TREE CANOPY STUDY - 2019

Project Overview

Team: PlanIt Geo [Denver, CO]

Data: State/Federal Agencies

Methods: LiDAR (Light Detecting & Ranging),
                  NAIP (Nat'l Agriculture Imaging Program)

INVENTORY VS. CANOPY STUDY

- **Street Tree Inventory (2018)**
  - » Focus: Public Right-of-Way (i.e. Streets)
  - » Level: Detailed (i.e. Individual Trees)
  - » Purpose: Assess, Inform Mgt. Program
- **Canopy Study (2019)**
  - » Focus: All Land Area (Includes ETJ)
  - » Level: Big Picture, Aggregate Measurements
  - » Purpose: Understand, Inform DPO + Future Plan
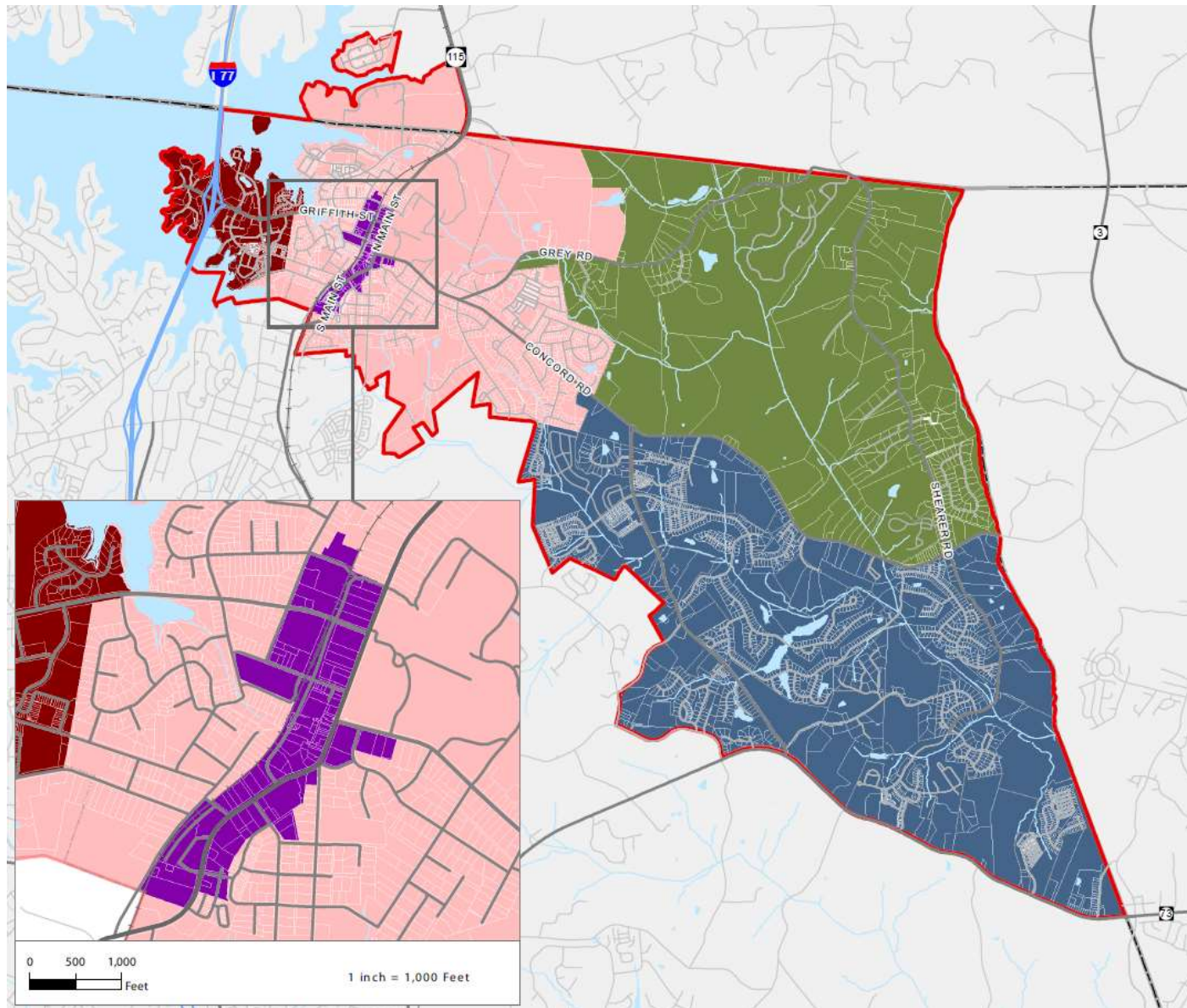
DAVIDSON 1930

