

Prairies and Savannas Campaign

Introduction

The Prairies and Savannas Campaign strives to recreate Illinois' roadmap for landscape-level conservation, restoration, and preservation efforts for grassland, shrubland, and savanna (i.e. early successional) habitats and corresponding native species, with an emphasis on species of greatest conservation need (SGCN) and other focal species. Since our earliest estimates, Illinois has lost 99.9% of its high-quality native prairie. The future of many Native Species in Illinois that are dependent upon early successional habitats is reliant upon both the preservation of the little native prairie that remains and the creation and continued management of restored habitats across the landscape. In the face of global human population and economic expansion, the future of these species is bleak, to say the least. Coordinated outreach, restoration, and conservation efforts are instrumental to ensuring that these ecosystems and corresponding species, continue to have a future across Midwest. The Illinois Wildlife Action Plan is just one piece of the puzzle in ensuring this future.

The SGCN and focal species, habitat and species stressors, and corresponding action strategies listed below, are not meant to be exhaustive lists, but instead benchmarks to guide meaningful, ecosystem-level results under the Plan. Over time, collaborative efforts coupled with monitoring and adaptive management strategies will steer the work under the Plan, accordingly.

Objectives

What follows is a collection of objectives for the next 10-year segment of the Prairies and Savannas Campaign under the Illinois Wildlife Action Plan. Conservation Action Strategies developed and outlined for each Landuse Sector and monitoring considerations associated with Focal Monitoring Species are listed under Monitoring the Effectiveness of Landscape Stewardship Actions and Species Management Actions, are tied into addressing and meeting the core objectives listed hereafter. These objectives are appropriate for each of the Landuse Sectors.

- Protect both native remnant and recovered habitats and their corresponding native flora and fauna through strategic land acquisition, conservation easements, and Natural Areas designation, and through active management
- Create, enhance, and recover Prairie, shrubland, and Savanna Natural Communities through direct land conversion using appropriate management tools and techniques
- Evaluate current and develop new outreach and training materials and avenues of messaging, to better inform and guide internal staff, partners, the public, and private contractors on the importance, and the restoration and protection, of Natural Communities included within the Campaign and the species that depend upon them
- Restore, enhance, and recover flora, fauna, and Natural Communities included in the Campaign to spatial extents and qualities that assure their viability and ecological value in the future.
- Continue and initiate research investigations aimed at evaluating threats to and potential causes of Campaign specific floral and faunal declines, developing strategies to help reverse these trends

- Establish an in-state, grasslands-focused working group, that includes representatives from a broad subset of stakeholder groups, including but not limited to state and federal agencies, non-government conservation organizations, municipalities, universities, agriculture groups, and community members, to help identify conservation needs and guide conservation efforts across the state
- Develop and implement an approach for landuse planning and management that prioritizes the benefits of Prairie and Savanna Natural Communities within the context of economic and recreational endeavors as well as human health.

Species of Greatest Conservation Need

Considering that native prairie, shrubland, and savanna communities are among the most imperiled within Illinois, the list of plant and wildlife species designated under SGCN is lengthy. Species identified as Species of Greatest Conservation Need associated with the Prairies and Savannas Campaign are identified in the Native Species Section of this Plan (Appendix I). Key species associated with Prairies and Savannas Campaign include frog, snake, bird, and plant species (Table P&S1). Most of these are Species of Greatest Conservation Need while others are Focal Monitoring Species listed under the various Landuse Sectors of the Campaign. Initiating a combination of land protection, land stewardship, research, outreach, and direct recovery actions is expected to improve the viability of populations of these species within Illinois.

Several Illinois Stewardship Species (Appendix III) are associated also with the Prairies and Savannas Campaign including five wildlife species [Greater Prairie Chicken, (*Tympanuchus cupido*), Yellow Mud Turtle (*Kinosternon flavescens*), Eastern Massasauga (*Sistrurus catenatus*), Illinois Chorus Frog (*Pseudacris illinoensis*), Rusty-patched Bumble Bee (*Bombus affinis*)] and twenty plant species [Earleaf False Foxglove (*Tomanthera auriculata*), (Pale False Foxglove *Agalinis skinneriana*), (Glade Onion *Allium stellatum*), (Mead's Milkweed *Asclepias meadii*), Tennessee Milkvetch (*Astragalus tennesseensis*), Clustered Poppy-mallow (*Callirhoe triangulate*), Richardson's Sedge (*Carex richardsonii*), Climbing Bittersweet (*Celastrus scandens*), Hill's Thistle (*Cirsium hillii*), Mohlenbrock's Umbrella-sedge (*Cyperus grayoides*), Leafy Prairie-clover (*Dalea foliosa*), Wolf's Spikerush (*Eleocharis wolfii*), Midland Fawnlily (*Erythronium mesochoreum*), Hairy Fimbry (*Fimbristylis puberula*), Prairie Bushclover (*Lespedeza leptostachya*), Sangamon Phlox (*Phlox sangamonensis*), Silver Bladderpod (*Physaria ludoviciana*), Eastern Prairie White-fringed Orchid (*Platanthera leucophaea*), Prairie Parsley (*Polytaenia nuttallii*), Pickering's Morning-glory (*Stylisma pickeringii*)]. While some of these plant species did not meet the S-rank criteria for designation as Species of Greatest Conservation Need they are still considered important species for maintaining the character of Prairie or Savanna Natural Communities as part of this Campaign.

