



# Forest Preserves of Cook County

## Southeast Cook County Land Acquisition Study



Data-Driven Planning & Decision Making

8/7/2020 – Calumet Stormwater Collaborative



## Project Drivers:

- **Next Century Conservation Plan acquisition goals – 21,000 additional acres of protected land**
- **2012 Land Acquisition Plan – opportunities in the southeast part of Cook County**
- **Challenge of evaluating individual parcels on a case-by-case basis**
- **Need for partnerships and leverage**
- **Supplement – not replace – existing criteria**



**Map 1. Southeast Cook County Planning Area**



# Southeast Cook County Land Acquisition Plan

A STRATEGY FOR THE FOREST PRESERVES OF COOK COUNTY  
MAY 2019

PREPARED FOR:



BY:

THE CONSERVATION FUND

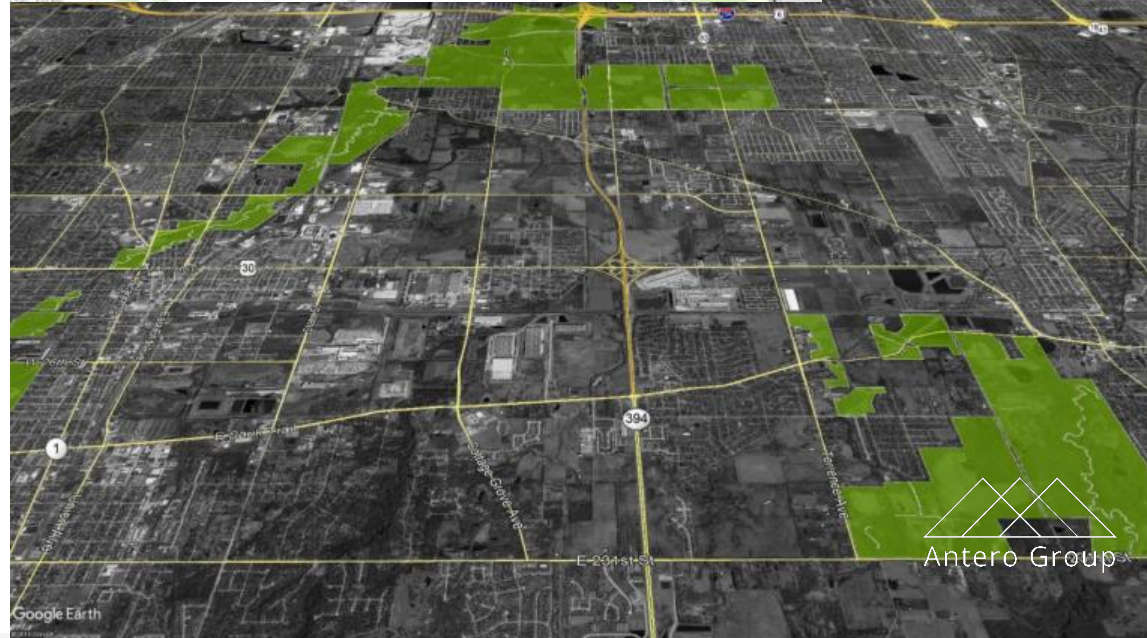
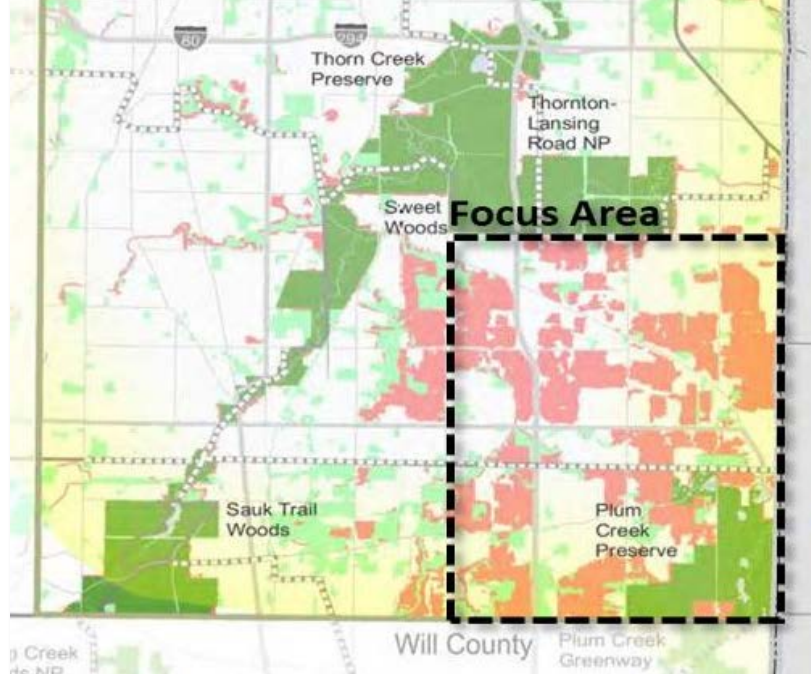
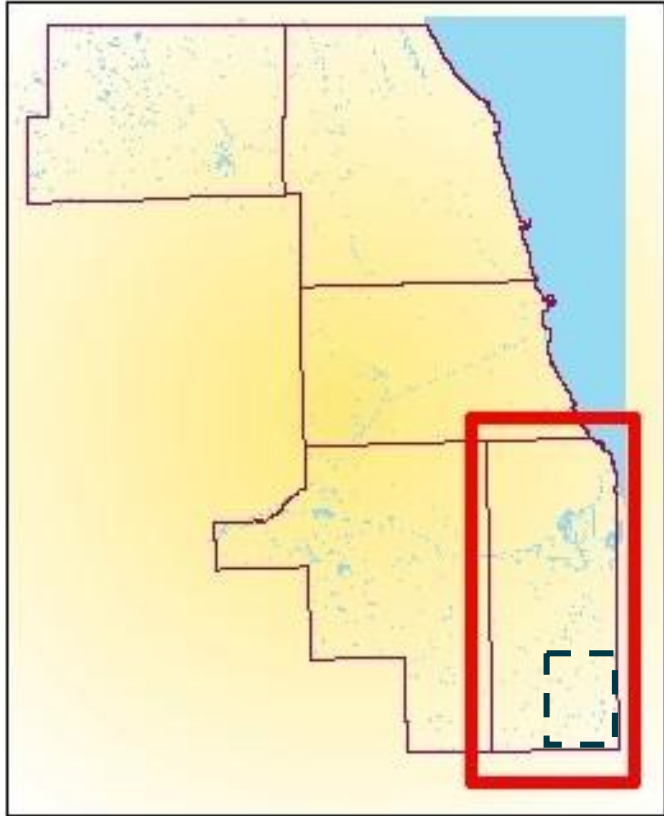
WITH:

Metropolitan Planning Council



- Planning Area
- Focus Area
- Water
- Forest Preserves of Cook County
- Managed Lands

# SE Cook County Planning Area



# Southeast Cook County Land Acquisition Study

## Project Team

The Conservation Fund	Metropolitan Planning Council	Antero Group	Rudd Resources
Emy Brawley	Josh Ellis	Curtis Witek	Kimberley Rudd
Will Allen	Chloe Gurin-Sands		Sonya Lewis
	Justin Keller		Yolanda Harris
	Bob Newport		
Project Management; Acquisition Strategy; GIS and Modelling	Stormwater; Wetlands Mitigation; Health and Equity	Planning; methodology, and GIS	Outreach and Engagement; Plan Production

# Southeast Cook County Land Acquisition Study

## Methodology:

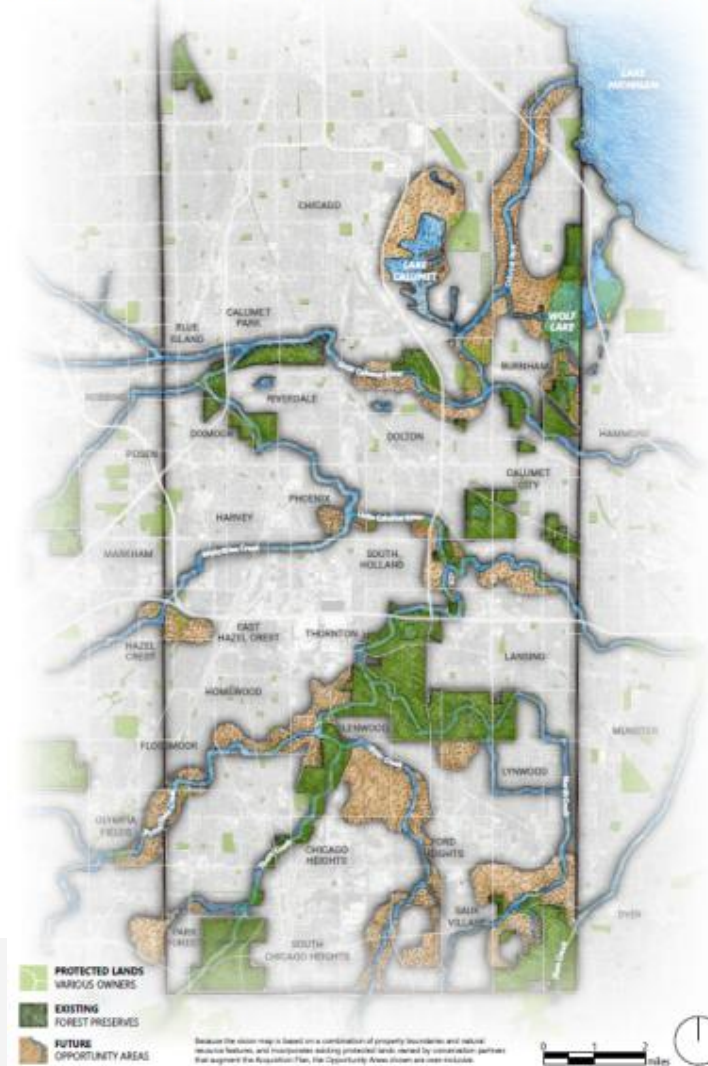
- Data Inventory
- Site Visit
- Local/Regional Plan Review
- Community Engagement
- Health and Racial Impact Review
- Suitability Analysis
- Feasibility Assessment

# Southeast Cook County, Illinois

For the Plan, five scenarios were developed to help differentiate parcels based on their ability to fulfill a set of objectives outlined by the Forest Preserves:

1. Ecological Value
2. Flood Mitigation
3. Inholdings/Adjacency
4. Connectivity (Streams, Trails)
5. Equity/Social Vulnerability