DAVIDSON
2000's

RESULTS

TREES ZONES

A map of the Town of Davidson with Parcel Lines.

LAND USE
- Circles at 30
- East Davidson
- Rural
- Village Infill College
- Downtown

STREETS / RAIL
- Rail
- Interstates
- Streets

WATER FEATURES
- Lakes and Ponds
- Creeks and Streams

BOUNDARIES
- Town of Davidson
- Sphere of Influence / ETJ
- County Boundary

TOWN OF DAVIDSON
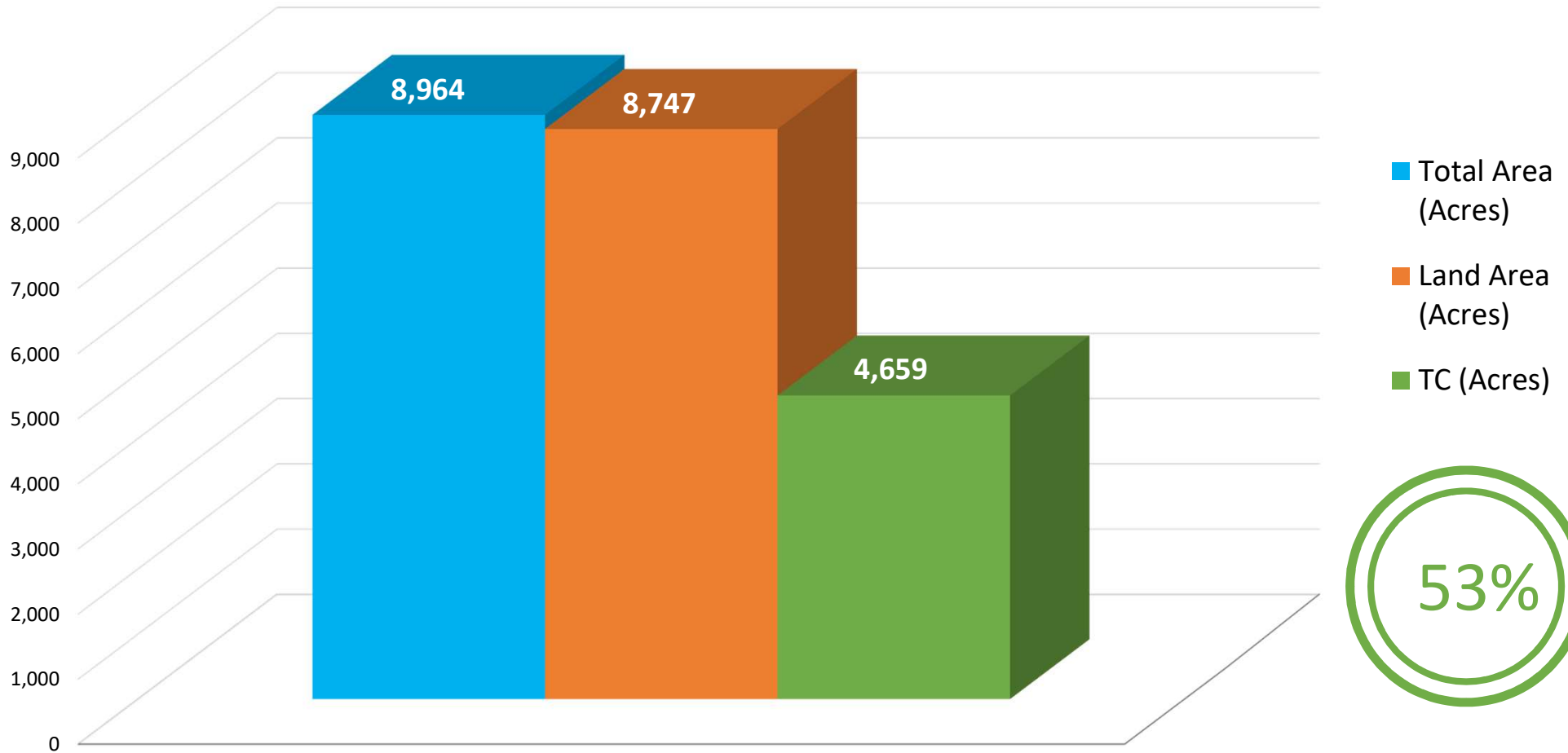MECKLENBURG COUNTY, NORTH CAROLINA

