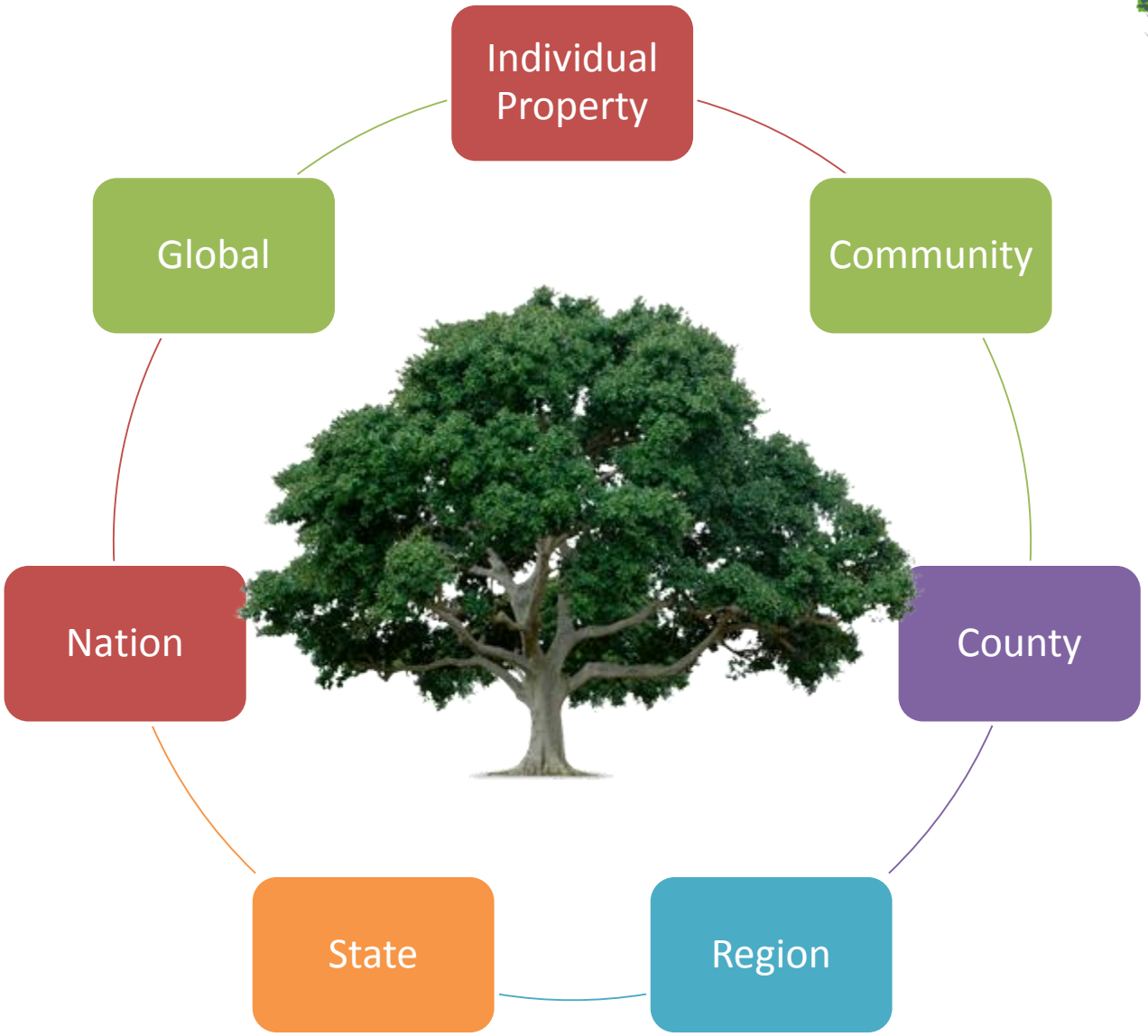
CHICAGO REGION TREES INITIATIVE

Our Trees.
Our Communities.
Our Future.

