



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN

PRESENTED FOR ADOPTION BY NIRPC EXECUTIVE COMMISSION:
DECEMBER 13, 2007
NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION & OPENLANDS PROJECT
THROUGH FUNDING ASSISTANCE FROM THE GAYLORD & DOROTHY DONNELLY FOUNDATION

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“LIFE IS WHAT HAPPENS TO YOU WHILE YOU’RE BUSY MAKING OTHER PLANS.”

- John Lennon

Quoting a Beatle is not your typical start to a planning document. Then again, what you are about to read is not intended to be your typical plan.

“Greenways are the paths where the natural and human landscapes coincide.” This quote by former Supreme Court Justice John Clarke brings to bear the essence of the Northwest Indiana Regional Greenways & Blueways Plan. The purpose of this plan is to provide a roadmap: a blueprint: a “call-to-action” for all stakeholders, private and public. The goal is to inspire preservation of valuable environmental remnants – to soften the inevitable collisions between the natural and human landscapes. The overriding vision of this document will become fully expressed through the implementation of its findings on local ordinances, the mobilization of private landowners, and ongoing conservation efforts of the region’s numerous environmental advocacy groups and individuals. Above all, this plan seeks to provide simple and clear actions to the stakeholders. Instead of page after page of technicalities and policy briefs, the focus will deal with a cursory review of the issues and what can be done immediately. Far from “gathering dust,” the authors hope you will take a vested interest in the plan’s recommendations and clear strategies to secure a region that our future generations can enjoy and submerge themselves into.



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THE NORTHWEST INDIANA REGIONAL GREENWAYS AND BLUEWAYS PLAN WAS DEVELOPED JOINTLY BY THE NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION (NIRPC) AND THE OPENLANDS PROJECT. FUNDING FOR THE PLAN WAS PROVIDED THROUGH A GENEROUS GRANT FROM THE GAYLORD AND DOROTHY DONNELLEY FOUNDATION IN THE SUMMER OF 2005. THE FOUNDATION WAS CREATED IN 1952 TO FURTHER THE WIDE-RANGING PHILANTHROPIC AND CIVIC INTERESTS OF GAYLORD AND DOROTHY DONNELLEY. IT IS A PRIVATE FOUNDATION THAT SUPPORTS A WIDE RANGE OF CAUSES INCLUDING CONSERVATION AND WILDLIFE PROTECTION, SOCIAL WELFARE, EDUCATION, ART AND CULTURAL INSTITUTIONS, HEALTH CARE, AND ANIMAL WELFARE.

THIS EFFORT REPRESENTS A CULMINATION OF RESEARCH, REVIEW, AND ANALYSIS OF LOCAL, REGIONAL, STATE, FEDERAL, AND

PRIVATE ENDEAVORS THAT AIM TO PRESERVE AND RESTORE LINEAR OPEN SPACE CORRIDORS IN THE NORTHWEST INDIANA LANDSCAPE. THE REASONS TO DO SO VARY. IT MAY BE FOR CONSERVATION PURPOSES, ENVIRONMENTAL EDUCATION, HABITAT PROTECTION, PERSONAL OR COMMUNITY HEALTH, AND RECREATION, OR EVEN TO ASSURE CLEAN WATER, PROTECT PROPERTY FROM FLOODING, AND PRESERVE COMMUNITY AESTHETICS. IT'S BASED ON A REALIZATION THAT, BY ITSELF, PROPERTY CAN EASILY LOSE THESE VALUES, BUT LINKED WITH MULTIPLE NEIGHBORS, THESE VALUES CAN BE SECURED.

CONTRIBUTORS



WHAT IS A GREENWAY?

- A greenway is a corridor of open space. It can vary greatly in scale, from narrow ribbons of open space that run through urban and suburban development to wide corridors that incorporate diverse natural and cultural features.
- A greenway can be land- or water-based. It can incorporate both public and private property, but always provides greater benefits because of its linear continuity than it would if the continuity was broken.
- Some greenways are primarily recreational corridors, while others function almost exclusively for environmental protection and are not necessarily intended for substantial human passage. Some greenways run along stream corridors, shorelines or wetlands; others follow old railway tracks or other land-based features.
- Greenways differ in their location and function, but overall a greenway network will protect natural and cultural resources, provide private or public recreational opportunities, improve and sustain hydrological functions, and enhance the natural beauty and the quality of life in neighborhoods and communities.

GOALS OF THE PLAN

- Create a vision for greenway preservation and water trail development in NW Indiana.
- Create a conversation among stakeholders on the attributes inherent in greenway development and conservation.
- Provide an interactive resource for local and county jurisdictions to utilize as they develop their visions and plans and negotiate development proposals that affect their remaining open space corridors.
- Facilitate active discussion on potential water trail opportunities.
- Detail the financial incentives available that encourage and support private and public greenway initiatives.
- Highlight the many not-for-profit environmental organizations in the region with expertise in working with private and public landowners to protect and restore greenways.
- The Greenways and Blueways Plan invites you to become an active participant in establishing a greenway and blueway system in Northwest Indiana.



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN



BUILDING ON THE PAST

In recent years, many open space initiatives have occurred in the region and on a local level. The Greenways and Blueways Plan is guided by those approaches and attempts to reflect them in this document.

- The 2005 Ped & Pedal Plan, which identified over 500 miles of potential off-road trails in the three-county region
- The Marquette Plan, which has an overall vision to open up 75% of the lakefront to public access, as well as establish a number of open space opportunities
- The Gary Greenlink Plan, a 2005 effort, and one of the best examples of local environmental planning, with an exhaustive analysis of sensitive environmental areas and greenway linkages for potential conservation and/or restoration
- The massive environmental remediation of the Grand Calumet River
- The flood control efforts of the Calumet River Development Commission and affected local communities
- The increasing focus of local communities to expand parklands and habitat preserves with notable examples in communities such as Michigan City, Valparaiso, and Cedar Lake

There have also been notable private endeavors to conserve habitat, help raise awareness, and provide insight to protecting the region's valuable ecological resources. These include:

- The commitment by innumerable landowners to preserve their backyard creek, protect a grove of oaks, restore a prairie garden, enhance a wetland, or make space for local wildlife to survive.
- The *Restoration Revolution in Northwest Indiana* by Lee Botts and the NW Indiana Quality of Life Council, which identify recent, ongoing projects to restore the region's natural areas as of 2006.
- *Protecting Nature in Your Community – Indiana Addendum to the Biodiversity Recovery Plan* by Chicago Wilderness, the Indiana-Illinois-Wisconsin region's first comprehensive conservation and restoration plan.
- The significant role and success of local not-for-profit land trusts and park foundations in preserving several thousand acres of critical habitat through donations, purchase, or dedication of conservation easements.
- The increasing number of developers that integrate open space features and greenway corridors into their projects as community and neighborhood amenities.

COME TOGETHER

This document was prepared after first meeting with public and private stakeholders so that their thoughts and ideas could be heard before a plan or implementation strategy materialized.

NIRPC is led by a 51-member board of Commissioners, where all municipalities and counties are represented by elected officials. Each of these local governmental agencies was interviewed at length regarding his or her perspectives on greenways and water trails. Past efforts and current or future initiatives as reflected in local comprehensive plans or project initiatives were discussed. Numerous interviews were held with municipal and county department heads and support staff, park superintendents, or directors. When possible, meetings were held with elected officials, especially from smaller towns, who may not have had staff.

After this initial round of interviews, stakeholders that are actively involved with environmental issues, were interviewed, including Save the Dunes Council, Shirley Heinz Trust, The Nature Conservancy, and the Wildlife Habitat Council. Discussions were also held with individuals with long standing environmental connections in the Calumet region.

The first product to be released for review from these interviews was a Greenways and Blueways Opportunities Map. This document highlighted those lands that were already protected or that had physical constraints, or prime greenway values. Hydric soils, wetlands, floodplains, woodlands and savannas, utility corridors, railroad corridors, bike and pedestrian trails, and interstate highway corridors were shown. In addition, large private landholdings, such as golf courses, boy scout and girl scout camps, arboretums, and land trust properties were also shown. The map was shown initially to the stakeholders, then to the public in a series of “Open Houses” that took place in all three counties in the NIRPC region during 2006.

Canoe trips were taken on area creeks and rivers to assess their potential as water trail corridors, or “blueways”. These are detailed in Chapter 4.

After the first year of interviews and public open houses, a draft Greenways and Blueways Plan was released for a final round of public review in November of 2007





THE GREENWAYSEIGHT



HOW DOES A PLAN MOVE FROM PAPER TO PROGRESS? THE KEY TO THE SUCCESS OF THIS PLAN IS HOW WELL IT TRANSLATES TO LANDOWNERS THROUGHOUT THE REGION, WHETHER PUBLIC OR PRIVATE.

WHILE PUBLIC AGENCIES HAVE PRESERVED MANY HIGH-QUALITY HABITAT REMNANTS ON ISOLATED PARCELS THROUGHOUT NORTHWEST INDIANA, BECAUSE OF FINANCIAL CONSTRAINTS, THEY HAVEN'T BEEN ABLE TO FOCUS ON THE MANY REMAINING GREENWAY CORRIDORS SPREAD THROUGHOUT

THE REGION. YET THESE ARE THE GREENWAY CORRIDORS THAT PROVIDE THE BIRDS AND BUTTERFLIES, TURTLES AND FROGS, FOR CHILDREN AND FAMILIES IN THEIR BACKYARDS AND NEIGHBORHOODS. THESE ARE THE CORRIDORS THAT DO MOST OF THE STORMWATER INFILTRATION, GROUNDWATER RECHARGE, SURFACE WATER CLEANUP. AND THESE ARE THE CORRIDORS THAT ADD COMMUNITY AESTHETICS, AUTUMN TREE COLORS, QUIET SPACES, AND PLACES TO WALK, OBSERVE, PLAY, AND EXPLORE.

THUS, IT WILL TAKE A SUBSTANTIALLY BROADER EFFORT TO ACHIEVE A CONNECTED GREENWAY SYSTEM THAN CAN BE PROVIDED BY PUBLIC AGENCIES. EIGHT MAJOR STAKEHOLDER GROUPS WERE IDENTIFIED AS KEY TO ACHIEVING AN EFFECTIVE BROAD-BASED GREENWAY SYSTEM. ONLY TWO OF THE EIGHT ARE BASED ON PUBLIC AGENCIES; ONE OF THE EIGHT DEPENDS ON UNIVERSITIES AND EDUCATIONAL INSTITUTIONS, AND FIVE OF THE EIGHT ARE PRIVATE IN NATURE. COLLECTIVELY, THEY ARE THE "GREENWAYS EIGHT."



LOCAL & COUNTY GOVERNMENTS

These stakeholders are the local gatekeepers – they decide on how a community will develop or re-develop. Local and county governments pass the local ordinances and long-range plans that determine the types of development that will occur within each community. These development regulations and guidelines are formed during Common Council, Plan Commission, Redevelopment Commission, Parks Board, Board of Public Works, and Board of Zoning Appeals meetings – amongst other specialized decision-making bodies. The meetings are important outlets for public discussion on sensitive development patterns that can preserve the unique landscape features of a community. Municipal and county officials have substantial power to steer new growth toward the goal of achieving a successful mix of development and conservation. A development that incorporates conservation design also provides substantial financial benefits to local government in terms of protecting infrastructure investment and minimizing its associated maintenance costs.

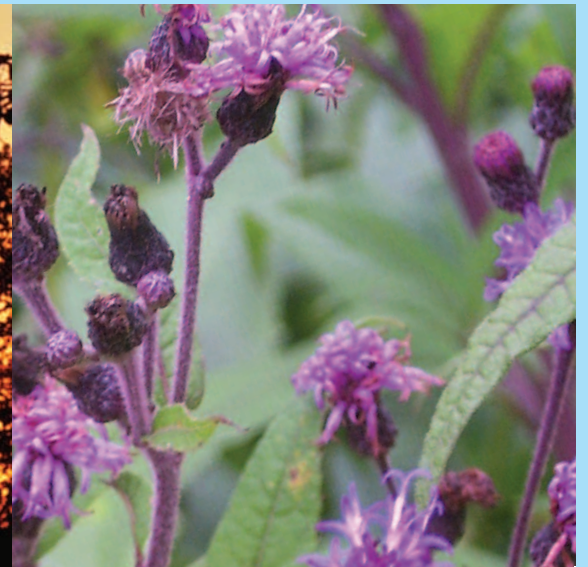
With regard to blueways, parks and public works departments play vital roles in implementing water trail segments, providing training and education on paddling, maintaining accurate signage at access sites and portages, and clearing out water trail routes of fallen trees and debris.



PRIVATE PROPERTY OWNERS

Participation in an interconnected greenway system does not mean opening up private land for public use. A functioning greenway system involving private property provides many public benefits – cleaner water, plant and animal biodiversity, less floodwater volume, community aesthetics, and groundwater recharge, to name just a few. In a viable, sustainable greenway system, the vast majority of creek banks, stormwater swales, oak groves, wetlands, farmlands, and floodplain forests will be privately owned. Many new subdivisions in the region dedicate greenway features to private homes associations. There is an increasing number of sources for information on managing these privately owned greenway segments to enhance their habitat or hydrological value. Several sources for management information are noted in the appendix, or generally available on the web. Many property owners also work closely with the not-for-profit land trusts, soil and water conservation districts, and county extension offices to conserve and manage their properties. Grants and tax benefits are available to many property owners who make long-term commitments.





In addition to local resident landholders are large private corporate landholdings throughout the region. Many of these corporations hold vast amounts of property, much of it still undisturbed and ecologically valuable. Even corporate-owned “Brownfields” can be remediated back to greenways, in whole, or as part of a large redevelopment plan. Corporate stewardship has been, and will continue to be, highly important in maintaining privately owned corporate open space for conservation purposes. Many large corporations have already partnered with both public entities and private environmental groups on strategies to conserve and enhance significant amounts of their properties for greenway purposes. Through the efforts of organizations, such as the NW Indiana Forum and the Wildlife Habitat Council, new partnerships continue to be fostered toward a stronger ecological balance between conservation and industry.



LAND TRUST/ADVOCACY GROUPS

Their names are well-known and a source of pride for our region: Save the Dunes Council, Shirley Heinze Land Trust, Coffee Creek Watershed Conservancy, The Nature Conservancy, Wildlife Habitat Council, Wolf Lake Initiative, Talltree Arboretum, Izzak Walton League, Woodland Savanna Land Conservancy, LaPorte County Conservation Trust. In addition, the region is home to many successful local park foundations that acquire land or accept donations to help expand local community park systems. Collectively, these organizations represent the heart of the not for profit land preservation movement in NW Indiana. Through their efforts, the Northwest Indiana region is recognized as one of the most ecologically diverse areas in the world. These groups have been responsible for protecting several thousand acres of property for conservation purposes. They are especially focused on working with private property owners, and they are increasingly outreaching to local governments to identify sensitive landholdings and sound management strategies.





Developers are primary movers for creating land use change, and, from a greenway perspective, that can be good. It is during the transition of land use from, in many cases, agriculture to suburban neighborhoods, that the opportunity to create and preserve greenways can occur. Developers also take on the substantial risk of redeveloping brownfields, and it is also at that time that greenways can be introduced into the community fabric where they hadn't existed beforehand. Developers define the landscape for the next 100 years or more, and thus have a critical role in providing open space for future neighborhoods and communities. An increasing number is using greenway corridors because they can be the most efficient open space design strategy available to border the most homesites. This proximity to open space is popular in the marketplace, will be utilized by the most people for healthy activity, and provides multiple benefits in terms of stormwater management. An increasing number of developers in Northwest Indiana is utilizing these conservation design principles.



A substantial framework of greenways, mostly privately owned, already exists throughout the region. Represented by the landholdings of utility and transportation agencies. Northwest Indiana is criss-crossed by active and abandoned rail lines, interstate highways, bike trails, NIPSCO corridors, and pipelines. These corridors represent hundreds of miles of functioning greenways. NIPSCO has been particularly effective in working with local governments, environmental groups, and farmers to manage their linear landholdings for greenway and open space purposes. The expanding bike trail system of Northwest Indiana brings multiple greenway benefits to many neighborhoods and communities. Railroads have retained prairie remnants in their corridors and are migration corridors for animals. Drainage boards do not allow development within the width of the easements of their legal drains. Interstate highways offer the potential for major landscaping initiatives to enhance the character of the region for the many interstate travelers who pass through.

Linear corridor owners usually have a primary purpose in owning their corridor, but because the corridor is usually wider than the road or bike trail or utility line that utilizes it, multiple greenway benefits are already in place.



LINEAR CORRIDOR OWNERS





FEDERAL, STATE, & REGIONAL ENTITIES

Federal, state, and regional agencies play a significant role in NW Indiana either through land holdings, statutory authority, review and enforcement procedures, and dialogue between public and private interests. The Environmental Protection Agency (EPA), Region V, and the Indiana Department of Environmental Management (IDEM) play crucial roles towards, remediation of contaminated brownfields and rivers, and the protection of our most ecologically sensitive properties. In addition, the National Park Service and Indiana Dept. of Natural Resources (DNR) provide another layer of environmental protection. The DNR also

provides several conservation and open space granting programs to aid local jurisdictions in purchasing additional lands. On the regional level, NIRPC staff devotes a significant amount of staff resources on stormwater management programs, including the MS4 program. NIRPC hosts the Environmental Management Planning Committee (EMPC), which serves as a forum between government entities, land trusts, and environmental advocates to identify strategies that will aid in the creation of new environmental protection policies and to assess how well existing ones are working.



INSTITUTIONS OF EDUCATION



Throughout all of NW Indiana, there have been conservation initiatives that have been either spearheaded or assisted through our region's colleges, universities, secondary, and elementary schools. Programs and projects have been initiated to help students take an active part in helping to create a culture of environmental awareness at all ages of educational development. These institutions have partnered with other stakeholders, such as advocacy groups, and numerous occasions to advance a solid ecological ethic for the students, communities, corporations and private property owners they work with. Additional opportunities abound through research possibilities regarding the definition of local habitats with the assistance of funding tailored for these purposes. Bringing these educational stakeholders into the mix is imperative to establish the importance of conservation and a deeper appreciation of nature, in general.



Greenways are simply linear corridors of open space varying in length and width, under public or private ownership, with multiple benefits to wildlife, water quality, stormwater management, human health, and quality of life. A greenway could be as small as a spring and the headwater creek-run that is created on an acre of privately owned property. If the creek-run flows downhill through several more properties, a more significant greenway habitat is created, but this somewhat larger greenway is dependent on the first property's spring and creek-run. As the creek continues its run through farmfields, neighborhoods, and town centers, the quality of the creek and its adjoining habitat is affected by each property owner's management decisions on the land he or she owns. One of the defining features of larger greenway systems is that, since they are usually under multiple ownerships, they need cooperative efforts to ensure their integrity and value to wildlife, water quality, stormwater management, human health, and quality of life. Being linear by definition means that their benefits can diminish fairly quickly if sections are managed poorly or substantially changed in character.

There are several distinctive types of greenways from which a linear open space system can be described.

Stormwater has an obvious impact on the landscape. When soils lose their infiltration ability under deep-rooted prairie vegetation, they drain stormwater rapidly to the lowest point in the nearby landscape. These low **swales** continue to gather water, connecting into other swales and adding volume, until a **creek** is reached. Since most small watersheds have lost much of their infiltration capacity due to farming, lawns, and asphalt, stormwater gathers into large volumes which commonly overwhelm creek systems creating flooding in an area defined as the **floodplain**. This system of swales, creeks, and floodplains is one of the best known greenway systems. In most communities, this system is protected from development into harder surfaces so that flooding isn't increased. The drained wetland soils and surrounding prairie uplands that overlay this system and used to infiltrate the stormwater could still be retro-fitted to deeper rooted habitat to soften the flooding impacts. The drained wetland soils are called **hydric soils**.

TYPES OF GREENWAYS



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN

A key aspect of Northwest Indiana's landscape is its division into the Lake Michigan and Kankakee River drainage basins by the **Valparaiso Moraine**. Scattered throughout the surface of this massive glacial deposit are thousands of acres of **oak savanna** remnants stretching from the Indiana-Illinois state border to the St. Joseph County line and the Indiana-Michigan state border. Indiana lies just to the east of the rain shadow of the Rocky Mountains, which resulted in a dominant prairie landscape from the mountains to Illinois and Indiana. With just a bit more moisture is the transition state between the prairie of the west and the woodlands of the east. In addition, northwest Indiana also has **sand savannas** interspersed along the beach ridges of glacial-era Lake Michigan and the Kankakee River. The savanna remnants, in total, represent a greenway system of an entirely different type, which in one sense seems to break the rule on continuity. But migratory birds, savanna-based butterflies and moths, and larger animals depend on the savanna remnants for refuge, moving from one to the next if given the opportunity. This movement of species through the landscape depends on the survival of as many undisturbed savanna remnants as possible. Since most of the savanna remnants are privately owned, their preservation is dependent on the private sector to sensitively locate homesites so that the core of each savanna is preserved.

More common animal and bird species utilize the many **pipeline, electric utility line, and railroad greenway corridors** that cross-connect throughout the region. Many of these utility and transportation corridors also preserve deep-rooted prairie segments that serve to infiltrate stormwater and replenish aquifers. Many of the railroad corridors have preserved stretches of native prairie within their right of ways. NIPSCO has led the way throughout the region in working with local communities and organizations to control invasive plants, enhance native plant habitat, and maintain habitat for threatened and endangered animal species within their electric utility corridors.

The linear ped and pedal trail system of Northwestern Indiana is being substantially developed on abandoned railroad right of ways that link an increasing number of parklands and recreation areas. Although a bike trail may take 10-12 feet of a 60-100 foot right of way, the remainder of the corridor is considered a greenway. The natural or landscaped appearance of these **linear trail corridor greenways** add to the experience of bicycling, walking, pushing baby strollers, in-line skating, or in some locations, horseback riding. For most residents of Northwest Indiana, the ped and pedal trail system has been their primary experience with greenways. The bike trails provide important public recreation benefits and are becoming increasingly recognized for the role they play in public health.

Interstate highway corridors can be planted with deep-rooted native vegetation to provide greater flood mitigation for the region as well as

groundwater recharge. These wide corridors could play a significant marketing role by creating a unique landscape aesthetic that enhance Northwest Indiana's image nationally for economic development. A traveler to and through Northwestern Indiana gains an impression of the region based on what is seen of the roadscape. Intensive and creative landscaping could be accomplished throughout the interstate highway corridor system in the Northwest Indiana region.

In the mature older communities with large areas of abandoned industrial lands, greenways can become a key site planning strategy to create investment value on these sites. **Greenways in brownfields**, especially as key components of residential, commercial, and job-based projects, are almost necessary in today's competitive development market. Water features, walking paths, linear parks, and strong landscape features add vibrancy and attractiveness to a development and are utilized in many award winning-public and private sector projects.

Greenways are suitable corridors for **agriculture**, both on a large scale as found in traditional farms and agri-business enterprises, where soils that may have high water tables are prime agricultural lands. In suburban and urban areas greenways provide open space corridors for urban agriculture, school gardens, community gardens, organic specialty crops, and native seed production for the marketplace.



GREENWAY BENEFITS



W

HY PRESERVE GREENWAY CORRIDORS?
IS IT WORTH THE EFFORT? WHAT ARE THE BENEFITS?

RATHER THAN BEING KNOWN FOR ACHIEVING A SINGLE PURPOSE, GREENWAYS HAVE INSTEAD BEEN RECOGNIZED FOR ACCOMPLISHING MANY PURPOSES. THEY ALSO ARE BECOMING INCREASINGLY SIGNIFICANT IN RESOLVING NEWLY IDENTIFIED NATIONAL AND LOCAL PROBLEMS. GREENWAYS SEEM TO HAVE BENEFITS THAT WEREN'T EVEN ENVISIONED WHEN THEY FIRST BECAME A COMMONLY ACCEPTED LANDSCAPE STRATEGY IN THE 1980S AND 1990S.

CONSIDER THE FOLLOWING BENEFITS OF ACHIEVING A SUCCESSFUL GREENWAY PROTECTION EFFORT IN NORTHWESTERN INDIANA.

GREENWAYS PROTECT & ENHANCE HABITAT FOR PLANTS AND ANIMALS

Greenway networks provide continuous open space corridors for plants and animals to migrate to larger habitats where they can more successfully survive and thrive. This is especially important not only to maintain viable populations and avoid local extinctions, but also to provide for a larger gene pool, which is important for reproduction in the long term. There is still much that biologists have yet to learn with regard to how wide of a greenway is needed to provide for migration. In general, narrow long greenways between larger expanses of habitat are less effective than shorter, wider greenways.

GREENWAYS PROVIDE RECREATIONAL OPPORTUNITIES

Northwest Indiana's popular ped and pedal trail system has taken advantage of a number of abandoned railroad corridors that are, typically, 60-100 foot wide greenways. These publicly owned corridors are active passageways for biking, jogging, skating, walking, and strolling for all age groups and people of many levels of ability or disability. But greenways in private homes association common areas, regulated drainage ditches, and strung-together private backyards provide places for adults and children to engage in other types of personally important daily recreational activities on their own land, whether it's a simple short walk, birdwatching, fishing, gardening, nature observation, or playing in and near creeks.



GREENWAYS IMPROVE AND SUSTAIN HYDROLOGICAL FUNCTIONS

Creeks and rivers seasonally flood, some years over more of the floodplain than others. Drainage swales from uplands in combination with the lower floodplain areas can infiltrate rainwater into groundwater aquifers, especially if planted with deep-rooted native vegetation. These wet “hydrological greenways” perform best if they aren’t built upon or turned into lawn, in which case they pass on their lost capacity for flood storage downstream to expand the floodplains of the next set of property owners. If stormwater isn’t infiltrated to groundwater aquifers, it is an increasingly expensive, lost resource draining into either Lake Michigan or the Gulf of Mexico.

GREENWAYS PROTECT PUBLIC INFRASTRUCTURE INVESTMENT

Several billion dollars in public infrastructure have been built in Northwestern Indiana in facilities such as roads, bridges and culverts, sewer and water lines, parks, trails, and public facilities and buildings. Dysfunctional floodplains and stormwater flows along upland swales, which are not mapped or protected as floodplains, can destabilize or ruin public infrastructure in major storms. A protected greenway system upstream of these facilities, with good infiltration and stormwater storage capacity is the simplest and most cost-effective strategy for protecting these public investments.

GREENWAYS PROTECT PRIVATE INVESTMENT

Several billion dollars in private investment have been invested in Northwestern Indiana in the form of pipelines, commerce and industry, homes, backyard structures and yards, and farming operations. Dysfunctional stormwater flows because of loss of floodplains or hardsurfacing of drainage swales can cause significant personal loss of property, investment, and cashflow. Healthy, functioning hydrological greenways upstream of these properties are the best insurance possible to avoid private financial loss.

GREENWAYS PROTECT CULTURAL & HISTORIC RESOURCES

Northwestern Indiana has an incredibly rich heritage providing almost 10,000 years of passage along its creeks and rivers, the Lake Michigan lakefront, and high and dry trail corridors for succeeding generations of Paleo, Archaic, Woodland, and Mississippian First American cultures. Followed by other cultures, including French-Canadian, British, and Colonial American explorers, military, and missionaries.

In the 1820s thru the 1840s, Northwest Indiana became the route for early American settlers of the west. In the midst of all of this traveling, many people settled and established Indian villages, trading posts, log cabins, hunting camps, woodlots, mill sites, first towns, and farms. A greenway system can help in preserving these historic and prehistoric resources. Walking, canoeing, and horseback riding all hark back to this 10,000-year period of traveling.

GREENWAY BENEFITS

GREENWAYS PROVIDE A PLACE FOR SIGNIFICANT LEVELS OF CARBON ENTRAPMENT

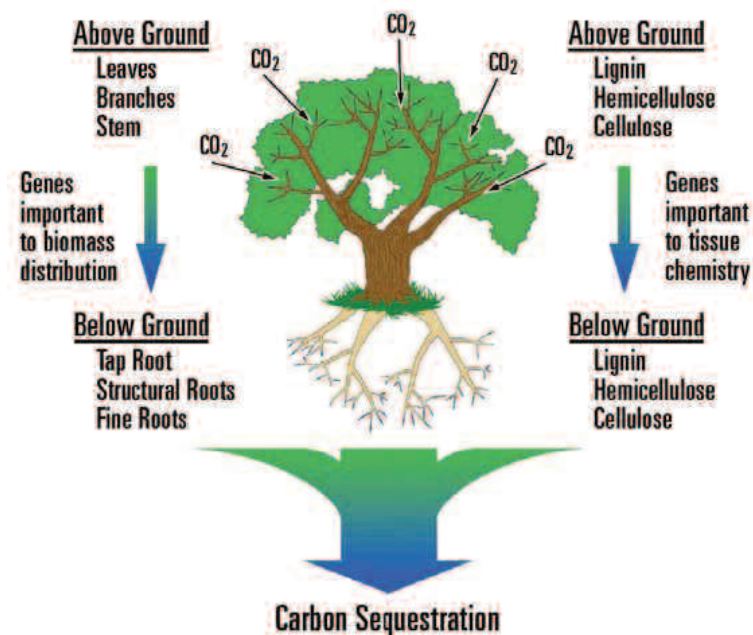
The root systems of trees, shrubs, grasses, and flowers grow when the plant absorbs carbon dioxide and transports the carbon from this greenhouse gas into the living tissue of the root. The deeper and more extensive the root system, the more carbon is converted and put underground. A farmer's hay pasture or perennial bio-fuel crop, a prairie remnant or restoration, or a healthy native oaks savanna create an especially large amounts of carbon entrapment, or sequestration, measured in levels of tons of carbon per acre, which would otherwise be in gaseous form in the atmosphere. Carbon entrapment is one of the principal strategies for combating the negative effects of climate change.

GREENWAYS PROVIDE A PLACE FOR REMEDIATION OF POLLUTANTS BY NATURAL PROCESSES

Plants will absorb a large number of chemicals from a degraded, polluted landscape, and thus provide one of the least expensive methods of assisting in the cleanup of otherwise unusable properties. The plants accomplish this role by

- Transporting the chemical into plant tissue, which can be harvested and removed from a site
- Absorbing the chemical into plant tissue and transforming it into safer chemicals
- Absorbing the chemical and breaking it down into safer gases, which are transpired into the atmosphere

Allowing brownfield sites to be intentionally "phyto-remediated" by plants is an increasingly common approach to pollution cleanup. In like manner, many pollutants that commonly flow through our neighborhoods through overuse of household chemicals, such as hydrocarbons from automotive activity, and pesticides, fertilizers, and insecticides from lawn maintenance are at least partially phyto-remediated by downstream greenway networks.





