CHICAGO REGION TREES INITIATIVE

Our Trees.
Our Communities.
Our Future.

Urban Forest Management Planning

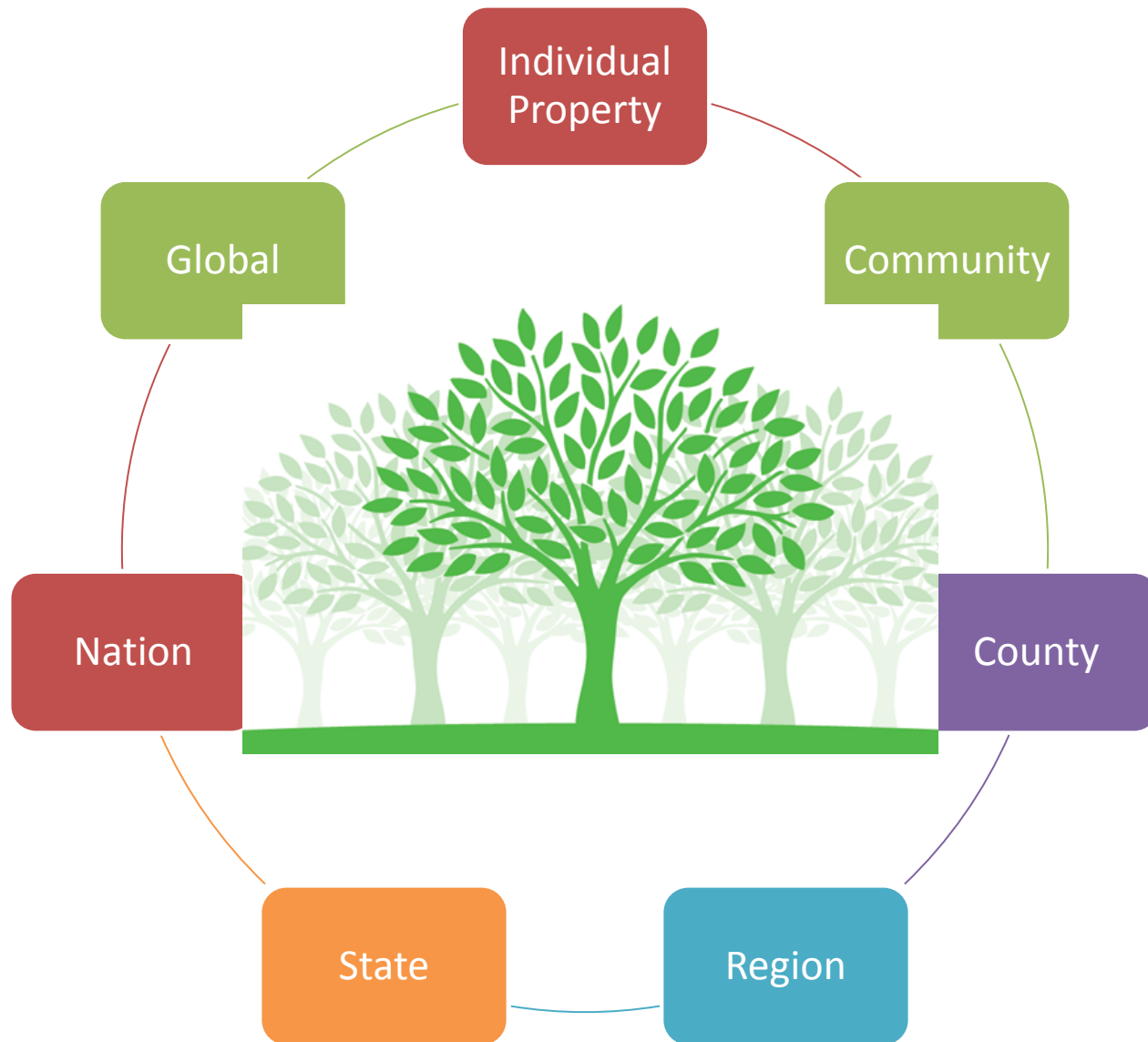# What has CRTI been up to and why should you care?

Building community capacity to manage and care for important infrastructure – the urban forest.

The urban forest is a collective asset – public and private trees

Resource

Urban forestry management plans and ordinances

Framework to preserve and protect the urban forest on public and private property

- education and outreach
- community-wide understanding of the value and benefits of trees
- community-wide support and engagement
- management strategies including forest composition, operations and funding
- ordinances and incentives
- community engagement and participation

The Sustainable Urban Forest
A Step-by-Step Approach

The Davey Institute/USDA Forest Service

Urban forestry management plan

Workshops:

       2 held

       42 participants from 33 communities

       Resources:

- community inventory analysis;
- LiDAR analysis overview;
- Ordinance and management plan review;
- Sample plans;
- Guide

Action:

       Individual work sessions with communities to facilitate plan development

Urban forestry management plan

START TO PLAN: URBAN FORESTRY MANAGEMENT PLAN

Steps:	To Do:

Introduction
   1. What is the urban forest (general)
      a. Regional and local context
      b. Public
      c. Private
   2. Why is it important (general)
      a. Benefits
      b. Services
          i. Built
         ii. Natural
   3. Need for collective action and why
	The Morton Arboretum will supply

Your Urban Forest
   1. Canopy cover (specific)
      a. Urban tree canopy assessment
   2. Species composition (specific)
      a. Inventory
          i. Public
         ii. Private
   3. What is the urban forest (specific)
      a. Regional and local context
          i. Public
         ii. Private
   4. Why is your urban forest important
      a. Benefits
      b. Services
          i. Built
         ii. Natural
      c. Green infrastructure
	1. The Morton Arboretum will help
	     a. Interactive map
	2. Your community inventory:
	     a. Public property
	
	     b. Private property data - The Morton Arboretum will provide
	3. How do you compare? How diverse is your forest?
	
