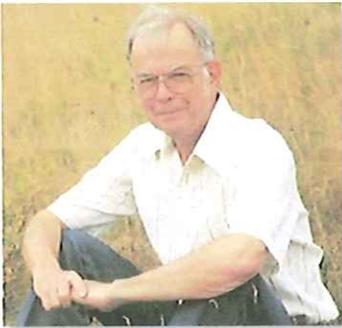


Natural Land Institute



George B. Fell

"We are living at the time of man's final conquest over the wilderness. What we have saved, and what we may save in the next few years, will be all the true wild nature that will remain to pass on from generation to generation in the years ahead. There will never be another chance."

*-George B. Fell, Founder of the
Natural Land Institute*



NLI Service Area

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- ❖ **Incorporated in 1958**, NLI, based in Rockford is a private, non-for-profit, land trust and conservation organization with a focus area in twelve counties within the Rock River watershed and along the Mississippi River bluffs of northwestern Illinois. The counties are: Boone, Bureau, Carrol, DeKalb, Henry, Jo Daviess, Lee, Ogle, Rock Island, Stephenson, Whiteside, Winnebago
- ❖ **To date, using primarily private funding and IDNR funds**, NLI and its partners have protected more than 16,000 acres of prairies, forests, wetlands and river corridors in Illinois and southern Wisconsin.
- ❖ **NLI's Largest Land Protection and Restoration Project**, the 721-acre Nygren Wetland Preserve in Rockton is our first large-scale effort to restore natural communities. It is part of a larger network of interconnected natural land and working landscapes in the Rock and Mississippi River. The *Dianne Nora Nature Trail* is a 2.5 mile free public hiking trail located at the preserve that is open year round. Download the Prairie State Hike App on your phone to see and hear the trail tour.
- ❖ **A significant portion of NLI's funding comes from individual donors.** Other sources of income include bequests and planned gifts, corporate and foundation gifts, gifts of land and conservation easements, and income from our endowments and other invested funds.
- ❖ **Major partners include:** Illinois Department of Natural Resources, Illinois Nature Preserves Commission, Community Foundation of Northern Illinois, Grand Victoria Foundation, Illinois Clean Energy Foundation, Beloit College, and Rock Valley College

House Districts: 67, 68, 69, 70, 71, 72, 73, 74, 76, 89, 90 **Senate Districts:** 34, 35, 36, 37, 38, 45

The mission of the Natural Land Institute is to create an enduring legacy of natural land in northern Illinois for people, plants and animals.



Contact: Kerry Leigh, Executive Director
815/964-6666, kleigh@naturalland.org
320 S. Third St., Rockford IL. 61104
Website: NaturalLand.org



**TESTIMONY BEFORE THE SURFACE TRANSPORTATION BOARD
IN THE MATTER OF**

Great Lakes Basin Transportation, Inc.
Draft Scope of Study for the Environmental Impact Statement
STB Docket No. FD – 35952

April 19, 2016
Belvidere, Illinois

My name is Kerry Leigh. I am the Executive Director of the Natural Land Institute, 320 S. Third Street, Rockford, Illinois. NLI is a private conservation organization that has been working to protect natural lands in northern Illinois for more than 58 years. I am here today to express our concern about the potential direct, indirect, and cumulative impacts to biological resources from the proposed construction and operation of the Great Lakes Basin rail line on property owned or protected by NLI, and on the ecological integrity of Kilbuck Creek and the Kishwaukee River in DeKalb, Ogle, and Winnebago counties.

A project of this magnitude and reach must be carefully planned so that multiple constituencies benefit from the economic, social, and environmental impact it affords.

The proposed rail line will parallel I-39 to the east, cutting across Kilbuck Creek and several tributaries to the South Branch of the Kishwaukee River. Both waterways are highly valued aquatic resources with excellent water quality and rich populations of fish, mussels and other wildlife. The line will then split into two spurs that follow the Winnebago County line, one going east, crossing the South Branch of the Kishwaukee River south of Cherry Valley; and the other going west, crossing Kilbuck Creek, then crossing the Rock River west of Meridian Road, skirting farmland owned by NLI on McGregor and Weldon roads in NE Ogle County and crossing the watershed of Hall Creek before linking into the Canadian National Railroad line south of the village of Winnebago.

The properties and preserves owned or protected by NLI that could be affected by the construction and operation of the proposed rail lines include:

- Howard Colman Dells Nature Preserve, located along Hall Creek on Weldon & Severson roads in NE Ogle Co. and SW Winnebago Co.
- Schlo-Mar Farm on McGregor and Weldon roads in NE Ogle Co.
- Waddell tract on Kilbuck Creek east of the Illinois Central railroad in Winnebago Co.
- Clear Water Legacy easements on the South Branch of Kishwaukee River in DeKalb Co.

From a preliminary review of the location of the proposed rail line it does not appear to directly impact any properties owned or protected by NLI, although a change in the alignment of the western spur line could directly affect the Schlo-Mar Farm. However, construction of a totally new rail line will have significant environmental and ecological impacts that could indirectly degrade NLI's preserves, damage

rivers and streams, including Hall Creek, Kilbuck Creek, the South Branch of the Kishwaukee River, and other high-quality aquatic resources, disrupt wildlife populations, destroy habitat for wildlife and pollinators, and stimulate additional development, especially in the ecologically-sensitive area south of the Kishwaukee River that is the focus of the "Kishwaukee River Corridor Green Infrastructure Plan" prepared by NLI and other members of the Kishwaukee River Ecosystem Partnership (KREP).