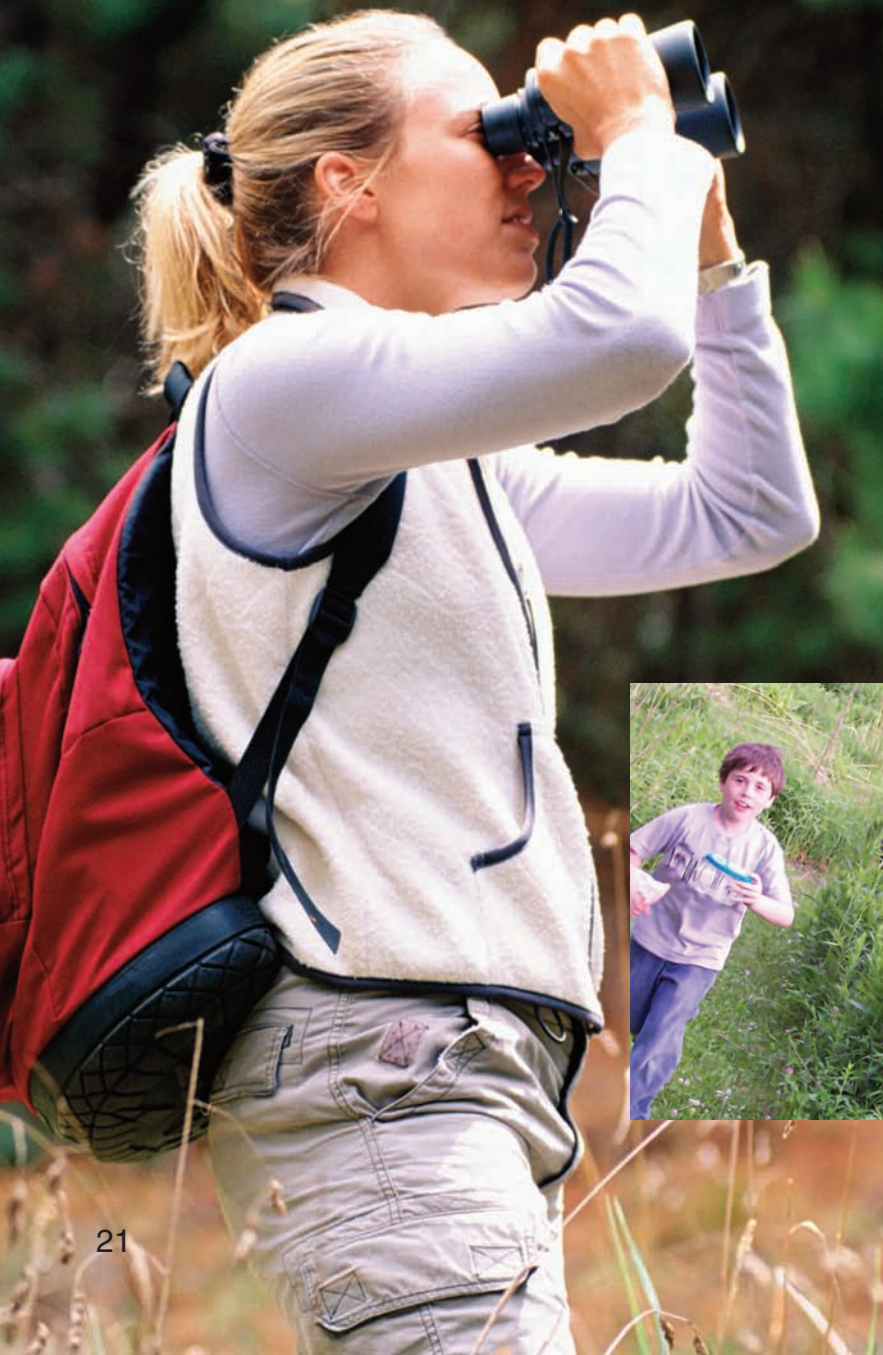
GREENWAYS PROVIDE HEALTH BENEFITS

The medical industry has recognized the value of 15 to 20 minutes of daily exercise on preventing or minimizing cardio-vascular disease, osteoporosis, type II diabetes, and some cancers. The exercise can be as basic and simple as a daily walk, and residents are increasingly attracted to new trail systems for this reason. In addition, there is increasing evidence that daily interactions with the natural environment have therapeutic effects on adults with mental stress and on children with attention deficit hyperactivity disorders. Proximity of greenways to neighborhoods is important so that the natural environment can be easily accessible.

GREENWAYS ENHANCE THE NATURAL BEAUTY AND AESTHETICS OF NEIGHBORHOODS AND COMMUNITIES

Older neighborhoods with mature trees, homes with deep backyards adjoining stream corridors, or a series of residential yards protecting oak savanna remnants are often thought of as the most attractive communities in town. New developments are beginning to recognize how strongly the marketplace responds to connected green spaces, landscaped buffers, creek corridor enhancements, and native plantings. An increasing number of communities is establishing downtown riverwalks connecting parks, libraries, and schools in an effort to add aesthetic values to aging developed areas.

GREENWAY BENEFITS



GREENWAYS IMPROVES THE QUALITY OF LIFE OF NEIGHBORHOODS AND COMMUNITIES

Mature trees and shrubs cool the summer climate in neighborhoods, reducing the heat island effect of too much concrete and asphalt. Long linear greenway corridors along streams and creeks provide aesthetic open space views and play space for adjoining homes and neighborhoods. Clean and healthy creeks are aesthetic assets to any neighborhood. Greenway buffers, whether public or private, soften the impact of highway noises and bright commercial lighting.



GREENWAYS PROVIDE FOR STEWARDSHIP OPPORTUNITIES ON A PERSONAL LEVEL

An increasing number of local residents and school children are becoming involved with habitat restoration whether on public lands, school grounds, or private backyards. Citizens are motivated by a desire to attract birds or butterflies to native prairie or woodland habitats. For others, the beauty of native perennial flowers is appreciated. It's not uncommon to create small habitats for 50 to 100 native plant species especially if a variety of soils and sun levels are present. The growing popularity of rain gardens adds greatly to the plant and animal diversity, which can be attracted to small restorations. Many property owners have purchased their land partially because of a desire to protect wetlands, savanna remnants, or small seeps, springs, and streams. Typically these small restorations or protected habitats are dependent on the health and connectedness of a larger system of private and public greenways which helps to sustain the hydrology and diversity of species that they desire to steward. For example, a single backyard might successfully create a prairie garden for certain plants and butterflies, but a series of healthy backyard habitats that link to a nearby protected creek corridor might attract deer, owls, tree frogs, wood ducks, or fox.



GREENWAYS OPEN UP ECONOMIC DEVELOPMENT OPPORTUNITIES IN A COMPETITIVE MARKET

River walks are being developed by towns interested in revitalizing their downtowns. Brownfields are often restored for habitat or community parklands. Nationwide, the fastest job growth is often occurring in communities and regions known for their green spaces and related recreational opportunities. Many corporate location specialists look for communities that offer attractive green space opportunities for their employees and their families because they know their workforce factors these quality of life features into making a relocation decision. Most economic development brochures build an image of open space, recreation, and a healthy lifestyle as a marketing enticement for corporate relocations.

ENHANCE PROPERTY VALUES

Many studies have shown that homes bordering protected open space sell for a premium. Residential developers charge a premium for lots located next to protected open space. Greenway corridors, especially along creeks and rivers where floodplains already preclude the development of property, offer the most cost-effective type of open space corridor to set aside for protection by the development industry. Homebuilders have learned, too, that they don't need to front the money to build golf courses as central features of cluster developments because purchasers are just as satisfied with a protected habitat core within their neighborhood, which can also have active use parks and trails intermixed. In a competitive housing market, developers who offer open space amenities throughout a development often have a competitive advantage. Developers can save significant dollars by designing greenway-oriented stormwater best management practices such as infiltration swales, infiltration buffer strips, community rain gardens, and prairie and wetland restoration in floodplains in lieu of hardscape stormwater conveyance structures.

It's early morning. You bring your canoe or kayak to the water's edge, step in, take your seat, and quietly glide off into the shaded creek corridor. Quiet, except for the barely perceptible sound of your paddle dipping into the water, you first notice the multi-colored damselflies darting and circling back to their favorite landing spots on bush twigs along the shore. You touch your paddle to the creek bottom. It's just barely a foot deep, maybe less. You surprise a green heron who was stalking a fish just ahead of you. It flies downstream, just to be surprised again as you silently drift up to him. You pass under a highway bridge but hardly notice the muffled sound of cars above you. You

whistle and hear the echo from the concrete wall as you pass under the bridge. Frogs splash and an occasional turtle slips quietly into the water off a log. You shoot some minor rapids under the next bridge, dropping at most two feet. You watch another green heron try to outfly you in fifty yard stretches. This goes on for half a mile before he finally disappears into the trees. A doe and fawn and two miles later, you veer toward the low grassy bank at the town park, land your canoe, and your trip is done.

Northwest Indiana is blessed with many miles of creeks and rivers where this experience is possible.

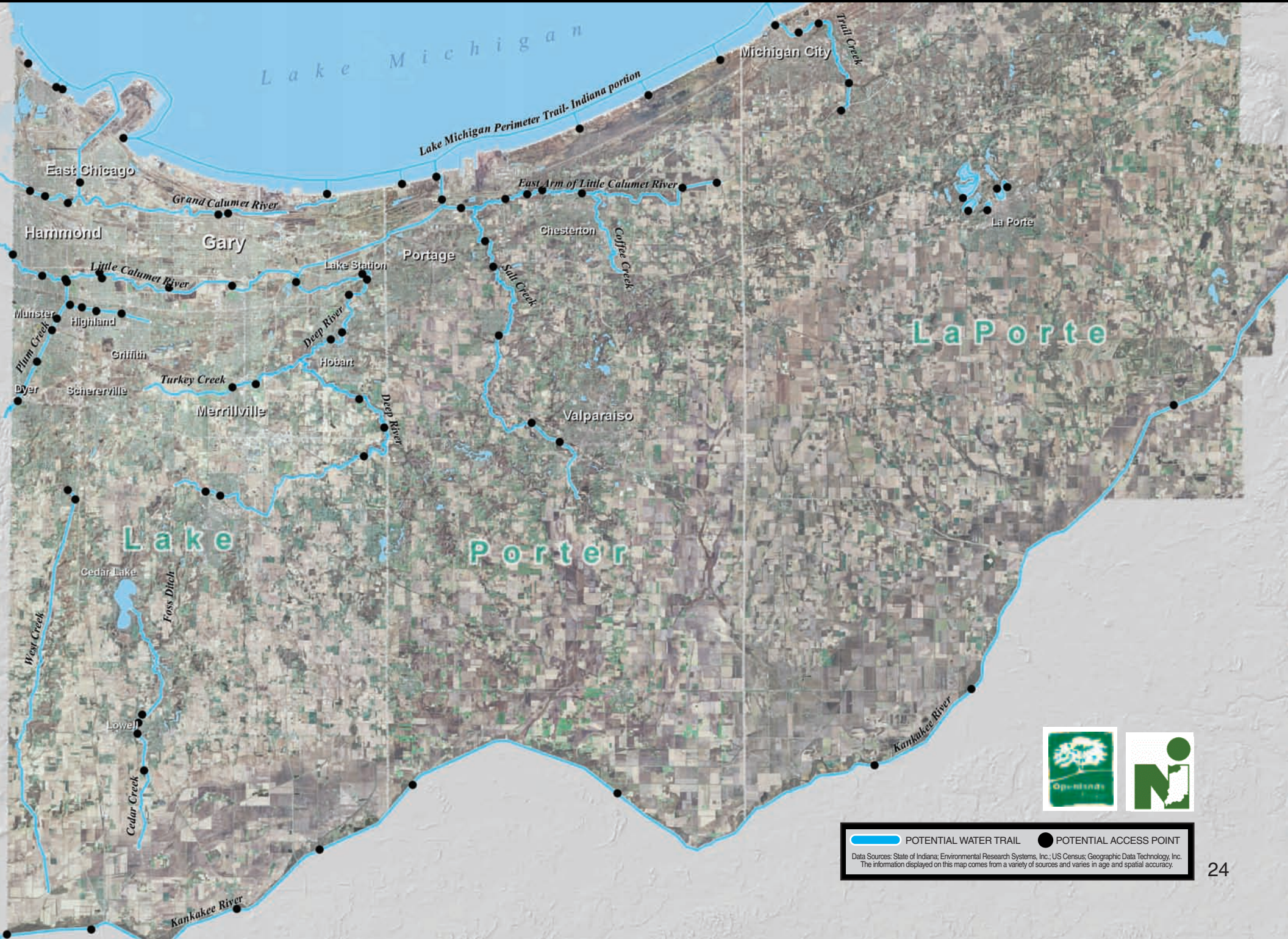



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN

BLUEWAYS

A WATER TRAIL NETWORK FOR NORTHWESTERN INDIANA

POTENTIAL WATER TRAILS



 POTENTIAL WATER TRAIL
  POTENTIAL ACCESS POINT

Data Sources: State of Indiana; Environmental Research Systems, Inc.; US Census; Geographic Data Technology, Inc.
 The information displayed on this map comes from a variety of sources and varies in age and spatial accuracy.





WHAT IS A WATER TRAIL?

EXPERIENCE LEVELS

Water trails can be shallow or deep, mud and waste bottomed, or rocky, sandy, or clay based, with fast or slow currents, and with obstacles that can be bypassed with reasonable ease or with difficulty. Creeks and rivers can be channelized straight for miles or meander with constant turns. The conditions on a water trail can change as quickly as the weather, with stormwater runoff or wind conditions creating the need for a greater level of experience very quickly. Creeks and rivers can have 2-foot shallow banks or 20-foot cliff-like banks. Water can also vary in terms of quality, from relatively clean waters to varying degrees of pollution, requiring a related response from the paddler in terms of hygiene. Mishaps on a creek, river, or lake can happen in isolated areas, and emergency response is more difficult, making self-reliance an important skill for a paddler.

But, in other states, popular, well-utilized water trails feature ocean shorelines with inaccessible rocky cliffs, Class IV and Class V rapids, 500-mile routes, or tidal estuaries. In an increasing number of water trails, paddlers with spinal cord injuries, paralyzed below the waist, are equal to any other experienced paddler on the water. Paddling, being a mode of transportation for tens of thousands of years might even be hard-wired in all of us because of the ease by which paddling skills can be learned. Northwest Indiana's creek, river, and lakefront waters were paddled by uncounted generations of travelers and in many ways, are easier to paddle today than in the past.

PADDLEABLE, ACCESSIBLE, INTERPRETED

A WATER TRAIL IS A CREEK OR RIVER OR LAKE SHORE WITH SEVERAL PLACES WHERE A PADDLER CAN PUT IN OR TAKE OUT A CANOE OR KAYAK. THESE ACCESS POINTS HAVE INTERPRETIVE SIGNAGE THAT PROVIDES CLEAR AND ACCURATE GUIDANCE TO THE PADDLER, SO THAT HE OR SHE KNOWS WHAT TO EXPECT ALONG THE ROUTE AND WHAT LEVEL OF EXPERIENCE IS NECESSARY TO TRAVERSE THE ROUTE.

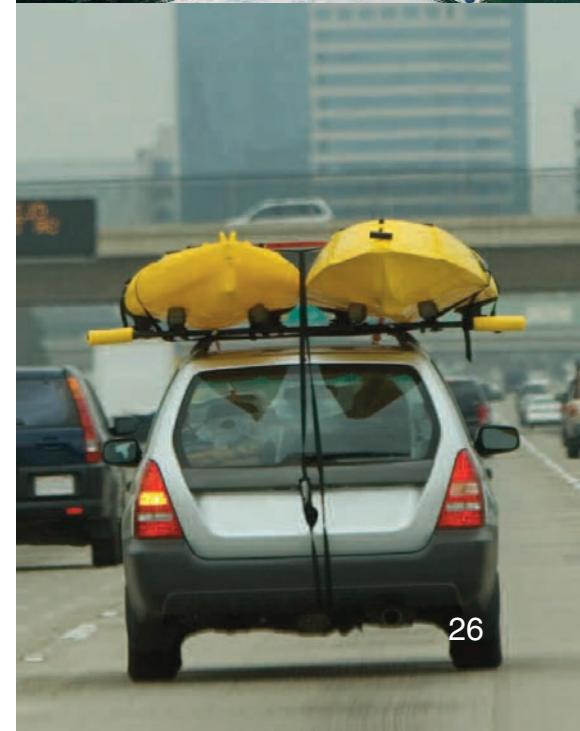
DESCRIPTION, HISTORY

Paddling routes through Northwestern Indiana were well known to European commercial interests, Jesuit missionaries in France, Montreal and Quebec trappers and traders, east coast Colonial militias, and the fledgling American government after the War for Independence. The Kankakee River, the Calumet River and its tributaries, and the Lake Michigan shoreline routes were on every map of this era. During the earliest years of settlement by the first local traders, and then, emigrant farmers and businesspeople from the east, the largest local creeks were immediately mapped to attract and establish the same commercial pattern of settlement as had occurred in new lands immediately west of the Appalachians, because mid-sized streams were important for moving commodities, operating millsites, and inspiring canal schemes to interconnect the bigger waterways.

By the 1830s, West Creek, Cedar Creek, Deep River, Salt Creek, Coffee Creek, Eagle Creek, and Turkey Creek were all mapped, named, and marketed to incoming settlers. Even Lake George (the current site of Schoon Ditch and Cady Marsh Ditch) was noted on early maps as “water from 1-8 feet deep.” Canals were envisioned, but financing never appeared, for routes from the Calumet River at Lake Station to Valparaiso and downstream to the Kankakee, from the Calumet River to Cedar Lake, and downstream to the Kankakee, and from Trail Creek to the Little Kankakee and downstream to the Kankakee.

But times and transportation technology changed, giving way to wagon road systems, railroads, and, most recently, car and truck routes. The creeks and rivers always remained as trapping and hunting grounds, a place for the local community to picnic and swim, for kids to spend their free time chasing critters, rafting, or otherwise exploring. The creeks gained enormous additional levels of stormwater discharge as fields were tilled, wetlands drained, and creeks channelized. In the Kankakee basin, as crops became more valuable than water, most stormwater was shipped downstream to the Illinois and Mississippi Rivers and finally the Gulf of Mexico. In the Lake Michigan basin in the lower reaches of the Calumet River watershed, with its almost flat topography, stormwater often stayed in place, much to the chagrin of rapidly developing neighborhoods, and the creek channels became dumping grounds for rapidly growing industry.

In the past 30 years, enormous investments have been made to clean up the Calumet River system and limit its floodwater damage. Recreational boating has become an enormous industry in its own right. New development is refocusing on waterfront properties as an asset, rather than the detriment much of it was during the 20th century. The general public is much more aware of the benefits and is demanding progress toward clean creeks, rivers, and lakes. The opportunity to return to paddling experiences couldn't be more timely.



NAVIGABILITY OF CREEKS AND RIVERS



A water trail should include segments of creeks, rivers, and lake routes that have a right of passage and support of local governments and property owners. Canoes and kayaks are often described as the one mode of transportation that ‘leaves no trace’ on the route that is followed. Paddlers typically pride themselves on the quietness of their craft and the minimal needs they have in paddling a waterbody.

The Indiana Supreme Court noted in *State v. Kivett*, 228 Ind.629,95 N.E. 2d 148 (1950) that the test for determining navigability is whether a waterway “was available and susceptible for navigation according to the general rules of river transportation at the time Indiana was admitted to the Union (1816).” The Indiana Natural Resources Commission maintains an administratively created roster of navigable waters that can change over time as new legislative or judicial clarifications are made. The Nonrule Policy Documents of the Indiana Natural Resources Commission comment on

the difference between ownership of a river bed versus the waters. These documents note that “determination of navigability is ultimately based on a judicial finding” but that, in addition, “legislative declarations have identified specific waters as being navigable.” These documents also note that “Other legal foundations may authorize public usage. A prescriptive easement may exist. A waterway may be a public freshwater lake subject to IC 14-26-2 and 312 IAC 11-1 through 312 IAC 11-5. Pursuant to IC 14-29-8, the Natural Resources Commission may, by rule, declare a waterway to be a recreational stream.”

In addition, it would appear that local and state governmental jurisdictions and land trusts in Indiana that acquire title or easements to property on one or both sides of any creek, stream, or river would have the right to establish rules and regulations for the access to and use of that waterbody as it flows through their landholding. Cooperative intergovernmental

efforts involving multiple properties could lay the groundwork for designating a water trail. This is often the organizational approach taken in other states throughout the country. Access to waterbodies at municipal, county, township, and state highway bridges, as well as from municipal parklands, public works sites, school sites, and other local government properties is a key to the creation of effective water trails.

In Northwest Indiana, most water trails will start out as short stretches where there is local support to create a low key, quiet recreational opportunity without a lot of investment, but that provides profound natural and recreational experiences to school kids and families that haven’t had a chance to float down that creek that they otherwise only see when they cross on a bridge.



NORTHWESTERN INDIANA'S OPPORTUNITY

One of the characteristics of the potential water trail system in Northwest Indiana is its great variety of landscapes and diversity of travel experiences. From short, fast-moving streams to historic voyageur routes, from Lake Michigan's inland ocean swells to deep woods natural preserves, and from shallow neighborhood habitat corridors to peaceful community lakes, there's an experience for everyone.

Small, shallow headwater creeks in many Northwest Indiana communities are well suited for local neighborhood use, school-based educational experiences, and training for inexperienced paddlers. These small creeks aren't typically identified in water trail plans and offer the potential to attract many more families and school children to a first-time paddling experience. The bigger rivers and larger inland lakes are already bordered by parklands or flood control lands that could, or already do, provide access for paddlers. The level of experience needed to paddle these rivers vary, depending on length of trip, depth and current speed, weather factors, and ability to handle river obstructions. Indiana's Lake Michigan shoreline provides a lake kayaking route for the experienced paddler. In the near future, it will join with initiatives in Michigan, Wisconsin, and Illinois to create a 1000-mile Lake Michigan Water Trail. With guides and trainers, the bigger rivers and Lake Michigan can be paddled by less experienced kayakers and canoeists to raise their level of ability.



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN



THE BENEFITS OF WATER TRAILS

WATER TRAILS HAVE MULTIPLE BENEFITS. FOR PARK PROGRAMS, A RIVER OR CREEK REPRESENTS A PATHWAY THAT DOESN'T HAVE TO BE BUILT FROM SCRATCH; IT JUST NEEDS REASONABLY LOCATED ACCESS, GOOD SIGNAGE, AND REMOVAL OR PORTAGING OF OBSTRUCTIONS. THUS, WATER TRAILS ARE MUCH LESS EXPENSIVE TO CREATE THAN A BIKE TRAIL. MOST FIRST-TIME PADDLERS ARE STRUCK BY THE QUIETNESS AND SOLITUDE OF PADDLING DOWN A STREAM, EVEN IN THE MIDST OF A DEVELOPED LANDSCAPE. THE NEXT MOST COMMON REACTION IS TYPICALLY SURPRISE AT SEEING WILDLIFE. GREEN HERONS, BEAVER, DEER, MULTI-COLORED DRAGONFLIES, AND BUTTERFLIES ARE COMMONPLACE ALONG A CREEK CORRIDOR. SHORT OR LONG PADDLES IS INVIGORATING HEALTHFUL EXERCISE, OR PADDLERS CAN RELAX AND JUST FLOAT WITH THE CURRENT.

THE POTENTIAL LAKE MICHIGAN WATER TRAIL, AS WELL AS WATER TRAILS ON THE LARGER RIVER SYSTEMS OF NORTHWEST INDIANA ALSO OPEN UP OPPORTUNITIES TO ENHANCE THE REGIONAL IDENTITY. ECOTOURISM, AND "GREEN" TOURISM AS A RAPIDLY EXPANDING SECTOR OF THE TOURISM INDUSTRY. NORTHWEST INDIANA HAS SUBSTANTIAL OPPORTUNITY TO CREATE WATER TRAIL ROUTES ON ITS LARGER WATER BODIES THAT WILL ATTRACT PADDLERS FROM AROUND THE COUNTRY. A WELL-DEVELOPED WATER TRAIL SYSTEM IS ONE OF THE RECREATIONAL AND QUALITY OF LIFE FEATURES THAT CORPORATE LOCATION SPECIALISTS WOULD MARKET TO CORPORATIONS LOOKING FOR PLACES TO EXPAND EMPLOYMENT FACILITIES.

EDUCATION AND TRAINING

A water trail network should be designed to be accessible to beginning and intermediate paddlers, as well as paddlers with advanced experience. Although there are basic paddling and portaging techniques that can be fairly easily learned, much of the training that new paddlers need is related to handling unexpected situations safely, paddling with a partner, and maintaining awareness of location and methods of communication. As paddlers gain experience, they usually like to try new waterbodies. Around the country, park and recreation departments are usually primary providers of training for less-experienced paddlers. The American Canoe Association (ACA) is a national organization that provides excellent guidance and support material. Local representatives of ACA may be available to help organize training classes.

One of the features of water trails is that it provides the opportunity for people with various levels of disability to participate. Because a canoe is commonly a two person craft, the lead paddler can travel with a blind partner or a developmentally disabled partner. The National Center on Physical Activity and Disability, the National Center on Accessibility, and the Rehabilitation Institute of Chicago all recognize that paddling opens up recreational and experiential opportunities to people with disabilities.



BASIC DESIGN PRINCIPLES

ACCESS SPACING

A healthy advanced paddler, experienced in long distances, could paddle the 70-mile Kankakee River bordering Northwest Indiana in two days. The Lake Michigan shoreline might be traversed in a similar period of time. But most recreational paddlers are looking for much shorter trips of several hours to a full day. For an older grade school level group or a local neighborhood trip, an hour's paddle may be more than enough. The coordination involved in staging cars at the beginning and ending access points for a trip on the bigger rivers usually means that at least a half-day trip is undertaken. For most paddlers, a leisurely half day trip could cover 6-8 miles, a full day trip 12 -16. For larger water bodies a minimal spacing of access points of 3-4 miles would be advisable. For local neighborhood creeks, an access at least every mile is preferred, but schools and park officials might see benefits in even shorter spacing.

PORTAGES

Small and large dams, pipelines, and other obstructions that can't be removed from a creek or river must be portaged by carrying the canoe past the obstruction. The portage needs a designated landing site above the obstruction and another site below to put the canoe safely back into the water. Depending on the speed of the current, the visibility of the obstruction, and the conditions and slope of the banks, signage must be installed at a safe distance upstream of the obstruction to direct the paddler to the correct bank to begin the portage. The property where the portage takes place should be publicly owned.

Heavily wooded creeks and small rivers can be blocked by treefalls and captured debris floating on the upstream end of the treefall. Treefalls can occur in areas difficult or almost impossible to portage. Treefalls can create dangerous deep spots in a creek or river as the current scours a channel under the tree equal in capacity to the channel upstream of the tree. Experienced paddlers learn how to traverse these situations, but inexperienced paddlers can be at risk. Ongoing management of a water trail in these situations is important, with current signage that notes the experience level needed if treefalls are found along the route.

ACCESS DESIGN

A well-designed access will have a place where a canoe or kayak can be unloaded and carried a relatively short distance on a slight to moderate slope to the water's edge. The stretch of water access selected would allow for approximately a foot of water a canoe length's distance into the creek or river. The inside curve of a meander or river bend where silt and sand are commonly deposited is not a good access location. Most channelized creeks and rivers have fairly consistent channel cross-sections and access works well almost anywhere. The amount of construction needed for an access varies depending on the level of usage and whether the access is designed under ADA standards. Many access sites have no construction involved if a grassy bank within a 1-3 feet above the waterbody is in a low-use area. Erosion control matting should be used in higher-use areas. Sunlit mowed grassy areas are more resilient than shaded areas of exposed soils. Rock and stone surfaces should be avoided if possible. If areas are used more frequently or are intended for access for the disabled, more substantial access facilities can be designed. On the bigger rivers and Lake Michigan, access with picnic facilities, open shelters, and rest rooms is ideal.



BASIC DESIGN PRINCIPLES

SIGNAGE

Signage is a key component of a general use water trail system. Signage interprets the creek or river for the paddlers, so that they know what to expect downstream. Signage should identify permanent river obstructions, portages, distances to the next access site, level of experience needed, special river conditions under different seasons and weather events, and emergency numbers. In addition, the culture and history of the waterbody, landmarks that might be seen on the trip, and wildlife to spot for all add value for the paddler. Water trail maps should be produced at some point to reinforce the information presented on signs. Water trail maps are especially important in helping orient the paddler once on the water body. Bridge crossings are usually unmarked, and heavy tree and shrub growth along creeks and rivers can disorient the paddler on longer trips. Pocket maps help to guide a reasonable pace for the trip and provide important emergency information if needed.

RESOLVING COMMONPLACE OBSTRUCTIONS

TREEFALLS

In pre-settlement years, early explorers and trappers had many fewer treefalls to contend with than we see in some of our creeks and rivers today. Rivers were more stable because the prairies absorbed most of the rainfall. Bank erosion was much less pronounced, and rivers and creeks were not downcut or incised into the surrounding landscape as deeply as today. Invasive tree and shrub species were not present, and seasonal prairie fires kept box elders, cottonwoods, and large willows out of the headwater creeks entirely. Unfortunately treefalls are a management issue today if a creek or river is to be used for a water trail. Once the significant task of cleaning treefalls out of a heavily laden creek or river system is accomplished, yearly maintenance is much easier. But occasional treefalls were nonetheless part of the habitat in presettlement times and did create habitat structure for macroinvertebrates, fish, and other animals. A water trail should be designed with the involvement of aquatic habitat specialists so that habitat value is retained, since high quality habitat is one of the best experiences to be gained from paddling a creek or river in the first place.



SEASONAL LOW FLOW

In general, creeks are deeper for a longer period of time in the spring when more rainfall events occur. Normal rainfall tapers off in August through October, so this is the seasonal low-flow period. Almost every creek in Northwest Indiana will rise rapidly after a thunderstorm or multi-day rain event, no matter what the season, because the landscape has been so drastically altered to drain rain rather than infiltrate it. Shallower creeks in the upper portion of any sub-watershed that may be excellent for paddling when water is seasonally higher, may not be useful during the seasonal low flow. This doesn't mean they shouldn't be considered part of a water trail system. It simply means that they are seasonally available.

Farther downstream, a creek with a high-quality natural structure (geomorphology) will have a continuous series of pools and riffles (shallows and deeper spots), which greatly increase fish diversity. But with seasonal low flows, can make paddlecraft passage is much more difficult. Whereas a channelized creek with the same water flow might be available throughout the summer and fall.

