



Planning/Coordination/Management

Hobart Marsh Area Plan City of Hobart \$11,460

The City of Hobart sought a management solution to the large areas of undeveloped tracts of land on its west side. The impetus behind this need to manage the land was driven by the acquisition of 355 acres of land for wetland mitigation by the Army Corp of Engineers. The ACOE Mitigation Plan called for the establishment of 8 to 10 different types of wetland communities in their tract of land. Their plan would create a nature preserve within the City in opposition to the tracts of farm fields of the prior usage. Given this land was bordered by other tracts of land owned and managed by the Shirley Heinze Land Trust, Save the Dunes, National Park Service, Lake County Parks, the Indiana Department of Natural Resources and the City of Hobart in addition to other private and residential land owners the need for an overall planned approach to future land use became apparent. With these diverse groups of land owners committed individually to land management practices and goals of low impact public use the City concluded that a coordinated overall development plan was vital. The City of Hobart felt that these property owners needed to have a coordinated plan that would allow the flexibility for individual property owners to develop their land while protecting the look and feel of a large urban nature preserve. The City additionally recognized the recreational potential of linking the Oak Savannah Bike Trail and Hobart's Robinson Lake Park with the several nature preserves through a series of trails. The resulting plan capitalized on the fact that this widespread area of soon to be native prairie, wetlands and woodlands will create a varied set of natural attraction appealing to hikers and naturalist.

Pheasant Hills Park Pond Water Quality Improvement Study Town of Dyer \$15,075

The town of Dyer hired an engineering company to complete water quality testing of Pheasant Hills Pond. Project objectives were to evaluate the condition of the pond, identify likely water stressors, prepare pond improvement recommendations, and provide educational and outreach opportunities for nearby residents and the community. Water sampling was completed during fall 2011 and summer 2012, which included measuring field water parameters and collecting water samples for laboratory analysis.

The water quality results and site observations were summarized in a final report that includes a recommended Habitat Restoration Plan with Best Management Practices that could be implemented to improve overall water quality, enhance terrestrial and aquatic wildlife habitat, and promote public educational, stewardship, and recreational values.

Michigan City Esplanade Environmental Assessment and Restoration Plan

City of Michigan City
\$20,000

The purpose of this project was to conduct an ecological survey and subsequent restoration plan for the area locally know as the Esplanade. This area consists of 66 acres of duneland habitat in multiple stages of succession and includes an additional 40 acres of shoreline beach. This survey and restoration plan provided the necessary guidance to begin the long process of restoring and then protecting the esplanade.

State Park Road Hydraulic Drainage Improvements Study
Town of Porter
\$37,000

The project area along State Park Road, between Waverly Road and the Indiana Dunes State Park Entrance Road, has a history of flooding and overtopping. During normal rain events the road is frequently flooded and inundated by water passing over the road. Flooding results in poor driving conditions and creates potential for vehicle contaminates to be washed into the adjoining wetlands decreasing the quality of the surface water as well as the quality of Dunes Creek. The flooding also causes access issues to the State Park as well as the residents living north of Waverly Road.

The immediate need of this planning project was to study and determine the hydraulic conditions causing the localized flooding of the roadway and surrounding wetlands. These wetlands play a very important role in maintaining the area's sensitive ecosystem and the flooding contributes negatively to their sustainability. It was also important to study the impacts of the flooding that may be attributing to Dunes Creek, which lies to the North of State Park Road.

Hammond Beach Shoreline Stabilization Project
Hammond Port Authority
\$40,000

The purpose of this project was analyze alternatives and initiate preliminary engineering to mitigate the inland erosion occurring along the Lake Michigan shoreline northwest of the Hammond Marina. The project limits were described as being along the Lake Michigan shoreline beginning at a point at the northwest edge of the Hammond Marina to a point approximately 2,000 feet northwest of the Hammond Marina.

It was the intent of this project to further investigate and advance a preferred treatment specifically related to the erosion and transportation of sediment and other materials along the project limits described above. Investigation would include seeking innovative solutions with emphasis on ecologically friendly materials and techniques that would check erosion both at the beach line as well as transportation of inland sediments. This phase of investigation would also include coordination with affected regulatory agencies, evaluation of alternatives, preparation of an opinion of probable construction costs and preliminary engineering of the preferred alternative.