Natural Lands

Extensive conversion of native grasslands for agricultural and urban landuses, has resulted in less than 2,600 acres (< 0.1%) of high-quality, native prairie upon Illinois' landscape. These remnants of minimally disturbed prairie, primarily exist now because they were considered unfarmable by early settlers. These

remnant prairies are vital to many Native Species of flora and fauna as they are the final havens in what has become a landscape greatly altered by human hands.

Hill Prairie Natural Communities include isolated, rocky outcroppings along the bluffs of the Illinois and Mississippi Rivers. Many were considered unsuitable for the plow and nearly un-grazable by livestock due to a combination of rough terrain and expansive forest buffers. Few remain, and those that do are important targets for land protection through acquisition, conservation easement, or enrollment in the Illinois Nature Preserves System.

Common throughout the Midwest, but limited in aggregate, many remnant prairies can be found within pioneer cemeteries. In graves surrounded by these remnant prairie plants, lay the settlers who diligently removed the native grasslands and savannas to establish homesteads, crop fields, and livestock paddocks. These sites remain through both respect for those who have passed, as well as their designation as historic landmarks. In Illinois many of these cemeteries are also protected within the Illinois Nature Preserves System due to their status as High-Quality Natural Communities or for supporting Endangered or Threatened Species.

The largest swaths of remnant, native prairie in Illinois, can be found at Goose Lake Prairie State Natural Area and Lost Mound National Wildlife Refuge. Due to a combination of clay soils and difficulty in draining the surrounding wetlands, small parcels of native tallgrass prairie at Goose Lake escaped conversion to cropland, pasture, coal production, or residential development. Similarly, due to a combination of sandy soils and seasonal flooding from the Mississippi River, the sand prairie at Lost Mound evaded conversion until it was acquired by the U.S. Army for use as an arms depot. Following the closure of the depot, the Army transferred much of the land to the U.S. Fish and Wildlife Service for the creation of a wildlife refuge.

Stressors to Habitats and Species on Natural Lands

Illinois' Prairie and Savanna Natural Lands face several key ecological stressors that threaten habitat quality and species viability. Stressors identified for individual Species of Greatest Conservation Need can be found in the Native Species Section (Table IIIId). Additional stressors associated with Natural Lands in the Prairies and Savannas Campaign include:

Woody encroachment and invasive species

Undesirable woody species invasion and successional advancement of habitat towards a forested Natural Community through fire suppression, coupled with both intentional and accidental introduction of various aggressive, non-native plant species, have greatly impacted most habitats across Illinois. Perhaps no habitat type is more affected by these factors than prairie, shrubland, and savanna systems. Considering how limited and fragile habitats are within Illinois' Natural Landscapes, this stressor is significant.

Incorporating fire back into the management of these systems is a key step in maintaining them, but in many cases, topography, surrounding vegetative communities, and even cultural resource concerns, can be hurdles to doing so. These areas can also harbor threatened and endangered plant species, greatly

limiting the use of herbicide and heavy equipment to restore and maintain them. Hand labor is often needed to delicately remove and treat unwanted invaders, which is costly and time consuming.

Non-target herbicide drift

Although herbicide use is carefully used within the management of these Natural Communities non-target herbicide drift from chemical applications meant to control vegetation on adjacent lands can stress Natural Lands. This stressor is magnified when we consider the numerous listed Native Species that remain within these important natural landscape grasslands, shrublands, and savannas.

Mowing

Scattered, remnant prairies found within pioneer cemeteries and along the vestiges of the first railways and roads developed in the 19th century, often fall in close proximity to human developments and working lands, making them susceptible to mowing operations. Mowing activity reduces community diversity by promoting grass species over forbs and shrubs, provides avenues for invasion by invasive species, and may disrupt breeding or overwintered habitat for Native Species.

Conservation Action Strategies to Address Stressors for Natural Lands

To mitigate the stressors affecting Illinois' Prairie and Savanna Natural Communities and the Native Species they support on Natural Lands, the Prairies and Savannas Campaign supports the following strategies and associated conservation actions.

Land Protection Strategy that makes use of conservation easements, land acquisition, and Nature Preserve designations focused on High-Quality Natural Communities.

1. Continue to identify natural features and communities and utilize conservation easements or Nature Preserve designations under the Illinois Natural Areas Preservation Act to protect and manage them in perpetuity.
2. Utilize conservation easements or land acquisitions to build protective buffers around Focus Areas and other known remnant Prairie and Savanna Natural Communities that are already protected or enrolled as Nature Preserves or Land and Water Reserves.

Land Stewardship Strategy that builds capacity to enhance, restore, and maintain Prairie and Savanna Natural Communities.

1. In coordination with internal and external partners, including national organizations such as the Association of Fish and Wildlife Agencies (AFWA), develop training courses and workshops for government agency staff, contractors, and volunteer groups, instructing them on appropriate management techniques to restore and maintain natural communities.
2. Implement Habitat Strike Teams to lead management activities focused on the stewardship of Prairie and Savanna Natural Communities.

Education and Outreach Strategy that provides information to the public and about Prairie and Savanna Natural Communities and the Native Species that they support.