PLACED ROCK & RUBBLE

Construction crews at highway bridges often place large rock in the creek below in order to create a rapids that prevents silt deposits from forming. Illegal dumping of rock and rubble into streams also occurs. Generally, a minor repositioning of the rocks to allow canoe or kayak passage is all that is needed, but permits from regulatory agencies or the road jurisdiction may be required. Rocky riffles and rapids have important benefits in creating habitat for macro-invertebrates and fish. In channelized creeks and rivers, these rock and rubble areas may be the only habitat structures in many miles for many fish species.

BEAVER DAMS

Beaver are probably here to stay, and their dams should not be unexpected on a paddling trip in smaller creeks. Beaver dams are usually not very high, but do demand some portaging experience as they occur unexpectedly and in locations where normal portaging on the creek bank may be difficult due to bank steepness or shrub growth. In most cases, these dams are very strong and can be stood upon to pull a canoe up and over. On small creeks used often by school or local neighborhoods, beaver dams should be removed.



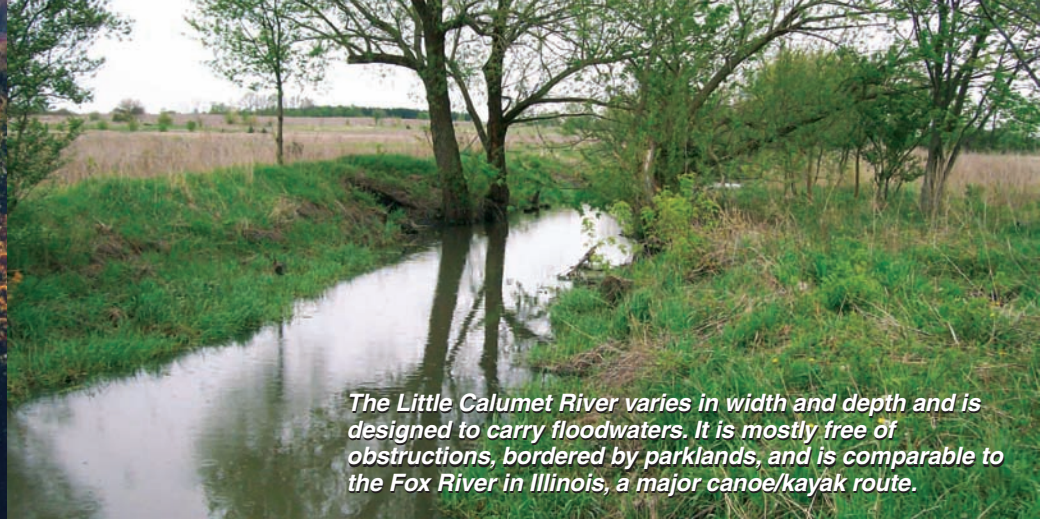
GREENWAYS & BLUEWAYS
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SPONSORSHIP & MANAGEMENT

A WATER TRAIL SHOULD BE LOCALLY ORGANIZED BY AGENCIES WITH A COMMON INTEREST IN PROVIDING FOR THE RECREATIONAL AND HEALTH NEEDS OF LOCAL CITIZENS. PADDLING A WATER TRAIL HAS PROVEN TO BE VERY POPULAR, ENJOYABLE, AND AN INEXPENSIVE EXPERIENCE FOR THE GENERAL PUBLIC. BECAUSE WATER TRAILS TYPICALLY INVOLVE MULTIPLE INTERESTED PARTIES, A LOCAL STEERING COMMITTEE SHOULD BE ORGANIZED FOR EACH WATER TRAIL. A STEERING COMMITTEE COULD INCLUDE PARK AND RECREATION DEPARTMENTS, SCHOOLS, NEIGHBORHOOD ORGANIZATIONS, CANOE AND KAYAK COMMERCIAL INTERESTS, LOCAL PADDLERS, AND/OR REPRESENTATIVES OF THE AMERICAN CANOE ASSOCIATION.



The Oxbow Lake at Homestead Park in Highland offers the potential for paddlecraft training



The Little Calumet River varies in width and depth and is designed to carry floodwaters. It is mostly free of obstructions, bordered by parklands, and is comparable to the Fox River in Illinois, a major canoe/kayak route.

LITTLE CALUMET RIVER BURNS WATERWAY

WEST OF RTE. 249



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN

This 24-mile stretch of the original slow moving, meandering Little Calumet River has been heavily modified over the past hundred years. Channelized, deepened in the various sections, with most of the adjoining wetlands and floodplains filled in with various fill deposits or developed to residential, the river retains little of its original character. Major flooding events in the surrounding neighborhoods over the decades have spurred a new role for the river corridor, which promises to restore some of its ecological significance. Hundreds of acres of river edge properties have been

purchased by the Little Calumet River Basin Development Commission for floodwater storage and the development of flood control levees. Neighboring towns have developed park sites. Indiana University operates a campus, and natural area restoration is occurring at an increasing number of locations. A new appreciation for the Little Calumet is growing.

The Little and Grand Calumet Rivers were once one prior to 1800 and constituted a well-known water trail system across Northern Indiana used for generations by native Americans and early traders.



OBSERVATIONS:

- Although parks and school properties adjoin the river, few designated canoe/kayak access sites exist.
- Several small dam and culvert access constrictions need to be resolved where the Little Calumet River crosses I-80 and I-65.
- An intergovernmental water trail committee needs to be formed to pursue implementation.
- Several adjoining meander cut-off ponds offer potential for paddlecraft training by park departments.
- The Little Calumet/Burns Waterway Water Trail could easily link to the Illinois stretch of the Little Calumet River where several access sites exist, and local governments are pursuing more.
- The river is generally deep enough with no obstructions and could be used by both intermediate and expert paddlers.
- Remaining levee construction opens opportunities for additional access sites.
- The potential for drastic water elevation changes in storm events necessitates specialized usage guidelines and possible warning systems, which the water trail committee should determine
- Mixing of paddlecraft and power boats in the Burns Waterway stretch will require specialized usage guidelines as well (eg. no-wake regulations).
- The West Segment of the Little Calumet River/Burns Waterway Water Trail is one of the most easily achieved water trails in Northwest Indiana. With signage and minor access improvements, several segments can be accomplished in the short term. Local and bi-state events (full-distance marathons, shorter races) could be organized fairly easily and could draw participants from several states.

POTENTIAL ACCESS SITES WEST TO EAST

- NE corner of Hohman and I-94/80 at the floodwater pump station site in Munster
- Riverside Park between Calumet Ave. and Columbia Ave. in Hammond
- Near the floodgates at the NW corner of Wicker Park in Highland
- Alternatively a site could be developed on the Cabella's® site across the river from Wicker Park
- Homestead Community Park in Highland (the adjoining Oxbow Lake provides a potential paddlecraft training pond)
- Kennedy Park, across the river from Homestead Park (its Oxbow Lake could also be used for training)
- Lake Etta County Park (existing canoe access) in the vicinity of the Chase Street Bridge
- Gleason Park at the Harrison Street bridge
- Georgia Street vicinity
- A new access site in the vicinity of Three Rivers County Park (paddlecraft training opportunity)
- A new access site on the south side of Rte. 20, just east of the Portage/Lake County line
- A new access site within the Portage Northside development area
- The Portage Public Marina
- The newly established Portage Lake Michigan beach park (which can also serve as an access site for the Lake Michigan Water Trail)



LITTLE CALUMET RIVER EAST BURNS WATERWAY

EAST OF RTE. 249

EAST ARM OF THE LITTLE CALUMET RIVER EAST OF RTE. 249

This 16-mile stretch of the Little Calumet River retains much of its pre-settlement character as it meanders through bottomland floodplain forest and below wooded ridges.

Many natural areas of woodland forbs and wetland seeps abound. Much of the river corridor lies within the Indiana Dunes National Lakeshore and includes historic sites such as the Bailly Homestead. Its western-most paddlable stretch traverses the Dunes National Lakeshore Heron Rookery landholding, which needs to be avoided during nesting season. But for a short period afterwards, in late autumn, this stretch could provide a good canoe trip. Almost all of the Little Calumet River east of Rte. 249, is, however, impassable to the recreational paddler because of substantial numbers of tree falls. Opening short stretches of this river for paddling would be educationally invaluable for instilling ecological and historical appreciation of Northwest Indiana original riverine landscapes.

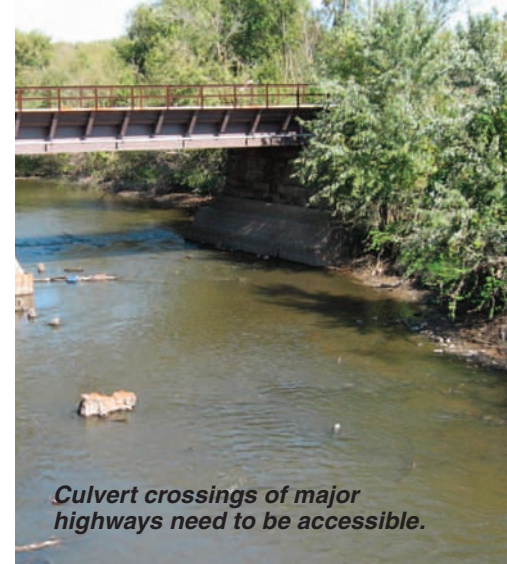
OBSERVATIONS:

Most of the Little Calumet River east of Rte. 149 is heavily wooded with many treefalls that would be difficult and expensive to clear out in the short term. Opening short stretches 1-2 miles in length could be a short-term objective.

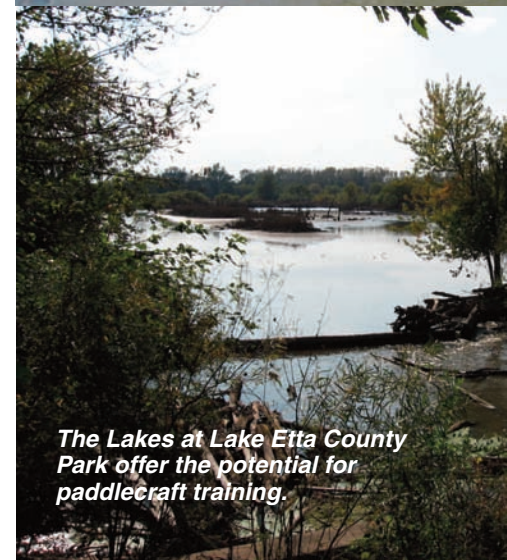
Significant stretches of the Little Calumet River are under the jurisdiction of the National Park Service.

POTENTIAL ACCESS SITES DOWNSTREAM FROM EAST TO WEST

- Rte. 49 vicinity
- Porter waste water treatment facility
- Wagner Rd. vicinity
- Bailly Homestead vicinity
- Babcock Rd. vicinity
- Rte. 149 vicinity
- Portage Parks fishing access or private marinas on the east side of Rte. 149



Culvert crossings of major highways need to be accessible.

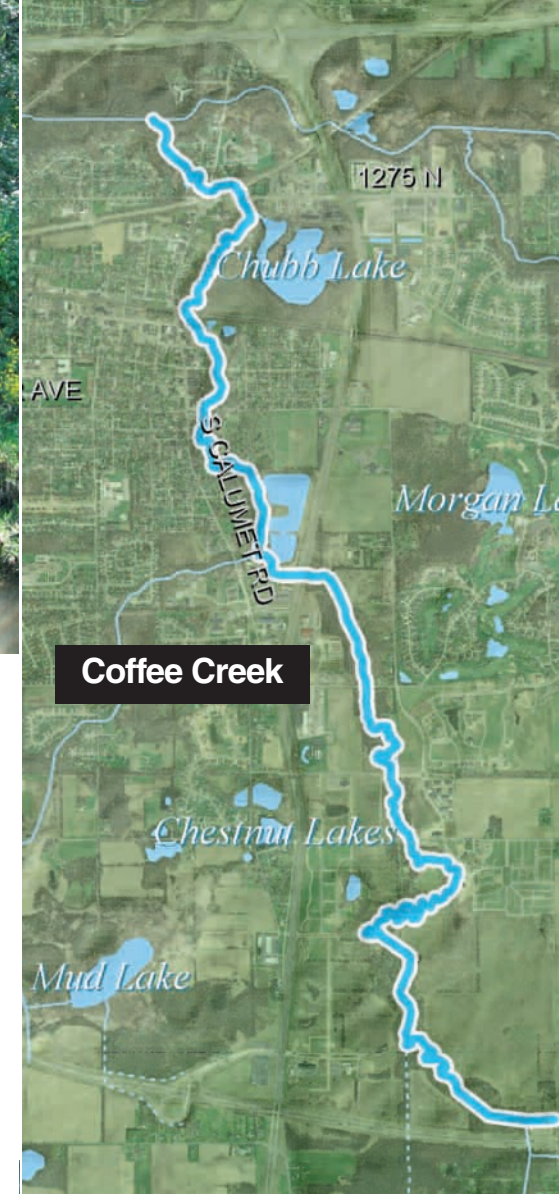


The Lakes at Lake Etta County Park offer the potential for paddlecraft training.

COFFEE CREEK



Coffee Creek would provide an excellent short-trail experience for the local community



Coffee Creek

Coffee Creek is a tributary to the Little Calumet River and was named prior to 1838. It is one of the shortest-named creeks from this era, with its headwaters in the Valparaiso moraine eight miles to the south as the crow flies. Today, it doesn't carry enough water for canoeing long stretches. But a short length along its downstream stretch could provide a good paddling experience for local residents and school children if the creek is maintained. A one-mile water trail could be established if a takeout site could be located in the vicinity of Indian Boundary Road/Calumet Road. Coffee Creek discharges into the Little Calumet River another ½ mile downstream.

OBSERVATIONS:

- Water depth can be seasonally low and the trail may be useful during limited months.
- Most of the water trail corridor is wooded and will need regular maintenance.
- The shallow water would make this water trail a good route for beginning paddlers.

POTENTIAL ACCESS SITES

DOWNSTREAM FROM
PARK NAME ON MORGAN AVE.

- Park name on Morgan Ave.
- Indian Boundary Road/Calumet Road vicinity
- Porter wastewater treatment facility, on the Little Calumet River





Turkey Creek as it traverses through Hidden Lake Park

TURKEY CREEK

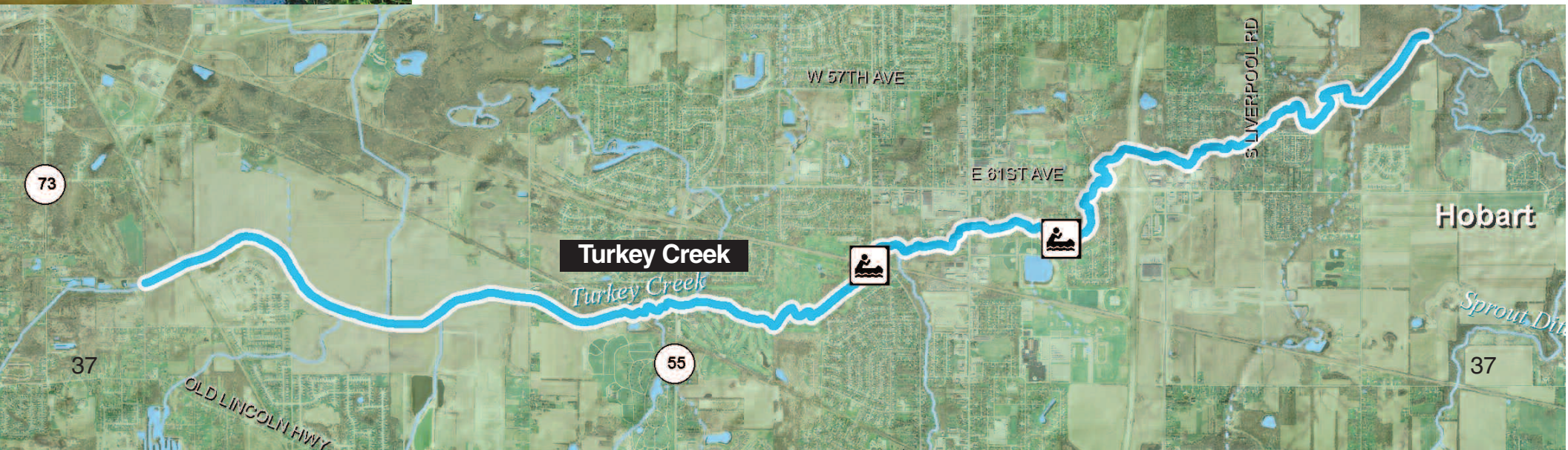
Turkey Creek is a tributary to Deep River and was named prior to the 1840s. From its headwaters in Schererville, it flows for 11 miles before discharging into Lake George. West of Arborgast Avenue, it might best be suited for short neighborhood and school recreational and educational purposes because of its shallowness and lack of park access, although Pfeiffer Grade School has a nice stretch through its grounds. East of Arborgast, Turkey Creek could be utilized for longer trips if better access is developed and short stretches of tree-fall were cleaned up.

OBSERVATIONS:

- Water depth changes may limit the paddling season, although east of Arborgast Avenue, the creek may be usable during most of the summer and fall.
- Some treefall between Hendricks Street and Cleveland Street will need to be removed and the channel maintained.
- Arrangements would need to be worked out with Innsbrook Country Club and Turkey Run Golf Courses for passage not to conflict with golfing activities.
- Several new access sites should be established east and west of I-65

POTENTIAL ACCESS SITES WEST TO EAST

- Arborgast Avenue vicinity
- Hendricks Street vicinity
- Northeast corner of the Turkey Run Golf Course, from the clubhouse parking lot, near Harrison Street
- Hidden Lake Park
- South Liverpool Road vicinity





As West Creek flows 15 miles south to the Singleton Ditch, it gains width and depth.



Moderately sloped banks provide good access in the vicinity of the NIPSCO crossing.



West Creek was named by the 1830's on a map of the region (Colton 1838). Its primary headwater tributary is Bull Run Creek in the village of St. John. In the upper headwater reaches, it is a small shallow but canoeable creek at least during part of the season through the newly built neighborhoods of St. John. It is well-scaled for beginning paddlers, families, and educational school trips in this stretch. Although well situated and accessible for local neighborhood use, it would be too small for interest by more experienced paddlers.

South of 117th Street, it begins to pick up more tributary runoff and begins to widen and slightly deepen. Being a regulated drainage ditch, it is channelized and generally kept free of obstructions. From 117th Street, it flows south 15 miles until it discharges into the Singleton Ditch.

WEST CREEK

OBSERVATIONS

- For most of its course, West Creek is deeply incised, generally 8-15 ft.
- The initial water trail would most easily be established in the headwaters stretch in St. John where local neighborhood residents and schools could be the primary users.
- A large detention pond next to the creek at Homestead Acres Park #1 could serve as a safety training area for first-time paddlers.

POTENTIAL ACCESS SITES NORTH TO SOUTH

- Homestead Acres Park #1
- NIPSCO crossing of West Creek at Bull Run Drive, ½ mile downstream from Homestead Acres Park #1
- A new access site in the vicinity of 109th Avenue
- A new access site in the vicinity of 117th Avenue
- A new access site in the vicinity of 135th Avenue
- A new access site in the vicinity of 151st Avenue



West Creek

KANKAKEE RIVER

The Kankakee River is one of the most historic rivers in American history. With a reasonably short portage to the St. Joseph River near South Bend, it was heavily used by generations of Native Americans. It was one of the three great primary routes from French Canada and Lake Michigan to the Mississippi Valley (the Wisconsin/Fox River and Chicago/Calumet to the DesPlaines/Illinois River being the others). In the 1680s, it became famous as the passageway for LaSalle and his great exploring parties on multiple trips between French Canada to and beyond the Illinois country. Many other 17th- and 18th-century explorers followed his route, which was widely recognized on European published maps.

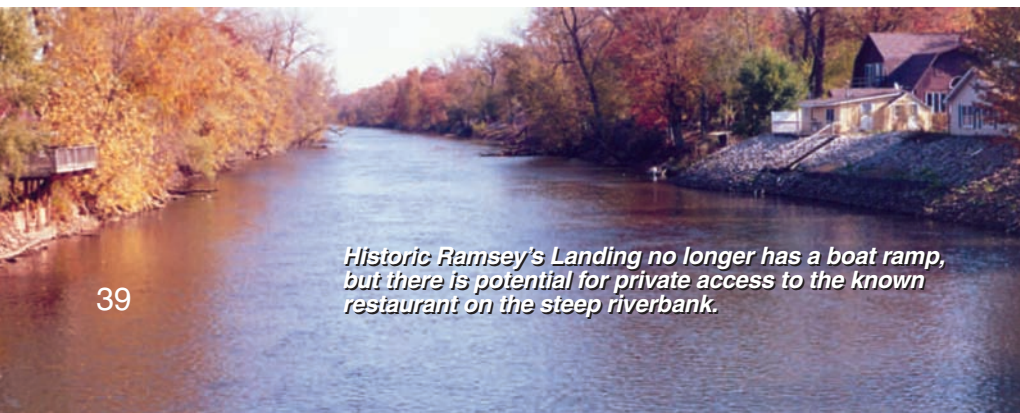
In the 1800s, the Kankakee River gained national recognition as a premier hunting area, visited by presidents and wealthy hunter

from the east. In the early 1900s, the river was channelized, removing its meanders, and connected to a series of newly dug drainage ditches that transformed the bottomlands into rich agricultural fields. State and county preserves along stretches of the river have preserved some of the disconnected meanders.

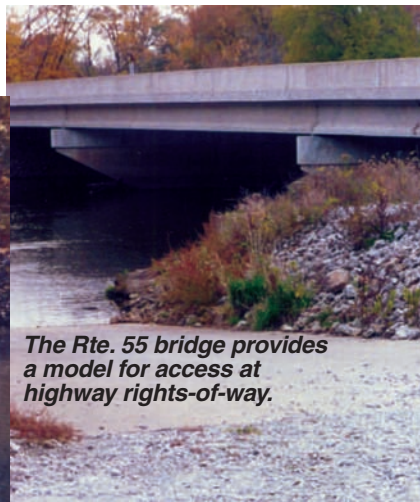
Because of its channelized nature and connection to the drainage ditch system, the Kankakee flows fast during rainy periods and carries an enormous bedload of sand, which can create unstable shallows. Canoeing is safely done only during a limited period of time because of these weather-related fast flows,—in a popular area of spring and fall hunting seasons. Nonetheless, it provides a uniquely beautiful 70-mile trip through American history without a dam nor a town along its length in this region.

OBSERVATIONS:

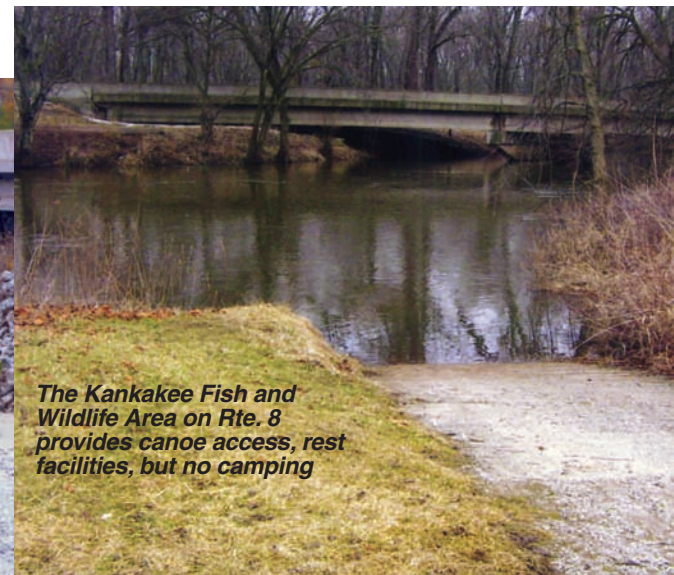
- The Kankakee River has several established boat launches primarily intended for small-powered boats. While these provide a good initial network of access for canoe trips, there are still too few for a water trail for paddlers. Approximately 12 access points are needed to provide an average 6-7 mile spacing for paddlers who, for reasons of weather, health, or timing, might become stranded on the river.
- State and county highway crossings are currently utilized in several locations for informal access. These sites, with minor improvements, could be useful for canoe access over the short term.
- The smaller-scale upper reaches of the Kankakee River may be more conducive for canoeing by less-experienced paddlers.
- A Kankakee River Water Trail for paddlers could extend into Illinois with cooperation from local governments and agencies across the state line.
- Although log jams are infrequent, they can occur at certain bridge crossings and can present dangerous conditions to inexperienced paddlers.
- The level of paddling experience required for trips on the Kankakee River can change due to river velocity and length of trip. Clear signage at every access is needed to guide the paddler.
- The Kankakee could provide multi-day paddling experiences if camping facilities were available.



Historic Ramsey's Landing no longer has a boat ramp, but there is potential for private access to the known restaurant on the steep riverbank.



The Rte. 55 bridge provides a model for access at highway rights-of-way.



The Kankakee Fish and Wildlife Area on Rte. 8 provides canoe access, rest facilities, but no camping

POTENTIAL ACCESS SITES EAST TO WEST

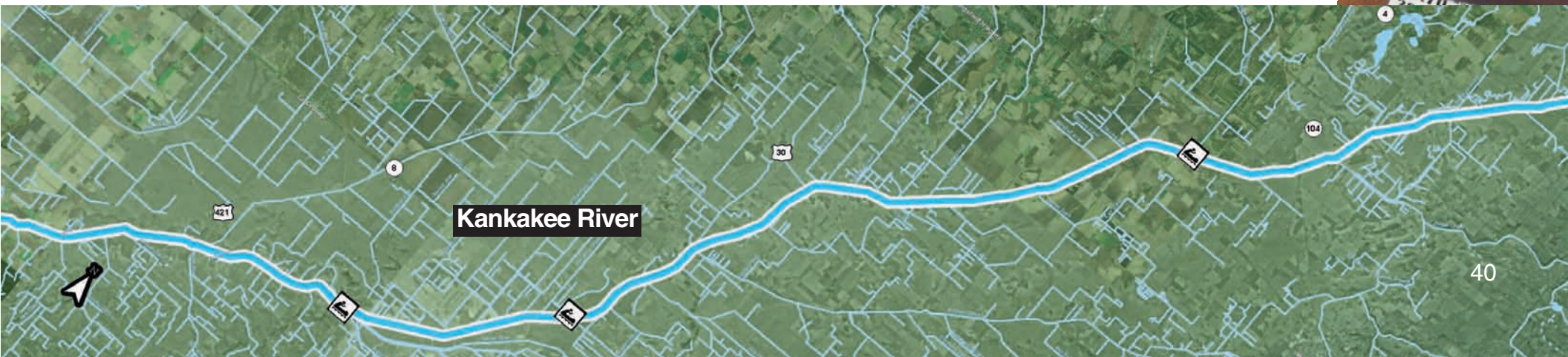
- A new access site in the vicinity of State Rte. 4 and the river between Fish Lake and North Liberty
- At the existing boat landing at Kingsbury Fish and Wildlife Area on the north bank of the river
- A new access site in the vicinity of U.S. Rte. 30 and the river
- At the existing boat landing at the Kankakee River State Fish and Wildlife Area on the north side of County Rte. 8 at the river.
- At the existing boat access on the west side of County Road 650 W at English Lake at the mouth of the Yellow River
- At a new access site at Dunn's Bridge on the north bank of the river off County Road 500 E.
- At a new access site on the north bank of the river at the Rte. 49 bridge crossing
- A new access site at the U.S. Rte 231 bridge crossing of the river on the south bank
- At the existing boat landing on the north bank of the river at the Grand Kankakee Marsh County Park, 1 mile east of I-65
- At the existing boat landing on the north bank of the river at the State Rte. 55 bridge crossing
- At the existing boat landing at the LaSalle Fish and Wildlife Area on the south bank of the river, ½ mile west of U.S. Rte. 41
- At the existing boat landing on the north bank at the La Salle Fish and Wildlife Area on the Indiana-Illinois state line



A boat ramp provides access at the Grand Kankakee Marsh County Park



Higher river elevations require a higher degree of paddling experience



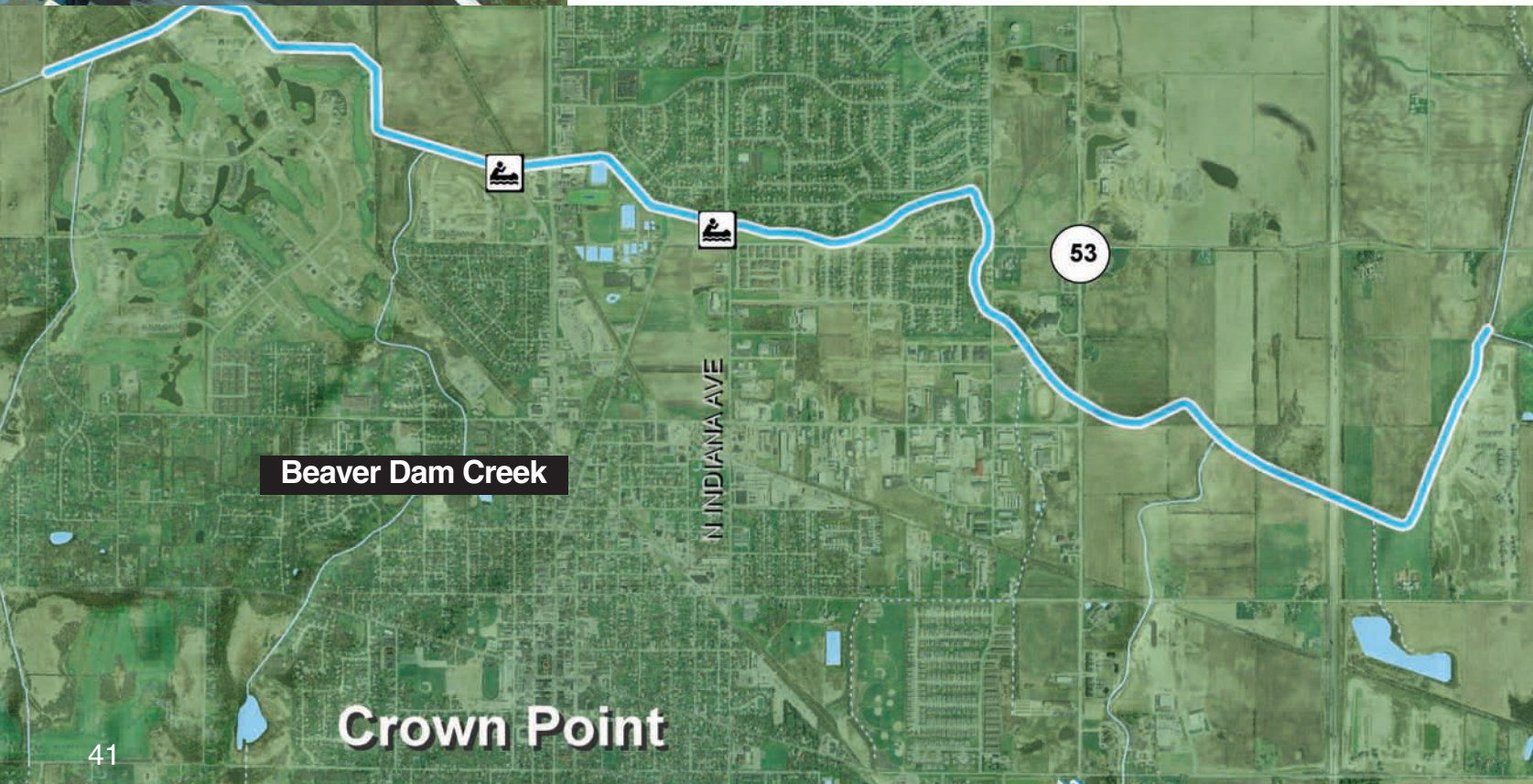
Kankakee River

BEAVER DAM CREEK



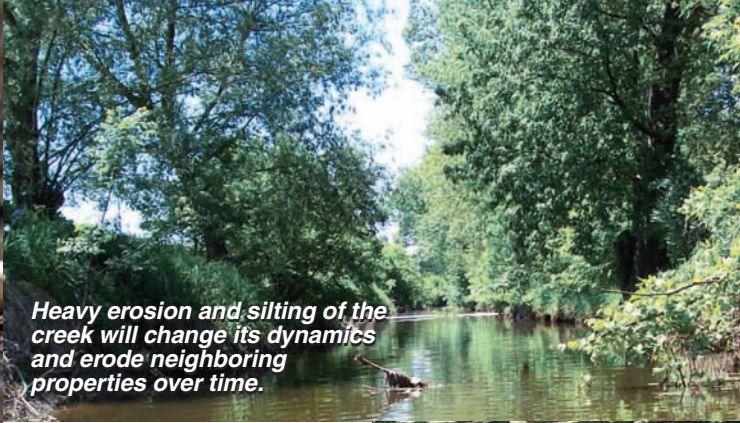
Beaver Dam Creek is an attractive paddling route with good habitat edges.