N

0   3,000 Feet

1 inch = 3,000 Feet

Date: 3/20/2019

DATA SOURCES:
NC One Map
Mecklenburg County
Town of Davidson

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

GRIFFITH ST

S MAIN ST

N MAIN ST

GREY RD

CONCORD RD

SHEARER RD

0   500   1,000 Feet

1 inch = 1,000 Feet

Tree Canopy (TC) Compared to Total Area & Land Area by Study Area

- Total Area (Acres): 8,964
- Land Area (Acres): 8,747
- TC (Acres): 4,659

53%

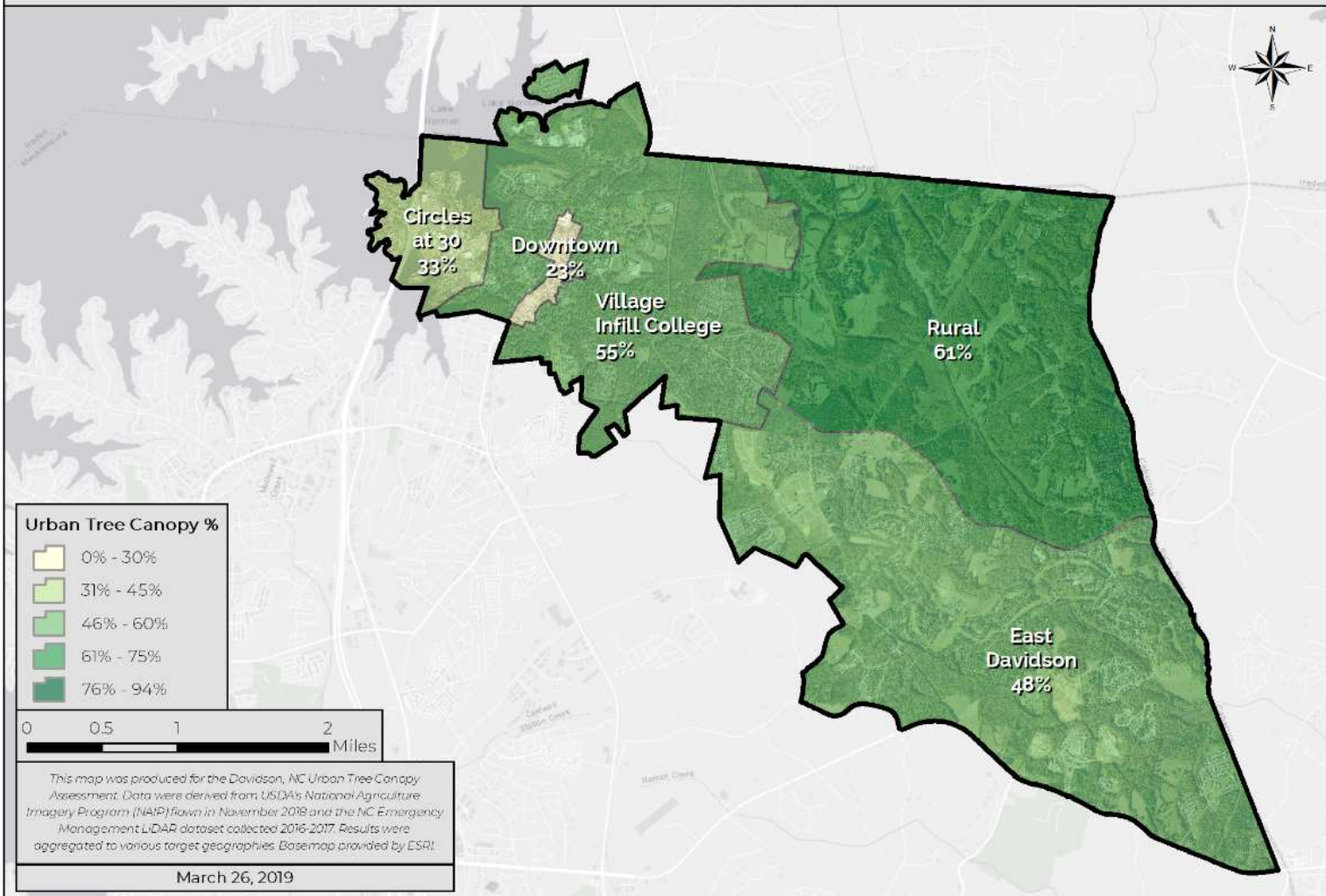Existing Tree Canopy (%) by Tree Zones
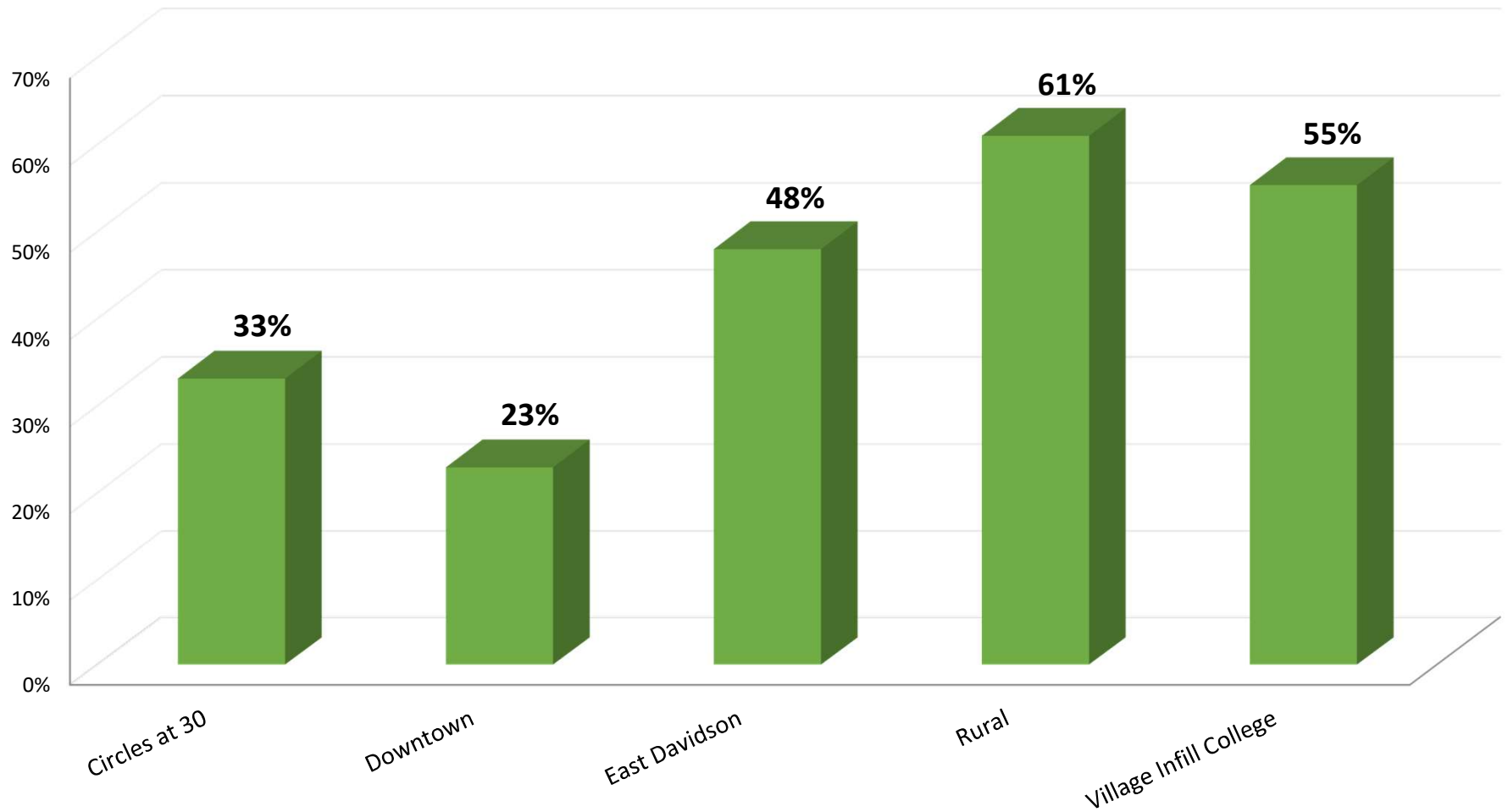
Urban Tree Canopy Assessment
Davidson, NC

