

REACH 1

T23S-R10W-7NW

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           | 100 | Multiple Terraces         | 0 |
| Open V-shape               | 0   | Wide Floodplain           | 0 |

Valley Width Index avg: 1.4 range: 1.0-2.0

Channel Morphology (Percent Reach Length)

| <u>Constrained</u> |     | <u>Unconstrained</u> |   |
|--------------------|-----|----------------------|---|
| Hillslope          | 100 | Single Channel       | 0 |
| Bedrock            | 0   | Multiple Channel     | 0 |
| Terrace            | 0   | 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     | 757              | 8,291            | 0                |
| Secondary   | 5                | 6                | 0                |

Channel Dimensions (m)

| <u>Wetted</u> |           | <u>Active</u> | <u>Floodprone</u> | <u>First Terrace</u> |
|---------------|-----------|---------------|-------------------|----------------------|
| Width 10.8    |           | 11.6          | 17.1              | 20.0                 |
| Depth 0.62    | Height    | 0.8           | 1.5               | 2.9                  |
|               | W:D ratio | 15.3          | Entrenchment 1.5  |                      |

Stream Flow Type: MF Water Temp: 6.0-6.0°C  
Avg. Unit Gradient: 0.8% Habitat Units/100m: 4.2

Riparian, Bank, and Wood Summary

|                      | <u>Primary</u> | <u>Secondary</u> |
|----------------------|----------------|------------------|
| Land Use:            | YT             | ST               |
| Riparian Vegetation: | D15            | D30              |

Bank Condition and Shade

| <u>Bank Status</u> | <u>Percent Reach Length</u> | <u>Shade (% of 180)</u> |
|--------------------|-----------------------------|-------------------------|
| Actively Eroding   | 0%                          | Reach avg: 0%           |
| Undercut Banks     | 0%                          | Range: 0- 0             |

Large Woody Debris

|                          | <u>Total</u> | <u>Total/100m</u> |
|--------------------------|--------------|-------------------|
| All pieces (≥3m x 0.15m) | 52           | 6.9               |
| Volume (m <sup>3</sup> ) | 29           | 3.8               |
| Key pieces (≥10m x 0.6m) | 0            | 0.0               |

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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      | Cbbl     | Bldr     | Bdrk      |
| CASCADE/BEDROCK     | 3               | 71                     | 12.9                | 0.53                | 906                                | 0                            | 0                                | 3        | 3         | 0        | 0        | 93        |
| GLIDE               | 3               | 88                     | 12.1                | 0.61                | 1,043                              | 0                            | 0                                | 12       | 37        | 8        | 3        | 40        |
| POOL-ALCOVE         | 1               | 5                      | 1.4                 | 0.36                | 6                                  | 0                            | 30                               | 70       | 0         | 0        | 0        | 0         |
| POOL-DAMMED         | 1               | 30                     | 8.2                 | 0.95                | 246                                | 0                            | 0                                | 0        | 10        | 5        | 5        | 80        |
| POOL-LATERAL SCOUR  | 4               | 74                     | 11.2                | 1.02                | 851                                | 0                            | 0                                | 5        | 4         | 4        | 26       | 61        |
| POOL-PLUNGE         | 1               | 16                     | 18.1                | 0.40                | 281                                | 0                            | 0                                | 0        | 25        | 25       | 10       | 40        |
| POOL-STRAIGHT SCOUR | 4               | 114                    | 10.3                | 1.07                | 1,166                              | 0                            | 0                                | 14       | 11        | 3        | 3        | 70        |
| RAPID/BEDROCK       | 8               | 186                    | 10.0                | 0.50                | 1,812                              | 0                            | 0                                | 2        | 16        | 5        | 10       | 68        |
| RIFFLE              | 5               | 129                    | 11.2                | 0.29                | 1,450                              | 0                            | 0                                | 4        | 57        | 13       | 2        | 24        |
| RIFFLE W/ POCKETS   | 2               | 50                     | 10.8                | 0.50                | 538                                | 0                            | 0                                | 15       | 23        | 13       | 25       | 25        |
| <b>Total:</b>       | <b>32</b>       | <b>762</b>             | <b>10.8</b>         | <b>0.62</b>         | <b>8,297</b>                       | <b>0</b>                     | <b>Avg: 1</b>                    | <b>8</b> | <b>21</b> | <b>7</b> | <b>9</b> | <b>55</b> |

HABITAT SUMMARY

| Habitat Group     | No.<br>Units | Total<br>Length<br>(m) | Avg.<br>Width<br>(m) | Avg<br>Depth<br>(m) | Wetted Area<br>(m <sup>2</sup> ) | Percent | Large<br>Boulders<br>Number | #/100m <sup>2</sup> |
|-------------------|--------------|------------------------|----------------------|---------------------|----------------------------------|---------|-----------------------------|---------------------|
| Dammed & BW Pools | 2            | 35                     | 4.8                  | 0.66                | 252                              | 3.04    | 0                           | 0.0                 |
| Scour Pools       | 9            | 204                    | 11.5                 | 0.97                | 2,297                            | 27.69   | 0                           | 0.0                 |
| Glides            | 3            | 88                     | 12.1                 | 0.61                | 1,043                            | 12.57   | 0                           | 0.0                 |
| Riffles           | 7            | 179                    | 11.1                 | 0.35                | 1,987                            | 23.95   | 0                           | 0.0                 |
| Rapids            | 8            | 186                    | 10.0                 | 0.50                | 1,812                            | 21.83   | 0                           | 0.0                 |
| Cascades          | 3            | 71                     | 12.9                 | 0.53                | 906                              | 10.92   | 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> |
|                                       | 11           | 14.4        |
| Pools ≥1m deep:                       | 4            | 5.3         |
| Complex pools (LWD pieces ≥3):        | 5            | 6.6         |
| Pool Frequency (channel widths/pool): | 6.0          |             |
| Residual pool depth (avg)             | 0.63m        |             |