An approximate six mile water trail along Beaver Dam Creek could fairly easily be developed. It would provide residents of Crown Point with a local water trail. Beaver Dam Creek was an unnamed headwater creek to Deep River and channellized for agricultural purposes after the settlement of the Crown Point area. When it was named has not been determined, the damming and impoundment of large low wetland areas west of Crown Point would certainly have been a motivation to the occasional beaver who might have re-entered the area after being heavily trapped out in the 18th century.

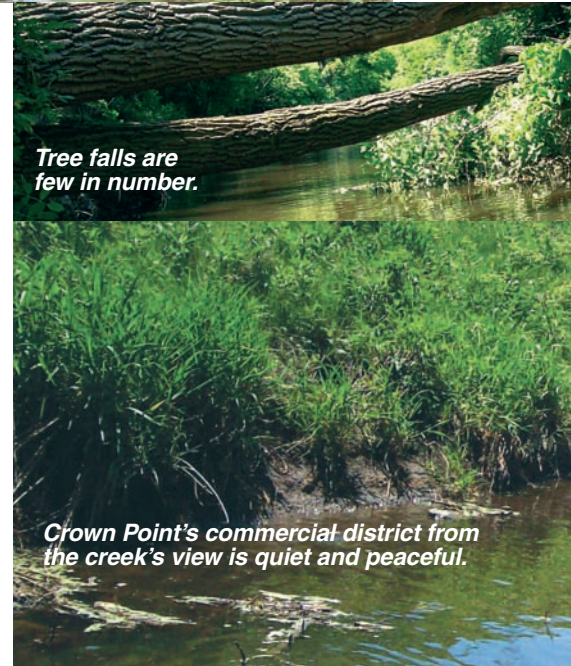




Beaver activity is evident.



Heavy erosion and silting of the creek will change its dynamics and erode neighboring properties over time.



Tree falls are few in number.

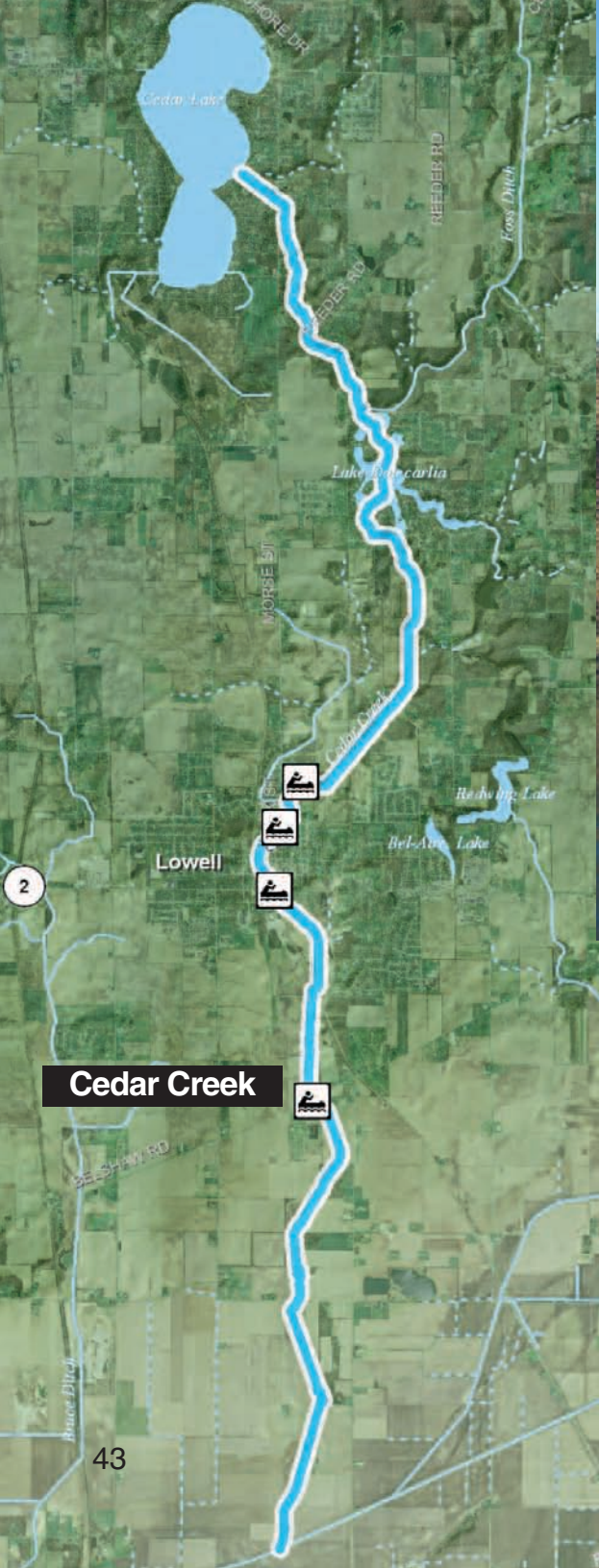
Crown Point's commercial district from the creek's view is quiet and peaceful.

OBSERVATIONS

- Three existing park sites along the creek in the center of Crown Point allow for fairly easy implementation of an opening stretch of a water trail.
- Water flow is conducive to a full season of use.
- The creek is channelized and tree falls are not common, however a few small tree falls need to be removed.
- Major erosion from construction sites needs to be better controlled as it has added significant levels of sediment to the creek and left-side bank cuts, which are steadily back cutting. Property will be lost if these side swales and creek feeders continue to incise. The sediment deposits will also change the energy dynamics of the creek causing it to re-meander into adjoining city-owned and private properties.
- The creek is shallow through almost all of its length and would be conducive to beginner levels of experience. Proper signage and interpretation, as well as well-designed access points, would still be necessary.
- Beaver damming is occurring in the creek.
- The steering committee for this water trail would be composed of the City of Crown Point and the County Drainage Commission.

POTENTIAL ACCESS SITES

- The west side of Clark Street
- West of Main Street and the old Erie Lackawanna RR right of way, north of the ball fields
- The northeast corner of Merrillville Road and 101st Street
- The east side of Madison Street, south of the creek
- On the south side of 101st Street, east of I-65



*A beautiful paddling
experience south of Lowell*

CEDAR CREEK

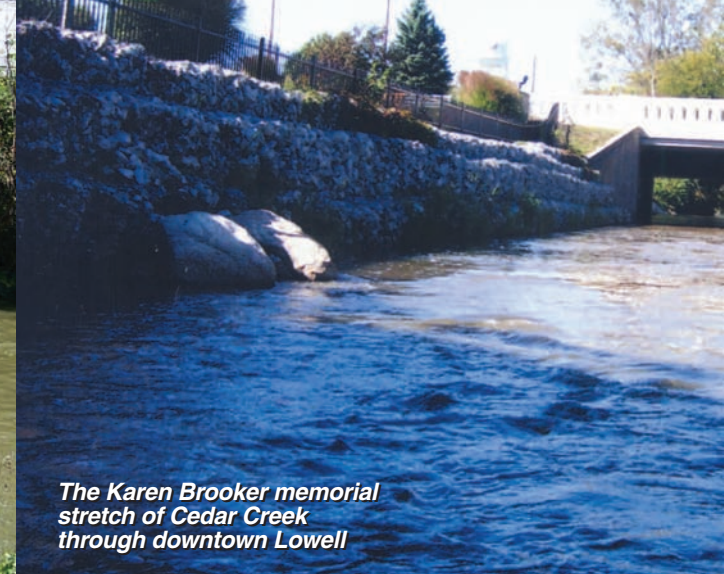
Cedar Creek was a heavily meandering creek, named by the late 1830s, and draining into the “deep marsh” of the Kankakee River. Its source was Cedar Lake. Halfway between Cedar Lake and Lowell, Lake Dalecarlia was created in 1929 by damming a portion of Cedar Creek. A canoe/kayak water trail is potentially possible from Cedar Lake downstream to Lowell although significant stretches of Cedar Creek are blocked by fallen trees, and, during drier seasons, the water level may be too low in the upper reaches. A very good opportunity to create an all season water trail exists within the City of Lowell, where public parks and access points are well spaced. Long distance future extensions of this initial trail may be possible to the Singleton Ditch and the Kankakee River.



A quiet, cool, shaded stretch just north of downtown Lowell



Excellent access between Mill and Clark Streets in Lowell



The Karen Brooker memorial stretch of Cedar Creek through downtown Lowell

OBSERVATIONS

- Although the stretch of Cedar Creek from its discharge out of Cedar Lake may be seasonally low, it can be paddled for part of the year. Portages are needed across five local road crossings because of small culverts. Fallen trees would need to be removed.
- On the south side of Lake Dalecarlia, the homeowners association park could be a good access for local community use.
- A canoe ride on Cedar Creek through Lowell is an enjoyable experience, with few rocky deposits to maneuver past and no downed trees.
- In Lowell, potential access sites are well spaced for local community and school use, with three potential access points ½ mile apart and a final takeout an additional 1.7 miles downstream.
- South of Lowell, a portage needs to be developed around a low gas pipeline that crosses the creek for the trail to extend to Belshaw Road.
- Relatively minor rock relocations need to be accomplished at several bridges and one mid-creek deposition location in Lowell.

POTENTIAL ACCESS SITES

- A new access site on the south side of 171st St.
- The VFW ballfield park, west of Morse Street
- Between Mill Street and Clark Street, on the North Creek bank
- Behind American Legion Post 101
- At the city wastewater treatment plant site on Bershaw Road



GRAND CALUMET RIVER

The Grand Calumet River, part of the combined, pre-settlement Calumet River system, bears little resemblance to its original self. The Grand Calumet is one of the most heavily industrialized river systems in the world. Throughout the 20th century, it underwent this major transformation from its origins as a sluggish, marshy bordered backwater, isolated from a lowered Lake Michigan less than 4000 years ago. Today, in the 21st Century, it represents one of the largest river restoration projects in the world as enormous quantities of polluted waste deposits have been and are being removed and natural area remnants and bird habitats are being protected along its banks. As its adjoining communities reinvest in new neighborhoods, more benign industries, and commercial development, the Grand Calumet River has the opportunity to become a focal point in the rebirth of the region. While undredged stretches are potential water trails of the future, the cleaned stretch of the river in Gary and East Chicago is an excellent trip already for paddlers who are at least moderately experienced. But it lacks a coordinated group of access locations and interpretive signage to make it a formal water trail.

OBSERVATIONS

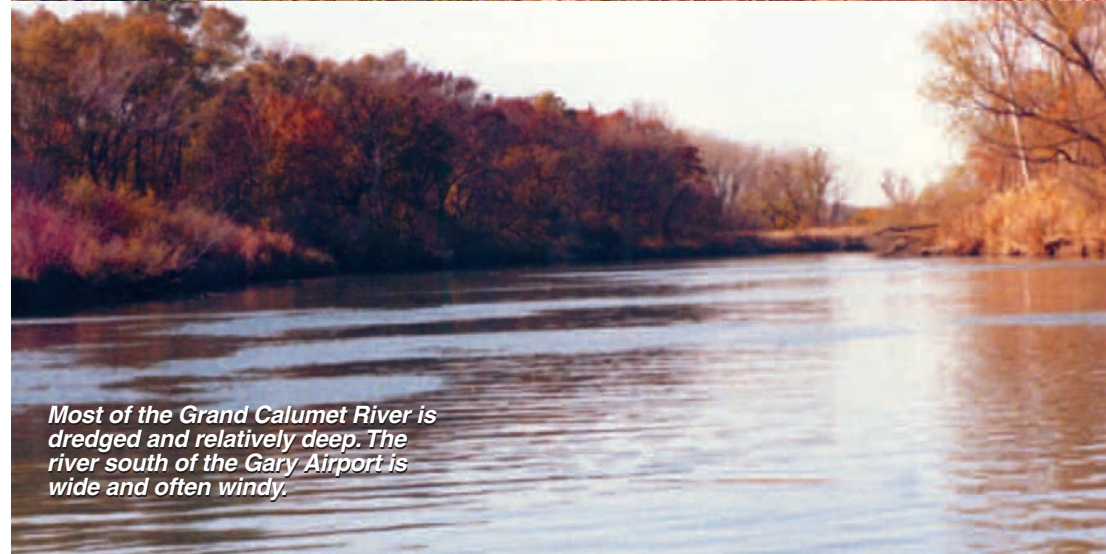
- There are several publicly owned parks, road right of ways, stormwater discharge stations, and wastewater treatment facilities that could provide strategically located access points to the river.
- The lagoons at Miller Beach could serve as excellent canoe and kayak safety training locations.
- The unique glacial, prehistoric, 19th century, industrial 20th century, and river restoration history of the Grand Calumet River should be strongly interpreted through signage and brochures.
- Industrially owned restoration and habitat preservation sites should be integrated into the water trail as rest stops with interpretive signage.
- The Grand Calumet River along with the Kankakee River is probably the most heavily canoed river in Northwest Indiana over the past 50 years due to well-attended educational tours sponsored by river restoration advocates in the 1980s, and 1990s. These tours should be reinstated and marketed to the metropolitan region in Northeast Illinois, Northwest Indiana, and Southwest Michigan as an eco-tourism economic development strategy.

POTENTIAL ACCESS SITES

- A private site open only for scheduled tour at North Broadway Street crossing
- A public site on the south bank, at West Second Avenue, east of Buchanan Street and west of the I-90 Tollway bridge
- Ambridge-Mann park on the south bank of the river
- In the vicinity of the Bridge Street bridge crossing
- In the vicinity of West 1st Avenue, west of Industrial Highway on the south bank of the river
- In the vicinity of the Kennedy Avenue bridge
- At the old Cline Avenue bridge on the west side of the new Cline Avenue bridge, on the south bank of the river
- On the south side of 151st St. on the west bank of the Indiana Harbor Belt Channel, several hundred yards north of the Grand Calumet River
- From the Indiana Harbor Channel west on the Grand Calumet River, river cleanup has yet to happen. The river can be very shallow and unpassable in spots and the sediments are potentially dangerous for paddlers. As part of a future river cleanup in this stretch of the river, future access sites for a water trail could be established at the Indianapolis Blvd. crossing, Columbia Park., Turner Park, and at the Hohman Ave. crossing



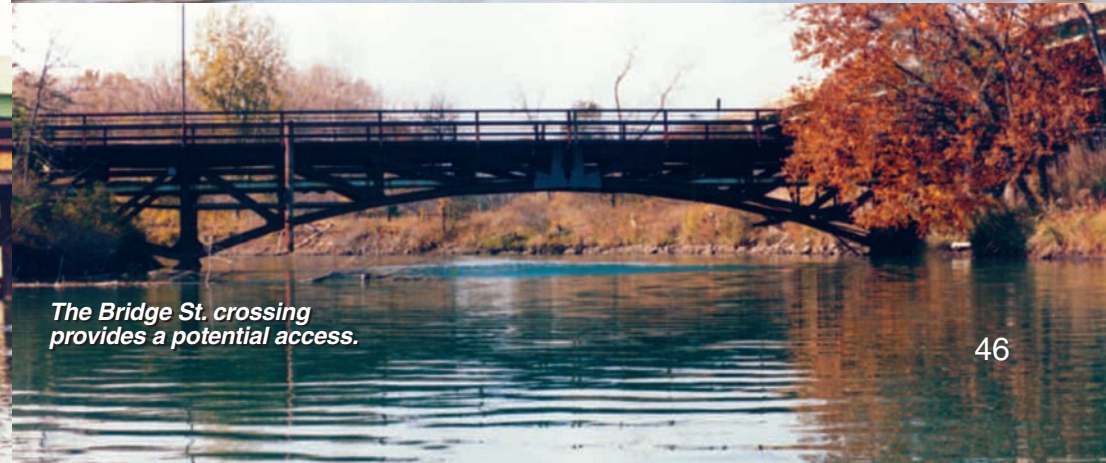
The lagoons at Miller Beach are remnants of the original Grand Calumet River and could be utilized for safety training classes.



Most of the Grand Calumet River is dredged and relatively deep. The river south of the Gary Airport is wide and often windy.



The Dewey St. bridge at Cline Avenue offers access to the river.




The Bridge St. crossing provides a potential access.



LAKE MICHIGAN



Implementing a series of beach access points along the Indiana portion of the Lake Michigan shoreline would be a key achievement in the current multi-state effort to create a 1000-mile Lake Michigan water trail. Although the Indiana shoreline already has several public access locations, there is no coordinated interpretive signage, and there needs to be several new access sites to lessen the paddling distance for lake kayakers. In addition, an emergency landing management strategy needs to be worked out with lakefront industrial property managers.



Lake Michigan conditions can change rapidly with the weather. North winds can be dangerous if kayaking past lakefront industry.

Lake Michigan



OBSERVATIONS

- Consistent lake kayak access regulations need to be established with local and county jurisdictions, as well as the state of Indiana and the National Park Service representing all of the public access sites along the lakefront.
- Leases given to marina operations should include clauses that allow for access for sea kayakers with reasonable fees, if necessary.
- Provision for locking or securing kayaks and walking access to camping areas should be allowed in several sites for use by longdistance kayakers.
- A water trail map and brochure should be prepared. It should point out access sites, inaccessible seawall shorelines, camping sites, emergency service, and emergency landing locations.
- Shoreline communities should establish police and emergency service policies for assisting longdistance kayakers who need to beach their lake craft under dangerous wind or wave conditions.

POTENTIAL ACCESS SITES

- The Hammond Lakefront Park
- Whihala Beach County Park boat ramp
- Whiting Park
- Jeorse Park
- Marquette Park
- West Beach at Indiana Dunes National Lakeshore
- Portage Lakefront Park at the mouth of Burns Waterway
- Porter Beach
- Indiana Dunes State Park
- Kemil Beach
- Central Beach
- Washington Park Marina



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN

CADY MARSH DITCH

After the Hart Ditch was built in the 1850s, the digging of the Cady Marsh Ditch was the next step in the process of draining Cady Marsh and Lake George to open up thousands of acres of marshland for farming purposes. Lake George (different than today's George Lake adjoining Wolf lake in Hammond) was indicated on maps from the 1830s as being "waters from 1 to 8 feet deep." Although Lake George and Cady Marsh are gone, the Cady Marsh Ditch still survives today. A potential local community water trail could be developed along the final 3-½ miles of the Cady Marsh Ditch from the vicinity of Colfax Avenue to its confluence with Hart Ditch. Schools and parks in Griffith and Highland provide opportunity for students and families to experience a shallow, quiet paddle of various trip lengths. The ditch today is in the midst of a major floodwater diversion construction project, which will utilize a tunnel to divert stormwater directly to the Little Calumet River flood control basin. The ditch will also be deepened from Arbogast Avenue east to Colfax Avenue.

OBSERVATIONS

- During extended drought periods, the waters may be low enough to preclude paddling, but normal water elevations seem adequate for beginner level paddlers.
- Park department and school programs could be developed to train inexperienced paddlers and to utilize the waterway for educational lessons in local geography, habitat, and water quality issues.
- The water corridor is not deeply incised, and the development of local access should be fairly simple and inexpensive.
- Design and planning coordination should be pursued with local governments and the Little Calumet River Basin Development Commission.

POTENTIAL ACCESS SITES

- A site in the vicinity of Colfax Avenue
- A site in the vicinity of Arbogast Avenue
- A site in the vicinity of North Broad Street
- Sheppard Park, east of Liable Road
- Highland High School
- Lincoln School, east of Indianapolis Boulevard
- Brantwood Park/Meadows Outlet

PLUM CREEK/ HART DITCH

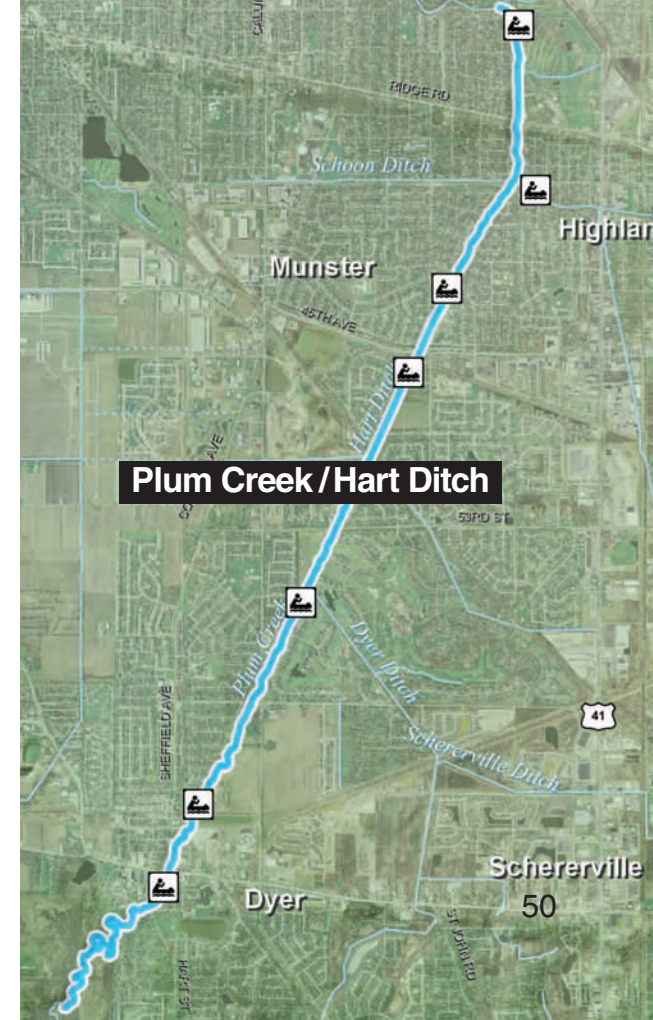
Plum Creek's headwaters are in Illinois and flow from the Cook County Forest Preserves through Dyer. Prior to the mid-19th century, its waters discharged into Lake George and the Cady Marsh. The construction of the Hart Ditch in the 1850s, followed by the Dyer Ditch, transformed the extensive wetlands of the area into rich agricultural lands. Today, although Plum Creek retains its name in Dyer, it becomes Hart Ditch at its confluence with Dyer Ditch. While Dyer Ditch is too shallow to paddle for most of the year, Plum Creek/Hart Ditch flow continuously and offer a potentially excellent local community water trail for its six mile length.

OBSERVATIONS

- Plum Creek/Hart Ditch is deeply incised, averaging 12-15 feet for most of its length and would require substantial access design and engineering, if designed to be ADA accessible.
- The creek system is best used by paddlers with at least a moderate level of experience.
- Major storms can quickly affect the depth and velocity of the creek. Interpretive signage should offer warnings to paddlers with regard to how to respond to these events.
- Occasional treefalls need to be removed on an ongoing basis.
- Plum Creek through Dyer offers potential riverwalk development opportunities.
- A Plum Creek water trail could be extended west into Illinois with the development of a Cook County Forest Preserve access site, but treefalls would require paddlers with substantial experience. The treefalls provide an important role in holding back stormwater and releasing it more slowly than would occur if the creek was cleaned out of woody debris.

POTENTIAL ACCESS SITES

- South end of the St. Margaret Mercy Health Care Facility at the Indiana-Illinois border
- City Hall Park on the south side of U.S. Rte. 30
- Dyer Wastewater Treatment facility/ Edmond Drive
- Briar Creek Park
- Twin Creek Park
- Stewart Park
- Brantwood Park/Meadows Outlet, 50 yards upstream in Cady Marsh Ditch
- Wicker Park, northwest corner, near pedestrian bridge





SALT CREEK

Salt Creek is one of Northwest Indiana's most historic creeks. It was the site of a large number of early pioneer era mill sites. During the mid-19th century canal building era, it was considered as a possible canal route to link the Great Lakes drainage basin to the Kankakee River and Mississippi River basin, but the canal never materialized. Salt Creek retains more natural geomorphology than most of Northwest Indiana's rivers and creeks, having never been consistently maintained as a channelized waterway. Floodplain forests, savanna ridges, and extensive wetlands line the meandering creek along much of its length. Valparaiso, at its headwaters area, has a fine opportunity to create a community water trail as new development proposals open opportunities to protect the floodplain and create access sites. Portage, at the lower stretches of Salt Creek, has a similar opportunity by linking together several park sites with final takeouts at Ameriplex at the Port on the Little Calumet River or the new Portage Lakefront Park at the mouth of Burns Waterway.

OBSERVATIONS

- Salt Creek, being heavily wooded along most of its stretches, has a significant number of treefall blockages. A functioning water trail in its early stages is most easily achieved where local government jurisdictions would be able to maintain a cleared route.
- Salt Creek, because of its significant habitat values, would offer one of the richest environmental education paddles in Northwest Indiana.
- Although the Valparaiso stretch of Salt Creek may be paddled by users with limited experience, the lower stretch in the Portage area would require a more experienced paddler.
- Salt Creek's cultural history is significant and should be interpreted by signage and brochures.

POTENTIAL ACCESS SITES

- Vicinity of Meridian and Division Road south of Valparaiso
- Vicinity of Washington Street (State Route 2)
- Vicinity of Joliet Road
- Creekside Park
- Vicinity of North 250 West Road
- Vicinity of Route 130
- Vicinity of West 500 North Road
- Haven Hollow Park
- Vicinity of U.S. Route 6
- Vicinity of State Route 149, north of Robbins Road
- Brennan Woods future park site, Portage
- Imagination Glen, existing access
- Ameriplex fishing access or private marina east side of State Route 249 on the Little Calumet River, approximately ¼ mile downstream of the mouth of Salt Creek





DEEP RIVER

Deep River and its primary tributaries, Turkey Creek and Beaver Dam Creek, were mapped by the 1830s. Today, much of the Deep River corridor in its upper reaches remains in a natural, meandering condition, protected by significant land holdings of Lake County Parks and Recreation. This stretch is heavily wooded and clogged by tree falls. If it were possible to open an initial short stretch or two, paddlers would enjoy an excellent trip through an impressive natural landscape. In its lower reaches, below the Hobart Dam, Deep River is channelized and free from treefalls, with only one dam impediment that needs a portage at the Deep River Outdoor Education Center. Just north of the I-89/I-94 bridge, after a 25-mile run, Deep River discharges into the Little Calumet, and a paddle trip can be continued for eight more miles to the mouth of Burns Waterway at Lake Michigan. Although this entire stretch is channelized, a paddler is utilizing the same waterway that was used by generations of Native Americans, French-Canadian voyageurs, and early American traders and travelers.

OBSERVATIONS

- Significant treefalls, averaging 10-15 per mile, make the lower reaches of Deep River unusable at present, yet this is potentially one of the premier paddling opportunities in Northwest Indiana.
- The existing access at the north unit of Deep River County Park and a new access several miles downstream, in combination with treefall removal, would be an important first phase for water trail development.
- The Hobart Dam can be portaged at present, but needs additional portage improvements.
- The dam at the Deep River Outdoor Education Center needs to have a portage developed before it can be safely passed.
- Several park sites and private marinas in the lower reaches of Deep River in Lake Station and the Little Calumet River in Portage provide substantial potential to open a first phase of the water trail in the short term.
- The cultural history of Deep River should be interpreted on signage and brochures.
- Access sites should be identified and created within future developments in the upper reaches of Deep River from the confluence of Beaver Dam Creek and Niles Ditch to the Deep River County Park.



