

REACH 1

T11S-R9W-34SW

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: 4.7 range: 3.0-6.0

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 | 264 | 1,533 | 0 |
| Secondary | 0 | 0 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | | <u>Active</u> | | <u>Floodprone</u> | <u>First Terrace</u> |
|---------------|------|---------------|------|-------------------|----------------------|
| Width | 5.9 | Width | 6.8 | 10.7 | 12.6 |
| Depth | 0.37 | Height | 0.6 | 1.1 | 1.5 |
| | | W:D ratio | 12.1 | Entrenchment | 1.6 |

Stream Flow Type: MF Water Temp: 12.5-12.5°C
Avg. Unit Gradient: 1.6% Habitat Units/100m: 4.2

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 | 1% | Reach avg: 77% |
| Undercut Banks | 3% | Range: 67- 89 |

Large Woody Debris

| | <u>Total</u> | <u>Total/100m</u> |
|---------------------------------------|--------------|-------------------|
| All pieces ($\geq 3m \times 0.15m$) | 18 | 6.8 |
| Volume (m^3) | 11 | 4.1 |
| Key pieces ($\geq 10m \times 0.6m$) | 0 | 0.0 |

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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 |
| POOL-LATERAL SCOUR | 5 | 129 | 6.2 | 0.67 | 768 | 3 | 9 | 50 | 35 | 4 | 1 | 1 |
| RAPID/BOULDERS | 2 | 100 | 5.6 | 0.23 | 562 | 65 | 0 | 13 | 8 | 50 | 30 | 0 |
| RIFFLE | 4 | 35 | 5.8 | 0.08 | 203 | 2 | 1 | 11 | 87 | 1 | 1 | 0 |
| Total: | 11 | 264 | 5.9 | 0.37 | 1,533 | 70 | Avg: 4 | 29 | 49 | 11 | 6 | 0 |

HABITAT SUMMARY

| Habitat Group | No. Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area (m ²) | Area Percent | Large Boulders Number | Boulders #/100m ² |
|-------------------|--------------|------------------------|---------------------|---------------------|----------------------------------|-----------------|--------------------------|---------------------------------|
| Dammed & BW Pools | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Scour Pools | 5 | 129 | 6.2 | 0.67 | 768 | 50.10 | 3 | 0.4 |
| Glides | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| Riffles | 4 | 35 | 5.8 | 0.08 | 203 | 13.21 | 2 | 1.0 |
| Rapids | 2 | 100 | 5.6 | 0.23 | 562 | 36.69 | 65 | 11.6 |
| Cascades | 0 | 0 | - | - | 0 | 0.00 | 0 | 0.0 |
| 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> |
| | 5 | 19.0 |
| Pools $\geq 1m$ deep: | 1 | 3.8 |
| Complex pools (LWD pieces ≥ 3): | 4 | 15.2 |
| Pool Frequency (channel widths/pool): | 7.8 | |
| Residual pool depth (avg) | 0.49m | |

STREAM SUMMARY

DEER CREEK #1 LOWER (REFERENCE)

| 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 | |
| 11 | 264 | 5.9 | 0.37 | 1,533 | 4 | 29 | 49 | 11 | 6 | 0 | 70 |

Wetted Area

| Habitat Group | (m ²) | Percent |
|-----------------|-------------------|---------|
| Scour Pool | 768 | 50.1 |
| Backwater Pools | 0 | 0.0 |
| Glide | 0 | 0.0 |
| Riffle | 203 | 13.2 |
| Rapid | 562 | 36.7 |
| Cascade | 0 | 0.0 |
| Step | 0 | 0.0 |
| 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 | 457 |
| Total conifers/1000 ft | 91 |
| Total conifers >20" dbh/1000 ft | 30 |
| 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 | 0.5 | 0.0 | 2.5 | 0.5 | 0.0 | 0.5 | 3.0 |
| 15-30cm | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | 1.5 |
| 30-50cm | 0.0 | 2.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.5 | 2.0 |
| 50-90cm | 0.0 | 1.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.5 | 1.0 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m ² | 0.0 | 3.5 | 0.5 | 4.0 | 1.0 | 0.0 | 0.5 | 2.5 |

Canopy closure and ground cover

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|------------------|-----------------------|--|------------------------|--|------------------------|--|
| | (%) | | (%) | | (%) | |
| Canopy closure | 71 | | 69 | | 50 | |
| Shrub cover | 48 | | 35 | | 43 | |
| Grass/forb cover | 53 | | 65 | | 43 | |

Predominant landform in each zone

| | Zone 1 0-10 meters | | Zone 2 10-20 meters | | Zone 3 20-30 meters | |
|-------------------|-----------------------|----|------------------------|----|------------------------|----|
| | Hillslope | 25 | | 75 | | 50 |
| High terrace | 75 | | 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 (%) | 38 | | 46 | | 34 | |

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 | 457 |
| Total conifers/1000 ft | 91 |
| Total conifers >20" dbh/1000 ft | 30 |

Average number of trees in a 5-meter wide band

| Diameter class (cm) | Zones 1-3 | |
|------------------------|-----------|----------|
| | Conifer | Hardwood |
| 3-15cm | 0.5 | 3.0 |
| 15-30cm | 0.0 | 1.5 |
| 30-50cm | 0.5 | 2.0 |
| 50-90cm | 0.5 | 1.0 |
| >90cm | 0.0 | 0.0 |