The corridors south of the Kishwaukee River along I-39 between Perryville Road and South Bend Road has significant natural, scenic and recreational resources, and has been targeted for development for intermodal transportation systems. The Green Infrastructure Plan for this area recommends land development policies, best management practices for storm water management, and development ordinance revisions needed to protect the resources along the river. I have included a copy of the Kishwaukee River Corridor Green Infrastructure Plan on a flash drive that I'm submitting today. I've also included a report on the conservation values and natural resources of the South Branch of the Kishwaukee River prepared by our consultant.

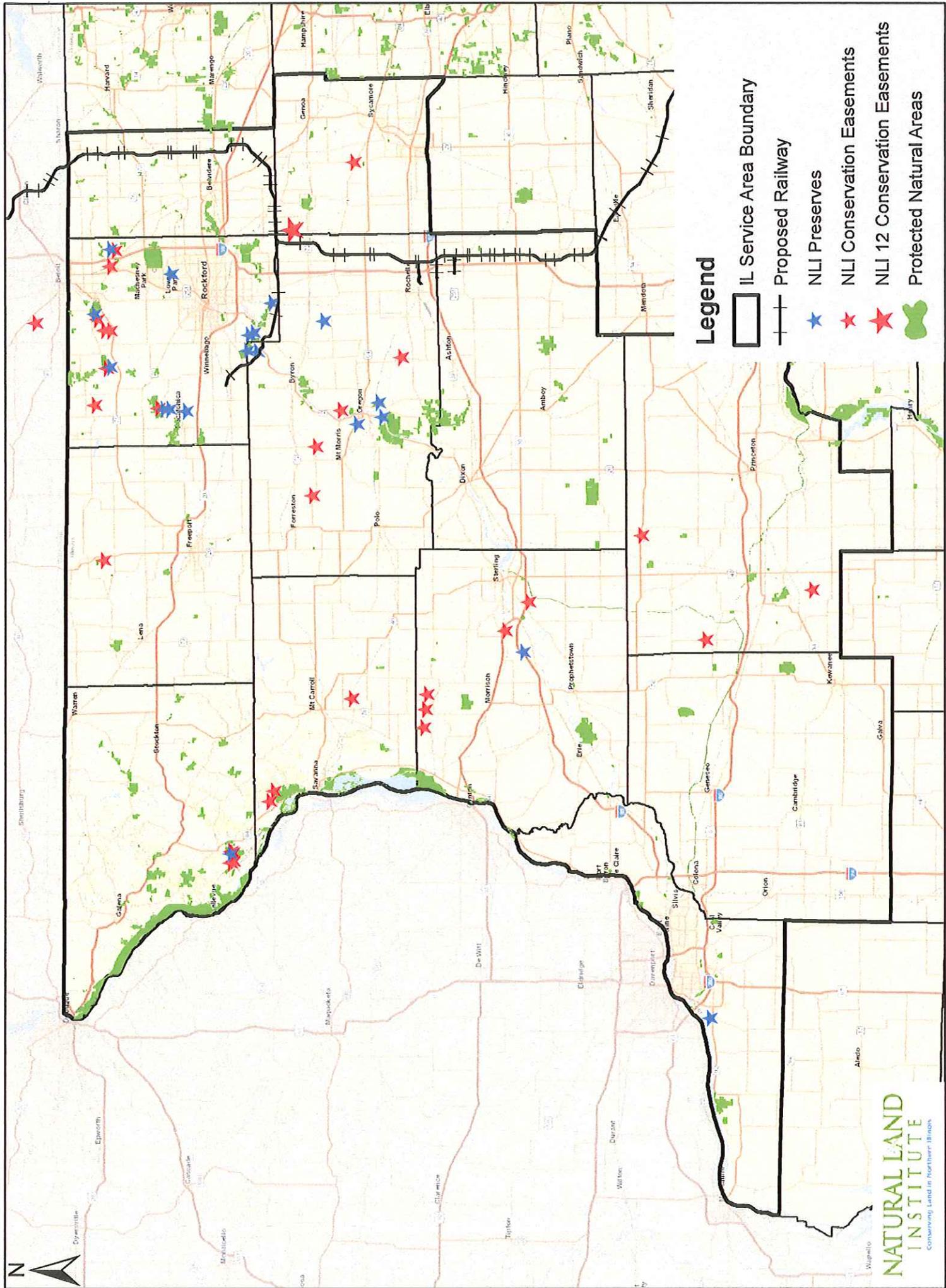
Soil erosion and runoff from construction and operation of the rail line could seriously degrade the high water quality and recreational resources of the river. In addition there will be indirect or inducted impacts on the biological resources of Kilbuck Creek, Hall Creek (which flows through Coleman Dells Nature Preserve) the Kishwaukee River and all of the forest preserves along the river between Cherry Valley and New Milford as the area along I-39 and Baxter Road, and south of the Rockford airport are developed for intermodal transportation projects, spurred by the construction of the new rail line.

There will need to be mitigation for environmental damages caused by the rail line project, but this will occur in a piece-meal fashion unless some larger agency or organization takes oversight of the project. The proposed rail line all lies within the jurisdiction of the Rock Island District of the Corps of Engineers.