POTENTIAL ACCESS SITES

- Between Colorado Street and Clay Street within future developments
- Between Clay Street and Grand Boulevard within future developments
- On the east side of Randolph Street in Deep River County Park, south of U.S. Rte 30
- Existing access in Deep River County Park, north of U.S. Rte 30 at the mill site
- Deep River County Park north of Ainsworth Road
- Vicinity of West Bracken Road or Arizona Street
- Lakeview Park on Lake George
- Northwest of the Hobart Deep River Dam, where the portage commences
- Park site on the east side of LaPorte Street. North of 33rd Avenue, across from Meister Elementary School
- Existing access at River View Park in Lake Station
- Existing access at Bicentennial Park in Lake Station
- Vicinity of the Michigan Street bridge
- Deep River Outdoor Education Center, where a portage should be developed to bypass the dam at this location
- Vicinity of Central Avenue on the Little Calumet River, a ¼ mile northeast of the mouth of Deep River



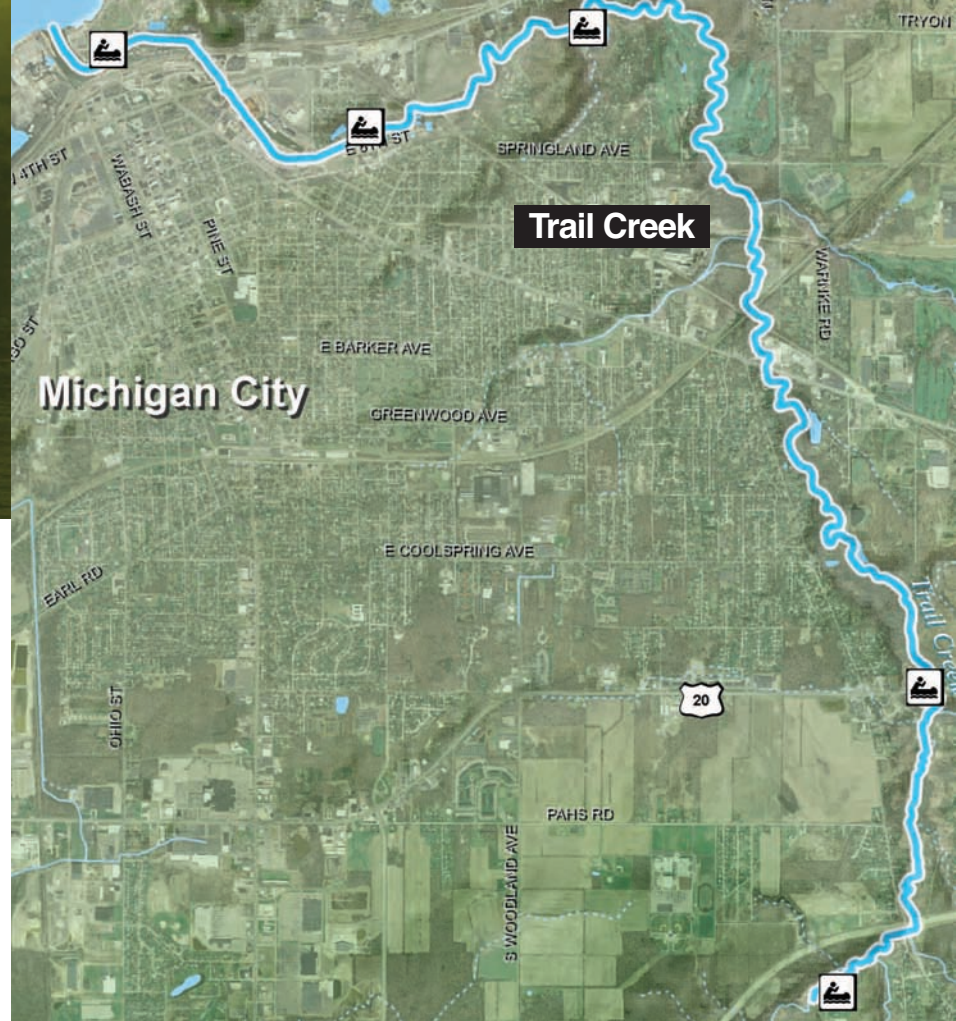
INDIANA HARBOR CANAL



The Indiana Harbor Canal was constructed in the 1880s and has served as a shipping canal for heavy industry in one of the most intensively industrialized areas of the United States. Although still active close to Lake Michigan, much of the canal is no longer utilized for shipping purposes as older industries left and newer industries and non-industrial development do not need the canal. Several park sites adjoin or lie near the canal, as well as important remnant natural areas. The canal links Lake Michigan with the Grand Calumet River. As has happened in older industrial riverfronts throughout the nation, the canal seems poised to become a central redevelopment and quality of life feature for the community of East Chicago. Its use for paddling purposes will probably be limited in the near future to well-experienced paddlers on lake kayaks. It is not safe, at present for paddlers with a limited level of experience. In recent years, Local sea kayaking clubs have organized annual trips to the Indiana Harbor Canal, marketed as the “Heavy Duty Industrial Urban Kayaking Trip.” Just as the paddling community brought attention and a popular image to the Calumet and Chicago River systems in Illinois, a similar initiative would make the Indiana Harbor Canal an attractive urban feature for redevelopment purposes in East Chicago.

OBSERVATIONS

- Since most of the Canal is lined with sheet piling and sea walls, and several low pipeline crossings and pollution control floating barricades, access is difficult from adjoining properties. Future access locations will depend on redevelopment site designs. Experienced kayakers paddle in from Lake Michigan as they do when visiting the Calumet River in Chicago.
- Goodman Park could develop an access in the future, as could redevelopment along the Lake George Canal.
- Boat views of the steel mills and heavy industrial operations shouldn't be underestimated in terms of popularity and interest for power boaters or paddlers. It is one of the unique experiences available for paddlers living in an urban area and adds to the overall diversity of paddling trips that can be marketed throughout the region.



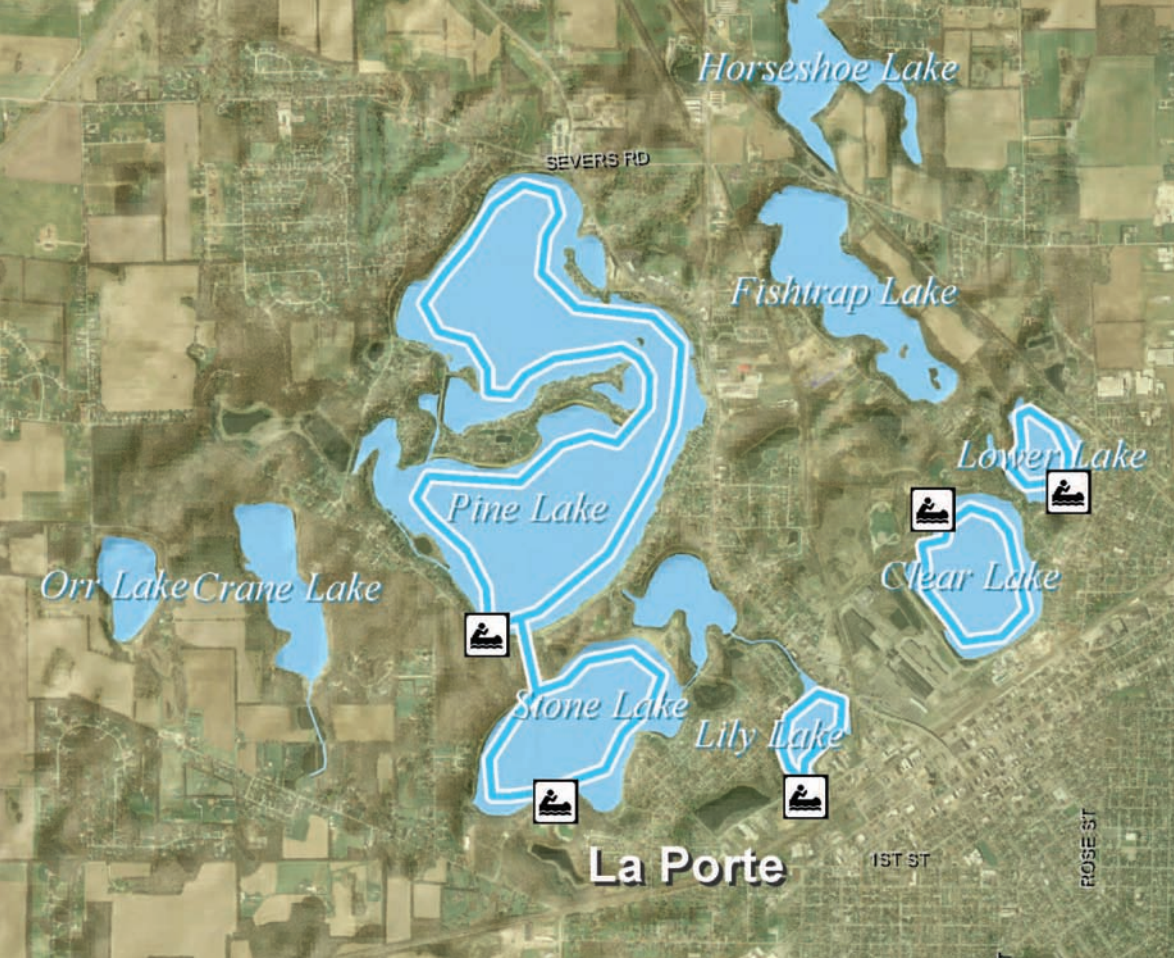
Trail Creek was well known to early settlers in the 1830s and its harbor determined the location of Michigan City as a hoped-for major port on Lake Michigan. Chicago became the major port, and Michigan City instead became famous as a major tourism center in the Midwest. Late in the 19th century, the Army Corps studied the possibility of linking Trail Creek with the Little Kankakee River by dredging a canal. Recreational boat traffic still uses the harbor at the mouth of Trail Creek in increasing numbers, and Michigan City is undergoing a renaissance based substantially on the attractiveness of its parks, marinas, and recreational facilities that line Trail Creek. Trail Creek is heavily forested along much of its course and treefalls are common. It courses through a rich natural habitat along much of its length. The relatively high-quality waters of Trail Creek are best known to fishermen who focus on seasonal runs of Coho, Chinook, Atlantic Salmon, Steelhead, Lake Trout, and Brown Trout.

OBSERVATIONS

- The treefalls provide fish habitat values, and removal of treefalls to allow for paddling needs to be sensitively done.
- During prime seasonal fish runs, paddling should be limited so as not to conflict with the fishing community.
- Trail Creek is an historic creek. Interpretive signage and brochures should be developed to explain the cultural history.
- Discussion with Pottawattomie Golf Course should be held to determine if there would be a strategy for paddling the creek during the off-season.
- An initial phase for a water trail should link Pottawattomie Park with an access site in the vicinity of the E Street bridge.
- During the peak boating season, power boat traffic downstream of the E Street bridge and the wave action off of sea walls lining the banks would make paddling difficult for those with little experience. But wake restrictions and off-peak power boat periods are good for paddlers. Restaurants, public parks, and visitor facilities should be designed to allow paddlecraft to tie up and access creekside development throughout the downstream harbor and marina area.

POTENTIAL ACCESS SITES

- Creek Ridge County Park
- Existing public access on the north side of U.S. Route 20
- North side of U.S. Route 35
- Vicinity of Springland Avenue
- Pottawattomie Park/Krueger Park
- Hansen Park
- Various public and private development sites downstream of the E Street Bridge to the main marina at the mouth of Trail Creek



THE LAKES OF LAPORTE

There are at least nine separate lakes in the City of LaPorte, all glacial kettle lakes that by the time of first settlement had evolved into rare habitats, some of the lakes have more emergent wetland vegetation than open water, and with a variety of wetland edges and uncommon aquatic vegetation. As the City grew and the lakes became well known for their recreational amenities, much of the original biodiversity was lost as invasive species, stormwater-born pollutants, and shoreline development became established. But, the lakes still are restorable over time, and some still exhibit substantial biodiversity. They also provide one of the unique paddling experiences in Northwest Indiana, probably more oriented to kayaking than canoeing. Pine Lake, Stone Lake, Clear Lake, Fishtrap Lake, Lower Lake, Lilly Lake, Crane Lake, and Horseshoe Lake, each have unique histories. Not all are currently publicly accessible, but the opportunity may arise in the future as the LaPorte community continues to develop.





GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN

OBSERVATIONS

- Public boat access exists on Pine Lake, Stone Lake, and Clear Lake.
- A kayaking route around the perimeter of each lake with portages between lakes, or the use of existing channel connections, would provide a diverse paddling experience.
- No wake, motorized boating is allowed on Pine Lake.
- Interpretive signage explaining the history and ecology of each lake would add substantially to a paddlers experience.
- Future development provides an opportunity to establish a public shoreline for paddlers to access lakes that are currently undeveloped.
- The lakes are a strong symbol of identity for LaPorte. Few other communities in the country are as fortunate to have such a cluster of inland lakes.
- Portage corridors between land-locked lakes should be considered in new development and redevelopment.
- Businesses, such as restaurants, which adjoin the lakes or connecting channels, should consider providing paddling amenities, such as places to temporarily beach a kayak or canoe.



POTENTIAL ACCESS SITES

- Pine Lake should ideally have two public access sites for paddlers because of its size. The other lakes ideally would have an access site and 2-3 places to rest, but not necessarily access by a car.
- In future redevelopment efforts, such as is contemplated near Clear Lake and Lily Lake, boardwalks and other shoreline features should be designed so as to provide access for paddlers.
- Specific access sites for currently privately owned lakes, should be determined in the future when development opportunities arise.



IMPLEMENTATION

IN THE PLANNING LEXICON, THERE EXISTS NO MORE COMPLICATED WORD THAN “IMPLEMENTATION.” IT IS SIMPLY WHAT MAKES OR BREAKS ANY PLAN’S LEGACY. THERE ARE MANY DOCUMENTS DEDICATED TO EFFECTUATING CHANGE IN OUR COMMUNITIES, BUT MANY ARE UNABLE TO MAKE THE LEAP FROM PLANS TO ACTION. THIS CHAPTER AIMS TO MAKE THE LEAP AND FOCUS ON READY-TO-IMPLEMENT STRATEGIES THAT WILL HELP STAKEHOLDERS TO PLAY AN EFFECTIVE ROLE IN ACHIEVING A GREENWAY AND BLUEWAY SYSTEM FOR NORTHWEST INDIANA.



GREENWAYS & BLUEWAYS

NORTHWEST INDIANA REGIONAL PLAN

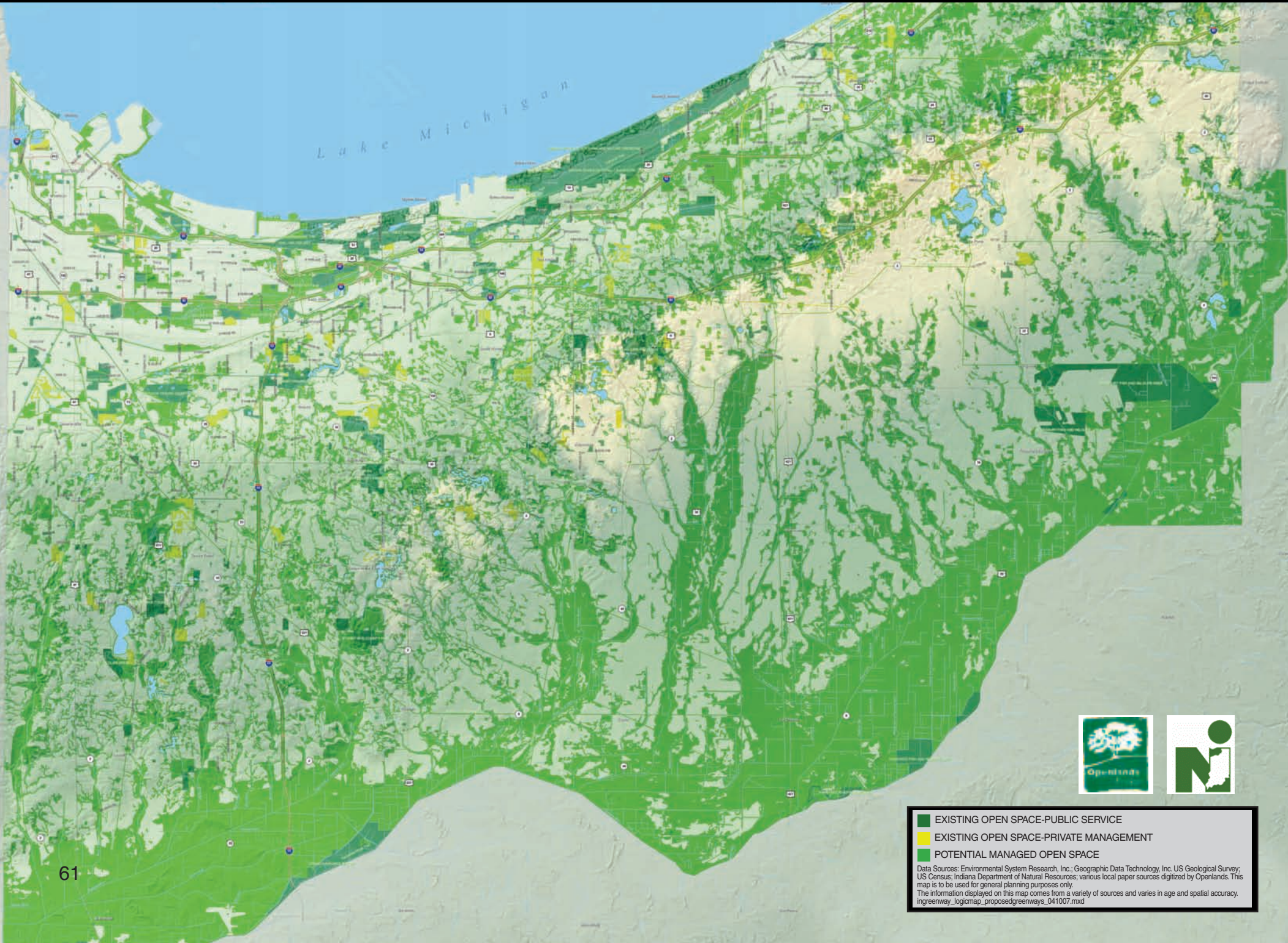
THE ROLES OF THE “GREENWAYS EIGHT”

At the start of this plan, eight major stakeholders were identified as the key participants in greenway and water trail development. They are:

LOCAL GOVERNMENTS
PRIVATE PROPERTY OWNERS
CORPORATE PROPERTY OWNERS
LAND TRUST/ADVOCACY GROUPS
LINEAR CORRIDOR OWNERS
LAND DEVELOPERS
INSTITUTIONS OF EDUCATION
FEDERAL & STATE AGENCIES

These are the stakeholders who can convert this planning document to an on-the-ground success. For certain greenways, it only takes one stakeholder group. For example, a neighborhood greenway will survive over time only if residents of the neighborhood meet together to ensure that it does. For longer, more complex greenways, diverse stakeholders must work together. Downstream public and private property owners who experience flooding and dirty stormwater runoff, need to work cooperatively with many different stakeholder groups upstream, if they hope to see the situation change for the better.

GREENWAY OPPORTUNITIES FOR NORTHWEST INDIANA



■ EXISTING OPEN SPACE-PUBLIC SERVICE
■ EXISTING OPEN SPACE-PRIVATE MANAGEMENT
■ POTENTIAL MANAGED OPEN SPACE

Data Sources: Environmental System Research, Inc.; Geographic Data Technology, Inc. US Geological Survey; US Census; Indiana Department of Natural Resources; various local paper sources digitized by Openlands. This map is to be used for general planning purposes only. The information displayed on this map comes from a variety of sources and varies in age and spatial accuracy. ingreenway_logicmap_proposedgreenways_041007.mxd



THE OPPORTUNITIES FOR GREENWAYS IN NORTHWEST INDIANA ARE MANY AND VARIED. THEY ARE GENERALLY DESCRIBED BY THE GEOGRAPHIC FEATURES LISTED ON PAGES 16-17. FLOODPLAINS, CREEK AND RIVER CORRIDORS, AND HYDRIC SOILS ARE KEY WATER-BASED GREENWAY COMPONENTS. THE OAK SAVANNA REMNANTS AND FLOODPLAIN FORESTS, WHICH SO DISTINCTIVELY CHARACTERIZE THE LANDSCAPE AESTHETICS OF THE REGION, CREATE IMPORTANT UPLAND AND LOWLAND GREENWAY HABITATS. A VARIETY OF BUILT LINEAR CORRIDORS ALSO PROVIDE GREENWAY BENEFITS. THESE INCLUDE INTERSTATE HIGHWAYS, RAIL LINES, PIPELINES, UTILITY CORRIDORS, AND TRAIL ROUTES. PORTIONS OF INDUSTRIAL BROWNFIELDS CAN BE

REDEVELOPED AS GREENWAYS TO ADD VALUE AND QUALITY OF LIFE TO FUTURE DEVELOPMENTS. ALL OF THESE GREENWAYS TOGETHER CREATE A PUBLIC AND PRIVATE OPEN SPACE SYSTEM WHICH CONNECTS LOCAL COMMUNITY AND COUNTY PARKLANDS, THE NATIONAL LAKESHORE, AND LAND TRUST PROPERTIES THROUGHOUT THE REGION WITH SCHOOLS, PRIVATE BACKYARDS, HOMES ASSOCIATION PROPERTIES, AGRICULTURAL LANDS, AND INDUSTRIAL LAND HOLDINGS. THE GREENWAY VISION EXPRESSED BY THIS MAP SHOWS WHAT NORTHWEST INDIANA COULD IDEALLY BE IN THE FUTURE THROUGH THE EFFORTS OF PUBLIC AND PRIVATE STAKEHOLDERS WORKING TOGETHER, FOCUSED ON THE MANY BENEFITS PROVIDED BY GREENWAYS.



LOCAL & COUNTY GOVERNMENTS

THE TAPESTRY OF OUR LAND USE BEGINS WHEN DECISIONS ARE MADE AND VOTES ARE CAST AT THE PLAN COMMISSION BOARD LEVEL IN EVERY MUNICIPALITY AND COUNTY. FURTHER REFINEMENTS OF DEVELOPMENTS ARE DETAILED AT THE BOARD OF ZONING APPEALS, REDEVELOPMENT COMMISSIONS, AND AT THE LEGISLATIVE END VIA THE COMMON COUNCIL. THESE BOARDS CREATE, REVISE, AND ENFORCE THE PLANS AND ORDINANCES THAT GUIDE ALL NEW DEVELOPMENTS. FOR OPEN SPACE AND WATER TRAIL OPPORTUNITIES TO FLOURISH, THE FOLLOWING STEPS MUST BE ACCOMPLISHED:

- 1** Each local and county jurisdiction should assess the proposed open space & water trail recommendations from the Regional Greenways & Blueways Plan and incorporate its locally pertinent aspects into their Comprehensive Plans. This document guides all new land use development. It organizes what land uses will go where, and how these land uses can integrate open space corridors and coordinate them across multiple future developments. Local governments can also establish free-standing special area plans or overlays to help in achieve a local greenway and blueway system. This approach would parallel the success of the region's Ped & Pedal Plan. Its Priority Trail Corridor Map has been adopted locally by numerous jurisdictions since the plan's adoption in January of 2005.
- 2** Local subdivision and zoning codes can be amended to allow for open space conservation in new developments. Subdivision and zoning codes implement the vision expressed in comprehensive plans and special area plans. Both the subdivision and zoning codes offer the strength of law and better yet, predictability for both the local official and developer. When standards are applied consistently, all parties know what's expected of them – and subjectivity becomes nearly non-existent in decision-making. Additional tools for jurisdictions to utilize include conservation easements, mitigation banking, carbon credits, developer donations and alternative best management practices for the treatment of wastewater. Railbanking should also be considered when purchasing old railroad rights-of-way for trail use.
- 3** Apart from development-driven open space strategies, each jurisdiction has the opportunity to actively pursue acquiring new properties. In every jurisdiction, no matter how large or small, there are opportunities to purchase properties that are considered environmentally “sensitive,” or are needed to satisfy the growing need of recreation space in a community or county. Most open space acquisition efforts, to date, have been focused on active recreation lands for organized sports and playgrounds. Greenway corridors open many additional passive recreational activities for more citizens who represent a broader range of age groups, levels of ability/disability, and interests in non-sports related activities. Land trusts and park foundations are excellent facilitators in helping acquire title or easements to greenway parcels.

4 Local and county jurisdictions should be involved in outreach strategies and should work with private landowners where greenway corridors could be established. Habitat enhancement, stormwater management, and invasive species control are all common issues on which landowners may need guidance on. Various communication strategies could be employed, such as articles in community newsletters or inserts in water bill mailers. Park departments could also play an active role programming restoration and habitat management classes.

5 County Drainage Boards, administered by the Surveyor Offices, regulate all legal drains and take responsibility in maintaining unobstructed water drainage. In this role, Drainage Boards have the opportunity to consider innovative strategies for enhancing riparian buffers and in-stream habitat. As an example, riffle structures in large channelized drains in the grain belt of Canada not only add habitat value and maintain the channel but also move the bedload of silt that might otherwise deposit and clog the waterflow. When development is proposed adjoining a legal drain, there is an opportunity to integrate and expand the drainage easements and allow for parklands, floodplain protected habitat restoration, neighborhood trails, and water trail access.

6 Highways and streets are significant barriers that prevent the movement of wildlife. These barriers could be mitigated to provide improved access between state parks and other preserves. A number of design solutions has successfully been used in other parts of the country to facilitate movement of wildlife between patches of rich habitat that are separated by roadways. At a larger scale, mitigation efforts and design interventions, such as low box culverts, could be utilized at locations frequented by wildlife. A system of fences could be used to channel the movement of wildlife to the tunnel on either side of the road. Reducing accidents caused by collisions with deer or other animals benefits both motorists and wildlife. Unbroken jersey barriers and vertical curbing block the movement of many small species. Providing periodic archways in the jersey barriers for wildlife to crawl under and rounding curbing profiles would aid in wildlife movement. These changes are best made at times of major road reconstruction.





PRIVATE PROPERTY OWNERS

Owners of land control how their property is utilized. If already developed with a home, a commercial enterprise, a service, or a small industrial use, their decisions affect how property is managed. Property owners who participate locally and voluntarily in a greenway network will see more habitat, stormwater, and aesthetic benefits than those who don't. Owners of large acreages who decide to develop their property have a strong influence on how effective a greenway system might be integrated into a proposed development's design. Many property owners have purchased their land and home site or business location because of their land's attractive natural attributes, or its overall setting within a larger landscape. One of the most effective activities a property owner could pursue would be to work together with neighbors to define what is special about the open space attributes in one's neighborhood and to pursue strategies to make it more special. Some of these strategies could include:

1 Create an environmental inventory of your neighborhood, identifying trees and shrubs, birds animals, and the water quality and biodiversity of your creek. Learn which species are invasive and may be shortening the life of more desirable species such as oaks and spring wildflowers. Use this baseline inventory to identify cooperative management strategies that enhance and encourage desirable habitat features.

2 Approach environmental agencies and not-for-profits listed in the appendix of this plan for management strategies and guidance in making your land more sustainable and healthy. Also look for sources for purchasing native trees, shrubs, and prairie plants of Northwest Indiana instead of cultivars and non-native plants sold at most retail sources. Use the web and local university programs and libraries to research your land and the kinds of biodiversity that would have originally been found on it. Learn about your soil types from county-based Soil and Water Conservation Districts

3 After creating your neighborhood greenway strategy, look one mile upstream and identify how your land is being influenced by land uses above you and look one mile downstream and determine how your neighborhood is affecting land uses below you. Try to link up with these property owners and resolve issues of common concern. When development is proposed above your neighborhood, get involved in asking for habitat and hydrological improvements that result in a more effective greenway for everyone.

4 If you have developed pride in what you have created on your land or within a broader cooperative landscape and you wish to assure its preservation in perpetuity, contact a local land trust or park foundation and discuss the possibility of establishing a conservation easement to protect your restoration. You still own the land and can limit public access, but subsequent owners of your property would be required to retain the habitat values that you created.

5 Owners of large acreages who wish to sell to developers but want to assure that certain linear habitat features that were important to them are protected, they could put a conservation easement on these greenway segments prior to sale. Developers will design around these protected open space parcels and sell lots adjoining the greenway for at least a 15% premium. Alternatively, look for a developer with experience in designing conservation developments and make your sale contingent on seeing a site plan that is acceptable.



The same strategies that apply to smaller, private landowners also may fit those large corporations who own significant amounts of property with environmentally sensitive areas. Northwest Indiana corporations are also pursuing a number of brownfield remediation projects that are of national significance. These sites, if open for public access, deserve interpretive signage to explain the efforts that have taken place. New corporate development, opening up on undeveloped greenfield sites, have the opportunity to create site plans with both sustainable environment and sustainable energy features.

1 Outreach to land trusts and advocacy groups to build partnerships for open space preservations, habitat management, and education programs. Membership and continued collaborations with the Wildlife Habitat Council is strongly encouraged. The Council has been successful in partnering with larger corporations on educational programs for children and developing policies to help restore and manage large acres of sensitive properties.

2 Continue partnering with the Northwest Indiana Forum and its Environmental Affairs Committee. The Forum provides a unified voice for larger industries as they work together to improve the ecological quality of the region. This Committee has been able to leverage successful remediation agreements with member corporations and local, state, and federal governments.

3 Consideration of establishing corporate-sponsored granting programs for conservation and restoration projects in the region. These programs could use the NiSource Environmental Challenge Fund as a model, which, since it's inception in 1995, has provided funding for over 140 projects in Lake, Porter and LaPorte Counties.



CORPORATE PROPERTY OWNERS



LAND TRUSTS/ADVOCACY GROUPS

Working closely with private landholders is a number of not-for-profit groups engaged in preserving and restoring habitat. Land trusts and park foundations hold private conservation easements, use grant funds to purchase land, and accept land donations. Land trusts are especially well-experienced in environmental education, volunteer stewardship, and habitat management. Land trusts and park foundations have been key groups over the years in helping to realize an expanding network of greenways and remnant habitats in Northwest Indiana. Land trusts and environmental advocacy groups are already key educators in encouraging the public to champion the need for open space conservation. Their strategies could include:

- 1** Land trusts should consider expanding their role beyond preserving the highest quality remaining habitat remnants. There is a need for these organizations to collaborate with local governments and developers in protecting or restoring moderate quality habitats in neighborhoods that are the more accessible experiential places that children and families see on a daily basis and from which they develop their environmental ethic.
- 2** Land trusts could greatly expand their educational role by working under contract to municipalities to prepare communication pieces on habitat management, to lead interpretive tours as part of park and recreation programming, to function or as advisors to various municipal commissions.
- 3** Municipalities without a supporting park foundation should consider organizing one, based on other successful model park foundations already in existence in Northwest Indiana.
- 4** Land trust and park foundation outreach to, and collaboration with large corporations that own significant amounts of property need to grow into a formal continuous relationship and dialogue. The Northwest Indiana Forum, working on behalf of these major industries, has offered a “gateway” opportunity for private trusts and advocacy groups to enter into dialogue on a number of critical issues.



Taltree Arboretum & Gardens



LINEAR CORRIDOR OWNERS



Helping to aid in the creation of a backbone of greenway corridors are those landowners of long stretches of property. These are manifested either in utility corridors, transportation corridors, riparian corridors, or abandoned railroads. One of these corridors exists in every community in the NIRPC region. In the case of establishing contiguous networks of greenways, of prime importance are the utility companies and those entities that have ownership of long stretches of abandoned railroads. Here are their strategies:

- 1** Partner with local public agencies, advocacy, and land trust groups and citizens on creating increased greenway conservation opportunities. Initiatives can include working with governmental entities where new development is planned where corridors could be utilized for active recreation uses – such as multi-use trails. Other ideas could be fostered through dialogue with private environmental groups on conservation of sensitive native vegetation within corridors and their overall protection as valuable wildlife habitat.
- 2** Commence a dialogue with recognized environmental steward organizations, such as the Boy and Girl Scouts of America. These groups could be utilized to perform basic cleanup and restoration functions – such as garbage pickup and tree and rock debris removal from water ways.
- 3** Begin a dialogue with active railroad owners on the feasibility of “joint-use” of their right-of-way with either passive or active recreation outlets. Programs may include specific links for “rails-with-trails” opportunities.
- 4** State, county, and local transportation officials need to incorporate stronger landscaping and conservation standards as they reconstruct new roadways. Either through formal or informal plantings, maintaining a significant corridor of natural vegetation will ensure not only scenic benefits, but help with stormwater runoff filtering and for wildlife access and travel corridors. Regarding scenic quality standards, better control of billboard proliferation should be strongly considered. Billboards have been viewed by the public to be a visual nuisance and deemed unsafe since they distract from drivers’ attention to the road. Billboards also block possible viewsheds as one travels through the region.