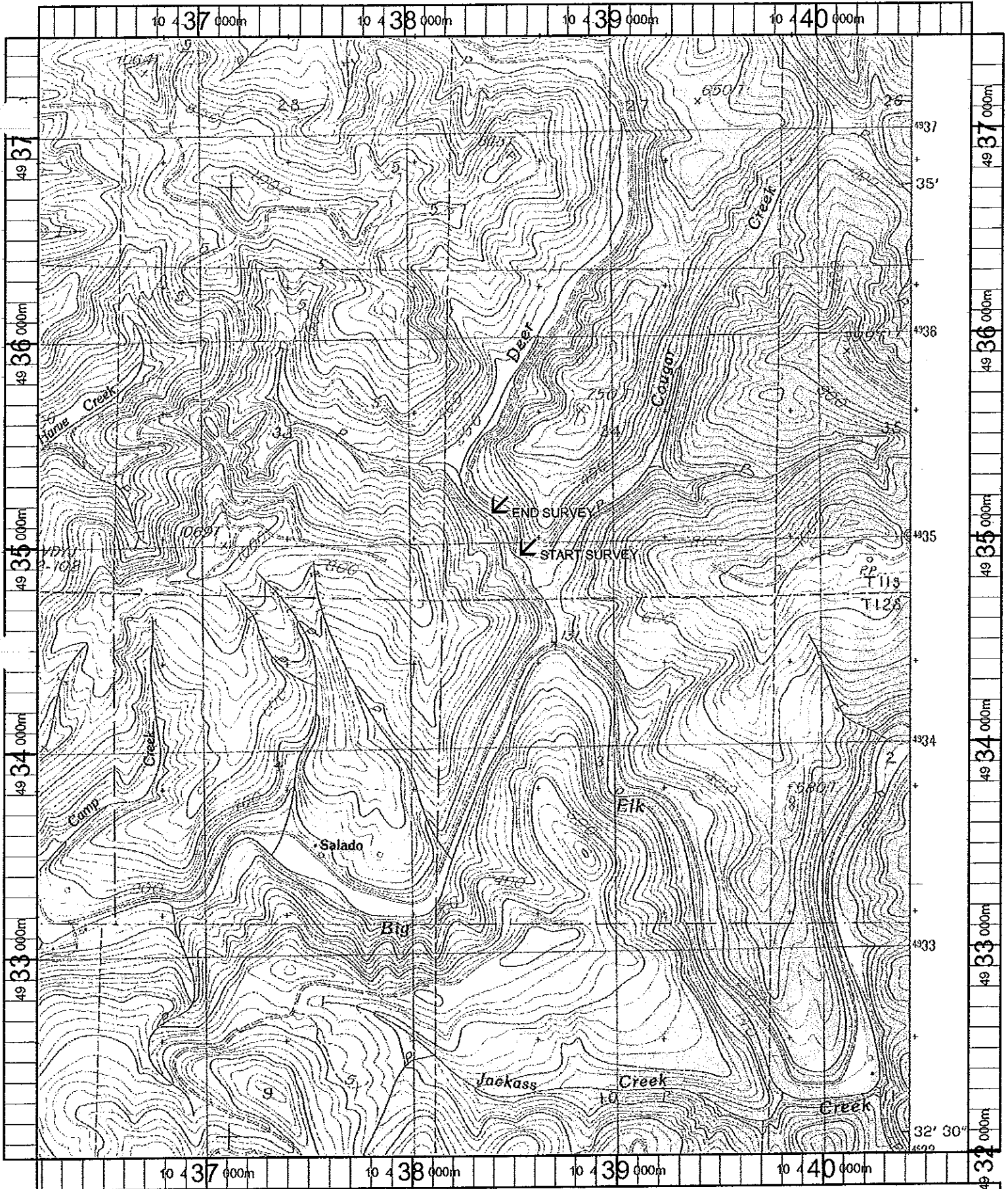
RIPARIAN ZONE VEGETATION

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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 | |
| 8 | LF | 1 | HT | 0.0 | 90 | 30 | 70 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 2 | 1 | 0 | |
| 8 | LF | 2 | HT | 0.0 | 40 | 20 | 80 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 4 | 0 | 0 | 0 | 0 | |
| 8 | LF | 3 | HT | 0.0 | 75 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 8 | RT | 1 | HT | 0.0 | 90 | 60 | 40 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 2 | 0 | 0 | |
| 8 | RT | 2 | HS | 25.0 | 55 | 50 | 50 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 8 | RT | 3 | HS | 25.0 | 10 | 10 | 60 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | ROAD |
| 11 | LF | 1 | HT | 0.0 | 15 | 90 | 10 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 1 | 0 | |
| 11 | LF | 2 | HS | 90.0 | 90 | 60 | 40 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 3 | 0 | 0 | 0 | |
| 11 | LF | 3 | HS | 80.0 | 30 | 100 | 0 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |
| 11 | RT | 1 | HS | 150.0 | 90 | 10 | 90 | Conifer | 0 | 0 | 0 | 0 | 0 | |
| | | | | | | | | Hardwood | 1 | 0 | 0 | 0 | 0 | |
| 11 | RT | 2 | HS | 70.0 | 90 | 10 | 90 | Conifer | 0 | 0 | 0 | 1 | 0 | |
| | | | | | | | | Hardwood | 1 | 0 | 0 | 0 | 0 | |
| 11 | RT | 3 | RBH | 30.0 | 85 | 10 | 60 | Conifer | 1 | 0 | 1 | 0 | 0 | |
| | | | | | | | | Hardwood | 0 | 0 | 0 | 0 | 0 | |



Name: ELK CITY
 Date: 10/17/100
 Scale: 1 inch equals 2000 feet

Location: 10 438363 E 4934725 N
 Caption: DEER CREEK RESTORATION SITE - YAQUINA BASIN