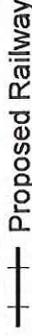
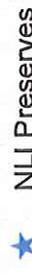
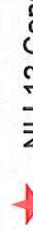
Recommendations:

1. The Scope of Study for the Environmental Impact Statement (EIS) should seriously evaluate the indirect impacts of construction and operation of the proposed rail line on the ecology of the South Branch of the Kishwaukee River, Kilbuck Creek and Hall Creek.
2. The Scope of Study for the EIS should give serious consideration to the cumulative impacts of the proposed western rail spur across the southern edge of the Kishwaukee River Corridor from development stimulated by the new rail line and evaluate alternatives to avoid, minimize or mitigate the damages to biological resources.
3. There should be a coordinated approach to mitigation of the environmental impacts of the proposed rail line in northern Illinois that includes the Army Corps of Engineers, U.S. Fish and Wildlife Service, IDNR, and local forest preserve and conservation districts, to avoid a piece-meal approach to mitigation of biological resources from damage caused by the new rail line.

Thank you for your consideration of our comments. We will submit more detailed comments and recommendations for the record at a later date.



Legend

-  IL Service Area Boundary
-  Proposed Railway
-  NLI Preserves
-  NLI Conservation Easements
-  NLI 12 Conservation Easements
-  Protected Natural Areas



NATURAL LAND INSTITUTE
 Conserving Land in Northern Illinois

South Branch Kishwaukee River
Natural History and Conservation Values
DeKalb County, Illinois

By Jerry Paulson
Natural Land Institute
April 18, 2016

Introduction

The Natural Land Institute holds conservation easements on twelve “Protected Properties” along the South Branch of the Kishwaukee River in an area know as the “Clear Water Legacy” (CWL) project area. (The Native American name for the Kishwaukee means “River of Clear Water.”) Protection and restoration of the land in the CWL project area was initiated through the Illinois Department of Natural Resources Conservation 2000 Program and the Kishwaukee River Ecosystem Partnership. The conservation easements were purchased by the Natural Land Institute using three C2000 grants that were secured from the Illinois Department of Natural Resources to purchase conservation easements on land in the CWL project area. A total of 417.27 acres of land along the river in 12 parcels was protected using IDNR funds.

Conservation Values

- 1) Natural – The trees, floodplain forests, wetlands and cover of grass and weeds on the former cropland provide a continuous tract of natural habitat for wildlife along the river.
- 2) Environmental – The reforested riparian buffer strip along the river has reduced scour erosion of the soils that were washed into the river degrading its water quality. The trees and ground cover help to filter silt and sediments from flood water, recharges the groundwater, and improves the water quality of the river. They also sequester carbon, reducing CO₂ that is released to the atmosphere.
- 3) Educational – The Protected Properties along the South Branch of the Kishwaukee River in the CWL project area are located close to Northern Illinois University, Rockford University, Rock Valley College and Kishwaukee College, and can be used, with permission of the Owner, for research, education and nature study.
- 4) Scenic – The valley of the South Branch of the Kishwaukee River provides a scenic vista for residents and travelers along Wheeler and McNeal roads, Countyline Road and Illinois Route 72. The forests along the river provide a scenic backdrop for people using the river for canoeing, kayaking, fishing and hiking.
- 5) Recreational – The South Branch of the Kishwaukee River is a popular recreational resource, used for fishing, canoeing and kayaking, birding, camping and hiking. Both DeKalb County and Winnebago County have identified the land along the South Branch of the Kishwaukee River as high priority for preservation in their regional greenway plans.

The vegetative community of the Protected Property is primarily composed of planted trees, the species composition of which is designed to simulate a floodplain forest. Dominant species include river birch (*Betula nigra*), sycamore (*Platanus occidentalis*), swamp white oak (*Quercus bicolor*), bur oak (*Quercus macrocarpa*), pin oak (*Quercus palustris*), and red oak (*Quercus rubra*). Box elder (*Acer negundo*) and silver maple (*Acer saccharinum*) have colonized these tree planting areas and are present abundantly. The undergrowth is composed primarily of exotic, cool-season grasses, chiefly redtop (*Agrostis gigantea*), smooth brome (*Bromus inermis*), and reed canary grass (*Phalaris arundinacea*). Many common shrubs are also present, including silky dogwood (*Cornus obliqua*), red-osier dogwood (*Cornus sericea*), and downy hawthorn (*Crataegus mollis*).

Fish and Wildlife

The South Branch of the Kishwaukee River between the City of Genoa and its confluence with the main branch is a highly valued aquatic resource, and a popular fishing area. Recent fish and mussel surveys (Rivera, 2012; Shasteen et. al. 2013) have documented high species richness in this segment of the river. Sampling of mussels at the McNeal Road bridge within the CWL project area and both upstream at the Glidden Road bridge and downstream at Deer Run Forest Preserve, found the following species: elktoe, *Alasmidonta marginata*, white heelsplitter, *Lasmigona complanata*, creek heelsplitter, *Lasmigona costata*, giant floater, *Pyganodon grandis*, creeper, *Strophitus undulates*, threeridge, *Amblema plicata*, Wabash pigtoe, *Fusconaia flava*, pimpleback, *Quadrula pustulosa*, mucket, *Actinonaias ligamentina*, plain pocketbook, *Lampsilis cardium*, fatmucket, *Lampsilis siliquoidea*, fragile papershell, *Leptodea fragilis*, and black sandshell, *Ligumia recta* (Shasteen et. al. 2013). The black sandshell is a State Threatened species, while the creek heelsplitter is a Species in Greatest Need for Conservation in Illinois (IDNR, 2005). The sampling sites upstream and downstream from the CWL project area are rated as "Unique Resources" based upon the very high species richness and/or abundance (15 spp.), number of intolerant species present, and recruitment of species. The McNeal Road bridge site, located within the CWL project area was rated as a "Moderate Resource" because of its lower species richness and abundance (11 spp.).

