Forests and Woodlands Campaign

Introduction

The Forests and Woodlands Campaign's mission is to establish a framework to sustain and restore populations of Illinois' native forest-dependent wildlife and plant species and to ensure that the ecological processes, species, and benefits their habitats support are secured for current and future generations.

The Campaign aims to outline a strategy to conserve, restore, and enhance the state's diverse forested ecosystems across natural, working, and developed lands. These habitats, including upland oak-hickory forests, floodplain forests, flatwoods, barrens, and woodlands, are essential to support a wide range of native biodiversity, including many Species of Greatest Conservation Need (SGCN). These community types correspond to the Forest Natural Community Class and the Woodland Natural Community Subclass within Illinois' Natural Community Classification System, as defined by the Illinois Natural Areas Standards & Guidelines (IDNR, 2023).

Despite covering a small fraction of the state's land area, Illinois forests provide critical ecological services such as carbon storage, water filtration, and wildlife habitat connectivity. Currently covering 15% of the state's land area (down from the historical 40%), Illinois' 4.9 million acres of forest support a large portion of the state's wildlife habitat and house much of the native plant diversity (IDNR 2020). However, these systems face mounting threats such as oak regeneration failure, land conversion, fragmentation, herbicide drift, introduced diseases, and invasive species. This Campaign addresses these challenges by promoting active stewardship, natural disturbance regimes (particularly prescribed fire), and strategic partnerships with landowners, agencies, and conservation organizations.

The Campaign integrates conservation efforts across three primary Landuse Sectors (Natural, Working, and Developed) while recognizing that forest conservation must be context-sensitive and collaborative. It seeks to balance ecological integrity with human use and to implement measurable conservation actions that improve habitat structure, composition, and resilience. This Campaign directly contributes to the statewide CWCP 2.0 vision to increase wildlife-compatible lands by 30% while preventing further habitat loss, and strengthening habitat connectivity across Landuse Sectors.

Objectives

The following set of core objectives define desired outcomes for the next 10 years (2025–2035) and beyond. They are intended to help sustain and enhance the structure, function, and biodiversity of Illinois' forested landscapes. They represent ecological needs, Agency priorities, and ongoing conservation challenges.

- Reestablish natural fire regimes to restore and maintain open woodland and forest communities, with particular emphasis on oak-hickory ecosystems.
- Improve structural diversity through timber stand improvement, managed harvest, selective thinning, gap creation, and protection of legacy trees and coarse woody debris.
- Enhance native species composition by reducing invasive species pressure, supporting native plant regeneration, and prioritizing rare and underrepresented species.

- Protect existing high-quality forest and woodland habitats through land acquisition, conservation easements, and dedication to programs such as the Illinois Nature Preserves System, ensuring long-term protection and management. Increase the extent and connectivity of large forest blocks to benefit interior-dependent wildlife and reduce fragmentation.
- Encourage sustainable management on private and working lands through landowner engagement, technical assistance, cost-share programs, and outreach initiatives.
- Monitor and respond to forest health threats, including pests, pathogens, and abiotic stressors.
- Increase capacity for forest conservation through partnerships, grant opportunities, and policy advocacy.
- Integrate forest conservation into land-use planning at local, regional, and state levels to promote connectivity and climate resilience.
- Establish and maintain a framework for data-driven monitoring and adaptive management to evaluate the effectiveness of conservation strategies over time.

Natural Lands

Illinois' natural forests and woodlands include some of the most ecologically important and imperiled systems in the state. Upland oak-hickory forests, fire-maintained woodlands, and floodplain forests historically dominated large portions of the landscape, but today the majority are restricted, fragmented, and/or degraded. Oak woodlands in particular, once sustained by periodic fire, now face regeneration failure due to altered disturbance regimes, invasive species, and competition from shade-tolerant species. Limited habitat remains for area-sensitive species and reducing overall ecosystem function.

In support of its goals, the Forests and Woodlands Campaign aligns with regional and national bird conservation efforts, including the Upper Mississippi/Great Lakes Joint Venture Landbird Conservation Strategy. This strategy identifies priority species and habitat targets across most of Illinois' forested land area. Many focal species highlighted in this plan are also Species of Greatest Conservation Need in Illinois. Aligning management with landbird population objectives helps ensure that forest restoration efforts also support broader migratory bird conservation goals, particularly for area-sensitive and canopy-nesting species that rely on large, contiguous tracts of mature forest.

Natural Lands within the Forests and Woodlands Campaign align closely with broader Comprehensive Wildlife Conservation Plan (CWCP) goals to protect high-quality, interconnected habitat across Illinois. These lands serve as ecological strongholds for native biodiversity while providing essential ecosystem services such as clean air, water filtration, and carbon sequestration. Coordination with other IWAP Campaigns ensures that large-scale conservation strategies are ecologically coherent across habitat boundaries reinforcing Illinois' statewide resilience to climate and land-use change.

Lands permanently protected for ecological purposes, such as those dedicated or registered within the Illinois Nature Preserves System or conserved through long-term easements and acquisitions, form much of the foundation of the Natural Lands described in this Campaign. Areas such as Nature Preserves, Land and Water Preserves, and Natural Heritage Landmarks are managed primarily for biodiversity and natural community integrity, consistent with the Illinois Natural Areas Preservation Act (525 ILCS 30). Where a large complex (e.g., a State Park or State Forest) includes both a dedicated Nature Preserve and non-dedicated acreage, the dedicated unit is considered within the Natural Lands Sector, and the adjacent managed recreation/production acreage is treated within the Work Land Sector.

Species of Greatest Conservation Need in Natural Lands

Natural forest and woodland systems support a broad suite of Native Species, including area-sensitive forest birds, forest-dependent herpetofauna, and rare plants associated with high-quality mesic or fire-dependent habitats. Species identified as Species of Greatest Conservation Need associated with the Forests and Woodlands Campaign are identified in the Native Species Section of this Plan (Appendix I). Some of the key species found on areas within the Natural Lands Sector include:

- Cerulean Warbler (*Setophaga cerulea*): A canopy-nesting migratory bird that requires large blocks of mature deciduous forest. Populations are declining due to fragmentation and loss of structurally complex forest habitat. Conservation efforts should focus on preserving large tracts of interior forest and enhancing canopy structure.
- Timber Rattlesnake (*Crotalus horridus*): Relies on large, remote forest blocks with open canopy patches for basking. Threatened by habitat loss, persecution, and isolation of populations. Conservation strategies include protection of hibernacula and maintaining mixed canopy cover.
- American Ginseng (*Panax quinquefolius*): A long-lived herbaceous plant of mature hardwood forests, threatened by illegal harvest and deer overbrowsing. Conservation requires protection of forest interior habitat and enforcement of collection regulations.
- Spotted Coral-root Orchid (*Corallorhiza maculata*): A mycoheterotrophic orchid found in undisturbed forest with rich organic soils. Sensitive to canopy thinning and soil disturbance. Protection of intact mesic forest is critical for persistence.

