Mapping Green Infrastructure

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Project Manager

What is HeartLands Conservancy?

Mission

Provide leadership and solutions to sustain and enrich the diverse environmental resources of Southwestern Illinois

Vision

Communities with healthy and sustainable air, land, and water resources for current and future generations.

- Founded in 1989
- 501(c)(3) nonprofit charitable organization
- Independent corporation

Investing In The Nature Of Southwestern Illinois

- 7 County Primary Service Area
- 2.5 million acres
- 670,000 residents
- 7,000 acres protected
- $30 Million+ invested
- 9 Employees
- 28 years in operation

How are we funded?

Variety of Sources:

- Service Contracts with Local Government & Agencies

- Foundation, State, and Federal Grants

- Donations

- Corporate Sponsors

- Judgments/Settlements

How do we accomplish our mission?

Three Priorities

- Land Conservation

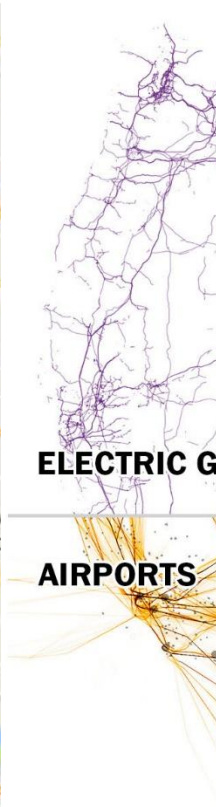- Building Greener Communities

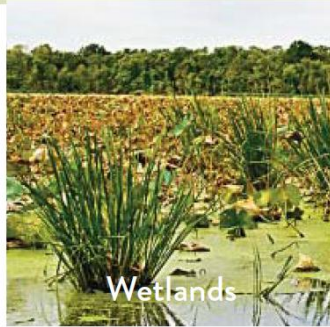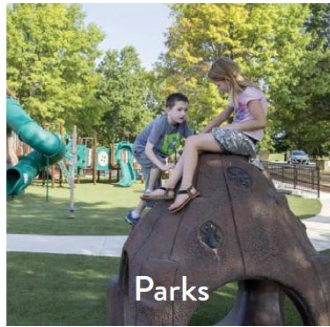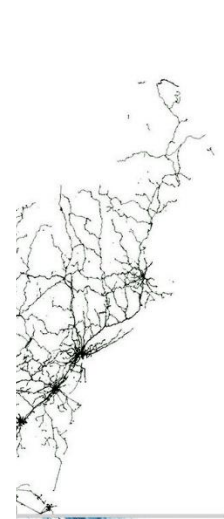- Engaging People with Nature
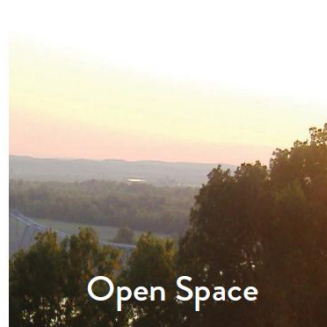
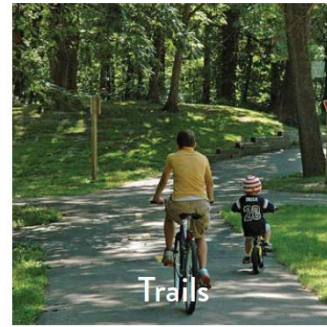Floodplain

Trees

Farmland

Wetlands

Natives

Prairies

Parks

Open Space

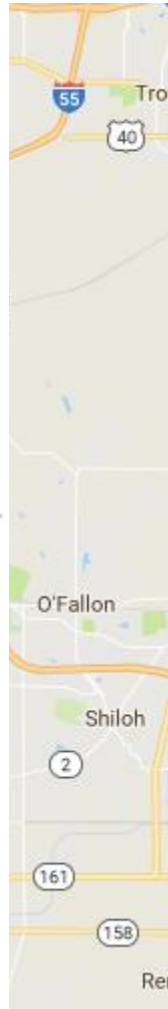Trails
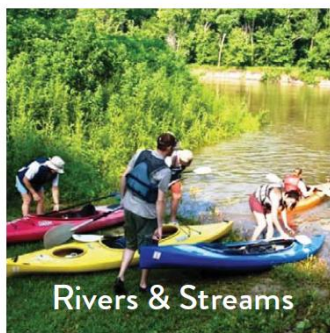
Rivers & Streams

Cultural Sites

Woodlands

ELECTRIC G

AIRPORTS

Green Infrastructure Framework

'An interconnected network of natural areas and other open spaces that conserves natural ecosystem values and functions, sustains clean air and water, and provides a wide array of benefits to people and wildlife. In short-
Our *Natural* life-support system.'