An intensive survey of fishes conducted on the South Branch of the Kishwaukee River in the summer of 2011 by the Illinois Department of Natural Resources (Rivera, 2012) found 32 species at the sampling station at McNeal Road (PQC-11). Larger fishes collected from this station included golden, silver, and shorthead redhorse, smallmouth bass, channel catfish, freshwater drum, largemouth bass, northern hogsuckers, white suckers, highfin carpsuckers, flathead catfish and carp. Smaller fishes included 10 species of minnows, rock bass, white bass, grass pickerel, banded darters, slenderhead darters, and brook stickleback. The brook stickleback was found in a small pool of cold water that was draining from a field tile into a roadside ditch on the edge of the sampling area. At this site 4 individuals of the state threatened gravel chub were found. This species are commonly collected in the Rock River south of Rockford. This station (PQC-11) had the greatest overall fish diversity found in the survey. The IBI score for this station was 50, an "A" rating. Historically this section of the river has scored an IBI above 50, but the 2006 sample found an IBI of only 44.

Amphibians and reptiles have not been inventoried in the CWL Project area. Common species expected to be found on the Protected Property (Phillips, 1998) include: mudpuppy, American

Illinois Environmental Protection Agency. 2014. Illinois Integrated Water Quality Report and Section 303(d) List, Appendix A-2. <http://www.epa.state.il.us/water/tmdl/303d-list.html>.

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Robinson, Scott K., and Steven Bailey. 1998. Kishwaukee River Area Assessment, Volume 3, Living Resources, Birds. Illinois Natural History Survey, Champaign, Illinois. Pp. 61-94.

Shasteen, Diane K., Sarah A. Bales and Alison Stodola. 2013. Freshwater mussels of the Rock River tributaries: Pecatonica, Kishwaukee, and Green River basins in Illinois. Illinois Natural History Survey Technical Report 2013 (13). Champaign, Illinois, 27 pp. + appendix.

Schwegman, J.E. 1973. Comprehensive Plan for the Illinois Nature Preserves System. Part 2. The Natural Divisions of Illinois. Illinois Nature Preserves Commission. 32 pp. + map.

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Vaiden, Robert C., Edward C. Smith, and Timothy H. Larson. 2004. Groundwater Geology of DeKalb County, Illinois with Emphasis on the Troy Bedrock Valley. Illinois State Geological Survey, Circular 563. Champaign, Illinois. 30 pp + appendices.

USDA. Official Soil Series Descriptions. https://soilseries.sc.egov.usda.gov/OSD_Docs/

USGS National Water Information System. 2015. USGS 05439500 South Branch Kishwaukee River NR Fairdale IL. <http://waterdata.usgs.gov/nwis/>

Cost Effectiveness of Green Infrastructure

Dennis Dreher, Geosyntec Consultants (ddreher@geosyntec.com)

While green infrastructure is becoming a widely accepted alternative development approach on the merits of its environmental benefits, questions of its cost effectiveness – in comparison to conventional grey infrastructure approaches – continue to be raised. Fortunately, there is growing documentation, regionally and nationally, supporting the conclusion that the long-term costs of green infrastructure are generally less than or equal to the costs of grey infrastructure. A few specific references and websites are provided at the end of this section.

While a true comparison of green vs. grey infrastructure costs often will require a site specific analysis, there are several basic principles that should be considered for all projects.

Reduced up-front costs: Some green infrastructure approaches reduce or eliminate the need for expensive grey infrastructure. A common example is the use of inexpensive naturalized swales or bioswales in lieu of traditional storm sewer drainage systems. Similarly, conservation developments that reduce mass grading and road and utility lengths can substantially reduce their infrastructure costs.

Reduced life-cycle costs: Some green infrastructure practices last substantially longer than grey infrastructure alternatives, thereby reducing life cycle costs. A good example is a permeable paving parking lot that often costs more to initially install than conventional concrete or asphalt but has a much longer life span. When considering total cost outlays over a time span of 20 to 30 years, for example, permeable paving may be much less expensive. When the stormwater storage under permeable paving is factored in (thereby reducing detention needs), the cost advantages for permeable paving are even stronger.

Reduced maintenance costs: Depending on the particular practice, green infrastructure may be more or less expensive to maintain than conventional infrastructure. But maintenance costs of some green infrastructure practices are much less expensive than their grey counterparts. A good example is natural landscaping in comparison to turf grass. While most turf installations require regular mowing and irrigation, well-established natural landscapes require relatively little long-term maintenance. Natural landscapes do require long-term spot control of invasive weeds and a regular schedule of controlled burning, but these costs are substantially less than maintenance costs for most turf installations.

