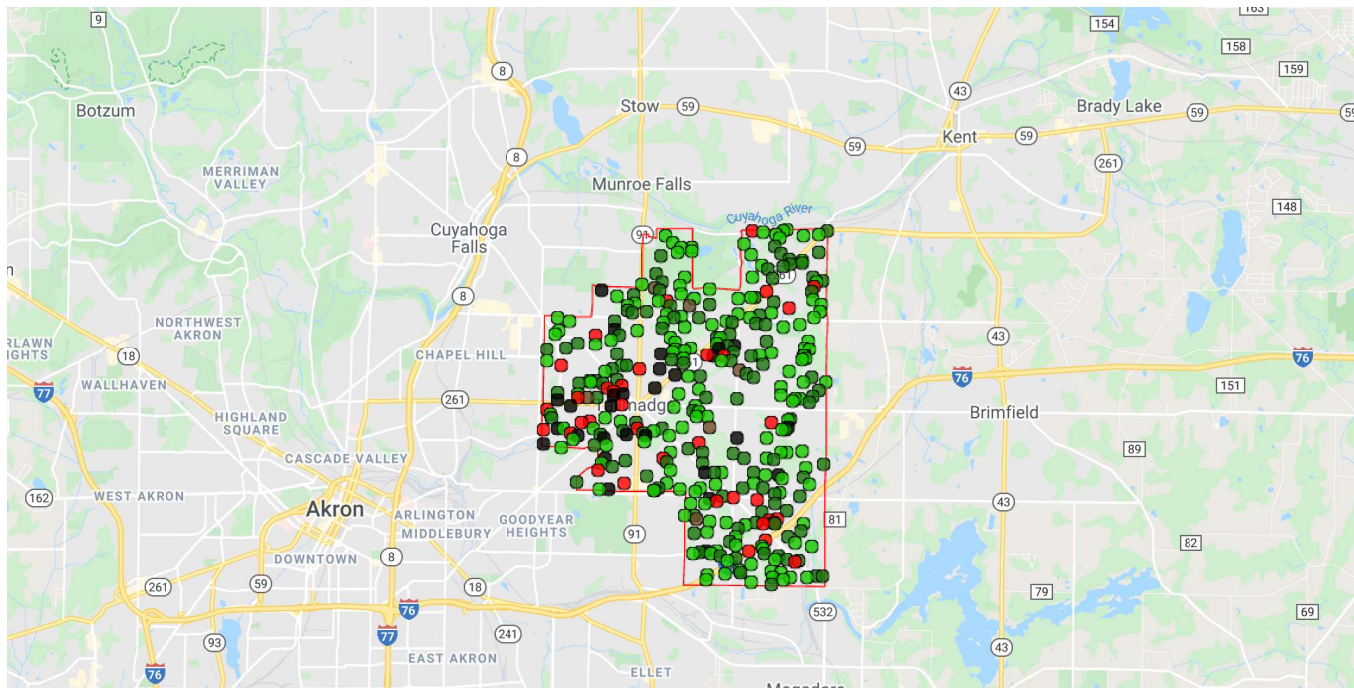


# i-Tree Canopy v7.1

## Cover Assessment and Tree Benefits Report

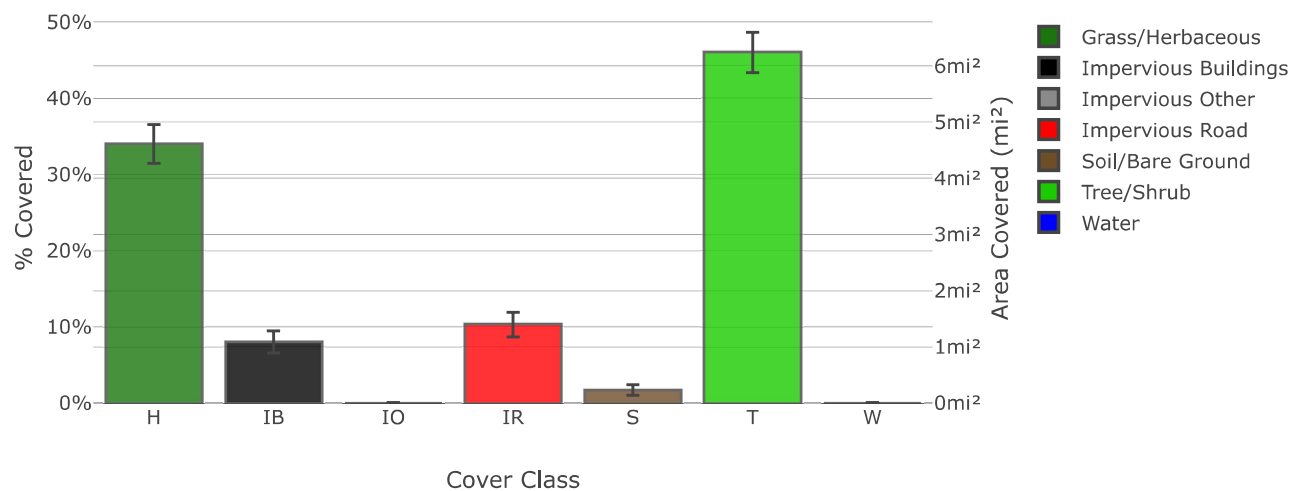
Estimated using random sampling statistics on 5/21/2021



