

Indiana DNR Division of Nature Preserves

2021 ANNUAL REPORT



DNR
Indiana Department
of Natural Resources



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DIRECTOR ADDRESS

Ron Hellmich

As we head into the third decade of the 21st Century, the Division of Nature Preserves continues with our mission of protecting Indiana's natural areas and the diversity of life these areas harbor. Though our mission remains the same, we search for relevance, and the relevance of natural areas to the citizens of Indiana.

Three new nature preserves suggest the different pathways of relevance. Ginn Woods Nature Preserve in Delaware County is owned by Ball State University and has provided field study opportunities for students there at one of the few remaining old-growth forests in the state. Grand Prairie Nature Preserve protects 10 acres of a natural prairie ecosystem that is one of the few left in the state. The Erie-Lackawanna Trail runs on the north side of this preserve, allowing for its users to get a glimpse of this fascinatingly diverse ecosystem. Sebert Woods Nature Preserve in LaPorte County is owned by the LaPorte County Parks Foundation and eventually will be transferred to the LaPorte County Parks Department. This preserve contains boreal flatwoods, mesic forests, swamp forests, and shrub swamp communities within its 39 acres. This incredible mix highlights its significance for protection.

The Lake Michigan Coastal Program continued its relevance journey with several initiatives. One is the creation of the Coastal Atlas, which brings together data and tools for Lake Michigan's coastal area communities and organizations to help with planning and decision making. Another project area is an emphasis on resilience in the coastal area as we head into changing climatic conditions and changes in land uses in the region.

The Indiana Natural Heritage Data Center continues to gather information on Indiana's natural diversity. Heritage staff and partners visited numerous natural areas throughout the state to study and inventory these areas for their species and plant-community diversity. With this information, decision makers can better understand impacts and plan more effectively. The Heritage program also introduced an iNaturalist project, Rare Species of Indiana, through which people can learn about and report rare species observations.

With the work done in 2021, the Division of Nature Preserves is ready to accomplish much more in the coming decade. We will continue the work of natural-area and natural diversity protection.



NEW STAFF

Max Gerke – Assistant Data Specialist

I am the new Data Assistant for the Indiana Natural Heritage Data Center and am super excited to bring my skillset to the division to further the mission. I was born in Fort Wayne and moved to Milwaukee, where I grew up. When I attended school at the University of Kentucky, my appreciation for the outdoors really began to sprout and take root. After graduating with a degree in Economics I moved to Chicago for two years and then to Denver for five years to work in parking and commercial construction permit consulting. Living in such proximity to the Rocky Mountains allowed my passion for nature to blossom and flourish by having so much access to managed lands and natural areas that are a joy to experience. From these experiences I decided to pivot careers and am currently taking classes in GIS with the intent to use these skills for preservation. My wife and I recently moved back to the Midwest to be closer to family. In my free time you can find me volunteering with the Patachou Foundation that works to fight food insecurity in Indianapolis, taking Spanish lessons, cooking fresh meals in the kitchen, and exploring all our new home has to offer.

Wyatt Williams – Ecologist

I am lucky enough to be the new community ecologist within the Heritage Program in DNP. I started in July and spent 2021 trying to absorb as much of Indiana's ~3,000 plants and 100 natural communities as possible. It has been a joy getting to know the state and the wealth of knowledge housed in the division and our partners. Before this, I spent five years as the naturalist at McCormick's Creek and Spring Mill state parks and did seasonal work at Brown County State Park and Indiana Dunes Learning Center before that. My degree is from IU, where I took botany, ornithology, and entomology classes and interned doing wetland restoration. My wife Danielle and I live in Bloomington and enjoy hiking, kayaking, caving, birding, botanizing, and volunteering for a number of organizations.

Katherine Balkema – Coastal Grants Specialist

I graduated from Wayne State University with a master's degree in Library and Information Science in May of 2021. I worked in an information and referral setting while I was attending school, and that experience sparked my interest in information management. I was born in Valparaiso and have lived in the Midwest for most of my life. I'm happy to be back in the area after living in Florida for a short while, where I worked as a librarian. I'm excited at the opportunity to apply my skills to a new purpose.

EXECUTIVE SUMMARY

In March 1967, the General Assembly passed the Nature Preserves Act, creating the Division of Nature Preserves and charging it with finding, protecting, and managing the Indiana's remaining natural areas. Since then, working with partners, 294 nature preserves have been dedicated. This encompasses 54,569 acres. Nature preserves are owned by numerous DNR divisions, land trusts, city/county park boards, and colleges and universities.

The Division of Nature Preserves (DNP) is charged with finding, protecting, and managing examples of Indiana's natural communities, coastal resources, and rarest species for the benefit of present and future generations. DNP comprises four primary components: nature preserve protection, nature preserve management, the Indiana Natural Heritage Data Center, and the Lake Michigan Coastal Program (LMCP). The division is funded by a variety of sources, including trust funds, grants, and general funds. Approximately one-third of the full-time staff is paid by non-General Fund sources, and all of the remaining staff receives a portion of their funding from non-General Fund sources. Division staff work from nine locations scattered around the state, including the central office in Indianapolis.

Division staff was involved with numerous publications and outreach activities. These included 30 presentations, 70 partner projects, 75 technical assists to partners, 18 interagency projects, 22 outreach activities, and numerous other projects to improve access and trails for visitors. The division hosted 10 hikes at nature preserves throughout the state. DNP staff also attended more than 150 meetings and wrote several articles. The LMCP coordinates the Septic System Maintenance and Care Awareness effort.

The Natural Heritage Database now contains 20,316 element occurrences (rare plants, animals, natural communities), and during 2021, a total of 352 new records were entered and 492 more were updated. Staff answered 1,210 information requests and conducted 1,045 environmental reviews, and reviewed 52 floodway permit applications, 151 public lake permit applications, and five coal permit applications.

The certified ginseng harvest numbers will be available in early June. A total of 18 ginseng dealers were licensed.

Regional ecologists managed and performed habitat restoration and invasive species control at numerous sites across the state. This year also featured a productive prescribed burn season, as regional ecologists performed prescribed burns on high-priority sites across the state with the help of the efficient mobilization of crews and assistance from partners and other divisions. Habitat restoration and invasive species control were continued in 2021. A total of 7,215 acres were treated, including prescribed burn acres and contracts.

There is at least one nature preserve in every natural region in Indiana. Nature preserves contain at least one example of all but two of the 81 natural community types known to occur in the state. Of the 250 state-endangered plants, there is at least one protected example of 222 of them.