1. Evaluate existing outreach materials and develop new strategies and materials to inform partners and the public about the importance of these rare, but ecologically important communities.
2. Develop and distribute outreach materials directed at best management practices for the stewardship of Prairie and Savanna Natural Communities and the Native Species that they support.

Focal Monitoring Species for Natural Lands

The following species were identified for monitoring purposes as indicators of Prairie and Savanna condition and the effectiveness of conservation actions within natural lands.

Ornate Box Turtle (*Terrapene ornata*)

Habitat: Requires open grassland habitat, where they often seek sites containing low, damp depressions amongst native vegetation where they can feed on various invertebrates and plant materials and burrow below ground for cover. They are found in greatest abundance within remnant sand, black soil, and Hill Prairies.

Threats: Habitat loss and fragmentation from the conversion of native grasslands to cropland or development for other forms of human-use, overgrazing, mowing and other forms of mechanical manipulation within grasslands, water and soil pollution, widespread pesticide applications, roads and other man-made obstructions that affect their travel or expose them to harm, illegal collection of turtles, and climate change leading to skewed proportions of sex within localized populations.

Monitoring: Conducting surveys for research purposes and to identify the presence/absence of turtles prior to initiating management activities such as mowing or prescribed fire and community science efforts through phone-based applications (apps) such as Seek or iNaturalist. Also, a continuation of research on the species and their habitat and new and re-evaluations of Natural Heritage Features through the Illinois Natural Areas Inventory.

Slender Glass Lizard (*Ophisaurus attenuates*)

Habitat: Utilize dry, deciduous forests, savannas, and open grasslands. In grasslands, they are found across a variety of soil types, but they do exhibit a preference for sandy soils. Native vegetation within the surrounding plant community that allows for bare ground that's conducive to movement and feeding behavior, is important.

Threats: Habitat loss, degradation of habitat due to invasive and woody encroachment from the disruption of natural disturbance regimes, and fragmentation of habitat likely causing reduced gene flow between populations.

Monitoring: Community science efforts through phone-based apps, through research focused specifically on the species, their habitat, or in conjunction with other species of wildlife that share habitat, and/or new and re-evaluations of Natural Heritage Features through the Illinois Natural Areas Inventory.

Leadplant (*Amorpha canescens*)

Habitat: Found in dry-mesic prairie and savanna systems, across an array of soil types. Presence on natural lands may indicate high-quality habitat, although it is being increasingly utilized in restoration plantings across working landscapes.

Threats: Habitat loss through land transition and succession, degradation from invasive species, and disruptions to natural disturbance regimes.

Monitoring: Vegetation monitoring through research projects, habitat review and evaluations concurrent with management efforts, and/or through new and re-evaluations of Natural Heritage Features through the Illinois Natural Areas Inventory.

Side-oats Grama (*Bouteloua curtipendula*)

Habitat: Due to a preference for sunlight, it is often found in open grasslands and shrublands, although it can persist in savannas with more open canopies, and it grows throughout a wide variety of soil types in dry-mesic conditions. Like leadplant, in natural landscapes this grass is an indication of high-quality habitat, but it is being widely utilized in plantings throughout working landscapes.

Threats: Grassland conversion to cropland or other forms of human development and the degradation of grasslands and savannas through the invasion of introduced exotic vegetation and/or through advancement of early successional plant communities to closed canopy forest due to disruptions to natural disturbance regimes.

Monitoring: Vegetation monitoring through research projects, habitat review and evaluations concurrent with management efforts, and/or through new and re-evaluations of Natural Heritage Features through the Illinois Natural Areas Inventory.

Focus Areas for Natural Lands

The following represent a few of the major prairie and savanna areas that are managed within the Natural Lands Sector as part of the Illinois landscape. While most of these sites protect primarily minimally developed, native Prairies and Savanna Natural Communities, the Prairie Ridge State Natural Area (SNA) complex is the state's grandest attempt at melding Working Lands with Natural Lands, to restore appreciable acreage in support of area sensitive Native Species in proximity to small parcels of remnant natural areas. Although the collective acreage of grassland and savanna communities held under these sites is relatively small, their importance is immense.

- Prairie Ridge State Natural Area
- Goose Lake Prairie State Natural Area

- Lost Mound National Wildlife Refuge
- Revis Spring Hill Prairie Nature Preserve
- Fults Hill Prairie Nature Preserve
- Midewin National Tallgrass Prairie

Working Lands

A largely rural, agronomic state, it's easy to see why the working landscape is the most extensive section in the Campaign. Considering more than 21 million acres of prairie and savanna were present during the initial settlement of Illinois and that those native systems built and concealed some of the most fertile soils on Earth, one can quickly ascertain why crops quickly replaced nearly all the tallgrass prairie species in "The Prairie State." Trees and shrubs in savannas and surrounding early successional forest communities were removed to build homesteads with the resulting clearings being used for crop and livestock production. Fire suppression by pioneers further contributed to the demise of much of the remaining savanna, as succession carried forward to closed canopy forests.

