

# Watershed Report

## Bear Creek

### 1101000304

The Center for Advanced Spatial Technologies at the University of Arkansas has developed the Arkansas Automated Reporting and Mapping System with funding from the Arkansas 85th General Assembly through the Arkansas Natural Resource Commission.

The 308 ten-digit watershed units and the 1556 twelve-digit watershed units were delineated by the Natural Resources Conservation Service, a division of the US Department of Agriculture.

For all watersheds that cross the Arkansas border, only the Arkansas portion of the watershed was used for mapping and statistical reporting.

## Watershed Summary (10 Digit HUC)

### *Bear Creek (1101000304)*

#### **Area Summary**

|                          |          |
|--------------------------|----------|
| Area - Square Miles..... | 150.96   |
| Area - Acres.....        | 97742.29 |

#### **Elevation Summary**

|                        | <u>Meters</u> | <u>Feet</u> |
|------------------------|---------------|-------------|
| Elevation Maximum..... | 601.00        | 1971.00     |
| Elevation Minimum..... | 198.00        | 649.00      |
| Elevation Average..... | 348.00        | 1141.00     |

#### **Land Use / Land Cover for 1999**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | 1.54             | 1.01%             |
| Bare.....           | .09              | .06%              |
| Water.....          | 1.04             | .69%              |
| Herbaceous.....     | .32              | .21%              |
| Forest.....         | 102.85           | 67.77%            |
| Agri - Crops.....   | .01              | .01%              |
| Agri - pasture..... | 45.91            | 30.25%            |

#### **Land Use / Land Cover for 2004**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | 3.12             | 2.06%             |
| Bare.....           | 1.14             | .75%              |
| Water.....          | .76              | .50%              |
| Herbaceous.....     | 3.12             | 2.06%             |
| Forest.....         | 101.09           | 66.61%            |
| Agri - Crops.....   | .01              | .01%              |
| Agri - pasture..... | 42.53            | 28.02%            |

#### **Land Use / Land Cover for 2006**

|                   | <u>Sq. Miles</u> | <u>% of Total</u> |
|-------------------|------------------|-------------------|
| Urban.....        | 3.68             | 2.35%             |
| Bare.....         | .96              | .61%              |
| Water.....        | .81              | .52%              |
| Herbaceous.....   | 18.99            | 12.10%            |
| Forest.....       | 89.59            | 57.09%            |
| Agri - Crops..... | .36              | .23%              |

Agri - pasture.....: 37.39 23.83%

**Land Use / Land Cover Change from 1999 to 2004**

| Area in Acres | Change TO |        |       |            |         |           |              |
|---------------|-----------|--------|-------|------------|---------|-----------|--------------|
|               | Urban     | Bare   | Water | Herbaceous | Forest  | Agri-Crop | Agri-Pasture |
| FROM Urban    | -.--      | -.--   | -.--  | -.--       | -.--    | -.--      | -.--         |
| Bare          | 1.00      | -.--   | 3.61  | 0.00       | 7.23    | 0.00      | 2.01         |
| Water         | 0.0       | 44.76  | -.--  | 5.42       | 121.43  | 0.00      | 40.54        |
| FROM Herb     | 11.84     | 4.62   | .40   | -.--       | 98.55   | 0.00      | 34.12        |
| Forest        | 418.28    | 427.91 | 8.03  | 146.72     | -.--    | 0.00      | 3621.82      |
| Agri-Crops    | 0.0       | 1.40   | 0.00  | 0.00       | 2.21    | -.--      | 1.40         |
| Agri-Pasture  | 451.60    | 231.02 | .20   | 612.97     | 4125.00 | 0.00      | -.--         |

# Sub-Watershed Summary (12 Digit HUC)

## Upper Bear Creek (110100030401)

### Area Summary

|                          |          |
|--------------------------|----------|
| Area - Square Miles..... | 35.88    |
| Area - Acres.....        | 23229.28 |