FOREST PRESERVES OF COOK COUNTY  
**VISION MAP** FOR SOUTHEAST COOK COUNTY



END

# Logic Scoring of Preference



KENT D. MESSER AND WILLIAM L. ALLEN, III

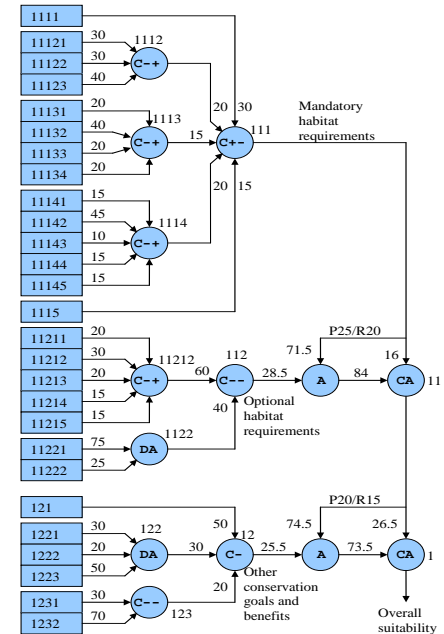
The Science of  
STRATEGIC  
CONSERVATION  
Protecting More with Less



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Dr. Jozo Dujmović





# Southeast Focus Area

## Logic Scoring of Preference (LSP) Decision Making Criteria

### 1 Potentially suitable FPD parcels in SE Cook County

#### 11 Natural Resource Protection & Hazard Mitigation

- 111 Stream/Creek Corridors
- 112 CW Green Infrastructure Vision 2.3
- 113 Floodplains
- 114 Flood Susceptibility Index

#### 12 Size & Location Characteristics

- 121 Parcel Size
- 122 Adjacent to Existing Managed Lands
- 123 Adjacent to Existing & Planned Trails

#### 13 Social Vulnerability Index / Equity Considerations

These criteria are not part of the weighted model, but they can be used to further differentiate the value of potential acquisition parcels

#### 14 Opportunity Characteristics

141 Community Interest	Identified as community open space opportunity in focus groups		
142 Opportunity Clusters	Potential blocks for conservation and economic development opportunities		
143 Partner Feasibility	Opportunity based on known intent of landowner or specific tax situations		
144 Health & Wellness Indicators	Identified health/wellness opportunity in focus groups or health research (e.g. CDC PolicyMap/Census tracts)		

### Natural Resource Protection & Hazard Mitigation

111 Stream/Creek Corridors	Includes stream frontage	100
Source: Cook County GIS Rivers & Streams	< 100 feet of a stream corridor	60
	Within 500 feet of stream corridor	40
	> 500 feet of stream corridor	0
112 CW Green Infrastructure Vision 2.3	Parcel centroid in GIV network	100
Source: CMAP	Intersects GIV network	40
	Outside GIV Network	0
113 Floodplains	Inside Floodway	100
Source: FEMA	Centroid in 100-year floodplain	90
	Intersects 100-Year floodplain	70
	Intersects 500-Year floodplain	50
	Outside floodplain	0
114 Flood Suspectibility Index	Highest possible index value	100
Source: CMAP	Interim Index Values	
	Lowest possible index value	0

# Data Layers

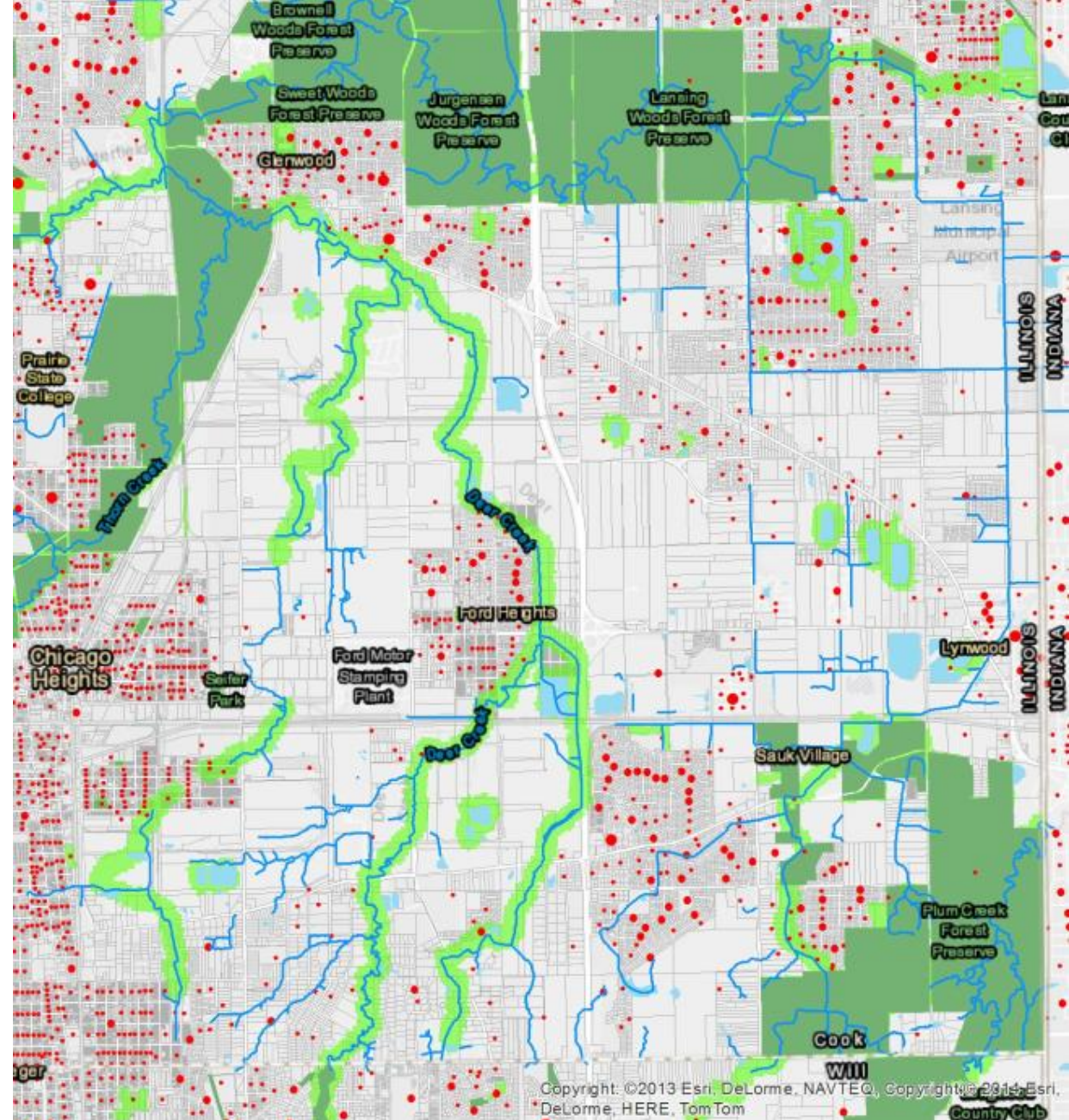
Census Block Group Centroids  
Population 2010

