The Illinois Comprehensive Wildlife Conservation Plan & Strategy
Version 2.0 (the next 20 years)

Illinois Landscape

Introduction

Illinois spans approximately 380 miles (615 km) north to south and is largely bounded by water with the Mississippi River on the west, the Ohio and Wabash Rivers to the south and east, and Lake Michigan in the northeast. The state shares a common border with six other states (i.e., Indiana, Iowa, Kentucky, Michigan, Missouri, and Wisconsin). Early descriptions of the area (Taylor et al. 2009) suggest the landscape was dominated by tallgrass prairie (35%), forestlands concentrated along waterways and in southern areas (41%), and wetlands including wet prairies (24%). Over the next 100 years this changed greatly as natural lands were shifted toward agricultural production, converted to wood products, and systematically drained to facilitate other highly managed uses (Barnhardt 2010, Iverson 1991). Reservoir construction, levee development, and the diversion of water from Lake Michigan into the Illinois River altered the patterns of water flow and water quality throughout the state. These types of activities occurred well into the 20th Century and some even continue in the present time.

Illinois has been known as the Prairie State since the 1840s due to the expansive prairie that once covered much of the northern and central part of the state. However the vast majority of that prairie has been repurposed for agricultural production or to support other human uses. Upon reflection about these changes Smith (1979) remarked that "By the beginning of the 20th Century, most of Illinois had been denuded of native vegetation."

More than thirty years ago the Critical Trends Assessment Project also recognized the magnitude of landscape modification in Illinois (CTAP 1994a):

> "HUMANS HAVE BECOME SO ECOLOGICALLY DOMINANT IN ILLINOIS that it is impossible to draw clear lines separating natural systems from the social, economic, political, and technological systems that influence them."

Despite these changes the lands and waters of Illinois continue to support thousands of wild animal and plant species. This Section of the Wildlife Action Plan will describe the extent and quality of the Illinois landscape and identify Conservation Action Strategies to enhance, protect, and recover it to maintain wild populations of native species.

Vegetative Cover in Illinois

We used the U.S. National Vegetation Classification 3.0 (Muldavin et al. 2025) to describe the character of terrestrial vegetation on the Illinois landscape (Figure II1). Nearly 75% of the landscape consists of lands managed intensively for human uses such as agriculture and urban development. Forested areas including Savannas and Woodlands make up over 16% while wetlands make up less than 1% of the state. Despite being the Prairie State only 6% of Illinois was classified as Prairie and this included all types of grasslands not just those that are remnants or considered high-quality (Table II1).

Existing vegetation cover reflects current and past land management efforts. LANDFIRE's Environmental Site Potential (ESP) was developed to represent terrestrial plant communities expected to occur under

current environmental conditions in the absence of human disturbance. We summarized the character of the Illinois landscape using the ESP to compare with existing conditions and to identify areas with high potential for restoration (Figure II2). This assessment suggests the Illinois landscape would consist of over 57% Prairie, 31% Woodlands & Savannas, and 8% Forest in the absence of current intensive human uses (Table II2). This differs greatly from existing conditions yet provides a spatial template to guide land restoration efforts toward appropriate Natural Communities throughout the state.

Landscape Classification for Native Species Management

The Illinois Natural Areas Inventory (INAI) defines Natural Communities as "ecological assemblages of co-existing, interacting species, considered together with their physical environment, and associated ecological processes, which reoccur on the landscape where similar conditions are present" (IDNR 2023). The Illinois landscape has been classified into Natural Community Types for terrestrial areas based on Natural Divisions (Schwegman 1973, White & Madany 1978) and for stream systems based on Ecological Drainage Units (Hinz et al. 2017). The classification systems derived from these efforts can be used to describe Natural Communities and to characterize landscape conditions from high quality to highly degraded as described in The Standards and Guidelines for the Illinois Natural Areas Inventory (IDNR 2023).

Natural, Working, and Developed Lands & Waters

As the majority of the Illinois landscape has been highly modified for human use we attempt to address the conservation of native wildlife and plants independently for lands that differ in their primary Landuse Sector (Figure II3). The designation of landscape units into these sectors is designed to describe the intended purpose of the land rather than the overall landscape context which surrounds it.

Natural Lands & Waters are defined here as those that are managed primarily for ecological benefit (e.g., Nature Preserves, Prairie Restorations). Over 5.5 million acres in Illinois were identified as Natural Lands & Waters making up just over 15% of the State of Illinois. Woodlands & Savannas are the majority of those lands (52.7%) and when combined with Forests (34.4%) make up more than 87% of Natural Lands. Prairie was identified on less than 1% of Natural Lands in Illinois (Table II3). Natural Lands & Waters include High-quality Natural Communities, habitats for state-listed species, and unusual concentrations of flora and/or fauna as identified in the Illinois Natural Areas Inventory (IDNR 2023). They may also include Outstanding Resource Waters, Restoration Areas, and Wilderness/Wildlife Areas with the appropriate management goals.

Working Lands & Waters are considered as those managed for specific human uses which also have substantial associated ecological benefits (e.g., timber production areas, reservoirs). Working Lands & Waters include Canals, Reservoirs, Farm Ponds, Transportation & Energy Rights-of-ways, Agricultural Easements, Production Forests, and designated Hunting and Fishing areas where human use is a major management objective.

Developed Lands & Waters are those managed almost exclusively for human use yet also serve as habitat for many native species (e.g., suburban yards, community recreational parks, stormwater detention ponds). Developed Lands include Residential Yards, Industrial Campus Lawnscapes, Pollinator Gardens, Rain Gardens, Detention/Retention Ponds, and even buildings and parking areas.

Nearly 85% or 30.5 million acres in Illinois were identified as Working & Developed Lands. The vast majority of these are designated for agriculture (23.8 million acres) and urban (3.2 million acres) purposes. The remainder are primarily classified as Prairie or Forest and include some grazing lands, recreational parks, and actively managed forests (Table II4).

Although there is overlap and interaction between these types of uses we may consider Threats, Stressors, and Conservation Action Strategies separately for these three Landuse Sectors (i.e., Natural Lands, Working Lands, and Developed Lands) in this Wildlife Action Plan. This approach acknowledges that native plants and wildlife occur within, and regularly use, the lands and waters of Illinois regardless of how we use these areas or perceive their quality.

Protected Lands and Waters

Protected Lands and Waters in Illinois occur in many forms and provide varied protections. Waters of the United States, Public Waters of the State of Illinois, Federal and State Lands, and private lands all have legal protections based on ownership and their defined use. These protections may restrict, or allow, public access and largely determine how these lands may be used. Within this Action Plan we consider lands that are publicly owned, privately owned for conservation purposes, and those with conservation easements as protected.

Publicly held land occurs in all three of the Landuse Sectors considered in this Plan. For example State Natural Areas, National Forests, municipal parks, roadways and their rights-of-ways, and even public buildings and their grounds are all managed for public use and can be considered protected at some level. Protected lands, especially those that have permanent status, are viewed as critical for providing habitat for native wildlife and plant species in Illinois (Glosser 2011).

We characterized Protected and Unprotected Lands in Illinois based on their Natural Community Class. These summaries include lands protected through ownership or easements by the public sector, private sector, municipalities, and the Illinois Nature Preserves Commission. Just over 1.5 million acres of land or 4.2% of Illinois' land area is considered protected at this time. The majority of these lands occur within the Forest (36.4%) and Woodland & Savanna (15.2%) Natural Community Classes while just over 11.1% are considered Prairie (Table II5). Unprotected lands comprise over 34.5 million acres of Illinois including 23.5 million acres used for agricultural production and 3.1 million acres for urban uses. Two million acres each of the Woodland & Savanna, Forest, and Prairie Natural Community Classes occur on unprotected lands in Illinois (Table II6). The vast expanse of unprotected land that still support these Natural Community Classes highlights the importance of these areas for native wildlife and plant species.