Dunes Kankakee Trail Engineering Feasibility Study - Town of Chesterton
Town of Chesterton
\$25,000

The Dunes Kankakee Trail is proposed as a North/South Corridor Trail that will link the Indiana Dunes State Park and the Kankakee River. The Trail will also link to other regional trails and parks. Current plans by the Town of Porter show the Dunes Kankakee Trail ending at League Lane (State Park Little League). The purpose of this project was to identify the preferred alignment of the

Dunes Kankakee Trail through the Town of Chesterton, Indiana in an effort to promote alternative forms of transportation, while taking into consideration and working around the environmental constraints. As referenced by the Chesterton Natural Resource Map, an environmental review of study area will need to take place at the beginning of this project to ensure the stability of the area due to its location within Indiana Dunes region.

Downtown Porter Master Plan & Public Access Improvement Study

Town of Porter

\$30,000

Through the development of the Gateway to the Indiana Dunes Sub-Area Plan in 2011, the Town of Porter has been able to progress towards the realization of the Marquette Plan—A vision for Lakeshore Reinvestment. From the community and stakeholder input came guiding principles to promote growth, quality of life and the vitality of Downtown Porter. This is crucial to attract visitors but also accommodate the needs of the residents. Also suggested is to improve connections between Downtown and visitor attractions throughout the area by way of gateway and streetscape enhancement as well as new and expanded regional trails.

Because of a range of issues with Downtown Porter not addressed within the bounds of the broader Gateway to the Indiana Dunes Sub-Area plan, the recommendation was made that the town focus on opportunities and challenges facing the Downtown by developing a Downtown Master Plan.

Implementing the Duties of the Lake Michigan Marina and Shoreline Commission

Northwestern Indiana Regional Planning Commission

\$7,500

The Lake Michigan Marina and Shoreline Development Commission (LMMSDC) was established by the Indiana State Legislature in 2010 among other things for the purpose of coordinating and facilitating the identification, environmental assessment, remediation and economic development of unused and underused properties suitable for economic development or redevelopment within 500 yards of the Lake Michigan shoreline, Lake Michigan tributaries, and Lake Michigan Basin inland lakes.

As an initial step to achieving this goal, the LMMSDC would like to obtain a feasibility study and preliminary engineering cost estimate to conduct a Phase I Environmental Assessment and Economic Feasibility Analysis for a number of properties within an initial planning area.

Many plans and studies have already been developed in recent years within the LMMSDC Environmental Planning Area. A successful respondent should demonstrate awareness of the data available and recommendations already in these plans.

Little Cal River East Branch Watershed Plan Education and Outreach

Save the Dunes

\$12,770

Save the Dunes is a non-profit organization whose mission is to preserve, protect, and restore the Indiana Dunes and all natural resources in northwest Indiana's Lake Michigan watershed for an enhanced quality of life. Save the Dunes coordinated and participated in numerous education and outreach activities to engage both stakeholders and the public in the watershed management planning process for the Little Calumet River East Branch (LCEB). Public meetings for

the LCEB watershed management plan were held each quarter, which totaled 10 public meetings during the tenure of this grant. Educational materials were also developed for elementary school children within the LCEB watershed. Over 1,000 local children received environmental education resulting from the outreach efforts. Events such as, Get Outdoors Day, Nature Night at Brummit Elementary School, and Leisure and Learning on the Little Calumet River, among others, provided opportunities for environmental outreach and education. Additionally, these events were widely publicized using several types of news media. A brochure was created and disseminated to promote interest and involvement with the LCEB watershed plan. A weed management plan was also developed in a partnership with the Nature Conservancy. Save the Dunes continues to provide quality environmental education experiences to local citizens in part due to the assistance of the Lake Michigan Coastal Program.

Natural Resources Management Plan
Department of Natural Resources – Dunes State Park
\$8,612

The purpose of this project is to accomplish implementation of the 2010-2015 natural resource management plan at Indiana Dunes State Park. Focus will be primarily on the eradication of herbaceous and woody invasive species such as oriental bittersweet (*Celastrus orbiculata*), bush honeysuckles (*Lonicera* spp.), Japanese barberry (*Berberis thunbergii*), privet (*Ligustrum* spp.), and garlic mustard (*Alliaria petiolata*) per the NRMP. The project goal is defined such that target species are reduced to levels that do not interfere with regeneration of native species or compromise structure within the community. Other tasks will include those ID'd in the NRMP, such as; mapping invasive populations, progress measurement/documentation, and fire break construction for protection of infrastructure. The project will include 90 day stewardship positions and materials such as herbicides/surfactants and dyes.