(Benedict and McMahon, 2006)

Why is Green Infrastructure Important?
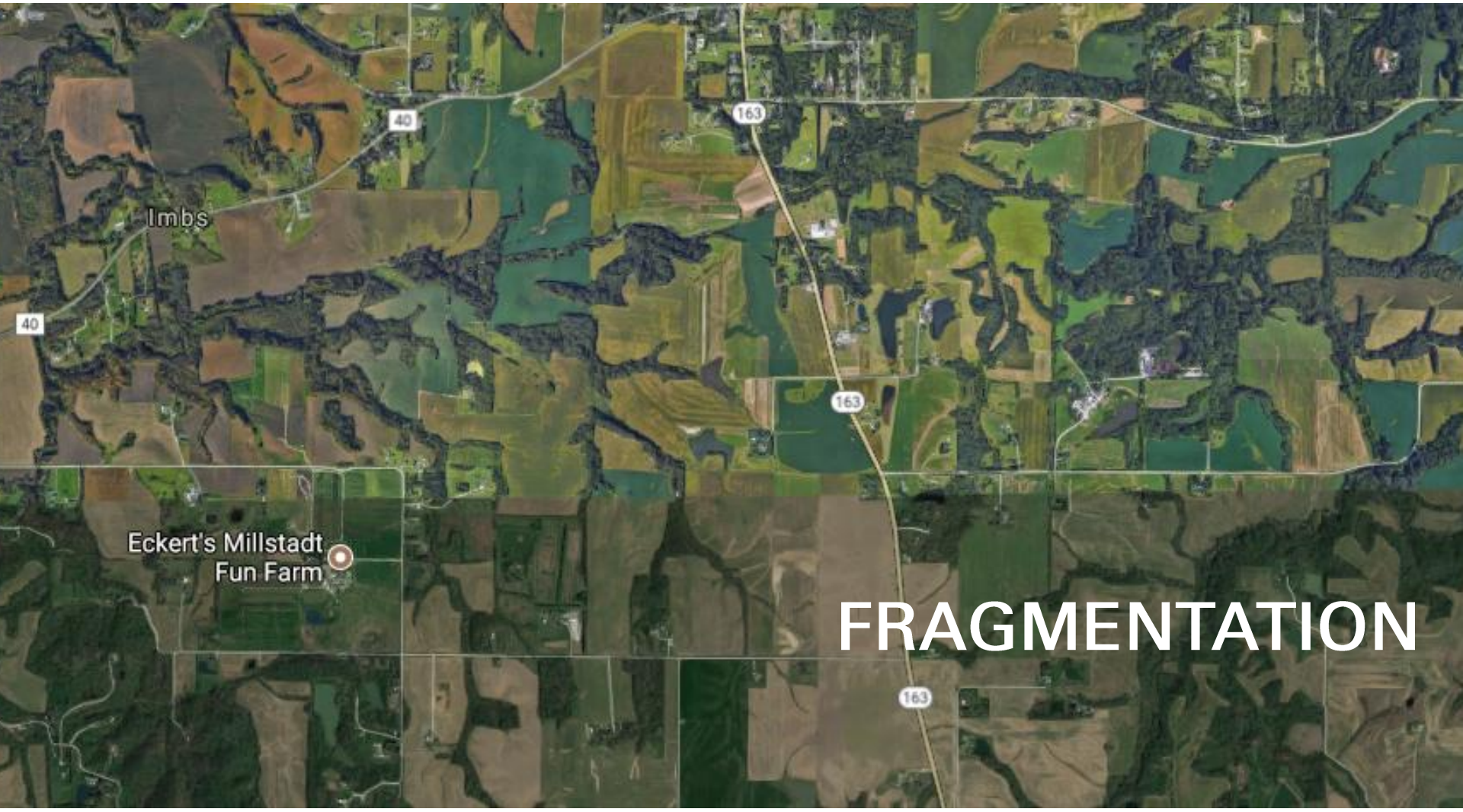
FRAGMENTATION