Today, much of the prairie that was used as cropland, remains as such. What isn't under row cropping, has either been converted to managed hay and pastureland or has succumbed to other forms of human use. Within large blocks of intensively farmed land, there are some opportunities to provide Native Species a foothold through the creation and restoration of both permanent and temporary habitat, and to create important corridors between larger blocks of existing habitat. A shift in how livestock producers view grass community composition and pasture utilization, would make a sizable impact on grazing lands. Conservation programs, notably those funded and administered through the Farm Bill, are highly valued within this landscape, and have been vital to wildlife conservation efforts for the past 40 years. Soaring land values and soil rental rates, coupled with a growing global human population having increasing demands for agricultural products, threaten their utility though, or at the least, makes the administration and implementation of these voluntary programs more expensive.

In rural settings, on lands not directly entangled in the agro-economic machine, prairie, shrubland, and savanna habitat is sprinkled across the landscape under land uses of varying size and quality. Utility and transportation rights-of-way have the potential to provide slivers of habitat through a sea of agriculture, providing travel corridors for wildlife and refuge for plants and other Native Species, but management limitations and shortcomings sap their overall potential to provide high quality habitats needed by some at-risk species. Similar potential exists for habitats in areas of energy development, including solar, wind, and coal, but again, they have similar limitations. Government owned and managed lands with recreation as the primary purpose, provide the most promise for Prairie, Shrubland, and Savanna dependent species especially where restoration efforts on lands that were farmed have been converted back to Prairie. The major limitation here is that less than 5% of the state falls under government ownership and/or management, and for those acres that do, the composition of land cover is primarily open water, wetlands, and forest, with few acres of Prairie or Savanna Natural Communities.

Stressors to Habitats and Species for Working Lands

Working Lands face a unique set of challenges due to their dual role in supporting both human activities and native biodiversity. These stressors often stem from altered disturbance regimes, land-use intensification, and insufficient conservation incentives. Stressors identified for individual Species of Greatest Conservation Need can be found in the Native Species Section (Table IIIId). Additional stressors associated with Working Lands in the Prairies and Forests Campaign include:

Conversion and fragmentation

Over time, conversion of prairie and early successional habitat to cropland has slowed, but this is less so due to changes in land use strategy, and more so due to a lack of acreage available to convert. Most of what can be converted to crop production, at least what is currently considered economically feasible, has been converted, although every year, the occasional strip of land once considered unfarmable, is cleared and/or modified to allow cropping, further isolating acceptable habitats for Native Species.

Conservation Reserve Program (CRP) enrolled acres and government owned and managed lands provide the majority of recovered Prairie and Savanna across the state. As of May 2025, Illinois has 104,000 fewer acres of CRP as compared to 2015, and 244,000 fewer acres as compared to 2005 enrollment levels. Across the Grand Prairie and Southern-Till Plain, degraded grasslands exist, but they often serve as livestock pasture, hay fields, and filter strips and consist of monocultures of cool-season, introduced grasses. Also common, smaller parcels of grass treated as rural greenspace exist but are manicured under intensive mowing practices and are of little value to wildlife as currently managed.

Land conversion continues, but much of the current conversion that occurs is that of land used for agricultural purposes transitioning to residential or industrial uses. Such conversion can be considered more detrimental as it is more dramatically altered from the conditions associated with the Natural Landuse Sector. Land used for agricultural purposes has higher future potential to provide habitat for prairie or savanna dependent species through enrollment in voluntary conservation programs or through select regenerative agriculture practices. Housing developments, industrial complexes, and solar fields have fewer opportunities to contribute as habitat for Native Species and are considered far less likely to be reclaimed as habitat for prairie or savanna dependent species within the foreseeable future.

Woody encroachment and invasive species

As within the Natural Lands Sector, woody and invasive species encroachment is rampant throughout Working Lands. The scars are evident across much of the state, apparent through flushes of early green-up in the spring and extended greenery through delays in leaf desiccation following the first hard freeze in the fall. Dense stands of cool-season, introduced grasses along various travel and utility corridors, cattle pastures, hay fields, open slopes, filter strips, and grassed waterways also visually leave a mark.

Some generalist species have adapted to these invaders but most obligate prairie species suffer from the degradation that ensues with their establishment and spread. Plant diversity and the amount of bare-ground decrease as these aggressive invaders expand and create monoculture stands. As they spread, management practices become more costly (labor and equipment costs for targeted removal or complete replanting) or restrict the effectiveness of management practices from our toolbox (mechanical soil disturbance). Prescribed fire is one of our best early successional habitat management tools, as

most of our Native Species of plants are adapted and dependent upon fire, but wide-spread sociological fear of it, coupled with insufficient staffing levels and the need for tandem treatments to sufficiently control some invasives, limits its use across the landscape.

Mowing is the most widely utilized method to control woody encroachment and invasive species, or simply to maintain highly manicured greenspace, but when considering grassland system health and wildlife, it is overutilized. Timing, frequency, and poor equipment maintenance associated with this management practice has consequences. Mowing too early or too often through the growing season can negatively impact pollinator life cycles, grassland herptiles, and nesting birds. Frequent mowing favors grasses, particularly cool-season, invasive grasses, reducing plant species diversity and habitat quality. Failure to clean residual plant materials from equipment leads to the spread of seed from undesirable plants, which is most evident along our transportation and utility corridors.