Several Illinois Stewardship Species (Appendix III) are associated with the Forests and Woodlands Campaign including one wildlife species [Indiana Bat (*Myotis sodalis*)] and nine plant species [American Bugbane (*Actaea podocarpa)*, Black Cohosh *(Actaea rubifolia),* Fragile Rockbrake *(Cryptogramma stelleri),* French's Shootingstar *(Dodecatheon frenchii),* Forked Aster *(Eurybia furcata),* Schreber's Aster *(Eurybia schreberi),* Kankakee Globemallow *(Iliamna remota),* Snowy Campion *(Silene nivea),* Ozark Bunchflower *(Veratrum woodii)*]. 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 Forest or Woodland Natural Communities as part of this Campaign.

Stressors to Habitats and Species in Natural Lands

Illinois' forested natural landscapes face several key ecological stressors that threaten habitat quality and species viability. Among these are:

- Fragmentation and edge effects, which intensify invasive species pressure, modify microclimate conditions, and isolate small woodland, barrens, and flatwoods remnants from adjacent habitat. Currently, only about 7% of Illinois' forest is interior forest, and only 40 forest blocks over 500 acres remain (IDNR 2020), emphasizing the need to preserve and reconnect large contiguous tracts of forest.
- Declining oak regeneration, as oak seedlings represent less than 10% of the understory despite oak/hickory forests dominating 68% of forest cover. Oaks are foundational species in Illinois forests, and their failure to regenerate is largely due to the absence of historical disturbance regimes like fire, combined with competition from shade-tolerant species, deer overbrowsing, and invasive plants. This shift threatens forest composition and the wildlife species that depend on oak ecosystems.

- Invasive plant species shift native forest structure, outcompete native understory species, and inhibit regeneration. These species reduce habitat quality for many SGCN by displacing native plants needed for food and cover and by disrupting mutualistic relationships in forest ecosystems.
- Forest health stressors including widespread ash mortality from emerald ash borer (*Agrilus planipennis*), potential oak decline from diseases such as oak wilt (*Bretziella fagacearum*) and sudden oak death (*Phytophthora ramorum*) or pests such as two-lined chestnut borer (*Agrilus bilineatus*) and spongy moth (*Lymantria dispar dispar*), and abiotic stressors like herbicide drift. These threats reduce canopy diversity, alter habitat structure, and leave forests more susceptible to further degradation and invasive colonization.
- Climate-related shifts in composition and hydrology, including changes in precipitation patterns, temperature ranges, flood regimes, and extreme weather events, which can alter species distributions, forest composition, and water availability. These changes may stress native species adapted to historical conditions and exacerbate the spread of invasive species, requiring adaptive management strategies and long-term ecological monitoring.
- Natural succession leading to closed-canopy conditions and loss of open woodland structure, particularly where fire has been excluded for decades.
- Mechanical disruption, such as unsustainable trail development, off-road vehicle use, or poorly timed forestry practices that disturb soils and root systems.
- Mesophication, the gradual replacement of fire-tolerant, shade-intolerant species (such as oaks and hickories) with more mesic, shade-tolerant species (such as maples and beeches), which reduces the light and temperature conditions necessary for many woodland and barrens specialists.
- Canopy closure and woody encroachment in historically open-canopy systems such as woodlands, barrens, and savannas, driven by fire suppression and invasive shrub proliferation (e.g., bush honeysuckle, autumn olive, multiflora rose).
- Altered hydrology and soil compaction in flatwoods and floodplain forests, which disrupt the natural wet–dry cycles that define these communities and can shift composition toward less characteristic vegetation.
- White-tailed deer overbrowsing and herbivore pressure, which limit regeneration of oak, hickory, and other native woody species, altering understory composition and structure over time.

Collectively, these processes reduce structural diversity, diminish fire-dependent flora, and threaten the persistence of open-canopy communities that are integral components of Illinois' Forest Natural Community Class and Woodland Natural Community Sub-class as defined by the Illinois Natural Areas Standards & Guidelines (2023).

Conservation Action Strategies to address Stressors in Natural Lands

To mitigate the stressors affecting Illinois' forest, woodland, barrens, and flatwoods communities, the Campaign supports the following strategies and associated conservation actions.

- Improve oak regeneration and understory diversity through restoration of natural disturbance regimes
    - Decades of fire suppression and canopy closure have reduced regeneration of oaks and other fire-dependent species, diminishing structural diversity and native ground-layer composition.

    - Conservation actions include:
        - Application of prescribed fire to maintain open canopy structure, promote oak and hickory regeneration, and encourage native herbaceous growth.
        - Implementation of timber stand improvement (TSI) and selective thinning to reduce competition from shade-tolerant species and allow more sunlight to reach the forest floor.
        - Control of invasive shrubs and small trees (e.g., bush honeysuckle, autumn olive) through mechanical or chemical means, coordinated with fire management.
        - Deer population management in areas with heavy browse pressure to protect regenerating oak and hickory seedlings.
- Reduce the spread and impact of invasive plant and animal species.
    - Invasive species alter native forest structure, reduce biodiversity, and limit regeneration of native trees and understory species.
    - Conservation actions include:
        - Early detection and rapid response (EDRR) programs for emerging invasive plants and pests.
        - Integrated vegetation management combining mechanical, chemical, and biological control methods.
        - Targeted invasive species removal to allow for natural regeneration.
        - Public outreach and landowner education on identification, prevention, and control of invasive species.
- Protect large, contiguous forest blocks and reduce fragmentation.
    - Habitat fragmentation isolates populations, increases edge effects, and threatens forest-dependent SGCN.
    - Conservation actions include:
        - Acquisition and protection of remaining large forest tracts through state programs and conservation easements.
        - Landowner incentive programs (e.g., CREP, CSP, EQIP) to promote reforestation and buffer establishment around existing forest.
        - Landscape-level planning that prioritizes connectivity between protected forest parcels and nearby woodlands, barrens, and flatwoods
- Restore and maintain hydrologic and soil function in flatwoods and floodplain forests.
    - Changes in hydrology have disrupted the natural wet–dry cycles essential for these communities.
    - Conservation actions include:
        - Hydrologic restoration to re-establish seasonal water retention and flow patterns.
        - Soil compaction reduction through controlled access and restoration of natural drainage patterns.
        - Reforestation with hydric-tolerant native species to improve flood resilience and ecological function.
- Increase resilience to forest health threats and climate-related stressors.