Science to Action

Forest Resource

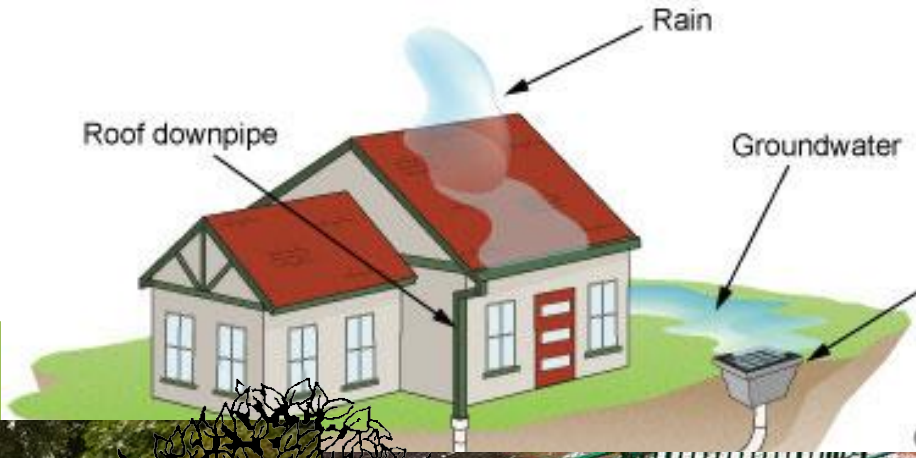


Water Qual

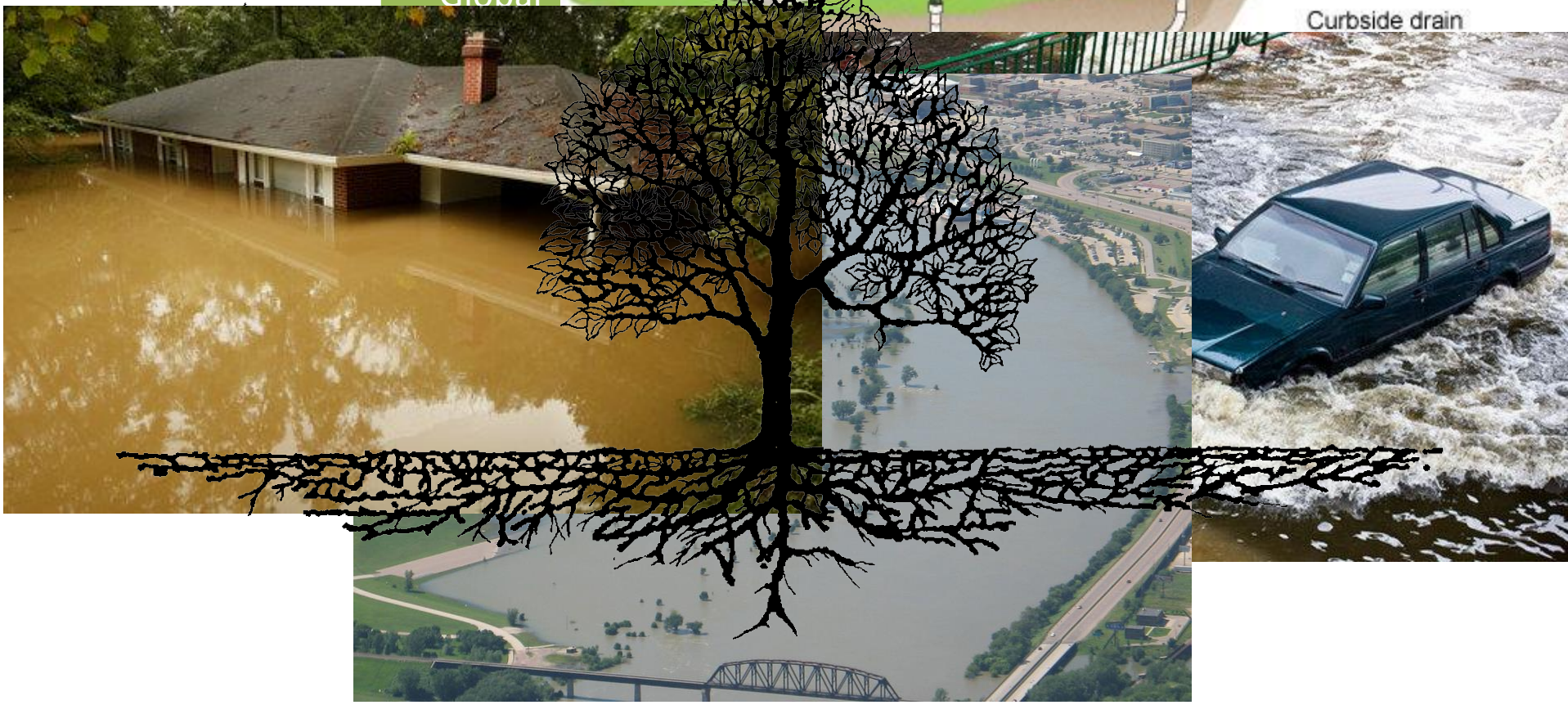
State

Region

Stormwater



Global



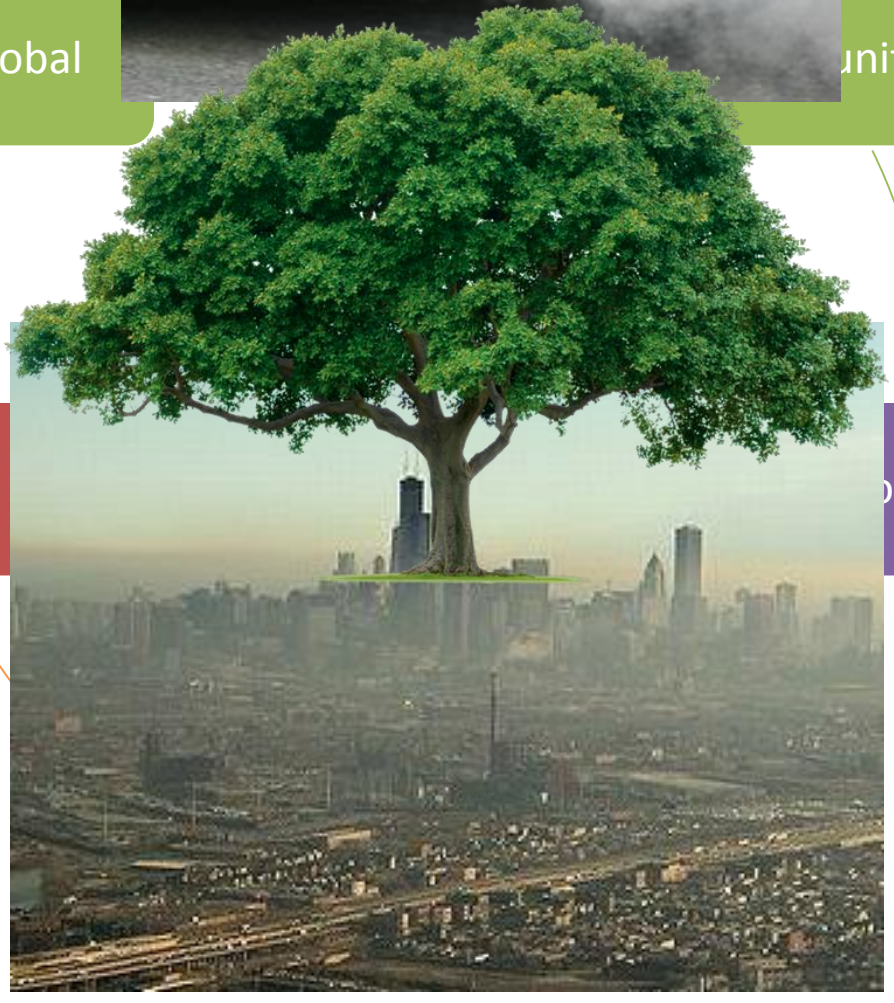
Air Quality

Global

unity

Nation

ounty



Social

- Improved social interaction
- Increased community activity
- Increased creative play
- Decreased crime

Economic

- Reduced ene
  - Reduced air
  - Reduced he
- Increased pr
  - Aesthetics (10%)
- Increased business a
  - People will drive fart
  - People are more will trees (12% more)

Wildlife

- Life web
- Habitat
- Food

Corridors and Connectors

Sta

Chicago Region Trees Initiative:

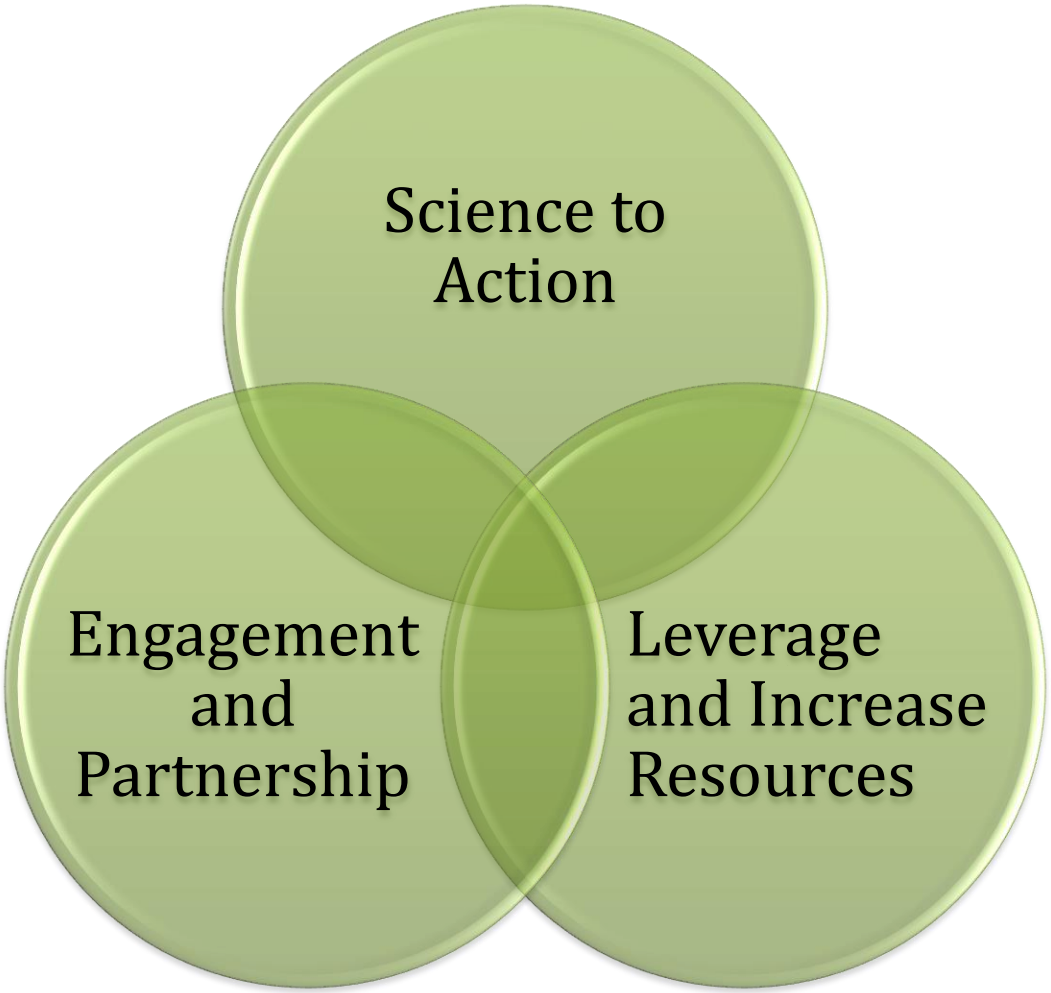
A collaborative effort to support and host a healthier urban forest in the Chicago Region by 2040. This forest will be comprised of a diversity of tree species and ages, appropriately distributed across land use types in the region. The forest will provide the region improved environmental, economic and social benefits.

Built on science!