DEVELOPERS

It's a well-known fact that growth will come. Even so, it can conserve and enhance a greenway system while developing our communities of the future. Innovative conservation-based developments – either residential or commercial – are springing up at a sizeable rate throughout the nation, including a substantial number in the Midwest. Just as important, the homebuyer is responding positively to these developments. Northwest Indiana has seen some of these developments begin to dot our landscape – proof that these nature-based communities are becoming increasingly popular to the local homebuyer. Far from the standard “cookie-cutter” layouts of the past, these progressive projects focus as much on environmental stewardship as they do on house designs. In demonstrating strategies that developers should emulate regionwide, a sampling, both local and national, are presented below:

NATIONAL EXAMPLES

Prairie Crossing – Libertyville, IL

Started in 1987, Prairie Crossing is a critically-acclaimed “Conservation Community” that was designed to combine responsible development, the preservation of open land, and easy commuting by rail. It is now considered a national example of how to design our communities to support a better way of life. Over 60 percent of the 677-acre site is protected open land that is actively used by people and wildlife. Ten miles of trails wind through a landscape of farm fields, pastures, lakes and ponds, native prairies, and wetlands. With more than 165 acres of restored prairies, 20 acres of restored wetlands, and 16 acres of historic hedgerows, the Prairie Crossing landscape is contributing to the restoration of the native ecology of the region. Many Prairie Crossing residents integrate these native plant communities into their own landscaping in formal or “wild meadow” styles to showcase their houses. Native landscaping also serves an important function in cleansing the storm water on the site and protecting the water quality of lakes. Hardier and more sustainable, it requires less water and labor than traditional lawns or more formal plantings, prevents flooding, and lowers maintenance costs. Prairie Crossing has been nationally recognized for its innovations in planning and community design. Further details can be found on their website: **HYPERLINK "<http://www.prairiecrossing.com>"**
www.prairiecrossing.com.

The Preserve at Little Pine – Marshall, NC

Resting in the heart of the North Carolina Mountains, the vast majority of the 1,800 acres of land at The Preserve at Little Pine will be placed into a conservation trust to protect this historic soil, its flora and its fauna for eternity. For every homesite, their goal is to preserve approximately 15 acres through protective covenants and a conservation easement. The conservation easement permanently protects a vast majority of the pristine land within The Preserve at Little Pine. The conservation area is managed by the Smoky Mountain National Land Trust and assures this land will never be disturbed nor developed upon. Details at: **HYPERLINK** "<http://www.littlepine.info>" www.littlepine.info.

Orange Twin – Athens, GA

The Orange Twin Conservation Community is a pedestrian-based eco-village based five miles from downtown Athens. It is run by the people who operate Orange Twin Records in the same area. With a total landholding of only 155 acres, the ownership group is committed to preserving 100 acres of this as greenspace while supporting community growth through experimental and natural building. Their hope is that Orange Twin can serve as a model of sustainable living, using viable solutions that do not further harm, but rather help, to heal the earth. Details at: **HYPERLINK** "<http://www.orangetwin.com>" www.orangetwin.com.

LOCAL EXAMPLES: Coffee Creek Center – Chesterton

Coffee Creek represents itself as a “neo-traditional community, setting standards in land use sustainability, ecology, and quality of life.” As a part of the center, a 167-acre parcel named the Coffee Creek Watershed Preserve was donated by the land developer, Lake Erie Land Company in 1999. A not-for-profit group was formed to manage this donated land – the Coffee Creek Watershed Conservancy. Between the man-made and naturally developed parcels, Coffee Creek successfully blends progressive land use standards with a solid conservation mindset. Details at: **HYPERLINK** "<http://www.coffeecreekcenter.com>" www.coffeecreekcenter.com.

Tryon Farm – Michigan City

At Tryon Farm, 120 acres of the 170-acre property will be left open for hiking, views, and habitat. The attraction for homebuyers is a rare combination of new simple houses and lofts, ranging in size from 400 to 3,500 square feet, grouped in seven settlements. These structures continue the aesthetic integrity of the original farm buildings. All homeowners share the cost of a hired “land steward,” who maintains the roads and does the basic farm chores. Special projects for wildlife habitats and wetland protection are led by the steward with volunteer help from homeowners. Details at: **HYPERLINK** "<http://www.tyronfarm.com>" www.tyronfarm.com.





INSTITUTIONS OF EDUCATION



The Northwest Indiana region boasts many institutions of higher learning that include regional campuses for Purdue and Indiana Universities, Ivy Tech, and several smaller colleges of note. In addition, the many school districts play a vital role toward providing our children with an appreciation of environmental stewardship from the earliest ages. Combined, our intellectual capital cannot be ignored for the role it can play in educating and assisting both the public and private sectors. The strategies that follow aim to involve these institutions:

- 1** Universities and colleges should partner to the greatest extent possible with local, county, state, and federal agencies on programs and/or projects that serve to sustain the region's ecology and enhance the benefits of greenway protection. These partnerships can be fostered through several existing grant programs that seek to establish such relationships. These funding opportunities are provided through a number of outlets – both public and private in origin from state agencies to foundations.
- 2** School districts should seek partnerships with land trusts, advocacy groups, state and regional agencies, and other related sources on developing a public education initiative to enlighten our youngest minds on the value of environmental stewardship and conservation practices. Materials can be developed specifically for these purposes. NIRPC and the Lake County Solid Waste Management District are two notable sources that can help provide assistance in these areas and/or conduct on-site presentations for pupils.
- 3** Teachers and school children would especially benefit from a local community water trail by using the creeks as “living laboratories” from which to learn science, geography, health, mathematics, and writing skills.





FEDERAL, STATE & REGIONAL ENTITIES



Federal and state agencies have had significant influence on Northwest Indiana. While they still have regulatory roles, they also now participate on many committees and councils with local government officials to identify environmental and open space initiatives that can be proactively and cooperatively pursued. As a regional agency, NIRPC has tried to be an effective forum for local officials to discuss and pursue regional initiatives. The following strategies could be pursued:

- 1** Federal and state funding for greenway preservation, development, and maintenance should be increased. Consistent funding will need to be established via existing avenues available through the IN Department of Natural Resources (DNR) and the IN Department of Transportation (INDOT).
- 2** The Environmental Protection Agency (EPA) Region V and NIRPC should coordinate water trail opportunities related to the remediation of polluted waterways in Northwest Indiana. A similar approach with regard to greenways should be pursued with the Indiana Department of Environmental Management (IDEM) on “brownfield” remediation concepts.

- 3** The State of Indiana should commit to follow through on recommendations in the State Trails Plan of 2006. This vanguard document proposed thousands of miles of potential trail opportunities in Indiana, with several hundred in Northwest Indiana alone. Governor Mitch Daniels took the first step toward realizing this vision by pledging \$20 million in 2007 for new trail projects. The governor indicated that this may be the start of sustained state funding for trail development.

- 4** Indiana is one of only seven states in the country that has not approved any conservation funds through referendum or measure. In addition, no taxing authority in the state has the power to take a referendum to vote unless that particular issue is first mandated by the Indiana legislature. The state should consider repealing this restriction and give all governmental taxing authorities the ability to issue a referendum on open space and conservation funding measures. Referendums depend on local support and would be agreed upon only by popular vote in a given jurisdiction. These are very

popular financial mechanisms used throughout the country, and Indiana taxpayers and local governments should be afforded the same opportunity.

- 5** NIRPC and the National Park Service (NPS) should continue to collaborate on potential trail opportunities within NPS landholdings – most especially the Marquette Greenways Trail.
- 6** NIRPC should establish a regional greenway coordination mechanism, such as a “Regional Greenways and Blueways Council” to work as a subcommittee of the Environmental Management and Policy Committee (EMPC).
- 7** NIRPC and Openlands, working with counties, municipalities, land trusts, and park foundations, should evaluate the feasibility of landbanking and other programs to incorporate vacant, under-used, tax-delinquent, and surplus government property for greenway purposes.



- 8** NIRPC and Openlands assist local governments in creating greenway and blueway demonstration projects in the region. They should assist in developing materials in support of the Regional Greenways & Blueways Plan. NIRPC should maintain continuous updates on its new Greenways & Blueways web site, providing an information clearinghouse for both public and private interests.
- 9** NIRPC should prepare model ordinances that would assist local government officials in protecting and enhancing greenways locally. An example would be reference lists of native plants that should be used in stormwater best management practices and park landscaping.
- 10** The NIRPC Ped & Pedal Committee should continue to champion the Regional Corridor Priority Trails map as the “backbone” greenways document in the region.
- 11** NIRPC should recommend the use of a hierarchy of greenways in regional stormwater management programs from the neighborhood, from first order stream subwatershed to entire watershed.





PARTNERING CASE STUDIES

THE GREENWAYS EIGHT NEED TO ENGAGE ONE ANOTHER TOWARD A SUCCESSFUL BALANCE OF DEVELOPMENT AND PRESERVATION IN THE CALUMET REGION. WHAT FOLLOWS IS A “BAKERS DOZEN” OF CASE STUDIES THAT HIGHLIGHT MANY SIGNIFICANT PARTNERSHIPS THAT HAVE COME TOGETHER TO ADVANCE A WIDE RANGE OF GREENWAY-RELATED INITIATIVES. THE IDEA IS TO INSPIRE THE READER TOWARD ACTION ON HIS OR HER OWN LEVEL – WHEREVER THAT MAY BE. EACH CASE STUDY INCLUDES A SYMBOL FOR ANY OF THE GREENWAYS EIGHT THAT PLAYED A ROLE IN HIGHLIGHTED PROJECT.



PORTAGE LAKEFRONT PARK

[SOURCE: THE RESTORATION REVOLUTION IN NORTHWEST INDIANA]



LOCAL CORPORATE PROPERTIES FED/STATE/REG ADVOCACY

The 1966 legislation that authorized creation of the Indiana Dunes National Lakeshore is called the port/park compromise because it also allowed development of the Port of Indiana and the building of two new large steel mills on either side, owned by the Midwest Division of the National Steel Company and Bethlehem Steel. At the time, the small City of Portage was more interested in new jobs for residents than in access to Lake Michigan. Now, 40 years later, Portage Mayor Douglas Olson has succeeded in gaining direct public access to the lake through a complicated partnership that includes the US Army Corps of Engineers, the Indiana Dunes National Lakeshore, the IDNR Lake Michigan Coastal Program, the Regional Development Authority, the now-bankrupt National Steel, Company and its new owner, (US Steel), plus the Save the Dunes Council and the City of Portage. The process included regulatory enforcement for removal of hazardous materials from two settling lagoons used by National Steel and the voluntary agreement of the company to go beyond the legal requirement to meet cleanup standards for future public use of the area. The new park will be developed under an agreement between the City of Portage and the National Park Service. The Save the Dunes Council acts as watchdog for the public on behalf of the National Lakeshore, and the Shirley Heinze Land Trust is assisting in identification of several rare native plants, some of which are not known to be growing elsewhere in the region.



Lost Marsh Site Prior to Development



Lost Marsh Site Post-Development



LOST MARSH ENVIRONMENTAL AND RECREATION AREA, HAMMOND, INDIANA

[SOURCE: OCTOBER 5, 2007 CONVERSATION WITH RON NOVAK, CITY OF HAMMOND, DIRECTOR, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT]



LOCALS FED/STATE/REGIONAL

The Lost Marsh site started with a 100-acre steel mill slag dump that contained 3.5M cubic yards of steel mill slag. The City of Hammond spent \$0.25M of its own funds to conduct an Environmental Assessment (EA) of the tax delinquent site. Based on the EA, the city decided to acquire property from the county and began to build upon the property and acquire additional property in the area. The city acquired additional property in the form of open water (George Lake) and also accepted a property donation from Amoco (now BP) for a total park area of 300 acres. Given the property size, it was decided to build a 9-hole youth golf course and an 18-hole adult golf course, an environmental area for bird watching and nature walks, and leave a separate area under conservation easement. The estimated total cost of the project is \$35M which was funded through riverboat gaming funds, two federal Brownfields grants, IDEM, and the Indiana Development and Finance Authority (site assessments). The City also worked with Hammond Sanitary District in site development by using biosolids as a component for the subsurface.

WOLF LAKE BI-STATE PARTNERSHIP



ADVOCACY LOCALS FED/STATE/REG EDUCATION CORPORATE

Wolf Lake is located on the northwest edge of Hammond, Indiana, and the far southeast edge of Chicago, Illinois. The Illinois-Indiana state line very nearly bisects the lake system. The lake covers more than 450 acres in Indiana and has a maximum depth of 18 feet. It is separated into pools by dikes constructed during sand and gravel dredging for the Tollway that crosses the lake. Over time, the lake has been degraded due to modifications to the lake's hydrology, impaired water and sediment quality, erosion due to wave action, and invasive species.

The Association for the Wolf Lake Initiative (AWLI) is a not-for-profit, 501(c)(3) working consortium of groups from communities around the lake, individual users of the lake, educators, researchers, and academics. The bi-state vision for Wolf Lake, created in 2000-2001 by some 130 individuals and groups, helps to guide the AWLI. Its major goal is to convene bi-state meetings of governmental agencies and officials; business and industry; local educational, civic and environmental groups; and individuals in support of its mission. Addition goals include the promotion of Wolf Lake and surrounding natural areas and advocating for improvements. They have led to projects such as the City of Hammond and U.S. Army Corps of Engineers'-led aquatic ecosystem restoration project.



HANSEN PARK, WINDING CREEK COVE & THE TRAIL CREEK GREENWAY, MICHIGAN CITY

[SOURCE:
[HTTP://WWW.EMICHIGANCITY.COM](http://www.emichigancity.com)]



LOCAL FED/STATE/REGIONAL ADVOCATE LINEAR

With funding from the Indiana Lake Michigan Coastal Program and the state Land and Water Conservation Fund, Michigan City reconfigured underutilized parks to support access to Trail Creek. Hansen Park now includes fishing pads and an observation deck overlooking a pond adjacent to Trail Creek. Winding Creek Cove includes walking trails, a fishing pad, a canoe launch ramp, and an observation deck overlooking Trail Creek. Finally, a multi-use trail goes over Trail Creek and connects the two parks. Additional partners include the land donors, Chicago South Shore Freight and Michigan City Sanitary District, and restoration specialists at Save the Dunes and J. F. New & Associates.



LITTLE CALUMET ACCESS AT AMERIPLEX



LOCAL CORPORATE FED/STATE/REGIONAL ADVOCATE DEVELOPER

Ameriplex Woods, located near the Ameriplex development, provides many recreational activities including hiking, cross country skiing, and fishing access to the Little Calumet River. Holiday Properties, which is the main developer for Ameriplex, donated the property to the City of Portage Parks & Recreation Department for the enjoyment of those looking to access the Little Calumet River. Portage Parks undertook an environmental restoration for the property by removing invasive plants and other non-native species. Further assistance from the Porter County Community Foundation, Bass Pro Shops, and funding from the Lake Michigan Coastal Program helped create a wood-chip hiking path throughout the property that ultimately leads to the river's edge. Further improvements to the site include a gravel parking lot, picnic shelter, tables, and signage at the entrance to the path. The old north Samuelson Road, which has long been abandoned, can still be viewed on the property while the historic bridge spans the Calumet River. This bridge will represent a vital link in the Marquette Greenway Trail from Chicago to New Buffalo, Michigan.



AMBLER FLATS



HOBART MARSH

[SOURCE: THE RESTORATION REVOLUTION IN NORTHWEST INDIANA]



PRIVATE ADVOCATE LOCALS TNC WITH SHIRLEY HEINZ

The Shirley Heinze Land Trust is entrusted with nearly a thousand acres of land with rare or unusual plants that it has been given or purchased. The Heinze Trust participates in various partnerships for restoration, working with both governmental agencies and private organizations. In May 2006, the Heinze Trust dedicated the nearly 200-acre Ambler Flatwoods Preserve as a state-dedicated nature preserve. The preserve, which is host to about 260 native plant species, was assembled from four parcels acquired since 1999 in partnership with state and federal conservation agencies and a private land protection organization.



LOCAL PRIVATE FED/STATE/LOCAL ADVOCATE

The Hobart Marsh project consists of several parcels of land that together, will preserve and restore wetlands, woodlands, and prairies on 357 acres of mostly former farm lands in and near the City of Hobart. Another purpose is to provide mitigation for the loss of wetlands in connection with the Little Calumet River Flood Control Project. Bringing the whole project together required cooperative action by the Little Calumet River Basin Development Commission (LCRBDC), the Army Corps of Engineers, and IDNR which agreed to assume long-term responsibility for management. Acquisition of the necessary land was financed by \$2.4 million of state funding authorized by the Indiana General Assembly for the LCRBDC, which then contracted with the Trust for Public Land to negotiate the purchases. The land will be further restored and enhanced at a cost of \$2.5 million by a contractor with funds from the Army Corps of Engineers to mitigate wetlands in order to compensate for construction of flood control levees along the Little Calumet River. Local land trust and conservation organizations also are involved in management of various parcels that are part of the total Hobart Marsh complex.



GRAND KANKAKEE MARSH RESTORATION PROJECT

(SOURCE: LAKE COUNTY PARKS AND RECREATION DEPARTMENT
[HTTP://WWW.LAKECOUNTPARKS.COM /GRAND.HTML](http://www.lakecountyparks.com/grand.html))



LOCAL FED/STATE/REGIONAL CORPORATE PRIVATE ADVOCATE

The Indiana Grand Kankakee Marsh Restoration Project (IGKMRP) is dedicated to the recovery and perpetuation of waterfowl and other wetland wildlife populations by protecting, enhancing, and restoring the wetlands and associated ecosystems of the Indiana Grand Kankakee Marsh. A coalition of volunteers representing over 30 organizations from not-for-profit conservation organizations, corporations and small businesses, and local, state, and federal government agencies has led the effort. Funding was obtained under the North American Wetlands Conservation Act (NAWCA) and the program to implement the North American Waterfowl Plan. Phases I through IV have resulted in 83 projects completed, 8,932 acres acquired, 5,774 acres restored, \$3,500,000 NAWCA funding, and matching funds of \$12,251,033. Land is owned and managed by a variety of partners, including the Indiana Department of Natural Resources, The Nature Conservancy, Lake and St. Joseph County Parks Departments, Waterfowl USA, and the Kankakee River Basin Commission.



PENNSY GREENWAY

(SOURCE: [HTTP://WWW.INDIANATRAILS.ORG /PENNSY_NWI.HTM](http://www.indianatrails.org/penssy_nwi.htm))



LOCAL ADVOCATE FED/STATE/REGIONAL EDUCATION LINEAR

In 2002, the communities of Munster, Schererville, Crown Point, the Lake County Parks Department, and the Village of Lansing, Illinois met to strategize the conversion of the abandoned Pennsylvania Railroad into a trail system. The project, entitled the Pennsy Greenway, would run approximately 15 miles from Crown Point to the Little Calumet River in Lansing. At this point, the project would meet up with the Burnham Greenway and eventually the Chicago Lakefront Trail. A study by the Purdue University Landscape Architecture Department found that the entire corridor was clear of major physical obstacles, and that a small amount of track remained for siding use by a local business. Lansing has completed their section of the trail. The Indiana communities have formed the Pennsy Greenway Joint Board led by the Lake County Parks Department and are contracting with an engineering firm to plan and design the trail. The communities continue to acquire the land during the planning stages. When completed, it would represent the first off-road link between Northern Indiana and Illinois.



PORTER COUNTY TOURISM TRAIL PLANS



LOCAL ADVOCATE FED/STATE/REGIONAL CORPORATE

The Porter County Convention, Recreation, and Visitor Commission currently is developing an ecology/heritage trail system. The intent is to link existing assets together through themes. Porter County is working with various partners including Taltree Arboretum, Coffee Creek Conservancy, federal, state, county, city, and town park agencies, departments, city, town, and county planners, NIRPC, Save the Dunes, local chambers of commerce, and economic development corporations.

The three phases of the project include:

1. Development of the actual trail system, which links existing assets together under specific themes and create maps outlining each trail.
2. Creation of an interpretive signage plan for each trail within the system and creation of a directional signage plan for the overall trail system.
3. Creation of interpretive programs for each themed trail system that can be downloaded off the Internet for iPods and MP3 players.



U.S. STEEL GARY WORKS ECOLOGICAL RESTORATION

[SOURCE: THE RESTORATION REVOLUTION IN NORTHWEST INDIANA]



CORPORATE ADVOCATE LOCAL FED/STATE/REGIONAL EDUCATION

At the east end of what is still one of the largest steelmaking complexes of the world, steelworkers, school children, Gary city officials, and environmentalists with help from staffs of state and federal agencies are working together in a long-term voluntary project to restore black oak savanna habitat on 20 acres next to the Miller Woods unit of the Indiana Dunes National Lakeshore. Project partners include the U.S. Steel Company, which owns the property, Mighty Acorns and the Indiana Dunes Environmental Learning Center, the US Forest Services' Forest Innovation Project, and the Brownfield program of the Gary Environmental Affairs Department. School groups schedule work sessions that may include collecting seed or planting trees while learning about why the plants that are native to the area are important to wildlife and to water quality in the adjacent Grand Calumet River. Nature Conservancy and the Wildlife Habitat Council provide technical assistance. Part of the site was used formerly to store slag and iron ore. Restoration is allowing opportunity to research effects on changes in the soil as restoration continues. U.S. Steel also has contributed another 32 acres of black oak savanna nearby that was never used for industry to the National Park Service. The company also has several other cooperative restoration efforts underway with the City of Gary and the Gary school system.



Taltree Arboretum & Gardens

TALTREE ARBORETUM & GARDENS

[SOURCE: [HTTP://WWW.TALTREE.ORG](http://www.taltree.org)]



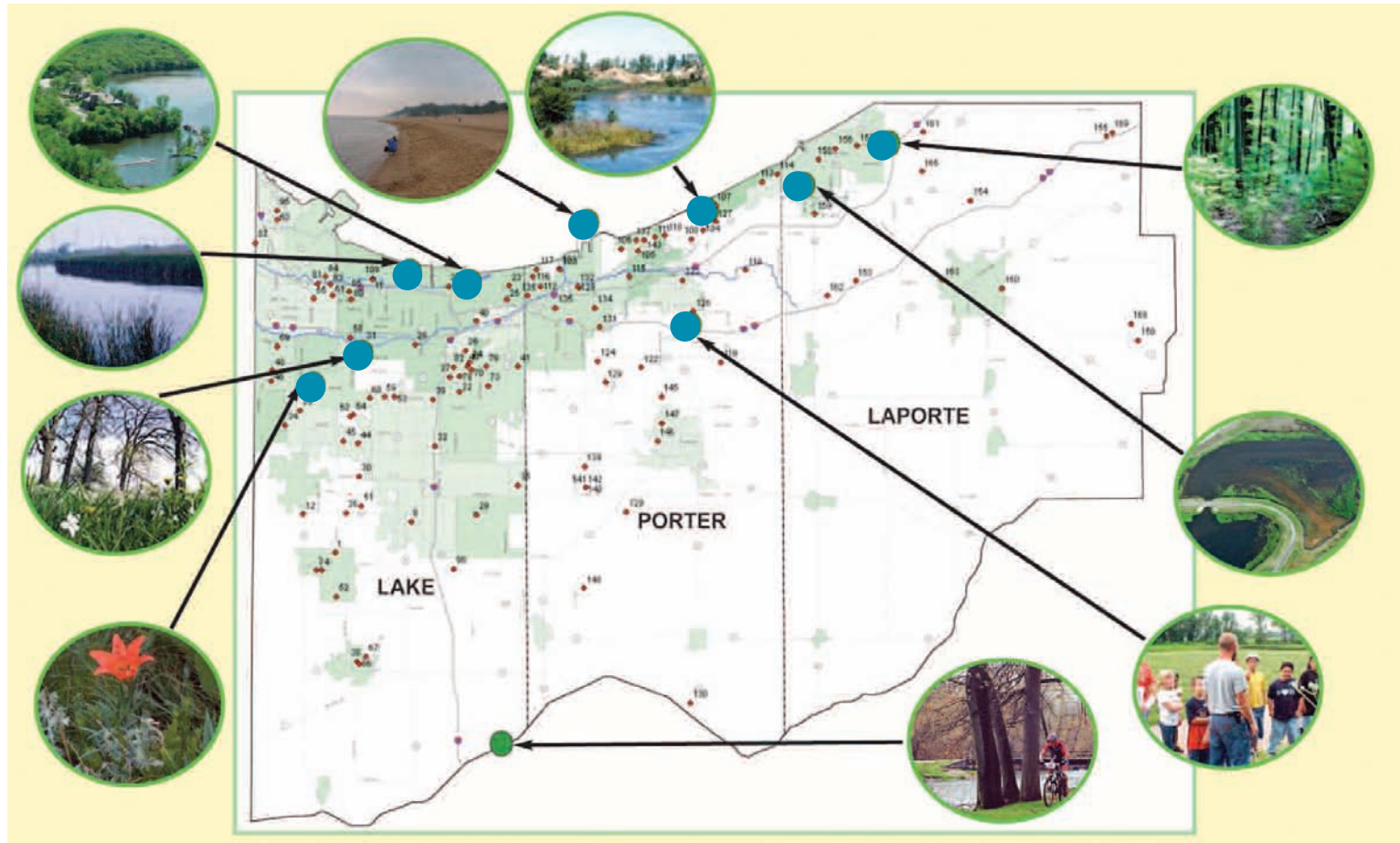
PRIVATE ADVOCATE FED/STATE/REGIONAL EDUCATION

Taltree Arboretum & Gardens is a remarkable asset to the South Lake Michigan region. Sitting on top of the Valparaiso moraine, Taltree boasts 300 acres of woody plant collections, gardens, wetlands, woodlands, and prairies. In 1997, Damien and Rita Gabis, founders of Taltree Arboretum & Gardens, realized that one of the problems of population growth was the loss of green space with its corresponding detrimental effect on people. Making plans to offer a solution, they envisioned a place where people would come to be refreshed and restored, find inspiration and creativity in nature, and learn about horticulture and ecology. Taltree's ongoing restoration and educational programs are possible through technical assistance and grants from a variety of sources including the U.S. Fish and Wildlife Service, NRCS's Conservation Reserve Program, the U.S. Forest Service, and NiSource Environmental Challenge Grants. Off-site, Taltree staff, US Steel, the Wildlife Habitat Council, The Nature Conservancy, and The Indiana Dunes Environmental Learning Center have partnered in a project to help plant trees and other native plants at a US Steel site and in the City of Gary. Gary school children visited the sites to learn about conservation and restoration. The students, Americorp volunteers, and representatives of the partnering agencies also planted trees in the Gary Ivanhoe area west of Ivanhoe Elementary School.

AN INVENTORY OF RESTORATION PROJECTS IN LAKE, PORTER & LAPORTE COUNTIES



GREENWAYS & BLUEWAYS
NORTHWEST INDIANA REGIONAL PLAN



The map above is based on the results of Phase One of the Restoration Inventory Project carried out under the direction of Lee Botts, Senior Advisor to the Quality of Life Council. As of September, 2006, the project identified 166 sites where restoration of natural areas was being carried out in the three-county region. Funding for the project was provided by a grant from

the Center for Regional Excellence at Indiana University Northwest. A full report, along with a detailed map of most restoration site locations, can be found online at www.nirpc.org/environment/restoration.htm. The poster was designed by staff at NIRPC, led by Graphic Director John Smith.

FOR MORE INFORMATION ABOUT THE PROJECT, PLEASE EMAIL LEE BOTTS AT LEEBOTTS@SBCGLOBAL.NET.

GREENWAYS & BLUEWAYS ASSISTANCE: FUNDING, EDUCATION & TRAINING

What resources exist to accomplish greenways and blueways throughout the region outside of internal sources? Fortunately, a large number of financial sources and educational and training programs exist today that can assist any public or private stakeholder in making a significant impact in advancing open space and water trail initiatives locally. These sources and programs are shown below in a series of matrices that can be utilized by each of the “Greenways Eight” stakeholder groups.

Each matrix has been laid out with the assistance program to the left, and all eight stakeholder groups to the right. If a particular stakeholder is eligible for that program – either public or private – their block is shaded accordingly. Each program is then alphabetically listed under each corresponding matrix with a brief description and link to their web sites. Please note that, although a stakeholder is identified for a program, this does not mean it would completely qualify. Further research at that program’s website will determine final eligibility.

There are two major types of matrices outlined – funding and education, project and training assistance. Both of these categories are further broken down into either public or private sources. The first set of matrices that follow involve funding opportunities.

Program Descriptions: Department of Natural Resources (DNR):

The mission of the Indiana Department of Natural Resources is to protect, enhance, preserve, and wisely use natural, cultural, and recreational resources for the benefit of Indiana's citizens through professional leadership, management, and education. To satisfy such a broad and diverse responsibility, the Department is divided into two distinct areas of responsibility: the Regulatory Management Team; and the Land Management Team. The Regulatory Management Team consists of the Divisions of Water; Entomology and Plant Pathology; Soil Conservation; Historic Preservation and Archeology; Reclamation; and Oil and Gas. Outdoor recreation and land management programs are housed within the Land

Management Team. That unit consists of State Parks and Reservoirs; Nature Preserves; Land Acquisition; Fish and Wildlife; Outdoor Recreation and Forestry. <http://www.in.gov/dnr>

1) **Classified Forest Program:** Specifically designed to help keep Indiana's private forests intact. It allows landowners with at least 10 acres of forest to set it aside and to remain as forest. In return for meeting program guidelines, landowners receive property tax breaks, forestry literature, and periodic free inspections by a professional forester while the forest is enrolled in the program. <http://www.in.gov/dnr/forestry/index.html>

GOVERNMENTAL FUNDING & INCENTIVE SOURCES STATE OF INDIANA

FUNDING TYPE	LOCAL & COUNTY GOVERNMENTS	PRIVATE PROPERTY OWNERS	CORPORATE PROPERTY OWNERS	LAND TRUSTS/ ADVOCACY	LINEAR CORRIDOR OWNERS	PRIVATE DEVELOPERS	FEDERAL/ STATE / NIRPC	INSTITUTIONS OF EDUCATION
1 CLASSIFIED FOREST PROGRAM (DNR)		YES	YES		YES	YES		
2 COMMUNITY & URBAN FORESTRY PROGRAM (DNR)	YES							
3 CONSERVATION RESERVE PROGRAM (DNR)		YES	YES		YES	YES		
4 FOREST IMPROVEMENT PROGRAM (DNR)		YES			YES	YES		
5 FOREST STEWARDSHIP INCENTIVE PROGRAM (DNR)		YES	YES		YES	YES		
6 INDIANA HERITAGE TRUST (DNR)	YES	YES	YES	YES	YES	YES	YES	YES
7 LAND & WATER CONSERVATION FUNDS (DNR)	YES							
8 RECREATIONAL TRAIL PROGRAM (DNR)	YES			YES			YES	
9 URBAN FORESTRY CONSERVATION GRANTS (DNR)	YES			YES				
10 COASTAL GRANTS (LMCP / DNR)	YES			YES	YES		YES	YES
11 COASTAL & ESTUARINE LAND CONSERVATION PROGRAM, OR CELCP (LMCP / DNR)	YES			YES			YES	
12 COMPLIANCE & TECHNICAL ASSISTANCE PROGRAM (IDEM)		YES	YES		YES			
13 ENVIRONMENTAL STEWARDSHIP PROGRAM (IDEM)		YES	YES		YES			
14 INDIANA BROWNFIELDS PROGRAM (IDEM)	YES						YES	
15 VOLUNTARY REMEDIATION PROGRAM (IDEM)		YES	YES		YES	YES		

2) Community and Urban Forestry

Program: Offers technical assistance to cities and towns interested in maintaining or improving this important resource. Communities can find out more about their urban forests by having a public tree inventory done and a management plan developed.