The Illinois Natural Areas Preservation Act (INAPA, 525 ILCS 30) envisioned a system of Nature Preserves to protect natural communities, and other elements of natural diversity, for the people of Illinois. **Natural Areas** are considered areas of land which contain High-Quality Natural Communities or "floral, faunal, ecological, geological or archaeological features of scientific, educational, scenic or esthetic interest" in the opinion of the Illinois Nature Preserves Commission (INPC) which was established in 1963. Lands dedicated as Nature Preserves are permanently held in trust and "declared to be put to their highest, best and most important use for the public benefit". Dedicated Nature Preserves have the highest level of protection provided by the State of Illinois. Natural Areas that support important natural heritage features can also be registered as Land and Water Reserves. Registered Areas have fewer restrictions on their potential uses but are also protected under INAPA. As of September 9, 2025 there

were 424 Dedicated Nature Preserves protecting 65,368 acres and 216 Registered Land and Water Reserves protecting 60,041 acres enrolled within the Illinois Nature Preserves System.

The Illinois Natural Areas Inventory (INAI) was initiated in the late 1970s to identify Natural Areas that might be protected as Nature Preserves by the Illinois Nature Preserves Commission (White 1978). Sites were categorized based on features that would qualify them as Natural Areas. The INAI has become a collection of biological and ecological information associated with sites considered to have statewide conservation significance and are thus worthy of protection. The INAI is actively maintained by the Natural Areas Evaluation Committee using The Standards and Guidelines for the Illinois Natural Areas Inventory (IDNR 2023). INAI data are curated by the Natural Heritage Database Program within the Illinois Department of Natural Resource's Division of Natural Heritage.

Midwest Conservation Blueprint

Intended as a tool to coordinate conservation the Midwest Conservation Blueprint was codeveloped with participation from over 20 organizations as a regional basemap of priority lands and waters. The Blueprint acknowledges that all lands and waters can contribute to conservation in the Midwest while prioritizing landscape units into categories that best meet the over 20 environmental and social indicators, or targets, that inform it. We described the Illinois landscape using the Midwest Conservation Blueprint (2024 version; Figure II4, Table II7).

Despite the highly modified landscape nearly 14% of Illinois is classified as a high (3.2 million acres) or a highest (1.68 million acres) conservation priority with another 14% considered a medium (5.06 million acres) conservation priority within the Blueprint (Table II7). This includes over 2.9 million acres of Illinois' Natural Lands (Table II8) and over 1.9 million acres of Working and Developed Lands (Table II9). When we include lands classified as Medium Conservation Priorities an additional 1.8 million acres of Natural Lands and nearly 3.2 million acres of Working & Developed Lands of regional importance occur in Illinois.

The Working & Developed Lands Sectors contain more than 5.5 times the area of the Natural Lands Sector in Illinois. As a result the number of acres of Working & Developed Lands (5.16 million acres; Table II8) that are considered Medium, High, or Highest Priorities within the Midwest Conservation Blueprint is greater than the number of acres in these Priority Classes considered Natural Lands (4.8 million acres; Table II9). This suggests that many opportunities exist for land protection and stewardship among the Working and Developed Lands of Illinois.

Relationship to Wildlife Action Plan Goals

Our Vision for the Illinois Landscape is one that supports resilient populations of native wildlife and plants along with human endeavors. Focusing on maintaining a broad array of Natural Communities and the ecological functions they support allows us to more effectively use our conservation resources to maintain native species throughout the State of Illinois. The Landscape Section of this Plan is focused on increasing the extent and quality of shared landscapes by concentrating on the protection, enhancement, and recovery of Natural Communities that support native species. Increasing the extent of shared landscapes can include transitioning between the Developed, Working, and Natural Lands Sectors or simply allowing increased native species cohabitation. Increasing quality includes conducting

restorations and providing enhancements that allow the landscape to better support native wildlife and plant species and can occur in any of the Landuse Sectors.

Objectives for Conserving the Illinois Landscape

We reviewed Conservation Objectives identified in previous and current versions of the Illinois Wildlife Action Plan, Illinois Forest Action Plan, Illinois Statewide Comprehensive Outdoor Recreation Plan, and other conservation plans associated with the Illinois Landscape (e.g., Chicago Wilderness Alliance's Green Vision Initiatives Publications). Based on this review we identified four 20-year Objectives for the Landscape Section of the Illinois Wildlife Action Plan.

- **Increase the Extent of Shared Lands that support Native Species by 30%**
- **Increase the Capacity of Shared Lands to support Viable Populations of Native Species by 30%**
- **Increase the Extent of Protected Land in Illinois by 30%**
- **Increase the Connection and Appreciation of the public to Natural Communities by 30%**

Threats to the Illinois Landscape

We reviewed Threats to Natural, Working, and Developed Lands identified in previous and current versions of the Illinois Wildlife Action Plan, Illinois Forest Action Plan, Illinois Statewide Comprehensive Outdoor Recreation Plan, and other conservation plans associated with the Illinois Landscape (e.g., Chicago Wilderness Alliance's Green Vision Initiatives Publications). There were many similarities among the Threats reviewed. We aggregated these Threats into four Threats Categories for the Landscape Section of the State Wildlife Action Plan.

Landscape Transition

Landscape Transition refers to changes in the extent or quality of Natural Communities to support native species. Transitions may be positive or negative and can be described as changes in water quality and quantity, fragmentation, disturbance, habitat loss, hard edges between Natural Communities, hydrology, or the presence or construction of structures for human use.

- Natural Community Degradation – decrease in quality or extent
- Natural Community Transformation – shift in Natural Community Class, Subclass, or Type

Invasive Species and Diseases

Invasive Species and Diseases threaten Natural Communities by undermining their composition and ecological function. The results of invasive species establishment may be observed as shifts in local environmental conditions through shading, allelochemical release, community simplification associated with nutrient competition, or as direct or indirect mortality events associated with disease or pathogens.

- Natural Community Degradation due to invasive species replacement of native species
- Diseases and/or pathogens that impact keystone species within Natural Communities

Pollution and Pollutants

Pollution and Pollutants threaten Natural Communities by changing underlying environmental conditions and altering ecological functions. The results of these changes may change the expression of the Natural Community by directly eliminating sensitive species or by shifting competitive advantages between species.

- Direct impacts of pollution and pollutants reducing Natural Community Quality and the ability to support Native Species.
- Direct impacts of pollution and pollutants reducing the extent of Natural Communities and their ability to support Native Species.

Climate Change

Climate Change threatens Natural Communities by fundamentally altering the environmental conditions they experience. Changes in storm frequency and severity, shifts in thermal regimes, and altered seasonal patterns of precipitation can transform the expression of Natural Communities at individual sites.

- Direct impacts on environmental conditions leading to Natural Community Transition
- Seasonal shifts in ecological functions (e.g., nutrient processing, carbon sequestration) and the ability to support Native Species.

Conservation Action Strategies for the Illinois Landscape

We reviewed over 800 Conservation Actions identified in previous and current versions of the Illinois Wildlife Action Plan, Illinois Forest Action Plan, Illinois Statewide Comprehensive Outdoor Recreation Plan, and other conservation plans associated with the Illinois Landscape (e.g., Chicago Wilderness Alliance's Green Vision Initiatives Publications). There were many similarities among the Actions reviewed. We aggregated Actions designed to meet analogous objectives into five Conservation Action Strategies for this Section of the State Wildlife Action Plan. Conservation Actions identified within each Strategy are examples of the types of activities included as part of that Strategy but are not meant to represent a full accounting of all possible Conservation Actions that support the Strategy.

Land Protection Strategy

The Land Protection Strategy is designed to identify, prioritize, and protect Natural Communities and the native species they support. Land Protection is designed to limit future uses to those that will not degrade existing conditions of the Natural Community or decrease its suitability for native species. This may be accomplished by land acquisition or through permanent or term-limited conservation easements. This Strategy is applicable to all Landuse Sectors and Natural Community Types identified in this Plan.