Urban Tree Canopy Percent by Tree Zone

plan–it
GEO

Circles at 30
33%

Downtown
23%

Village Infill College
55%

Rural
61%

East Davidson
48%

Urban Tree Canopy %

0% - 30%
31% - 45%
46% - 60%
61% - 75%
76% - 94%

0   0.5   1   2   Miles

This map was produced for the Davidson, NC Urban Tree Canopy Assessment. Data were derived from USDA's National Agriculture Imagery Program (NAIP) flown in November 2018 and the NC Emergency Management LiDAR dataset collected 2016-2017. Results were aggregated to various target geographies. Basemap provided by ESRI.
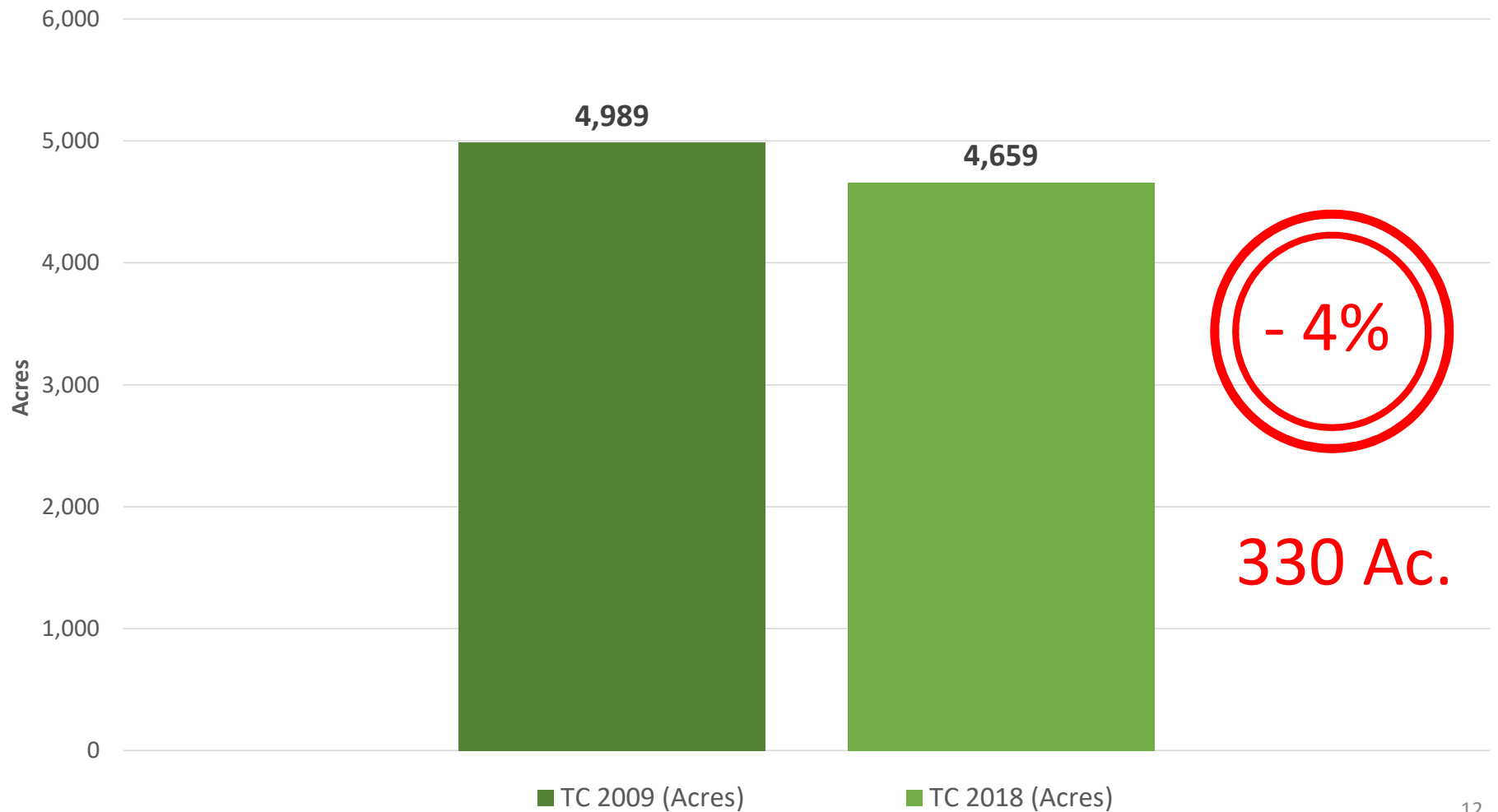
March 26, 2019