- 0 - 97
- 98 - 287
- 288 - 646

Cook County Rivers and Streams

Rivers and Lakes

*Chicago Wilderness  
Green Infrastructure  
Vision*



# Data Layers

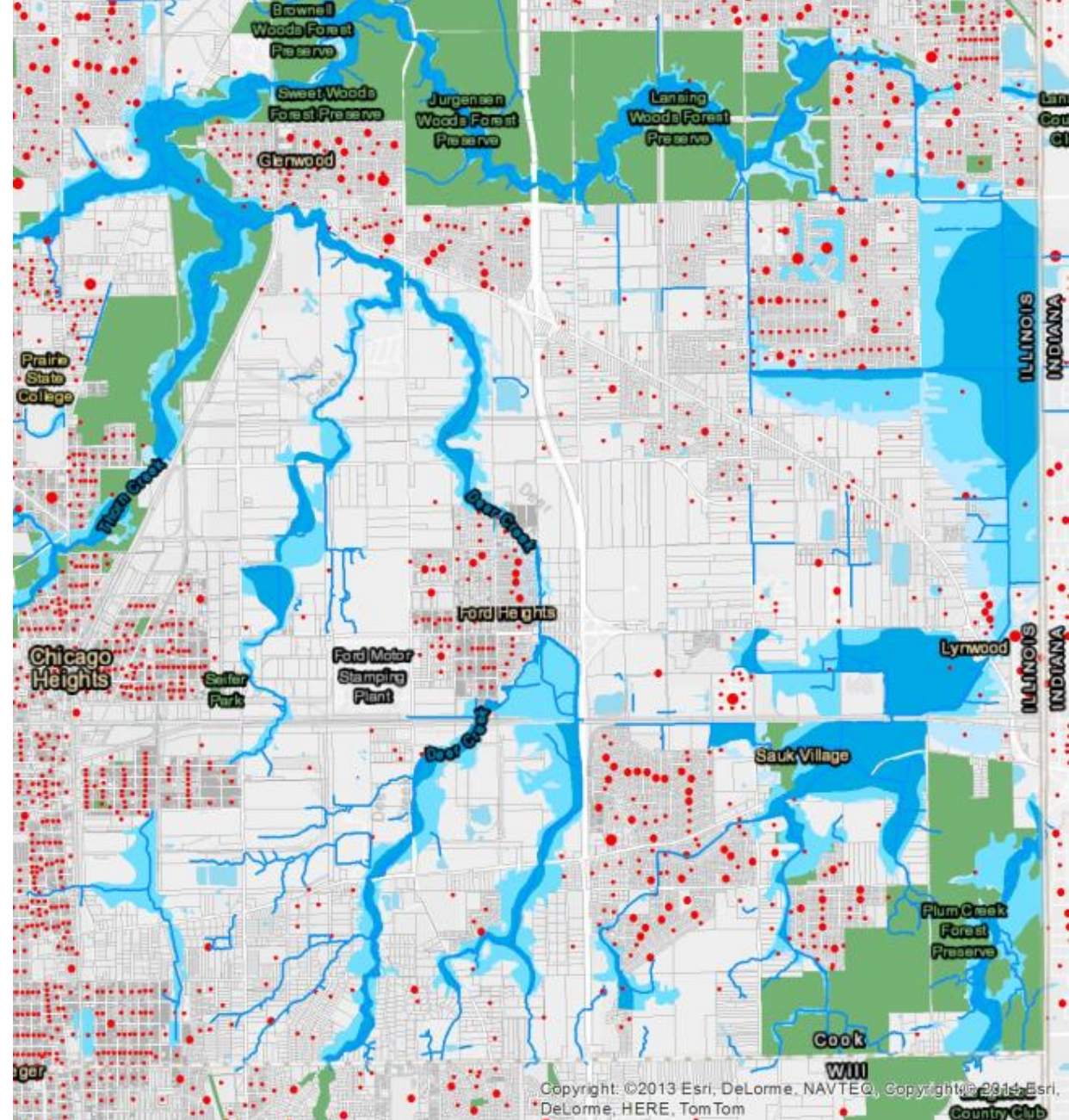
Census Block Group Centroids  
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Cook County Rivers and Streams