1. Identify priority areas for maintaining native species
    - High-quality features (INAI Category I)
    - Habitats for state-listed species (INAI Category II)
    - Unusual concentrations of flora and/or fauna (INAI Category VI)

    - Promoting Large and Contiguous Landscapes
    - Priorities within the Midwest Conservation Blueprint and other Regional and Local Conservation Planning Initiatives
2. Land Protection approaches available within major Landuse Sectors
    - Support Education and Outreach Programs that describe Land Protection Benefits and Opportunities (all Sectors)
    - Natural Lands – INPC Programs, Public Acquisition or easements, Land Trust Acquisition or easements
    - Working Lands – agricultural conservation easements, forest easements, Farm Bill Programs (CRP, CREP), Rights-of-way agreements
    - Developed Lands – community gardens, community and neighborhood parks, greenways (trails and bike paths), rain gardens, detention and retention ponds

Land Stewardship Strategy

The Land Stewardship Strategy is designed to identify, maintain, enhance, recover and restore Natural Communities that support native species. Land Stewardship includes activities that restore or mimic disturbance regimes, improve the compositional and/or structural integrity of Natural Communities, or that increase the suitability of an area for native species populations. This Strategy is applicable to all Landuse Sectors and Natural Community Types identified in this Plan.

1. Natural Community Identification & Tracking
    - Monitor Quality Indicators for Natural Community Classes
    - Maintain the INAI: Site surveillance, Feature Review, Feature Grading
2. Recovery and Restoration of Natural Communities
    - Restoring or mimicking disturbance regimes
        - Prescribed Fire Program
        - Hydrologic Control to mimic a natural hydrologic regime
    - (Re)introduction of Native Species
        - Emphasize native plantings in all Landuse Sectors
        - Promote use of native plants with high wildlife value (e.g., host plants)
    - Use(s) of buffers
3. Management of Protected Sites
    - Maintaining Native Communities
    - Enhancement of Natural Communities
    - Development and Implementation of Management Plans & Schedules (INPC Sites)
4. Shared Spaces – improving suitability for native species populations
    - Support Education and Outreach Efforts that describe approaches and opportunities that improve Land Stewardship
    - Wildlife Friendly Landscaping
    - Wildlife Friendly Building Design

Natural Community Connectivity Strategy

The Natural Community Connectivity Strategy is focused on reducing fragmentation and improving connections between Natural Communities. Activities directed toward removing or mitigating physical barriers, reconnecting isolated Natural Communities, and promoting landscape scale management are included here. This Strategy is applicable to all Landuse Sectors and Natural Community Types identified in this Plan.

1. Land Connectivity efforts
    - Remove or Mitigate Barriers within or between Natural Communities
    - Maintain Seasonal and Intermittent Habitats within Natural Communities
    - Manage for large and contiguous Landscapes
    - Develop and manage Corridors for Connectivity
2. Water Connectivity efforts
    - Remove or Mitigate Barriers within or between Natural Communities
    - Maintain Seasonal and Intermittent Habitats within Natural Communities
3. Support Education and Outreach describing approaches and opportunities to improve Natural Community Connectivity

Invasive Species and Diseases Strategy

The Invasive Species and Diseases Strategy is designed to detect, control, and prevent invasive species and diseases from degrading Natural Communities and the native species they support. Activities to identify, prevent introduction and establishment, or control and treat invasive species and diseases are included here. This Strategy is applicable to all Landuse Sectors and Natural Community Types identified in this Plan. While these activities could have been included within the Land Stewardship Strategy they are contained within a separate Strategy due to the magnitude of their Threat to Natural Communities throughout Illinois.

1. Improve Resistance and Resiliency of Natural Communities through Stewardship
    - Implement the Land Stewardship Strategy
    - Manage Natural Communities by enhancing conditions for Native Species
2. Establish and Support Early Detection and Rapid Response efforts
    - Identify new invasive species locations through community monitoring and reporting
    - Control invasive species and plant diseases before they become widespread
3. Increase biosecurity and prevention efforts to minimize invasive species or disease introductions
    - Support placement of boot brush stations, boat washing stations, and similar facilities to prevent movement and establishment of invasive species
    - Implement equipment cleaning requirements to prevent movement and establishment of invasive species while working in sensitive areas
    - Outreach and enforcement of Illinois' Noxious Weed Act and Exotic Weed Act
4. Increase Capacity to identify and control invasive species and diseases
    - Establish and support Cooperative Weed Management Areas
    - Establish and support invasive species strike teams
5. Support Education and Outreach Activities
    - Publish Best Management Practices for invasive species control

- Publish guidelines for minimizing transfer and establishment of invasive species or diseases to new areas

Pollution Reduction Strategy

The Pollution Reduction Strategy is focused on reducing the magnitude and extent of non-point source pollution impacts on Natural Communities and the native species they support. Conservation Actions that limit the use, transmission, or impacts of non-point source pollutants are included here. This Strategy is applicable to all Landuse Sectors and Natural Community Types identified in this Plan.

1. Implement practices that reduce stormwater runoff and associated pollutant transport
    - Conduct Natural Community enhancements to improve infiltration and water storage
    - Implement Edge of Field Buffer practices to intercept and slow runoff
    - Establish native plantings along rights-of-ways in conjunction with stormwater BMPs
    - Create and maintain Street and Parkway Buffers to intercept and slow runoff
2. Implement management practices that reduce the use of Potential Pollutants
    - Implement effective and efficient Nutrient Management Practices for commercial agriculture, home and community gardens, botanical gardens, outdoor recreational facilities, public parks, and lawnscapes.
    - Implement integrated pest management approaches that use Pesticides only when necessary and that minimize non-target impacts associated with runoff and drift.
    - Implement effective and efficient deicing approaches for roadways that minimize the use of road salt and deicing chemicals while maintaining safety.
    - Properly dispose of unused chemicals including cleaning agents, fertilizers, herbicides, personal care products, pesticides, and pharmaceuticals.
3. Implement and participate in programs designed to address nutrient inputs into aquatic systems
    - Implement the Illinois Nutrient Loss Reduction Strategy
    - Support the Illinois Nonpoint Source Management Program managed by the Illinois Environmental Protection Agency
    - Conduct Outreach programs to reduce sediment and nutrient inputs to aquatic systems
4. Implement programs and management practices that reduce greenhouse gas emissions
    - Support efforts to reduce energy consumption and increase energy efficiencies
    - Implement the Land Stewardship Strategy to enhance resilience of Natural Communities
    - Incorporate areas dedicated to carbon sequestration and storage within the Natural Community Connectivity Strategy

Monitoring the Illinois Landscape

The U.S. National Vegetation Classification (USNVC) will continue to be used to describe the Illinois Landscape and the extent of Natural Community Classes within it. This classification framework is maintained through a Federal and Non-federal partnership using a codeveloped data standard. This standard outlines a process for describing, reviewing, and maintaining a vegetation hierarchy that can be applied to describe the landscape.

The Illinois Natural Areas Inventory (INAI) Standards & Guidelines will provide a standard monitoring methodology for determining the quality of lands and waters in Illinois. While the INAI is maintained to acknowledge natural heritage features of statewide significance the evaluation and grading process is designed to assess Natural Community Types of all qualities.

References

Glosser, D. 2011. Illinois Sustainable Natural Areas Vision. Environmental Planning Solutions, Inc., for the Illinois Natural History Survey. 250 pp.

Hinz Jr., L.C., B.A. Metzke, and J.M. Vandermyde. 2017. Hierarchical Framework for Wadeable Stream Management and Conservation: Final Report. Illinois Natural History Survey Technical Report 2017(14).

Illinois Department of Natural Resources. 2023. Illinois Natural Areas Inventory Standards and Guidelines (revised edition). Springfield, Illinois. 105 pp.

Muldavin, E., D. Faber-Langendoen, A. Davidson, and A. Conley. 2025. U.S. National Vegetation Classification 3.0: User Guide. Proceedings of the U.S. National Vegetation Classification. USNVC-Proc-8. October 2025. Ecological Society of America, Washington, DC., USA. 20 pages + Appendices.