Nature preserves protect some of Indiana's most diverse landscapes, including dunes, sand prairies and savanna, wetland complexes, lakes, rivers, forested ecosystems, glades, karst features, prairies, fens, bogs, swamps, and geologic features. Three new nature preserves were dedicated, adding 210.76 acres to bring the total number of dedicated acres to 54,569.

INTRODUCTION

The Division of Nature Preserves (DNP) is made up of four components: the nature preserve program, preserve management program, the Natural Heritage Data Center, and the Lake Michigan Coastal Program (LMCP). The Nature Preserve Program works with numerous partners to protect natural areas through acquisition and other protection actions and dedication into the State Nature Preserve system. The preserve management program takes care of DNP- owned nature preserves and assists partners with their nature preserves by using many restoration and management activities, including prescribed burning and control of invasive species. The program also provides access to DNP-managed nature preserves by providing parking and trails, where appropriate. The Natural Heritage Data Center collects and manages statewide biodiversity data and tracks occurrences of rare species and high-quality natural communities. These information resources are used to guide conservation in multiple ways and help governmental agencies and private enterprise in their decision making. The species and community data provide a basis to inform projects during the planning phase by being used in environmental reviews and permit applications. The LMCP is responsible for coastal activities, including natural, cultural, and historic resource activities in the Indiana Lake Michigan Coastal Zone, providing grant funding for a variety of projects, and serving as a central clearinghouse for natural resource conservation and planning.

Mission

The Indiana Legislature passed the Nature Preserves Act in 1967, creating the DNP, charging it to work with partners to set aside and preserve areas of unusual natural significance for the benefit of present and future generations. Since that time, DNP staff has worked with DNR colleagues as well as with partners throughout Indiana, to catalog Indiana's flora, fauna, and natural areas, striving to set up a system of nature preserves that includes examples of all of the natural areas and rare species habitats that occur in Indiana. While the task is not complete, much progress has been made. At least one example of 79 out of 81 types of natural communities found in Indiana at the time of settlement is included in Indiana's nature preserve system. Ninety percent of the 434 plants considered endangered or threatened have viable populations in Indiana nature preserves.

The DNP mission is to identify, protect, and manage an array of nature preserves and natural areas in sufficient numbers and sufficient sizes to maintain viable examples of all of Indiana's natural communities. DNP also manages and maintains viable populations of endangered, threatened, and rare species. These activities are conducted for the benefit of the natural communities and their representative species, as well as for the benefit of present and future generations.

The purpose of the Indiana LMCP is to enhance state government's role in planning for and managing natural and cultural resources in the coastal region and to support partnerships between federal, state and local agencies and organizations. The LMCP relies upon existing laws and programs as the basis for achieving its purposes.

Funding

For a number of years, the division's operating budget was funded solely through Indiana's General Fund, and its Capital Funds alternately were either from the Cigarette Tax or the General Fund. Starting in the 1980s, as new staff positions were added to meet increasing demands, they were paid for with alternate funding sources. Currently, roughly 62% of division staff is paid through a variety of non-General Fund sources: INHPC Endowment, Coastal Program, Natural Resources Damages Account, Lands Unsuitable, and Pittman-Robertson. The remaining 38% are paid with General Fund monies (Figure 1). For General Fund paid staff, all have a portion of their salaries paid by non-state funds. These funds come from Office of Surface Mining, U.S. Fish and Wildlife Service (USFWS), and other sources, since a portion of the work being done by these employees is for projects desired by both the division and those entities. A portion of the time of most of these employees also serves as match for employees paid for with NOAA Coastal Program funds. Additionally, all seasonal division employees have at least a portion of their salaries paid for by federally funded projects, which further enhances taxpayer funds, enabling more natural resource work to be accomplished with less state funding.

The responsibilities of purchasing and operations include everything from making small repairs, training, and snowplowing using claim vouchers to making purchase requests for buying larger equipment such as UTVs, mowers, and some contracts. Most Quantity Purchase Agreements or (QPAs), were completed using requisitions, and these included purchases from Fastenal, NAPA, Goodyear, and Blackjack uniforms.

Public Relations and Outreach Activities

Divisional public relations efforts are divided into six broad categories: Presentations, Partner Projects, Technical Support, Inter-Agency Projects, Public Access Projects, and Outreach Activities.

Nature Preserves staff made 30 presentations to a variety of partners with the majority being done for nonprofit environmental groups. Those groups included our partner land trusts, wildflower groups, and community organizations. Topics included conservation design, multi-use trail design, Indiana wildflowers, and invasive species control.

Nature Preserves regional ecologists were involved in 70 partner projects that included land trusts, counties, park boards, nonprofit groups, and commercial entities. There was a wide variety of projects, including habitat restoration, public dedications of nature preserves, trail construction and maintenance, invasive species management, and monitoring of endangered, threatened, or rare species.

Seventy-five partner projects received technical assistance with their own projects from DNP staff. The bulk of these were for invasive species grants, removal, or monitoring, from all sectors of partnerships. DNP staff also provided comments on restoration plans, mitigation projects, streambank stabilization, and erosion control. There were also several large projects with industry that dealt with construction and installation of infrastructure like new rail lines, culverts, and sewer and power line placement.

There were 18 Inter-Agency Projects.

DNP staff also worked with various state agency personnel on invasive species control, placement of trails, rare plant surveys, forestry inventory, prescribed burns, breeding bird counts, deer monitoring and reduction, and storm damage clean-up on several properties.

There were 22 outreach activities and events in 2021.

DNP staff led 10 hikes on nature preserves, attended more than 150 meetings, wrote several articles, answered numerous public requests for information, and participated in the State Fair.

Twenty public access projects were completed. These included activities that most directly affect a visitor's experience in a nature preserve such as improvement to trails systems, parking lots, and installation of signs at several preserves. All trail structures, boardwalk systems, and access roads were maintained, hunter registration stations were staffed, and deer reduction hunts were held. Many nature preserves, under a variety of ownership types, are open and have trails that provide an excellent opportunity for nature study and outdoor recreation. See our website for information and maps at on.IN.gov/naturepreserves.

For information and maps, please visit
on.IN.gov/naturepreserves

INDIANA NATURAL HERITAGE DATA CENTER

The Indiana Natural Heritage Data Center collects and manages biodiversity information concerning rare plants and animals and high-quality natural communities throughout the state. In order to continually update our knowledge base, our division botanist and ecologists conduct field surveys to locate and monitor these imperiled plants and communities. Additional biologists, conservation groups, and citizen scientists submit species records that are vetted and then managed using the program's Biotics software. The products of the biodiversity data are used to inform and aid conservation activities throughout the state by public and private entities. One of the ways the data are used is in the DNR environmental regulatory process to help avoid or minimize impacts to significant natural communities, state-ranked species, and nature preserves.