	4. What is your urban forest doing? (iTree - Al Zelaya al.zelaya@davey.com)

The Sustainable Urban Forest: A Step-by-Step Approach	See guide by M. Leff et al. (electronic copy provided)
Who do you engage in the process?	

1. Internal	Internal
a. Board or commission member	a.
b. Elected official	b.
c. Administrative staff	c.
d. Cross department representation	d.
e. Forestry department representation	e.
f. Others	f.
2. External	External
a. Public	Public
i. Regional planning agency	i.
ii. County representatives (stormwater, forest preserve, others?)	ii.
	iii.
	iv.
iii. Schools	v.
iv. Park District	
v. Surrounding communities	
vi. Others	Private
b. Private	i.
i. Corporations	ii.
ii. Industry	iii.
iii. HOA	iv.
iv. Individual homeowners	v.
v. Churches	vi.
vi. Garden club	vii.
vii. Rotary	ix.
viii. Chamber of Commerce	x.
ix. Volunteers	
x. Others	Date:
3. Date for first meeting.	
What to include in your plan:	
1. Canopy goal	% Canopy cover (The Morton Arboretum to provide)
a. Public	a. Public
b. Private	b. Private
b. Private	

Interagency/Department Engagement

- Water
- Streets
- Parks
- Recreation
- Planning
- Economic Development
- Permitting
- Resident Outreach
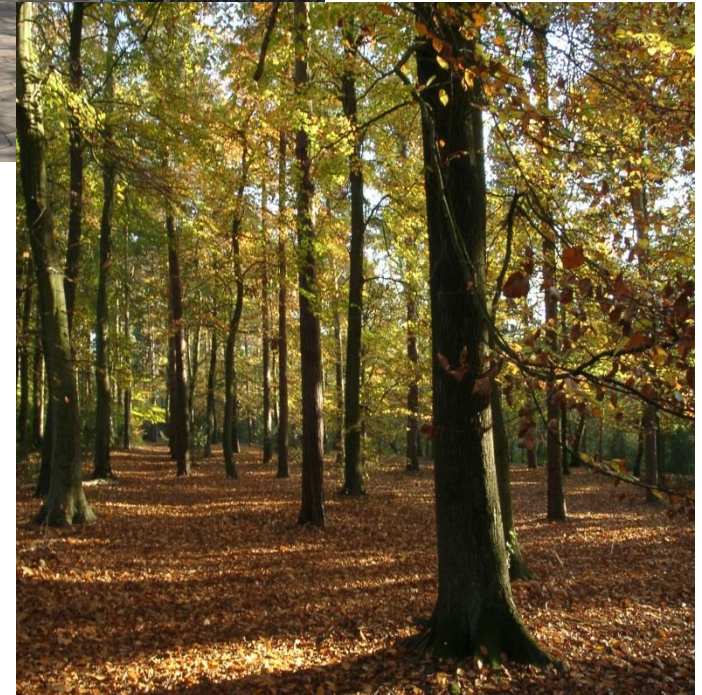- Marketing and Communications

Source: APWA

Private Landowners

- Residential
- Large rural
- Commercial
- Industrial

Land types:
Formal and natural

Advocacy

(etc.)

amber of Commerce,

ts, Environmental

Industry

Source: conleyslandscaping, galleryhip, djcoregon.com

Engagement

- Support for the plan
    - Expertise
    - Personal
    - Organizational
    - Policy
    - Resources

Source: alsgardena

2. Species goal 　　a. Public 　　b. Private	(not more than 5% species, 10% genus, 15% family?) a. b.
3. Age goal 　　a. Public 　　b. Private	a. Public b. Private
4. Inventory 　　a. Full 　　b. Frequency 　　c. Strategy for update	a. b. c.
5. Staff 　　a. Existing (include information on needs not currently being met) 　　b. Projected (include benefits of meeting needs: reduced overtime, reduced contracted service, etc. 　　c. Contracted needs 　　d. Contracted projected	Operations structure (Attach a table) a. b. c. d.
6. Training 　　a. Required (include who; consider cross training) 　　　　i. Frequency 　　　　ii. Funding 　　b. Incentive (include who; consider cross training) 　　　　i. Frequency 　　　　ii. Funding	a. 　　i. 　　ii. b. 　　i. 　　ii.
7. Tree Planning 　　a. Set priorities 　　b. Set goals to meet priorities	a. b.
8. Tree Planting	

a. Selection at nursery	a.
b. Specifications	b.
9. Tree establishment	
a. Specifications	
b. Warrantee requirements	
c. Mulch	
d. Water	
10. Site suitability criteria	
11. Maintenance criteria	
a. Water	a.
b. Mulch	b.
c. Pruning (include frequency)	c.
12. Risk assessment	
a. Who	a.
b. What	b.
c. When	c.
13. Tree protection and preservation	
a. Tree preservation ordinance	a.
b. Tree protection ordinance	b.
c. Landscape ordinance	c.
d. Private property	d.
i. Ordinance	i.
ii. Incentives	ii.
iii. Education	iii.
14. Monitoring	
15. Wood utilization	
16. Budget (capital and operating - equipment, staff, trees, etc.)	
a. One year	a.
b. Five year	b.
c. Ten year	c.
17. Attachments	