Schwegman, J.E. 1973. Comprehensive plan for the Illinois Nature Preserves Commission, Part 2 – The Natural Divisions of Illinois. Illinois Nature Preserves Commission, Springfield, Illinois. 32 pp.

White, J. 1978. Illinois Natural Areas Inventory – Technical Report. Illinois Department of Conservation, Springfield, Illinois. 426 pp.

White, J. and M.H. Madany. 1978. Classification of natural communities in Illinois. Pages 310 – 405. *In* White, J. 1978. Illinois Natural Areas Inventory – Technical Report. Illinois Department of Conservation, Springfield, Illinois. 426 pp.

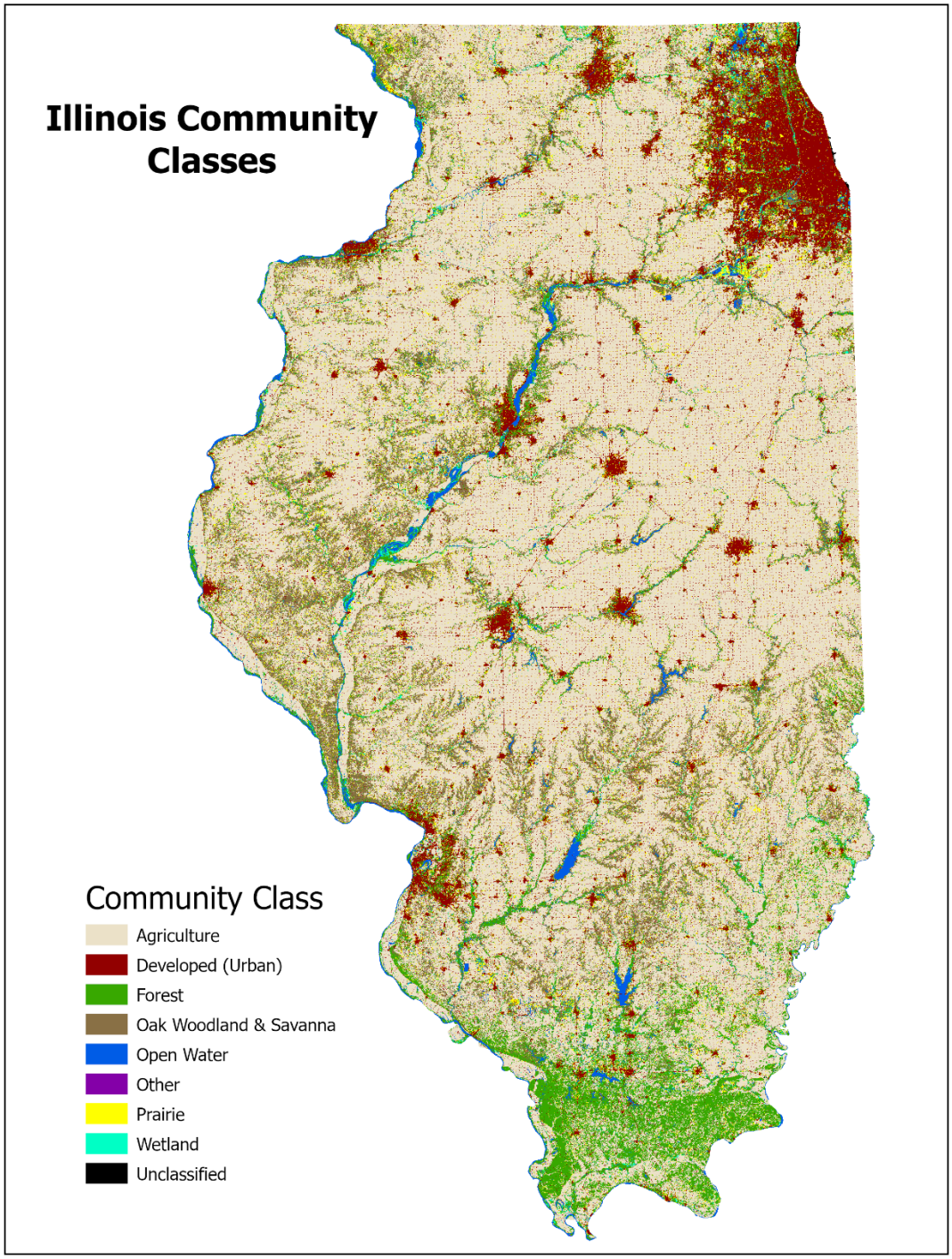

Figure II1. Landcover Classes for current land cover in Illinois based on the National Vegetation Classification. "Agriculture" and "Urban" include many Natural Community Classes modified for human use. "Other" includes Recently Disturbed, Eastern North American Cliff & Rock Vegetation, and Eastern North American Coastal Beach & Rocky Shore. "Unclassified" did not have a value assigned.

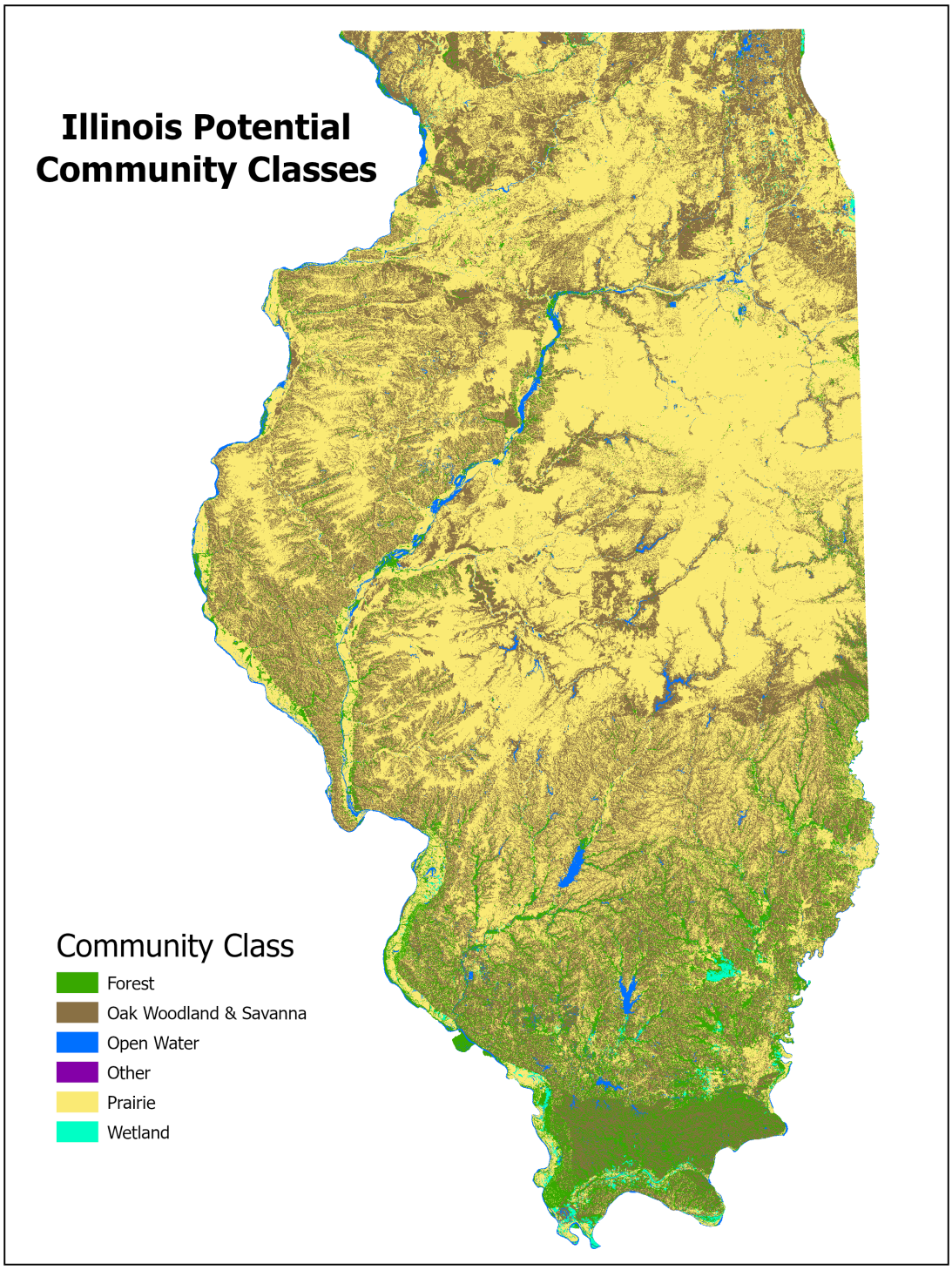

Figure II2. Terrestrial Natural Community Classes in Illinois based on the Environmental Site Potential. "Other" includes everything that did not fit into a standard Class (primarily Eastern North American Coastal Beach & Rocky Shore).