STREAM SUMMARY

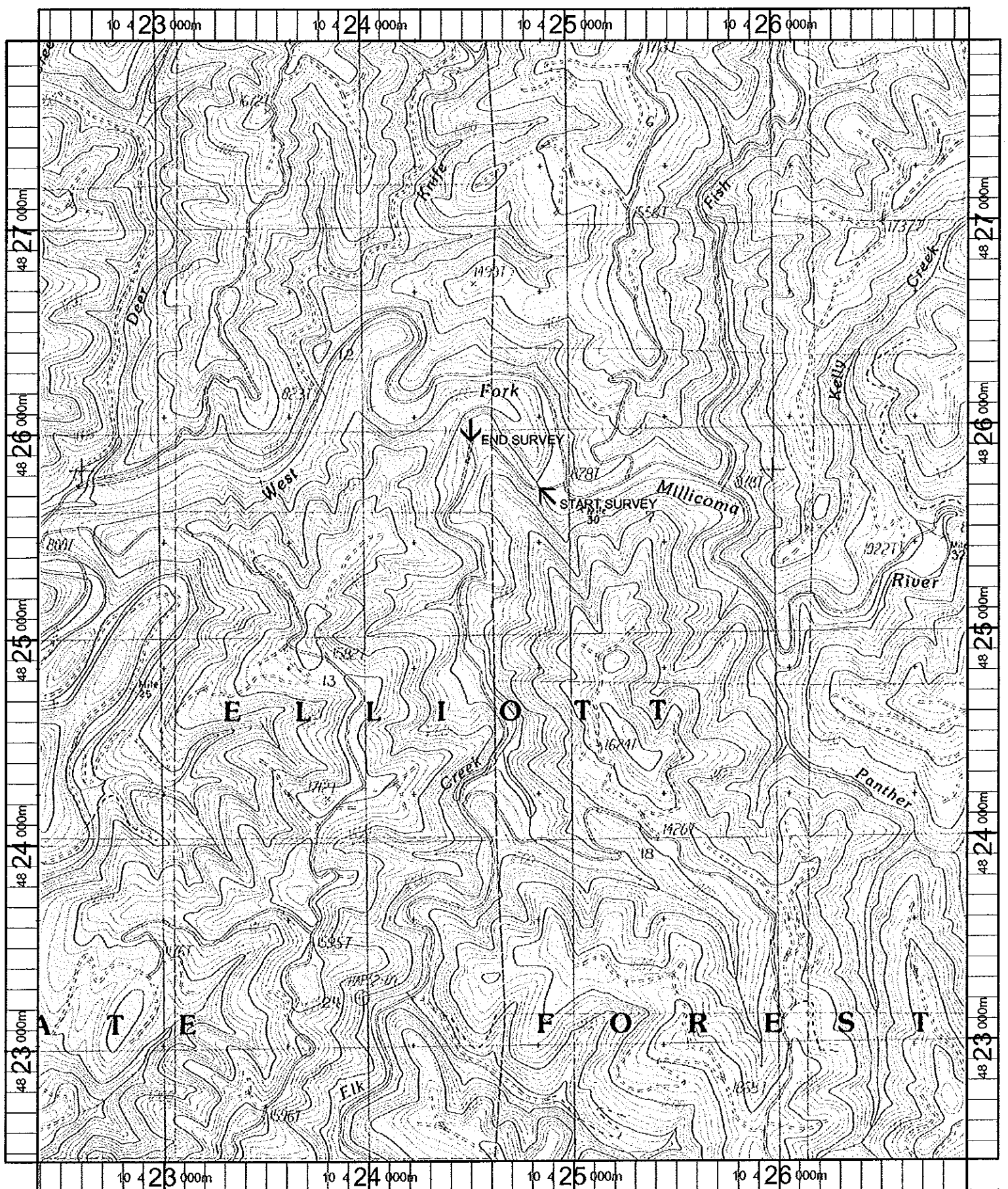
ELK CREEK PRE-TX

| 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> ) | Substrate<br>Percent Wetted Area |      |      |      |      | Total<br>Large<br>Boulder |      |
|-----------------|------------------------|---------------------|---------------------|------------------------------------|----------------------------------|------|------|------|------|---------------------------|------|
|                 |                        |                     |                     |                                    | S/O                              | Sand | Grvl | Cbbl | Bldr |                           | Bdrk |
| 32              | 762                    | 10.8                | 0.62                | 8,297                              | 1                                | 8    | 21   | 7    | 9    | 55                        | 0    |

Wetted Area

| Habitat Group   | (m <sup>2</sup> ) | Percent |
|-----------------|-------------------|---------|
| Scour Pool      | 2,297             | 27.7    |
| Backwater Pools | 252               | 3.0     |
| Glide           | 1,043             | 12.6    |
| Riffle          | 1,987             | 24.0    |
| Rapid           | 1,812             | 21.8    |
| Cascade         | 906               | 10.9    |
| Step            | 0                 | 0.0     |
| Dry             | 0                 | 0.0     |

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Name: ELK PEAK  
 Date: 10/16/100  
 Scale: 1 inch equals 2000 feet

Location: 10 424578 E 4825150 N  
 Caption: ELK CREEK RESTORATION SITE - MILLICOMA BASIN