<http://www.in.gov/dnr/forestry/index.html>

3) Conservation Reserve Program:

Intended to remove erodible land from row crop production. Maximum refund rates range up to 50% of your cost as approved by a district forester. Program requires that you follow a plan approved by a district forester and that you participate for at least 10 years.

<http://www.in.gov/dnr/forestry/grants/assistshare.html>

4) Forest Improvement Program:

Concerned with the supply of wood products. Maximum refund rates range up to 50% of your cost as approved by a district forester. Program requires that you follow a plan approved by a district forester and that you participate for at least 10 years.

<http://www.in.gov/dnr/forestry/index.html>

5) Forest Stewardship Incentive Program:

Encourages stewardship for privately owned woodlands. Maximum refund rates range up to 50% of your cost as approved by a district forester. Program requires that you follow a plan approved by a district forester and that you participate for at least 10 years.

<http://www.in.gov/dnr/forestry/index.html>

6) Indiana Heritage Trust: The Indiana Heritage Trust buys land from willing sellers to protect Indiana's rich natural heritage for wildlife habitat and recreation. A major source of funding from this program comes from the sale of environmental license plates.

<http://www.in.gov/dnr/heritage/>

7) Land & Water Conservation Funds: A matching assistance program that provides grants for 50% of the cost for the acquisition and/or development of outdoor recreation sites and facilities such as multi-use trails.

<http://www.in.gov/dnr/outdoor/grants/lwcf.html>

8) Recreational Trail Program:

A matching assistance program that provides funding for the acquisition and/or development of multi-use recreational trail projects. Both motorized and non-motorized projects may qualify for assistance. Provides for 80% matching reimbursement assistance for eligible projects.

<http://www.in.gov/dnr/outdoor/grants/rtp.html>

9) Urban Forestry Conservation Grants:

The Urban Forest Conservation (UFC) grants are intended to help communities develop long-term programs to manage their urban forests. Grantees may conduct any project that helps to improve and protect trees and other associated natural resources in urban areas. Community projects that target program development, planning, and education are emphasized.

<http://www.in.gov/dnr/forestry/index.html>

Lake Michigan Coastal Program (LMCP) – a DNR Division:

The purpose of the Indiana Lake Michigan Coastal Program is to enhance the State'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 Indiana Lake Michigan Coastal Program relies upon existing laws and programs as the basis for achieving its purpose.

<http://www.in.gov/dnr/lakemich>

10) Coastal Grants: For projects to protect and restore natural, cultural, and historic resources in Indiana's Lake Michigan coastal region. Comprised of two components: (1) Large Scale Grant Program; and (2) Small Scale Grant Program. Projects are required to be located in the proposed Lake Michigan Coastal Program Area, which consists of the watershed area draining into Indiana's portion of Lake Michigan.

<http://www.in.gov/dnr/lakemich/grants/index.html>



11) Coastal & Estuarine Land Conservation Program (CELCP): Program gives priority to lands that can be effectively managed and protected, provide public access to coastal and estuarine resources, and have significant ecological value.

<http://www.in.gov/dnr/lakemich/grants/celcp.html>

Indiana Department of Environmental Management: (IDEM)

IDEM was established in 1986 and employs some of Indiana's most qualified engineers, scientists and environmental project managers specializing in air, land, pollution prevention and water quality issues. IDEM staff members provide quality environmental oversight and technical assistance in communities around the state.

<http://www.state.in.us/idem>

12) Compliance and Technical Assistance Program:

Confidential, environmental assistance to Indiana businesses. OPPTA provides many services, but the one most frequently used by Indiana businesses is the confidential phone assistance.

<http://www.state.in.us/idem/compliance/ctap/index.html>

13) Environmental Stewardship Program:

A voluntary, performance-based leadership program designed to recognize and reward Indiana regulated entities for going above and beyond current environmental regulations. In return for their exemplary environmental performance, these establishments will receive program incentives including regulatory flexibility, public recognition, and networking opportunities.

<http://www.in.gov/idem/prevention/esp/>

14) Indiana Brownfields Program: Site assessment and cleanup grants, which help pay for environmental investigation and remediation costs at identified brownfield sites, and low-interest loans are also available under this program. These loans are designed to help cover costs associated with brownfield remediation and redevelopment. Some of the eligible activities include soil and groundwater cleanup, demolition, asbestos and lead based paint abatement, as well as further investigation.

<http://www.in.gov/ifa/brownfields/>

15) Voluntary Remediation Program:

Provides for any site owner or prospective owner a mechanism to cleanup contaminated property. When the clean up is completed, the IDEM will issue a Certificate of Completion and the Governor's office will issue a Covenant Not To Sue.

<http://www.in.gov/idem/programs/land/vrp/#general>

GOVERNMENTAL FUNDING & INCENTIVE SOURCES FEDERAL

FUNDING TYPE	LOCAL & COUNTY GOVERNMENTS	PRIVATE PROPERTY OWNERS	CORPORATE PROPERTY OWNERS	LAND TRUSTS/ ADVOCACY	LINEAR CORRIDOR OWNERS	PRIVATE DEVELOPERS	FEDERAL/ STATE / NIRPC	INSTITUTIONS OF EDUCATION
1 AQUATIC ECOSYSTEM RESTORATION (ACE)				YES			YES	
2 AQUATIC PLANT CONTROL PROGRAM (ACE)							YES	YES
3 CHANNEL CLEARING & SHAGGING FOR FLOOD CONTROL (ACE)				YES			YES	
4 ESTUARY HABITAT RESTORATION PROGRAM (ACE)				YES			YES	
5 PROJECT MODIFICATION FOR IMPROVEMENT OF THE ENVIRONMENT (ACE)				YES			YES	
6 PLANNING ASSISTANCE TO STATES (ACE)							YES	
7 REDUCE IMPACTS OF TRANSPORTATION ON WETLANDS & ECOSYSTEM (DOT)							YES	YES
8 BROWNFIELD ASSESSMENT, CLEANUP AND REVOLVING LOAN FUNDING GRANTS (EPA)	YES			YES			YES	
9 ENVIRONMENTAL JUSTICE SMALL GRANTS – URBAN AREAS (EPA)				YES				
10 FIVE STAR RESTORATION MATCHING GRANTS (EPA AND OTHERS)	YES	YES	YES	YES	YES	YES	YES	YES
11 GREAT LAKES PROGRAM (EPA)	YES			YES			YES	
12 L.U.S.T.TRUST FUND (EPA)							YES	
13 POLLUTION PREVENTION ASSISTANCE GRANT (EPA)								YES
14 NATIONAL ESTUARY PROGRAM (EPA)	YES			YES			YES	
15 REGIONAL GEOGRAPHIC INITIATIVE (EPA)	YES	YES	YES	YES	YES	YES	YES	YES
16 TECHNICAL ASSISTANCE GRANTS (SUPERFUND) (EPA)				YES				
17 WETLAND PROGRAM DEVELOPMENT (EPA)	YES						YES	
18 COOPERATIVE ENDANGERED SPECIES CONSERVATION FUND (FWS)							YES	
19 FISH & WILDLIFE MANAGEMENT ASSISTANCE (FWS)	YES	YES	YES	YES	YES	YES	YES	
20 LANDOWNER INCENTIVE PROGRAM (FWS)		YES					YES	
21 MIGRATORY BIRD MANAGEMENT (FWS)	YES	YES	YES	YES	YES	YES	YES	
22 NORTH AMERICAN WETLANDS CONSERVATION GRANT PROGRAMS (FWS)	YES	YES	YES	YES	YES	YES	YES	
23 NATIONAL FISH & WILDLIFE FOUNDATION GENERAL MATCHING GRANT PROGRAM (FWS)	YES	YES	YES	YES	YES	YES	YES	YES
24 PARTNERS FOR FISH & WILDLIFE (FWS)		YES	YES	YES	YES	YES		
25 PRIVATE STEWARDSHIP GRANT PROGRAM (FWS)		YES	YES	YES	YES	YES		
26 CONGESTION MITIGATION & AIR QUALITY PROGRAM (INDOT/NIRPC)	YES				YES		YES	
27 SURFACE TRANSPORTATION PROGRAM (INDOT/NIRPC)	YES						YES	
28 TRANSPORTATION ENHANCEMENT PROGRAM (INDOT/NIRPC)	YES						YES	
29 CHALLENGE COST-SHARE PROGRAM (INT – FED LANDS ONLY)	YES	YES	YES	YES	YES	YES	YES	YES
30 COOPERATIVE CONSERVATION INITIATIVE CONSERVATION CHALLENGE COST-SHARE (INT – FED LANDS ONLY)	YES	YES	YES	YES	YES	YES	YES	YES
31 FEDERAL AID IN WILDLIFE RESTORATION (INT)							YES	
32 COASTAL SERVICES CENTER LANDSCAPE CHARACTERIZATION & RESTORATION PROGRAM (NOAA)	YES	YES	YES	YES	YES	YES	YES	
33 FISHERIES HABITAT RESTORATION/COMMUNITY-BASED PROGRAM (NOAA)	YES	YES	YES	YES	YES	YES	YES	YES
34 NATIONAL ESTUARINE RESEARCH RESERVE LAND ACQUISITION AND CONSTRUCTION PROGRAM (NOAA)							YES	YES
35 CONSERVATION SECURITY PROGRAM (NRCS)		YES						
36 CONSERVATION INNOVATION GRANTS (NRCS)		YES	YES	YES	YES	YES		
37 COOPERATIVE CONSERVATION PARTNERSHIP INITIATIVE (NRCS)				YES				
38 ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (NRCS)		YES						
39 FARM & RANCH LANDS PROTECTION PROGRAM (NRCS)	YES	YES	YES	YES	YES	YES	YES	
40 HEALTHY FORESTS RESERVE PROGRAM (NRCS)		YES	YES		YES	YES		
41 SOIL & WATER CONSERVATION ASSISTANCE (NRCS)		YES	YES	YES	YES	YES		
42 WETLAND RESERVE PROGRAM (NRCS)		YES					YES	
43 WILDLIFE HABITAT INCENTIVES PROGRAM (NRCS)	YES	YES	YES	YES	YES	YES	YES	
44 RAILBANKING PROGRAM (STB)	YES			YES			YES	

“Yes” signifies a stakeholder’s eligibility for that source of funding or assistance.

Program Descriptions: U.S. Army Corp of Engineers (USACE):

USACE is made up of approximately 34,600 Civilian and 650 military members. Our military and civilian engineers, scientists, and other specialists work hand-in-hand as leaders in engineering and environmental matters. Our diverse workforce of biologists, engineers, geologists, hydrologists, natural resource managers and other professionals meets the demands of changing times and requirements as a vital part of America's Army.
<http://www.usace.army.mil>

1) Aquatic Ecosystem Restoration: To restore degraded aquatic ecosystem structure, function, and dynamic processes to a less degraded, more natural condition that will involve consideration of the ecosystem's natural integrity, productivity, stability, and biological diversity. Focus on implementing aquatic ecosystem restoration and protection within streams, rivers, and wetlands throughout the country.
<http://www.mvp.usace.army.mil/environment/default.asp?pageid=113>

2) Aquatic Plant Control Program: To research and develop alternative methods to control obnoxious aquatic plants in rivers, harbors, and allied waters. The program is designed to deal primarily with week infestations of major economic influence. Focus on developing new economically efficient control technologies and implementing cost-share control actions to reduce economically significant impacts.
<http://www.usace.army.mil/publications/engregs/er1130-2-500/c-14.pdf>

3) Channel Clearing & Shagging for Flood Control: To plan for and provide removal of accumulated snags and other debris from waterways and to clear stream channels in the interest of flood control. Involves channel clearing and excavation, with limited embankment construction by the use of materials from the clearing operation to

reduce nuisance flood damages caused by debris and minor shoaling of rivers. Possible source to clear waterways for recreation purposes.
<http://www.nae.usace.army.mil/pservices/snag208.html>

4) Estuary Habitat Restoration Program: To carry out estuary habitat restoration projects and provide technical assistance. These projects must result in improving degraded estuaries or estuary habitat or creating estuary habitat, with the goal of attaining a self-sustaining system integrated into the surrounding landscape. Mitigation and other legally required restoration activities are not eligible for funding.
<http://www.usace.army.mil/estuary.html>

5) Project Modification for Improvement of the Environment: Modify existing water resource project facilities and areas to achieve ecosystem restoration objectives and construct new projects to restore areas degraded by Corps projects. Focus on restored wetlands, reopened oxbows, improved fish passage facilities, and projects that have restored the salinity balance in estuarine areas.
<http://www.nae.usace.army.mil/pservices/rest/1135.htm>

6) Planning Assistance to States: To assist states in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land. Projects to implement conservation and restoration; wetland evaluation; coastal zone management and protection; water supply and demand; flood plain management.
<http://www.lre.usace.army.mil/planning/assist.html>

U.S. Department of Transportation (DOT):

Serves the United States by ensuring a fast, safe, efficient, accessible, and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future.
<http://www.fhwa.dot.gov/environment/bankpol1.htm>
<http://www.fhwa.dot.gov>

7) Reduce Impact of Transportation on Wetlands & Ecosystem: To ensure that the ratio of wetland acres replaced per acre that are unavoidably affected by Federal-aid Highway projects is at least 1.5-to-1. Improves highway planning and project development to promote native habitat conservation to, protect wildlife populations, and to reduce impacts on land and water resources
<http://www.fhwa.dot.gov/environment/bankpol1.htm>

U.S. Environmental Protection Agency (EPA):

EPA employs 17,000 people across the country, including our headquarters offices in Washington, DC, 10 regional offices, and more than a dozen labs. Staff is highly educated and technically trained; more than half are engineers, scientists, and policy analysts. In addition, a large number of employees are legal, public affairs, financial, information management, and computer specialists. EPA is led by the Administrator, who is appointed by the President of the United States.
<http://www.epa.gov>

8) Brownfield Assessment, Cleanup, and Revolving Loan Funding Grants: Provides direct funding for brownfields assessment, cleanup, revolving loans, and environmental job training. To facilitate the leveraging of public resources, EPA's Brownfields Program collaborates with other EPA programs, other federal partners, and state agencies to identify and make available resources that can be used for brownfields activities. In addition to direct brownfields funding, EPA also provides technical information on brownfields financing matters.
<http://www.epa.gov/brownfields/pilot.htm>

9) Environmental Justice Small Grants – Urban Areas: Address environmental and health concerns in all communities with a focus on those with a percentage of minority and/or low-income populations. Provides financial assistance to eligible affected local community-based organizations working on or



planning to work on projects to address local, environmental and/or public health concerns.
http://www.epa.gov/compliance/environmentaljustice/grants/ej_smgrants.html

10) Five Star Restoration Matching Grants: Provides assistance to support community-based wetland, riparian, and coastal habitat restoration projects that build divers partnerships and foster local natural resource stewardship through education, outreach, and training activities.
<http://www.epa.gov/owow/wetlands/restore/5star/>

11) Great Lakes Program: To protect, maintain, and restore the chemical, biological, and physical integrity of the Great Lakes. Aimed at habitat protection and restoration projects. Website: <http://www.epa.gov/glnpo/>
<http://www.epa.gov/glnpo/>

12) Leaky Underground Storage Tank (LUST) Trust Fund: States use Trust Fund money to oversee corrective action by a responsible party and to clean up sites where no responsible party can be found.
<http://www.epa.gov/swrust1/tiffacts.htm>

13) Pollution Prevention Assistance Grant: To provide state programs with the ability to assist businesses and industries in identifying better environmental strategies and solutions for complying with federal and state environmental regulations.
<http://www.epa.gov/oppt/p2home/grants/ppis/ppis.htm>

GOVERNMENTAL FUNDING & INCENTIVE SOURCES FEDERAL

14) National Estuary Program: To restore the physical, chemical, and biological integrity of the nation's estuaries and coastal waterways by protecting and enhancing water quality and living resources. Restoration is a key element and is often enumerated in Comprehensive Conservation and Management Plans.
<http://www.epa.gov/owow/estuaries>

15) Regional Geographic Initiative: Supports innovative, geographically-based environmental projects that protect children's health, restore watersheds, provide for clean air, prevent pollution, and foster environmental stewardship.
<http://www.epa.gov/regional/rgi.htm>

16) Technical Assistance Grants (Superfund): Provides money for activities that help your community participate in decision-making at eligible Superfund sites. An initial grant up to \$50,000 is available to qualified community groups so they can contract with independent technical advisors to interpret and help the community understand technical information about its site.
<http://www.epa.gov/superfund/community/tag/index.htm>

17) Wetland Program Development: To achieve no-net-loss and net-gain of wetlands in the US by conserving and restoring wetland health through the development of effective and comprehensive wetland protection and management programs. Provides the opportunity to build restoration programs, train staff, and prioritize restoration work.
<http://www.epa.gov/owow/wetlands/grantguidelines/index.html>

U.S. Fish & Wildlife Service (FWS):

The U.S. Fish and Wildlife Service is a bureau within the Department of the Interior. Its mission is to work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. The vast majority of fish and wildlife habitat is on non-Federal lands.
<http://www.fws.gov>

18) Cooperative Endangered Species Conservation Fund: Provides funding to states to assist in the development of programs for the conservation of endangered and threatened species.
<http://www.endangered.fws.gov/grants/section6/>

19) Fish & Wildlife Management Assistance: Provides technical information and assistance to restore, manage, and conserve the health of nationally significant fish, marine mammals, wildfire, other aquatic animals, and, their habitats. For the restoration of degraded habitats, open up fish passages, remove invasive species, and planting native vegetation.
<http://fisheries.fws.gov/FWSMA/mamain.htm>

20) Landowner Incentive Program: Encourages private landowners to conserve and manage critical habitat. Protect habitat through conservation easements. Prevent rare or declining species from being "listed." Two types of grants exist for both state and landowner assistance.
<http://www.federalaid.fws.gov/apport/apport.html>

21) Migratory Bird Management: For projects that aim to restore habitat where bird populations are declining, on-the-ground activities to conserve migratory bird and other wildlife habitats, supporting regional-scale biological planning, project implementation and evaluation.
<http://www.fws.gov/birdhabitat/NAWMP/plans.htm>

22) North American Wetlands Conservation Grant Programs: Encourage voluntary public-private partnerships to conserve North American wetlands ecosystems for migratory birds and other wildlife. For the acquisition, restoration and enhancement of wetlands and associated uplands habitat.
<http://birdhabitat.fws.gov/NAWCA/grants.htm>

23) National Fish & Wildlife Foundation General Matching Grant Program: To foster cooperative partnerships to restore and maintain proper function to watersheds and landscapes.
<http://www.nfwf.org/programs/guidelines.htm>

24) Partners for Fish & Wildlife: To work with private landowners to restore, enhance, and create fish and wildlife habitat on private lands. Program allows for the restoration or enhancement of almost any type of degraded wildlife habitat on privately-owned lands, providing it will benefit migratory birds, anadromous fish, or listed species.
"<http://partners.fws.gov/>" <http://partners.fws.gov/>

25) Private Stewardship Grant Program: Provides grants and other assistance on a competitive basis to private individuals and/or groups engaged in private, voluntary conservation efforts that benefit endangered, threatened, candidate, and other at-risk species on private lands. Supports on-the-ground conservation primarily through management and restoration activities.
http://www.endangered.fws.gov/grants/private_stewardship.html

Indiana Department of Transportation (INDOT) & Northwestern Indiana Regional Planning Commission (NIRPC):

Its mission statement: "INDOT will plan, build, maintain, and operate a superior transportation system enhancing safety, mobility, and economic growth."
<http://www.in.gov/indot>

26) Congestion Mitigation & Air Quality Program (CMAQ): Purpose is to fund projects that aid in improving air quality in regions that qualify, such as Northwest Indiana. NIRPC accepts applications from eligible agencies in Lake, Porter and LaPorte Counties for funding consideration. Call-for-projects occur every two years. Off-road trails are eligible projects under CMAQ.
<http://www.fhwa.dot.gov/environment/cmaqpgs/index.htm>

27) Surface Transportation Program: Provides flexible funding that may be used by states and localities for projects on any Federal-aid highway. NIRPC dedicates 3-5% of its portion to non-motorized projects such as off-road trails. Call-for-projects occur every two years.
<http://www.fhwa.dot.gov/safetealu/factsheets/stp.htm>

28) Transportation Enhancement Program: Offers funding opportunities to help expand transportation choices and enhance the transportation experience through 12 eligible TE activities related to surface transportation, including pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, and environmental mitigation. NIRPC has yearly call-for-projects and ranks eligible applications for INDOT's final approval. Single largest grant aid program for off-road trail development in Northwest Indiana.
<http://www.fhwa.dot.gov/environment/te/index.htm>

U.S. Department of the Interior (INT):

The Department of the Interior is the nation's principal conservation agency. Its mission is to protect America's treasures for future generations; provide access to our nation's natural and cultural heritage; offer recreation opportunities; honor our trust responsibilities to American Indians Alaska Natives, and island communities; conduct scientific research; provide wise stewardship of energy and mineral resources; foster sound use of land and water resources; and conserve and protect fish and wildlife.
<http://www.doi.gov>

29) Challenge Cost-Share Program: To leverage federal dollars with private and state funding for conservation efforts benefiting resources on public lands administered by the Bureau of Land Management (BLM), the Fish and Wildlife Service (FWS) and the National Park Service (NPS).

<http://www.doi.gov/initiatives/conservation.html>

30) Cooperative Conservation Initiative Conservation Challenge Cost-Share: To strengthen citizen participation in conservation through partnership projects that restore the health of public lands, promote collaborative management, improve services to public land users, and restore upland, riparian, and wetland resources. Program available to BLS, FWS and NPS managed lands.

<http://www.doi.gov/initiatives/conservation.html>

31) Federal Aid in Wildlife Restoration: Provide funding for the selection, restoration, rehabilitation, and improvement of wildlife habitat, wildlife management research, and the distribution of information produced by the projects.

<http://federalaid.fws.gov/wr/fawr.html>

U.S. National Oceanic & Atmospheric Administration (NOAA):

From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration, and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product.

<http://www.noaa.gov>

32) Coastal Services Center Landscape Characterization & Restoration Program: To explore the interrelationships of a region's ecology, land use, socioeconomics, and management, and to publish this information in the electronic format for use by the coastal management community.

<http://www.csc.noaa.gov/lcr/>

33) Fisheries Habitat Restoration/Community-Based Program: Provides funds for small-scale, locally driven habitat restoration projects that foster natural resource stewardship within communities and build partnerships aimed at restoring anadromous fish, marine and estuarine habitat, as well as promote community involvement and an overall conservation-stewardship ethic.

http://www.nmfs.noaa.gov/habitat/restoration/funding_opportunities/funding.html

34) National Estuarine Research Reserve Land Acquisition and Construction Program: Assists states in development and operation or reserves, including research, monitoring, education, resource stewardship, land acquisition, and facilities construction.

<http://nerrs.noaa.gov/>

National Resources Conservation Service (NRCS):

The NRCS provides leadership in a partnership effort to help America's private land owners and managers conserve their soil, water, and other natural resources. NRCS employees provide technical assistance based on sound science and suited to a customer's specific needs. They provide financial assistance for many conservation activities. Participation in NRCS programs is voluntary.

<http://www.nrcs.usda.gov>

35) Conservation Security Program: A voluntary program to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on tribal and private working lands, including cropland, grassland, prairie land, improved pasture, and range land, as well as forested land that is an incidental part of an agriculture operation.

<http://www.nrcs.usda.gov/programs/csp/>

36) Conservation Innovation Grants (CIG): A voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while

leveraging Federal investment in environmental enhancement and protection, in conjunction with agricultural production. CIG enables NRCS to work with other public and private entities to accelerate technology transfer and adoption of promising technologies and approaches to address some of the Nation's most pressing natural resource concerns.

<http://www.nrcs.usda.gov/programs/cig/>

37) Cooperative Conservation Partnership Initiative: A voluntary program established to foster conservation partnerships that focus technical and financial resources on conservation priorities in watersheds and airsheds of special significance.

<http://www.nrcs.usda.gov/programs/ccpi/>

38) Environmental Quality Incentives Program: Provides a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land.

<http://www.nrcs.usda.gov/programs/eqip/>

39) Farm & Ranch Lands Protection Program: Provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with state, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners.

<http://www.nrcs.usda.gov/programs/frpp/>

40) Healthy Forests Reserve Program: A voluntary program established for the purpose of restoring and enhancing forest ecosystems to: 1) promote the recovery of threatened and endangered species, 2) improve biodiversity; and 3) enhance carbon sequestration.

<http://www.nrcs.usda.gov/programs/HFRP/ProgInfo/HFRPPProgramInfo.html>



41) Soil & Water Conservation Assistance

Program: A voluntary effort for farmers and ranchers that provides cost share and incentive payments to address threats to soil, water, and related natural resources, including grazing land, wetland, and wildlife habitat.

<http://www.nrcs.usda.gov/programs/swca/>

42) Wetland Reserve Program: A voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The USDA Natural Resources Conservation Service (NRCS) provides technical and financial support to help landowners with their wetland restoration efforts.

<http://www.nrcs.usda.gov/programs/wrp/>

43) Wildlife Habitat Incentives Program (WHIP):

A voluntary program for people who want to develop and improve wildlife habitat primarily on private land. Through WHIP USDA's Natural Resources Conservation Service provides both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat.

<http://www.nrcs.usda.gov/programs/whip/>

44) Railbanking Program (STB): Technically, the "National Trails System Act" was enacted by Congress to protect abandoned rail corridors from being lost forever. Eligible agencies seeking to maintain corridors for bike and pedestrian use can petition the STB and begin negotiations with railroad companies. If agreeable, the railroad may enter in agreements where it could either donate, lease, or sell property to agency. Program has been responsible for nearly 20% of all rails-to-trails in the United States since its enactment in 1983.

http://www.stb.dot.gov/stb/public/resources_railstrails.html

PRIVATE SECTOR FUNDING & INCENTIVE SOURCES

FUNDING TYPE	LOCAL & COUNTY GOVERNMENTS	PRIVATE PROPERTY OWNERS	CORPORATE PROPERTY OWNERS	LAND TRUSTS/ ADVOCACY	LINEAR CORRIDOR OWNERS	PRIVATE DEVELOPERS	FEDERAL/ STATE / NIRPC	INSTITUTIONS OF EDUCATION
1 THE CONSERVATION FUND REVOLVING LOAN (TCF)	YES	YES	YES	YES	YES	YES	YES	YES
2 THE CONSERVATION FUND GREAT LAKES FUND (TCF)	YES	YES	YES	YES	YES	YES	YES	YES
3 LAND TRUST LOAN PROGRAM (TCF)				YES				
4 KODAK AMERICAN GREENWAYS AWARDS/GRANTS (TCF)	YES			YES				
5 CONSERVATION EASEMENTS (TNC)		YES	YES		YES	YES		
6 CONSERVATION BUYER PROGRAM (TNC)		YES	YES		YES	YES		
7 KEYSTONE INITIATIVE GRANTS (NFWF)	YES	YES	YES	YES	YES	YES		
8 ACRES FOR AMERICA (NFWF)	YES	YES	YES	YES	YES	YES		
9 NATIONAL PLANT CONSERVATION INITIATIVE (NFWF)	YES	YES	YES	YES	YES	YES		
10 PULLING TOGETHER INITIATIVE (NFWF)	YES	YES	YES	YES	YES	YES	YES	YES
11 CONSERVATION EASEMENTS (DU)		YES	YES		YES	YES		
12 REVOLVING LAND STRATEGY (DU)		YES	YES		YES	YES		
13 CARBON SEQUESTRATION PROGRAM (DU)		YES	YES		YES	YES		
14 ARCELORMITTAL FOUNDATION				YES				
15 BP COMMUNITY OUTREACH PROGRAM				YES				YES
16 CORPORATE CAMPAIGN FOR MIGRATORY BIRD CONSERVATION (WHC & PARTNERS)	YES	YES	YES		YES	YES	YES	
17 DONNELLY FOUNDATION GRANTS				YES			YES	
18 FIVE STAR RESTORATION MATCHING GRANTS (WHC AND OTHERS)	YES	YES	YES	YES	YES	YES	YES	YES
19 GREENWAYS FOUNDATION (OF INDIANA)	YES	YES	YES	YES	YES	YES	YES	YES
20 LAKE HERITAGE FUND (LAKE COUNTY ONLY)	YES	YES	YES		YES	YES		
21 LAPORTE COUNTY CONSERVATION TRUST	YES	YES	YES		YES	YES		
22 LEGACY FOUNDATION, INC. OF LAKE COUNTY	YES		YES	YES	YES			YES
23 NIPSCO ENVIRONMENTAL CHALLENGE FUND		YES		YES		YES		
24 NISOURCE CHARITABLE FOUNDATION GRANTS				YES				
25 PORTER COUNTY COMMUNITY FOUNDATION	YES	YES	YES		YES	YES		YES
26 SAVE THE DUNES CONSERVATION FUND	YES	YES	YES		YES	YES	YES	YES
27 SHIRLEY HEINZE LAND TRUST		YES	YES		YES	YES		
28 TRUST FOR PUBLIC LANDS LAND ACQUISITION & CONVEYANCE	YES	YES	YES		YES	YES	YES	
29 UNITED STATES STEEL FOUNDATION, INC.				YES				
30 WATERFOWL USA ENDOWMENT FUND – NW INDIANA CHAPTER		YES	YES	YES	YES	YES		
31 WOODLAND SAVANA LAND CONSERVANCY		YES	YES		YES	YES		

“Yes” signifies a stakeholder’s eligibility for that source of funding or assistance.



