# Tree Canopy Assessment

Engineering & Property Management Department
Office of the City Arborist

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charlottenc.gov

- Current Programs & Initiatives

- Canopy Assessment Approach & Findings

- Policy Question: Tree Canopy Goal

# OVERVIEW OF TREE PROGRAMS

# CITY TREE PROGRAMS/INITIATIVES



- Tree City USA for 39 Years

- Tree Ordinance
- Planting & Stewardship
- Preservation
- Storm Response
- Cankerworm Banding & Emerald Ash Borer Control
- Arbor Day Observance and Celebration
- TreesCharlotte Public/Private/Non-Profit Partnership
- Pilot Project to Assist Homeowners

- 2011: 50% Tree Canopy by 2050 Aspirational Goal
- 2017: Urban Forest Master Plan

City Arborist Services: Tree Planting, Maintenance, Pruning, Preservation, Storm Response, Pest Management

$5.1M

TreesCharlotte



| | |
|---|---|
| Endowment Cash | $ 250,000 |
| Contribution Cash | $ 100,000 |
| In-Kind Assistance | $ 400,000 |

# CANOPY ASSESSMENT
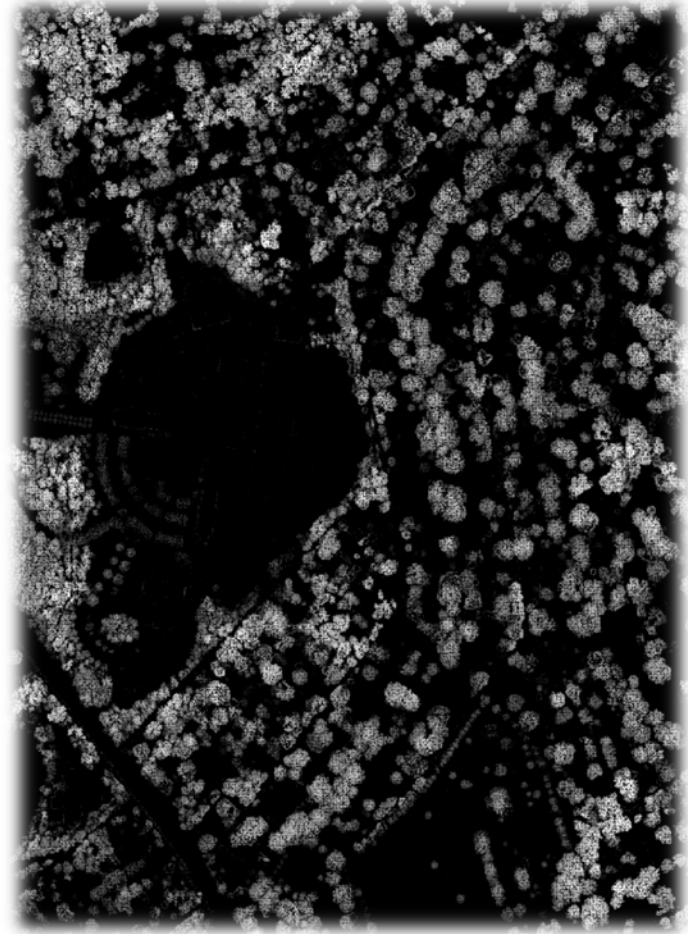
# CANOPY ASSESSMENT

- Specialized analysis based on aerial data

- 2012: 47% canopy coverage

- Reassess every 5 years

- Data quality improvements and the nature of the canopy make trend analyses challenging

- Professional Consultant: Planit GEO

May 2016 National Agriculture
Imagery Program Aerial Imagery



Winter 2016-17 NC Emergency Management
LiDAR (Light Detection and Ranging)