Rivers and Lakes

*Floodplains*



# Data Layers

Cook County Rivers and Streams

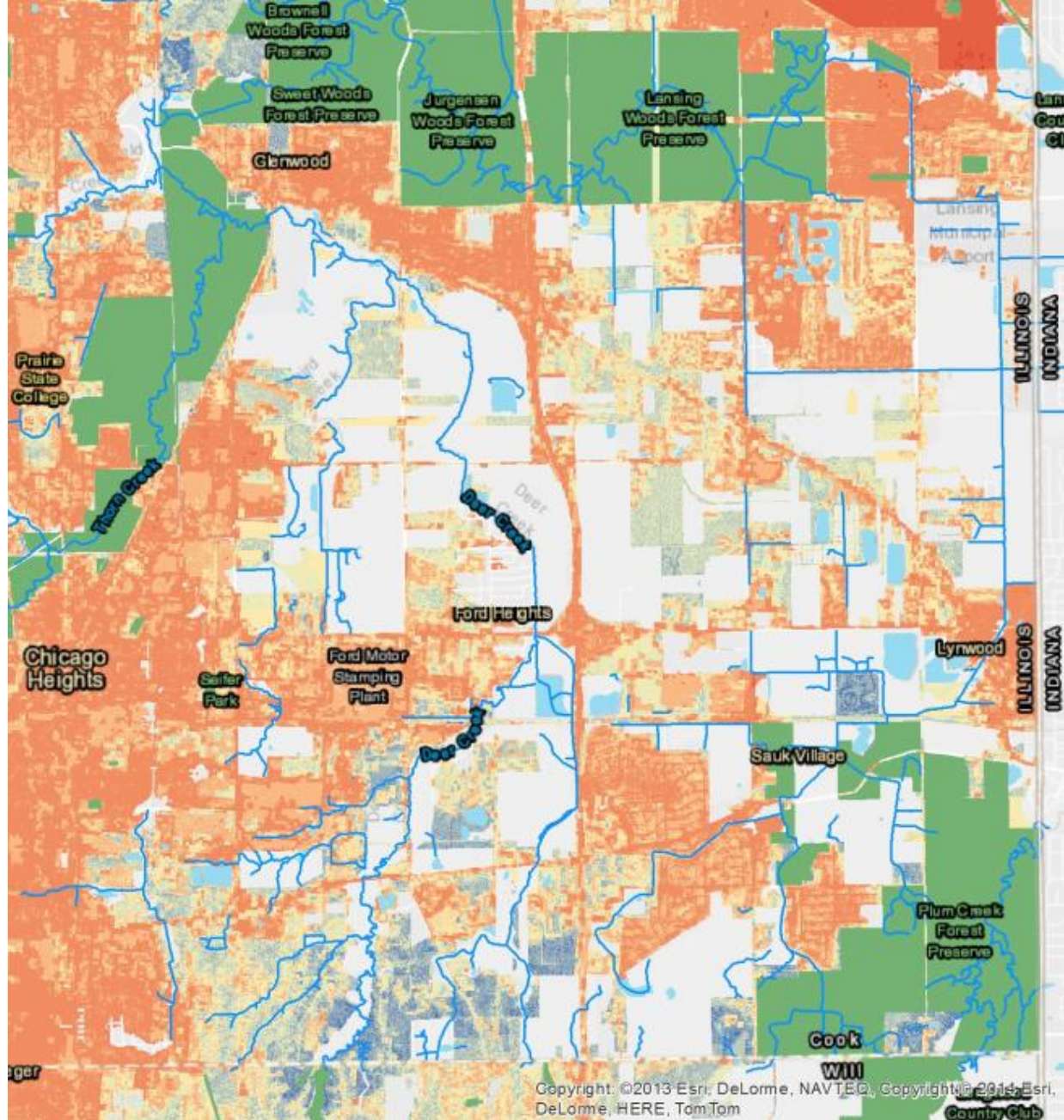


Rivers and Lakes

## Urban Flooding

Urban Flood Susceptibility Index  
CMAP 2017

- 9 - 10
- 8 - 9
- 7 - 8
- 6 - 7
- 5 - 6
- 4 - 5
- 3 - 4
- 2 - 3
- 1 - 2
- 1



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121 Parcel Size	Highest possible normalized value	100
Source: CoreLogic	Interim index values	
	Lowest possible index value	0
122 Adjacent to Existing Managed Lands	Shares boundary with FPDCC	100
Source: IL Protected Lands database	< 100 feet from FPDCC property	80
	< 100 feet of managed open space	50
	> 100 feet of a managed open space	0
123 Adjacent to Existing & Planned Trails	Intersects existing/proposed trail	100
Source: CMAP	< 100 feet of existing/proposed trail	80
	> 100 feet of existing/proposed trail	0

