

**ODFW AQUATIC INVENTORY PROJECT
RESTORATION MONITORING
STREAM HABITAT REPORT**

STREAM: JEFF CREEK
 GCG: 4-UJP
 SITE ID: 405
 BASIN: UMPQUA
 TREATMENT DATE: 2008
 SURVEY DATE: 7/1/2008
 SURVEY CREW: Paul Olmstead / Alex Farrand
 USGS MAPS: GUNTER
 ECOREGION: Mid-Coastal Sedimentary
 REPORT PREPARED BY: Matt Strickland / Sharon Tippery / Charles Stein

SURVEY DESCRIPTION:

Channel morphology: Constrained alternately by high terraces and hillslopes

Dominant landuse(s): Second growth timber (15-30 cm dbh)

Dominant riparian vegetation: Deciduous trees: size class 30-50cm dbh

Primary channel length (meters) and area (m²): 411 : 1,279

Secondary channel length (meters) and area (m²) 6 : 1

VWI average: 6.6 VWI Range: 5 - 9 Average Gradient: 1.5%

Pieces LWD per 100m: 4.1 Wood Volume (m³) per 100m: 3.2

Percent pools: 20% Complex pools (LWD pieces>=3): 1 Pools >=1m deep: 0

| Percent substrate (avg): | <u>Silt / organics</u> | <u>Sand</u> | <u>Gravel</u> | <u>Cobble</u> | <u>Boulder</u> | <u>Bedrock</u> |
|--------------------------|------------------------|-------------|---------------|---------------|----------------|----------------|
| All units | 3 | 8 | 12 | 7 | 2 | 69 |
| Pool units | 4 | 17 | 15 | 10 | 5 | 49 |
| Fast water units | 3 | 6 | 10 | 3 | 2 | 77 |

COMMENTS:

This is a pre-treatment, restoration survey.

**OREGON DEPARTMENT OF FISH AND WILDLIFE
HABITAT INVENTORY**

**JEFF CREEK
GCG: 4-UMP SITE ID: 405**

Survey Date: 7/1/2008

Report Date: 12/29/2008

T20S-R08W-S23NW

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 | 6.6 | VWI Range: | 5 - 9 |

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 | 411 | 1,279 | 0 |
| Secondary | 6 | 1 | 0 |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 4 | <u>First Terrace</u> n = 4 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 3.0 | Width: 6.3 | 9.1 (6 - 11) | 12.6 (11.2 - 13.2) |
| Depth: 0.11 | Height: 0.3 | 0.6 (0.6 - 0.6) | 1.6 (1.2 - 2) |

W:D ratio: 21.0

Stream Flow Type: LF

Average Unit Gradient: 1.5%

Water temperature (°C): 13.0 - 13.0

Entrenchment (ACW:FPW ratio): 1.5

Habitat Units/100m (total channel length): 5.3

Habitat Units/100m (primary channel length): 5.4

Riparian, Bank, and Wood Summary

| | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use: | ST | LT |
| Riparian Vegetation: | D30 | S |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding: | 8% | Reach avg: 100% |
| Undercut Banks: | 4% | Range: 100 - 100 |

Large Wood Debris

| | <u>Total</u> | <u>Total / 100m primary channel</u> |
|-----------------------------|--------------|-------------------------------------|
| All pieces (>=3m x 0.15m): | 17 | 4.1 |
| Volume (m ³): | 13 | 3.2 |
| Key pieces (>=12m x 0.60m): | 0 | 0.0 |

OREGON DEPARTMENT OF FISH AND WILDLIFE

JEFF CREEK

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T20S-R08W-S23NW

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 | Cbl | Bldr | Bdrk |
| POOL-LATERAL SCOUR | 4 | 59 | 4.5 | 0.45 | 260 | 4 | 4 | 17 | 15 | 10 | 5 | 49 |
| RAPID/BEDROCK | 14 | 322 | 2.7 | 0.03 | 928 | 51 | 3 | 5 | 5 | 2 | 2 | 83 |
| RIFFLE | 1 | 25 | 2.2 | 0.05 | 55 | 3 | 0 | 10 | 70 | 15 | 5 | 0 |
| STEP/BEDROCK | 2 | 2 | 2.1 | 0.01 | 3 | 0 | 3 | 3 | 5 | 13 | 0 | 76 |
| STEP/COBBLE | 1 | 9 | 4.0 | 0.05 | 34 | 0 | 5 | 11 | 42 | 42 | 0 | 0 |
| Total: | 22 | 417 | 3.0 | 0.11 | 1,280 | 58 | Avg: 3 | 8 | 12 | 7 | 2 | 69 |