7 County Chicago Region

- Cook
- Dupage
- Kane
- Kendall
- Lake
- McHenry
- Will

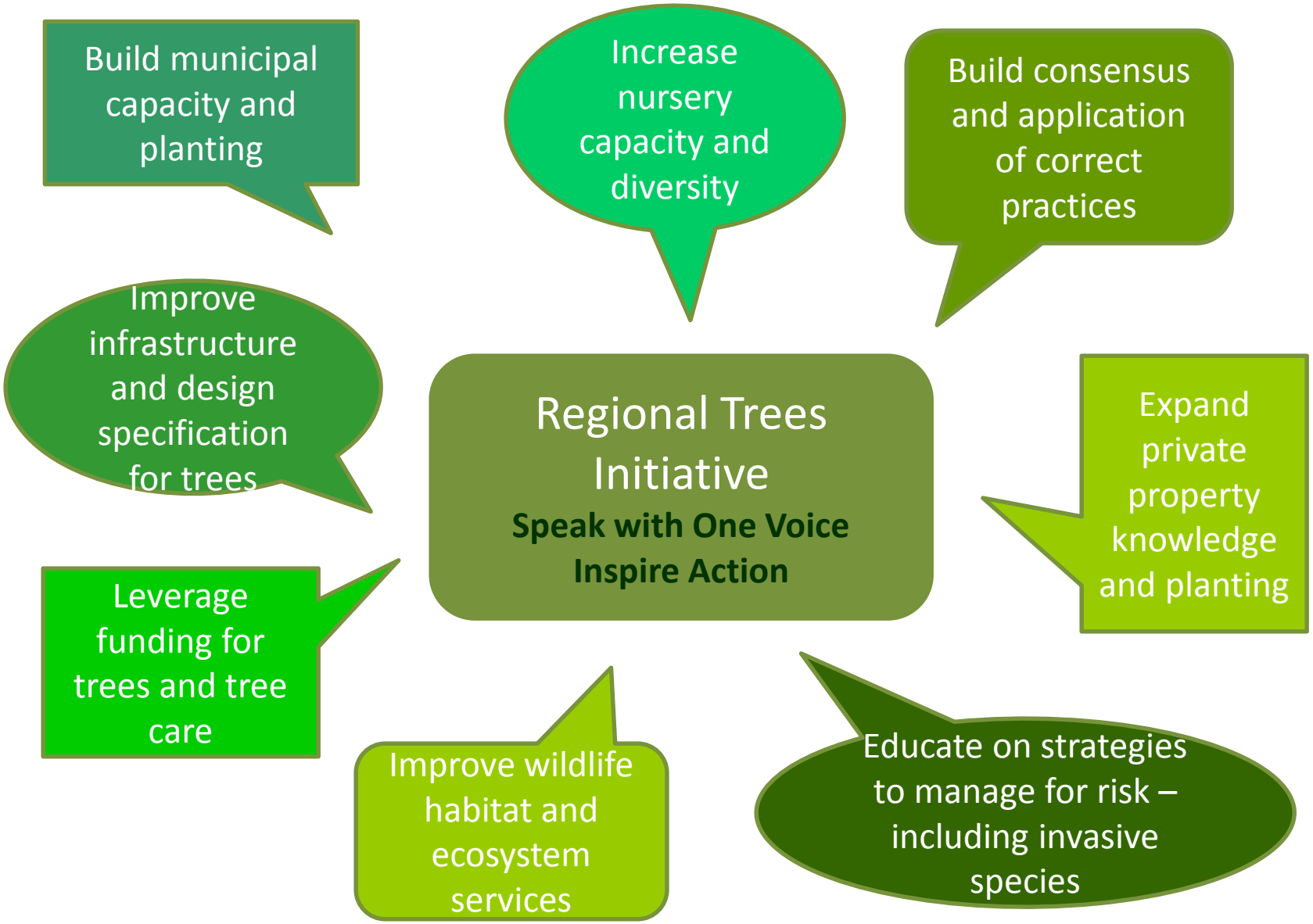
Chicago Regional Trees Initiative



EXECUTIVE ADVISORY COUNCIL


Chicago Regional Trees Initiative
Partners
Adoption and Implementation of Strategy
Work Groups
Strategy Definition
Share knowledge, develop resources and provide outreach
Executive Advisory Council
Vision and Resources

Collaborative Approach to Build Capacity



Working Groups

Tree Stewardship and Planting

- -Build Volunteer Training – TreeKeepers
- -Private Property Education
- -Build Capacity and Opportunities for Planting
- -Short Course
- -Research
- -Outreach

Trees and Green Infrastructure

- **-Integrate** Biodiversity Recovery Plan
- -State Urban Forestry Plan
- -Green Infrastructure Vision
- -GoTo 2040
- Ordinances
- -Research
- -Outreach
- Mentor Network

Communications & Education

- -Identify Key Messages
- -Gather and/or Develop Materials
- -Develop Message Distribution Strategy
- -Build Website
- -Intranet
- --Outreach

Risk Assessment

- -Invasive Pests and Pathogens
- -Tree Failure
- -Climate Adaptation
- -Research
- Outreach

Composition

- -Regional Tree Census
- -Urban Tree Canopy Assessment
- -Oak Recovery Mapping
- -Green Infrastructure Vision
- -Analysis
- -Operational Capacity

Industry and Associations

- -Technical Training
- -Consistent Standards and Specifications
- -Nursery Production and Resources
- -Research
- -Outreach

Resources

- -Collaborate on Funding Opportunities
- -Build on Existing Programs
- -Outreach

CHICAGO REGION TREES INITIATIVE

Our Trees.
Our Communities.
Our Future.

Foundation

Forest Composition
Operations Capacity

CHICAGO REGION TREES INITIATIVE

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Forest composition

Forest composition workgroup

- Determine a realistic and obtainable canopy cover goal for the region
- Ascertain an appropriate age and species distribution
- Develop achievable regional planting goals

Forest composition workgroup

- Determine a realistic and obtainable canopy cover goal
- Ascertain an appropriate age and species distribution
- Develop achievable regional planting goals

Forest composition

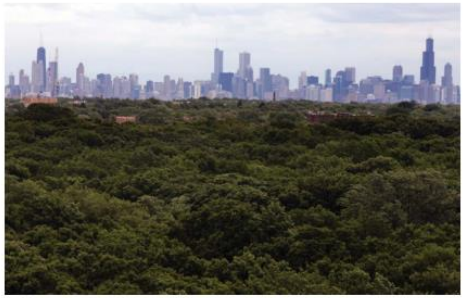
Chicago's regional forest

- Published in 2013
- Sampled 1400 plots
- Across 7 county region
- Recorded
  - Species
  - Diameter at breast height
  - Canopy cover

USDA

Urban Trees and Forests of the Chicago Region

David J. Nowak
Robert E. Hoehn III
Allison R. Bodine
Daniel E. Crane
John F. Dwyer
Veta Bonnewell
Gary Watson



Forest composition

Number of trees	157,142,000
Canopy cover (trees and shrubs)	21.0%
Most dominant trees by stem count	European buckthorn, green ash, boxelder, black cherry, American elm
Most dominant trees by leaf surface area	Silver maple, boxelder, green ash, European buckthorn, black walnut
Carbon storage	16.9 million tons ($349 million)
Pollution removal	24,170 tons/year ($183 million annually)

Forest composition

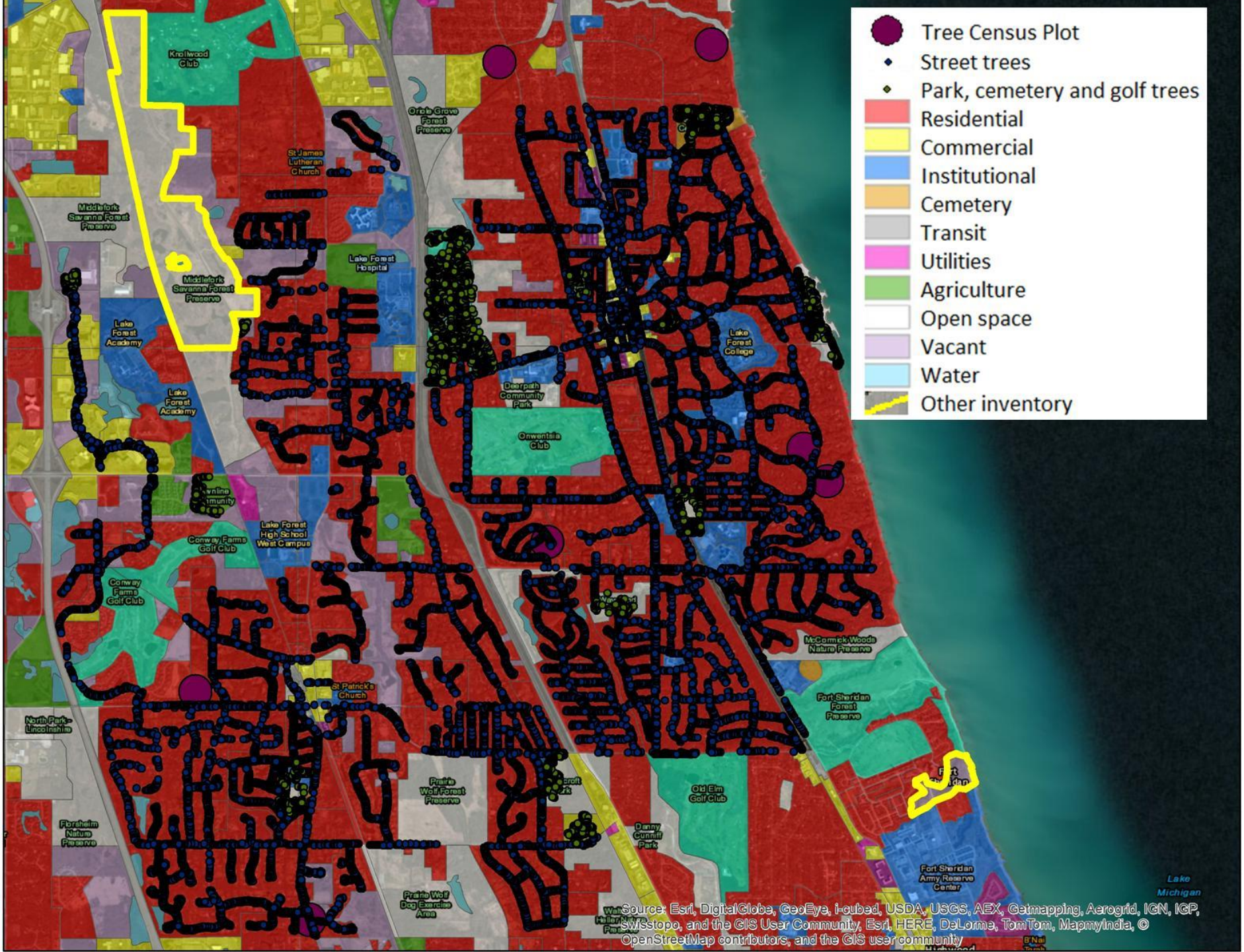
- Invasive species are a problem
- Pre-settlement species (especially oaks and hickories) are not abundant
- Ashes and maples are very common