Urban forestry management plans

Approximately 3 public meetings

Estimated time to complete 6-9 months

Ordinance used to support plan

Tree Management plan a resource for the ordinance

Species list

Specifications

1, 5 and 10 year plans

Urban forestry ordinances

2 Workshops

      Dates to be determined

      Legal counsel to help present

Foundation for our work

Forest Composition

Operational Capacity

Science to action

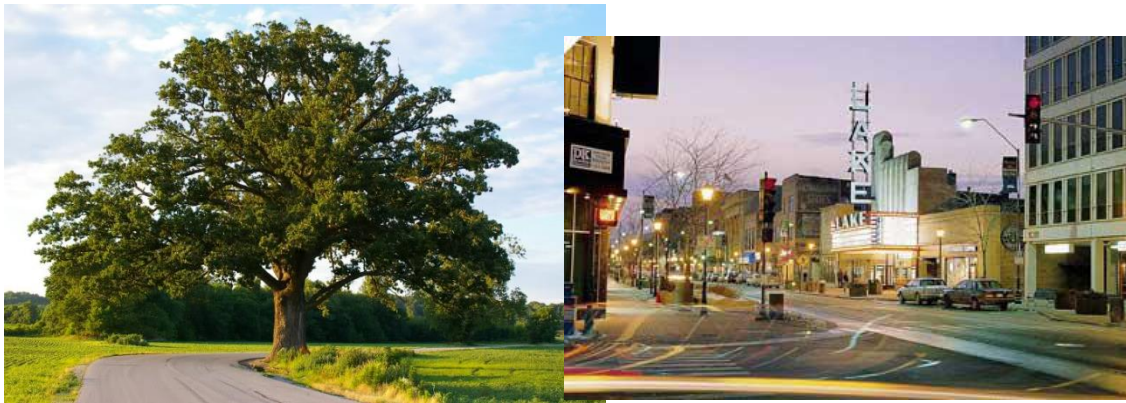Science to action

CRTI goals

- Healthy, more resilient urban forest
- Provide ecosystem services
- Provide habitat for wildlife

CRTI goals

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CRTI goals

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CRTI goals

- Healthy, more resilient urban forest
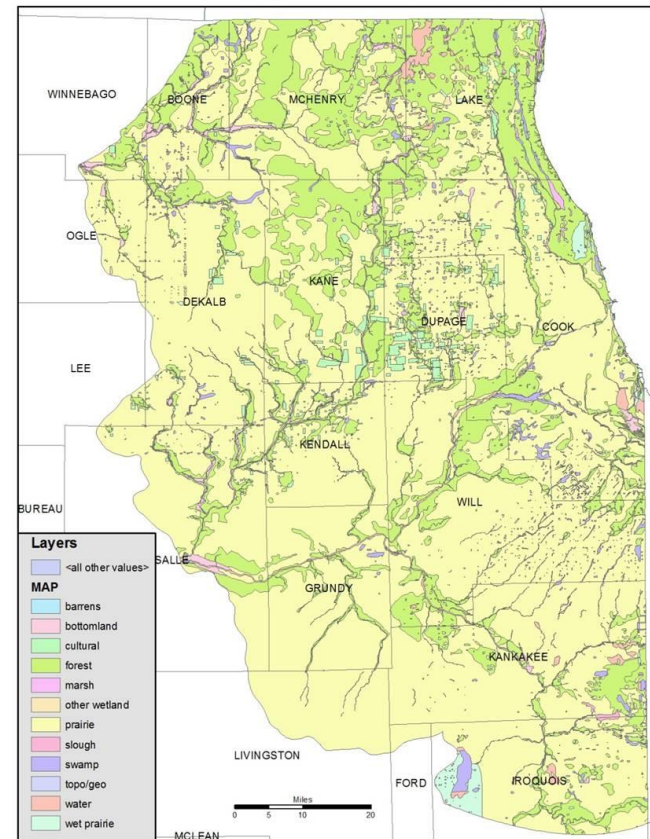- Provide ecosystem services
- Provide habitat for wildlife