HABITAT SUMMARY

| Habitat Group | Number Units | Total Length (m) | Avg Width (m) | Avg Depth (m) | Wetted Area | | Large Boulders | |
|-------------------|-----------------|------------------------|---------------------|---------------------|-------------------|---------|----------------|--------------------------|
| | | | | | (m ²) | Percent | Number | (# / 100m ²) |
| Dammed & BW Pools | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Scour Pools | 4 | 59 | 4.5 | 0.45 | 260 | 20.32% | 4 | 1.5 |
| Glides | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Riffles | 1 | 25 | 2.2 | 0.05 | 55 | 4.30% | 3 | 5.5 |
| Rapids | 14 | 322 | 2.7 | 0.03 | 928 | 72.51% | 51 | 5.5 |
| Cascades | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Step/Falls | 3 | 11 | 2.7 | 0.02 | 37 | 2.87% | 0 | 0.0 |
| Dry | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |
| Culverts | 0 | 0 | | | 0 | 0.00% | 0 | 0.0 |

POOL SUMMARY

| | Total of all Channel Lengths | | Primary Channel Length |
|---------------------------------------|------------------------------|---------------|------------------------|
| | <u>Total</u> | <u># / Km</u> | <u># / Km</u> |
| All Pools: | 4 | 9.6 | 9.7 |
| Pools >=1m deep: | 0 | 0.0 | 0.0 |
| Complex pools (LWD pieces>=3): | 1 | 2.4 | 2.4 |
| Pool frequency (channel widths/pool): | 16.5 | | |
| Residual pool depth (avg): | 0.42 | | |

OREGON DEPARTMENT OF FISH AND WILDLIFE
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RIPARIAN ZONE
VEGETATION SUMMARY

REACH 1

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

| | |
|---------------------------------|------|
| Total hardwoods/1000 | 1240 |
| Total conifers/1000 ft | 102 |
| 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 | 5.0 | 0.0 | 1.7 | 0.0 | 5.0 | 0.0 | 11.7 |
| 15-30cm | 0.0 | 2.7 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 4.7 |
| 30-50cm | 0.0 | 1.3 | 0.0 | 2.0 | 0.7 | 0.0 | 0.7 | 3.3 |
| 50-90cm | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.7 |
| >90cm | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total/100m2 | 0.0 | 9.0 | 0.0 | 5.3 | 1.7 | 6.0 | 0.6 | 6.8 |

Canopy closure and ground cover

| | Zone 1 0-10 meters (%) | Zone 2 10 - 20 meters (%) | Zone 3 20 - 30 meters (%) |
|------------------|------------------------------|---------------------------------|---------------------------------|
| Canopy closure | 98 | 98 | 80 |
| Shrub cover | 53 | 55 | 36 |
| Grass/forb cover | 48 | 45 | 44 |

Predominant landform in each zone

| | Zone 1 0-10 meters (%) | Zone 2 10 - 20 meters (%) | Zone 3 20 - 30 meters (%) |
|-------------------|------------------------------|---------------------------------|---------------------------------|
| Hillslope | 33 | 50 | 50 |
| High terrace | 50 | 33 | 0 |
| Low terrace | 17 | 17 | 0 |
| Floodplain | 0 | 0 | 0 |
| Wetland/meadow | 0 | 0 | 0 |
| Stream channel | 0 | 0 | 0 |
| Roadbed/Railroad | 0 | 0 | 50 |
| Riprap | 0 | 0 | 0 |
| Surface slope (%) | 19 | 28 | 34 |

