

2013 Coastal Grant Project Descriptions

LOW-COST CONSTRUCTION

Accessible Route and Kayak Launch System on Trail Creek in Hansen Park – City of Michigan City

LMCP Share - \$ 44,715; Applicant Share - \$ 44,715

This project will increase public access to Trail Creek by constructing an ADA accessible route and installing an ADA launch system, compliant with the 2010 ADA standards, at Hansen Park in Michigan City, Indiana. The project includes an ADA accessible route that begins at the existing parking lot. The route will be at a 5% or less grade and will lead to an at-grade concrete pad which is connected to the launch system. The launch system has transfer benches to allow for the transfer from a wheel chair into the water craft. The route circles the park making ADA accessible connections to the existing wetland observation deck, picnic shelter and parking lot.

Fedder's Alley Secondary Dune Habitat Restoration – City of Michigan City

LMCP Share - \$20,000; Applicant Share - \$20,000

The purpose of this project is to complete the restoration efforts that are ongoing by the Michigan City Parks and Recreation Department on approximately 9 acres of Lake Michigan coastal secondary dune habitat. The Park Department, in conjunction with the Urban Forester, has performed an extensive invasive species removal project on this property, leaving a clean slate for the installation of native dune species. This project will install native grasses and forbs to these 9 acres.

Michigan City Old Lighthouse Museum Lantern Room Reconstruction – City of Michigan City

LMCP Share - \$37,100; Applicant Share - \$37,100

The Michigan City Old Lighthouse, owned by the City of Michigan City, has been leased and successfully maintained by the Michigan City Historical Society (MCHS) since 1965 and is currently a museum. The purpose of the project is to reconstruct a historically accurate 1858 replica of the lantern room that is currently attached to the roof of the Michigan City Old Lighthouse. This will replace an aging 1858 replica lantern room built in 1973 which is deteriorating and leaking. Although the structure of the 1858 replica lantern room built in 1973 is not original itself, any weaknesses or leaks in the lantern room endangers the original Old Lighthouse structure as a whole, which is on the National Register of Historic Places.

Iron Enhanced Rain Garden for Education and Research – City of Valparaiso

LMCP Share - \$21,000; Applicant Share - \$21,000

The City of Valparaiso will design and construct two 53' long by 6' wide rain gardens on Central Elementary School property. Only native plantings will be installed within the rain gardens. One rain garden will have an iron enhanced sand filter between the compost layer and supporting gravel layer for the purpose of capturing dissolved phosphorus. The second rain garden will be a conventional design without the iron enhanced sand filter layer, and the performance of the two rain gardens will be compared. Educational outreach activities will also be geared for local elementary students, citizens, and stormwater management professionals.

Krueger Middle School Pathway to Wetlands – Michigan City Area Schools

LMCP Share - \$98,875; Applicant Share - \$98,875

The goal of this project is to construct an educational pathway and boardwalk through wetlands on Krueger Middle School's property. This project provides a direct connection between the public and the unique natural resources of our Lake Michigan Watershed.

Sunset Hill Farm County Park Pond and Prairie Restoration – Porter County Parks and Recreation
LMCP Share - \$31,500; Applicant Share - \$31,500

The goal of the project is to restore multiple ecosystems within Sunset Hill Farm County Park. The project consists of a wetland delineation and restoration of a 3-acre pond shoreline vegetation and 28-acre prairie. The restoration efforts for both the prairie and pond shoreline will consist of mowing and application of herbicide to the non-native plants existing in the area, followed by planting of native seed and installation of native seedlings. The project also includes developing a successful habitat restoration plan and implementing a long-term site management program. In addition to ecosystem restoration, the project will contribute to the protection of water quality in the local watershed.

PLANNING/COORDINATION/MANAGEMENT

A Livable Broadway: Mobility Analysis for Urban and Suburban Broadway – Gary Public Transportation Corporation

LMCP Share - \$50,000; Applicant Share - \$50,000

The "Livable Broadway" planning project will assess conditions, conflicts, and opportunities relating to non-automobile transportation on Broadway in Lake County, Indiana, from 4th Avenue to US 231. Gary Public Transportation Corporation has a transit presence in the corridor, with ridership that is by itself higher than that of several other northwest Indiana transit systems. This project would build on regional planning efforts focused on stabilizing transit, fostering urban redevelopment, and creating livable communities, to seek ways to create a stronger multi-modal corridor along Broadway. At the same time, it would galvanize multiple communities behind a single vision that marries development and stable, high-level transportation – a departure from disjointed and disorganized transit implementation.