NatureServe is an international organization that serves as the umbrella for the network of natural heritage programs and conservation data centers in the United States, Canada, Central and South America. The organization helps to ensure data consistency across the network and provides natural heritage data to clients who need it across state and county boundaries. NatureServe's Explorer website is broadly recognized as the best source of summary data on plant associations, plant, animal and insect species, and their global significance.

Rare Plant Inventory and Monitoring Highlights

Federal Listed Plants

Asclepias meadii (Mead's Milkweed): Federally Threatened

The only extant Indiana occurrence for this species is in a nature preserve in the northwestern part of the state where it was introduced several years ago. Recent studies at this site have tracked the relative survivorship of seedlings in the solitary population in burned and unburned sites, providing empirical data of significantly higher rates of survivorship among areas experiencing controlled burn conditions (60% versus 5%). Despite a thorough search in the known location at the site in June 2021, no individuals were observed.

Cirsium pitcheri (Dune Thistle): Federally Threatened

This Great Lakes endemic is known from more than 20 occurrences in Indiana in sand along Lake Michigan, but the number of individuals and extant occurrences in the state are thought to be decreasing. Surveys of four of the occurrences in June 2021 resulted in finding plants at two of them (a single plant at one site and 34 plants at another site; 177 plants were found at the latter in 1992, the last time it had been updated in the Heritage database).

Helenium virginicum (Virginia Sneezeweed): Federally Threatened

The only Indiana occurrence of this species is in a former mitigation wetland in Hamilton County. An August 2021 survey documented 68 individuals in the population. In 2021, leaf samples and flowerheads of this and the related *Helenium autumnale* (Common Sneezeweed) were collected by/for Dr. John Knox to determine

DATABASE STATISTICS

Lands Unsuitable Database Element Occurrences

EOs in the INHDC Database ...20,316
New Records Entered352
EO records updated492

The Natural Heritage Database serves as DNR's Lands Unsuitable Database, for the Division of Reclamation. We continuously update and quality control the database.

Natural Heritage Database Usage

Information Requests 1,210
Environmental Reviews 1,045
Coal Mine Permit Reviews 5
Floodway Permit Applications 52
Public Lake Applications 151
Research & Collecting Permits 71

The database is used for permit reviews in several DNR Programs and aids in planning and site development, while minimizing impacts to sensitive natural resource features.

if the Indiana population of Virginia Sneezeweed is genetically more closely related to Virginia or Missouri populations (the only other places where it occurs), or if it is different altogether, in an attempt to determine the origin of the population. Note: this species is in the process of being removed from the federal list of threatened and endangered species.

Physaria globosa (Globe Bladderpod): Federally Endangered

In Indiana, this native mustard is known from a single site in the far southwestern corner of the state. The site has been managed for a number of years in an attempt to maintain the population. It has generally responded well to management efforts that result in removing vegetation competition through mechanical scraping. The population was monitored in May 2021, when plants were in bud, flower, and starting to produce fruit, and a total of 209 plants were tallied. In addition, vegetation composition and structure within the population were monitored using Carolina Vegetation Survey (CVS) methodology; the same methodology was used by Kentucky and Tennessee Heritage staff to sample vegetation at Globe Bladderpod populations in those states in 2021 to get a better overall understanding of the requirements of the species globally. Work was also done in 2021 by Tennessee Tech University students and Missouri Botanical Garden to study pollination biology and genetics of the Indiana population.

Platanthera leucophaea (Eastern Prairie White-Fringed Orchid): Federally Threatened

The lone, precarious extant occurrence of this species in Indiana is monitored annually. In June 2021, a thorough search for the species was conducted in the location of past observations, but no plants were observed. Coordination with the USFWS is ongoing, and additional plant material was added to the site via seed installation in 2021.

Solidago shortii (Short's Goldenrod): Federally Endangered

The single population of Short's Goldenrod in Indiana continues to be stable and in good condition as of a September 2021 site inspection, when 160 clumps of the species were observed. Evidence of flooding was noted at the site, as sediment was observed on vegetation and the limestone ledge; this may reduce competition from other vegetation and positively affect Short's Goldenrod. Seed from this population was collected by staff for long-term storage in the fall of 2014.

Trifolium stoloniferum (Running Buffalo Clover): Federally Endangered

Running Buffalo Clover began the year as Federally Endangered but was removed from the Federal Endangered and Threatened species list in August 2021. Indiana has seven extant populations of this species, all in the southeastern portion of the state. A search was conducted in May 2021 at a historical occurrence for the species, but no plants were discovered. Several colonies of the species were observed and monitored within another extant occurrence in May 2021. This species requires disturbance, but disturbance has also led to many of the sites where this species once occurred becoming overrun by invasive species. Indiana populations seem to be declining and severely at risk.

State Listed Plants

Carex chordorrhiza (Creeping Sedge): State Endangered

Creeping Sedge is unique in that it spreads by stolons, with new growth arising from the nodes of the senesced, previous-year stems that creep through sphagnum moss. Before the discovery of a new occurrence of this species in Kosciusko County in 2020, there were four records of this bog sedge known in the state. Of these, two were possibly extirpated, one was considered historical, and the fourth has not been observed since 1989, when its numbers at that location had declined by more than 90% from the previous time it had been surveyed; it has not been seen at this site since, despite several surveys. In August 2021, a new occurrence of the species was discovered in St. Joseph County.

Gentiana villosa (Striped Gentian): State Endangered

Three of the five extant Indiana occurrences of Striped Gentian were monitored in September and October 2021, with only three vegetative individuals being observed at one of the occurrences. This species is at the edge of its range in extreme southern Indiana. It seems to require specific levels of disturbance in Indiana and may be somewhat transient as a result. In 2022, surveys for new populations in appropriate habitat are planned.

Geum rivale (Purple Avens): State Endangered

Just three Indiana occurrences of Purple Avens are thought to be extant, with one not updated in the Heritage database since 1983, and the other not observed during a 2020 site visit. The other extant occurrence, which had not been updated in the Heritage database since 1989, was relocated and monitored during a May 2021 field survey at the site. Fewer than 10 individuals were observed in this population.

Ligusticum canadense (Nondo Lovage): State Endangered

All three Indiana occurrences of Nondo Lovage consist of small populations in Harrison County. One of the occurrences, last updated in the Heritage database in 2015, was monitored in June 2021. This occurrence consisted of 13 stems, none of which produced flowers in 2021. The populations of this species should continue to be monitored to determine whether they are reproducing.