### Elevation Summary

|                        | <u>Meters</u> | <u>Feet</u> |
|------------------------|---------------|-------------|
| Elevation Maximun..... | 601.00        | 1971.00     |
| Elevation Minimum..... | 288.00        | 945.00      |
| Elevation Average..... | 391.00        | 1282.00     |

### Land Use / Land Cover for 1999

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .73              | 2.04%             |
| Bare.....           | .05              | .14%              |
| Water.....          | .01              | .03%              |
| Herbaceous.....     | .12              | .34%              |
| Forest.....         | 20.32            | 56.89%            |
| Agri - Crops.....   | .00              | -.--%             |
| Agri - pasture..... | 14.49            | 40.57%            |

### Land Use / Land Cover for 2004

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | 1.58             | 4.42%             |
| Bare.....           | .46              | 1.29%             |
| Water.....          | .00              | -.--%             |
| Herbaceous.....     | .83              | 2.32%             |
| Forest.....         | 18.76            | 52.52%            |
| Agri - Crops.....   | .00              | -.--%             |
| Agri - pasture..... | 14.09            | 39.45%            |

### Land Use / Land Cover for 2006

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | 1.79             | 5.01%             |
| Bare.....           | .42              | 1.18%             |
| Water.....          | .00              | -.--%             |
| Herbaceous.....     | 5.30             | 14.83%            |
| Forest.....         | 15.98            | 44.72%            |
| Agri - Crops.....   | .08              | .22%              |
| Agri - pasture..... | 12.16            | 34.03%            |

### Land Use / Land Cover Change from 1999 to 2004

| Area in Acres | Change TO |        |       |            |        |           |              |
|---------------|-----------|--------|-------|------------|--------|-----------|--------------|
|               | Urban     | Bare   | Water | Herbaceous | Forest | Agri-Crop | Agri-Pasture |
| Urban         | -.--      | -.--   | -.--  | -.--       | -.--   | -.--      | -.--         |
| Bare          | 0.0       | -.--   | 0.00  | 0.00       | .20    | 0.00      | 0.00         |
| Water         | 0.0       | .60    | -.--  | 0.00       | 1.20   | 0.00      | 1.61         |
| FROM Herb     | 7.63      | 2.21   | 0.00  | -.--       | 19.87  | 0.00      | 13.85        |
| Forest        | 276.38    | 153.34 | 0.00  | 32.92      | -.--   | 0.00      | 1337.94      |
| Agri-Crops    | 0.0       | 0.00   | 0.00  | 0.00       | 0.00   | -.--      | 0.00         |
| Agri-Pasture  | 246.27    | 103.17 | 0.00  | 123.04     | 803.85 | 0.00      | -.--         |

**Cheatham Creek  
(110100030402)**

**Area Summary**

|                           |          |
|---------------------------|----------|
| Area - Square Miles.....: | 21.95    |
| Area - Acres.....:        | 14213.53 |

**Elevation Summary**

|                         | <u>Meters</u> | <u>Feet</u> |
|-------------------------|---------------|-------------|
| Elevation Maximun.....: | 432.00        | 1417.00     |
| Elevation Minimum.....: | 257.00        | 843.00      |
| Elevation Average.....: | 374.00        | 1227.00     |

**Land Use / Land Cover for 1999**

|                      | <u>Sq. Miles</u> | <u>% of Total</u> |
|----------------------|------------------|-------------------|
| Urban.....:          | .22              | .95%              |
| Bare.....:           | .00              | -.--%             |
| Water.....:          | .00              | -.--%             |
| Herbaceous.....:     | .02              | .09%              |
| Forest.....:         | 16.66            | 72.15%            |
| Agri - Crops.....:   | .00              | -.--%             |
| Agri - pasture.....: | 6.19             | 26.81%            |