    - Changes in hydrology have disrupted the natural wet–dry cycles essential for these communities.
    - Conservation actions include:
        - Diversification of age and species structure through selective planting and retention of legacy trees.
        - Monitoring and adaptive management for pests such as emerald ash borer, oak wilt, and gypsy moth.
        - Promotion of native genetic diversity through use of locally sourced seed stock in restoration plantings.
- Support ecological management of open-canopy woodlands, and barrens.
    - These communities are uniquely dependent on frequent fire and disturbance, yet are often overlooked in forest management.
    - Conservation Actions include:
        - Regular prescribed burning on rotational intervals to prevent canopy closure and maintain herbaceous groundcover.
        - Targeted mechanical removal of woody encroachment, especially of invasive shrubs and saplings.
        - Use of patch-mosaic burning and thinning to create gradients of openness and structural heterogeneity.
        - Collaboration with Nature Preserves Commission and land trusts to expand and maintain protected examples of high-quality open-canopy systems.
- Minimize mechanical disturbance and recreational impacts.
    - Unregulated access and infrastructure development can damage sensitive soils and vegetation.
    - Conservation Actions include:
        - Trail and facility planning to avoid erosion-prone or high-quality habitats.
        - Use of best management practices (BMPs) in forestry and recreation areas to limit compaction and disturbance.
        - Public education and signage to reduce off-trail travel and damage to restoration areas.
- Minimize herbicide drift and chemical trespass.
    - Off-target pesticide movement as a pervasive stressor for forest and woodland communities, including dedicated Nature Preserves and Land & Water Reserves.
    - Conservation Actions include:
        - Establish no-spray buffers and weather-window/timing restrictions near Nature Preserves/Land & Water Reserves and other priority sites
        - Standardize on-site control with INPC Vegetation Management Manuals and the Herbicide Reference Tool; train staff/partners.
        - Incorporate leaf/soil sampling and visual injury scoring for sentinel species (including oaks) in Focus Areas.

These strategies emphasize integration of disturbance-based management, connectivity, and adaptive stewardship to maintain the full range of forest and woodland natural communities across Illinois. Each action is intended to support measurable progress toward the Campaign's core objectives of improving composition, structure, and ecological function.

To ensure conservation strategies in natural landscapes are aligned with species-specific needs, managers should reference the SGCN lists and their community associations and various stressors. This tool highlights the unique vulnerabilities and habitat requirements of forest-dependent SGCN, many of which rely on large, unfragmented blocks of oak-hickory or floodplain forest. By cross-referencing stressors like invasive species and regeneration failure with species occurrence and habitat associations, conservation partners can more effectively prioritize restoration activities that benefit the greatest number of sensitive species.

Focal Monitoring Species in Natural Lands

The following species were identified for monitoring purposes as indicators of forest habitat condition and the effectiveness of conservation actions within natural lands:

- Eastern Box Turtle (*Terrapene carolina*)
    - Habitat: Prefers a mosaic of upland forest, forest edges, and open woodlands with well-drained soils.
    - Threats: Vulnerable to road mortality, habitat fragmentation, and fire suppression that reduces open canopy structure.
    - Why monitor: Moderately detectable and sensitive to habitat fragmentation and fire-dependent structures, its presence and demographic trends can indicate the health of large forest blocks and the maintenance of forest openings.
- Eastern Wood-Pewee (*Contopus virens*)
    - Habitat: Inhabits a variety of mature forest types with semi-open mid- and upper canopy structure for flycatching.
    - Threats: Declines linked to canopy closure, reduced forest patch size, and fragmentation.
    - Why monitor: Abundant, easily surveyed, and sensitive to canopy structure and regeneration, making it an excellent general indicator of healthy mature forest.
- Ovenbird (*Seiurus aurocapilla*)
    - Habitat: Occupies mature interior forests with closed canopy and deep leaf litter.
    - Threats: Edge effects, habitat fragmentation, and loss of interior forest habitat.
    - Why monitor: Common enough for point counts, responds strongly to intact interior forest conditions, and acts as a reliable surrogate of interior forest ecosystem health.
- Acadian Flycatcher (*Empidonax virescens*)
    - Habitat: Strongly associated with riparian mature forests and well-shaded streams.
    - Threats: Loss of riparian forest, changes to hydrology, and habitat fragmentation.
    - Why monitor: Relatively common and very easy to identify by voice, reflecting the condition of riparian forest connectivity and canopy structure.
- Wood Thrush (*Hylocichla mustelina*):
    - Habitat: Mesic hardwood forests with rich understory and moist leaf litter for nesting and foraging.
    - Threats: Habitat fragmentation and nest predation in edge environments.
    - Why monitor: Area sensitive species.

- Kentucky Warbler (*Geothlypis formosa*):
    - Habitat: Mature bottomland and upland hardwood forests with dense shrub layers.
    - Threats: Understory degradation from deer overbrowsing and invasive species.
    - Why monitor: Sensitive to understory diversity and connectivity.
- American Ginseng (*Panax quinquefolius*)
    - Habitat: Prefers mature hardwood forests with deep shade, rich mesic soils, and minimal disturbance.
    - Threats: Threatened by illegal harvest, overbrowsing by deer, and canopy loss due to poor management and development.
    - Why monitor: Easily located in suitable forests by trained observers, serves as a surrogate for mature forest integrity, understory health, and sustainable management practices.

Focus Areas on Natural Lands

The areas listed below include some of Illinois' largest and highest-quality forested conservation lands. These sites represent some of the best opportunities to protect large, relatively intact tracts of forest that sustain diverse native species and ecological processes. Their size, habitat complexity, and landscape context make them important cores for biodiversity, and they are well positioned to serve as demonstration areas for active management and adaptive conservation strategies.