Industrial agriculture practices

As agriculture has become more industrialized, grassland habitats and associated wildlife have continually declined. Crop diversity in Illinois has been reduced to predominantly corn and soybean rotations. Most livestock production has moved from the pasture to the feedlot. Crop field and equipment sizes have grown while the number of farmers has decreased. Inflation has increased costs for inputs like equipment, infrastructure, fuel, and commodities, while also impacting land acquisition costs and soil rental rates as land values climb.

These increasing expenses have pushed out the small family farmer, while those who remain seemingly feel the pressure to make ends meet through maximizing yields any way they can. This includes removing fencerows and hedgerows to gain extra rows of crops and converting pasture, hay, and CRP cover to farm marginal and often highly erodible acres. Chemical pesticide use has increased over time to combat insect damage, disease, and weed competition. Fertilizer use has also increased in an attempt to maximize yields while also providing producers opportunities to skip the use of year-to-year crop rotations to chase corn prices.

The potential ecosystem-level damage sustained through these practices is still not fully known, but what we do know (nutrient run-off, groundwater contamination, and herbicide resistance) provides evidence that the impacts reach further than many would like to admit. The Illinois producer has an important job - feed and fuel the world and anchor the state's economy - but it has come at the expense of the loss of the prairies and savannas and the decline of Native Species of plants and wildlife. There are immense opportunities on lands used for agriculture for recovering Prairie and Savanna Natural Communities and the Native Species that they support, albeit, not often at the large-tract scale that some species require.

Conservation Action Strategies to Address Stressors for Working Lands

To mitigate the stressors affecting Illinois' Prairie and Savanna Natural Communities and the Native Species they support on Working Lands, the Prairies and Savannas Campaign supports the following strategies and associated conservation actions.

Manage and restore existing habitat on publicly managed sites, creating showcases for the benefit of Native Species populations.

1. Collectively assess current conditions and goals for state-managed sites with Prairie and Savanna Natural Communities. Develop management plans and collaborate on managing the habitat into the future.
2. Designate Focus Areas around key state-managed properties and work with neighboring property owners and other partners to build prairie, shrubland, and savanna complexes.
3. Target monitoring, research, and acquisitions within these Focus Areas to build core habitat complexes and track ecological responses to our management efforts.
4. Implement Habitat Management Teams to enhance and recover Natural Communities within Focus Areas associated with the Campaign.

In conjunction with our conservation partners maintain and expand existing programs that support private lands planning and technical assistance efforts.

1. Collaborate to collectively track management efforts and assess the ecological response of our conservation efforts while using adaptive management strategies.
2. Support the private lands programs of our conservation partners and present a unified message and strategy for conservation work on Illinois' working lands.
3. Participate in state, regional, and national committees and working groups focused on landscape level conservation of habitats and wildlife associated with the Campaign.
4. Recognize conservation partners whose management and accomplishments best represent the objectives of the Campaign, and support and spread their message.

Research and assess the impacts and opportunities tied to renewable energy development and infrastructure, and engage transportation sectors on vegetation management strategies.

1. Guide research evaluating wildlife and ecological impacts of energy development activities (especially wind and solar development).
2. Engage with energy companies as partners in conservation and collaborate to implement best management practices and develop mitigation strategies.
3. Engage with transportation sectors to implement best management practices for pollinators and to maintain habitat connectivity as a point of emphasis.

Assess the potential of conservation agriculture approaches under the regenerative agriculture movement to benefit Native Species and their habitats.

1. Identify areas to prioritize for transition from agricultural use into higher quality wildlife habitat by conducting precision agricultural analysis on lands included in the IDNR Agricultural Lease Program.
2. Expand the use of conservation agricultural practices (no-till, cover cropping, fallowing, crop rotations, etc.) on state-managed agricultural leased areas to reduce stressors on Native Species that use these and adjacent lands.
3. Guide research to assess the ecological impacts of implementing conservation agriculture practices on lands used for agriculture.

4. Guide research to assess the impacts on wildlife of including cover crop (winter) and warm-season grass (summer) grazing into traditional grazing rotations that rely solely on cool-season, introduced grass pastures and hay.
5. Use the information gained from these approaches to promote these analyses and conversion strategies within our Private Lands Programs.

Acquire land and employ easements, strategically, to bolster efforts within Working Landscapes.

1. Strategically acquire land to expand Focus Areas and associated complexes.
2. Promote the use of conservation easements near Focus Areas.
3. Evaluate the contribution of Illinois' Conservation Reserve Enhancement Program (CREP) enrollments and management activities on species associated with the Campaign.

Implement outreach and develop platforms, materials, and messaging that inform constituents on the importance of healthy Prairie and Savanna Natural Communities.

1. Evaluate and update current outreach strategies and platforms to provide information in a format that engages the public, creating interest and driving action in managing and conserving Natural Communities included within the Campaign.
2. Co-develop strategies with government and private sector partners to create materials and messaging that informs constituents of the human-health, climate, environmental, and wildlife benefits of healthy Natural Communities. Partners should span the fields of natural resources, agriculture, healthcare, realty, and industry.
3. Create user-friendly materials to guide managers in evaluating, restoring, conserving, and maintaining habitats associated with the Campaign.

Focal Monitoring Species for Working Lands

The following species were identified for monitoring purposes as indicators of Prairie and Savanna condition and the effectiveness of conservation actions within natural lands.