Table II1. Natural Community Classes in Illinois based on current land cover associated with the National Vegetation Classification. "Agriculture" and "Urban" include many Natural Community Classes modified for human use. "Other" includes Recently Disturbed, Eastern North American Cliff & Rock Vegetation, and Eastern North American Coastal Beach & Rocky Shore. "Unclassified" areas did not have a value assigned.

Current Statewide Community Class			
Community Class	**Area (km^2)**	**Acres**	**Percent of State**
Agriculture (Row Crop)	88,905.7	21,969,047.4	60.9
Developed (Urban)	13,114.7	3,240,706.3	9.0
Oak Woodland & Savanna	11,989.8	2,962,746.9	8.2
Forest	11,532.5	2,849,744.7	7.9
Prairie	8,957.5	2,213,439.3	6.1
Agriculture (Other)	7,243.4	1,789,884.8	5.0
Open Water	2,571.5	635,441.8	1.8
Wetland	1,311.1	323,974.5	0.9
Unclassified	232.6	57,470.4	0.2
Other	13.8	3,408.6	<0.1
Total	145,872.7	36,045,864.5	100.0

Table II2. Potential Terrestrial-based Natural Community Classes in Illinois. Based on LANDFIRE Environmental Site Potential. "Other" includes everything that did not fit into a standard Class (primarily Eastern North American Coastal Beach & Rocky Shore). Potential wetlands also appear lower than Wetlands in Table II1 because some semi-aquatic Natural Community Types were not included in the Potential Terrestrial Class assessment.

Potential Statewide Community Class			
Community Class	**Area (km^2)**	**Acres**	**Percent of State**
Prairie	84,000.4	20,756,928.6	57.6
Oak Woodland & Savanna	46,277.3	11,435,355.0	31.7
Forest	12,410.4	3,066,669.5	8.5
Open Water	2,588.9	639,721.3	1.8
Wetland	594.7	146,950.7	0.4
Other	1.0	239.4	<0.1
Total	145,872.7	36,045,864.5	100.0

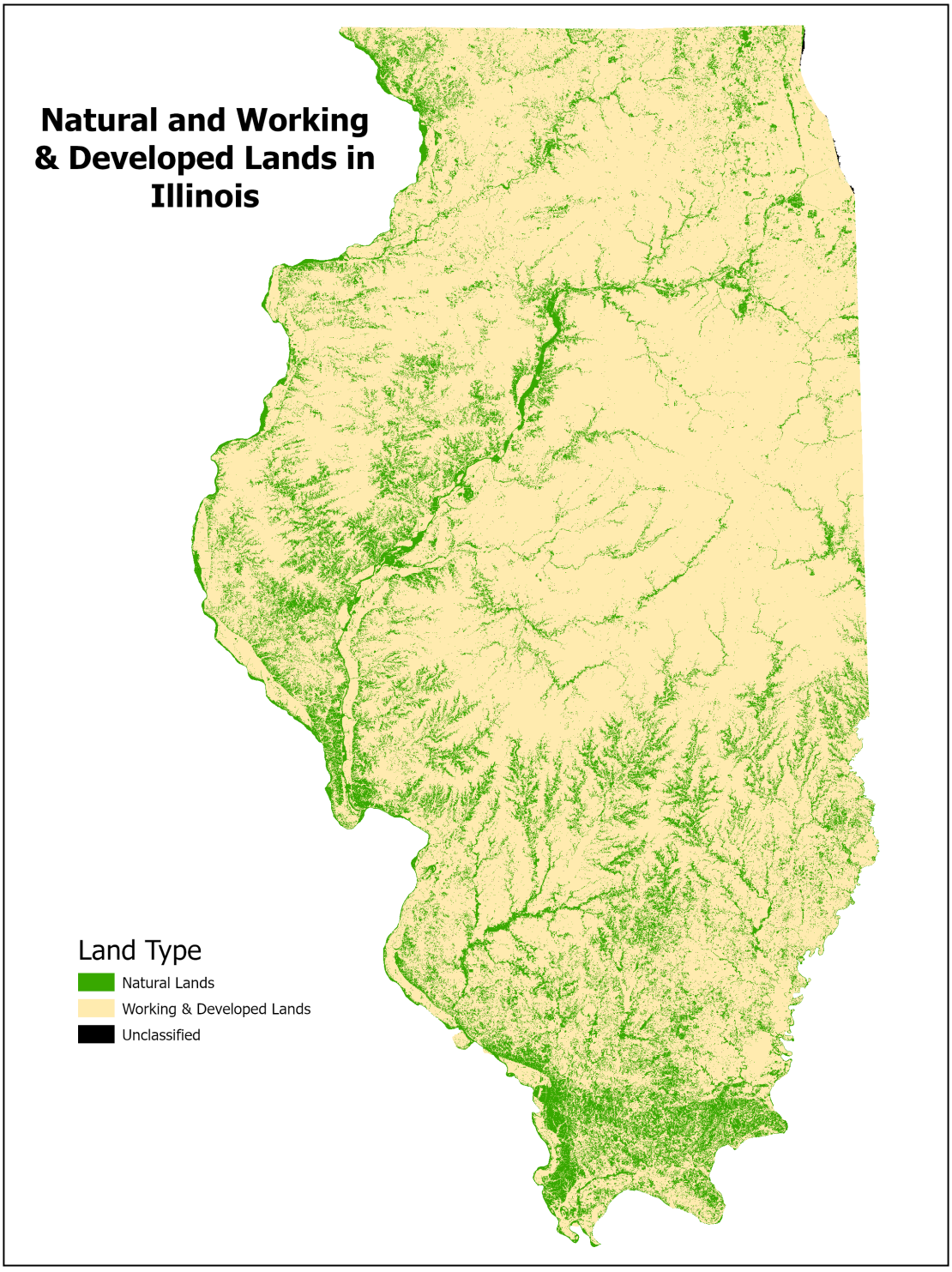

Figure II3. Natural and Working & Developed Lands throughout Illinois. Land Types were assigned based on the National Vegetation Classification.

Table II3. Natural Community Classes within the Natural Lands sector. The Natural Lands sector includes over 5.5 million acres (15.3%) of land in Illinois primarily in the Oak Woodland & Savanna Natural Community and Forest Natural Community Classes. Natural Community Classes are identified here regardless of their quality.

Natural Lands			
Community Class	**Area (km^2)**	**Acres**	**Percent of Natural Lands**
Oak Woodland & Savanna	11,989.8	2,962,746.9	53.7
Forest	7,690.5	1,900,350.1	34.4
Open Water	1,646.5	406,848.5	7.4
Wetland	861.1	212,788.0	3.9
Prairie	154.2	38,114.9	0.7
Other	0.9	219.7	<0.1
Total	22,343.0	5,521,068.1	100.0

Table II4. Natural Community Classes within the Working & Developed Lands sector. Working and Developed Lands make up over 30 million acres (nearly 85%) of land in Illinois and are focused on row crop agriculture and urban landuses. Note: Prairie includes grasslands of varying quality and not just high-quality remnants.