Many of these larger public land complexes also include dedicated Illinois Nature Preserves or Land & Water Reserves, units managed primarily for ecological benefit under the Illinois Nature Preserves System, and, in southern Illinois, several Shawnee National Forest Wilderness Areas that represent similarly pristine, minimally developed lands. These Focus Areas together can act as models of Natural Land stewardship and are priorities for monitoring forest health, tracking SGCN populations, and testing restoration approaches such as prescribed fire, invasive species control, and native species establishment. By concentrating resources on these lands, we can measure progress toward Campaign goals while inspiring collaborative conservation at regional scales.

Priority sites that exemplify high-quality natural forest and woodland management include:

- Pere Marquette State Park — Includes the Pere Marquette Nature Preserve, protecting loess hill prairies, limestone outcrops, and mesic forests characteristic of the Illinois River bluffs.
- Cache River State Natural Area — Contains the Heron Pond–Little Black Slough Nature Preserve and Section 8 Woods Nature Preserve, representing some of Illinois' last remaining cypress–tupelo swamps and floodplain forests.
- Hanover Bluff Nature Preserve — Encompasses rugged upland and floodplain forests within the unglaciated Driftless Division and serves as a refuge for many SGCN forest birds.
- Starved Rock State Park — Includes the Starved Rock Nature Preserve, protecting sandstone canyons, mesic upland forests, and rare fern-dominated cliff communities.
- Shawnee National Forest Wilderness Areas — Large tracts such as Lusk Creek, Garden of the Gods, Bald Knob, and Bay Creek preserve minimally disturbed forest and woodland communities, functioning as natural benchmarks for unmanaged ecological processes in southern Illinois.

Working Lands

Working forest lands in Illinois include actively managed private woodlands, production forests, utility corridors, early successional habitats, and forested buffers integrated within agricultural or recreational areas. These areas support native species while also delivering timber, fuelwood, recreation, agricultural products and other ecosystem services. Managed disturbances such as selective harvesting, thinning, and prescribed fire plays a crucial role in enhancing structural diversity and maintaining open canopy conditions in these systems.

Illinois' working forest lands play a dual role: producing economic and recreational benefits while also sustaining biodiversity and providing ecosystem services. This Campaign section supports the CWCP vision by promoting cross-sectoral partnerships and landowner engagement in conservation. Integration with agricultural, pollinator, and grassland conservation strategies is essential to scale habitat benefits beyond forest boundaries, creating multifunctional landscapes that are ecologically productive and socially viable.

Species of Greatest Conservation Need in Working Lands

Working forest lands are actively managed for human uses such as agriculture, timber production and recreation but also retain large areas of open space that support native wildlife. These lands often feature managed disturbance like prescribed fire or selective harvest to maintain diverse structural conditions and provide habitat for a unique set of species. Species identified as Species of Greatest Conservation Need associated with the Forests and Woodlands Campaign are identified in the Native Species Section of this Plan (Appendix I).

Conservation actions on working lands are most effective when tailored to species that coexist within highly managed environments. The Illinois SGCN Forests and Woodlands species list identifies several SGCN that depend on early successional habitats, forest edges, and managed disturbance regimes. Using these lists allow conservation partners to select practices, like thinning, fire, or field-edge management, that simultaneously support production goals and promote recovery of priority species like Red-headed Woodpecker or Blue-winged Warbler.

- Eastern Whip-poor-will (*Antrostomus vociferus*): Strongly associated with open woodlands and early successional forest; declining due to fire suppression and canopy closure. Management should promote disturbance regimes that maintain open understory structure.
- Red-headed Woodpecker (*Melanerpes erythrocephalus*): Prefers open woodlands, savannas, and forest edges with standing dead trees for nesting. Threatened by loss of oak woodland and fire-dependent ecosystems. Fire and snag retention benefit this species.
- Yellow-breasted Chat (*Icteria virens*): A shrubland species often associated with regenerating forests and edge habitats. Vulnerable to habitat loss from succession and land clearing. Early successional habitat maintenance supports this species.
- Blue-winged Warbler (*Vermivora cyanoptera*): Dependent on early successional habitat such as regenerating clearcuts and shrubby old fields; vulnerable to habitat loss and shrub encroachment. Timber harvests and edge habitat restoration aid its recovery.
- Eastern Red Bat (*Lasiurus borealis*): A forest-dwelling bat that roosts in foliage and uses forest edges and openings; threatened by loss of foraging habitat and forest fragmentation. Forest retention with canopy heterogeneity supports its habitat needs.

- Mead's Milkweed (*Asclepias meadii*): A conservative prairie and savanna species occurring in high-quality remnant habitats; fire-dependent and threatened by canopy closure and habitat loss. Regular prescribed fire and protection of remnant habitats are essential.

Stressors to Habitats and Species in Working Lands

Working forest 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. Major stressors include:

- Suppression of fire and other disturbance regimes, which disrupts the natural processes that maintain open woodland and savanna structure. Many species in these landscapes are adapted to frequent, low-intensity disturbances such as fire, grazing, or selective timber harvest. Fire suppression leads to canopy closure, encroachment of shade-tolerant species, and loss of the heterogeneous structure needed by early successional and woodland-adapted species.
- Conversion to cropland or urban development, which results in direct loss of forest habitat and the fragmentation of remaining patches. Edge habitats, riparian buffers, and fencerows that once provided habitat continuity are often cleared or degraded, reducing habitat availability for wildlife dependent on transitional zones between forest and open land.
- Invasive species degrading habitat quality, including species like Amur honeysuckle, multiflora rose, autumn olive and Japanese honeysuckle (*Lonicera japonica*). These invasives outcompete native understory plants, alter fire regimes, and reduce the quality of nesting and foraging habitat for birds, small mammals, and pollinators.
- Lack of active forest management, leading to homogenous forest structure, limited regeneration, and increased vulnerability to pests and disease. Without thinning, selective harvest, or fire, forest stands become overstocked, shade out ground flora, and lose habitat diversity needed by SGCN.
- Herbicide drift from adjacent land uses, particularly in regions with intensive agriculture, which can damage sensitive plants, reduce nectar and forage availability for pollinators, and disrupt ecological relationships in field edges, forest margins, and regenerating habitats.