Linum sulcatum (Grooved Yellow Flax): State Threatened

Only about half of the 15 occurrences of Grooved Yellow Flax in Indiana are thought to be extant. Three of the extant occurrences were monitored in 2021. One, in a Clark County glade, was last updated in the Heritage database in 2005; in July 2021 more than 100 individuals were observed. Another, in a Harrison County glade, was last updated in the Heritage database in 1981; in August 2021, more than 100 individuals were observed. The third, in a Lake County prairie, had not been updated in the Heritage database since 1978; 20-30 plants were observed at this location in June 2021.

Malaxis unifolia (Green Adder's-Mouth Orchid): State Endangered

A northwest Indiana occurrence of Green Adder's-Mouth Orchid was monitored in June 2021, and during the monitoring effort, habitat similar to where the plant was known to occur was searched for additional plants. A new population with double the known number of plants at the site was discovered.

Myriophyllum tenellum (Slender Water-Milfoil): State Endangered

At the only known site for this aquatic species in Indiana, the location of the original survey point has been developed with installation of a seawall. As such, no plants were found at this location during an October 2021 survey; however, a new population of Slender Water-Milfoil was discovered along an undeveloped shoreline in the same lake in October 2021.

Phlox ovata (Mountain Phlox): State Endangered

Before 2021, only one of the four known Indiana occurrences of Mountain Phlox was thought to be extant. After showing this occurrence to ACRES Land Trust staff, an ACRES employee spotted a new occurrence of this species on a private property in May 2021. ACRES has been working with the landowner to try to provide long-term protection to the property.

Rhynchospora nitens (Short-Beaked Bald-Rush): State Endangered

Short-Beaked Bald-Rush was considered extirpated from Indiana until it was relocated in northwest Indiana in 2012. It was observed at that site until water levels rose in 2015-2016, changing the site temporarily from mudflat to shallow lake. After six years of not being observed, with low precipitation levels leading to the shallow lake receding to mudflat in 2021, it was again documented at the site in August and September 2021.

Scheuchzeria palustris ssp. americana (American Scheuchzeria): State Extirpated

The status of American Scheuchzeria was changed from State Endangered to State Extirpated after an unsuccessful search for the species at the last known extant site for it (in Noble County) in 2020. In 2021, while conducting a plant inventory for The Nature Conservancy at a site co-owned by them and private landowners, division personnel discovered a new occurrence of this rare bog species (and a first record of the species for Kosciusko County) in June 2021; a second population was found at the site in August 2021. As a result, the status of this inconspicuous species is being changed back to State Endangered in 2022.

Sideroxylon lycioides (Buckthorn Bumelia): State Endangered

Indiana's only known extant occurrence of Buckthorn Bumelia had not been updated in the Heritage database since 1994. The population was visited and monitored in June 2021. A total of 51 individuals were tallied during a thorough search for this rare small tree.

Spiranthes arcisepala (Appalachian Ladies'-Tresses): No Status

Surveys for Appalachian Ladies'-Tresses, a recently described species that was taxonomically split from the *Spiranthes cernua* complex, had not been conducted in Indiana. After reviewing old photographs of "*Spiranthes cernua*" from a northeastern Indiana fen and determining them to be Appalachian Ladies'-Tresses, this population was relocated and monitored in September 2021. Photographs potentially representing this species from two other northern Indiana populations have since been obtained and reviewed. The status of this species will be changed to State Endangered in 2022. Additional populations will likely be discovered as surveys for the species are conducted.

Utricularia geminiscapa (Hidden-Fruited Bladderwort): State Endangered

Before 2021, Indiana had six occurrences of Hidden-Fruited Bladderwort. In August 2021, while conducting a plant inventory for The Nature Conservancy at a site co-owned by them and private landowners, division staff discovered a new occurrence of this rare carnivorous plant (and a first record of the species for Kosciusko County).

Ginseng

The 2021 ginseng selling season is coming to a close, while the harvesting season ended Dec. 31, 2021. A review of the numbers so far show that Indiana will most likely have a similar harvest for 2021 to that of 2020, about 2,500 pounds. We had 18 dealers for the season handling more than 5,000 transactions. For 2021, ginseng averaged \$650 per pound and root counts were steady at 276 roots per pound, similar to 2020. While the harvest total is about equal to the previous season, it is down by about 1,000 pounds from the 2019 season, which is a cause for concern. Weather is always a factor, but anecdotally, with the pandemic, ginseng dealers have reported substantially less harvesters bringing in ginseng. We plan to pull these numbers from the database for the past two years to review and compare. The other significant change is that DNP implemented the ginseng portal in 2020. It is now the system through which ginseng sales are reported, reports are generated, etc. by dealers. This system has helped eliminate errors in that all weight conversions, as well as any other math requirements are accomplished through the portal. The portal has also reduced duplication. The consistency between the two years tells us that the portal is helping in those two major areas. The ginseng team continues to make adjustments to the portal each year to keep it easy for both the dealers and the administrators to use. Finally, DNR has begun the readoption of the Ginseng administrative code, 312 IAC 19, and hopes to complete that process by the time this annual report reaches you.

NATURE PRESERVE DEDICATION AND LAND ACQUISITION

As 2021 closed, there were 294 nature preserves dedicated under state law, Indiana Code 14-31-1. This represents 54,569 acres spread throughout Indiana. We work closely with many others in dedicating significant natural areas, including other DNR divisions, local land trusts, local county park systems, and colleges and universities. The first dedicated nature preserve was Pine Hills Nature Preserve, adjacent to Shades State Park, dedicated in 1969. Since then, the nature preserve system has grown to be the most widely distributed system of protected lands in the state. Seventy-one counties contain a nature preserve. For more than any other reason, nature preserves are set aside to protect the plants, animals, and natural communities that are found on them, providing protection in perpetuity for the benefit of this and future generations. Visitation is allowed to the extent that the features can tolerate it without deterioration.

210.76
NEW ACRES
added to the
nature preserve system

For a list of community types and a nature preserve example, please visit on.IN.gov/naturepreserves

Ginn Woods Nature Preserve *Ball State University – 161.31 acres*

This nature preserve in Delaware County protects 161.31 acres of mesic upland forest, central till plain flatwoods, shrub swamps, and low gradient creeks.

Ginn Woods is an exceptional natural area within the east-central Indiana region. This is due to the lack of human disturbance. The result is the second-largest tract of protected old-growth forest in Indiana. This site supports a diversity of plants and animals that are uncommon in the fragmented landscape of east-central Indiana.

This site is dominated by beech and maple. It supports rich flora, including spring ephemerals and a variety of fern communities.

It is owned by Ball State University.



Grand Prairie Nature Preserve *DNR Nature Preserves – 10.30 acres*

This nature preserve is in Lake County and protects 10.30 acres of wet prairie of the Chicago Lake Plain.