Science to action

Operational capacity

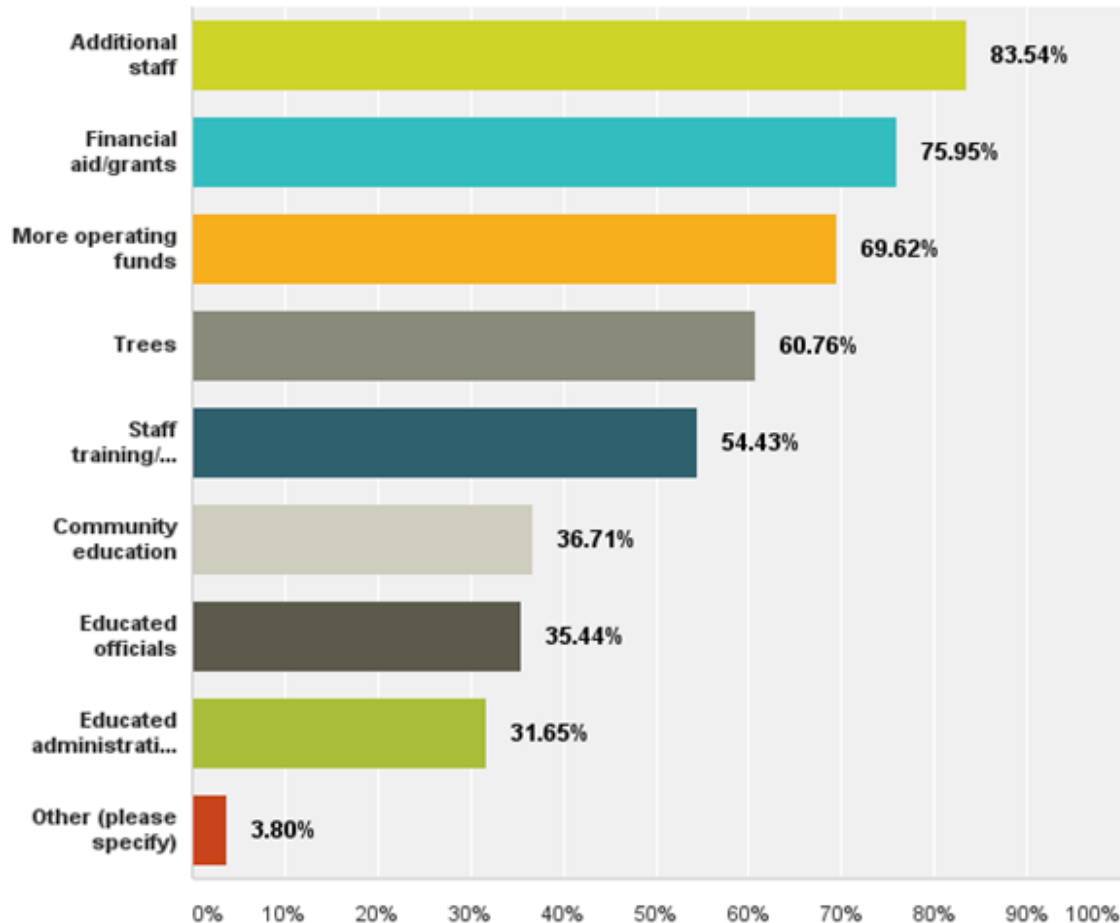## Forest composition

Our communities

Regional forestry survey

- Survey sections
  - Administrative and program profile
  - Emerald ash borer
  - Other tree disorders
  - Tree planting
  - Maintenance of trees
  - Tree removal

# What resources do you need to improve your municipal forestry program?

| Resource	Percentage
Additional staff	83.54%
Financial aid/grants	75.95%