Multiple benefits: While most grey infrastructure practices have a single purpose, most green infrastructure practices provide multiple benefits. For example, while storm sewers are meant to merely convey runoff, bio-swales convey, store, treat, and infiltrate runoff. Green roofs not only reduce runoff volumes, they also reduce urban heat-island impacts and reduce heating and cooling costs for buildings. Native landscaping and use of trees in urban design can enhance property values, reduce air pollution, mitigate climate change impacts, and reduce energy costs.

Reduced need for public infrastructure investment and remediation: Regardless of the potential cost savings to developers, green infrastructure provides considerable public benefits and reduces public remediation costs for problems like flooding and stream channel erosion. The use or

native landscaping instead of turf can substantially reduce demand for irrigation, thereby reducing the need to size water supply infrastructure to meet extreme summer-time demands. Another example is the creation of open space, greenways, and trails in private developments that provide connections to public recreation systems or, in some cases, are donated directly to public open space agencies.

Selected References:

Banking on Green: A Look at How Green Infrastructure Can Save Municipalities Money and Provide Economic Benefits Community-Wide, ASLA

http://www.asla.org/uploadedFiles/CMS/Government_Affairs/Federal_Government_Affairs/Banking%20on%20Green%20HighRes.pdf

Forging the Link, Chapter 3: Economics and LID Practices

http://www.unh.edu/unhsc/sites/unh.edu.unhsc/files/docs/FTL_Chapter3%20LR.pdf

This was developed by Rob Roseen, a colleague at Geosyntec.

Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, USEPA

http://water.epa.gov/polwaste/green/upload/2008_01_02_NPS_lid_costs07uments_reducingstormwatercosts-2.pdf

This EPA doc reports on a number of case studies.

Link to EPA's website that addresses costs-benefits of GI.

http://water.epa.gov/infrastructure/greeninfrastructure/gi_costbenefits.cfm

Changing Cost Perceptions: An Analysis of Conservation Development, Chicago Wilderness

http://www.chicagowilderness.org/files/2513/3087/0430/Cost_Analysis_Report.pdf

Kishwaukee River Corridor Green Infrastructure Plan

Winnebago County, Illinois Executive Summary

The Kishwaukee River Corridor Green Infrastructure Plan is centered in an area of Winnebago County with significant natural and recreational resources. This area has been identified as a new industrial development corridor, making it an ideal site to incorporate green infrastructure concepts and principles into the development plans. Recognizing this opportunity, the Kishwaukee River Ecosystem Partnership (KREP) sought funding to provide green infrastructure information and technical assistance to the local jurisdictions in the development corridor. This short summary highlights some of the information presented at numerous meetings over a year and a half with municipalities, landowners, environmental organizations, media, and interested local citizens.

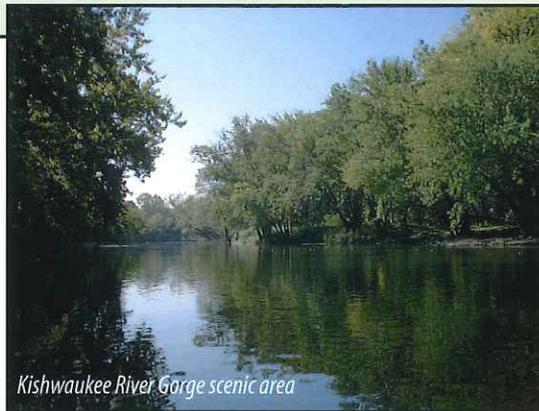
The Kishwaukee River Corridor

The corridor of land south of the Kishwaukee River between Chicago-Rockford International Airport and Cherry Valley has been identified in local economic development plans for new industrial development, taking advantage of the airport's location near major transportation systems and the I-39/Baxter Road Interchange.

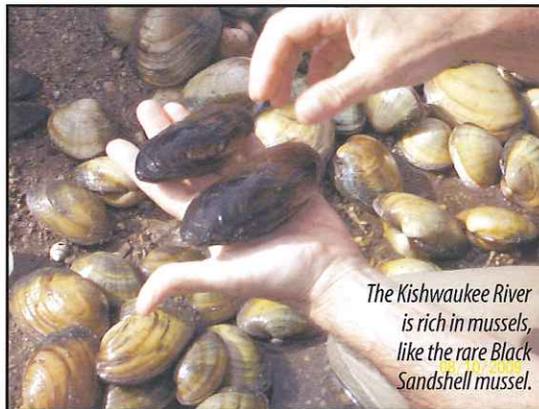
The Kishwaukee River is recognized statewide for its diversity of fish and mussels, migratory bird habitats, bald eagles, ospreys, river otters, and high quality natural woodlands and wetlands. It is one of the highest quality river systems in Illinois. The Kishwaukee is also an important destination for recreational activities, providing quality fishing, hiking, canoeing, tubing, camping, picnicking, bird watching and other healthy outdoor activities. The Winnebago County Forest Preserve District has made a major public investment protecting open space along the Kishwaukee River and Kilbuck Creek. The Rockford Park District also owns Atwood Park, a much-visited regional park that straddles the Kishwaukee River east of New Milford.

What is "Green Infrastructure?"

The term "green infrastructure" is attributed to a 1994 report to the Governor of Florida. It was intended to reflect the notion that natural systems are important components of our infrastructure, as much as "grey infrastructure" is in developed areas.



Kishwaukee River Gorge scenic area



The Kishwaukee River is rich in mussels, like the rare Black Sandshell mussel.