Flora of interest includes the State Threatened earleaf foxglove and Leiberg's witchgrass along with a variety of mesic and wet prairie plant species. The prairie is in bloom during mid- to late summer.

It is owned by and under the administration of the Division of Nature Preserves.



Sebert Woods Nature Preserve
LaPorte County Parks Foundation – 39.15 acres

This nature preserve is located in LaPorte County within the Northwestern Morainal Natural Region, Chicago Lake Plain and Valparaiso Moraine sections. This site contains boreal flatwoods, mesic forest, and shrub swamp as well as their associated plant communities. It is located directly south of Wintergreen Woods Nature Preserve.

This is a remnant northern boreal flatwoods natural community, which is a type of forest restricted to a narrow area just south of the Lake Michigan dunes. A remarkable assemblage of 362 taxa of native plants occurs here. Many of the plant species found here are usually located much farther north and include paper birch, a number of sedge species, goldthread, Canada mayflower, and starflower.

It is owned by LaPorte County Parks Foundation, Inc.



NATURE PRESERVES PROGRAM

The work done to maintain the long-term viability and ecological health of our nature preserve system is one of the most important functions of the DNP. Toward this fundamental goal, the division maintains eight regional field offices that oversee our statewide system of preserves. (Appendix C, Map 1). They care for numerous preserves found across large geographic areas covering many counties.

Habitat restoration and invasive species control were continued in 2021. A total of 7,215 acres were treated. This number includes burn acres and contracts.

These regional field offices serve as a base of operations for our ecologists along with their staff and equipment. DNP regional ecologists perform an array of work, including ecological restoration, public land management, conservation planning, monitoring and inspections, environmental reviews, and botanical and natural areas inventory. They also provide many community services, including technical consultation and environmental education. Importantly, the regional ecologists also maintain safe public access to our unique and growing DNP trail system.

Regional ecologists integrate expertise in many fields and decades of experience working in natural areas to offer innovative management to Indiana's nature preserve system. They have expertise in subjects such as conservation biology, forest health issues, wildland firefighting, public speaking, wetland restoration, and recreational trail design and installation, among many others.

Regional ecologists also supervise and manage a specialized team of stewardship staff. Our stewardship staff performs the daily work of property management and controlling invasive species. They are experienced with heavy equipment, chainsaws, herbicide application, wildland firefighting, trail maintenance, and safety.

This report addresses nature preserves on public lands that are owned by the DNR, as well as those owned by our private and local government partners.

Regional ecologists work with the private sector to place mitigation projects on existing conservation lands, including nature preserves. Mitigations are required to replace wetlands and forests affected by development. This provides valuable restoration funding for public lands while helping the private sector fulfill the requirements of regulatory permits and settlements. This effort is resulting in significant enhancements at several nature preserves.

Regional staff are heavily involved with land protection, conservation planning, and community outreach. They provide technical assistance to their communities, partner land trusts, federal and municipal agencies, and other DNR divisions and agencies.

Invasive Species Control

Numerous invasive species continue to invade natural areas, and the list of species of concern seems to grow every year. Control does not mean eradicate—control means to maintain invasive species at a level at which they do not threaten the natural communities of the preserve. Complete eradication is practically impossible and prohibitively expensive unless the population to be controlled is relatively small.

This year, regional ecologists aimed their invasives control efforts at the following species: garlic mustard, Canada thistle, glossy buckthorn, bush honeysuckle, Japanese honeysuckle, teasel, phragmites, white sweet clover, yellow sweet clover, autumn olive, knapweed, crown vetch, sericea lespedeza, Japanese stiltgrass, reed canary grass, moneywort, bouncing bet, brome grass, ground ivy, privet, purple loosestrife, oriental bittersweet, multiflora rose, amur cork tree, tall fescue, Johnson grass, scurf pea, burning bush, hybrid cattail and Japanese chaff flower.

**7,215
ACRES**
of habitat
restoration and
invasive species
control were
treated in 2021.

Invasive Species Management

DNP staff are involved across the state in leading efforts to control invasive plants that cause extensive degradation of our natural habitats, including forests, prairies, and wetlands. With decades of experience in habitat restoration and invasive weed control, the DNP is a recognized authority on early detection of invasives as well as the techniques used to control them and restore healthy native habitats.

DNP staff collaborate with many partner organizations seeking to develop and carry out their own successful strategies and programs to control invasive weeds on nature preserves across Indiana. Technical assistance, educational materials, and site assessments promoting early detection and effective control measures are important aspects of the division's work.

Southeast regional ecologist Jason Larson serves on the leadership of the Southern Indiana Conservation Weed Management Area (SICWMA). Such groups are being formed across the U.S. as landowners, private groups, and government agencies look for more effective ways to limit the growing economic and environmental damage caused by invasive species. These community coalitions work through sharing knowledge, people, and other resources in an effort to improve public education, prevention, and eradication/containment programs across a given geographic area.

Coastal regional ecologist Derek Nimetz serves on the steering committee of the Indiana Coastal Weed Management Area, providing technical assistance to northwest Indiana coastal communities on limiting the spread of invasive species.

Mitigation Projects on Natural Areas

The DNP works with diverse partners and funding sources to deliver effective conservation in Indiana. Mitigation funds are increasingly being used for habitat restoration, providing an important opportunity to further protect nature preserves in need.

When wetland, stream, or forest habitats must be negatively affected or destroyed due to infrastructure needs or other development, federal law (under the Clean Water Act or United States Fish and Wildlife Service) requires that the lost habitat be mitigated through the construction and restoration of similar habitat within the geographic area. The DNP then works closely with industry and regulators in a mutually beneficial process of performing these needed mitigations on DNR-owned public conservation lands.

Through these collaborations, the division can perform reforestation projects and restore and enhance impaired wetlands while providing future stewardship of the mitigation projects.

A number of conservation lands have benefited from significant restoration projects conducted via DNP staff and consultants helping private-sector entities fulfill regulatory requirements. These projects are helping to improve biodiversity at significant savings to the division.

Pittman-Robertson Wildlife Restoration Grant

Thanks to the Division of Fish & Wildlife, the DNP received additional funds from the Pittman-Robertson grant that started in July 2020 and ends in June 2022. The grant, titled "Wildlife Restoration Activities on Natural Areas", focuses on wildlife habitat restoration activities, including prescribed burning as well as invasive species and woody-plant succession control methods on nature preserves as part of their management plans.

This grant funds divisional activities including preserve management, surveys, and outreach efforts for the two-year grant duration and helps the DFW meet grant-match goals. A great deal of needed management work is being accomplished throughout the state because of this federal funding.