Program Descriptions: The Conservation Fund (TCF):

The Conservation Fund is the nation's foremost environmental nonprofit dedicated to protecting America's most important landscapes and waterways for future generations. The Conservation Fund pioneers a balanced, non-advocacy, non-membership approach to conservation: one that blends environmental and economic goals and objectives. Since its founding in 1985, the fund has helped its partners safeguard wildlife habitat, working farms and forests, community greenspace, and historic sites totaling nearly six million acres nationwide.

<http://www.conservationfund.org>

1) The Conservation Fund Revolving Loan:

Provides ready capital to purchase top priority lands for conservation across the country and bridge financing to local organizations for their important land conservation priorities. All properties are purchased from willing sellers at or below fair market value.

http://www.conservationfund.org/revolving_fund

2) The Conservation Fund Great Lakes Fund:

Provides technical assistance and bridge financing to nonprofit land trusts working to preserve resources within the Great Lakes Basin. Short-term loans are made to public agencies and nonprofit land trusts for the conservation of coastal and freshwater sites of high ecological significance.

<http://www.conservationfund.org/node/472>

3) Land Trust Loan Program: The Conservation Fund provides 15 percent of its conservation capital base to land trusts as bridge financing, enabling the groups to acquire properties immediately, but raise funds over time.

<http://www.conservationfund.org/node/487>

4) Kodak American Greenways

Awards/Grants: To stimulate the planning and design of greenways in communities throughout America. Made possible by a generous grant from Eastman Kodak, the program also honors groups and individuals whose ingenuity and creativity foster the creation of greenways.

<http://www.conservationfund.org/node/245>

The Nature Conservancy (TNC):

The Nature Conservancy's mission is to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

<http://www.nature.org/initiatives/>

<http://www.nature.org>

TNC has six HYPERLINK priority conservation initiatives to address the principal threats to conservation at the sites where we work, focusing on:

Fire

<http://www.nature.org/initiatives/fire/>

Climate Change

<http://www.nature.org/initiatives/climatechange/>

Freshwater

<http://www.nature.org/initiatives/freshwater/>

Marine

<http://www.nature.org/initiatives/marine/>

Invasive Species

<http://www.nature.org/initiatives/invasivespecies/>

Protected Areas

<http://www.nature.org/initiatives/protectedareas/>

Forests

<http://www.nature.org/initiatives/forests/>

5) Conservation Easements: A voluntary, legally binding agreement that limits certain types of uses or prevents development from taking place on a piece of property now and in the future, while protecting the property's ecological or open-space values.

<http://www.nature.org/aboutus/howwework/conservationmethods/privatelands/conservationeasements/>

6) Conservation Buyer Program: Land is bought in critical conservation areas, then appropriate conservation easements are designed for the land to protect natural features, and finally the land is resold to individuals dedicated to the conservation of the land and supportive of the protective conservation easement.

<http://www.nature.org/aboutus/howwework/conservationbuyer/>

National Fish & Wildlife Foundation (NFWF):

A nonprofit established by Congress in 1984, the National Fish and Wildlife Foundation sustains, restores, and enhances the Nation's fish, wildlife, plants, and habitats. Through leadership conservation investments with public and private partners, NFWF is dedicated to achieving maximum conservation impact by developing and applying best practices and innovative methods for measurable outcomes.

7) Keystone Initiative Grants: The foundation awards matching grants under their Keystone Initiatives to achieve measurable outcomes in the conservation of fish, wildlife, plants, and the habitats on which they depend.

http://www.nfwf.org/AM/Template.cfm?Section=Keystone_Initiatives_Grant_Guidelines

8) Acres for America: A partnership between Wal-Mart Stores, Inc. and the National Fish and Wildlife Foundation. The Acres for America

program was established to provide funding for projects that conserve important habitat for fish, wildlife, and plants through acquisition of interest in real property.

http://www.nfwf.org/AM/Template.cfm?Section=Browse_All_Programs

9) Native Plant Conservation Initiative: A strong preference is given for "on-the-ground" projects that involve local communities and citizen volunteers in the restoration of native plant communities. Funds cannot be used for direct land acquisition costs or political advocacy.

http://www.nfwf.org/AM/Template.cfm?Section=Browse_All_Programs

10) Pulling Together Initiative: To prevent, manage, or eradicate invasive and noxious plants through a coordinated program of public/private partnerships and to increase public awareness of the adverse impacts of invasive and noxious plants.

http://www.nfwf.org/AM/Template.cfm?Section=Browse_All_Programs

Ducks Unlimited:

11) Conservation Easements: A perpetual conservation easement allows a landowner to protect key natural habitats of a property while continuing to use the area for economic gain or recreation.

<http://www.ducks.org/Conservation/LandProtection/2825/ConservationEasements.html>

12) Revolving Land Strategy: All of the dollars used to acquire properties are obtained from gifts specified for land purchase. Additionally, dollars generated from each land sale are then used to purchase other critical breeding waterfowl habitat on the market that is deemed to be under threat.

<http://www.ducks.org/Conservation/LandProtection/2833/RevolvingLandsProgram.html>



PRIVATE SECTOR FUNDING & INCENTIVE SOURCES

13) Carbon Sequestration Program: Objective is to help guide industry and landowners in taking advantage of the growing environmental market by assembling carbon offset credits associated with ecologically sound forest or grassland restoration work on private lands.

<http://www.ducks.org/Conservation/EcoAssets/1306/CarbonSequestration.html>

General Funding Sources:

14) ArcelorMittal Foundation: Promotes ArcelorMittal's commitment to society and Sustainable Development, focusing in particular on the communities where it operates.

<http://www.arcelormittal.com>

15) BP Community Outreach Program: Builds a sense of teamwork among employees while contributing toward the social progress of the communities in which we work.

<http://www.bp.com>

16) Corporate Campaign for Migratory Bird Conservation (Wildlife Habitat Council): A corporate-led initiative designed to preserve and restore habitat on corporate lands, in cooperation with other public and private landowners, along critical migratory bird routes in the Western Hemisphere.

<http://www.wildlifehc.org/migratorybirds/>

17) Gaylord & Dorothy Donnelly Foundation:

Supports a wide range of causes including conservation and wildlife, social welfare, education, art and cultural institutions, health care and animal welfare. The Donnelly Foundation is main financial contributor to the Northwest Indiana Greenways & Blueways Plan.

<http://www.gddf.org/#>

18) Five Star Restoration Matching Grants (Wildlife Habitat Council and others): Provides assistance to support community-based wetland, riparian, and coastal habitat restoration projects that build diverse partnerships and foster local natural resource stewardship through education, outreach, and training activities.

<http://www.epa.gov/owow/wetlands/restore/5star/>

19) Greenways Foundation (of Indiana): A charitable trust working to promote the growth, enhancement, and use of Indiana greenways. Granting opportunities are available.

<http://www.indygreenways.org/>

20) Lake Heritage Parks Foundation:

Charitable arm of the Lake County Parks and Recreation Department (LCPD). Accepts donations of property for active and passive recreation sites managed by the LCPD.

<http://www.lakecountyparks.com>

21) LaPorte County Conservation Trust:

Dedicated solely to maintaining, preserving, and protecting the natural resources and biodiversity of LaPorte County, Indiana.

<http://www.lpcct.org/>



22) Legacy Foundation, Inc. of Lake County:

Grants are available for protecting and enhancing the environment to eligible recipients.

<http://www.legacyfoundationlakeco.org/grantpages/index.htm>

23) NIPSCO Environmental Challenge Fund:

Small granting program that supports local natural resource and wildlife improvement projects and related educational and recreational efforts.

http://www.nisource.com/commitment_ecf.asp

24) NiSource Charitable Foundation Grant:

Seeks to preserve community strengths, address critical needs, and build resources for the future by extending financial and human resources. Environmental projects are eligible under this program.

http://www.nisource.com/commitment_charitable.asp

25) Porter County Community Foundation:

Seeks to enhance the quality of life in Porter County by providing funds through an open grant-making process for humanitarian, cultural, educational and environmental purposes. Grants are considered in three categories: Program Enhancement, Program Operations, and Capital Campaign Support.

<http://www.portercountyfoundation.org>

26) Save the Dunes Conservation Fund: 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. They seek to outreach to landowners and acquire new land for protection and restoration.

http://www.savedunes.org/about/conservation_fund/

27) Shirley Heinze Land Trust: A non-profit organization was endowed in 1981 as a charitable trust to preserve and protect the unique ecosystems of the Indiana Dunes region. The Heinze Land Trust acquires and preserves natural lands in the southern Lake Michigan watershed. Current holdings cover the entire range of habitat communities.

<http://www.heinzetrust.org/>

28) Trust for Public Lands Land Acquisition & Conveyance:

Serves as an independent agent, buying land from willing landowners and then transferring it to public agencies, land trusts, or other groups for protection. In some instances, TPL will protect land through conservation easements, which restrict development but permit traditional uses such as farming and ranching.

<http://www.tpl.org> www.tpl.org

29) United States Steel Foundation, Inc.:

Grants are awarded in three programs: education; safety, health and human services; and public, cultural and scientific affairs. Only non-profits are eligible for foundation funding.

<http://www.uss.com/corp/ussfoundation/>

30) Waterfowl USA Endowment Fund – NW Indiana Chapter:

Or "Local Bucks for Local Ducks." Raises funds for the purchase, protection, restoration, and enhancement of wetlands and waterfowl habitat in the Northwest Indiana area.

<http://www.nwiwusa.org/>

31) Woodland Savanna Land Conservancy:

A non-profit land trust based in Valparaiso that focuses on protecting woodlands, savannas, wetlands, farms, and archaeological sites in and around Porter County. The Conservancy accepts voluntary donations of either title or conservation easements from property owners interested in preserving their family lands.

<http://www.lakenetwi.org/member/woodland/about.html>

EDUCATION, PROJECT & TRAINING ASSISTANCE GOVERNMENT SOURCES

PROGRAM & ASSISTANCE RESOURCES	LOCAL & COUNTY GOVERNMENTS	PRIVATE PROPERTY OWNERS	CORPORATE PROPERTY OWNERS	LAND TRUSTS/ ADVOCACY	LINEAR CORRIDOR OWNERS	PRIVATE DEVELOPERS	FEDERAL/ STATE / NIRPC	INSTITUTIONS OF EDUCATION
1 BROWNFIELDS AND LAND REVITALIZATION TECHNOLOGY SUPPORT CENTER (EPA)	YES	YES	YES	YES	YES	YES	YES	YES
2 ENVIRONMENTAL EDUCATION GRANTS (EPA)				YES				YES
3 ENVIRONMENTAL EDUCATION AND TRAINING PARTNERSHIP (EPA)				YES				YES
4 EPA'S ENVIRONMENTAL EDUCATION PROGRAMS	YES	YES	YES	YES	YES	YES	YES	YES
5 ENVIRONMENTAL FINANCE PROGRAM	YES						YES	
6 TECHNOLOGY INNOVATION PROGRAM (EPA)	YES	YES	YES	YES	YES	YES	YES	YES
7 INDIANA DUNES ENVIRONMENTAL EDUCATION PROGRAMS (NPS)				YES				YES
8 RIVERS, TRAILS & CONSERVATION ASSISTANCE (NPS)	YES	YES	YES	YES	YES	YES	YES	YES
9 LearnNPS								YES
10 LAND OWNER & COMMUNITY ASSISTANCE (DNR)	YES	YES	YES	YES	YES	YES	YES	YES
11 NATURAL RESOURCES EDUCATION CENTER (DNR)								YES
12 WILDLIFE BIOLOGISTS (DNR)	YES	YES	YES	YES	YES	YES	YES	YES
13 WILDLIFE HABITAT COST-SHARE PROGRAM (DNR)		YES		YES				
14 CONSERVATION TECHNICAL ASSISTANCE (NRCS)		YES						
15 COUNTY SOIL & WATER CONSERVATION DISTRICTS (NRCS)	YES	YES	YES	YES	YES	YES	YES	YES
16 CONSERVATION EDUCATION CURRICULUM (USDA FOREST SERVICE)								YES
17 IDEM PROGRAMS	YES	YES	YES	YES	YES	YES	YES	YES
18 COUNTY SOLID WASTE MANAGEMENT DISTRICTS	YES	YES	YES	YES	YES	YES	YES	YES
19 LAKE COUNTY PARKS TEACHER & GROUP PROGRAMS				YES				YES
20 LAPORTE COUNTY PARKS ENVIRONMENTAL EDUCATION				YES				YES
21 NIRPC ENVIRONMENTAL EDUCATION OUTREACH	YES			YES			YES	YES
22 PURDUE UNIVERSITY COOPERATIVE EXTENSION SERVICE	YES	YES	YES	YES	YES	YES	YES	YES

"Yes" signifies a stakeholder's eligibility for that source of funding or assistance.

Program Descriptions: U.S. Environmental Protection Agency (EPA):

1) Brownfields and Land Revitalization Technology Support Center: To provide information about the use of innovative site investigation and cleanup technologies and strategies at brownfields and other land revitalization sites.
<http://www.brownfieldstsc.org/>

2) Environmental Education Grants: Supports environmental education projects that enhance the public's awareness, knowledge, and skills to help people make informed decisions that affect environmental quality. EPA awards grants each year based on funding appropriated by Congress
<http://www.epa.gov/enviroed/grants.html>

3) Environmental Education and Training Partnership: Program delivers environmental education training and support to education professionals across the U.S. The consortium includes universities and non-profit organizations that are nationally recognized leaders in education and environmental education.
<http://www.epa.gov/enviroed/eetap.html>

4) EPA's Environmental Education Programs: The EPA offers a vast array of training and education resources for teachers, advocate groups, and individuals. A listing of community service project ideas for school-age children is also highlighted.
<http://www.epa.gov/enviroed/>

5) Environmental Finance Program: Provides financial technical assistance to the regulated community and advice and recommendations to the Agency on environmental finance issues, trends, and options. Broad-based resource network that links private and public sector participants together to help disseminate information to affected local and state governments.
<http://www.epa.gov/efinpage/>

6) Technology Innovation Program: Provides information about characterization and treatment technologies for the hazardous waste remediation community. It offers technology selection tools and describes programs, organizations, publications for federal and state personnel, consulting engineers, technology developers and vendors, remediation contractors, researchers, community groups, and individual citizens.
<http://www.epa.gov/tio/>

National Park Service (NPS):

7) Indiana Dunes Environmental Education Programs:

The National Lakeshore offers programs at various locations throughout Lake and Porter Counties. Teacher guides, pre-visit classroom activities, and other resources are available to make visits more enjoyable or just to learn more about this unique national park site. <http://www.nps.gov/indu/forteachers/index.htm>

8) Rivers, Trails & Conservation Assistance:

The community assistance arm of the National Park Service. Staff provides technical assistance to community groups and local, state, and federal government agencies so they can conserve rivers, preserve open space, and develop trails and greenways.

<http://www.nps.gov/ncrc/programs/rtca/>

9) LearnNPS: An educational web site for teachers, students, and Web Rangers. Web Ranger Kids can find information on the NPS parks before they visit, complete a series of activities to qualify for an award, and send Web Ranger e-cards.

<http://www.nps.gov/learn/home.htm>

Indiana Department of Natural Resources (DNR):

10) Land Owner & Community Assistance:

Extensive set of online resources that cover a large variety of topics involving fish and wildlife, parks and recreation, water resources, forests, plant and pest problems, and soils and minerals.

<http://www.in.gov/dnr/>

11) Natural Resources Education Center:

Houses five major education initiatives: GoFishIN; Hoosier Riverwatch; Project Learning Tree; Project WET; and Project WILD. Several resources are also available on loan.

<http://www.in.gov/dnr/nrec/>

12) Wildlife Biologists: Research and technical investigations are performed by scientists educated in wildlife biology, zoology, botany, chemistry, mathematics, or various combinations of these disciplines. Service provided by the DNR on request.

<http://www.in.gov/dnr/fishwild/huntguide1/wbiolo.htm>

13) Wildlife Habitat Cost-Share Program: A financial assistance program that reimburses a portion of the expenses incurred by a landowner for developing wildlife habitat, specified in management plan prepared by the District Wildlife Biologist.

http://www.in.gov/dnr/fishwild/hunt/cost_share.pdf

National Resources Conservation Service (NRCS):

14) Conservation Technical Assistance:

Provides technical assistance supported by science-based technology and tools to help people conserve, maintain, and improve their natural resources. The CTA Program provides the technical capability, including direct conservation planning, design, and implementation assistance, that helps people plan and apply conservation on the land.

<http://www.nrcs.usda.gov/programs/cta/>

15) County Soil & Water Conservation

Districts: Help Indiana residents to conserve land, water, forests, wildlife, and related natural resources. Provides educational outreach to local schools through programs and materials on loan. There is a district office in each one of Indiana's 92 counties. A general web site for all Indiana SWCD offices is:

<http://iaswcd.org/>



General Resources:

16) Conservation Education Curriculum

(USDA Forest Service): To connect people to the land by providing them with the tools they need to take informed actions related to sustaining natural and cultural resources. Helps people of all ages understand and appreciate our country's natural resources and how to conserve those resources for future generations.

<http://www.na.fs.fed.us/spfo/ce/index.cfm>

17) IDEM Environmental Education: Ideas for educating students and working together to improve the environment we share. From lesson plans to tips for healthier classrooms, these links are designed for educators and administrators but will be useful for anyone interested in environmental education.

http://www.in.gov/idem/your_environment/education/index.html

18) County Solid Waste Management

Districts: These districts exist to proactively reduce the amount of waste destined for landfills and incinerators. In their mission, each district in Lake, Porter, and LaPorte Counties offers education programs for schools – either on-site or at district offices and facilities.

Lake County SWMD:

<http://www.lcswmd.com>

LaPorte County SWMD:

["http://www.solidwastedistrict.com"](http://www.solidwastedistrict.com) Recycling and Waste Reduction District of Porter County:

<http://www.itmeanstheworld.org>

19) Lake County Parks Teacher & Group Programs:

Several activities at county park properties exist for teachers and school children of all ages including nature hikes, water resource education, GPS training, and interpretive programs.

<http://www.lakecountyparks.com/Teachers.htm>

20) LaPorte County Parks Environmental Education:

Offers a large variety of programs and special events. Their Naturalist staff is committed to quality environmental education that provides thousands of students throughout the county and beyond with the tools to better care for the earth.

<http://www.laportecountyparks.org/programs.html>

21) NIRPC Environmental Department:

Strives for improvement in both water and air quality for the entire Northwest Indiana region. Provides educational tools, programs, and hosts the Environmental Management Policy Committee, which represents the region's premiere forum on matters of conservation, water quality, and bringing together diverse partnerships toward the betterment of the regional ecology.

<http://nirpc.org/environment/environment.htm>

22) Purdue University Cooperative Extension Service:

Provides research advice from Indiana's land grant colleges on plant, insects, and environmental issues. The Porter County office offers the Indiana Master Naturalist Program certificate.

<http://www.ces.purdue.edu/porter/>

<http://www.ces.purdue.edu/lake/>

<http://www.ces.purdue.edu/laporte/>

EDUCATION, PROJECT & TRAINING ASSISTANCE PRIVATE SOURCES

PROGRAM & ASSISTANCE RESOURCES	LOCAL & COUNTY GOVERNMENTS	PRIVATE PROPERTY OWNERS	CORPORATE PROPERTY OWNERS	LAND TRUSTS/ ADVOCACY	LINEAR CORRIDOR OWNERS	PRIVATE DEVELOPERS	FEDERAL/ STATE / NIRPC	INSTITUTIONS OF EDUCATION
1 CORPORATE LANDS FOR LEARNING (WHC)		YES	YES	YES	YES	YES		YES
2 BACKYARD CONSERVATION (WHC)	YES	YES	YES	YES	YES	YES	YES	YES
3 WILDLIFE AT WORK (WHC)	YES	YES	YES	YES	YES	YES	YES	YES
4 WINGS OF WONDER (WHC)		YES	YES	YES	YES	YES		YES
5 CONNECT GRANTS FOR CULTURALLY-DIVERSE COMMUNITIES (LNT)				YES				
6 LEAVE NO TRACE RESOURCES	YES	YES	YES	YES	YES	YES	YES	YES
7 PACKING WITH PEAK FUND (LNT)	YES	YES		YES			YES	YES
8 STATE ADVOCATE PROGRAM (LNT)	YES	YES	YES	YES	YES	YES	YES	YES
9 TOOLS FOR TEACHING FUND (LNT)	YES	YES	YES	YES	YES	YES	YES	YES
10 AMERICAN CANOE ASSOCIATION	YES	YES	YES	YES	YES	YES	YES	YES
11 AMERICAN HIKING SOCIETY	YES	YES	YES	YES	YES	YES	YES	YES
12 ASSOCIATION FOR THE WOLF LAKE INITIATIVE	YES	YES	YES	YES	YES	YES	YES	YES
13 AUDUBON SOCIETY	YES	YES	YES	YES	YES	YES	YES	YES
14 CHICAGO WILDERNESS CONSORTIUM	YES	YES	YES	YES	YES	YES	YES	YES
15 CENTER FOR WATERSHED PROTECTION	YES	YES	YES	YES	YES	YES	YES	YES
16 THE CONSERVATION FUND LEADERSHIP NETWORK	YES	YES	YES	YES	YES	YES	YES	YES
17 DUCKS UNLIMITED	YES	YES	YES	YES	YES	YES	YES	YES
18 HOOSIER ENVIRONMENTAL COUNCIL	YES	YES	YES	YES	YES	YES	YES	YES
19 INDIANA-ILLINOIS SEA GRANT								YES
20 INDIANA WILDLIFE FEDERATION	YES	YES	YES	YES	YES	YES	YES	YES
21 IZAAK WALTON LEAGUE	YES	YES	YES	YES	YES	YES	YES	YES
22 JF NEW (FEE-BASED CONSULTANTS)	YES	YES	YES	YES	YES	YES	YES	YES
23 LEGACY FOUNDATION, INC. OF LAKE COUNTY – GRANTSTATION			YES					
24 NATIONAL TRAILS TRAINING PARTNERSHIP – AMERICAN TRAILS	YES	YES	YES	YES	YES	YES	YES	YES
25 THE NATURE CONSERVANCY	YES	YES	YES	YES	YES	YES	YES	YES
26 NORTHWEST INDIANA FORUM	YES		YES		YES	YES	YES	
27 OPENLANDS PROJECT	YES	YES	YES	YES	YES	YES	YES	YES
28 SIERRA CLUB	YES	YES	YES	YES	YES	YES	YES	YES
29 TRAIL DART & TRAINING (RTC)	YES	YES	YES	YES	YES	YES	YES	YES
30 TRUST FOR PUBLIC LANDS	YES	YES	YES	YES	YES	YES	YES	YES

“Yes” signifies a stakeholder’s eligibility for that source of funding or assistance.



Program Descriptions: Wildlife Habitat Council (WHC):

The Wildlife Habitat Council (WHC) is a nonprofit, non-lobbying group of corporations, conservation organizations, and individuals dedicated to restoring and enhancing wildlife habitat. Created in 1988, WHC helps large landowners, particularly corporations, manage their unused lands in an ecologically sensitive manner for the benefit of wildlife. Habitat projects on these lands, which vary in nature and scope, are corporate-driven cooperative efforts between management, employees, community members, local conservation groups, and local, state and federal agencies. <http://www.wildlifehc.org>

1) Corporate Lands for Learning: Opens doors to experience innovative teaching and learning techniques and the opportunity to involve your community in various conservation efforts. Program utilizes corporately-owned open lands to educate school children on environmental ethics. <http://www.wildlifehc.org/corporatelands/>

2) Backyard Conservation: Demonstrates how conservation practices that help conserve and improve natural resources on agricultural land across the country can be adapted for use around your home. These practices help the environment and can make your yard more attractive and enjoyable. <http://www.wildlifehc.org/managementtools/backyard.cfm>

3) Wildlife at Work: A proven method for developing voluntary programs that achieves habitat enhancement, increase employee morale, improve community relations, and reduce costs. <http://www.wildlifehc.org/wildlifeatwork/index.cfm>

4) Wings of Wonder: A site-based environmental education program developed by and for *Corporate Lands for Learning* sites. Hoosier Environmental Council Website: <http://www.hecweb.org>
http://www.wildlifehc.org/threerivers/wings_of_wonder/

Leave No Trace (LNT):

5) Connect Grants for Culturally-Diverse Communities: To engage educators and reach diverse communities with Leave No Trace education. <http://www.lnt.org/programs/connectgrant/index.html>

6) Leave No Trace Resources: Exhaustive list of all programs and resources available through LNT. <http://www.lnt.org/training/resources/index.html>

7) Packing with Peak Fund: The PEAK program is based on the seven principles of Leave No Trace and aims to teach minimum impact outdoor skills and ethics to children ages 6 to 12 with elements of experiential and environmental education. <http://www.lnt.org/programs/peak/PackingwithPEAKFund.html>

8) State Advocate Program: Assists interested Leave No Trace educators and volunteers with their local effort to promote and teach minimum impact outdoor ethics. These active volunteers are a foundation of the Leave No Trace program because they coordinate outreach, education and training in their respective states. <http://www.lnt.org/programs/advocate/index.html>

9) Tools for Teaching Fund: In response to the number of requests from organizations in need of Leave No Trace materials, training and information, the Leave No Trace Center for Outdoor Ethics has established a grant giving program. <http://www.lnt.org/programs/grants/index.html>

General Resources:

10) American Canoe Association: A nationwide organization that is in service to the broader paddling public by providing education on matters related to paddling, supporting stewardship of the paddling environment, and enabling programs and events to support paddlesport recreation. <http://www.americancanoe.org>

11) American Hiking Society: The only national organization dedicated to promoting and protecting America's hiking trails, the natural areas that surround them, and the hiking experience itself. Chief sponsor of "National Trails Day" in June. <http://www.americanhiking.org>

12) Association for the Wolf Lake Initiative: A working consortium of groups from communities around Wolf Lake that includes individual users of the lake, educators, researchers, and academics. <http://www.lakenetwi.net/member/wolflakeinitiative/>

13) Audubon Society: Mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. Two chapters are active in Northwest Indiana: Potawatomi Audubon Society & the Dunes-Calumet Audubon Society. <http://www.audubon.org>

14) Chicago Wilderness Consortium: An unprecedented alliance of more than 200 public and private organizations that have joined forces to protect, restore, and manage the region's natural lands and the plants and animals that inhabit them. The Chicago Wilderness region extends from Southeast Wisconsin, through Northeast Illinois into Northwest Indiana. <http://www.chicagowilderness.org>

15) Center for Watershed Protection: A non-profit corporation that provides local governments, activists, and watershed organizations around the country with the technical tools for protecting some of the nation's most precious natural resources: our streams, lakes, and rivers. <http://www.cwp.org>



EDUCATION, PROJECT & TRAINING ASSISTANCE PRIVATE SOURCES

16) The Conservation Fund Leadership

Network: A strategic alliance of non-governmental and public and private sector partners dedicated to building the capacity of professionals and organizations involved in natural and cultural resource conservation. It represents a new vehicle for strengthening the American conservation community and mainstreaming conservation into the work of non-traditional partners through courses, workshops, seminars, and conferences.
http://www.conservationfund.org/training_education

17) Ducks Unlimited: Conserves, restores, and manages wetlands and associated habitats for North America's waterfowl.
<http://www.ducks.org>

18) Hoosier Environmental Council: To restore and protect Indiana's natural environment upon which all life depends. Educating members, the media, elected officials, and the public on environmental issues.

19) Indiana-Illinois Sea Grant: Dedicated to an approach that uses research, education, and outreach to promote the wise use of our nation's coastal, ocean, and Great Lakes resources for a sustainable economy and environment.
<http://www.iisgcp.org>

20) Indiana Wildlife Federation: Works with state agencies and other similar organizations to monitor what is happening in Indiana to our wildlife and their habitat, including our lakes and rivers, our air, and soil.
<http://www.indianawildlife.org>

21) Izaak Walton League: Takes a common-sense approach toward protecting our country's natural heritage and improving outdoor recreation opportunities for all Americans. Several chapters exist and are active throughout the NIRPC region.
<http://www.iwla.org>

22) JF New (Fee-based Consultants): Provides a broad range of ecological consulting and restoration services and operates one of the largest native plant nurseries in the nation with over 355 available species.
<http://www.jfnew.com>



GREENWAYS & BLUEWAYS NORTHWEST INDIANA REGIONAL PLAN

23) Legacy Foundation, Inc. of Lake County –

GrantStation: An interactive web site that provides access to results-oriented grant seeking resources including instant access to thousands of active, pre-screened, national grant makers, as well as thousands of regional and local grant makers awarding grants in over 130 different areas of interest. Additionally provides proposal writing guides, step-by-step tutorials on grants management, and a wealth of information and tools to submit compelling grant requests. This comprehensive tool is available by appointment at the Legacy Foundation office at 219-736-1880.

24) National Trails Training Partnership –

American Trails: Exhaustive education and training resource web site for those looking to develop trail systems nationwide.
<http://www.americantrails.org/http/aboutnntp.htm>

25) The Nature Conservancy: A leading conservation organization working around the world to protect ecologically important lands and waters for nature and people. The Southern Lake Michigan Rim project office is working with a variety of partners to help protect this national treasure and other natural areas throughout Northwest Indiana.

<http://www.nature.org>

26) Northwest Indiana Forum: A non-profit regional economic development organization, serving Lake, Porter, and LaPorte counties. Hosts an Environmental Affairs Committee where top industries come together to discuss strategies for improving the region's ecology.

<http://www.nwiforum.org>

27) Openlands: An independent, non-profit organization dedicated to preserving and enhancing public open space in Northeastern Illinois and Northwestern Indiana. Has taken a leadership role in securing more than 45,000 acres of land in the Chicago area for public parks, forest preserves, land and water greenway corridors, and urban gardens.

<http://www.openlands.org>

28) Sierra Club: Inspired by nature, the club works together to protect communities and the planet. The club is America's oldest, largest, and most influential grassroots environmental organization.

<http://www.sierraclub.org>

29) Trail DART & Training: A for-hire service of Rails-to-Trails Conservancy, TrailDART offers full service assistance to communities in all aspects of trail building from initial consultation to laying the groundwork for trails through trail development and beyond.

<http://www.railtrails.org/whatwedo/trailbuilding/technicalassistance/trailDART.html>

30) Trust for Public Lands: A national, nonprofit, land conservation organization that conserves land for people to enjoy as parks, community gardens, historic sites, rural lands, and other natural places, ensuring livable communities for generations to come.

<http://www.tpl.org> <http://www.tpl.org>