Conservation Action Strategies to Address Stressors on Working Lands

To effectively reduce and mitigate the threats facing Illinois' working forest lands, including production forests, managed recreational lands, and forested transportation/utility corridors, each conservation action must be strategically aligned with one or more specific stressors. The following strategies emphasize how management can support biodiversity while sustaining productive use:

- Promote sustainable wildlife-focused silviculture and forest management practices.
    - Unsustainable harvest and mechanical practices can degrade habitat quality, reduce regeneration, and alter species composition.
    - Conservation Actions include:
        - Implementation of Best Management Practices (BMPs) for forestry operations to minimize soil erosion, compaction, and water quality impacts.
        - Encouragement of selective harvest, group selection, and uneven-aged management to sustain structural diversity and regeneration.
        - Incentivizing forest certification programs (e.g., FSC, Tree Farm) and technical assistance to private landowners promoting long-term forest stewardship.

        - Integration of wildlife habitat objectives into silvicultural prescriptions: retaining snags, mast-producing trees, and coarse woody debris, and managing stand age diversity to support SGCN and other forest-dependent wildlife.
- Reduce the spread and impact of invasive species and herbicide drift.
    - Invasive plants and unregulated herbicide use along roads, rights-of-way, and agricultural borders threaten regeneration and understory composition in working forests.
    - Conservation Actions include:
        - Use of prescribed fire to maintain oak dominance, control woody encroachment, and stimulate native herbaceous layers.
        - Timber stand improvement (TSI) to thin dense canopies and increase light availability to the understory.
        - Rotational harvest or mechanical clearing to create patch-mosaic habitat supporting shrubland guild species.
        - Collaboration with landowners and forestry cooperatives to coordinate fire and thinning treatments across ownership boundaries.
        - Recommend no-spray buffers and weather-dependent application guidelines along forested edges, riparian strips, and rights-of-way to reduce off-target herbicide movement.
        - Coordinate with landowners, applicators, and cooperatives to implement integrated vegetation management (IVM) that minimizes broadcast herbicide use and prioritizes targeted, lower-volatility treatments in proximity to forested working lands.
- Enhance oak and early-successional habitat through disturbance-based management.
    - Many working forest tracts lack natural disturbance processes necessary for oak regeneration and young forest habitat favored by many SGCN.
    - Conservation Actions include:
        - Use of prescribed fire to maintain oak dominance, control woody encroachment, and stimulate native herbaceous layers.
        - Timber stand improvement (TSI) to thin dense canopies and increase light availability to the understory.
        - Rotational harvest or mechanical clearing to create patch-mosaic habitat supporting shrubland guild species.
        - Collaboration with landowners and forestry cooperatives to coordinate fire and thinning treatments across ownership boundaries.
- Protect working lands that support key forest functions and connectivity.
    - Working landscapes can maintain essential forest cover and corridors linking natural habitats if managed strategically.
    - Conservation Actions include:
        - Conservation easements or incentive programs that encourage retention of forest cover on private working lands.
        - Partnerships with local governments and industry to integrate forest conservation into land-use planning.
        - Riparian buffer establishment and reforestation along agricultural and transportation corridors to reduce sedimentation and enhance connectivity.

        - Coordination with IDNR Forestry, NRCS, and Soil & Water Conservation Districts to align management assistance with wildlife objectives.
- Maintain habitat quality in recreational and multi-use forest settings.
    - Recreational use and infrastructure development can lead to compaction, erosion, and disturbance of sensitive areas within state forests and parks.
    - Conservation Actions include:
        - Site planning and trail routing that avoid high-quality or erosion-prone habitats.
        - Implementation of BMPs for construction and maintenance to reduce soil disturbance and runoff.
        - Public education and signage promoting low-impact recreation and awareness of restoration areas.
- Strengthen coordination, capacity, and awareness for forest management assistance on working lands.
    - Many of Illinois' working forest tracts rely on limited technical support and participation in available management programs. Increasing awareness and coordination among partners can enhance implementation of best practices without new funding commitments.
    - Conservation Actions include:
        - Increase outreach and technical assistance to landowners and foresters to promote participation in existing programs (e.g., EQIP, CSP, CRP, IDNR Forestry Development Act).
        - Coordinate among IDNR, NRCS, USFS, and conservation partners to align forest management objectives with wildlife conservation priorities.
        - Promote cross-training and information-sharing between forestry, wildlife, and land management professionals to build capacity for implementing prescribed fire, invasive species control, and silvicultural practices.
        - Encourage integration of forest and wildlife management goals into ongoing statewide initiatives related to climate, water quality, and habitat connectivity.

Focal Monitoring Species on Working Lands

The following species were identified as indicators of forest habitat condition and for monitoring the effectiveness of conservation actions within working lands:

- Eastern Whip-poor-will (*Antrostomus vociferus*)
    - Habitat: Open woodlands, savannas, and regenerating clearcuts with sparse understory and abundant leaf litter.
    - Threats: Fire suppression, canopy closure, and loss of open woodland habitats.
    - Why monitor: Highly vocal, relatively easy to survey, and strongly associated with disturbance-maintained habitats, making it an effective indicator of open forest and woodland health.
- Red-headed Woodpecker (*Melanerpes erythrocephalus*)

    - Habitat: Relies on open oak woodlands, savannas, and mature forests with standing dead trees for nesting.
    - Threats: Loss of oak ecosystems, fire suppression, and removal of snags.
    - Why monitor: Readily visible and vocal, responds well to prescribed fire and snag retention, making it an effective surrogate for woodland structural diversity and active management.
- Blue-winged Warbler (*Vermivora cyanoptera*)
    - Habitat: Early successional habitats, shrubby old fields, and regenerating forest edges.
    - Threats: Succession of shrublands to closed canopy, land clearing, and invasive plant encroachment.
    - Why monitor: Responds quickly to habitat creation and is reliably detected during breeding surveys, providing a clear measure of shrubby and early successional conditions.
- Eastern Red Bat (*Lasiurus borealis*)
    - Habitat: Roosts in tree foliage of woodlands and uses forest edges and small openings for foraging.
    - Threats: Forest fragmentation, removal of roost trees, and pesticide impacts reducing prey abundance.
    - Why monitor: Moderately detectable with acoustic surveys, and responds to forest canopy heterogeneity, providing insight into both roosting and foraging habitat integrity.
- Gray Treefrog (Dryophytes (*Hyla) versicolor*)
    - Habitat: Forested wetlands, ephemeral ponds, and adjacent woodlands with some tree cover.
    - Threats: Drainage of seasonal pools, pesticide drift, and loss of wetland buffers.
    - Why monitor: Highly vocal and easy to survey, indicating wetland and edge woodland condition in working landscapes.
- Mayapple (*Podophyllum peltatum*)
    - Habitat: Grows in the herbaceous layer of mesic to dry-mesic deciduous forests, often in moderately shaded conditions.
    - Threats: Canopy closure and invasive plant competition.
    - Why monitor: Abundant, easily surveyed, and indicative of a healthy native spring ephemeral layer and light-to-moderate canopy conditions.