# Gain (street & median trees)
Trees planted in 2009
Not captured in 2012

# Gain (yellow area)
Logged in 2009
Trees not tall enough in 2012

# Loss (red area)
Lawrence Orr Elementary
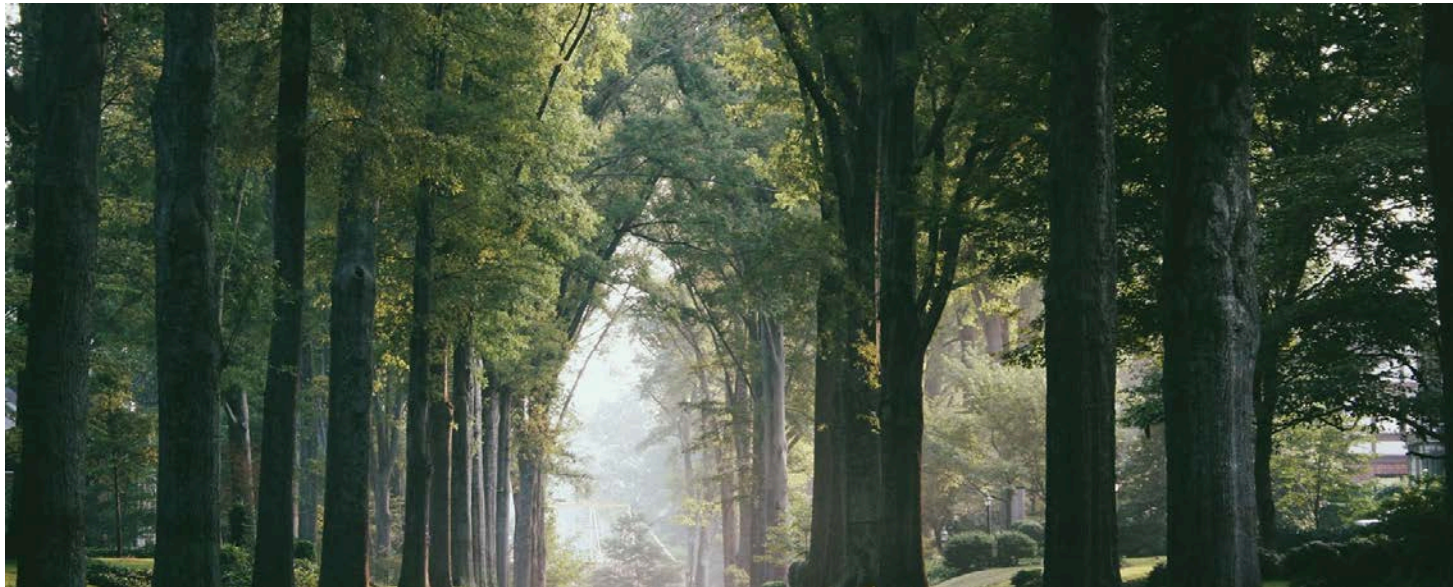Built in 2014

Comparisons Using 2018 City Boundary

- 2012 data: 47.1% tree canopy*

- 2016 data: 46.8% tree canopy*

- .3% loss of tree canopy

    * +/- .9% margin of error

# FURTHER RECOMMENDATIONS

- Evaluate locations of and reasons for loss and gain
- Evaluate potential planting areas (neighborhoods, land use categories, etc.)
- Assess at regular intervals
- Share assessment results

# MOVING FORWARD

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- Use the data to understand opportunities to keep and grow the canopy

- Re-evaluate tree canopy goal
- Goal(s) that describe value of the canopy
- Reinforce tree canopy benefits
    - Shade/Energy Savings/Heat Island Effect
    - Air Quality/CO2 Removal and Storage
    - Rain: Rainfall Intercepted
    - Aesthetics/Property Values
    - Health

- Coordinate with:
    - Strategic Energy Action Plan
    - Comprehensive Plan
    - Unified Development Ordinance

Policy Question: Determine what Charlotte's Tree Canopy Goal(s) should be

- Environment Committee will review the analysis and most appropriate goal-setting approaches
  - Reflecting value of trees in urban settings and neighborhoods
  - Preparing for Comprehensive Plan and UDO
  - Aligned with other city goals

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*~ Author / source here*

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**Considering margin of error,**

45.9%    46.8%    47.7%

-.9%    +9.%