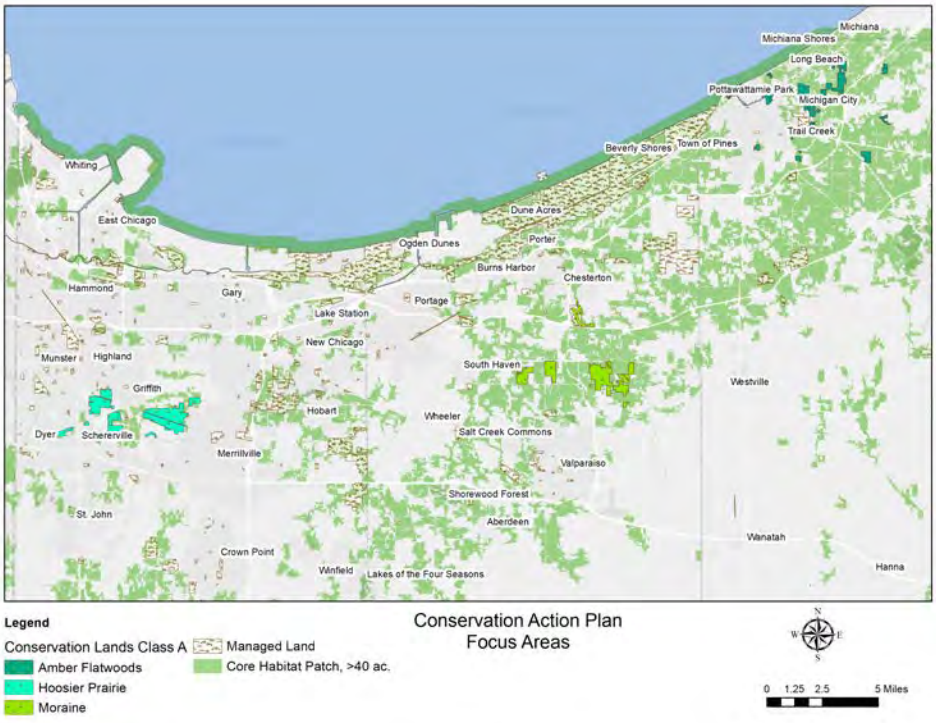
HOOSIER PRAIRIE | MORAINE COMPLEX | AMBLER FLATWOODS

CONSERVATION ACTION PLANNING



Executive Summary: CALUMET LAND ACQUISITION & HABITAT RESTORATION PLAN

The purpose of this project (CZ584-309) was to develop a land acquisition strategy that identifies priority parcels, funding mechanisms and supporting geospatial products for three focus areas in Northwest Indiana: Hoosier Prairie, Moraine Complex and Ambler Flatwoods. This was achieved through a collaborative conservation action planning (CAP) process with local stakeholders who identified conservation targets, threats and the strategies for the best conservation outcomes. The deliverables of this project will be used by conservation organizations and land managers to advance land and wildlife conservation in the Calumet region.


Photo by Derek Nimetz, IDNR

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Conservation Action Planning

is critical for the sustainability of complex ecosystems in the Lake Michigan Watershed. This planning process and resulting plan captures a record of decisions and supporting information for treatment of several units of land. It identifies practices needed to solve natural resource concerns and seize opportunities to improve the targeted lands. Northwest Indiana is fortunate to have many experts committed to looking at the geography of the landscape and determining strategies that maintain and/or restore biodiversity and quality habitat.

One of the most complete strategic conservation planning efforts to date has been the production of the Coastal and Estuarine Land Conservation Program (CELCP) Plan in Indiana. However, gap areas not covered by previous planning efforts such as CELCP still exist. With support from the Indiana Department of Natural Resources Lake Michigan Coastal Program, conservation partners of the Calumet region led a conservation planning process to address the gap areas of: Oak Ridge / Hoosier Prairie (Lake County), Moraine / Sunset Hill (Porter Country), and Amber Flatwoods (LaPorte County). This process yielded conservation action plans for these key areas that will be used by conservation organizations and land managers to advance land and wildlife conservation in the Calumet region.

