

**ODFW AQUATIC INVENTORY PROJECT**  
**OREGON PLAN FOR SALMON & WATERSHEDS**  
**STREAM RESTORATION HABITAT REPORT**

STREAM: Salmonberry Creek (U-99)  
BASIN: Smith River  
SURVEY TYPE: Post-Tx  
DATE: August 28, 2007  
SURVEY CREW: Ryan Lande, Andy Livesay  
REPORT PREPARED BY: Paul Jacobsen  
BASIN AREA: 3.5 km<sup>2</sup>  
USGS MAPS: Beaver Creek  
ECOREGION: Coast Range Sedimentary

**GENERAL DESCRIPTION:**

The Salmonberry Creek habitat survey extended 560 meters. The channel was alternately constrained by hillslopes and terraces in a broad valley floor. The average valley width index was 6.9 (range: 5.5-12.0). Land use for the reach was timber harvest and young (3-15 cm dbh) trees. The average unit gradient was 1.1 percent. Scour pools (75%) dominated stream habitat. Gravel (74%) dominated stream substrate. Wood volume was high at 36.5 m<sup>3</sup>/100m.

**COMMENTS:**

There were no potential barriers to upstream fish migration in the surveyed length.

The crew noted several habitat structures during the survey.

REACH 1

T20S-R06W-S30SW

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         | 6.9 | VWI Range:                | 5.5 - 12 |

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 Channel   | 560               | 1,053            | 6                |
| Secondary Channel | 0                 | 0                | 0                |
| Off-Channel Units | 7                 | 1                | 0                |

Channel Dimensions (m)

| <u>Wetted</u> | <u>Active</u> | <u>Floodprone</u> n = 5 | <u>First Terrace</u> n = 5 |
|---------------|---------------|-------------------------|----------------------------|
| Width: 1.9    | Width: 3.9    | 5.3 ( 4.5 - 5.8 )       | 6.0 ( 4.9 - 6.5 )          |
| Depth: 0.25   | Height: 0.4   | 0.8 ( 0.74 - 1 )        | 1.1 ( 0.9 - 1.2 )          |

W:D ratio: 9.4  
 Stream Flow Type: LF  
 Average Unit Gradient: 1.1%  
 Water temperature (°C): 14.0 - 14.0

Entrenchment (ACW:FPW ratio): 1.4  
 Habitat Units/100m (total channel length): 10.2  
 Habitat Units/100m (primary channel length): 10.4

**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:  | 19%                         | Reach avg: 98%          |
| Undercut Banks:    | 14%                         | Range: 89 - 100         |

Large Wood Debris

|                             | <u>Total</u> | <u>Total / 100m primary channel</u> |
|-----------------------------|--------------|-------------------------------------|
| All pieces (>=3m x 0.15m):  | 111          | 19.8                                |
| Volume (m <sup>3</sup> ):   | 204          | 36.5                                |
| Key pieces (>=12m x 0.60m): | 0            | 0.0                                 |

HABITAT INVENTORY

Report Date: 11/14/2007

Survey Date:

8/28/2007

| REACH 1            |                 | T20S-R06W-S30SW        |                     |                     |                                    |                               | REACH 1                          |           |           |          |          |          |
|--------------------|-----------------|------------------------|---------------------|---------------------|------------------------------------|-------------------------------|----------------------------------|-----------|-----------|----------|----------|----------|
| HABITAT DETAIL     |                 |                        |                     |                     |                                    |                               |                                  |           |           |          |          |          |
| Habitat Type       | Number<br>Units | Total<br>Length<br>(m) | Avg<br>Width<br>(m) | Avg<br>Depth<br>(m) | Total<br>Area<br>(m <sup>2</sup> ) | Large<br>Boulders<br>(#>0.5m) | Substrate<br>Percent Wetted Area |           |           |          |          |          |
|                    |                 |                        |                     |                     |                                    |                               | S/O                              | Snd       | Grvl      | Cbl      | Bldr     | Bdrk     |
| DRY UNIT           | 5               | 12                     | 4.5                 | 0.00                | 51                                 | 0                             | 0                                | 5         | 95        | 0        | 0        | 0        |
| POOL-LATERAL SCOUR | 29              | 333                    | 2.2                 | 0.48                | 791                                | 1                             | 5                                | 30        | 62        | 3        | 0        | 0        |
| PUDDLED UNIT       | 1               | 7                      | 0.7                 | 0.07                | 5                                  | 0                             | 0                                | 5         | 85        | 10       | 0        | 0        |
| RAPID/BOULDERS     | 2               | 11                     | 0.3                 | 0.02                | 3                                  | 0                             | 5                                | 38        | 58        | 0        | 0        | 0        |
| RIFFLE             | 17              | 196                    | 1.0                 | 0.02                | 197                                | 0                             | 0                                | 7         | 87        | 6        | 0        | 0        |
| STEP/COBBLE        | 4               | 9                      | 0.8                 | 0.02                | 7                                  | 0                             | 0                                | 5         | 84        | 11       | 0        | 0        |
| <b>Total:</b>      | <b>58</b>       | <b>567</b>             | <b>1.9</b>          | <b>0.25</b>         | <b>1,054</b>                       | <b>1</b>                      | <b>Avg: 3</b>                    | <b>19</b> | <b>74</b> | <b>4</b> | <b>0</b> | <b>0</b> |

| HABITAT SUMMARY   |                 |                        |                     |                     |                   |         |                |                          |  |
|-------------------|-----------------|------------------------|---------------------|---------------------|-------------------|---------|----------------|--------------------------|--|
| Habitat Group     | Number<br>Units | Total<br>Length<br>(m) | Avg<br>Width<br>(m) | Avg<br>Depth<br>(m) | Wetted Area       |         | Large Boulders |                          |  |
|                   |                 |                        |                     |                     | (m <sup>2</sup> ) | Percent | Number         | (# / 100m <sup>2</sup> ) |  |
| Dammed & BW Pools | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Scour Pools       | 29              | 333                    | 2.2                 | 0.48                | 791               | 75.07%  | 1              | 0.1                      |  |
| Glides            | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Riffles           | 17              | 196                    | 1.0                 | 0.02                | 197               | 18.67%  | 0              | 0.0                      |  |
| Rapids            | 2               | 11                     | 0.3                 | 0.02                | 3                 | 0.28%   | 0              | 0.0                      |  |
| Cascades          | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |
| Step/Falls        | 4               | 9                      | 0.8                 | 0.02                | 7                 | 0.69%   | 0              | 0.0                      |  |
| Dry               | 6               | 18                     | 3.9                 | 0.01                | 56                | 5.29%   | 0              | 0.0                      |  |
| Culverts          | 0               | 0                      |                     |                     | 0                 | 0.00%   | 0              | 0.0                      |  |

| POOL SUMMARY                          |              |                              |               |                        |
|---------------------------------------|--------------|------------------------------|---------------|------------------------|
|                                       | <u>Total</u> | Total of all Channel Lengths |               | Primary Channel Length |
|                                       |              | <u># / Km</u>                | <u># / Km</u> | <u># / Km</u>          |
| All Pools:                            | 29           | 51.2                         |               | 51.8                   |
| Pools >=1m deep:                      | 0            | 0.0                          |               | 0.0                    |
| Complex pools (LWD pieces>=3):        | 14           | 24.7                         |               | 25.0                   |
| Pool frequency (channel widths/pool): | 5.0          |                              |               |                        |
| Residual pool depth (avg):            | 0.46         |                              |               |                        |