Burn Program

The DNP performed prescribed fire on a combined 2,167 acres.

The DNP's burn program is one of the oldest prescribed fire programs in the state. We have been safely and effectively using prescribed fire to manage Indiana ecosystems for more than 30 years. These fires range in size from those on tiny prairie remnants to landscape-scale fires covering hundreds of acres.

Prescribed fire is a land management tool that provides benefits that no other technique offers. It is crucial for maintaining rare and declining habitats that are considered to depend upon periodic fires. Our carefully planned and managed burns maintain such natural processes as plant germination, forest succession, and control of weedy and invasive species in Indiana's prairies, oak woodlands, and wetlands.

While healthy native habitats are the primary goal of DNP's burn program, prescribed fire is also an important part of reducing hazardous fuel loads of woody debris and brush on our public lands.

DNP ecologists spend a lot of time training and planning for the application of prescribed fire. This effort includes several disciplines such as ecology, weather, wildland firefighting, incident command, communications, and logistics. A profound knowledge of fire ecology informs our planning and use of prescribed fire. Important ecological factors include targeted native plant and animal communities, seasonal timing of prescribed burns, prescribed fire return intervals, and forest regeneration (e.g., oaks). Much planning and consideration goes into sensitive species such as Eastern box turtle (*Terrapene c. carolina*), Eastern massassauga (*Sistrurus c. catenatus*), and Indiana bat (*Myotis sodalis*).

Crucial to the continued success and growth in our burn program is cooperation among partners to field effective wildland fire crews. DNP staff frequently works within multi-divisional DNR prescribed burn teams that include representatives from Forestry, State Parks, and Fish & Wildlife. Collaboration with non-DNR partners such as municipalities (city and county), as well as nonprofit conservation groups (e.g., The Nature Conservancy, Shirley Heinze Land Trust, ACRES, and NICHES), enable us to assemble larger, more capable crews, and the interaction contributes to exchange of ideas and crew cohesion.

The most important work our ecologists do involves managing their staff of 20 part-time and intermittent stewardship employees who are trained and experienced in conducting prescribed burns. Having this capacity, along with our partners' support, enables us to safely conduct multiple controlled burns simultaneously during a given window of ideal prescribed burn weather.

2,176
ACRES
of prescribed
burns performed
by the DNP.



Regional Highlights

Southwest Region

A 210-acre landscape prescribed burn was conducted at Leavenworth Barrens Nature Preserve to maintain and restore the fire-dependent barrens plant and animal community. This work was completed with help from the divisions of Forestry and State Parks as well as Sycamore Land Trust. A contract was completed at Wabash Lowlands Nature Preserve that included 195 acres of forest stand management. The herbaceous layer is showing a promising response, and contracts are in place to conduct prescribed burns to further restore the herbaceous and shrub layers. Work has started at Twin Swamps Nature Preserve that will focus on restoration of 250 acres of forest stand management in an effort to provide an open canopy to promote a more robust and diverse herbaceous and shrub layer that will allow for maintenance with prescribed fire.

Southeast Region

A presentation on Landscaping with Native Plants hosted on Zoom by the Bartholomew County Master Gardeners was attended by 30 participants. A 289-acre restoration contract was completed at Brock Sampson and Minton nature preserves. The focus of this work was a follow-up from previous forest stand management work. This work helped control invasive plants and manage state rare *Melothria pedula* (creeping cucumber) populations and restore oak hickory forest and siltstone glade habitat. A total of 357 acres was completed by the division at 15 properties, including White Oak Nature Preserve within Clark State Forest. This work benefits open oak woodlands by removing mid-story maple and beech trees. Cedars were removed at the Coffee tract of Baseline Barrens Nature Preserve to manage and restore the barrens community.

Central Region

A total of 1,462 acres of prescribed woodland burning was completed at Ten O'clock Line Nature Preserve within Brown County State Park. More than 60 participants helped during this roughly 10-hour project. Results were monitored by a drone flyover. More than 900 acres of treatment was completed in the Central Region. This included 440 acres of work done by contractors. A series of bilingual interpretive and regulatory signs were created for areas of Fort Harrison State Park and Warbler Woods Nature Preserve to address increased use and diverse user group environmental education opportunities.

Northeast Region

The Northeast Regional Crew completed 1,157 acres of habitat restoration focusing on northern wetlands, bogs, fens, oak woodlands, and savannas across northeast Indiana. This included large areas of invasive hybrid cattail being controlled in marsh and sedge meadow habitats on high-quality nature preserves. Progress in controlling hybrid cattail and non-native phragmites has been encouraging. Many acres that once were dense with these tall non-native grasses now have only a few stalks, and the rare native plants have rebounded.

A successful contract controlled 35 acres of invasive non-native shrubs on Loon Lake Nature Preserve. In part of the preserve, autumn olive was so dense it was difficult to push through on foot. Few plants could grow in that shade.

The combination of favorable weather and the availability of capable staff led to 2021 being a good year for prescribed burning with 309 acres burned. Prescribed burns are necessary to maintain fire-dependent communities such as sedge- dominated wetlands, prairies, savannas, and oak woodlands.

Coastal Region

A floristic inventory and management plan for Moraine Addition Nature Preserve was completed in July 2021. A consultant located 718 species of plants within the 405-acre nature preserve during portions of 2020 and 2021. Furthermore, 19 plant species were noted as state endangered, threatened or watch list within this site. Twenty-seven acres known as the York Tracts that are adjacent to Moraine Nature Preserve have been acquired. This acquisition protects upland mesic forest and marsh habitats. Fifty years after the dedication of Moraine Nature Preserve, the division is still acquiring and managing natural areas within the Valparaiso Moraine. Funding for these projects

was provided in part by the National Oceanic and Atmospheric Administration and the DNP's Lake Michigan Coastal Program. The DNP has been working with the U.S. Army Corps of Engineers, the Little Calumet River Basin Development Commission, and other conservation partners to restore wetlands, prairies and savannas in Lake County. During October 2021, the U.S. Army Corps of Engineers determined that the five-year wetland mitigation project had been completed. A partnership between the division and the Little Calumet River Basin Development Commission seeks to maintain and improve the 300-acre property known as Hobart Marsh.