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"The distribution of tree canopy cover is generally not – and needn't be – uniform across a municipality or even identical in every neighborhood."
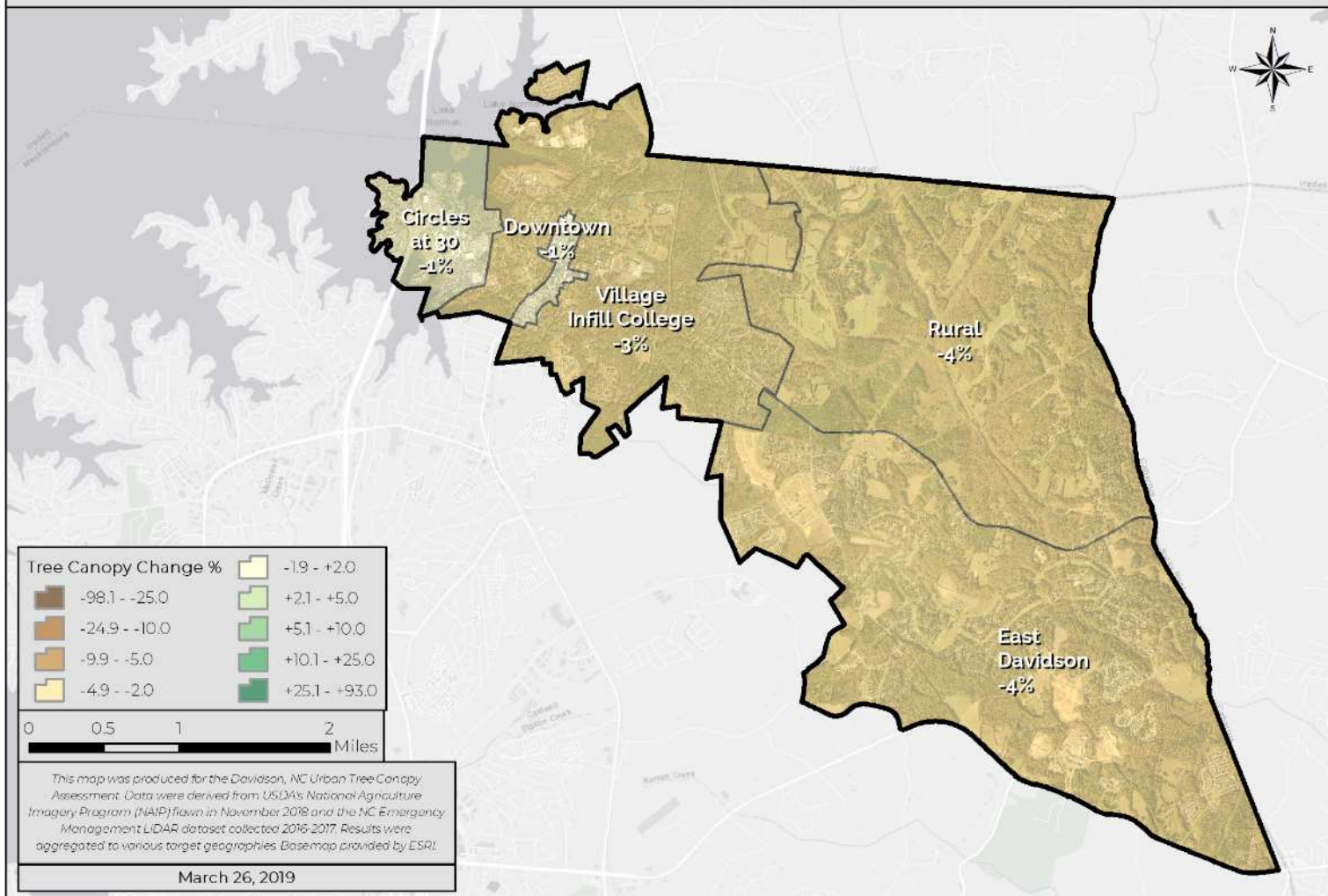
- USDA Sustainable Forest Guide