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

3 transects

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

| | |
|---------------------------------|------|
| Total hardwoods/1000 | 1240 |
| Total conifers/1000 ft | 102 |
| Total conifers >20" dbh/1000 ft | 0 |
| Total conifers >35" dbh/1000 ft | 0 |

Average number of trees in a 5-m wide band

| <u>Diameter</u> <u>class (cm)</u> | <u>Zones 1-3</u> | |
|--------------------------------------|--------------------|-----------------|
| | <u>0-30 meters</u> | |
| | <u>Conifer</u> | <u>Hardwood</u> |
| 3-15cm | 0.0 | 11.7 |
| 15-30cm | 1.0 | 4.7 |
| 30-50cm | 0.7 | 3.3 |
| 50-90cm | 0.0 | 0.7 |
| >90cm | 0.0 | 0.0 |

RIPARIAN ZONE VEGETATION

Reach 1

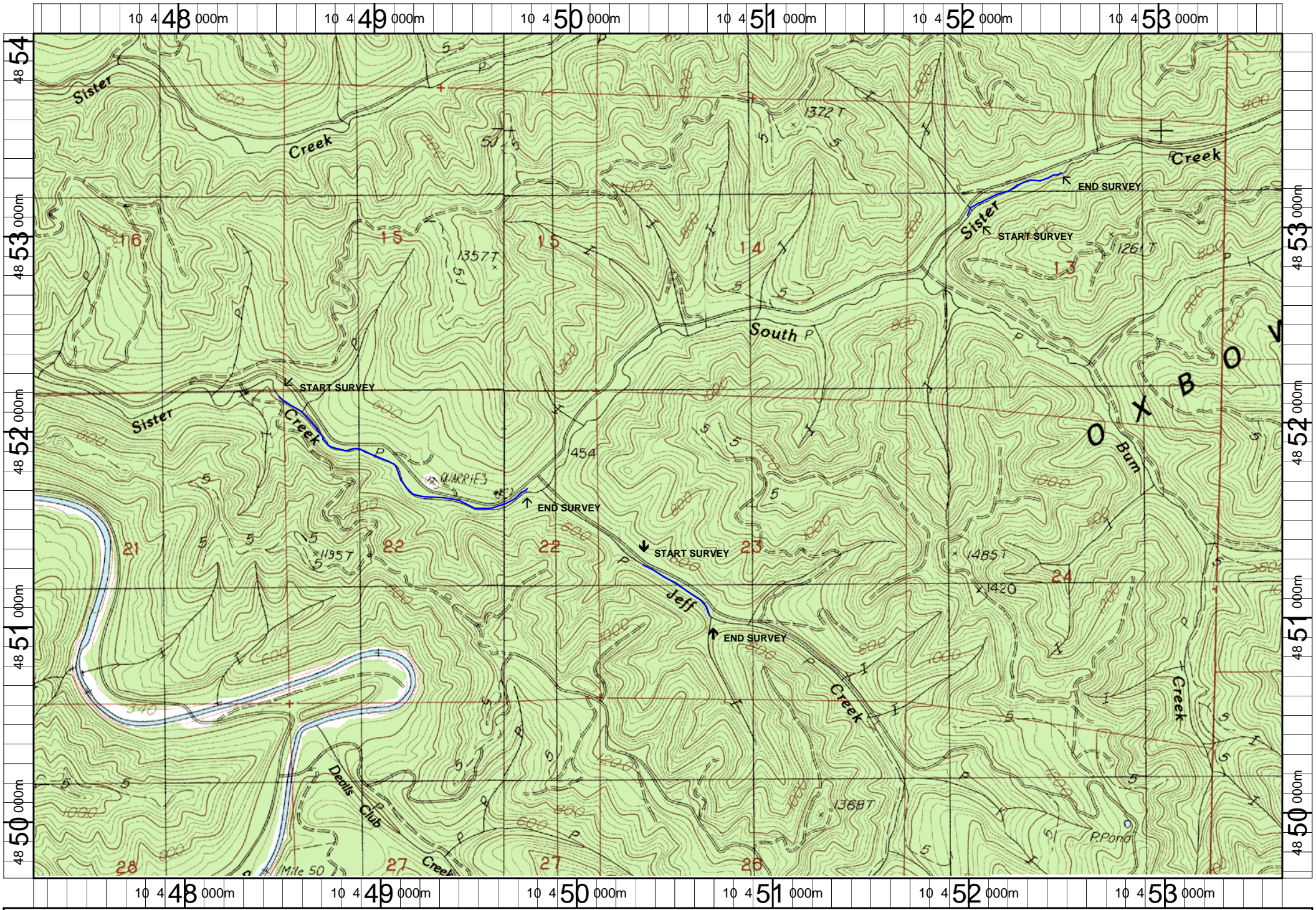
Reach 1

| Unit | Side | Zone | Surface | Slope | Cover (percent) | | | | Diameter class (cm) | | | | | Notes | |
|------|------|------|---------|-------|-----------------|-------|-------|----------|---------------------|-------|-------|-------|-----|-------|--|
| | | | | | Canopy | Shrub | Grass | | 3-15 | 15-30 | 30-50 | 50-90 | >90 | | |
| 7 | LT | 1 | HT | 0 | 100 | 15 | 85 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 1 | | 2 | | | | |
| 7 | LT | 2 | HT | 0 | 100 | 50 | 50 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 3 | 1 | | | | | |
| 7 | LT | 3 | RB | 0 | 35 | 50 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 7 | RT | 1 | HS | 65 | 100 | 25 | 75 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 3 | 3 | | | | | |
| 7 | RT | 2 | HS | 83 | 100 | 40 | 60 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 1 | 2 | 1 | | | | |
| 7 | RT | 3 | HS | 85 | 100 | 40 | 60 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 3 | 1 | | | | | |
| 13 | LT | 1 | HT | 0 | 90 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 1 | 3 | | | | | |