Focus Areas on Working Lands

Illinois' working forest lands demonstrate how active management can sustain both ecological function and economic productivity. These sites illustrate the integration of sustainable forestry, wildlife habitat restoration, and recreation while maintaining essential forest cover and connectivity. Many include both state and federal lands where prescribed fire, selective harvest, and invasive species control are regularly applied to meet diverse management goals.

Several of these areas overlap or adjoin lands dedicated under the Illinois Nature Preserves System or other conservation designations, highlighting opportunities for integrated management across Landuse Sectors. Together, they represent models of working land stewardship—balancing row crop agriculture, timber, wildlife, and recreation while contributing to landscape connectivity and biodiversity.

Focus Areas that exemplify successful working forest management include:

- Trail of Tears State Forest (Union County) — One of Illinois' most actively managed state forests, balancing sustainable timber harvest, prescribed fire, and wildlife management. The site serves as a demonstration area for oak regeneration, woodland restoration, and multi-use public recreation.
- Hidden Springs State Forest (Shelby County) — Features ongoing timber stand improvement, selective harvest, and prescribed fire programs that maintain mixed-oak woodland and savanna structure while supporting local forestry education and research partnerships.
- Lowden-Miller State Forest (Ogle County) — Incorporates diverse forest types and terrain, including upland oak-hickory and bottomland forest, where selective management and recreational use coexist within a well-monitored forestry framework.
- Jim Edgar Panther Creek State Fish and Wildlife Area (Cass County) — A large mixed-use property combining reforestation projects, wildlife management, agriculture and recreation. Managed for both early-successional habitat and mature forest structure, it provides a model for integrated land stewardship on reclaimed lands.
- Shawnee National Forest – Oakwood Bottoms and Bell Smith Springs (Jackson & Pope Counties) — Exemplify large-scale, multi-objective management on federal lands. Oakwood Bottoms integrates hydrologic restoration, waterfowl management, and bottomland hardwood forestry, while Bell Smith Springs demonstrates prescribed fire, visitor management, and habitat restoration within a high-use recreation complex.

These Areas provide opportunities for collaborative monitoring, training, and public outreach to demonstrate best practices in silviculture, prescribed fire, and invasive species control. They also serve as indicators of how working forests can sustain biodiversity, connect natural areas, and deliver long-term ecological and economic benefits statewide

Developed Lands

Forested components of developed lands include urban tree canopies, suburban parks, forested greenways, backyard woodlands, and wooded edges of transportation corridors. These human-dominated environments represent an increasingly important frontier for conservation, where ecological restoration and urban design intersect. Though fragmented and altered, these areas offer important ecosystem services—such as shade, stormwater filtration, carbon sequestration, and wildlife refuge—and provide opportunities to engage diverse stakeholders in conservation.

The IDNR Urban and Community Forestry Program, in partnership with the U.S. Forest Service Urban and Community Forestry Program, supports municipalities, park districts, and local partners in managing and expanding urban tree cover. These programs advance nature-based solutions that improve air and water quality, mitigate urban heat, enhance biodiversity, and strengthen community resilience. Their technical assistance, training, and participation in initiatives such as Tree City USA help Illinois communities develop sustainable local forestry programs that align with state and national conservation goals.

The Oak Ecosystem Recovery Plan, developed for the Chicago Wilderness region, offers a foundational example of how landscape-scale planning, stakeholder collaboration, and science-based strategies can be applied even in fragmented and urbanized areas. This framework emphasizes the importance of restoring oak ecosystems within human-dominated settings by integrating fire management, invasive species control, and community engagement. Its principles and conservation targets serve as a valuable

guide for adapting forest stewardship to the challenges and opportunities present in Illinois' developed landscapes.

Forest and woodland habitats on developed lands are often undervalued, yet they are vital green infrastructure that contribute to public health, neighborhood quality of life, and ecological connectivity. Forested habitats on developed lands overlap functionally and spatially with grassland, wetland, pollinator, and urban biodiversity strategies and offer an opportunity for combined IWAP Campaign goals. Collaborative planning and implementation, especially in areas like green infrastructure, hydrology, and community engagement, can yield conservation outcomes that extend beyond forest patches. By integrating forest stewardship into broader conservation initiatives, this Campaign ensures that forest actions contribute meaningfully to statewide resilience, ecosystem connectivity, and biodiversity recovery.

Species of Greatest Conservation Need in Developed Lands

Species identified as Species of Greatest Conservation Need associated with the Forests and Woodlands Campaign are identified in the Native Species Section of this Plan (Appendix I). Developed forest lands are often surrounded by human infrastructure but still provide patches of habitat within parks, greenways, backyards, and transportation corridors. These urban forests offer habitat for adaptable wildlife species that persist at the interface of natural and built environments.

- Barn Owl (*Tyto alba*): Occasionally nests in large, old structures and hunts open grasslands and forest edges; affected by habitat loss and building closures.
- Chimney Swift (*Chaetura pelagica*): Once reliant on hollow trees, now nests in chimneys and is declining due to modernization of building design and loss of nesting and roosting structures.
- Tri-colored Bat (*Perimyotis subflavus*): Uses forest edges, buildings, and culverts in developed areas; impacted by white-nose syndrome and habitat disturbance.
- Lined Snake (*Tropidoclonion lineatum*): Inhabits grassy or wooded urban areas with loose soils; vulnerable to habitat degradation and urban development.
- Narrow-leaved Sunflower (*Helianthus angustifolius*): Occurs along forest edges and moist roadsides; threatened by mowing, development, and competition from invasive species.
- Narrow-leaved Crabapple (*Malus angustifolia*): Found in forest margins and thickets within developed settings; subject to hybridization, habitat loss, and neglect.