The gap areas (i.e. conservation areas not covered by CELCP) identified in this report are significant because they possess high biodiversity, contain high quality, limited natural resources, and are connected to regional trail systems. They are also surrounded and intersected by various land uses. Land uses include residential and commercial development, transportation, agriculture and utility and industrial use. The challenge of maintaining high quality natural areas that are surrounded by urbanization and industrialization called for strong, strategic conservation plans involving all stakeholders in the Indiana coastal region. As a result, the conservation plans for each gap area detail land management and acquisition strategies that address conservation threats and targets, highlight opportunities for funding, collaboration, and future work, and identify metrics that will indicate if strategies are successful. Each gap area has its own plan and supporting geospatial products as each gap area faces different conservation threats and targets. These three action-oriented plans cover the next 5 years and can be used as a tool to engage and educate stakeholders in conservation work throughout the region.

The gap areas and the surrounding land are managed by a number of partners including but not limited to state agencies, companies, utilities, private businesses, and other organizations. Due to the number of partners involved, a collaborative, action-oriented process called Conservation Action Planning (CAP) proved to be the most efficient and effective way to bring all partners together. The CAP process builds effective projects with the greatest impact possible by focusing on what needs to be done, how it should be done, and monitors success after action is taken. For greatest efficacy and impact, this CAP process was split up into 3, two-hour meetings for each gap area over the course of 3 months with supplemental site visits and partner correspondence throughout. Each meeting was professionally facilitated by Joe Tutterrow from The Nature Conservancy. The meetings were interactive and adaptive, and used maps to help visualize strategies. The meetings focused on action-oriented outcomes to ensure all parties were in agreement with the strategies that addressed the various conservation targets, threats, and opportunities, as well as what would be measured to indicate each strategy's success.

In this document, "**gap areas**" are conservation areas that were not included in the Coastal and Estuarine Land Conservation Program (CELCP), the previous conservation planning document created for the region.

Photo by Derek Nimetz, IDNR

Regional Conservation Threats


Photo by Jim Erdelac

Fragmentation

Fragmentation that occurs via right-of-ways (ROWs), roads that bisecting individual sites and residential, industrial, and other developed areas reduces the connectivity of natural areas across the landscape. Impacts of fragmentation can be abated through cooperative management; sites managed as part of a contiguous landscape despite jurisdictional boundaries are more resilient to disturbances and vulnerabilities associated with fragmentation. Fragmentation is a more severe threat when adjacent development is incompatible with healthy habitats. For example, land uses that prohibit connectivity and create noise, light, air, and water pollution reduce the integrity of adjacent natural areas. Fragmentation also encourages encroachment or allows for the establishment of large infestations of invasive species. Fragmentation concerns are increasing as Northwest Indiana grows in population and the potential for rapid, high-intensity development adjacent to priority site increases.

While there is limited ability to address all existing fragmentation, partners have identified opportunities to reduce the impacts where possible. For instance, in areas that are highly fragmented, partnering with utilities and adjacent landowners on invasive species control and best management practices has been identified as a strategy with potential for a number of potential projects sites. Additionally, preparing for increased fragmentation in the future is a critical step in protecting conservation targets from development. Land acquisition and conservation easements have been identified as strategies to limit the future impact of development adjacent to priority sites as well as providing input into municipal planning processes to influence development practices and where possible to encourage sustainable development consistent with the surrounding ecology.

Invasive Species

Invasive species were identified as a costly and severely damaging to the native species and habitat structures of the three focus areas. The impact of invasive species is exacerbated by other threats such as fragmentation, pollution, and reduced fire regime. While invasive species are a regional threat, land managers and other partners have the ability to reduce the impacts through restoration and management projects, conservation planning, outreach and partnership-building with adjacent landowners, and securing additional resources.