Survey Date 8/28/2007  
Report Date: 11/7/2007

**RIPARIAN ZONE  
VEGETATION SUMMARY**

REACH 1

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

|                                 |     |
|---------------------------------|-----|
| Total hardwoods/1000            | 711 |
| Total conifers/1000 ft          | 224 |
| 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<br>0-10 meters |          | Zone 2<br>10 - 20 meters |          | Zone 3<br>20 - 30 meters |          | Zones 1-3<br>0-30 meters |          |
|---------------------|-----------------------|----------|--------------------------|----------|--------------------------|----------|--------------------------|----------|
|                     | Conifer               | Hardwood | Conifer                  | Hardwood | Conifer                  | Hardwood | Conifer                  | Hardwood |
| 3-15cm              | 1.7                   | 1.0      | 0.7                      | 0.7      | 0.7                      | 2.3      | 3.0                      | 4.0      |
| 15-30cm             | 0.0                   | 2.7      | 0.0                      | 3.3      | 0.0                      | 0.0      | 0.0                      | 6.0      |
| 30-50cm             | 0.3                   | 1.3      | 0.0                      | 0.3      | 0.3                      | 0.0      | 0.7                      | 1.7      |
| 50-90cm             | 0.0                   | 0.0      | 0.0                      | 0.0      | 0.0                      | 0.0      | 0.0                      | 0.0      |
| >90cm               | 0.0                   | 0.0      | 0.0                      | 0.0      | 0.0                      | 0.0      | 0.0                      | 0.0      |
| Total/100m2         | 2.0                   | 5.0      | 0.7                      | 4.3      | 1.0                      | 2.3      | 1.2                      | 3.9      |

**Canopy closure and ground cover**

|                  | Zone 1<br>0-10 meters<br>(%) | Zone 2<br>10 - 20 meters<br>(%) | Zone 3<br>20 - 30 meters<br>(%) |
|------------------|------------------------------|---------------------------------|---------------------------------|
| Canopy closure   | 84                           | 57                              | 34                              |
| Shrub cover      | 77                           | 49                              | 33                              |
| Grass/forb cover | 17                           | 31                              | 38                              |

**Predominant landform in each zone**

|                   | Zone 1<br>0-10 meters<br>(%) | Zone 2<br>10 - 20 meters<br>(%) | Zone 3<br>20 - 30 meters<br>(%) |
|-------------------|------------------------------|---------------------------------|---------------------------------|
| Hillslope         | 33                           | 33                              | 83                              |
| High terrace      | 67                           | 50                              | 0                               |
| Low terrace       | 0                            | 0                               | 0                               |
| Floodplain        | 0                            | 0                               | 0                               |
| Wetland/meadow    | 0                            | 0                               | 0                               |
| Stream channel    | 0                            | 0                               | 0                               |
| Roadbed/Railroad  | 0                            | 17                              | 17                              |
| Riprap            | 0                            | 0                               | 0                               |
| Surface slope (%) | 13                           | 28                              | 56                              |

**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            | 711 |
| Total conifers/1000 ft          | 224 |
| Total conifers >20" dbh/1000 ft | 0   |
| Total conifers >35" dbh/1000 ft | 0   |

**Average number of trees in a 5-m wide band**

| Diameter<br>class (cm) | Zones 1-3          |                 |
|------------------------|--------------------|-----------------|
|                        | <u>0-30 meters</u> |                 |
|                        | <u>Conifer</u>     | <u>Hardwood</u> |
| 3-15cm                 | 3.0                | 4.0             |
| 15-30cm                | 0.0                | 6.0             |
| 30-50cm                | 0.7                | 1.7             |
| 50-90cm                | 0.0                | 0.0             |
| >90cm                  | 0.0                | 0.0             |