Stressors to Habitats and Species in Developed Lands

Forested habitats on developed lands are highly fragmented and subject to intensive human activity. Though they may include parks, greenways, backyards, or wooded roadsides, these areas are typically small, degraded, or isolated. Nonetheless, they offer important opportunities for urban biodiversity conservation. The following stressors commonly affect these habitats and the species that rely on them:

- Loss of tree cover and native understory vegetation, driven by factors such as aging urban trees, inadequate recruitment, widespread emerald ash borer mortality, inconsistent maintenance practices, and the replacement of native trees with ornamental or non-native species. These losses reduce canopy continuity, eliminate nesting and roosting structures, and diminish the native plant diversity needed to support insects, birds, and other wildlife in developed

landscapes. Failure to replace removed trees—and the widespread use of turfgrass in place of natural understory—further limits habitat quality and ecological function.

- Fragmentation and edge effects, which are pronounced in urban environments, increase exposure to invasive species, domestic predators, and pollution. Wooded areas are often small and highly disturbed, with minimal core habitat. This limits the viability of sensitive species and reduces genetic connectivity.
- Herbicide and pesticide overuse or improper application, especially in rights-of-way, lawns, and parks, negatively affects native plants, pollinators, amphibians, and other sensitive species. Drift and runoff from treated areas can degrade adjacent habitats and disrupt ecosystem functions.
- Artificial lighting and human disturbance, including noise, recreation, and domesticated animals, interfere with species' behavior, reproduction, and movement. Nocturnal species such as bats and owls are particularly sensitive to urban lighting, while ground-nesting birds may abandon nests near trails and playgrounds.
- Lack of native plant diversity in landscaping, which results in ecological simplification and reduced habitat value. Lawns and ornamental plantings often fail to provide food or shelter for native wildlife and may facilitate the spread of invasive species. The absence of native host plants for insect larvae limits not only the food base for many birds but also the survival of the larvae themselves, which are integral components of Illinois' biodiversity and serve as essential contributors to ecosystem health and diversity.

Conservation Action Strategies to address Stressors on Developed Lands

To enhance the ecological and social functions of forest and woodland habitats within Illinois' developed lands, the Campaign supports the following strategies and associated conservation actions:

- Strengthen urban and community forest management through local–state–federal partnerships
    - Illinois' Urban and Community Forestry Program, coordinated by IDNR in partnership with the U.S. Forest Service, helps municipalities and community organizations plan, plant, and manage trees for ecosystem and social benefits.
    - Conservation actions include:
        - Providing technical support and training for local tree inventories, canopy assessments, and forest management planning.
        - Promoting participation in Tree City USA and similar recognition programs to encourage community engagement and accountability.
        - Supporting equitable tree canopy expansion in underserved neighborhoods to address environmental justice and climate resilience goals.
- Enhance wildlife habitat and connectivity within urban and suburban environments
    - Forested corridors, greenways, and park woodlands provide vital connectivity for birds, bats, pollinators, and small mammals across fragmented landscapes.
    - Conservation actions include:
        - Designing and managing urban forest patches and green corridors to support SGCNs such as Common Nighthawk, bats, and migratory birds.
        - Integrating native vegetation and layered canopy structure in parks, campuses, and residential plantings to support nesting and foraging.
        - Implementing bird-safe and pollinator-friendly design standards in urban planning.
        - Encourage native landscaping and lawn alternatives such as prairie gardens, pollinator patches, shade-tolerant groundcovers, and pocket woodlands, to

replace portions of traditional turfgrass and increase habitat value for insects, birds, and small mammals.

- Integrate forest stewardship into urban infrastructure and planning
    - Thoughtful integration of tree canopy and woodland patches into urban design improves air quality, reduces heat islands, and manages stormwater runoff.
    - Conservation actions include:
        - Coordinating forest management goals with municipal stormwater and green-infrastructure plans.
        - Using low-impact development (LID) and tree-based bioswales to filter pollutants and slow runoff.
        - Adopting design standards and zoning incentives for tree preservation during development.
- Mitigate environmental stressors affecting urban forests
    - Urban trees and forest remnants face unique pressures from herbicide drift, soil compaction, heat, and light pollution.
    - Conservation actions include:
        - Establishing vegetation management standards and no-spray buffers adjacent to priority habitats and Nature Preserves.
        - Promoting soil decompaction, mulching, and root-zone protection during construction and maintenance.
        - Managing light pollution and noise in urban areas to reduce impacts on nocturnal wildlife.
- Expand community engagement and citizen-science monitoring
    - Public participation is critical for maintaining long-term forest health and awareness in developed areas.
    - Conservation actions include:
        - Supporting community tree-planting and monitoring programs through partnerships with schools, NGOs, and local park districts.
        - Utilizing tools such as iNaturalist, eBird, and volunteer monitoring to track species presence and phenology.
        - Offering urban forestry workshops and stewardship training to increase local capacity for habitat restoration and maintenance.

Although fragmented, developed lands still support numerous SGCN adapted to urban forests, parklands, and greenways. The Illinois SGCN Forests and Woodlands species lists helps identify which species are most compatible with these environments and the habitat elements they require, such as roosting cavities, flowering plants, or forest edge continuity. Applying this knowledge enables urban planners, municipalities, and community groups to make targeted enhancements that contribute meaningfully to biodiversity conservation in developed areas.

Focal Monitoring Species on Developed Lands

The following species have been identified as indicators of forest habitat condition and are recommended for monitoring the effectiveness of conservation actions within developed lands:

- Chimney Swift (*Chaetura pelagica*)
    - *Habitat*: Urban areas, nesting in chimneys and occasionally hollow trees in parks.

    - *Threats*: Loss of roost sites due to building modifications and capped chimneys.
    - *Why monitor*: Very detectable by their calls and flight patterns, strongly tied to urban forest–structure interfaces.
- Northern Flicker (*Colaptes auratus*)
    - Habitat: Uses urban parks, wooded neighborhoods, and edges with scattered large trees and ground-foraging areas.
    - Threats: Loss of standing dead trees (snags), overly tidy landscaping, and removal of ant-rich foraging habitats.
    - Why monitor: Readily observed, easily identified, and responds to snag availability and woodland structure, making it a good surrogate for urban canopy and ground-layer health.
- Tri-colored Bat (*Perimyotis subflavus*)
    - *Habitat*: Urban woodlots, bridges, culverts, and forest edges.
    - *Threats*: White-nose syndrome, roost structure loss, disturbance.
    - *Why monitor*: Feasible with acoustic monitoring, reflects connectivity and roost-site availability.
- Monarch Butterfly (*Danaus plexippus*)
    - Habitat: Urban parks, backyard gardens, roadside plantings, and other greenspaces with milkweed and nectar plants.
    - Threats: Loss of milkweed host plants, pesticide use, and habitat fragmentation in urban areas.
    - Why monitor: Highly recognizable, easily surveyed, and a flagship pollinator species whose trends reflect the condition of native plantings and pollinator-friendly management in developed landscapes.
- White Oak (*Quercus alba*)
    - *Habitat*: Dominant canopy tree of upland mesic and dry-mesic forests, savannas, and woodland edges.
    - *Threats*: Fire suppression, herbicide drift, competition from shade-tolerant species, poor oak regeneration, and habitat fragmentation.
    - *Why monitor*: As Illinois' state tree and a keystone species, its recruitment and canopy presence are highly visible indicators of successful disturbance management, long-term regeneration, and sustainable oak woodland health.