| 13 | LT | 2 | HT | 0 | 85 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | 1 | | |
| 13 | LT | 3 | RB | 0 | 75 | 40 | 30 | Conifer | | | 1 | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 13 | RT | 1 | HS | 48 | 100 | 20 | 80 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 2 | | | | | | |
| 13 | RT | 2 | HS | 58 | 100 | 30 | 70 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 1 | | | | 1 | | |
| 13 | RT | 3 | HS | 71 | 100 | 15 | 75 | Conifer | | | 1 | | | | |
| | | | | | | | | Hardwood | 3 | | | | | | |
| 20 | LT | 1 | LT | 0 | 100 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 3 | 2 | 2 | | | | |
| 20 | LT | 2 | LT | 0 | 100 | 90 | 10 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | 5 | | | |
| 20 | LT | 3 | RB | 0 | 75 | 30 | 30 | Conifer | | 3 | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 20 | RT | 1 | HT | 0 | 100 | 75 | 25 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 5 | | | | | | |
| 20 | RT | 2 | HS | 25 | 100 | 30 | 70 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | | | | | | | |
| 20 | RT | 3 | HS | 46 | 95 | 40 | 60 | Conifer | | | | | | | |
| | | | | | | | | Hardwood | 9 | 2 | | | | | |

COMMENT SUMMARY

MONITORING AREA: 4-UMP SITE ID: 405 STREAM: JEFF CREEK

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES |
|-------|------|------|-----------|----------|---|
| 1 | RR | 00 | 22.7 | | T=13, PRE-TX SITE ADDED BY REQUEST -DAN JENKINS, ROSEBURG |
| 2 | SC | 00 | 31.2 | | H=0.60M |
| 3 | LP | 01 | 51.4 | TJ/ | |
| 4 | SR | 11 | 51.4 | | H=0.90M, CC 15M UPSTREAM |
| 8 | LP | 00 | 142.7 | DJ | |
| 14 | SR | 00 | 256.3 | | H=0.35M |
| 20 | RR | 01 | 389.3 | TJ/ | |



Name: GUNTER
 Date: 1/5/2009
 Scale: 1 inch equals 2000 feet

Location: 10 0450430 E 4851853 N NAD 83
 Caption: JEFF CREEK RESTORATION SITE - SMITH BASIN

UMP-405 Jeff Creek (Pre-Treatment) 2008 Summer Habitat Survey Photographs



Reach photo