Native plants

The most commonly applied definition of landscape-based green infrastructure is based on the idea that certain lands have an inherent value and function that can be made even greater when part of a larger network.

The foundation of green infrastructure is connectivity—at the **landscape scale** it links the natural elements like river corridors, woodlands, wetlands, and grasslands so they can work together as a whole to sustain ecological values and functions. Green infrastructure also can include working lands, trails and other recreational features, as well as cultural and historic sites.

At the **community and neighborhood scale**, green infrastructure incorporates planning and design approaches such as compact, mixed-use development, parking reduction strategies and urban forestry. This reduces impervious surfaces and creates walkable, attractive communities.

At the **site scale**, green infrastructure can use engineered practices that mimic natural systems by absorbing stormwater back into the ground (infiltration), use trees and other natural vegetation to convert that water to water vapor (evapotranspiration), and use rain

barrels or cisterns to capture and reuse stormwater. These natural processes manage stormwater runoff in a way that maintains or restores the site's natural hydrology and helps to reduce flooding as well as cleaning our water.

Resource-Sensitive Policies in Local Plans

Winnebago County, Rockford, and Cherry Valley each have adopted a land use or comprehensive plan that establishes their policies for development, community character, public facilities, and open space. Each jurisdiction has many good policy recommendations in their respective plans that can be coupled with new ordinances and other actions to help them achieve the benefits that come from planning with green infrastructure. For a full list of pertinent policies and the recommended actions see the full Plan at: <http://krep.bios.niu.edu>

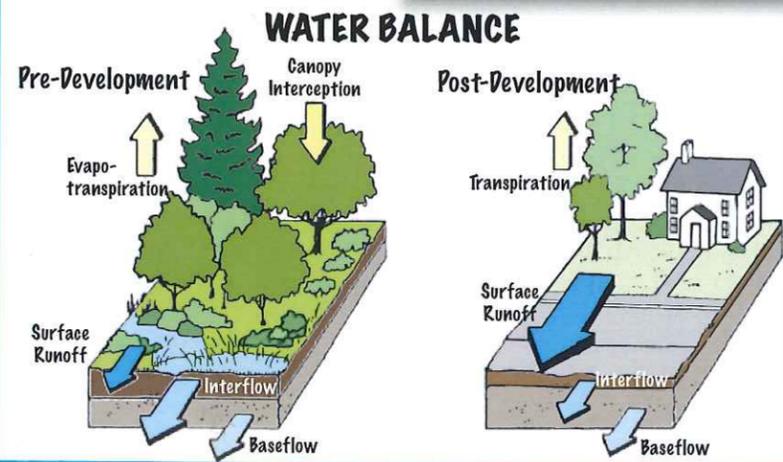
The Mapping Process

Geographic Information Systems (GIS) mapping experts at the Rockford Park District worked with local resource experts and the project consultant to develop a green infrastructure base map for the planning area. All available natural resource GIS data was collected to provide the base to identify the Core Green Infrastructure of the Kishwaukee Corridor. Mapping included sensitive resources, natural areas, flood plains, stream corridors, highly erodible soils and open space.

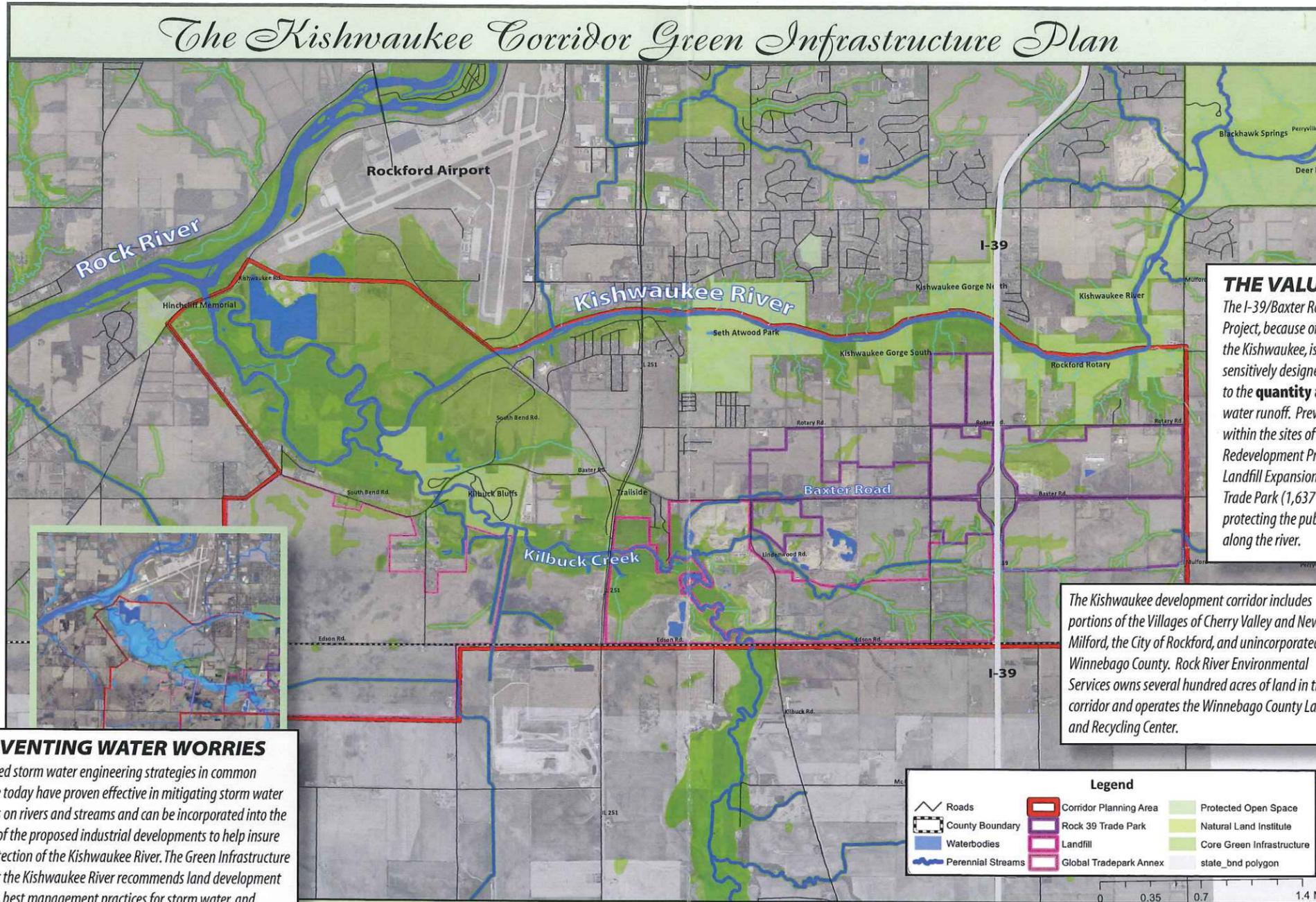
Cost Effectiveness of Green Infrastructure