More operating funds	69.62%
Trees	60.76%
Staff training/...	54.43%
Community education	36.71%
Educated officials	35.44%
Educated administrati...	31.65%
Other (please specify)	3.80%

Our trees

Goals

- Fine scale map
  - Species distribution
  - Age distribution
  - Canopy density
- Spanning a wide region
- Across all land use types
  - Varying land owners
  - Varying management strategies
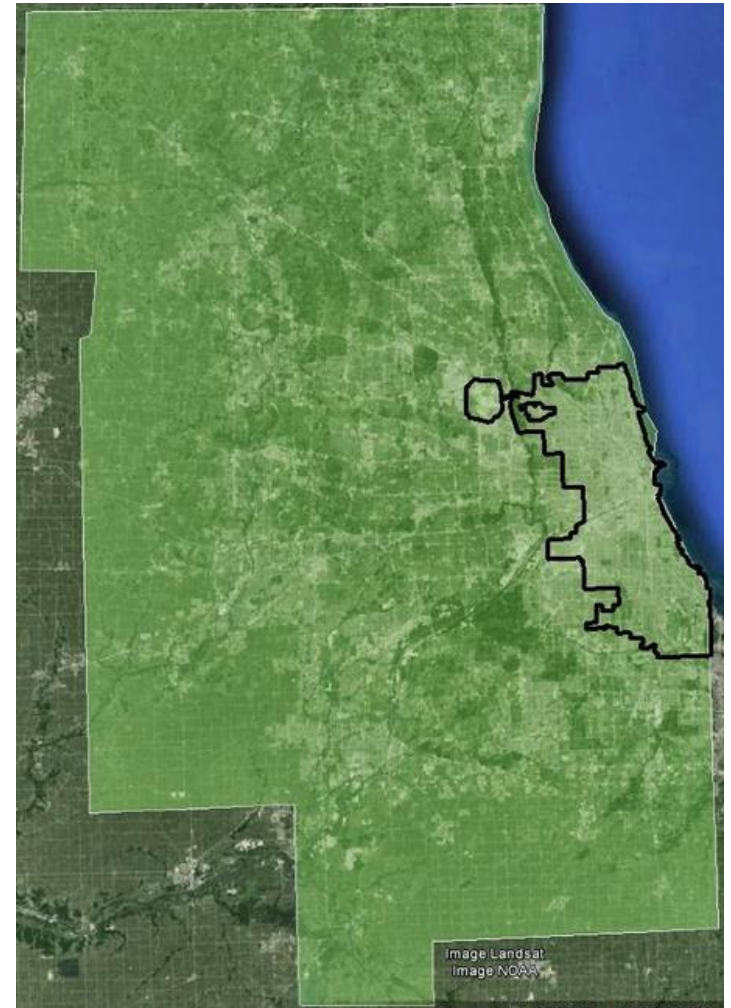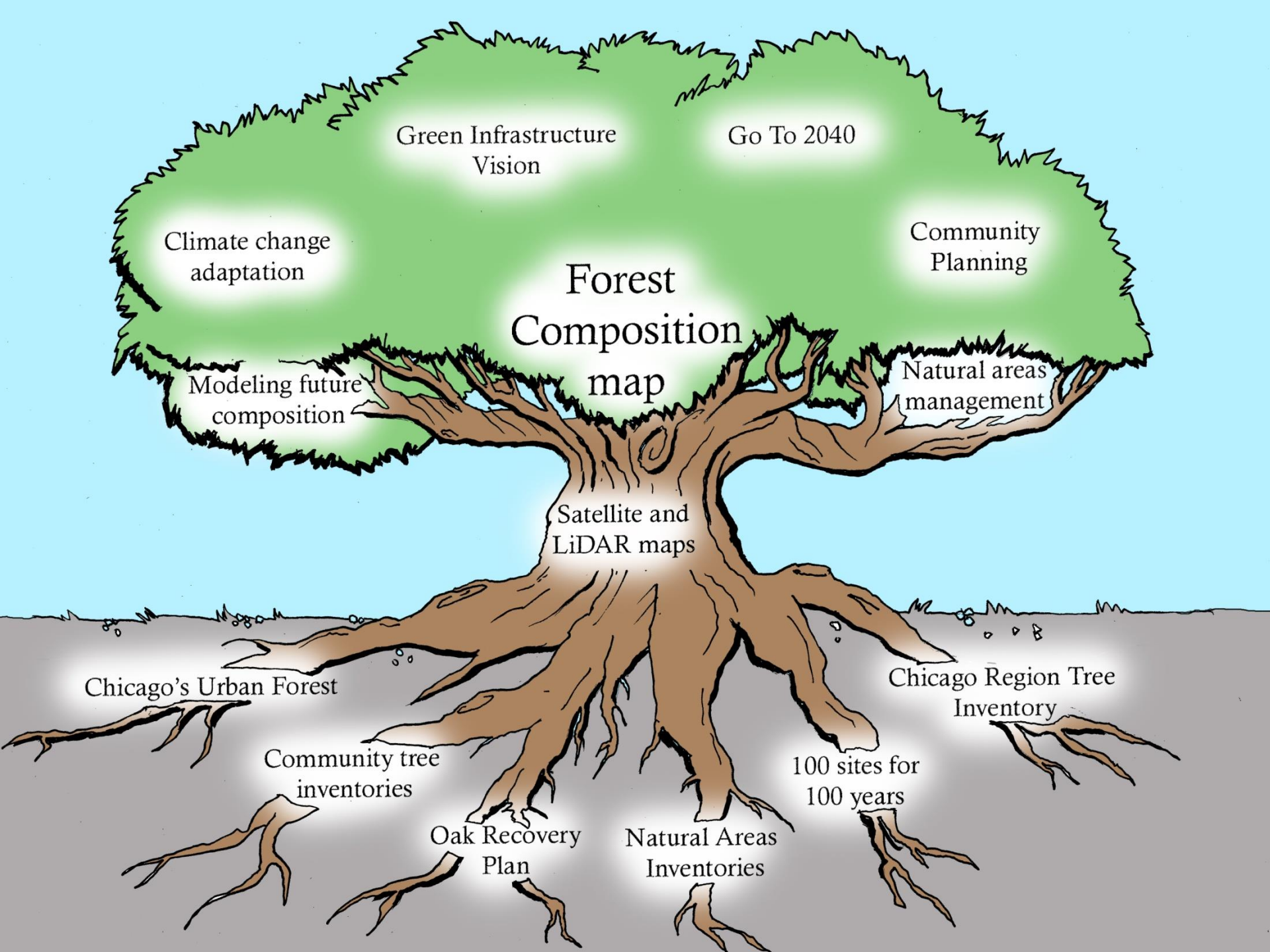
Canopy data