**RIPARIAN ZONE VEGETATION**

Reach 1

Reach 1

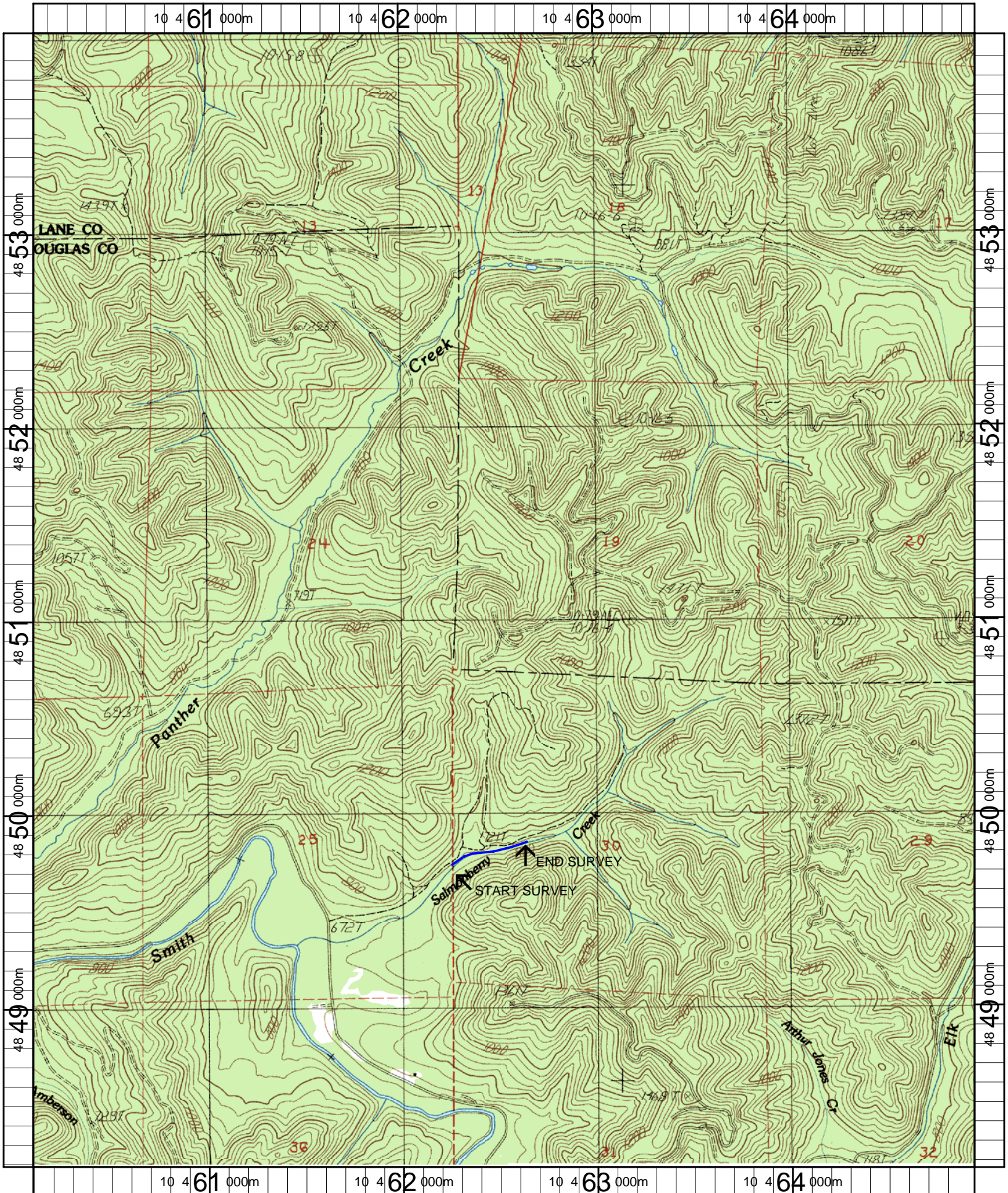
| Unit | Side | Zone | Surface | Slope | Cover (percent) |       |       |          | Diameter class (cm) |       |       |       |     | Notes |                |
|------|------|------|---------|-------|-----------------|-------|-------|----------|---------------------|-------|-------|-------|-----|-------|----------------|
|      |      |      |         |       | Canopy          | Shrub | Grass |          | 3-15                | 15-30 | 30-50 | 50-90 | >90 |       |                |
| 13   | LT   | 1    | HT      | 0     | 95              | 95    | 5     | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     | 2     | 1     |       |     |       |                |
| 13   | LT   | 2    | HT      | 10    | 95              | 95    | 5     | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     | 2     |       |       |     |       |                |
| 13   | LT   | 3    | HS      | 35    | 95              | 75    | 20    | Conifer  |                     |       |       | 1     |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     |       |       |       |     |       |                |
| 13   | RT   | 1    | HT      | 5     | 60              | 90    | 10    | Conifer  |                     |       |       |       |     |       | BUFFER ZONE    |
|      |      |      |         |       |                 |       |       | Hardwood |                     | 2     | 1     |       |     |       |                |
| 13   | RT   | 2    | HS      | 80    | 35              | 25    | 60    | Conifer  |                     |       |       |       |     |       | TIMBER HARVEST |
|      |      |      |         |       |                 |       |       | Hardwood | 1                   | 1     |       |       |     |       |                |
| 13   | RT   | 3    | HS      | 80    | 0               | 10    | 60    | Conifer  |                     |       |       |       |     |       | CLEARCUT       |
|      |      |      |         |       |                 |       |       | Hardwood | 2                   |       |       |       |     |       |                |
| 25   | LT   | 1    | HS      | 55    | 90              | 30    | 40    | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood | 1                   | 3     |       |       |     |       |                |
| 25   | LT   | 2    | RB      | 5     | 20              | 10    | 25    | Conifer  | 2                   |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     |       |       |       |     |       |                |
| 25   | LT   | 3    | HS      | 75    | 50              | 70    | 30    | Conifer  | 2                   |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood | 3                   |       |       |       |     |       |                |
| 25   | RT   | 1    | HT      | 0     | 95              | 75    | 15    | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     | 1     | 2     |       |     |       |                |
| 25   | RT   | 2    | HT      | 0     | 70              | 60    | 30    | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     | 2     | 1     |       |     |       |                |
| 25   | RT   | 3    | HS      | 80    | 15              | 10    | 50    | Conifer  |                     |       |       |       |     |       | TIMBER HARVEST |
|      |      |      |         |       |                 |       |       | Hardwood | 2                   |       |       |       |     |       |                |
| 38   | LT   | 1    | HT      | 0     | 95              | 85    | 15    | Conifer  | 5                   |       |       | 1     |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     |       |       |       |     |       |                |
| 38   | LT   | 2    | HT      | 0     | 90              | 75    | 25    | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     | 2     |       |       |     |       |                |
| 38   | LT   | 3    | RB      | 0     | 35              | 10    | 30    | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood |                     |       |       |       |     |       |                |
| 38   | RT   | 1    | HS      | 15    | 70              | 85    | 15    | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood | 2                   |       |       |       |     |       |                |
| 38   | RT   | 2    | HS      | 75    | 30              | 30    | 40    | Conifer  |                     |       |       |       |     |       |                |
|      |      |      |         |       |                 |       |       | Hardwood | 1                   | 3     |       |       |     |       |                |
| 38   | RT   | 3    | HS      | 65    | 10              | 20    | 40    | Conifer  |                     |       |       |       |     |       | TIMBER HARVEST |
|      |      |      |         |       |                 |       |       | Hardwood |                     |       |       |       |     |       |                |