Google

RMap data ©2021

### Land Cover



| Abbr.        | Cover Class          | Description | Points     | % Cover ± SE  | Area (mi <sup>2</sup> ) ± SE |
|--------------|----------------------|-------------|------------|---------------|------------------------------|
| H            | Grass/Herbaceous     |             | 119        | 34.00 ± 2.53  | 4.61 ± 0.34                  |
| IB           | Impervious Buildings |             | 28         | 8.00 ± 1.45   | 1.09 ± 0.20                  |
| IO           | Impervious Other     |             | 0          | 0.00 ± 0.00   | 0.00 ± 0.00                  |
| IR           | Impervious Road      |             | 36         | 10.29 ± 1.62  | 1.40 ± 0.22                  |
| S            | Soil/Bare Ground     |             | 6          | 1.71 ± 0.70   | 0.23 ± 0.09                  |
| T            | Tree/Shrub           |             | 161        | 46.00 ± 2.66  | 6.24 ± 0.36                  |
| W            | Water                |             | 0          | 0.00 ± 0.00   | 0.00 ± 0.00                  |
| <b>Total</b> |                      |             | <b>350</b> | <b>100.00</b> | <b>13.57</b>                 |

### Tree Benefit Estimates: Carbon (English units)

| Description  | Carbon (kT) | ±SE   | CO <sub>2</sub> Equiv. (kT) | ±SE    | Value (USD)  | ±SE        |
|--|-------------|-------|-----------------------------|--------|--------------|------------|
| Sequestered annually in trees                              | 4.42        | ±0.26 | 16.20                       | ±0.94  | \$753,614    | ±43,645    |
| Stored in trees (Note: this benefit is not an annual rate) | 136.92      | ±7.93 | 502.05                      | ±29.08 | \$23,352,338 | ±1,352,428 |

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Amount sequestered is based on 0.708 kT of Carbon, or 2.596 kT of CO<sub>2</sub>, per mi<sup>2</sup>/yr and rounded. Amount stored is based on 21.940 kT of Carbon, or 80.446 kT of CO<sub>2</sub>, per mi<sup>2</sup> and rounded. Value (USD) is based on \$170,550.73/kT of Carbon, or \$46,513.84/kT of CO<sub>2</sub> and rounded. (English units: kT = kilotons (1,000 tons), mi<sup>2</sup> = square miles)

### Tree Benefit Estimates: Air Pollution (English units)

| Abbr.        | Description   | Amount (T)    | ±SE          | Value (USD)        | ±SE            |
|--------------|---|---------------|--------------|--------------------|----------------|
| CO           | Carbon Monoxide removed annually  | 1.42          | ±0.08        | \$1,895            | ±110           |
| NO2          | Nitrogen Dioxide removed annually   | 6.24          | ±0.36        | \$2,615            | ±151           |
| O3           | Ozone removed annually  | 96.82         | ±5.61        | \$242,979          | ±14,072        |
| SO2          | Sulfur Dioxide removed annually   | 6.78          | ±0.39        | \$851              | ±49            |
| PM2.5        | Particulate Matter less than 2.5 microns removed annually                             | 7.08          | ±0.41        | \$777,114          | ±45,006        |
| PM10*        | Particulate Matter greater than 2.5 microns and less than 10 microns removed annually | 51.72         | ±3.00        | \$324,232          | ±18,778        |
| <b>Total</b> |   | <b>170.06</b> | <b>±9.85</b> | <b>\$1,349,685</b> | <b>±78,166</b> |

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in T/mi<sup>2</sup>/yr @ \$/T/yr and rounded:

CO 0.228 @ \$1,333.50 | NO2 0.999 @ \$419.27 | O3 15.514 @ \$2,509.68 | SO2 1.086 @ \$125.51 | PM2.5 1.135 @ \$109,728.87 | PM10\* 8.288 @ \$6,268.44 (English units: T = tons (2,000 pounds), mi<sup>2</sup> = square miles)

### Tree Benefit Estimates: Hydrological (English units)

| Abbr. | Benefit                      | Amount (Mgal) | ±SE     | Value (USD) | ±SE     |
|-------|------------------------------|---------------|---------|-------------|---------|
| AVRO  | Avoided Runoff               | 62.44         | ±3.62   | \$557,974   | ±32,315 |
| E     | Evaporation                  | 351.49        | ±20.36  | N/A         | N/A     |
| I     | Interception                 | 351.62        | ±20.36  | N/A         | N/A     |
| T     | Transpiration                | 496.24        | ±28.74  | N/A         | N/A     |
| PE    | Potential Evaporation        | 2,248.45      | ±130.22 | N/A         | N/A     |
| PET   | Potential Evapotranspiration | 1,688.19      | ±97.77  | N/A         | N/A     |

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in Mgal/mi<sup>2</sup>/yr @ \$/Mgal/yr and rounded:

AVRO 10.005 @ \$8,936.00 | E 56.321 @ N/A | I 56.342 @ N/A | T 79.515 @ N/A | PE 360.281 @ N/A | PET 270.507 @ N/A (English units: Mgal = millions of gallons, mi<sup>2</sup> = square miles)

#### About i-Tree Canopy

The concept and prototype of this program were developed by David J. Nowak, Jeffery T. Walton, and Eric J. Greenfield (USDA Forest Service). The current version of this program was developed and adapted to i-Tree by David Ellingsworth, Mike Binkley, and Scott Maco (The Davey Tree Expert Company)

#### Limitations of i-Tree Canopy

The accuracy of the analysis depends upon the ability of the user to correctly classify each point into its correct class. As the number of points increase, the precision of the estimate will increase as the standard error of the estimate will decrease. If too few points are classified, the standard error will be too high to have any real certainty of the estimate.



Additional support provided by:



Use of this tool indicates acceptance of the [EULA](#).