Forest composition

"A state of transition"

Data types

- Composition distribution
- Age class distribution
- Canopy cover


Tree Census Plot
Street trees
Park, cemetery and golf trees
Residential
Commercial
Institutional
Cemetery
Transit
Utilities
Agriculture
Open space
Vacant
Water
Other inventory
Knollwood Club
Middlefork Savanna Forest Preserve
Orrole Grove Forest Preserve
St James Lutheran Church
Lake Forest Hospital
Lake Forest Academy
Lake Forest College
Deerpath Community Park
Onwentsia Club
Conway Farms Golf Club
Lake Forest High School West Campus
McCormick Woods Nature Preserve
Fort Sheridan Forest Preserve
St Patrick's Church
North Park - Lincolnshire
Prairie Wolf Forest Preserve
Old Elm Golf Club
Danny Cunniff Park
Fort Sheridan Army Reserve Center
Forsheim Nature Preserve
Prairie Wolf Dog Exercise Area
Lake Michigan
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, Swisstopo, and the GIS User Community, Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Canopy cover

- Remotely sensed
  - LiDAR
  - Flyover and satellite imagery

Urban tree canopy

University of Vermont
Spatial Analysis Lab

CHICAGO REGION TREES INITIATIVE

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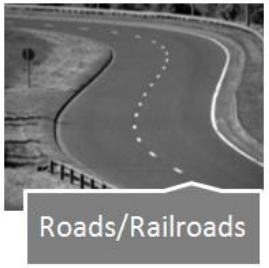
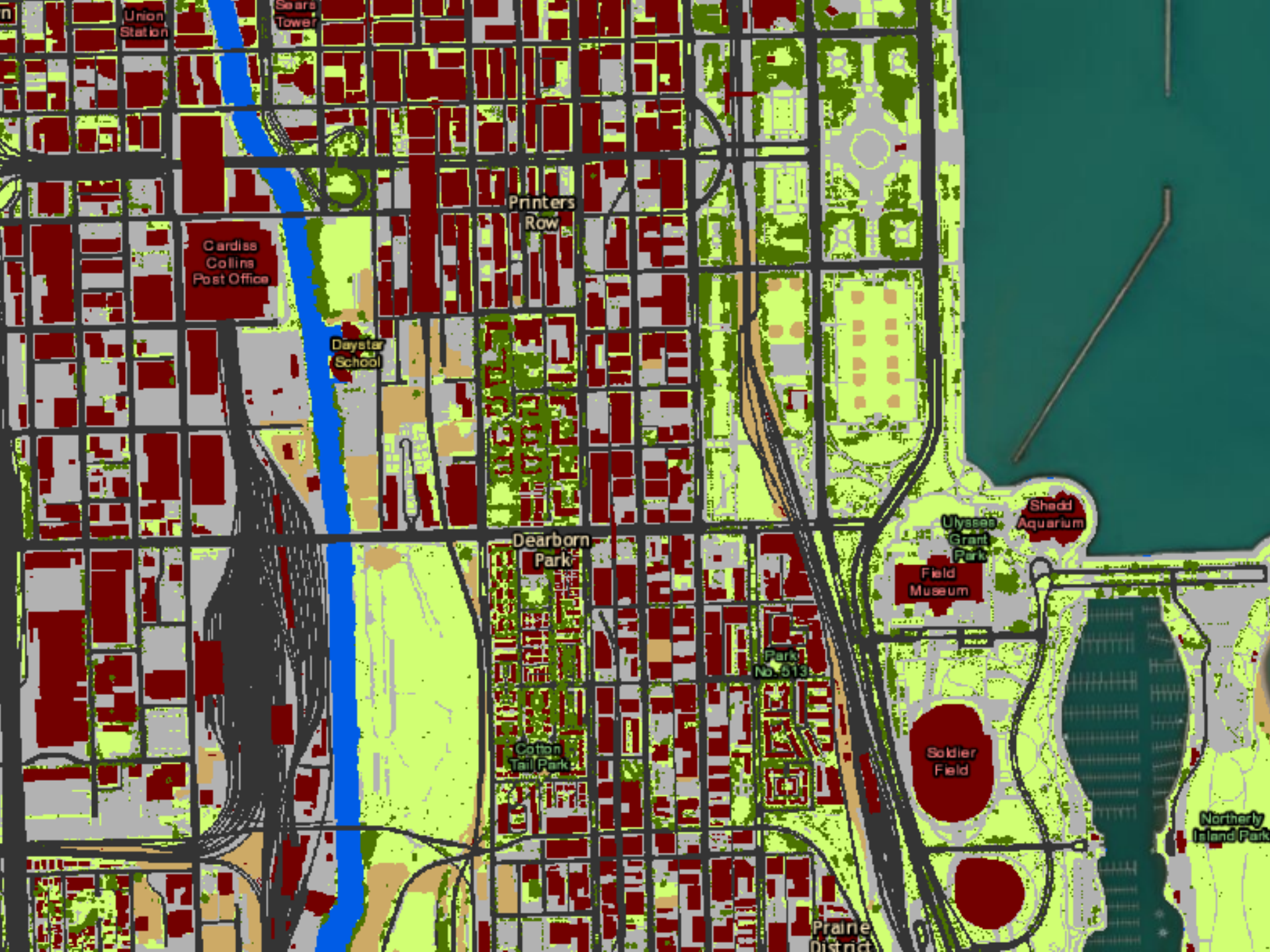
Urban tree canopy

- Seven county region
- ½ meter resolution
- Seven land cover types
- Cook county is done!
- Rest of the region in September