While a true comparison of green vs. grey infrastructure costs often requires a site specific analysis, there are several basic principles that should be considered for all projects.

Adding buildings and pavement increases imperviousness which greatly increases surface water runoff.



The Kishwaukee Corridor Green Infrastructure Plan



THE VALUE OF NATURE

The I-39/Baxter Road Redevelopment Project, because of its size and proximity to the Kishwaukee, is a project that should be sensitively designed, with special attention to the **quantity and quality** of storm water runoff. Preventing storm water impacts within the sites of the I-39/Baxter Road Redevelopment Project (1,348 acres), Eco-Rock Landfill Expansion (862 acres) and Global Trade Park (1,637 acres) will go a long way in protecting the public investment already made along the river.

Increased stormwater runoff has caused serious erosion in the ravine areas of the Kishwaukee Gorge.

of 20 to 30 years. When coupled with stormwater storage under permeable paving that reduces detention needs, the cost advantages are even greater.

• Reduced maintenance costs

Maintenance costs of some green infrastructure practices are much less expensive than their grey counterparts. A good example is natural landscaping in comparison to turf grass. While most turf installations require regular mowing and irrigation, well-established natural landscapes require relatively little long-term maintenance other than the spot control of invasive weeds and a regular schedule of controlled burning. This is substantially less than maintenance costs for most turf installations.

• Multiple benefits

While most grey infrastructure practices have a single purpose, most green infrastructure practices provide multiple benefits. For example, native landscaping and use of trees in urban design enhance property values, reduce air pollution, absorb stormwater, and reduce energy costs.

• Reduced public grey infrastructure investment and remediation needs

All scales of green infrastructure provide considerable public benefits and reduces public remediation costs for problems like flooding and stream channel erosion. The use of native landscaping instead of turf can substantially cut demand for irrigation, thereby reducing the need to size water supply infrastructure to meet extreme summer-time demands. Another example is the creation of open space, greenways, and trails in private developments that provide connections to public recreation systems or, in some cases, are donated directly to public open space agencies.

PREVENTING WATER WORRIES

Advanced storm water engineering strategies in common practice today have proven effective in mitigating storm water impacts on rivers and streams and can be incorporated into the design of the proposed industrial developments to help insure the protection of the Kishwaukee River. The Green Infrastructure Plan for the Kishwaukee River recommends land development policies, best management practices for storm water, and ordinance revisions needed to implement these strategies.

Most of the proposed Kishwaukee River development corridor drains into the Kishwaukee River and its tributary, Kilbuck Creek. The western-most part of the corridor drains via a drainage ditch directly into the Rock River just south of its confluence with the Kishwaukee River. The soils in this area are composed mostly of drained wetlands. The land lying south of Baxter Road and west of I-39 drains into Kilbuck Creek. The land lying north of Baxter Road drains directly into the river through steep ravines that formed in the bedrock on the edge of the Kishwaukee River Gorge, a narrow, highly scenic and heavily wooded segment of the river between Cherry Valley and New Milford. Most of these ravines drain through public parks and forest preserves. The soils in this area are shallow glacial tills over bedrock and are highly erosive. The land lying south of Baxter Road and east of I-39 drains into the south branch of the Kishwaukee River, which flows through forest preserves and joins the north branch within Blackhawk Springs Forest Preserve just west of Perryville Road.