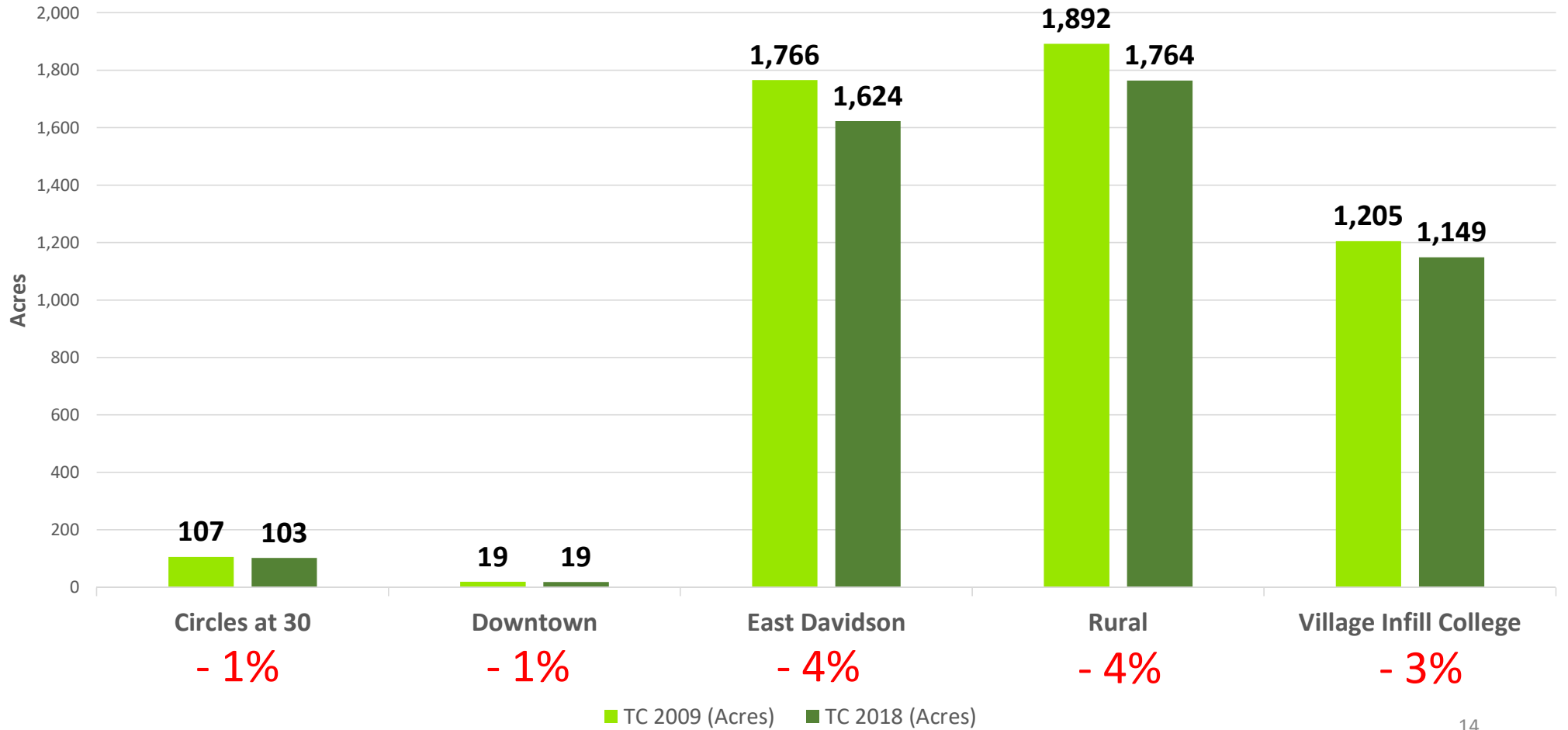Tree Canopy Change in Davidson
2009-2018

Urban Tree Canopy Assessment
Davidson, NC

Urban Tree Canopy Change 2009-2018 by Tree Zone

plan–it
GEO

Circles
at 30
-1%

Downtown
-1%

Village
Infill College
-3%

Rural
-4%

East
Davidson
-4%

Tree Canopy Change %
-98.1 - -25.0
-24.9 - -10.0
-9.9 - -5.0
-4.9 - -2.0
-1.9 - +2.0
+2.1 - +5.0
+5.1 - +10.0
+10.1 - +25.0
+25.1 - +93.0

0   0.5   1   2
Miles

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March 26, 2019

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Tree Canopy Change by Tree Zones
2009-2018

Circles @ 30
Losses

Circles @ 30 Gains

REASONS FOR CHANGE

- **Losses**
  - » Rural: Utilities, Forestry, Residential Lot Clearing
  - » East Davidson: Large-Scale Residential Development
  - » Village Infill/College: College Activities, Infill Dev.
  - » Downtown: Infill Dev. (College, Residential), Tree Age
  - » Circles @ 30: Larger Individual Buildings
- **Gains**
  - » Maturing Tree Canopy [Demolitions/Reforestation]
  - » DPO 9 Requirements [Limits Loss via Min. Canopy/Street Trees]
  - » Volunteer Planting Initiatives [Trees Davidson]

BENCHMARKING

- **Similar Communities**
  - » Fayetteville, AR: 2% Loss Over 10 Years (36% Total Canopy)
  - » Davidson, NC: 4% Loss Over 9 Years (53% Total Canopy)
  - » Charlottesville, VA: 6% Loss Over 9 Years (45% Total Canopy)
- **Takeaways**
  - » Extent of Loss: Moderate/Important
  - » Action Matters: Canopy Increases = Achievable