Union Station
Sears Tower
Printers Row
Cardiss Collins Post Office
Daystar School
Dearborn Park
Cotton Tail Park
Park No. 513
Field Museum
Ulysses Grant Park
Shedd Aquarium
Soldier Field
Prairie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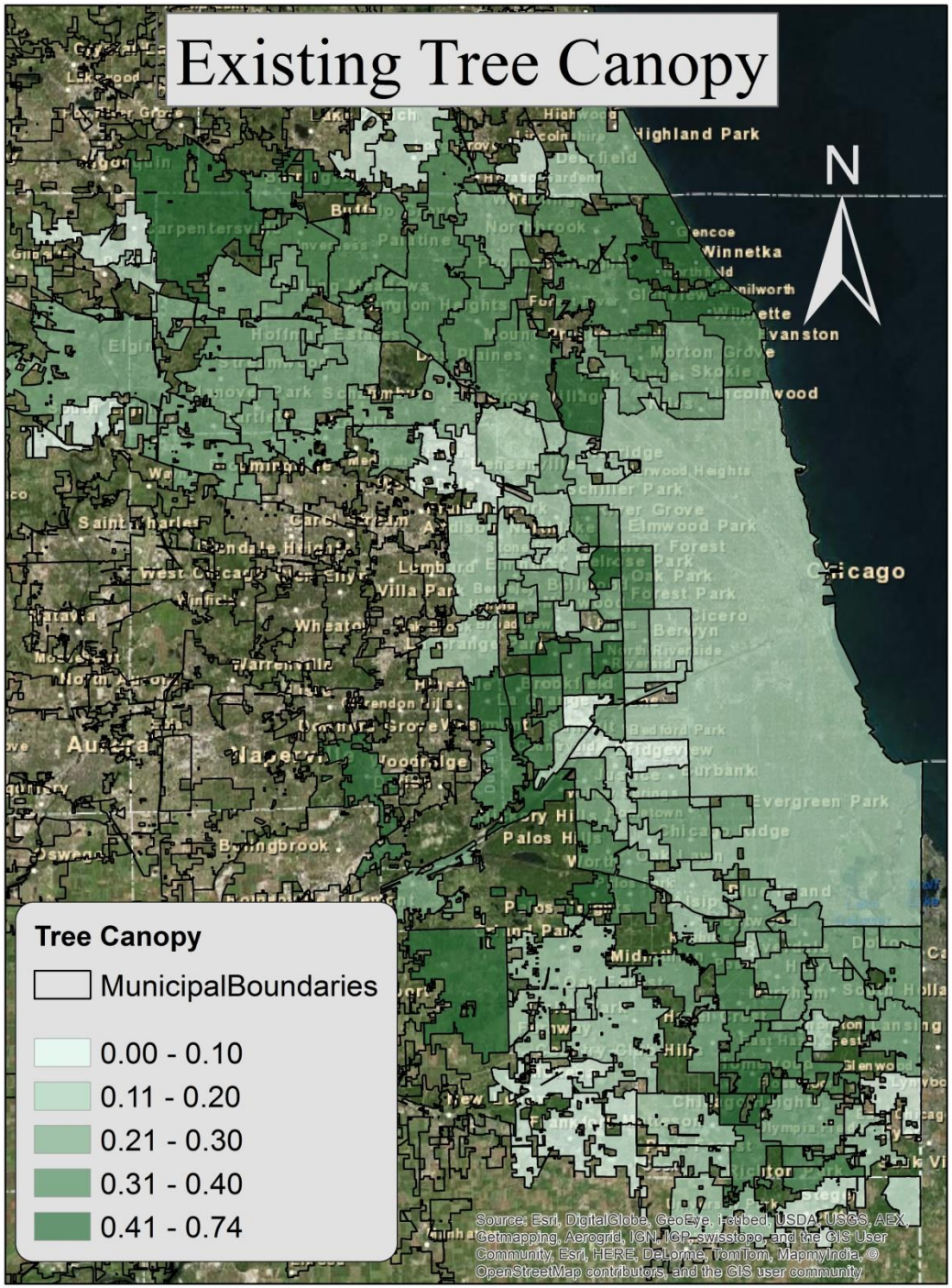
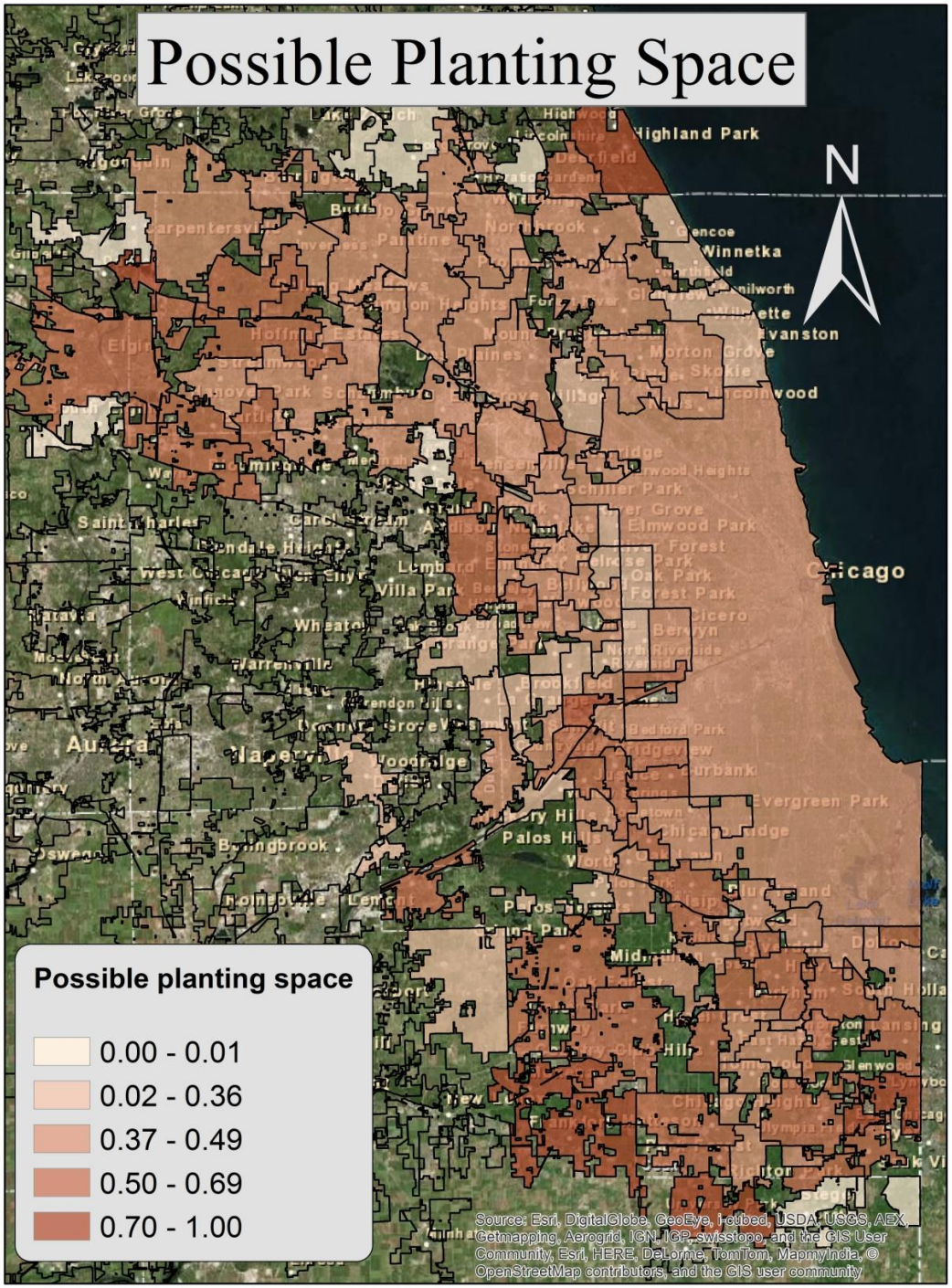
Park No. 513
Soldier Field
Field Museum
Ulysses Grant Park
Shedd Aquarium
Northerly Island Park
Prairie District

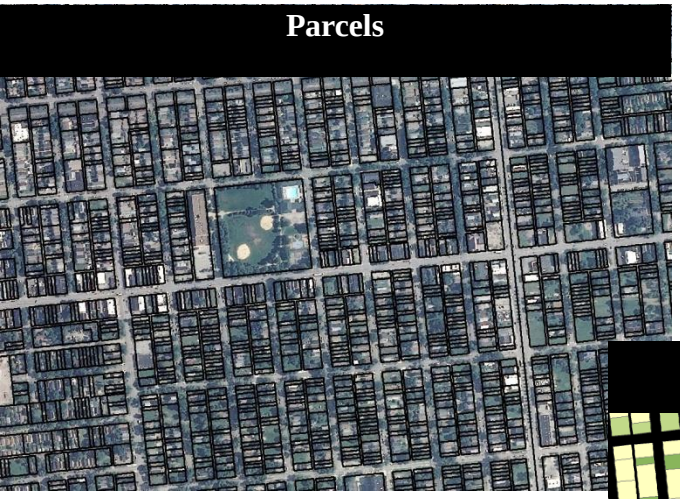
How can you use this?