**Land Use / Land Cover for 2004**

|                      | <u>Sq. Miles</u> | <u>% of Total</u> |
|----------------------|------------------|-------------------|
| Urban.....:          | .49              | 2.12%             |
| Bare.....:           | .13              | .56%              |
| Water.....:          | .00              | -.--%             |
| Herbaceous.....:     | .42              | 1.82%             |
| Forest.....:         | 16.28            | 70.45%            |
| Agri - Crops.....:   | .00              | -.--%             |
| Agri - pasture.....: | 5.79             | 25.05%            |

**Land Use / Land Cover for 2006**

|                      | <u>Sq. Miles</u> | <u>% of Total</u> |
|----------------------|------------------|-------------------|
| Urban.....:          | .54              | 2.34%             |
| Bare.....:           | .10              | .43%              |
| Water.....:          | .00              | -.--%             |
| Herbaceous.....:     | 2.80             | 12.12%            |
| Forest.....:         | 14.37            | 62.21%            |
| Agri - Crops.....:   | .05              | .22%              |
| Agri - pasture.....: | 5.24             | 22.68%            |

**Land Use / Land Cover Change from 1999 to 2004**

| <u>Area in Acres</u> | <u>Change TO</u> |             |              |                   |               |                  |                     |
|----------------------|------------------|-------------|--------------|-------------------|---------------|------------------|---------------------|
|                      | <u>Urban</u>     | <u>Bare</u> | <u>Water</u> | <u>Herbaceous</u> | <u>Forest</u> | <u>Agri-Crop</u> | <u>Agri-Pasture</u> |
| FROM Urban           | -.--             | -.--        | -.--         | -.--              | -.--          | -.--             | -.--                |
| Bare                 | .40              | -.--        | 0.00         | 0.00              | 0.00          | 0.00             | 0.00                |
| Water                | 0.0              | .20         | -.--         | 0.00              | 2.21          | 0.00             | .60                 |
| FROM Herb            | .60              | 0.00        | 0.00         | -.--              | 7.43          | 0.00             | 2.21                |
| Forest               | 46.16            | 69.85       | 0.00         | 19.27             | -.--          | 0.00             | 581.06              |
| Agri-Crops           | 0.0              | 0.00        | 0.00         | 0.00              | 0.00          | -.--             | 0.00                |
| Agri-Pasture         | 97.14            | 19.47       | 0.00         | 78.68             | 608.15        | 0.00             | -.--                |

**Barren Fork  
(110100030403)**

**Area Summary**

|                          |          |
|--------------------------|----------|
| Area - Square Miles..... | 34.63    |
| Area - Acres.....        | 22425.27 |

**Elevation Summary**

|                        | <u>Meters</u> | <u>Feet</u> |
|------------------------|---------------|-------------|
| Elevation Maximun..... | 470.00        | 1542.00     |
| Elevation Minimum..... | 230.00        | 754.00      |
| Elevation Average..... | 353.00        | 1158.00     |

**Land Use / Land Cover for 1999**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .21              | .59%              |
| Bare.....           | .02              | .06%              |
| Water.....          | .01              | .03%              |
| Herbaceous.....     | .10              | .28%              |
| Forest.....         | 24.97            | 70.48%            |
| Agri - Crops.....   | .01              | .03%              |
| Agri - pasture..... | 10.11            | 28.54%            |

**Land Use / Land Cover for 2004**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .44              | 1.24%             |
| Bare.....           | .20              | .56%              |
| Water.....          | .00              | -.--%             |
| Herbaceous.....     | .72              | 2.03%             |
| Forest.....         | 24.80            | 70.00%            |
| Agri - Crops.....   | .00              | -.--%             |
| Agri - pasture..... | 9.27             | 26.16%            |