# Data Layers

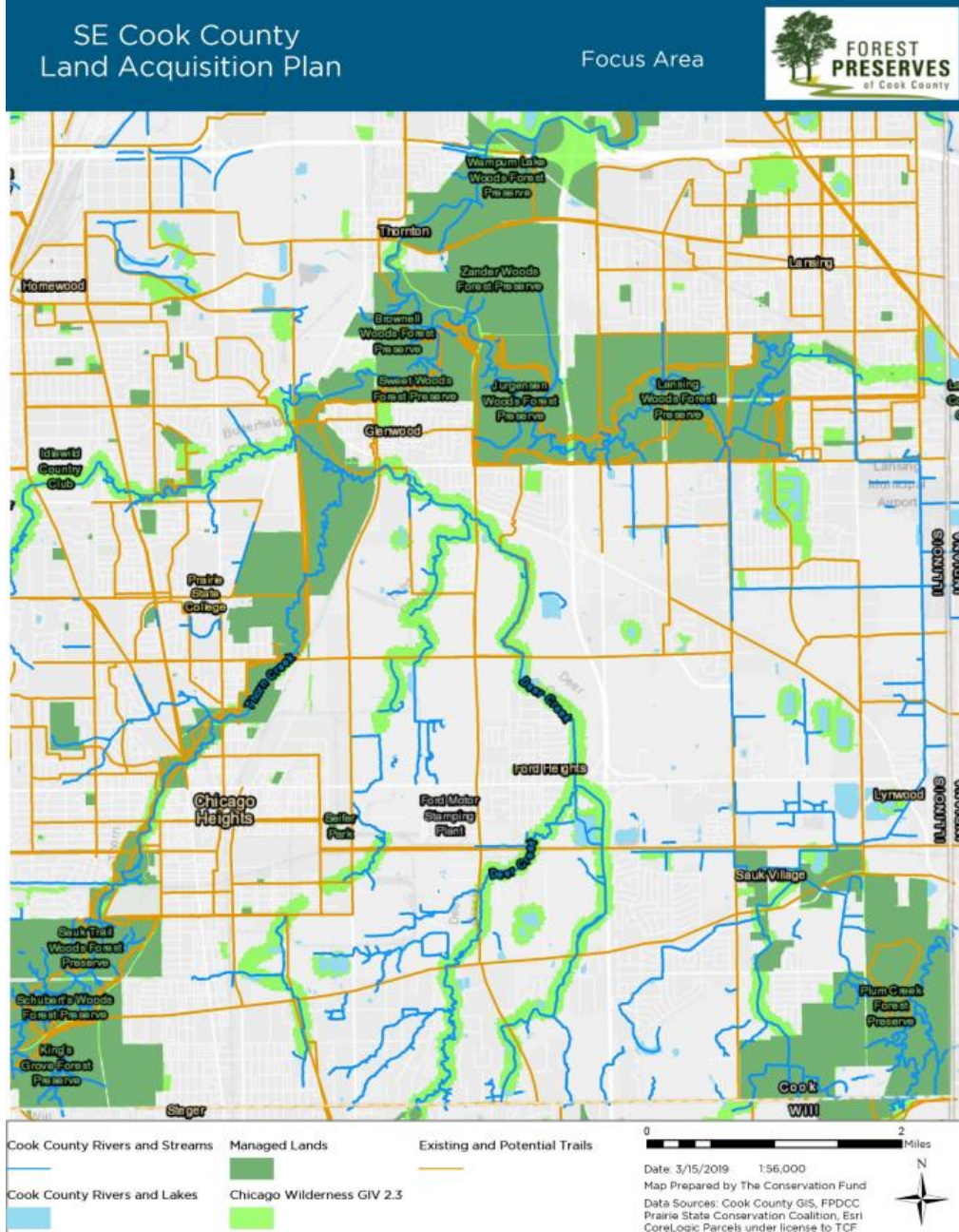
Census Block Group Centroids  
Population 2010

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Cook County Rivers and Streams

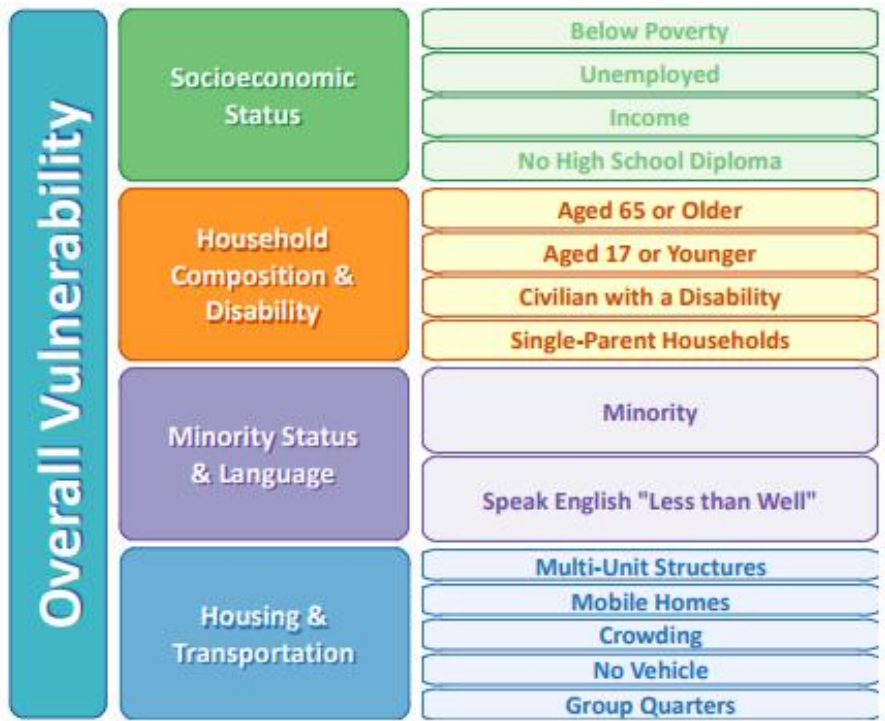
Rivers and Lakes

*Existing and Potential  
Trails*



# SVI/Equity Considerations

We used the Centers for Disease Control (CDC)'s Social Vulnerability Index (SVI) to represent the equity scenario. The SVI uses U.S. Census data to determine the social vulnerability of every Census tract. It illustrates the distribution of the populations facing the highest amount of inequity and highest amounts of hardship.