Brincka Cross Design
Porter County Parks
\$15,000

The Porter County Parks and Recreation Department plans to further improve Brincka Cross Gardens County Park through the design and engineering of a non-motorized trail, added signage, trail head facilities, and other support facilities. This includes the enhancement and extension of existing trails and paths, adding new amenities such as water fountains, and improving connectivity by adding a concrete entry walk and interpretive signage. This project will result in a full set of construction documents that the Porter County Parks and Recreation Department can put out to public bid.

Brincka Cross Gardens represents a nexus between recreation and nature as art. The incredible detail and planning that went into cultivating the gardens and its surrounding environment are without parallel in the State of Indiana—or the Midwest. This project will enable the Porter County Parks and Recreation Department to revive and restore this park to its original grandeur for all visitors to enjoy.

Stormwater Fiscal Incentives Analysis and Technical Design Manual

LaPorte County Government
\$26,250

In 2011, the County of LaPorte and the cities of Michigan City and LaPorte adopted a Joint Zoning Ordinance which was partially funded by the Lake Michigan Coastal Program. This proposal is to seek funding for the next step which is to create a Comprehensive Stormwater Fiscal Incentives Analysis and Technical Design Manual to be used in conjunction with the Joint Zoning Ordinance. In the zoning ordinance, incentives for the engagement of alternative treatment of stormwater are offered, and this manual will identify and assign proposed financial cost for their installation and maintenance. The purpose of this project is to create the needed manual and ordinances for the communities to utilize. A Stormwater Fiscal Incentives Analysis Manual will be designed to outline and define the incentives and credits. This will be used by the municipalities to encourage developers to implement BMPs to meet water quality standards. A Stormwater Technical Design Manual will also be assembled. It is understood that design manuals already exist but most are written from a "one size fits all" approach. The objective is to compile a manual that is tailored to LaPorte County, Michigan City, and the City of Laporte. This will be done by incorporating information from existing manuals that apply specifically to these entities as well as integrating feedback that is gleaned from the stakeholder meetings. The outcome will be a Comprehensive Stormwater Fiscal Incentives Analysis and Technical Design Manual that can be adopted by all three entities.

Lakeshore Public Access and Restoration Implementation Plan
City of Michigan City
\$13,500

The purpose of this project is to provide implementation priorities regarding public access, environmental restoration and sand management outlined as concerns in the Sheridan Beach and Esplanade Ecological Assessment. These issues include minimizing bare sand exposure, boardwalk/path improvement locations and improvements, ADA access, interpretive signage, native areas to be protected and expanded, prescribed fire schedule, phased planning and implementation costs, and monitoring recommendations.

Education/Outreach

Healthy Rivers Colloquium and Restoration
Valparaiso University
\$7,200

In all, 12 lectures were given, and there were six displays of "The Living River", an exhibit in which local residents and school children became acquainted with living macro invertebrates collected from a mid-western stream. During the introduction of each lecture, the river restoration efforts of The Valparaiso University Biology Club were highlighted. Furthermore, conspicuous mention was made of other effective conservation organizations involved in river work. The data show that this lecture series has increased the participation of university students and local residents in volunteer river restoration work. There is no question that the large number of lecture attendees have learned much about a healthy river (and community activism) by attending the series. Moreover, there can be no uncertainty about the effectiveness of the Healthy Rivers Lecture

Series in increasing local resident participation in stream restorations. Before the lecture series local participation was less than 5%. After the lecture series local participation has risen to more than 38%.

**Training local college students and volunteers to monitor restored wetlands in Wolf Lake, Hammond, Indiana
Purdue University Calumet
\$38,042**

Wolf Lake is one of the lagoons that had once connected to Lake Michigan. It has been known as a prime habitat for numerous indigenous plants and animals, including state endangered species such as Lake Sturgeon and Franklin's ground squirrel. However, much of natural characters of the Lake have been altered by industrialization and urbanization during the 20th Century. Particularly, the Lake has lost its native wetland and shoreline habitats and historical connection to Lake Michigan. As an attempt to restore the natural characters, The City of Hammond and US Army Corps of Engineers constructed 80 acres of wetlands, sand prairies, shrub carrs and black oak savanna and revegetated with aquatic plants along the 14,550 linear feet in the Indiana side of the Wolf Lake during 2004-2010.