**Land Use / Land Cover for 2006**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .59              | 1.66%             |
| Bare.....           | .19              | .54%              |
| Water.....          | .00              | -.--%             |
| Herbaceous.....     | 4.29             | 12.10%            |
| Forest.....         | 21.98            | 62.02%            |
| Agri - Crops.....   | .11              | .31%              |
| Agri - pasture..... | 8.28             | 23.36%            |

**Land Use / Land Cover Change from 1999 to 2004**

| <u>Area in Acres</u> | <u>Change TO</u> |             |              |                   |               |                  |                     |
|----------------------|------------------|-------------|--------------|-------------------|---------------|------------------|---------------------|
|                      | <u>Urban</u>     | <u>Bare</u> | <u>Water</u> | <u>Herbaceous</u> | <u>Forest</u> | <u>Agri-Crop</u> | <u>Agri-Pasture</u> |
| FROM Urban           | -.--             | -.--        | -.--         | -.--              | -.--          | -.--             | -.--                |
| Bare                 | .60              | -.--        | 0.00         | 0.00              | 0.00          | 0.00             | 0.00                |
| Water                | 0.0              | .40         | -.--         | .20               | 3.81          | 0.00             | 1.00                |
| FROM Herb            | 2.01             | 1.61        | 0.00         | -.--              | 37.73         | 0.00             | 10.44               |
| Forest               | 52.99            | 64.23       | 0.00         | 44.16             | -.--          | 0.00             | 751.26              |
| Agri-Crops           | 0.0              | 1.40        | 0.00         | 0.00              | 1.20          | -.--             | .80                 |
| Agri-Pasture         | 70.65            | 46.36       | 0.00         | 178.83            | 1008.97       | 0.00             | -.--                |

**Lower Bear Creek  
(110100030405)**

**Area Summary**

|                          |          |
|--------------------------|----------|
| Area - Square Miles..... | 27.23    |
| Area - Acres.....        | 17629.00 |

**Elevation Summary**

|                        | <u>Meters</u> | <u>Feet</u> |
|------------------------|---------------|-------------|
| Elevation Maximun..... | 432.00        | 1417.00     |
| Elevation Minimum..... | 198.00        | 649.00      |
| Elevation Average..... | 275.00        | 902.00      |

**Land Use / Land Cover for 1999**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .23              | .87%              |
| Bare.....           | .02              | .08%              |
| Water.....          | .99              | 3.75%             |
| Herbaceous.....     | .05              | .19%              |
| Forest.....         | 18.76            | 71.03%            |
| Agri - Crops.....   | .00              | -.--%             |
| Agri - pasture..... | 6.36             | 24.08%            |

**Land Use / Land Cover for 2004**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .37              | 1.40%             |
| Bare.....           | .20              | .76%              |
| Water.....          | .76              | 2.88%             |
| Herbaceous.....     | .61              | 2.31%             |
| Forest.....         | 19.06            | 72.14%            |
| Agri - Crops.....   | .01              | .04%              |
| Agri - pasture..... | 5.41             | 20.48%            |

**Land Use / Land Cover for 2006**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .43              | 1.63%             |
| Bare.....           | .10              | .38%              |
| Water.....          | .80              | 3.03%             |
| Herbaceous.....     | 3.21             | 12.15%            |
| Forest.....         | 17.49            | 66.22%            |
| Agri - Crops.....   | .08              | .30%              |
| Agri - pasture..... | 4.30             | 16.28%            |