Why is Green Infrastructure Important? Fragmentation

- Decreased Habitat
- Less diversity-rich and rare habitats
- Loss of corridors for large species travel
- Increased 'Edge Habitat'
  - Exotic/Invasive Species
  - Increased human interaction, vehicle crashes
  - Increased Spread of Pathogens

Why is Green Infrastructure Important? Public Health Risks

- Degraded Air Quality

- Higher Humidity and Increase in Heat Wave Intensity/ Frequency

- Degraded Water Quality

Why is Green Infrastructure Important?
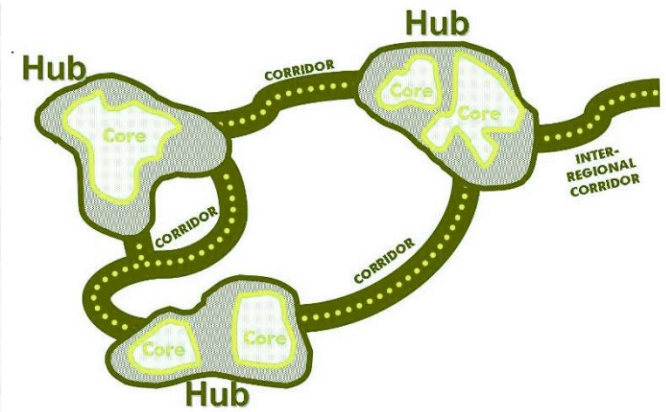## Loss of Well Being

- Nature Deprivation

- Increase in obesity, cardiovascular disease, asthma, stress, depression

- Increase in pathogens , less resistance to pathogens

# Green Infrastructure Framework for Southwestern Illinois

- Use GIS to analyze Land Use & Land Cover data in order to identify prime places for Hub and Corridor Connections for a Regional Green Infrastructure Plan.