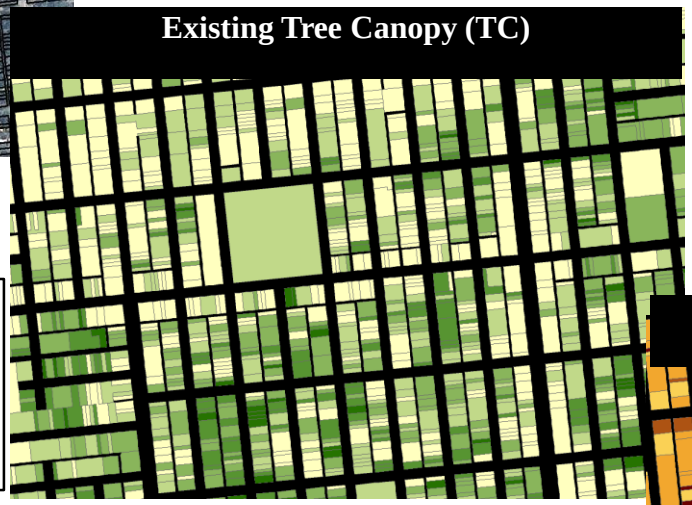
- Identify priority places to plant
  - Gaps in tree canopy

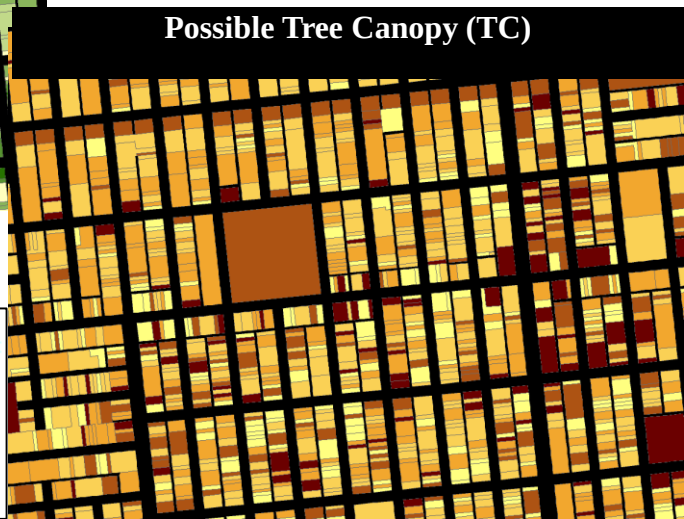

Existing Tree Canopy
N
Highland Park
Winnetka
Evanston
Chicago
Tree Canopy
MunicipalBoundaries
0.00 - 0.10
0.11 - 0.20
0.21 - 0.30
0.31 - 0.40
0.41 - 0.74
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community


Possible Planting Space
N
Highland Park
Winnetka
Chicago
Aurora
Naperville
Bolingbrook
Possible planting space
0.00 - 0.01
0.02 - 0.36
0.37 - 0.49
0.50 - 0.69
0.70 - 1.00
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Urban tree canopy



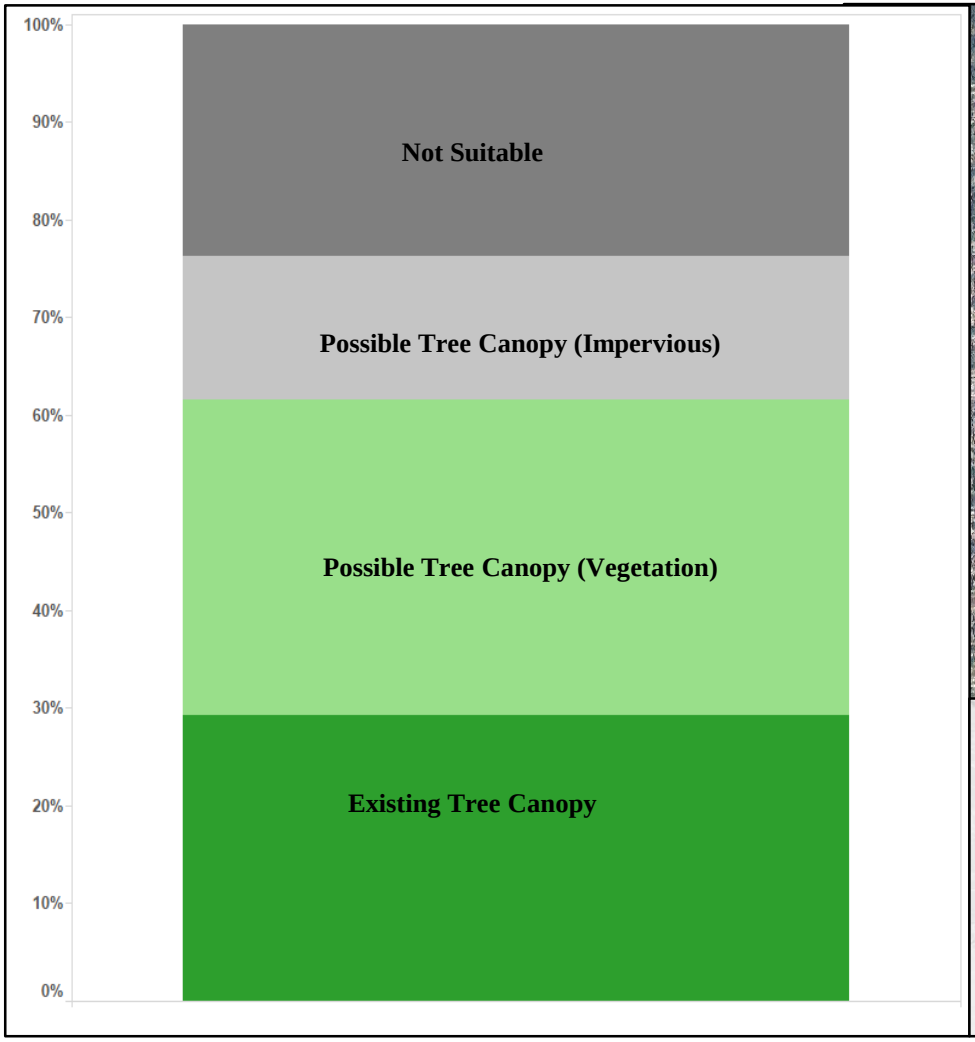


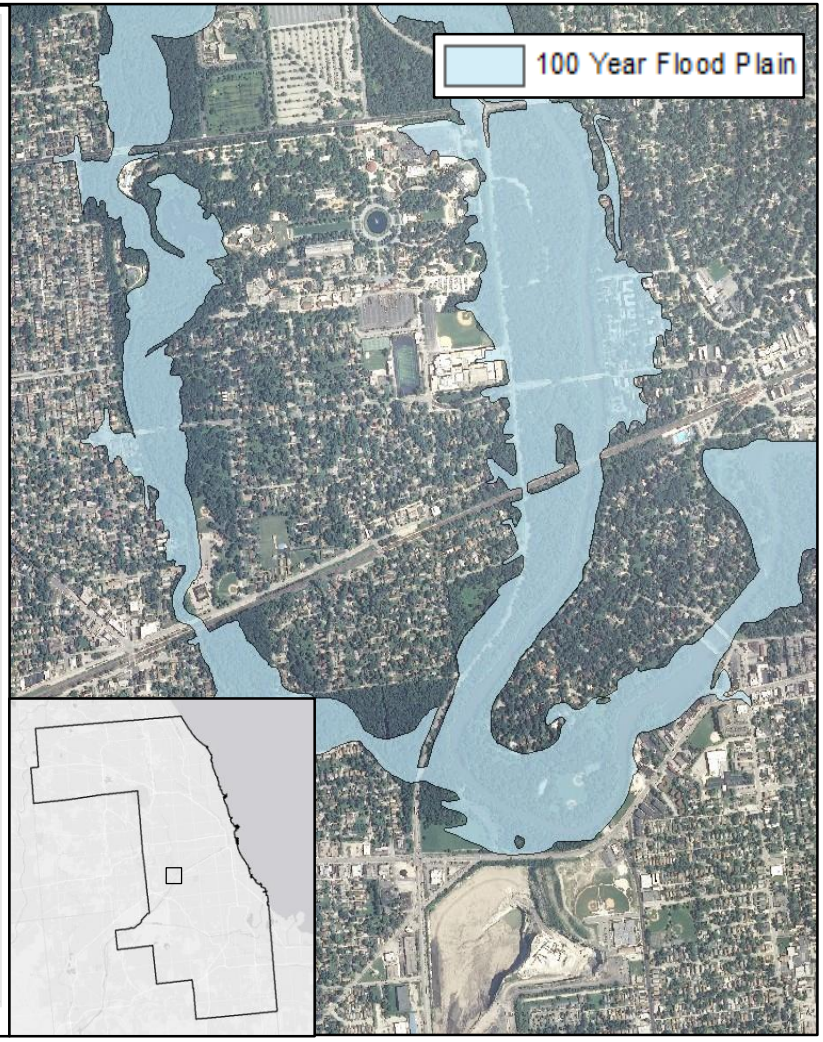


How can you use this?