- Produced from LiDAR and satellite imagery
- Two foot resolution
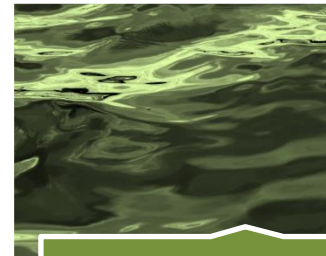- Across the seven county region

Buildings

Roads/Railroads
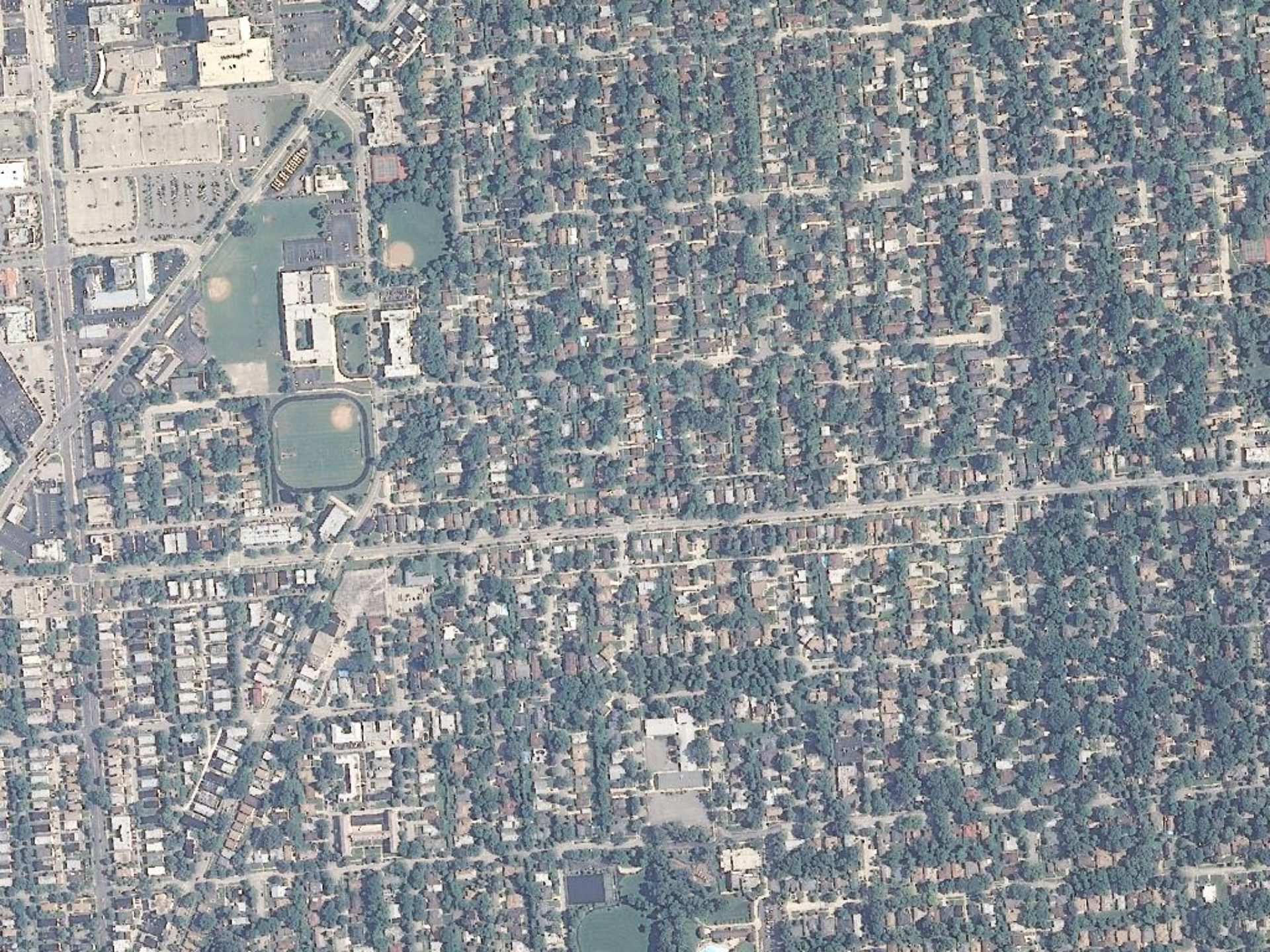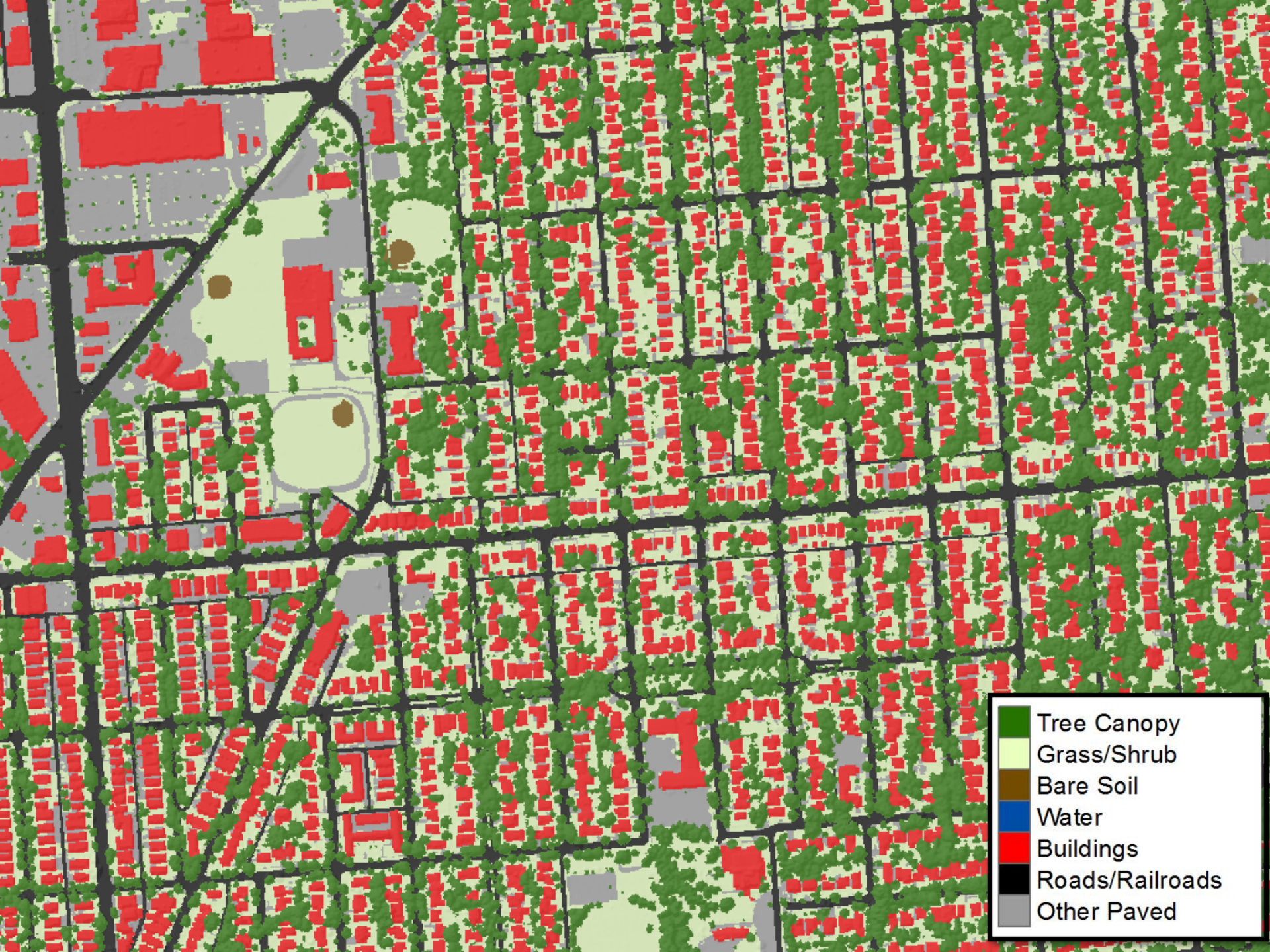

Other Paved

Tree Canopy

Grass/Shrub

Bare Soil

Water

Legend

- Tree Canopy
- Grass/Shrub
- Bare Soil
- Water
- Buildings
- Roads/Railroads
- Other Paved

Our future

Using these data we can…

- Identify priority places for tree plantings
- Identify vulnerable areas by species or age diversity
- Determine how best to help communities improve their forestry programs

Percent canopy cover

- 0-10%
- 10-15%
- 15-20%
- 20-25%
- 25-30%
- 30-45%
- 45-100%

Surface temperature (F)