Working & Developed Lands			
Community Class	**Area (km^2)**	**Acres**	**Percent of Working & Developed Lands**
Agriculture (Row Crop)	88,905.7	21,969,047.4	72.1
Developed (Urban)	13,114.7	3,240,706.3	10.6
Prairie	8,803.2	2,175,324.4	7.1
Agriculture (Other)	7,243.4	1,789,884.8	5.9
Forest	3,842.1	949,394.6	3.1
Open Water	925.1	228,593.3	0.8
Wetland	450.0	111,186.5	0.4
Other	12.9	3,188.8	<0.1
Total	123,297.1	30,467,326.1	100

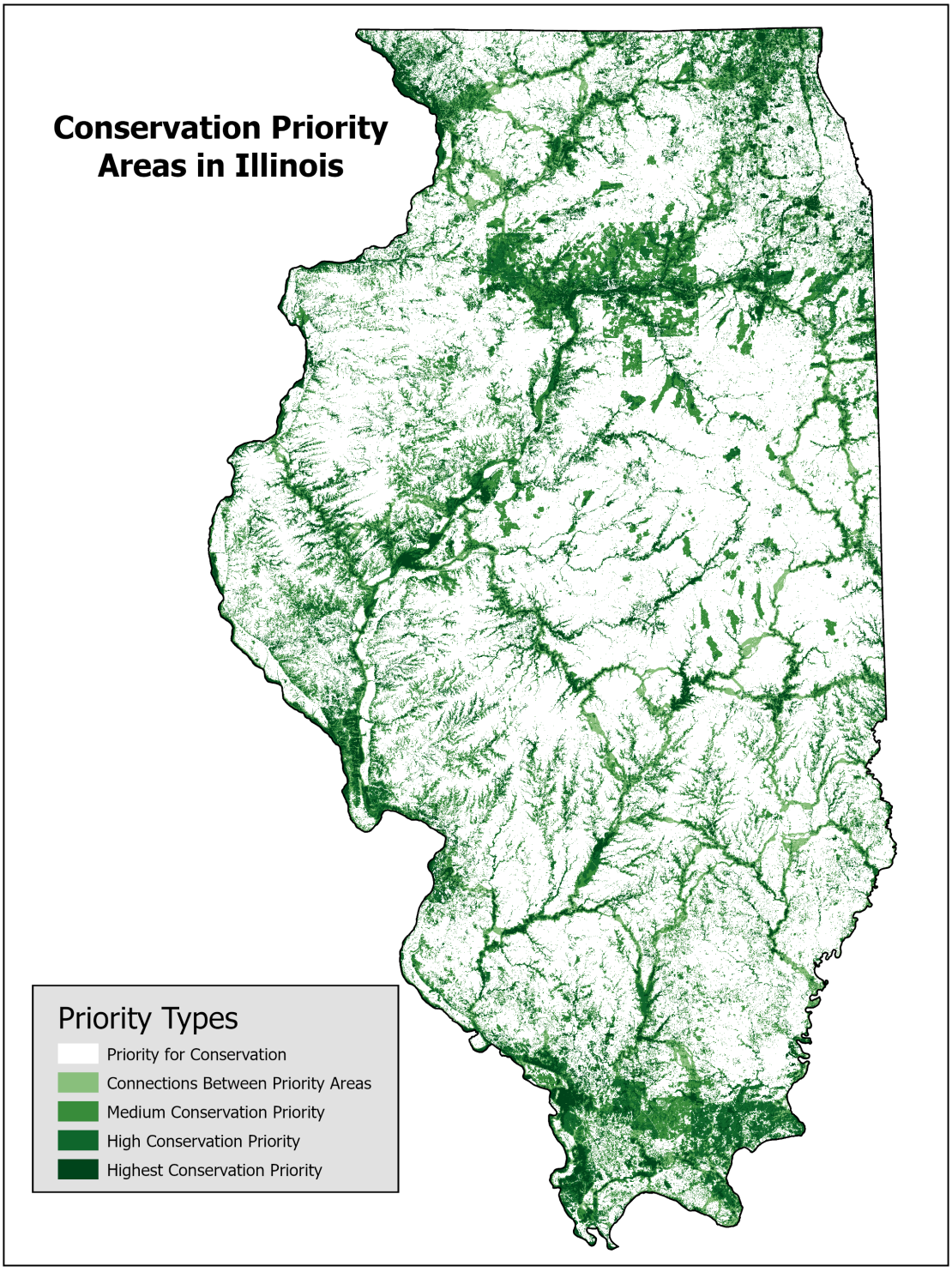

Figure II4. Midwest Conservation Blueprint Priorities within Illinois. Based on the Midwest Conservation Blueprint (2024 version).

Table II5. Natural Community Classes on Protected Lands in Illinois based on the National Vegetation Classification version 3.0.

Protected Lands			
Community Class	**Area (km^2)**	**Acres**	**Percent of Protected Lands**
Forest	2,233.2	551,843.6	36.4
Oak Woodland & Savanna	932.4	230,410.7	15.2
Prairie	681.8	168,471.3	11.1
Open Water	587.3	145,114.3	9.6
Agriculture (Row Crop)	551.3	136,234.9	9.0
Wetland	403.3	99,668.5	6.6
Agriculture (Other)	398.9	98,579.1	6.5
Developed (Urban)	321.8	79,507.7	5.2
Unclassified	20.8	5,134.8	0.3
Other	1.3	324.3	<0.1
Total	6,132.2	1,515,289.2	100.0

Table II6. Natural Community Classes on Unprotected Lands in Illinois based on the National Vegetation Classification version 3.0.

Unprotected Lands			
Community Class	**Area (km^2)**	**Acres**	**Percent of Unprotected Lands**
Agriculture (Row Crop)	88,354.4	21,832,812.5	63.2
Developed (Urban)	12,792.9	3,161,198.6	9.2
Oak Woodland & Savanna	11,057.4	2,732,336.2	7.9
Forest	9,299.3	2,297,901.1	6.7
Prairie	8,275.7	2,044,968.0	5.9
Agriculture (Other)	6,844.5	1,691,305.7	4.9
Open Water	1,984.3	490,327.5	1.4
Wetland	907.7	224,306.0	0.6
Unclassified	211.8	52,335.6	0.2
Other	12.5	3,084.3	<0.1
Total	139,740.5	34,530,575.4	100.0

Table II7. Statewide Conservation Priority area in Illinois. Based on the Midwest Conservation Blueprint 2024 edition.

Statewide Conservation Priority			
Description	**Area (km²)**	**Acres**	**Percent of State**
Priority for Conservation	100,053.3	24,723,660.3	68.6
Medium Conservation Priority	20,465.6	5,057,163.6	14.0
High Conservation Priority	13,212.4	3,264,842.8	9.1
Highest Conservation Priority	6,813.0	1,683,536.4	4.7
Connections Between Priority Areas	5,327.7	1,316,494.6	3.7
Total	145,872.0	36,045,697.8	100.0

Table II8. Area of Conservation Priority Types within Natural Lands of Illinois based on the Midwest Conservation Blueprint. Highest Conservation Priority areas include the top 10% of all evaluated areas, High Conservation Priority (75th – 90th percentile), Medium Conservation Priority (55th -75th percentile), Priority for Conservation (50th percentile and lower). Connections between Priority Areas include areas identified as the shortest distances between disconnected Medium, High, or Highest Conservation Priority areas.

Natural Lands Conservation Priority			
Description	**Area (km²)**	**Acres**	**Percent of Natural Land**
Medium Conservation Priority	7,455.2	1,842,207.7	33.4
High Conservation Priority	7,081.8	1,749,946.2	31.7
Highest Conservation Priority	4,949.0	1,222,911.1	22.2
Priority for Conservation	2,624.5	648,537.7	11.7
Connections Between Priority Areas	232.2	57,376.3	1.0
Total	22,342.6	5,520,979.1	100.0

Table II9. Area of Conservation Priority Types within Working & Developed Lands of Illinois based on the Midwest Conservation Blueprint. See Table II6 for a description of Priority Types.