- **Northern bobwhite quail (*Colinus virginianus*)**
 - Habitat: Requires a mix of open grass and dense shrub thickets, with a high percentage of bare ground under the vegetative canopy. Suitable quail habitat is often found at the intersection of forest, grassland, shrubland, and cropland habitats, which is where the species obtains its designation as an “edge” species. Frequent disturbance is required to keep their habitat at the appropriate seral stage.
 - Threats: Grassland/shrubland/savanna habitat loss and fragmentation through intensive human landuse, habitat degradation due to invasive plant species encroachment and interrupted natural disturbance regimes (fire and native herbivore grazing), and implementation of incompatible land management practices (mowing, widespread herbicide application, and conventional tillage practices). Reduced habitat quality and quantity make individuals more susceptible to predation, severe weather events, and disease, while also reducing nesting and brood-rearing success.

- Monitoring: Bobwhites are currently monitored through the IDNR- Division of Wildlife Resources' Upland Bird Route Survey, the USGS' North American Breeding Bird Survey, and through hunter harvest reports from the Illinois Natural History Survey's Illinois Hunter Harvest Report.
- **Eastern meadowlark** (*Sturnella magna*)
 - Habitat: Requires open grasslands and edge habitat, preferring native grass plantings but they can utilize hay fields and pastures that typically contain a heavy component of introduced, cool-season grasses or small grain crop fields such as wheat, oats, or rye.
 - Threats: Grassland habitat loss and fragmentation, habitat degradation from invasive plant species and woody encroachment, mowing and haying operations during the nesting season, overgrazing by livestock, and harvest and double-cropping activities within small grain crop fields (primarily wheat) during the nesting season.
 - Monitoring: Meadowlarks are currently monitored through the IDNR- Division of Wildlife Resources' Upland Bird Route Survey and the USGS' North American Breeding Bird Survey.
- **Bobolink** (*Dolichonyx oryzivorus*)
 - Habitat: Requires large blocks of open grassland habitat, preferring native grass plantings, but will utilize hay fields and pastures with a heavy component of introduced, cool-season grasses.
 - Threats: Grassland habitat loss and fragmentation, habitat degradation due to invasive plant species and woody encroachment, mowing and haying operations during the nesting season, and overgrazing by livestock. Also, nest parasitism by brown-headed cowbirds (*Molothrus ater*) impacts recruitment.
 - Monitoring: Bobolinks are currently monitored through the IDNR- Division of Wildlife Resources' Upland Bird Route Survey and the USGS' North American Breeding Bird Survey.
- **Monarch Butterfly** (*Danaus plexippus*)
 - Habitat: Early successional habitats such as grasslands and shrublands, providing an abundance and diversity of both nectar producing plants and milkweed species. Diversity of these species upon the landscape ensures that a food source is available throughout the growing season to support both migrating and breeding populations, while milkweed diversity provides ample host plants for breeding monarchs and subsequent larval development.
 - Threats: Habitat loss and degradation, incompatible land management practices such as mowing during the growing season, widespread pesticide utilization namely in agricultural settings, and climate change.
 - Monitoring: There are numerous collective government and citizen-science efforts that are monitoring monarchs, including but not limited to, MonarchNet, Integrated Monarch Monitoring Program, Monarch Larva Monitoring Project, and Monarch Watch. There is

also an array of phone-based apps utilized to track monarch occupancy-abundance and migrations. Also, research on monarchs and their habitat should continue.

- **Milkweeds** (genus *Asclepias*)
 - Habitat: There are 19 native species of *Asclepias* found in Illinois, this diversity ensures that the Genus exists across a broad range of soil types and moisture conditions.
 - Threats: Degradation of habitats due to invasive encroachment and the removal of appropriate forms of plant community disturbance, such as fire or grazing by native herbivores, widespread utilization of herbicides in agricultural settings, and mowing practices that damage actively growing milkweeds and that promote competing species (grasses).
 - Monitoring: Monitoring for milkweeds mirrors that of monarchs; much dependent upon citizen-science efforts and apps.

Focus Areas for Working Lands

The following areas provide a representative mix of working lands and conservation and are distributed throughout the Illinois landscape. They include several sites with a primary focus on ecosystem management and restoration of Natural Communities associated with the Prairies and Savannas Campaign, while others were incorporated simply due to the great potential that they possess for wildlife dependent upon early successional habitats.

The list includes sites that were once strip-mined for coal and others that are composed of retired cropland. They have been actively transitioned into the Working Lands Sector and in some cases continue to transition toward the Natural Lands Sector. Many of these sites provide recreational opportunities for our constituency, and several continue to provide agronomic benefits through cropping, grazing, and haying operations. These sites offer abundant opportunities to highlight how strategic management and restoration actions can be incorporated into areas currently or previously managed primarily for human use, to build ecosystems where both wildlife and humans benefit.

- Burning Star State Fish and Wildlife Area
- Ten Mile Creek State Fish and Wildlife Area
- Sibley and Saybrook Pheasant Habitat Areas
- Pyramid State Recreation Area
- Forever Fields Upland Habitat Complex
- Snakeden Hollow State Fish and Wildlife Area

Developed Lands

For the communities focused on in this Campaign, no landscape category has been as permanently altered as those under Developed Landscapes. As the human population continues its pattern of exponential growth, urban centers continue to grow and expand. This is due both to population increases within these urban centers and through migrations of people from rural areas to towns and cities. As populations grow, so too does their impacts on flora, fauna, and their habitats.