- 72-75
- 75-77
- 77-79
- 79-81
- 81-83
- 83-85
- 85-87

Percent people affected by crime

- 0.00 - 5.00
- 5.01 - 10.00
- 10.01 - 20.00
- 20.01 - 30.00
- 30.01 - 45.00
- 45.01 - 100.00
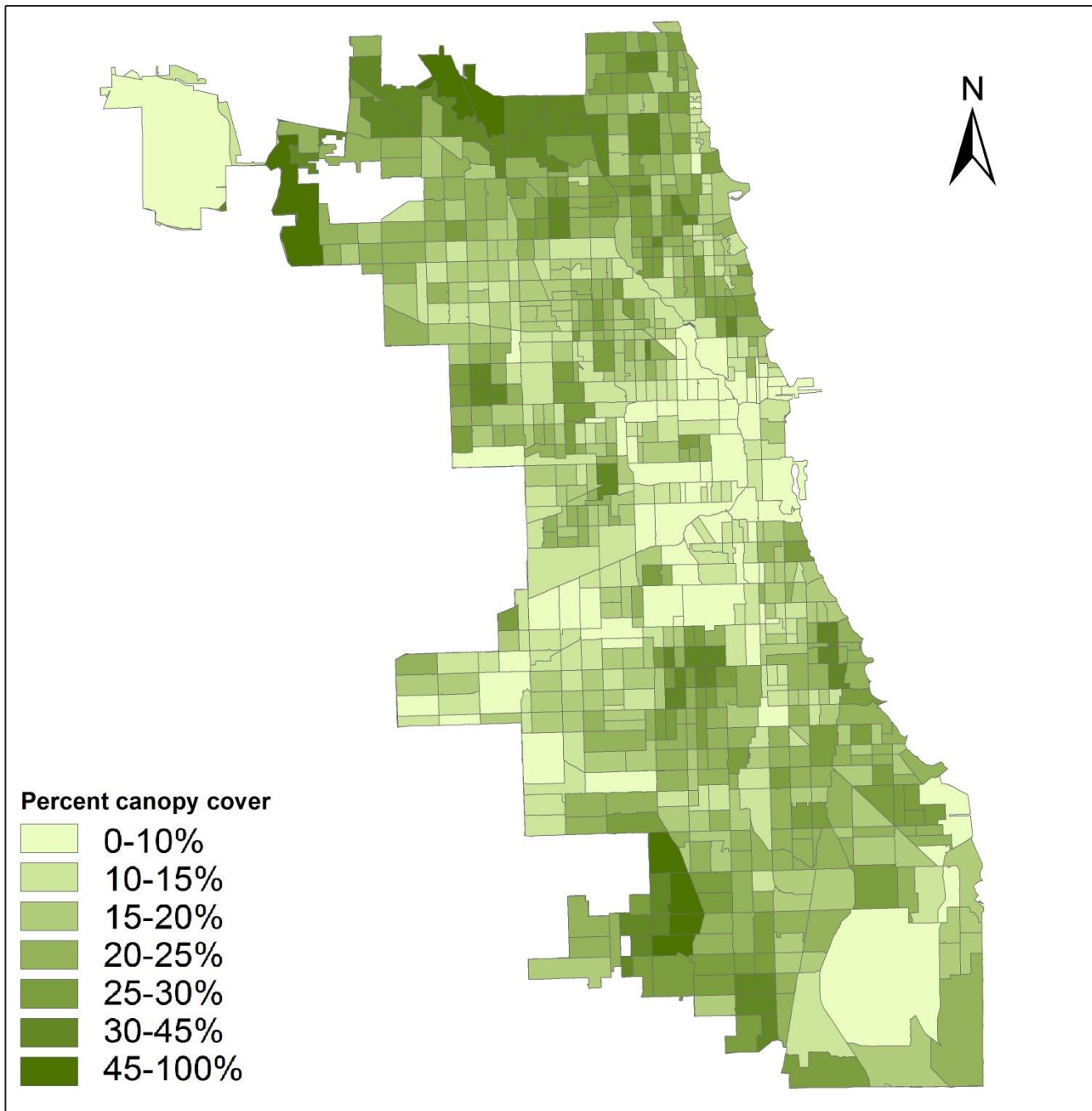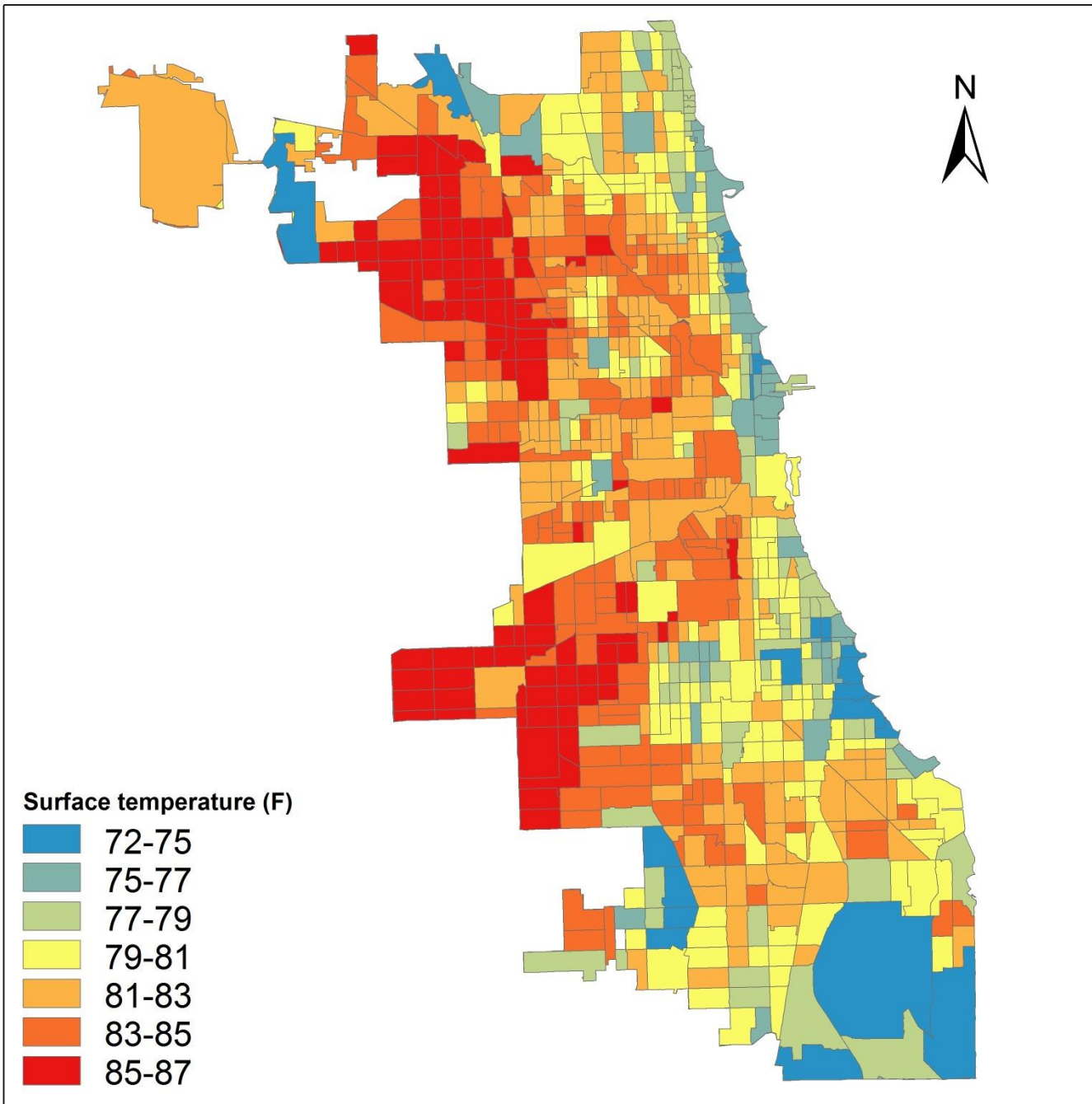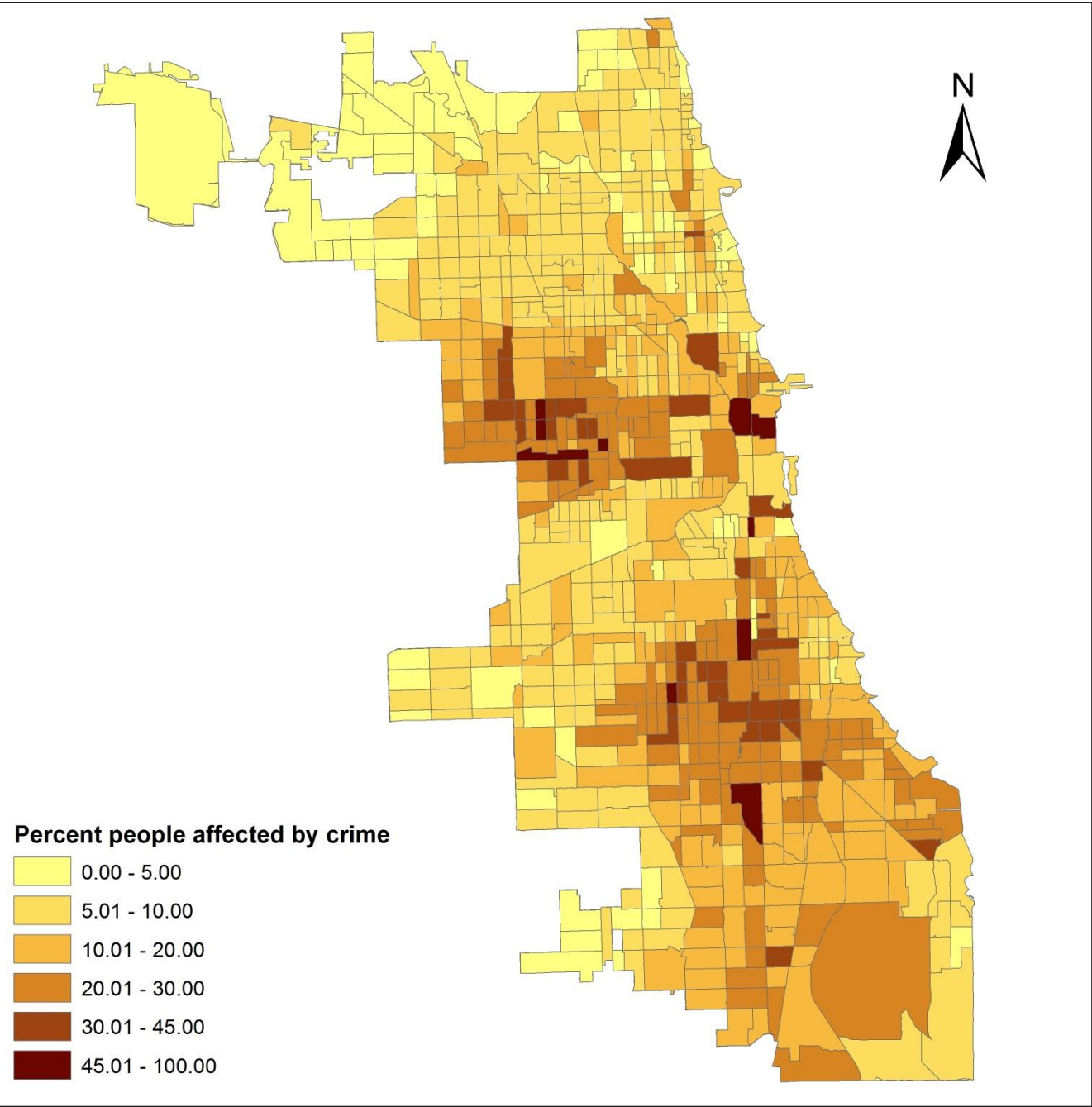
Species	Percent abundance
Acer platanoides	18.49%
Fraxinus pennsylvanica	14.50%
Gleditsia triacanthos	14.37%
Acer saccharinum	12.45%
Ulmus hybrid	3.03%

Genus	Percent abundance
Acer	35.95%
Fraxinus	17.38%
Gleditsia	14.37%
Tilia	4.39%
Ulmus	5.38%

Existing Tree Canopy

Oak Park

Canopy cover	38%
Plantable space	64%
# species	124
Diversity index	6 of 10
Crime rate	3.2%

Chicago

Canopy cover	19%
Plantable space	63%
# species	125
Diversity index	5 of 10
Crime rate	5.1%

Tree Canopy

- 0.00 - 0.10
- 0.11 - 0.20
- 0.21 - 0.30
- 0.31 - 0.40
- 0.41 - 0.74

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, TomTom, Mapmylndia, © OpenStreetMap contributors, and the GIS user community

Questions?