Wolf Lake wetlands are an opportunity for local college students and residents to learn about the ecology of the area. Six college students from the area were trained over the course of two years to identify and collect data on the native flora and fauna of Wolf Lake. Not only was data collected from the lake but presentations and reports by the students were also given and completed. All of this trained the students for future work not only in Northwest Indiana but beyond. Six workshops for volunteers and local residents were also conducted, the workshop attendees received indoor lectures and outdoor demonstrations to understand basic concepts of ecology in the Wolf Lake, Lake Michigan and Great Lakes region and to identify native and exotic plant species in the Wolf Lake wetlands. This project also included the placement of three interpretive signs to inform about the recent restoration of the wetlands, the signs describe history, ecology, birds, and plants of Wolf Lakes.

**X-Ray Vision
Lubeznik Center
\$5,000**

The Lubeznik Center for the Arts hosted art exhibits that focused on the environment and our connection to nature. Along with this exhibit, the Lubeznik Center for the Arts provided daily art educational programming which complemented the exhibit and on-site docent guided tours for 450 children who are from economically disadvantaged homes and enrolled in our summer Adventure Camp. This opportunity was used to build within the children an understanding of the importance of environmental stewardship.

**Shifting Sands Short
Legacy Foundation
\$7,500**

A short promotional trailer has been completed for the Shifting Sands documentary project and will continue to be shown to various audiences for feedback as production of the full

documentary proceeds. Early versions were shown to several different audiences as it was being developed, including attendees at the Environmental Management Policy Committee of the Northwest Indiana Regional Planning Committee, the Environmental Committee of the Northwest Indiana Forum, the Porter County Izaak Walton League, student volunteers from the University of Illinois at Chicago working with the City of Gary, the Ogden Dunes Historical Society, the Indiana University Alumna Association, Green Drinks in Michigan City, and attendees at an open house at the Cardno/J. F. New Company, as well as the advisory group for the project.

**ArcGIS 10 Training Materials Development – Indiana Lake Michigan Watershed Version
Indiana University Northwest
\$4,996.70**

This project was undertaken to provide basic, no cost, GIS instruction via ArcGIS software, to personnel and organizations in the Lake Michigan Coastal region in a small class setting.

In the past, free ArcGIS training has been occasionally offered in Northwest Indiana through the Northwest Indiana GIS Forum and the Indiana Department of Environmental Management at Indiana University Northwest. Changes by ESRI (producer of ArcGIS) in the Authorized Teacher Program for the software, has left the possibility of becoming re-certified as an instructor of the software financially out of reach for the current instructor. Because of the increase in cost and time to retrain as an ESRI certified instructor, as well as obtaining costly course training materials for students, other organizations such as the U.S. EPA have decided to create in-house materials to train personnel in the newest version of the software, ArcGIS 10.1.

Regional GIS personnel have benefitted in the past from this free ArcGIS training. The need for ArcGIS training in Northwest Indiana will continue as organizations acquire new personnel. Our region has a rich history of providing free GIS training that has been very popular.

Personnel from U.S. EPA region 5 shared their training materials (created for ArcGIS 10 (2 full-day training session focused toward environmental specialists) with the Northwest Indiana GIS Forum. Class materials include lecture slides and accompanying exercises. These materials provide a good introduction to the basic functions of the software. Since the materials were created for use by the U.S. EPA, the data used in the lectures and exercises are environmentally focused, but national in scope. Our intention was to change the exercises to include data that represents the Northwest Indiana watershed.

**Water Safety
City of Portage
\$3,500**

The City of Portage had engaged the Indiana DNR Division of Law Enforcement, the US Coast Guard, Portage Fire Department - Water Rescue, the Northwest Indiana Paddling Association, Porter County Boys and Girls Club, Portage Township YMCA, and the Great Lakes Surf Rescue Project and developed a water safety expo. The expo was implemented in the Spring of 2013, before the beach season. The expo involved a variety of stations each highlighting different educational tools such as assessing lake conditions, proper fitting of personal flotation devices, using surf boards and kayaks as potential life saving devices, understanding rip currents, and flip, float and follow techniques to name a few. The expo culminated with a regularly scheduled free public program held throughout the summer (and beyond) at the Portage Lakefront Pavilion

classroom. The idea being that a monitor will be installed in the classroom that can show videos and/or images of the variety of lake conditions with narration.

Low Cost Construction

Fancher Lake Rain Garden and Shoreline Habitat Restoration Project

Lake County Board of Commissioners

\$10,900

The project implemented recommendations from EcoRealm's Three-Year Habitat Restoration and Long-Term Maintenance Plan (2009) that had not been fully accomplished through an earlier Lake Michigan Coastal Program project. The project also included a demonstration shoreline rain garden to raise public awareness about the benefits of rain gardens.