In Illinois, when people hear “human-focused development”, they likely visualize the urban sprawl of Cook and its surrounding counties. Although this region can be considered the apex of development of human-focused use within the state, it’s important to understand that this form of development exists also downstate, at varying scales. It encompasses smaller cities such as Springfield or Marion, but it even includes the smallest of towns and villages and all of the local infrastructure that ties them together.

How we exist within and utilize space within these communities has impacts on grassland and savanna species and habitats, but it also provides opportunities for their benefit. If we take them into consideration during the initial planning stages of new developments or when conducting management activities on both undeveloped lands or existing green space within these centers, we can provide space for native plants and wildlife.

Stressors to Habitats and Species for Developed Lands

Prairies and Savannas on Developed Lands are highly fragmented and subject to intensive human activity. Though they may include parks, greenways, backyards, or grass covered roadsides, these areas are typically small, degraded, or isolated. Nonetheless, they offer important opportunities for urban biodiversity conservation. Stressors identified for individual Species of Greatest Conservation Need can be found in the Native Species Section (Table III d). Additional stressors associated with Developed Lands in the Prairies and Savannas Campaign include:

Habitat loss to urbanization and corresponding development

To accommodate human population growth, the footprint of towns and cities grows to provide housing, transportation and utility infrastructure, industrial developments, parks and other forms of greenspace, and dining and entertainment venues. Throughout much of Illinois, Prairies and Savannas as well as lands used for agriculture provide convenient, cost-effective building sites within and around these urban centers. Such developments are nearly permanent in nature, greatly reducing the likelihood that these parcels will be returned to grassland habitat.

Fragmentation

Within these highly developed areas few places remain recognizable as Prairies or Savannas since these Natural Communities are highly managed and impacted by surrounding developed lands. This fragmentation inhibits movement between patches of habitat for many wildlife species, potentially disrupting stages within the life cycles of some, and potentially reducing gene flow for other populations.

Manicured green space

Green space within small municipalities to large cities provide people with important places for social and recreational activities. In the largest cities, these spaces provide some of the only opportunities for citizens to interact with nature. Within smaller municipalities, suburban neighborhoods, and on rural homesteads, manicured lawns have become, for many, a source of pride and maintaining them, a form

of recreation. Although these spaces can provide some habitat for generalist grassland and savanna wildlife, these areas are typically heavily manicured through mowing and landscaping practices, reducing species diversity and habitat quality. Also, use of fertilizers, water, and pesticides to maintain them, negatively impact the surrounding environment and wildlife.

Conservation Action Strategies to Address Stressors on Developed Lands

To mitigate the stressors affecting Illinois' Prairie and Savanna Natural Communities and the Native Species they support on Developed Lands, the Prairies and Savannas Campaign supports the following strategies and associated conservation actions.

- **Outreach and Technical Assistance Strategy** that assists municipalities, developers, and urban planners by providing information on best management practices to incorporate beneficial habitat and travel corridors for Native Species within the Developed Lands Sector.
 - Develop outreach materials for local governments, professionals, community leaders, and the public
 - Deliver outreach and technical assistance to local governments, professionals, community leaders, and the public
- **Alternative Lawns Strategy** focused on promotion and implementation of alternatives to lawns, turf grass, and ornamental plants.
 - Advance initiatives to convert manicured green space to native plant species, to set an example for partners and constituents, while positively impacting native wildlife species.
 - Provide outreach materials to municipalities and the public highlighting the environmental benefits of these alternative practices to traditional lawns and landscaping.
 - Promote the establishment of pollinator gardens from private yards to municipal parks and green spaces, to urban roadsides and rooftops.
- **Utilize conservation easements and strategic land acquisition to protect and buffer sensitive areas from further development within the Developed Lands Sector.**

Focal Monitoring Species for Developed Lands

The following species were identified for monitoring purposes as indicators of Prairie and Savanna condition and the effectiveness of conservation actions within natural lands.

- **Rusty patched bumblebee (*Bombus affinis*)**
 - Habitat: Utilizes a mix of ecosystems, including forest and woodland edges, marshes, savannas, shrublands, and grasslands, although grasslands providing a high diversity of nectar producing forbs are most heavily utilized for foraging and are also highly selected for nesting activity. Due to extensive burrowing activities between nesting and overwintering, they prefer looser soils.

- Threats: Habitat loss through land use conversion and development; degraded habitat- specifically decreases in forb quantity and diversity- due to a combination of invasive species encroachment, interruptions in natural disturbance regimes, and incompatible land management techniques (mowing and widespread herbicide use); disease; competition with non-native pollinators, and heavy pesticide use, particularly within Working Landscapes.
- Monitoring: Citizen-science efforts through phone-based apps, new and re-evaluations of sites through the Illinois Natural Areas Inventory within developed landscapes, and through monitoring efforts outlined by the USFWS under their Voluntary Survey and Monitoring Technical Assistance and Best Survey Practices for the Rusty Patched Bumble Bee (*Bombus affinis*) plan (USFWS 2025).
- **Monarch butterfly** (*Danaus plexippus*)
 - For habitat, threats, and monitoring for this species, refer to the Focal Monitoring Species list under the Working Landscapes section.
- **Milkweed** (*Asclepias spp.*) – multiple species
 - For habitat, threats, and monitoring for this genus, refer to the Focal Monitoring Species list under the Working Landscapes section.