Working & Developed Lands Conservation Priority			
Description	**Area (km²)**	**Acres**	**Percent of Working & Developed Land**
Priority for Conservation	97,325.9	24,049,710.3	78.9
Medium Conservation Priority	12,944.7	3,198,699.3	10.5
High Conservation Priority	6,092.6	1,505,506.9	4.9
Connections Between Priority Areas	5,087.2	1,257,065.2	4.1
Highest Conservation Priority	1,846.8	456,356.1	1.5
Total	123,297.1	30,467,337.8	100.0

Illinois Landscape: Natural Community Classes

Introduction

The conservation and management of Natural Communities for the benefit of native wildlife and plant species is one of the major approaches of Illinois' Wildlife Action Plan. The Illinois Landscape has been classified into nine Natural Community Classes (INAI S&G 2023). The six major Natural Community Classes (Forest, Savanna & Woodland, Stream, Open Water, Prairie, Wetland) are directly addressed within the Campaign Section of the Wildlife Action Plan. The three remaining Natural Community Classes (Bedrock, Cave, Shore) have a much smaller footprint within the state and are briefly addressed in this Chapter of the Landscape Section.

Bedrock Natural Community Class

The Bedrock Natural Community Class occurs where the underlying geological material is at or near the surface and the soil is thin or absent. These characteristics impose severe limitations on the vegetation and the wildlife that they support.

Glade Subclass – Three Types occur in Illinois: Sandstone Glade, Limestone Glade, Shale Glade

Landscape features classified within the Glade Subclass occur as openings in a forest, caused by bedrock at or near the surface with dry or xeric conditions and thin or absent soil that limits tree growth. Glades usually consist of stunted trees, shrubs, patches of herbaceous vegetation, and open areas with little vegetation.

Cliff Subclass – Nine Types occur in Illinois: Dry Sandstone Cliff, Mesic Sandstone Cliff, Dry Limestone Cliff, Mesic Limestone Cliff, Dry Dolomite Cliff, Mesic Dolomite Cliff, Sandstone Overhang, Eroding Bluff, Algific Talus Slope

Natural Communities that occur on or near vertical faces of exposed bedrock or of unconsolidated materials having thin or absent soil layers are classified in the Cliff Subclass.

Objectives for Bedrock Natural Community Class

- Maintain Cliffs and Glades where they occur (minimize natural community transitions)
- Share Cliffs and Glades with native wildlife and plants that use them
- Minimize recreational overuse that may damage Cliffs and Glades
- Recognize Cliffs and Glades as important components of the Illinois Landscape.

Species of Greatest Conservation Need associated with the Bedrock Natural Community Class – **Wildlife SGCN:** Carinate Pillsnail (*Stenotrema hubrichti*); **Plant SGCN:** Oak Fern (*Gymnocarpium dryopteris*), Pinnatifid Spleenwort (*Asplenium pinnatifidum*), Cliff Goldenrod (*Solidago sciaphila*)

Illinois Stewardship Species associated with the Bedrock Natural Community Class – no Illinois Stewardship Species have been identified for the Bedrock Natural Community Class at this time.

Threats/Stressors associated with the Bedrock Natural Community Class

Bedrock Natural Communities experience the same Threats identified earlier in the Landscape Section. However, due to their thin and poorly developed soils they are particularly sensitive to degradation from

recreational overuse. Excessive trampling of vegetation and disturbance of the soil may be a major concern on some Glades and Cliffs.

- Landscape Transition
- Invasive Species and Diseases
- Pollution & Pollutants
- Climate Change
- Recreational Impacts

Conservation Action Strategies associated with the Bedrock Natural Community Class

Bedrock Natural Communities can benefit from the Conservation Action Strategies identified earlier in the Landscape Section. Note that Bedrock Natural Communities are especially sensitive to invasive species problems and their control should be emphasized in Glades and on Cliffs.

- Land Protection Strategy
- Land Stewardship Strategy
- Natural Community Connectivity Strategy
- Invasive Species and Diseases Strategy
- Pollution Reduction Strategy

Focus Areas associated with the Bedrock Natural Community Class – no Focus Areas have been identified for Bedrock Natural Communities at this time. However, all Cliffs and Glades identified as Category I on the Illinois Natural Areas Inventory and protected by the Illinois Nature Preserves Commission can be considered priorities.

Monitoring the effectiveness of Landscape Stewardship and Species Management Actions associated with the Bedrock Natural Community Class – Natural Community Grading based on the INAI Standards & Guidelines will be used to assess changes in Bedrock Natural Communities associated with Conservation Actions occurring within them.

Cave Natural Community Class

We define the Cave Natural Community Class to include naturally occurring openings or cavities large enough for a person to enter at least 20 feet or far enough for someone to experience total darkness. We also include within this Natural Community Class other areas with similar conditions such as sinkholes and abandoned mines that provide subterranean habitat for cave associated fauna for the purposes of this Wildlife Action Plan.

Cave Subclass – Two Types occur in Illinois: Aquatic Cave, Terrestrial Cave

Caves are concentrated in southern and western Illinois and also occur in dolomitic carbonate rocks of northern Illinois (Figure II5). We differentiate Natural Community Types within caves as either Aquatic or Terrestrial based on where the fauna occur within the cave. Some information associated with the Aquatic Cave Natural Community Type is included within the Streams & Open Waters Campaign.

Objectives for the Cave Natural Community Class

- Protect physical examples of wild cave systems (Cave Natural Communities) and the karst landscapes they occur within.
- Minimize disturbance to cave systems that support cave dependent species (Support the Illinois Cave Protection Act; [525 ILCS 5/-]).
- Maintain subterranean openings to allow access for cave dependent species.
- Protect groundwater resources in karst areas of Illinois.

SGCN for the Cave Natural Community Class – Wildlife SGCN – **Indiana Bat** (*Myotis sodalis*), **Northern Long-eared Bat** (*Myotis septentrionalis*), **Eastern Small-footed Bat** (*Myotis leibii*), **Gray Bat** (*Myotis grisescens*), **Southeastern Myotis** (*Myotis austroriparius*), **Rafinesque's Big-eared Bat** (*Corynorhinus rafinesquii*), **Cave Obligate Isopod** (*Caecidotea lesliei*), **Packard's Cave Amphipod** (*Crangonyx packardi*), **Packard's Cave Isopod** (*Caecidotea* packardi), **Anomalous Spring Amphipod** (*Crangonyx anomalus*), **Illinois Cave Amphipod** (*Gammarus acherondytes*), **Iowa Amphipod** (*Stygobromus iowae*), **Missouri Cave Snail** (*Fontigens antroecetes*), **Madonna Cave Springtail** (*Pygmarrhopalites madonnensis*), **Subtle Cave Amphipod** (*Stygobromus* subtilis), **Shawnee Hills Cavefish** (*Forbesichthys papilliferus*); Plant SGCN – no plant species have been identified as SGCN for the Cave Natural Community Class.

SGIN for Cave Natural Community Class – None. The conservation status of other cave dependent bats that are known to occur in Illinois are currently being assessed using historic and recently collected information. The **Tricolored Bat** (*Perimyotis subflavus*) is considered a priority for assessment as it currently remains unranked (SNR).

Illinois Stewardship Species for the Cave Natural Community Class – Illinois Cave Amphipod (*Gammarus acherondytes*), **Indiana Bat** (*Myotis sodalis*)

Threats/Stressors for the Cave Natural Community Class

Cave Natural Communities experience the same Threats identified earlier in the Landscape Section. Invasive species can restrict or block cave entrances and disrupt connectivity with the surface. Karst Areas that contain caves are especially vulnerable to pollutants such as pesticides, inorganic fertilizer, livestock waste, and septic system leakage entering them as groundwater pollution. Cave systems are

also vulnerable to recreational disturbances leading to graffiti, trash, broken speleothems, and fire and smoke damage.