Grand Calumet Region

Phase I of a 100% federally funded USEPA Great Lakes Restoration Initiative Dune and Swale and GLLA Wetlands Restoration Project in the Grand Calumet River Area of Concern was completed. This was a six-year project in which DNR worked with The Nature Conservancy and Lake County Parks through a series of grant agreements, contracts, and coordinating to restore globally imperiled dune and swale habitats including black oak sand savanna and the near-shore wetlands of the Chicago Lake Plain. A scope of work budget has been created for Phase II for this project. It will cover the next three years of restoration efforts. Assistance was provided to IDEM by identifying contaminants sampling locations for the Gary Lagoons property by the Heritage staff and the Division of Fish & Wildlife's mammalogist, ornithologist, and herpetologist who gathered and provided information on flora and fauna that inhabit the contaminated area. A meeting was conducted with Audubon Great Lakes to orient its members to the area before their inclusion in their 2022 marsh bird monitoring surveys.

INDIANA LAKE MICHIGAN COASTAL PROGRAM

Federal Program Evaluation - April 2021

The Coastal Zone Management Act calls for the periodic evaluation of all federally approved state coastal programs. The evaluations assess operations and management and how the lead state agency is addressing the issues identified in the approved coastal program, as well as NOAA regulations governing the program and the terms of federal financial assistance awards. Indiana completed its evaluation in April.



NOAA identified two significant accomplishments:

- Accomplishment: The Indiana Lake Michigan Coastal Management Program has supported much-needed access improvements to both coastal waters and beaches for disadvantaged residents and visitors.
- Accomplishment: The Indiana Lake Michigan Coastal Management Program has addressed all the concerns expressed in the 2008 conditional approval of the Indiana Coastal Nonpoint Program and has submitted these changes to the U.S. Environmental Protection Agency and NOAA.

Some of the recommendations included:

- Recommendation: The NOAA Office for Coastal Management recommends that the Indiana Department of Natural Resources consider amending the annual coastal management grants process to specifically target the program's stated goals, such as applied science.
- Recommendation: The NOAA Office for Coastal Management recommends that the Indiana Department of Natural Resources work with public and private partners to develop a comprehensive shoreline management strategy for the state's coastal area.
- Recommendation: The Indiana Lake Michigan Coastal Management Program should examine opportunities to improve coastal access and recreation opportunities for all residents and visitors, including coordination of the annual Coastal Grants program with the Coastal and Estuarine Land Conservation Program and the Statewide Outdoor Recreation Plan.

Lake Michigan Coastal Program Grant-Funded Projects 2021

Project Title: The Marquette Greenway Corridor Management Plan

Organization Applying: Town of Burns Harbor Redevelopment Commission

LMCP Request: \$20,000

Burns Harbor needed assistance with the coordination and planning for management of the ADA/ABA accessible Marquette Greenway Trail and greenspace to help protect coastal ecosystems and their services while managing stormwater, improving access to Lake Michigan, and enhancing recreation in the region.

Project Title: Environmental STEM Education in the Lake Michigan Watershed

Organization Applying: Dunes Learning Center

LMCP Request: \$20,000.00

Dunes Learning Center will deliver a continuum of community-based environmental STEM (E-STEM) education programs that connect classroom lessons with the Lake Michigan watershed for 75 participating teachers and 2,000 Northwest Indiana students in grades 3-8. E-STEM in the Lake Michigan Watershed will be delivered free of charge to students with limited access to nature in primarily low-income, urban areas in partnership with school corporations.

Project Title: Karner Blue Butterfly Survey
Organization Applying: Indiana DNR – Division of Nature Preserves
LMCP Request: \$1,670

The Indiana DNR Heritage Program will continue surveying sites in the LMCP Coastal Area in an effort to locate populations of the Karner Blue Butterfly; this survey was an extension to previous survey work completed in 2020.

Project Title: The Portage Land Acquisition & Disposition Strategy Project
Organization Applying: City of Portage Redevelopment Commission
LMCP Request: \$40,000

The proposed project sought to create a sustainable decision-making framework for the city and its partners to emphasize land conservation and economic development in equal measure, initially by determining which lands should be preserved/protected and which should be sold for development.

Project Title: Indiana Coastal Region Perceptions of Natural Resources in the Indiana Dunes
Organization Applying: Save the Dunes Conservation Fund
LMCP Request: \$15,483.05

The project team conducted five in-person “mental mapping” workshops and one virtual webinar to assess the perceptions that coastal communities and stakeholders have regarding the natural resources in the Indiana Dunes. The results will be used to inform future public outreach, engagement, and programming on incorporating citizen perceptions and understanding.

Project Title: Moraine Nature Preserve Public Access Plan
Organization Applying: Indiana DNR – Division of Nature Preserves
LMCP Request: \$21,000

A contractor was hired to develop a public access plan for the Moraine Nature Preserve and Moraine Addition Nature Preserve as a means to improve public access opportunities at Moraine Nature Preserve and design potential trail and parking options at both nature preserves.

Project Title: Penn Oak Property Acquisition at Veterans Memorial Parkway Trail Corridor
Organization Applying: Lake County Parks & Recreation Department
LMCP Request: \$26,800

This was a fee-simple acquisition of 13.25 acres. The land encompasses a portion of Smith Ditch, which is a tributary to Deep River, as well as emergent wetland, open water, wet prairie, and upland adjacent to a former railroad made up of a grassland and scrub-shrub habitats.

Project Title: Washington Park 1911 Bandstand Preservation Project
Organization Applying: Michigan City Department of Parks and Recreation
LMCP Request: \$100,000

This project consisted of two parts. First, an engineer assessed the structural condition of Washington Park’s historical Old Bandstand and produced drawings, specifications, and cost estimates for the project. Second, based on the engineer’s findings, construction began on rehabilitating the structure for future use.

Project Title: Grand Prairie Restoration
Organization Applying: Indiana DNR – Division of Nature Preserves
LMCP Request: \$35,000

Grand Prairie consists of approximately 12 acres of land, 10 acres of which hosts rare remnant tallgrass prairie natural communities, including some wetland, as well as a number of state-threatened and endangered plant and animal species observed within half-mile of the property. This project strove to restore the remnant prairie habitat along the northern edge of the Grand Prairie natural area by removing a stand of early successional trees.

Project Title: Sarros Acquisition 2

Organization Applying: Lake County Parks & Recreation Department

LMCP Request: \$178,000

This project acquired the fee-simple interest in approximately 100 acres within the Town of Schererville and St. John Township that consists of 20 acres of various wetlands, 25 acres of oak-hickory forest, and 54 acres of grassland, as well as regenerating oak savanna. The acquisition was carried out to protect and augment flood storage in the upper Turkey Creek Watershed, improving flood control and water quality downstream to Deep River and Lake Michigan.

Septic System Maintenance and Care Awareness

In 2021, the LMCP continued to implement a Section 319 Grant from the EPA. These funds address the need for greater state focus on local nonpoint source pollution efforts. All sampling and testing were completed in 2021. Final results of this project will be available in 2022. The LMCP received a Governor's Proclamation for Septic Awareness Week.