Hartford

Edwardsville

Marine

I-70

Mitchell

143

I-270

Glen Carbon

Pontoon Beach

Highland

40

Maryville

157

I-70 162

St. Jacob

Granite City

I-255

Troy

40

203

160

111

Madison

I-55

Venice

40

Collinsville

4

Brooklyn

Fairmont City

159

East St. Louis

I-64

Caseyville

Lebanon

Summerfield

Fairview Heights

O'Fallon

50

Sauget

Alorton

Centreville

Shiloh

I-64

New Baden

Cahokia

50

Swansea

Scott AFB

East Carondelet

I-255

Mascoutah

Dupo

163

Belleville

158

Rentchler

177

Millstadt

Freeburg

15

Smithton

Fayetteville

St. Libory

Floraville

Paderborn

Darmstadt

Hecker

New Athens

13

Lenzburg

Marissa

Legend

(M) Metrolink Stations

•— Metrolink

Interstate

Rail Lines

Streams

Wetlands

Public Open Space - State

Public Open Space - Federal

Public Open Space - County, Municipal
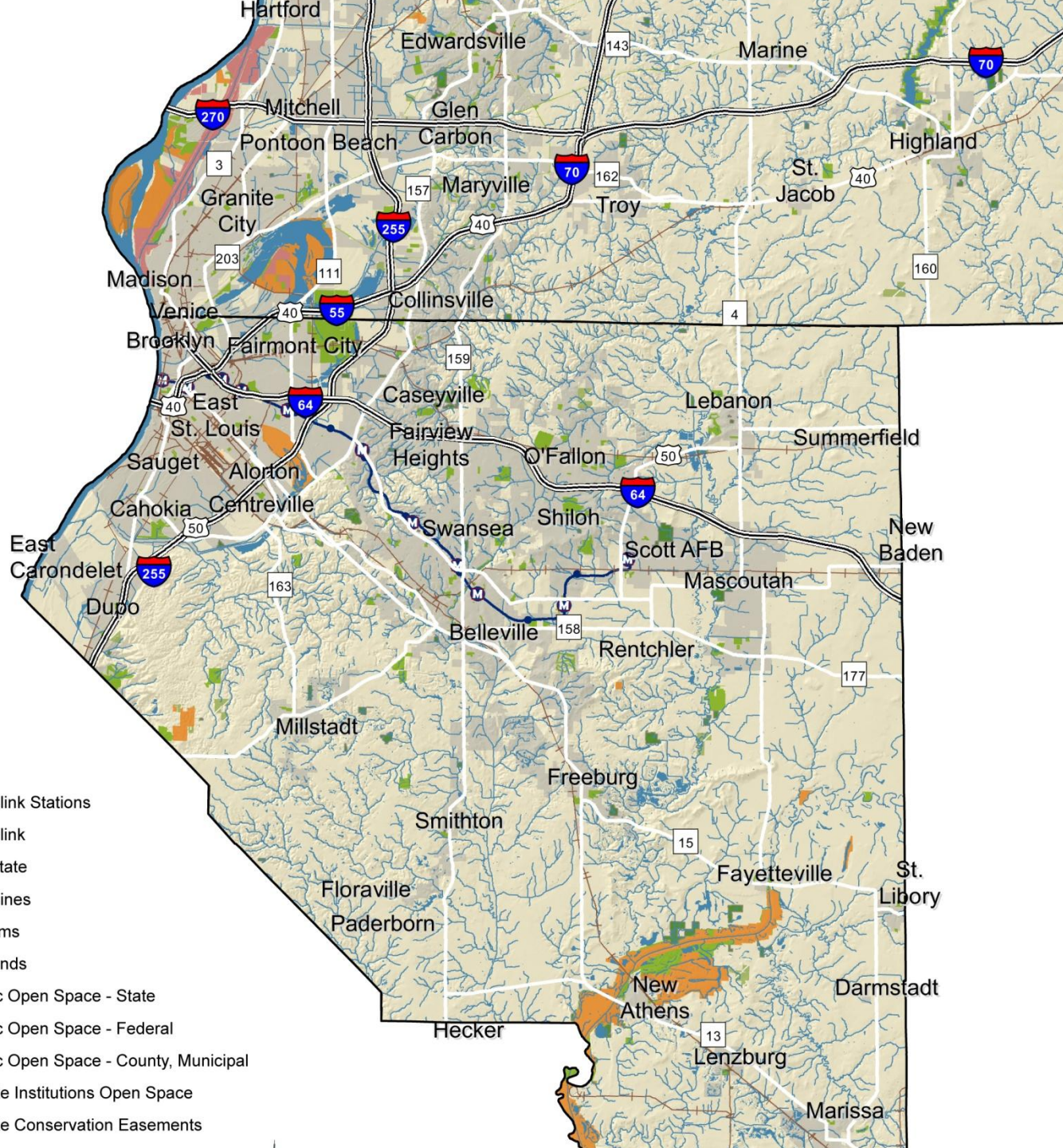
Legend