• Reduced up-front costs

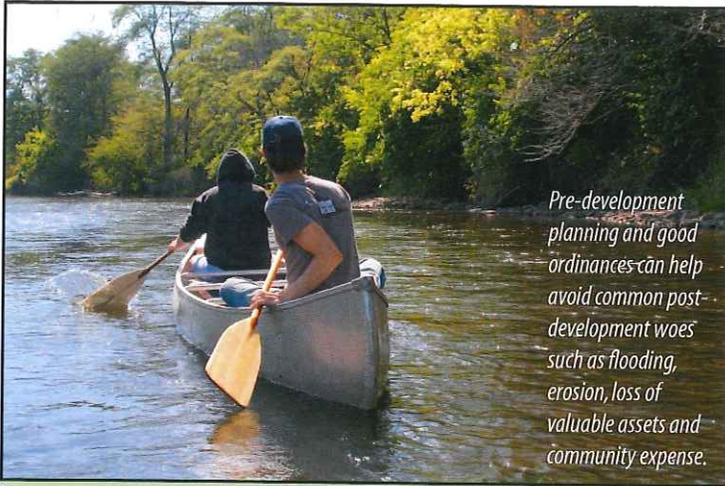
Some green infrastructure approaches reduce or eliminate the need for expensive grey infrastructure. These include the use of inexpensive naturalized swales or bioswales in lieu of traditional storm sewer drainage systems. Similarly, conservation developments that reduce mass grading, roads and utilities can substantially cut their grey infrastructure costs.



Engineered "green infrastructure" is a tool to help handle increased imperviousness such as parking lots.

• Reduced life-cycle costs

Some green infrastructure practices last substantially longer than grey infrastructure alternatives, thereby reducing life cycle costs. For example: a permeable paving parking lot that costs more to initially install than conventional concrete or asphalt has a much longer life span and less maintenance outlays over a time span



Pre-development planning and good ordinances can help avoid common post-development woes such as flooding, erosion, loss of valuable assets and community expense.

Next Steps --

Municipalities and the County should continue to work with technical advisors to:

- Adopt the Green Infrastructure Plan through an Intergovernmental Agreement approved by Winnebago County, Ogle County, City of Rockford, Village of Cherry Valley, Village of New Milford, Rockford Park District and Winnebago County Forest Preserve District.
- Develop and adopt a Unified Development Ordinance and county-wide stormwater ordinance that incorporates the recommendations of the Green Infrastructure Plan.
- Develop a GI-based master plan for the industrial property in the Global Trade Park south of Kilbuck Creek.
- Incorporate GI concepts into a regional plan for Economic Development.
- Discuss GI concepts and innovative approaches to development with larger landowners and developers in the planning area.

Moving from Policy to Action

The Plan recognizes the strong policy basis for various aspects of green infrastructure protection and design in the land use plans of Winnebago County, Rockford, and Cherry Valley. It recommends new development ordinances for local governments to reflect the progressive policies of their adopted plans that will help put these progressive policies on-the-ground.

The core recommendation of the Plan is to move from broad policies to specific actions that incorporate green infrastructure (GI) principles and practices into land use and development plans by taking the following actions:

1. Adopt ordinance language that protects critical GI resources and encourages, and/or requires GI designs for all new development.
2. Establish stronger collaboration between local governments, developers, and natural resource organizations to incorporate GI protection into development proposals.

3. Continue to strengthen intergovernmental cooperation between the county, municipalities, and other units of local government.
4. Protect and restore natural resources in the Kishwaukee River Corridor.
5. Recognize the link between economic growth and an adequate quantity of clean water, a pleasing natural environment, and ample recreational opportunities in local development plans.

Conclusion

Local businesses and industry as well as local residents have become increasingly aware of the need to develop with a long-term sustainability attitude. This plan provides the foundation for community leaders, developers and natural resource groups to create a vibrant region that attracts responsible economic growth while protecting our water and the public investments that have already been made along the river. We look forward to working together.

Selected References

*To see full recommendations and information download **Kishwaukee River Corridor Green Infrastructure Plan at:** See appendix for checklist of "watershed friendly" ordinance revisions.* <http://krep.bios.niu.edu>

***Banking on Green: How Green Infrastructure Saves Municipalities Money and Provides Economic Benefits Community-wide.** The American Society of Landscape Architects (ASLA) looks at the most cost-effective options for managing polluted runoff and protecting clean water, and finds that green infrastructure solutions save taxpayer money and provide community benefits by managing stormwater where it falls.* <http://www.asla.org/ContentDetail.aspx?id=31301>

The Green Edge: How Commercial Property Investment in Green Infrastructure Creates Value <http://www.nrdc.org/water/commercial-value-green-infrastructure.asp>

Reducing Stormwater Costs through Low Impact Development (LID) USEPA http://water.epa.gov/polwaste/green/upload/2008_01_02_NPS_lid_costs07uments_reducingstormwatercosts-2.pdf

USEPA costs-benefits of Green Infrastructure. http://water.epa.gov/infrastructure/greeninfrastructure/gi_costbenefits.cfm

The Kishwaukee River Ecosystem Partnership (KREP) has worked for many years to guide preservation and restoration efforts in the watershed, offering advice on strategies and initiatives that help preserve and sustain the river for our future generations. KREP will continue to work with Cherry Valley, New Milford, Rockford, Winnebago County, Rock River Environmental Services and private developers to develop strategies and guidelines to insure the continued protection of valuable recreational amenities and land and water resources of the Kishwaukee River and Kilbuck Creek.



Kishwaukee River Corridor Green Infrastructure Plan was funded in part by a Boeing grant to the Chicago Wilderness Sustainable Watershed Action Team. The plan is a result of engaging the local community in a planning effort focused on incorporating green infrastructure into industrial development.