# Social Vulnerability Index

## Socioeconomic

- % Poverty
- % Unemployed
- Per Capita Income
- % No High School Diploma

## Household Composition & Disability

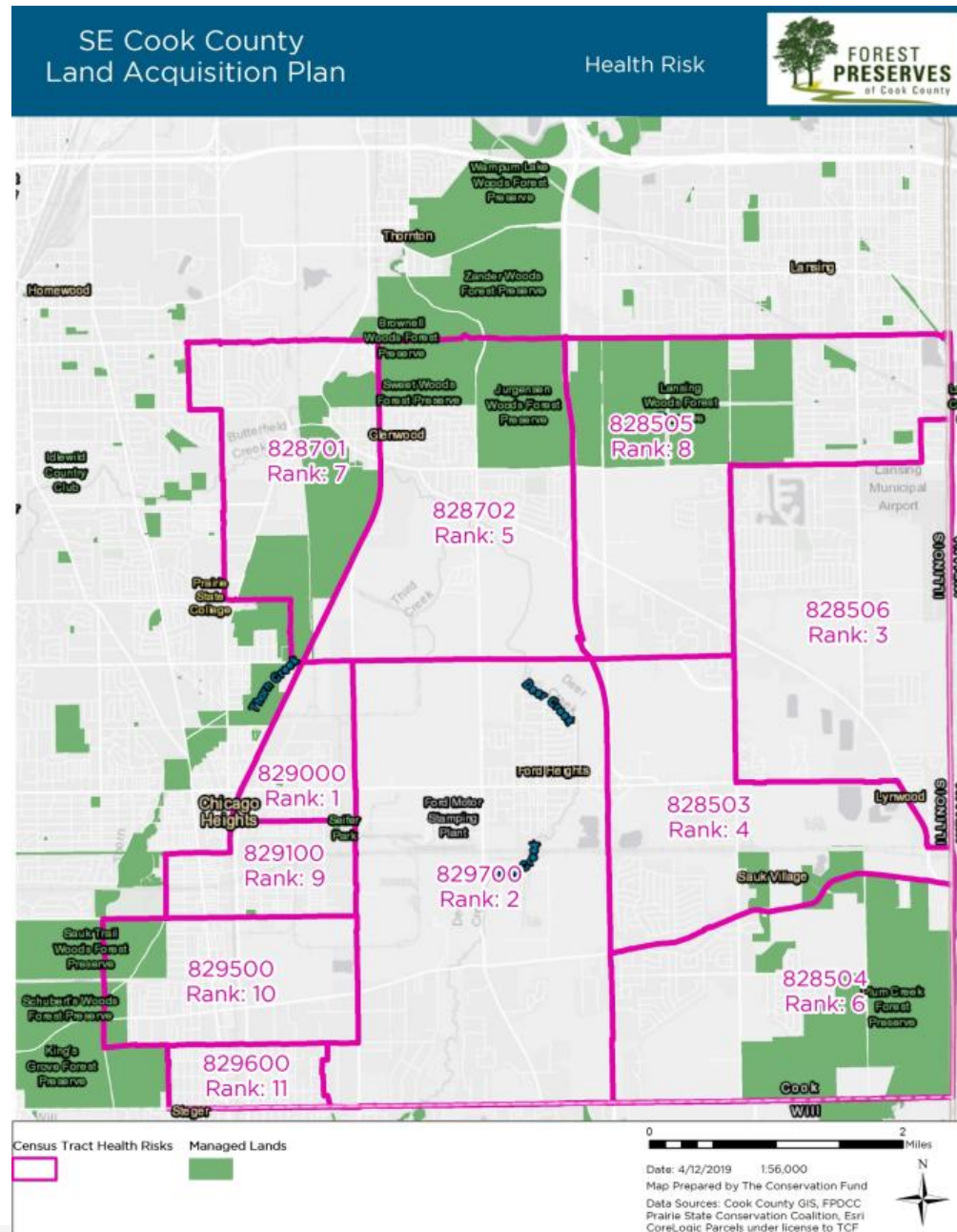
- % 65 years +
- % 17 & younger
- % Disability
- % Single parent < 18 years old

## Minority Status & Language

- % Minority
- % English as 'second' language

## Housing & Transportation

- % Multi-family housing
- % Mobile home
- % 'crowded' People > Rooms
- % No vehicle
- % Institutionalized



	Scenario: Flood Mitigation	Inholdings	Equity	Connectivity	Ecological
111 Stream/Creek Corridors	10	20	5	40	40
112 CW Green Infrastructure Vision 2.3	10	60	5	40	40
113 Floodplains	40	10	45	20	10
114 Flood Suspectibility Index	40	10	45	0	10
	100	100	100	100	100
121 Parcel Size	40	20	10	5	30
122 Adjacent to Existing Managed Lands	40	70	30	60	60
123 Adjacent to Existing & Planned Trails	20	10	60	35	10
	100	100	100	100	100
131 Social Vulnerability Index	100	100	100	100	100
	100	100	100	100	100
11 Natural Resource Protection & Hazard Mitigation	80	15	20	50	80
12 Size & Location Characteristics	15	80	30	40	15
13 Social Vulnerability Index	5	5	50	10	5
	100	100	100	100	100