Whiting Nature and Cultural Walk - Interpretive Signage for Whiting Lakefront Park and Wihala Beach

City of Whiting

\$50,000

The Interpretive Signage for Nature and Cultural Trail is a project consisting of research, design and fabrication of six interpretive signage stations. The signs highlight the history of the area, industrial and railroad culture, duneland, beach, and lake habitats, and environmental issues to raise awareness and provide education opportunities for park visitors/users. The six stations are located along the Whiting Nature and Cultural Walk. The Whiting Nature and Cultural Walk is a project to implement a pedestrian promenade and multi-use trail along the Lake Michigan shoreline through Whiting Lakefront Park and Whihala Beach in Whiting, Indiana. Both parks offer active recreation opportunities and habitat areas within immediate proximity of Lake Michigan and have historically been recreational areas since the early 1900s. The promenade and trail will be an extension of the region's Marquette Greenway that will connect through northwest Indiana into the City of Chicago. The intention of the nature and cultural walk is to create a new opportunity to reconnect park visitors with Lake Michigan through a scenic promenade, overlooks, and interpretive signage that will highlight historic, cultural, natural and environmental facts and issues. The trail will begin at the Whiting Lakefront Park entrance at Front Street and proceed through Whiting Lakefront Park along the shoreline and then through Whihala Beach. It will connect with the City of Hammond at the Casino property at Lake Street.

Marsh Restoration, Hoosier Prairie Nature Preserve

DNR – Division of Nature Preserves

\$11,000

This project funded the restoration of 9.3 acres of marsh and wet prairie in block 2 of Hoosier Prairie Nature Preserve, Lake County, Indiana. Funding was used to hire a contractor to perform the required work of spraying and hand wicking with herbicide dense stands of cattails. All work required in the contract was completed in September, 2012.

These work sites will be incorporated into the management plan for Hoosier Prairie Nature Preserve and will become part of the regular maintenance schedule. Routine inspections will be conducted and follow-up work will be performed as needed to maintain the site in its restored

condition. The site was burned in November, 2012 to remove accumulated litter caused by this project.

Land Acquisition

Roth Acquisition at Deep River County Park

Lake County Parks and Recreation

\$62,250

Lake County Parks has been developing, protecting, and adding on to Deep River County Park since the early 1970's. Deep River is currently around 1,100 acres split north and south of Route 30. One of the priority planning goals for the park was to link the north and south units along Route 30. This project was the fee-simple acquisition of a key 14.1 acre parcel between the north and south units of Deep River County Park within the Town of Merrillville. This parcel is north of 30 and helped provide linkage to the north and south parcels, the park owns south of Old Lincoln Highway (73rd Avenue). Also, this acquisition provided some trail access to the south unit of Deep River. The Roth acquisition protects riparian habitat along Deep River. These areas hold many plant species, old river oxbows, and provide great habitat for many species of birds, mammals, amphibians, insects, and reptiles. This property protection improves opportunities for species to move under the Deep River Bridge on Route 30, and some species to cross over the road north or south. Lake County Parks demolished the house and other buildings along Route 30. This property has been in the Lake County Parks Open Space Vision Plan for over 30 years. This property helps provide a future protected riparian corridor of floodplain along the east side of Lake County.

Staehlin Acquisition at Oak Ridge Prairie County Park

Lake County Parks

\$17,500

The Staehlin Acquisition at Oak Ridge Prairie County Park was completed in November of 2013. This project was the fee simple acquisition of 5 acres which was added to Oak Ridge Prairie. The 5 acres are made up of a dry mesic sand forest, and is mostly surrounded by wetlands. Many native plant species make up this property, and has very similar habitats found on adjacent park lands.

This property in the future will be restored and enhanced to bring its biodiversity potential to its fullest. Exotic and aggressive native woody species will be removed and thinned out to allow herbaceous species the ability to thrive with more sunlight. Interior park trails will be extended to this property which will allow public access to the forest. Public can visit this site now, but must negotiate woody vegetation and surrounding wetlands.

Pawloske Acquisition at Trail Creek

City of Michigan City

\$19,997.50

This project acquired approximately four acres of land adjacent to Trail Creek in Michigan City, Indiana on Michigan Boulevard, more commonly known as the Pawloske Quick Stop. This land is adjacent to a previous Coastal Grant purchased property that is also adjacent to Trail Creek. This

site has the potential for access amenity development and has existing ingress, egress to a controlled intersection.