | Wetted Area | |
|-----------------|-------------------|---------|
| | (m ²) | Percent |
| Scour Pool | 744 | 35.9 |
| Backwater Pools | 69 | 3.3 |
| Glide | 175 | 8.5 |
| Riffle | 422 | 20.4 |
| Rapid | 644 | 31.1 |
| Cascade | 0 | 0.0 |
| Step | 19 | 0.9 |
| Dry | 0 | 0.0 |

REACH 1

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1

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

| | |
|---------------------------------|-------|
| Total hardwoods/1000 ft | 1,189 |
| Total conifers/1000 ft | 30 |
| Total conifers >20" dbh/1000 ft | 30 |
| Total conifers >35" dbh/1000 ft | 30 |

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 | 2.5 | 0.0 | 5.0 | 0.0 | 2.0 | 0.0 | 9.5 |
| 15-30cm | 0.0 | 0.0 | 0.0 | 4.5 | 0.0 | 3.0 | 0.0 | 7.5 |
| 30-50cm | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 2.5 |
| 50-90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| >90cm | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| Total/100m ² | 0.0 | 4.5 | 0.5 | 9.5 | 0.0 | 5.5 | 0.2 | 6.5 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|------------------|-----------------------|--|------------------------|--|------------------------|--|
| | (%) | | (%) | | (%) | |
| Canopy closure | 69 | | 66 | | 64 | |
| Shrub cover | 53 | | 54 | | 49 | |
| Grass/forb cover | 45 | | 46 | | 38 | |

Predominant landform in each zone

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|-------------------|-----------------------|-----|------------------------|----|------------------------|----|
| | Hillslope | 100 | | 75 | | 75 |
| High terrace | 0 | | 25 | | 25 | |
| 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 (%) | 56 | | 50 | | 35 | |

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 | 1,189 |
| Total conifers/1000 ft | 30 |
| Total conifers >20" dbh/1000 ft | 30 |

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 | 9.5 |
| 15-30cm | 0.0 | 7.5 |
| 30-50cm | 0.0 | 2.5 |
| 50-90cm | 0.0 | 0.0 |
| >90cm | 0.5 | 0.0 |