COMMENT SUMMARY

MONITORING AREA: 4-UMP SITE ID: 99 STREAM: SALMONBERRY CREEK POST-TX

| UNIT# | TYPE | CHAN | DIST. (m) | COMMENTS | NOTES            |
|-------|------|------|-----------|----------|------------------|
| 6     | LP   | 00   | 58.5      | HS, DJ   | PLACED LOGS      |
| 10    | LP   | 00   | 99.8      | HS       | PLACED LOGS      |
| 12    | LP   | 00   | 124.3     | HS, DJ   | PLACED LOGS      |
| 14    | LP   | 00   | 153.8     | HS, DJ   | PLACED LOGS      |
| 15    | LP   | 00   | 172.8     |          | LOTS OF COHO FRY |
| 19    | LP   | 00   | 235.1     | HS       | PLACED LOGS      |
| 21    | LP   | 00   | 257.6     | HS       | PLACED LOGS      |
| 22    | LP   | 00   | 268.6     | HS       | PLACED LOGS      |
| 24    | LP   | 00   | 279.3     | HS       | PLACED LOGS      |
| 26    | LP   | 00   | 302.6     | HS       | PLACED LOGS      |
| 28    | LP   | 00   | 306.2     | HS       | PLACED LOGS      |
| 34    | LP   | 01   | 350.2     | HS, TJ/  |                  |
| 41    | LP   | 00   | 429.7     | HS       | PLACED LOGS      |
| 42    | SC   | 00   | 432.2     | HS       |                  |
| 43    | LP   | 00   | 440.2     |          | PLACED LOG       |
| 51    | LP   | 00   | 499.7     | HS       | PLACED LOGS      |
| 55    | LP   | 00   | 535.7     | HS       |                  |





Name: BEAVER CREEK  
 Date: 1/9/2007  
 Scale: 1 inch equals 2000 feet

Location: 10 462529 E 4851101 N  
 Caption: SALMONBERRY CREEK RESTORATION SITE - SMITH BASIN