**Land Use / Land Cover Change from 1999 to 2004**

| <u>Area in Acres</u> | <u>Change TO</u> |             |              |                   |               |                  |                     |
|----------------------|------------------|-------------|--------------|-------------------|---------------|------------------|---------------------|
|                      | <u>Urban</u>     | <u>Bare</u> | <u>Water</u> | <u>Herbaceous</u> | <u>Forest</u> | <u>Agri-Crop</u> | <u>Agri-Pasture</u> |
| Urban                | -.--             | -.--        | -.--         | -.--              | -.--          | -.--             | -.--                |
| Bare                 | 0.0              | -.--        | 3.61         | 0.00              | 7.02          | 0.00             | 2.01                |
| Water                | 0.0              | 40.94       | -.--         | 5.22              | 104.77        | 0.00             | 32.52               |
| FROM Herb            | 1.40             | .40         | .40          | -.--              | 20.27         | 0.00             | 4.01                |
| Forest               | 25.69            | 70.65       | 8.03         | 16.26             | -.--          | 0.00             | 370.31              |
| Agri-Crops           | 0.0              | 0.00        | 0.00         | 0.00              | 1.00          | -.--             | .60                 |
| Agri-Pasture         | 19.07            | 33.52       | .20          | 99.75             | 806.86        | 0.00             | -.--                |

**Middle Bear Creek  
(110100030404)**

**Area Summary**

|                          |          |
|--------------------------|----------|
| Area - Square Miles..... | 31.27    |
| Area - Acres.....        | 20245.21 |

**Elevation Summary**

|                        | <u>Meters</u> | <u>Feet</u> |
|------------------------|---------------|-------------|
| Elevation Maximun..... | 427.00        | 1401.00     |
| Elevation Minimum..... | 230.00        | 754.00      |
| Elevation Average..... | 336.00        | 1102.00     |

**Land Use / Land Cover for 1999**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .15              | .48%              |
| Bare.....           | .00              | -.--%             |
| Water.....          | .03              | .10%              |
| Herbaceous.....     | .03              | .10%              |
| Forest.....         | 22.14            | 71.17%            |
| Agri - Crops.....   | .00              | -.--%             |
| Agri - pasture..... | 8.76             | 28.16%            |

**Land Use / Land Cover for 2004**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .24              | .77%              |
| Bare.....           | .15              | .48%              |
| Water.....          | .00              | -.--%             |
| Herbaceous.....     | .54              | 1.74%             |
| Forest.....         | 22.19            | 71.37%            |
| Agri - Crops.....   | .00              | -.--%             |
| Agri - pasture..... | 7.97             | 25.64%            |

**Land Use / Land Cover for 2006**

|                     | <u>Sq. Miles</u> | <u>% of Total</u> |
|---------------------|------------------|-------------------|
| Urban.....          | .33              | 1.06%             |
| Bare.....           | .15              | .48%              |
| Water.....          | .01              | .03%              |
| Herbaceous.....     | 3.39             | 10.90%            |
| Forest.....         | 19.77            | 63.57%            |
| Agri - Crops.....   | .04              | .13%              |
| Agri - pasture..... | 7.41             | 23.83%            |

**Land Use / Land Cover Change from 1999 to 2004**

| <u>Area in Acres</u> | <u>Change TO</u> |             |              |                   |               |                  |                     |
|----------------------|------------------|-------------|--------------|-------------------|---------------|------------------|---------------------|
|                      | <u>Urban</u>     | <u>Bare</u> | <u>Water</u> | <u>Herbaceous</u> | <u>Forest</u> | <u>Agri-Crop</u> | <u>Agri-Pasture</u> |
| FROM Urban           | -.--             | -.--        | -.--         | -.--              | -.--          | -.--             | -.--                |
| Bare                 | 0.0              | -.--        | 0.00         | 0.00              | 0.00          | 0.00             | 0.00                |
| Water                | 0.0              | 2.61        | -.--         | 0.00              | 9.43          | 0.00             | 4.82                |
| FROM Herb            | .20              | .40         | 0.00         | -.--              | 13.25         | 0.00             | 3.61                |
| Forest               | 17.06            | 69.85       | 0.00         | 34.12             | -.--          | 0.00             | 581.26              |
| Agri-Crops           | 0.0              | 0.00        | 0.00         | 0.00              | 0.00          | -.--             | 0.00                |
| Agri-Pasture         | 18.47            | 28.50       | 0.00         | 132.67            | 897.18        | 0.00             | -.--                |