Wetlands Mapping and Functional Assessment

The LMCP, working with Ducks Unlimited, completed work on its Section 309 Wetlands Mapping and Functional Assessment Project. The Wetland Functional Assessment was completed in 2021, and results were sent to various departments to review, including the DNR, IDEM, and USFWS. Final results were sent to USFWS to be included in the update of the National Wetland Inventory (NWI) map.

Coastal Atlas

Work began to launch the Coastal Atlas for the Indiana Shoreline of Lake Michigan. The LMCP, working with Sanborn, started working on a contract to create this product for the DNR. This project will host a number of interactive maps, information, and tools regarding key aspects of Lake Michigan such as wetlands and flooding, as well as hosting imagery, such as aerial photography and LiDAR. The atlas will allow local decisions makers, land managers, and stakeholders to have ready access to information in one location, enabling them to make decisions regarding Lake Michigan and its associated resources. With help from the Coastal Atlas Steering Committee, including help from Jeff Motz in MIS and Robert Wilkerson in GIS, the format of using ESRI's story map format was chosen to be the base format for this project.

6217 Update

Indiana has satisfied the 2021 interim condition decision regarding OSDS Nonpoint Source Pollution Management Measure/NPS Coastal Management Program. The Indiana Lake Michigan Coastal Management Program (LMCP) formed the Northwest Indiana Septic System Work Group in 2013 to support voluntary inspections of OSDS. The work group, made up of federal, state, and local OSDS stakeholders, works to identify and address potentially failing OSDS within the coastal watersheds and conducts outreach and education programs for OSDS and proper system maintenance. The work group launched a good neighbor program to encourage homeowners within identified "hot spot" areas of potentially failing OSDS to properly maintain and inspect their systems. Indiana has also developed several training programs that promote the importance and need for routine inspections of existing OSDS. The LMCP, IDEM, GNIAR and IOWPA work together to provide annual training for realtors and certified IOWPA inspectors in northwest Indiana on the importance of OSDS inspections, especially during property transfers for the realtor audience.

In addition to the in-person trainings geared toward professional audiences, LMCP and IDEM are partnering with Purdue University Extension, Illinois-Indiana Sea Grant, the Indiana Department of Health, GNIAR, and IOWPA to develop online septic system education modules to facilitate virtual learning. The online modules will be adaptable for several different audiences including homeowners, realtors, IOWPA members, and local communities. The state plans to hold virtual training events several times a year within the coastal nonpoint program management

area and host the education material online so that interested individuals will be able to access it at any time.

Indiana will track voluntary inspections through partnerships with Porter and Lake counties and IOWPA. With support from the LMCP, Porter County recently moved to a cloud-based system for tracking OSDS inspections that will be queried annually to determine the number of inspections of existing OSDS. Although Lake County currently lacks an electronic inspection database, the LMCP is committed to meeting with Lake County Health Department staff annually to review their paper files on OSDS inspections. In addition, the LMCP will continue to pursue a partnership with Lake County to encourage and support the county to move to an electronic tracking system. The LMCP is also partnering with IOWPA to acquire software that will capture inspections performed by IOWPA-certified inspectors within Lake and Porter counties as another mechanism for tracking voluntary-based inspections that occur.

The state is committed to an adaptive approach to ensure it will achieve its voluntary inspection targets. Every five years, Indiana will assess the number of inspections that have occurred within Lake and Porter counties to determine if they are on target for reaching their goal of inspection 67% of the operating OSDS within these counties during the next 15 years.

APPENDIX A: DIVISION STAFF THROUGH 2021

Nature Preserves Management

Ronald Hellmich	<i>Division Director</i>
Tom Swinford	<i>Assistant Director</i>
Laura Minzes	<i>Operations Director</i>
Gail Riggs	<i>Office Manager</i>
Cathy Zajdel	<i>Administrative Support</i>

Natural Heritage Data Center

Teresa Clark	<i>Natural Heritage Coordinator</i>
Taylor Davis	<i>Heritage Data Manager</i>
Matt Wyrick	<i>Protection Director</i>
Wyatt Williams	<i>Heritage Ecologist (replaced Roger Hedge)</i>
Scott Namestnik	<i>Heritage Botanist</i>

Regional Ecologists

Andrew Reuter	<i>Central</i>
Ryan Keller	<i>Southwest</i>
Rich Dunbar	<i>Northeast</i>
Matt Beatty	<i>Northwest</i>
Taylor Lehman	<i>East Central</i>
Derek Nimetz	<i>Coastal</i>
Jason Larson	<i>Southeast</i>
Emily Stork	<i>Grand Calumet</i>

Lake Michigan Coastal Program

Jenny Orsburn	<i>Program Manager</i>
<i>Vacant</i>	<i>Grant Specialist</i>
Kathryn Vallis	<i>Coastal Resource Planner</i>
Ashley Sharkey	<i>Special Projects Coordinator</i>
<i>Vacant</i>	<i>Grant Assistant</i>
Kacey Alexander	<i>Operations Manager</i>

APPENDIX B: OWNERS OF NATURE PRESERVES

County and City Partners

Allen County Parks and Recreation
Bartholomew County Parks and Recreation
Bloomington Parks Board
Elkhart County Parks
Evansville Park Board
Fort Wayne Park Board
Town of Fishers
Harrison County Parks and Recreation
Indy Parks
Jennings County Community Foundation
LaGrange County Parks Board
Lake County Parks and Recreation
LaPorte County Parks and Recreation
LaPorte County Conservation Trust
Muncie YMCA
LaPorte County Parks Foundation
St. Joseph County Parks and Recreation
Steuben County Parks and Recreation
Terre Haute Park Board
Town of DeMotte
Vigo County Parks and Recreation

University Partners

Ball State University
Goshen College
Indiana State University
Purdue University
Wabash College

Federal Partners

U.S. Fish and Wildlife Service

State Partners

DNR Forestry
DNR Fish & Wildlife
DNR State Museum and Historic Sites
DNR State Parks
State Board of Health

Land Trust and Non-Profit Partners

ACRES Land Trust, Inc.
Central Indiana Land Trust (CILTI)
Indiana Karst Conservancy
Izaak Walton League
NICHES Land Trust
Red-Tail Land Conservancy, Inc.
Save the Dunes
Shirley Heinze Land Trust
Sycamore Land Trust (SLT)
The Nature Conservancy (TNC)
Whitewater Valley Land Trust
Oak Heritage Conservancy
Ouabache Land Conservancy

APPENDIX C: NATURE PRESERVE REGIONAL ECOLOGIST DISTRICTS