- ⓜ Metrolink Stations
- —•— Metrolink
- ══ Interstate
- ┼┼ Rail Lines
- —— Streams
- ▮ Wetlands
- ▮ Public Open Space - State
- ▮ Public Open Space - Federal
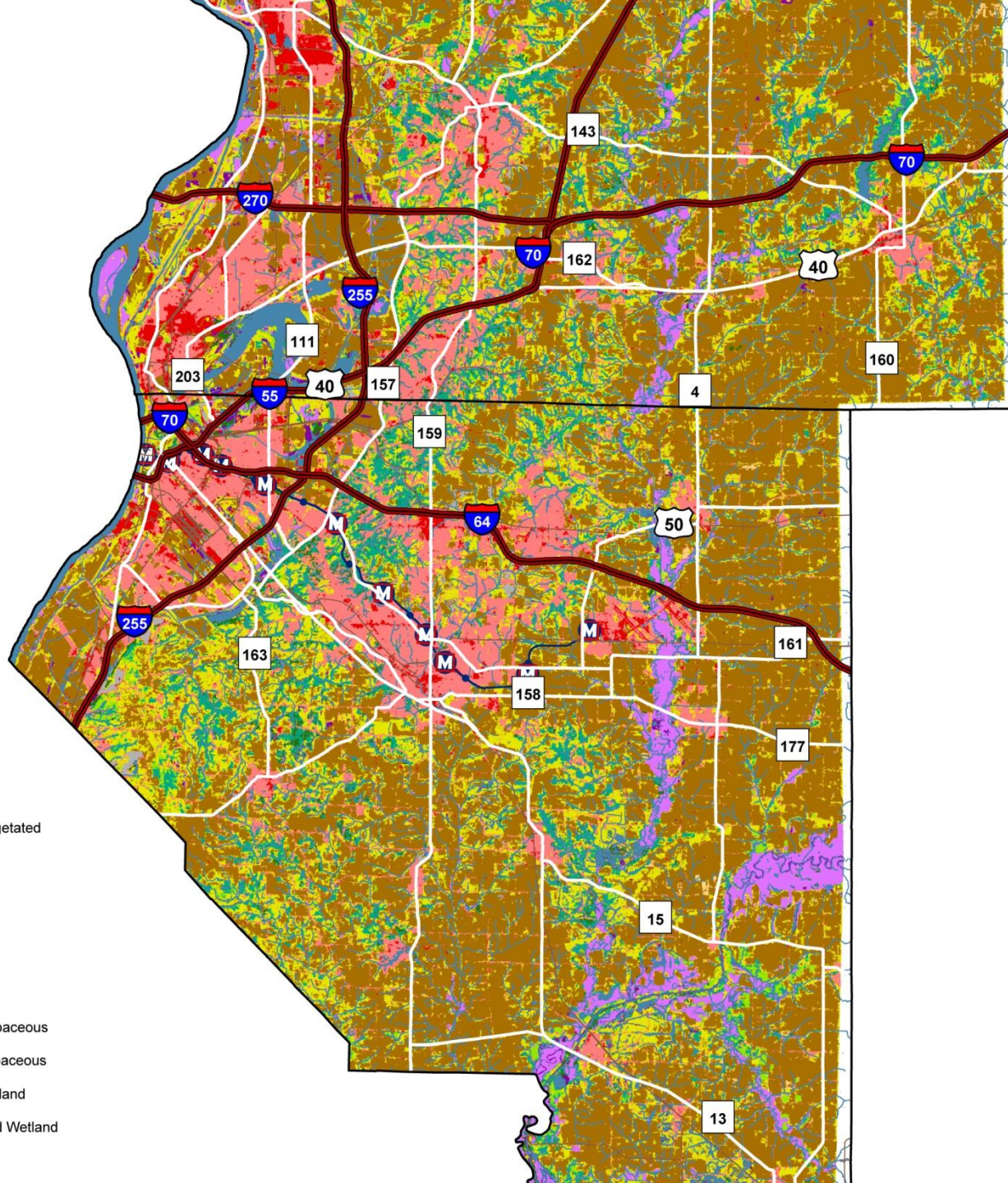- ▮ Public Open Space - County, Municipal
- ▮ Private Institutions Open Space
- ▨ Private Conservation Easements

Legend

Interstate

M Metrolink Stations

Metrolink

Rail Lines

Land Cover

- Urban High Intensity
- Urban Low Intensity
- Barren or Sparsley Vegetated
- Cropland
- Grassland
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Deciduous-woody Herbaceous
- Evergreen-woody Herbaceous
- Woody-dominated Wetland
- Herbaceous-dominated Wetland
- Open Water

Legend

Ⓜ Metrolink Stations

Metrolink

Interstate

Rail Lines

Existing Trail

Planned Trail

Existing On-Road Bikeway

Planned On-Road Bikeway

Forest Cores (>10 acres)

Streams

Streams Buffer (Urban 50ft.; Non-Urban 100ft.)

Wetlands

Wetland Buffer (300 ft.)

Public Open Space - State

Public Open Space - Federal

Public Open Space - County, Municipal

Private Institutions Open Space

Edwardsville
Marine
Pierron
Mitchell
Glen Carbon
Highland
Madison
Pontoon Beach
Maryville
St. Jacob
Granite City
Troy
Venice
Collinsville
Brooklyn
Fairmont City
Caseyville
East St. Louis
Fairview Heights
O'Fallon
Lebanon
Summerfield
Sauget
Alorton
Swansea
Shiloh
Scott AFB
New Baden
Cahokia
Centreville
Belleville
Mascoutah
East Carondelet
Rentchler
Dupo
Millstadt
Freeburg
Smithton
Fayetteville
St. Libory
Floraville
Paderborn
New Athens
Darmstadt
Lenzburg
Marissa