- Landscape Transition
- Invasive Species & Diseases (White-nose Syndrome)
- Pollution and Pollutants
- Climate Change

Conservation Action Strategies for the Cave Natural Community Class

Cave Natural Communities can benefit from the Conservation Action Strategies identified earlier in the Landscape Section. Note that Cave Natural Communities are especially sensitive to groundwater contamination and direct human disturbance.

- **Land Protection Strategy**
  - Encourage enrollment in long-term protection programs
  - Evaluate the conservation status of cave dependent species for possible state-listing
- **Land Stewardship Strategy**
  - Maintain or improve the condition and viability of the surface native plant community to support nutrient input and to protect the subsurface from contamination and/or changes in temperature and humidity.
  - Establish buffers around sinkholes and critical groundwater recharge areas.
  - Promotion of cave gates to prevent vandalism and unintended disturbances.
- **Natural Community Connectivity Strategy**
  - Maintain surface and subterranean connections that allow movement of air and wildlife
- **Invasive Species & Diseases Strategy**
  - Monitor the condition of cave dwelling bats (White-nose Syndrome)
  - Limit access to vulnerable populations
- **Pollution Reduction Strategy**
  - Develop and implement BMPs to protect caves, sink holes, and groundwater recharge areas.
  - Conduct education and outreach efforts to landowners with sinkholes and caves
- **Recover native species populations**
  - Implement scientific evaluation and monitoring to identify locations where cave dependent species are, or may be, present.

Focus Areas for the Cave Natural Community Class – listed alphabetically

- Birk 3 Mine (Bat Hibernaculum)
- Pecumsaugan Creek - Blackball Mines Nature Preserve (Bat Hibernaculum)
- Brainerd Cave Land & Water Reserve (Bat Hibernaculum)
- Burton Cave Nature Preserve (Bat Hibernaculum, Invertebrates)
- Cave Spring Cave (Bat Maternity Roost)
- Fogelpole Cave Nature Preserve
  - Paul Wightman Subterranean Nature Preserve (Bat Hibernaculum, Invertebrates)
- Griffith Cave (Bat Hibernaculum)

- Illinois Caverns State Natural Area (Bat Hibernaculum, Invertebrates)
- Magazine Mine (Bat Hibernaculum)
- Stemler Cave Woods Nature Preserve

Focal Monitoring Species for the Cave Natural Community Class – Cave dwelling Bats

Monitoring the effectiveness of Landscape Stewardship and Species Management Actions for the Cave Natural Community Class – Bat Hibernacula Surveys, NABat, iBAT – Roosting Habitat for bats

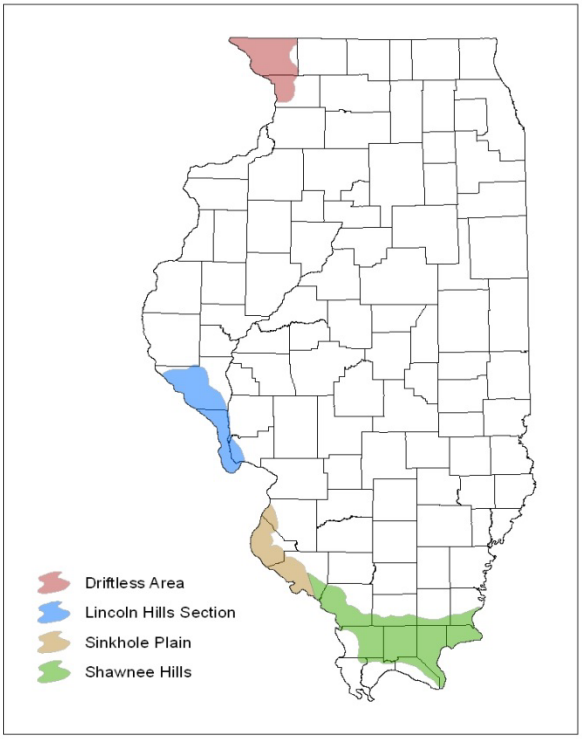

Figure II5: Karst regions of Illinois where Caves and Sinkholes are more likely to occur.

Shore Natural Community Class

The Shore Natural Community Class occurs where lake deposited sand from Lake Michigan maintains Beach and Foredune Natural Community Types at early successional stages with little soil development. Information about the Lake Michigan Shoreline has recently been summarized by the Illinois Geological Survey.

Shore Subclass – Two Types occur in Illinois*: Beach, Foredune*

- **Beach Natural Community Type** – non-existent soil development on recently deposited sand from wave action.
- **Foredune Natural Community Type** – previously deposited sand that includes the beginnings of soil development occurring adjacent and inland from the Beach.

Objectives for the Shore Natural Community Class – Maintain Natural Shorelines where they occur, share the beach with native wildlife and plants, conduct invasive species management, and minimize shoreline hardening

Species of Greatest Conservation Need for the Shore Natural Community Class –

Beach: Wildlife SGCN - Piping Plover (*Charadrius melodus*); Plant SGCN - Sea Rocket (*Cakile edentula var. lacustris*), Seaside Spurge (*Chamaesyce polygonifolia*)

Foredune: wildlife SGCN - Piping Plover (*Charadrius melodus*); Plant SGCN - Trailing Juniper (J*uniperus horizontalis*), Pitcher's Thistle (*Cirsium pitcheri*), Dune Willow (*Salix syrticola*)

Illinois Stewardship Species for the Shore Natural Community Class – Piping Plover (*Charadrius melodus*), Pitcher's Thistle (*Cirsium pitcheri*), Lakeside Daisy (*Tetraneuris hebacea*)

Threats/Stressors for the Shore Natural Community Class

Shore Natural Communities experience the same Threats identified earlier in the Landscape Section. Water level changes and altered storm severity associated with Climate Change may increase beach erosion. Shorelines suffering undesired erosion may be subjected to engineered hardening can reduce the quality and extent of Beach Natural Communities by restricting the movement of sand. Shorelines are also heavily used for recreation and are thus vulnerable to the introduction of invasive species, pollutants, and direct disturbances such as off-trail vegetation trampling.

- Landscape Transition
- Invasive Species & Diseases
- Pollution & Pollutants
- Climate Change
- Recreational Impacts

Conservation Action Strategies for the Shore Natural Community Class

Shore Natural Communities can benefit from the Conservation Action Strategies identified earlier in the Landscape Section. Note that Shore Natural Communities are especially sensitive to changes in water level and storm surge as well as direct human disturbance associated with recreational use.

- **Land Protection Strategy**
    - Protect Shore Natural Communities for migratory birds and public use
- **Land Stewardship Strategy**
    - Develop a sustainable sand management plan to reduce shoreline erosion and sand accretion for Lake Michigan.
        - Explore the use of living shorelines that stabilize sand and conserve native species
        - Explore the use of living breakwaters to reduce beach erosion and provide off-shore habitat
    - Control recreational access by creating trails and boardwalks that avoid negatively impacting beaches and foredunes.
    - Implement community service events for stewardship, education, and outreach
- **Natural Community Connectivity**
    - Connect beaches and foredunes with adjacent Natural Communities when possible
- **Invasive Species & Diseases**
    - Conduct invasive species control to maintain Shore Natural Community quality
- **Pollution Reduction Strategy**
    - Support efforts to eliminate and mitigate the impacts of combined sewer overflows

Focus Areas for the Shore Natural Community Class –

- Illinois Beach State Park – Illinois Beach Nature Preserve (Illinois' First Nature Preserve and a National Natural Landmark)
- Chicago Area Lakeshore Parks (examples include Jackson Park – 63rd Street Beach Dunes in Chicago; South Shore Nature Sanctuary; Montrose Beach Dunes Natural Area & Montrose Point Bird Sanctuary)

Monitoring the effectiveness of Landscape Stewardship and Species Management Actions for the Shore Natural Community Class – Natural Community Grading based on the INAI Standards & Guidelines will be used to assess changes in Bedrock Natural Communities associated with Conservation Actions occurring within them.