A list of invasive species of concern has been identified by the Indiana Coastal Cooperative Weed Management Area partnership led by The Nature Conservancy. A list of species can be found at www.nature.org.

Reduced Fire Regime

Disruption of consistent fire regimes is a threat for savanna, woodland, and prairie complexes; it threatens natural resources in the Hoosier Prairie and Moraine Complex focus areas. The use of fire in managing natural areas is inconsistent and, in some years, barely existent. This is due to the proximity of residential areas,

policies that limit burn windows, unfavorable weather conditions, and limited staff and funding to implement prescribed burns.

Due to the lack of fire in savanna and prairie habitats over the years, many local sites have become overgrown with aggressive and nonnative species and have begun to lose the structure that supports these unique habitats.

Increasing the use of prescribed burns to manage these areas may be achieved through policy-change, such as widening the burn window; increased funding for staff and equipment; interagency resource-sharing; collaboration with local municipalities; outreach to improve public perception of prescribed burns; and contingency planning, such as using mechanical methods of invasive species removal when burns are not feasible.

Pollution and Contamination of Land and Water Resources

Because of proximity to industry, agriculture, urbanization and other land uses, pollution is a concern for the health of natural resources in this region. The presence of pollutants disrupts ecosystem function, encourages invasive species spread, and threatens wildlife.

The type and severity of pollutants varies across the Indiana coastal landscape. While pollution from nearby active industry and a former industrial complex now classified as a superfund site threaten Hoosier Prairie, the Moraine Complex's proximity to subdivisions and other development pressures presents it's own suite of pollution challenges.

Furthermore, wetlands, natural areas with capacity to store, filter and purify water, have been dramatically altered across the landscape negatively impacting the hydrology of surrounding lands. Historically, Northwest Indiana was filled with wetlands which have diminished or become degraded over time. According to the Northwestern Indiana Regional Planning Commission's 2040 Plan, the acreage of wetlands in Northwest Indiana once numbered more than 340,000 total acres based on NRCS hydric soils data. Today, only 72,410 acres of these wetlands remain.

Strategies for overcoming problems resulting from pollution of land and water are built around best-use-management policies, outreach, and green infrastructure implementation.

Human Disturbances

While passive recreation on designated trails is encouraged, some recreational activities are not compatible with maintaining public safety and ecological integrity. Use of all-terrain vehicles, unpermitted fires, and the creation of social trails have a cumulative impact on frequently visited sites. Dumping is also an ongoing threat to these and many other natural areas.

Lack of Funding for Land Managers

Throughout all three focus areas, a consistent threat is the lack of funding for land managers to manage natural resources. The quality and rarity of natural resources coupled with accelerated stresses from adjacent land uses, requires a high-level of active management to protect the landscape. Because natural processes have been disrupted by fragmentation, thereby increasing their vulnerability, land managers are critical players in protecting our resources. However, funds to adequately manage them are limited. Securing long-term, sustainable funding for land management activities is essential for conservation of these areas.

Climate Change

Climate change exacerbates all other threats. Further, it will likely favor generalist and invasive species in transitioning ecozones, intensify weather events that disrupt ecological functions, increase both drought and flashiness, and will threaten species that help maintain habitat structures.

Clear-cutting and Deforestation

Clear-cutting is a logging practice in which most or all trees in an area are uniformly cut down. The Moraine Complex and Ambler Flatwoods are both vulnerable to this threat. Clear-cutting can reduce the quality and quantity of topsoil, and the resulting loss of trees can negatively impact the surrounding air quality. Additionally, the many species that rely on Moraine and Ambler's tree cover are at risk of losing their homes and habitat. Forests also play a critical role in mitigating climate change as forests act as a carbon sink, soaking up carbon dioxide in the atmosphere that would otherwise contribute to ongoing changes in climate patterns.