Beaver Dam Ditch and Pond Natural Habitat Restoration Planning Project – City of Crown Point

LMCP Share - \$24,500; Applicant Share - \$24,500

The City of Crown Point recently acquired a 22-acre area. The City of Crown Point is preparing the Beaver Dam Ditch and Pond Natural Habitat Restoration Plan. This planning process will begin with local stakeholders and decision-makers participating in a workshop to discuss water quality issues and water quality protection objectives for the site. Based on this water quality protection framework, the City will convene community workshops to seeking public input to identify community preferences for open space, aquatic recreation opportunities, interpretive opportunities, and connective trail opportunities at the site. Based on this stakeholder and public input process, the City will commission a plan that will provide a blueprint that identifies water quality protection and low-impact development best-management practices (BMPs), as well as public access and recreational opportunities for the site.

Hobart Sustainable Neighborhoods – City Of Hobart

LMCP Share - \$4,000; Applicant Share - \$4,000

The Hobart Sustainable Neighborhood Plan (HSN Plan) goal is to advance sustainability in the City of Hobart by generating needs and impact assessments and recommendations, including identifying and benchmarking each of the City's residential neighborhoods on the three key components of sustainability: Economic/Capital, Environment/Ecology, and Social/Equity. This grant will develop the Environmental/Ecological sub-plan of the HSN plan.

EDUCATION/OUTREACH

The Indiana Great Lakes Innovative Stewardship through Education Network – Indiana University Northwest

LMCP Share - \$47,841; Applicant Share - \$47,841

This project will pioneer the creation of the GLISTEN (Great Lakes Innovative Stewardship through Education Network) Little Calumet Watershed Education Corridor, which will be documented by site-specific signage and as a GIS-based map of the region with the location of long-term water monitoring sites that will be “sponsored” by a school (e.g. Deep River Environmental Center). Each site will be monitored bi-annually in a coordinated StreamBlitz by either an undergraduate institution, high school, or middle school, with level-appropriate scientific methods. This work will run in concert with watershed curriculum implemented in the classrooms. Specially selected undergraduate students from each undergraduate institution will work directly with faculty, local teachers, and community environmental partners to become specially trained in watershed restoration science through the paraprofessional role – the Student Stewardship Liaison (SSL).

Educational 3D Modules to Demonstrate the Movement of Contamination due to Underground Fuel Pipeline Failure – Purdue University

LMCP Share - \$28,552; Applicant Share - \$28,552

Recently, in Porter County, ENBRIDGE is planning to lay a new pipe line for 50 miles to transport oil and related supplies. When the presentation was made at NIRPC EMPC meeting on 09/06/2012, the risk and the extent of contamination possible during a failure were not made clear. Few failures in the past show the vulnerability. To help the public as well planners, it is essential to have a simple visualization tool using which everyone can understand the risk and issues related to a pipe failure and the effects caused to the nearby ground and surface water bodies and to the Lake Michigan coast. This education and outreach project proposes developing simple user friendly immersive virtual 3D visualization modules for understanding the complex process of contaminant movement with the ground water when an underground fuel pipeline failure occurs and subsequently the contamination joins a surface water stream. These modules can be downloaded and used in all computer system and can be used for regional planning and coastal improvement.

Improvement in Collection and Dissemination of Real-Time Data from Lake Michigan (Michigan City, IN) – Purdue University

LMCP Share - \$40,684; Applicant Share - \$40,684

In 2012, Illinois-Indiana Sea Grant (IISG) and Purdue University acquired a real-time monitoring buoy which was placed approximately 4 miles off of Michigan City, Indiana. When deployed, the buoy transmits data, such as wind speed and wave height, every ten minutes to a website maintained by IISG (www.iiseagrant.org/buoy). All data collected Funds will be used to improve the utility of the buoy for anglers, biologists, recreational boaters, educators, and others through three main channels: 1) addition

of real-time temperature sensors that collect surface water temperatures and temperatures at depth; 2) development of classroom- based activities that make use of the buoy data; and 3) promotion of this buoy and related activities as a useful resource. IISG will solicit feedback from a variety of stakeholders, including teachers, scientists, and recreational fishermen. Given the increased capacity for research and explicit incorporation of user feedback at all stages, this project will greatly improve the utility of the buoy for many end users. In addition, other agencies currently sharing buoy project data around the Great Lakes could potentially adopt IISG’s stakeholder-based designs for use with their own programs.