Focus Areas o**n Developed Lands**

Forested habitats occurring on Illinois' developed lands, including some properties managed by County Forest Preserve Districts and Conservation Districts, Peoria Park District woodlands, forested land managed by colleges and Universities, and wooded rights-of-way along Illinois' interstates, play an outsized role in supporting biodiversity within urban and suburban environments. Though fragmented, these green spaces contribute essential ecosystem services such as shade, stormwater regulation, pollinator support and habitat for other Native Species, and opportunities for people to engage with nature.

These Focus Areas identified here demonstrate how forest remnants and urban woodlands provide wildlife habitat, enhance native plant diversity, and increase Natural Community resilience. Monitoring programs in these developed settings can evaluate how conservation-oriented design, tree planting, and habitat enhancements improve ecosystem health and connect people with nature.

- County Forest Preserve and Conservation District Lands — Large tracts of semi-natural forest near urban centers (e.g., Cook, DuPage, Lake, Champaign, and Will counties) that provide habitat connectivity, recreation, and environmental education opportunities.
- Peoria Park District Woodlands — Examples of long-term woodland management and native plant restoration within an urban setting.
- University and College Forest Lands — Research and demonstration forests (e.g., University of Illinois, SIU Carbondale, Principia College) that integrate education, ecological restoration, and campus sustainability goals.
- Illinois Department of Transportation Rights-of-Way — Opportunities to manage highway corridors as linear habitat for pollinators, birds, and small mammals through native vegetation and reduced mowing.

Monitoring the Effectiveness of Landscape Stewardship and Species Management Actions

Tracking the effectiveness of conservation actions is essential to ensure that the Forests & Woodlands Campaign is achieving measurable progress for Species of Greatest Conservation Need (SGCN) and other dependent wildlife dependent. The purpose of monitoring is to evaluate whether management actions are improving population viability, habitat structure, function, and resilience to guide adaptive management at multiple scales and to evaluate their ability to move the needle of native species populations. This section identifies both outcomes (the biological and ecological responses being sought) and the outputs (the measurable stewardship activities and management actions required to reach them).

The Campaign encourages the use of shared performance measures across state, federal, and other partners to promote consistency and coordination. These measures emphasize tracking ecological condition, species responses, and management implementation within the Natural, Working, and Developed lands described earlier in this chapter.

Key performance measures include the following outcomes and their associated supporting actions:

- Habitat Composition & Structure – Increase in structural and compositional diversity across forest and woodland communities, including successful oak regeneration and balanced canopy-to-understory ratios. Supporting actions include prescribed fire, silvicultural thinning, invasive shrub and tree removal, and implementation of forest management plans.
- Species of Greatest Conservation Need – Stabilized or increasing occupancy and abundance trends for focal forest SGCN (e.g., forest birds, bats, amphibians). Supporting actions include establishment of monitoring stations, standardized surveys, and data sharing through IWAP frameworks.
- Open-Canopy and Fire-Dependent Communities – Maintenance of open woodland and barrens structure through recurring disturbance. Supporting actions include prescribed burning, rotational clearing, and brush management.
- Invasive Species Control – Reduction in cover and spread of invasive woody and herbaceous species in priority areas. Supporting actions include mechanical, chemical, or biological control and early detection and rapid response (EDRR) activities.
- Hydrology and Soil Function – Restoration of natural wet–dry cycles and soil integrity in flatwoods and floodplain forests. Supporting actions include hydrologic restoration, soil decompaction, and drainage improvement projects.

- Interior Forest and Connectivity – Increased interior forest area and improved connectivity among forest blocks. Supporting actions include reforestation, conservation easements, and riparian corridor plantings.
- Urban Forest and Developed Landscapes – Expanded and healthy urban tree canopy providing wildlife habitat, climate resilience, and community benefits. Supporting actions include canopy assessments, tree plantings, participation in Tree City USA, and public outreach programs.
- Private Lands Stewardship – Improved forest habitat condition and native cover on private lands enrolled in conservation programs. Supporting actions include implementation and monitoring of Illinois Recreational Access Program (IRAP), Conservation Reserve Enhancement Program (CREP), and Conservation Stewardship Program (CSP) projects, with management plan follow-ups.
- Forest Health and Resilience – Timely detection and response to forest pests, diseases, and herbicide drift. Supporting actions include forest health surveys, BMP-based mitigation, and staff training.
- Community Engagement and Capacity Building – Increased local stewardship capacity and public participation in forest monitoring and restoration. Supporting actions include informational outreach, workshops, citizen science programs (eBird, iNaturalist, Survey123), and NGO–agency partnerships.

Monitoring across these categories is accomplished through the collective efforts of IDNR's Divisions of Forestry, Wildlife, Natural Heritage, and Private Lands & Waters, together with INHS, USFS, NRCS, USFWS, and NGO partners. Each Division contributes unique expertise—from vegetation monitoring for Natural Community Grading to update the Illinois Natural Areas Inventory to private land program evaluations and Pittman–Robertson–supported wildlife studies. Together, these complementary efforts form the foundation of a coordinated statewide monitoring framework.

Monitoring results should be used to guide adaptive management. Regular analysis and data sharing among Agencies and partners will help refine conservation actions, update priorities, and ensure accountability toward measurable biodiversity outcomes. Emerging tools such as remote sensing for canopy change, drone-based imagery for structure assessment, and automated acoustic detection for bats and birds offer new opportunities to strengthen the precision and scale of monitoring efforts.

By focusing on wildlife outcomes and the measurable stewardship actions that support them, the Forests & Woodlands Campaign provides a unified framework for evaluating progress toward ecological recovery, long-term resilience, and sustained habitat quality across Illinois' diverse landscapes.

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