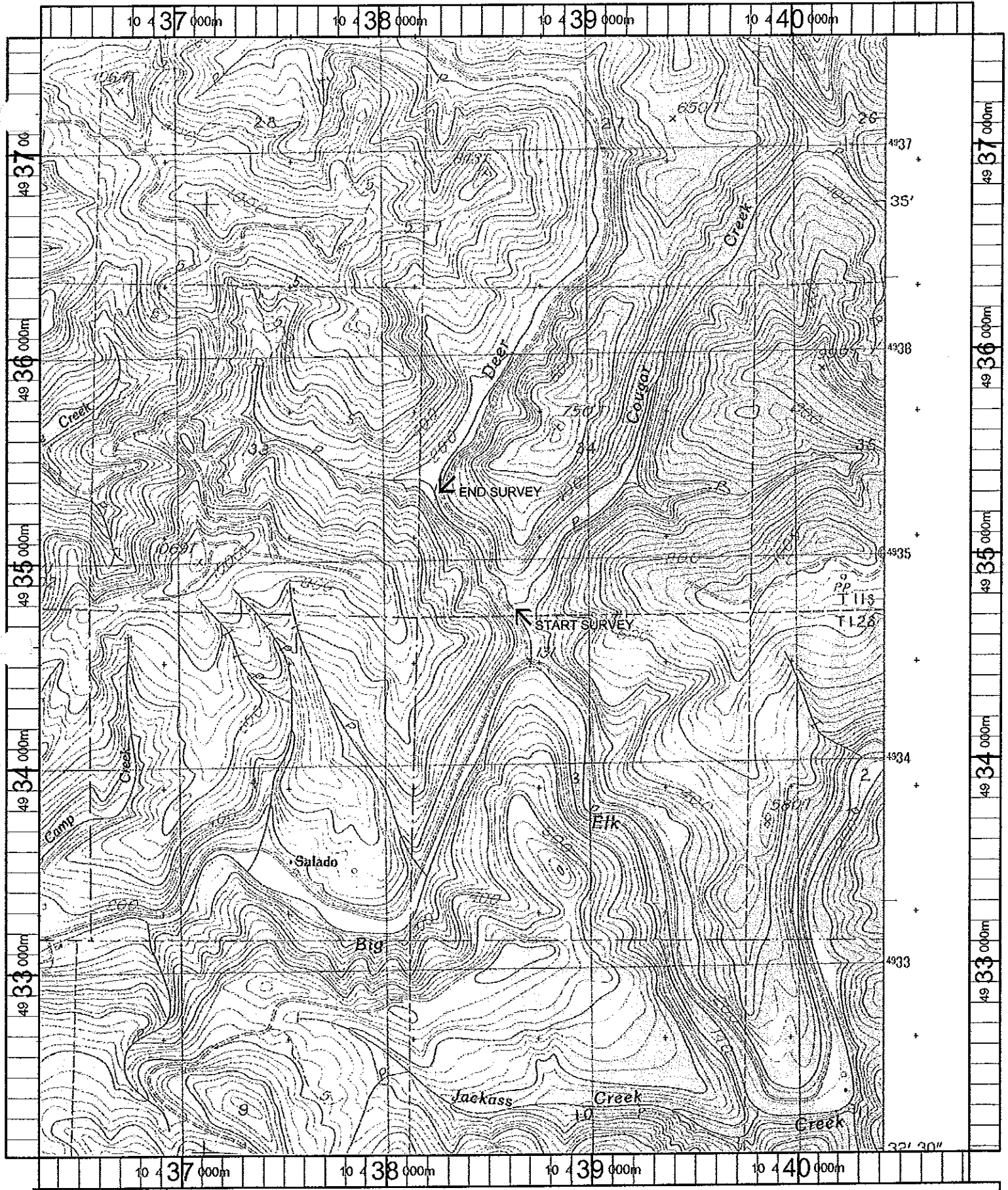
RIPARIAN ZONE VEGETATION

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 | |
| 4 | LF | 1 | HS | 75.0 | 90 | 60 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 3 | 0 | 0 | 0 | 0 | |
| 4 | LF | 2 | HS | 65.0 | 60 | 90 | 10 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 6 | 1 | 0 | 0 | 0 | |
| 4 | LF | 3 | HS | 60.0 | 60 | 90 | 10 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 4 | 0 | 0 | 0 | 0 | |
| 4 | RT | 1 | HS | 90.0 | 90 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 2 | 0 | 2 | 0 | 0 | |
| 4 | RT | 2 | HS | 75.0 | 95 | 35 | 65 | Conifer | 0 | 0 | 0 | 0 | 1 | |
| | | | | | | | | Hardwood | 4 | 8 | 0 | 0 | 0 | |
| 4 | RT | 3 | HS | 30.0 | 85 | 15 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 2 | 0 | 0 | 0 | ROAD |
| 13 | LF | 1 | HS | 0.0 | 75 | 30 | 70 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 2 | 0 | 0 | |
| 13 | LF | 2 | HT | 0.0 | 80 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 13 | LF | 3 | HT | 0.0 | 80 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 4 | 0 | 0 | 0 | |
| 13 | RT | 1 | HS | 60.0 | 20 | 70 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 13 | RT | 2 | HS | 60.0 | 30 | 70 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 13 | RT | 3 | HS | 50.0 | 30 | 70 | 30 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 1 | 0 | 0 | |



Name: ELK CITY
 Date: 11/8/100
 Scale: 1 inch equals 2000 feet

Location: 10 438489 E 4934808 N
 Caption: DEER CREEK RESTORATION SITE - YAQUINA BASIN