Weights (%)

	Scenario: Flood Mitigation	Inholdings	Equity	Connectivity	Ecological
111 Stream/Creek Corridors	8	3	1	20	32
112 CW Green Infrastructure Vision 2.3	8	9	1	20	32
113 Floodplains	32	1.5	9	10	8
114 Flood Suspectibility Index	32	1.5	9	0	8
121 Parcel Size	6	16	3	2	4.5
122 Adjacent to Existing Managed Lands	6	56	9	24	9
123 Adjacent to Existing & Planned Trails	3	8	18	14	1.5
131 Social Vulnerability Index	5	5	50	10	5
TOTAL WEIGHT = 100	100	100	100	100	100

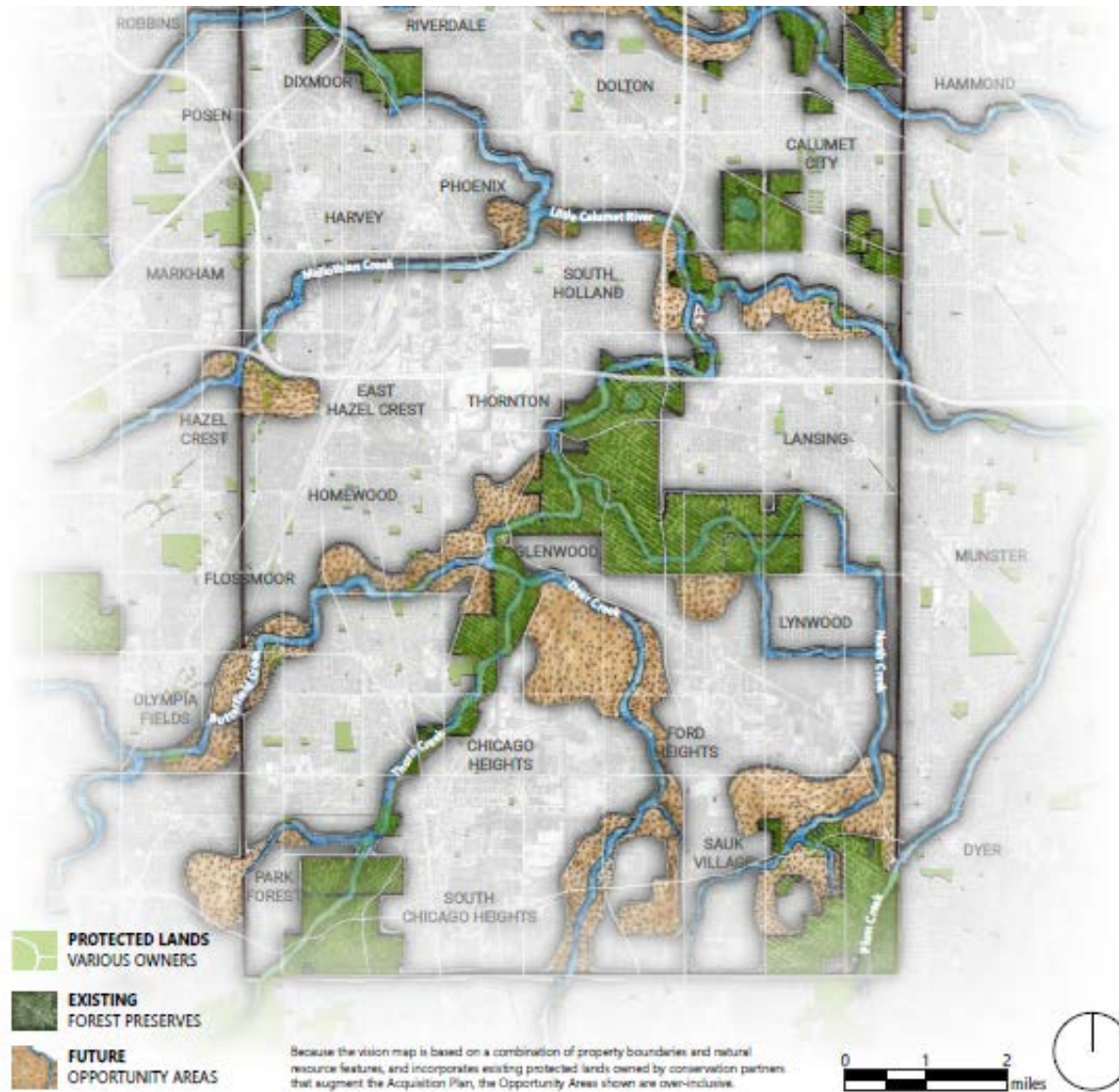
1. Ecological Value
2. Flood Mitigation
3. Inholdings/Adjacency
4. Connectivity (Streams, Trails)
5. Equity/Social Vulnerability

## FOREST PRESERVES OF COOK COUNTY VISION MAP FOR SOUTHEAST COOK COUNTY

**Table 4. Focus Area**

SUITABILITY ANALYSIS RESULTS FOCUS AREA	NO. OF PARCELS	NO. OF ACRES
Total	24,807	20,477
Meets 5 of 5 scenarios	61	2,503
Meets 4 of 5	131	2,328
Meets 3 of 5	110	1,638
Meets 2 of 5	159	1,161
Meets 1 of 5	658	2,025
Meets 0 of 5	23,688	10,822

**Source:** The Conservation Fund





THE  
CONSERVATION FUND