Ecosystems Services Valuation of the Indiana Coastal Region – Purdue Illinois-Indiana Sea Grant
LMCP Share - \$3,912; Applicant Share - \$3,912

The goal of this study is to augment the Conservation Fund Study conducted for NIRPC on ecosystem services in Northwest Indiana. The study focused on land based ecosystems whereas the proposed study will build on the study by evaluating services provided by coastal areas in Northwest Indiana such as the local beaches and the coastal areas of Lake Michigan. The intended audience is coastal resource managers and decision-makers. The first phase in the ecosystem service valuation will include identification of the ecosystem services provided by the Indiana LMCP Area, a prioritization of these services based on input from managers and a review of the available economic value estimates of these priority services. Project partners will work with stakeholders to gather the available resources and hold a public stakeholder workshop.

Shifting Sands Film Curriculum – Legacy Foundation
LMCP Share - \$5,000; Applicant Share - \$5,000

This project created an educational component as a compendium to the Shifting Sands documentary already in production. The documentary with a working title of “Shifting Sands” will explore the diverse ecosystem of the southern rim of Lake Michigan and document the historic environmental and economic struggles while looking at new ways of thinking about our natural world in tandem with our economy.

APPLIED RESEARCH

An Iron Enhanced Rain Garden for Dissolved Phosphorus Removal – Valparaiso University
LMCP Share - \$39,701; Applicant Share - \$39,701

The overall goal of this proposed project is to enhance stormwater quality entering Salt Creek and, ultimately, Lake Michigan. This goal is to be accomplished through two major objectives: 1) By enhancing the performance of rain gardens as a stormwater management practice through a new design that allows dissolved phosphorus to be retained in the rain garden instead of being released and, 2) By associating the project with multiple educational/outreach activities. Rain gardens, due to the organic content of plants and/or mulch, may act as a source of dissolved phosphorus and increase downstream phosphorus loading. This project seeks to reduce dissolved phosphorus discharge of rain gardens by the addition of a sub-surface, sand filter layer that contains iron shavings (at ~5% by weight). In surface sand filter configurations, iron shavings have been shown to retain dissolved phosphorus, thereby improving stormwater runoff quality and reducing phosphorus loads to receiving water bodies. This project will test the performance of two rain gardens, one with a sub-surface iron enhanced sand filter layer and one without. If successful, the results of the project may lead to an improved rain garden

design that has the ability to remove dissolved phosphorus from stormwater runoff. Educational outreach activities will also be geared for students, citizens, and stormwater management professionals.

Examining Climate Change Influence on Nonpoint Source Pollution Using NSPECT Models for Lake Michigan – Purdue University Calumet

LMCP Share - \$10,721.58; Applicant Share - \$10,721.58

This project plans to develop an education and outreach module to take the NSPECT model (Nonpoint Source Pollution and Erosion Comparison Tool) developed by the National Oceanographic and Atmospheric Agency (NOAA) Coastal Service Center to the user agencies by developing NSPECT models for 4 different watersheds namely Deep River, Trail Creek, Little Calumet River East Arm and Salt Creek. In that process, nutrient and Total Suspended Solids (TSS) sampling will be conducted in 8 selected locations. These data will be used for the model development. The final stage modeling and Database creating will be taken up during this extension. Additionally, for Coffee Creek, NSPECT model will be developed.

EMERGING ISSUES

Taltree's Organic Produce: Teaching Children Sustainable and Organic Farming Practices

- Taltree Arboretum and Gardens

LMCP Share - \$41,034; Applicant Share - \$41,034

The primary goals of Taltree's Organic Produce (TOP) are to develop curriculum to teach school children in grades K-8 concepts relating to 1) sustainably and organically grown produce, 2) farming as an integrated system of related component, and 3) demonstrating the positive consequences of these sustainable practices on the broader Northwest Indiana region. Taltree is nearing completion of its new, one-acre Children's Adventure Garden featuring a major "seed-to-table" component that has been designed to demonstrate integrated farming practices. Curriculum modules will be developed by Taltree's senior horticulturalist and education specialist, and tested by partner school St. Paul Lutheran School in Michigan City. Program opportunities will then be pushed out to all teachers in Lake, Porter, and LaPorte Counties. School groups that visit Taltree will also be taught the new curriculum. Sustainable Farming Practices was identified by the Coastal Advisory Board as a priority under the Emerging Issues category. The "2040 Comprehensive Regional Plan: A Vision for Northwest Indiana," which was adopted in June, 2011, cites the potential for urban farms to connect low-income communities to high-quality produce as a priority for the region.