- Identify priority places to plant
  - Gaps in tree canopy
  - Green infrastructure planning

How can you use this?





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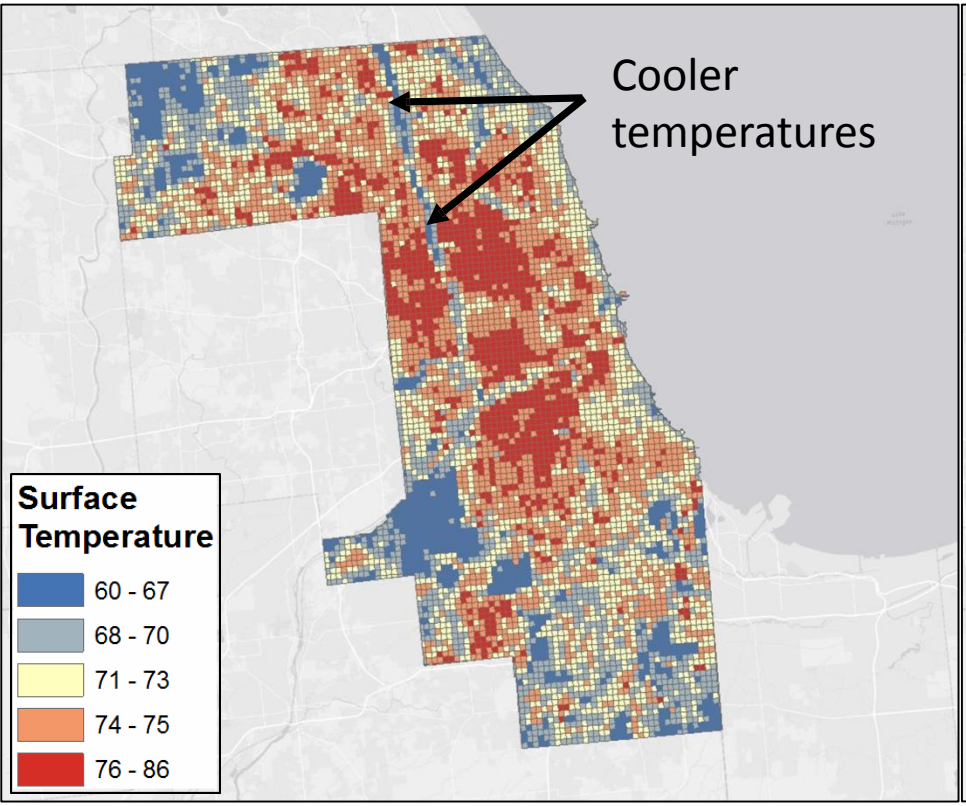
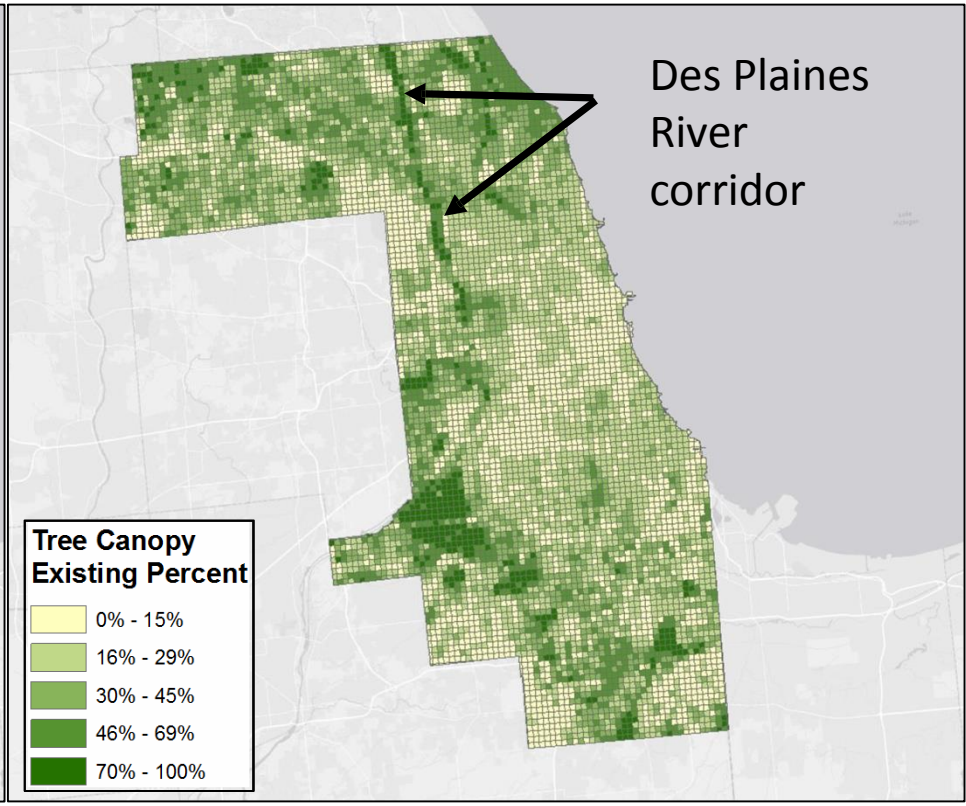


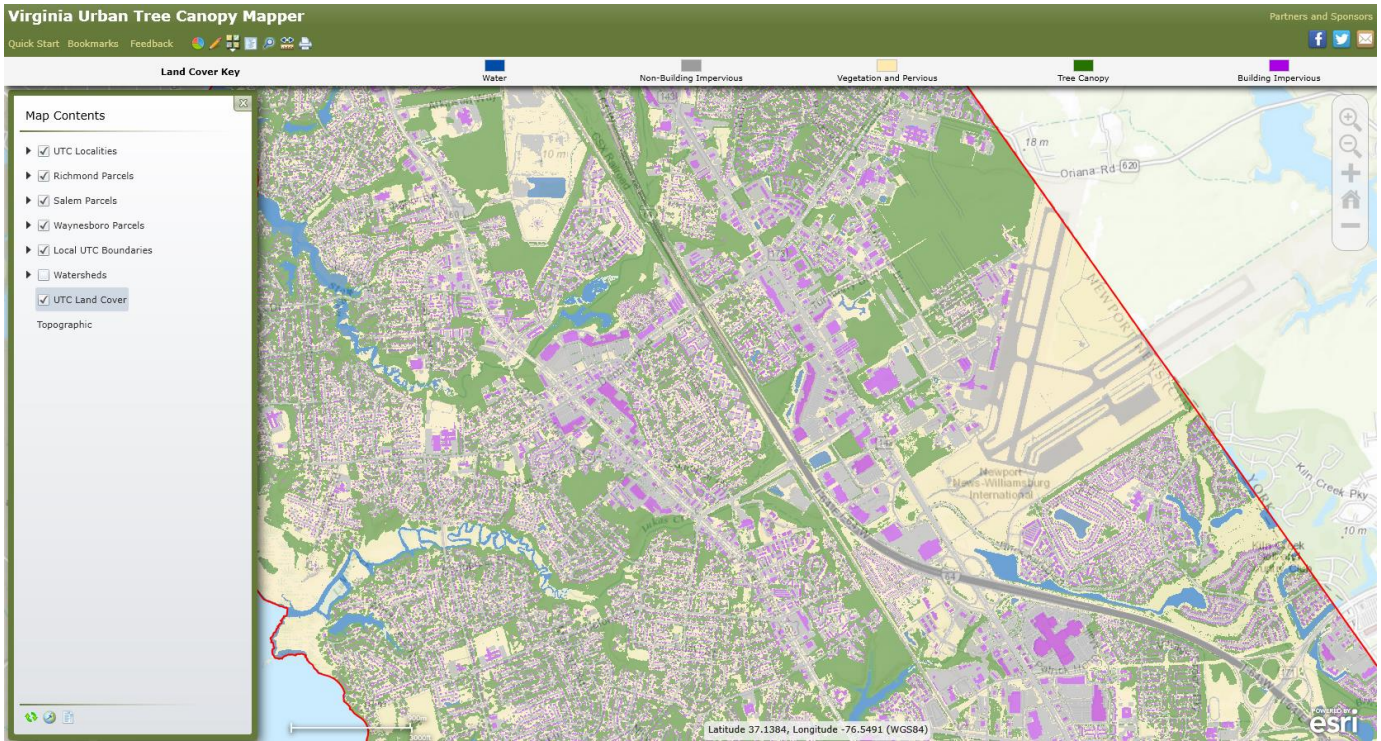


How can you use this?