N

Legend

- **Ⓜ** Metrolink Stations
- ●— Metrolink
- Interstate
- ┼ Rail Lines
- — Existing Trail
- ••• Planned Trail
- — Streams
- ▨ IL Natural Area Inventory 2014
- ▩ ESTL Ecosystem Identified Area
- ■ Archeological Sites
- ■ Forest Cores (>10 acres)
- ■ Forest Buffer (200 ft.)
- ■ Wetlands
- ■ Streams Buffer (Urban 50ft.; Non-Urban 100ft.)
- ■ Wetland Buffer (300 ft.)
- ■ Public Open Space - State
- ■ Private Conservation Easements

What's Next

- Use new refined urban land use to establish identify connections through cities.
  - Urban Forestry Program

- Work with local governments to move toward regional goals

- Engage with landowners using various tools for land conservation.

TOOLS

- PURCHASE or DONATION (Fee-Simple Ownership)

  - High Quality Natural Areas

  - Park & Recreation

  - Stormwater

  - Donated lands that don't meet criteria above can be sold and funds received can be then be invested in conservation
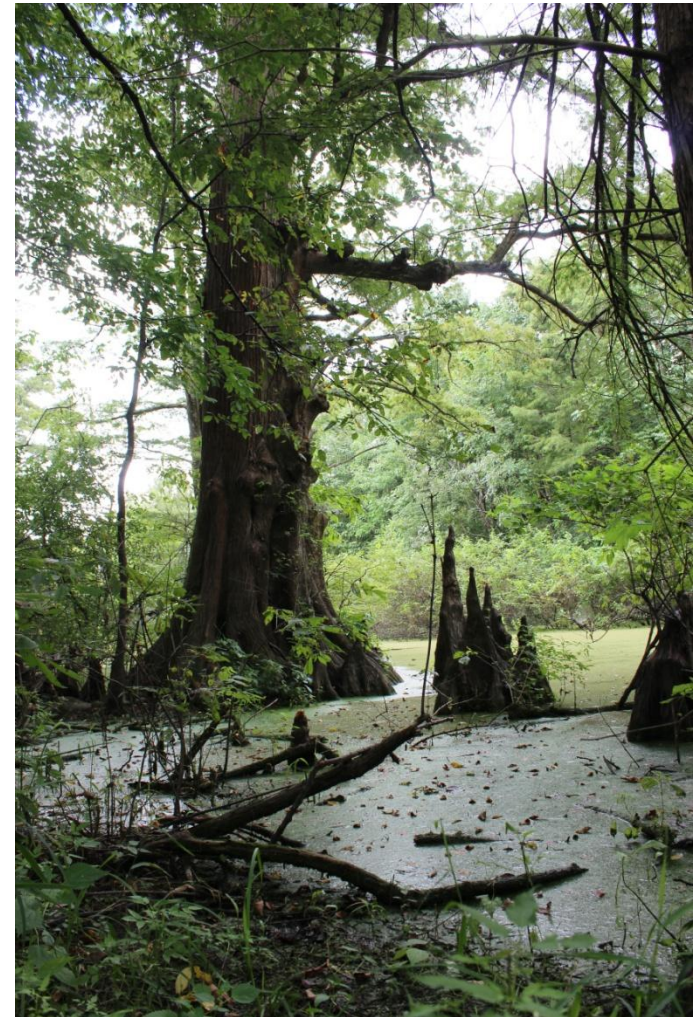
TOOLS

- EASEMENTS

- Donated vs. Purchased

- 2 Types
  - Conservation Easement

  - Agricultural Easement

ADDITIONAL TOOLS

- STATE – IL Nature Preserves Commission
  - Nature Preserve
  - Land & Water Reserve
  - Natural Heritage Landmark

- FARM BILL PROGRAMS
  - Conservation Reserve Program
  - Wetland Reserve Program
  - Wildlife Habitat Incentives Program

ADDITIONAL TOOLS

- POLICY

  o Conservation Overlay Districts / Conservation Subdivision

  o Protection of riparian corridors, stormwater management, urban forests, etc.

  o Environmental Mitigation

ADDITIONAL TOOLS

- PROGRAMS
  - HeartLands' Lots of Love – converting vacant lots into habitats that will increase biodiversity and improve water quality for the community.

Outcomes

- Implementing this Plan in 2 counties would:

  ○ Protect & buffer 88,000 acres of core forest.

  ○ Create 3,200 acres of riparian corridor

  ○ 84,000 acres of wetland buffer