Focus Areas for Developed Lands

The sites below present opportunities to showcasing prairie, shrubland, and savanna recovery and conservation opportunities on lands within the Developed Lands Sector. These sites are accessible by the public and present opportunities for large numbers of people to interact with the Natural Communities included in this Campaign, while affording outreach opportunities highlighting the ecosystem services of these communities and the threats to the species found within them. They also provide important habitat for an array of native wildlife and native plants from habitat dependent to generalist species.

- Botanical Gardens
- Community and Neighborhood Parks (supported through Illinois' Land and Water Conservation Fund and Open Space Lands Acquisition and Development Programs).
- Greenways and Trails
- Illinois State Park Facility Lawns
- [World Shooting and Recreational Complex](#)

Monitoring the Effectiveness of Landscape Stewardship Actions and Species Management Actions

As with any respectable plan, actions implemented to affect change must be monitored and evaluated to document results, which in turn directs adaptive management, restructuring strategies and actions as

needed. How we monitor the response to the actions we implement in this Campaign is vital for evaluating the effectiveness of our efforts and actions, while also impacting future versions of the Plan.

Monitoring under the Prairies and Savannas Campaign will include:

- **Evaluation of current habitat conditions and tracking corresponding changes due to management actions or changes in land use.**
 - Develop protocols to evaluate and track grassland, shrubland, and savanna habitat conditions prior to and following management actions across our state-managed lands and on private lands enrolled in state-administered programs such as the Conservation Reserve Enhancement Program (CREP) Illinois Recreational Access Program (IRAP) and the Conservation Stewardship Program (CSP).
 - Implement a similar protocol or track existing monitoring efforts that assess management impacts on lands enrolled under voluntary conservation programs such as the Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), and Partners for Fish and Wildlife Program.
- **Tracking population trends for Focal Monitoring Species that were listed under the Campaign's Landscape Sectors.**
 - Current and future monitoring strategies were listed with each species. The list, including the species monitored and the monitoring strategies utilized, should be amended as new species for consideration are presented or as new methods to track population and habitat trends emerge.
 - Develop habitat evaluation keys to score the quality of quail habitat across the landscape on both public and private lands and create a database to track those scores to provide landscape-scale assessments of habitat conditions and plant community responses to management activities.
 - Research on Focal Monitoring Species and their habitat should continue.
- **Utilizing community-science platforms and efforts where appropriate.**
 - As technology advances, opportunities for community-scientists to contribute meaningful data grows. In the face of capacity and resource reductions amongst fish and wildlife agencies across the nation, the integration of these data into government-led surveys and monitoring programs, can be of benefit.
- **Utilize and expanding research collaborations.**
 - Conservation and wildlife focused research efforts have been and will continue to be a driving force behind our monitoring efforts.

References

United States Fish and Wildlife Service (USFWS). (2025) Voluntary Survey and Monitoring Technical Assistance and Best Survey Practices for the Rusty Patched Bumble Bee (*Bombus affinis*) Version 3. U.S. Fish and Wildlife Service, Bloomington, MN.

Table P&S1. Examples of key species within the Prairies and Savannas Campaign. Native wildlife and plant species associated with key prairie and savanna habitats. **Note:** SWAP Status indicates if the species has been identified as a Species of Greatest Conservation Need (SGCN), State Threatened (ST) or Endangered (SE) species, or an Illinois Stewardship Species (ISS).

Common Name	Scientific Name	SWAP Status	Focal Monitoring Species
Illinois Chorus Frog	<i>Pseudacris illinoensis</i>	SGCN, ST, ISS	no
Plains Hog-nosed Snake	<i>Heterodon nasicus</i>	SGCN, ST	no
Ornate Box Turtle	<i>Terrapene ornata</i>	SGCN, ST	Yes
Lined Snake	<i>Tropidoclonion lineatum</i>	SGCN, ST	no
Upland Sandpiper	<i>Bartramia longicauda</i>	SGCN	no
Northern Harrier	<i>Circus hudsonius</i>	SGCN	no
Loggerhead Shrike	<i>Lanius ludovicianus</i>	SGCN	no
Greater Prairie-chicken	<i>Tympanuchus cupido</i>	SGCN, SE, ISS	no
Rusty-Patched Bumble Bee	<i>Bombus affinis</i>	SGCN, SE, ISS	Yes
Woolly Milkweed	<i>Asclepias lanuginosa</i>	SGCN, SE	Yes
Hill Prairie Larkspur	<i>Delphinium carolinianum</i>	SGCN, SE	no
Blue Grama	<i>Bouteloua gracilis</i>	SGCN, SE	no
Prairie Bush Clover	<i>Lespedeza leptostachya</i>	SGCN, SE, ISS	no

Common Name	Scientific Name	SWAP Status	Focal Monitoring Species
Northern Bobwhite	<i>Colinus virginianus</i>	none	Yes
Bobolink	<i>Dolichonyx oryzivorus</i>	none	Yes
Eastern Meadowlark	<i>Sturnella magna</i>	none	Yes
Monarch Butterfly	<i>Danaus plexippus</i>	none	Yes