- Identify priority places to plant
  - Gaps in tree canopy
  - Green infrastructure planning
  - Social justice
    - Decrease crime
    - Decrease health maladies
    - Increase property values

How can you get these data?

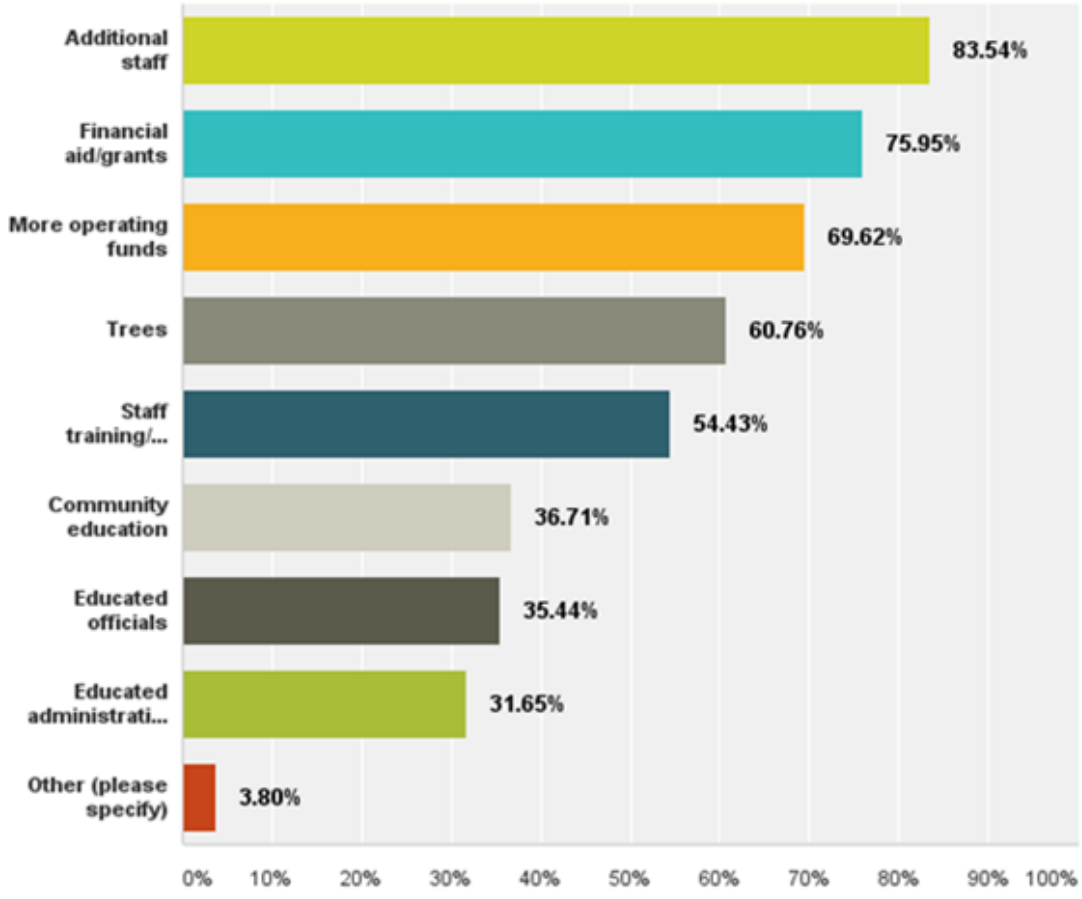
- Download the file
  - Hosted on CMAP's datahub
- Interactive maps
  - Field Museum and CRTI to make interactive maps



Interactive maps

- Tree canopy
- Possible planting space
- Heat island
- Socio-economic factors
- Health issues

Operations Capacity



Climate Change Response Framework

Partnerships

Vulnerability Assessments

Forest Adaptation Resources

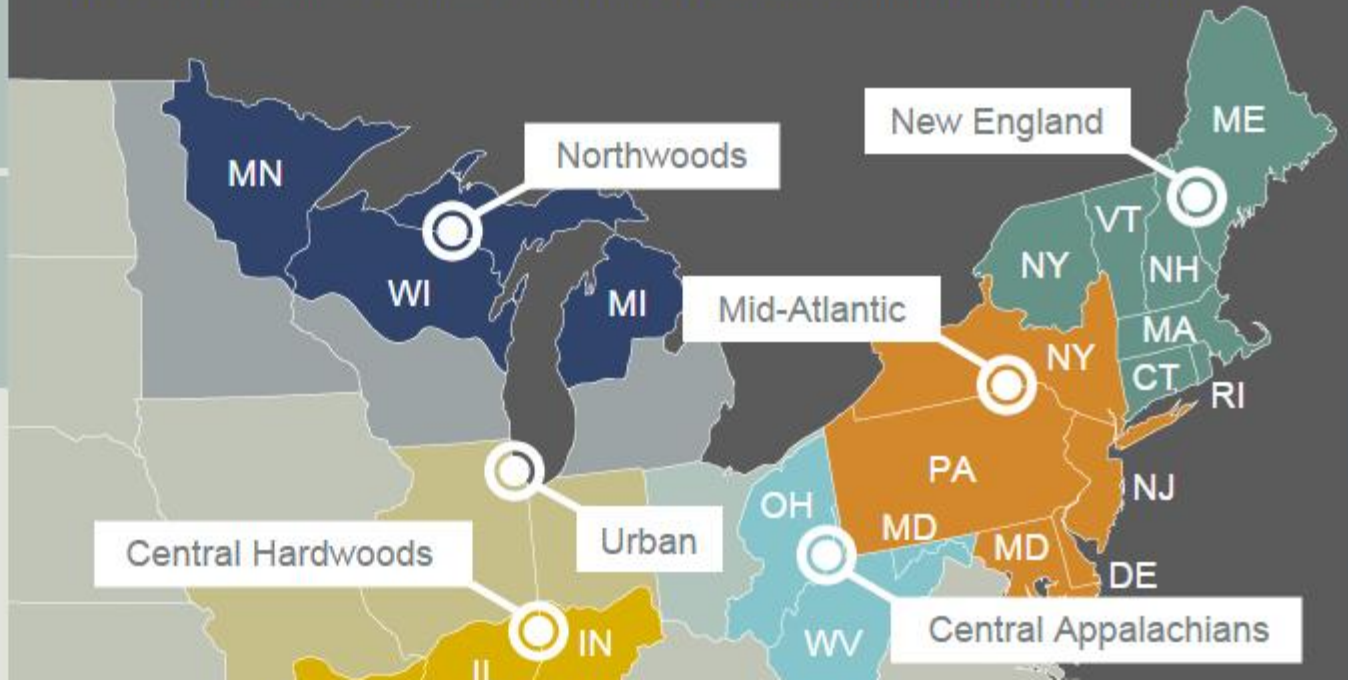
Demonstration Projects

News & Events

What is the Climate Change Response Framework?

The Framework is a collaborative, cross-boundary approach among scientists, managers, and landowners to incorporate climate change considerations into natural resource management. It provides an integrated set of tools, partnerships, and actions to support climate-informed conservation and forest management.

Six Framework projects encompass 19 states, including 14 National Forests and millions of acres of forestland. Each regional project interweaves four components: science and management partnerships, vulnerability assessments, adaptation resources, and demonstration projects. Learn more about how the components interact to build a flexible, scalable, and effective Framework at Our Approach. Use the interactive map to learn more about Framework activities in your region.



Trainings

- Forestry Management Plans and Ordinance Development
- Community Trees Network
  - May 7th
- Annual Celebration and Recognition Event
  - July 14th
- Urban Forestry Basic Training
  - August 20th and September 10th
- Risk Assessment and Management Conference
  - December 2nd
- Corridors and Trees (IDOT, Metra, Utilities)
- Contract Growing
- Extending Your Resources - Volunteers
- Climate Vulnerability and Adaptive Capacity

Questions

Melissa Custic, CRTI Coordinator
mcustic@mortonarb.org