Executive Summary of Gainesville's Urban Forest in 2016[1]

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From May to October 2016, one hundred and seventy-seven plots were sampled and analyzed to quantify the vegetation structure, functions, and values of the urban forest in Gainesville. This project was done in partnership with the city of Gainesville's Parks, Recreation, and Cultural Affairs Department.

The ecological assessment provides a detailed look into some of the economic and ecological values of the city of Gainesville's urban forest. The outcomes from this study can serve as the basis for the following:

- Enhancing the understanding of the urban forest's values.
- Improving urban forest policies.
- Planning and managing the urban forest.
- Providing empirical data for the inclusion of trees within environmental regulations.

In addition to field sampling of urban forest vegetation, a separate analysis was done by the University of South Florida using high-resolution imagery to assess canopy cover in Gainesville.

The full report describes the methodologies used to conduct the inventory and assessment, and it is available via this link: https://waterinstitute.usf.edu/upload/documents/GNV-ECO-Report-2016.pdf

This document provides an executive summary of the economic values and ecological structure of Gainesville's urban forest.

Economic Values

- Compensatory value: $1.4 billion.
- Total savings from urban forest benefits: $24.4 million/ year.
- Residential heating and cooling savings: $7.7 million/ year.
- Avoided air pollution abatement value: $2.7 million/ year.
- Public health savings: $2.66 million/year.
- Carbon sequestration: 44,200 tons of carbon per year ($5.88 million/year).
- Carbon storage: 746,000 tons of carbon ($99.2 million).
- Avoided stormwater costs: $3.8 million/year.

Ecological Structure

- Number of trees: 7.2 million. "Trees" in this study are defined as woody stems at least an inch in diameter at breast height (DBH).
- Tree canopy cover: 47%.
- Number of species identified: 173 (97 in tree stratum; 153 in shrub stratum).

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- Loblolly pine, slash pine, laurel oak, water oak, and red maple make up over half of Gainesville's urban forest.
- Over 94% of tree species identified are native to Florida.
- Average density: 178 trees per acre.
- 60% of trees in Gainesville are less than 6 inches in diameter.
- 80% of trees are in excellent or good condition, 11% in fair condition, and 9% in poor condition or dead.
- 30% of the city is covered by shrubs.
- 24% of the city is covered by impervious surfaces, and 23% is covered by maintained grass.